



Improving Army Installation Facility and Land Use Deals and Partnerships

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Preface

This report documents research and analysis conducted as part of the project entitled *Enhancing Cost Saving Army Installation Real Estate and Facility Partnership Approaches*, sponsored by the Office of the Assistant Chief of Staff for Installation Management. The purpose of the project was to assess Army installation real estate and facility deals and partnership approaches, such as enhanced use lease deals, and provide recommendations to facilitate more-effective installation use of these approaches to save Army costs and improve installation operations and readiness.

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Summary

Army installation facility and land use deals and partnerships can provide Army installations with substantial benefits, such as gaining access to facilities and saving costs. The partnerships that often produce the greatest financial benefits involve installation real estate, buildings, and other facilities (such as airfields). These arrangements have generated significant revenue and saved substantial funds for some military installations. Army installations have been facing significant budget reductions and need to find ways to maintain operations and even enhance installation readiness despite declining budgets. An installation land use or facility sharing deal or partnership might be one way for the Army to save and earn large amounts of money. However, the U.S. Army has taken only limited advantage of these approaches, partly because of several barriers. Implementing these arrangements can be time-consuming, complex, and manpower-intensive, and they require significant local knowledge and ongoing community and partner communications. In addition, their implementation and development usually require financial, legal, contracting, real estate, engineering, and other technical expertise and resources, and these are not always readily available on the installation.

Given the benefits and challenges, the Assistant Chief of Staff for Installation Management (ACSIM) asked the RAND Corporation's Arroyo Center to assess these arrangements and provide recommendations to help overcome barriers, thereby allowing the Army to successfully carry out more of these installation real estate and facility approaches. Our research team did this through a series of three analyses that relied on analysis of military Service and RAND databases and installation data, document and literature reviews, interviews, and case studies. The first analysis focused on identifying the most promising approaches for saving Army costs and earning funds for installations. We did this by identifying approaches and practices for developing and implementing installation real estate and facility deals and partnerships. The second and third analyses focused on two promising approaches identified in the first analysis: (1) outgrants, particularly large-scale leases—sometimes called enhanced use leases (EULs)—and (2) facility and infrastructure sharing partnerships.

What We Found

Findings from Analysis 1: Most Promising Approaches

In the first analysis, we identified approaches and practices that can be used to develop and implement installation real estate and facility deals and partnerships, with the goals of both understanding the possible approaches and prioritizing them in terms of how useful they are

to the military in terms of either saving money or earning funds for installations. The analysis identified three main categories:

1. outgrants
2. facility and infrastructure sharing partnerships
3. other facility and land use partnerships and deals.

An *outgrant* is a legal document, such as a lease or easement, that gives external organizations the right to use Army installation land or facilities. U.S. military installations leasing land or other high-value assets to public or private entities in exchange for monetary or in-kind payments, as occurs in EUL real estate arrangements, have generated significant revenues and saved the U.S. Department of Defense (DoD) millions of dollars each year.

A facility and infrastructure sharing partnership is one in which a military installation partners with one or more other organization, typically another government agency, in sharing a facility or infrastructure for mutual benefits. Sharing can occur with a federal, state, or local government agency (or agencies) and can take many different forms, such as sharing an installation facility or a partner facility—e.g., a library, swimming pool, wastewater facility, or small-arms range. In some limited cases, the military can simply opt to use the civilian facility and save money by closing its installation facility.

Other facility and land use partnerships and deals are specialized approaches that do not directly fall into the first two categories. These include arrangements, for example, where a community chooses to donate funds to construct a new installation facility; to help fund upgrades to an existing one; or to help operate, fund, or maintain an installation museum.

In assessing the three approaches, we found that outgrants and facility and infrastructure sharing partnerships are the most common land use and facility deals and partnership approaches that can and have earned funds or saved money at military installations and that provide other benefits (such as enhancing installation operations and readiness and improving support for military personnel and their families). These two categories are the focus of the other two analyses. Although all three approaches share lessons learned, one important cross-cutting finding is that state and local governments play a key role in many of the installation land use and facility deals and partnerships as facilitators, catalysts, partners, and/or funders.

Findings from Analysis 2: Assessing Large-Scale Outgrants

In our analysis of military experiences using EULs and other forms of large-scale outgrants, we identified several lessons learned regarding benefits of outgrants, challenges in using outgrants, and ways to address those challenges. Outgrants can provide a variety of benefits: (1) saving costs and earning revenues for the installation; (2) enhancing the military mission and installation readiness; (3) improving support for military personnel and their families; (4) providing morale and productivity improvements; (5) providing uses for underutilized installation property; (6) protecting and preserving installation real property; (7) providing installation land management and energy and environmental benefits; (8) having public and community relations benefits for the installation; and (9) providing community benefits, such as helping the local economy. Not every large-scale outgrant has all these benefits, but most have many of them.

This analysis also identified ten main challenges in developing and implementing large-scale outgrants. First, development and implementation of these complex deals often require

diverse specialized expertise, such as real estate, legal, financial, contracting, engineering, and other technical skills. Second, Army installation personnel often lack the knowledge, training, expertise, motivation, and time to pursue innovative opportunities. Army installations receive only 50 percent of the revenues and do not receive those funds immediately because they first must be deposited into a special U.S. Treasury account. These are disincentives for installation managers to pursue large-scale outgrants. Third, it can be challenging to find a partner who wants to use the property. Fourth, the military is required to receive fair market value for the property and must determine a viable business case for both partners, which can be barriers to these deals. The fifth and six challenges are issues of scoring by the U.S. Office of Management and Budget and the Congressional Budget Office for outgrants and installation security and access concerns. Seventh, EULs and other larger outgrant deals often take a long time to develop and implement—especially because of the legal and military requirements, oversight, and management approvals processes. Eighth, infrastructure issues and other outgrant support issues can create problems in developing the outgrant deal. Ninth, determining how to manage and share risks associated with the outgrant deal can be a challenge. Last, cultural differences between military installations and potential partners, such as differences in decisionmaking and legal authorities and processes, sometimes must be addressed.

Our second analysis also identified some lessons to overcome some of these challenges. First, state and local governments can play an important role in helping to overcome the barriers in large-scale outgrant deals by being facilitators or catalysts for the deals (such as helping to find a partner and to create a viable business case), by leasing the property, and by providing financial assistance. Second, installation staff need leadership support and technical assistance to help with these deals—not just legal and real property help, but also financial, business, contracting, and engineering help. Third, the challenges associated with large-scale leases payments having to go in a special U.S. Treasury account instead of a local account could be dealt with by changing the legislation and allowing the installation to use a trust account or some other type of local account. A fourth proposed solution is to speed up the DoD EUL and other large-scale outgrant development and approval processes. Fifth, another important lesson learned is the importance of ongoing communications among all the different stakeholders in the process. The final lesson learned is for the military to address the challenge of security and access issues by leasing out land and buildings near the perimeter of the installation and moving the fence line.

This analysis also identified three additional lessons learned: (1) Air Force and Army outgrant experiences (both more successful and less successful) show that determining an appropriate value for the installation property and what is exchanged for that property are critical to the outgrant success; (2) Air Force base experiences with developing and implementing EULs have shown that EULs do not have to be at an installation that is in a high-property value or urban area; and (3) Army contractors might provide a potential opportunity for future installation outgrants.

Findings from Analysis 3: Assessing Facility and Infrastructure Sharing Partnerships

This analysis developed categories of facility and infrastructure sharing partnerships, then derived lessons learned about the motivation of facility and infrastructure sharing partnerships, the benefits of them, the challenges in using them, and key factors needed to address those challenges.

We developed a database with 85 examples of installation partnerships that involved some level of sharing facilities or infrastructure on or off the installation. We focused on 11 case studies—eight U.S. military installation facility and infrastructure sharing partnerships and three noninstallation federal national security organizations’ facility partnerships. The analysis identified four categories of facility and infrastructure sharing partnerships: (1) joint use of a facility or infrastructure on a military installation; (2) joint use of a partner facility or infrastructure in the community; (3) joint construction and use of a facility or infrastructure that is not on the military installation; and (4) other facility and infrastructure sharing partnerships.

The analysis revealed some benefits. Specifically, these partnerships can save costs and enhance the installation’s operations and mission. For instance, cost-saving benefits can include paying less for facility construction or leasing costs and operations and maintenance costs; and installation operational and mission benefits can include improving the effectiveness of the Army mission, providing better support services to Soldiers and their families, advancing technology development, and improving installation water security. These partnerships are often motivated by mission needs and a desire to reduce costs. The need to decide about a major facility investment, such as the need to upgrade or renovate an existing building or erect a new one, often provides a partnership opportunity. The partnership can also enable innovation in space design, such as energy and environmental efficiencies, amenities and aesthetics, future space flexibility, and layout and workspaces to promote collaboration.

Despite their significant benefits, partnerships come with a variety of challenges. Just as with many large-scale outgrant deals, these partnerships often take years and a large amount of qualified staff time to develop and implement. Similarly, one of the main barriers to developing and implementing partnerships is that installation and partner personnel lack the required knowledge, expertise, incentives, and time. Another main obstacle is the existence of organizational cultural barriers, which include both (1) the differences in the partner agencies’ values, social environment, and managerial structures and practices and (2) the ways in which agency employees interact with each other and with individuals from other agencies.

This analysis also revealed some lessons learned to help achieve the benefits and overcome the challenges in terms of seven key success factors: (1) Employ strong leadership and project champions; (2) engage staff and stakeholders early in the process; (3) provide qualified management and technical staff; (4) implement ongoing communications across all stakeholders; (5) provide well-defined policy, doctrine, and project design; (6) take advantage of a major decision point for a facility investment; and (7) provide up-front staff and funding resources.

Two more-general lessons learned also emerged: (1) Organizations that are not direct partners to the project can be key facilitators for the partnership; and (2) some things (e.g., relying too much on a leader or champion) should be avoided, if possible, when developing and implementing installation facility and infrastructure sharing partnerships.

What We Recommend

Our recommendations fall into three main areas: general recommendations that are common across all the facility and land use deals and partnerships; recommendations to help the Army develop and implement more installation large-scale leases and other outgrants; and policy and installation-level recommendations for developing and implementing a shared facility or infrastructure partnership.

General Recommendations for Facility and Land-Use Deals and Partnerships

In this area, we offer five main recommendations:

1. The Army should enhance and provide stronger guidance, training, and assistance for developing and implementing installation land use and facility/infrastructure sharing partnerships and deals.
2. The Army should develop well-established processes and incentives for developing and implementing partnerships for facilities and land use.
3. Useful insights and lessons should be drawn from military installations' and other federal agencies' experiences with these approaches, and these insights should be used to inform future activities. To do this, the Army should provide written, in-depth case studies and lessons learned from Army, Air Force, and other federal installation facility sharing and land use partnership and outgrant experiences. In addition, ACSIM, in partnership with other parts of DoD, should develop templates and fact sheets for facility sharing partnerships, large-scale outgrants, and other facility sharing and land use partnerships.
4. ACSIM; the Assistant Secretary of the Army (Installations, Energy and Environment); U.S. Army Corps of Engineers, and Installation Management Command and the other landholding commands should do more to document policies and lessons learned about these approaches and disseminate them to installations through diverse methods.
5. The Army at all levels should improve community outreach and engagement to help conduct more facility and land use partnerships and deals. Specifically, Army headquarters organizations, such as ACSIM, should engage more with national organizations that represent and support state and local governments (such as the Association of Defense Communities, National Governors Association, and the International City/County Management Association) that can be key partners in these activities. Similarly, Army regional organizations and installations should work more with individual state and local organizations to help implement more facility sharing and land use partnerships and deals that benefit both Army installations and the communities.

Recommendations for Improving Army Processes for Supporting Installation Large-Scale Leases and Other Outgrants

The Army could improve its processes for supporting the development and implementation of large-scale leases (such as EULs) and other installation outgrants. First, the Army should provide strong leadership support to help develop and implement more of these outgrants by strengthening policy guidance and outreach to installations and providing clear, consistent messages about leadership support and the benefits from outgrants. Because of some negative connotations associated with the term *EUL*, we suggest the Army create a new name for these types of large-scale outgrants, perhaps calling them *partnership leases*. The Army should also consider creating an *Installation Partnership Leases Program* that focuses on and provides support for all installation leases (including what used to be called EULs, the large-scale energy leases, and smaller leases), and advertise this new program with communities, industries, and installations. In providing this support, the Army needs to manage expectations by providing realistic time lines about the process and the value of the deals. In addition, the Army should have a policy that the outgrants should be solvent for the partners without relying on DoD use of the leased property.

Second, the Army should create more incentives for installations to do outgrants. To do this, Army leadership should align and balance incentives across different levels of the Army. Increasing the use of underutilized property through leases or other arrangements can save resources that would be spent on the property in the absence of such arrangements. The Army should consider revising its policy so that the priority for the use of the first 50 percent of installation revenues is for facilities that support installation readiness. This sort of priority more directly links installation revenue investments to installation readiness. For the garrison commanders and installation personnel, the Army should consider providing them with greater control over a larger portion of the outgrant revenues, perhaps 75–80 percent, with the remaining amount going to the landholding command. In short, Army policy could be changed so that installations can receive more than just 50 percent of the outgrant proceeds and also ensure quicker reception of the funds.

Third, the Army should also ensure that installation managers and staff have the technical assistance needed to develop and implement large-scale outgrant deals, similar to what the Air Force Civil Engineer Center (AFCEC) provides to Air Force installations. We suggest two possible options for doing this: Conduct a couple of Army installation partnership lease pilots using the support of AFCEC or invest Army resources to create a centralized Army organization to assist installations, using AFCEC as a model.

Fourth, the Army needs to document and disseminate lessons learned to installations from previous EULs and other large-scale outgrant experiences. Documentation should include fact sheets, templates, and in-depth case studies of success stories. These products should include descriptions of the challenges and how they were dealt with, discussions of the benefits garnered by all the partners, and the lessons learned, including lessons from all military Services and also from the failures.

Fifth, the Army should work with communities to develop and implement more large-scale outgrants. ACSIM could team with the Association of Defense Communities, National Governors Association, International City/County Management Association, or similar organizations to create a task force on facilitating more installation outgrants. ACSIM could also team with its counterparts in the Air Force and Navy in these activities. The Army at all levels should engage more state and local government economic agencies and defense associations to help develop more large-scale outgrants because these groups can facilitate, participate in, and help fund deals.

Sixth, the Army should simplify the leasing process. This would require both legislative and Army policy changes to allow installations to acquire the revenues and in-kind considerations more easily and more quickly. Changes should be made to the special accounting rules so that installations can receive the revenues sooner. The legislation, 10 U.S.C. § 2667, could be changed to grant installations more flexibility to take lease funds, both as cash and for in-kind considerations.¹ Changes should also be made in the competition, fair-market-value assessment, and scoring processes by the U.S. Office of Management and Budget and the Congressional Budget Office. Legislative and policy changes are needed to allow more flexibility to relax rules in cases where there are multiple benefits to the installation and public, such as a large-scale leasing deal with a local government that improves public infrastructure.

¹ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2667, Leases: Non-Excess Property of Military Departments and Defense Agencies.

Last, the Army should reexamine and consider changing contracting policies so contractors lease the space they use instead of getting free space on the installation.

Army Policy and Installation Recommendations When Developing a Joint Facility or Infrastructure Sharing Partnership

The Army should change installation master planning and real property policies to give greater weight to infrastructure and facility sharing partnerships in facility planning and decision-making. Policies should be changed so that installation managers and planners consider using any major decision point regarding a facility investment that does not affect the mission as an opportunity to partner and innovate.

At the installation level, once the installation managers have decided to develop a joint infrastructure or facility sharing partnership, we recommend the following several actions by partnership planners to help ensure a more successful partnership:

- Develop a vision and plan for the partnership process and facility sharing.
- Cultivate support from key leaders, stakeholder organizations, and individuals, and develop champions for the partnership.
- Secure up-front resource investments (e.g., financial and staff resources) for the development and implementation of the partnership.
- Develop a communications strategy for the change that addresses partnership staff, leaders, and other stakeholders.
- Implement incentives and other methods in the process to minimize the impact of change on the staff.
- Include well-defined and well-documented roles, responsibilities, and accountability among partnership stakeholders throughout the process.

With respect to implementing the partnership and for planning and designing the facility, we recommend the Army installation and partners negotiate how to share the specific facility space, risks, and costs, and put the negotiated terms in a written agreement. Clear policy, doctrine, and project design for the facility space should spell out, among other things, how to address the different partner security concerns and the expected partner staff roles and responsibilities in the new facility. Where possible, the facility design should include sustainability features, future space flexibility, aesthetics, amenities, and incentives so that installation staff and partner members see the facility as a desirable place to work.

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Abbreviations

ABIS	Automated Biometrics Identification System
ACSC	Australian Cyber Security Centre
ACSIM	Assistant Chief of Staff for Installation Management
ADC	Association of Defense Communities
AFCP	Air Force Community Partnership
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AMRDEC	Army Aviation and Missile Research, Development and Engineering Center
APG	Aberdeen Proving Ground
APS	Arizona Public Service
AR	Army Regulation
ARNG	Army National Guard
ASA(IE&E)	Assistant Secretary of the Army (Installations, Energy and Environment)
ASD	Australian Signals Directorate
ASIO	Australian Security Intelligence Organisation
BAMC	Brooke Army Medical Center
BRAC	Base Realignment and Closure
BTC	Biometrics Technology Center
CBO	Congressional Budget Office
CJIS	Criminal Justice Information Services
CRADA	cooperative research and development agreement
DASA(IH&P)	Deputy Assistant Secretary of the Army (Installations, Housing and Partnerships)
DGIFC	Defence Geospatial and Intelligence Fusion Centre
DGRC	Defense Non-Tactical Generator and Rail Equipment Center
DoD	U.S. Department of Defense
DPW	Directorate of Public Works
EPA	educational partnership agreement

EUL	enhanced use lease
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FDRHPO	Fort Drum Regional Health Planning Organization
FEMA	Federal Emergency Management Agency
FMV	fair market value
FP	force protection
FVEY	“Five Eyes” (intelligence group consisting of intelligence organizations from Australia, Canada, New Zealand, the United Kingdom, and the United States)
FY	fiscal year
GAO	U.S. Government Accountability Office
GM	General Motors
IAFIS	Integrated Automated Fingerprint Identification System
ICMA	International City/County Management Association
IGSA	Intergovernmental Support Agreement
IMCOM	Installation Management Command
IT	information technology
JARIC	Joint Aerial Reconnaissance Intelligence Centre
JBMDL	Joint Base McGuire-Dix-Lakehurst
JBSA	Joint Base San Antonio
LEED	Leadership in Energy and Environmental Design
MILCON	military construction
MNARNG	Minnesota Army National Guard
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MWR	Morale, Welfare, and Recreation
N/A	not applicable
NASA	National Aeronautics and Space Administration
NDAA	National Defense Authorization Act
NEPA	National Environmental Policy Act
NGI	Next Generation Identification
NGO	nongovernmental organization
NPV	net present value
NSA	National Security Agency
O&M	operations and maintenance
OEI	Office of Energy Initiatives
OMB	U.S. Office of Management and Budget

OSD	Office of the Secretary of Defense
PPA	Power Purchase Agreement
R&D	research and development
RAF	Royal Air Force
RGAAF	Robert Gray Army Airfield
SCIF	Secure Compartmented Information Facility
Section 2667	Section 2667 of Title 10 of the U.S. Code, pertaining to the Armed Forces
Section 2668	Section 2668 of Title 10 of the U.S. Code, pertaining to the Armed Forces
SF	square feet
STEM	science, technology, engineering, and mathematics
TACC	Training and Community Center
UAS	unmanned aerial system
UK	United Kingdom
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
VA	Veterans Administration
VBT	Value Based Transaction
WRF	water reclamation facility

Introduction

Army and other Service installations have a long history of partnering with communities across a wide variety of functional areas to leverage government resources and save money. In general, an installation partnership is formed when a military installation agrees to work with nonmilitary organization (or more than one), such as a local government agency or a company, to derive mutual benefits. The partner organizations invest in the partnership by sharing responsibilities, information, resources, risks, and rewards. These partnerships usually involve a long-term relationship. Previous RAND Corporation research has found that installation partnerships that have saved the military the most money are those that involve installation real estate, buildings, or other large-scale facilities.¹ These partnerships or real-estate deals in which the installation leases land or shares another high-value asset in exchange for monetary or in-kind payments, such as enhanced use lease (EUL) agreements and other large-scale outgrant deals, have generated significant revenues and saved the U.S. Department of Defense (DoD) millions of dollars over time.

Army installations are facing significant budget reductions and need to find ways to maintain operations with declining budgets. An installation land use or facility partnership deal can provide a way for the Army to save and earn large amounts of money, but there are many challenges to installations conducting such projects. If Army installations could successfully implement more large-scale outgrant deals and other real estate and facility deals and partnership approaches, it could help them save costs and earn revenues to help pay for installation operations and enhance readiness.

Even though the Army has taken advantage of some of these approaches, their application has been limited so far. There are many barriers to installations successfully developing and implementing large-scale leasing deals, facility partnerships, and other partnership approaches. In particular, these deals are time-consuming, complex, and manpower-intensive, and they require significant local knowledge and ongoing community and partner communications. In addition, they usually require financial, legal, contracting, real estate, engineering, and other technical expertise and resources to develop and implement.

Given the opportunities and challenges, the Assistant Chief of Staff for Installation Management (ACSIM) asked RAND Arroyo Center to assess these barriers and provide recommendations to help overcome them so that the Army can successfully implement more of these installation real estate and facility approaches.

¹ See Beth E. Lachman, Susan A. Resetar, and Frank Camm, *Military Installation Public-to-Public Partnerships: Lessons from Past and Current Experiences*, Santa Monica, Calif.: RAND Corporation, RR-1419-A/AF/NAVY/OSD, 2016.

The specific objective of this project was to (1) assess Army installation real estate and facility deals and partnership approaches, such as EUL deals, that save costs or earn funds for Army installations and (2) recommend ways to facilitate more-effective installation use of these approaches. The study had the following four main tasks:

1. Examine the range of approaches and practices for developing and implementing installation real estate and facility deals and partnerships to identify the most-promising approaches for saving Army costs and earning funds for installations.
2. Analyze military installation experiences with developing and implementing real estate and facility deals and partnerships.
3. Identify and assess ways to improve Army policies and approaches for developing and implementing installation real estate and facility deals and partnerships.
4. Develop and document recommendations to improve the implementation of installation real estate and facility deals and partnerships.

Methodology

Our methodology consisted of three main analyses. The first analysis focused on **identifying the approaches and practices for developing and implementing installation real estate and facility deals and partnerships to determine the most-promising approaches for saving Army costs and earning funds for installations**. For this analysis, we conducted document reviews, interviews with DoD personnel, and analysis of Service and RAND databases and installation data. As part of the document review, we examined legislation and DoD policies regarding installation real estate and facility deals and partnership approaches, including legal language and restrictions, types of outgrants, and diverse Service approaches. The databases we examined included an Army partnership survey of more than 250 partnership examples,² the Air Force Community Partnership (AFCP) Program website, and an AFCP database consisting of more than 200 existing U.S. Air Force (USAF) installation partnerships and information about additional partnership ideas still being developed. We also built on previous RAND military installation partnership research, including using part of the database consisting of a representative sample of more than 300 existing diverse military installation partnerships and installation interviews.³ We used all these sources to examine the different types of installation outgrant and partnership examples, including the estimated cost savings, earnings, and other benefits associated with the examples.

² In 2013, the Army requested that installations submit information about existing partnerships with other public organizations, including a brief description of the partnership, who the partner is, and what type of agreement was used. The quality of the Army survey results varied: Some installations, such as Fort Carson and Fort Bliss, provided very detailed information about diverse partnerships; others provided little to no information. There are likely several reasons for the mixed results, such as the fact that often a single records person replied to the installation survey and the fact that the partnerships occur in many different functional areas; often, one person does not know about all partnerships in all functional areas. We also found Army installation partnership examples through our literature search and interviews that were not included in the Army survey results, even for installations that had provided information about many different partnerships, such as Fort Bliss and Fort Carson.

³ For more information about this research, see Lachman, Resetar, and Camm, 2016.

In doing this first analysis, we found that outgrants and facility and infrastructure sharing partnerships are the most common land use and facility deals and partnership approaches that can and have earned funds or saved money at military installations. Thus, we conducted detailed analyses on these two approaches in the other two main analyses.

The second analysis focused on **assessing the Army and Air Force outgrant processes**. Because outgrants involve a real estate transaction that gives external organizations the legal right to use military installation land use and facilities, such as through a lease or easement, installations follow a well-defined process for implementing deals, although there are differences among the Services, especially between the Army and Air Force. For this assessment, we conducted a literature review, a legal analysis of the requirements, and interviews with military real estate, legal, real property, financial, and other relevant experts from the installation to headquarters level about the outgrant processes. For instance, we interviewed Army, USAF, Navy, and Office of Secretary of Defense (OSD) headquarters staff and former staff experienced in real property management and the outgrant process. Installation interviews included discussions with garrison and wing commanders; with real property, legal, financial, and Directorate of Public Works (DPW) staff; and with community leaders and other partner members involved in more than a dozen different Army and USAF outgrant deals. Each interview lasted from about 30 to 60 minutes. We analyzed different federal agency EUL and other outgrant activities, such as lessons from installation experiences and the differences between Army and USAF policies and implementation. We also examined the legislation and National Aeronautics and Space Administration (NASA), Veterans Affairs (VA), Navy, and OSD policies and experiences. In addition, we identified barriers and lessons learned and assessed ways to overcome implementation barriers for the Army. Our analysis also focused on ways to retain cost savings and leasing earnings to invest at installations and the fair market value (FMV) requirements. We examined detailed information for more than 20 existing military installation EULs (most of the currently existing ones), a half-dozen EULs that never developed or that terminated early, and at least six other outgrants; we discussed these with different DoD participants and experts.

The third analysis focused on **assessing facility and infrastructure sharing partnerships**. Because there are a great variety of approaches and processes for developing and implementing installation facility and infrastructure sharing partnerships, we took a different approach to assess these opportunities. For these partnerships, we developed an Excel database with 85 different examples of military installation facility and infrastructure sharing partnerships to capture the variety of existing approaches. To develop this database, we used the aforementioned data sources: the RAND database of more than 300 diverse existing military installation partnerships, the AFCP database of more than 200 partnership activities, and the Army survey database. We also interviewed military experts and conducted literature reviews to identify and examine other examples and to discuss barriers and ways to address them. We assessed the information from the interviews, literature, and databases to categorize the different types of facility and infrastructure sharing partnerships and to develop lessons learned.

Then, we chose a diverse sample of these partnerships as case studies. We conducted eight in-depth case studies of installation facility and infrastructure sharing partnerships and three other in-depth case studies of federal national security facility sharing partnerships. These later cases took advantage of other RAND research on facility sharing partnerships. All told, the 11 case studies were chosen to represent a diverse variety of different functional areas, facility types, length of time since the partnership was implemented, and diversity of partner

types. Cases also needed to be considered mostly successful,⁴ and they had to have yielded cost savings and other benefits for the military partner. We also had to be able to find sufficient information on the case studies from the literature and to interview some military and partner personnel who had been involved in the partnership development or implementation.⁵ After identifying the cases to be studied, we interviewed participants who were involved in different stages of the development and implementation of the partnerships. The interviewees were both management and technical staff and from both the military and their partners. The interviewees provided valuable insights, perspectives, and details about the cases that could not be found in the public literature. We interviewed from one to five people for each case study, with most cases involving at least two different people. Each interview lasted from about 30 to 60 minutes.

Overall, for the three different analyses, we interviewed diverse Army headquarters staff: ACSIM, Assistant Secretary of the Army (Installations, Energy and Environment (ASA[IE&E])), and Installation Management Command (IMCOM). We also interviewed U.S. Army Corps of Engineers (USACE), Air Force Civil Engineer Center (AFCEC), USAF headquarters, Navy, and OSD personnel about installation outgrant experiences, requirements and policies, and installation partnerships. We also interviewed USAF and Army installation and community staff about outgrants and/or partnerships at more than a dozen military installations including: Aberdeen Proving Ground (APG), Fort Carson, Fort Drum, Fort Hood, Fort Huachuca, Fort Knox, Fort Polk, Eglin Air Force Base (AFB), Ellsworth AFB, Grand Forks AFB, Hill AFB, Joint Base San Antonio (JBSA), Nellis AFB, Redstone Arsenal, and Seymour Johnson AFB. For example, we interviewed personnel at Ellsworth AFB about their leases and Fort Hood and City of Killeen personnel about their joint use airport partnership. All told, we interviewed more than 70 people.

Finally, we attended two relevant Association of Defense Communities (ADC) conferences: the Installation Innovation 2017 Conference in San Antonio, Texas, in February 2017, and the 2017 Defense Communities National Summit in Washington, D.C., in June 2017, at which we had additional discussions with installation and community staff.

Scoping

This study is focused on how to implement more-effective and more-efficient outgrant deals and partnerships. Specifically, we focused on identifying the installation land use and facility deals and partnership approaches with the most opportunities to earn funds and save installation costs and on how to more effectively develop and implement more of these deals and partnerships. Our study was not focused on conducting a cost-benefit analysis of the installation real estate and facility deals and partnerships, nor even on elaborating all the benefits and risks. It was also not intended to justify conducting partnerships or to discuss all the pros and cons

⁴ By *mostly successful*, we mean cases that had been implemented or least partially implemented and appeared to be experiencing some cost savings and/or other benefits. These partnerships were in different stages of development, and at least one had been delayed and was not yet experiencing all the anticipated benefits, so we use the subject term *mostly successful* because more time is needed to evaluate the full level of success for all these cases.

⁵ We also interviewed military experts, such as garrison and deputy garrison commanders, about the less-successful partnerships to help learn from mistakes.

of partnerships. Previous research, such as *Military Installation Public-to-Public Partnerships: Lessons from Past and Current Experiences*,⁶ has shown the benefits of installation partnerships, discussed the pros and cons, and described how partnerships should be assessed and considered along with other approaches when installations are focused on reducing costs. However, we should note that a secondary objective to our study was to acknowledge nonmonetary benefits for the Army, such as enhancement to installation operations and readiness, from implementing these approaches.

How to Read This Report

This report was written for diverse audiences, including Army leadership, other DoD leaders and decisionmakers, members of Congress, installation staff, and community and industry members who might want to partner with Army installations in land use deals or facility sharing partnerships. Different audiences have different needs and interests. Some people might want to read this report cover to cover; others could choose to read just the parts that are of most interest to them. For example, some installation or community staff might be most interested in the implementation details about particular case studies, which are discussed in the appendixes; they can choose to read only those portions. The main report was written for readers who have a basic understanding of the topics, and the appendixes provide more explanation. For the most part, the appendixes, especially the cases studies, were written so that they do not depend on the reader having read the report. Because these appendixes' installation case studies were written to be able to stand alone, there is some redundancy between the descriptions in them and in the main report. The names of the 30 main case studies used throughout the report are listed in Table 1.1, along with the main location of the case studies and which type of case studies they are.

Next, we describe the general content of each chapter and appendix so that readers can identify the ones that best serve their interests.

In Chapter Two, we describe our analysis of examining the approaches and practices for developing and implementing installation real estate and facility deals and partnerships to identify the most-promising approaches for saving Army costs and earning funds for installations. This chapter also provides an overview of the different agreement types used to implement installation land use and facility deals and partnerships, and the cross-cutting role of state and local governments in these approaches. In Chapter Three, we discuss the results of our analysis of outgrants (case studies in blue and purple rows in Table 1.1). Chapter Four describes our facility and infrastructure sharing partnerships results (case studies in green and purple rows in Table 1.1). Last, Chapter Five presents some overall conclusions and some recommendations derived from those conclusions that should be of interest to Army and DoD headquarters commanders and decisionmakers, congressional leaders, and installation commanders and managers.

The document also contains three appendixes. Appendix A provides more detail on the case study examples of installation outgrants that are summarized in Chapter Three. Appendix B discusses the outgrant process and provides more information about the policies and legal requirements on outgrants, including an explanation of how outgrant payments are accepted

⁶ Lachman, Resetar, and Camm, 2016.

and how the installations use them. Those interested only in outgrants might choose to read Chapter Three, parts of Chapter Five related to outgrants, and Appendixes A and B.

Appendix C provides some additional examples of national security facility and infrastructure sharing partnerships. Because Chapter Five describes our facility and infrastructure sharing partnerships, those readers who are interested in the facility and infrastructure partnerships might choose to read all or parts of Chapter Five, and Appendix C. However, two of the facility sharing partnerships are also outgrant case studies (the Nellis AFB and City of North Las Vegas EUL, and the Seymour Johnson AFB and City of Goldsboro Sports Complex EUL), so they are discussed in Appendix A.

Table 1.1
Main Case Studies and Their Main Locations in This Report

Case Study Title	Main Discussion Location in the Report	Type of Case Study	U.S. Military Service or Country Involved in the Partnership
APG EUL	Table 3.1, "Developing and Implementing EULs" section of Chapter Three, and "Army EULs" section of Appendix A	Army outgrant	Army
Australian Cyber Security Centre (ACSC)	Table 4.3 and Appendix C	Non-Installation Federal National Security Facility Sharing Partnership with Other Federal Agencies	Australia
Eglin AFB–Community Airport EUL	Table 3.2 and "Air Force EULs" section of Appendix A	Air Force outgrant	Air Force
Eglin AFB–Emerald Breeze Hotel EUL	Table 3.2 and "Air Force EULs" section of Appendix A	Air Force outgrant	Air Force
Eglin AFB–Solar Array EUL	Table 3.2 and "Air Force EULs" section of Appendix A	Air Force outgrant	Air Force
Eglin AFB–Water Reclamation Facility EUL	Table 3.2 and "Air Force EULs" section of Appendix A	Air Force outgrant	Air Force
Eglin AFB Easement to the Mid-Bay Bridge Authority for a New Connector Road	"Other Large-Scale Leases and Easements" section of Chapter Three and "Other Large-Scale Outgrants" section of Appendix A	Air Force outgrant	Air Force
Ellsworth AFB Leasing 21,000 Square Feet (SF) to a Health Care Company in a Shared Office Building	"Other Large-Scale Leases and Easements" section of Chapter Three and "Other Large-Scale Outgrants" section of Appendix A	Air Force outgrant	Air Force
Fort Detrick Central Utility Plant EUL	Table 3.1	Army outgrant	Army
Fort Drum Community Regional Healthcare Partnership	Table 4.2 and Appendix C	Military Installation Facility Sharing Partnership with Other Government Agencies	Army
Fort Hood and City of Killeen Joint Use Airport	Table 4.2 and Appendix C	Military Installation Facility Sharing Partnership with Other Government Agencies	Army

Table 1.1—Continued

Case Study Title	Main Discussion Location in the Report	Type of Case Study	U.S. Military Service or Country Involved in the Partnership
Fort Huachuca and the City of Sierra Vista Library Partnership	Table 4.2 and Appendix C	Military Installation Facility Sharing Partnership with Other Government Agencies	Army
Fort Knox Animal Shelter Partnership	Table 4.1	Joint use of a partner facility in the community	Army
Fort Meade Reclaimed Water Partnership Between National Security Agency (NSA) and Howard County, Maryland	Table 4.2 and Appendix C	Military Installation Infrastructure Sharing Partnership with Other Government Agencies	Army
Fort Sam Houston EUL—Became JBSA Office Space EUL	“Issues that Occurred with Early EUL Implementation” section of Chapter Three and Appendix A	Army and then Air Force outgrant	Army and Air Force
Grand Forks AFB—Unmanned Aerial Systems Industrial Park EUL	Table 3.2 and “Air Force EULs” section of Appendix A	Air Force outgrant	Air Force
Hill AFB—Research and Technology Park EUL	Table 3.2 and “Air Force EULs” section of Appendix A	Air Force outgrant	Air Force
Joint Base McGuire-Dix-Lakehurst (JBMDL)—Solar Array EUL	Table 3.2 and “Air Force EULs” section of Appendix A	Air Force outgrant	Air Force
Luke AFB—Solar Array EUL	Table 3.2 and “Air Force EULs” section of Appendix A	Air Force outgrant	Air Force
Minnesota Army National Guard (ARNG) Training and Community Center (TACC) Partnerships with Communities	Table 4.2 and Appendix C	Military Installation Facility Sharing Partnership with Other Government Agencies	Army
Nebraska ARNG and Omaha Police and Fire Training Center Partnership	Table 4.1	Joint construction and use of a facility that is not on the military installation	Army
Nellis AFB and City of North Las Vegas Wastewater Facility and Fitness Center EUL	Table 3.2, “Developing and Implementing EULs” section of Chapter Three, Table 4.2, and “Air Force EULs” section of Appendix A	USAF outgrant and Military Installation Facility and Infrastructure Sharing Partnership with Other Government Agencies	Air Force
Picatinny Arsenal EUL	Table 3.1	Army outgrant	Army

Table 1.1—Continued

Case Study Title	Main Discussion Location in the Report	Type of Case Study	U.S. Military Service or Country Involved in the Partnership
Redstone Arsenal and NASA Partnerships	Table 4.2 and Appendix C	Military Installation Facility Sharing Partnership with Other Government Agencies	Army
Redstone Arsenal EUL	Table 3.1 and “Army EULs” section of Appendix A	Army outgrant	Army
Seymour Johnson AFB—City of Goldsboro Sports Complex EUL	Table 3.2, Table 4.2, and “Air Force EULs” section of Appendix A	USAF outgrant and Military Installation Facility Sharing Partnership with Other Government Agencies	Air Force
U.S. Biometrics Technology Center (BTC)	Table 4.3 and Appendix C	Non-Installation Federal National Security Facility Sharing Partnership with Other Federal Agencies	Army
United Kingdom (UK) Defence Geospatial and Intelligence Fusion Centre (DGIFC) and the Pathfinder Building	Table 4.3 and Appendix C	Non-Installation Federal National Security Facility Sharing Partnership with Other Federal Agencies	UK
Wright Patterson AFB Partnership Where Community Members Use the Base Pool	Table 4.1	Joint use of a facility on the installation	Air Force
Yuma Proving Ground Vehicle Hot Weather Test Track EUL	Table 3.1 and “Army EULs” section of Appendix A	Army outgrant	Army
NOTE: Blue rows indicate case studies that are outgrants; green rows are facility and infrastructure sharing partnerships; and purple rows are partnerships that are both outgrants and facility sharing partnerships.			

Identifying Approaches and Practices for Developing and Implementing Installation Facility Sharing and Real Estate Deals and Partnerships

Our first analysis was intended to broadly focus on identifying the approaches and practices that can be used to develop and implement installation real estate and facility sharing deals and partnerships. The intent was both to understand the possible approaches and to prioritize them in terms of how useful they are in saving military money or earning funds for installations.

Here, we examine the approaches to developing and implementing installation land use and facility deals and partnerships, followed by an examination of the practices or agreement types that can be used. We conclude with a discussion of an important cross-cutting lesson learned across all the approaches.

Approaches to Develop and Implement Installation Land Use and Facility Sharing Deals and Partnerships

To assess Army installation real estate and facility and infrastructure sharing deals and partnerships, we examined the many different approaches that installations can and do use. We wanted to analyze approaches that earned funds or saved the military money, so we focused on the land use and facility/infrastructure sharing deals and partnerships that offer such opportunities. After examining the approaches, we grouped them into the following three main categories: (1) outgrants; (2) facility and infrastructure sharing partnerships; and (3) other facility and land use partnerships and deals.

Outgrants

An outgrant is a legal document that gives a non-Army organization the right to use Army installation land or facilities, such as a lease or easement. U.S. military installations leasing land or another high-value asset to another public or private entity in exchange for monetary or in-kind payments, as occurs in EUL real estate deals, have generated significant revenues and saved DoD millions of dollars each year. For example, 11 Air Force installation EULs implemented in the past 12 years have generated more than \$55,155,000 in revenue as of March 2017.¹ Installations have used and can use outgrant deals to earn revenue and take advantage of underutilized installation facilities, land, and other real property. We assess outgrants in more detail in Chapter Three as part of our second analysis.

¹ AFCEC, “Air Force Enhanced Use Lease Workshop,” briefing, June 19, 2017, p. 20.

Facility and Infrastructure Sharing Partnerships

A facility and infrastructure sharing partnership occurs when a military installation partners with one or more other organization(s), usually another government agency, in sharing a facility or infrastructure for mutual benefits. Sharing can occur with one or more other federal, state, or local government agencies and can take many different forms, such as sharing an installation facility or a partner facility. In some cases, the military installation could choose to close its facility and just use the community facility instead. The military can save significant funds by doing this because it no longer needs to provide the facility and personnel on the installation, saving DoD the facility operations and maintenance (O&M) and personnel costs. In some of these partnerships, the military installation could incur some costs by paying to use the partner's facility. However, it can ultimately save the installation money overall. We discuss facility and infrastructure sharing partnerships in more detail in Chapter Four as part of our third analysis.

Other Facility Sharing and Land Use Partnerships and Deals

Other facility sharing and land use partnerships and deals are specialized approaches that do not directly fall into the first two categories. These include arrangements where a community chooses to donate funds to construct a new installation facility or help fund upgrades to an existing one. Another example is the assistance that nonmilitary organizations can provide in operating and running a military installation museum.

Based on our prioritization in the analysis, we found that this category offers fewer opportunities than the other two categories. This category has less opportunity because it depends on the generosity of the community, which the Army does not control. Rather than devoting a chapter assessing this opportunity, we discuss it briefly here using two examples: community gifts for installation facilities, and community help with installation museums.

Community Gifts for Installation Facilities

Communities can give gifts to the military to help build, maintain, or operate an installation facility. In 10 U.S.C. § 2601, Congress permits the military to accept gifts and sets requirements on how gifts can be taken and used. Basically, a military installation can take a gift of real property, personal property, or money if the gift is used for the benefit of an installation school, hospital, library, museum, cemetery, or other facility or organization.² The authority to accept such gifts is vested in each Service's respective Secretary.³ Obviously, installations cannot ask for gifts, but communities often want to help out the installation by building or helping to fund a Morale, Welfare, and Recreation facility for military personnel and their families because they want to show their support.

² U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 155, Acceptance of Gifts and Services, Section 2601, General Gift Funds Subsection (a), General Authority to Accept Gifts.

³ Authority to accept gifts can be delegated to lower levels through department policy, but it differs by Service branch. For example, the Army has given limited authority to accept gifts, and the delegation is executed by memorandum. Army Regulation (AR) 1-100, *The Army Gift Program*, Washington, D.C.: Headquarters, Department of the Army, July 27, 2015, p. 2.

Army policy has delegated gift acceptance authority for the United States Military Academy, the National Museum of the United States Army, the Heritage Center for the National Museum of the United States Army, and the U.S. Army Heritage and Education Center. AR 1-100, 2015, pp. 10–11.

The Air Force distinguishes gifts by the type and amount and delegates gift acceptance authority at different levels, down to the installation level. Air Force Instruction (AFI) 51-601, *Gifts to the Department of the Air Force*, Washington, D.C.: Headquarters, Department of the Air Force, November 26, 2003.

For example, at Maxwell AFB in Alabama, community partners are providing more than \$500,000 for the construction of the River Region Freedom Park for airmen and their families. This park sits on 3.5 acres within the housing area just inside the main gate and consists of a variety of amenities—three playgrounds, picnic tables, swing sets, restrooms, pavilions, a soccer field, a walking track, a rope climb, and exercise stations for adults. The Montgomery Area Chamber of Commerce Foundation led this communitywide effort to build this park, with \$100,000 donated by the Chamber Foundation and another \$100,000 being donated by Wright Flyers and the Air University Foundation. Other organizations have donated time and technical expertise, such as the City of Montgomery and Montgomery County providing project management and support and the Montgomery Home Builders Association donating material and labor to build restroom facilities, valued at \$60,000.⁴

Communities give facility gifts to military installations for several reasons—to help the installation as a good neighbor, to support military personnel and their families, to show their support for the country, or because they want to try to prevent a military installation from being closed in a future Base Realignment and Closure (BRAC) round. The community often values the military jobs and wants to help ensure they stay at local installations. As we discuss later in this chapter, many states and local governments have created military support organizations for these diverse reasons, and some of these organizations have given millions of dollars to help support installation facilities.

One of the best examples of such support is Navy installation assistance in Connecticut. In 2007, the State of Connecticut's General Assembly authorized \$50 million to be invested in military value at Naval Submarine Base (NAVSUBASE) New London in Groton, Connecticut, to protect it from closure in a future BRAC round. Part of the mission of the State of Connecticut Office of Military Affairs is coordinating efforts to prevent the closure or downsizing of the NAVSUBASE, which provides a \$4.5 billion annual economic impact and more than 15,000 jobs to Connecticut.⁵ Between 2005 and 2012, the State of Connecticut invested about \$11 million to construct facilities on NAVSUBASE, including \$7.7 million for a new diver support facility and boiler, \$740,000 for a training kitchen for culinary specialists, and \$2.5 million for a facility housing a new submarine bridge training simulator.⁶ The simulator is used to train submarine crews in safe navigation by simulating entrances to ports around the world.

In some cases, communities have also given gifts to help restore, preserve, or adaptively reuse historic installation buildings. This has occurred with the Presidio of San Francisco, a former Army installation that was closed by BRAC. The Presidio of San Francisco contains more than 800 buildings, 430 of which are historic Army buildings, on its 1,500 acres of natural and historic areas. After the BRAC closure, the Army transferred the post to the National Park Service as part of the Golden Gate National Recreation Area in 1994. Two years later, the

⁴ Rebecca Burylo, "Freedom Park Dedicated to Families at Maxwell," *Montgomery Advertiser*, May 28, 2014; Brad Harper, "River Region Unites to Fund \$400K Park at Maxwell," *Montgomery Advertiser*, December 19, 2013; Donovan Jackson, "Base Plans Productive Year," 2nd Air Base Wing Public Affairs, February 7, 2014; and Lachman, Resetar, and Camm, 2016, p. 41.

⁵ State of Connecticut Office of Military Affairs, *State of Connecticut Office of Military Affairs (OMA) Annual Report 2011–2012*, 2012a.

⁶ State of Connecticut Office of Military Affairs, "Navy Opens State-Funded Simulator Facility at Connecticut Sub Base," December 6, 2012b.

Presidio Trust Act of 1996 created a special federal agency, the Presidio Trust, to “transform it into a new kind of national park.” The Presidio Trust operates with a partnership approach that balances private-sector and public interests, preservation, and development.⁷ After the Presidio Trust was created, funds for the preservation and upkeep of the valuable real estate came from public and private sources. Between 1998 and 2013, investment in the Presidio included more than \$1.25 billion from private funds and \$348 million from federal funds.⁸ Of the private funds, \$570 million came from building investments, \$714 million came from leasing revenue, and more than \$35 million came from philanthropic gifts.⁹ Many of these gifts have helped to restore and adaptively reuse the former post’s historic buildings. In fact, about 350 historic buildings have been rehabilitated for visitors and commercial tenants at the Presidio between 1998 and 2013 with the combined use of private funds, leasing revenues, federal funds, and the gifts.¹⁰

Community Help with Installation Museums

Communities also provide special help with installation museums. They help to operate, maintain, build, and upgrade these museums. In fact, there is special authority in 10 U.S.C. § 2601 for museums. This legislation allows installations to accept gifts of services for a military museum from a nonprofit organization dedicated to supporting that museum.¹¹ In fact, communities around many installations have formed nonprofit organizations to help installation museums. These nongovernmental organizations (NGOs) can help mobilize support with the local and broader communities for the installation museum in the form of funding and volunteers. Communities often like helping to maintain and support installation museums because such actions cultivate a sense of pride and national spirit, offer educational benefits for children and adults, foster an appreciation for community and Army history, are a way to give back to those who serve, and provide economic benefits through increased tourism. Communities often created a special nonprofit foundation to help support a military museum. This NGO can raise funding and other support for building construction, restoration, operations, and maintenance in ways that the Army or even a private partner cannot. The nonprofit museum foundation can solicit donations by approaching individuals, corporations, historic associations, and foundations.

We illustrate these points by describing a large and successful Army museum, Fort Benning’s National Infantry Museum and Soldier Center. This museum opened in a new 190,000-SF facility in 2009. A formal partnership between the Army and the National Infantry Museum Foundation has helped provide funding for the construction, operation, and upkeep of this museum. Diverse funding streams and partnerships maintain the museum, which has been visited by more than 2 million people since its opening.¹²

⁷ Key partners are the National Park Service and the nonprofit Golden Gate National Parks Conservancy. Presidio Trust, “About the Presidio Trust,” webpage, undated.

⁸ Presidio Trust, *Discover the Presidio: Presidio Trust 2013 Year-End Report*, 2014.

⁹ Presidio Trust, “Lessons from the Presidio of San Francisco: Building Rehabilitation and Adaptive Reuse,” November 2016.

¹⁰ Presidio Trust, 2014.

¹¹ 10 U.S.C. § 2601(1)(2)(A).

¹² National Infantry Museum, “About Us,” webpage, undated-a.

This large museum contains eight galleries, a giant screen theater, a restaurant, a gift shop, combat simulators, and numerous interactive exhibits, video presentations, and monuments. It also preserves more than 70,000 mostly historic artifacts and has a Heritage Walk, World War II Company Street, and a Vietnam Memorial Plaza. The museum also provides special educational tours for schools, scout troops, and other groups; it also offers summer camps for children. Fort Benning uses the museum grounds for basic training graduation ceremonies and provides about 30 percent of its annual operating expenses.¹³

The National Infantry Museum Foundation is a nonprofit whose sole purpose is to plan, raise funds for, and operate this museum. The nonprofit raised \$110 million to build the modern museum and continues to raise most of the funds to maintain and operate it.¹⁴ Currently, the National Infantry Museum Foundation provides about 70 percent of the annual operating expenses for the museum and raises more than \$3 million every year for the museum.

The National Infantry Museum Foundation has numerous ways that it raises funds from corporations and individuals to support the museum. First, the Foundation has a special year-long Premier Partnership program for corporate sponsors that pay a yearly fee of \$5,000 to \$25,000. In exchange, each “corporate sponsor becomes an integral part of the museum visitor experience and can align its brand with the museum’s mission—to honor soldiers past, present and future.”¹⁵ In 2016, more than 15 corporate sponsors provided a total of \$300,000 to the museum. Second, the foundation has the 1775 Society, which individuals pay annual dues ranging from \$1,000 to \$10,000 to join. In exchange, members receive a variety of benefits based on the size of the membership, such as having their names listed on the 1775 Honor Roll, discounts to different museum events, invitations to member-only events and film screenings, and some free tickets to the museum’s annual black-tie Gala and Silent Auction.

A third funding mechanism is personalized dedications. To honor Soldiers, a \$250 tax-deductible donation can be made for legacy custom-engraved pavers along the Heritage Walk. Personalized donations can also be made for memorial benches and legacy maple trees located around the museum campus. Private dedication ceremonies are also held. The museum also rents out various parts of the museum campus (such as the Continental Room, Heritage Hall, the Grand Hall, down-range combat simulators, and the giant screen theater) for a variety of public and private events, such as corporate meetings, weddings, and birthday parties.¹⁶ The museum and foundation also collect cash contributions in boxes at the museum and from donations online. Finally, the proceeds from the museum’s Fife and Drum Restaurant and Bar, the Rally Point Canteen theater concessions stand, and the gift shop also provide support.

Communities also can acquire grants and other support from state and local agencies to help support installation facilities. Hill AFB Aerospace Museum provides an example. The Hill Aerospace Museum, located on 30 acres of Hill AFB, has benefited from a variety of community support from the local to state levels for almost 25 years. The museum, a gift from the State of Utah to Hill AFB, houses more than 90 military aircraft, missiles, and aerospace

¹³ National Infantry Museum, undated-a.

¹⁴ Phil W. Hudson, “Georgia’s Hidden National Treasure: The National Infantry Museum & Soldier Center,” *Atlanta Business Chronicle*, January 21, 2015.

¹⁵ National Infantry Museum, “Support Your National Infantry Museum,” webpage, undated-b.

¹⁶ National Infantry Museum, undated-b.

vehicles and thousands of historical artifacts.¹⁷ In 1983, the Aerospace Heritage Foundation of Utah, a nonprofit organization, was founded to provide financial and other support for the Hill Aerospace Museum. This nonprofit is the main financial supporter of the museum. It runs the museum gift shop (all proceeds support the museum), conducts museum marketing activities, and acquires artifacts for restoration and display. It also conducts fundraising for aircraft restoration projects; exhibit development; museum operation; science, technology, engineering, and mathematics (STEM) educational activities; and capital museum projects. Hill AFB provides utilities and some basic supplies and some staff.¹⁸

In 1996, the governor of Utah created the Museum's Utah Aviation Hall of Fame. Its goal was to "cultivate public awareness and appreciation for the contributions of such worthy individuals to air power," and "encourage the continued development of aviation throughout the state."¹⁹ The Order of Daedalians, the National Fraternity of Military Pilots, is the sponsor and custodial agency for the Utah Aviation Hall of Fame. Community partners also paid for the 2015–2106 relocation and renovation of the Utah Aviation Hall of Fame. In 2015, the Utah State Legislature appropriated \$150,000 for this project.²⁰ The ALSAM Foundation of Salt Lake City, which is an independent foundation,²¹ provided additional funding.

Lessons Learned from Other Facility and Land Use Partnerships and Deals

The experiences with these other types of facility and land use partnerships and deals have some lessons similar to the outgrant deals and installation facility sharing partnerships, as are discussed in the next two chapters. First, these partnerships have diverse benefits that can save costs and enhance installation operations and readiness. Second, these partnerships leverage the expertise, capabilities, and resources of each partner. Third, they often require innovative and creative thinking to take advantage of these opportunities. Fourth, state and local governments and communities play important roles as partners, facilitators, and funders of installation partnerships. In these partnerships, the communities, NGOs, and individuals who want to help the installation can become the champions who help develop an idea, foundation, or other activity to help the installation facility. These organizations also work to raise funds to support the installation in numerous creative ways, as the National Infantry Museum Foundation example illustrated. Fifth, the main barriers to such partnerships include lack of knowledge among installation and community staff about the potential opportunities; limited incentives, expertise, and time for community and installation personnel to develop and implement the partnerships; and organizational cultural differences between the installation and the organizations that can help develop and implement partnerships.

¹⁷ Hill Aerospace Museum, "Welcome to the Hill Aerospace Museum," webpage, undated-a.

¹⁸ Hill Aerospace Museum, "Aerospace Heritage Foundation of Utah," webpage, undated-b.

¹⁹ Hill AFB, "Museum Opens Utah Aviation Hall of Fame," October 14, 2016.

²⁰ Hill AFB, 2016.

²¹ The ALSAM Foundation of Salt Lake City tends to provide funding for education, medical research, human services, and Catholic agencies and charities.

Additional Agreement Types Used to Develop and Implement Installation Land Use and Facility Sharing Deals and Partnerships

Besides outgrants, installations use other authorities and agreement types for developing other facility and land use partnerships and deals. In fact, many different OSD and Army programs, initiatives, and other activities can be used to develop and implement an installation facility or land use partnership or deal. The main ones include: an Intergovernmental Support Agreement (IGSA), a Memorandum of Agreement (MOA), a Memorandum of Understanding (MOU), and an airport joint use agreement. Other agreement types also might involve installation land use and facility partnerships, but they focus less on the land and facilities. We briefly explain each of these areas. We should note that many of the land use and facility deals and partnerships could involve more than one of these agreement types and, depending on the amounts of money involved, authorities used, time length of the deal, and other conditions of the agreement. One installation might use one agreement type while a different installation for a similar partnership might use a different agreement type.

Intergovernmental Support Agreement

IGSAs are relatively new. Congress originally authorized them as part of the National Defense Authorization Act (NDAA) for fiscal year (FY) 2013.²² Section 331 in the 2013 NDAA provided additional statutory authority for military installations to enter into agreements with local and state governments for “installation support services”; i.e., for a state or local government to provide, receive, or share installation support services.²³ This authority was refined two years later in Section 351 of the FY 2015 NDAA, which maintained the primary provisions of the original law but provided clarification on contractual aspects to facilitate further intergovernmental cooperation. For instance, Section 351 now states that the Service Secretary can enter into an IGSA on a sole-source basis with a state or local government to provide, receive, or share installation support services if the Secretary determines the agreement will serve the best interests of the department by enhancing mission effectiveness or creating efficiencies or economies of scale. In summer 2017, an IGSA was limited to a five-year lease term, but this period was extended to ten years by the FY 2018 NDAA modification.

As of early November 2017, the Army had 14 signed IGSAs. IGSAs have been used for a variety of partnerships, including ones that involve sharing facilities, such as an Army installation using an IGSA to share the use of a county animal shelter. Animal shelter IGSAs can save the Army costs, especially when an installation no longer needs to provide a facility and staff for providing the services. For example, Fort Sill signed an IGSA with the City of Lawton, Oklahoma, in 2017 for the city to provide stray animal control and shelter services. The city will capture stray animals on post and transport them to the Lawton Animal Welfare Facility, where the animals will be housed and provided veterinary services. County staff will also provide outreach to Fort Sill families and the community to find the animals’ owners or to

²² The IGSA authority, codified as 10 U.S.C. § 2679, was refined by section 351 of the NDAA for FY 2015. U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2679, Installation-Support Services: Intergovernmental Support Agreements; Public Law 113-291, Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015, December 18, 2014.

²³ 10 U.S.C. § 2679(a).

place the animals in new homes and report to Fort Sill about the animals they captured on the post. Cost avoidance to the garrison is \$639,000 per year after the onetime start-up costs are offset.²⁴ These IGSA examples show the potential for more cost-saving IGSA for community facility sharing partnerships.

Memoranda of Agreement (MOAs) and Memoranda of Understanding (MOUs)

MOAs and MOUs are similar agreements, often between headquarters or major command level components.²⁵ Installations use MOAs and MOUs to share facilities (and other assets, such as personnel and equipment) when little to no money is involved. For example, Fort Bliss has an MOA with several different organizations to provide free on-post office space to each of them in exchange for each organization providing free services to the installation. Fort Bliss has MOAs with the nonprofit Upper Rio Grande Workforce Development Board (which provides an on-post workforce center to help military spouses and family members seek employment), the Small Business Administration, and the El Paso County Tax Office (which creates a satellite office on post to provide tax office support to the Fort Bliss community). In some cases, an MOA might be used instead of an IGSA; for example, an MOA was used for an animal shelter partnership at Fort Knox that saves funds for the Army because the post was able to close its on-post animal shelter and rely on the county facility. (This example is discussed in Chapter Four and Table 4.1.) However, most of the partnerships that use these agreement types do not usually involve saving the military much money or earning much money for installations, so they were not a main focus of this study.

Airport Joint Use Agreement

Another agreement type that involves land use and facility approaches is joint use agreements for sharing military installation airfields. Installations can enter into joint use agreements to enable civil aircraft to use domestic military airfields.²⁶ Although not required, the military can collect landing fees from the civil aircraft for use of those airfields.²⁷ The Secretary of Defense will determine the amount of any landing fee to be charged, and the fee offsets any consideration that the private organization must provide under its agreement with the airfield. Landing fees can be used for the operation and maintenance of the airfield. These partnerships can save installations large amounts of money, so we examined them as part of our study,

²⁴ First-year savings will be \$589,000 because the startup costs are \$50,000. For more information about this partnership, see Winona Morris, "Cost Benefit Analysis: Operation of Animal Shelter, Fort Sill, OK," Fort Sill, August 19, 2016; and Fort Sill and City of Lawton, "Intergovernmental Support Agreement (IGSA) Between the United States Army Garrison (USAG)/IMCOM, Fort Sill and the City of Lawton, OK," Memorandum of Agreement, February 8, 2017.

²⁵ AR 405-80, *Management of Title and Granting Use of Real Property*, Washington, D.C.: Headquarters, Department of the Army, October 10, 1997, p. 10.

²⁶ For example, see U.S. Code, Title 49, Transportation, Subtitle VII, Aviation Programs, Part A, Commerce and Safety, Subpart iii, Safety, Chapter 445, Facilities, Personnel, and Research, Section 44502, General Facility and Personnel Authority. Also see U.S. Code, Title 49, Transportation, Subtitle VII, Aviation Programs, Part B, Airport Development and Noise, Chapter 471, Airport Development, Subchapter I, Airport Improvement, Sections 47103, National Plan of Integrated Airport Systems, and 49 U.S.C. Section 47107, Project Grant Application Approval Conditioned on Assurances About Airport Operations.

²⁷ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2697, Acceptance and Use of Landing Fees Charged for Use of Domestic Military Airfields by Civil Aircraft.

including conducting a case study at Fort Hood, which has a joint use agreement with the City of Killeen, Texas, for sharing Robert Gray Army Airfield (RGAAF) (as is discussed in Chapter Four and in Appendix C).

Other Agreement Types

There are other agreement types and authorities that also are used to develop and implement military installation land use and facility partnerships. We briefly describe two in this subsection: an educational partnership agreement (EPA) and a cooperative research and development agreement (CRADA). However, these two partnership types usually focus more on the sharing of personnel, skill, expertise, and equipment within facilities and less on the land and facilities, so they were not as directly relevant for our study.

Educational Partnership Agreement (EPA)

An EPA is an agreement between a federal agency and an educational institution in the United States to encourage and enhance study in mathematics, engineering, and scientific disciplines at all levels of education. Any laboratory, product center, test center, depot, training and educational organization, or operational command under the jurisdiction of DoD can partner with local schools, colleges, universities, or any other nonprofit institutions that are dedicated to improving STEM education. The EPA is authorized by the Educational Partnership Act (10 U.S.C. Sec. 2194), passed in 1999, which recognizes DoD's role in promoting education in STEM fields.²⁸

For instance, because of its mission of conducting research and developmental flight testing and evaluation of aerospace systems, Edwards AFB in California needs highly trained STEM personnel and has partnered in an EPA with Antelope Valley College to help promote STEM education in the region—a partnership that involves some facility sharing. As part of this partnership, Air Force personnel can use Antelope Valley College's facilities, such as computing facilities, libraries, and visitor spaces, and faculty and students from the college can use the base laboratory facilities in Air Force–related laboratory-based research projects.²⁹ Again, EPAs do not usually involve saving much military money and do not earn funds for installations, so they were not a main focus of this study.

CRADA

A CRADA is a written agreement between a federal agency (such as a military installation) and a private company, university, nonprofit organization, or other public agency to work together on a research and development (R&D) project, and they can involve sharing R&D facilities. CRADAs were authorized by the Federal Technology Transfer Act of 1986 and are governed by 15 U.S.C. § 3710a.³⁰ CRADAs are for specialized facilities and do not usually involve saving large amounts of installation funds, so they were not a main focus of our study.

²⁸ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part III, Training and Education, Chapter 111, Support of Science, Mathematics, and Engineering Education, Section 2194, Education Partnerships.

²⁹ For more information about this Edwards AFB EPA, see Lachman, Resetar, and Camm, 2016, p. 65.

³⁰ U.S. Code, Title 15, Trade and Commerce, Chapter 63, Technology Innovation, Section 3710a, Cooperative Research and Development Agreements.

The Role of State and Local Governments in Installation Land Use and Facility Sharing Deals and Partnerships

An important cross-cutting lesson across all the approaches is that state and local governments play key roles in many of the installation land use and facility sharing deals and partnerships as facilitators, catalysts, partners, and funders. Many local, state, and regional governments and organizations have created defense alliances (such as the Florida Defense Alliance and the Utah Defense Alliance) and military support offices (such as the State of Connecticut Office of Military Affairs)—to help support the defense industry, military installations, and military personnel and their families within their states. States also have economic assistance organizations, such as the South Dakota Governor’s Office of Economic Development, that can help installations develop land use and facility sharing deals with communities, including with local governments, industry, and NGOs. Similarly, at the local and regional level, counties and cities have created local and regional organizations to support an installation or multiple installations within a region, such as the Fort Meade Regional Growth Management Committee and the Fort Drum Regional Liaison Organization. Local and regional governments also have chambers of commerce and other economic assistance organizations, such as the Montgomery Area Chamber of Commerce, that can help military installations develop land use and facility partnerships and deals. They can also be key partners in deals, or they can provide or help generate financing to help fund installation deals and partnerships.

These local and state groups have a variety of motivations. Some wish to support servicemen and servicewomen and their families. They also provide support because of economic reasons—specifically, so that these partnerships and deals can help bring jobs, additional tax revenues, and other economic benefits to their state and communities. Many have also been driven by concerns over past and potential future BRAC rounds and want to help military installations become more efficient and effective so the installation will not be closed. Some of these organizations were originally created to deal with previous BRAC effects, both growth and losses at installations. The South Sound Military and Communities Partnership and the Fort Meade Regional Growth Management Committee were created to deal with 2005 BRAC growth near Joint Base Lewis-McChord in Washington and Fort Meade in Maryland, respectively. Throughout the rest of this report, we provide examples of the many different ways that state and local governments have helped military installations in land use and facility partnerships and real estate deals.

Finally, national organizations, such as the ADC, work with states and local communities that have played a role or could play a stronger role in installation land use and facility deals and partnerships. Other such organizations include the International City/County Management Association (ICMA), the National League of Cities, the National Council for Public-Private Partnerships, the National Conference of State Legislatures, and the National Governors Association.

Chapter Summary

In the first analysis, we identified the approaches and practices that can be used to develop and implement installation real estate and facility deals and partnerships, with the goal of both understanding the possible approaches and prioritizing them in terms of how useful

they are in saving money or earning funds for the Army. The analysis identified three main categories—outgrants, facility and infrastructure sharing partnerships, and other facility and land use partnerships and deals—and found that outgrants and facility and infrastructure sharing partnerships are the most common land use and facility deals and partnership approaches that can and have earned funds or saved money at military installations. Those two categories are the focus of the remaining report.

In these three categories, we found that besides outgrants, installations use a variety of other authorities and agreement types for developing other facility and land use partnerships and deals, such as IGSAs, MOAs, and MOUs. Although all of the approaches share lessons learned (and are discussed more), one important cross-cutting finding is that state and local governments play a key role in many of the installation land use and facility deals and partnerships as facilitators, catalysts, partners, and funders.

Military Installation Outgrants

This chapter focuses on the results of our second analysis on military installation outgrants, one of two major approaches that we identified in Chapter Two. We begin this chapter with an overview about outgrants—describing their various types, how the military takes payments for them, and how the military uses the payments. Then, we discuss installations’ experiences with EULs and other large-scale outgrants. This discussion mostly focuses on both Army and USAF experiences because useful lessons can be learned from both Services’ outgrant activities, especially because the Air Force has implemented more EULs than any of the other Services in the past ten years. We also examined some other federal agencies’ experiences with EULs, featuring information from the Navy, NASA, and the VA. We conclude this chapter by discussing lessons learned about installation outgrants.

Overview of Installation Outgrants

As noted in Chapter Two, an outgrant is a legal document that gives the right for a non-Army organization to use Army installation land, an Army installation facility, or other Army-controlled real property.¹ The outgrant is the written agreement of the terms and conditions under which the non-Army organization uses the Army installation’s property.

Types of Outgrant

There are four main types of outgrants: leases, easements, licenses, and permits. We briefly describe each type of outgrant here and provide more information about the policies and legal requirements of outgrants in Appendix B. Then, we provide an overview of EULs, a special type of installation lease.

Lease

A lease gives a non-Army organization exclusive use of the Army property in exchange for cash or in-kind considerations,² such as improvements to installation properties or construction of new facilities in place of cash rent. A lease is usually limited to five years, unless the Secretary of the Army determines it either promotes the national defense or is in the public interest to

¹ For more information about the legal and policy requirements of outgrants, see Appendix B.

² *In-kind consideration* refers to goods or services that a lessee provides to an agency instead of cash rent payments; for example, building new facilities and infrastructure, such as a guard house, on an installation. Usually, the installation staff involved has to calculate the value of the in-kind consideration as part of a business case analysis of the proposed deal that they must submit before Service leadership approves the deal.

have a longer lease term.³ Exceptions on lease length exist for selected organizations that provide a service to an installation, such as banks and credit unions, which can have leases for up to 25 years. Similarly, EULs and other specialized long-term leases are allowed to last as long as 50 years. A longer-term lease is for non-excess Army property—that is, property the Army is not using or is underutilizing but that is not considered excess property because the Army might need it in the future. A lease of non-excess property can be entered into if the Secretary of the Army considers it a direct benefit to the United States; it promotes the national defense, an Army mission, or the public interest; and its use is compatible with the current and anticipated military activities at that installation. Leases also are required to be competed, unless the lease is in the public interest or using competitive procedures is unobtainable or incompatible with that lease's purpose.⁴

The military is supposed to reserve the right to terminate a lease at will because of national defense concerns, but sometimes the military waives this requirement for longer-term leases.⁵ Because of mission and other installation operational considerations, usage hours and other restrictions could be imposed on a lease (as with other outgrants). Leases of non-excess property owned by the Army are governed by 10 U.S.C. § 2667 (Section 2667) and Army policy. Army policy has delegated to the USACE the authority to execute and administer all leases under Section 2667.⁶

Leases can involve large payments, as we will discuss. In addition, in most cases, leases require at least a fair market value (FMV) payment for using installation property, which we also discuss in more detail later.

Easement

An easement allows another organization to use Army military land for a specified purpose and usually refers to a right of way across Army land. Military installations commonly grant easements for a variety of purposes, such as roads and streets; gas, water, sewer, and oil pipelines; railroad tracks; canals and ditches; tunnels; dams and reservoirs in connection with fish and wildlife programs; cell towers; and poles and lines for transmitting or distributing electric power and communications signals. An easement is similar to a lease in that an installation can charge and receive funds from an easement, although it is not required to charge for it. An installation receives cash and in-kind considerations from an easement the same way it does from a lease. Easements are granted under several authorities, such as 10 U.S.C. § 2668 (Section 2668).⁷ If

³ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2667, Leases: Non-Excess Property of Military Departments and Defense Agencies, Subsection b, Conditions on Leases, Part 1; Paul D. Cramer, "Leasing Real Property on Army Installations," memorandum for ACSIM, CDR, US Army Materiel Command, CDR, Installation Management Command, Chief, USAR, Chief, NGB, Chief, USACE, Washington, D.C., Assistant Secretary of the Army (Installations, Energy and Environment), October 1, 2012a.

⁴ See 10 U.S.C. § 2667(h).

⁵ Waivers are sometimes made with some longer-term development leases when the developer cannot get the financing for the deal because of a general termination clause. Financiers are risk averse and often will not provide funding to a large-scale and long-term installation EUL investment when the military reserves the right to take the property back at will.

⁶ See 10 U.S.C. § 2667(h).

⁷ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2668, Easements for Rights-of-Way.

an easement benefits an Army installation, such as an oil or water pipeline that provides this commodity to the installation, the Army typically does not charge for it. If the easement is just passing through the installation, such as an oil or water pipeline that does not provide service to the installation, then the practice is that the installation should charge the company for the easement. Most easements do not involve large payments, but opportunities do exist. Easements can involve large payments in some cases, as is illustrated by an example from Eglin AFB discussed later in this chapter (in the section titled “Other Large-Scale Leases and Easements”). Easements are mostly subjected to the same requirements and oversights as leases.

License

A license provides another organization with a nonexclusive right to occupy and pass through the military property, often a temporary use of the property.⁸ Licenses might or might not involve any payment, depending on the terms and conditions of the outgrant. Usually, licenses do not generate large sums for an installation, but there are some opportunities for revenue generation from these outgrants. For example, Joint Base McGuire-Dix-Lakehurst (JBMDL) grants licenses to individuals and organizations, such as schools, that want to use some of the base’s 24 soccer fields for soccer tournaments, and they charge for the licenses. JBMDL staff estimate that the base will earn approximately \$100,000–\$125,000 per year in revenues for licensing out the fields and \$15,000–\$17,500 per year in food and beverage concession revenues. Total expected revenue in 2017 was estimated at \$115,000–\$142,500.⁹ Often, licenses can involve an in-kind consideration instead of a payment. For example, military installations often use licenses to allow other organizations to use recreational fields. In some cases, instead of a cash payment, the nonmilitary organization might provide maintenance help in exchange for the use of the fields.

Permit

A military installation permit is similar to a license but is often used with another federal agency. Permits are more likely than are licenses to involve payment. Permits can include charging a rental fee and fees for the utilities and other services provided by the installation to the other federal agency that is using an installation facility. That payment can also include in-kind considerations, such as helping to repair, improve, and maintain the facility. For example, South Dakota’s Ellsworth AFB provided a permit in 2013 for the Federal Emergency Management Agency (FEMA) to establish a Joint Field Office on the base so that FEMA could coordinate federal operations and provide timely emergency winter storm assistance. FEMA was granted use of the first floor of Building 4040 for four months in exchange for in-kind consideration fixes to the office space plus \$35,100 in rent and utility payments.¹⁰

⁸ Legally, a *license* is a real estate instrument that grants permission to use property for a specified purpose without conveying an interest in the property.

⁹ Lisa Schmidt, “Air Force Enhanced Use Lease Program,” AFCEC briefing, December 14, 2016, slide on AFCEP Real Estate Partnership Concepts; and AFCEP Program, “Implemented Partnership Agreements,” USAF database extract, June 21, 2017.

¹⁰ AFCEP Program, “Exploring Ways to Leverage Underutilized Property in the Air Force,” briefing, December 14, 2016b. It is important to note that USAF personnel strategically had FEMA help prepare this first floor of Building 4040 for future commercial space with its in-kind considerations, which helped enable the base to lease this space to a company in 2015, as is explained later in this chapter and Appendix A.

EUL

EULs are a type of large-scale outgrant that can last as long as 50 years. The Services tend to distinguish an EUL from a “normal outlease on the basis of scope, process, term, and consideration. . . . EULs generally involve larger amounts of property, generally undergo a more detailed evaluation and review before approval and greater oversight after approval, [and] often are executed for longer periods of time.”¹¹ EULs are leases that usually involve multiple acres of installation property that the military needs to retain because of possible future mission needs but will not need to use in the near future—i.e., a way to take advantage of military assets that are not currently being used. Both the Air Force and Army emphasize the use of EULs for generating cash or other value for the military. The Air Force states that “[a]n EUL is a business deal, involving a real property lease, with a goal of generating rent profit”¹² for the military. The Army states that “[t]he Enhanced Use Lease Program engages through a competitive process, private sector entities to acquire and leverage value from nonexcess real estate assets on Army and select Department of Defense (DoD) Installations.”¹³ With an EUL, both the military and the public- or private-sector lessee have a return on investment.

How the Military Receives Value from Outgrants

Leases normally require that the organization leasing the Army installation property pay an amount that is at least the FMV for that installation property. This FMV payment does not need to be all cash; it can include in-kind considerations. The requirement is that the value of the cash plus the in-kind considerations from the lease must be at least FMV of the property. The legislation says that for Army installations, the Secretary of the Army determines the official acceptable FMV amount for leases. For Army leases, the installation has Army-approved appraisers evaluate the FMV of the property for the lease. USACE oversees this process (as is discussed further in the subsection on “Army EUL Experience” later in this chapter). Some limited exceptions are made to the FMV requirement for leases, such as for BRAC properties, public schools, credit unions, and privatized housing. In addition, some large-scale energy outgrants have not required the FMV for the use of installation land because these outgrants focused on installation energy goals and used a different authority that does not require FMV for the outgrant (which is discussed more later in this chapter). When installation easements involve payments, it also should be at least FMV. In addition, a lease, easement, or license requires congressional reporting when the estimated or actual annual FMV (both cash and in-kind considerations) is greater than \$750,000.

How Outgrant Payments Are Accepted

Cash payments from Army installation leases are deposited in a special U.S. Treasury account—called a 97R5189 account (the Air Force calls it a K2 account)—before they can go to the installation and other parts of the Army as required by Section 2667. Approval authority for using these funds depends on the installation that generated the funds based on its Army headquarters organization. For Active Component installations, the approval authority is the

¹¹ U.S. Government Accountability Office (GAO), *Defense Infrastructure: The Enhanced Use Lease Program Requires Management Attention*, Washington, D.C., GAO-11-574, June 2011, p. 5.

¹² Schmidt, 2016, p. 22.

¹³ Army Corps of Engineers, Baltimore District, “About EUL,” webpage, February 22, 2013.

Assistant Chief of Staff for Installation Management; for U.S. Army Reserve installations, the approval authority is the Chief of the Army Reserve; and for ARNG installations, the approval authority is the Chief of the National Guard Bureau. In addition, it is usually more than a year before Army and other military installations receive any of these funds.

Exceptions on how the lease's cash payments can be accepted are made for utilities and services provided to the lessees by the installation. In these cases, the organization leasing the land pays the Army installation directly for utilities and other services that it used, such as paying for energy usage and custodial services.

As noted, in-kind considerations are when the organization that leases the property provides the installation with services or facilities instead of cash. The types of in-kind considerations that installations are allowed to receive as part of the lease payment are specified by legislation.¹⁴ Specifically, the lessee can

- provide or construct facilities
- perform facility improvements and maintenance
- alter, repair, or improve the leased property
- provide maintenance, protection, alteration, repair, improvement, or restoration of other installation property or facilities
- provide utilities and other services.

In-kind considerations can be for diverse installation projects. For example, in a Nellis AFB EUL with the City of North Las Vegas, the city provided in-kind considerations by building a \$25 million on-base fitness center for military personnel and their families and by replacing some water infrastructure. In an Eglin AFB EUL deal, the Mid-Bay Bridge Authority provided in-kind considerations for a variety of installation projects, including runway improvements, purchase of fire suppression equipment, a fire station renovation, fish habitat restoration, and funding for energy conservation projects.

Interviewees from the Army, Air Force, and Navy all stated that installation personnel usually prefer in-kind considerations instead over cash payments from EULs and other large-scale outgrants because they can receive the payments without having to wait for more than a year and can use the payments for their installation priorities. However, we should note that when taking in-kind considerations, it is important that they are used for the purposes mentioned earlier, that they are valued properly, and that there is proper Service oversight to ensure that the legal requirements are met.

How Outgrant Payments Are Used

The legislation also specifies how the outgrant payments for leases and easements are allowed to be used. For the payments that the military receives for leases, “[n]o less than 50 percent of the revenues must be made available for authorized uses . . . at the installation where the revenues were generated.”¹⁵ This means that at least 50 percent of the lease revenues should go back to the installation. By Army policy, 50 percent of the lease revenues go back to the Army installation that generated the revenues, and the other 50 percent are maintained by the land-

¹⁴ 10 U.S.C. § 2667.

¹⁵ There is an exception in Section 2667: “All proceeds from outgrant activities associated with a military museum shall be made available for authorized uses only at that museum.” 10 U.S.C. § 2667.

holding command. An exception is that 100 percent of the revenue for a museum lease is made available to the installation museum.¹⁶

USAF policy differs. For AFBs, 100 percent of the annual net proceeds go to the installation for the first \$1 million of annual net cash proceeds, and any amounts more than that are evenly divided between the installation and AFCEC.¹⁷ However, no USAF installation has ever had annual cash proceeds above \$1 million for an EUL, so all the proceeds have remained at the bases.

By law, lease payment revenues that go back to a military installation can be used for maintenance, alteration, repair, improvement, or restoration of installation property or facilities; construction or acquisition of new facilities; and payment of utility or real property maintenance services. Similarly, the revenues that go to the landholding command can be used only for the aforementioned purposes; however, they can be used for any Army property that the landholding command owns, not just the installation that generated the funds.

Some of the lease cash payments also can be used for military administrative expenses incurred for the land use transaction. However, there are some limitations on how the payments can be used. By law, the outgrant payments are allowed to be used for the administrative “expenses related to assessing, negotiating, executing, and managing lease and easement transactions,” but not for any of the “government personnel costs.”¹⁸ Easements have the same requirements regarding payment use.

Costs and Risks in Developing, Implementing, and Managing Outgrants

Next, we provide an overview of the main costs and risks that the military has in developing, implementing, and managing outgrants.

Costs

Most of the costs to the military from installation outgrants occur in development and implementation. These costs are mostly associated with the time needed for different installation staff to assess, negotiate, and execute the deal; to develop the agreement; and to conduct the legal and financial review of the lease, easement, or other outgrant deal. There are also some administrative costs associated with these processes, such as conducting a real estate appraisal and physically producing and copying the legal documents. However, as noted, administrative costs can be paid for by the lease and easement payments. The installation costs to manage outgrants once they are implemented are usually minor because they mostly involve collecting and tracking the payments, which entails a minimal amount of staff time. The installations are basically landlords collecting rent. Because installations routinely develop, implement, and manage dozen of outgrants, there are standard templates, document language, and processes for developing, implementing, and managing most outgrants. For example, installations have to develop, implement, and manage leases for every commercial restaurant, bank, and other

¹⁶ There are also exceptions for agricultural and grazing leases. Monies from these can be used by the Army to pay for administrative expenses associated with that lease or to finance multiple land use management programs at any Army installation.

¹⁷ Timothy A. Byers and Kathleen I. Ferguson, “Air Force Policy Memorandum Establishing Distribution of Lease Consideration,” memorandum for all MAJCOM-FOA-DRU, Washington, D.C., Assistant Secretary of the Air Force for Installations, Environment and Energy, May 11, 2012.

¹⁸ 10 U.S.C. § 2667(i)(1).

business on the installation. They also have to do this work for easements for water and energy pipelines, cell towers and communications cables, and state roads and other infrastructure that cross some portion of the installations.

Military installations implement many of these outgrants because of mission and installation operational needs. For example, a Navy real property expert stated that the Navy is trying to implement more outgrants for private companies to use installation land and facilities for cellular telephone sites because cell service is needed for military personnel and their families on Navy installations. Similarly, easements for water and energy infrastructure that cross over Army installations often are needed for the installation's needs.¹⁹

Because of these installation outgrant requirements, the hours required to develop, implement, and manage EULs or other specialized large-scale outgrants reflect only a small portion of staff time expended by those who are already implementing and managing outgrants. In other words, when considering implementing more outgrants, the issue is the extra staff time for what might be only one or two large-scale outgrants, because most installations would not do many. However, EULs and other large-scale outgrants involve more-complex processes, so more staff need to be involved and spend more time on developing and implementing such deals than the smaller, more routine outgrants. In addition, having a center of expertise for outgrants, such as AFCEC has, requires more personnel resources. However, these personnel can also potentially help with mission-related outgrants—and, again, most of the time is needed to develop and implement the deals, not to maintain them.

Large-scale installation leases also involve the costs of providing services to the leased facilities, such as police and fire department protection, utilities, and custodial services. However, services might or might not be provided by the installation—and when they are provided by the installation, payment for them is usually made directly to the installation; this is allowed by the legislation and is not considered in the deals' revenue estimates.

Risks

Besides the monetary costs, there are also potential costs associated with the risks from outgrants that are not as successful. Financial risks are relatively minor for these deals when considering the alternatives. One risk is that installations might not receive the full FMV of the outgrant. However, if the deal had not occurred and the land or facility was empty, there would have been no payments to begin with; thus, even if the revenue is lower than originally estimated, the deal is still likely beneficial to the installation (as will be discussed later). This benefit would include the fact that the facility no longer needs to be maintained by the military installation.

A second risk is that the deal might need to be terminated. According to USAF and Army real estate experts, the oversight and approval process for large-scale outgrants ensures that most installation outgrant deals that need to be terminated are indeed ended before much staff time or other military effort is invested. In addition, a well-developed outgrant agreement will mean that termination should not incur many costs for an installation. In this case, the installation will not receive payments, but it still owns the land and facilities and can use them

¹⁹ We should note that several Army experts stated that Army installations could charge more for some of these outgrants because the installations often are not receiving FMV in the deals and could be. Specifically, given current concerns about military budgets, some installations might want to reexamine some of these deals and approaches and consider charging more than in the past because, in some cases (as with some Army easements), the Army was not receiving full FMV for the property. Other experts argued that if the Army were to charge more, then the company would charge the Army more for the services provided to the installation.

for something else. Most military installation outgrant agreements should have appropriate termination clauses and requirements for the conditions in which to return the property to the installation at the end of the agreement. There is an operational risk if the installation needs the facility back for its mission, but this has not yet been an issue. There have been cases when the military chooses to lease back space in an EUL facility, such as in the Fort Sam Houston EUL in which the old Brooke Army Medical Center (BAMC) building has been leased by Army South headquarters since 2003. However, this is not necessarily that bad of a deal for the Army, as will be explained in the discussion about the BAMC EUL deal (see “Issues that Occurred with Early EUL Implementation” later in this chapter). Other things could also change over time—20 to 25 years is a long time, and being locked into that long a lease might not be the best as circumstances change. This risk can be addressed by having some flexibility or contingent provision in the contract to allow changes over time as conditions change.

Large-Scale Outgrant Experience

Having provided an explanation of outgrants, we now discuss the experience that the military has with large-scale outgrants. Military installations have implemented a variety of large-scale outgrant deals in the form of EULs, other leases, and easements. By large-scale outgrant deals, we mean outgrants that involve large sums of money, in-kind considerations, or both; a long time period; and usually multiple acres of installation land. Specifically, a large-scale outgrant usually involves from dozens to a couple hundred acres, lasts 20 to 50 years, and has income and in-kind considerations totaling from a half-million to multiple millions of dollars over the length of the outgrant. In this section, we discuss the process for developing and implementing outgrants and provide a few examples. More examples appear in Appendix A. We begin by discussing EULs, then turn to other large-scale outgrants. Our study focused on large-scale outgrants because they provide the most revenue and cost-savings benefits for the military.

Developing and Implementing EULs

In discussing EULs, we discuss both the Army and the Air Force, because the Air Force has been more proactive in supporting, developing, and implementing EULs over the past few years and because its experience offers some useful insights for the Army. We also looked at some EUL experiences from the Navy and other federal agencies (i.e., NASA and VA); information from those experiences is reflected in the lessons learned discussion in the subsections titled “Challenges in Developing and Implementing Large-Scale Outgrants” and “Lessons Learned to Help Address the Challenges” later in this chapter.

Army EUL Experience

The Army’s Enhanced Use Leasing Program started in 2001. In the Army, the authority to execute EULs was originally delegated to the Deputy Assistant Secretary of the Army for Installations, Housing and Partnerships (DASA[IH&P]),²⁰ and most responsibilities for executing EULs have been further delegated to the USACE. The Army’s EUL Program used to be managed by USACE, Baltimore District, which was designated as the “Center of Expertise” in

²⁰ The Deputy Assistant Secretary of the Army for Installations, Housing and Partnerships formerly did not include “Partnerships” in its title; this was added about six years ago.

2008.²¹ The Army no longer has a centralized technical assistance center for EULs, nor does it have an official EUL program. In the past few years, Army EULs have been handled by the local USACE District with USACE headquarters as the lead.

Since it started developing and implementing EULs in 2001, the Army has implemented some deals and also had a couple that started and then were terminated for one reason or another. For example, at Fort Bliss, Texas, an EUL that was signed in 2006 was “terminated by the Army in 2010 because the lessee had made no progress in developing the property and the lease included a provision that allowed the Army to terminate the lease for this reason.”²² Table 3.1 provides a list of some of the currently implemented Army EULs. More details on some of these EULs appear in Appendix A.

To illustrate an Army EUL deal, we briefly overview the APG EUL. (For more information about this EUL, see the description in Appendix A.)

APG EUL

In 2006, APG signed an EUL with a private developer to build a 416-acre office and R&D complex on the installation, known as the GATE Office and Technology Park. It includes single-story and multistory office buildings, R&D facilities, and retail buildings. As of fall 2015, only about 625,000 SF of a projected 3 million SF had been built. The project slowed because of the economic downturn, and the smaller size affects the amount of rent the Army receives. Most of these facilities have been leased to defense contractors and military and other government agencies. Part of the GATE Office and Technology Park is inside APG’s secure perimeter and part is outside.

Original estimates projected that this EUL project would earn up to \$400 million for the Army over its 50-year lease. As of November 2015, the project was bringing in \$1.8 million per year in lease revenues to the Army. Half of these funds are retained by the installation and the other half go to IMCOM headquarters. In addition, the developer pays around \$1 million per year to the installation for police and fire department services, road maintenance, and other services through a Service Support Agreement. This funding helps the installation maintain capacity in these critical Base Operations Support services in the face of declining installation budgets.

USAF EUL Experience

The Air Force started developing EULs at about the same time as the Army. In the Air Force, authority to execute EULs has been delegated to the Assistant Secretary of the Air Force for Installations, Environment and Energy (SAF/IE), and most responsibilities for executing EULs have been further delegated to AFCEC, which provides a centralized technical assistance center to help USAF installations develop and implement EULs. Currently, AFCEC leads the execution of USAF installations’ EUL deals and other Value Based Transactions (VBTs). AFCEC has a variety of legal, real estate, contracting, and other technical experts to help USAF bases with EULs. AFCEC personnel perform the following tasks:

- identify existing Air Force nonexcess real property assets to be developed
- assess the feasibility of EUL opportunities
- use project management expertise to take a project from concept to lease execution

²¹ Army Corps of Engineers, Baltimore District, 2013.

²² GAO, 2011, p. 7.

Table 3.1
Selected Army Installation EUL Deals

EUL Name	Installation's Main EUL Partner(s)	Brief Description of the EUL
Aberdeen Proving Ground (APG) EUL	St. John Properties	The partner has constructed an office and R&D complex that generates at least \$1.8 million per year in lease revenues, half of which APG receives. The developer also pays around \$1 million per year to the installation for police and fire department services, road maintenance, and other services through a Service Support Agreement, which helps the post provide base operations support. ^a
Fort Detrick Central Utility Plant EUL	10-acre land lease to Chevron Corporation in partnership with Keenan Development Company	Alternative financing for a \$130 million utility plant. Keenan Development finances, develops, manages, and operates a central utility plant providing steam and electricity to tenants on the installation. ^b
Picatinny Arsenal EUL	InSitech Inc.	InSitech Inc. leased 100,000 SF of existing facility space and 120 acres of land to build an R&D campus. The in-kind consideration return to the Army was optimistically estimated to be \$500 million over the lease term, with \$7.4 million in in-kind consideration from developer payments and the rest in the Army's share of net rental revenues. Through the end of 2010, however, the Army had received only \$1.7 million in consideration for the lease, 77 percent less than the estimated amount, and no rental revenues because the project was slowed by the economic downturn. ^c
Redstone Arsenal EUL	City of Huntsville. In a joint venture, Corporate Office Properties Trust and Jim Wilson & Associates named LW Redstone, LLC to develop the project.	Through a joint venture, Corporate Office Properties Trust and Jim Wilson & Associates lease 468 acres to develop Redstone Gateway. The development is optimistically valued at \$1 billion. Relocation of Redstone Arsenal's main gate, valued at \$8 million, was an in-kind consideration. ^d
Yuma Proving Ground Vehicle Hot Weather Test Track	General Motors	In this joint facility use EUL, General Motors financed and built a hot-weather vehicular testing complex on 2,400 acres of land. The Army shares use of the complex to test 85 percent of its wheeled vehicle fleet at no additional cost, saving millions of Army dollars. ^e

NOTES: These case studies are most of the currently tracked Army EULs and were chosen to represent a variety of deals, including diverse types and different levels of success.

^a Kurt Stout, "Looking Back on BRAC: Aberdeen Proving Ground," *Capitol Markets*, July 30, 2012; and St. John Properties, "GATE at Aberdeen Proving Ground," webpage, undated. (For more information in this report, see the "Army EULs" section of Appendix A.)

^b Keenan Development, "Fort Detrick Central Utility Plant—Phase I, Frederick, Maryland," webpage, undated-a.

^c GAO, 2011.

^d Skip Vaughn, "Redstone Plans to Lease Land for Growth," U.S. Army, February 12, 2010. (For more information in this report, see the Army EUL section of Appendix A.)

^e National Council for Public-Private Partnerships, "Yuma Desert Proving Grounds, Yuma, Arizona," webpage, undated. (For more information in this report, see the Army EUL section of Appendix A.)

- engage with stakeholders to determine community/industry interest
- negotiate lease; prepare documents for lease signing, closing and managing lease during lease term
- plan and host on-site industry days
- manage financial returns from EULs, easements and other VBTs
- oversee the long-term health and sustainability of EUL/VBT projects.²³

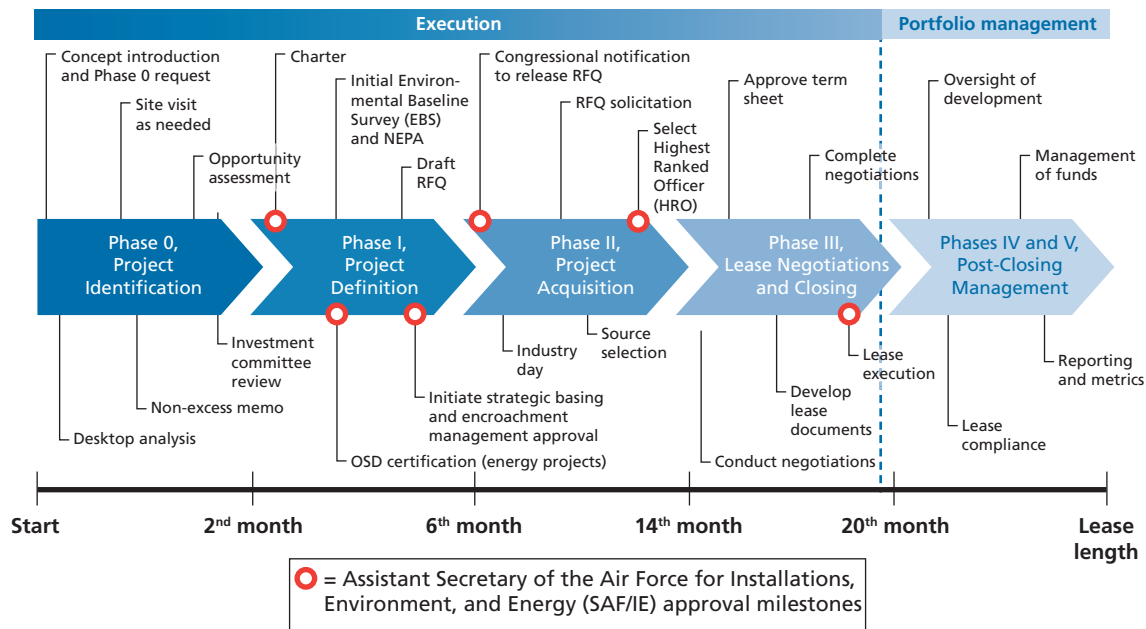
²³ AFCEC, "Real Estate Development," webpage, undated-c.

To help educate and assist USAF base personnel on EULs, AFCEC provides information and outreach through different methods, such as workshops and presentations at ADC conferences. For example, at the 2017 Defense Communities National Summit in June 2017 in Washington, D.C., AFCEC provided a three-hour “Air Force Enhanced Use Lease Workshop” to USAF installation personnel and other attendees. At this workshop, AFCEC explained the USAF EUL process and provided lessons learned from previous EUL deals and advice to help USAF bases and communities develop more successful EULs.

Figure 3.1 is a chart that AFCEC staff used to explain the USAF EUL process at the AF EUL Workshop at the 2017 Defense Communities National Summit. The chart helps explain the complexity of the process and how EUL development requirements can slow down the process. For instance, it describes some of the steps of the Request for Qualifications process that are taken to compete the EUL projects; it also describes some of the steps taken to comply with the National Environmental Policy Act (NEPA).²⁴

The Air Force also has had a variety of EUL deals that have been developed and implemented since 2001 and some that were terminated. The Air Force made a decision to invest in the AFCEC center of expertise to help develop and implement installation EULs. In recent years, it has developed and implemented more EULs than both the Army and Navy. Table 3.2 lists ten of the ongoing USAF installation EULs, information on revenue generated by these EUL deals so far, and what is anticipated over the life of the projects. Because of having implemented fewer EULs, the Army has less experience and expertise in develop-

Figure 3.1
Air Force EUL Process: Steps and Estimated Time Line



SOURCE: AFCEC, 2017.

NOTES: Actual timeline from concept to lease-signing varies widely and is highly subject to variation due to the nature and complexity of each project. Some actions may occur concurrently with others.

²⁴ NEPA is a U.S. law that requires federal agencies to consider and assess environmental impacts during agency planning and decisionmaking when the proposed action could affect the environment. It also requires agency and public participation in the NEPA process. U.S. Code, Title 42, The Public Health and Welfare, Chapter 55, National Environmental Policy.

Table 3.2
Selected Ongoing Air Force Installation EUL Deals

Installation and EUL Name	Installation's Main EUL Partner(s)	Year Signed	Lease Term in Years	Forecasted NPV at Closing (Lease Term)	Value Received as of March 31, 2017 ^a	Brief Description of the EUL
Eglin AFB–Community Airport EUL	Okaloosa County	2007	25	\$7,246,611	\$2,535,335	Okaloosa County leases 130 acres of land for airport. Eglin AFB initially receives \$318,000 a year in in-kind considerations with a 3-percent escalation each year. ^b
Eglin AFB–Emerald Breeze Hotel EUL	Emerald Breeze Resort Group	2012	50	\$18,398,210	\$1,510,726	Emerald Breeze Resort Group finances, builds, and owns a hotel on 17 acres of leased land. Eglin AFB receives \$25 million and 10 percent of gross sales from hotel. ^c
Eglin AFB–Solar Array EUL	Gulf Power Company	2015	37	\$1,017,406	\$0	Gulf Power Company leases 240 acres to construct and manage a solar array. The in-kind considerations to Eglin AFB will equal an estimated \$1 million at the end of the lease. ^d
Eglin AFB–Water Reclamation Facility EUL	Okaloosa County	2007	30	\$6,584,764	\$2,728,175	Okaloosa County leases 225 acres to construct and maintain a water reclamation facility. The County will give \$325,000 a year in in-kind considerations to Eglin AFB with a 2-percent escalation each year for water line and other maintenance. ^e
Grand Forks AFB–Unmanned Aerial Systems Industrial Park EUL	Grand Forks County signed the EUL, State of North Dakota financially contributed	2015	50	\$26,520,222	\$283,841	Grand Forks County leases 217 acres to build an unmanned aerial system campus. The rent paid to Grand Forks AFB is \$90,000 per year with a 2-percent escalation. ^f
Hill AFB–Falcon Hill National Aerospace Research Park EUL	Sunset Ridge Development Partners signed the EUL and manages the project; State of Utah helped finance	2008	50	\$88,281,197	\$20,176,714	Sunset Ridge Development Partners leases 550 acres from Hill AFB in exchange for the construction and renovation of office space and other infrastructure projects, valued at \$12.5 million. ^g
Joint Base McGuire-Dix-Lakehurst (JBMDL)–Solar Array EUL	Starwood Energy Group and Energy Management Inc., True Green Capital, and Conti Group	2015	40	\$8,010,437	\$232,711	Affiliates of Starwood Energy Group and Energy Management Inc. develop the project; True Green Capital affiliates, in partnership with Conti Group, build, own, and operate the array. JBMDL receives \$250,000 per year for the lease term. ^h

Table 3.2—Continued

Installation and EUL Name	Installation's Main EUL Partner(s)	Year Signed	Lease Term in Years	Forecasted NPV at Closing (Lease Term)	Value Received as of March 31, 2017 ^a	Brief Description of the EUL
Luke AFB—Solar Array EUL	Arizona Public Service (APS)	2014	30	\$3,169,010	\$694,060	APS constructs, owns, and operates a solar array on 100 acres of leased land. APS pays Luke AFB approximately \$120,000 a year. ⁱ
Nellis AFB—City of North Las Vegas Wastewater Facility and Fitness Center EUL	City of North Las Vegas	2008	50	\$34,803,405	\$24,962,041	City of North Las Vegas builds a water reclamation facility on 41 leased acres. In-kind consideration valued at an estimated \$35.8 million is paid in the form of a new fitness center, and water supply and reclaimed water infrastructure. ^j
Seymour Johnson AFB—City of Goldsboro Sports Complex EUL	City of Goldsboro	2016	20	\$579,710	\$0	City of Goldsboro leases 62 acres to construct and own a multisports complex. The in-kind consideration that Seymour Johnson AFB receives is an expansion of a fitness center, valued at a minimum of \$600,000. Seymour Johnson AFB also has joint use privileges of the facility. ^k
Total	N/A	N/A	N/A	\$194,610,972	\$53,123,603	

SOURCE: AFCEC, June 2017. (For more information in this report, see the notes for each case study.)

NOTES: These were all of the USAF EULs that were being tracked by AFCEC in 2017, except for one from 1988 that was being renegotiated and the Fort Sam Houston EUL (which became the JBSA Office Space EUL). NPV = net present value. N/A = not applicable.

^a Throughout this document, any statement regarding the value received from any of these EUL or other outgrant deals is referring to the cumulative nominal/current dollars, not a discounted rate based on a base year, because this is how the Air Force and Army report the data. In addition, the statistics usually account for the actual cash received and in-kind considerations that can be more easily quantified, such as construction of a facility, but not some of the in-kind considerations that are more difficult to quantify, such as some of the staff hour contributions and any energy and water security benefits.

^b Gordy Fornell, "Eglin Community Partnership Initiative," briefing, Florida Defense Support Task Force, June 27, 2013.

^c Dan Cohen, "Development Team Closes on \$25M Resort for EUL on Okaloosa Island," Association of Defense Communities, November 15, 2012.

^d Dan Cohen, "Air Force, Utility Sign EUL for Solar Array at Eglin AFB," Association of Defense Communities, December 11, 2015b.

^e ADC, *Community Roles in Enhanced Use Leasing*, Infobrief, September 2007.

^f AFCEC, June 2017.

^g Erik Castle and Marta Dunn, "Falcon Hill National Aerospace Research Park at Hill Air Force Base, Utah," Hill AFB, October 20, 2015.

^h Joshua King, "Largest Military Solar Energy Project in Northeast Breaks Ground on JB MDL," Joint Base McGuire-Dix Lakehurst Public Affairs, December 21, 2016.

ⁱ Grace Lee, "Luke, APS Solar Array Live," Luke Air Force Base, July 13, 2015.

^j Lawrence Crespo, "Nellis Breaks Ground for New Fitness Center," Nellis Air Force Base, October 1, 2010.

^k Goldsboro Wayne Travel & Tourism, "City of Goldsboro Multi-Sports Complex P4 Collaboration With Seymour Johnson Air Force Base," webpage, undated.

ing and implementing them than the Air Force, especially staff experience with EULs at the USACE compared with that of AFCEC staff.

More details on these EULs are presented in Appendix A. As we did with the Army, we summarize one of these EULs, the Nellis AFB EUL.

Nellis AFB and City of North Las Vegas EUL

In October 2008, the City of North Las Vegas and Nellis AFB signed an EUL for the city to lease 41 acres on Nellis AFB to build a city water reclamation facility (WRF). Because it is a leasing payment, the city agreed to provide in-kind facilities to the base with an originally estimated value of \$35.8 million, including about \$25 million to construct a new fitness center for military personnel and their families and about \$10.8 million for base reclaimed water and water supply infrastructure. The city needed land to be able to build a larger WRF to allow for more development and city expansion. In 2011, the \$257 million WRF with a capacity of 25 million gallons of water per day went into operation and enabled North Las Vegas to grow.

The Air Force had multiple benefits from this EUL project, including saving costs, improving installation facilities and infrastructure, enhancing services for the military and their families, enhancing base water security, and improving environmental quality. According to AFCEC, as of March 2017, the value received from the EUL to the Air Force equaled \$24,962,041,²⁵ and the forecasted NPV at closing (lease term) for the Air Force is \$34,803,405.²⁶ In April 2012, the new 110,000-SF fitness center on Nellis AFB opened for military personnel and their families. This Leadership in Energy and Environmental Design (LEED)-Silver facility is 2.5 times larger than the old fitness center on Nellis AFB and has an indoor running track, three basketball courts, an indoor pool, and more space for exercise equipment and activities.²⁷

The reclaimed water and water supply infrastructure benefits being financed by the city “include replacement of aging infrastructure, reclaimed water for irrigation of the golf course, the ability to produce reverse osmosis quality water for aircraft wash down and other uses, and reduced cost for wastewater treatment.”²⁸ Water infrastructure enhances water security by saving scarce potable water resources so they can be used for installation readiness rather than for irrigating the base golf course.²⁹

Issues that Occurred with Early EUL Implementation

All military services and other federal agencies have experienced challenges in developing and implementing EULs. These are large, complex business and real estate deals, and DoD origi-

²⁵ The value received for this EUL is referring to the cumulative nominal/current dollars and encompasses the cash received and in-kind considerations for the construction of the facilities and other infrastructure.

²⁶ As with other long-term outgrant deals, the estimated long-term return has changed over time from the original estimate of \$35.8 million. AFCEC, June 2017.

²⁷ Crespo, 2010.

²⁸ City of North Las Vegas, “Final Environmental Assessment for Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas for Construction and Operation of a Water Reclamation Facility, Nellis Air Force Base, Nevada,” 2008.

²⁹ Water resources and the increasing scarcity of water has become a concern for installation readiness, especially for installations in dry Western states, such as Nellis AFB in Nevada and Fort Huachuca in Arizona. For more information about how water can affect installation readiness, especially at Fort Huachuca, see Beth E. Lachman, Susan A. Resetar, Nidhi Kalra, Agnes Gereben Schaefer, and Aimee E. Curtright, *Water Management, Partnerships, Rights, and Market Trends: An Overview for Army Installation Managers*, Santa Monica, Calif.: RAND Corporation, RR-933-A, 2016.

nally had only limited development and implementation experience with them. All Services have gone through a learning process and dealt with issues as they started implementing EUL deals. In addition, these deals carry risk that can change the outcomes, especially revenues, based on unexpected changes, such as the economic downturn in 2008 and military growth at some installations from the 2005 BRAC.

We illustrate some of these issues using the EUL at Fort Sam Houston in Texas. In July 2001, the Army entered into three 50-year lease agreements at Fort Sam Houston with one company. The purpose of this EUL deal was to lease three large, deteriorated, vacant buildings on the installation to a private developer that would renovate the buildings as office space and then sublease the space to private-sector tenants for profit. Historic BAMC and two other abandoned buildings were to be preserved and converted into 450,000 SF of administrative space as part of this deal.³⁰ As part of the payment, the Army was also supposed to receive a share of the development's net rental income. Another Army benefit from the EUL was eliminating Army costs associated with maintaining the old buildings.

The revenue was to be deposited into an escrow account to fund future work projects at installation facilities. According to the requirements of the legislation and a concern in a 2011 study from GAO,³¹ the revenues were supposed to be deposited initially into the U.S. Treasury instead of being deposited and disbursed from an escrow account to pay for in-kind construction and maintenance projects. Other EULs (such as the one at Hill AFB and two at Eglin AFB) had similar issues when they used local accounts to take funds that were being used for in-kind considerations.³² Having to deposit the money in the U.S. Treasury first and returning the funds to the installation more than a year later limits installations' ability to take in-kind considerations. Some military experts, including a Service real estate lawyer, suggested that the legislation should be changed to allow installations to have more flexibility to take EUL funds, both as cash and for in-kind considerations. A main reason for not allowing a local account to be used to take funds for in-kind considerations projects is a concern that the funds would be used inappropriately, which did happen with some past EULs.³³ However, proper Service headquarters oversight could be set up to prevent this problem from happening, as the Air Force has demonstrated with some of its EUL financial oversight procedures.

The Fort Sam Houston deals were signed in July 2001 when the post was open. At the time, anyone could drive on and off the post freely at any time. There were no guard gates or identification checks at the post and many companies were considering leasing space on the post once the EUL facilities were renovated. After September 11, 2001, the Army changed its policies and required identification checks to get onto the post. The prospect of leasing space to private firms slowed significantly. The 2008 economic downturn further slowed the development plans; thus, only two of the deteriorated buildings had been renovated by 2010. At that time, the Army estimated that EUL payments over 50 years would total about \$198 million, which would be about 22 percent less than originally estimated. In addition, after the lease

³⁰ ADC, 2007.

³¹ Technically, GAO found that only the Picatinny EUL had violated the law regarding Treasury deposits because they had used the funds for things they were not supposed to. GAO, 2011.

³² These USAF EULs used the funds for in-kind considerations that are allowed by the legislation; the issue was with the type of local accounts. GAO, 2011.

³³ GAO, 2011.

was signed, the Army decided to relocate Army organizations to the fort, resulting in a large increase in demand for Army office space at the installation. Because it needed the space, the Army ended up entering into a leaseback agreement,³⁴ renting most of the EUL space that had been renovated, which meant that most of the estimated future consideration would be the result of the Army getting back a portion of the rent that the Army pays to the EUL developer. Thus, the Army pays rent to the developer to pay back to the Army. The EUL ended up being like a third-party financing deal to adaptively reuse the historic BAMC and the other buildings. Problems arise with this deal because of the U.S. Office of Management and Budget (OMB) scoring requirements of OMB Circular A-11.³⁵ (See Appendix B for more details on the scoring issues.) However, this type of deal is very similar financially to how the Army privatizes utilities, so it is not necessarily a bad arrangement—especially given what probably would have happened if the deal had not been made. Because of the challenges to acquire funding to adaptively reuse older buildings, the Army would have been paying to maintain these buildings but not enough to maintain them well, so the buildings likely would have deteriorated further and it would have cost even more to adaptively reuse them later—if the funding could even be found.

In addition, having the old BAMC building space available to lease was beneficial for Army South. Around late 2001, the Army wanted to relocate Army South headquarters to Fort Sam Houston. At the time, there was no space available to meet its size and force protection (FP) requirements both on and off-post. Leasing space from the EUL developer in the old BAMC building would be cost-effective and met the space and FP needs. The developer could have BAMC ready for Army South headquarters occupation within 18 months, which would have been faster than the Army military construction (MILCON) process. The result was that U.S. Army South moved its headquarters to the old BAMC in 2003. By renting space in the EUL building, the Army likely saved millions of dollars in MILCON costs and avoided the delays of constructing a special building for Army South headquarters. Another benefit of this deal to Army South is that the renovated facility, with its historic and aesthetically pleasing exterior and foyer, creates an ideal building for the diplomatic parts of its mission, such as hosting visits from foreign dignitaries.

Despite its problems, the Fort Sam Houston EUL can be considered a success story for the Army, especially considering the alternative of leaving the buildings to deteriorate further and the challenges in acquiring funding for adaptive reuse of older buildings. In fact, this deal actually gave the Army many benefits. First, the Fort Sam Houston EUL has provided some revenues to the Army because not all the tenants are Army. Second, the developer's in-kind considerations paid for other installation facility renovations. Third, it eliminated the installation costs of maintaining the old buildings and it provided two facilities that are in better condition than many of the other Army-maintained buildings on the installation, which has likely helped worker morale.³⁶ Fourth, the large historic BAMC building was cost-effectively adaptively reused, preserving Army history. Fifth, U.S. Army South was able in 2003 to move

³⁴ A *leaseback* is an arrangement in which the military installation leases an asset to another entity, then leases back services or property from the lessee. For example, an installation could lease a warehouse facility to a private company and then rent back some space for its own use.

³⁵ OMB, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11, July 2017.

³⁶ Army personnel directly involved in Army facility management at JBSA over the past 15 years stated these and other installation benefits from this EUL.

its headquarters into a cost-effective, attractive, and FP-compliant space in the old BAMC, which likely saved MILCON costs and avoided delays of constructing a new building for this Army organization.³⁷

In addition, the Army did not know when it signed the EUL that it would need to grow at Fort Sam Houston, and it did not know about the September 11, 2001, terrorist attacks that would pose restrictions on facility access. GAO argued that the Army either should have not considered the three EUL buildings nonexcess property because of their internal location on the post or it should have included an exit clause from the deal, but the GAO report did not mention that the deal had been signed when the installation was an open post.³⁸ Furthermore, this is an expected risk that can occur in implementing any EUL; in many EUL deals, the government waives the exit clause because the developer cannot acquire financing for the deal if the clause is included. This Fort Sam Houston example illustrates the complexities and diverse issues that occur in implementing EULs and other large-scale and long-term outgrants. More of these issues are discussed in the later section on lessons learned.

Complicating the EUL deal at Fort Sam Houston is the fact that it became part of JBSA in October 2010 because of a 2005 BRAC decision. On October 1, 2010, Fort Sam Houston, Lackland AFB, and Randolph AFB combined to become JBSA under the management of the U.S. Air Force. After the Air Force took over the administration of the Fort Sam Houston EUL, the deal was renegotiated in 2010 and is now called the JBSA Office Space EUL. The current forecasted NPV at closing (lease term) for the Air Force is \$47,113,560, and the value the Air Force had received as of March 31, 2017, was \$1,503,045.³⁹

Other Large-Scale Leases and Easements

Besides EULs, installations have also developed some other types of large-scale leases and easements. We discuss three different examples here. First, we describe how some Army installations in the past few years have been developing large-scale energy outgrants that often are in the form of leases. Second, we discuss an innovative large-scale facility lease at Ellsworth AFB. Last, we briefly illustrate an easement deal at Eglin AFB that provides high in-kind considerations to the military. This last example demonstrates that easements can sometimes generate significant benefits for the military installation.

Army Large-Scale Energy Outgrants

The Army has been developing and implementing large-scale energy outgrant deals partly because of strong Army leadership support for them and partly because of the activities of the Army Office of Energy Initiatives (OEI) within the ASA(IE&E).⁴⁰ OEI focuses on helping

³⁷ For a more in-depth discussion of these benefits and the Fort Sam Houston EUL lessons learned, see Appendix A.

³⁸ GAO, 2011.

³⁹ AFCEC, June 2017.

⁴⁰ Much of this support started because of the Army's Net Zero Initiative. In October 2010, the Army launched the installation Net Zero Initiative. Net Zero was a holistic strategy founded upon the Army's sustainable practices and incorporation of emerging best practices to manage energy, water, and solid waste at Army installations. It included a group of Net Zero Energy pilot installations. An objective of this initiative included (where practicable and fiscally prudent): "Reducing overall energy use, maximizing energy efficiency, implementing energy recovery and cogeneration opportunities, and then offsetting the remaining demand with the production of renewable energy from onsite sources, so that the Net Zero Energy installation produces as much renewable energy as it uses over the course of a year." ASA(IE&E), *2015 Progress Report: Army Net Zero Initiative*, Washington, D.C., October 2016b, p. iv.

installations develop and implement large-scale energy deals to assist with achieving Army energy security goals.

The Secretary of the Army established the OEI as the central management office for cost-effective, large-scale renewable and alternative energy projects on Army installations. The OEI implements projects that leverage private sector financing and generate at least 10 megawatts of renewable or alternative energy. . . . Enhancing the Army's energy security is operationally necessary, financially prudent, and Mission critical.⁴¹

Often, large-scale solar array deals involve a long-term lease to use installation land. For example, OEI helped staff at Fort Detrick, Maryland, develop and implement a 15-megawatt solar project on Fort Detrick land with Ameresco. Ameresco financed, designed, built, owns, operates, and maintains the large-scale solar facility, which became operational in May 2016. It also leased installation land for the project. The project includes a 25-year electricity purchase agreement in which Fort Detrick agrees to purchase the renewable electricity from Ameresco through a 25-year Power Purchase Agreement (PPA). The project provides Fort Detrick with renewable energy at or below current and projected utility rates. Approximately \$3 million in costs to the Army will be avoided over the course of the contract, and the electricity to be generated by the facility is the equivalent of powering 2,720 homes per year and will reduce greenhouse gas emissions by 19,000 metric tons annually.⁴² Through the PPA authority, Ameresco leases the land, but this arrangement does not involve an FMV requirement because the emphasis is on the energy benefits the installation receives from the deal, including providing the installation with electricity at a cheaper rate through a renewable source.

As just stated, these deals are often being implemented because of energy security benefits to the Army and do not place as much emphasis on the financial returns from the deal or receiving FMV for the use of the installation land. Therefore, many of these large-scale energy outgrants are not receiving a financially calculated FMV for the land. To understand why, we need to explain the authority used to conduct energy outgrants.

The Army, and DoD more broadly, have several legal authorities and agreement types that can be used to enter large-scale energy-related outgrants. Besides EULs, these agreements include PPAs and General Services Administration areawide contracts. If an installation uses an EUL, that agreement is subject to the FMV requirement of Section 2667. However, legal authorities for other agreements, such as PPAs, are silent on whether the installation must receive FMV as part of the agreement.⁴³ A 2016 GAO report determined that the military does not have any guidance for long-term PPAs that requires DoD cost estimates to reflect all the

⁴¹ In addition, "To create energy secure installations, the Army begins by developing generation assets on or near Army land. The next step is to add energy storage and energy controls systems, creating 'islandable' capabilities for an installation. These islandable capabilities can enable the direct routing of electricity to essential requirements in the event of a grid disruption or other power emergencies." OEI, "Welcome to the Army Office of Energy Initiatives," webpage, undated.

⁴² ASA(IE&E), "Fort Detrick Large-Scale Renewable Energy Solar Project," fact sheet, OEI, May 2016a.

⁴³ For example, 10 U.S.C. § 2922a permits contracts for energy or fuel for military installations; 10 U.S.C. § 2410q permits multiyear contracts to purchase electricity. U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 173, Energy Security, Subchapter II, Energy-Related Procurement, Section 2922a, Contracts for Energy or Fuel for Military Installations; U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 141, Miscellaneous Procurement Provisions, Section 2410q, Multiyear Contracts: Purchase of Electricity from Renewable Energy Sources.

costs, including the value of the land.⁴⁴ Instead, OSD policy calls for these projects to generally use leases and include a statement of FMV for the land.⁴⁵ However, the same OSD policy does not discuss all types of alternative financing mechanisms available to DoD in its agreements with private developers.⁴⁶ Because these authorities are silent on FMV and do not address all mechanisms currently available to DoD, there is ambiguity in whether FMV is required for some of the energy-related outgrants.

Ellsworth AFB Leasing 21,000 SF to a Health Care Company in a Shared Office Building

In 2015, Ellsworth AFB entered into a five-year lease with Drynahan, LLC (Advance Health), a Virginia-based health care management firm. The lease is for approximately 21,000 SF on the first floor of Building 4040, a building on the base that also houses the USAF Financial Services Center. The lease fills space that was vacated when the USAF pay processing center lost almost 400 jobs, and the company shares the building with this USAF Financial Services Center. The USAF center employees occupy the second floor; Advance Health's employees occupy the first floor.

Both the amount of square footage leased and the monthly rental rate increase each year under the lease until Advance Health has complete possession of the first floor in Year 5. The company was supposed to have 40 people in the building by the end of 2015 and up to 200 people in the facility within three to five years. The base will earn a rental income of about \$635,486 from this lease over the five years. Besides paying rent, Advance Health makes some in-kind improvements to the USAF property.

This leasing deal is innovative for a variety of reasons. First, the company has no defense contractors working for it, nor does it have any involvement with the Air Force or the installation, which is unusual for a military installation leasing deal. Second, Advance Health was recruited to come to the base by the Governor's Office of Economic Development and the South Dakota Ellsworth Development Authority rather than anyone from the military. Third, the company had no offices in the community near the base. The company was looking for a more central and western location for a call center and likely would not even have considered Ellsworth AFB had it not been for the aforementioned state organizations. Last, personnel at Ellsworth AFB had strategically used a permit deal with FEMA in this same building to help prepare the space for this commercial deal (as was discussed earlier).

This deal also provides a variety of benefits to the Air Force and the community. For the Air Force, the base receives the rental income and in-kind considerations. The deal also helps the base offset operating costs and fill underutilized space. The base saves costs by not having to pay operations and maintenance cost on this underutilized space. The Air Force also does not have to spend resources searching for a military tenant to use this space. The deal benefits the community by providing good-paying jobs for western South Dakota, a sparsely populated community. South Dakota officials also see the deal as providing another "reason to keep Ellsworth off future base-closing lists."⁴⁷

⁴⁴ GAO, *DOD Renewable Energy Projects: Improved Guidance Needed for Analyzing and Documenting Costs and Benefits*, Washington, D.C., GAO-16-487, September 2016, p. 32.

⁴⁵ GAO, 2016, p. 32.

⁴⁶ GAO, 2016, p. 25.

⁴⁷ Jim Holland, "Ellsworth to Lease Space for Private Company's Call Center," *Rapid City Journal*, July 1, 2015.

Eglin AFB Easement to the Mid-Bay Bridge Authority for a New Connector Road

Eglin AFB has partnered with the Mid-Bay Bridge Authority through a large-scale easement signed in 2015 that permits the Authority to use Eglin property for a new connector road. Eglin will realize an estimated \$20 to \$30 million payment-in-kind from the Mid-Bay Bridge Authority.⁴⁸ Eglin AFB in-kind payments include new runway lighting, runway striping and improvements, a fitness track, new fire suppression equipment, a fire station renovation, fish habitat restoration, solar thermal heating systems, and energy conservation projects.⁴⁹

Lessons Learned from Outgrants

Next, we discuss the lessons learned from implementing EULs and other large-scale outgrant deals. We start by describing the benefits. Then, we discuss the challenges in developing and implementing outgrants. Last, we focus on the factors that contribute to success and that help to deal with the challenges. In this section, we describe lessons from USAF and Army EUL experiences and experiences from other large-scale outgrant deals. We also describe some Army- and USAF-specific lessons learned.

Benefits of Outgrants

EULs and other large-scale outgrants can provide significant value to an installation in a variety of ways. **First, they can provide economic benefits to the installation by earning payments and saving costs.** They can earn revenue and in-kind considerations for the installation. For example, at Nellis AFB in the USAF's EUL with the City of North Las Vegas, the city is providing an estimated \$35.8 million of in-kind considerations by constructing a fitness center for military personnel and their families and supplying the funding for installing reclaimed water and water supply infrastructure. In fact, as of March 2017, 11 USAF installation EULs implemented over the previous ten years had generated more than \$55,155,000 of revenue in terms of cash and in-kind considerations.⁵⁰ Outgrants can also provide cost-saving and cost-avoidance benefits, such as saving the costs of operating and maintaining old and underutilized facilities. For example, in the Hill AFB EUL, the developer replaced deteriorating base administrative office buildings as part of the in-kind considerations, including constructing a new 37,000-SF building for \$7 million to house the Air Force Security Forces Squadron,⁵¹ which saved the cost of maintaining the deteriorating buildings and the construction costs of the new building. In the Grand Forks EUL, the base saved about \$16 million that it would have had to spend to remove the old existing infrastructure on the property. A former base commander at Eglin AFB stated how the in-kind payments generated from Eglin's EULs have contributed to beneficial installation projects that might not have otherwise had funding. Part of this economic benefit can come from the ability to bundle multiple installation facilities

⁴⁸ Sources for the two different cost estimates: Mike Spaits, "Bridge Authority Partnership with Eglin Benefits All Northwest Florida," Eglin Air Force Base, June 21, 2010; and Fornell, 2013.

⁴⁹ Fornell, 2013. For more details on this easement, see Appendix A.

⁵⁰ Ten of these EULs are listed in Table 2.2; the 11th is the JBSA Office Space EUL, which had been a Fort Sam Houston EUL. For more information about the cash and in-kind consideration from these EULs, see Appendix A. AFCEC, June 2017, p. 20.

⁵¹ Castle and Dunn, 2015.

and land areas (including both valuable and less valuable facilities and land parcels) to achieve economy-of-scale benefits in the outgrant deal, as the Hill AFB EUL example illustrates.

Second, EULs and other outgrants can enhance the military mission and installation readiness, such as by helping with testing and training and energy security. For example, the Yuma Proving Ground EUL with General Motors provides the Army with a facility for testing wheeled vehicles in hot weather. Even the Eglin AFB Emerald Breeze Hotel EUL provided some benefit to the installation's military mission because Eglin uses the hotel's rooftop for USAF antennas, which the 96th Test Wing will be able to use for telemetry operations. EULs have also helped with energy and water security, such as the reclaimed water infrastructure development at Nellis AFB in its EUL with the City of North Las Vegas and the energy benefits from the Luke AFB large-scale solar array—the ASA(IE&E) stated in 2015 that “the solar array at Luke Air Force Base increases the Air Force's energy flexibility and diversity.”⁵²

Third, some large-scale installation outgrants can improve support for military personnel and their families. In some cases, the military personnel and their families use the facilities that are developed through the outgrant deal or provided as part of the in-kind consideration. For example, in the Seymour Johnson AFB and City of Goldsboro Sports Complex EUL, the military personnel will use the private sports complex and have year-round access to higher-quality game and practice fields. In the Nellis AFB and City of North Las Vegas EUL, the in-kind consideration provided a new 110,000-SF fitness center on the base for military personnel and their families.

Fourth, some outgrant deals can provide morale and productivity improvements. For instance, when the deal involves improving facilities that DoD civilians or military personnel use, it can provide morale and productivity improvements by providing better work facilities. For example, in the Hill AFB–Falcon Hill National Aerospace Research Park EUL, USAF personnel expect that working in upgraded base facilities will improve the morale of employees, which will contribute to greater productivity and mission achievement.⁵³

Fifth, outgrants can help installations find productive uses for underutilized property. Specifically, real estate deals help take advantage of nonutilized and underutilized installation land and facilities that would otherwise remain underused or unused. Many of these buildings would otherwise deteriorate or impose ongoing maintenance costs to prevent deterioration, so the installation saves these costs through these deals and frees up resources to help support installation readiness. The adaptive reuse of the old BAMC and north beach building from the Fort Sam Houston EUL illustrates how empty deteriorating buildings have been productively reused.

Sixth, outgrants can help protect, preserve, and upgrade installation real property. For instance, in-kind considerations can be used to upgrade and maintain installation property, as happened with the lease at Ellsworth AFB to the health care company and with the installation of new gates in the Redstone Arsenal and Hill AFB EULs. This benefit can also include helping to preserve and adaptively reuse historic buildings, such as the BAMC at Fort Sam Houston (now JBSA) EUL.

Seventh, outgrant deals can have installation land management and energy and environmental benefits. We illustrate with three diverse examples. The Eglin AFB road ease-

⁵² Lee, 2015.

⁵³ Castle and Dunn, 2015.

ment with the Mid-Bay Bridge Authority's in-kind considerations have helped with fish habitat restoration on the base and with energy conservation projects. The Nellis AFB and City of North Las Vegas EUL deal had multiple environmental benefits: the fitness center was built to LEED Silver requirements, and the deal involved the development and use of reclaimed water infrastructure, which helps preserve groundwater resources. The Fort Detrick, Luke AFB, and JBMDL large-scale solar array deals all involve renewable energy systems that help reduce greenhouse gas emissions. The Luke AFB solar array also helped meet the renewable energy goals of the state of Arizona and the Arizona Public Service Company (the utility partner in this EUL).

Eighth, EULs and other outgrant deals can have public and community relations benefits. For instance, the Seymour Johnson AFB and the City of Goldsboro Sports Complex EUL helps provide public relations benefits from the community members and the military and their families using the facility together. Similarly, in the Grand Forks AFB EUL, the Air Force, university, and commercial organizations collaborating in the flight operations and civil engineering activities contribute to improved relationships. These benefits can extend to both the outgrant partner and the community, as in the Nellis AFB EUL with the City of North Las Vegas that strengthened community relationships and resulted in "closer bonds" between Nellis AFB and the City of North Las Vegas.⁵⁴

Last, EULs and other large-scale outgrants can also benefit the community. Often, the large-scale outgrants can help provide jobs and other economic benefits. For instance, the Hill AFB–Falcon Hill National Aerospace Research Park EUL benefits the community by providing both an estimated 15,000 additional jobs resulting from the new office and retail facilities and a greater tax base for income taxes, property taxes, and sales taxes, which increases local tax revenues.⁵⁵ Providing jobs is especially important in rural communities, which have fewer job opportunities in a region, depend more on the installation, and might have lost military jobs from military downsizing, as occurred at Ellsworth AFB and Grand Forks AFB. The large-scale lease to the health care company at Ellsworth AFB helped to bring new high-paying jobs to the region that helped replace some of the 400 USAF Financial Services Center jobs that were lost at the base. In Grand Forks County, many graduates from the University of North Dakota's aviation program left the state for technical jobs elsewhere because they could not find jobs in the region. The Grand Forks AFB Unmanned Aerial Systems (UAS) Campus EUL will help provide 2,500 to 3,000 mostly high-paying professional jobs that will keep young people in the community. This deal can offer local job opportunities in UAS pilot training, systems testing, research, and sensor development. The county's tax base will also increase as a result of the EUL.

Not every large-scale outgrant has all these benefits but most have many of them. In addition, because of the benefits to the military and communities, Congress has encouraged greater use of EULs. For instance, the House report for H.R. 2810—the 2017 version of the NDAA for FY 2018—noted that EULs have been used "to develop electricity generation, commercial

⁵⁴ Fred Meurer, Steve Bonner, Will Rowe, Susan Morris, and Craig Zgabay, "Installation-Community Partnerships: A New Paradigm for Collaborating in the 21st Century," *Journal of Defense Communities*, Vol. 1, 2012.

⁵⁵ Castle and Dunn, 2015.

and industrial facilities, and other infrastructure projects that have benefited both the military installation as well as the surrounding communities.”⁵⁶

Challenges in Developing and Implementing Large-Scale Outgrants

Installations have faced a variety of challenges in trying to develop and implement EULs and other large-scale outgrants. **The first challenge is the fact that these are complex deals that often require diverse technical expertise to develop and implement them, including real estate, legal, financial, contracting, engineering and other technical skills.** These diverse skills are required because of the planning, design, construction, management, and operational needs of having an EUL partner construct and/or renovate facilities that often have significant and complex infrastructure, financial, contracting, environmental, security, and legal implications.

Second, Army installation managers, master planners, and other personnel are not familiar with such activities and often lack the motivation, knowledge, training, and time to pursue these innovative opportunities. Army personnel also have limited incentives to pursue them. Some personnel also do not know that installations can receive at least 50 percent of the revenues from the leases; others have wanted to receive more than 50 percent, having seen their USAF counterparts receive 100 percent of the revenues. Army installation managers and other experts that we interviewed said disincentives for Army installations to pursue large-scale outgrants are created by the facts that (1) installations receive only 50 percent of the revenues and (2) even that amount must be deposited into a U.S. Treasury account first, and it is usually more than a year before the installation’s receipt of the funds.⁵⁷ Similarly, two Navy personnel said these issues have been a disincentive for implementing outgrants at Navy bases, which is why they prefer in-kind considerations that go directly to installations from the start. In addition, some Army installation staff currently perceive inconsistent Army leadership support and mixed messages about whether even to pursue EULs. For example, at ADC conferences, there is limited discussion by Army leaders about EULs, especially compared with the Air Force, and Army personnel receive little information from the USACE about how its personnel help support deals. Installation staff also can be risk averse and might not want to pursue these deals—especially when they do not understand the possible returns for the installation. Furthermore, even if an installation planner wants to pursue an EUL or other large-scale outgrant, it is possible that installation contracting, legal, or financial staff might not have the time, expertise, or interest in supporting an innovative installation partnership. Based on all these reasons, Army installation staff are not likely to develop many EULs and other large-scale outgrants—with one exception: large-scale energy outgrants. OEI has expressed leadership support to develop and implement such deals.

A third major challenge for large-scale outgrants is finding a partner who wants to use the installation property. Some installation managers do not even consider doing a large-

⁵⁶ U.S. House of Representatives, Armed Services Committee, Report on the National Defense Authorization Act for Fiscal Year 2018, H. Rept. No. 115-200, July 6, 2017, p. 316.

⁵⁷ It is well known within DoD that installation managers often need to be able to retain and control cost savings at the installation level to participate in innovative cost savings programs; it is also known that when they have problems acquiring and using such savings, it creates a disincentive to participate. For instance, this has been an ongoing problem with installations not participating in energy utility demand response programs: If installations cannot retain the cost savings at the installation, that can discourage participation. GAO, *Electricity Markets: Actions Needed to Expand GSA and DOD Participation in Demand-Response Activities*, Washington, D.C., GAO-14-594, July 2014.

scale outgrant because they assume nobody would have a use for the property. Someone has to find value in the installation's underutilized property. This often requires innovative ideas and creative recruitment and could involve external parties helping to identify a property use and potential partners. For example, the Ellsworth AFB lease of 21,000 SF of office space to a health care company came about because of the Governor's Office of Economic Development and the South Dakota Ellsworth Development Authority helped identify and recruit the company. Similarly, Grand Forks AFB signed an EUL with Grand Forks County to lease 217 acres for commercial companies to develop its UAS campus because the idea was identified and developed with the help of county staff in collaboration with the private industry, base personnel, and AFCEC staff. Army large-scale energy outgrant deals often have help from OEI to find energy company partners.

The fourth challenge is closely related to the third. For these outgrant deals to work, the military is required to receive FMV for the property, and there must be a viable business case for both partners. The legislation requires military installations to receive the FMV of the land in the deal, and the private developer needs to make a profit. The FMV requirement has often been a significant challenge, especially if the outgrant deal involves in-kind considerations because it can be difficult to place a monetary value on them. If the installation receives military value, as has occurred with some of the large-scale energy outgrants (which use a different authority that does not require FMV for the outgrant), then the military is not necessarily receiving FMV for the land. Also, legal opinions have differed about how to calculate the FMV for EULs and other outgrants. Eglin AFB's two EULs with Okaloosa County, the one for the WRF and the one for the Destin–Fort Walton Beach Airport, provide good examples of this. In both these EULs, “the Air Force accepted a negotiated amount of consideration that was less than the appraised value of the property. According to the Air Force, although it uses property appraisals as a guide for determining FMV, a property's actual FMV is the price a willing buyer could reasonably expect to pay a willing seller in a competitive market to acquire the property.”⁵⁸ A GAO study questioned this approach for calculating FMV and stated, “it was not clear how and to what extent the Services ensured the receipt of FMV.”⁵⁹ However, some other Air Force, Army, and other DoD headquarters and installation staff have questioned whether the military always must receive FMV if the deal ultimately provides value to the military and saves money compared with not doing a deal. In addition, for EULs and other outgrants that are with local governments and that involve public benefits (as with the Eglin AFB and Okaloosa County WRF and airport EULs), do deals need to achieve the full FMV? Installation and community staff have both raised this issue, especially because the FMV requirement has limited the development of some installation EULs with local governments. As found in previous RAND research, “Some installations have faced challenges in developing community partnerships because the fair market value requirement prices the property too high for a municipality's public use.”⁶⁰ Similarly, the FMV requirement has limited opportunities with private developers. For example, NASA personnel have found that the requirements for FMV and how NASA installations can accept in-kind considerations have limited its ability to encourage the use of EULs at underutilized NASA property with potential

⁵⁸ GAO, 2011, p. 26.

⁵⁹ GAO, 2011.

⁶⁰ Lachman, Resetar, and Camm, 2016, p. 142.

property developers. According to GAO, “NASA officials said prospective lessees are reluctant to make costly capital improvements to a property that will have to be returned to the government at the end of the lease without other compensation, such as a reduction in cash rent.”⁶¹

Fifth, Congressional Budget Office (CBO) and OMB scoring issues have caused challenges for EULs and other large-scale outgrants.⁶² Some people have suggested that budget scoring adds unnecessary uncertainty to installation EUL deals and other partnering opportunities because the guidelines for the use of the data are subjective,⁶³ and “because there are potential issues surrounding the determination of fair market value and inconsistencies between the A-11 rules and commercial accounting standards.”⁶⁴ This has led some experts to argue that “[s]coring needs to be reformed in relation to partnerships, especially in cases where the benefits to the federal agency, or agencies, involved make clear fiscal and budgetary sense.”⁶⁵

Sixth, sometimes security and access issues can be challenges because the people who would work or visit the installation need to be able to get on the installation property and access the leased building(s). If the leasing deal is for a purpose for which most people are temporary visitors, such as to tour a museum, then normal gate access procedures for getting on post are probably sufficient, and the full-time employees can go through the installation security procedure to acquire appropriate badges and access. However, this arrangement might not be as feasible if the EUL or other large-scale outgrant deal involves multiple buildings on the installation, and a large number of diverse people need to access and work at those buildings.

Seventh, EUL and other large-scale outgrants can take a long time to develop and implement because of the legal and military requirements, oversight, and management approval processes. EULs, especially, often take a long time to develop and implement, which discourages potential partners and installation staff from undertaking them. For example, the Grand Forks AFB EUL took seven years from the start of the idea until the deal was signed, and that time does not reflect any of the construction time. In addition, interviews with more than half a dozen installation and local government personnel involved in EULs at five different Army and Air Force installations revealed the fact that the deals took so long to develop and implement, anywhere from four to seven years just to have the EUL agreements signed before any construction began. Most interviewees cited the slow military requirements and the Air Force and Army oversight and approval processes as the reasons why the deals took so long. AFCEC has acknowledged some of the time-line challenges in the USAF process. For example, a USAF lesson learned is that USAF EULs have experienced “[l]engthy AF process for approval of sublessees and tenants.”⁶⁶ In addition, in the House report for H.R. 2810—the

⁶¹ GAO, *Federal Real Property: Improved Cost Reporting Would Help Decision Makers Weigh the Benefits of Enhanced Use Leasing*, Washington, D.C., GAO-13-14, December 2012b, p. 16.

⁶² *Budget scoring* is the process of estimating the budgetary effects of pending and enacted legislation and comparing them with limits set in the budget resolution or legislation. Effects are generally measured in terms of budget authority, receipts, and outlays. Tax Policy Center, “Federal Budget Terms,” webpage, 2010.

⁶³ Meurer et al., 2012, p. 9.

⁶⁴ Lachman, Resetar, and Camm, 2016, p. 142.

⁶⁵ Meurer et al., 2012, p. 9.

⁶⁶ AFCEC, June 2017, p. 29.

2017 version of the NDAA for FY 2018—Congress expressed some concerns about the time it takes to develop and implement EULs.⁶⁷

Eighth, yet another challenge is that infrastructure issues and other outgrant support issues could create problems in developing the outgrant deal. Issues include the planning, provision, construction, and operation of transportation, water, energy, communications, and other support services. One of the main issues with infrastructure is determining who will supply what and who pays for it. This consideration also includes accounting for extra traffic and road infrastructure considerations. When private developers develop properties on private land, they often are required to pay for transportation, water, and energy infrastructure that needs to be added to accommodate the growth. In some EUL deals, such as at APG, the military planners had not determined how to accommodate such issues in the original deal, and it added cost, time delays, and extra negotiations in the process for the Army. In fact, APG staff stressed that an important lesson learned is to deal with these issues at the outset of the EUL process. Things were further complicated at APG because its utilities were privatized, and staff had to negotiate terms with the developer and privatization contractor regarding water services. At Grand Forks AFB, things went more smoothly with its EUL regarding infrastructure, partly because staff had the AFCEC EUL experts helping in this process. In addition, in this deal, the state provided some funding to help pay for new roads and moving the guardhouse.

Who provides other types of Base Operational Support services to the outgrant is also part of this issue. An illustration of this is a Navy experience with an EUL in Hawaii in which the Navy learned the importance of figuring out early on which government agency has legislative jurisdiction for providing police, fire, and emergency medical services and other government services. In December 2005, Naval Station Pearl Harbor and a developer signed an EUL for the developer to construct a 55,000-SF Navy community support service center and about 30,000 SF of retail and commercial space (the Moanalua Center) outside the fence line on Navy land. The project was ultimately successful, but it was delayed because the Navy had to work with the state to change some government services from exclusive jurisdiction to concurrent jurisdiction to enable the state to have responsibility for fire and police protection and other services.

Ninth, how to manage and share risks associated with the outgrant deal is another important challenge. Outgrant partners need to figure out how to apportion and manage the cost uncertainties, legal liabilities, and other risks for the partnership and come to terms on the language for such issues in the contract or agreement. Sharing space, facilities, and infrastructure often involves complex risk and liability issues that need to be spelled out in the leasing contract. For instance, there is the risk of the installation property being damaged, someone getting hurt on the leased property, or environmental contamination. Another type of risk is financial, especially if the deal involves an additional investment in long-lived facilities or equipment, such as the partner renovating and upgrading the building that it is leasing. The contract needs to contain negotiated language to account for who is responsible and who pays for which risks and liabilities.

Last, these installation outgrant deals often face cultural differences between military installations and potential partners, including state and local government and industry partners. Differences exist in such areas as decisionmaking processes; legal authori-

⁶⁷ U.S. House of Representatives, Armed Services Committee, 2017, p. 316.

ties and processes; accounting, financial, and contracting procedures; communication procedures and styles; and language and terminology. Communications differences are a significant part of this challenge, especially for EULs. Normally, industry real estate and other business deals occur at a much faster pace than the U.S. Army can execute them. Many within the Army and DoD do not understand the speed at which business works. When the Army started its EUL program in 2001, it created a lot of industry enthusiasm, but the Army did not sufficiently communicate the complexities and time needed to develop and implement deals. This situation arose partly because these deals were new and people in the Army did not realize how long it would take to complete the deals given the complexities, the legal requirements, and the government oversight processes. The result was that many in industry and the Army had unrealistic expectations about how quickly and easily EULs could be developed and about how profitable the arrangements would be. When the deals did not meet these expectations and some were not working out, it created a negative view of EULs, especially with business developers and financiers. This industry view of Army EULs has created a challenge for future Army installation EULs and other large-scale outgrants and is part of the reason why the Army has not done as many EULs in the past few years and has shied away from using the term EUL.

Lessons Learned to Help Address the Challenges

Military installation experiences with EULs and other large-scale outgrants provide useful insights for how to address many of these challenges. **First, state and local governments can play an important role in large-scale outgrant deals and can help overcome the barriers of finding a partner and creating a viable business case for both the military installation and the partner.** In fact, they have played a critical role in developing and implementing EULs and other large-scale outgrants, usually in multiple ways. State and local governments are often key partners in deals by acting as facilitators and catalysts, as Grand Forks County was in the Grand Forks AFB UAS Campus EUL. State and local governments have helped to develop ideas and find companies to participate in deals. State and local military support and economic development organizations help to develop deals. For instance, the Governor's Office of Economic Development and the South Dakota Ellsworth Development Authority helped identify and recruit the company in the Ellsworth AFB lease of 21,000 SF of office space to a health care company. Many states and local governments have created military support organizations to help support installations because they want to help the military, support servicemen and servicewomen and their families, help the economy in their states and communities, and help installations become more efficient and effective—and potentially help avoid closure in a future BRAC round.

Some state, city, and county governments also provide financial assistance for the EULs by providing tax incentives, grants, or gifts for the EUL deal. For example, the state of Utah provided funding for road improvements and gate relocations with the Hill AFB EUL, and the State of North Dakota has provided about \$15.5 million for utility infrastructure, road, and other improvements with the Grand Forks EUL.⁶⁸ In fact, AFCEC has stated the importance of leveraging nonmilitary sources of funds, especially to ensure that deals provide FMV to the military, noting that “[n]on-developer funding could be the difference in a deal being viable

⁶⁸ Tom Ford, “Grand Sky,” presentation at the 2017 Defense Communities National Summit, Grand Forks County, N.D., June 20, 2017.

or being a bust!”⁶⁹ Lastly, in some EULs, the local government might also be the organization leasing the property, as in Nellis AFB, the Grand Forks AFB, and the Seymour Johnson AFB EULs. By being the EUL partner, the local government is often willing to take some of the risk that the private developer or installation might not want to incur. For example, with the Nellis AFB EUL deal with North Las Vegas, the city (not the installation) incurs the financial risks associated with the construction of the base fitness center.

Second, installation staff need leadership support and technical assistance to help with these deals—not just legal and real property help, but also financial, business, contracting, and engineering help. As was mentioned earlier, Army installation personnel have experienced mixed and unclear messages about whether to implement EULs and other large-scale outgrants and about where the revenues go. Many installation managers also lack the experience and technical skills to develop complex large-scale deals. Therefore, Army installation managers and other staff have limited incentives and motivation to develop EULs and other revenue-generating outgrants. Unlike Army installations, USAF installations have clear leadership support for EULs. In addition, AFCEC provides installations with key technical assistance, such as real estate, legal, financial, contracting, and engineering expertise. Its members also provide useful military procedural and process oversight on the deal development and implementation. Without assistance, many of the current AFB EULs would probably not have been developed and implemented. In summary, large-scale outgrant projects often require support and expertise from military legal, financial, contracting, engineering, and other technical staff.

Third, the challenges associated with EUL funds having to go in a special U.S. Treasury account instead of a local account could be dealt with by changing the legislation and allowing the installation to use a trust account or some other type of local account (with appropriate Service safeguards in place) to use the funds more directly at the installation that creates the EUL, especially for funds that are supposed to go to projects that are in-kind considerations. Making these changes could help provide incentives for more Army and other Service installations to pursue EULs. In fact, Navy personnel who we interviewed stated that the Navy policy to focus more on receiving in-kind considerations rather than cash payments from large-scale outgrants has helped provide incentive for installations to do more outgrants because the installations receive more of the funding and receive it more quickly. In some cases, having the funds locally accessible is important to the deal, as in the Nellis AFB EUL. The City of North Las Vegas put \$25 million to pay for constructing the fitness center at Nellis AFB into a local escrow account that could be taken out only with signatures from both authorized Air Force and developer personnel. If these funds had not been set aside at the start of the project in 2008, the project might not have happened: The economy ran into problems and the city might not have been able to acquire the funds later. With this suggested legislative change, the actual language could include some specific Service oversight requirements to ensure that the funds are properly managed and used only for what the legislation allows to avoid the problems that occurred with the Picatinny EUL.

Fourth, one way to address the challenges of the extended period required to develop and implement EULs and other large-scale outgrants is to speed up the DoD EUL and other large-scale outgrant development and approval processes. AFCEC is working to

⁶⁹ AFCEC, June 2017, p. 26.

streamline the USAF processes and reduce the time required for developing EULs, implementing the Request for Qualifications process,⁷⁰ and approving sublessees and subtenants.⁷¹ To address the last issue, AFCEC is working to provide sufficient detail of sublessee(s)/tenant(s) to help expedite USAF approval.⁷² Similarly, in the House report for H.R. 2810 (the 2017 version of the NDAA for FY 2018), Congress has stated a need to streamline the DoD EUL processes. Because of “concerns . . . on the length of time it can take to initiate, negotiate, and implement an EUL,” Congress encouraged streamlining of the Services’ EUL processes, including any legislative changes necessary to speed up the process.⁷³ Note that this statement also acknowledges that legislative changes might be necessary.

Part of the reason the DoD EUL and other large-scale outgrant processes are slow and take so long has to do with DoD organizational oversight requirements to protect the federal government from ending up in a bad deal. These deals involve risks and potential costs, though they are mostly limited for the military, as was explained earlier. These risks need to be balanced with the benefits gained from the deals and in streamlining the processes (which would enable more deals to be implemented but might increase risks slightly). Thus, these deals are a balancing act in terms of risks, expected revenues, costs, benefits, and time. Army and other DoD personnel also need to recognize the uncertain nature of deals and the fact that some will not work out. It should be acceptable for a few deals to be terminated or to not return the originally estimated returns, especially because projections for the estimated returns at the start of a outgrant deal might be high and the projects, although not meeting those goals, are still successful compared with not having had the outgrant deal. In addition, some within the Army and DoD have to be careful about having too narrow a definition of success and focusing too much on maximizing revenues to the military from these deals. Such deals can have a variety of hard-to-quantify benefits, as the old BAMC facility at the Fort Sam Houston EUL demonstrated.⁷⁴

Another important lesson learned is the importance of ongoing communications among all the different stakeholders in the process, especially between the military installation and headquarters and with the community and the developers. For instance, communications difficulties can arise between military headquarters and installations in different functional areas, such as contracting or legal staff not communicating with headquarters about partnership issues. A lesson learned here is the importance of having technical expertise, such as Army headquarters staff or the AFCEC EUL office, that can help in the large-scale lease development and implementation processes. Regarding industry communications, AFCEC stated, “Project success [is] contingent on effective Air Force/Industry communications.”⁷⁵ Multiple EUL deals have attributed a team approach with strong communications as being critical both to success and to helping overcome barriers to project development and implementation. For example, in the Luke AFB Solar Array EUL, strong teamwork

⁷⁰ “Lease solicitation objectives not apparent or lost in large, cumbersome RFQs.” AFCEC, June 2017, p. 28. AFCEC is working with industry to improve their communication in the Request for Qualifications and subsequent processes.

⁷¹ AFCEC, June 2017, p. 29.

⁷² AFCEC, June 2017, p. 29.

⁷³ U.S. House of Representatives, Armed Services Committee, 2017, p. 316.

⁷⁴ For more information about the Fort Sam Houston EUL, see Appendix A.

⁷⁵ AFCEC, June 2017, p. 28.

and ongoing communications between stakeholders, especially the utility partner and USAF personnel, were important to the implementation of this deal. In fact, the team's strong communications were vital to addressing a implementation challenge that arose when archeological artifacts were discovered on the EUL site and the area needed to be mitigated because of cultural resource laws and requirements.⁷⁶ Similarly, a former senior leader from Eglin AFB stated how important teamwork with the partners and within the Air Force was for overcoming the barriers encountered when developing and implementing their EULs and easement deals. Another part of this communications lesson from USAF and Army outgrant experiences is that early interaction with all stakeholders is key. According to AFCEC for EULs, "Early interaction with all stakeholders, base, industry, and municipalities increases the viability of EULs through effective team collaboration."⁷⁷ AFCEC staff also stated that "[e]arly and continuous interaction with all critical stakeholders increases EUL project success."⁷⁸ Stakeholder communications need to include other military installation tenants, as the Air Force learned from the challenges with the Army-owned Defense Non-Tactical Generator and Rail Equipment Center (DGRC), which has been a tenant at Hill AFB for decades. The Air Force staff told the Army that the DGRC would have to leave Hill AFB because the EUL needed the land that the DGRC occupied. The Army did not want to relocate this center, and the issue created not only delays in the EUL but also tension among the Army, Air Force, and Congress.⁷⁹

A lesson learned to address the challenge of security and access issues in large-scale outgrants is for the military to lease out land and buildings near the perimeter of the installation and move the fence line. This is often done with EUL deals that involve large tracts of land with mixed use development. In fact, these practices were employed with multiple EULs, such as the APG, the Grand Forks AFB, the Hill AFB, and the Redstone Arsenal EULs. Another way to handle leasing an installation building is to ensure that the employees who need to work there would be able to pass the security procedures. This situation occurred at Ellsworth AFB, which is leasing office space to the health care company for a call center because the employees are processing sensitive health care information that involves privacy concerns (i.e., access to information about health care conditions and Social Security numbers) and need to pass strict security background checks to be able to perform their jobs.

Other Lessons Learned from Large-Scale Outgrants

Next, we discuss some lessons learned from large-scale outgrant deals, including factors that help enable development of successful deals.

First, both USAF and Army outgrant experiences (from both the more successful and less successful outgrants) show that determining an appropriate value for the installation property and what will be exchanged for that property are critical to the outgrant

⁷⁶ Karen White, "Luke AFB, 15 MW Solar Array, Challenges and Lessons Learned," USAF Utility Law Field Support Center, briefing, May 2014.

⁷⁷ AFCEC, June 2017, p. 27.

⁷⁸ AFCEC, June 2017, p. 27.

⁷⁹ For more information about this, see U.S. House of Representatives, Armed Services Committee, Subcommittee on Readiness, "Hearing on National Defense Authorization Act for Fiscal Year 2016 and Oversight of Previously Authorized Programs Before the Committee on Armed Services House of Representatives, One Hundred Fourteenth Congress, First Session. Subcommittee on Readiness Hearing on Alignment of Infrastructure Investment and Risk and Defense Strategic Requirements," March 3, 2015b.

success. Both AFCEC staff and Army real estate experts have found that installation staff need to have realistic expectations about the likely value of the deal. Installation personnel have to remember that the federal government must receive FMV for the property for most outgrant deals. Most important, “An EUL is a business transaction—determining a value for the exchanged items is crucial to success.”⁸⁰

Second, USAF bases’ experiences have shown EULs do not have to be at an installation that is in a high-property-value or urban area. The secret lies in identifying a suitable and profitable use for the property and finding the right partners. For example, the Grand Forks AFB UAS Campus EUL is being implemented in a primarily rural area with lower property values. The planners of this deal found a use that was suitable for this rural area, taking advantage of the open air space and local university technical staff. As Table 3.3 illustrates, most of the eight USAF bases with EUL deals are not located in areas with high property values. Specifically, only two of the eight USAF bases with active EULs are clearly located in regions with higher property values. In addition, of the four bases that have individual EUL projects with total forecasted NPV at closing of more than \$25 million, only one of them is clearly located in a higher property area. Obviously, property values are subjective; for example, beachfront property on Eglin AFB would cost much more than a Superfund site on an inland portion of the base, and real estate in regions with good neighbors and schools often costs more than it does in areas that have high levels of crime and poverty and schools with poor reputations. This subjective table is designed to illustrate the likely magnitude for the costs of the property at each EUL to dispel the idea that EULs have to be in areas with high property values or that are primarily urban.

Third, Army contractors could provide a potential opportunity for future installation outgrants. Many Army installations have a large number of contractors that do not pay directly for the building space that they use on installations. These contractors could lease space, but it would require changing some contracting policies. That might increase some of the costs in some contracts because some contractors give discounts in exchange for installation space. However, this approach also could benefit the Army, and DoD as a whole: There could be savings in installation costs from providing so much extra space on installations, and there could also be extra leasing revenues. There are also instances in which the contractors have not given discounts in exchange for the free space on the installation. These changes would also affect the parts of the Army that benefit from giving the contractors free on-post space by making those parts pay for the space (through their contract charges) rather than having the installations pay for it. Another way to change the current practices and potentially save Army funds would be to require that the Army organization giving free space to contractors would have to pay IMCOM (or other landholding command) for that space. Analysis should be conducted of the full range of options and their costs and savings implications for different parts of the Army to figure out which option really would save overall total Army costs.

Chapter Summary

This chapter focused on the results of our second analysis on military installation outgrants, the assessment of military experiences using EULs and other forms of large-scale outgrants.

⁸⁰ AFCEC, June 2017, p. 25.

Table 3.3
Expected Revenue Returns and Location Information for the Eight Air Force Bases with EULs

	Eglin AFB	Grand Forks AFB	Hill AFB	Joint Base McGuire-Dix-Lakehurst	Joint Base San Antonio	Luke AFB	Nellis AFB	Seymour Johnson AFB
EUL focus	Four diverse deals	UAS campus	Aerospace research park	Solar array	Office space	Solar array	Wastewater facility and fitness center	Sports complex
Total forecasted NPV	\$31.8 million	\$26.5 million	\$88.2 million	\$8.9 million	\$47.1 million	\$3.0 million	\$34.8 million	\$0.6 million
State	Florida	North Dakota	Utah	New Jersey	Texas	Arizona	Nevada	Georgia
Estimated magnitude of the property value	High in coastal area	Low	Low, 30 miles from Salt Lake City	Low, former Superfund site	Likely high, in a major city	Low, but 15 miles west of Phoenix	Likely low, but about 10 miles from downtown Las Vegas	Low

SOURCE: Schmidt, 2016.

NOTE: Green shading is for individual EUL projects with total forecasted NPV at closing of more than \$25 million.

The analysis revealed a variety of lessons learned regarding the benefits of outgrants, challenges in using outgrants, and ways to address those challenges. Benefits identified by the analysis are that outgrants can (1) provide economic benefits to the installation by earning revenues and saving costs; (2) enhance the military mission and installation readiness; (3) improve support for military personnel and their families; (4) provide morale and productivity improvements; (5) develop productive uses for underutilized property; (6) protect and preserve installation real property; (7) provide installation land management and energy and environmental benefits; (8) provide public and community relations benefits; and (9) provide community benefits, such as generating more jobs in the community. Not every outgrant provides all these benefits, but most provide economic benefits and some of the other benefits.

The analysis also identified ten main challenges in developing and implementing large-scale outgrants. First, development and implementation of these complex deals often require diverse technical expertise, such as real estate, legal, financial, contracting, engineering and other technical skills. Second, Army installation personnel often lack the knowledge, training, expertise, motivation, and time to pursue innovative opportunities. The fact that Army installations receive only 50 percent of the revenues and that they have to wait so long to receive the funds (because they must first be deposited into a special U.S. Treasury account) are disincentives for pursuing large-scale outgrants. Third, it can be challenging to find a partner who wants to use the property. Fourth are the potential challenges posed by the requirements that the military receive FMV for the property and that a viable business case must be determined for both partners. The fifth and six challenges are OMB/CBO scoring issues and security and access concerns. Seventh, EULs and other larger outgrant deals often take a long time to develop and implement because of the legal and military oversight requirements and management approval processes. Eighth, infrastructure issues and other outgrant support issues could create problems in developing the outgrant deal. Ninth, there are challenges in determining how to manage and share risks associated with outgrant deals. Last, cultural differences between military installations and potential partners, such as differences in decisionmaking and legal authorities and processes, sometimes arise.

Finally, the analysis also identified some lessons learned to help overcome some of these challenges. First, state and local governments can play an important role in overcoming the barriers in large-scale outgrant deals by being facilitators or catalysts for the deal (such as helping to find partners and create viable business cases); by leasing the property; and by providing financial assistance. Second, installation staff need leadership support and technical assistance to help with these deals—not just legal and real property help, but also financial, business, contracting, and engineering help. Third, the challenges associated with EUL revenues having to go in a special U.S. Treasury account instead of into local accounts could be dealt with by changing the legislation and allowing installations to use trust accounts or some other type of local accounts. Fourth, a proposed solution to address the challenges of it taking a long time to develop and implement EULs is to speed up DoD EUL development and approval processes. Fifth, another important lesson learned is the importance of ongoing communications among all the different stakeholders in the process. Finally, a lesson learned to address the challenge of security and access issues is for the military to lease out land and buildings near the perimeter of the installation and move the fence line.

The chapter closes with three additional lessons learned: (1) USAF and Army outgrant experiences (from both the successful and unsuccessful outgrants) show that determining an appropriate value for installation property and what is exchanged for that property is critical to

outgrant success; (2) USAF bases' experiences have shown that EULs do not have to be at an installation that is in an area that is urban or has high property values; and (3) Army contractors might represent a potential opportunity for future installation outgrants.

Facility and Infrastructure Sharing Partnerships with Other Government Agencies

This chapter focuses on the results of our third analysis, which focused on facility and infrastructure sharing partnerships, the other of the two major approaches we identified in Chapter Two. A facility or infrastructure partnership is when a military installation partners with other organizations, usually another government agency, to share a facility or infrastructure for mutual benefits. Sharing can occur with one or more other federal, state, or local government agencies. Private organizations can also be involved in partnerships. This sharing can take many different forms, such as sharing an installation facility or sharing a partner facility. Sometimes, the military installation chooses to close a facility and just use the community facility instead. In these cases, the military can save significant funds because it no longer needs to provide the facility and personnel on the installation, so DoD saves the facility O&M and personnel costs. Military installations might incur costs in some of these partnerships, such as paying to use the partner's facility, but these usually are small compared with the averted costs of the installation operating and maintaining its own facility.

In this chapter, we explain our analysis of these facility and infrastructure sharing partnerships categories. We discuss the categories of these partnerships, how we used case studies in the assessment, and the lessons learned.

Categories of Installation Facility and Infrastructure Partnerships

We developed a database with 85 examples of installation partnerships that involve some level of sharing facilities or infrastructure on or off the installation. These installation partnerships include examples from all of the military Services. Many of these examples involve sharing facilities without any financial arrangement or with limited cost-savings benefits. Common facility sharing partnerships occur when an installation allows a community to use installation ball fields or a small arms range, the military uses community facilities, or the community and the installation use each other's facilities. With all of these examples, the arrangement might involve payments or in-kind services.

It is important to note that facility and infrastructure sharing partnerships can involve using different authorities and agreement types, including outgrants. Partnerships might involve the installation and partner signing an MOA, a license, or a lease when the partner is using the installation facility. As a result, overlap exists between some of the facility sharing partnerships and outgrant examples.

In examining these different facility sharing partnerships, we focused on those that involved some sort of cost savings, cost avoidance, or revenue generation. We grouped the partnerships into the following four main categories:

- joint use of a facility or infrastructure on a military installation
- joint use of a partner facility or infrastructure in the community
- joint construction and use of a facility or infrastructure that is not on the military installation
- other facility and infrastructure sharing partnerships.

We explain each of these categories next. In Table 4.1, we provide examples of functional areas and of a partnership for each of the first three categories. We do not include the fourth category in the table because it is for less-common examples that did not directly fit in the first three categories. This table does not necessarily list all the functional areas for the partnerships; it illustrates functional areas for which we have at least one installation partnership example in our database.

Category 1: Joint Use of a Facility or Infrastructure on a Military Installation

Joint use of a facility or infrastructure on a military installation occurs when the partners agree to share a building, other facility, or infrastructure (such as water or energy utilities) on a military installation. Because we are focused on partnerships that save the military money, we focused on those that also involved sharing the costs of building, operating, and managing the installation facility. For instance, joint use airports often involve the shared use and shared costs of operating and maintaining the facility and of building new features at the facility, as is the case with the partnership between Fort Hood and the City of Killeen, Texas, involving RGAAF. For example, this partnership involved jointly using the airfield and sharing in upgrading, repairing, and maintaining it. A maintenance sharing example is how each partner manages and pays for the excess rubber removal from the airfield every other year, saving half the costs for each partner (compared with each partner having to do it every year if both parties had their own separate airfields).¹

The cost sharing can include the partner paying a fee to use the installation facility; e.g., the City of Killeen leasing RGAAF runway as part of the joint use airport at Fort Hood. Paying a fee to use a facility is very common for partnerships where the community uses recreation facilities, such as pools, golf courses, and ball fields. For example, JBSA has a partnership with community golf agencies that allows public citizens to use the base golf courses if they pay a use fee for each visit. The base earns some additional greens fees from community use, which helps pay for golf course O&M. In some cases, such as the JBMDL soccer field license example discussed in the Chapter Three, fees can be substantial—expected revenue from the soccer field in 2017 was estimated to be between \$115,000 and \$142,500. In another example, Wright Patterson AFB has a partnership with the City of Fairborn, Ohio, allowing community swim teams and individuals to use the base swimming pool in exchange for swim pass fees. In 2014, this partnership generated more than \$83,000 in extra revenue for the base, which helped the base pool stay open.² Table 4.1 shows the variety of different functional areas in

¹ For more information about the Fort Hood and City of Killeen joint use airport, see Appendix C.

² U.S. Air Force, November 25, 2014; and Crowe, 2014.

Table 4.1
Examples of the Different Categories of Facilities and Infrastructure That Are Shared in Installation Facility and Infrastructure Sharing Partnerships

	Category 1: Joint Use of a Facility or Infrastructure on the Installation	Category 2: Joint Use of a Partner Facility in the Community	Category 3: Joint Construction and Use of a Facility That Is Not on the Military Installation
Sample functional areas for the facility or infrastructure that is shared	• Ball fields • Central vehicle wash facility • Child development center • Emergency operations center • Golf course • Joint use airport • Power generation facility • Small arms range • Sports complex • Swimming pool • Water infrastructure • Water treatment facility	• Animal shelter • Ball fields • Child care facility • Compost facility • Emergency operations center • Golf course • Hospital • Jail • Library • Small arms range • Swimming pool • Veterinary clinic	• Education center • Joint training and community center • Police and fire training center • Small arms range
Example of a facility sharing partnership that saves or generates funding for the military installation	Wright Patterson AFB Partnership, in which community members use the base pool Wright Patterson AFB has a partnership with the City of Fairborn, Ohio, for community members to use the base swimming pool. Community swim teams and individuals use the base pool in exchange for swim pass fees. In 2014, this partnership generated more than \$83,000 in extra revenue for the base and the extra revenue enabled the pool to stay open despite sequestration budget problems.^a	Fort Knox Animal Shelter Partnership Partnership involving Fort Knox, a privatized housing contractor, and Hardin County that allows stray animals found on Fort Knox to be taken to the Hardin County Animal Shelter. Fort Knox pays the county \$142 per stray animal, but it was able to close its animal shelter and save the operating and personnel costs for running that facility. The Army also avoided paying an estimated \$1 million for upgrades to that facility.^b	Nebraska ARNG and Omaha Police and Fire Training Center Partnership The Nebraska ARNG and the City of Omaha shared construction costs and use of the Omaha police and fire training center. The City paid for specialized fire and police training facilities; the ARNG paid for joint use classrooms as part of a 45,000-SF Readiness Center that was built on site. The ARNG saved the cost of building the training facilities.^c

^a AFCP Program, "Implemented Partnership Agreements," USAF database extract, June 21, 2017; and Amanda Crowe, "Wright-Patt Pool Opens to Fairborn Community," *Xenia Daily Gazette*, May 14, 2014.

^b Lachman, Resetar, and Camm, 2016, p. 61.

^c Lachman, Resetar, and Camm, 2016, p. 55–56.

which partnerships have occurred and some more details for the Wright Patterson AFB swimming pool example.

Category 2: Joint Use of a Partner Facility or Infrastructure in the Community

Joint use of a partner facility or infrastructure in the community occurs when a military installation decides to use a community facility or infrastructure off the installation instead of providing the facility or infrastructure on the installation. For example, Fort Huachuca closed its main library and has a partnership with the City of Sierra Vista allowing military personnel and their families to use the city's library instead. Fort Huachuca pays Sierra Vista \$77,000 per year to procure additional library materials for Soldiers and their families. However, closing the post building and transferring the three library staff members to other installation jobs yielded the Army an estimated \$300,000 in savings per year, amounting to more than \$2.2 million in total savings as of spring 2014.³ An example of shared infrastructure with the community off the installation is a water pipeline that serves the Piñon Canyon Maneuver Site and a state prison and is shared by Fort Carson and the Colorado Department of Corrections. The City of Trinidad supplies the water; Fort Carson owns the 30-mile water line. When the line was leaking and needed replacement, the prison and Fort Carson shared the cost of repairs.⁴

Joint use often features a variety of cost sharing and payment arrangements, as demonstrated in the Fort Carson and Fort Huachuca examples. An installation also might close or avoid building an installation facility because the partner is providing the community facility for installation use, as with the Fort Huachuca example. An example of a partnership allowing an installation to avoid building a facility occurred with a small arms firing range at Buckley AFB in Colorado. Buckley AFB has a partnership with the Aurora Police Department to use its small arms firing range. The Air Force pays the police department a lump sum fee for unlimited use of the police department's firing range. Because the airmen do not have to travel to use other small arms ranges, the Air Force estimates that the base saves around \$5,000 per year in travel costs and another \$16,000 per year for the cost associated with the travel time. The Air Force also avoids about \$2.9 million in construction fees by not having to build a small arms firing range on the installation.⁵ This example shows that installations can often save or avoid significant costs by closing facilities or avoiding building new ones on the installation.

Table 4.1 shows the variety of different functional areas in which partnerships have occurred and provides another example of this type of facility partnership with a stray animal shelter at Fort Knox, Kentucky. We should note that when an installation closes a facility and relies on the community partner to supply the service instead, the installation incurs the risk that the partner facility might not remain open to provide the service. Risk should be assessed before closing an installation facility and relying on the partner. Some risk factors to consider are how important the service is to the partner, whether there are many substitutes for the service in the community, and the likelihood that the partner will discontinue the service or that the quality of the service it provides will decline. For instance, partnering with a local government for an animal shelter is probably a low-risk situation because most local govern-

³ Lachman, Resetar, and Camm, 2016, p. 45. For more information about the Fort Huachuca library partnership, see Appendix C.

⁴ Lachman et al., 2016, p. 113.

⁵ AFCP, 2017.

ments would be unlikely to close their shelters, and animal rescue group alternatives exist in many parts of the country to help if there are too many stray animals. Partnering for a child care facility could be considered a higher risk because a community child care facility is more likely to close and because of quality concerns; alternatives in the community might not meet military standards.⁶

Category 3: Joint Construction and Use of a Facility or Infrastructure That Is Not on the Military Installation

Joint construction and use of a facility or infrastructure that is not on the military installation refers to when the installation and the community share in the cost of construction, use, or maintenance of a new joint facility off the installation. These types of partnerships are less common and often involve training and educational facilities. One example is the Omaha Police and Fire Training Center. The City of Omaha shared the costs of construction and use of a facility with the Nebraska ARNG. The city paid for specialized fire and police training facilities, and the ARNG paid for joint use classrooms. Besides sharing the training facilities and classrooms, the partners also train together at this facility. In another example, the Minnesota ARNG (MNARNG) partners with local communities to build and share joint TACCs that provide a training facility for the ARNG and a gathering and recreational center for the community. (See Table 4.2 and Appendix C for more details.) An example of a joint college educational facility is Little Rock AFB and the City of Jacksonville, Arkansas, sharing the costs of building an education center for colleges to offer undergraduate and graduate degrees to military personnel, their families, and the community. The Jacksonville–Little Rock AFB University Center is located just off the base and was jointly funded with \$10 million from the Air Force and \$5 million from the City of Jacksonville.⁷

In this category, we also include joint facilities that are built on installation land but are outside the installation fence line. Even though facilities are on military land, they are often built, owned, and operated entirely by the partner. These new joint facilities could be completed through a large-scale lease that involves moving the fence line so the community can have easier access and control of the facility. An example of this is the Seymour Johnson AFB and City of Goldsboro Sports Complex EUL, in which the sports complex is on installation land but outside the fence line, and the facility is being built and managed by the city and its developers but the Air Force shares in its use. (See Table 4.2 and Appendix A for more details.)

Category 4: Other Facility and Infrastructure Sharing Partnerships

The other facility and infrastructure sharing partnerships are the ones that do not directly fit into the other three categories. One partnership in this category involves the partner providing part of the installation infrastructure; there is some sharing but not a direct joint use of the infrastructure. An example of such an infrastructure partnership is that of Fort Meade with Howard County, Maryland, in which the county supplies treated wastewater to cool a new National Security Agency (NSA) computing center. The county, NSA, and Fort Meade worked together to design and build the reclaimed water infrastructure that supplies the waste-

⁶ However, there are ways to address the quality risk by the military requiring partner child care facilities to meet military standards and inspecting them to ensure they do.

⁷ This facility has six different colleges at it. For more information, see Rochelle Sollars, “Built on Excellence: University Center Offers Lesson in Community Support,” Little Rock AFB, February 1, 2011.

Table 4.2
Selected Military Installation Facility and Infrastructure Sharing Partnerships with Other Government Agencies

Partnership Title	Military Installation Partner	Other Government Agency Partner(s)	Description of the Partnership
Fort Drum Community Regional Healthcare Partnership	Fort Drum, New York	Seven different community health care facilities ^a	Instead of building a new hospital, Fort Drum partnered with the surrounding communities to use community hospitals. Through the partnership, Soldiers and their families use nearby civilian hospitals for inpatient medical facilities and most specialty care. Fort Drum's medical department also uses community medical facilities. ^b
Fort Hood Joint Use of the Robert Gray Army Airfield	Fort Hood, Texas	City of Killeen	Fort Hood and the City of Killeen have a joint use agreement at the fort's Robert Gray Army Airfield. On this airfield is the civil Killeen–Fort Hood Regional Airport. The partners jointly use and contribute to the maintenance and operation of the airfield. ^c
Fort Huachuca and the Sierra Vista Library Partnership	Fort Huachuca, Arizona	City of Sierra Vista	Instead of having to upgrade the building, Fort Huachuca closed its on-post main library after forming a partnership with the City of Sierra Vista. Soldiers and their families now use the Sierra Vista library facility. Fort Huachuca pays an annual fee to the city for additional library services for military members. ^d
Minnesota National Guard TACC Partnerships	MNARNG	State of Minnesota, City of Rosemount, City of Inver Grove Heights, and 8 other cities in Minnesota	TACCs combine National Guard Readiness Centers with local community centers. These joint centers contain classrooms; recreation and other facilities and are designed, financed, built, and used together by the MNARNG, the state, and the local communities. ^e
Nellis AFB and City of North Las Vegas EUL	Nellis AFB, Nevada	North Las Vegas	The City of North Las Vegas constructed a water reclamation facility (WRF) on 41 acres of land leased from Nellis AFB through an EUL. Nellis AFB shares water infrastructure with the city; as part of the in-kind consideration, the base receives reclaimed water from the WRF and improved water supply infrastructure. ^f
Reclaimed Water Partnership at Fort Meade with Howard County and the NSA	NSA and Fort Meade, Maryland	Howard County	Infrastructure partnership in which the county supplies treated wastewater to cool a new 600,000-SF NSA computing center. The county, NSA, and Fort Meade worked together to design and build the reclaimed water infrastructure for this new building. ^g

Table 4.2—Continued

Partnership Title	Military Installation Partner	Other Government Agency Partner(s)	Description of the Partnership
Redstone Arsenal and NASA partnerships	Redstone Arsenal, Alabama	NASA	Redstone Arsenal and NASA have partnered together since 1960. NASA is a tenant at this installation. Over the years, the partners have used each other's facilities for various technology developments and tests, taking advantage of synergistic personnel expertise and complementing facilities. ^h
Seymour Johnson AFB and City of Goldsboro Sports Complex EUL	Seymour Johnson AFB	City of Goldsboro, North Carolina	Seymour Johnson AFB partnered with the City of Goldsboro in a 20-year EUL for the City to build and operate a 62-acre multisports complex that both the community and base personnel use. ⁱ

^a The partner health care facilities include both public and private hospitals and clinics. Fort Drum Regional Health Planning Organization, "Community Connection," webpage, 2012.

^b Fort Drum Regional Health Planning Organization, "What Is FDRHPO?" webpage, undated-c. (For more information in this report, see Appendix C.)

^c "Killeen–Fort Hood Regional Airport at Robert Gray Army Airfield, Killeen/Ft. Hood Texas: (Draft) Joint Operating Plan (JOP)," June 17, 2000. (For more information in this report, see Appendix C.)

^d Library Journal Archive Content, "ALA Protests Closure of Fort Huachuca Library," April 12, 2007. (For more information in this report, see Appendix C.)

^e "The Minnesota Model: What It Is and Why You Should Adopt It," *Foundations of Readiness, Journal of the Army National Guard Installations Division*, 2009. (For more information in this report, see Appendix C.)

^f Meurer et al., 2012. (For more information in this report, see Appendix A.)

^g Matthew Hay Brown, "Howard and NSA Reach Deal to Cool Computer Center with County's Treated Wastewater," *Washington Post*, January 2, 2014. (For more information in this report, see Appendix C.)

^h These Redstone Arsenal and NASA partnerships were chosen because they show long-term evolving facility sharing relationships that have ongoing operational mission benefits to both partners. AMRDEC Public Affairs, "NASA Tests New Rocket with Army-Developed Tech," U.S. Defense Department Science Blog, March 8, 2015. (For more information in this report, see Appendix C.)

ⁱ Goldsboro Wayne Travel & Tourism, undated. (For more information in this report, see Appendix C.)

water to the NSA building, but the partners do not share use of the actual installation water pipelines.⁸

Use of Case Studies in the Assessment of Joint Facility and Infrastructure Partnerships

We identified and examined dozens of facility and infrastructure partnerships and gathered lessons learned from many of these. However, we also decided to do a few more in-depth case studies of a smaller set of these partnerships. We chose to do case studies of eight military facility and infrastructure sharing partnerships and three noninstallation federal national security organizations' facility partnerships. These 11 case studies were chosen to represent a diverse set of different functional areas, facility types, length of time since the partnership was implemented, and diversity of partner types. Cases also needed to be considered mostly successful and to have had cost savings and other benefits for the military partner.⁹ We also had to be able to find robust information on the case studies from the literature and to interview some military and partner personnel who had been involved in the partnership development or implementation. For the eight installation partnership case studies, we chose examples that involved sharing an airport; a library; and health care, recreational, water, and training facilities and that had federal, state, and local partners, plus two EUL examples. Table 4.2 summarizes who the partners were in each of the military installation facility and infrastructure sharing partnerships and provides a brief overview of the partnerships. Appendixes A and C provide more detail about each of the case studies as noted in footnotes for each example in Table 4.2.

We were also able to analyze three noninstallation federal national security facility partnership case studies because of other ongoing RAND research partnerships. These case studies include national security partnerships in two U.S. allied nations: the UK and Australia. For these partnership case studies, we assessed examples that involved diverse types of national security facility sharing, such as intelligence agencies sharing a Secure Compartmented Information Facility (SCIF) across five countries' intelligence agencies; a military and a civilian federal agency sharing a biometrics data center facility; and intelligence, military, and civilian agencies sharing a facility to advance the nation's cybersecurity mission. Table 4.3 summarizes the partners in each of the noninstallation federal national security organizations' facility sharing partnerships and provides a brief overview of each partnership. Appendix C presents a summary overview about each of these facility sharing partnership case studies.

Lessons Learned About Joint Facility and Infrastructure Partnerships

In presenting lessons learned, our analysis included the lessons learned not only from the 11 in-depth case studies, but also from the broader set of 85 military installation facility and

⁸ For more information, see Appendix C.

⁹ By *mostly successful*, we mean cases that were implemented or at least partially implemented and appeared to be experiencing some cost savings or other benefits. Since these partnerships were in different stages of development and at least one had been delayed and was not yet experiencing all the anticipated benefits, we use the subject term *mostly successful* because more time is needed to evaluate the full level of success for all these cases.

Table 4.3
Selected Noninstallation Federal National Security Facility Sharing Partnerships with Other Federal Agencies

Partnership Title	Federal National Security Organization Partner	Other Federal Agency Partner(s)	Description of the Partnership
UK Defence Geospatial and Intelligence Fusion Centre (DGIFC) and the Pathfinder Building	Joint Aerial Reconnaissance Intelligence Centre	The Defence Geographic Centre, the Defence Human Intelligence Organisation, and the Joint Aeronautical and Geospatial Organisation	The UK DGIFC in the Pathfinder Building brought together personnel from military intelligence organizations and other nondefense organizations, all of which share facility use and costs. The shared facility promotes intelligence integration and development of capabilities, supporting the agencies' missions. Other organizations joined the Pathfinder partnership later, including the Joint Forces Intelligence Group, which brings together the Command Group and parts of the Intelligence Collection Group.
U.S. Biometrics Technology Center (BTC)	Defense Forensics and Biometrics Agency ^a	Federal Bureau of Investigation (FBI)	DoD's Defense Forensics and Biometrics Agency and the U.S. FBI share the BTC facility in Clarksburg, West Virginia. Personnel from both organizations will work in this facility in separate and shared spaces to further collaboration and the sharing of biometrics technology, standards, and information. Both agencies' biometrics databases are housed at the BTC. The partners also split the costs of the facility.
Australian Cyber Security Centre (ACSC)	Australian Security Intelligence Organisation	Department of Defence, Attorney-General's Department, Australian Federal Police, and the Australian Crime Commission	The ACSC is a partnership of cybersecurity personnel from military and nonmilitary federal agencies that share space in the Ben Chifley Building. The participating agencies with cybersecurity expertise contribute to the costs of the Centre and the colocation of their staff. The aim of the Centre is to raise awareness of cybersecurity, promote coordination on the reporting and investigation of cyberthreats, and coordinate national cybersecurity operations and capability.

^a The Defense Forensics and Biometrics Agency is a Field Operating Agency under the Army's Office of the Provost Marshal General.

infrastructure sharing partnerships, which supported the lessons learned from the 11 in-depth case studies.

Our general findings are that military installation partnerships that share infrastructure and facilities take advantage of the expertise, capabilities, and resources of each partner, which reduces costs and enhances the installation's operations, readiness, and mission. These partnerships are often motivated by mission needs and a desire to reduce costs. The need to

decide about a major facility investment, such as the need to upgrade or construct a new building, often provides a partnership opportunity. Another finding is that partnerships can also enable innovation in space design (such as energy and environmental efficiencies), amenities and aesthetics, future space flexibility, and layout and workspaces to promote collaboration. For example, facility sharing innovations have occurred by the partners deciding to implement *future proofing*,¹⁰ building design features that enable a more flexible, longer-lived, and adaptable workplace, such as in the BTC (see Appendix C).¹¹

Next, we discuss the motivations for partnerships based on our analysis. We then discuss partnerships' benefits and challenges, along with key factors that help overcome the main challenges and help enable partnership success.

Motivation for Partnerships

We found that three main drivers motivated the development of these partnerships:

1. financial and budget drivers
2. facility investment decision points
3. mission drivers: improving installation operations, readiness, and services.

Financial and Budget Drivers

The desire for military installations, local governments, and other federal agencies to save money on constructing, managing, operating, and maintaining facilities is a main motivation for partnering and sharing facilities. When investments are going to be made in organizational changes and in agencies' facilities, a partnership provides an opportunity to save costs. For example, this was a main motivation for the Fort Huachuca library and the Fort Knox animal shelter partnerships (discussed in the subsection titled "Category 2: Joint Use of a Partner Facility or Infrastructure in the Community" earlier in this chapter and in Table 4.1, respectively).

Facility Investment Decision Point

Deliberating a facility investment decision can motivate an installation to partner because of the high costs of the facility investment needs. An organization that has an out-of-date facility in need of updating, that plans to close a facility and relocate elsewhere, or that wants to build a new facility provides the opportunity to develop and implement a partnership.

We illustrate with three diverse installation examples. Fort Huachuca's library building needed a significant investment to upgrade the facility, which motivated Army planners to explore the idea of a partnership with the city. Similarly, planners at Fort Drum decided to consider a community regional health care partnership instead of spending millions of dollars on a new Army hospital. The third example involves Altus AFB in Oklahoma, where the veterinary facility needed an estimated \$100,000 to upgrade and maintain the building. Instead,

¹⁰ *Future proofing* is a building design approach for long-lived buildings that tries to minimize both the detrimental effects of future events and the potential for obsolescence and deterioration to maintain building life-cycle benefits. Brian Rich, "The 10 Principles of Future Proofing Historic Buildings and the Role of Computational Simulation Software," Richaven Architecture & Preservation blog post, December 12, 2013.

¹¹ It is important to note that some of these practices, such as future proofing and energy and environmental efficiencies, are good design practices that are often implemented independent of sharing a facility. Leaps forward in new facility designs and systems occur regardless of sharing. However, we found that an innovative facility sharing process helps facilitate innovation in these other areas as well.

the base managers decided to close its veterinary services on base and partner with off-base providers to offer veterinary services to military personnel and their families. The base saved an estimated \$100,000 on deferred maintenance for just the facility repairs; it also avoided personnel costs and future O&M costs.¹²

Also, when an organization needs more space (as was the case with the DoD–BTC partnership—the FBI’s Criminal Justice Information System was outgrowing its building), its leaders might look to partner in a new facility because of the potential partnership opportunities and benefits.

Mission Driver: Improving Installation Operations, Readiness, and Services

Another main motivation for installation facility partnerships is the need to improve installation operations and services, including soldier and family support. Military planners might see the mission benefits of colocation, especially given declining budgets. We illustrate with three examples. The MNARNG TACC partnerships were partly motivated by the potential benefit to the MNARNG’s recruiting mission and the need to improve the training facilities. Similarly, the Nebraska ARNG planners were motivated by the improved training and joint training benefits accrued by sharing the Omaha Police and Fire Training Center with the city. The Yuma Proving Ground Facility Sharing EUL with General Motors was partly motivated by the Army wanting a new facility for testing wheeled vehicles in hot weather.

Partnerships are often driven by a desire to enhance or maintain support for military personnel and their families, especially as military resources decline. For instance, the Fort Huachuca library, the Altus AFB veterinary facility, and the Fort Drum community regional health care partnerships were all partly motivated by military planners seeking to ensure that military personnel and their families had these services. The Nellis AFB EUL was partly motivated by the Air Force wanting to improve fitness services for military personnel and their families; thus, part of the in-kind considerations was having the City of North Las Vegas finance and construct a new base fitness center.

Table 4.4 shows which of the eight military installation facility and infrastructure sharing partnership case studies had these motivations as drivers for the partnerships, and Table 4.5 shows which of the three noninstallation national security federal agency partnership case studies had each of these motivations. All the military installation facility and infrastructure sharing partnership case studies were motivated by all three factors, except for the Fort Hood and City of Killeen joint use airport. That partnership was mostly motivated by financial and budget considerations of both partners and a facility investment decision point by the city, but not by the military mission.

As shown in Table 4.5, the UK Pathfinder building and the U.S. BTC both had financial and budget drivers, facility investment decision points, mission drivers, and leadership visions as motivation. The mission of ACSC and the leadership vision were at the forefront of the creation of ACSC, although financial and budget drivers and a facility investment decision point played a partial role. These partnerships also had the leadership vision as a motivating factor for the partnership. Specifically, they were partly motivated by leaders who believed in a better way of doing things and a desire to partner and change. A new facility can also provide a leap forward, with newer technologies, innovation, and facility design. This innovation can include workspaces and amenities to facilitate more sharing and integration across orga-

¹² Lachman, Resetar, and Camm, 2016, p. 108.

Table 4.4
Motivations for the Military Installation Facility and Infrastructure Sharing Partnerships

Motivation	NASA and Redstone Arsenal Partnerships	NSA, Fort Meade, and Howard County Wastewater Partnership	Minnesota ARNG TACC Partnerships	Fort Huachuca and City of Sierra Vista Library Partnership	Nellis AFB and North Las Vegas EUL	Seymour Johnson AFB and City of Goldsboro EUL	Fort Drum Community Regional Healthcare Partnership	Fort Hood and City of Killeen Joint Use Agreement
Financial and budget drivers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Facility investment decision point	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Military mission driver	Yes	Yes	Yes	Yes, support to military members	Yes, support to military members	Yes, support to military members	Yes, support to military members	No

Table 4.5
Motivations for the Noninstallation National Security Organizations' Facility Sharing Partnerships

Motivation	UK DGIFC and the Pathfinder Building	U.S. Biometrics Technology Center	Australian Cyber Security Centre
Financial and budget drivers	Yes	Yes	Partially
Facility investment decision point	Yes	Yes	Partially
Mission driver	Yes	Yes	Yes

NOTE: Partially = Part of the factor was important to success, but it was unclear from the interviews and literature whether other parts of this factor were important.

nizational stovepipes to improve national security. For example, the Pathfinder building has innovative circular workspaces that promote collaboration across different classified networks. This innovation can also involve future-proofing and other cutting-edge space design features, energy and environmental efficiencies, and sustainability features, as with the new BTC facility. These are good design practices that are often implemented independent of sharing a facility; however, we found that a nontraditional facility sharing process helps facilitate innovation in these other areas as well.

Benefits of Joint Facility and Infrastructure Partnerships

The main benefits of the installation facility and infrastructure sharing partnerships are that the partnerships can reduce or avoid costs and enhance installation operations, readiness, and missions. Cost savings can include reducing individual partners' costs for building space (e.g., sharing construction or leasing costs), providing facility O&M colocation efficiencies, saving facility support staff time, and (in some cases) reducing the overlap in partner activities. Buildings can have high costs to upgrade (or construct), maintain, and operate (including increasing costs for utilities), so military installations can save significant amounts by sharing a facility. For instance, with the MNARNG TACC partnerships, the MNARNG saves millions of dollars in facility construction and operating costs because the state and local governments pay for 25 percent of the multimillion-dollar facility construction costs, and the community usually pays the facility operating costs. The partnership also saves some manpower costs for the MNARNG because the community operates and manages the TACC, and the ARNG soldiers have more time to focus on the mission.

Up-front financial investments often need to be made for new facilities and partnerships. The actual cost savings and cost avoidances over the long term can be calculated by comparing the difference between the investment costs and the cumulative savings from the reductions in total costs to use, occupy, operate, and maintain the joint space (in terms of reduced manpower, equipment, operations, maintenance, infrastructure, space, and utilities) and the costs if the agencies had stayed in separate spaces.

If the military closes an installation facility and relies on the community partner to provide the facility and service for the military, it yields greater cost savings because the installation does not need to pay to upgrade the facility (or build a new facility) or to operate and maintain the facility. It can also save on personnel costs, as demonstrated by the Fort Knox animal shelter partnership. Fort Knox pays \$142 per stray animal to Hardin County, but the Army avoids significant costs in the long run by closing the installation animal shelter. Specifi-

cally, the Army experiences cost savings on the building upgrade costs, operating costs, and three nonappropriated-fund salaries. Fort Knox's stray animal facility was old and needed at least \$1 million worth of upgrades to the heating, ventilating, and air conditioning and plumbing systems.¹³

Some joint facility partnerships, such as those involved in an EUL, also had the benefit of providing a revenue payment or an in-kind consideration to the installation that helped pay for other installation facility costs. For example, in the Nellis AFB and City of North Las Vegas EUL, as part of its leasing payment, the city built a new \$25 million 110,000-SF fitness center on Nellis AFB for military personnel and their families.

The partners experience diverse operational, readiness, and mission benefits that can help enhance the military installation and government partner operations. Facility sharing partnerships help improve effectiveness of Army operations and mission. For instance, the MNARNG TACC partnerships help the MNARNG with its recruiting mission, and the Redstone Arsenal and NASA facility partnerships help the Army with advances in aviation and missile research, development, and testing. Another mission benefit is that some of the facility sharing partnerships can give Army managers more time to focus on their mission because they do not need to manage a facility, as with the MNARNG TACC partnerships. Another example of mission benefit is Fort Hood's joint use airport partnership at Robert Gray Army Airfield with the City of Killeen; the city has helped improve the safety of Army airfield operations by acquiring funding for airfield improvements. For instance, the city acquired a \$164,000 grant from the Federal Aviation Administration to install a wildlife abatement system with five years of maintenance to reduce the bird air strike hazard. The city also acquired more than \$4 million from state and local organizations to help Fort Hood upgrade the airfield's radar approach control facility. This example also illustrates how partnerships can create access to funds that would not be available to the Army otherwise and the opportunities for state and local funding (an important cross-cutting issue discussed near the end of Chapter Two).

These facility sharing partnerships can also increase workforce expertise, and the partners can enjoy advances in technology development and implementation, as happened with the Redstone Arsenal and NASA facility partnerships and the three noninstallation federal national security organizations' facility partnerships.

The partnerships also help improve support services to military service members and their families. For example, the Fort Drum Community Regional Healthcare Partnership improved health care services for both the military and their families and the surrounding communities. The Seymour Johnson AFB and City of Goldsboro Sports Complex EUL provides airmen and their families (and the surrounding communities) with access to a higher-quality and year-round outdoor recreational facility.

The three noninstallation federal national security organizations' facility partnerships had some additional national security mission benefits. The partnering agencies have improved collaboration and communications and can produce more-timely data and information products. The partners also can provide more-integrated and more-timely support for field operations and to respond in crisis situations. In the BTC partnership, standards and interoperability also improved.

¹³ Lachman, Resetar, and Camm, 2016, p. 61.

These partnerships can also have environmental benefits. For instance, both the NSA at Fort Meade Reclaimed Water Partnership with Howard County and the Nellis AFB and City of North Las Vegas EUL helped the environment through the use of reclaimed water instead of using surface or groundwater sources. These partnerships also helped with installation water security. Some of the new facilities built through the partnerships—such as the new fitness center from the Nellis AFB EUL, the Pathfinder building, and the BTC partnerships—also have LEED certification or other environmentally beneficial features.

Facility sharing partnerships also can benefit community relations for the military. For example, an MNARNG TACC is a part of the community, and it promotes more-frequent interactions between the Guard and the community, which helps improve military community relations. This example also demonstrates that the community relations benefits often accrue when the military installation and the community build a facility together. The partnership between Little Rock AFB and the City of Jacksonville to build the Jacksonville–Little Rock AFB University Center is another example of this. Installation community relations benefits also usually accrue in facility sharing partnerships where the community uses a military installation facility, such as the swimming pool partnership at Wright Patterson AFB and the soccer field partnerships at JBMDL.

Every partnership examined appeared to have both cost savings and installation benefits. However, the types of benefits for the individual partners were not always the same, and sometimes one partner gained most of the cost savings. In addition, the cost savings often did not occur in the first couple years; rather, they appeared only over the long term because of the need to make up-front investments in personnel, facilities development, and other resources before the returns of the partnership could be realized.

Challenges to Developing and Implementing Facility and Infrastructure Sharing Partnerships

Despite the significant benefits of partnerships, they also come with a variety of challenges. Many of these challenges are the same ones documented in *Military Installation Public-to-Public Partnerships: Lessons from Past and Current Experiences*.¹⁴ Many barriers to installation facility and infrastructure sharing partnerships are common to installation partnerships of all types. We briefly overview the challenges for installation facility and infrastructure sharing partnerships here, and the reader can see *Military Installation Public-to-Public Partnerships: Lessons from Past and Current Experiences* for more details on the common partnership barriers.

Just as with many large-scale outgrant deals, facility and infrastructure sharing partnerships often are complex arrangements that can take years to develop and implement and require an investment of qualified staff time. The larger the scope of the effort and the larger amount of money involved, the more time and personnel it will take to develop and implement these partnerships.¹⁵

Similarly, installation and partner personnel staffing issues pose major barriers to developing and implementing these partnerships. Staff often lack knowledge, expertise, incentives, and time to develop and implement these partnerships. Military installations often do not have enough qualified personnel with the appropriate technical skills, expertise, and experience to

¹⁴ Lachman, Resetar, and Camm, 2016.

¹⁵ For more information, see Chapter Six in Lachman, Resetar, and Camm, 2016.

develop facility sharing partnerships—such as the financial experts, lawyers, DPW personnel, and procurement/contracting staff—or they lack time or motivation to participate. The fact that an installation's military and garrison commanders turn over every two to three years also can be a challenge to these partnerships that require a long-term investment for development and implementation.

Another common problem for most partnerships is that people do not like change and some might resist it. Installation facility sharing partnerships can encounter resistance to change by individuals or groups that try to sabotage or slow down the process. Both community and installation personnel might perceive a facility sharing partnership as a threat to the control that they have as individuals, or that the organization they work for has in performing the activity.

Barriers relating to organizational cultures pose another main obstacle. These barriers can be differences in the partner agencies' values, social environment, managerial structures and practices, or how agency employees interact with other individuals and each other. Such barriers can also include differences between military and community partners' decisionmaking processes; legal authorities and processes; financial and contracting procedures; and language and terminology. For example, military installations have specific financial and accounting processes that they must follow to show the business case of the partnership and to pay for any facility developments, and these often differ from the processes that a state or local government or an industry partner must follow.

Another key challenge is determining how to manage and share the risks associated with sharing facilities and infrastructure. The partners need to figure out how to apportion and manage the cost uncertainties, legal liabilities, and other risks in the contracts and agreements for the partnership. Facility and infrastructure sharing partnerships usually involve sharing some combination of facility space, manpower, infrastructure, and equipment. For instance, with the MNARNG TACC partnerships, the agreements specify who uses which spaces when, who manages the facility and scheduling of use (usually the community), and who manages and pays for the utilities and maintenance (usually the ARNG).¹⁶ With these shared activities, there is always the risk of an accident in which something breaks, someone is injured, property is damaged, or the environment needs to be cleaned up. There could also be some elements of financial risk, especially when the partnership requires an additional investment in a long-lived facility. The partners need to negotiate and document in the agreements or contracts who has the responsibility to pay the costs for which risks.

Installations also might need to address communication barriers in trying to develop and implement facility sharing partnerships—both externally, in dealing with the partners, and internally, within the military system. Challenges in communicating with partners sometimes arise because of terminology and other cultural differences. Another barrier is the lack of appropriate communications across different installation organizations. These challenges occur when communicating across different installation functional stovepipes (such as financial, legal, and contracting) and when communicating between military headquarters and installations (such as contracting or legal staff not communicating with headquarters about the partnership issues). Sometimes, headquarters staff do not have time and do not know enough about the local circumstances to participate as effectively (which can be a pitfall of a central-

¹⁶ For more details on the Minnesota ARNG TACC partnerships, see Appendix C.

ized unit organization supporting such arrangements if the unit does not appreciate the importance of understanding the local environment).

Finally, installation facility and infrastructure sharing partnerships can be hampered by security and access issues. These are more of a concern when the partner is using an installation facility or infrastructure or otherwise needs access to the installation. This occurred with the Fort Sill animal shelter sharing partnership with the City of Lawton, Oklahoma. Fort Sill is using the city's facility, but the city needs to pick up stray animals on the installation. Because of security concerns, some installation personnel might not want partner personnel working on the installation, or community personnel and members using an installation facility. Security personnel could try to limit or stop the partnership, and security issues can create additional costs and requirements for the partnership deal. For example, some partner personnel might be required to go through special background checks before they can work on installations.

Lessons Learned to Help Address the Challenges: Seven Key Factors for Success

To help overcome the challenges of joint facility partnerships discussed earlier, we identified some lessons learned from our analysis. These centered around seven key factors for success. Specifically, seven main factors involving people, design, and planning are required to make military installation facility and infrastructure partnerships successful and to achieve their benefits. We identified these factors by assessing the 11 case studies and the other installation facility and infrastructure sharing partnership examples. The first three of the seven factors we identified all involve having qualified and motivated personnel to create the changes needed for the partnership. These factors also tend to reflect the steps in a strategic planning process. In essence, developing and implementing an installation facility partnership can be considered similar to a strategic planning process. The seven factors are as follows:

- Employ strong leadership and project champions.
- Engage staff and stakeholders early in the process.
- Provide qualified management and technical staff.
- Implement ongoing communications across all stakeholders.
- Provide well-defined policy, doctrine, and project design.
- Take advantage of a major decision point for a facility investment.
- Provide up-front staff and funding resources.

We summarize each here.

Employ Strong Leadership and Project Champions

Partnerships need ongoing leadership and champions to motivate and enforce the organizational change, help breach cultural barriers, and lower staff resistance. These leaders and champions are necessary within all partner organizations and must include qualified, effective managers. Leaders can also be stakeholders outside the partnership that help provide financial and networking support, such as key state and local governments. Without this leadership and these champions, the partnership could be delayed or weakened or could even fail. One of the main success factors in the Fort Hood joint use airport partnership was the strong leadership and team of project champions from both the installation and the city. Similarly, having strong leadership support and a qualified team was important to the success of the Nellis AFB EUL. The BTC facility sharing partnership has been delayed partly because of the death of Senator

Robert Byrd, one of the project's champions, and the loss of leadership support within DoD and the FBI.

Engage Staff and Stakeholders Early in the Process

Early engagement with stakeholders, including key personnel, is also important to overcoming the challenges, especially resistance to change and certain staffing issues. Stakeholders need to understand the benefits and become vested in the change, and they need to become part of the process to help perform the transformation. Involving stakeholders leads them to become key champions and facilitators of the needed change. Engaging installation personnel early in the process can help motivate qualified personnel who have the necessary skills to help with the partnership. When a military installation facility partnership affects services that military personnel and their families use, such as a closing an installation Morale, Welfare, and Recreation (MWR) facility, it is important to involve those military personnel and families throughout the planning process. For instance, Fort Huachuca Family and MWR management held public meetings to inform soldiers, military retirees, and their families about the Sierra Vista library partnership idea and the plan to close the main library on the post. Leaders made sure that library user concerns about having enough computer terminals on the post was addressed at other locations. Such outreach helped minimize resistance to this change.

If the facility sharing partnership involves building a new facility on an installation, the NEPA stakeholder process is usually required, as it was in the Nellis AFB EUL. By law, the NEPA process requires a specific public notification and feedback process.

Provide Qualified Management and Technical Staff

The staff involved with the partnership will determine success. Successful partnerships need qualified, enthusiastic, and dedicated management staff who can lead facility development and implementation. They should have diplomatic and persuasive skills to deal with all stakeholders, management skills and experience to lead the project development, and the authority to make the needed changes. To help with building and space design and implementation, the technical staff should be diverse and qualified. This goes for security, information technology (IT), financial, engineering, and facility design staff. For instance, having strong project managers and qualified and diverse staff in the areas of buildings, IT, security and process improvements was important to the Pathfinder partnership's success (see this case study in Appendix C for more details).

Implement Ongoing Communications Across All Stakeholders

The partnership process requires ongoing communications throughout the process among all relevant stakeholders, including military and other government leaders (who provide funding approvals and oversight) and partner agency staff at all levels (including headquarters, middle management and facilities). If the partnership affects or appears to affect services provided to military beneficiaries—such as retirees, DoD civilians, servicemen/women, and their families—it is important to engage and communicate with those stakeholders, as well. Again, Fort Huachuca's community meetings on the proposed library partnership is a good example of such outreach. It is also important to include relevant external stakeholders, such as facility architects, developers, builders, contractors, and the public. This occurred in the animal shelter partnership involving Fort Knox, the privatized housing contractor, and Hardin County: Fort Knox leadership and planners worked closely with the privatized housing contractor and county to develop and implement this deal, and they also reached out to members of the on-

post housing communities about stray cats and dogs being transported to the Hardin County Animal Shelter.

Provide Well-Defined Policy, Doctrine, and Project Design

In planning the partnership, the leaders must provide clear policy, doctrine, and project design for the organizational change. This involves articulating and documenting partner roles and responsibilities and ensuring that they are understood and carried out. The partners negotiating and then documenting in the agreements or contracts about which parties are responsible for managing and paying for all the possible risks is a critical part of this process. Well-documented clarification of partner roles and responsibilities was a key part of the MNARNG TACC partnerships and was a key factor in the success of the Pathfinder partnership, especially for its facility space and organizational changes. The partnership plan, doctrine, agreement(s), and facility design also should address how shared space, costs, risks, and security concerns are being shared and meet each partner's needs. For example, in the Fort Hood joint use airport partnership with the City of Killeen, the partners developed a Joint Operating Plan that provides the details for how the partners use, operate, manage, and maintain this airfield together, specifying who maintains taxiways, ramps, the runway, and airfield lighting and signage, among other details.

Take Advantage of a Major Decision Point for a Facility Investment

When installation planners are facing a major decision point about what to do with a facility because of infrastructure and operational concerns, such as the need to construct a new expanded facility, they have an opportunity for innovation and partnership. This is the time to consider partnering with a community organization to save resources and improve installation operations, create organizational change, and advance integration and collaboration in a new innovative space design. This factor was important for the Fort Huachuca library, Fort Knox animal shelter, MNARNG TACC, and the Altus AFB veterinary services partnerships.

Provide Up-Front Staff and Funding Resources

The installation facility and infrastructure partnerships require a significant investment in up-front staff and funding resources to develop and implement the partnership. Such resources are needed for joint planning, design, and implementation of the overall process and to plan, design, and construct the shared facility (or adapt an existing one); for the extra communications among the partners and other stakeholders to create the working relationships; and for moving partner personnel into the shared facility. For example, the MNARNG facility sharing TACCs took more time, effort, and personnel skills to create and manage the shared facilities and working relationships, especially given the need to coordinate competing activities at the facilities and to manage the expectations of the multiple users, but the variety of partnership benefits were worth the extra effort.¹⁷

Overall, installation facility and infrastructure partnerships had most of the aforementioned factors, which helped them become more successful. Most of the partnerships we studied for this analysis featured all these success factors in their partnerships. Table 4.6 shows the success factors for eight U.S. military installation facility and infrastructure sharing partnerships. Table 4.7 shows the success factors for the three cases studies from other RAND research.¹⁸

¹⁷ "The Minnesota Model: What It Is and Why You Should Adopt It," 2009.

¹⁸ These factors were determined based on a qualitative analysis of our case studies, including the interview responses and literature review. Many came from asking the interviewees the following questions: What were the factors for success in devel-

Table 4.6

Factors That Are Key to Partnership Success for the Military Installation Facility and Infrastructure Sharing Partnerships

Success Factor	NASA and Redstone Arsenal Partnerships	NSA, Fort Meade, and Howard County Wastewater Partnership	Minnesota ARNG TACC Partnerships	Fort Huachuca and City of Sierra Vista Library Partnership	Nellis AFB and North Las Vegas EUL	Seymour Johnson AFB and City of Goldsboro EUL	Fort Drum Community Regional Healthcare Partnership	Fort Hood and City of Killeen Joint Use Agreement
Strong leadership and project champions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Staff and stakeholders engaged early in the process	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Yes
Qualified management and technical staff	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Yes
Ongoing communications across all stakeholders	Partially	Yes	Yes	Yes	Yes	Yes	Partially	Yes
Well-defined policy, doctrine, and project design	Yes	Partially	Yes	Unknown	Yes	Yes	Unknown	Yes
Major decision point for facility investment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Up-front resources required in staff and funding	Unknown	Partially	Yes	Unknown	Yes	Yes	Unknown	Mostly

NOTE: Partially = Part of the factor was important to success, but it was unclear from the interviews and literature whether other parts of this factor were important
 Unknown = No information was available about this factor from the interviews or literature.

Table 4.7
Factors That Are Key to Partnership Success for the Noninstallation National Security Organizations' Facility Sharing Partnerships

Success Factor	UK DGIFC and the Pathfinder Building	U.S. Biometrics Technology Center	Australian Cyber Security Centre
Strong leadership and project champions	Yes	Initially; when partially lost, the project slowed	Yes
Staff and stakeholders engaged early in the process	Yes	Yes	Partially
Qualified management and technical staff	Yes	Yes	Yes
Ongoing communications across all stakeholders	Yes	Yes	Yes
Well-defined policy, doctrine, and project design	Yes	Partially	Unknown
Major decision point for facility investment	Yes	Yes	Yes
Up-front resources required in staff and funding	Yes	Yes	Mostly

NOTE: Partially = Part of the factor was important to success, but it was unclear from the interviews and literature whether other parts of this factor were important.

Unknown = No information was available about this factor from the interviews or literature.

Other Lessons Learned About Installation Facility and Infrastructure Sharing Partnerships

We also identified two other lessons learned about facility and infrastructure sharing partnerships. **First, organizations that are not direct partners in the project can be key facilitators for the partnership.** They can provide financial, technical, and political support and can act as catalysts for the partnership. For military installation partnerships, local government staff often are key facilitators to help negotiate and develop the deals, such as the Howard County Mission Growth/BRAC Office personnel who helped with the NSA reclaimed water partnership by coordinating among Fort Meade, Howard County Public Works Department, and NSA personnel. In the USAF EUL partnerships at Nellis AFB and Seymour Johnson AFB, AFCEC provided legal, contracting, real estate, engineering, and business-case cost-analysis assistance to help develop these complex financial real estate deals. Third-party organizations can also mediate or negotiate between the partners and educate staff and key stakeholders and persuade them to support the partnership. Examples of third-party organizations are political leadership; other federal, state, or local agencies; NGOs; and private-sector organizations, such as the builder of the facility. For example, Senator Robert Byrd facilitated the BTC partnership by helping to secure federal funding to construct the building.

Second, certain things should be avoided, if possible, when developing and implementing installation facility sharing partnerships. Most weaknesses that can undermine the partnership effort result from a lack of the key factors previously discussed. First, not secur-

oping and implementing the partnership? What are the lessons learned from developing and implementing the partnership? What parts of the partnership development and implementation process were most successful and why? What parts of the partnership development and implementation process were least successful and why?

ing long-term leadership support in each of the partnership organizations can inhibit efforts. Without enough leadership support, the partnership can be delayed or even fail. On the other hand, the partnership should not depend too much on one leader or champion. If that person leaves, the partnership will likely falter or die; therefore, the organizations involved need to develop multiple champions. The challenges with leadership support in the BTC partnership, including the loss of its main champion, contributed to delays in the development of internal shared spaces and DoD moving into the new building.

Second, leaving one or more stakeholders out of the process or not communicating with them enough can also hurt the facility sharing partnership process. These stakeholders might feel left out, not important, or angry. This could lead them to criticize the partnership and possibly try to sabotage it. A third mistake that can weaken staff members' buy-in to a partnership is to allow them to occupy a new facility before the bugs have been worked out. Staff members get frustrated when things do not work properly, so moving into facilities before they are fully ready can result in staff complaining or resisting the change. This response at the exact time when leaders are trying to rally personnel support can be problematic. The ACSC partnership experienced this issue to a minor degree: Some initial dissatisfaction was created, but the partners were able to ameliorate this with additional leadership outreach and efforts to solve the problems.

Chapter Summary

This chapter focused on the results of our third analysis on facility and infrastructure sharing partnerships—one of two major approaches we identified in Chapter Two. The analysis revealed categories of facility and infrastructure sharing partnerships and lessons learned about the motivation behind them, the benefits of them, challenges in using them, and key factors needed to address those challenges.

Our analysis involved developing a database with 85 examples of installation partnerships that involved some level of sharing facilities or infrastructure on or off an installation and focusing on 11 case studies—eight installation military facility and infrastructure sharing partnerships and three noninstallation federal national security organizations' facility partnerships. The analysis identified four categories of facility and infrastructure sharing partnerships: (1) joint use of a facility or infrastructure on a military installation; (2) joint use of a partner facility or infrastructure in the community; (3) joint construction and use of a facility or infrastructure that is not on the military installation; and (4) other facility and infrastructure sharing partnerships.

We found that three main drivers motivated the development of these facility and infrastructure sharing partnerships. The first is financial and budget drivers; i.e., partners wanting to save money on facility costs. The second is when at least one partner is facing a major facility investment decision point, such as the need to upgrade, rebuild, or construct a new building. The third motivation is the mission driver, a desire to improve installation operations, readiness, and services, such as wanting to improve soldier and family support.

The analysis revealed some benefits. The main benefits of the installation facility and infrastructure partnerships are that the partnerships can save and avoid costs and enhance installation operations, readiness, and missions. Potential cost-saving benefits can include reducing individual partners' costs for building space (e.g., sharing construction or leasing

costs); providing facility O&M efficiencies; saving facility support staff time; and, in some cases, reducing overlap in partner activities. The partners experience diverse operational, readiness, and mission benefits that can help enhance the military installation and government partner operations. Facility sharing partnerships can help improve the effectiveness of Army operations and mission, increase workforce expertise, give Army managers more time to focus on their mission, advance technology development, and improve support services to Soldiers and their families. The partnerships also can have environmental benefits, such as improving installation water security. Facility sharing partnerships also can benefit community relations for the military.

Despite the significant benefits of such partnerships, they come with a variety of challenges. First, they are often complex arrangements that can take years to develop and implement and require an investment of qualified staff time. Second, installation and partner staffing issues can pose problems. Staff often lack knowledge, expertise, incentives, and time to develop and implement these partnerships, and some staff might resist the change. Cultural barriers among organizations pose another obstacle to change; these can be the differences in the partner agencies' values, managerial structures, decisionmaking processes, terminology, and financial and contracting processes. Another key challenge is how to manage and share risks among partners. Installations also might have to address communication barriers—both externally, in dealing with the partners, and internally, across different military installation and headquarters organizations. Sometimes security and access issues can create a final challenge, especially when the partner needs to access an installation facility or infrastructure.

The analysis also revealed some lessons learned to help achieve the benefits and overcome the challenges in terms of seven key success factors: (1) Employ strong leadership and project champions; (2) engage staff and stakeholders early in the process; (3) provide qualified management and technical staff; (4) implement ongoing communications across all stakeholders; (5) provide well-defined policy, doctrine, and project design; (6) take advantage of a major decision point for a facility investment; and (7) provide up-front staff and funding resources.

Two other, more-general lessons learned emerged: (1) Organizations that are not direct partners in the project can be key facilitators; and (2) some things should be avoided, if possible, when developing and implementing installation facility sharing partnerships. An example of the latter is relying too much on only one leader or champion for development and implementation.

Conclusions and Recommendations

In this chapter, we present conclusions based on our three analyses and our recommendations.

Conclusions

Our analyses identified three approaches—installation outgrants, facility sharing partnerships, and other facility and land use partnerships and deals—and showed that they can provide a variety of benefits to the Army, such as saving costs, earning revenues, and enhancing installation operations and readiness. Opportunities exist to create more of these partnerships and deals, but challenges exist. Challenges can be lack of staff time, experience, knowledge, and incentives; organizational cultural differences and resistance to change; the fact that these complex projects take a long time to develop and implement; and developing the business case and finding appropriate partners. In addition, legal requirements and government policies have limited and slowed the development of these deals and partnerships.

Our analyses also revealed some lessons learned on how the Army can overcome the challenges. The Army can lower barriers to take greater advantage of these approaches by strengthening and clarifying Army policies; better documenting successes and lessons learned; providing more technical assistance to installation personnel and providing incentives for them to implement more of these approaches; and streamlining the development and approval processes. Legislative changes would also be required to help streamline the processes. In addition, the Army needs to engage more with state and local governments and other community organizations and work more closely with them to help develop and implement such deals because those groups can play such important roles as champions, facilitators, and partners in all of the different approaches.

Recommendations

Based on these general conclusions and the findings presented in the individual chapters, we have grouped our recommendations into three main areas. First, we discuss the general recommendations that are common across all the facility and land use deals and partnerships. Second, we present recommendations to help the Army develop and implement more installation EULs and other outgrants. Third, we provide Army policy- and installation-level recommendations for developing and implementing a shared facility or infrastructure partnership.

General Recommendations for Facility and Land Use Deals and Partnerships

To help develop and implement more installation facility and land use partnerships and real estate transactions, Army leadership should strengthen efforts to support such approaches in several areas. **First, the Army should enhance and provide stronger guidance, training, and assistance for developing and implementing installation partnerships and deals.**

Second, the Army should develop well-established processes and incentives for developing and implementing partnerships for facilities and land use, which we elaborated on in the subsections with more specific recommendations.

Third, useful insights and lessons should be drawn from the experiences of military installations and other federal agencies and used to inform future activities. To do this, the Army should provide written in-depth case studies and lessons learned from Army, USAF, and other federal installation facility and land use partnership and outgrant experiences. In addition, ACSIM, in partnership with other parts of DoD, should develop templates and fact sheets for facility sharing partnerships, large-scale outgrants (i.e., EULs), and other facility and land use partnerships.

Fourth, ACSIM, ASA(IE&E), USACE, IMCOM, and the other landholding commands should do more to document and disseminate policies and lessons learned about such approaches to installations through diverse methods. Such methods should include updating and expanding the Army partnership website, distributing email notices, and sharing information at ADC conferences and other relevant forums.

Last, the Army at all levels should improve community outreach and engagement to help conduct more facility and land use partnerships and deals. State and local governments, industry, universities, and NGOs are important partners that can help facilitate, participate in, and finance such arrangements. Army headquarters organizations, such as ACSIM, should engage more with national, state, and local organizations that can serve as key partners, such as the ADC, ICMA, National League of Cities, National Governors Association, and Western Governors' Association. All these organizations can help mobilize state and government agencies to help installations develop and implement more facility and land use partnerships and deals that benefit both Army installations and the communities. Army regional organizations and installations should work through individual state and local organizations. Other relevant industry associations and organizations, such as the National Council for Public-Private Partnerships, should also be engaged in this process.

Recommendations for Improving Army Processes for Supporting Installation EULs and Other Outgrants

We recommend several things that the Army could do to improve its processes for supporting the development and implementation of EULs and other installation outgrants. **First, the Army should provide strong leadership support to help develop and implement more of these outgrants.** The Army can do this by strengthening policy guidance and outreach to installations and by providing clear consistent messages about leadership support and the benefits of such outgrants. Because of negative connotations associated with the term *EUL* by parts of industry and some Army installation personnel, we suggest the Army create a new name for these types of large-scale outgrants, perhaps calling them *Installation Partnership Leases* instead. The Army should also consider creating an *Installation Partnership Leases Program* (or whatever new name is chosen) to focus on and provide support for all installation leases, including what used to be called EULs, the large-scale energy leases, and smaller leases.

Initiating such a program would show installations, communities, and industry that the Army is serious about doing more large-scale leases. The Army should advertise this new program with communities, industries, and installations by reaching out at ADC and other conferences and by holding special meetings with developers and the financing industry. The Army should learn from past EUL mistakes and better manage expectations by sharing realistic time lines and more-realistic projected values. The Army should also ensure that a systematic method is used to assess in-kind considerations and to assess the advantages, disadvantages, benefits, and costs from these outgrant activities. These assessments should cover the entire length of the agreements, from the initial development of the project to the final conclusion. In addition, the Army should have a policy that outgrants should be solvent for the partners without relying on DoD use of the leased property, which would help avoid some of the problems with past EULs, especially the scoring issues. Such a policy should be documented and provided in the outreach about the Installation Partnership Lease Program, especially with prospective developers and installation personnel.

In implementing an Installation Partnership Lease Program, the Army should also accept that, given the high level of uncertainty and potential risk from the large-scale and long-term outgrant deals, some deals will not work out as well as initially anticipated. It should be expected that some deals will have to be terminated or will not yield the full amount of expected returns. It should also be recognized that some partnerships that do not yield the full amount of expected returns should be considered successful because initial estimates of the revenues from outgrants can be overly optimistic and because such deals usually still have significant benefits for the military.

Second, the Army should create more incentives for installations to do outgrants. Army leadership should align and balance incentives across different levels of the Army. For Army senior leaders and the leadership of landholding commands, the Army leaders should communicate on how outgrant use of underutilized property at installations saves resources that would otherwise be needed to maintain such facilities. These savings enable garrisons to use the freed-up resources to support installation readiness. To help ensure this readiness support, the Army should consider revising its policy so that the priority for using the first 50 percent of installation revenues is for installation facilities that support installation readiness. This sort of priority more directly links installation revenue investments to installation readiness. The Army should also consider providing garrison commanders and installation personnel with greater control over a larger portion of the outgrant revenues, such as 75–80 percent, with the remaining 25–20 percent going to the landholding command. Specifically, consideration should be given to changing Army policy so that installations can receive more than just 50 percent of the outgrant proceeds and receive that revenue more quickly.

Third, the Army should ensure that installation managers and staff have the technical assistance needed to develop and implement such large-scale outgrant deals, in the same way that AFCEC provides support to USAF installations. Specifically, the Army should provide centralized technical assistance to help installations with Installation Partnership Leases. We suggest two possible options for doing this: (1) Conduct a couple of Army installation partnership lease pilots using the support of AFCEC, or (2) invest Army resources to create a centralized Army organization to assist installations, using AFCEC as a model. The first option involves having two or three installations implement large-scale partnership leases, similar to EULs, and having AFCEC assist in this process. The Air Force would likely require some sort of reimbursement in exchange for such help. If these pilots go well, then the Army

could consider formalizing the arrangement to have AFCEC help on a regular basis. This is a lower cost option, because the Army would take advantage of USAF experience and expertise with implementing EULs.

The second option of creating a centralized Army assistance organization would require more investment of resources, including personnel and time to develop the expertise to help with such deals. The Army could invest in a USACE capability or in such an organization as OEI to create the centralized center of expertise to support Installation Partnership Leases. If the Army chooses this option, it should invest in developing this assistance center and ensure that it can provide the same type of assistance that AFCEC does. This center should also monitor, measure, evaluate, and document the accrued and expected benefits and progress of the implemented outgrants over time. Having such a technical assistance center would also likely help motivate installations to develop and implement large-scale leasing deals because they would have help in doing them.

Fourth, the Army needs to document and disseminate lessons learned to installations from previous EUL and other large-scale outgrant experiences—both the successes and failures, and from all Services, not just the Army. Such documentation should include fact sheets, templates, and in-depth case studies of success stories. This documentation should include describing challenges and how they were dealt with, discussing the benefits garnered by all the partners, and providing the lessons learned from both the successes and failures. Documented installation project benefits should feature the full variety of Army monetary benefits (i.e., revenues received so far and expected project NPV), along with other benefits from past, ongoing, and future outgrants. The Army should also record the Army costs for developing and implementing such outgrants, so each project's net value can be calculated. The Army could work with the Air Force on such materials because USAF installations and AFCEC have implemented more EULs, which can provide useful lessons for Army installations.

Fifth, the Army should work with communities to develop and implement more large-scale outgrants. ACSIM could team with ADC, the National Governors Association, ICMA, or some of the other previously mentioned organizations to create a task force on facilitating more installation outgrants, and ACSIM could also team with its counterparts in the Air Force and Navy. The Army at all levels should engage more state and local government economic agencies and defense associations to help develop more large-scale outgrants. These organizations can help find industry partners and develop creative ideas and business cases for the properties. In addition, the Army should work with these diverse national, state, and local organizations to advertise to community members and developers and other businesses about available nonexcess and leasable properties at Army installations.

Sixth, the Army should simplify the leasing process. This requires both legislative and Army policy changes that would allow installations to acquire the revenues and in-kind considerations more easily and more quickly. Changes should be made to the special accounting rules so installations can receive revenues sooner. The legislation, 10 U.S.C. § 2667, could be changed to grant installations more flexibility to take EUL funds, both as cash and for in-kind considerations. For instance, this law could be changed to allow some outgrant revenue and in-kind consideration funds to be placed in local accounts that can be used directly at the installation instead of having the funds first go into a special U.S. Treasury account. Obviously, appropriate safeguards would need to be put in place regarding who could access the account and how the funds could be used. One way to do this would be to have a local joint account that can be accessed only with multiple signatures to ensure appropriate Service oversight on

the use of funds. Changes should also be made in the competition, FMV assessment, and OMB/CBO scoring processes. Legislative and policy changes are needed to allow more flexibility to relax rules in cases where there are multiple benefits to the installation and public—for example, a large-scale leasing deal with a local government that provides public infrastructure, such as the water treatment facility example at Eglin AFB. The Army should work with the Air Force, Navy, OSD, and others to make the needed policy and legislative changes.

Last, the Army should reexamine and consider changing contracting policies so that contractors lease the space they use instead of getting free space on the installation. Such a change would generate more leasing revenues at installations. This change could cause some minor contracting increases because some contractors provide the Army with contract discounts in exchange for the use of office space on installations. In other cases, the Army is not receiving this discount but is still providing the free space. Overall, this policy might save money for the Army and DoD as a whole because of the savings in installation costs by providing so much extra space on installations and the extra leasing revenues. However, an analysis of the full range of options and of costs and savings implications should be studied before implementing such an idea.

Army Policy and Installation Recommendations When Developing a Joint Facility or Infrastructure Sharing Partnership

We also developed some policy- and installation-level recommendations for improving the development and implementation of shared facility and infrastructure partnerships. **In terms of policy, the Army should change installation master planning and real property policies to give greater weight to infrastructure and facility sharing partnerships in facility planning and decisionmaking.** Policies should be changed so that installation managers and planners consider using any major decision point on a facility investment that does not affect the mission as an opportunity to partner and innovate. When needing to construct, expand, or update a building or facility planners should examine possible partnership opportunities, especially for soldier and family support facilities at installations in urban areas and other locations where possible community partners exist. Before choosing to partner at a facility, planners should be sure to identify and assess all implications to all stakeholders for a variety of facility options, such as a joint on-post or off-post facility partnership; adaptively reusing, upgrading, or constructing the facility on-post with or without a partner; and closing the on-post facility and relying on community partners for the facility or service. The Army planners should consider the possibility of including innovation in the facility space design, such as future proofing.

At the installation level, once the installation managers have decided to develop a infrastructure or facility sharing partnership, we recommend partnership planners take several actions to help ensure a more successful partnership:

- Develop a vision and plan for the partnership process and facility sharing.
- Cultivate support from key leaders, stakeholder organizations, and individuals, and develop champions for the partnership.
- Secure up-front resource investments (e.g., financial and staff resources) for developing and implementing the partnership.
- Develop a communications strategy for the change that addresses partnership staff, leaders, and other stakeholders.

- Implement incentives and other methods in the process to minimize the impact of change on the staff.
- Provide well-defined and well-documented roles, responsibilities, and accountability among partnership stakeholders through the process.

We also have some specific recommendations for implementing the partnership and for planning and designing the facility. To start, the Army installation and partner must negotiate how to share the space, risks, and costs, and put the negotiated terms in a written agreement. Establishing these details and having a well-written agreement spelling out these terms (including any liabilities, termination conditions, and what happens when one partner does not meet their agreement commitments) is key. In this negotiation process, the partners need to be sure to address the different agency security and access requirements. The partners might need to have joint and separate partner areas, as was the case with the MNARNG TACCs. Amenities, aesthetics, and incentives should be incorporated into the project so that installation staff and partner members see the facility as a desirable place to work, and the layout and workspace should be designed to promote collaboration where appropriate. In cases for which it is possible, partners should be innovative and incorporate sustainability features, such as constructing a LEED-certified facility, and future space flexibility features, such as future proofing.

As with any facility project, a facility project manager should be chosen who can effectively oversee the planning, design, and construction of the facility. The partners should provide clear policy, doctrine, and project design for the facility space, including how to address security and access concerns. Such policies and designs need to spell out the expected partner staff roles and responsibilities in the new facility and need to ensure that all people who work or use the facility are clear on which partner manages the space and which maintains it. Qualified technical staff with diverse skills—such as security, IT, financial, engineering, and facility design—should be hired to help with building and space design and implementation. Obviously, the security issues are more of a concern with shared facilities on an installation.

Case Study Examples of Installation Outgrants

This appendix presents summaries of 16 diverse outgrants. It provides details about 14 Air Force and Army enhanced use leases (EULs). We also briefly discuss two larger non-EUL outgrant deals, an easement at Eglin Air Force Base (AFB) and a facility sharing lease at Ellsworth AFB. Some of these examples were discussed in the main report; here we expand on that information. We briefly provide an overview of the EUL, its benefits, and (for some of the examples) some of the lessons learned.

This appendix is organized as follows:

- Air Force EULs—ten case studies
- Army EULs—three case studies
- EULs that have been managed by both the Army and Air Force—one case study
- Other large-scale outgrants—two Air Force case studies.

Air Force EULs

Here, we summarize ten different U.S. Air Force (USAF) EUL examples that were presented in Table 3.2:

- Eglin AFB Community Airport EUL
- Eglin AFB Emerald Breeze Hotel EUL
- Eglin AFB Water Reclamation Facility (WRF) EUL
- Eglin AFB Solar Array EUL
- Grand Forks AFB EUL: The Grand Sky Project
- Hill AFB EUL: Falcon Hill National Aerospace Research Park
- Joint Base McGuire-Dix-Lakehurst (JBMDL) Solar Array EUL
- Luke AFB Solar Array EUL
- Nellis AFB and City of North Las Vegas EUL
- Seymour Johnson AFB and City of Goldsboro Sports Complex EUL.

Eglin AFB Community Airport EUL

Destin–Fort Walton Beach Airport was a direct result of an EUL between Okaloosa County and the Air Force, signing a 25-year lease for 130 acres of land in 2007. The northwest Florida airport provides commercial aviation service to the area.

Both Eglin AFB and Okaloosa County have experienced economic benefits from this deal. This EUL deal generated approximately \$318,000 in 2008 of in-kind consideration for the Air Force. The in-kind consideration will increase 3 percent each year with quarterly payments to Eglin AFB.¹ The Air Force Civil Engineer Center (AFCEC) estimates the forecasted net present value (NPV) at closing (lease term) for the Air Force at \$7,246,611, with the Air Force having received \$2,535,335 as of March 31, 2017.² A Joint Use Agreement, separate from the EUL, allows commercial airlines to use the runway and pay fees to maintain the airfield. The airfield “accommodates over a dozen types of military aircraft and all of the area’s civilian air traffic.”³ Okaloosa County has saved money by sharing the airport instead of having to construct its own.

Eglin AFB Emerald Breeze Hotel EUL

Eglin AFB signed an EUL with Emerald Breeze Resort Group in 2012 that resulted in the construction of a hotel. The negotiation process for the EUL took four years.⁴ Emerald Breeze Resort Group is leasing 17 acres of land from Eglin AFB on Okaloosa Island for 50 years. The organization built the 152-room Holiday Inn Destin West Resort on the land and it opened in 2014. The approved second phase of the project plan is to construct a second hotel with 124 rooms.⁵

This EUL deal has generated the most financial benefit of all of Eglin AFB’s EULs because it was built on highly valued beachfront property. Eglin AFB receives an originally estimated \$25 million from Emerald Breeze Resort Group and 10 percent of the gross receipts of the hotel’s business.⁶ The base will use this revenue for various infrastructure projects. This EUL also has a mission benefit for the Air Force: Eglin is using the hotel’s rooftop for antennas that the 96th Test Wing will use to perform telemetry.⁷ It also has an MWR benefit because the hotel offers a discount to active duty and retired service members.⁸ According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$18,398,210; as of March 31, 2017, the value the Air Force had received was \$1,510,726.⁹

¹ Fornell, 2013.

² Throughout this appendix, any statement regarding the value received from any of these EUL or other outgrant deals is referring to the cumulative nominal/current dollars not a discounted rate based on a base year because this is how the Air Force and Army report such data. The statistics are from AFCEC, June 2017.

³ Dan Cohen, “Strong Bond Between Eglin AFB, Host Communities Helps Preserve Base’s Military Missions,” Association of Defense Communities, July 5, 2015a.

⁴ Innisfree Hotels, “Holiday Inn Resort Comes to FWB,” undated.

⁵ Cohen, 2012.

⁶ Fornell, 2013.

⁷ Dan Cohen, “Eglin EUL Enhances Mission While Supporting Upgrades for Base Facility,” Association of Defense Communities, June 1, 2014b.

⁸ AFCEC, “Sample of Success Stories,” undated-c.

⁹ AFCEC, June 2017.

Eglin AFB Water Reclamation Facility EUL

Okaloosa County formally agreed to lease 225 acres from Eglin AFB for 30 years for the construction of the Arbennie Pritchett WRF in 2006.¹⁰ In 2007, construction began on the site, which formally housed the county's spray irrigation effluent disposal site. The WRF can produce approximately 10 million gallons of water per day and receives effluent from Eglin AFB, which the base pays the county to treat. The community and Air Force installation both benefit from the WRF partnership. Eglin AFB receives \$325,000 a year in in-kind consideration from the EUL, with a 2-percent escalation each year for water line and maintenance.¹¹ The in-kind consideration was expected to contribute to newly privatized military housing on the base.¹² Another benefit for the Air Force from this deal is that water reclamation liability became the responsibility of the county. In response to the deal, Eglin AFB closed a small WRF on Duke Field now that the base no longer has to operate and maintain this WRF. AFCEC estimates the forecasted NPV at closing (lease term) for the Air Force is \$6,548,764, with value received by the Air Force as of March 31, 2017, equal to \$2,728,175.¹³

Eglin AFB Solar Array EUL

As happened on other Air Force bases, Eglin AFB used an EUL, signed in 2015, for the creation of a large-scale solar array. The partnership with Gulf Power Company established the creation of a 30-megawatt photovoltaic solar energy plant on 240 acres of Eglin-owned land. Gulf Power and a third-party developer, Coronal Energy, will construct, own, and operate the solar plant. The solar array's power will harness more than 60,000 megawatt-hours of energy each year.¹⁴ This will eventually power 4,500 homes and meet 19 percent of Eglin's annual energy needs.¹⁵ In March 2017, the project hit its halfway milestone and had installed more than 170,000 solar panels.¹⁶

Gulf Power will give Eglin AFB in-kind payments over the 37-year lease, estimated at \$1 million through infrastructure upgrades.¹⁷ The infrastructure repairs and upgrades resulting from this EUL and Eglin's other EULs include installing a new running track with new locker facilities, repairing 13 or 14 roofs, implementing energy projects, and upgrading air conditioning systems.¹⁸ The revenue received from the Gulf Power solar array supports other infrastructure upgrades on Eglin AFB that focus on renewable energy and energy efficiency. As of summer 2017, Eglin AFB had not yet received any monetary value from the solar array

¹⁰ ADC, 2007.

¹¹ Fornell, 2013.

¹² ADC, 2007.

¹³ AFCEC, June 2017.

¹⁴ Cohen, 2015b.

¹⁵ Cheryl Sawyers, "First Panel Installed at Eglin's Solar Farm Park," Air Force Civil Engineer Center, January 20, 2017.

¹⁶ Rick DelaHaya, "Eglin AFB Solar Field Hits Milestone," *Gulf Power News*, March 24, 2017.

¹⁷ Cohen, 2015b.

¹⁸ Breanne Smith, "Open for Business: New Hotel Equates to High AF Return," Air Force Civil Engineer Center, May 23, 2014.

because it was not yet in operation. However, AFCEC estimates the forecasted NPV at closing (lease term) for the Air Force is \$1,017,406.¹⁹

Grand Forks AFB EUL: The Grand Sky Project

The Grand Sky Business and Technology Park is the product of a 50-year EUL between Grand Forks AFB and Grand Forks County in North Dakota. Grand Forks County is leasing 217 acres from Grand Forks AFB to develop an unmanned aerial system (UAS) campus. In 2008, Grand Forks County staff met with the Grand Forks base commander and expressed interest in leasing available land. After researching different development opportunities, the county selected the UAS project as the focus for this EUL. The partners signed the EUL in 2015, seven years after county staff initially voiced interest. Commercial UAS developers will design, test, and operate the UASs on the campus. An estimated 1.2 million square feet (SF) will be a part of the UAS campus, with 75,000 SF currently under development.²⁰ Northrop Grumman and General Atomics are two active tenants of the campus.

The benefits that Grand Forks AFB receives from the EUL include revenue generation, cost avoidance, and mission support. Grand Forks County pays annual land rent of \$90,000 to the Air Force, with a 2.9 percent annual escalation. According to AFCEC, forecasted NPV at closing (lease term) for the Air Force is \$26,520,222; as of March 31, 2017, the value the Air Force had received equaled \$283,841.²¹ Without the EUL deal, the removal of the existing infrastructure on the property would have cost the Air Force \$16 million. The EUL also supports the missions of Grand Forks AFB regarding “flight operations and civil engineering collaboration.”²² This collaboration of Air Force, university, and commercial organizations also contributes to improved public and community relationships.

Grand Forks County expects to gain 2,500 to 3,000 jobs as a result of the EUL.²³ These jobs could appeal to local university graduates and provide new employment opportunities in the area. In recent years, many graduates from the University of North Dakota’s aviation program have left the state for jobs elsewhere. The Grand Sky Project can offer local job opportunities in UAS pilot training, systems testing, research, and sensor development. The county’s tax base will also increase as a result of the EUL.

The county and state played significant roles in helping to develop and implement this EUL by providing leadership and financial support. County staff initiated and led the development of the EUL; base, state, private-sector, and AFCEC staff contributed to its creation and implementation. The State of North Dakota has invested approximately \$15.5 million for utility infrastructure, road, and other improvements. The private sector has invested \$20 million to date with \$26 million in private investment planned for 2017 and 2018.²⁴

A variety of factors contribute to the success thus far of the Grand Forks EUL. In addition to supporting Grand Forks AFB’s missions, the partnership gives the “ability to provide

¹⁹ AFCEC, June 2017.

²⁰ AFCEC, June 2017.

²¹ AFCEC, June 2017.

²² AFCEC, June 2017.

²³ Dan Cohen, “EUL Project Creates Opportunity for Host Community to Support Grand Forks AFB,” Association of Defense Communities, January 7, 2014a.

²⁴ AFCEC, June 2017.

contractor support for training or other mission support needs.”²⁵ The project was also a team effort in which direct AFCEC support aided the efficacy of the partnership. Last, the EUL is unique in that “it is being spearheaded by a defense community rather than the private sector.”²⁶ In return, the Air Force has emphasized the impact of the financial support from the state in creating the EUL.

Hill AFB EUL: Falcon Hill National Aerospace Research Park

Utah’s Hill AFB signed a commercial office and retail EUL in 2008 with Sunset Ridge Development Partners (SRDP). Per the agreement, SRDP leased 550 acres from Hill AFB to build an aerospace research and technology park. The lease term is 50 years. SRDP will build the mixed use Falcon Hill National Aerospace Research Park in exchange for the development of new office space and other infrastructure construction for Hill AFB, which was considered payment-in-kind. Falcon Hill facilities will exist both inside and outside of the Hill AFB fence line because of the benefits of expanding beyond the fence. Construction is expected to last 25–35 years and result in an additional 6 million SF of commercial office and retail facilities.²⁷ Office buildings are designed to meet Leadership in Energy and Environmental Design (LEED) certifiability. From the initial idea development until the first building was constructed took almost ten years, and it took about five years from the original idea for the EUL agreement to be signed. Table A.1 shows the time line for the development and implementation of this EUL.

The Air Force’s interest in an EUL began as a result of 1.5 million SF of “deteriorating” administrative offices on Hill AFB.²⁸ An Air Force assessment revealed that to replace the buildings through military construction (MILCON) would cost more than \$350 million. In addition, assessment revealed that a complete facility renovation of more than 130 buildings that had been originally converted into office space from World War II warehouses “would be uneconomical and not executable,” and that renovation still would not have rectified many of the buildings’ problems, such as “poor energy efficiency, parking configuration issues, and inadequate Anti-terrorism Force Protection (ATFP) compliance.”²⁹ An EUL that used the aging buildings became the best option for Hill AFB. In fact, this EUL deal achieved greater value for the Air Force because it was able to bundle these older and less-valuable facilities with more-valuable land parcels to achieve economy-of-scale benefits from this single deal.

On the leased 550 acres, SRDP constructed the Falcon Hill National Aerospace Research Park, which is expected to have more than 2 million SF of commercial space after completion of the first phase.³⁰ The development of the research park was designed to be built in two phases over the years. Phase One of the project is construction “inside the fence,” and Phase Two is construction “outside the fence.” Phase One includes construction of Building 1580 (a three-story commercial office building with 75,000 SF) and Building 1575 (a five-story, 150,000-SF commercial building). Another building being con-

²⁵ AFCEC, June 2017.

²⁶ Cohen, 2014a.

²⁷ Castle and Dunn, 2015.

²⁸ Castle and Dunn, 2015.

²⁹ Castle and Dunn, 2015.

³⁰ CBRE Group, “Falcon Hill at Hill Air Force Base,” undated.

Table A.1
Chronological History of the Hill AFB EUL Development

Phase	Date	Activity
Exploration	June 2003	Preliminary concept analysis began
	October 2004	Preliminary concept approval
Identification	September 2005	USAF Concept Opportunity Study completed
Definition	April 2006	USAF internal Business Case Analysis completed
	March 2007	Industry Day held
	May 2007	Request for Qualifications released to public
Execution	August 2008	Signature of lease documents by Deputy Assistant Secretary of the AF for Installations (SAF/IEI)
Property Management	January 2012	First USAF payment in-kind facility constructed—Building 408 (Security Forces)
	March 2012	First commercial office building constructed—Building 1575 (Intercontinental Ballistic Missile support contractor)
	April 2012	New West Gate constructed as USAF payment in-kind
	January 2015	Second commercial office building constructed—Building 1580
	April 2015	First commercial retail building constructed
Project Closeout	50 to 75 years from signing, subject to lease renewal	Each Site Development Lease has a 50-year term

SOURCE: Castle and Dunn, 2015.

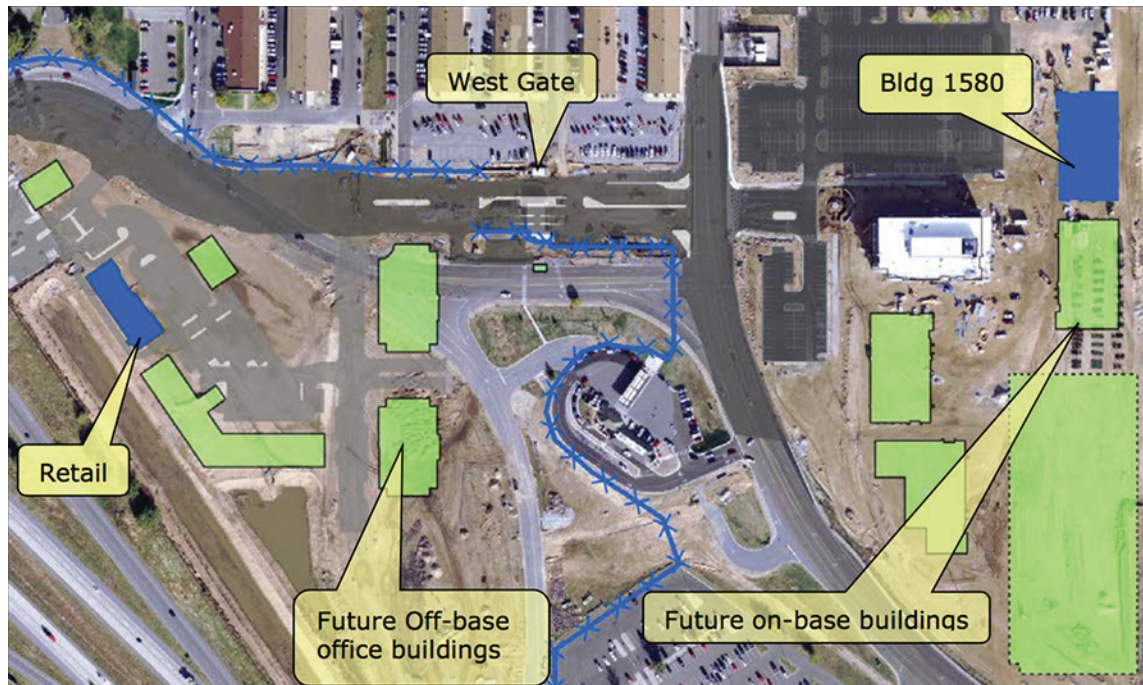
structed on the base as an in-kind consideration is a 37,000-SF office building that houses the Air Force Security Forces Squadron (Building 408). Outside of the Hill AFB gate is a retail building that holds a Starbucks coffee shop; restaurants and a hotel will be added to that space.³¹ Tenants of the buildings within the research park include Lockheed Martin, Orbital ATK, the Air Force Nuclear Weapon Center's Intercontinental Ballistic Missile Systems Directorate, and the Utah Science Technology and Research Initiative. Building 1580 is expected to bring up to 500 jobs to Utah.³²

Construction of new infrastructure was an important part of this EUL. To allow for proper spacing of the Falcon Hill project, the developer built new roads and a new West Gate for Hill AFB. Figure A.1 shows a map of the new West Gate and some of the initial EUL construction. The new West Gate was completed in April 2012 and moved the base perimeter fence so that the general public could have access to the majority of the EUL development. The construction of the West Gate also reduced traffic congestion. The value of the in-kind

³¹ Castle and Dunn, 2015.

³² Mitch Shaw, "New Lockheed Martin Facility at HAFB Expected to Bring Up to 500 New Jobs," *Standard-Examiner*, December 2, 2016.

Figure A.1
Map Showing the Initial Construction on the Southern End of the Hill AFB EUL Site



SOURCE: Castle and Dunn, 2015.

NOTE: Retail buildings are colored blue.

consideration in the form of road construction, the building of the West Gate, and new project infrastructure was estimated at \$12.5 million.³³

The funding for the roads and West Gate construction were grants from the State of Utah, a key supporter of the Falcon Hill EUL.³⁴ In 2007, Utah established by state law a special economic development authority, called the Military Installations Development Authority (MIDA), to aid economic development related to military installations. MIDA has helped oversee the implementation of the Falcon Hill EUL and the procurement of funds. By January 2015, the Utah legislature had appropriated \$23 million in state grants and \$2.5 million in Tax Increment Financing (TIF) bonds for the project; MIDA could spend up to \$30 million more on Air Force infrastructure and development for Hill AFB.³⁵

This EUL deal provides multiple benefits to Hill AFB, including economic, facility upgrade, morale, and productivity improvements and other operational and mission benefits. The economic benefits provided to the Air Force consist of revenues, cost savings, and cost avoidance. According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$88,281,197; as of March 31, 2017, the value received by the U.S. Air Force was \$20,176,714.³⁶ Revenue in the form of in-kind considerations replaced deteriorating adminis-

³³ Castle and Dunn, 2015.

³⁴ Lachman, Resetar, and Camm, 2016.

³⁵ Castle and Dunn, 2015.

³⁶ AFCEC, June 2017.

trative office buildings and provided other Air Force facilities improvements. For example, the developer constructed a new 37,000-SF building for \$7 million to house the Air Force Security Forces Squadron as part of the payment in-kind.³⁷ Part of this value is also the cost avoidance from not having to maintain old buildings. The Air Force also predicts improved morale of employees working in upgraded facilities, which will contribute to greater productivity and mission achievement.

The community also benefits from this EUL, which provides an estimated 15,000 additional jobs resulting from the new office and retail facilities and a greater tax base for income taxes, property taxes, and sales taxes, increasing local tax revenue.³⁸ Phase One of the Falcon Hill EUL is expected to bring \$500 million into the Utah economy.³⁹

One lesson learned from this partnership is the importance of considering all stakeholders during the development of the EUL, especially installation tenants and how the deal might affect them. The extent of Hill AFB's EUL affected a permit that the Army-owned Defense Non-Tactical Generator and Rail Equipment Center (DGRC) had with Hill AFB. Hill's EUL established that the project site would be "free of tenants," so the Air Force told the DGRC that it would not renew the center's permit.⁴⁰ This meant that the Army would have to move the DGRC to another installation, which would create unanticipated costs for the Army. The cost estimates for moving the DGRC from Hill AFB varied. One 2011 assessment estimated that relocation of the DGRC would cost \$37–45 million;⁴¹ a 2014 estimation predicted moving the DGRC to Anniston Army Depot, Alabama, would cost approximately \$17.1 million, though life-cycle costs were not considered in this estimate.⁴² The Army wanted the Air Force to help pay for the moving costs, especially because the Hill AFB EUL was to financially benefit the Air Force rather than meet an Air Force mission need; however, the Air Force and Army disagreed about how to resolve this issue. This disagreement about the DGRC relocation caused delays in the EUL and tension among the U.S. Army, Air Force, and Congress.⁴³ Several assessments of relocating the DGRC were recommended after the creation of the EUL. Involving all stakeholders, including installation tenants, from the beginning of a project can potentially help avoid such complications.

Another issue in this EUL occurred with the Air Force not strictly following the requirements of Section 2667.⁴⁴ In this EUL, some of the cash consideration received by the Air Force was deposited into a local escrow account and not the U.S. Treasury before being disbursed from the escrow account to pay for in-kind construction and maintenance projects, which raises questions about the extent to which this EUL complied with 10 U.S.C. § 2695 (Sec-

³⁷ Castle and Dunn, 2015.

³⁸ Castle and Dunn, 2015.

³⁹ Mark Davis, "Success at Falcon Hill," *Military Engineer*, undated.

⁴⁰ GAO, 2011.

⁴¹ GAO, 2011.

⁴² U.S. House of Representatives, Armed Services Committee, Subcommittee on Readiness, "H.R. 1735—FY16 National Defense Authorization Bill," Subcommittee on Readiness, 2015a.

⁴³ U.S. House of Representatives, Armed Services Committee, Subcommittee on Readiness, 2015b.

⁴⁴ 10 U.S.C. § 2667.

tion 2695).⁴⁵ Specifically, “in the Hill Air Force Base EUL, while some consideration was accepted directly by the government pursuant to Section 2695, the master development agreement requires the developer to deposit additional up-front consideration and a percentage of the net operating revenues into a payment in-kind account outside the U.S. Treasury.”⁴⁶

The demand for improved administrative facilities on Hill AFB motivated the Falcon Hill EUL, and the needs of the involved partners continued to drive its development. The involvement of government and private organizations to achieve a mutually beneficial outcome was a contributor to the scope and financial return of this EUL, with more than 100 potential projects existing within the partnership.⁴⁷ Leadership support—including planners and designers from Air Force Headquarters, AFCEC, Hill AFB, and defense contractors—was critical to this EUL project. The extent of the project has required that stakeholders remain flexible and optimistic in their planning and design. At the beginning of the project, construction did not begin when expected and overall development was slower than planned because of the economic slowdown.⁴⁸ Adaptive planning and a commitment to meeting the needs of all partners improves benefits for both the Air Force and developers from this EUL deal. According to Air Force staff, the Falcon Hill EUL “ultimately has been successful thus far by interweaving private industry market pressures with the Air Force’s stewardship of public sector market needs.”⁴⁹

Joint Base McGuire-Dix-Lakehurst Solar Array EUL

Joint Base McGuire-Dix-Lakehurst (JBMDL) has an EUL partnership that installed a large-scale solar array on this joint base. With 50,000 solar panels covering 98 acres of land, the 16.5-megawatt solar energy project in partnership with JBMDL in New Jersey is the Northeast’s largest solar array on a military installation.⁵⁰ The 40-year lease was signed in 2015 and involves multiple partners. Affiliates of Starwood Energy Group and Energy Management Inc. developed the project, JBMDL owns the land, and True Green Capital leases the land. An affiliate of True Green Capital owns the solar project, and, through a partnership with Conti Group, will construct and operate the infrastructure. The 98-acre solar farm is located on a 128-acre capped landfill, a former Superfund site. As a result, the fair market value (FMV) is less, and more environmental procedures and oversight were required in this EUL project’s development. Because of these factors, personnel from the New Jersey Pinelands Commission, the New Jersey Department of Environmental Protection, and the JBMDL Environment Restoration Program were important partners and contributors to the project.⁵¹

⁴⁵ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2695, Acceptance of Funds to Cover Administrative Expenses Relating to Certain Real Property Transactions.

⁴⁶ GAO, 2011, p. 15.

⁴⁷ Micah Garbarino, “Developer Begins Construction on USTAR Innovation Center at Hill AFB, Foresees ‘Silicon Hill,’” Hill AFB, March 3, 2017.

⁴⁸ GAO, 2011.

⁴⁹ Davis, undated.

⁵⁰ King, 2016.

⁵¹ Kelly Pickerel, “Largest Military Solar Project in Northeast Breaks Ground,” *Solar Power World*, December 21, 2016.

Senior Air Force leadership and AFCEC staff also helped with the development and implementation of this EUL. Before the selection of a developer, AFCEC “facilitated a feasibility study that determined there was a significant return potential for commercial energy generation.”⁵² After an industry day and a published solicitation for possible developers, the Air Force selected Starwood/Siemens Energy Group as the Highest Ranking Offerer. Starwood/Siemens Energy Group then developed and presented multiple energy ventures. For the solar array, the partners signed the EUL in 2015, ground was broken in 2016, and the array became operational in 2017.

The solar array will produce 21,000 megawatt-hours per year, an amount capable of providing renewable energy to 2,500 homes.⁵³ The power generated by the solar array will be sold by the installation’s partners. In exchange, the U.S. Air Force receives an estimated \$250,000 per year for the 40 years of the lease, which it will invest in energy resilience.⁵⁴ The revenue will go toward JBMDL’s energy assurance plan. Besides helping with the Air Force’s energy resiliency goals, the project has environmental benefits: It is expected to help reduce air pollution. For example, from this EUL, there is an expected 15,000-metric ton reduction of carbon dioxide emissions (the equivalent of 3,000 cars leaving the roads).⁵⁵

According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$8,010,437, and as of March 2017, the value received from the EUL to the Air Force equaled \$232,171.⁵⁶ In addition to promoting the military’s commitment to energy resiliency, the project achieves the stated purpose of EULs, which is to convert underutilized resources into a financial benefit for military bases. The involvement of multiple public and private partners allowed the EUL to meet the community’s interest in renewable energy. In addition, as stated by the Assistant Secretary of the Air Force for Installations, Environment, and Energy in 2016, the project helps to “strengthen mission assurance [of the U.S. Air Force] through energy assurance.”⁵⁷

Luke AFB Solar Array EUL

A partnership between Luke AFB and Arizona Public Service (APS), Arizona’s largest and longest-serving electric company, established the construction of a solar array on the base. In 2014, the Arizona-based partners signed the EUL that leased 100 acres of land to APS for 30 years.⁵⁸ APS owns, operates, and maintains the solar array with no cost to the government. The fully operational solar array will produce 10 megawatts of renewable energy each year. For comparison, Luke AFB uses 70 megawatts of energy each year. The solar array will reduce carbon emissions by an estimated 19,000 tons.⁵⁹

⁵² AFCEC, “Joint Base McGuire-Dix Lakehurst EUL,” webpage, undated-a.

⁵³ King, 2016.

⁵⁴ Erik Larsen, “Joint Base Builds Solar Farm on Superfund Site,” *Courier-Post*, December 20, 2016.

⁵⁵ King, 2016.

⁵⁶ AFCEC, June 2017.

⁵⁷ King, 2016.

⁵⁸ “Luke AFB Leases Land to Arizona Public Service for New Solar Power Plant,” *Business Wire*, June 19, 2014.

⁵⁹ Lee, 2015.

The project has been in development since 2008, but the partnership was not official until 2010. After deciding the best use of the land was to lease it to APS, the partners planned to have an active solar array by 2011. However, the discovery of an archaeological site delayed the time line of the project for four years. By 2015, the solar array was operational and APS was paying approximately \$120,000 per year for the land, to continue for 30 years.⁶⁰

The Air Force is experiencing multiple benefits from this EUL deal, including financial and energy resiliency benefits. According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$3,169,010 and the value received by the U.S. Air Force as of March 31, 2017, was \$694,606.⁶¹ The revenue from the lease will help maintain Luke AFB buildings. The EUL also helps the Air Force with its renewable energy goals. According to the Assistant Secretary of the Air Force for Installations, Environment and Energy in 2014, “The solar array at Luke Air Force Base increases the Air Force’s energy flexibility and diversity, and provides consumers with clean and affordable power,” and “by working with industry and the local community to develop these third-party financed projects, we are improving Air Force mission assurance through energy assurance”⁶²

The EUL also provides environmental benefits, such as supporting the AZ Sun Program through the production of renewable energy and improvement of air quality in Arizona. The project was also expected to create 200 local jobs during the construction of the array.

An analysis of this EUL provides useful lessons learned about such projects. First, strong teamwork throughout the duration of the project was important to its success, especially because of the unexpected delay from the cultural resources issues. Air Force leadership, AFCEC support, and utility company and installation teams were in weekly contact during the initial project planning, which was helpful following the discovery of the archaeological artifacts. The archeologist employed by APS was also part of the mitigation planning. Second, the environmental assessment that the National Environmental Policy Act requires was a “long pole in the tent.”⁶³ Starting that assessment early in the time line of the EUL and maintaining communication during that time was important. Last, the project benefited from flexibility of the partners involved. Initially, the Air Force considered purchasing electricity rather than leasing the land, but a flexible approach allowed for the project to be redesigned to achieve the best outcome for those involved.⁶⁴

Nellis AFB and City of North Las Vegas EUL

In 2005, Nellis AFB had an “obsolete” fitness center with little potential for receiving construction funds in the near future, and the City of North Las Vegas required increased water treatment capacity to be able to continue its economic growth.⁶⁵ Nellis AFB and the City of North Las Vegas recognized the opportunity to develop an EUL together to meet their growing facility and infrastructure needs. Over several years, the Air Force and community personnel worked together to create a joint solution. The result was the signing of a multimillion-

⁶⁰ Lee, 2015.

⁶¹ AFCEC, June 2017.

⁶² Lee, 2015.

⁶³ White, 2014.

⁶⁴ White, 2014.

⁶⁵ Meurer et al., 2012.

dollar partnership in October 2008, in which the City of North Las Vegas formally leased 41 acres of land from Nellis AFB and built a jointly used WRF on it. In exchange for using Air Force property, the city also built a new fitness center and improved water supply infrastructure for Nellis AFB. The WRF, the plans for which doubled in size after North Las Vegas leased the land from Nellis AFB, can produce 25 million gallons of water per day from reclaimed water, with the ultimate capacity being 50 million gallons per day.⁶⁶ The WRF was an “environmentally friendly plant” valued at \$257 million that went into operation in 2011.⁶⁷ The city needed the larger WRF to allow for more development and city expansion. In fact, for the city, “a major factor in siting the WRF [at Nellis AFB] would be the ability to provide reclaimed water to support the continued economic growth of the region.”⁶⁸

The Air Force had multiple benefits from this EUL project, such as saving costs, improving installation facilities and infrastructure, enhancing services for the military and their families, enhancing installation water security, and improving environmental quality. North Las Vegas is giving Nellis AFB in-kind considerations worth an estimated \$35.8 million in exchange for leasing the 41 acres.⁶⁹ A new fitness center on Nellis AFB for military personnel and their families was worth an estimated \$25 million. The city completed construction of the 110,000-SF fitness center in 2012. The energy-efficient facility had LEED Silver certification.⁷⁰ The center is 2.5 times larger than the old fitness center on Nellis AFB and has an indoor running track, three basketball courts, an indoor pool, and more space for exercise equipment and activities.⁷¹ Without the support of the City of North Las Vegas, funding for this fitness center would have taken years to acquire.⁷²

The remainder of the in-kind consideration to Nellis AFB took the form of reclaimed water and water supply infrastructure worth an estimated \$10.8 million. The investment improved aging infrastructure, irrigation for the golf course using reclaimed water, and the use of reverse osmosis quality water to wash aircraft.⁷³ It also lessened the cost of wastewater treatment for the base. Such water infrastructure enhances water security by saving scarce potable water resources so they can be used for installation readiness rather than irrigating the golf course.⁷⁴

Within four years of the signing of the EUL, the city finished construction of the water reclamation facility and the fitness center. According to AFCEC, as of March 2017, the value received from this EUL to the U.S. Air Force equaled \$24,962,041, and the forecasted NPV at closing (lease term) for the Air Force is \$34,803,405.⁷⁵

⁶⁶ City of North Las Vegas, 2008.

⁶⁷ Meurer et al., 2012.

⁶⁸ Meurer et al., 2012, p. 4.

⁶⁹ Crespo, 2010.

⁷⁰ Meurer et al., 2012.

⁷¹ Crespo, 2010.

⁷² David Funk and Kevin Culp, “Leveraging Assets at Air Force Installations,” *Military Engineer*, undated.

⁷³ City of North Las Vegas, 2008.

⁷⁴ Water resources and the increasing scarcity of water has become a concern for installation readiness, especially for installations in dry Western states, such as Nellis AFB in Nevada and Fort Huachuca in Arizona. For more information about how water can affect installation readiness, especially at Fort Huachuca, see Lachman et al., 2016.

⁷⁵ AFCEC, June 2017.

The EUL provides useful lessons about the management and benefits of such a partnership. The involved Air Force and community leaders were committed to achieving a mutually beneficial outcome that utilized available resources to meet both partners' needs. Strong leadership and effective communication, planning, and compromise contributed to the financial return of the partnership. In addition, the partners learned to use an EUL as a means to better manage risk.⁷⁶ Without the EUL, Nellis AFB would have had to rely on the risks of trying to acquire congressionally appropriated MILCON funds and the City of North Las Vegas would have faced "the risk that limited water resources presents to economic growth."⁷⁷ The EUL also strengthened community relationships and resulted in "closer bonds" between Nellis AFB and the City of North Las Vegas.⁷⁸

Seymour Johnson AFB and City of Goldsboro Sports Complex EUL

Seymour Johnson Air Force Base in Wayne County, North Carolina, signed a 20-year EUL with the City of Goldsboro in March 2016. The EUL launched the creation of a 62-acre multi-sports complex on unused USAF land on the perimeter of the base. The sports complex, which the City of Goldsboro is building, will serve as a community venue for practice, game, and tournament events for a variety of sports, such as youth and adult soccer, football, lacrosse, field hockey, and ultimate Frisbee. The complex has eight fields, parking space, restrooms, walking trails, and concession facilities and required moving the perimeter fence of the base to maintain security. The city is responsible for all construction, installation, operating, and maintenance costs for this facility.

Seymour Johnson AFB, the City of Goldsboro, and Wayne County communities all benefit from this partnership. The EUL terms established that the City of Goldsboro expand a fitness center on Seymour Johnson AFB by 2,500–3,000 SF to add more space for group exercise activities and equipment.⁷⁹ This benefit is considered an in-kind consideration from the City of Goldsboro and is valued at a minimum of \$600,000.⁸⁰ An additional benefit of the EUL for Seymour Johnson AFB is the "joint use schedule" of the sports complex that gives the Air Force access to the sports complex for 40 hours every month and from 90 to more than 100 weekend dates per year for the term of the lease.⁸¹ Having access to this new sports complex provides military personnel with greater access to higher-quality game and practice fields that offer a safer all-weather playing surface that is available year-round.

For members of the City of Goldsboro and Wayne County communities, the new sports complex also provides greater access to a higher-quality, safer, and year-round outdoor recreational facility. In addition, because the surrounding area has few comparable sports complexes, the community expects to see increased travel because of more sporting events and tournaments, generating a positive economic benefit. Prior to the creation of the EUL and the resulting sports complex, the communities of the City of Goldsboro and Wayne County received more than \$147.46 million from travel in 2013, and in 2014 the community generated

⁷⁶ Lachman, Resetar, and Camm, 2016.

⁷⁷ Meurer et al., 2012.

⁷⁸ Meurer et al., 2012.

⁷⁹ Goldsboro Wayne Travel & Tourism, undated.

⁸⁰ Goldsboro Wayne Travel & Tourism, undated.

⁸¹ John Joyce, "Sports Complex Lease Is Signed," *Goldsboro News-Argus*, March 29, 2016.

more than \$3 million from sporting events.⁸² Tournament events at the new sports complex have the potential to promote investment, stimulate the economy, and provide new entertainment opportunities to community members. The city predicted an additional \$473,000 of annual sales tax revenue and an additional \$177,000 of annual occupancy tax revenue from increased travel and participation in sporting events.⁸³

Other benefits of the EUL are less quantifiable. Improved fitness facilities (both the community complex and the AFB facility) encourage healthy lifestyles. Active living can reduce the incidences of diabetes, obesity, and other preventable diseases. The partnership also promotes a spirit of community between the Air Force base and the broader civilian communities. A commander at Seymour Johnson AFB, said, “Our strong partnerships with Goldsboro and Wayne County make Seymour Johnson Air Force Base a perfect example of how collaboration between Airmen and the neighboring communities can strengthen the quality of life of the region.”⁸⁴

Paying to expand the base fitness center was the in-kind consideration the city provided in exchange for the use of Seymour Johnson AFB property. According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$597,710; however, because the facility was not scheduled to open until March 2018, the Air Force had not yet reaped any monetary value from the fitness center expansion as of March 31, 2017.⁸⁵ The Air Force receives \$600,000 in cost savings benefits due to the city’s in-kind considerations in addition to the cost savings that result from access to the sports complex. The City of Goldsboro paid approximately \$3 million for the sports complex with a much greater predicted financial return.⁸⁶ If the partnership proves to be beneficial for both parties at the end of the lease and the City of Goldsboro does not default on its agreement, the partners have the option to renew the lease for ten additional years.

Army EULs

Next we summarize three Army EUL examples at three different installations: Aberdeen Proving Ground, Redstone Arsenal, and Yuma Proving Ground.

Aberdeen Proving Ground: GATE Office and Technology Park EUL

In 2006, Aberdeen Proving Ground (APG) signed an EUL with St. John Properties to build a 416-acre office and research and development complex. The complex includes single-story and multistory office buildings, research and development facilities, and retail buildings. This complex is known as The GATE Office and Technology Park, and there are areas of the complex both inside and outside APG’s perimeter. Various office spaces are certified LEED Gold and LEED Silver.⁸⁷

⁸² Goldsboro Wayne Travel & Tourism, undated.

⁸³ Goldsboro Wayne Travel & Tourism, undated.

⁸⁴ Goldsboro Wayne Travel & Tourism, undated.

⁸⁵ AFCEC, June 2017.

⁸⁶ Rochelle Moore, “Council Approves Sports Complex Contract,” *Goldsboro News-Argus*, March 9, 2017.

⁸⁷ St. John Properties, undated.

The partners designed the EUL in phases, with growth occurring over several years. In 2006, the Army entered into a master agreement at APG, which did not officially lease the land; rather, it was an agreement to later sign leases with the lessee to develop the land. Per the agreement, the lessee, St. John Properties, was expected to construct an office and technology park on the 416 acres and pay the Army rent on completed buildings. The rent would go into an escrow account, and the funds then would be provided as cash or used for in-kind consideration projects at APG. A 2011 U.S. Government Accountability Office (GAO) review found that the Army had entered eight different lease agreements at APG at the time.⁸⁸

The project was originally estimated to have 3 million SF upon completion, but the development of the project has slowed; in fall 2015, only about 625,000 SF of that had been built, and St. John Properties had leased 88 percent of the property, with most of the leases of five years or less and with more than 90 percent of the tenants being defense contractors and military and other government agencies. In addition, the 50-year lease was originally expected to generate \$400 million of revenue for the Army, a high estimate because it assumed a fast development of 3 million SF and a very profitable leasing plan for all this space. As of November 2015, the project was producing \$1.8 million in cash per year in leasing revenues, of which half was returned to APG. The rent paid to the Army was based on the developer constructing buildings first, not on a direct lease payment for the land; as a result, the Army has received less rent because less space was built than initially projected. However, the developer also pays around \$1 million per year to the installation for police and fire department services, road maintenance, and other services through a Service Support Agreement. Such funding helps the installation maintain capacity in these key Base Operations Support (BOS) services in the face of declining installation budgets.⁸⁹ Having that funding for these services through this Service Support Agreement is a key benefit from this EUL.

The cash revenues payments and the extra funds for BOS services are the main benefits of this EUL for APG. The community also benefits from this partnership through increased profits and employment opportunities. APG and the community continue to benefit from the partnership, but the slow progression of the project has affected the benefits it generates. This example shows how actual benefits and costs of a long-term leasing deal do not always reflect the originally projected benefits and costs.

Another important lesson from the APG EUL is that it is critical to assess traffic, water, and other utility issues early in the EUL development process. When private companies develop properties on private land, they often are required to pay for transportation, water, and energy infrastructure that needs to be added to accommodate the growth. In the APG EUL, the military planners had not determined how to accommodate such issues in the original deal, which led to additional costs, delays, and negotiations in the process for the Army. Things were further complicated at APG because its utilities were privatized, and staff had to negotiate terms with both the developer and privatization contractor regarding water services.

Redstone Arsenal EUL

An EUL involving Redstone Arsenal, the City of Huntsville, Alabama, and other partners led to the construction of Redstone Gateway, an office, retail, and hotel complex. This deal consists of

⁸⁸ GAO, 2011.

⁸⁹ Information from APG installation staff on November 16, 2015. For more information about this EUL, see Stout, 2012; and St. John Properties, undated.

468 acres of land being leased from Redstone Arsenal for the construction of a 4.6 million-SF complex with approximately 48 buildings being constructed outside of the installation's security perimeters and 11 buildings inside it.⁹⁰ The lease term is 50 years with an option for a renewal of 25 years. Project efforts began in 2006 and construction preparations began in 2011; the project has an estimated 15-year build-out plan.

The land for Redstone Gateway was farmland that generated only approximately \$17,000 a year.⁹¹ Staff from Redstone Arsenal was considering the land for a summer concert when they recognized that an EUL was an opportunity to generate a much greater income. The Army awarded an EUL opportunity to Jim Wilson & Associates (JWA), a retail developer, in 2006. After the project stalled in 2008, JWA partnered with Corporate Office Properties Trust (COPT), which built relationships and furthered negotiations with Redstone Arsenal and the City of Huntsville. In 2009, JWA and COPT negotiated a master lease with the Army. Through a joint venture, COPT develops, leases, and manages the office space and JWA develops and leases the retail component of the project.⁹² Their partnership is named L.W. Redstone LLC.

The infrastructure costs of Phase I of the project from 2010 to 2012 equaled \$36 million. COPT has invested \$125 million in developing Redstone Gateway, and "annexation of the land into the City of Huntsville allowed for the creation of a \$72 million Tax Incremental Financing (TIF) district."⁹³ Redstone Gateway's real estate taxes make the TIF an option.⁹⁴ Highlights of the complex are 1.2 million SF of secured office space, LEED-Silver certification or higher of all buildings, single-tenant and multi-tenant buildings in a pedestrian-friendly area, covenant-controlled park, and plans for 124,000 SF of convenience retail, restaurants, and hotels.⁹⁵ Boeing, DRS, and Marriott TownePlace Suites are current tenants.

Redstone Arsenal has many benefits from this EUL, including revenue generation, cost avoidance, safety enhancements, facility upgrades, and access to additional office space. The construction of the complex addresses space limitations that Redstone Arsenal faced. Following the Base Realignment and Closure 2005 decision, an estimated 4,700 Department of Defense (DoD)-directed positions and 15,000 indirect and induced jobs were to come to the area.⁹⁶ The Research Park in Northwest Huntsville and Redstone Arsenal had no more available space. Redstone Arsenal had to construct \$440 million of military infrastructure and at one point had 1.2 million SF of requests for space.⁹⁷ The complex's additional office space will help address this problem.

⁹⁰ Dan Cohen, "Ambitious Plans Under Way for Redstone Arsenal EUL," Association of Defense Communities, March 7, 2011.

⁹¹ Vaughn, 2010.

⁹² Jim Wilson and Associates, LLC, "Groundbreaking Held for \$1 Billion Redstone Gateway Project," August 23, 2010.

⁹³ Redstone Arsenal, "2016 Army Community Partnership Awards Questionnaire," memorandum to Chief of Partnerships, OACSIM—Partnership Office, October 26, 2016.

⁹⁴ *Tax increment financing* is a "tool that allows municipalities to promote economic development by earmarking property tax revenue from increases in assessed values within a designated TIF district." Richard Dye and David Merriman, "Tax Increment Financing: A Tool for Local Economic Development," Lincoln Institute of Land Policy, January 2006.

⁹⁵ U.S. Army Corps of Engineers, "Featured Project: Redstone Arsenal, Huntsville, Alabama," webpage, undated.

⁹⁶ Corporate Office Properties Trust, "The Development of Redstone Gateway," presentation, March 2010.

⁹⁷ Corporate Office Properties Trust, 2010; Vaughn, 2010.

The EUL partnership deal also allowed for the movement of the Redstone Arsenal Gate 9 at no cost to the Army. The gate, which is Redstone's primary access control point, accounted for almost 50 percent of daily traffic. However, the gate was close to high-speed avenues outside the installation, which posed a safety concern. The relocation of the gate through the EUL is a cost avoidance to the Army equivalent to approximately \$8 million.⁹⁸ In addition, the lease payments to Redstone Arsenal can help fund its "priority list" of modernization projects, which is valued at approximately \$40 million.⁹⁹

The community also benefits from the EUL. The City of Huntsville will receive greater tax revenues from the complex, and the community will have more convenience retail, hotel, and restaurant options. The community also will benefit from the economic development that comes with increased jobs and the space to host the new employees.

Yuma Proving Ground Vehicle Testing EUL

The unique location of Yuma Proving Ground in Yuma, Arizona, provided an opportunity for a partnership with General Motors (GM). Yuma Proving Ground partnered with GM in a 50-year EUL for GM to finance and build a Hot Weather Testing complex for vehicles. Army and GM personnel share the use of this facility for testing wheeled vehicles in hot weather.

Yuma Proving Ground is a large military installation in a remote area with an extremely hot climate. GM thus saw Yuma as a useful setting for vehicle testing. In 2007, GM and Yuma Proving Ground signed the EUL, which gave GM the authority to finance and build the hot-weather testing complex. The facility features a 3.5-mile circular track, a 1.4-mile straightway, a vehicle dynamics test pad, engineered ride road, and other test tracks and support facilities.¹⁰⁰ GM completed the complex, which spans 2,400 acres, on time and within budget by 2009.¹⁰¹ The Army and GM share use of the facility. GM built and maintains the facility to Army standards in lieu of rent.

The EUL provides cost savings and testing and technology development mission benefits for the Army. The Army gained a new testing facility with GM providing engineering, maintenance, and construction services instead of rent, thus saving the Army an estimated \$100 million. The Army can test more than 85 percent of its wheeled vehicle fleet at no additional cost.¹⁰² At the facility, the Army and GM also have the opportunity to jointly advance vehicle technology.

The local communities also benefit from the partnership. The Yuma Proving Ground vehicle testing facility was expected to bring an additional 250–300 jobs to the area with an estimated annual payroll of \$22 million, stimulating the local economy.¹⁰³ The City of Mesa, on the other hand, was able to have a private company redevelop the land that GM left behind, which is located in a high-growth area.

The EUL partner also experienced multiple benefits. GM's testing facility in Mesa, Arizona, required refurbishment, and the company had concerns about urban encroachment and

⁹⁸ Redstone Arsenal, 2016.

⁹⁹ Vaughn, 2010.

¹⁰⁰ Keenan Development, "General Motors Desert Proving Ground—Yuma," webpage, undated-b.

¹⁰¹ National Council for Public-Private Partnerships, undated.

¹⁰² National Council for Public-Private Partnerships, undated.

¹⁰³ National Council for Public-Private Partnerships, undated.

security in the area. Creating a modern testing facility in Yuma addressed these concerns, given the location's remoteness and protected airspace of Army property, guaranteeing the privacy that GM desired for its vehicular testing. In Mesa, the vehicular facility spanned more than a dozen buildings, but in Yuma the complex is consolidated into one area.

The success of the partnership depended on multiple factors.¹⁰⁴ GM and the Army had similar needs and a common goal. Those assisting the development process had a variety of capabilities, with the team comprising subject-matter experts, counsel, real property, contracting, and facilities personnel. The detailed business plan outlined specific uses for the facility and stated who would use the facility and what would happen if a partner did not follow the standards the contract had set. At the time, the social and political environment was favorable for the EUL. Throughout the process, GM and the Army also took into consideration the views of other stakeholders, such as the City of Mesa. At the end of the lease term, the facilities will return to Army ownership, though there is an option for renewal at the end of the lease.

EUL That Has Been Managed by Both the Army and Air Force

In this section, we discuss an EUL that started out as an Army EUL, but transitioned to becoming a USAF EUL after the Army installation became part of a joint base under Air Force control. This is an EUL that was part of Fort Sam Houston and became part of Joint Base San Antonio (JBSA) on October 1, 2010, when the Air Force took over management of this new joint base consisting of the combined installations of Fort Sam Houston, Lackland AFB, and Randolph AFB.

Fort Sam Houston EUL Became JBSA Office Space EUL

In July 2001, Fort Sam Houston partnered with a developer to establish three 50-year lease agreements with one company for three vacant and deteriorated buildings on approximately 36 acres of land. The three buildings are the old Brooke Army Medical Center (BAMC), the North Beach building, and the South Beach building. The BAMC began as a medical dispensary in a log cabin in 1870, undergoing multiple expansions, relocations, and name changes, including a grand opening of a main hospital in 1938.¹⁰⁵ Construction on this main BAMC building began in 1935 and was completed in 1937.¹⁰⁶ For almost 60 years, the facility treated hundreds of thousands of patients until operations were relocated to a new facility across the post in 1994. For about seven years, the old BAMC facility was mostly vacant and unused except for occasional training by Army soldiers and security forces practicing their "entering and clearing a building" skills.¹⁰⁷ During this seven-year period, the building degraded signifi-

¹⁰⁴ For more information about these factors, see National Council for Public-Private Partnerships, undated.

¹⁰⁵ Ray Derry, "Brooke Army Medical Center," Handbook of Texas Online, undated.

¹⁰⁶ The dates surrounding when old BAMC was built, opened, and closed varied slightly depending on the source. In fact, the cornerstone on the building itself was dated 1936. The Command Historian U.S. Army South stated that this date was wrong; construction was actually started in 1935 and completed in 1937. Interview with the Command Historian U.S. Army South, November 15, 2017.

¹⁰⁷ U.S. Army South Public Affairs, "The Ghosts of Old BAMC Still Roam U.S. Army South Headquarters Building," *JBSA News*, October 29, 2015. This article states that the hospital opened in 1996, but a former DPW staff member from Fort Sam Houston said it opened in 1994.

cantly, especially given its original age and Army challenges in maintaining older buildings. This large building is eligible for listing on the historic registry and with the state historic preservation office (SHPO), the Texas Historical Commission. The SHPO would require parts of old BAMC to be preserved in any adaptive reuse project. Given this situation and the historical significance of the facility, the Army wanted to find a cost-effective way to adaptively reuse this unique historical building, which paved the way for this EUL deal.

Through this EUL, the developer agreed to renovate the three buildings into approximately 450,000 SF of office space.¹⁰⁸ The developer would then sublease the space to private-sector tenants for a profit and the Army would receive a portion of this net income from the developer. The EUL would benefit the installation because the historical BAMC building would be preserved and reused, and the EUL payments returned to the Army, some as cash and some as in-kind considerations, would help fund work projects on the installation. BAMC preservation efforts included maintaining the building exterior (Figure A.2), restoring the foyer to the building (Figure A.3), and keeping the original windows (which were covered with blastproof glass). Another benefit of this EUL is the Army's cost savings because of the elimination of the maintenance costs for the old buildings.

Figure A.2
Front of the Brooke Army Medical Center (BAMC) Building



¹⁰⁸ ADC, 2007.

Figure A.3
Ceiling of the Foyer in the BAMC Building



Some challenges arose regarding the Fort Sam Houston Office Space EUL, and the initial expected results of the EUL deal did not match what occurred over time. First, the Army put the money into an escrow account to use the funds for approved in-kind projects at the installation, rather than into a U.S. Treasury account. According to the requirements of the leasing law (i.e., Section 2667), the revenues were supposed to be deposited into the U.S. Treasury initially instead of being deposited and disbursed from an escrow account to pay for in-kind construction and maintenance projects; thus, the Army had not followed proper procedures.¹⁰⁹

Second, this EUL deal was signed in July 2001, when Fort Sam Houston was an open post. At that time, anyone could drive on and off the post freely without any identification checks. In fact, two city roads used by city buses and other traffic cut through the post. In planning for the EUL deal before it was signed, several large local firms expressed interest in renting space in the buildings once they were renovated. The EUL business plan at the time seemed strong for renting the space to nonmilitary companies. Then the September 11, 2001, terrorist attacks occurred: The Army closed the post and started requiring identification checks for anyone to drive on the post. As a result, most private companies were no longer interested in leasing space in the EUL buildings. This delayed the development plans for the three facilities.

¹⁰⁹ GAO, 2011.

The economic downturn in 2008 slowed the development plans even more. The payments that were going to be returned to the Army from the EUL outgrants were originally estimated at a value of \$230 million over the lease terms. However, in 2010, the lessee had renovated only two of the three buildings. By that time, the expected return from the EULs had decreased to \$198 million over the lease terms, a difference of 22 percent.¹¹⁰ A later estimate was even lower.

Another complication involved the tenants of the office space. After the signing of the leases, the Army relocated Army organizations to Fort Sam Houston. This resulted in an increased demand for Army office space at the installation. Because most nonmilitary organizations were no longer interested in the space and Army organizations could not find cost-effective rental space off the post, it made sense for them to lease in the EUL facilities. By 2010, the result was that the Army had rented nearly all of the available office space that private-sector tenants were originally supposed to fill.¹¹¹ Specifically, because it needed additional space, the Army ended up entering into a leaseback agreement and renting most of the EUL space that had been renovated, which meant that most of the estimated future consideration would be the result of the Army getting back a portion of the rent that the Army pays to the EUL developer.¹¹² Put another way, the Army pays rent to the developer to pay back to the Army. The EUL ended up being like a third-party financing deal to adaptively reuse historic BAMC and the other buildings. Such deals run into problems with the U.S. Office of Management and Budget (OMB) scoring requirements of Circular A-11 (see Appendix B for more details on the scoring issues). However, such a deal is financially very similar to how the Army privatizes utilities, so it is not necessarily a bad financial deal—especially given what would have happened if the deal had not been made. To better explain some of the additional benefits from this deal, consider the experience with one of the major tenants in the BAMC building, U.S. Army South headquarters.

Around late 2001, the Army also decided to relocate U.S. Army South headquarters to Fort Sam Houston, and U.S. Army South needed a large building. The General Services Administration, which competes leases for military organizations, looked around the San Antonio area for space that would work for U.S. Army South's needs but found no space available to meet the size and force protection (FP) requirements. Leasing space from the EUL developer in the old BAMC building was cost-effective and met the FP needs. The developer could have BAMC ready for U.S. Army South headquarters occupation within 18 months, which would have been faster than the MILCON process. The result was that U.S. Army South moved its headquarters to the old BAMC in 2003. Without this renovated building, Army South would have had no place to go. By renting space in the EUL building, the Army likely saved the MILCON costs and delays of constructing a special building for Army South headquarters. Another benefit of this deal to Army South is that the renovated facility with its aesthetically pleasing exterior and foyer creates an ideal building for the diplomatic parts of its mission, such as having foreign dignitaries visit Army South headquarters. In fact, other Army

¹¹⁰ GAO, 2011.

¹¹¹ GAO, 2011.

¹¹² A *leaseback* is an arrangement in which the military installation leases an asset to another entity, then leases back services or property from the lessee. For example, an installation could lease a warehouse facility to a private company and then rent back some space for its own use.

personnel who work in this facility also like it because it is in better condition and a nicer facility than many of the other buildings on the installation that the Army maintains.

Another part of this EUL story was that only two of the three buildings were renovated and leased to tenants: the BAMC and the North Beach building, which was fully leased in 2008, mostly to DoD tenants. The third building, called the South Beach building, has not been renovated. In fact, the developer put up another building on the property instead of renovating the original one. A lesson learned is that the EUL contract should have included an incentive for renovating each of the buildings (or a penalty for not doing so).¹¹³

Despite such disadvantages, however, the many benefits resulting from the Fort Sam Houston EUL indicate that it should still be considered a success story for the Army, especially given the alternative to the Army of leaving the buildings to deteriorate further. Given the challenges to acquiring funding for adaptive reuse and maintenance of older buildings (especially historic ones), this deal actually generated many benefits for the Army. First, the Fort Sam Houston EUL has provided some revenues to the Army because not all the tenants are Army. Besides Army South, EUL tenants include Defense Contract Management Agency, Army Medical Command, and a small percentage of defense contractors. Second, the developer's in-kind considerations paid for other installation facility renovations. Third, this deal eliminated the installation costs of maintaining the old buildings and provided two facilities that are in better condition than many of the other Army-maintained buildings on the installation, which likely contributes to improved worker morale.¹¹⁴ Fourth, the large historic BAMC building was cost-effectively and adaptively reused, preserving historic and artistic features of the structure along with important Army history. Fifth, U.S. Army South was able to move its headquarters to the old BAMC in 2003, moving into cost-effective, attractive, and FP-compliant space, which likely saved MILCON costs and delays of constructing a new building for this Army organization.¹¹⁵

In addition, at the time the EUL was signed in July 2001, the Army did not know (1) that it would need to grow at Fort Sam Houston, (2) about the post becoming a closed post, or (3) the impending economic downturn. GAO argued the Army should not have considered the three EUL buildings nonexcess property because of their internal location on the post, or that the Army should have included an exit clause from the deal.¹¹⁶ However, this is an expected risk that can occur in implementing any EUL—in many EUL deals, the government waives the exit clause because the developer often cannot acquire financing with the inclusion of such a clause.

The Army was unable to reap the full benefits of the EULs because of the transfer of responsibility of the project to the Air Force. As a result of the 2005 Base Realignment and Closure (BRAC) decision, on October 1, 2010, Fort Sam Houston, Lackland AFB, and Ran-

¹¹³ This lesson learned was provided by former Fort Sam Houston DPW personnel who had been involved in the Fort Sam Houston EUL deal.

¹¹⁴ Army personnel directly involved in Army facility management at JBSA over the past 15 years stated this was an installation benefit from this EUL.

¹¹⁵ Different Army personnel involved in this EUL and Army facility management at this installation over the past 15 years mentioned that the Army benefits from this EUL. These personnel tended to focus on looking holistically at how this deal helped the installation. Military personnel who have criticized this EUL deal have focused more on the FMV and other official requirements of leasing deals.

¹¹⁶ GAO, 2011.

dolph AFB combined to become JBSA. After the Air Force took over the administration of the Fort Sam Houston EUL, the deal was renegotiated in 2010. According to AFCEC, the forecasted NPV at closing (lease term) for the Air Force is \$47,113,560, and the value the Air Force had received as of March 31, 2017, was \$1,503,045.¹¹⁷

Other Large-Scale Outgrants

Next, we discuss a large office building lease at Ellsworth AFB and then a large-scale easement at Eglin AFB.

Ellsworth AFB Leasing 21,000 SF to a Health Care Company in a Shared Office Building

Ellsworth AFB is located ten miles east of Rapid City, South Dakota, and hosts the 28th Bomb Wing. In 2015, Ellsworth AFB entered into a five-year lease with Drynahan, LLC (Advance Health), a Virginia-based health care management firm. The lease is for approximately 21,000 SF on the first floor of Building 4040, a building on the base that also houses the USAF Financial Services Center. The company is expected to have 200 people working in the building within three to five years. Both the amount of square footage leased and the monthly rental rate increase each year under the lease until Advance Health has complete possession of the first floor in Year 5. The base will earn a total rental income of about \$635,486 from this lease over the five years. Besides paying rent, Advance Health makes some in-kind improvements to the USAF property.

Motivation for the Ellsworth Lease

In 2015, Building 4040 housed the USAF Financial Services Center, but it was operating under capacity due to budget cuts and layoffs. The USAF Financial Services Center had opened in 2007, employing approximately 550 civilian and military employees at its peak, but almost 400 lost their jobs in 2011.¹¹⁸ For four years, Building 4040 operated at approximately one-fourth capacity with a large amount of vacant space. The layoffs also had economic impacts on this sparsely populated area. (Rapid City's population is about 9,348.)

Advance Health, a private company founded in 2010 and employing 850, wanted a central/western location for a call center. Around 2015, this company had conducted a six- to eight-month nationwide search for a location for this call center.¹¹⁹ At the same time, personnel within the South Dakota Governor's Office of Economic Development and the South Dakota Ellsworth Development Authority were trying to recruit new businesses to the state. Wanting to help both the base and the local economy, the office contacted Ellsworth to see if the base had some property that might be available for use by business. This state organization helped to recruit Advance Health and then connected the company with the appropriate Ellsworth AFB personnel.

To create space for Advance Health, Ellsworth AFB consolidated its USAF Financial Services Center staff on Building 4040's second floor. The installation also built its staff a new command center on the second floor, leaving the now-vacant first floor completely separate

¹¹⁷ AFCEC, June 2017.

¹¹⁸ Holland, 2015.

¹¹⁹ Holland, 2015.

Table A.2
Ellsworth AFB's Yearly Revenue from the Advance Health Lease

Year	Approximate Square Footage	Lease Cost Per SF	Total Lease Amount per Year	Cumulative Revenue
2016	6,568	\$8.50	\$55,828	\$55,828
2017	10,996	\$8.50	\$93,466	\$149,294
2018	14,897	\$8.50	\$126,624.50	\$275,918.50
2019	18,341	\$9.00	\$165,069	\$440,987.50
2020	21,521	\$9.00	\$193,689	\$634,676.50

SOURCE: Interview with personnel at Ellsworth AFB, January 2017.

from Air Force functions upstairs. Advance Health then leased the first floor of Building 4040 to operate a Medicare Call Center.

Partnership Design and Lease Structure

The partnership is structured as a five-year lease that allows Advance Health to increase its leased space over that period in exchange for monthly lease payments. Table A.2 shows the square footage and lease amounts for each of the five years.

In 2017, the lease was in its second year, with Advance Health leasing approximately 10,996 SF at a rate of \$8.50 per SF. At the end of Year 5, Advance Health will fully occupy all 21,521 SF on the first floor of Building 4040 at a rate of \$9.00 per SF.

The rent that Advance Health pays is offset by the cost of in-kind improvements it is making to the facility. Because Building 4040 houses both a government entity and private company, the USAF Financial Services Center wanted certain security requirements in place to close off the second floor from the call center. To pay for these security requirements, a lease clause requires Advance Health to pay for improvements that the installation will make to bring the facility “to required standards.” Advance Health’s monthly rents are then reduced by the cost of these improvements. Examples of these improvements are a secured card swipe entry system in the building’s elevator and secured doors on the second floor.

The lease provides Advance Health with turnkey office space, including the associated office equipment, desks, chairs, cubicles, and other items associated with the first floor space. Advance Health personnel also have general use of Building 4040’s common space, such as lobbies, restrooms, elevators, parking lots, and driveways.

Partnership Benefits

Ellsworth AFB, Advance Health, and the community all benefit from this partnership. For Ellsworth AFB, the leasing deal provides revenue of more than \$635,000 that it can use to help with base facilities. The rental payments and in-kind improvements also help offset base operating costs. The lease terms also provide other benefits to the Air Force. The leasing deal helps fill underutilized space, which saves on operations and maintenance cost of the empty space. The in-kind improvements that Advance Health makes also increase the value of the space. The assistance from both the South Dakota’s Governor’s Office of Economic Development and the South Dakota Ellsworth Development Authority negated the need for Ellsworth to look for a military tenant for the space.

The lease also creates new collaborative relationships among Ellsworth AFB, the private sector, and the South Dakota government. Advance Health's call center has only private-sector personnel and no prior relationship with the Air Force. Although it has clients in 48 states, the Ellsworth call center is only Advance Health's third location.¹²⁰ Following "an extensive search across the nation to determine the best site for its new location," Advance Health chose the Ellsworth facility in part because of the "talented workforce, a great cost of living and beautiful site to expand to."¹²¹ The partnership with Ellsworth gives the company a foothold in a new geographical area while tapping into local assets. Advance Health also benefits from turnkey office space that the chief operating officer touted as "state of the art" with "all the technology we need to plug into."¹²²

The Governor's Office of Economic Development and South Dakota Ellsworth Development Authority helped recruit Advance Health, and the successful partnership between Ellsworth and Advance Health could be used to attract other businesses to the area. The partnership's unique design and lessons learned also can be used to help Ellsworth AFB in developing additional partnerships.

The community benefits because the new Advance Health jobs at the base help the local economy by providing good-paying jobs in this sparsely populated community. Advance Health pays its workers more than minimum wage—starting around \$14–\$15 per hour and ranging up to as much as \$17 per hour—and a higher annual wage than is typically paid in the area.¹²³ When the lease began in 2015, Advance Health's call center employed approximately 17 people.¹²⁴ Advance Health expected that number to increase to 100 employees in 2017, with an additional 100 jobs by the end of 2018.¹²⁵ The higher wages not only benefit current residents, they also help attract new residents to the area. The increase in disposable income also benefits area businesses. The money that employees spend at nonexchange restaurants on base go directly to the installation. Money spent in the surrounding community benefits the local economy. The South Dakota Ellsworth Development Authority also cited the lease as "an added reason to keep Ellsworth off future base-closing lists."¹²⁶

Lessons Learned from the Leasing Arrangement

The partnership with Advance Health was the first lease of its kind between Ellsworth AFB and a private business,¹²⁷ and the director of the South Dakota Ellsworth Development Authority considers the partnership to be a success.¹²⁸ Although Ellsworth AFB and Advance Health also both consider this arrangement a success, there have been some minor bumps along the

¹²⁰ South Dakota Governor's Office of Economic Development, "Virginia-Based Healthcare Company Expanding to Ellsworth AFB," Box Elder, S.D., June 30, 2015.

¹²¹ South Dakota Governor's Office of Economic Development, 2015.

¹²² Holland, 2015.

¹²³ Holland, 2015.

¹²⁴ Holland, 2015.

¹²⁵ Rushmore Region Economic Development Alliance, "Advance Health Thrives in Ellsworth AFB Office Space," June 18, 2017.

¹²⁶ Holland, 2015.

¹²⁷ Holland, 2015; Rushmore Region Economic Development Alliance, 2017.

¹²⁸ Holland, 2015

way. One was the base security measures for access to the building, which is on the installation behind the base's security gate. In 2015, Advance Health's chief operating officer expressed some initial concerns about base access. Their employees have to undergo background checks because of the nature of their work, but because of the base security issues "company officials will be authorized to vouch for employees at the base."¹²⁹ In 2017, inclement weather provided an example of a minor access challenge because installation personnel were on minimum manning during a snowstorm and the base's visitor control center was closed. An Advance Health employee was trying to escort a visitor that day and was not allowed to do it without the visitor's approval documentation, which was in the closed visitor control center. This documentation issue caused only a minor delay—an Air Force staff member was called who was able to retrieve the documentation from the closed center and the visitor was granted access. Such an example illustrates how a solution was found when a problem arose and that the base learns from experience. Overall, this facility leasing partnership is considered a success by the base, partner, and community, and it shows opportunities for more such partnerships at both Ellsworth AFB and other military installations.

Eglin AFB Easement to the Mid-Bay Bridge Authority for a New Connector Road

Eglin AFB has partnered with the Mid-Bay Bridge Authority through an easement. The easement, signed in 2015, permits the Mid-Bay Bridge Authority, a Dependent Special District of the State of Florida, to use Eglin property for a new connector road.¹³⁰ The toll road will be 11 miles long.¹³¹ The surrounding communities greatly benefits from this easement. The connector road will link Destin to Interstate 10, ease traffic on White Point Road and John Sims Parkway, and improve hurricane evacuation routes from South Okaloosa and Walton Counties.¹³²

Eglin AFB will receive an estimated \$20–30 million from the easement.¹³³ The payment-in-kind will contribute to multiple areas. The consideration projects are "new runway lighting," "runway stripping and improvements," "fitness track," "new fire suppression equipment," "fire station renovation," "solar thermal heating systems," and "energy conservation projects."¹³⁴ The in-kind consideration will also support habitat restoration of the Okaloosa Darter, a local fish that is classified as a threatened species after being an endangered species for almost 30 years.¹³⁵ Maintaining communication throughout the partnership between partners was a critical element of the easement. Eglin AFB's civil engineers met with Mid-Bay Bridge Authority quarterly, maybe monthly.

¹²⁹ Holland, 2015.

¹³⁰ Mid-Bay Bridge Authority, "About the Mid-Bay Bridge Authority," webpage, undated.

¹³¹ Melinda Rogers and Glenn Wagner, "Lighting the Way at Eglin," *Military Engineer*, undated.

¹³² Spaits, 2010.

¹³³ Estimates range from \$20 million to \$30 million. Spaits, 2010; Fornell, 2013.

¹³⁴ Fornell, 2013.

¹³⁵ More than 98.7 percent of the Darters' habitat is located on Eglin AFB property. U.S. Fish and Wildlife Service, "Okaloosa Darter," Panama City Ecological Services/Fish and Wildlife Conservation Office, undated.

Legal Authorities and the Outgrant Process

In this appendix, we provide more information about the legal and policy requirements for developing and implementing outgrants. We explain about the different types of outgrants, the fair market value requirements, the scoring requirements, how the outgrant revenues can be accepted, and how they are allowed to be used.

What an Outgrant Is

An *outgrant* is “a legal document which conveys or grants the right to use Army-controlled real property.”¹ The outgrant provides the written agreement of the terms and conditions for a non-Army organization to use an Army’s installation’s real property. In many instances, outgrants also are provided in exchange for cash or in-kind consideration (i.e., payment), for which the Army must receive at least fair market value (FMV). There are four main types of outgrants: leases, easements, licenses, and permits.² An enhanced use lease (EUL) is a basically a large-scale and long-term lease that can last as long as 50 years. However, an EUL is not defined for military installations in statute or policy; the Service branches distinguish an EUL from other leases based on scope, size, terms, and type and amount of consideration received. Other types of agreements (e.g., Memoranda of Agreement [MOAs], Memoranda of Understanding [MOUs], Intergovernmental Support Agreements [IGSAs]) are not considered outgrants.

Lease

A *lease* is “a written agreement which conveys a possessory interest in real property, usually exclusive, for a period of time for a specified consideration.”³ Consideration for leases comes in two forms:⁴ cash and in-kind. Generally, a lease permits the non-Army organization to occupy and use that property for any lawful reason. However, leases can include conditions or restrictions on how that property might be used. Of the different outgrants, a lease conveys the most rights to the lessee.

¹ AR 405-80, 1997, p. 10.

² AR 405-80, 1997, p. 4.

³ AR 405-80, 1997, p. 11.

⁴ *Consideration* is a legal term for the thing (or things) of value being exchanged in a contract. Consideration can be either a promise to do something (e.g., provide a product) or a promise not to do something (e.g., file a lawsuit). In a typical contract, both parties are exchanging some form of consideration. For example, an agreement to perform a service in exchange for payment contains two forms of consideration: (1) the service that Person A provides to Person B, and (2) the payment that Person B provides to Person A.

By law, the Service branches can lease out only “nonexcess” real property. Leases of military nonexcess real property are governed by 10 U.S.C. § 2667⁵ (“Section 2667”) and Service branch–specific policies. Section 2667 refers only broadly to “leases” and does not differentiate among standard leases and EULs. Thus, its requirements apply to both short-term and long-term leases and EULs. A lease of nonexcess property can be entered into if the Service Secretary considers it to be a direct benefit to the United States, to promote national defense and/or the public interest, and to be compatible with the current and anticipated military activities at that installation. Army Regulation 405-80 ranks Army preferences for selecting non-Army users of real property. In descending order, outgrants should be granted to:

- non-Army entities supporting an Army, installation, or national defense mission
- other Service branches, U.S. Department of Defense (DoD) activities, or military agencies
- other federal agencies or Services
- contractors supporting military, DoD, or federal agencies or Services
- state or local government agencies or entities
- private parties.⁶

Section 2667 also requires the Army to compete its leases, unless the lease is in the public interest or using competitive procedures is unobtainable or incompatible with that lease’s purpose.⁷ The Deputy Assistant Secretary of the Army (Installations, Housing and Partnerships) (DASA[IH&P]) must approve any exceptions to competitive procedures for leases under Section 2667.⁸

A lease is limited to five years, unless the Service Secretary determines it either promotes the national defense or is in the public interest to have a longer lease term.⁹ EULs, for example, are for much longer lease terms, such as 40 or 50 years. Another exception to the five-year requirement is banks and credit unions, which can have lease terms up to 25 years.

In most cases, the military also is required to receive at least FMV in exchange for the lease. Exceptions to the FMV requirement are Base Realignment and Closure (BRAC) properties,¹⁰ public schools,¹¹ credit unions,¹² and privatized housing.¹³ Any lease, license, or easement with an estimated FMV of greater than \$750,000 must also be reported to Congress.¹⁴

⁵ 10 U.S.C. § 2667, “Leases: non-excess property of military departments and Defense Agencies.”

⁶ AR 405-80, 1997.

⁷ See 10 U.S.C. § 2667(h); Cramer, 2012a.

⁸ Cramer, 2012a.

⁹ 10 U.S.C. § 2667(b)(1).

¹⁰ 10 U.S.C. § 2667(g)(2).

¹¹ 10 U.S.C. § 2667(k).

¹² U.S. Code, Title 12, Banks and Banking, Chapter 14, Federal Credit Unions, Subchapter I, General Provisions, Section 1770, Allotment of Space in Federal Buildings or Federal Land.

¹³ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 169, Military Construction and Military Family Housing, Subchapter IV, Alternative Authority for Acquisition and Improvement of Military Housing, Section 2878, Conveyance or Lease of Existing Property and Facilities.

¹⁴ U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2662, Real Property Transactions: Reports to Congressional Committees, Part (a)(1)(c).

Leases can contain certain restrictions on the property's use to accommodate the mission and other installation-specific considerations. Leases under Section 2667 also must contain termination clauses permitting the military the right to terminate the agreement at will. The termination clause protects the military's anticipated future needs for the property. However, the termination clause also could be contrary to a partnering organization's interests and prevent a deal from moving forward. Section 2667 provides the military with broad authority to waive the termination clause if "[the Service Secretary] determines that the omission of such a provision will promote the national defense or be in the public interest."¹⁵ In the case of the Army, interviewees suggested that a waiver of the termination clause often is necessary to facilitate a longer-term large-scale installation lease. Waivers are sometimes made with some longer-term development leases when the developer cannot get the financing for the deal because of such a general termination clause. Financiers are risk averse and often will not provide funding to a large-scale and long-term installation leasing investment when the military reserves the right to take the property back at will.¹⁶ To protect Army interests, Army policy requires that any prospective lease with a term longer than five years that also excludes a termination clause must be reviewed by the Realty Governance Board prior to lease solicitation.¹⁷ Proposed leases for agriculture and grazing, cell towers and telecommunication facilities, banks and credit unions, and elementary and secondary public schools are exceptions to this requirement. The DASA(IH&P) also can approve case-by-case exceptions to this requirement. Army policy delegated the authority to execute and administer all leases under Section 2667 to the U.S. Army Corps of Engineers (USACE).¹⁸

The Army and Air Force have used their Section 2667 authority to enter into a variety of short-term and long-term leases and EULs. For example, Aberdeen Proving Ground granted a five-year lease to Bank of America to operate a bank branch on 0.134 acres of installation land. Ellsworth Air Force Base (AFB) in South Dakota used a short-term lease to provide a private entity with more than 21,000 SF of office space for use as a call center in exchange for monthly rental payments, as is discussed in Appendix A.

Enhanced Use Lease (EUL)

The Services use their Section 2667 leasing authority both for standard leases and more-complex, long-term agreements called EULs. Although the term EUL is commonly used throughout the federal government, there is no consistent definition and agencies' EUL authorities and policies vary. Section 2667 is the authority for DoD and military EULs, but it does not differentiate among EULs and other types of leases. Earlier Army guidance distinguished between EULs and other leases, but the Army changed its policy in 2012 because "the distinctions [between leases and EULs] have proven difficult to uniformly apply and [are] not generally useful for purposes of lease approval."¹⁹ The Services tend to distinguish an EUL from a "normal outlease on the basis of scope, process, term, and consideration. . . . EULs generally

¹⁵ 10 U.S.C. § 2667(b)(3).

¹⁶ The Navy also will waive the termination-at-will clause in some of its large-scale outgrant deals, including the energy ones, when it is clear that the company will have a difficult time acquiring the financing for the deal.

¹⁷ Cramer, 2012a.

¹⁸ Cramer, 2012a.

¹⁹ Cramer, 2012a.

involve larger amounts of property, generally undergo a more detailed evaluation and review before approval and greater oversight after approval, [and] often are executed for longer periods of time.”²⁰ EULs are leases that usually involve multiple acres of installation property that the military needs to retain because of possible future mission needs, but does not need to use in the near future. The Air Force views EULs as business deals with the goal of maximizing the Air Force’s profit and return on investment.²¹ The Army is less explicit about profit generation from leases, but it does see them as “prudent asset management and help[ing] defray Army costs.”²² An EUL can benefit an installation by leveraging existing, underutilized property in exchange for some kind of payment (cash or in-kind) while retaining that property for potential mission needs and developing long-term relationships with non-Army organizations. Neither Army nor Navy real property personnel tend to use the term EUL much anymore; they mostly refer to such installation real estate deals as long-term leases.

Some Service real property interviewees argued that the long lease terms typical of EULs are implicit statements that a Service does not need the nonexcess real property and might be better served by its disposal. However, EULs and other large-scale outgrants also have some important advantages over land disposal. The biggest advantage is the military’s ability to maintain ownership as a hedge against its future needs. Leasing out nonexcess real property enables a Service to maintain ownership of the land while receiving some financial benefit from it. During the time the property is leased, that Service can receive such benefits as rental payments or building improvements that reduce the operating and maintenance costs it otherwise would have had. By maintaining ownership of the land and only leasing it, the military installation can guard against encroachment concerns and ensure that the property’s use remains compatible with the installation’s use. A lease also keeps the real property available to the military in case future missions or growth requires the military to take the property back. In addition, disposal of the property can make it more difficult and expensive or impossible to acquire the land back if the military needs it later.

In the House report for a summer 2017 version of the National Defense Authorization Act (NDAA) for fiscal year (FY) 2018, Congress encouraged greater use of EULs, noting that they have been used “to develop electricity generation, commercial and industrial facilities, and other infrastructure projects that have benefited both the military installation as well as the surrounding communities.”²³ Due to “concerns . . . on the length of time it can take to initiate, negotiate, and implement an EUL,” Congress encouraged streamlining of the Services’ EUL processes, including possible legislative changes necessary to speed up the process.²⁴

FMV

For most leases, the military installation is legally required to obtain a minimum of FMV from the partnering organization for use of the property. Exceptions to the FMV requirement are BRAC properties, public and publicly affiliated schools, credit unions, and privatized housing.

²⁰ GAO, 2011, p. 5.

²¹ For example, see AFCP Program, “Air Force Community Partnership Program Quick Reference Guide,” Version 14, November 3, 2016a, p. 28.

²² Cramer, 2012a.

²³ U.S. House of Representatives, Armed Services Committee, 2017, p. 316.

²⁴ U.S. House of Representatives, Armed Services Committee, 2017, p. 316.

The statutory authorities for a particular lease determine whether FMV is required as part of the agreement. If the statute is silent on the issue, FMV is determined according to Service branch policy.

FMV is the amount of cash or in-kind consideration that a knowledgeable purchaser would likely pay to use a particular property.²⁵ For leases and EULs, Section 2667 authorizes the appropriate Service Secretary to determine what constitutes FMV for a particular lease.²⁶ As a result, there is no set methodology for determining FMV and what constitutes FMV is open for interpretation. In 2012, the U.S. Government Accountability Office (GAO) found that the *receipt of FMV* also effectively is open to interpretation due to the lack of clear guidance.²⁷ For example, in the “Okaloosa County Regional Airport Enhanced Use Lease” at Eglin AFB, the Air Force agreed to accept \$318,000 annually as consideration for the EUL. As a result, the negotiated lease payments were 75 percent less per year than the appraised value determined by a private company hired by the Air Force.²⁸ Citing the Eglin AFB EUL as an example, GAO expressed concern that the lack of clear guidance might mean other Services also were not getting at least FMV for their leased properties. In its discussion on distinguishing among lease types, Office of Management and Budget (OMB) Circular A-11 describes its guidance on estimating FMV:

In the case of real property, the fair market value should be based on current market appraisals. If no asset exists, the fair market value of the proposed asset should be based on the Government’s estimate of the private developer’s cost to construct the leased facility. The estimate should only include the costs the Government would normally pay the private sector for such a facility. These costs include the total direct and indirect costs of constructing the facility, including land purchase, design, site improvements, and management costs. Fair market value should not include the value of features or enhancements that were built or added for the Government’s unique needs or special purposes.²⁹

FMV often is determined through appraisals, which can add time to the leasing process. An appraiser must complete a commercial appraisal known as a “yellow-book appraisal,” which must be reviewed and approved by the government (e.g., the General Services Administration). Appraisals can be conducted by either a private company or a governmental entity, such as the USACE. Appraisals are often expensive; one interviewee stated an installation can expect to pay approximately \$9,000–14,000 for the appraisal and an additional \$2,000 for the government appraisal. As a result, these FMV appraisals must be factored into the cost-benefit analysis during the planning phase for any leasing agreements.

Legal experts have differed on how to calculate the FMV for EULs and other installation outgrants. For example, consider Eglin AFB’s two EULs with Okaloosa County, the one for the water reclamation facility (WRF) and the one for the Destin–Fort Walton Beach Airport. (Both are discussed in more detail in Appendix A.) In both these deals, “the Air Force accepted

²⁵ AR 405-80, 1997, p. 10.

²⁶ 10 U.S.C. § 2667(b)(4).

²⁷ GAO, *2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue*, Washington, D.C., GAO-12-342SP, February 2012a, p. 240.

²⁸ GAO, 2011, p. 26.

²⁹ OMB, 2017, Appendix B, p. 7.

a negotiated amount of consideration that was less than the appraised value of the property. According to the Air Force, although it uses property appraisals as a guide for determining FMV, a property's actual FMV is the price a willing buyer could reasonably expect to pay a willing seller in a competitive market to acquire the property."³⁰ A GAO study questioned this approach for calculating FMV and stated that "it was not clear how and to what extent the Services ensured the receipt of FMV" for such deals.³¹ However, others have questioned whether the military always must receive FMV if a deal ultimately provides value to the military and saves government dollars compared with not doing a deal. Another question that military experts ask is whether EULs and other outgrants that are with local governments and involve public benefits (such as the Eglin AFB and Okaloosa County WRF and airport EULs) need to achieve the full FMV. Installation and community staff have both raised this issue, especially because the FMV requirement has limited the development of some installation EULs with local governments. As found in previous RAND research, "Some installations have faced challenges in developing community partnerships because the fair market value requirement prices the property too high for a municipality's public use."³² Similarly, the FMV requirement has limited opportunities with private developers. For example, National Aeronautics and Space Administration (NASA) personnel have found that the requirements for FMV and how NASA installations can accept in-kind considerations have limited that agency's ability to encourage the use of EULs at underutilized property with potential developers. According to GAO, "NASA officials said prospective lessees are reluctant to make costly capital improvements to a property that will have to be returned to the government at the end of the lease without other compensation, such as a reduction in cash rent."³³

Budget Scoring for Leases

Budget scoring is a term for the measurement of federal spending obligations against appropriations. It is a process governed by the House and Senate Budget Committees, the Congressional Budget Office, and the U.S. Office of Management and Budget (collectively known as "the scorekeepers"). The purpose of the scoring process is to ensure compliance with budget laws and to ensure that scorekeepers measure the effects of legislation consistent with scorekeeping guidelines and legal requirements.³⁴ Budget scoring guidelines are detailed in OMB Circular Number A-11.³⁵

Under OMB Circular A-11, federal agencies are required to submit certain types of leases and other unique, nonroutine real property financing proposals to OMB for review of the scoring impact. Appendix B of Circular A-11 contains the specific rules for scoring federal lease-purchases and other leases, such as EULs. Because leases can involve assets and an associated financial risk spread over a period of years, there are specific guidelines for treating the budgetary consequences of such agreements. Not all leases are subject to budget scoring under

³⁰ GAO, 2011, p. 26.

³¹ GAO, 2011.

³² Lachman, Resetar, and Camm, 2016, p. 142.

³³ GAO, 2012b, p. 16.

³⁴ GAO, *Budget Scoring: Budget Scoring Affects Some Lease Terms but Full Extent Is Uncertain*, Washington, D.C., GAO-01-929, August 2001, p. 4.

³⁵ OMB, 2017.

Circular A-11. Relevant to leases of Army-controlled real property, all financing proposals that are “non-routine in nature and involve unique or unusual concepts or characteristics” must be submitted to OMB for scoring.³⁶ These nonroutine proposals include the following:³⁷

- outlease-leaseback³⁸ mechanisms
- establishment of public-private partnerships or limited liability corporations
- special purpose assets for which there is no real private-sector market
- EULs with leasebacks with annual payments above the threshold levels of \$2,850,000 for 2017 and \$3,095,00 for 2018
- projects constructed or located on federal government land
- contracts that require the contractor to acquire or construct assets valued at more than \$50 million
- arrangements that convey special tax status to the project by virtue of the federal government’s participation
- leasing arrangements containing options that can be conveyed from a third party in exchange for future consideration
- financing proposals required by statute to submit to OMB scoring or comply with Circular A-11.

Under Appendix B, three lease types are divided into two categories: (1) lease-purchase or capital leases, and (2) operating leases. Lease-purchase is a lease where ownership of the asset is transferred to the federal government following the end of the lease term.³⁹ A capital lease is any other lease requiring budget scoring that does not fall into the definitions of either a lease-purchase or an operating lease.⁴⁰ An operating lease must meet all of the following criteria:⁴¹

- Ownership of the asset remains with the lessor during the term of the lease and is not transferred to the federal government at the conclusion of the lease term.
- The lease does not contain a bargain-price purchase option.
- The lease does not exceed 75 percent of the estimated economic life of the asset.
- The present value of the minimum contractually required payments over the life of the lease does not exceed 90 percent of the FMV of the asset at the beginning of the lease term.
- The asset is a general-purpose asset rather than being for a federal government special purpose, and it is not built to the unique specifications of the federal government as lessee.
- There is a private-sector market for the asset.

³⁶ OMB, 2017, p. 1.

³⁷ OMB, 2017, pp. 1–2.

³⁸ A *leaseback* is a financial transaction in which one party sells an asset and leases it back for a long period. Thus, the party continues to use the asset but no longer owns it. For example, a service could sell a piece of real property but have a portion of that property leased back to it for use.

³⁹ OMB, 2017, Appendix B, p. 6.

⁴⁰ OMB, 2017, Appendix B, p. 6.

⁴¹ OMB, 2017, Appendix B pp. 6–7.

Determining the category in which a lease belongs involves such factors as estimation of FMV, any special features or enhancements to the asset, the existence of up-front, lump-sum payments, whether the project is located on government land, and any proposed purchase or lease renewal options.⁴²

The budget requirements in Appendix B of Circular A-11 are of special interest to partnerships because they determine how a federal agency must structure the agreement. The proposed agreement's score also affects the viability of the project. Agencies must submit their lease proposals for OMB scoring during the project's conceptual, developmental stage. Any subsequent changes that could substantially change the scope of the proposal or affect the initial scoring impact must be resubmitted to OMB.

It has been suggested that budget scoring adds unnecessary uncertainty to installation EULs, especially with local governments. This is because guidelines for the use of data are subjective,⁴³ and potential issues surround the determination of FMV and inconsistencies between the rules in Circular A-11 and commercial accounting standards. Some installations have faced challenges in developing large-scale outgrants because the FMV prices the property too high for a municipality's public use.⁴⁴

For example, A-11 scoring can affect an EUL project in two ways. First, if the project involves a land-lease, there is no budget scoring performed as long as the lease is based on fair market value (which can be received as a cash payment or in-kind consideration). Second, if there is federal leasing of space in new buildings constructed with the EUL project, the A-11 criteria are used to determine whether the project should be considered a capital lease or an operating lease, which have different budgetary requirements. Others have suggested that A-11 has made those leases that result in government ownership unaffordable because they are treated as a capital lease. Over time, A-11 has been applied to public-private partnerships, precluding their use to finance federal acquisition of capital assets.⁴⁵

Easement

An *easement* grants the rights to use Army nonexcess property for a specific purpose, whether that use is temporary or permanent.⁴⁶ Easements commonly are used to grant rights-of-way over, in, or across Army land. Easements for use of military nonexcess real property can be issued under different authorities, although many types are contained in 10 U.S.C. § 2668 (Section 2668). Section 2668 states that easements include the following:

- (1) railroad tracks;
- (2) gas, water, sewer, and oil pipe lines;
- (3) substations for electric power transmission lines and pumping stations for gas, water, sewer, and oil pipe lines;

⁴² OMB, 2017, Appendix B, p. 7.

⁴³ Meurer et al., 2012.

⁴⁴ Lachman, Resetar, and Camm, 2016, p. 142.

⁴⁵ Lachman, Resetar, and Camm, 2016, p. 142. For more information, see Dorothy Robyn, *Reforming Federal Property Procurement: The Case for Sensible Scoring*, Washington, D.C.: Brookings Institution, April 24, 2014.

⁴⁶ Army Regulation 405-45, *Real Property Inventory Management*, Washington, D.C.: Headquarters, Department of the Army, November 1, 2004, p. 11.

- (4) canals;
- (5) ditches;
- (6) flumes;
- (7) tunnels;
- (8) dams and reservoirs in connection with fish and wildlife programs, fish hatcheries, and other improvements relating to fish-culture;
- (9) roads and streets;
- (10) poles and lines for the transmission or distribution of electric power;
- (11) poles and lines for the transmission or distribution of communications signals (including telephone and telegraph signals);
- (12) structures and facilities for the transmission, reception, and replay of such signals; and
- (13) any other purpose that the Secretary considers advisable.⁴⁷

The military has granted easements on its nonexcess real property for a variety of purposes. For example, Aberdeen Proving Ground has granted easements for the following:

- electric power transmission and gas pipelines (Baltimore Gas and Electric)
- sewer pipelines (Northeast Maryland Waste Disposal Authority)
- underground telephone conduit (Verizon Maryland, Inc.).

Another example is the easement that Eglin AFB granted to the Mid-Bay Bridge Authority. The easement permits Mid-Bay Bridge Authority to use Eglin property for a new connector road. In exchange for the easement, Eglin receives in-kind consideration valued at more than \$30 million for runway improvements, a fitness track, fire equipment and station renovation, habitat restoration, and energy conservation and solar energy projects.

Currently, the language in Section 2668 is unclear on whether payment (cash or in-kind) is required for an easement or if receipt of such payment is permissible but optional. Section 2668 does not explicitly state that payment for easements is required. The only mention of payment within Section 2668 is a statement that both leases and easements are subject to the same legal requirements for deposit and use of proceeds.⁴⁸ Relevant portions of 10 U.S.C. § 2662 (congressional reporting of easements with an estimated FMV of more than \$750,000) and 10 U.S.C. § 2667 (deposit of “all proceeds received pursuant to the granting of easements . . . under Section 2668”) contemplate payment for easements, but they do not resolve whether payment is required for every easement.

Army practice does not always require payment for easements: Current business practice is to charge only for easements that are not providing a service to the installation (e.g., power lines passing through military property to provide power only to civilians). It appears that congressional intent is that payment should always be received for every easement: House Bill

⁴⁷ 10 U.S.C. § 2668(a).

⁴⁸ 10 U.S.C. § 2668(e): “Disposition of Consideration.—Subsections (c) and (e) of section 2667 of this title shall apply with respect to in-kind consideration and proceeds received by the Secretary of a military department in connection with an easement granted under this section in the same manner as such subsections apply to in-kind consideration and money rentals received pursuant to leases entered into by that Secretary under [section 2667].”

2810 (a 2017 version of the NDAA for FY 2018) would amend Section 2668 to ensure that the military departments receive FMV when granting easements.⁴⁹

License

A *license* provides a non-Army organization with nonexclusive use of Army real property for specified purposes.⁵⁰ A license contains the rights, responsibilities, and liabilities of both parties. It also can be issued with or without compensation. It can be granted under different authorities, including as part of a lease or easement, or as part of the Army's broad administrative powers.⁵¹ AR 405-80 states that both licenses and leases can be used to give private organizations use of Army nonexcess real property. A lease contemplates full-time use of the space, but a license can be used for "occasional, nonregular, regular part-time, or full-time use of space."⁵² The Assistant Secretary of the Army (Installations, Energy and Environment) policy is to use licenses or other nonexclusive outgrants in lieu of leases whenever these nonexclusive outgrants can still meet the agreement's intended purpose.⁵³

Licenses can be used for a variety of nonexclusive uses. Joint Base McGuire-Dix-Lakehurst grants licenses to parties wanting to use the installation's soccer fields. Aberdeen Proving Ground granted a license to AT&T to place six antennas on top of the Rock Island Water Tank. The Army also licenses property to State National Guards. The Maryland National Guard is licensed to use 98.5 acres of land and buildings at Weide Airfield. Army policy for National Guard licenses is to waive any rent or fee, but to charge for any services the installation provides (e.g., utilities, trash, water, and sewer). Use of Army airfields by others (except in emergencies) require a lease, license, or permit, depending upon the proposed use.

Licenses might or might not involve any payment, depending on the terms and conditions of the license. Usually, licenses do not generate large sums for an installation, but there are some opportunities for revenue generation from such outgrants. In the Joint Base McGuire-Dix-Lakehurst example, where the base grants licenses to schools and other organizations that want to use some of the base's 24 soccer fields for soccer tournaments, the base charges for the licenses. In fact, personnel estimate that the base will earn approximately \$100,000–\$125,000 per year in revenues for licensing out the fields and \$15,000–\$17,500 per year in food and beverage concession revenues. Total expected revenue in 2017 was estimated to be \$115,000–\$142,500.⁵⁴ In addition in 2017, Joint Base McGuire-Dix-Lakehurst granted a license to the Burlington County College swim team to use the base swimming pool at a rate of \$65 per hour while the college pool was undergoing repairs.⁵⁵

Usually, licenses do not involve large payments and could involve an in-kind consideration instead. For example, military installations often use licenses to allow other organizations

⁴⁹ U.S. House of Representatives, National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, as passed by the House, Section 2812, July 14, 2017b: "Clarification of the applicability of fair market consideration in grants of easements on military lands for rights-of-way."

⁵⁰ AR 405-80, 1997, p. 11.

⁵¹ AR 405, 80, 1997, p. 11.

⁵² AR 405-80, 1997, p. 6.

⁵³ Cramer, 2012a.

⁵⁴ Schmidt, 2016; and AFCEP, 2017.

⁵⁵ AFCEP, 2017.

to use recreational fields; in some cases, instead of a cash payment, the nonmilitary organization can provide maintenance help in exchange for the use of the fields.

In addition, as one military real estate expert explained, no-fee licenses are also often used because of the liability issues associated with using a military installation facility.

Permit

As with a license, a *permit* provides a nonexclusive use of Army real property for specified purposes. The agreements and terms for licenses and permits are much the same, but the parties differ. However, within the Army, a permit typically is used when the agreement is with another federal agency.⁵⁶ For instance, Sheppard AFB in Texas granted a permit to the Oklahoma City VA Health Care System to establish an outpatient clinic in 30,000 SF of vacant space within its existing base clinic. Similar to licenses, permits also can be issued with or without compensation. For example, South Dakota's Ellsworth AFB in 2013 provided a permit for the Federal Emergency Management Agency to establish a Joint Field Office on the base for federal disaster assistance so it could coordinate federal operations and provide emergency winter storm assistance. The agency was granted use of the first floor of Building 4040 for four months in exchange for 90 days of in-kind consideration (repairs in the office space area to help prepare the space for future commercial lease projects), plus \$29,000 for one month of rent and \$6,100 in utility costs.⁵⁷

How Outgrant Payments Are Accepted

Outgrant payments can be accepted in two forms: cash or in-kind. What constitutes a cash payment is straightforward; examples are rent payments made for leases and proceeds received from easements. In-kind payments provide goods or services in lieu of money.

Cash Payments

By law, most cash payments are required to be deposited in special Treasury accounts. This requirement applies to proceeds from (1) leases entered into under Section 2667,⁵⁸ (2) easements granted under Section 2668,⁵⁹ and (3) "all proceeds received by [Secretary of the Army] from authorizing the temporary use of other property under [the Army's control]."⁶⁰ However, there are exceptions to this deposit requirement. Section 2667 specifically excludes (1) amounts paid for utilities and services provided to the lessee by the Army,⁶¹ (2) monies received for leasing land for agricultural or grazing purposes,⁶² and (3) all monies received for leases of BRAC properties.⁶³ Utilities and services provided to the lessees are instead credited to the appropria-

⁵⁶ AR 405-80, p. 11.

⁵⁷ U.S. Air Force, "Completed Partnerships by Primary Use," briefing, May 23, 2016. .

⁵⁸ 10 U.S.C. § 2667(e)(1)(A)(i).

⁵⁹ 10 U.S.C. § 2667(e)(1)(A)(ii).

⁶⁰ 10 U.S.C. § 2667(e)(1)(A)(iii).

⁶¹ 10 U.S.C. § 2667(e)(1)(B).

⁶² 10 U.S.C. § 2667(e)(3).

⁶³ 10 U.S.C. §§ 2667(e)(4) and (e)(5).

tion account or working capital fund that paid those expenses.⁶⁴ Monies for agricultural or grazing purposes can be retained by the Service branch.⁶⁵ Monies for BRAC properties are credited to the appropriate DoD Base Closure Account.⁶⁶

Once these monies are deposited, the law sets only minimum requirements for the amount of the proceeds that must be returned to the installation initiating the outgrant. Section 2667 requires that “*at least 50 percent* of the proceeds deposited in the special account . . . be available for [legally permissible] activities . . . only at the military installation or Defense Agency location where the proceeds were derived”⁶⁷ (emphasis added). Service branch policy then determines how much is returned to the installation and how it is disbursed. The funds returned to the installation from the U.S. Treasury account are usually not received at the installation until more than a year after they were deposited.

The Army and Air Force differ on the handling of cash proceeds. Army policy reiterates legal requirements that “no less than 50 percent of the revenues . . . be made available for authorized uses . . . at the installation where the revenues were generated.”⁶⁸ The policy does not state where the remaining 50 percent of the proceeds goes. In practice, the installation will receive 50 percent of the proceeds and the remaining 50 percent goes to the landholding command. Contrarily, the Air Force returns the first \$1 million in annual proceeds to the installation, with additional proceeds divided 50–50 between the installation and the Air Force.⁶⁹ However, no installation has received more than \$1 million in annual payments, so the installations currently keep the proceeds. The Navy also tends to have the installation receive 50 percent of the outgrant proceeds with the remaining 50 percent going to the Commander, Navy Installations Command (CNIC), while the U.S. Marine Corps generally allows installations to keep 100 percent of outgrant revenues, though exceptions exist.

Some Army policy contains an implied preference for cash payment instead of in-kind consideration. A 2011 GAO audit criticized the Army and Air Force for its handling of some of its EULs. The Army EUL at Picatinny Arsenal also was the subject of a 2011 GAO legal opinion criticizing the agreement’s terms. One of GAO’s major critiques was the deposit of consideration in interest-bearing escrow accounts instead of the special Treasury accounts required by Section 2667. The EULs in question required some or all of the cash consideration received to be deposited in an escrow account before disbursement to pay for in-kind construction and maintenance projects.⁷⁰ The Picatinny Arsenal EUL also improperly classified cash consideration as “in-kind consideration” because it was to be used for in-kind services.⁷¹ In response to the 2011 GAO audit and legal opinion, a 2012 memorandum from the Assistant Secretary of the Army (Installations, Energy and Environment) states that obtaining in-kind consideration

⁶⁴ 10 U.S.C. § 2667(e)(2).

⁶⁵ 10 U.S.C. § 2667(e)(3).

⁶⁶ 10 U.S.C. §§ 2667(e)(4) and (5); U.S. Code, Title 10, Armed Forces, Subtitle A, General Military Law, Part IV, Service, Supply, and Procurement, Chapter 159, Real Property; Related Personal Property; and Lease of Non-Excess Property, Section 2687, Base Closures and Reassignments.

⁶⁷ 10 U.S.C. § 2667(e)(1)(D).

⁶⁸ Cramer, 2012a.

⁶⁹ Byers and Ferguson, 2012.

⁷⁰ GAO, 2011, p. 15.

⁷¹ GAO, 2011, p. 48.

“may not always be beneficial to the Army compared with established procurement procedures for obtaining the same product and service.”⁷² In addition, “procedures to properly value and assure receipt of in-kind consideration over the lease term can be administratively burdensome and [a GAO audit] expressed concern about the adequacy of those procedures.”⁷³ Currently, Army practice is for Army leases to provide for cash consideration unless the approval authority for the Determination of Availability determines that in-kind consideration is in the Army’s best interest.⁷⁴ The Determination of Availability must include the basis for that determination, and Army legal counsel must review and approve both the specified in-kind consideration and any accounts required for receipt of that consideration.⁷⁵ In addition to the effects on consideration, the GAO audit and legal opinion have had a chilling effect in some circles on the Army’s willingness to enter into EULs.

We should note that interviewees from the Army, Air Force, and Navy stated that installation personnel usually prefer to take in-kind considerations instead of cash payments from EULs and other large-scale outgrants because they can receive the payments without having to wait over a year and can use them for their installation priorities. In addition, the Navy’s practice has been to use more in-kind payments rather than cash payments for installation EULs and other large-scale outgrants.

In-Kind Payments

Section 2667 lists the following permissible types of in-kind payment for leases and easements:

1. alteration, repair, or improvement of the real property being leased
2. maintenance, protection, alteration, repair, improvement, or restoration (including environmental restoration) of other Army properties or facilities
3. construction of new facilities for the Army
4. providing facilities for Army use
5. providing or paying for utility services for the Army
6. providing maintenance services for the Army
7. “[p]rovision of such other services relating to activities that will occur on the leased property as the Secretary [of the Army] considers appropriate.”⁷⁶

The Air Force handles its in-kind consideration in two ways: deposit of funds and turn-key consideration. With deposit of funds, monies are placed in a trust account to pay for the specified in-kind payment (or payments). Both the Air Force and the developer must sign off on any release of funds. After the in-kind project is completed, any remaining funds go into the Air Force’s special Treasury account for leases. As an example, Nellis AFB signed an EUL with the City of North Las Vegas in 2008 in exchange for some in-kind consideration. The City of North Las Vegas agreed to build a fitness center on Nellis AFB, and it placed \$25 mil-

⁷² Cramer, 2012a

⁷³ Cramer, 2012a.

⁷⁴ Cramer, 2012a.

⁷⁵ Cramer, 2012a.

⁷⁶ 10 U.S.C. §§ 2667(b)(5) and 2667(c)(1).

lion in a designated escrow account to fund the construction.⁷⁷ In another example, Eglin AFB received \$27.2 million for an easement granted to Mid-Bay Bridge Authority. The funds were placed in a trust account, and Eglin AFB decided how to use the funds. With turnkey in-kind consideration, a partner constructs a building, facility, or other piece of property to Air Force specifications. For example, the State of Utah constructed a new, relocated gate as part of its in-kind payment to Hill AFB for an EUL.

How Outgrant Payments Are Used

Whether cash or in-kind, outgrant payments can be used only for specific purposes. These specified purposes largely mirror the types of in-kind payment that the Army can receive. Those purposes include the following:

1. maintenance, protection, alteration, repair, improvement, or restoration (including environmental restoration) of property or facilities
2. construction or acquisition of new facilities
3. lease of facilities
4. payment of utility services
5. real property maintenance services
6. administrative expenses incurred by the Secretary concerned under Sections 2667 and 2668.⁷⁸

There are exceptions to how outgrant payments can be used. Monies from agricultural or grazing leases can be used by the Army to pay for administrative expenses associated with that lease or to finance multiple land use management programs at any Army installation.⁷⁹ Monies derived from a military museum are available for use only at that museum.⁸⁰

For Army outgrants, the monies first are deposited into the special Treasury account 97R5189.⁸¹ Defense Finance and Accounting Services (DFAS) manages the account, but the approval authority to disburse the funds depends on the installation generating the funds. For U.S. Army Reserve installations, the approval authority is the Chief, U.S. Army Reserve. Likewise, the approval authority for National Guard installations is the Chief, National Guard Bureau. For Active Component installations, disbursement of monies is approved by the Assistant Chief of Staff for Installation Management. Both the installation and the landholding command can use their share of the proceeds only for activities within the specified use categories. The difference is in where these proceeds can be used. For the installation, Section

⁷⁷ A 2011 GAO audit found that two Army and three Air Force EULs did not comply with statutory requirements on depositing lease proceeds. 10 U.S.C. § 2667(e) requires that proceeds be deposited in a special Treasury account. One area of noncompliance was designating proceeds as “in-kind” instead of cash consideration, and placing the funds in an interest-bearing escrow account. See GAO, 2011.

⁷⁸ 10 U.S.C. § 2667(e)(1)(C); 10 U.S.C. § 2668.

⁷⁹ 10 U.S.C. § 2667(e)(3).

⁸⁰ 10 U.S.C. § 2667(e)(1)(E).

⁸¹ Cramer, 2012a. Note that the Air Force refers to its account as a “K2” account.

2667 requires that the proceeds be used at the installation where they were derived.⁸² For the landholding command, the proceeds are allocated by the landholding command's priorities. This means that Installation Management Command or other landholding commands can use their 50 percent of the proceeds to fund projects at headquarters or other installations than where the monies were derived.

Administrative Fees

Under Sections 2667 and 2668, the military can receive monies for its administrative expenses (also known as administrative fees) associated with leases and easements. Administrative expenses are defined as "only those expenses related to assessing, negotiating, executing, and managing lease and easement transactions. The term does not include any Government personnel costs."⁸³ Sections 2667 and 2668 do not set dollar amounts or limits on these administrative expenses. However, interviews confirmed that they are nominal amounts.

⁸² 10 U.S.C. § 2667(e)(1)(D).

⁸³ 10 U.S.C. § 2667(i)(1).

Other National Security Facility and Infrastructure Sharing Partnership Examples

This appendix provides summaries of the national security facility and infrastructure sharing partnership case studies, except for the two enhance use leases (EULs)—the Nellis Air Force Base (AFB) and City of North Las Vegas EUL, and the Seymour Johnson AFB and City of Goldsboro Sports Complex EUL—which were summarized in Appendix A. First, we provide overviews of six military installation facility and infrastructure sharing partnerships; then, we describe the three noninstallation national security federal agency facility sharing partnerships.

Military Installation Facility and Infrastructure Sharing Partnerships

The six military installation partnerships we discuss are as follows:

- Fort Drum Community Regional Healthcare partnership
- Fort Hood and City of Killeen Joint Use Airport
- Fort Huachuca and the City of Sierra Vista Library Partnership
- Minnesota Army National Guard (MNARNG) Training and Community Center (TACC) Partnerships with Communities
- National Security Agency (NSA) at Fort Meade Reclaimed Water Partnership with Howard County, Maryland
- Redstone Arsenal and National Aeronautics and Space Administration (NASA) Partnerships.

Fort Drum Community Regional Healthcare Partnership

Beginning in 1985, Fort Drum has partnered with surrounding communities in upstate New York in the North Country Healthcare System, a military-civilian regional health care partnership. Following a decision to pursue a community partnership instead of building a hospital on post, the fort has relied on the surrounding community for inpatient medical facilities and most specialty care. Soldiers and families can use seven civilian hospitals and clinics within a 40-mile radius of the post, with the two largest hospitals within 10 miles of Fort Drum.¹ Fort Drum's medical department also uses community medical facilities, such as post doctors performing surgery within a civilian hospital.

¹ The community partner facilities include both public and private hospitals and clinics. For more information, see Fort Drum Regional Health Planning Organization, undated-c.

Created in 2006, the Fort Drum Regional Health Planning Organization (FDRHPO) is a key part of this health care system integration because it connects the military medical facilities with the regional health care system. The FDRHPO's mission is to "analyze the health care system for the soldiers, their families, and the surrounding civilian community, identify gaps, and then leverage additional medical resources."² Over time and with the help of the FDRHPO, the community has made commitments and investments to improve the health care system that have benefited both the military and the community. Such commitments have focused on developing and recruiting qualified medical professionals, upgrading facilities, expanding behavioral health resources, enhancing the emergency medical service system, and technology improvements.

The Fort Drum health care model provides many benefits to the Army and the community. The partnership has helped to improve military medical care at Fort Drum at a lower cost to the Army. It provides a more convenient, timely, and integrated health care system for soldiers and their families. This collaborative regional approach provides other advantages—integrating military and civilian assets; allowing the installation to avoid building as many medical facilities; providing regional economy-of-scale cost and service benefits; and leveraging community, state, and federal resources. The community commitments through this partnership have improved both military and civilian health care. For instance, more than \$84 million has been spent on hospital upgrades. Four new behavioral health clinics have been created. Other behavioral health resources have been expanded with the help of some New York state funds, such as an enhanced Emergency Medical Services project that received more than \$150,000 from the State of New York.³ The number of TRICARE-credentialed behavioral health providers in the region has increased from 39 to 109. Technology improvements have included implementing a fiber infrastructure at 30 health care sites and creating a communitywide electronic health records system. The FDRHPO has also obtained health care information technology (HIT) grants and has partnered with Jefferson College to recruit, educate, and retain certified health care information technology specialists in the region.⁴

The partnership has developed to include a long-term recruitment project of almost \$1 million to increase the number of medical and behavioral health care professionals within the region. The FDRHPO encourages local students to pursue health care careers and supports initiatives that bring additional or enhanced health care training to the region to meet current and future health care workforce needs. For instance, the FDRHPO has collaborated with Jefferson Community College to expand nursing education in the region. It helped the college obtain a U.S. Department of Labor grant to fund the creation of a part-time night and weekend option for students to pursue a nursing degree, enabling more working adults to enter the health care field.⁵

The partnership has also improved the health care system for the community. In fact, this partnership has created a more comprehensive and higher quality health care system than would normally be available in such a small, rural community. It has also created more than

² Fort Drum Regional Health Planning Organization, undated-c.

³ Fort Drum Regional Health Planning Organization, "Community Commitment in Action," webpage, undated-a.

⁴ Fort Drum Regional Health Planning Organization, undated-a.

⁵ State University of New York Jefferson, "Fort Drum Regional Health Planning Organization to Be Awarded Jefferson Citation," May 12, 2014.

4,000 jobs in the region and has contributed an estimated \$373 million annual impact within the local economy.⁶

Fort Hood and City of Killeen Joint Use Airport

Since June 2000, Fort Hood and the City of Killeen, Texas have partnered to jointly use the installation's Robert Gray Army Airfield (RGAAF). This partnership started with a joint use airport agreement and has evolved since its creation, with both partners helping to maintain and upgrade the airfield. Through this partnership, Fort Hood leased undeveloped land contiguous to RGAAF to the City of Killeen and the city constructed a civil airport consisting of a terminal, ramps, and other aviation associated facilities, and it leases the RGAAF runway, creating a joint use airport. Per the agreement, some of the operation, maintenance, and repair costs for the airport and facilities and its utilities will come at no cost to the Army. The civil airport resulting from the partnership is named Killeen–Fort Hood Regional Airport and spans 84.5 acres of land leased from the Army.⁷

The Joint Operating Plan (JOP) provides the details for how the partners use, operate, manage, and maintain this airfield together. It spells out which partner occupies which parts of the airfield area. The airfield operations area of the RGAAF has designated areas for Fort Hood use, City of Killeen use, and joint use, as seen in Figure C.1. The JOP also describes how the partners will share maintenance costs of the grounds, pavement, and airfield lighting and signage.⁸ Another agreement per the JOP is that every other year, each partner removes excess rubber. This maintenance activity costs the Army about \$250,000 and the City of Killeen \$60,000 each time it is done, so the Army saves around \$250,000 every other year by not having to pay for this maintenance requirement.

The Army receives many benefits from the City of Killeen's partnership activities at RGAAF. Fort Hood has experienced cost savings and avoidance, maintenance benefits, and the development of upgraded and new airfield infrastructure and systems, which enhances the Army's airfield operations and installation readiness. For instance, the City of Killeen has helped fund a variety of airfield infrastructure and systems. In 2005, the city invested \$10 million in building terminal and taxiways, and another \$5 million the following year in taxiway expansions. Around 2011, the city spent more than \$1 million to upgrade other taxiways. Killeen has also paid \$30,000 to install an Automated Terminal Information System to advise crews and show status of aircraft, which benefits both the city's and the Army's use of RGAAF. The city also acquired a grant from the Federal Aviation Administration (FAA) to install a wildlife abatement system with five years of maintenance to address the bird air strike hazard, valued at \$164,000. Last, the city constructed a blast pad and drainage control for \$486,000.

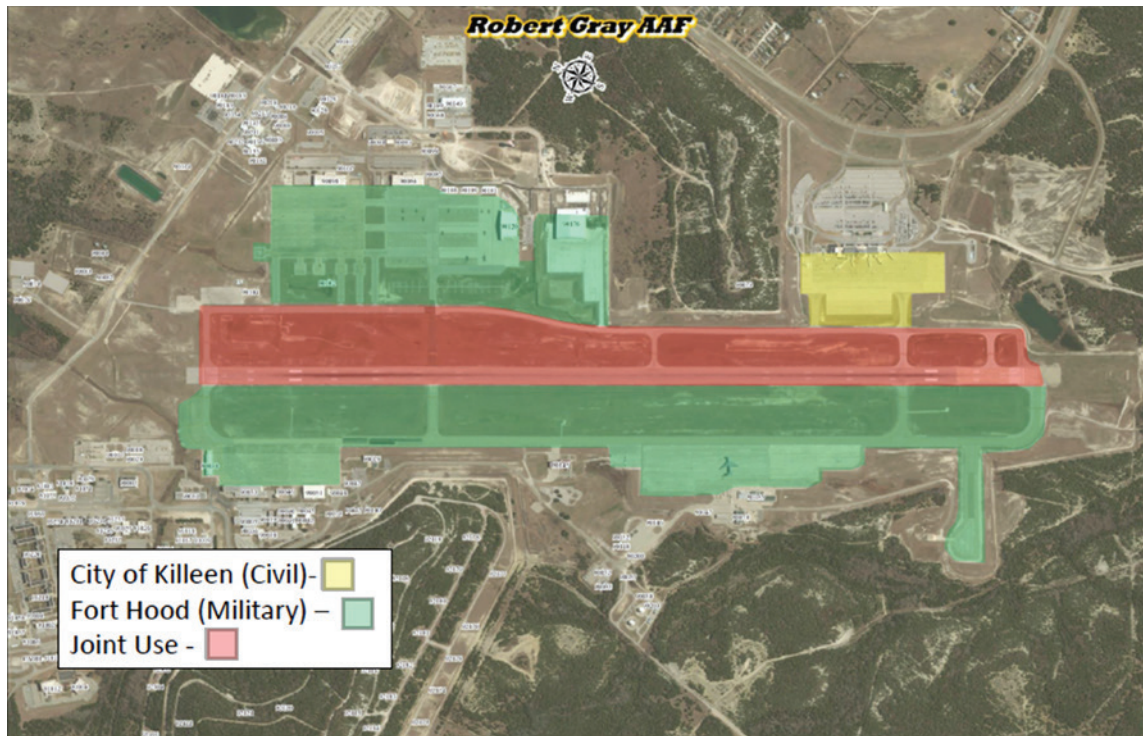
The City of Killeen has also provided maintenance support for the airfield. This maintenance covers almost half of the joint areas (and its own area). Types of support include sweeping and daily inspections of taxiways and ramps, pavement and safety area maintenance, and grounds and above-ground lighting maintenance for the runway. The Army's combined ben-

⁶ Fort Drum Regional Health Planning Organization, "Community Connection," webpage, undated-b.

⁷ "Killeen–Fort Hood Regional Airport at Robert Gray Army Airfield, Killeen/Ft. Hood Texas: (Draft) Joint Operating Plan (JOP)," 2000.

⁸ "Killeen–Fort Hood Regional Airport at Robert Gray Army Airfield, Killeen/Ft. Hood Texas: (Draft) Joint Operating Plan (JOP)," 2000.

Figure C.1
Robert Gray Army Airfield (RGAAF) Aircraft Operations Area



SOURCE: "Killeen-Fort Hood Regional Airport at Robert Gray Army Airfield, Killeen/Ft. Hood Texas: (Draft) Joint Operating Plan (JOP)," 2000, Appendix 4.

efits as a result of the partnership is valued in millions of dollars of infrastructure, systems, and maintenance support.

The RGAAF partnerships also benefit the City of Killeen. First, the city saves the costs of not having to build its own runway and some of the other airfield infrastructure. The airport is also now conveniently located. Second, the Army provides some key services for the airfield for both military and civil flights, including all air traffic control services, crash rescue response to the airfield, and other fire and emergency response to other facilities. Third, Fort Hood contributes maintenance support to the airfield. Fort Hood's maintenance activities cover almost half of the joint areas (and its own area) and include sweeping and daily inspections of taxiways and ramps, pavement and safety area maintenance, and underground lighting maintenance for the runway. For the community, the regional airport's estimated annual impact amounts to 824 jobs, \$48 million in increased gross product, \$30 million in increased personal income, and \$13 million in increased retail sales.⁹

Over time, the Fort Hood and City of Killeen RGAAF partnership has led to other partnerships that help support RGAAF operations, such as a partnership to modernize the RGAAF radar approach control facility. In this partnership, local and state organizations partnered with Fort Hood to combine resources for the upgrade at a cost of about \$5 million. The City of Killeen applied for a grant to renovate and modernize this facility, and the Texas Mi-

⁹ Fort Hood Public Affairs Office, "Fort Hood Fact Sheet No. 0710: Robert Gray Army Airfield," February 15, 2007.

tary Preparedness Commission's Defense Economic Adjustment Assistance Grant program awarded the city a grant of \$3.47 million in spring 2016. Support for the grant application and selection came from the Killeen Economic Development Corporation, Killeen–Fort Hood Regional Airport, Heart of Texas Defense Alliance, the Texas Military Preparedness Commission, and Fort Hood's Directorates of Aviation Operations; Public Works; and Plans, Training, Mobilization and Security. Other partners also helped fund the modernization project.¹⁰ The Killeen Economic Development Corporation contributed \$536,000 and Fort Hood invested \$1 million. Through in-kind considerations, the City of Killeen contributed \$337,000.¹¹ This RGAAF radar approach control facility renovation was completed in August 2017. Because the runway and control tower is shared between the facilities, upgrades to the radar approach control facility benefit Army aviators and commercial pilots and air carriers.

Despite the mutual benefits of the RGAAF partnerships, the original joint use agreement faced some challenges near the beginning. One complication involved the cost-share ratio specified in the joint use agreement. Early in the partnership, the partners learned that the previously determined cost-share ratio would not work because it involved pulling funds from the U.S. Department of Defense (DoD), FAA, and city into one project, which would be difficult. So, the partners changed the initial cost-share ratio. A second challenge stemmed from differences between the FAA advisory circular criteria and DoD installation circular criteria. The partners thus had to ensure that the airfields were up to the standards of the relevant criteria. The parts of the airfield that are the city's responsibility were designed to meet FAA criteria while the areas under Fort Hood's authority were designed to meet DoD criteria. An exception is the runway, which is designed to FAA criteria.

The RGAAF partnerships between Fort Hood and the City of Killeen provide many benefits to those involved. This success is in part because of the good relationship the partners have built with each other. They understand that they are striving toward a common goal and that cooperation will produce a win-win outcome. Leaders of the partner organizations are also strong supporters of this relationship. In addition, the partners' staff have maintained good communication, speaking to each other almost daily. Overall, as the partnerships between Fort Hood and the City of Killeen have evolved and grown since 2000, both the installation and the city continue to benefit from the joint use of RGAAF.

Fort Huachuca and the City of Sierra Vista Library Partnership

Fort Huachuca in Arizona entered into a partnership for sharing a community library with the City of Sierra Vista in March 2007. It was a pilot project authorized under the National Defense Authorization Act for fiscal year (FY) 2005 Section 325 (five services were authorized for partnership opportunities: refuse collection and disposal, recreation, library services, facility maintenance and repair, and utilities).¹² The partnership has provided cost savings for the Army and additional revenue generation for the city.

In the mid-2000s, the Fort Huachuca library was not meeting Army standards, largely because of underfunding. It required a major upgrade, estimated at \$400,000. A large propor-

¹⁰ J. C. Jones, "Killeen–Fort Hood Receives \$3.47 Million Grant from Texas," *Killeen Daily Herald*, April 1, 2016.

¹¹ "News Brief: Post Receives \$3.47M Grant," *Fort Hood Sentinel*, April 7, 2016.

¹² Public Law 108-375, Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Section 325, Pilot Program for Purchase of Certain Municipal Services for Army Installations, October 28, 2004.

tion of Soldiers and families lived off-post, the on-post library was used primarily for computer access by trainees there, and only 17 percent of authorized users were registered; as a result, the library became a candidate for a partnership. The city estimated that its cost to operate the on-post library as a branch location would exceed the budget being spent on the library. For its part, Sierra Vista had a high-quality library that was relatively close to military housing areas. The partnership between Fort Huachuca and the Sierra Vista Library formed as a result. Fort Huachuca closed the main library on post, distributed additional computers throughout the post, and transferred the three library staff members to other jobs. The city and the Army signed a Memorandum of Understanding to allow on-post soldiers and their families to use the city library. In exchange, the Army agreed to pay Sierra Vista \$77,000 per year to procure additional library materials for Soldiers and their families.

The outcomes of this partnership have not been formerly assessed. However, Fort Huachuca has saved money in operating expenses and the cost required to bring the library up to standards. Savings estimates vary but are in the range of more than \$300,000 per year, up to more than \$2.2 million total savings as of spring 2014.¹³ Soldiers and their families have access to a higher-quality library with services that include a café, periodic lectures, and movies. The on-post military intelligence library is still open and available to trainees and others; however, its primary purpose is not to provide general audience resources and family programs.

The partnership, although financially beneficial to the Army and the community, was met with some initial resistance at the time the post library was closed. For example, the American Library Association protested the closure of the library, claiming the partnership would reduce available services and set a dangerous precedent of library closures.¹⁴ The resistance was mostly from a couple of military retirees who lived off post, and one of the librarians, who was transferred to a position at the post museum. Now, this is no longer an issue; the Army and its members and families have adjusted to the new arrangement.

Minnesota Army National Guard (MNARNG) Training and Community Center (TACC) Partnerships with Communities

Throughout the state of Minnesota, the MNARNG has combined Readiness Centers with local community centers to create ten TACCs. Federal, state, and local governments designed, financed, built, and shared these multipurpose complexes. For the basic facility construction, the National Guard pays 75 percent of the cost, the state pays 12.5 percent, and the local government pays 12.5 percent.¹⁵ A TACC usually consists of Guard-only space, community-only space, and shared space—such as the drill floor, which is often used by the community as a gym. A community might enhance or add to the basic structure of the facility, such as enlarging the drill space to make it a full-fledged gym with basketball, volleyball, and running track capabilities; installing central air conditioning; adding an ice skating arena; and carpeting the floors. If the enhancements benefit both the Guard and the community, costs are split equally; otherwise, whichever party stands to benefit pays for it. The Rosemount Community Center illustrates the variety of facilities within a TACC, including a banquet room, auditorium, climate-controlled gym, kitchen, multipurpose arena, seasonal indoor ice-skating rink,

¹³ Lachman, Resetar, and Camm, 2016, p. 45.

¹⁴ Library Journal Archive Content, 2007.

¹⁵ “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009.

classrooms, and National Guard—unique spaces, such as a weapons vault, offices, and a supply/storage area.¹⁶

The Minnesota State Army Building Commission sells bonds so that the state and local governments' fund their shares of the TACC construction costs.¹⁷ Once the bonds are paid off, the MNARNG owns the TACC and pays the utilities and maintenance costs, and the community leases its space. It often subleases parts of the facility, such as an auditorium or banquet room, to recoup the costs. The other operating costs could be shared by the Guard and the community or paid entirely by the community. The community usually manages the facility and its schedule, which frees Guard staff of those tasks.

TACCs provide numerous benefits to the involved partners. The MNARNG experiences a variety of benefits, including cost savings, enhanced facility features, and mission benefits related to enhanced recruitment. First, the MNARNG saves in the facility construction and operating costs, especially because the community usually pays the facility operating costs. The partnership also provides manpower savings for the MNARNG because the community operates and manages the TACC, allowing the ARNG Soldiers more time to focus on mission. A second benefit is the access to enhanced additional facilities and amenities because of the community-funded facility features, such as larger gyms and ice-skating rinks. Third, locating TACCs in “demographic hotspots” ensures that they are parts of the community and promote more-frequent interactions between the Guard and the community.¹⁸ This helps the MNARNG with its recruiting and community relations. The community participates more in Guard events, such as Soldiers' homecomings, and the ongoing contact between Guard Soldiers and the community in the TACC helps educate young people about the National Guard, which is likely why the state has such a high recruiting rate.¹⁹

The local communities also experience a variety of benefits from the TACC partnerships, such as cost savings and economic benefits. The community saves costs on the construction of a community center (especially because the ARNG pays 75 percent of the facility construction costs). The community also experiences operations and maintenance (O&M) cost savings, especially because the ARNG usually pays the facility utilities and maintenance costs. The community also has access to additional facilities and amenities through the enhanced community gathering space of a TACC. The TACCs also provide economic benefits to the community. For example, there were 270 military personnel assigned to the Inver Grove Heights TACC in 2008, and “the community got close to \$2.35 million in additional economic impact” because of this TACC.²⁰

The MNARNG TACC facility sharing partnerships provide a variety of lessons about facility partnerships. First, the MNARNG TACC facility partnerships took “more time, effort, and people skills to maintain the carefully cultivated relationships between the Guard and the community, to coordinate competing activities at the facilities, and to manage the expectations

¹⁶ “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009.

¹⁷ “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009.

¹⁸ “How Minnesota Did It and How You Can, Too,” *Foundations of Readiness, Journal of the Army National Guard Installations Division*, 2009.

¹⁹ “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009.

²⁰ “How Minnesota Did It and How You Can, Too,” 2009.

of multiple users.”²¹ However, the benefits far outweigh these and other challenges in developing, implementing, and using these joint use centers. Second, the commitment from the Army National Guard leadership was important to the success of each of these partnerships. Third, having a consensus builder and communicators within both the Guard and the community to interact with the local government entities and/or state congressional delegation was critical. Fourth, it helped that the National Guard was already involved in the communities and able to sell the communities on the plans. Last, picking the right demographic and site, such as a high-traffic area, was important for successful TACCs. For instance, the Cambridge Armed Forces Reserve and Community Center was constructed across the street from a junior college and the Montevideo TACC was attached to a high school.²²

National Security Agency (NSA) at Fort Meade Reclaimed Water Partnership with Howard County, Maryland

In 2010, the NSA, a tenant at Fort Meade in Maryland, was planning to build a new 600,000-square-foot computer center, which would need large amounts of water for its operation. At the same time, Howard County was dumping about 18 million gallons of treated wastewater per day into the Little Patuxent River from the Little Patuxent Water Reclamation Plant. The county is charged for this discharge, and Howard County Public Works Department personnel were concerned about reaching the plant’s discharge limit as determined by its Clean Water Act requirements. The deputy director of the Public Works Department met with staff at the Howard County Mission Growth/Base Realignment and Closure (BRAC) Office to see whether anyone at Fort Meade might be able to use nonpotable water. A staff member from the Howard County Mission Growth/BRAC Office who had helped facilitate a variety of partnerships between Fort Meade and the community contacted Fort Meade and the NSA about the reclaimed water.²³ NSA personnel expressed some interest in the water.

After more than two years of negotiation, Howard County reached a deal to supply treated wastewater to cool the new NSA computing center. The NSA received as much as 5 million gallons of nonpotable water per day when the computer center opened in 2016. Howard County is paying \$40 million to build a water pump station for this project, which is funded through bonds. The NSA began paying the county back for this investment in 2015 and will pay an estimated \$2 million per year for the treated wastewater.²⁴

Through this partnership, the NSA gains a cheaper secure water source for its computer center. The nonpotable water is cheaper than the alternatives of using tap water or drilling wells that also would have stressed an aquifer already burdened by rapid development in the area. The NSA is estimated to save \$34 million over ten years and \$95 million over 25 years. The NSA also helps the environment by leaving the groundwater alone and using reclaimed water.²⁵

²¹ “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009.

²² “The Minnesota Model: What It Is and Why You Should Adopt It,” 2009; and “How Minnesota Did It and How You Can, Too,” 2009.

²³ For more information about some of these other Fort Meade partnerships, see Lachman, Resetar, and Camm, 2016.

²⁴ Brown, 2014.

²⁵ Brown, 2014.

Howard County benefits from this partnership because it reduces the amount of treated wastewater that it discharged into the Little Patuxent River (and, ultimately, the Chesapeake Bay) and stays below its discharge limit. The county also earns some income from selling the reclaimed water to the NSA at Fort Meade. It also helps lift development restrictions that the county was facing from the wastewater discharge cap.²⁶

Redstone Arsenal and NASA Partnerships

NASA and the Army at Redstone Arsenal have a long history of partnering together at different levels, starting in 1960. Though their missions differ, they have many synergies, including research and development (R&D), operations, acquisition, test, and evaluation; mission capabilities for responsive spacecraft and launches; cross-cutting technical expertise and technology; joint 911 dispatch center; and an expanded knowledge base. High-level leadership has developed some of their partnerships; others have occurred when an engineer or another staff member realizes that their work could benefit the other partner. Redstone Arsenal currently has more than 40 active partnerships with NASA.²⁷

One example is that NASA and the Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) have partnered to work on rocket propulsion R&D for about ten years. As part of this partnership, during the 2015 launch preparation of the Space Launch System, NASA used Redstone Test Center for a series of small rocket component tests regarding potential explosions. NASA has a larger test facility than the Army's. The Army normally uses this facility to test military systems, such as missiles, and Army technicians have helped NASA engineers set up and run the NASA small rocket component tests. Through another partnership, NASA helped the Army with failure investigations of Army helicopters. A third partnership involved developing certification standards for additive manufacturing that benefits both partners.²⁸

According to the AMRDEC director, though the missions of the partners differ, "the underlying engineering and technologies do have mutual support intersections" and the partnerships thus provide many benefits.²⁹ This partnership advances aviation and missile research, development, and testing by sharing the two partners' expertise and facilities. Such cooperation allows the partners to produce better products and make NASA and defense rocket space launches safer. Another benefit of the partnership is that it promotes the production of products in the United States. The rocket motor tested in 2015 was completely U.S.-made. The collaboration between U.S. partners to produce technology domestically is a reflection of national priorities of locally improving technology and technical skills.³⁰ Overall, the partners "learn from one another and as a result produce better products for [their] end user applications."³¹

²⁶ Most of the information about this partnership came from Raj Kudchadkar, "Utilities Taking the Lead on Installation-Community Water Security," presentation, ADC 2014 National Summit, Association of Defense Communities, June 6, 2014; and Lachman, Resetar, and Camm, 2016, p. 30.

²⁷ Amy Gluken Tolson, "Army, Space Agency Benefit from Partnership," *Redstone Rocket*, September 9, 2015.

²⁸ Tolson, 2015.

²⁹ AMRDEC Public Affairs, 2015.

³⁰ AMRDEC Public Affairs, 2015.

³¹ AMRDEC Public Affairs, 2015.

Noninstallation National Security Federal Agency Facility Sharing Partnerships

In this section, we provide the details of three different national security organizations' facility sharing partnerships that we conducted as case studies for other RAND research. We provide them here because they provide some useful lessons learned about developing and implementing such facility partnerships. They are especially useful for comparing and contrasting the different challenges, methods, and issues in sharing classified facilities. The first one, the Defence Geospatial and Intelligence Fusion Centre (DGIFC) and the Pathfinder Building partnership in the United Kingdom (UK), is of special interest because it involves sharing of a Secure Compartmented Information Facility (SCIF) not just among UK intelligence agencies, but also across the FVEY nations (i.e., "Five Eyes"—the intelligence group consisting of intelligence organizations from Australia, Canada, New Zealand, the UK, and the United States). The second one, the Biometrics Technology Center (BTC), is of particular interest because it also involves classified facilities in a shared building, but the two partners maintain separate SCIFs and share unclassified areas. The third one, the Australian Cyber Security Centre (ACSC), also illustrates the need for having shared classified and unclassified spaces.

The Defence Geospatial and Intelligence Fusion Centre (DGIFC) and the Pathfinder Building Partnership

In 2012, the UK DGIFC began initial operations at the Pathfinder Building at Royal Air Force (RAF) Wyton, near Huntingdon, Cambridgeshire, England, about 65 miles north of London.³² The occupants of this facility consist of a variety of UK military intelligence organizations that have partnered in the sharing of this facility, including sharing a SCIF. These UK military intelligence activities include the Joint Aerial Reconnaissance Intelligence Centre (JARIC), the Defence Geographic Centre, the Defence HUMINT [Human Intelligence] Organisation, and the Joint Aeronautical and Geospatial Organisation. Other synergistic activities have joined the partnership and colocated in this building, including representatives from the RAF, Royal Navy, the Army, and nondefense UK organizations, such as the Secret Intelligence Service (counterpart to the U.S. Central Intelligence Agency [CIA]) and General Communications Head Quarters (counterpart to the U.S. NSA). Also established in the Pathfinder building was the Joint Forces Intelligence Group headquarters, which brings together other UK Defense Intelligence elements: the Command Group and elements of the Intelligence Collection Group. Even though these agencies are part of this joint center, they retain their own agency identities and budgets. It is important to note that some of the organizations that moved to Pathfinder later did so because their leaders saw the benefits of sharing facility costs and improving their mission by being colocated with the other agencies.

Motivation for the Pathfinder Partnership

The construction of the Pathfinder building and the development of the partnership among the building's key stakeholders, which began in 2008, was motivated by a combination of three factors:

1. business reasons, mainly financial and budget drivers

³² "New Defence Intelligence Buildings Handed over to MoD," Ministry of Defence, press release, March 16, 2012.

2. mission need to better integrate intelligence operations to support deployed forces and to align UK military reorganization
3. leadership belief that new tradecraft was needed to improve the quality and timeliness of support to military operations.

Significant reductions to the UK national budget, especially after the 2008 financial crisis, led to a significant defense budget reduction and a drawdown of military and civilian manpower. To achieve the required reductions, the UK Ministry of Defence (MOD) developed a UK-wide “Defence Estate Development Plan,” similar to a U.S. BRAC process, to close and consolidate numerous small military sites.³³ The key assumption was that consolidation would reduce costs. In addition to those anticipated savings, the MOD closed sites and sold the land to local authorities to earn income.

The “Programme to Rationalise and Integrate the Defence Intelligence Estate (PRIDE)” was the UK military intelligence component to the MOD plan; it was the business case under which Pathfinder was conceived and built. The plan foresaw moving the UK JARIC, located at RAF Brampton, and elements of the UK Defense Intelligence Staff, located in London, into one building at RAF Wyton,³⁴ and it foresaw closing and selling RAF Brampton.³⁵ The anticipated cost savings were not just from selling RAF Brampton, but also from expected cost savings related to economy-of-scale support services from no longer having to provide services to many smaller sites. RAF Wyton, located about six miles from RAF Brampton, was chosen because it was large, had an active runway, and could accommodate buildings and the numbers of people who were expected to move from other facilities.

The second motivating factor was improving the timeliness and quality of intelligence support to UK military operations. UK military leaders had learned in Afghanistan and Iraq, as well as in previous operations, that they needed a better way to quickly integrate and disseminate intelligence data to support operational forces. Leadership believed that organizational change and colocation would accomplish this.

The third motivator was a leadership belief in the need to develop new tradecraft to accommodate massive new data sources and nontraditional challenges. New tradecraft included improving the sharing of intelligence information across intelligence organizations with the UK and across FVEY. Understanding that a modern building occupied by multiple intelligence organizations would give the UK the opportunity to leap forward with new tradecraft and ways of work, leadership took a visionary view at a key decision point regarding investments, facilities, intelligence mission requirements, and organizations.

Partnership Benefits

The Pathfinder partnership’s benefits are most evident in the improvements to intelligence operations and cost reductions. The intelligence mission and national security benefits included developing a new capability by creating the fusion environment, maintaining and enhancing the geospatial intelligence capability, improving multisource intelligence integration, and improving the timeliness and quality of intelligence support to military operations. Integration of different intelligence organizations and expertise enabled the production of more-integrated

³³ For more on this process, see UK Ministry of Defence, “Defence Estate Development Plan 2009,” 2009.

³⁴ Royal Air Force, “New Defence Intelligence Hub to Be Established,” April 29, 2009.

³⁵ Royal Air Force, 2009.

and more-comprehensive intelligence that was more quickly disseminated to key users. UK and FVEY counterparts' security was enhanced because more-diverse intelligence elements shared and integrated different perspectives and different information more quickly and easily, including information that might not have been integrated in the past.

The partnership also had a variety of financial benefits, including cost savings, cost avoidance, and even earning some income. Closing and selling off defense sites, such as Brampton, earned significant revenue and saved operating costs. The consolidation of different organizations into the Pathfinder building reduced the operational, maintenance, infrastructure, and support costs for each organization (utilities, equipment, support staff) because they no longer had to operate their own sites or maintain costly SCIFs. A final but important benefit was the ability to innovate technically (such as with information technology [IT]) and doctrinally (new tradecraft and ways of collaboration) to achieve the effectiveness that leaders believed was necessary to support current and future operations.

Some initial investments were needed for construction, setting up a complex internal layout (such as the IT and communications infrastructure required for the shared SCIF). However, these initial costs were not as significant as the long-term savings from closing and consolidating smaller sites.

Design of the Pathfinder Building and the Shared SCIF

The Pathfinder building was designed around two key features: a large, open, secure collaboration space and a security policy that allowed full access to FVEY partners who work in the UK SCIF. The open area is hanger-shaped and large enough to accommodate an aircraft the size of a C-17. There are smaller classified meeting rooms along the outer walls. The open floor is furnished with tables that can be arranged into shapes to facilitate collaboration between and among users. The collaborative workspace design aims to facilitate the physical integration of different intelligence disciplines (such as HUMINT [human intelligence], GEOINT [geographic intelligence], and open source) for more-efficient collaboration and integration of information into all-source intelligence. The design of the tables was aimed at accommodating UK information security policies, especially accreditation of electronic systems that handle classified information. Because UK policies generally prohibit interconnecting different systems, the tables were designed so that the different systems at each desk could be organized according to the needs of the team using the space.

The UK made an early decision to have most of Pathfinder be accessible for FVEY partners and to minimize UK-only spaces. About 95 percent of the facility is completely accessible to cleared FVEY individuals; there are only small exceptions.

Pathfinder was built to accommodate about 1,200 people, although the initial organizations that moved into the building represented roughly 50 percent of that number. Planners anticipated that other elements would join as their facilities closed. Other elements chose to move there because organizations' leaders saw that they could save costs and improve the quality of their product by moving to the new shared facility.

Process for Developing and Implementing the Pathfinder Partnership

Pathfinder planners understood from the beginning that the move to a new facility was the moment when major doctrinal and policy changes could be made to modernize ways of work. The planners identified a small team to develop new doctrine for the organizations they managed who would occupy the building. The goal was to develop new ways of work that would take advantage of the information availability and collaborative possibilities of the new build-

ing. Planners anticipated that the new doctrine and policies would be attractive to other organizations choosing to move to Wyton to take advantage of information and collaboration opportunities to improve the quality of their product. The planners developed a vision and blueprint for this organization that involved transformational change from an old stovepiped process into a new one in which information sharing and collaboration produced an output more quickly and with “greater insights.” To make this transformation work, they developed policy and doctrine to enable the growth of a “trust model for data sharing.” The planners also implemented a major policy change by switching from UK-only to FVEY-access classified space. Achieving this transformation involved addressing cultural, policy, and other barriers. In addition, planners implemented a detailed “blueprint” that spelled out all the roles and responsibilities as part of this process.

To implement this effort, planners sought to link the new doctrine to the design of the building. This required qualified leadership, management, and staff, including project management staff. The planners used the Managing Successful Programmes methodology to help ensure that the design and building of the Pathfinder facility was efficient and effective.³⁶

Leadership support from the Ministry of Defence and from the UK and US intelligence communities was key to implementing the partnership. This support included having financial and political support to make necessary investments in the building. In charge of the Pathfinder partnership effort was a UK brigadier general (a one star) who championed the plan. He built a coalition of support of key personnel for the process by creating a value proposition and engaging stakeholders early in the planning process. These supporters in turn became champions who were critical to the organizational change that was being implemented.

How the Cultural, Policy, and Other Barriers Were Addressed

Cultural barriers refer to differences in organizations’ values, social environments, managerial structures and practices, and both the legal and unwritten procedures that follow. For the Pathfinder project to succeed, senior leaders had to be visibly committed to the change and had to convince key personnel to commit to the process and project early on. This helped the key personnel feel ownership and see value in the process.

Closing and moving JARIC to a new location created a cultural challenge for the Pathfinder building planners. Given the connections that staff associated with JARIC, the leaders knew it was important to have some sort of transition ceremony to help everyone accept its closing and the move to the Pathfinder building. JARIC was officially disbanded on July 13, 2012. A special ceremony and dinner were held to mark JARIC’s closing at RAF Brampton and to honor its memory.³⁷ One interviewee called it a “wake,” so they could bury JARIC and start something totally new. He also said that by doing this, the organization was then able to “become something bigger and better.”

³⁶ *Managing Successful Programmes* (MSP) is a management methodology consisting of a set of principles and processes to use when managing a program. For example, MSP principles include advising how to “Organise people to ensure responsibilities and lines of communication are clear, Plan the work in a way which achieves results, Ensure that the organisation benefits from undertaking the programme, Ensure that all interested parties (the stakeholders) are involved, Resolve issues which arise, Identify and manage risks, Ensure quality, Keep up to date information which tracks the continually changing environment, [and] Audit a programme to ensure standards are being followed.” Insights, “Managing-Successful-Programmes,” webpage, undated.

³⁷ For more information about the transition, see Paul Hamer, “UK JARIC Transitions to Defence Geospatial and Intelligence Fusion Centre,” *National Geospatial Intelligence Agency Magazine: Pathfinder—International Partnerships*, Vol. 10, No. 6, November/December 2012.

One of these key champions asserted that there were no real technical barriers to the sharing and integrated approach that was crucial to this transformation; the main barriers were bureaucratic and policy ones. Such organizational barriers were essentially major cultural challenges to what the planners wanted to do. To overcome these cultural barriers and make the type of change needed for success, leaders needed to move their subordinates away from their comfort zones.³⁸

Three key changes were needed: First, the planners had to change policy and doctrine to accommodate the security procedures to a FVEY space instead of a national UK space. Second, they had to develop a “trust model” for sharing data so that participating organizations were willing to trust each other. Third, leaders needed to transform the delivery of the intelligence product. To accomplish this, they had to change staff mindsets and skill sets to become more collaborative and more data-centric.

A detailed blueprint was promulgated that spelled out the entire plan, including policies and staff roles. During its development, stakeholder input to the blueprint was sought to help improve the process and gain stakeholder buy-in to the change.

Creating Incentives So Staff Would Accept the Move and New Collaborative Work Environment

The leadership needed to offer incentives so that the staff would want to be in the new Pathfinder building, accept the change, and be willing to work with new people from the different partnering agencies. The planners needed to provide ways to build new social networks and a new community at Pathfinder. Given that some people were being relocated from many small sites as far as 60 miles away and others from more-urban London, amenities at Pathfinder had to accommodate changes to peoples’ commutes, including potentially longer ones, and changes in the surrounding environment.

Facility amenities, such as a snack bar, social activities, clubs, and a weekly social gathering night were planned to enable creation of new social and professional networks. These activities helped people get to know each other and to develop a new work sense of community, and facilitated more collaboration among people from partnering agencies. New professional growth opportunities, such as having a job exchange program and a mentoring program, were also instituted. This combination of incentives helped staff see advantages to the changes, become part of a new collaborative working community, adjust to the major cultural change, reduce the friction associated with the change, and understand that leadership was serious about the change.

A Variety of Diverse Personnel Were Needed for the Pathfinder Process

The Pathfinder partnership required diverse qualified personnel for its development and implementation. The commander in charge was critical as the leader and main champion. He built a coalition of support of key personnel that were key champions. It also was important to have people from different disciplines to help in this effort.

Security experts were fundamental to the development and implementation of this plan. Given the classified nature of the facility and IT and communications infrastructure, security personnel who understood the business needs and requirements were essential.

³⁸ It is interesting to note that all the interviewees emphasized the cultural barriers over the policy and other barriers, and tended to frame addressing these other barriers under cultural barriers.

Strong project managers were established in three areas: buildings, IT, and process improvements. A building project manager oversaw the design and construction of the Pathfinder building. The IT project manager was needed to help oversee the design, development, and implementation of the IT systems, especially given the diverse nature of classified computing systems involved. The process manager sought to ensure the physical structure was aligned with the policies directing operations in the building.

Risks and Liabilities of the Pathfinder Partnership

Pathfinder faced three main types of risks and liabilities: cultural risks, long-term budget and funding risks, and start-up liability issues. The main cultural risk was integrating many people from different organizations. Failure to create an integrated and collaborative culture could result in a tense work environment where organizational control and trust issues could undermine the mission. There was also a risk of losing experts who were unwilling to accept the change.

There was a major risk regarding the funding needed to build, expand, and maintain the facility over time. This long-term budget and funding risk created a challenge for the planners who had to make critical investment decisions: whether to build only to current requirements or invest in more features in the building structures now in anticipation of capabilities that would be used only in the future.

The partnership also had the startup liability of harmonizing different organizations' financial, administrative, and security structures. Security was a particularly thorny problem because different personnel security clearance requirements can limit the ability to bring staff from different organizations with different security requirements to work together in a shared SCIF. Early coordination with anticipated building occupants allowed planners to address this risk and work out one shared security requirement for the shared SCIF. Another risk involved aligning the different contracts for administrative support that the organizations had had at their previous sites (and that had their own contract term lengths and payment schedule) and determining which ones were to be kept or terminated. Breaking such support contracts could have been a problem because of earlier termination conditions, such as increased costs to the original contracting organization.

How the Pathfinder Partnership Has Evolved

The Pathfinder partnership evolved considerably and positively. As planners anticipated, organizations that had a choice of where to locate when their sites were closed chose to affiliate with Pathfinder because of the economic and operational advantages. To entice organizations to relocate, Pathfinder leaders decided not to charge some UK military intelligence units for building space if they would relocate to Pathfinder. The incentive worked: Some Air Force, Army, and Navy intelligence units came to Pathfinder both because the military units could save facility costs and because the collective output of the elements located in the building improved the intelligence.

Second, the governance structure has changed since the creation of the partnership. Initially, when legacy organizations moved into Pathfinder, they kept their leadership in place. Over time, the structure has evolved so that many of the building's organizations now have only one leader; deputies and staff were less critical because many responsibilities could be shared, which resulted both in cost and manpower savings and in greater collaboration.

IT integration has also evolved and improved over time. Part of this delay had to do with the technology learning curve for trying to do new things and the need to adjust systems to work well in a new facility. Additionally, there was some resistance by personnel in the building to adopting the new and different IT systems.

Lessons Learned from the Pathfinder Experience

When the initial conceptual decision was made to close facilities and move organizations into a single location, UK leaders understood that this was an unparalleled opportunity to innovate and advance the intelligence mission through organizational integration and collaboration. The partnership succeeded because Pathfinder leaders had a clear vision, policy, doctrine, and project blueprint. The plan drove the change, addressed numerous barriers, and sustained national and leadership support, especially given the high investment costs. Spelling out clear roles and responsibilities was a key part of the blueprint. Along the way, many lessons were identified:

- Leadership support and project champions were critical to addressing cultural and organizational challenges. Leadership support included financial support and authority to make decisions and implement policy. Developing a team of subordinate supporters and champions was also critical.
- Leadership engaged stakeholders early in the process, including allies from the United States, and worked to invest them in the project. These stakeholders then helped with the transformation and became champions and facilitators of change instead of resisting it.
- Demonstrating the value of change and providing incentives to staff for moving to the new facility helped to address resistance to the change. Providing new social and relationship building opportunities to minimize organizational barriers was key to success.
- A well-developed and well socialized management and implementation process was critical to success. Having diverse qualified personnel—such as program managers and IT, security, engineering, and design staff—and ongoing communications throughout the process among key stakeholders made that possible. Qualified and persuasive managers helped with the organizational change. Qualified program and project managers ensured the efficient and effective design and construction of the Pathfinder building.

The BTC Partnership

Federal Bureau of Investigation (FBI) and DoD personnel routinely work together to use biometrics to identify terrorists and criminals who threaten the United States and U.S. citizens. Biometrics is the science of identifying individuals through physical traits, such as face or voice recognition, fingerprints, palm prints, DNA, and iris scans. In 2005, the leadership of both these organizations decided to partner in the development of the BTC at the FBI's campus in Clarksburg, West Virginia. The BTC was constructed between 2010 and December 2015. In 2016, about 1,000 employees of the FBI's Biometric Center of Excellence within the Criminal Justice Information Services (CJIS) Division relocated to the BTC. The U.S. Army's Defense Forensics and Biometrics Agency employees were also to move into the building but had not yet done so as of spring 2017. This facility is the U.S. center for research, development, and testing in biometrics and helps with anything from terrorist to criminal investigations that need biometric data and analysis. The joint facility is designed to encourage even more joint

biometric investigations and advances in biometrics data, standards, analysis, technologies, and training.

Motivation for the Development of the BTC

Multiple factors motivated the FBI and DoD to collaborate on the BTC facility. The first major driver was the fact that senior leaders at DoD and the FBI in 2005 shared the same vision for a need to collaborate more on biometrics. The partners had similar motivations for the BTC facility partnership, stemming from the benefits they would share. For the FBI, CJIS was outgrowing its current building and needed a new facility. The BTC was an opportunity to design a new space and facility in partnership with DoD to save costs and improve their mission. At the same time, the U.S. Army's Defense Forensics and Biometrics Agency employees were located in an old, run-down rental property with security concerns in downtown Clarksburg. In addition, Army staff routinely visited the FBI facility to meet with FBI staff, and DoD biometrics computers were already located at the FBI compound.

Beyond the physical benefits of the new facility, integration of data, standards, and collaboration had become more important because of evolving technologies and the role of biometrics. As one former senior leader in DoD biometrics stated, the value of "one too many searches" was critical for biometrics uses for national security. In the late 1990s and early to mid-2000s, DoD was investing in developing a fingerprint database, the Automated Biometrics Identification System (ABIS). The FBI had its own fingerprint database, the Integrated Automated Fingerprint Identification System (IAFIS). When DoD fingerprinted someone to check his or her identity, the greatest information gained about that individual came from searching and trying to match those prints against both the DoD and FBI fingerprint databases. DoD evolved its collection methods, standards, and database to facilitate such collaboration. Similarly, to check fingerprints for a foreign national's history, the FBI wanted to search both the FBI and DoD fingerprint databases. Collaboration was needed between FBI and DoD staff to achieve their missions more effectively and to advance and update biometrics tools and technologies that both organizations needed to use.

Another main driver for the development of the BTC partnership was a powerful U.S. senator from West Virginia, Robert Byrd. He had helped secure funding for the original FBI campus and CJIS building in Clarksburg, and he provided key political and financial support for the new building. He helped secure U.S. federal funding for DoD and the FBI to jointly fund the construction of the new BTC building. Although he was not directly associated with either of the partnering organizations, he was a facilitator for this partnership.

Colocating FBI and DoD staff is important for both agencies for their biometrics missions. A few years ago, two DoD biometrics personnel began to spend about one day a week at the FBI biometrics facility. They coordinate and share information; help address mission overlap concerns; leverage resources, technical expertise, and other agency contacts; and help facilitate faster operational response. Prior to this weekly colocation of staff, biometrics operational missions suffered from a lack of sufficient collaboration. For instance, in 2011, both FBI and DoD personnel showed up in a European country to acquire biometrics data on that country's criminals because visa requirements were being waived for that country. This redundancy wasted government resources, caused confusion with the European nation, and reflected poorly on the United States. Now, the FBI and DoD coordinate on such trips because of the weekly colocation arrangement, and either FBI or DoD personnel conduct the trip and

collect, clean, and share the data, which saves costs by avoiding duplicated travel, staff time, and data collection and cleaning.

Colocation also benefits FBI and DoD mission needs for coordination with other U.S. federal agencies. At times, DoD or FBI personnel need to coordinate with the U.S. Department of Homeland Security and the U.S. Department of State on operational biometrics issues. With colocation, FBI and DoD staff can leverage their different contacts to save staff time, enhance collaboration, and complete such tasks faster. In addition, the FBI and DoD staff have jointly traveled overseas to collect biometrics data together, such as staff from both agencies going to Micronesia together.

Background on Biometrics at DoD

To understand the evolution of this partnership, it is important to understand how biometrics applications, technologies, and organizations have been evolving within the U.S. DoD, especially for supporting warfighting operations. The field mission of biometrics is to support warfighting and feed the operational intelligence cycle. DoD also has a more limited role in forensic biometrics for fighting crime and providing legal evidence. The data collection, quality, and processing of field biometrics have improved substantially over the past three decades, allowing DoD to better achieve these objectives.

DoD biometrics, in comparison with FBI biometrics, has changed leadership and oversight responsibilities multiple times during the past 20 years. First, it is important to explain that, within DoD, multiple organizations play roles in biometrics. The Office of the Secretary of Defense provides oversight regarding biometrics while the U.S. Air Force, Army, and Navy use biometrics to help in their operations. In 2000, the Army became the Executive Agent for DoD biometrics. Prior to that, DoD used biometrics primarily for logical and physical access control, and only a few pilot programs were in existence. Since 2000, oversight for DoD biometrics has shifted within the Army, first from the Army Chief Information Officer (CIO)/G-6 to the G-3/5/7 (Operations, Plan, and Training), then to the Office of the Provost Marshall General, which has been the oversight lead since 2012.³⁹

Within DoD, several biometrics organizations have changed names and organizational structures over time. For instance, in 2005, the Biometrics Management Office (within the Army CIO/G-6) in Washington, D.C., helped provide policy and support for biometrics across DoD, not just the Army. At that same time, the Army-led Biometrics Fusion Center, located in West Virginia, housed ABIS and managed the technological aspects of DoD biometrics. The Biometrics Management Office (in Washington, D.C.) and Biometrics Fusion Center (in West Virginia) merged in 2006 under the umbrella of the Biometrics Task Force. This task force gained recognition and responsibility and became the Biometrics Identity Management Agency in 2010. In 2013, that agency merged with the Office of the Provost Marshall General's forensics efforts to become the Defense Forensics and Biometrics Agency. This merger brought DoD's field mission to support warfighting and to feed the operational intelligence cycle together with DoD's more-limited role in forensic biometrics for crime fighting and providing legal evidence (such as for crimes committed on a U.S. military installation).⁴⁰

The technology and use of biometrics in the field has also evolved within DoD. In the late 1990s, DoD had pilot programs for using field biometrics that focused on fingerprints for

³⁹ For more information, see Defense Forensics and Biometrics Agency, "DFBA FAQs," webpage, undated.

⁴⁰ For more information, see Defense Forensics and Biometrics Agency, undated.

logical and physical access control. Since then, the volume of data collected and the number and type of biometrics modalities have expanded. DoD introduced facial recognition in the early 2000s in a move toward biometrics for identification, emphasizing force protection and digitizing records. The evolution of field biometrics introduced the use of iris scans, classified portals, DNA, Rapid DNA, and app-based mobile devices. Integration standards, data collection, and storage have also improved. In addition, DoD's main mission focus for using biometrics shifted from overseas contingency operations to partner nation training as the contingency operations decreased.

The development of biometrics resulted in DoD expanding the use of ABIS for submissions and storage of biometrics. As of 2014, ABIS stored more than 6 million unique identities. Since 2011, 12,000 of these identities have matched to watchlisted or top-tier threats. DoD ABIS submissions peaked in 2012 but have declined since, as operations in Afghanistan have drawn down.⁴¹ However, interagency requests are growing quickly as data sharing steadily improves. The growth of ABIS records further indicates that biometrics is an important and growing field.

Background on Biometrics at the FBI

The main mission of biometrics in the FBI is to support crime fighting and to be used as legal evidence for the courts. As early as 1924, the FBI was gathering and searching prints from police agencies, which led to the agency developing a biometrics program. By 1992, the FBI CJIS was founded as a central repository for the FBI and is now the largest division in the FBI. It consolidated three programs and moved into a building at the 986-acre Clarksburg complex. Biometrics at the FBI continued to advance through the 1990s and 2000s. In 1999, the IAFIS was launched, introducing a national network for electronic submittal of fingerprints to the FBI. Around 2004, new search capabilities were launched that increase latent fingerprint hits. The Biometric Center of Excellence was then created to serve as a focal point for all FBI biometrics in 2007. Four years later, the replacement for IAFIS, known as the Next Generation Identification (NGI), was rolled out. NGI includes rapid mobile searches, a national palm print repository, and an iris pilot. Other advances have been the creation of a new message structure standard to send 1,000-pixels-per-inch fingerprint images, palm print, face with subject acquisition profiles, scars, marks, and tattoos, and iris biometrics. CJIS dedicated the BTC facility in 2015. Prior to construction of the BTC, the Biometric Center of Excellence was housed in a 500,000-square-foot office building.⁴²

NGI features a major data center for biometrics storage and processing. It contains more than 115 million unique identities (compared with DoD's 6 million) and has submissions from more than 24,000 local, state, tribal, federal, and international partners.⁴³ More than 80 million fingerprints were processed in FY 2016, an average of more than 200,000 per day. The FBI also stores palm prints of more than 12,000 unique identities and maintains a

⁴¹ Defense Forensics and Biometrics Agency, *Defense Forensics and Biometrics Agency 2013–2014 Report*, 2014.

⁴² See, for example, FBI, "Delivering the Future the Biometric Center of Excellence," webpage, March 11, 2010; FBI, "Criminal Justice Information Services (CJIS) Overview," webpage, undated-a; SecureIDNews, "A History of AFIS," December 2, 2014; FBI, "Welcome to FBI Biometric Specifications (BioSpecs)," webpage, undated-b; FBI, "New FBI-DOD Biometric Center Will Help Combat Threat of Terrorism," August 12, 2015; and Biometric Update, "History of Biometrics," January 14, 2015.

⁴³ FBI, "Next Generation Identification (NGI) Monthly Fact Sheet," May 2017.

sexual offender registry, which currently has more than 750,000 entries.⁴⁴ The NGI system's 2011 rollout featured many incremental technological improvements, such as improvements in advanced fingerprint identification technology, latent prints, palm prints, facial recognition, and a criminal iris repository.⁴⁵

The BTC Building Design

The BTC building was designed to facilitate collaboration and emphasize that the building is a shared space. The three-floor office building is situated on a plateau with offices elevated on a podium. The podium contains the facility entry, amenities, administrative space, a data center, and the FBI fingerprint storage facility. It is partially embedded in an earthen berm to provide thermal stability and security for the BTC data centers. A large interior courtyard is a secure outdoor space for staff.

The facility includes “future proofing” design features that enable a flexible and adaptable workplace,⁴⁶ and an optimized structural grid with curtain wall modules based on newly developed furniture space standards that met the requirements of both the FBI and DoD. With informal gathering areas on each floor coupled with shared office support and a “communicating stair” linking work areas across multiple floors, the building encourages collaboration. The building is Leadership in Energy and Environmental Design Gold–certified, with such features as interior lighting controls, native plant landscaping, environmental building materials, a green roof, parking for carpool vehicles, and an underfloor pressurized mechanical distribution system.⁴⁷

The designers planned for the facility to have some distinct separate spaces for the FBI and DoD, in addition to shared public open areas. The BTC plans for 300,000 square feet (SF) for the FBI (83 percent) and 60,000 SF for DoD (17 percent).⁴⁸ To enter the FBI space requires an FBI security clearance or an escort. The FBI did not want to integrate its data center, though the FBI data and computer center includes DoD database computers. DoD also wanted a separate classified workspace because of its different security requirements. The DoD-only space includes a separate reception area, entrance, and cleared data center and workspaces. Entry to the DoD space requires a DoD clearance or an escort. In the shared open space are a forensic lab to advance in-the-field identification with Rapid DNA and latent fingerprint techniques and a video analytic capabilities room to advance the technologies. However, neither of these areas are occupied yet because of FBI and DoD funding issues.

How the BTC Costs Were Planned to Be Shared

The BTC construction costs were split as follows: The FBI paid \$67.6 million (70 percent) and DoD paid \$30 million (30 percent). The total O&M cost is expected to be \$13,312,942. According to the FBI's FY 2017 Authorization and Budget Request to Congress, the FBI

⁴⁴ FBI, 2017.

⁴⁵ FBI, undated.

⁴⁶ *Future proofing* is a building design approach for long-lived buildings that tries to minimize both the detrimental effects of future events and the potential for obsolescence and deterioration to maintain life-cycle benefits. Rich, 2013.

⁴⁷ Skidmore, Owings & Merrill LLP, “FBI Biometric Technology Center,” webpage, undated.

⁴⁸ U.S. Department of Justice, “Fiscal Year 2017 Authorization and Budget Request to Congress,” February 2016.

expected to pay 55.40 percent of this cost (\$7,375,000); CJIS user fees and DoD would cover 32.67 percent and 11.93 percent of the remaining costs, respectively.⁴⁹

BTC O&M costs consist of facility and IT costs. Table C.1 shows how these costs were planned to be split between the FBI and DoD. Facility O&M costs cover all aspects of operating and maintaining the physical facility. This includes facility supplies, equipment, and services; custodial/grounds and central plant equipment maintenance; building modifications/repairs; preventative maintenance and inspections; utility costs; and contracted service providers. The total cost of facility O&M is \$8,650,000. The FBI budget requested to cover 51.35 percent of this; CJIS user fees are expected to pay 30.29 percent and DoD is expected to pay the remaining 18.36 percent.⁵⁰

The FBI's facility IT includes communications and network infrastructure, such as firewalls, intrusion detection systems, servers, and storage. The O&M costs for maintaining the FBI's communications and equipment include hardware/software maintenance and five-year technical refreshment costs for FBI workstations and network equipment. The FBI's IT O&M costs, totaling about \$4,662,942, are the sole responsibility of the FBI. The FBI budget requested to pay 62.90 percent of this cost, and CJIS user fees will pay the remainder, as shown in Table 3.2. DoD would also incur some of its own IT infrastructure O&M costs (not shown in the table).

Challenges for the BTC Partnership

The BTC partnership has faced a variety of challenges. First, recent U.S. federal budget constraints have contributed to funding restrictions within DoD and the FBI, which have contributed to delays in developing joint spaces in the facility and delayed DoD's occupancy. Second,

Table C.1
How the BTC Facility and IT O&M Costs Are to Be Shared

O&M Costs	FBI Budget Request (% of total)	Expected to Be Paid by CJIS User Fees	Expected to Be Paid by DoD	Total Cost
Facility O&M	\$4,442,000	\$2,620,000	\$1,588,000	\$8,650,000
Percentage of the total	51.35%	30.29%	18.36%	100%
IT O&M (FBI only)	\$2,933,000	\$1,729,942	N/A	\$4,662,942
Percentage of the total	62.90%	37.10%	N/A	100%
Total	\$7,375,000	\$4,349,942	\$1,588,000	\$13,312,942
Percentage of the total	55.40%	32.67%	11.93%	100%

SOURCE: U.S. Department of Justice, 2016.

NOTE: Orange shading indicates costs pertaining to the FBI; purple shading indicates costs pertaining to DoD.

⁴⁹ U.S. Department of Justice, 2016.

⁵⁰ U.S. Department of Justice, 2016.

slow federal funding and procurement processes contributed to delays in some of the internal space plans. A third major challenge has been numerous organizational changes within DoD. The Army biometric oversight organization has changed multiple times. Fourth, changes in OSD and Army leadership support and some loss of project champions contributed to funding challenges and slowed DoD personnel's transition into the BTC. Fifth, DoD and the FBI had different security standards for the physical space. These challenges were addressed by negotiations and compromises, such as the new facility's antiterrorism and force protection standards being worked out together. Last, the partners have had to address cultural challenges stemming from agency differences. DoD is mission oriented while the FBI is process oriented; the FBI employees are mostly local while many DoD employees are from other places. The current partial colocation schedule and ongoing communications are working on addressing the cultural challenges of this partnership.

Benefits of the FBI-DoD BTC Partnership

The shared BTC is expected to have multiple benefits for both the FBI and DoD. The facility brings together strengths, specialized capabilities, and data from the two partners, such as FBI's large centralized collection of biometric information and DoD's military biometrics database systems. The partnership expedites communications and information exchanges, helps create the same baseline for biometrics data and technologies, and saves resources in facilities and operational biometrics missions, such as travel and data collection. Within the BTC facility, the biometrics workforce will be consolidated and enhanced.

Other anticipated benefits of the biometric collaboration include creating "advances in a variety of identification technologies like DNA, iris recognition, voice patterns, facial patterns, and palm prints" and improvements in "biometrics product certification, training, standards development, privacy rights, and R&D into emerging technologies."⁵¹ The agencies are also expected to have the ability "to move these technologies and resulting biometric tools more quickly from the laboratory into the hands of those who work to combat terrorism and protect the public from dangerous criminal activity."⁵² For the rural West Virginia community, the BTC provides economic benefits and a sense of pride for the community, especially because of having a new cutting-edge facility. Colocation creates a vision of the area being a biometrics hub for the nation and has attracted biometrics talent to the area. A major biometrics vendor moved an office from Washington State to Morgantown, West Virginia.

Lessons Learned from the BTC Partnership

This analysis of the BTC partnership identifies valuable lessons for those interested in developing and implementing federal facility public-to-public partnerships. First, senior leadership support and having champions are critical to securing funding and addressing cultural change challenges. Loss of such support has caused funding challenges for finishing some planned spaces in the BTC and has delayed permanent colocation of DoD staff in the BTC building. Operational staff have found a temporary colocation workaround because of the benefits to their missions. Second, the evolution of biometrics and communication technologies and their use in national security operations increased the need for more biometrics integration and collaboration. This demand for biometrics improvement was a key motivation for colocation.

⁵¹ FBI, 2015.

⁵² FBI, 2015.

Third, compromises had to be made regarding different agency space and security concerns within the design of the BTC building. Such compromises included agreeing to common exterior antiterrorism and force protection standards, even though the FBI and DoD have different standards. Internal to the building, because of each organization's own security requirements, the organizations agreed to have separate classified spaces and some shared open space.

Last, this partnership shows the importance of the two partners leveraging their expertise, resources, and even different organizational processes (e.g., different procurement processes, different U.S. Department of Homeland Security and U.S. Department of State contacts, and joint FBI and DoD biometric data-collection trips overseas). Even though staff from both agencies have yet to fully occupy the facility, they are reaping such benefits from sharing the BTC through a temporary weekly colocation workaround. For example, because DoD can acquire equipment more quickly than the FBI can, the organizations have used the DoD process to acquire some equipment for the BTC.

The Australian Cyber Security Centre (ACSC) Partnership

The ACSC is a partnership of different Australian federal agencies residing in the Ben Chifley Building in Canberra.⁵³ The partnership colocates cybersecurity staff and capabilities from Defence, the Attorney General's Department, Australian Security Intelligence Organisation (ASIO), Australian Federal Police, and the former Australian Crime Commission.⁵⁴ This includes the old Cyber Security Operations Centre, Australian Signals Directorate's (ASD's) cybersecurity mission, Attorney-General's CERT Australia, cybercrime staff from the Australian Federal Police and staff from the Australian Criminal Intelligence Commission (formerly the Australian Crime Commission), and cyber investigations and telecommunication security specialists from ASIO. The ACSC officially became operational in November 2014, when the initial staff moved into the Ben Chifley Building, which was expected to have approximately 300 personnel by 2017.⁵⁵ The ACSC appears to behave like a new federal interagency organization, but it is jointly funded and partner agency staff are still part of their parent agencies.

The Ben Chifley Building was constructed in 2014 and "is a special purpose, high-security building, designed with the capacity and flexibility to meet national security needs now and in the future."⁵⁶ The 32,000-cubic-meter structure covers a seven-hectare site and contains 45,000 square meters of office space. Designed to accommodate 1,800 staff members, it has environmental sustainability features, such as solar panels on the roof for electricity generation and the capability to harvest rainwater from the roof to be used for landscaping irrigation. ASIO constructed the facility, and the cost of the building was \$700 million.⁵⁷

The partnership improves information sharing, analysis, and coordination among the participating agencies. The roles of the ACSC include raising awareness of cybersecurity, reporting on the nature and extent of cyberthreats, analyzing and investigating cyberthreats,

⁵³ Australian Federal Police, "The Australian Cyber Security Centre (ACSC)—Partnering for a Cyber Secure Australia," undated.

⁵⁴ Australian Cyber Security Centre, "About the Australian Cyber Security Centre," webpage, undated-a.

⁵⁵ Australian Cyber Security Centre, "Frequently Asked Questions," webpage, undated-b.

⁵⁶ ASIO, "Ben Chifley Building," webpage, undated.

⁵⁷ See ASIO, undated; Stephen Jeffery, "Australian Cyber Security Centre to Relocate From ASIO Headquarters," *Sydney Morning Herald*, November 26, 2016; and Rider Levett Bucknall, "Ben Chifley Building, Campbell, Canberra, Australia," webpage, undated.

coordinating national cybersecurity operations and capability, and partnering with industry on information sharing and response strategies. The ACSC is the joint responsibility of the Attorney General and Minister for Defence and is overseen by the Cyber Security Operations Board. Each agency that participates in the ACSC contributes to the ACSC costs.

Motivations for the ACSC

The motivation for the ACSC stemmed from three important areas: mission and national security needs, facility and budget drivers, and political motivation. In an effort to address Australia's national security needs, senior leadership sought greater collaboration among the Australian federal agencies that each play a role in cybersecurity issues. They wanted to address the turf war challenges among the different cybersecurity-focused agencies, such as ASIO, ASD, the Australian Federal Police, and the Australian Criminal Intelligence Commission. Such turf wars were making it difficult for these organizations to jointly combat cybersecurity concerns. The agencies' leaderships also thought that collaboration was needed to better protect Australian IT networks and provide more-timely responses to cyberattacks.

Facility and budget concerns also drove ACSC efforts. The construction of the Ben Chifley Building was for ASIO, but the facility was short on space for 100 to 200 personnel. After the leadership began looking for a place to locate the ACSC, which was temporarily located in an ASD building in 2012, the ACSC moved into the Ben Chifley Building in 2014. However, in 2017, ASIO needed more space for additional employees, and the ACSC also needed some unclassified space, so the ACSC was planning to move to a new location later in 2017.

A final driving force is that the ACSC is a way for the Australian government to show its commitment to cyber defense. In 2016, Australia had a problem with denial of service for its census online forms of the Australian Bureau of Statistics. This problem was originally thought to be a hacker attack but turned out to be a hardware failure. The incident caused some political problems for the government because Australia's federal cyber agencies offered different and confusing explanations. By facilitating collaboration, the ACSC should help prevent such confusion in the future.

Benefits of the ACSC

Colocation of the different organization's cybersecurity experts into the Ben Chifley Building benefits Australia's cybersecurity mission. The shared physical space promotes better collaboration across the agencies and helps each agency have a better understanding of the other agencies' roles and missions. This, in turn, reduces redundancies and promotes better demarcation of missions. The ACSC also serves as a single touchpoint for outside response for the government, and it can facilitate a timelier and more coordinated response during a crisis. The layout of the facility space helps improve these benefits. The different agencies operate in an open area with about 20–30 workstations that facilitate and promote timely and integrated information and communications. Nearby is a crisis response room with a situation awareness screen and rows of workstations where different experts can quickly man the stations and collaborate during a cybersecurity emergency.

Lessons Learned from the ACSC Partnership

The ACSC case study provides insight about federal agencies partnering inside a joint facility for national security missions. First, the senior leadership, a two-star, was a passionate champion for ACSC and was key to the success of the partnership. Second, the partnership presented cultural challenges, given the turf war and close-knit communities of the different

agencies, which took time to address. Colocation interactions and regular motivational talks to all the staff helped address some of the clan-like allegiances and other cultural challenges. Third, some government officials feared that the relocation of ASD cybersecurity experts away from other ASD staff would hurt part of the ASD mission, a potential disadvantage of the partnership. However, the remainder of the ASD staff are located in a building that is within a short walking distance of the ACSC, which helps address this concern. Last, the Ben Chifley Building is a top-secret facility, which limits the ability of ACSC staff to interact with industry. One of the roles of ACSC is to be “the hub for private and public sector collaboration and information-sharing to combat cyber security threats,”⁵⁸ so this limitation can hurt part of the partnership’s mission. However, the ACSC was planning to move into a new building later in 2017 that would have classified and unclassified work areas and thus eliminate that particular drawback of the 2017 ACSC facility.

⁵⁸ ACSC, undated-a.

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Army installation facility and land use deals and partnerships can provide Army installations with substantial benefits, such as saving costs and improving installation operations. The partnerships that often produce the greatest financial benefits involve installation real estate, buildings, and other facilities (such as air fields). These arrangements have generated significant revenue and saved substantial funds for some military installations. Army installations have been facing significant budget reductions and need to find ways to maintain operations and even enhance installation readiness despite declining budgets. An installation real estate deal or facility sharing partnership might be one way for the Army to save and earn large amounts of money. However, the U.S. Army has taken only limited advantage of these approaches, partly because of several barriers. Implementing these arrangements can be time-consuming, complex, and manpower-intensive, and they require significant local knowledge and ongoing community and partner communications. In addition, their development and implementation usually require financial, legal, contracting, real estate, engineering, and other technical expertise and resources, and these are not always readily available on the installation. This report assesses Army installation real estate and facility deals and partnership approaches, such as large-scale leasing deals (sometimes called enhanced use leases [EULs]), and provides recommendations to improve installation use of these approaches to save costs, improve installation operations and readiness, and increase other benefits.



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