



Environmental and Sustainability Considerations in the Joint Integration Development System (JCIDS)

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Purpose and Scope

- **Purpose**
 - Provide an overview of existing processes for incorporating environmental considerations and sustainable practices into the JCIDS process.
 - Analyze how requirements and needed capabilities are recognized, relating to environmental considerations and sustainability and how policy, doctrine and lessons learned impact delivering solutions to these problems .
- **Scope**
 - Background
 - Capability Development Processes
 - Recent Initiatives and Efforts
 - Way Ahead
 - Discussion
 - Questions

Base Camps throughout US History



Encampments
Life Support Areas
Major Supply Points
Secure Lines of Communication
Enable Power Projection



2012

2002

1991

1989

1982

1973

1965

1953

1950

1944

1941

1918

1917

1865

1861

1842

1781

1775



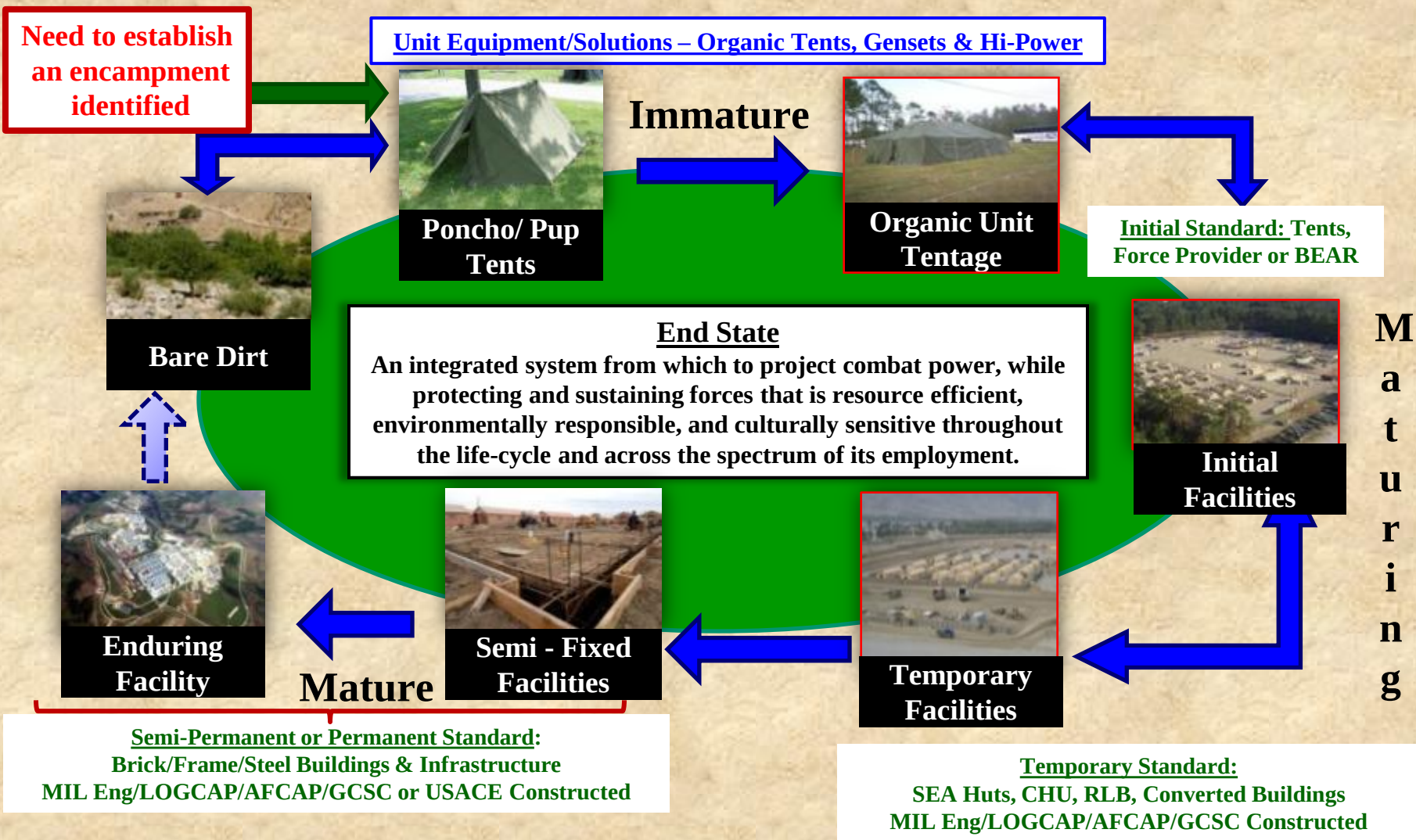
Background

- **US Forces are currently required to conduct extended operations over time in deployed locations.**
- **Over time, these deployed locations may evolve into base camps.**
- **There are currently no standards addressing the planning, design, construction, operations, management , transfer or closure of base camps – In the past 20 years the Army has established over 1000 base camps; each one was a “one off”/ad hoc effort.**
- **The Army looks at Base Camps across the Full Range of Military Operations for our Forces.**

Environmental Considerations and Sustainability Issues are prevalent across all types and sizes of base camps



Life Cycle of Base Camps





Base Camp Systems

Health & Safety

Habitation

Construction Capabilities

Waste Management

Waste Water

Operations

Force Protection

Power Generation

Potable Water

Mission Support

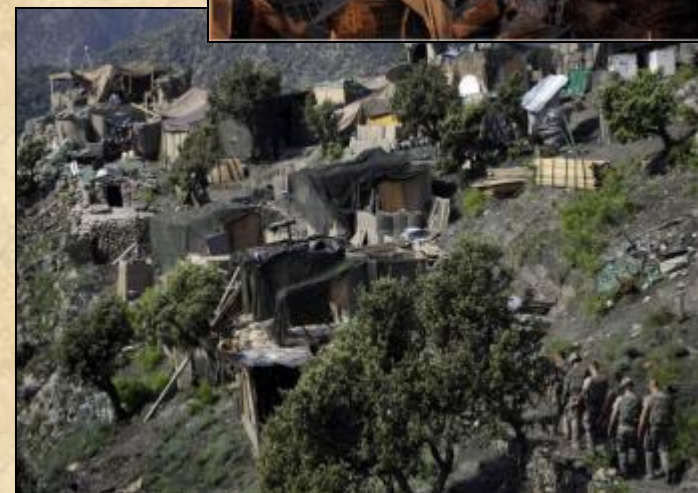
Billeting	Showers
Laundries	Latrines
Kitchens	Administrative Facilities
Dining Facilities	MWR Facilities
Power Generation & Distribution	Water Storage & Distribution
Fuel Storage	Waste Water Mgmt & Storage
Prime Power Interface Kit	Heating, Ventilation & Air Conditioning
Force Protection	Perimeter Security





Systemic Base Camp Challenges

- Consume vast amounts of **resources**
- Generate vast quantities of liquid & solid **waste**
- Challenging to **protect** from attacks
- Too much **manpower** to establish and shut down
 - Ability to “lift & shift” is severely limited
- Combat power **diverted** from counter insurgency (COIN) tasks to convoy/base security, base ops & maintenance
- Lack of **standardization**, robustness, systems architectures, interoperability & scalability
- Total life cycle **costs** are prohibitive





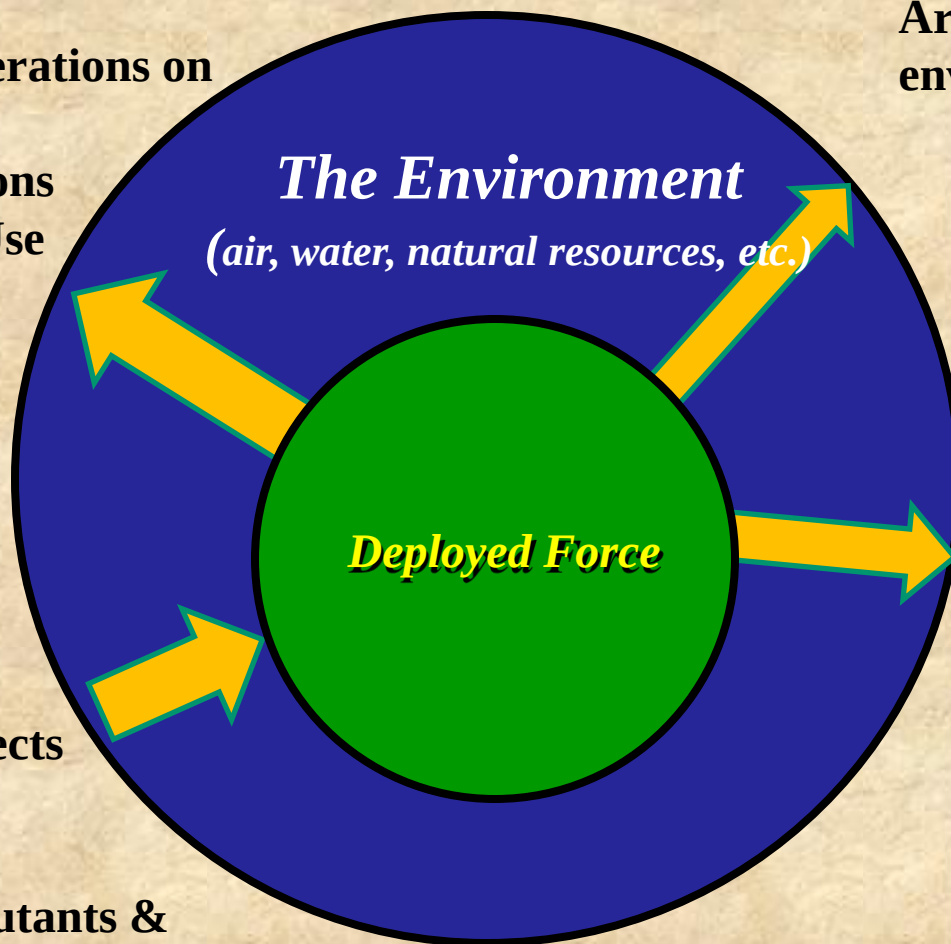
Deployed Forces and the Environment

Effects of Army Operations on the environment

- Combat Operations
- Land/Resource Use
- Waste

Environmental Effects

- Disease
- Climate
- Exposure to Pollutants & Hazardous Materials
- Costs



Army actions to secure environmental resources

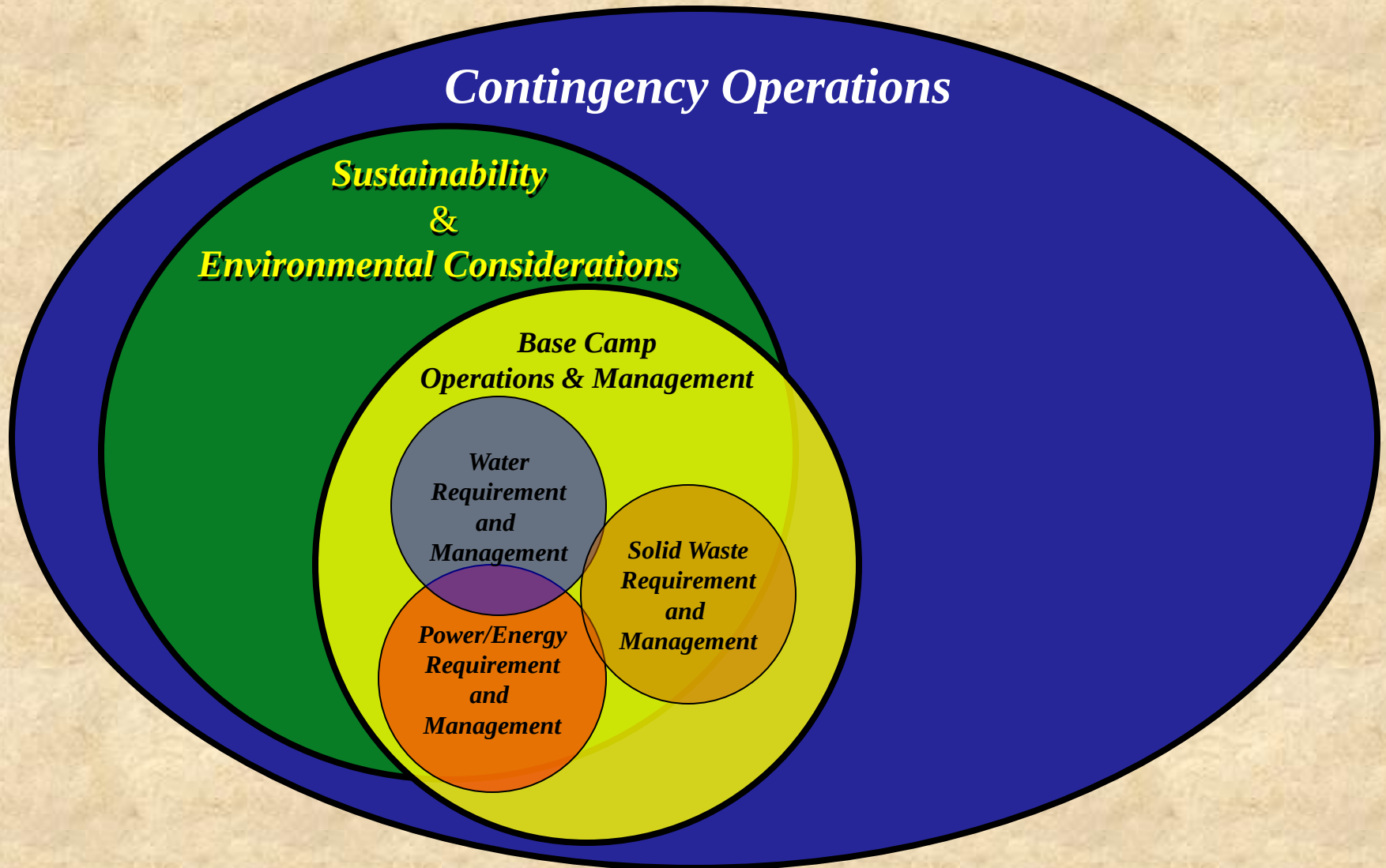
- Water
- Energy Sources
- Infrastructure

Army actions to improve the environment

- Stability/Recon Ops
- Infrastructure
- Preservation
- Sound environmental mgmt practices
- Restoration

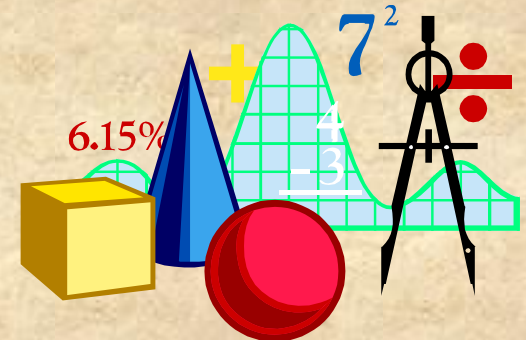


Sustainability and Environmental Considerations



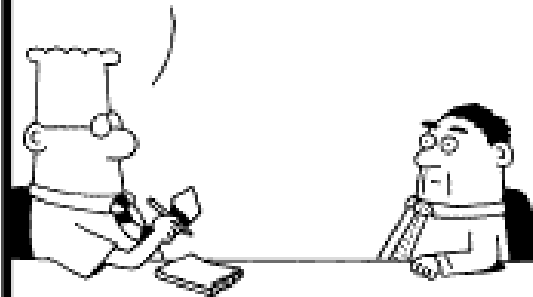


Capabilities Development 101





I'LL DESIGN THE
SYSTEM AS SOON AS
YOU GIVE ME THE
USER REQUIREMENTS.



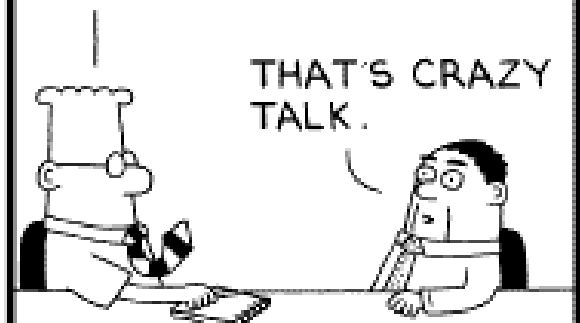
www.dilbert.com scottadams@aol.com

BETTER YET, YOU
COULD BUILD THE
SYSTEM, THEN I'LL
TELL YOUR BOSS THAT
IT DOESN'T MEET MY
NEEDS.



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I DON'T MEAN TO
FRIGHTEN YOU, BUT
YOU'LL HAVE TO DO
SOME ACTUAL WORK.



THAT'S CRAZY
TALK.



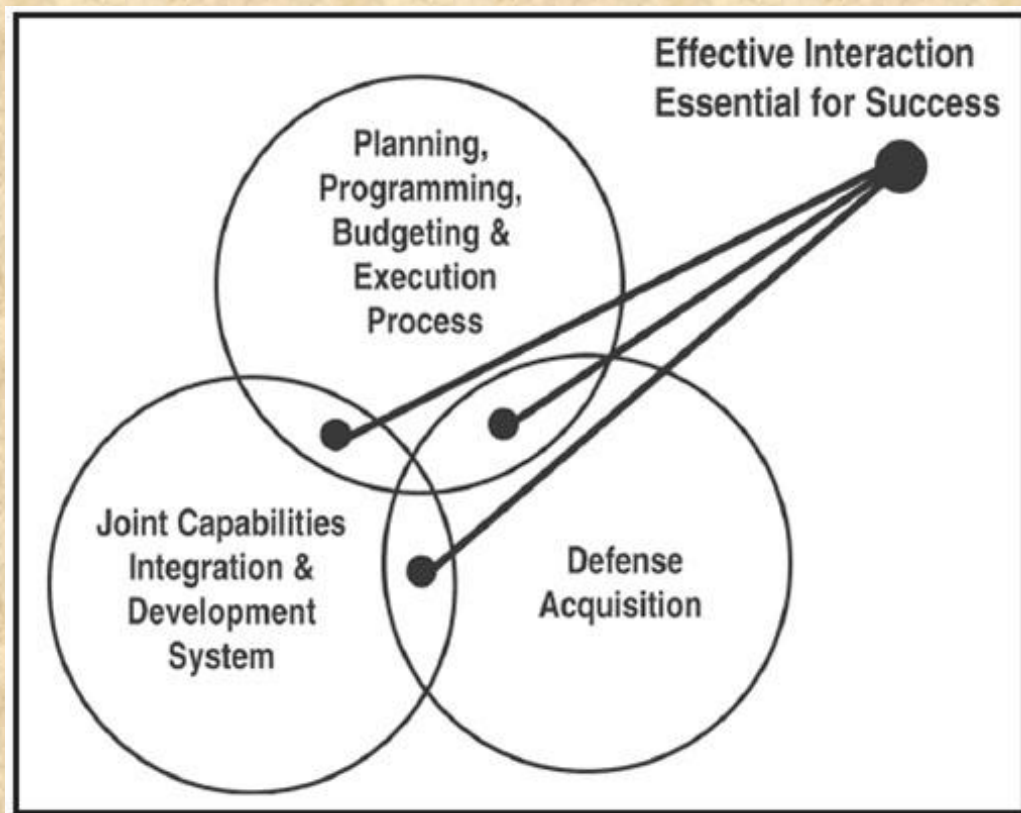
Joint Capabilities Integration & Development System (JCIDS)



DOD has 3 key processes to deliver the capabilities required by the warfighter:

- The requirements process;
- The acquisition process;
- and the Planning, Programming, Budget, and Execution (PPBE) process

- JCIDS implements the requirements process.
- JCIDS identifies, assesses, and prioritizes joint military capability needs as required by law.
- The capabilities are identified by analyzing what is required across all functional areas to accomplish the mission.





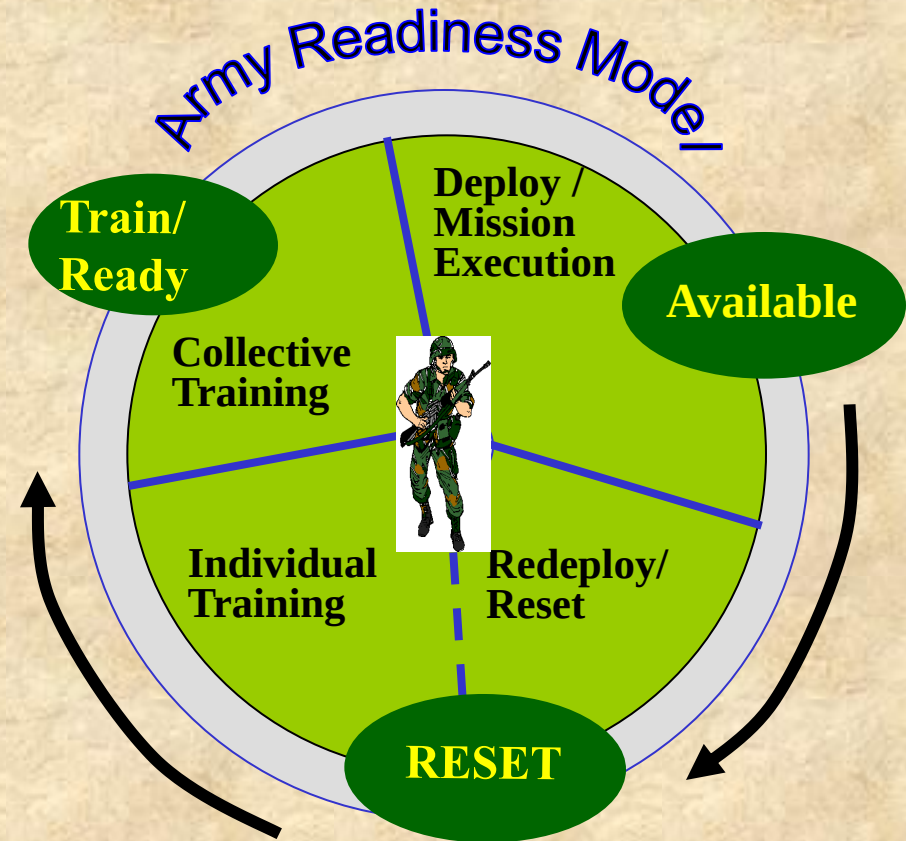


Training and Doctrine Command (TRADOC)

Mission



TRADOC develops the Army's Soldier and Civilian leaders, and designs, develops, and integrates capabilities, concepts and doctrine to build a campaign-capable, expeditionary and versatile Army in support of joint warfighting commanders through Army Force Generation (ARFORGEN); Provides support the Army's Human Capital Core Enterprise.



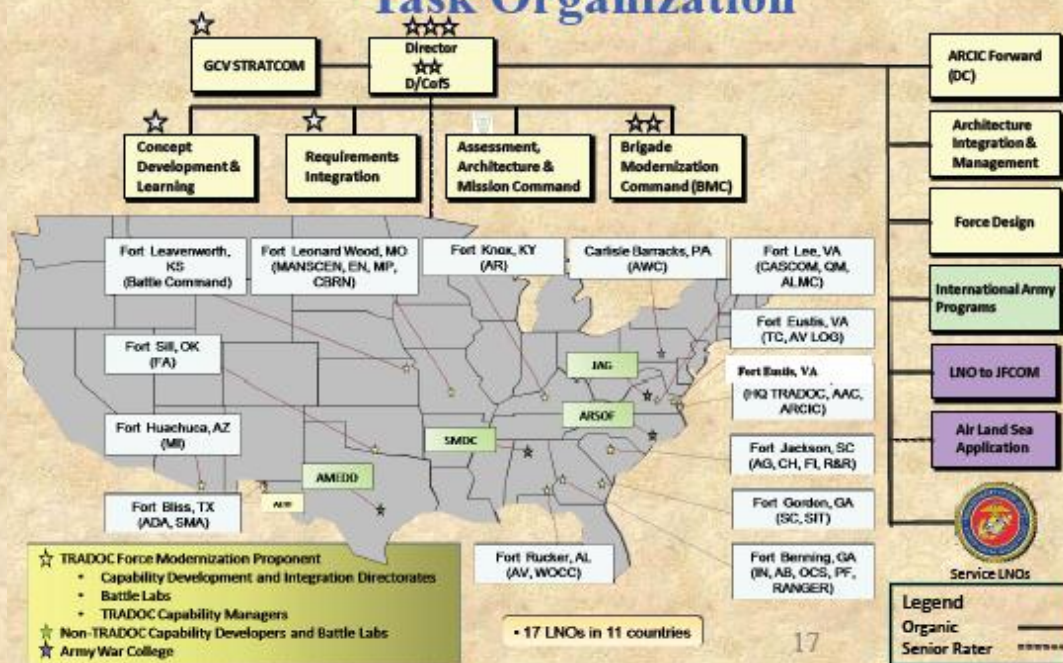


Army Capabilities Integration Center (ARCIC)

Mission

The ARCIC leads the development and integration of force capabilities across the DOTMLPF for the Army within a Joint, Interagency, Intergovernmental and Multinational (JIIM) environment to support the Joint Force Commander through ARFORGEN

Task Organization

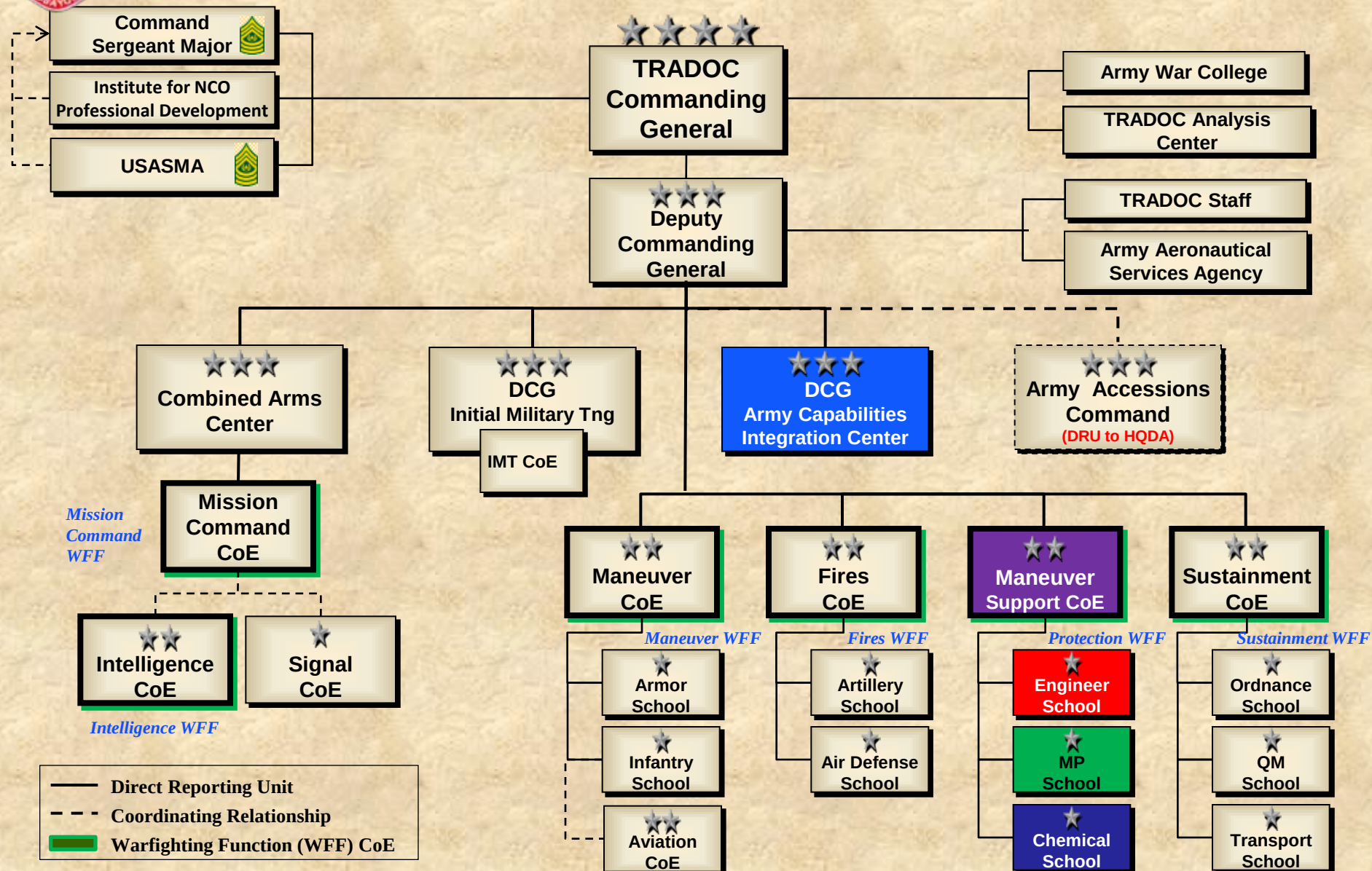


- Single agent for Architect of the Future Army
- Army's integrator for current and future force capabilities developments

ARFORGEN: Army Force Generation

DOTMLPF: Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities

TRADOC Centers of Excellence (CoEs)





Integrated Capabilities Development Teams (ICDTs)

What: an integrating team made up of multi-disciplined personnel

Purpose: Prioritize, integrate, and synchronize all DOTMLPF requirements within the assigned function portfolio as informed by the assigned warfighting Army functional concept (AFC)

Key is simplicity and flexibility:

- ICDTs are:
 - chartered by Director, ARCIC
 - chaired by a TRADOC CoE
 - produce deliverables

*Empowered
participants
essential*



Required Capabilities Identification for Environmental Considerations and Sustainability



EC & Sustainability Tasks in Base Camp CBA

RC 1- EC & Sustainability Tasks



RC 2 - EC & Sustainability Tasks RC



RC 4 - EC & Sustainability Tasks RC



RC 3 - EC & Sustainability Tasks RC



RCs 5 & 6 - EC & Sustainability Tasks



81 related tasks
24 direct tasks



Base Camp CBA Summary



37 Areas related to Environmental Considerations and Sustainability

- **Conduct geospatial engineering operations and functions**
- **Master planning/design and Real Estate – land use, Environmental Baseline Surveys (EBS), abandon, dismantle, and demolish base camps**
- **Utilities – power generation and distribution systems, physical plants, utility infrastructure**
- **Water (potable and non- potable) production, distribution and management**
- **Environmental, Safety, Occupational Health (ESOH) and hygiene support services (i.e. fire prevention and response or spill control)**
- **Maintain water (potable and non- potable) production and distribution**
- **Sanitation, waste collection, and treatment systems**
- **Construction materials management and reuse – modular, scalable, sustainable**
- **Integrated pest management and vector control support.**
- **Force health protection**



Sustainment CBA

Chapter 4 (Other Services) Annex B



7 Specific Required Capabilities for Environmental Considerations and Sustainability Identified

- **Assess/predict effects of EC when conducting full spectrum operations.**
- **Provide environmental support when conducting full spectrum operations.**
- **Provide waste management when conducting full spectrum operations.**
- **Provide environmental clean up when conducting full spectrum operations.**
- **Provide environmental engineering reconnaissance/survey when conducting full spectrum operations.**
- **Provide engineering in order to assure mobility, enhance protection, enable expeditionary logistics, build capacity, and minimize environmental impacts.**
- **Plan design, construct, operate, transfer and close base camps in a joint, international and multinational environment to provide safe, secure, and largely self-sustaining base camps to support full spectrum operations.**



DOTMLPF Analysis Solution Summary

- D**
- Revise and update doctrine for large scale clean up operations to include sampling requirements and procedures.
 - Revise and update doctrine on battlefield assessment/prediction of effects of environmental conditions.
 - Increase Engineer Facilities Detachments (EFDs) to 1 per base camps with 5000 people or more.
 - Increase Forward Engineer Support Teams (FEST)-As and FESTs-Main.
- O**
- Assign environmental engineers to 1 per BN.
 - Provide waste management SME support in development of contract performance work statements/ scopes of work for contracting personnel.
- T**
- Train Soldiers in environmental sampling procedures.
 - Revise lesson plans for more in-depth instructional blocks on EC & Support for the EC CCC, BOLC, WOAC, WOBC
 - Develop and train Individual common Soldier Environmental support tasks for the Army.
- m**
- Increase quantity of waste management equipment sets currently found in Force Provider to provide for each 600-man sized base camp component.
 - Develop SKOs for the engineers or base camp mayor cells to include waste management equipment such as waste incinerators that are available commercially but need to be modified to meet expeditionary basing requirements. Modify Environmental Sampling Kits SKOs based off of USAPHC sampling kits.
- M**
- Develop Environmental Sampling Kits SKOs.
 - Adapt ENFIRE or FIRESTORM or IKE to include environmental data collection.
 - Modify existing laboratory capability from AMEDD, CID, or Common Analytical Laboratory Systems for environmental sample analysis.
 - Develop IT for tracking, storing, archiving, and accessing environmental data.



DOTMLPF Analysis Solution Summary

- L**
 - Add instruction on environmental considerations to all PCCs to emphasize leaders including assessment/prediction of environmental conditions as part of their mission planning requirements.
 - Emphasize leader education on planning for life cycle of waste management in operations.
 - Emphasize to leaders the importance of including environmental reconnaissance/survey in early planning stages.
 - Emphasize to leaders the importance of conducting EBSs prior to occupying an area. Educate Leaders to ensure personnel tasked with conducting Environmental Baseline Surveys (EBS) are properly trained and equipped.
- P**
 - Develop and track an ASI or secondary MOS for environmental engineers.
 - Develop EPA-lab- qualified personnel to conduct lab analysis needed for environmental sample processing.
- F**
 - Provide training facilities that includes existing buildings, open areas, ranges, etc. for assessment/prediction of environmental effects.
- AP**
 - Revise/update Army policy on waste management to be more specific to standardize waste management in-theater.
 - Develop Army policy regarding tracking, storage, archiving, and documentation of environmental data.

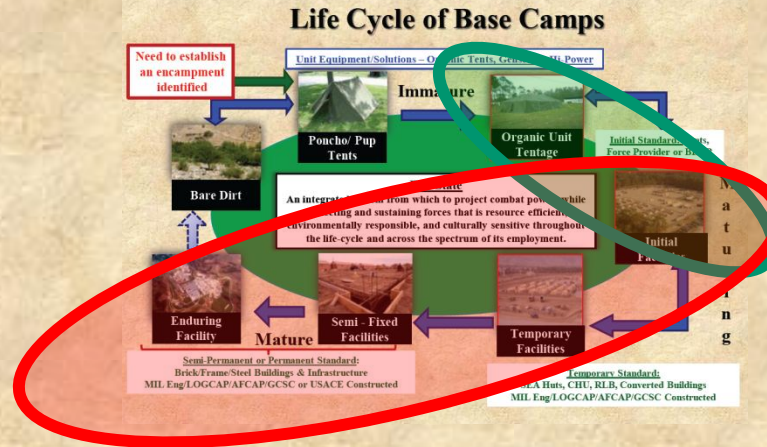


DOTM**LPF**

**Solutions addressing
Environmental
Considerations and
Sustainability**



MTOE Solutions vs Non MTOE Solutions



MTOE Solutions

- Routine Standardized DOTMLPF processes
- Non routine processes to expedite (ONS) typically low priority

Non MTOE Solutions

- NO Standardized DOTMLPF processes
- Non routine processes to expedite (ONS) typically low priority and more justification required



Possible Way Ahead for Non MTOE Solutions



- **Develop Standards for related equipment sets**
- **Evaluate possible equipment sets**
- **Develop listing of acceptable products and vendors**
- **Develop appropriate contract language for procurement when needed**



Discussion

Questions?

