



# Team Muhandis: Building Great Iraqi Army Engineers

*By Major Jason L. Buursma and Captain Thomas G. Fitzpatrick*

## The Road to a New Dawn

**T**hroughout Operation Iraqi Freedom and Operation New Dawn, U.S. and coalition forces worked to develop an Iraqi Army engineer force capable of supporting and defending the sovereignty of Iraq. These efforts built on years of work by officers and noncommissioned officers from all services and coalition partners. Australia, in particular, contributed significantly to the training effort throughout Operation Iraqi Freedom. For several years, the Australians provided an engineer officer to serve as the officer in charge of Team Muhandis (Engineer), the Multi-national Corps–Iraq engineer section advising Iraqi Army engineers. These field grade officers served 6-month tours, advising Iraqi Army engineer senior leaders and synchronizing efforts and information with subordinate engineer brigades and military transition teams.

In early 2011, the XVIIIth Airborne Corps assumed responsibility as part of U.S. Forces–Iraq (USF-I) to complete Operation New Dawn. The USF-I joint engineer staff (J-7) worked to enable a trained and equipped Iraqi Army engineer force to support the internal and external defense of the country. Team Muhandis led the J-7 efforts in this strategic mission by—

- Conducting key leader engagements with the Joint Headquarters Military Engineering (M10) Directorate and Iraqi Ground Forces Command (IGFC) engineers.
- Synchronizing engineer training efforts across multiple Iraqi organizations.
- Providing oversight of new equipment fielding to build engineer capability.

Team Muhandis devised a targeted approach to build Iraqi Army engineer capability. The team developed the following three focus areas to enable a minimum-essential capability as the end of the mission approached:

- Route clearance.
- Sustainment.
- Bridging.

## Route Clearance Capability

**T**eam Muhandis coordinated with division engineers, division level cells training Iraqi Security Forces (ISF), and the 20th Engineer Brigade to synchronize partnership efforts and track the progress of route clearance capability. The team also worked with the Iraqi Training

## Report Documentation Page

*Form Approved  
OMB No. 0704-0188*

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1. REPORT DATE <b>APR 2012</b>	2. REPORT TYPE	3. DATES COVERED <b>00-00-2012 to 00-00-2012</b>			
4. TITLE AND SUBTITLE <b>Team Muhandis: Building Great Iraqi Army Engineers</b>		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Army Engineer School, Engineer Professional Bulletin, 464 MANSCEN Bldg 3201 Ste 2661, Fort Leonard Wood, MO, 65473</b>		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>	<b>Same as Report (SAR)</b>	<b>4</b>	



**Soldiers from the 1st Cavalry Division train soldiers from the 14th Field Engineers Regiment to operate the interrogator arms of their light armored vehicles.**

and Advisory Mission and the M10 directorate to speed up the fielding of 45 Iraqi light armored vehicles to fill shortages in Iraqi Army route clearance teams. This combined training and resourcing effort led to a significant increase in qualified route clearance teams across Iraq. With the drawdown of forces, U.S. forces had fewer military transition teams and partnering units available to track ISF engineers, making it difficult to track the activities of each Iraqi Army field engineer regiment.

Team Muhandis coordinated with the IGFC engineer staff to refine weekly and monthly reports to include information useful to U.S. forces. This let the IGFC see its engineer capabilities more clearly and provided good situational awareness for U.S. forces. The added detail also led to an increased emphasis on route clearance. In some cases, Iraqi engineer units refused to conduct missions with their U.S. engineer partners. This was often resolved by the IGFC simply issuing a directive to the Iraqi unit to conduct partnered operations. Team Muhandis also initiated a weekly online meeting with division engineers and 20th Engineer Brigade staff officers to discuss issues common to many Iraqi Army engineer units. Team Muhandis was then equipped to provide feedback to the IGFC and the M10 and to influence Iraqi Army command emphasis to resolve problems.

## Sustainment Challenges

**S**ustainment continues to be a challenge for Iraqi Army engineers as their logistical and maintenance system suffers from a variety of long-standing problems, from the unit to the national level. In early 2011, the Iraqi Army engineer depot level repair facility was merely a building without power or equipment and had only a few Soldiers present to manage operations. Team Muhandis influenced key Iraqi Army leaders to put greater emphasis on developing and strengthening national-level engineer sustainment units. A competent new Iraqi Army commander was placed in command of the repair facility, and the operation moved to a building suitable for depot level repairs. Team

Muhandis also helped the unit correct critical deficiencies, including—

- Mechanic training.
- Power generation.
- Shortage of repair parts.
- Shortage of equipment such as tool kits and vehicles.



**Iraqi light armored vehicle maintenance specialists train Iraqi mechanics.**

*“Team Muhandis influenced key Iraqi Army leaders to put greater emphasis on developing and strengthening national level engineer sustainment units.”*

The team coordinated equipping solutions through the Iraqi Training and Advisory Mission, but also discovered that Iraqi Army engineers could help themselves with many of their challenges. The M10 directed that two Iraqi Army engineer sustainment units be relocated to Contingency Operating Site Taji, where other national engineer assets were located. In many cases, one unit had excess items that were a shortage in another unit. Team Muhandis and the 20th Engineer Brigade facilitated meetings and coordination between different engineer units to cross-level resources. The units benefited, and U.S. advisors could build capacity faster in under-resourced units.

### **Military Bridging Training and Equipping**

**T**he 20th Engineer Brigade was tasked to build Iraqi Army bridge capability. The brigade dedicated a full-time team, plus trainers from the 74th Multirole

Bridge Company, to help transform the Iraqi Army Strategic Bridge Company (originally organic to the Headquarters Field Engineer Regiment) into a Headquarters Bridge Regiment. This action required extensive assistance and coordination with Iraqi Army engineer leaders to resolve manning, equipping, and facility issues. The most difficult task was advising and assisting the transfer of personnel and equipment to support the transformation. Once the major issues were resolved, Soldiers from the U.S. bridge company trained the Iraqi unit on the emplacement of the assault float bridge, Mabey-Johnson bridge, and medium girder bridge. They also trained operators on bridge support equipment.

The equipping effort required extensive coordination between U.S. and Iraqi Army leaders. The USF-I staff clarified procedures as equipment was transferred to the Iraqi




**Soldiers from the 74th Multirole Bridge Company teach Iraqi Army soldiers to employ a bridge across the Tigris River.**

Army under a number of different programs, each requiring a unique process. The staff work was complicated but necessary to properly equip the Iraqi Army engineers.

The 20th Engineer Brigade provided premier training to Iraqi Army engineers, who learned quickly but had high rates of turnovers and transfers. Iraqi and U.S. leaders were concerned about the loss of trained bridging personnel, so the 20th Engineer Brigade worked with the Iraqi Army Engineer School to provide bridging instructors and equipment. By ensuring that bridge instructors and equipment were built into the generating force, they set the conditions for long-term training proficiency in the operating force. These trainers will be essential to the Iraqi Army as it works to expand its bridging capacity from a company to a regiment.

### The Way Ahead

**F**uture advisors at the national level can replicate some of our successes by facilitating communication across all advise, train, assist, and equip elements through conducting informal coordination meetings; receiving issues from the lower echelons; and facilitating solutions through the national headquarters. The advisors can help Iraqi Army units help themselves by facilitating communication and coordination between units and ensuring that additional capabilities are resourced in the operating and generating forces. Finally, senior U.S. leader involvement is critical to make these efforts succeed.

Throughout 2011 and Operation New Dawn, Iraqi Army engineers demonstrated significant progress, specifically in the areas of route clearance operations, engineer sustainment, and logistical support bridge emplacement and repair. Going forward, they must continue to support internal security operations while training to defend their country against external threats, thus enabling a more stable, sovereign, and self-reliant Iraq. The future of Iraq is in their hands. 

*Major Buursma served in a variety of positions, including Team Muhandis officer in charge, during Operation New Dawn. He also served as an Iraqi Army field engineer regiment advisor, 2008–2009. He holds a bachelor's degree in computer science from Wheaton College and a master's degree in engineering management from the University of Missouri–Rolla (now Missouri University of Science and Technology).*

*Captain Fitzpatrick served in a variety of positions, including IGFC engineer liaison officer, during Operation New Dawn. He also served as a route clearance platoon leader and company executive officer, 2006–2007. He holds a bachelor's degree in biology from East Carolina University and a master's degree in engineering management from Missouri University of Science and Technology.*

