OFFICE OF THE SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

Iraq Reconstruction

Lessons in Program and Project Management

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USAID Development Experience Clearinghouse

SIGIR Mission Statement

Regarding U.S. reconstruction plans, programs, and operations in Iraq, the Special Inspector General for Iraq Reconstruction provides independent and objective:

- oversight and review through comprehensive audits, inspections, and investigations

- advice and recommendations on policies to promote economy, efficiency, and effectiveness

- deterrence of malfeasance through the prevention and detection of fraud, waste, and abuse

- information and analysis to the Secretary of State, the Secretary of Defense, the Congress, and the American people through Quarterly Reports and other publications

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Special Inspector General
for Iraq Reconstruction

Iraq Reconstruction:

Lessons in Program and Project Management

3

[March 2007]

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PREFACE

Iraq Reconstruction: Lessons in Program and Project Management is the third and final Report of the Special Inspector General for Iraq Reconstruction's (SIGIR) Lessons Learned Initiative (LLI). Begun in September 2004, the LLI focused on three areas of the U.S. relief and reconstruction effort in Iraq:

- human capital management
- contracting and procurement
- program and project management

The LLI has sought to capture the key lessons learned from the Iraq reconstruction experience and to recommend systemic adjustments within the U.S. government aimed at promoting improved capacity and preparedness for future post-conflict relief and reconstruction operations.

The first LLI Report, *Iraq Reconstruction: Lessons in Human Capital Management,* was released in early 2006. SIGIR published its second Report, *Iraq Reconstruction: Lessons in Contracting and Procurement,* in August 2006. The collected observations of these two Reports amplified the need for targeted reform of U.S. contingency relief and reconstruction planning. Significantly, the U.S. government has responded to a number of issues raised in both of these Reports.[1]

For this Report, SIGIR reviewed all relevant documents and conducted extensive interviews with those possessing direct experience managing programs and projects in Iraq. On April 12, 2006, SIGIR presented the findings of this research to a panel of 27 experts, who participated in a day-long conference at the National Defense University in Washington, D.C. The participants, who are listed at the end of this Report, examined and discussed SIGIR's initial findings,

and the Report's subsequent direction was shaped largely by their collective insight.

Thousands of talented and dedicated men and women worked long hours under challenging and often dangerous circumstances to manage and execute the Iraq reconstruction program. They developed, in a very short period of time, a relief and reconstruction endeavor of unprecedented complexity and magnitude. The findings in this Report are intended neither to diminish their individual efforts nor to question their collective commitment. Rather, SIGIR has sought to factually review the evolution of program and project management in Iraq and to derive constructive lessons learned. Learning from the Iraq experience will improve the U.S. government's capacity to execute future relief and reconstruction operations in contingency environments.

OVERVIEW

The operation and management of U.S. relief and reconstruction efforts in Iraq was characterized by continual change. Three successive organizations bore responsibility for providing the program with strategic oversight and tactical direction: the Office of Reconstruction and Humanitarian Assistance (ORHA), the Coalition Provisional Authority (CPA), and the U.S. Mission-Iraq.

ORHA and CPA—both under the aegis of the Department of Defense (DoD)—were dissolved within 14 months of the conclusion of the 2003 invasion of Iraq. The U.S. Mission-Iraq—under the Department of State (DoS)—assumed oversight of the program at the end of June 2004. Each responsible entity developed successive

reconstruction strategies responsive to the evolving environment it faced in Iraq.

ORHA emphasized planning for what was expected to be a relatively short-term relief and reconstruction endeavor, developing strategies to ameliorate expected humanitarian crises and potential disasters, such as oil-field fires. ORHA's small reconstruction component intended to restore essential services rapidly back to pre-war levels. Its inchoate operations, however, were superseded by the advent of CPA in April 2003.

Concurrently, in April 2003, the Congress created the Iraq Relief and Reconstruction Fund (IRRF 1), appropriating $2.475 billion, the preponderance of which was allocated to the U.S. Agency for International Development (USAID). The scope and amount of IRRF 1 reflected what many expected the post-invasion situation in Iraq to require: rapid relief efforts, minimal reconstruction, and some stimulus for basic economic development. Moreover, the Administration expected that Iraqi oil revenue would be a primary source for reconstruction funds.

The initial plan anticipated that, within 12 to 18 months, Iraq would assume complete sovereignty, including full responsibility for relief and reconstruction efforts.[2] These optimistic projections presumed that Iraq would promptly take on the oversight of most programs and projects, except oil restoration, which would receive continuing support from the U.S. Army Corps of Engineers (USACE) under the Task Force Restore Iraqi Oil (RIO) program.

The events of summer 2003, however, substantially altered the U.S. strategy in Iraq, including its approach to relief and reconstruction. The virtual collapse of Iraq's governing structures, the recognition that Iraq's infrastructure was severely dilapidated, and the rise in insurgent attacks forced ORHA's successor organization, CPA,

to conclude that the relief and reconstruction effort anticipated by IRRF 1 would need to be greatly expanded. In addition, the breakdown in Iraq's oil production and export systems meant that oil revenue would not be sufficient to fund the program.

CPA thus requested a much larger supplemental appropriation than the Congress had provided in the IRRF 1. In November 2003, the Congress appropriated $18.4 billion for the new program, IRRF 2, which, pursuant to CPA's strategic plan, emphasized large-scale infrastructure projects. To oversee this revised and expanded program, CPA created a new management entity: the Program Management Office (PMO). By March 2004, 12 major contractors had won competitively bid, large contracts to design and build projects in six infrastructure sectors. To support PMO's management of these contractors, seven private-sector program management contractors were engaged. USACE partnered with PMO in this process, providing construction management and oversight. USAID's influence correspondingly diminished during this period.

On June 28, 2004, the United States transferred sovereignty to the Iraqi Interim Government (IIG). The U.S. Mission-Iraq concomitantly took the lead in reconstruction management, and the Iraq Reconstruction Management Office (IRMO) was created under DoS to assume responsibility for the strategic direction of the reconstruction effort. The change to DoS leadership led to another shift in reconstruction emphasis. Capital-intensive infrastructure projects, funded by the bulk of the IRRF 2, were given less prominence. And the worsening security situation required substantial funding to be shifted to support the Iraqi Security Forces. USAID, which had a diminished voice during CPA's tenure, regained prominence. And PMO became the Project and Contracting Office (PCO), which continued oversight of most construction projects. USACE's Gulf

Region Division (GRD) increased its management presence and eventually absorbed PCO.

Key Questions

In this Report, SIGIR explores five key questions about program and project management:

- How did the original reconstruction planning efforts affect the ability of managers to oversee the execution of the initial relief and reconstruction projects?
- How was CPA's PMO structured, and what were the advantages and disadvantages associated with this model?
- What were the causes and effects of the reconstruction delays in fall 2003 and winter 2004?
- How did managers meet the challenge of constant change—particularly the reprogramming that occurred during the summer and fall of 2004?
- What were the key execution issues relating to managing subcontractors and Iraqi firms, cost controls for U.S. and non-U.S. funds, and implementing performance metrics and capacity-development initiatives?

This Report is organized into three sections:

Pre-ORHA through Early CPA (Fall 2002 to August 2003)—*Initiating the Program*: Section one provides an overview of the planning environment, which had a direct effect on the capacity of program managers to execute and control reconstruction projects.

The Later CPA Period (August 2003 to June 2004)—*Re-initiating the Program*: Section two analyzes PMO and the delays in executing reconstruction projects during this period.

U.S. Mission/Iraqi Government (July 2004 to Present)—*Executing and Controlling the Program*: Section three focuses on the three program realignments and their effect on the execution of the reconstruction program. This section also discusses the management of reconstruction projects, including performance management, cost and quality control, and capacity development.

A Note on Scope and Methodology

To define program and project management, this Report uses the Project Management Institute's (PMI) definition of these terms:

- A *project* is a "temporary endeavor undertaken to create a unique product of service."
- A *program* is a "group of related projects managed in a coordinated way."

This Report also uses PMI's five phases of program and project management: initiating, planning, executing, controlling, and closing. Within these phases, key components of project management—including scope, time, cost, quality, people, communication, and risk—are discussed.[3]

The development of contracting plans and the solicitation of contract awards are explained in *Iraq Reconstruction: Lessons in Contracting and Procurement*. Workforce planning, recruitment, and continuity of staff are discussed in SIGIR's first Lessons Learned Report, *Iraq Reconstruction: Lessons in Human Capital Management*.

This Report describes the management and execution of IRRF, seized, vested, and DFI funds. It does not directly discuss the management of other funding streams, including the Economic Support Fund and the Iraq Security Forces Fund.

RECOMMENDATIONS

RECOMMENDATIONS

Program management in Iraq grew increasingly complex from 2003 to 2007, ultimately involving hundreds of contractors and thousands of projects. The reconstruction effort required, but did not initially receive, consistent and effective oversight. U.S. policymakers repeatedly shifted strategy in response to the constantly changing circumstances in Iraq. These policy shifts, including leadership changes, meant that program managers not only dealt with long periods of uncertainty, but also had to adjust to new systems, procedures, and reporting requirements. This compounded the difficulty of delivering projects on time, within scope and budget.

Over the past four years, DoD, DoS, and USAID have adapted to relentless and challenging demands with commitment and agility, internalizing and drawing on important lessons learned in the course of their work. SIGIR offers these recommendations, based on these lessons learned, to both help the ongoing Iraq relief and reconstruction program and to promote systemic adjustment through legislative and regulatory reform. Such reforms are essential to preparing the United States for future post-conflict contingency relief and reconstruction operations.

1. The Congress should consider a "Goldwater Nichols"-like reform measure to promote better integration among DoD, USAID, and DoS, particularly with respect to post-conflict contingency operations.

In 1986, the Goldwater-Nichols Act initiated a fundamental reorganization of the Department of Defense. As a result of this Act, U.S. forces increased cooperation and integration. It was not an easy process, but over the past twenty years, the United States has benefited greatly from the improved coordination among the military services.

The Iraq experience illustrates the need to expand cooperation and integration across U.S. agencies, but most especially among DoD, DoS, and USAID. Unlike other agencies, these three have missions that require them to operate primarily outside the United States and engage constantly with other governments and international entities.

Steps have already been taken to move this integration forward. National Security Presidential Directive 44 and DoD Directive 3000.05 both encourage interagency cooperation. USAID has created an office of military affairs to serve as a liaison to DoD. DoS, in response to NSPD-44, established the Office of the Coordinator for Reconstruction and Stabilization. USAID and DoS staff regularly attend military training exercises to share lessons learned and to brief military personnel on their responsibilities and capabilities. DoD's Joint Concept Development and Experimentation Office is currently looking at ways to improve civilian/military planning. These steps, although important, are just a beginning. The experience of the Goldwater-Nichols Act suggests that the Congress should consider new legislation that could advance further cooperation among DoD, DoS, and USAID on post-conflict contingency reconstruction and relief planning and execution.

2. The Congress should adequately fund the Department of State's Office of the Coordinator for Reconstruction and Stabilization.

The Office of the Coordinator for Reconstruction and Stabilization (S/CRS) was created by the President in response to the need for better post-conflict contingency coordination among U.S. departments. S/CRS completed a post-conflict implementation plan in October 2006. This plan identifies short-, medium-, and long-term tasks that the U.S. government should execute to improve planning,

preparation, and execution of post-conflict contingency operations. The plan commendably seeks to address many of the lessons learned from Iraq that SIGIR and others have identified. Most important, it aims at institutionalizing ongoing interagency contingency exercises and developing a civilian reserve corps. A lack of funding and weak recognition of S/CRS by some agencies have prevented the plan from being fully realized. The Congress should provide S/CRS with the funding and authority to fulfill its mission.

3. The U.S. government should clarify the authorities of the multiple agencies involved in post-conflict operations to avoid ambiguity over who is in charge.

Although no single U.S. agency demonstrated the capacity to manage the large and complex Iraq program alone, the resultant and unavoidably *ad hoc* response that sometimes ensued was less than optimal. Developing *ad hoc* organizations in theater, such as the PMO and IRMO, consumed significant U.S. resources and time. Moreover, these new offices did not have the appropriate staff, procedures, systems, or institutional strength to direct effectively the complex interagency rebuilding effort.

S/CRS should be fully empowered to take up its presidentially mandated responsibility for coordinating the planning for future contingency relief and reconstruction operations. Additionally, S/CRS should be provided legal authority, working within the interagency structure and guidelines, to decide who should be in charge of what in any post-conflict reconstruction operation.

4. Existing agencies should institutionalize the most effective project management systems, procedures, policies, and initiatives developed during the Iraq reconstruction effort.
Because U.S. government agencies did not have appropriate systems in place to properly manage a program of the magnitude and complexity of the IRRF, they often created new systems and procedures. Over time, many of these procedures became effective in practice. USAID, DoS, and DoD, should identify and institutionally incorporate the best practices from the Iraq experience.

5. Program managers should integrate local populations and practices at every level of the planning and execution process.
In planning for future contingency operations, the U.S. government should involve, from the outset, a broad spectrum of individuals with familiarity about the affected nation (from policy makers to contractors to international experts). In Iraq, successful reconstruction managers took the time to understand local customs and practices.

Project design and execution should incorporate local contractors and vendors. Also, planning for projects should consider local and regional quality standards, rather than trying to impose U.S. standards, which too often caused increased cost and delayed execution in Iraq.

6. Funding designated for post-conflict contingency programs should support flexible programs and projects that yield both short- and long-term benefits.
Consideration should be given to developing multi-year programs with properly-sequenced reconstruction projects. Both short- and long-term relief and reconstruction programs can be better planned

and implemented through a multi-year financing strategy rather than through unscheduled supplemental appropriations. Contingency funding should also be made available for essential but unforeseen programs and projects. In Iraq, adequate reserves were not set aside to fund unanticipated projects, and the frequent reprogramming of funds adversely affected outcomes in several infrastructure sectors.

7. Develop policies and procedures to manage non-U.S. appropriated funds.

The United States deployed to Iraq without standardized policies and procedures to manage non-U.S. appropriated funds (e.g., the Development Fund for Iraq). Policies and systems were thus developed reactively and not implemented consistently. As a result, there were questions about the accountability of non-U.S. funds. As oversight entities pursue allegations of waste, fraud, and abuse, jurisdictional questions continue to surface. Before contingency operations begin, planners should develop clear policies regarding the management of non-U.S. funds.

8. Develop comprehensive planning for capacity development.

Before approving reconstruction funds, the Congress should require agencies to present a capacity-development strategy that will enable the effective transfer of operational responsibility for reconstruction projects to the host country.

In Iraq, capacity-development programs were not adequately integrated into the overall effort. Projects should include an organizational and management component as well as training in operations and maintenance.

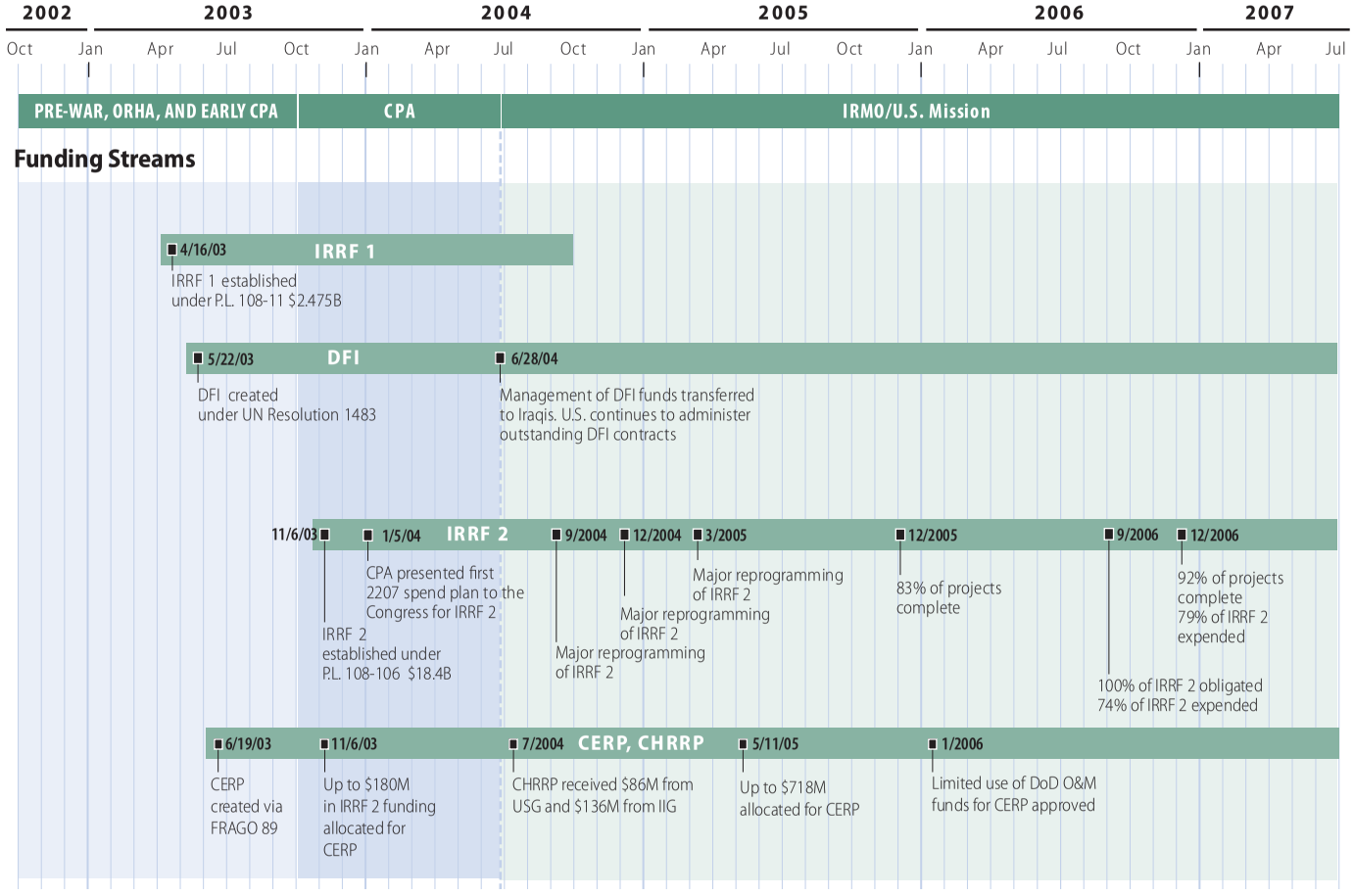
9. Future post-conflict contingency planning should provide for well-resourced and uninterrupted oversight of relief and reconstruction programs to ensure effective monitoring from the outset and permit real-time adjustments.

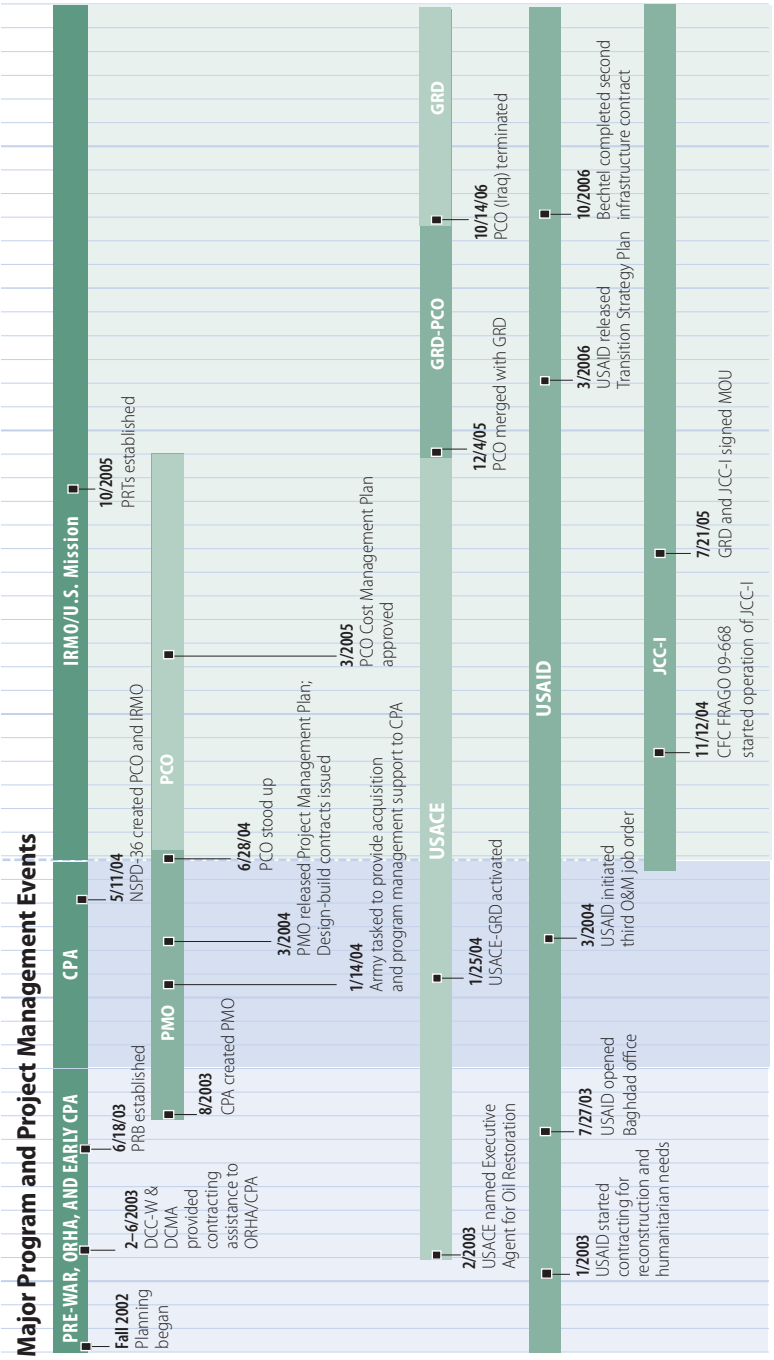
An effective monitoring and oversight plan needs to be in place within each agency from the outset of contingency operations. This will allow for early and direct feedback to program managers, who can implement course corrections in operating practices and policies. Early and effective oversight will also deter fraud, waste, and abuse. For construction projects, there should be consistent oversight, including appropriate quality assurance and quality control programs. In Iraq, successful projects were usually those that received good quality assurance and effective quality control.

Operations that involve multiple agencies, funding streams, and management systems require that the Congress take steps to standardize oversight and provide clear guidance on any reporting requirements involving multiple agencies.

IRAQ RECONSTRUCTION

Program and Project Management Timeline




Major Program and Project Management Events
PRE-WAR, ORHA, AND EARLY CPA
CPA
IRMO/U.S. Mission
Fall 2002
Planning began
2–6/2003
DCC-W & DCMA provided contracting assistance to ORHA/CPA
6/18/03
PRB established
PMO
8/2003
CPA created PMO
5/11/04
NSPD-36 created PCO and IRMO
PCO
6/28/04
PCO stood up
3/2004
PMO released Project Management Plan; Design-build contracts issued
1/14/04
Army tasked to provide acquisition and program management support to CPA
3/2005
PCO Cost Management Plan approved
10/2005
PRTs established
USACE
2/2003
USACE named Executive Agent for Oil Restoration
1/25/04
USACE-GRD activated
GRD-PCO
12/4/05
PCO merged with GRD
GRD
10/14/06
PCO (Iraq) terminated
USAID
1/2003
USAID started contracting for reconstruction and humanitarian needs
7/27/03
USAID opened Baghdad office
3/2004
USAID initiated third O&M job order
3/2006
USAID released Transition Strategy Plan
10/2006
Bechtel completed second infrastructure contract
JCC-I
11/12/04
CFC FRAGO 09-668 started operation of JCC-I
7/21/05
GRD and JCC-I signed MOU

PRE-ORHA THROUGH EARLY CPA (FALL 2002 TO AUGUST 2003)—INITIATING THE PROGRAM

Before military operations began in March 2003, several reconstruction plans were in place. Federal agencies had developed these various plans in classified environments to prevent speculation about war plans. As a result, they often worked independently from each other.[4]

Some assumptions upon which these plans were based later proved inaccurate, and the plans were never fully integrated into a single operational strategy. This lack of coordination subsequently affected the capacity of program managers to execute projects in Iraq.[5]

Initial Planning for Relief and Reconstruction

Iraq reconstruction planning began during the fall of 2002.[6] The National Security Council (NSC) Deputies Committee and the Office of Management and Budget (OMB) sponsored interagency working groups to prepare post-war plans. DoD created Joint Task Force IV[7] to coordinate post-war plans, and other U.S. agencies, including USAID, developed internal planning groups.

In January 2003, just two months before the start of the March 2003 invasion, ORHA was established as a temporary organization under DoD to coalesce the existing plans for humanitarian assistance and reconstruction. The establishment of ORHA, and the shift from an NSC to a DoD-led effort, was the first major evolution in the reconstruction program. ORHA was established partly because it became clear that there was a need for an operational entity on the ground in Iraq to play a primary coordinating role.[8] But it proved

The plans were **never fully integrated** into a single operational strategy. This lack of coordination **subsequently affected the capacity of program managers** to execute projects in Iraq.

more challenging than expected to integrate the "disparate team of government agencies"[9] involved under a newly created and poorly resourced lead organization.

ORHA comprised individuals from a variety of agencies[10] and backgrounds, with responsibilities divided into three pillars:

- humanitarian assistance
- civil administration
- reconstruction

Several assumptions influenced planning across each of ORHA's three pillars. The expectation that a significant humanitarian crisis would occur meant that assistance resources were focused on providing refugees with water, food, and medicine. Reconstruction funding was limited and was designed to target critical infrastructure[11] in order to bring Iraq's essential services back to pre-war levels. Iraq was expected to rapidly assume the financial burden for much of the reconstruction program with funding from oil revenues.[12]

Reconstruction planners assumed that events in Iraq would follow a fairly linear progression from war to recovery to stability. Humanitarian relief would supplant martial activity, and stabilization would permit rapid reconstruction.[13] In February 2003, an interagency exercise, held in Washington, D.C., anticipated that a lack of security could cause looting, but no specific strategy to prepare for this contingency was developed.[14] Stability was expected to be achieved relatively soon after hostilities ceased.

> I think our assumption [was that we would] have a certain degree of stability. The Iraqis are going to go back to work, the ministries aren't going to be looted. You're essentially going to have a functioning state, but unlike Bosnia, our assumption was this is an oil-rich state. So, within a year or maybe 18 months…there will be oil revenues flowing…
>
> [We planned] out a series of discrete interventions…that [would] keep the place from falling apart and do the absolutely critical things that need[ed] to be done to pull Iraq back together…[until the] oil revenues [would come] pouring into the country…. Planning was done on operating assumptions that [were] so radically different from what ultimately evolved…[15]

The key assumptions regarding the anticipated post-conflict environment in Iraq—that stabilization would be quickly achieved; that Iraq's governing institutions would resume operations; and that oil revenues would provide reconstruction funds—drove the plans developed by each of ORHA's three pillars.

HUMANITARIAN ASSISTANCE PILLAR

DoS and USAID partnered to develop ORHA's humanitarian assistance pillar, which focused on preparing for the anticipated humanitarian crisis. The DoS Bureau of Population, Refugees, and Migration joined with USAID's Office of Foreign Disaster Assistance (OFDA), to develop an assistance program aimed at providing immediate relief—including food, water, shelter, and medical care—to displaced Iraqis.

USAID's Disaster Assistance Response Team (DART), managed by OFDA, deployed to the Gulf Region and prepared to move into Iraq to meet the immediate needs of internally displaced persons.[16] Before deployment, the DART team had participated in exten-

sive preparatory exercises, including disaster assistance training,[17] instruction on Iraqi culture, and safety procedures. DART spent approximately $1 million on these preparations.[18] USAID's Office of Transition Initiatives (OTI)—an office that provides "fast, flexible short-term assistance targeted at key political transition and stabilization needs"[19]—partnered with DART in these efforts.

By the time hostilities began in March 2003, the humanitarian pillar's staff[20] was in place in the Gulf Region, contingency funding was available,[21] and contractors and non-governmental organizations (NGOs) were engaged. Importantly, by February 2003, the DoS/USAID interagency effort accomplished several important staging milestones:

- pre-positioned supplies throughout the region, totaling $26.5 million[22]
- fielded a 65-person team
- established a 24-hour support office
- secured contingency support funding through USAID
- identified and funded contractors and grantees

CIVIL ADMINISTRATION PILLAR

The strategy for the civil administration pillar was intended to rapidly re-establish Iraqi governmental functions after hostilities ceased. This approach called for Coalition senior advisors to help Iraqi civil servants continue to operate Iraqi ministries,[23] thereby maintaining the delivery of critical services, particularly water and electricity.

Unlike the humanitarian assistance pillar, the civil administration pillar, which operated under the aegis of DoD, accomplished little preparation before deploying to Iraq. The civil administration team was not sufficiently staffed, adequate funding had not been secured,

DoD **deployed** without adequate funding mechanisms, contracting support, or contract administrators **to assist the senior advisors' activities** with Iraqi ministries.

and contractors required to supplement the staff had not been identified.

> There was no pre-planning done to address the civil administration needs. There was an assumption that Iraqis who normally took care of such things would continue to do so. When they didn't, there was no plan in place on how to make these civil administration tasks happen.[24]

DoD deployed without adequate funding mechanisms, contracting support,[25] or contract administrators to assist the senior advisors' activities with Iraqi ministries.[26] Although logistics and basic service support was to be provided through the Army's Logistics Civilian Augmentation Program (LOGCAP) contract,[27] the means for providing adequate funding to support senior advisors' activities with Iraqi ministries were not established in advance.

ORHA's Comptroller and his limited team were prepared to manage the operating budget of ORHA[28] but not to support reconstruction projects. The Principal Deputy Under Secretary of Defense, Acquisition, Technology, and Logistics requested that the Defense Contract Management Agency (DCMA) provide contracting support for ORHA, but specifically stated that DCMA's support would not include reconstruction and humanitarian efforts.[29] Only after arriving in Kuwait—and in response to increasing requests made once operations were established in Iraq—did the ORHA

Comptroller's team expand its mandate and establish procedures to support reconstruction activities.[30]

RECONSTRUCTION PILLAR

In the fall of 2002, before the creation of ORHA, the NSC and OMB sponsored initial planning for the reconstruction program. U.S. agencies involved included DoD, DoS, USAID, the Department of the Treasury (Treasury), and the Department of Justice. With the creation of ORHA, these interagency working groups became less active,[31] and ORHA designated USAID to lead the reconstruction pillar, thereby activating many of the plans that USAID had already been developing.

Agency Relief and Reconstruction Plans

USAID developed relief and reconstruction plans for ten sectors: health, education, water and sanitation, electricity, shelter,[32] transportation, governance and rule of law, agriculture and rural development, telecommunications, and economic and fiscal policy.[33] These plans included "benchmarks to be achieved within one month, six months, and one year."[34] Activities targeted critical program interventions[35] to bring Iraqi essential services back to pre-war levels.

During the fall of 2002, USACE concomitantly evaluated possible post-conflict damage scenarios for Iraq and developed a cost estimate for the reconstruction of Iraq's infrastructure. The team estimated that the reconstruction effort would require $35 billion, based on a moderate damage scenario. USACE had not been specifically tasked to do this, and it is unclear whether this estimate was ever disseminated to inform others engaged in post-conflict planning.[36]

In March 2003, the Department of the Treasury created the Iraq Financial Task Force (IFTF) to "coordinate the planning and execution of Treasury's role in post-war stabilization, administration, and reconstruction of Iraq."[37] Specific efforts included planning for a new Iraqi currency. Treasury also provided technical advisors to assist the Iraqi Ministry of Finance and the Central Bank of Iraq.

USAID concurrently began issuing contracts to support the planned relief and reconstruction effort, with most contracts issued during the spring of 2003.[38] These contracts were eventually funded by IRRF 1, which the Congress approved in April 2003. The scopes of work for these contracts were based on easily accessible information about the country and region, which often proved to be inconsistent and/or misleading. For example, although program managers were able to develop fairly detailed plans for the rehabilitation of the Port of Umm Qasr (because of sound intelligence information), there was limited data available on the condition of Iraq's water sector, and thus the scopes of work for projects in this sector were correspondingly inadequate.[39]

USAID deployed with approximately 27 personnel, including sector managers, contracting experts, financial officers, logistical teams, and inspector general personnel. USAID also hired a contractor to provide additional program management and logistical support, developing a "Mission-in-a-Box"—the people and systems needed to manage the anticipated effort in Iraq.[40]

USAID headquarters established an Iraq reconstruction office in Washington, D.C., comprising USAID personnel and contractors. This office acted as a liaison, providing reach-back and technical advice to USAID/Iraq. USAID also prepared to establish a relatively large infrastructure office in Iraq to manage USAID's largest contract—a $1.03 billion infrastructure project awarded to the Bechtel

Corporation in April 2003. USAID's Iraq infrastructure office was staffed by approximately 24 USAID and contract personnel.

In late February 2003, the Department of the Army tasked USACE to repair the expected damage to Iraq's oil infrastructure and to restore Iraqi oil and gas production capacity to pre-war levels.[41] USACE's Southwest Division was given the mission, and Task Force Restore Iraqi Oil (RIO) was formed to execute the program. To support the RIO effort, USACE entered into a contract with KBR[42] and mobilized more than 100 USACE personnel, including project managers for oil production, refined products, communications, and security.[43]

USACE expressed interest in becoming more involved in international reconstruction efforts.[44] Some believed that USACE was better suited—given its experience and mission—to oversee construction projects than USAID. This created some tension[45] between the two agencies; but ultimately, in May 2003, the decision was made to have USAID and USACE enter into an interagency agreement that tasked USACE personnel to provide construction management and quality assurance support for USAID's infrastructure projects. Specifically, USACE was to help "ensure that the reconstruction contractor's work [was] completed in accordance with the job order, international standards, environmental requirements, and in compliance with U.S. government policies."[46]

In addition to forming Task Force RIO and partnering with USAID, USACE planned to deploy up to ten Forward Engineering Support Teams (FESTs) to the region to support engineering needs in Iraq. These teams of five to ten military and civilian personnel were intended to augment an operational military unit's existing engineering capability. Their primary responsibility was to conduct

assessments of infrastructure needs encountered by the operational units.[47] The teams employed "tele-engineering" to access support offered in the United States by a mix of military and civilian staff at the Engineer Infrastructure and Intelligence Reachback Center.[48]

In addition to its infrastructure reconstruction projects, USACE provided senior advisors to specific ministries such as irrigation, electricity, housing and construction, transportation and communications, and health.[49]

FUNDING AND THE ORIGINAL RECONSTRUCTION GOALS AND EXPECTATIONS

In April 2003, the Congress appropriated $2.475 billion to IRRF 1 under Public Law (P.L.) 108-11. The Congress designed the law to be flexible and to allow the transfer of funds across sectors (subject to notification). It also permitted reimbursement to agencies that had expended their own funds on reconstruction planning and activities.[50]

USAID's "Vision for Iraq" plan supported much of the initial request for reconstruction funding under IRRF 1. NSC and OMB approved the plan in February 2003,[51] which included milestones and goals for key sectors and established a timeframe for completing projects. Many of the goals defined by USAID sought to achieve quick results and reflected specific targets provided by the NSC or created by USAID in response to directives from the NSC.[52] USAID included several of the same outcomes outlined in the document in the scopes of work for its initial reconstruction contracts. However, the plan did not clearly define what it meant to restore Iraq's infrastructure to "pre-war levels."[53] Thus, reconstruction plans and programs were not consistently gauged to a specific goal.[54] This was in part because there was difficulty getting accurate information about the state of Iraq's infrastructure.[55]

The feasibility of achieving the initial reconstruction milestones was questioned at the time. From the outset, "there was a gap between goals and available funding—$680 million [the amount originally allotted for USAID infrastructure reconstruction efforts] was nowhere near the amount needed to attain the goals."[56] One of USAID's critical goals was to help the Iraqi ministries become operational as quickly as possible,[57] but one USAID contractor questioned how to accomplish capacity building in ministries that, for all practical purposes, had ceased to operate.[58]

Table 1 illustrates the goals for selected components of the original reconstruction program as outlined in the USAID "Vision for Iraq," USAID contracts, and the CPA strategic plan, which was created in July 2003. Reported program results are also included.[59]

Early Reconstruction Goals and Eventual Program Results

	USAID Vision Document (Feb. 2003)	USAID Contracts (FY 2003)	CPA Strategic Plan (Summer 2003)	Results
Schools	Within six months, 3,000 schools [will be] repaired or rehabilitated.[a]	Within six months the contractor will repair or rehabilitate up to 3,000 school buildings.[b]	By October 2003, rehabilitate 1,000 priority schools.[c]	Since 2003, approximately 3,000 schools had been rehabilitated, in full or in part.[d] (In addition, GRD-PCO completed 807 schools and MNF-I completed 1,365.[e])
Health Care	Basic health services will be available to a targeted 50% of the population, and maternal/child health to 100% of the population, in secure areas, within six months.[f]	Basic health care available to 12.5 million persons.[g]	By October 2003, restore basic health care services to 95-100% of pre-war levels.[h]	USAID does not report results relating directly to percentage of population served. Rather, it posts several specific accomplishments relating to health services, including: • immunizing more than three million children under five • vaccinating more than 700,000 pregnant women against tetanus • re-equipping more than 600 health clinics with essential equipment and supplies[i]
Electricity	Within one year: Generation of 6,750 MW achieved.[j]	Within 12 months generating capacity will be restored to 75% of the pre-1991 level of 9,000 MW (or 6,750 MW.[k]) (Note: Pre-war capacity has been estimated at 4,500 MW.[l])	By October 2003, improve generating capacity to 4,000 MW.[m] By January 2004, improve generating capacity to 5,000 MW.[n] By 2005, improve generating capacity to 7,000 MW.[o]	The December 2006 quarterly average was 4,260 MW.[p]

Table 1

a USAID document, "USAID's Vision for Post-Conflict Iraq," February 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY341.pdf, accessed May 12, 2006).

b USAID document, "Iraq Infrastructure Reconstruction Statement of Work," April 17, 2003 (online at: http://www.usaid.gov/iraq/contracts/pdf/BechtelSecC.pdf, accessed May 12, 2006), p. 14.

c CPA document, "CPA Strategic Plan," July 2003.

d USAID website, "USAID Assistance for Iraq: Education" (online at: http://www.usaid.gov/iraq/accomplishments/education.html, accessed January 5, 2007).

e SIGIR Report, "SIGIR Quarterly Report and Semiannual Report to the United States Congress," January 2007, p. 69.

f USAID document, "USAID's Vision for Post-Conflict Iraq," February 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY341.pdf, accessed May 12, 2006).

g USAID document, "Health System Strengthening in a Post-Conflict Iraq Statement of Work," April 30, 2003 (online at: http://www.usaid.gov/iraq/contracts/pdf/ABTSecC.pdf, accessed May 12, 2006), p. 10.

h CPA document, "CPA Strategic Plan," July 2003.

i USAID website, "USAID Assistance for Iraq: Health" (online at: http://www.usaid.gov/iraq/accomplishments/health.html, accessed May 12, 2006).

j USAID document, "USAID's Vision for Post-Conflict Iraq," February 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY341.pdf, accessed May 12, 2006).

k USAID document, "Iraq Infrastructure Reconstruction Statement of Work," April 17, 2003 (online at: http://www.usaid.gov/iraq/contracts/pdf/BechtelSecC.pdf, accessed May 12, 2006), p. 12.

l SIGIR Report, "SIGIR Quarterly Report to the United States Congress," April 2006, p. 57.

m CPA document, "CPA Strategic Plan," July 2003.

n CPA document, "CPA Strategic Plan," July 2003.

o CPA document, "CPA Strategic Plan," July 2003.

p SIGIR Report, "SIGIR Quarterly Report and Semiannual Report to the United States Congress," January 2007, p. 25.

We were **bumping into one another** as we tried to **solve the same problem**.

Insufficient Capacity To Meet Immediate Needs

In March 2003, ORHA personnel began deploying to Kuwait. In April 2003, members of ORHA's humanitarian assistance, civil administration, and reconstruction pillars all moved into Iraq, where ORHA took the lead in U.S. relief and reconstruction efforts. However, ORHA was never able to develop a fully coordinated plan. In the absence of an integrated strategy, each participating entity deployed to Iraq with divergent understandings and assumptions about the goal of the reconstruction effort, its proposed length and scale, and the responsibilities and functions assigned to each agency. This led to confusion and duplication of effort.

One former ORHA official stated: "We were bumping into one another as we tried to solve the same problem."[60] Another reported that he did not know USAID's role and had never heard of DART or OTI until he arrived in Kuwait in March 2003.[61]

> Initially we were told repetitively to stay in [our] lane and the lanes turned out to be, I think, more like stovepipes. So very few of us really had any idea what others' capabilities were, what their mandate was. There was a lot of confusion that probably could have been avoided had there been much more consultation from the beginning.[62]

Existing strategic plans failed to reach some military units. For example, in April 2003, the 101st Airborne Division "began to be concerned with reconstruction, stability and ops, and [it] basically generated [its] own plan, based on the conditions there, in total segregation from whatever plans may have existed within ORHA and within the Corps of Engineers."[63]

The experience of a USACE FEST member based in northern Iraq illustrates the confusion that plagued the initial phase of reconstruction operations. As FEST teams completed assessments of infrastructure needs throughout the country, the information they acquired was sent to Baghdad, where needs were prioritized and then provided to various entities for execution. However, information was not clearly communicated, which created duplication of effort. In one instance, a local contractor hired by a FEST team to renovate a building found that a military unit was already doing the work.[64]

Once in Iraq, it quickly became clear that the anticipated humanitarian crisis had not materialized. There were not large numbers of refugees, nor had there been a general breakdown in the food distribution system. There was, however, an acute need to restore basic services—e.g., trash collection, sewage line repair, and electrical power. ORHA had neither the capacity nor the organization to carry out these tasks, so other agencies expanded their mandates to begin to meet these urgent needs.[65]

USAID's OTI was a bright spot during the initial chaos, agilely responding to the needs it confronted. One CPA official noted that the OTI program succeeded because it had money and was "the easiest to access and the most useful."[66] An OTI staff member explained the early activities of the organization:

> I was astounded to find that OTI was practically the only organization in [Baghdad] that had any money in hand and had an ability to implement right at the beginning.[67] We were there essentially to try to respond to events as they unfolded, and so initially, it was to try to employ as many people as possible, and secondly, to try to demonstrate that there was some things happening that were positive to the Iraqi people, and that's essentially what our mission was.[68]

The degree to which civilians would be expected to **work in hostile environments** had not been adequately examined before the start of operations.

One of OTI's initial tasks was to assist various ministry staff resume operations by replacing essential equipment that had been looted. Through grants, OTI provided desks, chairs, computers, and basic office supplies purchased from the local market.[69] This initiative, "Ministry-in-a-Box," helped more than 30 Iraqi ministries recover from the massive looting that had ransacked virtually every government facility in Baghdad.[70]

When the expected humanitarian crisis did not materialize, DART and its implementing partners became an underutilized asset, even though DART possessed the organic capacity to fund grants and write contracts for urgent relief and reconstruction needs, a function that ORHA's civil administration pillar lacked. However, DART's leadership was reluctant to authorize DART teams to operate in the insecure environment that constituted post-conflict Iraq.[71]

The degree to which civilians would be expected to work in hostile environments had not been adequately examined before the start of operations. This was a concern for DART and USACE's forward engineer teams, which included both military and civilian personnel.[72] Differing expectations among these organizations contributed to administrative logjams that delayed project execution because available capacity was not used to meet urgent needs.

ORHA Shifts to CPA

Soon after ORHA mobilized into Iraq, CPA was created, supplanting ORHA as the entity responsible for governing Iraq and overseeing the reconstruction effort. The first official recognition of CPA

appeared in a U.S. Central Command (CENTCOM) order that Commanding General Tommy Franks issued on April 16, 2003. On May 9, 2003, the President appointed Ambassador L. Paul Bremer III as his envoy to Iraq, giving him specific direction:[73]

> All USG elements in Iraq, other than those under the command of the Commander, U.S. Central Command, will keep you fully informed, at all times, of their current and planned activities.[74]

On May 13, 2003, the Secretary of Defense designated Ambassador Bremer as the CPA's Administrator, providing that, as Administrator, he would be responsible for "the temporary governance of Iraq, and…oversee, direct, and coordinate all executive, legislative, and judicial functions necessary to carry out this responsibility, including humanitarian relief and reconstruction and assisting in the formation of an Iraqi interim authority."[75]

CPA quickly absorbed the resources and operations of ORHA. On June 16, 2003, the Deputy Secretary of Defense stated that "ORHA is dissolved and its functions, responsibilities, and legal obligations [are] assumed by the CPA."[76] The memo also stated that the Secretary of the Army, who became the executive agent (responsible for providing administrative, logistics, and contracting support) for ORHA on May 21, 2003, would now be the executive agent for CPA.

This rapid organizational evolution produced several significant challenges for those managing initial reconstruction projects and funds, including: unclear understanding of various agency capabilities; insufficient capacity to meet immediate needs; inadequate policies, procedures, and systems; shifting strategies and funding uncertainties; weak communication systems and large information demands; and lack of expertise in program management.

Management of Vested Iraqi Funds

On March 20, 2003, the President signed Executive Order 13290, which provided that vested funds—Iraqi funds frozen in U.S. banks—would be transferred to the U.S. Department of the Treasury, and "should be used to assist the Iraqi people and to assist in the reconstruction of Iraq."[77] Under this authority, the ORHA Comptroller began using these funds to initiate reconstruction projects approved by Iraqi ministries. An interagency group determined that vested funds needed to be treated like U.S.-appropriated dollars.[78]

MANAGEMENT OF PAYMENTS TO IRAQI CIVIL SERVANTS USING VESTED FUNDS

Treasury was aware of the logistical and procedural challenges associated with paying nearly two million Iraqi civil servants: there was no functioning banking system and no easy way of identifying valid employees. Neither ORHA nor CPA was equipped with the necessary resources to accomplish this task.

While in Kuwait, Treasury officials turned to the ORHA Comptroller for assistance in developing a plan to use vested funds to pay civil servants.[79] The Comptroller requested $100 million to pay civil servants and to support humanitarian relief and small reconstruction. Washington approved the use of vested funds for these projects.[80]

After ORHA determined where the money would be housed, it set up the process for paying civil servants. An April 11, 2003 memo from the Deputy Secretary of Defense stated that Americans would have fiduciary responsibility for the money until it was transferred to another responsible individual or entity. After a discussion with an interagency group, ORHA decided that a "trusted Iraqi" would be used to pay the civil servants. The trusted Iraqi would assume responsibility for the funds after an American official transferred

the money. The trusted Iraqi was responsible for obtaining lists of civil servants to be paid and then distributing payments. The Army provided security as funds were disbursed to the trusted Iraqi and subsequently at the paying stations.[81] After the payments were made, the trusted Iraqi was to provide a list of disbursements and signatures of the people who received the money. Compliance with this process, however, was inconsistent at best.

MANAGEMENT OF INITIAL RECONSTRUCTION PROJECTS FUNDED BY VESTED FUNDS

In April and May 2003, the ministry advisors in ORHA's civil administration pillar began to identify relief and reconstruction needs. These advisors immediately observed the damage that widespread looting had caused in Baghdad after hostilities ended:

> One of the biggest obstacles to the ability of ORHA to implement anything was the rampant looting that had taken place. The [Iraqi] ministry buildings effectively no longer existed. There were no windows or doors. They were just concrete shells of buildings.[82]

Initially, there was no process within ORHA's civil administration pillar for funding rapid relief projects for the decimated ministries.[83] Building on the process to pay civil servants, ORHA put together systems to fund project requests from the senior advisors and the military. The ORHA Comptroller became the conduit for submitting requests to the OSD Comptroller. The process required senior advisors or military officers to complete a standard form stating requirements based on the needs of the ministries. Initially, there was no formal review of requests in Iraq beyond the individual ministry approval of suggested projects. After project funding was approved, ministerial advisors designated a trusted Iraqi to be responsible for the project.[84]

Funds were often disbursed before work was performed so materials could be purchased. The responsible individuals would later provide evidence that the project had been completed.[85] There was limited capacity to provide oversight of these transactions. One official noted that the overarching goal was to get Iraqis back to work, restore basic services, and execute projects that quickly improved local communities. The conditions and time constraints presented by the chaotic post-conflict environment meant that depending on the trustworthiness of Iraqi workers was essential to the success of a project.[86]

As of June 2, 2003, $500,000 of vested funds had been given to support these emergency projects. An additional $2.1 million was set aside, pending DoD's demonstration that the initial $500,000 had been spent on projects that benefited the Iraqi people.[87]

Management of Seized Funds

On May 7, 2003, based on a British model that gave British forces "walking around money,"[88] a Combined-Joint Task Force 7 (CJTF-7) operations order initially gave up to $25,000 in seized funds to individual brigade commanders.[89] A three-page handout detailed the procedures to be followed by a paying agent and a field ordering officer, who were responsible for disbursing funds for small projects. The commanders were responsible for documenting the expenditures and providing reports to ORHA. By June 2, 2003, $4 million of seized funds had been given to the Brigade Commanders' Discretionary Fund. This was supported by $400,000 of vested funds.[90]

On June 16, 2003, the CPA Administrator changed the fund's name to the Commander's Emergency Response Program (CERP), and on June 19, 2003, the Commander of CJTF-7 issued

CPA **failed to clearly define** roles and responsibilities, failed to implement adequate controls, and did not consistently enforce its own rules to ensure **transparency of the management and disbursal of the DFI.**

Fragmentary Order (FRAGO) 89, ordering CERP into operation. Some CERP projects were managed by military officers with little reconstruction and development experience.

One civil affairs officer noted that he needed "design and implementation assistance: none of us has ever built a landfill or paved city roads back in the United States."[91] Other CERP projects lacked sufficient oversight and appropriate documentation.[92] But CERP went on to become one of the most important programs in Iraq's relief and reconstruction.

Management of DFI Funds

On May 22, 2003, U.N. Security Council Resolution 1483 recognized the Development Fund for Iraq (DFI) as a primary source for funding Iraq's recovery. The DFI subsumed the existing Oil-for-Food funds and frozen Iraqi assets that belonged to the Iraq government or that had been controlled by Saddam Hussein.[93] The resolution underlined that these funds be transparently managed and disbursed under the direction of CPA for the benefit of the Iraqi people.[94] On June 15, 2003, the CPA's Administrator signed CPA Regulation 2, which applied to the "administration, use, accounting, and auditing of the DFI."[95]

A CPA-IG audit of CPA's management of the DFI found that CPA "policies and procedures, although well-intended, did not establish effective controls."[96] CPA failed to clearly define roles and responsibilities, failed to implement adequate controls, and did not consis-

tently enforce its own rules to ensure transparency of the management and disbursal of the DFI.[97]

Of particular concern were the insufficient financial and contractual controls. CPA was responsible for implementing U.S. financial management policies, such as the DoD Financial Management Regulations (FMR). The CPA-IG audit revealed that the DoD FMR "could have been easily adapted to establish policies and procedures to account for DFI cash."[98] CPA developed new policies and procedures to manage DFI, but failed to enforce them effectively. Further, CPA failed, pursuant to its own rules, to secure the services of an effective outside auditing firm to review and advise CPA on DFI controls. The accounting firm that CPA did employ only managed balance sheets for CPA's comptroller.[99]

NEW POLICIES LAUNCHED WITHOUT PROPER TRAINING

CPA's disbursing and paying agents were pressed into service before they could be given adequate training on the procedures governing the handling of DFI disbursements. CPA-IG's review of 26 DFI disbursements found that only one included the documentation required under CPA's regulations.[100]

An early 2005 review of CPA's financial management practices by the OSD found that "effective, efficient financial management of non-U.S. fund sources was not accorded a high enough priority."[101] The OSD assessment report found that "financing of reconstruction activities began before procedures and staffing were fully in place," and "many policies and procedures were developed in response to new situations, not in advance."[102] Further, the report noted that "the Army's financial management system was selected, but the other services [members from Navy, Air Force, etc.] were not trained in, and therefore did not completely understand, this system."[103]

The OSD review further observed that "at the onset of stability and reconstruction operations, there was a lack of clearly defined authorities and lines of accountability for financial management internal controls," adding that "modern systems to conduct procurement, asset control, budget execution, and accounting were not in place. Financial records were largely kept in a manual system, limiting access only to in-theater personnel."[104] The concerns raised by this review were substantiated by CPA-IG's audit of CPA's management of DFI.[105]

The story of the DFI's management underscores the need to include an effective oversight component in the initial planning of any reconstruction effort.

TOO FEW CONTRACT ADMINISTRATORS TO MANAGE CONTRACTS

Initially, only three contracting officers were in Baghdad to support CPA's relief and reconstruction demands.[106] This limited contingent constrained CPA's capacity to provide effective execution of needed contracts and contract oversight. There was a similar dearth of contracting officer representatives (COR), who were needed to provide technical expertise and to monitor contract performance.[107] Unsurprisingly, the lack of sufficient personnel to support CPA contracting early on produced problems. A CPA-IG audit found CPA "contract files to be in disarray."[108] Some contracts were missing, and others were stored on personal email accounts, individual hard drives, or external storage devices. See SIGIR's *Iraq Reconstruction: Lessons in Contracting and Procurement* at www.sigir.mil.

Management of U.S. Funds

Initially, USAID and USACE were the two main U.S. agencies responsible for managing U.S-funded reconstruction projects in Iraq. By early May 2003, USAID contractors and staff had established offices in Baghdad, although many personnel were still in Kuwait awaiting deployment. The formal establishment of the USAID mission in Baghdad was announced on July 27, 2003. During the summer of 2003, USAID managed 12 relief and reconstruction contracts and a number of grants and cooperative agreements. USACE simultaneously managed Task Force RIO and the FESTs deployed with operational Army units. During the spring and summer of 2003, both agencies faced challenges managing their projects because of shifts in program scope and funding uncertainties.

In the spring of 2003, contractor mobilization and the execution of initial reconstruction planning efforts were limited by funding uncertainties. IRRF 1 was approved by the Congress in April 2003 when USAID was beginning to implement its relief and reconstruction programs. Early delays were ameliorated when, on May 22, 2003, the President issued Executive Order 13303, allowing contractors to spend U.S.-appropriated funds immediately on reconstruction efforts.[109]

Notwithstanding this new spending authority, many program managers in Iraq found that, during the summer of 2003, their budgets were being cut because of CPA's shifting spending strategies. Consequently, some contractor staff demobilized, and some ongoing activities were canceled or de-scoped. One contractor had to lay people off, close regional offices, and scale down reconstruction efforts.[110] Other contractors were asked by CPA to slow down spending as the IRRF 1 program strategy was being revised.[111]

CPA's assumption of control over all reconstruction planning in June 2003 bred tension between CPA and USAID. As CPA expanded and began to exercise its broad authority, USAID contractors were required to coordinate their ongoing programs with the new strategic plan under development by CPA and the senior advisors. This collision of reconstruction management activities sometimes caused contractors to receive conflicting requests from different U.S. government entities or officials.[112]

Oversight of contractors became an immediate concern:

> The situation in Iraq was less than stable, and security was becoming a concern across the board. Security cost began to escalate rapidly and was the subject of almost daily briefings/discussions.... Not long after the award of the contracts, [USAID] did get four contract specialists into country to 'oversee' the contracts. I use that term rather loosely because I do not believe anyone was able to freely visit the contractor sites to see how progress was going...[113]

During this time, USACE faced growing challenges managing the expansion of the RIO project:

> Project management was not an issue, program expansion was. Our original mission was to restore the oil infrastructure to keep crude oil flowing, thus enabling the Iraqi government to receive funds to support their recovery. Our first add-on mission was to restore the production of [liquified petroleum gas] LPG for cooking and boiling of water. That task fell to the RIO team. Then benzene (auto fuel) became an issue (gas lines) and our mission expanded to include purchasing and transporting fuel from Kuwait. Repairs to the production infrastructure were adversely impacted by acts of sabotage, but completed prior to hand-off back to the Iraqi Ministry of Oil.[114]

Program Review Board

On June 18, 2003, in an effort to coordinate and prioritize reconstruction planning and projects, the CPA Administrator signed CPA Regulation 3, establishing the Program Review Board (PRB). The PRB reviewed proposed reconstruction projects—regardless of whether they were underwritten by seized, vested, DFI, or appropriated funds—and recommended expenditures.[115]

The PRB coordinator developed processes, forms, and instructions for requesting PRB approval for reconstruction projects. A database was created to track PRB-approved projects. Initially, this system only tracked the number of approved projects, and it provided no information on project status. This limited reporting capacity obscured visibility on the progress of reconstruction projects.[116]

Re-thinking the Relief and Reconstruction Program

During the summer of 2003, CPA developed a new reconstruction strategy that shifted the focus from a small-scale, discrete relief and development effort to an ambitious, large-scale reconstruction program. The shift in strategy was driven by the recognition that many initial assumptions that drove early planning proved off the mark.

> [Things] changed over the course of the summer of 2003 as the recognition set in that, in part because of the looting and in part because of the bad condition of the infrastructure...that the reconstruction issues [were] much larger than was originally believed and that the capabilities of the Iraqi ministries to do anything were very limited...[117]

In July 2003, CPA created its first strategic plan, which established five priorities: security, essential services, economy, governance, and strategic communication. The plan included broad goals and metrics but was not tied to a specific budget.[118]

Simultaneously, CPA worked with the interim Iraqi ministries to develop the 2003 Iraqi government budget, and the World Bank, United Nations, and Bechtel simultaneously conducted infrastructure assessments. Bechtel's assessment, completed in June 2003, identified approximately $16 billion of work in six infrastructure sectors.[119] The joint World Bank and United Nations report, a draft of which was completed in July 2003 (it was later published in October 2003), estimated that $56 billion was needed to meet median-term reconstruction needs.[120]

Iraq's available budget could not yet fund needed reconstruction projects, and thus CPA sought a very large U.S. appropriation. At that time, the United States was preparing for an October 2003 international donor conference. A review of previous donor conferences showed that other countries had been more inclined to support "soft" projects, including those focused on education and governance. So the CPA Administrator made a strategic decision to concentrate the supplemental request on security, justice, and infrastructure projects.[121]

Based on these assessments, and various input from Iraqi ministries, senior advisors, USAID, and USACE, CPA's budget and finance officials put together a large and ambitious supplemental request in less than two months. Participants in this process reported that there was little time or opportunity to debate.[122] In August 2003, the CPA Administrator submitted to OMB a multi-billion dollar relief and reconstruction funding request to begin the restoration of Iraq's infrastructure (original estimates ranged from $24-$27 billion[123]). In September 2003, OMB submitted a $20.3 billion request to the Congress, and in November 2003, the Congress passed legislation appropriating $18.4 billion to the Iraq Relief and Reconstruction Fund (IRRF 2).

THE LATER CPA PERIOD (AUGUST 2003 TO JUNE 2004)—RE-INITIATING THE PROGRAM

To manage its significantly expanded reconstruction program, CPA created the PMO in August 2003, giving this office the authority to oversee the execution of the thousands of projects funded by the $18.4 billion IRRF 2 program. The CPA Administrator directed PMO to develop a system to execute this program and oversee the implementation of more than 2,300 projects.

The Origin of the PMO

In the process of formulating its greatly expanded reconstruction program, CPA examined several program management options. CPA first considered having USACE, which was already overseeing projects in Iraq, manage the entire program. However, USACE officials demurred, contending that the agency did not have the capacity in Iraq to exercise oversight of this prodigious program.[124] USACE was heavily engaged in managing oil and electricity programs under Task Force RIO and Task Force Restore Iraqi Electricity. Its primary expertise rested in construction management and execution, and not the kind of planning, programming, and budgeting demands inherent in CPA's reconstruction program.[125] Moreover, USACE maintained that it could not rapidly secure sufficient staff[126] to manage the massive program in Iraq.[127]

CPA consulted with USAID about the structure and direction of the IRRF 2 program,[128] but USAID did not have the staff nor the organizational capacity[129] to manage so large an infrastructure-focused program. Additionally, CPA recognized that the Iraqi ministries were unable to manage the program, although they were included in the project selection process.[130]

When it became clear that neither USACE nor USAID nor the Iraqi ministries could manage the reconstruction program, CPA turned to a core group then serving within CPA, some of whom had significant infrastructure and engineering backgrounds. This group developed a concept paper that envisioned the formation of a new and novel program management office within CPA that would rely on contractors both for the management and the execution of the reconstruction program. That is, both oversight and execution of the program would be largely contracted out.

On August 15, 2003, the CPA Administrator approved the formation of the PMO and directed $10 million to fund its startup. To lead the effort, he appointed a retired U.S. Navy Rear Admiral, who was then the Deputy Senior Advisor to the Transportation and Communication Office Ministry.[131]

On September 6, 2003, OMB submitted CPA's $20.3 billion budget request to the Congress seeking supplemental funding for Iraq-related activities, a portion of which would "finance the most critical needs for security and infrastructure that cannot be met with anticipated revenues from oil sales until the entire oil infrastructure becomes more robust."[132] To support this request, CPA developed a 48-page document that discussed the current state of each of the key sectors, described illustrative projects, and provided estimated costs. However, the request included little analysis of how these costs were determined.

The following day, the President addressed the nation about funding Iraq's relief and reconstruction, stating that the United States "will provide funds to help [Iraq] improve security and…help them to restore basic services, such as electricity and water, and to build new schools, roads, and medical clinics."[133]

CPA immediately issued an information memo announcing the creation of PMO and detailing the mission of the office. The memo noted that:

> [The] implementation of such a large program, in such a short time, is an exercise unprecedented in the worlds of development and nation-building and will require an equally unprecedented effort in terms of its execution. [I have] therefore decided to establish a Program Management Office under CPA to drive this forward, with involvement from both the public and private sectors.[134]

On November 6, 2003, the Congress approved $18.4 billion for Iraq's relief and reconstruction. Compared to the IRRF 1 law, this legislation was quite specific, defining allocations among ten sectors and outlining a number of requirements and duties that CPA had to carry out as it implemented the program.

IRRF-2 KEY COMPONENTS

- **Ten sector allocations**:

IRRF 2 Original Allocations by Sector

Electricity	$5,560,000,000
Water Resources and Sanitation	$4,332,000,000
Security and Law Enforcement	$3,243,000,000
Oil	$1,890,000,000
Justice, Public Safety Infrastructure, and Civil Society	$1,318,000,000
Health Care	$793,000,000
Transportation and Telecommunications	$500,000,000
Roads, Bridges, and Construction	$370,000,000
Education, Refugees, Human Rights, and Governance	$280,000,000
Private Sector Development	$153,000,000

Table 2

- **Re-allocation across sectors**. Up to 10% could be re-allocated between sectors, but could not increase a sector's allocation by more than 20%.
- **Availability of funds**. Funds were to be available until September 30, 2006.
- **Cost to complete projects**. Before the initial obligations of funds, CPA and OMB were to submit a proposed project-by-project report, called the *Section 2207 Report*. The report would list the major projects under each of the ten sectors, the costs required to complete each project, and anticipated obligations for each three-month period. The first report was due by January 5, 2004.
- **Clarification of responsibilities**. The *2207 Report* required a list of agencies responsible for executing each project. The agencies included CPA, DoS, Treasury, DoD, USAID, and the Department of Health and Human Services.[135]
- **Capacity development**. Agencies receiving funds were encouraged to "provide significant financial resources, technical assistance, and capacity building to counterpart organizations led by Iraqis."[136]

The USG component of PMO was under-resourced from its inception, and thus PMO was dependent upon contractor support. When the Congress passed the supplemental funding legislation, the PMO director was supported by just two people from USACE and 14 contractors.[137]

PMO was **under-resourced from its inception** and was primarily dependent on contractor support. When the supplemental passed, the **PMO director was supported by only two people** from USACE and 14 contractors.

PMO Develops a Program Management Plan

PMO developed a Program Management Plan (PMP), the first draft of which was completed by October 2003; the final version was approved in March 2004. The plan detailed PMO's proposed organizational structure, financial controls, personnel needs, information management requirements, and project management tools. The PMP provided for the following:

Limited U.S. government personnel: PMO planned to hire "'just enough' United States government employees to perform inherently governmental functions, augmented by multiple program management contractors who [would] be engaged to oversee the large construction contracts, delivering this historic volume of work on an accelerated schedule."[138] PMO estimated that a staff of 100 government personnel would be needed to oversee the program.[139] The PMO director—a government employee—would be responsible for integrating and coordinating the program, allocating resources, clarifying roles and responsibilities, and establishing polices and procedures. A Director of Programming would be responsible for synchronizing efforts across all the sectors.

Private-sector management support: Seven program management organizations would work with a core team of government staff to perform program and project management. One contractor would "provide program management support to the CPA/PMO to

facilitate overall program coordination and management"[140] and one to support the management of each of PMO's six sectors: security and justice; electricity; oil; public works and water; transportation and communication; and buildings, housing, and health. The PMO contractor and the Sector Program Management Office Contractors (SPMOC) would be "capable of providing the full range of program management services including but not limited to: integration and coordination; scheduling; resource management; estimating; acquisition and procurement support; logistics support…[and] task order development."[141]

A program management contractor described the model:

> The role of the program management office was to set policies, processes, and procedures. It was also to be the overall program manager and integrator of the sector programs. The sector program managers would write requirements and develop project packages. They would also work with the design-build contractors on the design of the projects. Once the design was established and the project determined, the Corps would step in to oversee the activities and provide construction management.[142]

Private-sector construction expertise: PMO proposed hiring twelve design-build construction companies with particular experience in each of PMO's six sectors to execute the work.[143]

Government construction management support: PMO asked USACE to provide construction management and quality control in each sector. A member of USACE was appointed Director of Construction, responsible for all "construction management, coordination, quality assurance, schedule, financial, and progress management at the PMO."[144] USACE was then establishing the Gulf Region

Division (GRD) to consolidate USACE's existing offices in Iraq under one command-and-control authority.[145] On January 25, 2004, USACE activated GRD, establishing its headquarters in Baghdad. GRD included three districts located in the northern, central, and southern regions of Iraq. Staffing for these districts and the division headquarters came primarily from four other USACE divisions. USACE members deployed to Iraq from these divisions on a rotating basis.[146]

Contract administration: CPA's contracting office provided contracting officers to work with the PMO's program managers. GRD worked with the CPA's Head Contracting Authority (HCA) to divide up contract administration duties: GRD staff served as the administrative contracting officers, and HCA staff members served as the procuring contracting officers for PMO.[147] The head of the contracting office also served as the Director of Non-construction, responsible for the procurement of equipment, supplies, and services.

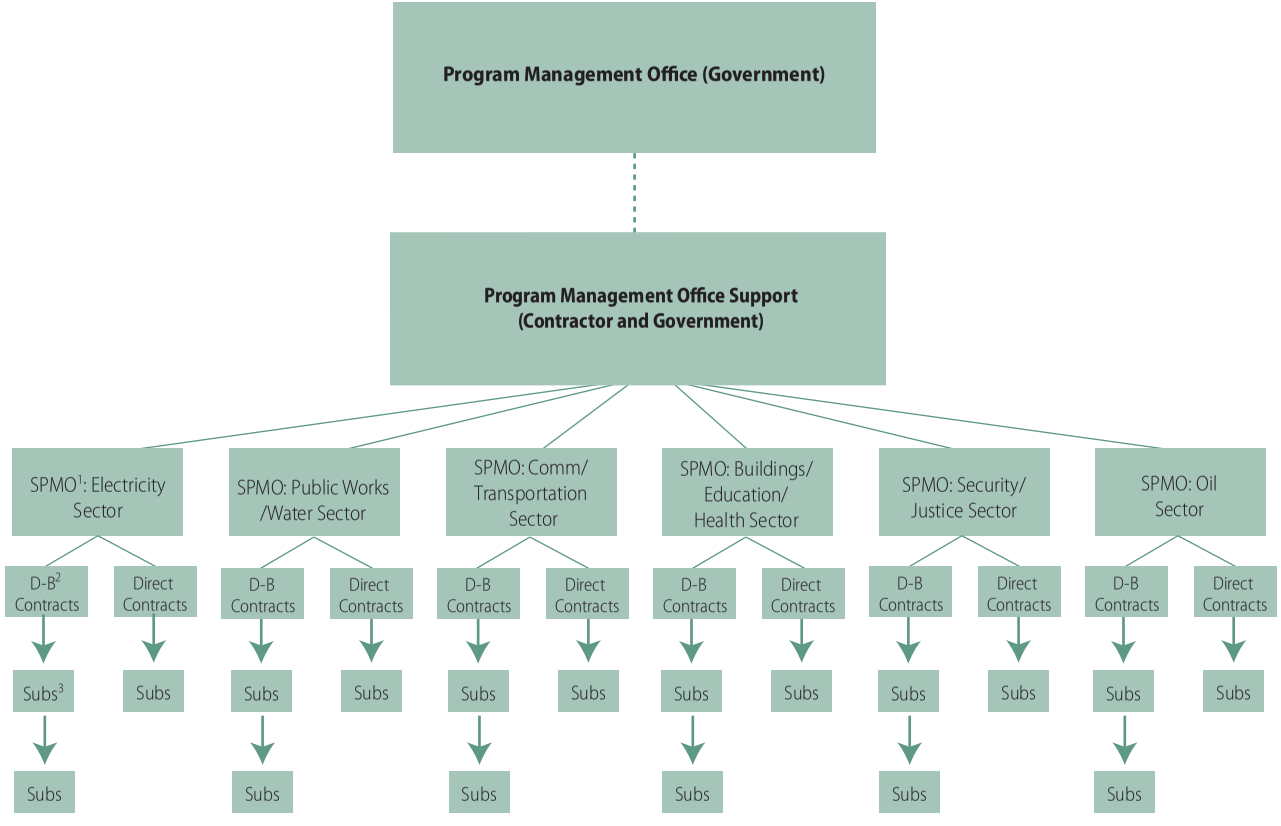
Integrated financial and information management: To manage costs and performance, PMO proposed the development of a new information management system that would track key performance indicators: cost, scope, and schedule. PMO expected to use part of the $50 million allocated in IRRF 2 for reporting and monitoring to fund this system.[148]

Utilization of Iraqis and capacity development: The PMP stated that the PMO would use "Iraqi capabilities—planners, administrators, contractors, subcontractors, suppliers, and other Iraqi personnel resources—to the greatest extent practicable."[149] PMO expected to coordinate with Iraqi ministries to develop project requirements and also expected the design-build contractors to transition their

skills and knowledge to the Iraqi people. The transfer of knowledge, skills, and abilities was a requirement in the program management, sector program management, and design-build contracts.[150] This was expressed directly in design-build contractors' award fee: 40% of their possible fee was based on their ability to meet subcontractor goals and train, develop, and transition projects to the Iraqis.[151]

Figure 2 illustrates the various layers of PMO.

PMO's Layered Management Approach



[1] Sector Program Management Office (Contractors and Government)
[2] Design-Build
[3] Subcontractors

Figure 2

PMO Struggles To Execute Its Plan

PMO was heavily reliant on its management contractors, but there was confusion about the actual roles and responsibilities of the various actors within PMO.[152] In addition, a number of logistical issues impeded PMO's progress, including hiring staff, developing the new information management system, and creating a plausibly executable project plan. Resolving these issues consumed most of PMO's efforts from inception until March 2004, when the design-build contracts were all finally awarded.

DEFINING ROLES AND RESPONSIBILITIES

PMO's government staff and its program management contractors had different understandings of their respective roles and responsibilities. Specifically, there was confusion about the scope of the supervisory contractors' responsibilities.[153] To address this issue, PMO began to develop standard operating procedures (SOPs). A team of contractors and government employees were tasked to create the SOPs; however, they were not completed until the summer of 2004 and thus were never truly implemented during the life of PMO. One contractor observed that "you need a unified program management approach. [We] never got that, never got anybody to agree that we were on the right coordinated track."[154]

Inherently Governmental Function

The responsibilities of the program management contractors were not adequately detailed in their respective contracts. This was partly because of the "uncertainties of the reconstruction program."[155] The SPMOC contracts stated that "the duties to be performed under this contract [are] necessarily general. Attempting to develop a finite description of the tasks would serve little purpose given the irreducible uncertainties of the reconstruction effort."[156]

INHERENTLY GOVERNMENTAL FUNCTION

An inherently governmental function is one that "is so intimately related to the public interest as to mandate performance by Government employees." An inherently governmental function includes activities that require either the exercise of discretion in applying Government authority, or the making of value judgments in making decisions for the Government.

See FAR 7.5 for specific examples (online at: **http://www.acquisition.gov/far/current/html/Subpart%207_5.html#wp1078196**, accessed February 25, 2007).

This issue was not properly addressed until after the management contracts were awarded in March-April 2004. Only then were contractors asked to submit a program management plan that defined their roles and responsibilities within PMO.

In August 2004, a review by DCMA and the Defense Contract Audit Agency (DCAA) concluded that the contractors' program management plans were so broad that the contractors might have been performing inherently governmental functions. DCMA and DCAA recommended that these plans be approved only if they expressly limited the contractors' scope of work to non-governmental duties.[157] Later, a responsibility matrix was created to avoid any potential issue of contractors performing governmental duties, but the matrix was not made part of the contracts until the second year.[158]

FUNDING

Pursuant to the CPA Administrator's September 9, 2003 request, the OSD Comptroller approved $10 million in U.S.-appropriated funds to support PMO's operations for the first six months.[159] In addition,

USACE provided $9 million to prepare the project plan and initial scopes of work.[160] During the fall of 2003, these funds supported PMO's staff.[161] Additional money was needed to hire government personnel to manage the program, but this funding was not yet available. *See infra* p. 61.

Thus, PMO was understaffed. PMO was structured such that "there could only be a few key government people providing oversight. The projects were many, so there needed to be a lot of contractor help to manage [the program]."[162] More than $200 million was allocated from IRRF 2 to fund the program management contractors.[163]

HIRING STAFF

In November 2003, when the IRRF 2 supplemental passed, PMO was staffed with 3 people and supported by 14 USACE contractors. By January 2004, eight government personnel were working in PMO.[164] PMO found that the government was not as agile as the private sector in hiring people, and some qualified candidates dropped out of the process because of lengthy delays.[165] In August 2004, a year after PMO was created, the office had only 50 of the 100 people that the director had requested.[166]

Finding people with a comprehensive understanding of program management—including the development of an appropriate cost, scope, and schedules for each project and task order—proved to be an enormous challenge.[167] In addition, the relatively short tours of some government personnel adversely affected continuity. Contractors hired people for one-year assignments, but the staff supplied by the various military services had tours of only four or six months, frequently with gaps during turnovers.[168]

At its inception, **PMO did not have an existing information management system** to track projects.

ESTABLISHING AN INFORMATION TECHNOLOGY SYSTEM

At its inception, PMO did not have an information management system to track projects. PMO leadership decided to fund the development of a specialized system to manage the program's projects, which was expected to be eventually provided to the Iraqis.[169] This decision was driven by the conclusion that "no existing DoD management solution provides the full complement of integrated capabilities that were required."[170]

PMO sought to have an operating data management system by January 15, 2004.[171] However, developing and implementing this system proved much more difficult than expected. First, PMO did not receive the $50 million earmarked in the supplemental appropriation for project management systems until May 2004. A SIGIR report on the use of these funds found that only $26.2 million was spent on system development. IRMO used the remaining funding for salary support.[172] Second, many of the program management and design-build contractors used different information systems; their contracts did not require all contractors to conform to a common standard.[173] The PMO contracting and finance departments also used different systems. Integrating and managing these various databases was virtually impossible.

The various information systems included:

- *Standard Procurement System (SPS) and Procurement Desktop-Defense (PD2)* —DoD's automated contracting system
- *Resident Management System (RMS)*—USACE's construction management system

"We **needed a system** just to [keep] track of the program. When you **lose track of a program,** a big program like this with [2,300] projects, **you never get it back.**"

- *Corps of Engineers Financial Management System (CEFMS)*
- *Primavera P3 (Project Management)*—commercial software for planning and scheduling
- *Maximo*—commercial software for asset management, which can also integrate other program elements, such as contract management

In January 2004, GRD's Director of Resource Management arrived to set up CEFMS, which is the USACE project tracking system. By February 2004, the first funding document was loaded into the system.[174] However, it took additional time to integrate all of the systems: they were not fully integrated until the spring of 2005. *See infra* p. 107.

Networking and storage space also posed significant challenges. Data storage capacity was limited, which constricted the ability of managers to maintain electronic files.[175] Interoperability was also a serious obstacle. One official noted, "there was no connectivity or linking to any other office, except for email."[176]

The delay in creating integrated information systems greatly hindered the capacity of program managers to oversee and control the program. PMO "needed a system just to [keep] track of the program. When you lose track of a program, a big program like this with [2,300] projects, you never get it back."[177]

NEGATIVE EFFECTS OF AN ACCELERATED TIMEFRAME: DEVELOPING THE PROJECT PLAN, ESTABLISHING METRICS, AND MANAGING EXPECTATIONS

After the supplemental funding request was submitted to OMB, a team of consultants worked from October until December 2003 to help PMO develop the specific projects that would make up the PMO's reconstruction program. They worked with the senior advisors and ministries to determine the project list. The CPA Administrator directed that the CPA's senior advisors and the Iraqi ministries—not the PMO—should determine which projects would be funded under the IRRF 2 plan.[178] But the involvement of the ministries varied. Some ministries had "designs sitting on their shelf," while others were not prepared to participate.[179]

USACE contractors identified about 5,000 projects, developed rough cost estimates (including security and program management costs) for each, and then prioritized the projects based on need and available funding. Lower priority projects fell below the funding cut line, and these proposals were given to Iraq's Ministry of Development, Planning, and Cooperation, which was expected to work with other donors to fund them.

On December 1, 2003, the prospective project list was passed to the CPA Administrator. Over the next nine days, CPA regional advisors and military commanders in the field reviewed and further prioritized the projects.[180] A final list of approximately 2,300 projects was completed on December 10, 2003, and sent to Washington, D.C., for final approval. This list was approved and incorporated into the first *Section 2207 Report* to the Congress, submitted on January 5, 2004.[181]

However, PMO was severely limited by time and resources during the formulation of its program:

> Forty-five days is not enough time. I don't care how hard you work, or how good you are, or how smart you are, or what your agency is, that's not enough time to put [an $18.4 billion] program together.[182]

At this time, CPA had also not tied this spend plan to its July 2003 strategic plan. In September 2003, the Deputy Secretary of Defense tasked a team within the OSD to assist with the development of CPA's metrics.[183] One of the team's first tasks was to link CPA's strategic plan to the supplemental request. Based on the supplemental allocation, CPA's five goals were funded as follows:[184]

- security: $4.315 billion
- essential services: $13.246 billion
- economy: $563 million
- governance: $563 million
- strategic communication: no funding

The CPA supported the development of metrics and continually monitored outputs in the oil, electricity, and water sectors. However, the CPA's capacity to consistently collect and analyze information on the entire reconstruction program decreased in November 2003 when the USG decided to transition responsibility to the IIG by June 30, 2004. This decision forced the CPA to focus more of its attention on the immediate steps required for a successful political transition rather than on longer term reconstruction goals.[185] Program managers did not develop a consensus on the benchmarks for more specific outputs across all sectors until after June 2004. *See infra* p. 102.

Managing expectations became a growing challenge for the PMO during this period. The understanding was that the work would be done quickly:

> We were going to build the whole thing the first year. That was the message to the outside. No matter how hard we tried, that was the measuring stick that came over every video teleconference, not spending enough, not doing enough projects...Somehow we did not get the expectation right on what it would take to do $18 billion worth of work.[186]

After the supplemental request passed in November 2003, the Deputies Committee continued to debate the purpose of the money and how it would be managed. There was disagreement about the PMO, who should be responsible for the money, and what types of projects should be funded. This delayed the procurement of the design-build and program management contracts—and consequently, the execution of projects—by 30 to 45 days.[187]

The delay in the arrival of IRRF 2 funds had a severely constricting effect upon the reconstruction program.[188] In addition, once money did arrive, the emphasis focused on project starts and amounts obligated and expended. Some failed to consider the inevitable time constraints associated with preparing designs, hiring subcontractors, and initiating work.[189]

Project Execution Delays: Before the Design-build Contractors Arrived

Between September 2003 and March 2004, before the arrival of the design-build contractors, several factors combined to slow the reconstruction effort. Existing government organizations lacked the capacity to manage "the scale and complexity of the reconstruction effort funded by IRRF 2,"[190] but the decision to create PMO—and the significant amount of time and resources it took to develop the new office and hire its supporting contractors[191]—directly affected the execution of projects. With respect to existing projects, managers continued to face shifting priorities and changes in funding, which

affected their capacity to execute according to project schedules. For new activities, including the procurement of non-construction goods and services, the lack of operational systems and effective procedures limited progress.

SHIFTING PRIORITIES

CPA's decision to focus on large infrastructure projects created a deep division[192] among those involved in the reconstruction effort about the appropriate priorities for reconstruction.[193] Several USAID officials operating in Baghdad during this time did not agree with CPA's direction,[194] and argued that more funds were needed for agriculture, democracy, and economic reform (including private-sector business development).[195]

> If I go to an elected official and say what do you need, they're going to say build me something. They're never going to say...please put me through the tortured process of [for instance] reforming our oil pricing system.... What needs to be done is never what the politicians ask for....
>
> So, the reason the substantive issue was so difficult is that those of us who...were arguing, you know, do this stuff first, don't build stuff, but on the other hand, I read the same...public opinion surveys that [others] read...and there was a huge imperative to build things.[196]

USAID developed a budget, which would have allocated $5 billion of IRRF 2 to the agency as follows:

- Infrastructure: $3.25 billion
- Health, Education, and Humanitarian Assistance: $250 million
- Economic Governance, Agriculture, and Marshlands: $550 million

- Local Governance, Elections, and Community Programs: $800 million
- Monitoring and Evaluation: $150 million

This proposed budget was not included in the final supplemental request. However, by March 2007, USAID received approximately $3.9 billion of IRRF 2 funds.[197] *See infra* p. 86.

Agreeing on who ultimately held decision-making power for the reconstruction programs and project selection was a problem. PMO executed the program, but was not the decision-maker. The senior advisors were the authorities on what projects should be funded and the direction of the overall program. "Ultimately, [the CPA Administrator] was the decision-maker."[198] Others involved with PMO, however, reported that conflicting agency interests hampered good decision-making.

> We thought we knew, we were told who the decision-makers were, but the truth is on the ground...you had all of these advisors out in the various areas, you had all the [military] commanders [and] sometimes those priorities did not match and then you talked to the ministers or you talked to the leaders in the local Iraqi areas, and you were trying to overlay all those desires and hit a high pay-off target where they all say it was a priority.[199]

This tension created management challenges, but differences in priorities and opinions also presented significant challenges at the contractor level. In its audit of a USAID economic reform project, the USAID Office of Inspector General (USAID OIG) found that of 38 planned activities, 10 had been completed, 6 were cancelled, and 22 were ongoing, as of May 31, 2004.[200] The audit found that some of the delays were the result of CPA's changing strategies:

> One of the challenges was the limited control that USAID/Iraq had in managing this program. As a development agency, USAID often adopts a long-term perspective that focuses on building the host country's capacity and self sufficiency in order to promote self government. On the other hand, the CPA was more focused on addressing near-term priorities that would affect an orderly transition of power to a sovereign Iraqi government. Consequently, there were different priorities based upon these discrete institutional approaches and roles. As a result of the different priorities, the Mission could not exercise its normal latitude and control in addressing problems in the design and implementation of its activities.[201]

USAID OPERATIONS DURING CPA/PMO

In September 2003, USAID's reconstruction portfolio included projects in health, economic governance, local governance, infrastructure, and education. Contractors had spent the previous spring and summer mobilizing, developing work plans, and commencing initial activities. USAID's September 23, 2003 report highlighted some of its ongoing projects: infrastructure work and equipment repair at Baghdad's International Airport; assessments and repairs of key bridges; identification of more than 500 community activities through the community action program; an accelerated program to rehabilitate 1,000 schools by October 2003; teacher training initiatives; the emergency repair and rehabilitation of power generation facilities and electrical grids; the distribution of health kits; the award of more than 800 rapid-response grants; opening the Port of Umm Qasr; the establishment of local councils; and renovations of major sewage treatment plants.[202]

After PMO was created, the scope of USAID's operations significantly changed. Under IRRF 1, OMB apportioned reconstruction money directly to USAID, which gave the agency both fiduciary

and executive responsibility for projects approved by ORHA or the CPA.[203] Under IRRF 2, however, PMO "kept track of the funds and managed the overall program."[204] PMO managed the scope of USAID's project activity under IRRF 2, which created friction between USAID and CPA/PMO: "[USAID] did not like the control that [PMO] exercised."[205]

However, this coordination was required as PMO was in charge of all reconstruction activities funded by IRRF 2, and the Army was fiscally responsible for the execution of IRRF 2 funds.[206]

FAILING TO USE EXISTING CAPACITY

From September 2003 to March 2004, only a limited number of organizations focused on infrastructure construction efforts because the design-build contracts were not issued until March 2004.[207]

Some of the military units with the capacity to execute reconstruction projects failed to receive resources needed because of the centralized structure of the program:

> We have the [PMO] working in August, September, October, November [2003] with almost no people to determine what the requirements are, even as military units across Iraq had had to submit any project that was valued at over $10,000 to Baghdad to be prioritized. We had hoped [these projects would] one day be funded and executed by someone since we weren't authorized to execute it, even though we had designers, construction managers, quality assurance inspectors, contracting officers, finance officers. We had people, communications, transportation, security, and we had identified these requirements....When [the CPA Administrator] visited in mid-May to Mosul as an example, we gave him $20 million of scope of estimated work that needed to be done; we got $200,000. We left that capacity on the table for a year...that was a huge loss, and it was a loss because of this compartmentalization and this over-centralization.[208]

Bechtel's second infrastructure contract, awarded in January 2004, was intended to bridge Bechtel's first contract and the design-build contracts that PMO would manage. When the contract was awarded, Bechtel set up its organization and mobilized staff to manage a $1.8 billion program. Bechtel's task orders were not issued as quickly as originally anticipated: between January and April 2004, Bechtel received only six job orders, totaling approximately $213 million.[209]

Bechtel was fully mobilized and could have moved forward to increase services throughout Iraq, as PMO awarded the other design-build contracts.[210] In addition, the delay increased Bechtel's overhead costs, thus reducing the amount available for actual construction.

CPA INITIATIVES TO MEET IMMEDIATE NEEDS

During early 2004, CPA expanded the use of DFI funds for the reconstruction program, pending the award of the design-build contracts. CPA thereupon created a new program, the Accelerated Iraq Reconstruction Program (AIRP) and provided more funding to CERP and the Rapid Regional Response Program (R3P).

CPA had created R3P in September 2003 as a civilian equivalent to CERP. The program was "designed to provide maximum flexibility to regional and governorate coordinators in implementing projects responsive to the needs in their areas of responsibility."[211] The R3P was funded by approximately $250 million in DFI funds[212] and focused on job creation and small, high-impact projects.[213]

By January 2004, regions could execute programs up to $500,000 (up from $200,000) without prior Regional Program Coordinator approval.[214] However, in at least one region, "personnel did not use effective procedures to monitor performance of contracts; and, in some cases, projects were not monitored at all."[215] SIGIR investiga-

tions uncovered a criminal scheme involving R3P funds in Hilla, Iraq, resulting in the prosecution and imprisonment of several individuals.

In April 2004, the CPA Administrator initiated the AIRP in ten strategic cities: Baghdad, Ba'quba, Falluja, Mosul, Ramadi, Samarra, Tikrit, Najaf, Diwaniya, and Kerbala. Teams deployed to these cities to help local officials prioritize projects. Technical experts assisted with the development of scopes of work, and provided contracting support.[216] Many of the AIRP projects focused on water and sanitation.

According to a June 22, 2004 DoD status report, the AIRP had employed 5,400 Iraqis on projects.[217] Some of those employed completed site preparation work in anticipation of the design-build contracts.[218] At the time of transition, 33 contracts valued at about $130 million had been awarded,[219] and approximately 150 projects, totaling $277 million, had been approved. *See infra* p. 101.

INITIAL LOGISTICS CHALLENGES AND DELAYS

The IRRF 2 supplemental request originally focused on infrastructure projects, not equipment. However, during the development of the first project spend plan, it became clear that senior advisors and the Iraqi ministries wanted funds for non-construction equipment and materials. The spend plan included approximately $4 billion for non-construction and $1.8 billion for capacity building.[220]

In December 2003, the head of PMO asked a Marine Corps Colonel to be PMO's Director of Reconstruction Logistics, responsible for the acceptance, storage, and wholesale distribution of non-construction equipment and materials. Non-construction items included fire trucks, spare parts, hospital furniture, pumps, generators, and many

of the other needs of the ministries. Non-construction also included equipment for the Iraqi security forces.

Initially, PMO was not set up to manage non-construction projects, including the logistics associated with shipping, handling, insuring, transporting, and storing this equipment. Logistics requirements took time, resources, and more personnel than were available.[221]

There was a crucial need to support the ministries and the New Iraqi security forces. To fill this need, contracting officers initially used DFI money to buy equipment and materials, often based on anticipated requirements. But there was no logistics system set up to handle the equipment purchased with DFI funds, and there was no specific agency responsible for "inventorying and signing for goods coming into Iraq."[222]

Lacking a specific location to send equipment, contracting officers created an end shipping destination: "Baghdad Warehouse." Initially, no such warehouse in Baghdad existed. When equipment arrived, contracting officers and program managers stored equipment wherever they could. One program manager observed that he "was ordering guns, ammunition, vehicles, and other items with no organized receiving point. For instance, the guns and ammo were going to the basement of the courthouse, the only place we could find."[223]

In February-March 2004, an inter-agency assessment team traveled to Baghdad to examine contracting, acquisition, and logistics. Regarding logistics, the team found that the non-construction program was under-resourced and that a plan was needed to "synchronize, prioritize, [and] de-conflict movement of supplemental, non-appropriated, and donated material into theater/country." An ongoing challenge was "clearly defining requirements for non-construction acquisition."[224]

The team developed 17 recommendations to improve management of logistics and the non-construction program, including:

1. Creating a rear contracting office to handle non-construction buys
2. Establishing a non-construction office
3. Creating a program management team to assist the ministries in defining and determining requirements
4. Clarifying who has authority to purchase goods[225]

A similar review by the U.S. Army Audit Agency (USAAA) concluded that, "in the early stages of implementing the FY 2004 IRRF program, a limited number of personnel were available for determining the accuracy of the receiving reports and invoices." PCO personnel indicated that "spot checks were occasionally performed, but without any standard process. Because of the increased security risks at the time, there was a problem getting personnel to the receiving points to inventory and sign the receiving reports."[226]

Logistics Improvements

The Director of Reconstruction Logistics immediately recognized the need to improve accountability of equipment and supplies entering Iraq. After he received $16 million in DFI seed money, he located two storage facilities—one at the Umm Qasr port and another at Abu Graib—to become principal receiving points for "Baghdad Warehouse" materials. During the summer of 2004, he worked with the contracting team to award a logistics support contract and set up a database to track all equipment entering these two storage facilities.

By the fall of 2004, the logistics team was able to account for all inbound IRRF non-construction equipment and materials that

would be stored at the Umm Qasr port and Abu Graib (this particular team was not responsible for tracking equipment and supplies en route to the warehouse). In January 2006, in a review of the accountability of FY 2004 IRRF funds, USAAA found that "PCO's process for "receiving goods and services based on the invoice and receiving report"[227] generally followed the required USACE guidance.

The logistics team did continue to experience some management challenges in the process of handling DD250 (material inspection and receiving report) accounts, including the government's struggle to make timely payments, due to "receiving reports not properly signed and untimely submissions."[228] This resulted in some vendors becoming unwilling to deliver supplies to Iraq. To resolve this issue, PCO and DCMA developed a memorandum of understanding (MOU) to establish roles and responsibilities, ensuring that a representative was present to receive goods. This MOU was completed in October 2004 and renewed in 2005.[229]

Another significant challenge for the logistics team was personnel turnover. The logistics team consisted of eight certified U.S. government contracting officer representatives who supervised five separate contracts. Over the course of three years, 81 people filled these 8 spots.[230] In addition to the turnover within the logistics team, the turnover within organizations ordering the equipment meant the logistics team continuously had to re-educate them about the importance of proper logistics execution during planning and budgeting.

Project Execution Delays: After the Arrival of the Design-build Contractors

By April 2004, all contracts for program management support as well as the design-build contracts had been awarded, and contractors began to mobilize. Design-build and program management

contractors were given 30 days to mobilize. Although some began work in April, many took 45 days to get started.[231] Concerns about security caused some contractors to delay sending their people to Iraq.[232]

When they arrived, some contractors found an organization unprepared for their arrival. Because the program management contracts were awarded at the same time as the design-build contracts, a solid management structure was not yet in place.[233] One design-build contractor found that contracting officers had not yet received a copy of its contract:[234]

> So we've been given tasks to mobilize, get ourselves to Iraq, and there was no one in Iraq that had even seen the contract. They had to get it from us.[235]

The contracting office was supposed to receive the contracts 24-48 hours after the contracts were awarded, but the lack of integrated systems prevented this. Some information could be forwarded via email, but some of the files were too large. Most of the actual contracts did not arrive in theater until April 2004.[236] Insufficient project information and slow funding also caused delays.

INSUFFICIENT PROJECT INFORMATION

The original goal was to have the program management contractors prepare the scopes of work for the design-build contractors. However, these contracts were not awarded until March 2004. Government staff, who did not necessarily have the skills to adequately complete this task, worked with the USACE contractors to prepare the initial scopes of work:

"So **we've been given tasks to mobilize**, get ourselves to Iraq, and there was **no one in Iraq that had even seen the contract.** They had to get it from us."

> We knew that [it] had to be done, so we set ourselves to preparing these task orders...it was a very difficult time and challenging time for the people that were here to engage in this task order preparation. The task order preparation is where you define for the design-build contractor exactly what it is that you want him to design and build, involves a lot of leg work, a lot of homework and putting a lot of documents together that eventually become part of the contract that tasks that design-build contractor to do the work. If it's not done well that part of the design-build contractor's work will not start out well. So, it was important work, but it was work that wasn't intended to be...done by...government staff. It was intended to be done by contractors.[237]

USACE contractors worked with the government sector leads to create the initial sets of scopes of work, which would later be incorporated into task orders. After they were developed, they were put aside in anticipation that people would arrive later to implement them. At that time, the team prioritized efforts based on projects that would make an immediate impact or projects that already had plans in place.[238]

When program managers began to develop the task orders, they found that the utility of these initial scopes of work varied across sectors.[239] In the end, some of the task orders did not provide accurate information on the current condition of Iraq's infrastructure. Others did not consider existing designs within certain ministries.

In the end, some of the **task orders did not provide accurate information** on the current condition of Iraq's infrastructure. Others **did not consider existing designs** within certain ministries. And some were **developed without consulting Iraqis.**

And some were developed without consulting Iraqis. Finally, some designs and design standards proved to be unworkable, too technically advanced, or not culturally appropriate. When contractors arrived onsite, unforeseen needs increased costs and delayed construction. For example:

- Before dredging could begin at the Port of Umm Qasr, the piers needed repairs.[240]
- Unanticipated land ownership issues delayed the construction of court facilities.[241]
- Unplanned site conditions delayed the construction of primary healthcare centers.[242]

FUNDING DELAYS

During the spring of 2004, the original *Section 2207 Report* became an integral part of the project execution process. PMO program managers packaged projects, using this report as their guide.[243] Then project requests were provided to the PMO finance office. Finance staff members worked with the contracting staff to ensure that task orders could be traced back to project descriptions in the *Section 2207 Report*.

The IRRF 2 supplemental directed that changes to projects identified in the initial *Section 2207 Report* must be justified and approved.

One official described this as an arduous process.[244] The PMO finance department then forwarded the request to the Army, and the Army sent it to DoD. DoD provided it to OMB for final approval. OMB then released the funds to the appropriate executing agency. Initially, OMB delayed approval, which stalled the overall process.[245]

> I think it's the age-old dilemma [between Washington and the field], do you trust the people in the field when people back in Washington don't really know what the people in the field are doing? ...I think there was the impression that, at least we thought so [in Iraq], that Washington wanted to look at everything. They wanted to have complete information–if you were working on an oil cap project, they'd want to know, well, who's the contractor, and how's it being done, and when's it going to be finished?... I think that, in my 20-year experience at OMB, this was a level of control and oversight and intervention that I'd never seen before.[246]

The contracting staff could not issue the task order until funds were released. When the money was released, negotiations with the contractor would begin, which often took about 30 to 90 days.[247]

Effects of Incremental Funding: An Example of Inefficiency

Most reconstruction projects depend on other projects and must be properly sequenced. A senior advisor commented that "you've got to do the right projects at the right time or it doesn't work. The whole thing will shut down if you don't do those things in sequence."[248] Projects in Iraq, especially in the oil and electricity sectors, were not always developed in the proper sequence.

> There was a sequence of events...that had to be done.[249] We did the engineering, the design, and parts list for [all the] task orders. [Then PMO] would come in and say, okay, we have [a certain amount of money]. Put it on task order number four. We'd come back, task order four is third in line to 11, 15, 19—you have to do 11, 15, and 19 first, before you do 4...We couldn't get the thought process linked and sequenced to be able to do anything productive.[250]

Incremental funding, lack of direction, and turnover of staff were contributing factors. "There was never a continuous stream of funding. I went through seven contracting officers in six months. There was never a continuity of leadership, focus, thought..."[251]

SECURITY DELAYS

All projects were affected by the change in the security situation, which became even more dangerous in April 2004. Some construction projects were destroyed after they were finished.[252] Related factors contributed to delays, including reduced workdays to allow for staff to travel during daylight, evacuations because of civil unrest, and the inability of trucks to deliver supplies.[253] One project experienced "three evacuations, a hijacking incident, and the ransacking of [two project] offices."[254] Looting, sabotage, and attacks on people occurred at some of the infrastructure contractors' construction sites.[255]

QUANTIFYING THE DELAYS

PMO asked the design-build contractors to deploy to the region just after signing their contracts. They were given initial mobilization task orders to do so, and the contractors rapidly deployed assets to Iraq. It naturally takes time to mobilize and begin projects. But, due to the constraints discussed above (security, funding, inappropriate

scopes of work, and indecision) the design-build contractors were not immediately put to work by PMO. Under their cost plus contracts, the contractors continued to incur costs and charge overhead costs to the government, even though many were not working on actual reconstruction projects.

A recent SIGIR audit on this issue stated that 5 of the 12 design-build contractors charged $27 million in mobilization costs, $62.1 million in administrative costs, and only $26.7 million in direct project costs between March and November 2004.[256]

Of these five contractors, the first to receive a task order did so three months after it arrived in Iraq; one contractor waited nine months before substantial work began. The latter contractor, KBR, received its mobilization task order on February 14, 2004, but did not begin substantial work until November 19, 2004. During this time KBR billed $52.7 million in administrative costs and $13.4 million in project costs. This is only a partial account of the indirect costs incurred during this time.[257] Administrative task orders were not issued immediately, and when issued, they were not issued to all of the design-build contractors.

OVERCOMING IMPLEMENTATION CHALLENGES AND DELAYS: AN EXAMPLE OF COOPERATION

The Blackwater incident in Falluja in April 2004 was a "defining moment, and everything changed."[258] It changed the way many contractors operated. The deteriorated security situation caused some contractors to run their programs remotely. Other contractors managing both construction and non-construction projects reduced security risks by calling on their Iraqi counterparts and the U.S. military.

Some contractors moved to northern Iraq and other safer areas,

and they relied on their Iraqi staff to run the day-to-day aspects of the projects. Iraqi engineers and other employees working on the USAID-funded infrastructure project continued field inspections of work sites.[259] Iraqi subcontractors were able to continue work on many water and sanitation projects even in areas where daily fighting was underway.[260] Attacks appeared to target U.S. personnel; thus, it was important to reduce the appearance that projects were run by Americans.[261]

Officials and contractors stressed the need to hire and train local counterparts at the beginning of a reconstruction program. Iraqi involvement not only helped develop capacity, it minimized security risks.[262]

OVERCOMING IMPLEMENTATION CHALLENGES AND DELAYS: ANOTHER EXAMPLE OF COOPERATION

In spring 2004, USAID and the 1st Cavalry Division (1st Cav) of the U.S. Army overcame many obstacles to progress by combining their strengths: USAID, through OTI, had the processes in place to issue grants, and the 1st Cav had people to provide protection and oversight. Together they implemented projects focused on job creation, with the common goal of improving security and basic services, such as sewage collection, trash removal, and water and electricity distribution. By focusing on these initiatives, USAID and 1st Cav demonstrated to the Iraqi people a presence on the ground that could enhance their quality of life.[263]

Members of USAID and 1st Cav jointly approached the CPA Administrator, who approved the realignment of $162 million to support this effort.[264] USAID and 1st Cav worked together to develop a scope of work for the project and then used OTI's fast and efficient grant mechanism to initiate the work.[265] Ultimately, the

project employed about 57,000 Iraqis per day.[266]

The 1st Cav and USAID worked well together for several reasons. OTI asked a member of the 1st Cav to sit in OTI's office space. This helped alleviate differences in terminology between the two organizations. For example, the military and OTI used two different processes for identifying addresses, which sometimes caused delays and or confusion when locating a project site. This issue was addressed with the co-location of staff.[267] The 1st Cav leadership understood the importance of thinking about non-military ways to improve the situation on the ground and reached out to various players to build partnerships and projects. In addition, because 1st Cav was in Baghdad, it could build off of existing resources more easily than units stationed in remote parts of the country.[268]

The End of PMO

The contractors and employees hired to manage contractors or design and build projects arrived in April and May 2004. They found an organization again in transition. On November 15, 2003, it was announced that the United States would transition authority to the Iraqis by July 1, 2004. And on May 11, 2004, President Bush announced that by June 30, 2004, the PMO would be dissolved and replaced by two new offices, PCO and IRMO.[269] Contractors arriving during this transition were faced with an unexpected challenge:

> ...we finally got...the majority of the contractors there in May. We did away with [the] PMO in July, and then we started [another] new organization.[270]

U.S. MISSION/IRAQI GOVERNMENT (JULY 2004 TO PRESENT)—EXECUTING AND CONTROLLING THE PROGRAM

The third phase of the Iraq reconstruction program focused on jump-starting the infrastructure reconstruction effort, improving management systems and practices—including oversight—and responding to a continuing parade of organizational and programmatic shifts. Although progress was made in these areas, it was often reactive. And many of these program management enhancements were not fully implemented until a year or more after the start of the IRRF 2 program.

Roles and Responsibilities Shifted and Clarified

During the year following the dissolution of CPA, several significant organizational changes realigned program management responsibilities and functions among the various entities involved in the Iraq reconstruction program.

In May 2004, National Security Presidential Directive 36 (NSPD 36) made DoS responsible for the U.S. reconstruction program in Iraq, "with the exception of U.S. efforts relating to security and military operations, which would be the responsibility of DoD."[271] As a result, PMO's duties were split between two new temporary organizations after the transition—the DoS-run Iraq Reconstruction Management Office and the DoD-led Project and Contracting Office. IRMO took on the overall management of the Iraq reconstruction program; PCO was tasked with acquisition and project management support for DoD construction and non-construction projects. USAID reported to the Chief of Mission and coordinated

with IRMO and PCO. This coordination, however, was inconsistent.

Under the new regime, IRMO's responsibilities for the reconstruction program included "strategic planning, prioritizing requirements, monitoring spending, and coordinating with the military commander."[272] "The ministry advisors…essentially had the responsibility for looking at the program and prioritizing where the dollars went."[273] This was an important shift.

PMO had played a paramount role in providing program requirements, which is not typical for an executing entity. With the transition, PCO took on a more traditional program management role, executing priorities outlined by IRMO and others.[274] But the legacy of PMO resulted in some jurisdictional tension between PCO and IRMO.

PCO maintained responsibility for approximately $13.4 billion of the $18.4 billion, and the Army provided oversight of the PCO.[275] PCO also oversaw the program's financial management system used to prepare the quarterly *Section 2207 Report* (a former responsibility of PMO). But PCO did not oversee other executing agencies.[276]

Other changes included the creation of the Joint Contracting Command–Iraq (JCC-I) on November 12, 2004, through FRAGO 09-668. This office was established because of the plethora of DoD offices involved in contract administration. JCC-I aimed at streamlining contracting procedures and processes.[277] PCO and JCC-I leadership decided to have GRD perform contract administration support of awarded task orders.[278] Although this arrangement began in spring/summer 2004, GRD and JCC-I did not sign a formal MOU until July 21, 2005.[279]

One reason for this delegation was GRD's field presence. JCC-I was located principally in Baghdad, but GRD has offices in north,

central, and southern Iraq. Because of this decentralization, GRD staff members could see the results on the ground and better respond to contractor needs and questions.[280] JCC-I, GRD, and PCO created a matrix that delineated GRD and PCO's responsibilities. Before contract definitization, most contract actions were the responsibility of the PCO. After definitization, most contract actions were the responsibility of GRD.[281]

In March 2005, PCO submitted a plan to merge with GRD. Preparations for this merger continued during the remainder of 2005, and the consolidation took place on December 4, 2005. The change recognized the increased number of projects moving into phases in the USACE area of expertise—from construction management to closeout.[282] On October 14, 2006, PCO's office in Iraq closed, leaving GRD responsible for overseeing the completion of its portion of the IRRF 2 construction program (the remaining $13.4 billion).

EFFECTS OF ORGANIZATIONAL SHIFTS

These large organizational shifts were accomplished to improve interagency and intra-agency coordination. A USACE manager noted that one of the few times when the project management business process truly worked was when the program managers, field managers, and financial staff were all in the same office and could talk as issues arose.[283] Beginning in the summer of 2004, PCO and USAID directors met every morning to improve communication, assign new work to the entity that could best and most rapidly execute it, and improve the inconsistent relationship that had existed between PMO and USAID.[284]

The creation of these new offices, such as IRMO, PCO, and GRD, also created confusion about jurisdiction. Although IRMO selected projects and provided money, a former head of PCO believed that he

The **many layers of management**, including the program management contractors, **made it difficult to determine who had ultimate authority** over money, people, and projects.

was not obligated to report to the IRMO director, but rather, to three other people: the military commander, the Secretary of the Army, and the Chief of Mission. The Chief of Mission would work with IRMO to determine programs, but ultimately these programs were approved by the Chief of Mission.[285]

USACE, which managed many of the projects, did not report to IRMO, and JCC-I, which assigned many of the contracting officers, did not report to IRMO or PCO. The many layers of management, including the program management contractors, made it difficult to determine who had ultimate authority over money, people, and projects. One former IRMO advisor recognized that the complicated management structure truly increased the importance of personal relationships.[286]

An April 2005 DoS draft assessment of the electricity sector highlighted this complicated management structure:

> There are two project management organizations, the [PCO] and USAID. PCO has hired Parsons as their owner-engineer to design and manage projects. USAID uses Bechtel as both project manager and primary contractor. IRMO Electric office decides on projects to be completed and assigns them to PCO and USAID to be executed. An example of this complex relationship is the Doura Steam plant rehabilitation of units 5 and 6. The [Ministry of Electricity] is the project manager. Bechtel is the prime contractor for USAID and subcontracts to Siemens and Emerson for generator and controls work. Siemens, under a UNDP contract, is subcontracting to Babcock for boiler work. The [Ministry of Electricity] is accountable for the

> remainder of the plant work. Each contractor manages within [its] own scope but lack[s] accountability for the success of systems that cut across individual contractor scope. When one contractor at Doura was asked who is accountable for all the pieces fitting together, he said he was only accountable to doing his part. The [Ministry of Electricity] is ultimately accountable for project success, but they do not have project management skills and they do not seem to want to accept responsibility for success. A better approach is to have one experienced design and project manager over the entire job that can integrate and direct all subcontractor work.[287]

The Reconstruction Program's Realignment

When the U.S. Mission-Iraq took over from CPA, the overall Iraq reconstruction program faced the challenge of the third significant leadership change within 18 months. And with this shift came a comprehensive review of the overall reconstruction program. This review resulted in an extensive realignment of priorities, and a series of reprogrammings that entailed a greater focus on security, economic development, and democracy building.

Two other realignments took place—one in the fall of 2004 and another in the spring of 2005. These three realignments profoundly affected the shape and the execution of the reconstruction program. They also aggravated the already difficult operating environment for the reconstruction program managers, who found it difficult to implement projects in an atmosphere of continuously shifting priorities.

The first review examined the original IRRF 2 spend plan and the current status of the program, identified and pulled together the priorities and needs of the various stakeholders (including other donors), and developed a new plan based on these changing priorities.[288] One aim of this effort was to shift money from planned

These three realignments **profoundly affected the execution** of the reconstruction program… **managers found it difficult to implement projects in an atmosphere of continuously shifting priorities.**

projects (that were not scheduled to begin until mid-to-late 2005) to high-impact projects.[289]

Realigning the reconstruction program was done in partnership with all U.S. government implementing agencies and the IIG:[290]

> [The new General and Ambassador] had established a partnership before they came out there. They were in agreement that the focus of the program was going to be on security, democracy, and economic growth.
>
> In the realignment process…the MNF-I put [in]…a bid for funds and then MNSTC-I came in with their bid for funds. The senior advisors each got a vote in terms of their bid for funds. The PCO had a vote in terms of holding on to its funds….And USAID had an opportunity to bid on funds, and all of us had an opportunity to say how we thought the program ought to be running.
>
> Everybody got a chance to bid and everybody got their thoughts on the table. That was the interagency process that had essentially never taken place up until then…
>
> It gave us a chance to get in on the policy end of it. Win or lose, you got to speak your piece. You got to assist in the process of making policy, and then when the assignments were handed out, we had very clear lanes of implementation. We knew what it was we were supposed to do.

> But I think that there was a substantial change at that point and the whole process was much more transparent, and there was much better cooperation between the executing agencies.[291]

In September of 2004, the Congress approved the realignment of $3.46 billion of IRRF 2 among various sectors with a focus on "improving security, increasing Iraqi employment, and supporting the democratic transition in Iraq."[292] Funds for economic reform, private sector development, and agriculture increased by $380 million; democracy programs received $180 million; and jobs programs received $286 million. The security sector received an additional $1.8 billion, with the majority of it allocated for training and equipping Iraqi security forces.[293] Most of the money for these reallocations came from the water and electricity sectors because these sectors originally received the most funds and the majority of projects in these sectors were not scheduled to begin until mid-2005.[294] The water sector's budget was cut by nearly half.

ONGOING REALIGNMENTS

The second realignment in the fall of 2004 moved some money back into the electricity sector to support the restoration of essential services in those areas most directly affected by the insurgency.[295]

A further realignment in spring 2005 focused on sustainability and capacity development; $607 million was allocated for a "management program (including operations and maintenance for the electricity and water sectors)."[296] The April 2005 *Section 2207 Report* presented the rationale behind this shift:

> (1) the original estimate of the damage done to the basic infrastructure from decades of neglect and warfare was significantly underestimated; as a result, more time and resources are required to stand-up

and maintain systems than originally thought; and (2) the limited capacity of the Iraqi government to provide their own resources for near-term reconstruction.[297]

Between October 1, 2005, and December 31, 2005, an additional $253.3 million was realigned within and among sectors.[298] Money was moved out of several infrastructure sectors, including electricity, health care, transportation, and water, and into non-construction sectors such as the justice, public safety infrastructure, and civil society sector as well as the education, refugees, and human rights sector.[299]

The following list illustrates the types of projects that lost more than $10 million because of the realignments:

- a transmission project
- Umm Qasr to Basrah water pipeline and sewage treatment plant
- a civil aviation project
- a potable water project
- nationwide hospital and clinic improvements[300]

As of January 2006, strategy changes had resulted in more than $5 billion in realignments and reallocations: $3.46 billion in September 2004 and an additional $2.128 billion thereafter.[301] See Figure 3.

Although the realignments were consistent with evolving policy, the continuous reviews of the program caused frustration among some program managers,[302] specifically regarding the drag that reprogrammings effected upon program momentum. A PCO official observed that "there needed to come a time when we stopped talking, stopped analyzing, and just executed the program."[303] "The impact of incremental reprogramming [had] a significant detrimental effect on the momentum of program execution… (it slows the pace) and consequently [resulted] in increased overhead costs."[304]

The realignments unfolded within an environment of regular change among U.S. and Iraqi leadership. A former PCO Director of Programs noted that, although the ministries and advisors could articulate their needs at any given time, the turnover in leadership positions (three Iraqi governments in three years) made institutional progress difficult.[305]

IMPACT OF REALIGNMENTS

Funding and Project Delays

The realignment process caused funding delays that challenged program management and contracting officials. During the fourth quarter, FY 2004 (July-September 2004), all funding for the design-build program, except for the security and justice sector, was frozen, pending the completion of the Mission's review and re-prioritization of reconstruction plans.[306] These funds were not released until the end of September 2004, which delayed the issuance of task orders and prevented work from starting.[307] "We lost 60 to 90 days of construction because we didn't have the money from the fourth quarter."[308]

> It was the uncertainty of funding or [finding out] that funding will be pulled away because the strategy has changed, and suddenly there's a new priority. That's very difficult because when you've got contractors mobilized and suddenly you have no money, you've [got to] start sending them home.[309]

Delays caused during the April 2005 realignment directly affected the electricity and water sectors. Funds were withheld and then reinstated six months later, "causing delays in awarding task orders and contracts. The delay increased the burden on the program management and contracting teams in Iraq to develop project scopes of

work, to make the necessary awards, and to obligate funds before the expiration of the IRRF 2 on September 30, 2006."[310]

Effect on Ongoing Projects

The realignments also impacted ongoing projects. For example, a budget cut resulted in the cancellation of a water distribution system project that would have connected to the Erbil/Ifraz wastewater treatment plant (WTP).[311] In the public works and water sector, "lack of funding for three and a half months resulted in actual Iraqi employment lagging original projection."[312]

Effects of the reprogrammings included the cancellation of six transmission projects, eight primary healthcare centers, three large water treatment projects, and a reduction in scope of a project to renovate a water channel.[313]

Other projects received additional funds during these realignments. For instance, the rule-of-law program received an additional $53.6 million, democracy building received $38.5 million, and ministerial capacity building received $20 million.[314]

Significant Realignments 2004-2006

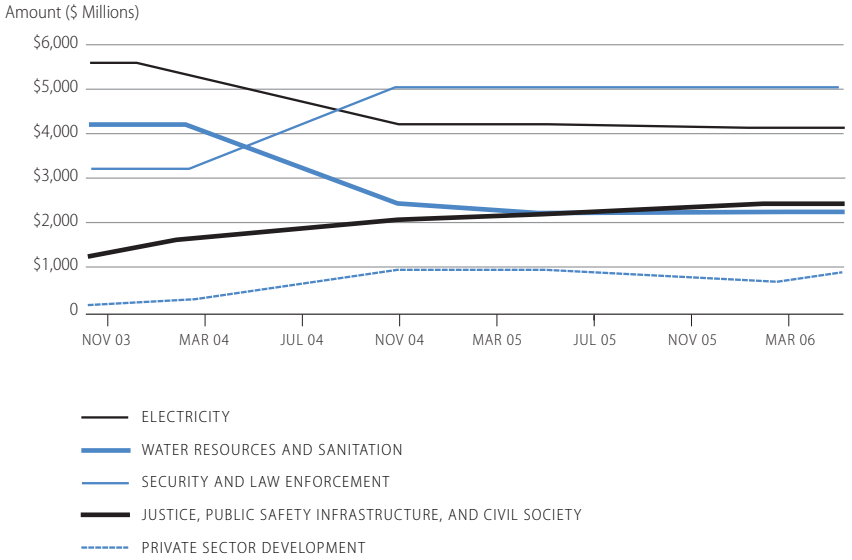


Figure 3
Sources: *Section 2207 Reports*, January 2004-July 2006 (online at: http://www.state.gov/p/nea/rls/rpt/2207/, accessed November 15, 2006).

IRRF 2 Quarterly Reallocations by Sector ($ millions)
November 2003 - July 2006

Sector	Original Allocation November 6, 2003	Allocation January 2004	Allocation April 2004	Allocation July 2004	Allocation October 2004	Allocation January 2005	Allocation April 2005	Allocation July 2005	Allocation October 2005	Allocation January 2006	Allocation April 2006	Allocation July 2006
Security and Law Enforcement	3,243	3,243	3,243	3,235	5,045	5,045	5,036	5,017.6	5,017.6	5,036	5,036	5,036
Justice, Public Safety Infrastructure, and Civil Society	1,318	1,476	1,489	1,484	1,953	1,953	2,130	2,188.5	2,242.5	2,349.8	2,354.7	2,326.9
Electricity	5,560	5,560	5,539	5,465	4,350	4,369	4,308	4,318.5	4,309.8	4,220	4,220	4,220
Oil	1,890	1,701	1,701	1,701	1,701	1,701	1,723	1,723	1,723	1,735.6	1,724.7	1,724
Water Resources and Sanitation	4,332	4,332	4,148	4,247	2,311	2,279	2,157	146	2,146.6	2,131.1	2,131	2,131
Transportation and Telecommunications	500	500	500	500	500	513	509	508.4	508.5	465.5	469.1	469.1
Roads, Bridges, and Construction	370	370	370	368	360	360	355	334	333.7	333.7	337.7	337.7
Health Care	793	793	793	786	786	786	786	786	789	739	746.3	784.5
Private Sector Development	153	184	184	183	843	843	860	840	443	453	805.3	805.3
Education, Refugees, Human Rights, and Governance	280	280	259	259	379	379	363	363	363	410	410	410

Table 3

Sources: *Section 2207 Report*, January 2004-July 2006 (online at: http://www.state.gov/p/nea/rls/rpt/2207/, accessed November 15, 2006).

Management of DFI Funds

After the transition from CPA, IIG took over the management and control of DFI funds. But IIG was not prepared to administer and manage CPA contracts.[315] Thus, on June 15, 2004, the Iraqi Ministry of Finance gave the PMO director the responsibility to manage and "facilitate disbursements for contracts signed by the former CPA, requiring payment subsequent to June 28, 2004."[316] The Minister of Finance stated that this responsibility would transfer to "the Chief of Mission of the United States Embassy and the Commander of the Multi-National Force-Iraq on June 30, 2004."[317]

But immediately after the transition, no single U.S. agency had responsibility for the administration of DFI contracts. KPMG noted that, as of December 2004, PCO, USACE, Coalition forces, DoD, DoS, and Treasury were separately "performing budgeting, project management, contract administration, legal accounting, finance, and inspector general functions" of DFI contracts.[318] JCC-I later became appointed as the responsible party for administering these DFI contracts.

As late as April 2005, U.S. agencies did not have complete accounting records of DFI contracts, nor did they have details of the procedures, policies, and controls necessary to effectively document and monitor DFI projects. This problem was cited in various audits spanning late-2004 to mid-2005. In an April 2005 audit, SIGIR noted that PCO and the Joint Area Support Group-Central (JASG-C) Comptroller could not accurately identify the current value of obligations, payments, and unpaid obligations for DFI contracts.[319] SIGIR made 40 recommendations to the JASG-C, JCC-I, and the U.S. Ambassador.

In April 2006, SIGIR found that each organization had implemented the majority of the recommendations, although some were

still in the process.[320] However, a January 2007 SIGIR audit found that the U.S. government spent $1.4 million on audit services and equipment, but "DFI accountability has only slightly improved, and seven recommendations directed to the Joint Area Support Group-Central remain open."[321]

The transfer of DFI contract administration continues to be a challenge. A KPMG audit that examined DFI funds through June 2005 stated that, although the United States had a committee to manage the handover of DFI-funded contracts,[322] it did not have a comprehensive strategy.[323] An audit conducted by Ernst and Young, which examined DFI funds from June 2005 to December 2005, reaffirmed many of KPMG's findings, stating "the U.S. agencies did not maintain a complete and accurate database of outstanding contractual commitments for contracts signed by the former CPA."[324]

Shift in Management Approach for Infrastructure Projects

In July 2004, the U.S. Mission, PCO leadership, and U.S. military commanders focused on starting construction projects. One former PCO official stated: "If we don't move projects forward, we will just churn money—whether it is right or wrong, we just need to do something."[325] At this time, the design-build contractors were in place, but only 200 construction projects had actually started.[326] Of more than $11 billion of IRRF funds that had been apportioned,[327] only $366 million had been disbursed.[328] Between August and December 2004, the pace of the program quickened: PCO construction starts grew by 91%, from 610 to 1167, and disbursements nearly doubled.[329]

Design-build contractors were hired partly because the U.S. government is not structured to have sufficient personnel to man-

age and execute large-scale infrastructure projects. The design-build contractors possessed organic management expertise and were charged with overseeing U.S., Iraqi, and third-country subcontractors. SIGIR audits have documented shortfalls in these areas by some contractors.

The design-build contractors were also rewarded for their use of Iraqi subcontractors. As a result, much of the actual construction work was completed by local and regional firms, creating multiple layers of contractors for each project.

The construction of one of Bechtel's projects, the Basrah Children's Hospital, illustrates the layered structure typical of design-build contractors in Iraq. USAID issued a job order to Bechtel, which in turn hired a consortium of three contractors to design and build the hospital. These subcontractors hired additional local subcontractors and laborers to complete the work and were responsible for providing on-site project management and supervision. In this one instance, there were at least four layers of management, and each relied on the next to provide appropriate oversight. Iraqi subcontractors performed about 75% of Bechtel's work in Iraq.[330]

The use of multiple layers of subcontractors, especially for construction projects, is not uncommon and can be quite effective.[331] However, in Iraq, managing the subcontractors proved difficult for many of the design-build contractors. Many of the Iraqi contractors did not have sophisticated management systems; some had none. Moreover, the Iraqi subcontractors had to be trained in everything from safety and procurement policies to quality assurance.[332]

One contractor waived insurance requirements for some Iraqi firms and helped others obtain operating funds.[333] Some local contractors did not understand U.S. government rules, regulations, and expectations. For example, the U.S. government expects that items

The use of **multiple layers of subcontractors, especially for construction projects, is not uncommon and can be quite effective.** However, in Iraq, **managing the subcontractors proved difficult** for many of the design-build contractors.

purchased will be new, even if this is not stipulated in a contract. Some Iraqi vendors provided used items in original packaging.[334] Some of the delays for infrastructure projects were caused by the failure of Iraqi subcontractors to understand and conform to international standards.[335]

As the security situation devolved, the design-build contractors relied more heavily on local subcontractors to complete work. Bechtel and others moved many of their full-time staff to Amman, Jordan, where managers continued to provide oversight remotely.[336] In some cases, as a number of SIGIR inspections and audits have shown, this oversight proved too limited to ensure proper project completion.

IRAQI-LED CONSTRUCTION

In summer 2004, PCO and IRMO leadership decided to expand the strategy for infrastructure reconstruction beyond the prime design-build contractors. Program managers "needed any and all ways of showing progress."[337] The new plan was to hire local firms to construct smaller projects in addition to, or instead of, the design-build contractors.[338] To do this, a management team "established a portfolio of lower-risk projects to contract in the open market."[339] They decided to start with a roads project in Diyala and extend the initiative based on the results of this project.

Increasing the number of contractors involved in the IRRF 2 program posed a challenge for PCO program managers. Managers needed to assess the risks and trade-offs associated with managing more local firms. Although design-build contractors were responsible for managing their subcontractors, whether they were from Iraq, the United States, or a third country, hiring more Iraqi firms directly required the government to take "on the risk of overseeing many more contractors in terms of execution and contract administration"[340] without a fully staffed organization.

As of October 2005, upwards of 25% of the total dollar value of IRRF 2 construction projects had gone to Iraqi firms, either as direct contracts or through design-build contractors. GRD-PCO noted that it continued to increase this percentage.[341]

> ...the proportion of construction projects and dollars awarded to Iraqi firms either as direct contracts or subcontracts continued to expand. Most direct contracts—in terms of projects—were awarded in the [following sectors: facilities and transportation; communication; and electricity].[342]

Iraqi-led Management: An Example

Despite the challenges project managers faced overseeing Iraqi contractors, the shift proved to be beneficial in some areas, especially in the railway sub-sector. Local subcontractors who had experience working on railroads were hired to complete the work. PCO hired three experienced local engineers to oversee the contractors' work. And the Iraqi Republic Railway Commission (IRRC), which drove many of the priorities, had a clear understanding of the railroad system and knew what was required to complete the job. The team was able to communicate and prioritize, given a finite amount of resources, and stay focused so they could accomplish the task.[343]

There were challenges associated with executing projects in this sub-sector, including construction delays and managing costs and security risks. But PCO managers felt the team worked well together. In addition, the IRRC had a straightforward goal: fix the stations, fix the tracks, and fix the communication system. The team focused on basic, standard, railway construction. They did not attempt to use the newest technology. They looked to the simplest solution instead of the best technology to complete the job,[344] something not all teams in Iraq did.

COMMUNITY OWNERSHIP

Some contractors worked with community groups to complete smaller-scale infrastructure projects. For example, a community group applied for a USAID-funded grant and worked with an Iraqi engineer to hire a local contractor to oversee construction. After the community group accepted the work, payments were made to local contractors. Grants managers were based throughout the country to oversee the projects. Projects often took longer to complete, but the community took ownership of the process.[345]

Several USAID and DoD officials told SIGIR that it was important to engage local citizens and contractors earlier in a reconstruction effort, especially on community-based infrastructure projects.[346] However, officials also noted the importance of selecting and coordinating these efforts with larger-scale infrastructure projects. USAID noted: "It may be useful to use local firms to construct or rehabilitate small projects like water or sewer pumping stations. However, without a source of treated water from rehabilitated sewage treatment facilities, the utility of the smaller projects will not be realized."[347]

REGIONAL MANAGEMENT

PMO started out with a centralized focus as it set up its operations and initiated its projects. However, PMO planned to move project managers into the field as more projects started. As part of the transition plan, PMO put together a strategy for regional teams to work in each of the 18 governorates to gather local priorities and communicate these to the central office in Baghdad.[348] These teams would coordinate with local leaders and military commanders on construction projects. Further, these teams would take over the regional presence that CPA had established during its tenure. As part of the transition from CPA to the IIG, several regional CPA offices closed.

PMO recognized that it would be valuable to move project managers into the regions to align reconstruction efforts with regional priorities and the U.S. military. PCO, however, had limited success[349] in implementing PMO's plan. Initially, DoS did not support this proposal, primarily because of security concerns.[350] And PCO did not have enough staff to fill these slots.

One regional program manager expressed concern over the lack of human resources in the field:

> A strong and visible PCO presence at all levels of reconstruction is needed to ensure the success of IRRF. In order to fully support the interests of all Coalition members, the Iraqi people and the military ground commanders, PCO must deliver the necessary people and resources to adequately lead and manage the reconstruction effort. The greatest contributing factor to PCO's slow start and limited credibility with the MSCs, State Department, and local Iraqis has been the inadequate presence of PCO personnel in the field. Not committing qualified and capable personnel will only further exacerbate our difficulties.[351]

Regional Management: An Example

In April 2004, PMO created AIRP, funded by DFI, to initiate projects that could be "quickly implemented to improve the daily lives of the Iraqi people, by creating jobs and providing additional security."[352] These projects were to be high-impact and focus on infrastructure, including bridges and roads. Work was to be carried out in coordination with local councils, the military, and various ministries.[353] Although all of the AIRP projects had been contracted by the end of June 2004, many still had not yet begun.

After the dissolution of CPA, many of the staff responsible for implementing AIRP projects concluded their term. One program manager replaced a regional team of seven or eight people. He was tasked with the management of a $50 million AIRP program with 136 projects, ranging from $18,000 to $4 million. To assist him, he had one Iraqi engineer. Together, they faced several challenges.

First, they operated exclusively with cash. The local military commander assigned an Army captain to act as the pay agent for the reconstruction program. When cash was needed, he would fly to Baghdad, fill a duffle bag with cash, and bring it back.[354] Because of the inconsistent cash controls earlier in the effort, this team decided it was necessary to keep as much cash on hand as possible so they could pay vendors and contractors reliably. At one point, the team had $23 million in cash in storage.[355] By the spring of 2005, more stringent cash controls were put in place.

Second, the region lacked continuity in contracting and financial management staff associated with this program. Over one year, there were about five contracting officers and five finance officers.[356] The main office in Baghdad provided little support or guidance on processes and procedures.[357] The team thus created their own.

Although faced with enormous execution challenges, this AIRP program completed about 80% of its projects between May 2004 and June 2005. After July 2004, none of the projects were canceled or de-scoped. This success is directly attributable to the cooperation of Iraqi engineers, the local Iraqi government, and the U.S. military. Well-trained local engineers were hired and priority was given to local contractors—not just Iraqi, but members of the dominant tribe, which reduced security problems.

The program management team put in safeguards against corruption and established oversight processes and procedures. To reduce corruption, they put up signs in local areas to increase public awareness of the projects. Before the program manager made a payment, contractors submitted an approved invoice that included pictures (digital cameras were provided to the engineers). The engineers and the relevant ministry and/or the local council reviewed and approved each invoice. In late July 2004, the management team also created a Project Quality Review Board to give Iraqis ownership of the reconstruction efforts in their region.[358]

Controlling Progress and Performance of Projects: Measuring Performance

After the transition, IRMO, PCO, and USAID each put a concerted effort into the development of a more formal metrics framework. For example, PCO's framework, a draft of which was completed on September 30, 2004, comprised four main categories:

- output/outcome
- project and financial performance
- special contract requirements
- capacity-building metrics[359]

PCO's sector program managers were responsible for gathering and monitoring data for all projects based on this framework. This information fed into PCO's monthly reports. PCO also initiated regular review meetings to monitor high-impact, high-dollar projects in each of the main sectors. These reviews focused on three key performance indicators—scope, cost, and schedule. During these meetings, contracting officers and program managers reviewed progress and discussed concerns. The overarching goal was to identify projects that would not be delivered on budget and to develop alternatives.[360]

Although PCO's analytical framework applied to all projects, initial high-level reviews were conducted only of major task orders. A USAAA audit identified a need to monitor all projects, at all levels, regardless of size, complexity, or importance.[361]

Insufficient and ineffective management, monitoring, and communication between contractors and the U.S. government sometimes led to delayed construction, cost overruns, and an unclear understanding of projects started and completed. For example, an earlier identification of potential problems associated with the management of the primary healthcare facilities could have led to remedial actions that would have allowed for the completion of these buildings. Rather, corrective actions were not taken until July 2005, more than a year after the task orders were awarded, and, as a result, the vast majority of the clinics in the program were not completed.[362]

The late focus on metrics made it difficult to coordinate information across agencies. In particular, the lack of consistent definitions, assumptions, and common metrics across agencies working on similar projects caused "a potential for misunderstanding by USAID/Washington and other interested users."[363]

The rehabilitation of schools throughout Iraq provides an illustrative example. GRD-PCO, USAID, and USAID's contractors each used a different definition of a rehabilitated school. For reporting purposes, USAID's definition was "schools for which rehabilitation work was started but not necessarily completed." USAID's contractor, however, considered a school rehabilitated when "all the work was performed and inspected, and the final payment made."[364] This difference led to a report stating that 144 more schools had been finished than were actually completed. GRD-PCO's program aimed to "refurbish existing facilities to bring them up to an acceptable level, which would be conducive to a good learning environment."[365]

The tardy focus on metrics limited the USG's ability to assess the impact of certain projects. A July 2006 audit of USAID's Local Governance program found that it "could not determine if USAID/Iraq's local governance activities achieved their intended outputs because USAID/Iraq did not require [the contractor] to submit all reporting and monitoring documents specified in the contract."[366]

Measuring the performance, progress, and impact of Iraq reconstruction projects continues to be difficult because of limited performance data.[367] In February 2006, GAO testified before the Congress that, while broad goals have been established and some progress has been made, "limited performance data and measures make it difficult to determine and report on the progress and impact of U.S. reconstruction."[368] In February 2006, DoS was still "finalizing a set of metrics to track the impact of the reconstruction efforts."[369]

PCO, USAID, and IRMO **did not always have an appropriate grasp of the actual costs** of many of the reconstruction projects.

Controlling Progress and Performance of Projects: Cost Control

The security situation limited the ability of managers to manage cost effectively. Initial security estimates were included in the vast majority—if not all—of the contracts. Many IRRF 2 projects estimated between 7-10% for security; however, this amount increased as the security situation worsened.[370] A Congressional Research Service report found that 10-25% of reconstruction costs went to personnel protection, "draining funds from the purposes for which they were intended."[371] GAO reported that under Task Force RIO, security costs for one contractor were 18%, while costs for another contractor were 14.3%.[372] More recent reports, including a January 2007 SIGIR fact sheet, conclude that security costs for design-build contractors ranged from 7.6% to 16.7%.[373]

But the deteriorating security situation was just one reason why it was difficult to manage costs. PCO, USAID, and IRMO did not always have an appropriate grasp of the actual costs of many of the reconstruction projects. This problem persisted well into 2006, despite steps taken after the transition in June 2004 to determine cost-to-complete estimates, develop a comprehensive cost management plan, and improve the definitization process.

COST TO COMPLETE

P.L. 108-106, passed in November 2003, required CPA/OMB to report quarterly on the progress of all projects under each of the ten sectors and provide cost-to-complete estimates. (This responsibil-

ity was later transferred to DoS.) Cost-to-complete estimates are determined by:

- progress toward contract completion to date
- cost of the contract work completed to date
- reasons for variances from initial estimates[374]

Estimates are then developed based on the amount of work remaining to be completed and the cost of that work.[375]

Agencies that received funds from IRRF 2 had to track cost-to-complete information separately, and submit reports quarterly. Project and cost information was then combined and submitted to the *Section 2207 Report*. But agencies did not immediately comply with this requirement.

GRD-PCO produced its first monthly cost-to-complete report in June 2005. GRD-PCO, USAID, and the Multi-National Security Transition Command-Iraq (MNSTC-I) first submitted a cost-to-complete report to IRMO in September 2005, although the original report was due in January 2004. Reasons for the 21-month delay included the lack of unified guidance regarding the cost-to-complete method and inadequate information management systems.[376]

Unclear Guidance

A January 2006 SIGIR audit found that although GRD-PCO, USAID, and MNSTC-I started to produce cost to complete estimates during fall 2005, the estimates were burdened by errors. A significant reason for this was because the legislation did not provide adequate guidance on how to complete these estimates, and IRMO did not provide formal written guidance to these agencies.[377] The audit also found that the agencies did not have strong internal controls and processes to determine cost-to-complete estimates.

For example, in July 2005, GRD-PCO issued a summary outlining its methodology for determining cost to complete; however, it did not widely disseminate this summary across PCO's sectors, which meant that each sector developed different approaches to determining cost-to-complete estimates.[378] In December 2005, MNSTC-I developed procedures for construction projects, but not non-construction projects. This policy, however, did not include a provision for projecting future costs, which would have aided in determining the total cost of a project.[379] In February 2007, USAID presented IRMO with its formal cost-to-complete policies.[380]

Inadequate Financial Management Systems

PCO planned to develop an integrated program and financial information system, but PCO did not complete this system until the spring of 2005,[381] and it was not fully integrated and operational until the summer of 2005.[382] Integrating systems was one of PCO's greatest challenges. An October 2005 SIGIR audit made these observations:

> PCO management has experienced difficulties integrating financial and program management data across its management information systems infrastructure...The inability to share data has negatively impacted PCO's ability to link the financial information in CEFMS to program information. Consequently, it is difficult for project management to prepare cost-to-complete estimates.[383]

USAID's existing system was not set up to handle requests generated from P.L. 108-106, and it could not support requests from PMO and later IRMO. USAID normally tracks its funds by strategic objective; however, IRRF 2 legislation required USAID to track costs by the sectors and sub-sectors described in the IRRF 2 spend

plan. Initially, USAID created off-line reports by hand, which led to misunderstanding and disagreement about numbers because of different interpretations and data-entry errors. In the spring of 2005, USAID completed a web-based system to track disbursements and obligations by sector and sub-sector. This greatly facilitated reporting.[384] USAID staff recommended creating a standing set of funding categories and reporting requirements that could be used across agencies for future interagency contingency operations.[385]

PCO'S COMPREHENSIVE COST-MANAGEMENT PLAN

Recognizing the need for a more effective way to measure costs, PCO leadership developed a comprehensive cost-management plan, which received final approval in March 2005. The document emphasized managing administrative overhead costs of design-build contractors. The plan relied "on a combination of risk-management tools, contingency-management tools, and earned-value principles [to] gauge the effectiveness of individual sectors as they execute their respective programs."[386]

In April 2005, an assessment team went to Iraq to review the financial management of IRRF 2. The team found that, despite improvements made to managing costs, there was still no strategic approach for handling cost overruns.[387] It recommended that weekly reviews, "project by project," be conducted to ensure projects were executed "in a manner consistent with current time-to-complete and cost-to-complete estimates."[388]

But challenges with cost management continued. In January 2006, USAAA noted that CEFMS, the financial management system used by PCO, still lacked "written guidance describing its financial management system procedures,"[389] causing some control weaknesses. In response to the USAAA report, GRD-PCO developed a number of

standard operating procedures and issued guidance that addressed and satisfied USAAA's recommendations. The most recent version was completed in September 2006.

In July 2006, when 70% of IRRF 2 had been expended, cost management continued to be a concern of both USAID and PCO. Several projects continued to report cost overruns, while data for other projects were not adequate to conduct a proper trend analysis. In periodic reviews of the financial information in the Iraq Reconstruction Management System (IRMS), SIGIR has identified a number of data entry errors, reporting irregularities, and inconsistencies.

SIGIR's audit of the Basrah Children's Hospital illustrates the continuing challenges agencies and contractors have had in managing costs.[390] In November 2003, Congress allocated $50 million in IRRF 2 funds to build a pediatric facility in Basrah. USAID estimated that the original completion date would be December 2005. However, contracting delays and problematic program oversight pushed this date to July 2007. In its July 2006 audit, SIGIR estimated that the hospital would cost an additional $69.5-$89.5 million to construct.[391]

EARNED VALUE MANAGEMENT AND IMPROVEMENTS TO DEFINITIZATION PROCESS

PCO used earned value management[392] (EVM) as the primary metric to monitor and manage project costs.[393] EVM can allow for visibility of costs and realistic planning. However, EVM is not an effective tool until a project is definitized because the method requires an agreed-on completion cost and schedule. EVM's effectiveness was limited because of the complicated definitization process and various managers' different approaches to EVM.

Although program management contractors were required to use EVM, no standard approach was prescribed in their contracts.

KEY CONTRACTING TERMS

Indefinite Delivery/Indefinite Quantity (IDIQ) contracts "provide for an indefinite quantity, within stated maximum and minimum limits, of specific supplies or services" to be furnished within an unspecified time period. Under these contracts, task orders are issued on either a *cost-reimbursement (e.g., cost-plus)* or *fixed-price* basis.

Under **fixed-price** task orders, "payment is made to the contractor on the basis of pre-established prices."

Under **cost-reimbursement** task orders, the U.S. government reimburses the contractor for all allowable, allocable, and reasonable contract costs. Cost-reimbursement contracts are typically used in risky situations when the U.S. government is unable to provide sufficient information for offerors to accurately determine a competitive price.

Source: Ralph Nash, et al., *The Government Contracts Reference Book,* Second Edition, 1998.

Therefore, the contractors in each sector used different methods.[394] This limited the ability to have a standard method across PCO sectors.

The Cost Management Plan, approved in March 2005, outlined PCO standards for EVM. It clarified responsibilities and definitions and established a procedure that could be followed across PCO:

- Design-build contractors were required to execute projects using a Work Breakdown Structure.
- Design-build contractors were required to establish a base schedule with financial information. These schedules would be incorporated into the Resident Management System.
- Actual data would be updated and analyzed at least monthly.
- Sector program managers would be responsible for performing EVM, using the Primavera software, and maintaining all data and records.[395]

The SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, discussed the problems with definitizing task orders under the design-build construction contracts—the finalization of negotiations between the government and contractors about the specific work to be done, costs, and schedules for individual projects. These challenges affected PCO's ability to effectively control the costs of specific projects and overall indefinite delivery/indefinite quantity (IDIQ) design-build contracts.

Of note, a July 2006 SIGIR audit stated that the Federal Acquisition Regulation and the Defense Federal Acquisition Regulation Supplement do not provide specific direction on the definitization of task orders under IDIQ contracts. But contracting officers in Iraq felt that they had a "fiduciary responsibility to protect the government, including the timely definitization of task orders under IDIQ contracts."[396] The U.S. Army concluded that task orders under IDIQ contracts would be considered undefinitized if the terms and conditions were not agreed on before the beginning of a project.

Definitization is extremely important to control the contractors' rate of expenditure, or burn rate. Because the design-build contracts were cost-plus, as soon as contractors mobilized they started to incur and charge costs. Definitization enabled PCO managers to establish clear expectations about the work that would be performed under individual task orders. Such information allowed managers to better inform the public and the government about the program and provide clear reasoning for adjustments to initial plans.[397]

During the summer and fall of 2004, PCO took steps to improve the definitization process, including creating a single administrative task order. This task order covered all administrative costs in IDIQ contracts, instead of including overhead as part of each individual construction task order. This gave managers a better understand-

ing of the direct and indirect costs associated with the work of the contractors. By segregating costs, PCO could also avoid paying for the same indirect costs for two different projects.

This required contractors to change their accounting and billing systems, which they did, but at a cost. This change would have been easier if the billing system had been set up this way at the beginning. Instead, it became more complex because it was done after the fact. By March 2005, administrative costs for several contracts were separated.[398]

USAID's Method

Although both USAID's and PCO's infrastructure contracts were cost-plus contracts, the two agencies used different methods for tracking costs. USAID and Bechtel negotiated a fixed fee, including overhead and indirect costs, based on the value of work anticipated to be awarded to Bechtel.[399] Estimates for each project included a proportionate share of these costs. For each job order, USAID and Bechtel negotiated a rough order of magnitude (ROM), estimating direct and indirect costs.[400]

USAID encouraged Bechtel to implement projects quickly; as a result, Bechtel sometimes began construction before the design was complete. Bechtel used many[401] fixed-price subcontracts for equipment and labor. To measure progress, USAID and Bechtel held weekly meetings and completed a trend analysis.[402]

Controlling Progress and Performance of Projects: Quality Management of Construction Projects

USACE-GRD provided construction management and quality assurance (QA) for PCO. USACE also had an interagency agreement with USAID to provide construction management of USAID's infrastructure projects. With PCO, USACE-GRD was responsible for design-build task orders with U.S. and foreign firms and direct contracts with Iraqis.[403] Once task orders were let, GRD staff took over the responsibility for the monitoring of the projects' progress as related to the specifications detailed in the contract, in particular the contractors' quality control (QC) plan.

After the June 2004 transition, a SIGIR audit found that PCO issued more than 100 standard operating procedures (SOPs). Of these, "42 were related to construction and contracting quality management."[404] Of particular significance was the procedure that required GRD's QA representative to maintain daily QA reports. SIGIR inspection teams found that, despite these SOPs, GRD's ability to perform adequate QA and construction management varied.

SIGIR inspection teams traveled to various sites throughout Iraq to review the progress and quality of construction efforts. In particular, they ensured that results aligned with the contract objectives. They determined whether designs were appropriate and whether actual construction met these standards, and they assessed the QA oversight provided by the U.S. government. These inspection teams completed 42 assessments as of April 2006 and found mixed results in terms of design, execution, and oversight. In a review of these projects, results of twelve were not consistent with the contract's original objectives, eleven were not adequately designed, and eleven did not meet the standards of the original design.

An example of a well-designed, well-constructed, and well-managed project was the Zakho Military Academy in Zakho, Iraq. A SIGIR inspection report published in April 2006 cited these reasons for the project's success:

- **The project was well designed**. The designs were accurate, properly sequenced, compatible with "existing and new facilities," and considered local materials and labor.[405]
- **Construction met design standards**. Construction was completed with a "high level of workmanship by the contractor."[406] The USACE project engineer and QA representative lived on site and were actively engaged in day-to-day activities.[407]
- **QC and QA plans and programs were detailed and effective.** The plan was detailed, and the contractor provided daily QC reports. USACE maintained daily progress reports and monitored the contractor's quality plan.[408]

USACE failed to provide adequate oversight of other construction projects. For example, at the aviation base building in Kirkuk, construction deficiencies were not "identified and corrected before sign-off and turnover to the Iraqi Air Force."[409] The oversight of the Ninewa Village Roads Segment 3 project had poorly designed plans. According to a SIGIR assessment, "there appeared to be limited coordination between the GRD-North District and PCO as to who had responsibility for design…."[410]

GRD-North was not aware that the State Commission for Roads and Bridges provided designs to the contractors. PCO, however, knew of this process.[411] On the same project, the QC plan was not adequate. "The contractor's quality control (CQC) plan submitted by the contractor consisted of five lines in an email message."[412] It was unclear whether it was approved, and the CQC reports are incomplete.[413]

In some cases, contractors who were required to submit a QC plan did so, but did not follow it. In other instances, contractors did not even submit a plan. The government's QA program can mitigate poor construction, and improvements can be made with proper oversight. However, the U.S. government did not consistently apply QA of reconstruction projects in Iraq. Instead, some border posts did not have proper security fences. A teaching hospital's roof leaked, and several police stations' renovated walls were cracked and peeling. Other common deficiencies were found in plumbing, electrical, and finishing work associated with new and renovated buildings.

Another issue that affected the quality of some construction projects was the disconnect between Iraq's standard construction procedures and internationally accepted guidelines. In the case of the Baghdad Police Academy, according to SIGIR reports, an Iraqi subcontractor used cement joints to seal wastewater pipes, a practice used by Iraqi construction companies, but not an international standard. These cement joints leaked, causing major interior damage to the police facilities. Concerns were raised about health hazards within the building, because wastewater leaked through floors, ran down walls, and filled ceiling lights. In addition, there were structural issues with the buildings themselves, including foundation cracks, and honeycombing problems in the concrete. As a result of the substantial repairs required to fix these problems, some of the planned construction for this $72.75 million project was canceled.[414]

Controlling Progress and Performance of Projects: Contract Administration and Documentation

Measuring performance and cost and providing QC are critical components of monitoring a project's progress. The information

gathered during these QC reviews often led to adjustments to scope, cost, and/or schedule, which then triggered a change to a contract. But USAID and PCO did not always make timely, responsive contract modifications, affecting the government's ability to adequately oversee and control contractors.

In USAID's health sector, an audit by the USAID Office of Inspector General (OIG) found that 60% of the activities "did not achieve their intended outputs."[415] The audit found that the contractor did not properly manage the contract and that staff in Iraq did not always respond to contractor requests in a timely fashion. The audit made a recommendation to ameliorate this problem.[416]

In response, USAID clarified the process for modifying contract SOWs and emphasized the importance of doing so "prior to implementation of changes by the contractor and within a reasonable timeframe of notification of the requirement for a change."[417] A 2004 USAID OIG audit of the economic reform program found that USAID staff in Iraq needed to improve recordkeeping procedures and revise their reporting requirements.[418] USAID/Iraq staff used "an informal recordkeeping system"[419] (e-mail correspondence, for example). Actions were taken on both of these recommendations.[420] However, a 2006 USAID OIG report found similar weaknesses, partly "because of the high turnover of the Cognizant Technical Officers (CTO)."[421]

In its infrastructure sector, USAID OIG concluded that "the mission's management controls related to the infrastructure reconstruction and rehabilitation projects are in need of improvement."[422] As a result, USAID OIG recommended that USAID establish procedures to ensure that each job order includes an environmental review, a specific plan, a process for handling excess charges, and closeout procedures.[423] A May 24, 2004 letter from the mission director to

USAID OIG noted that actions had been taken in response to these recommendations.[424]

DoS and PCO-GRD also did not always respond to contract requests in a suitable timeframe. Under PCO-GRD, the construction of the primary healthcare centers illustrates the importance of diligent contract oversight and proper documentation.[425] Poor contract administration of a DoS contract "resulted in millions of dollars put at unnecessary risk, and property that can not be accounted for that was acquired…"[426]

Contract documentation and data continued to be an issue throughout the reconstruction effort. In a review of selected projects, SIGIR found that PCO could not provide a task order worth more than $2 million and data in IRMS, which utilizes information that is stored in CEFMS and other financial and contract systems, was inaccurate for eleven projects surveyed. In another instance, GRD-PCO was unable to provide the SOW for a hospital project, and a data-entry error in IRMS misstated the project's value.[427]

Controlling Progress and Performance: Rewarding Performance

In a January 2004 presentation to potential bidders of design-build contracts, PMO described the proposed award fees. Contractors would receive monthly feedback, but would receive an award-fee determination every six months. Sixty percent would be based on technical performance, and 40% would be based on management, including the use of local subcontractors. A contractor's base fee would be 3%, but each contractor could be eligible for up to an additional 12%, based on performance.

To determine these awards, PCO established an Award Fee Evaluation Board and created policies and procedures. However, these policies and procedures were not consistently followed. Evaluation criteria were subjective, contract files were incomplete, and monthly assessments were not regularly performed. A SIGIR audit concluded that "the effect of stated evaluation criteria without established definable metrics could result in over-inflated contractor performance evaluations."[428] In response, on July 25, 2005, JCC-I published a memo outlining the Award Fee Board Policy. The policy highlights these important components of the award fee:

- The contractor earns an award fee by performing the work requirements as stated in the contract and by excelling in the areas specified in the award-fee process—not by doing what the program manager or other government personnel may want of the contractor on a particular day.
- The contractor begins each evaluation period with 0% of the available award fee. Contractors do not begin with 100% of the available fee and have deductions withdrawn to arrive at the evaluated fee.[429]

In addition, a JCC-I official told SIGIR that award-fee officials had received training, and the award-fee process was monitored more closely.[430]

Managers debated the appropriate amounts of award fees. Some argued for more "penalties for poor performance and rewards for desired performance."[431] This was especially true for completion dates. Missing agreed-on completion dates would cause additional costs.[432] Balancing the risks assumed by the contractor and the government was an additional challenge. The lack of clarity on this

issue resulted in the government having responsibility for some cost increases—not the contractor.[433]

Closing: Capacity Building and Transfer to Iraqis

Although capacity development was a component of the IRRF 2 supplemental legislation, PCO did not formally begin to address capacity development until late 2004. Two important decisions—first to transfer sovereignty to Iraqis on June 30, 2004 and second, to move responsibility for the reconstruction program from DoD to DoS—disrupted operations and delayed the integration of capacity development in the overall program management plan.[434]

In August 2004, PCO began developing the "Iraq Capacity Development PCO Management and Interface Plan," which the PCO Director formally approved in December 2004. This plan outlined a five-level approach to capacity development:

- Level One: Policy
- Level Two: Laws and Regulations
- Level Three: Inter-organizational
- Level Four: Iraqi Ministries
- Level Five: Infrastructure

PCO realized that the success of IRRF 2 infrastructure projects hinged on the support of the Iraqi government and every U.S. agency involved in Iraq reconstruction. Regulations, budgets, ministerial systems and processes, and training in operations and maintenance were each a necessary and critical component of the successful operation of any facility.

Throughout early 2005, PCO briefed agencies, think tanks, congressional staff, and contractors on its five-level framework to

improve awareness and gain support.[435] Significantly, PCO worked with other agencies to develop its capacity framework into the "Sustainability Program Transition Plan." This plan was signed in September 2006.

Within the five levels outlined in PCO's framework, capacity-building efforts in Iraq can be further categorized into three broad areas relating to program and project management:

- *Operations and Maintenance:* providing technical training and ensuring the financing needed to sustain infrastructure projects funded by the IRRF 2 and DFI
- *Management Skills:* strengthening techniques necessary to administer programs, such as financial management, contract administration, leadership, and program management
- *Vendor Base:* building the capacity of Iraqi and regional contractors to bid for and manage U.S.-funded contracts

OPERATIONS AND MAINTENANCE

USAID was the first entity to focus on providing training to Iraqis to ensure the long-term sustainability of infrastructure projects. Operations and Maintenance (O&M) was a component of every task order awarded for infrastructure work, but processes were initially *ad hoc*. By the summer of 2004, program managers recognized the need for a more formal process for training and transferring projects to Iraqis.[436] This was partially because some of the "initial Bechtel projects began to fail because the Iraqis could not operate or maintain them."[437]

In the summer of 2003, USAID issued two job orders specifically focused on O&M. One worked with the Ministry of Electricity to "provide technical, procurement, cost, and schedule assistance in planning and preparing for the winter 2003 and spring and fall 2004

major generating unit overhaul outages to restore existing installed generation to reliable operation."[438] The second O&M job order provided technical support for the "day-to-day operations and maintenance to improve plant performance."[439] A third O&M-focused job order was issued in March of 2004, and was initially assigned "to provide a program of in-plant mentoring and training at the grassroots level in the 19 existing Ministry of Electricity power plants across Iraq."[440]

As stated above, PCO formally began its capacity-development program in August 2004, when it initiated the "Iraq Capacity Development PCO Management and Interface Plan."[441] In the fall of 2004, PCO awarded a contract that specifically focused on capacity development.[442] In December 2004, the PCO director approved the PCO plan, which focused on infrastructure O&M. Throughout early 2005, PCO took additional steps to improve its capacity-development program. These included the establishment of standard operating procedures, which were approved in February 2005.[443]

By May 2005, it became clear that additional efforts would be needed to ensure that Iraqis would be able to sustain projects, especially in the electricity and water and sanitation sectors. At this time, an interagency group[444] formed to focus on these issues. The group reported that "a number of critical infrastructure facilities constructed or rehabilitated under U.S. funding have failed, will fail, or will operate in sub-optimized conditions following handover to the Iraqis."[445] To mitigate anticipated problems, the group recommended that support be provided to Iraqis for up to one year, increased from 90 days, after project transfer.[446]

Recently, DoS has developed a cost-sharing program with the Iraqi government for sustainment of U.S.-funded power plants, a portion of which will include O&M capacity building.[447] In addition,

PCO reports that since July 2005, eight additional interagency working groups, task forces, or committees have been formed to focus on capacity-development issues.[448]

In January 2006, a SIGIR audit outlined concerns about the process used to transfer assets to the Iraqis. SIGIR found that the processes in place were geared more toward transfer at the local level and "do not address the information needs of the Government of Iraq and the Iraqi ministries responsible for planning the integration and sustainment of completed projects."[449] However, two initiatives are underway to mitigate problems highlighted in the audit:

- *The Information Technology Working Group* focuses on gathering all project asset information into a single database.
- *The Asset Recognition and Transfer Team Working Grou*p is developing common policies and processes to facilitate the transfer of assets to the Iraqi government. (This group merged with the Sustainability Working Group and is now called the Asset Recognition, Transfer, and Sustainability Group.)

MANAGEMENT SKILLS

Initial efforts to provide O&M training to Iraqis revealed an apparently unforeseen need to develop the capacity of Iraqi staff tasked with overseeing U.S.-funded reconstruction projects. Many of these Iraqis had not been trained in budgeting, managing systems, scheduling repairs, or advanced planning. They also needed leadership, direction, and support from managers and ministry staff to ensure the sustainment of an integrated program or system of facilities. One SIGIR interviewee categorized this need as one for "operations and maintenance at the ministerial level."[450]

By March 2005, PCO recognized this need and expanded capacity-building efforts beyond O&M to include training

ministerial staff in business systems, human resources, and "other administrative functions necessary to the successful operation and sustainability of completed infrastructure facilities."[451] PCO modified the sector program management contracts to include increased emphasis on ministerial training.

In its January 2006 *Section 2207 Report*, DoS announced that it had created a new project code for "ministerial capacity" and reallocated funds to support this work. These funds would be used for "maximizing the relationship between the Mission's Senior Consultants and the Ministerial Assistance Teams and the Ministries to focus on sustainability as a core mission of the Ministry, supporting core skills development training in the areas of operations and maintenance budgeting, and focusing on Asset Recognition and Transfer (ART) capabilities."[452] At least three working groups were established to build the capacity of the ministries:

- public-sector working group
- capacity-development working group
- ministerial-assistance-team working group

VENDOR BASE

The involvement of Iraqi vendors varied at the beginning of the reconstruction effort. Although hiring local subcontractors was a priority in summer 2003, building the capacity of these firms took time.

Another issue involved women-owned companies. As of June 2005, only one women-owned Iraqi firm was involved in the reconstruction effort. To encourage greater participation of Iraqi women in the reconstruction program, PCO joined with GRD and JCC-I to develop a program of networking sessions, training, and general marketing to Iraqi businesswomen, in addition to providing incen-

tives to contractors to hire women-owned firms for subcontracting work. As of February 2006, 220 women-owned Iraqi firms were carrying out work under the IRRF 2 reconstruction program.[453]

In January 2005, PCO established the Subcontracting Excellence and Capacity Development Database, which tracks the number of subcontractors hired by the design-build contractors and the number of capacity development activities sponsored by the design-build contractors.

Provincial Reconstruction Teams

The Provincial Reconstruction Teams (PRTs) exemplify another shift in the way reconstruction projects are implemented and managed. PRTs are joint civilian-military bodies focused on coordinating reconstruction efforts—related to infrastructure and non-infrastructure—and acting as the primary interface with the U.S. government in provinces throughout Iraq. In October 2005, the U.S. Embassy-Iraq and Multi-National Force-Iraq (MNF-I) jointly issued Cable 4045 establishing the PRTs. In November 2005, PRTs were created in Mosul, Kirkuk, and Hilla. To date, ten PRTs are operating throughout Iraq.

DoS's stated goals for the PRTs are to "develop a transparent and sustained capability to govern, promoting increased security and rule of law, promoting political and economic development and providing provincial administration necessary to meet the basic needs of the population."[454] The PRTs report to the National Coordination Team, which works through the U.S. Embassy in Iraq, and receives strategy guidance through the Executive Steering Committee. PRTs are planned to have staff of up to 100 people, depending on needs in the province, who will be provided by the military, DoS, USAID, GRD-PCO, and others.[455]

Although a similar model is used in Afghanistan, "there is little formal doctrine, military or civilian, on PRTs/PRDCs or their function."[456] A recent House Committee on Appropriations report stated that:

> it will be critical for the chief of mission to provide detailed guidance on their functions in Iraq... it should be clear that PRTs—under the guidance of the chief of mission—are the agent for the management, auditing, and coordination of all U.S. government reconstruction funds available in the region, including civilian agency funds and military reconstruction funds such as the Commander's Emergency Response Program and the Commanders Humanitarian Relief and Reconstruction Program.[457]

The Committee recommended $622 million in funding for the program, of which a portion would be allocated from IRRF 2. However, before spending these funds the Committee required that DoS provide:

> (1) the formal assessment completed by the U.S. embassy and military command in Iraq of the initial performance of the first three demonstration PRT projects; (2) a complete program plan, including total cost and staffing requirements of the PRTs/PRDCs program in Iraq; (3) the official implementing guidance that incorporates the recommendations cited above in this report; and (4) a plan to transition PRTs/PRDCs in Iraq by the end of FY 2007.[458]

On October 23, 2006, DoS submitted this report to the Congress.[459]

An October 2006 SIGIR audit noted that the PRTs face several challenges, including security, inadequate resources, and unresolved roles and responsibilities, especially regarding civilian and military integration.[460]

The lessons learned while managing the Iraq reconstruction program during the last three years—including the need for sufficient oversight, clear roles and responsibilities, adequate policies and systems, and coordination—can and should be applied to this new approach for managing Iraq reconstruction.

ENDNOTES

1. For example, on June 22, 2006, the Deputy Secretary of Defense announced the formation of a Task Force to Support Improved DoD Contracting and Stability Operations in Iraq. Also, the Department of State's Office of the Coordinator for Reconstruction and Stabilization, as part of its implementation plan, is considering the development of a "civilian reserve corps."
2. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 37).
3. PMI document, "A Guide to the Project Management Body of Knowledge (PMBOK® Guide)," 2000 Edition.
4. See SIGIR Lessons Learned Forum, Program and Project Management, Washington, D.C., April 12, 2006.
5. See SIGIR Lessons Learned Forum, Program and Project Management, Washington, D.C., April 12, 2006.
6. See e.g. Air War College, "Pre-war Planning for Post-war Iraq" (online at http://www.defenselink.mil/policy/sections/policy_offices/isa/nesa/postwar_iraq.html, accessed July 23, 2006); SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006.
7. Phase IV is a term used by the military to describe those activities that take place post-combat.
8. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 202-203).
9. Senior military planning officer, interview, June 23, 2003.
10. Military planners, especially those associated with Phase IV, were not consistently involved in ORHA's planning efforts. "Unfortunately, a lot of effort was being duplicated by the parallel field and Washington teams." Source: Senior USAID official, interview, November 2, 2003.
11. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 33).
12. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 37).
13. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 31-33).
14. Former ORHA official, interview, February 2, 2006.
15. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 64-65).

16. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 28).
17. See "The Field Operations Guide" (online at http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/resources/pdf/fog_v4.pdf, accessed February 5, 2007).
18. USAID document, "USAID Consultations on Iraq Contingency Planning," February 24, 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY342.pdf, accessed June 7, 2006).
19. OTI provides "fast, flexible short-term assistance targeted at key political transition and stabilization needs." (Source: USAID/OTI Staff, written comments to SIGIR, March 9, 2006.)
20. DART has a Response Alternative for Technical Services (RATS) program, and OTI used staff from its "bullpen;" both groups can be activated quickly to respond to an urgent request.
21. At this point, USAID used mostly International Disaster Assistance (IDA) and Transition Initiatives (TI) funds.
22. USAID document, "USAID Consultations on Iraq Contingency Planning," February 24, 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY342.pdf, accessed June 7, 2006).
23. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 44).
24. Former ORHA staff, interview, February 2, 2006.
25. Sixteen service contracts were issued for subject matter experts, linguists, and in support of the Iraqi Free Media Program and Iraqi Reconstruction and Development Council. (Source: DoD IG Report, "Contracts Awarded for the Coalition Provisional Authority by the Defense Contracting Command-Washington," March 8, 2003, pp. 4-5.)
26. The Defense Contract Management Agency (DCMA) was not asked to provide contract support, including the administration of contracts, until February 27, 2003. (See: GAO report, "Rebuilding Iraq: Fiscal Year 2003 Contract Award Procedures and Management Challenges," Report 04-605, June 2004.)
27. For more information on LOGCAP, please see SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006.
28. A GAO report found that "there were not always sufficient in-country personnel to administer the contracts or task orders when they were initially awarded or issued." (See: GAO report, "Rebuilding Iraq: Fiscal Year 2003 Contract Award Procedures and Management Challenges," Report 04-605, June 2004.)
29. DoD memo, "Contracting Support for Office of Reconstruction and Humanitarian Assistance," March 29, 2003.
30. Former ORHA official, interview, December 9, 2005; former ORHA official, interview, March 15, 2006.

31. Former senior USAID official, interview, November 2, 2005.
32. This sector was eventually dropped. (Source: Former USAID official, interview, February 9, 2006.)
33. OMB document, "Testimony of OMB Director," July 29, 2003.
34. OMB document, "Testimony of OMB Director," July 29, 2003.
35. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 33).
36. USACE official, written comments to SIGIR, July 27, 2006.
37. Department of Treasury report, "International Assistance Programs: Review of Treasury Activities for Iraq Reconstruction," OIG-06-029, March 23, 2006, pp. 2-3.
38. USAID's formal procurement process for Iraq reconstruction began in January 2003, when the NSC instructed the agency to initiate contracting related to Iraq. On January 16, 2003, the USAID Administrator responded by authorizing the use of "a less than full and open competition process" to meet the pressing needs to prepare for potentially significant relief and reconstruction efforts. Between February and May 2003, USAID awarded eight major IRRF 1-funded contracts. Although Congress did not approve IRRF 1 until mid-April 2003, USAID issued contracts in the anticipation of the eventual appropriation. For more information on USAID's contracting process, please refer to SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006.
39. Former USAID contractor, USIP interview, September 8, 2004 (online at: http://www.usip.org/library/oh/iraq.html, accessed July 23, 2006).
40. Former USAID contractor, interview, June 29, 2006.
41. See USACE document, "Frequently Asked Questions: USACE Missions—Oil Fire Suppression and Restoration of Production," updated January 20, 2004 (online at: http://www.hq.usace.army.mil/cepa/iraq/faq.htm, accessed May 29, 2006) and USACE official, interview, June 25, 2003.
42. This contract was signed March 8, 2003. For more information on this contracting process, please see SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006.
43. USACE official, interview, June 25, 2003.
44. Former USACE official, interview, October 30, 2006.
45. Former USAID official, interview, November 2, 2005; USACE official, interview, June 27, 2004.
46. USAID press release, "USAID Selects Technical Advisors for Iraq Reconstruction Programs," July 3, 2003 (online at: http://www.usaid.gov/press/releases/2003/pr030703_1.html, accessed July 24, 2006).
47. USACE official, interview, March 1, 2006.
48. USACE official, interview, March 1, 2006.
49. USACE document, "USACE and the Reconstruction of Iraq," January 12, 2004, slides 11 and 12.

50. See Public Law 108-11, p. 117 (STAT 573). Until April 2003, USAID and other agencies used their own operating budgets to fund initial contracts, grants, cooperative agreements, supplies, and purchases, and to pay for other costs associated with the planning efforts.
51. See USAID document, "USAID's Vision for Post-Conflict Iraq," February 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY341.pdf, accessed May 12, 2006).
52. See former senior USAID contractor, interview, January 5, 2006; former senior USAID official, interview, February 9, 2006.
53. USAID document, "USAID's Vision for Post-Conflict Iraq," February 2003 (online at: http://pdf.dec.org/pdf_docs/PDABY341.pdf, accessed May 12, 2006).
54. USAID notes that the "lack of accurate pre-war data made it difficult to establish goals based on a pre-war baseline." Source: USAID, written comments to SIGIR, February 22, 2007.
55. USAID, written comments to SIGIR, February 22, 2007.
56. Former senior USAID contractor, interview, January 5, 2006.
57. Senior USAID official, written comments to SIGIR, April 11, 2006.
58. USAID contractor, interview, February 22, 2006.
59. Delays in achieving program results were partly due to the deteriorating security situation, which became more dangerous in late 2003.
60. Former senior advisor, interview, July 18, 2003.
61. Former ORHA official, interview, March 15, 2006.
62. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 27).
63. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 29).
64. Former FEST member, interview, July 20, 2003.
65. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 27).
66. Former CPA senior advisor, written comments to SIGIR, January 18, 2006.
67. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 25).
68. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 30-31).
69. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 25).
70. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 25-26).
71. See e.g. USAID official, interview, January 20, 2006; former ORHA official, interview, February 2, 2006.

72. See USACE official, interview, March 1, 2006.
73. Congressional Research Service document, "The Coalition Provisional Authority (CPA): Origin, Characteristics, and Institutional Authorities," updated June 5, 2005, p. 2.
74. White House letter, President to Paul Bremer, May 9, 2003.
75. DoD memo, "Designation as Administrator of the Coalition Provisional Authority," May 13, 2003.
76. DoD memo, "Authority of the Administrator of the Coalition Provisional Authority and Support Relationships," June 16, 2003.
77. *Federal Register*, Executive Order 13290—Confiscating and Vesting Certain Iraqi Property, Part IV, March 24, 2003 (online at: http://www.treas.gov/offices/enforcement/ofac/legal/eo/13290.pdf, accessed July 23, 2006).
78. Former ORHA/CPA official, interview, March 15, 2006.
79. Former ORHA/CPA official, interview, December 7, 2005.
80. Former ORHA/CPA official, interview, March 15, 2006.
81. Former ORHA/CPA official, interview, December 7, 2005.
82. Former ORHA/CPA official, interview, March 23, 2006.
83. Former ORHA/CPA official, interview, March 23, 2006.
84. Former ORHA/CPA official, interview, March 15, 2006.
85. Former ORHA official, interview, March 15, 2006.
86. Former ORHA official, interview, March 15, 2006.
87. U.S. Army/Office of CPA document, "Vested Funding Program Release Document," June 2, 2003.
88. Former ORHA/CPA official, interview, December 7, 2005.
89. Former ORHA/CPA official, interview, December 7, 2005.
90. U.S. Army/Office of CPA document, "Vested Funding Program Release Document," June 2, 2003.
91. Former Army officer, interview, December 21, 2005.
92. See USAAA report, "Commander's Emergency Response Program and Quick Response Fund," A-2005-0173-ALE, May 2, 2005; USAAA report, "Follow up Audit of the Commanders' Emergency Response Program and Quick Response Program," A-2005-0332-ALE, September 20, 2005; SIGIR Report, "Management of the Commander's Emergency Response Program for Fiscal Year 2005," SIGIR-05-025, January 23, 2006; USAAA Report, "Follow up Audit II of the Commander's Emergency Response Program and Quick Response Program," A-2006-0090-ALE, March 31, 2006.
93. See UN Security Council Resolution 1483, May 22, 2003 (online at: http://daccessdds.un.org/doc/UNDOC/GEN/N03/368/53/PDF/N0336853.pdf?OpenElement, accessed May 29, 2006).

94. UN document, UN Security Council Resolution 1483, May 22, 2003, Section 13 (online at: http://daccessdds.un.org/doc/UNDOC/GEN/N03/368/53/PDF/N0336853.pdf?OpenElement, accessed May 29, 2006).
95. SIGIR Report, "Coalition Provisional Authority Comptroller Cash Management Controls Over the Development Fund for Iraq," SIGIR 04-009, July 28, 2004, p. i.
96. SIGIR Report, "Coalition Provisional Authority Comptroller Cash Management Controls Over the Development Fund for Iraq," SIGIR 04-009, July 28, 2004, p. 4.
97. See SIGIR Report, "Oversight of Funds Provided to Iraqi Ministries through the National Budget Process," SIGIR 05-004, January 30, 2005.
98. SIGIR Report, "Coalition Provisional Authority Comptroller Cash Management Controls Over the Development Fund for Iraq," SIGIR 04-009, July 28, 2004, p. 4.
99. See SIGIR Report, "Oversight of Funds Provided to Iraqi Ministries through the National Budget Process," SIGIR 05-004, January 30, 2005.
100. SIGIR Report, "Coalition Provisional Authority Comptroller Cash Management Controls Over the Development Fund for Iraq," SIGIR 04-009, July 28, 2004, p. 5.
101. Interagency Assessment Report, "Financial Management Internal Controls Lessons Learned—Working Draft," Pre-decisional, p. 27.
102. Interagency Assessment Report, "Financial Management Internal Controls Lessons Learned—Working Draft," Pre-decisional, p. 27.
103. Interagency Assessment Report, "Financial Management Internal Controls Lessons Learned—Working Draft," Pre-decisional, p. 36.
104. Interagency Assessment Report, "Financial Management Internal Controls Lessons Learned—Working Draft," Pre-decisional, p. 2.
105. See SIGIR Report, "Oversight of Funds Provided to Iraqi Ministries through the National Budget Process," SIGIR 05-004, January 30, 2005.
106. Former ORHA contracting official, interview, November 22, 2005.
107. DoD Report, "Contracts Awarded for the Coalition Provisional Authority by the Defense Contracting Command-Washington, " D-2004-057, March 18, 2004, p. 24.
108. SIGIR Report, "Administration of Iraq Relief and Reconstruction Funds," 05-007, April 30, 2005, p. 5.
109. White House document, "Executive Order Protecting the Development Fund for Iraq and Certain Other Property in Which Iraq Has An Interest," May 22, 2003 (online at: http://www.whitehouse.gov/news/releases/2003/05/20030522-15.html, accessed July 23, 2006).
110. USAID contractor, interview, February 21, 2006.
111. Former USAID official, interview, February 9, 2006.
112. USAID contractor, interview, February 22, 2006; former USAID official, interview, February 9, 2006.
113. USAID official, email to SIGIR, December 2005.

114. USACE official, email to SIGIR, September 9, 2006.
115. Former ORHA/CPA official, interview, March 23, 2006.
116. Former ORHA/CPA official, interview, March 23, 2006.
117. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 58).
118. Senior USAID official, interview, November 3, 2005; former USAID official, interview, February 9, 2006.
119. See Bechtel document, "Iraq Infrastructure Reconstruction Program, Recommended Implementation Plan," June 2003 (online at: http://www.usaid.gov/iraq/contracts/pdf/iirii_rfp031002attach6.pdf, accessed March 9, 2007).
120. UN document, "United Nations/World Bank Joint Iraq Needs Assessment," October 2003, pp. x-1.
121. CPA official, interview, March 9, 2007.
122. See SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006; former USAID official, interview, February 9, 2006.
123. CPA official, interview, March 9, 2007.
124. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 96).
125. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 98).
126. The majority of USACE's 35,000 personnel are civilians and are not required to deploy overseas.
127. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 97-98).
128. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 86).
129. Official involved felt that USAID could not manage more than $3 billion. See former CPA official, interview, January 13, 2006.
130. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 77).
131. Note: The CPA Administrator approved by initialing an approval box on a memo. Initials dated August 15, 2003. See CPA memo, Director, CPA-OMB, "Management of Large Appropriated Construction Contracts," August 15, 2003.
132. CPA info memo, Chief of Staff to CPA Staff, "President's Supplemental—CPA Program Management Office," unclassified, September 9, 2003.
133. White House document, "Address of the President to the Nation," September 7, 2003 (online at: http://www.whitehouse.gov/news/releases/2003/09/20030907-1.html, accessed June 6, 2006).

134. CPA info memo, Chief of Staff to CPA Staff, "President's Supplemental—CPA Program Management Office," unclassified, September 9, 2003.
135. See Public Law 108-106 (online at: http://www.export.gov/Iraq/pdf/public_law_108-116.pdf, accessed July 31, 2006).
136. United States Public Law 108-106, "Emergency Supplemental Appropriations Act for Defense and for the Reconstruction of Iraq and Afghanistan," 2004, p. 1223.
137. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 78-79).
138. PMO document, "Draft PMO Program Management Plan," October 15, 2003, p. 11.
139. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 85).
140. Army, written comments to SIGIR, March 9, 2007.
141. PMO document, "PMO Program Management Plan," March 26, 2004, p. 21.
142. Army, written comments to SIGIR, March 9, 2007.
143. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 118).
144. CPA PowerPoint, "Iraq Infrastructure Reconstruction: The Way Ahead," October 20, 2003.
145. These offices included the Iraq Provisional Command, the Iraq Reconstruction Office, Task Force Restore Iraqi Oil, Task Force Restore Iraqi Electricity, and the Iraq Area Office.
146. McGuiness, John Lt. Col., "Contracting to Rebuild a Nation: The roles and responsibilities of U.S. contracting activities in Iraq," March 2005.
147. SIGIR interview with senior contracting official, November 2-3, 2005.
148. See P.L. 108-106, (online at: http://export.gov/iraq/pdf/public_law_108-116.pdf, accessed February 25, 2007).
149. PMO document, "PMO Program Management Plan," March 26, 2004, p. 1.
150. PMO, written comments to SIGIR, March 7, 2007.
151. PMO presentation, "Iraq Reconstruction Pre-proposal Conference Briefing," January 21, 2004.
152. PMO/PCO program management contractor, interview, March 14, 2006.
153. Former senior DoD contracting official, written comments to SIGIR, April 2006.
154. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 91).
155. USAAA Audit, "Program Management in Support of Iraq Reconstruction," A-2005-0194-ALA, May 26, 2005, p. 22.
156. Language in SPMOC contracts issued by the Pentagon Renovation Program, Section A, March 10, 2004.
157. USAAA Audit, "Program Management in Support of Iraq Reconstruction," A-2005-0194-ALA, May 26, 2005, p. 22.

158. USAAA Audit, "Program Management in Support of Iraq Reconstruction," A-2005-0194-ALA, May 26, 2005, p. 48 (PCO followed a USAAA recommendation to have the matrix legally reviewed and approved so functions of the contractors were clearly stated in the award of the second-year option contracts).
159. CPA document, "Program Management Plan," October 15, 2003, p. 16.
160. CPA document, "Program Management Plan," October 15, 2003, p. 16.
161. Former senior DoD contracting official, written comments to SIGIR, April 2006.
162. Former senior DoD contracting official, written comments to SIGIR, April 2006.
163. PMO document, PowerPoint Presentation by PMO Deputy Director, April 24, 2004.
164. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 86).
165. Senior PMO official, interview, March 3, 2006.
166. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 86).
167. Former senior DoD contracting official, written comments to SIGIR, April 2006.
168. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 91).
169. Senior PMO official, interview, March 3, 2006.
170. CPA document, "Program Management Plan," October 15, 2003, Figure 2.
171. CPA document, "Program Management Plan," October 15, 2003, p. 26.
172. SIGIR memo, SIGIR to U.S. Ambassador to Iraq and Director, IRMO and Commanding General, USACE-GRD, "Fact Sheet on the Use of the $40 Million Appropriation To Support the Management and Reporting of the Iraq Relief and Reconstruction Fund," SIGIR 05-026, January 27, 2006.
173. PMO/PCO program management contractor, interview, March 14, 2006.
174. Army, written comments to SIGIR, March 9, 2007.
175. PMO/PCO program management contractor, interview, March 14, 2006.
176. Senior DoD contracting official, interview, November 2-3, 2006.
177. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 92).
178. Former senior CPA official, interview, March 3, 2006.
179. USACE contractor, interview, March 9, 2006.
180. USACE contractor, interview, March 9, 2006.
181. USACE contractor, interview, March 9, 2006.
182. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 93).
183. PCO official, interview, August 21, 2006.

184. PCO official, interview, August 21, 2006.
185. PCO official, interview, August 21, 2006.
186. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 219).
187. Former PMO official, interview, August 23, 2006.
188. CPA official, interview, March 9, 2007.
189. SIGIR Lessons Learned Forum: Program and Project Management, Washington D.C., April 12, 2006 (transcript p. 219).
190. Army, written comments to SIGIR, March 9, 2007.
191. See SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006. Also, PCO notes: "Because many contracts for the reconstruction of Iraq were previously awarded on a sole source or limited competition basis, language was developed in the Supplemental appropriations requiring funds to be expended on contracts awarded pursuant to full and open competition. The supplemental appropriation was passed in November 2003. Time was needed to develop RFP's, go through the solicitation and selection process, award the contract, and mobilize contractors to Iraq. This was done within a period of four to five months." Source: Army, written comments to SIGIR, March 9, 2007.
192. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 131).
193. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 99).
194. See former senior USAID official, interview, January 19, 2006.
195. See former USAID official, interview, February 9, 2006; former senior USAID official, interview, January 19, 2006.
196. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 131).
197. CPA document regarding USAID plans for FY 2004 supplemental, October 18, 2003; former USAID official, interview, February 9, 2006; USAID/Iraq, written comments to SIGIR, June 8, 2006; IRMO document, "Weekly Status Report," March 6, 2007.
198. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 78 and 105).
199. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript p. 105).
200. USAID OIG Report, "Audit of USAID/Iraq's Economic Reform Program," E-266-04-004-P, September 20, 2004, p. 5.
201. USAID OIG Report, "Audit of USAID/Iraq's Economic Reform Program," E-266-04-004-P, September 20, 2004, p. 7.
202. USAID document, "Fact Sheet #65," September 23, 2003 (online at: http://www.usaid.gov/iraq/updates/sep03/iraq_fs65_092403.pdf, accessed July 23, 2006).

203. See e.g. senior USAID official, interview, November 3, 2005; USAID contracting official, interview, November, 2, 2005.
204. Former senior CPA official, interview, July 1, 2004.
205. Former senior CPA official, interview, July 1, 2004.
206. Army, written comments to SIGIR, March 9, 2007.
207. For more information on the contracting process for the design-build contractors, please see SIGIR report, *Iraq Reconstruction: Lessons in Contracting and Procurement*, July 2006.
208. SIGIR Lessons Learned Forum: Program and Project Management, Washington, D.C., April 12, 2006 (transcript pp. 124-127).
209. USAID, written comments to SIGIR, March 12, 2007.
210. Senior USAID official-Baghdad, interview, January 19, 2006.
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Maj. Gen. William L. Nash, U.S. Army (Ret.), has been director of the Council on Foreign Relations' Center for Preventive Action since April 2001. He leads the Council's efforts to work with governments, international organizations, the business community, and non-governmental organizations to anticipate international crises and to provide analysis and specific recommendations for preventive action. He came to the Council after serving as the UN's regional administrator in Northern Kosovo in 2000.

Major General Nash commanded the United States Army's 1st Armored Division from June 1995 to May 1997. In late 1995, he became the Commander of Task Force Eagle, a multinational division of 25,000 soldiers from 12 nations charged to enforce the military provisions of the Dayton Peace Accords in northeastern Bosnia-Herzegovina. He served also in Vietnam and in Operation Desert Storm.

Joe Benkert has been the Deputy Director of the Defense Reconstruction Support Office and its predecessor, the Defense Support Office-Iraq, since September 2004. Mr. Benkert was instrumental in establishing these offices as a means to provide a single focus within the Office of the Secretary of Defense for coordination of the Defense Department's support of stabilization and reconstruction activities in Iraq and Afghanistan. Prior to this appointment, he was the Deputy and Chief of Operations for the Coalition Provisional Authority's Washington office. Before that, he was Chief of Staff for the Principal Deputy Under Secretary of Defense for Policy.

Alan Chvotkin is Senior Vice President and Counsel of the Professional Services Council (PSC), the principal national trade association representing the professional and technical services industry. PSC is known for its leadership in the full range of acquisition, procurement, outsourcing, and privatization issues. He is a member of the Supreme Court and the American and District of Columbia bar associations. He is also a member of the National Contract Management Association and serves on its national board of advisors.

Tom Crangle is a consultant, investor, and licensed professional engineer with more than 25 years of experience in construction, entrepreneurship, and employee leadership. He has been a career senior manager for the Tennessee Valley Authority, held senior and ownership positions in several start-up companies, and served as a consultant to the Federal Emergency Management Agency (FEMA). At FEMA, his concentration was primarily on electric systems infrastructure restoration and debris management. In 2004, Mr. Crangle served as Senior and Deputy Senior Advisor to the Ministry of Electricity, Coalition Provisional Authority-Baghdad.

James M. Crum is the Department of the Army's Washington Director of the Project and Contracting Office (PCO) for the Iraq reconstruction mission. He leads an interdisciplinary program team that focuses management support in logistics, financial management, personnel, strategic communications, legislative affairs, and contracting for the Secretary of the Army and the PCO team in Baghdad. Having served 18 years for the U.S. Army Corps of Engineers, he has been involved in emergency response phases of infrastructure development and operations.

Ginger M. Cruz is the Deputy Inspector General for SIGIR. She previously served as the Chief of Staff for SIGIR. She is a former news director, reporter, anchor, and producer for two NBC affiliates, a former Deputy Assistant Secretary for Public Affairs at the U.S. Department of Housing and Urban Development, former Communications Director for the Governor of Guam, and a former Vice President for a small federal consulting firm in Washington, D.C.

Colonel Peter (Duke) DeLuca, U.S. Army, is a combat engineer who, as the Assistant Chief of Staff, Engineer (CJ-7), for the Multi-National Security Transition Command, recently managed a construction program with $2 billion in execution and $1 billion in additional planned requirements in support of the Iraqi Security Forces. Previously, he was a Deputy Engineer of the NATO Rapid Deployment Corps-Italy. He is currently a Senior Service College Fellow at Harvard University's John F. Kennedy School of Government, with particular interest in energy security.

Patrick Garvey is a member of the professional staff on the Senate Foreign Relations Committee, chaired by Senator Richard G. Lugar. His portfolio includes oversight for Iraq stabilization and reconstruction efforts, counter-terrorism, and broader Middle East policy. He had a direct role in producing 23 Iraq oversight hearings. Mr. Garvey is a Commander in the Navy Reserve, and, when mobilized to the Persian Gulf, he was seconded to the United States Agency for International Development Baghdad Mission to assist in the early stages of the reconstruction effort and develop the Strategic Plan for the Future of Iraq.

Charles M. Hess is a Senior Program Director with the Shaw Group's Hurricane Katrina Recovery Task Force. Mr. Hess formerly served as Director of PCO, where he provided program management and leadership for more than $13 billion of construction and non-construction activities.

Chris Hoh is Director for South Central European Affairs in the U.S. Department of State. From 2004 to 2006, he was Director for Response Strategy and Resource Management in the new U.S. Office for Reconstruction and Stabilization, charged with improving civilian deployment to stability operations in post-conflict states. From 2003 to 2004, he served as a Special Advisor for Secretary of State Powell's Diplomatic Readiness Initiative. He was Deputy Chief of Mission of the U.S. Embassy in Sarajevo, Bosnia, from 2000 to 2003.

Kathye Johnson is the Director of Reconstruction, Gulf Region Division (GRD)-PCO. Prior to this appointment, Ms. Johnson was Deputy Director of PCO. Ms. Johnson is a civil engineer. During her career, she has worked on most of the major construction sectors (including refineries, electrical generation facilities, and historic institutions).

Major General Ronald L. Johnson, U.S. Army, is the Deputy Chief of Engineers and Deputy Commanding General of the U.S. Army Corps of Engineers. Prior to this assignment, MG Johnson served as Director of the U.S. Army Installation Management Agency, directing the management of 181 Army installations, more than 75,000 military and civilian personnel, and a budget exceeding $8 billion. In Iraq, MG Johnson served as Commanding General, GRD, and Deputy Director of CPA's Program Management Office.

James Kunder is Assistant Administrator for U.S. Agency for International Development's Asia and the Near East Bureau. His distinguished career includes positions as Director for Relief and Reconstruction in Afghanistan, Deputy Assistant Administrator for USAID's Bureau for External Affairs, and Director of the Agency's Office of U.S. Foreign Disaster Assistance.

Major General Daniel E. Long, Jr., U.S. Army, was the Director of PCO. Prior to this assignment, General Long was Commander, 29th Infantry Division (L). From September 2001 through April 2002, General Long was Deputy Commander, Stabilization Force Multi-National Division North in Bosnia before returning to command the 29th Division.

Steve Lord is an Assistant Director in the Government Accountability Office's (GAO) International Affairs and Trade Group, supervising a body of work on Iraq reconstruction issues, including an examination of the current U.S. reconstruction strategy. Mr. Lord has worked in GAO for more than 20 years in positions of increasing responsibility, including three years in GAO's overseas office in Frankfurt, Germany.

Joseph T. (Mickey) McDermott is the Assistant Inspector General for Audit at SIGIR. He serves as the principal advisor to the Inspector General and the Deputy Inspector General for all audit matters, including audit policy and planning. He spends most of his time in Baghdad with his audit staff.

Christopher Milligan was a former USAID Deputy Mission Director in Iraq.

Rear Admiral David J. Nash, U.S. Navy (Ret.), is with BE&K, a 33-year-old international engineering and construction company, as president of its newly formed Government Group. Prior to joining BE&K, Rear Admiral Nash was the director of the PMO in Baghdad.

Ambassador Robin Raphel is a consultant to SIGIR. She served in Iraq under both General Jay Garner and Ambassador L. Paul Bremer, and subsequently was Coordinator for Iraq Reconstruction at the Department of State. Ambassador Raphel recently retired from the Department of State after a 30-year career, during which she held several senior positions, including Assistant Secretary of State for South Asian Affairs, Ambassador to the Republic of Tunisia, and Vice President of the National Defense University.

Ambassador Joseph A. Saloom III is the Director for the Iraq Reconstruction Management Office. A career Foreign Service Officer, Ambassador Saloom served previously as the Deputy Chief of Mission, Niger; Ambassador to the Republic of Guinea; and Deputy Assistant Secretary of State for Finance and Development.

Brigadier General Stephen Seay, U.S. Army (Ret.), is a member of the board at eMagin Corporation. While on active duty, he served as Program Executive Officer for Simulation, Training, and Instrumentation and Commanding General, Joint Contracting Command-Iraq/Head of Contracting Authority, Operation Iraqi Freedom. He has also served as Program Manager for a joint system; headed the Joint Target Oversight Council; and was Commanding General, Simulation, Training and Instrumentation Command, Army Materiel Command.

Robert J. Silverman is the Director of the Office of Iraq Economic Affairs at the U.S. Department of State. In 2003, Mr. Silverman served as Deputy Economic Counselor, where he stayed until he assumed the position Deputy Director of the Office of Northern Gulf Affairs (Iran and Iraq), known previously as the Office of Special Plans.

James "Spike" Stephenson is the Senior Advisor for Post-Conflict Stabilization and Reconstruction at Creative Associates International, Inc. Formerly a Senior Foreign Service Officer with USAID, his duties included 13 months as Mission Director in Iraq and Senior Advisor to the Department of State's Coordinator for Reconstruction and Stabilization.

Norm Szydlowski is the President and Chief Executive Officer of Colonial Pipeline. He has more than 23 years experience with Chevron Corporation in roles ranging from field engineer to Vice President of Refining, where he was responsible for one of the largest refinery systems in the world. He served as the Senior Consultant to the Iraqi Ministry of Oil.

Kevin R. Taecker is the U.S. Treasury Department Financial Attaché-Baghdad and Director, Iraq Reconstruction Management Office for Financial and Fiscal Affairs. Previously, Mr. Taecker served as Senior Banking Advisor, Economic Policy Directorate of the Central Bank/Ministry of Finance for CPA.

Charles (Fritz) Weden is the Acting Division Chief, Office of Transition Initiatives (OTI) with USAID. In 2002, Mr. Weden headed USAID's OTI program in Iraq. A former Senior Foreign Service Officer, Mr. Weden has served with USAID since 1965 in assignments that have included Assistant Director and Deputy Director in Egypt, Director in Yemen and Tunisia, Deputy Assistant Administrator in USAID's then Near East Bureau, USAID Director in Indonesia, and Deputy Assistant Administrator of USAID's Asia and the Near East Bureau.

*Bios are current as of April 2006.