

Senior Service College Fellowship Civilian Research Project

AN EXPLORATORY [SILVER] PATH TO INTERAGENCY RECONSTRUCTION

BY

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USAWC CIVILIAN RESEARCH PROJECT

AN EXPLORATORY [SILVER] PATH TO INTERAGENCY RECONSTRUCTION

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ABSTRACT

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The U.S. Army's *Counterinsurgency* manual says the integration of civilian and military efforts is "crucial" in operations. We talk a good game. In practice, there are significant integration challenges. Tensions abound -- who leads, who follows; quick projects to gain influence or longer development projects; how to measure progress; dueling cultures; and, different funding sources. In addition, many civil-military teams attempting reconstruction in complex operations are "cobbled together." This is not unique to U.S. operations. That there is expertise available to deal with complex operations is not for debate; the Department of State, especially the US Agency for International Development, has extensive development experience, while the Department of Defense knows combat and security operations. Integration comes in the middle ground, where we often step on each other. This paper classifies complex reconstruction problems as "wicked problems," identifies interagency challenges and shortfalls which exacerbate their wicked nature, develops an operational concept of reconstruction for essential services, and gives recommendation for improving interagency operations and the Army's support to civilian lead agencies.

AN EXPLORATORY [SILVER] PATH TO INTERAGENCY RECONSTRUCTION

“The style is not so much of a traveller who knows the route, but more of an explorer who has a sense of direction but no clear route. Search and exploration, watching out for possibilities and inter-relationships, however unlikely they may seem, are part of the approach. There are ideas as to the way ahead, but some may prove abortive. What is required is a readiness to see and accept this, rather than to proceed regardless on a path which is found to be leading nowhere or in the wrong direction.”ⁱ

In a 2009 report for the RAND Corporation, Thomas Szayna and a group of researchers asked the question, “[H]ow the Army can assist in making key civilian agencies more capable partners to the Army in the planning and execution of stability operations.”ⁱⁱ The question has the wrong focus and is backwards. Except in the direst of security situations, stability operations will be interagency efforts and the civilian agencies, specifically the Department of State, are the focal point to coordinate and lead. The Army cannot “make” civilian agencies, such as the U.S. Agency for International Development (USAID), more capable partners — it cannot give them additional funding or additional personnel or change their processes or organizational cultures. Rather than figuring out how to integrate civilian agencies into Army stability operations, the Army needs to identify how it can best support the civilian lead agencies before, during, and after these operations.

The focus of this research is reconstruction, a subset of stability operations, and, more specifically, restoration of essential services. As defined by the U.S. Army's Field Manual (FM) 3-07, *Stability Operations*, “Reconstruction is the process of rebuilding degraded, damaged, or destroyed political, socioeconomic, and physical infrastructure of a country or territory to create the foundation for long-term development.”ⁱⁱⁱ The processes required for stabilization — tasks such as formation of a freely elected and

inclusive government, development of rule of law, reform of the security sector, and attempts at reconciliation — are beyond the scope of this research. While this paper has a U.S. government focus, its findings and recommendations are not uniquely American. The U.S. and its NATO allies have similar experiences with reconstruction in complex operations, spanning operations in places like Bosnia, Kosovo, Afghanistan, and Iraq. The recommendations fit easily within comprehensive and “whole-of-government” approaches. The constituent parts of the solutions, such as lead and supporting agencies, common lexicon and doctrine, habitual relationships and familiarity, joint training, and deliberate and extensive coordination and collaboration, are resident or reachable in all NATO partners.

This paper proceeds in four parts. The first section looks at the characteristics of complex operations impacting post-conflict reconstruction. It classifies complex operations as “wicked” problems and seeks to identify the major interagency shortfalls experienced by the U.S. government in recent complex operations. The second section describes the what and why of reconstruction and attempts to place the Army's role in these operations. The third section argues for the primacy of restoration of essential services as the immediate reconstruction focus post-conflict and develops an operational concept of essential services reconstruction, without getting into specific, sectoral technical requirements (e.g. power, water, sewage, transportation). It also addresses mechanisms for assessment of programs and interagency challenges and opportunities. While this section uses essential services as a vehicle, the development model and assessment mechanisms can transfer to other political and socioeconomic areas requiring post-conflict reconstruction (e.g. administrative, banking, judicial, etc.).

The final section outlines interagency recommendations, then focuses on changes the Army can implement to better position itself to support civilian lead agencies in complex operations.

Finally, a note about terminology. The U.S. Department of Defense has approved terms for when two or more U.S. military departments operate together (*joint*) and when two or more forces or agencies of allied nations operate together (*combined*).^{iv} The DOD Dictionary also has the term *interagency coordination*, but this term is lacking, because interagency reconstruction operations involve much more than coordination. This paper will interchangeably use *integrated operations* or *interagency operations* to refer to complex reconstruction operations. *Interagency operations* are the “coordinated employment of multiple federal organizations, bringing all the instruments of national power to bear on a problem.”^v This is in the spirit of one of the *DOD Dictionary's* definitions for *integration*: “The arrangement of military forces and their actions to create a force that operates *by engaging as a whole*.”^{vi}

“Stability operations is not a game for amateurs.”^{vii}

Reconstruction takes place in an environment of complex operations, and complex operations are “wicked” problems.^{viii} Reconstruction in this context is not the typical peacetime development of USAID or the civic action missions that an Army engineer unit might accomplish as part of a bilateral exercise. As wicked problems, post-conflict reconstruction operations are “ill-defined” and, therefore, lack clear missions and definitive ends.^{ix} They are also “highly resistant to resolution” and “go beyond the capacity of any one [organization] to understand and respond to.”^x The implication of this is that there can be no unilateral military solution to post-conflict reconstruction

challenges, just as there can be no unilateral Department of State or USAID or other civilian agency solutions. Wicked problems require an interagency approach.

Yet, current interagency challenges and shortfalls exacerbate wicked problems. Coping with these problems requires a better understanding of the characteristics of wicked problems, how they exist in the milieu of complex operations, what are our current interagency shortfalls, and how organizations attempting reconstruction can mitigate their effects. Understanding each other and the nature of the problems better will improve reconstruction efforts.

Wicked Problems

Reconstruction operations do not just entail the simple reconstruction of "physical infrastructure."^{xi} They are as much or more social problems as they are technical problems, are open-ended and multi-causal, and require extensive governmental capacity, planning, and "elusive political judgment for resolution."^{xii} Rittel and Webber believe that social and planning problems such as these are "inherently wicked" and contrast them with "tame" problems. Tame problems have clear ends and planners know when they have solved the problem. Wicked problems, by contrast, are "ill-defined" for both causal explanations and identifiable ends. They exhibit the following characteristics (and challenges for planners):

1. There is no way to format the problem definitively; framing the problem different ways leads to different resolutions. In this environment, the linear military planning process is ill-suited to tackle the problems.
2. Ill-defined ends mean that there is no stopping; planners can always continue to try to seek better solutions. Planners will develop potential solutions, but they will fail to consider many others.

3. There is no right solution, each group or agency will assess resolution differently, and every solution will have consequences and could lead to other wicked problems.
4. Every wicked problem is different, even if there are similarities with previous experiences, so planners use lessons learned from previous experiences at their own risk, not knowing the consequences of the solution or the uniqueness of the current wicked problem.
5. Context matters; how a planner chooses to define/explain the causes of a wicked problem impacts the solutions.^{xiii}

The Milieu of Complex Operations

Reconstruction operations exhibit all of these characteristics of wicked problems. They are not straightforward or linear, but instead consist of open-ended (always room for improvement) and interdependent systems (political, socioeconomic, physical infrastructure). They are unstable, “socially complex,” cannot be solved by one organization, and require action at multiple levels for resolution.^{xiv} The environment is one of “interactivity and uncertainty,” with competing “causal factors, conflicting policy objectives and disagreement over the appropriate solution.”^{xv} Each organization, given its unique mission, organization, and personnel, frames the problem differently. Army forces on the ground may focus on short-term, “quick win” projects designed to gain favor with local groups or individuals and improve the security situation, while USAID representatives may favor long-term capacity development training. Even within the same organization, different levels will have different interpretations of the problem — for example, the view from the Provincial Reconstruction Team (PRT) in Mosul, Iraq, is rarely the same as that of the Office of Provincial Affairs (OPA), in Baghdad.

Some researchers would say an important caveat is that there are degrees of

wickedness within reconstruction operations. They argue that “many policy problems lie somewhere on a continuum between tame and wicked” and “may display some but not all of the characteristics of wicked problems.”^{xvi} While this is undoubtedly true, within the milieu of complex operations and reconstruction, even seemingly tame problems are, in fact, complex and wicked — having any of the characteristics of a wicked problem makes it a wicked problem. Take electrical power, for example. The physical and technical generation, transmission, and distribution of power is a linear process, which would seem a tame problem to solve. The reality, however, is not so straightforward. Very often, especially in Iraq and Afghanistan, installed capacity does not equal actual output, and people or groups do not get equitable distribution of produced power. The reasons for this can include: the physical plant may be present and capable of functioning, but the trained and proficient plant operators and managers may have fled the conflict or do not know how to operate or maintain the system; corruption, intimidation, or favoritism in the distribution of power; lack of political will, funding, or capacity to improve the system; and, different approaches to the resolution of the problem lead to no resolution (e.g. one group favoring reconstruction of power generation, another group favoring repair or construction of long-haul, high-voltage transmission lines, and no group working the low-voltage, “last mile” distribution networks that actually deliver power to local houses and businesses).

In the end, reconstruction problems in complex operations are almost never tame and require an extraordinary degree of integration to solve. Dealing with these wicked problems — highly complex, highly resistant to resolution, ill-defined, beyond the capacity of any one organization — requires an interagency or whole-of-government

approach. Wicked reconstruction problems are “necessarily interagency in nature.”^{xvii} Unfortunately, to date, the “United States still lacks many of the capacities, processes, mechanisms, and resources required to effectively conduct complex operations.”^{xviii}

Interagency Challenges

Interagency challenges and issues in dealing with wicked reconstruction problems are numerous. The US Army's Field Manual 3-24, *Counterinsurgency*, posits that the integration of civilian and military efforts is "crucial" in successful counterinsurgency operations.^{xix} The *U.S. Government Counterinsurgency Guide* says, “Counterinsurgency places great demands on the ability of bureaucracies to work together.”^{xx} We talk a good game. In practice, there are significant integration challenges. Tensions abound — who leads, who follows; quick projects to gain influence or longer development projects; how to measure progress; dueling cultures; and, different funding sources. In addition, many civil-military teams attempting stability and reconstruction in complex operations are “cobbled together,” often one-deep in expertise and hampered by personnel selection and rotation policies. This is not unique to US operations.

That there is expertise available to deal with complex operations is not for debate; the Department of State, and especially USAID, has extensive development experience, while the Department of Defense knows combat and security operations. Integration and civil capacity development come in the middle ground, where we often step on each other. A literature review and personal experiences show a variety of interagency challenges and shortfalls, each of which negatively compounds the characteristics of wicked reconstruction problems. Broadly speaking, the challenges and shortfalls are in

the areas of vision, doctrine, training, education, organization, resourcing, and culture.

Across U.S. departments, agencies, and bureaus, there is a “lack of a common vision and shared strategic goals,”^{xxi} which leads to each agency framing reconstruction problems differently and developing different solutions. At the ground level, this translates to a “lack of clear guidelines”^{xxii} and working at cross-purposes. Because there is no common vision or shared strategic goals for reconstruction — no shared “road map” and understanding — there is a corresponding lack of doctrine, or the doctrine is incomplete and not integrated, because each organization has developed it alone. For example, the Army now has three seminal, capstone manuals which include or cover reconstruction and stabilization (FM 3-0, *Operations*, and the previously mentioned FM 3-07 and 3-24), yet an eminent practitioner with high-level experience in both the Army and Department of State still says, “It is not clear from our doctrine that we really have a clear concept for how to undertake reconstruction, nor do we have a common understanding across the force of what its component activities are, who should be responsible for them, or what specific capabilities need to be resident in our Army units to accomplish the necessary component tasks.”^{xxiii}

Without integrated doctrine for reconstruction, it is nearly impossible to develop a “common lexicon,”^{xxiv} agreed upon tasks, necessary interagency skills and education programs, or quality interagency training and exercises to accomplish reconstruction missions effectively and efficiently. This is not to say that there are no reconstruction tasks or terminology in the U.S. Government framework today. But, without the overarching, agreed upon, and inculcated vision, goals, and doctrine, it is unlikely that these organizations will interpret these tasks or terms the same way, or that they will

even use them.

A prime example is the Essential Task Matrix (ETM) developed by the Office of the Coordinator for Reconstruction and Stabilization (S/CRS), a part of the Department of State. The ETM is a robust, comprehensive list of tasks across the technical sectors of security, governance and participation, humanitarian assistance and social well-being, economic stabilization and infrastructure, and justice and reconciliation.^{xxv} There are two problems with the ETM. First, because it is not based on an overarching, agreed upon interagency doctrine, it only provides a “menu of issues” that “*should be considered* when working in conflict-stricken countries.”^{xxvi} Going back to the characteristics of wicked problems, without a common understanding of reconstruction based on shared interagency doctrine, Army planners and USAID planners are likely to read the “menu of issues” differently and order different ways to resolve a problem.

The second problem with the ETM is that it is not currently “harmonized”^{xxvii} with each organization's doctrine, education, training, and exercises, leading to unfamiliarity and lack of use. For example, an interagency process developed the ETM, in 2005. In the period 2008-2009, the Army's 25th Infantry Division prepared for and deployed to Iraq. During mission rehearsal exercises (with non-Department of State folks “playing” USAID representatives), discussions throughout the deployment with the Division's Department of State Political Advisor (POLAD), and routine and intimate coordination with five PRTs and USAID, we never heard the term ETM. We consequently stumbled our way through reconstruction and development in Northern Iraq, often at odds with the PRTs and OPA.

Organizational and resource issues also plague reconstruction operations. There

are great resource disparities between the U.S. Government organizations involved in interagency reconstruction, leading to an “imbalance among the three elements of national power: defense, diplomacy, and development (the three Ds).”^{xxviii} Smaller, but critical agencies like USAID have a fraction of the people that the Department of Defense does and cannot easily deploy them in sufficient quantities or for long periods of time.^{xxix} Other civilian agencies also lack adequate equipment and support structures, such as network connectivity and information technology, as well as critical funding and authorities to spend it. Most of the Brigade Commanders in Afghanistan and Iraq have more latitude and authority to spend funds from the Commander's Emergency Response Program (CERP) than any Department of State officials in charge of PRTs. Along with a lack of doctrine on composition and employment of integrated civilian-military teams, these disparities of personnel and resources lead to an ad hoc approach to interagency teams in post-conflict situations. In an environment where doctrine does not set the conditions for shared understanding of mission and roles and responsibilities, and organizational and resource constraints lead to ad hoc efforts, successful interagency operations often come down to happenstance and “informal relationships without established systems or procedures - always at the mercy of breakdowns in communications, interagency friction, and interpersonal dynamics.”^{xxx}

Competing organizational cultures, untamed by common doctrine and shared understanding, can also play a great part in these breakdowns of coordination and is another challenge for improving interagency operations. Different cultures can lead to different interpretations of problems, desired end states, recommended solutions, and planning timelines. Cultural barriers can lead to “parochialism, unhealthy competition,

and a stovepiped approach to problem solving.”^{xxxix} There is very little likelihood that agencies in conflict and competition can deal adequately with wicked problems — they will frame problems differently; they will develop different, sometimes conflicting solutions; and, each will take different lessons learned from the same operations and apply them differently to the next problem set. In fact, interagency cultural differences and barriers “represent a significant barrier to interagency reform.”^{xxxix}

Mitigating Wicked Problems

The U.S. Government must overcome all of these interagency challenges in order to succeed in wicked reconstruction problems. In general, there are several theoretical and practical constructs for gaining a handle on wicked problems. According to Rittel and Webber, the most difficult challenges of wicked problems are definition of the problem (“knowing what distinguishes an observed condition from a desired condition”), location of the problem (“finding where in the complex causal networks the trouble really lies”), and “identifying the actions that might effectively narrow the gap between what-is and what-ought-to-be.”^{xxxix} As noted above, current interagency challenges mean that the U.S. Government approach to these problems is one of “fragmentation,” where the “fragmented pieces are...the perspectives, understandings and intentions of the collaborators, all of whom are convinced that their version of the problem is correct.”^{xxxix} The solution to fragmentation is to first gain shared understanding, defined as a “a deep and robust understanding of the circumstances,” which will lead to shared commitment.^{xxxix} In the interagency world, shared doctrine is the key to gaining shared understanding. It will help to ensure that analysts and planners from multiple agencies have a common view of the definition and location of the problem, when dealing with

wicked reconstruction operations. In addition to shared understanding, three additional elements are necessary: a deliberate planning system; synchronization and unity of effort; and, a forcing function.

First, there must be an integrated, deliberate planning system to achieve shared understanding and common approaches. To some degree, simply planning together equals interagency success. However, resolution of wicked problems requires more deliberate, iterative efforts. According to Rittel and Webber, this planning should be an “argumentative process,” where “an image of the problem and of the solution emerges gradually among the participants, as a product of incessant judgment, subjected to critical argument.”^{xxxvi} The interagency team has to know and trust each other to get to the point where they can accept incessant judgment and critical arguments without conflict and competition. Second, the interagency deliberate planning must ensure that it is working toward common goals, which requires “synchronization and a pervasive unity of effort” across all sectors.^{xxxvii} Finally, the interagency could benefit greatly from statutory reform, which would serve as a forcing function for interagency operations. This would be similar to the Stafford Act, which “directs Federal cabinet level departments to plan, prepare, and execute implementing operations”^{xxxviii} for domestic emergency and consequence management.

“Reconstruction has become an integral part of the American way of war.”^{xxxix}

Improving interagency operations in wicked post-conflict reconstruction operations requires, first and foremost, a shared understanding of the problem and a common vision for the resolution. The shared understanding must start with agreement about what reconstruction is and why it is important. This section will define reconstruction and

identify the founding documents and guidelines currently directing U.S. reconstruction development. It will then look at the Army's role in reconstruction based on key concepts and tasks for successful stability operations.

Reconstruction Defined

Before discussing what reconstruction is, it is important to identify what it is not. First, reconstruction is not nation-building. In 2002, before the U.S. was in Iraq and before we knew the extent of the stabilization and reconstruction tasks required in Afghanistan, John Hamre and Gordon Sullivan presciently noted that “only the citizens of the country in question will build their nation and bring about peace; outsiders can only support their efforts.”^{xl} They also cautioned that outsiders should be “realistic about what they can achieve” and have a goal to “create a minimally capable state, not to build a nation or address all the root causes that imperil peace.”^{xli} Second, reconstruction is not new. The U.S. military has supported or executed development and reconstruction activities throughout its history. This “pattern of military involvement in development activities” has included “providing improved infrastructure, governance, education, etc., [and] continued during and after numerous conflicts, including World War II, Korea, Vietnam, and those in Central America.”^{xlii} During such efforts, the U.S. Government and military “fostered efforts to improve conditions in countries where the military operated and...often did so beyond minimalist legal and moral requirements.”^{xliii} This is brilliantly fictionalized in the novel *A Bell for Adano*, the story of an American Military Government representative, in Sicily, going well beyond his governance warrant to restore administrative functions and quality of life to a post-World War II Italian town.^{xliv}

Finally, reconstruction is not agreed upon by U.S. Government agencies. In fact, organizations and agencies often use the word reconstruction, but rarely define it. At the top, the Reconstruction & Stabilization Civilian Management Act of 2008 does not define reconstruction.^{xlv} A search of the Department of State's website returns 172 results, none of which is a standard, doctrinal definition the interagency team can use for shared understanding.^{xlvi} The National Security Council's Reconstruction and Stabilization Policy Coordination Committee's (R&S PCC) *Principles of the USG Planning Framework for Reconstruction, Stabilization and Conflict Transformation* does not define reconstruction.^{xlvii} The website and resource library for the Department of State's Office of the Coordinator for Reconstruction and Stabilization do not list a definition.^{xlviii} The *DOD Dictionary* also does not include a definition for reconstruction.^{xlix} In the world of wicked reconstruction problems, it seems each organization is left to interpret reconstruction on its own.

Two definitions do exist for interagency consideration. The first comes from the World Bank. While it is not laid out as a neatly packaged doctrinal definition, it includes the following elements: 1) “rebuilding of the country's socioeconomic framework;” and, 2) “reconstruction of the enabling conditions for a functioning peacetime society.”ⁱ The second comes from the U.S. Army: “Reconstruction is the process of rebuilding degraded, damaged, or destroyed political, socioeconomic, and physical infrastructure of a country or territory to create the foundation for long-term development.”ⁱⁱ The Army definition is the closest thing to a consensus definition in the interagency environment, being listed in the glossary of key terms of the *Guiding Principles for Stabilization and Reconstruction*. This document, co-developed by the United States Institute of Peace

and U.S. Army Peacekeeping and Stability Operations Institute (PKSOI) and adopted by the S/CRS, attempts to “present strategic principles for all major activities in [stabilization and reconstruction] missions in one place.”^{lii} Unfortunately, principles are not doctrine unless they are authoritative, as the authors acknowledge, and the document includes some major caveats — the “*Guiding Principles* manual bears no government stamp, nor has the U.S. government adopted it officially...not intended to replace any single agency's “doctrine,” strategic guidance, or mission statements”^{liii} -- which will limit the acceptance of the Army's definition and could lead to different framing of problems and solutions by different organizations.

The Army definition is similar to the first element for the World Bank, but its use of the term *infrastructure* (rather than the World Bank's *framework*) tends to lead folks on the ground to focus on the physical elements (e.g. brick-and-mortar government centers, health clinics, banks and businesses, power and waste treatment facilities, etc.) rather than the enabling conditions (e.g. institutions, human and technical capacity development) of reconstruction.^{liv} A combined version would be more appropriate and could serve as the basis for an agreed upon interagency definition:

Reconstruction is the process of rebuilding the degraded, damaged, or destroyed political, socioeconomic, and essential services frameworks (physical infrastructure and institutions) of a country or territory to restore or create the enabling conditions for long-term development and a functioning peaceful society.

Why is Reconstruction Important?

The U.S. military has conducted development and reconstruction in the past. It is in the midst of conducting reconstruction operations in both Afghanistan and Iraq. For the foreseeable future, reconstruction operations are here to stay, and the interagency

team has to be ready to execute them. Ten years of war have not changed a prediction from 2002 — “failed states are a reality that cannot be wished away.”^{lv} Because of this, many analysts believe that the near future will encompass more “small uncomfortable wars,” which will become the “new norm.”^{lvi} The “small uncomfortable wars” mean likely counterinsurgency (COIN) efforts. And, as Eric T. Olson has pointed out, “in no form of warfare has reconstruction been more important than in COIN...reconstruction can take away an insurgent's cause and deny him what he seeks most fervently - the active and willing support of the population.”^{lvii} Because of this, the U.S. Government elevated stability operations to a core mission.

Two foundation documents direct stability operations' elevated status. The first in hierarchy (and second in issuance), is National Security Presidential Directive 44 (NSPD-44), *Management of Interagency Efforts Concerning Reconstruction and Stabilization*. The purpose of NSPD-44 is “to promote the security of the United States through improved coordination, planning, and implementation for reconstruction and stabilization.”^{lviii} NSPD-44 acknowledges the reality of the current environment when it says, “The United States has a significant stake in enhancing the capacity to assist in stabilizing and reconstructing countries or regions, especially those at risk of, in, or in transition from conflict or civil strife, and to help them establish a sustainable path toward peaceful societies, democracies, and market economies.”^{lix} In order to “achieve maximum effect,” it directs the Secretary of State to “coordinate and lead integrated United States Government efforts, involving all U.S. Departments and Agencies with relevant capabilities, to prepare, plan for, and conduct stabilization and reconstruction activities.”^{lx}

NSPD-44 is a good start towards successful interagency operations; it lays the foundation for why reconstruction and stabilization operations are important. But, it has few teeth; it is not sufficiently directive to force other departments and agencies to “mobilize and integrate the specific capabilities...to achieve the objectives,”^{lxix} leading us back to happenstance, circumstances, and personalities for effective interagency cooperation. It makes sense to have the Secretary of State as the lead for reconstruction and stabilization operations, because capacity building is not the strength of the U.S. military and civilian tasks “should be left to civilian agencies.”^{lxxii} To be most effective, statutory reform is required along the lines of the responsibilities and authorities given to the Federal Emergency Management Agency for disaster and emergency response. For example, the *Department of Homeland Security Appropriations Act of 2007* requires that the “National Response Plan provides for a *clear chain of command* to lead and coordinate the Federal response to any natural disaster, act of terrorism, or other man-made disaster.”^{lxxiii} NSPD-44 provides for a “focal point,” but not a clear chain of command.

The second document is DOD Directive 3000.05, originally released just before NSPD-44, in 2005, and then re-issued as a DOD Instruction, in 2009. These documents established stability operations as a “core U.S. military mission that the Department of Defense shall be prepared to conduct with proficiency equivalent to combat operations.”^{lxxiv} The original DOD Directive 3000.05 had a major caveat that weakened the lead nature of the civilian agencies. It stated, “Many stability operations tasks are best performed by indigenous, foreign, or U.S. civilian professionals. *Nonetheless, U.S. military forces shall be prepared to perform all tasks necessary to establish or maintain*

order when civilians cannot do so.^{lxv} Fortunately, the 2009 DOD Instruction eliminated this verbiage and replaced it with the more realistic “Lead stability operations activities to establish civil security and civil control, restore essential services, repair and protect critical infrastructure, and deliver humanitarian assistance until such time as it is feasible to transition lead responsibility to other U.S. Government agencies...seek to enable the deployment and utilization of the appropriate civilian capabilities.”^{lxvi} Rather than being in the “all tasks necessary” category, the DOD Instruction lists political and socioeconomic tasks in the areas of support to civil-military teams and assistance to other U.S. Government agencies.^{lxvii} Overall, DOD Instruction 3000.05 gives the Army and other Services good guidance on how to integrate stability operations across all facets of the force.

The Army's Role

A key question is how the U.S. Army will support these core stability missions. The 2008 Field Manual 3-07, *Stability Operations*, is the capstone manual that supports NSPD-44 and DODI 3000.05 and Army mission execution in complex operations. Although it came out in between DOD Directive 3000.05 and its reincarnation as DOD Instruction 3000.05, FM 3-07 tracks better with the latter DOD document. It avoids the “all tasks necessary” caveat and, instead, focuses on performing “specific functions as part of a broader response effort, supporting the complementary activities of other agencies, organizations, and the private sector.”^{lxviii} According to FM 3-07, there are five primary stability tasks, which roughly align with S/CRS's essential tasks and stability sectors (S/CRS stability sectors are listed in parentheses, after the Army primary stability tasks):

1. Establish Civil Security (*Security*);
2. Establish Civil Control (*Justice and Reconciliation*);
3. Restore Essential Services (*Humanitarian Assistance and Social Well-Being*);
4. Support to Governance (*Governance and Participation*); and,
5. Support to Economic and Infrastructure Development (*Economic Stabilization and Infrastructure*).

Of course, the clarity of a field manual rarely translates easily to the situation on the ground, especially in wicked problems like Afghanistan and Iraq. Leaving aside the first two tasks to Establish Civil Security and Establish Civil Control, tasks for which the Army is either the primary executor or a peer contributor, the Army has to determine how best to support lead civilian agencies in the last three primary stability tasks, especially in the most delicate and unstable period — the beginning.

In the beginning of any complex stabilization and reconstruction operation, the security situation may not allow civilian agencies to conduct developmental tasks. In this situation, and as acknowledged by DOD Instruction 3000.05 and FM 3-07, it may be necessary for military units to “fill the void”^{lxix} and conduct limited reconstruction tasks concurrently with stabilization of the security situation. While incorporating short-term projects to complement security operations and restore minimum life support, governance, and essential services, the Army must seek to minimize potential negative impacts on longer-term development. Examples of negative impacts could include inadvertently favoring local strongmen who have ulterior motives; unknowingly favoring one group over another; or, constructing systems or projects without long-term

sustainment or operations and maintenance plans (e.g. schools without teachers, clinics without doctors or equipment, complex water treatment plants without operator training, diesel fuel, or spare parts). Operating under the assumption of eventual success and remaining in support of civilian agencies for development, even when the bulk of the civilian support is not on the ground, the Army “must focus on reconstruction tasks that will set the conditions for success of these civilian agencies.”^{lxx} The Army in this situation maintains a key strength that it will have throughout the operation - battlefield presence - basing and operations among the population, which give it a unique ability for “gathering and managing key information that will be essential to the success of subsequent civilian efforts.”^{lxxi}

Some critical considerations, then, are how best to provide this “key information” to the civilian agencies who will be the lead for reconstruction in later phases of the operation; how to integrate the various reconstruction efforts of different agencies; and how to ensure that short-term reconstruction tasks which Army units conduct are complementary to future long-term development, instead of being at cross-purposes. The next section will examine these considerations as it develops an operational concept of reconstruction for essential services.

Getting from Washington to Tikrit

It was 2008-2009. In Washington, there was a lot of talk about interagency reconstruction and stabilization. There was a National Security Presidential Directive that established the Secretary of State as the lead coordinator for stability operations, a Reconstruction and Stabilization Policy Coordination Committee, and an Office of the Coordinator for Reconstruction and Stabilization. There was an *Interagency Conflict*

Assessment Framework, a *U.S. Government Planning Framework for Reconstruction, Stabilization and Conflict Transformation*, and an *Essential Task Matrix*, none of which were doctrine or universally accepted across the U.S. Government.

In the 25th Infantry Division, based in Tikrit, Iraq, from 2008-2009, we did not know much, if anything, about all those documents, offices, agencies, or guidance. Before the deployment, we thought our pre-deployment training was thorough. In addition to combat and security tasks, we attempted to train for likely reconstruction and stability missions. We based most of the specialty training we developed on lessons learned from the unit we replaced, the 1st Armored Division. For example, they told us what great challenges (and headaches) the processes for electricity and oil extraction/processing/distribution were in Northern Iraq. So, the Division Engineer established a partnership with the Hawaiian Electric Company and sent folks to Midland, Texas, to learn about the oil industry. But, we failed to train for one of the most important challenges — interagency operations. We did no training with interagency partners. We saw no Department of State or USAID representatives. We only met a living, breathing PRT guy at a two-day seminar, right before deployment.

At the beginning of the deployment, we were trying to figure out what the just-released *Stability Operations* manual meant to us, but the pace of combat and reconstruction operations made detailed study difficult and implementation on the fly almost impossible. The *Guiding Principles for Stabilization and Reconstruction* was not in our hands, yet. There were four Provincial Reconstruction Teams in the Arab provinces of our sector and one Regional Reconstruction Team with the Kurdish Regional Government. Each of the PRTs had a different work plan and emphasis, not

just because of the differences in the provinces and their circumstances, but also because of the personalities and experiences of the U.S. Civil Servants working in them. Each PRT had a partnership with an Army Brigade Combat Team (BCT). Some of these partnerships were very good; some were not. Personalities seemed to be the main thing that could make or break a PRT-BCT relationship. A solid PRT-BCT partnership could turn sour with the transition of a PRT leader or BCT Commander. Nobody did things the same way, there was little shared understanding of the problems, and reconstruction was less than effective and efficient.

We based our reconstruction focus on our Commanding General's belief that there are three things that a government provides to its people (Security, Rule of Law, and Essential Services) and his direction that we figure out what was broken and fix it, primarily using our Commander's Emergency Response Program (CERP) funds. The PRTs had no equivalent funding stream or authorities with the flexibility of CERP, which led to problems between the PRTs and us. We conducted a sector-wide nodal analysis of all critical infrastructure, without the PRTs, to figure out what was broken and came up with exhaustive lists of both real issues and complaints from locals (after six years in Northern Iraq, we somehow did not have the detailed infrastructure information and assessments that we should have had). We did projects, not programs; brick-and-mortar construction, not training and capacity development. Sometimes this lined up with the focus of the PRTs, but often it did not. There were tensions between our short-term focus and the PRTs' longer-term goals. The turning point came when the Multi-National Corps - Iraq (MNC-I), the higher headquarters for the 25th Infantry Division, worked with the Office of Provincial Affairs and directed that all divisions would “put the

PRT in the lead,” squarely putting the military organizations in a supporting role.

The purpose of this vignette is not to disparage the abilities, experiences, efforts, or motivations of the dedicated civilian and military personnel serving and sacrificing in places like Iraq. Far from it. The point is that integration and whole-of-government approaches are easier to talk about in a national capital, but harder to implement on the ground. Effective integration requires shared understanding. For reconstruction to be effective from Washington all the way to Tikrit, the U.S. Government must establish clear reconstruction doctrine, binding on all agencies, bureaus, and departments. The benefits of clear reconstruction doctrine include: identified lead agencies (at all levels), with corresponding delineation of supporting agencies; understanding of each organization's roles, responsibilities, procedures, and available resources; codified interdependence; a common language and processes; efficient use of limited resources; better development of collaborative and knowledge management tools; and, consistent joint education, training, which lead to familiarity. The next section develops an operational concept of essential services reconstruction for consideration in doctrine.

“Security and services cannot be separated.”^{lxxii}

This section lays out a model for essential services reconstruction for two purposes: 1) to define and then argue for the primacy of essential services as the basis for development of other stability sectors and end states; and, 2) to develop an operational concept of interagency reconstruction. It lays out a definition of essential services and why essential services should have primacy. Then, it develops the model of essential services reconstruction and development. Development of models for reconstruction, across critical stability sectors, is important because of the “utility of

having some set of standard practices or a template for master planning or managing the conduct of national reconstruction to guide the interagency effort.”^{lxxiii}

Definition of Essential Services

Like *reconstruction*, the term *essential services*, if defined at all, has different meanings throughout the literature (sometimes within the same document) and the interagency community. As previously mentioned, different meanings lead to different interpretations, depending on the perspective of the analyst, and different approaches to resolution. The broadest U.S. Government definition comes out of the *Guiding Principles for Stabilization and Reconstruction*, a document that the Office of the Coordinator for Reconstruction and Stabilization calls the “first strategic “doctrine” ever produced for civilians engaged in peacebuilding missions.”^{lxxiv} The *Guiding Principles* defines essential services as “security, the rule of law, economic governance, and basic human needs services.”^{lxxv} Using this definition, reconstruction or restoration of essential services would equate to nation-building, because it is everything. The Army's Field Manuals are minimalist, focusing on the “most basic civil services: the essential food, water, shelter, and medical support necessary to sustain the population until local civil services are restored.”^{lxxvi}

It is not until later, when discussing support to economic and infrastructure development, that the *Stability Operations* manual discusses more advanced services, such as transportation, telecommunications, energy, and municipal services. According to the manual, development of this physical infrastructure “complements and reinforces efforts to stabilize the economy. It focuses on the society's physical aspects that enable the state's economic viability.”^{lxxvii} But, these services do not just support a state's

economy. What the manual fails to understand is that these services are *the* essential services, which form the basis for the provision of all other services, including the humanitarian “most basic civil services,” and help to gain the support of the population for what is usually a struggling, nascent government. Because of their criticality, it is important to define essential services:

Essential services are the institutions, human capacity, and physical infrastructure that make up the interconnected administrative, energy, water, sewage, telecommunications, and transportation frameworks of a country.

A Semantic Argument

The purpose of the restoration or reconstruction of essential services is to provide for the people and to help “[secure] the populace's allegiance to their government.”^{lxxviii} These essential services, when functioning, are the physical evidence to the population that the government is capable of providing for them. Eric T. Olson believes that the “critical purpose of reconstruction in [counterinsurgency] is “to win the hearts and minds” of the people.”^{lxxix} This is incredibly hard to do, especially if the nascent government does not have the capacity and the U.S., either through military or civilian means, is providing essential services. It could also be difficult if the post-conflict period follows a particularly divisive and violent conflict and the country has not gone through some sort of reconciliation process. Former insurgents and factions may cease fighting, reintegrate, and join the politics of the country, but they are not likely to give their “hearts and minds” to the government, unless they control it. Olson's use of the “hearts and minds” term is problematic, but his justification for conducting reconstruction, especially in counterinsurgencies, is sound: 1) “it is the right thing to do;” 2)

“reconstruction persuades the population to support the counterinsurgent and reject the guerilla;” and, 3) “reconstruction can address the fundamental sources of violence and unrest in the nation, thereby removing the insurgent’s cause.”^{lxxx}

Instead of talking about winning “hearts and minds,” our reconstruction concepts should work towards enabling the nascent host nation government to gain the “wholehearted support” of the population for *their* government, not for the U.S. Government, military forces, or civilian agencies.^{lxxxi} It is much more difficult to win the “hearts and minds” of a population, especially one recently divided in conflict, than it is to win the “wholehearted support” of that population. This is not quibbling. People can give their allegiance and support to a government without giving their “hearts and minds.” We do not have to look to failed and post-conflict states to see examples of this dynamic. The Québécois remain supportive of the Confederation, but their “hearts and minds” do not lie with Anglophone Canada. The “hearts and minds” of Texas are all Texan, but that does not mean they do not support the Union. One thing is certain — if the host nation government cannot provide essential services to the people, there is little chance of it winning either the “hearts and minds” or the “wholehearted support” of the population.

Primacy of Essential Services

The administrative, energy, water, sewage, telecommunications, and transportation frameworks of a country are the essential services. They are literally the glue that holds a country together, the first things citizens see, every morning, and a constant reminder that a government is or is not supporting its people. They are critical to the humanitarian, basic needs, life support tasks that the Army's *Stability Operations*

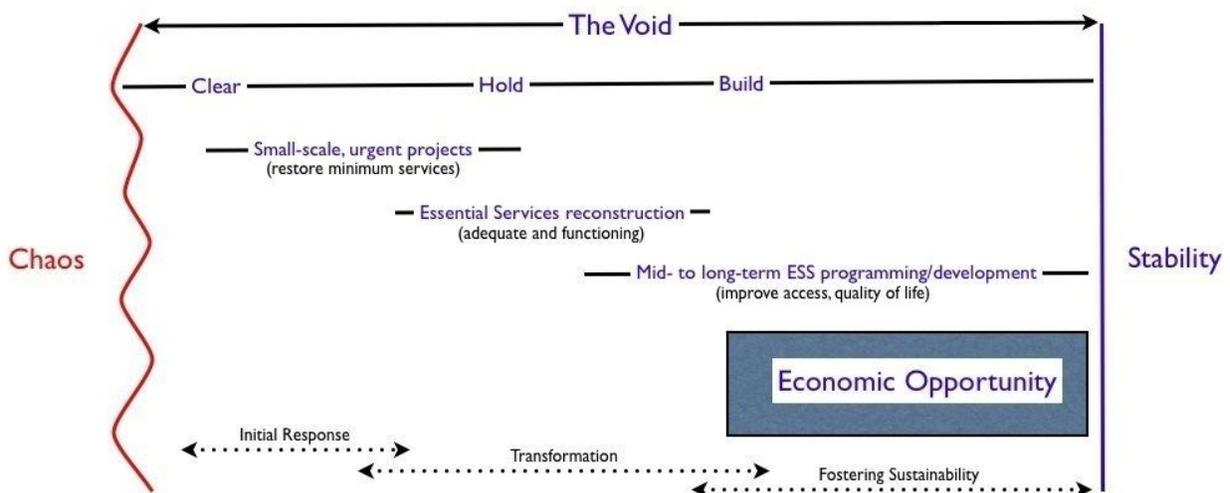
manual calls essential. Some have called them “indispensable” in the fight against insurgents.^{lxxxii} Prior to the surge in Baghdad, Iraqi Deputy Prime Minister Salam al-Zoubai noted that “security and services cannot be separated,” while another Iraqi official noted that “electricity solves security and services problems.”^{lxxxiii} Provision of these essential services gives the population incentives to support the government, instead of the insurgent,^{lxxxiv} or to refrain from violence themselves, because they believe that there is a better way of life ahead. When the 25th Infantry Division was in Northern Iraq, this was the number one request of locals to the Division's leadership, during battlefield circulation - more consistent hours of power, more clean water, more sanitation. Areas receiving the most essential services were more likely to be calm and stable and supportive of the local, provincial, and central governments. This is the “utility” of “providing for the population beyond just security,” recognizing the “value of providing for the needs and desires of the population.”^{lxxxv} It is also the reason that the U.S. Government should prioritize these essential services in complex reconstruction operations.

Do Essential Services produce stability?

One glaring issue with stability operations is that “scholars, soldiers, and policymakers alike lack a clear and shared understanding of how stability operations actually produce stability.”^{lxxxvi} Many of the dimensions and end states of stability operations are ephemeral, with vague understandings of the mechanisms which connect them to each other. It is easier to see the connection with essential services. As mentioned in the previous section, they are the glue that holds a country together — improvements in every other political and socioeconomic framework in a post-conflict

society are dependent on, and enabled by, functioning essential services. Imagine trying to extend the reach of the central government in Afghanistan to remote provinces without modern transportation and telecommunications systems. Imagine how no power, water, road and pipeline transportation systems in Iraq would mean absolutely no macroeconomic stabilization and growth, because of the Iraqi economy's oil-dependent, rentier nature. Imagine trying to build a house today, with no power tools.

James Wirtz notes that “without clear theoretical understanding of stability operations (i.e., an explanation of how diplomatic, military, economic, social, and political initiatives can be *harnessed to produce stability*), it is virtually impossible to assess ongoing operations.”^{lxxxvii} Without assessments, it is incredibly difficult to develop or modify ends, ways, and means, often leading policymakers to “muddle through.”^{lxxxviii} The figure below posits a theoretical approach on how to harness stability with essential services.



Three provisions (Security, Essential Services, Rule of Law) => Opportunity and Development => Public confidence and "wholehearted" support of HN Government

The *initial response* for essential services consists of small-scale, urgent projects that restore minimum services. This provides for the basic needs of the populace. According to Eric T. Olson, “the ability to bring relief to the suffering of the indigenous population by addressing these needs will have a strong positive influence on efforts to win over the population and gain their cooperation.”^{lxxxix} Capacity development begins in this stage and continues throughout the reconstruction operation. Follow-on *transformation* efforts rehabilitate or reconstruct critical nodes to go beyond the minimum essential service needs of the country. This improvement, from bare minimum to adequate and functioning, provides opportunity for both individuals and the government to get beyond basic survival. For example, dependable power (increasing hours of power, at consistent times), allows the shopkeeper to re-open and enables local cell phone or landline communications systems to support police stations and functions. At this point, confidence in the nascent government begins to improve, as people see daily improvements in their situations and they perceive that local governments are effective and providing necessary services.

Efforts at transformation change to ones designed to *foster sustainability*. Mid- to long-term essential services programs and development add new capabilities or redundancies (e.g. multiple transmission lines in a network, which allows power to be re-directed, if there is an interruption in the system) and efficiencies. These efforts improve dependability of essential services frameworks, access to services, and quality of life, which supports not only opportunity, but also development. Returning to Lieutenant General Caslen's three things that a government has to provide for its people, effective security and rule of law are built on a foundation of essential services.

The presence and equitable provision of all three lead to opportunity and development (both social and economic). Opportunity and development, enabled by essential services, are key components of gaining the confidence and “wholehearted” support of the populace.

A Concept of Essential Services Reconstruction

It is imperative that the interagency community develops a concept of reconstruction. An accepted, doctrinal concept of reconstruction will form the basis of shared understanding and will “guide planning, preparation for, and execution of reconstruction operations.”^{xc} Having an agreed upon concept of reconstruction does not mean that the U.S. Government will execute reconstruction operations the same way in every post-conflict situation. Instead, interagency planners and operators will be able to use the concept and its authoritative, fundamental principles, coupled with experience, judgment, and local context, to develop and execute integrated reconstruction operations. Eric T. Olson has developed the general framework for an operational concept of reconstruction. The major elements include: “a statement of the purpose of reconstruction, a description of its essential elements, a general sequence and scheme of reconstruction activities, and guidelines for assigning responsibilities and assessment of a reconstruction effort.”^{xci} The analysis below illustrates these major elements as a concept for essential services reconstruction, but Olson's general framework is appropriate for any of the desired end states for stabilization and reconstruction (e.g. governance, rule of law, social well-being, sustainable economy, etc.).

1. A statement of the purpose of reconstruction.

To develop a statement of the purpose of reconstruction for essential services, we must review previously developed definitions:

- **Reconstruction** is the process of rebuilding the degraded, damaged, or destroyed political, socioeconomic, and essential services frameworks (physical infrastructure and institutions) of a country or territory to restore or create the enabling conditions for long-term development and a functioning peaceful society.
- **Essential services** are the institutions, human capacity, and physical infrastructure that make up the interconnected administrative, energy, water, sewage, telecommunications, and transportation frameworks of a country.

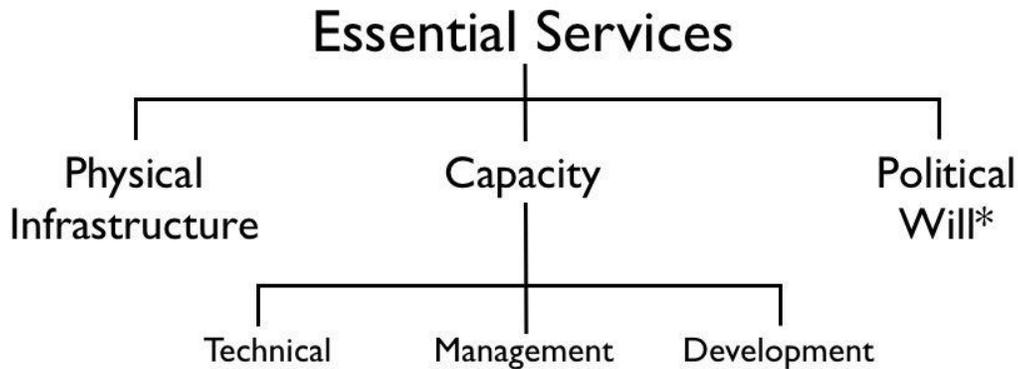
The purpose of essential services reconstruction is to rebuild the essential services institutions, human capacity, and physical infrastructure of a country to provide for the needs of the population and restore or create the enabling conditions for long-term development and a functioning peaceful society. The initial goal is to restore minimum services. The intermediate goal is to go beyond the initial response and restoration of minimum services to at least a point where the essential services are adequate and functioning. The long-term goal is to enable opportunity and development.

2. A description of the essential elements.

Any essential services framework (administrative, energy, water, sewage, telecommunications, or transportation) requires three elements to provide for the population — physical infrastructure, human capacity, and political will. This is represented in the figure below. The physical infrastructure and human capacity generally make up the institutions that provide these essential services. The individuals

who possess the desire and political will to direct the provision (or not) of these essential services to the population generally reside outside of the institutions, although many bureaucrats inside the institutions have ties to, and are influenced by, politicians, especially in tribal societies. The physical infrastructure includes the public works facilities, nodes, and networks, as well as the operations and maintenance for them.

The human capacity element consists of the technical abilities of operators to run the infrastructure; the ability of the supervisors to manage overall systems; and the long-range forecasting and development abilities of designers and planners. In the case of electricity, an example of this includes the technicians who run the power generators; the managers who supervise overall power plant functions and the power transmission and distribution networks; and, the regional and national planners who determine when that power plant will need to be replaced and what should be the design capacity of the replacement. Political will is the willingness and ability of leaders to provide equitable distribution of essential services to all citizens. The analysis below develops each of these three elements further, and then proposes seven general rules for essential services development planning. While every operational concept for essential services reconstruction should include these elements, they are not unique to the essential services frameworks. The Rule of Law framework, for example, has a physical infrastructure, human capacity, and an element of political will, as do the others.



* Political will reflects the willingness to provide equitable distribution of Essential Services to all citizens, regardless of tribe, sect, ethnicity, etc.

Physical Infrastructure

Every complex reconstruction operation will be different in its requirements to restore, rehabilitate, or reconstruct the physical infrastructure of the affected country. On the ground assessments, conducted with host nation technical experts (if available), are critical to develop detailed reconstruction programs. After developing a baseline of information on the status of essential services physical infrastructure, interagency planners should address five focus areas (or phases) when developing physical infrastructure restoration programs: 1) restoration of minimum services; 2) repair/rehabilitate additional equipment and facilities to achieve essential services that are adequate and functioning above minimum service levels (return to function as designed and installed capacity); 3) build out and/or improve to foster sustainability and development; 4) improve operations and maintenance capabilities (training, funding, spare parts, etc.); and, 5) capacity development based on existing and new equipment. Host nation personnel need to be intimately involved in the development of priorities, if not directly responsible (with advice and assistance from external technical experts).

Ideally, there is a cascading system of national to provincial to local development strategies, which prioritize programs (including operations and maintenance), plans, and projects.

Not all projects require money. The interagency team should look to maximize its ability to influence through key leader engagements (e.g. meetings with a national minister on behalf of a local or regional essential services manager who is marginalized or ostracized from the ministry because of differing tribes). By being aware of development plans, priorities, and statuses across the different levels of the essential services institutions, interagency advisors can oftentimes break through the bureaucracy that stymies host nation managers far from the capital city. Technical support, coordination, and information sharing, cost little compared to new power generation. Finally, the U.S. Government's knowledge, resources, and countrywide presence give interagency planners and advisors a powerful tool — the power to convene meetings and conferences, which sometimes are the only occasions where host nation officials find out what other host nation officials are doing.

Human Capacity

Capacity development requires both technical expertise and finesse. It consists of improving the capacity of essential services personnel in the areas of technical operations and maintenance, management practices, and design/development policies, plans, and programs. Capacity development in a post-conflict setting is not just governmental; it also needs to include the development of local contractors, architecture and engineering firms, etc. Training and capacity development programs need to be multi-leveled (e.g. beginning—developing—sustaining—performing—self-reliant),

because there will be varying skill levels and education resident in the institutions. In the long run, capacity development is a much more important program than restoration of the physical infrastructure. Even the most reliable equipment will break down without proper operations and maintenance procedures.

Capacity development requires finesse because of the dynamic that the more we do, the less we will see them grow and develop. The actions, mediations, influence, money, and enablers of the U.S. Government can cause a degree of dependency in the institutions of the host nation. Capacity development also requires finesse because it is the partnerships that we develop (through mentoring, presence, and channeling information and issues from one level to another) that are important, not the projects. The tendency is to forget this and focus on the projects. Interagency planners and advisors constructing capacity development programs would be wise to consider the model used by Special Forces for Foreign Internal Defense (FID) missions - assess, train, advise, and assist.

All levels (national ministry all the way down to individual operator) usually need training and development, and often there is a dearth of educated, qualified personnel. Local national essential services operators and managers are often uninformed about current operations, plans, and developments at the national level. Here, the interagency team can play a key role - by informing essential services personnel about what is happening at different levels within their government, the interagency team can “[mentor] and [encourage] local officials to work with the central government [and vice versa] to make sure that the needs of their populations are being considered in national decisions.”^{xcii}

Interagency planners and trainers/advisors need to remember the following key points with respect to capacity development. First, there are three main levers of influence available with host nation partners: knowledge, presence, and resources. Second, each capacity development program must assess the capabilities, effectiveness, and reliability of the partners to be trained, then tailor training to their needs. Finally, situational awareness and understanding about both the status of the physical infrastructure and the levels of proficiency of the technical, managerial, and development staff of the institutions form the basis for planning advice, capacity development programs, and synchronized training and operations.

Political Will

“Political will” most likely will generally be outside the warrant of the interagency planners and advisors working essential services restoration to affect, but inequitable distribution of essential services for political reasons or personal gain will happen and needs to be planned for. It is possible that interagency planners and advisors can influence the technical and managerial staff of essential services institutions through solid working relationships based on mutual trust (and imbued with cooperation, coordination, and communication) and influence. A more draconian method to combat lack of political will that leads to inequitable distribution of essential services is conditionality - “failure to cooperate will bring an end to the benefit being received.”^{xciii}

Seven General Rules for Essential Services

Although we can gather some baseline data on the capacity and status of essential services in a failing or failed state before we deploy, usually the U.S.

Government cannot develop essential services reconstruction programs until it has personnel on the ground who can work with the host nation to do detailed surveys and assessments. There are, however, some general rules that can form a template for the development of a operational reconstruction concept. Once on the ground, interagency planners can apply (and modify) these programs based on the conditions observed.

Seven general rules for essential services reconstruction are:

1. Focus on institutions and remember they are interconnected
2. Work “over their shoulders” from the beginning (the more we do, the less we see them grow)
3. Prioritize training and capacity development (leading to ownership and ability to do it themselves)
4. Prioritize repair, restoration, and rehabilitation of existing infrastructure
5. Build new only where necessary for overall system operation
6. Plan for, fund, and train operations and maintenance from the beginning
7. Think farm grade or industrial strength

The last rule may need some clarification. Two examples will suffice. Once, while briefing the division Commanding General, a Brigade Commander in Kirkuk noted that we needed to have realistic standards when evaluating the essential services infrastructure in Iraq. He reasoned that, if we did not, then “by Western standards, every category would be red.”^{xciiv} Several months later, the Engineer from the Multi-National Security Transition Command – Iraq (MNSTC-I) was discussing the challenges of building facilities for the Iraqi Security Forces. Every porcelain sink they had installed had been destroyed by misuse, so MNSTC-I had changed contract specifications to install stainless steel sinks. The MNSTC-I Engineer said, “We've tried to give them

western solutions to a problem set which they do not think are problems.”^{xcv} His solution was to program items that were super durable, easy to maintain, indestructible, farm grade or industrial strength.

Command and Control and Management

The interagency team will not be able to implement any of these rules or affect the elements of essential services listed above without a well-resourced and well-organized command and control and management organization. This organization has three main functions. First, it must conduct information and knowledge management. Information management, in this sense, is the collection and organization of data from multiple sources, while knowledge management is the collation of that data which supports assessments, deliberate planning, program development, and execution. Second, the organization must prioritize and direct effort. Finally, it must allocate resources based on the prioritization.

3. A general sequence and scheme of reconstruction activities.

The general sequence of essential services reconstruction activities should follow the phases as laid out in the Office of the Coordinator for Reconstruction and Stabilization's *Post-Conflict Reconstruction Essential Tasks: Initial Response* (short-term), *Transformation* (mid-term), and *Fostering Sustainability* (long-term).^{xcvi} The general scheme of reconstruction activities (all ideally conducted in conjunction with host nation) is as follows:

1. Gather baseline data
2. Develop goals, objectives, and desired effects

3. Conduct on-the-ground reconnaissance
4. Develop programs (physical infrastructure, human capacity, institutional)
5. Implement programs
6. Monitor/conduct continuous assessments
7. Continue or modify programs, based on assessment of desired affects

There are several challenges, issues, and weaknesses with current interagency processes that the U.S. Government needs to overcome in order to execute this scheme of reconstruction successfully. The first challenge is a wicked problem one - “in order to describe a wicked-problem in sufficient detail, one has to develop an exhaustive inventory of all conceivable solutions ahead of time.”^{xcvii} This requires intimate knowledge of the problem and close cooperation with host nation personnel, which can be gained only in theater. Therefore, planning needs to be done in Baghdad or Kabul, not Washington, but there is no authoritative, integrated, deliberate planning doctrine for the theater (operational) level and below. There is no shared interagency understanding of the processes capable of getting to goals, objectives, or desired effects.^{xcviii} Interagency planning teams will “muddle through” the problems differently, each time.

Second, the focus should be on programs, not projects, but the situation on the ground may demand initial responses before units or organizations can conduct detailed infrastructure reconnaissance and before the interagency team can develop supporting programs. In this case, there are only three things to do — accept it, limit long-term damage, and make the most out of it. Accepting it means recognizing that these projects are a “first order of business—electricity, clean water, sewage, and other

necessities that will support at least a marginal standard of living.”^{xcix} Limiting long-term damage requires some forethought and resource capabilities to have solutions that are generally self-contained, rapid response, and temporary (e.g. mobile substations that temporarily repair existing electrical distribution systems, instead of a diesel-guzzling generator for every house). Another option to limit long-term damage is to conduct “easily organized activities,”^c such as trash removal or canal cleaning. To make the most out of these initial response efforts, the interagency team can attempt to use these projects as “pilot activities that enhance learning for the design of later, larger-scale programs”^{ci} and assessments of the capacity of local essential services personnel and institutions.

Third, the on-the-ground reconnaissance and assessment phases deserve interagency teams, but none exist today. Military units will generally accomplish this “reconstruction reconnaissance,”^{cii} given their dispersion and ability to move freely about the country. Today, the problem is that the civilian “agencies [who will later do reconstruction] will have specific information requirements that are often either unknown or insufficiently specified to U.S. forces.”^{ciii} One solution is to second “augmentees from various agencies responsible for reconstruction who are embedded with the first arriving units.”^{civ} These would have to be liaison officers (LNO) with authority. For example, a USAID LNO seconded to a Brigade Combat Team, not to tell the BCT what USAID can do for it, but rather to submit information and data requirements, advise on development principles, keep the BCT informed about what USAID is developing while over-the-horizon and waiting, and advise on known host nation development plans, constraints, and challenges.

Finally, there is not enough readily available, technical engineer expertise in either the civilian or military sides of the interagency partnership. Many times, the scarce military engineer assets in a Brigade Combat Team on the ground are going to have a combat engineer focus and will not have the kinds of technical expertise necessary to conduct detailed reconstruction reconnaissance. The same is true for USAID, which has such a small permanent staff of true technical engineers.^{cv} In order to make the reconnaissance, program development, and monitor/assessment pieces of any reconstruction operational concept successful, the U.S. Government will need to develop doctrine, organization, training and material solutions for an interagency reconstruction assessment and support team.

4. Guidelines for assigning responsibilities.

According to David Galula, “Tasks and responsibilities cannot be neatly divided between the civilian and the soldier, for their operations overlap too much with each other.”^{cv} This is true, but there are definitely areas where each has primacy. For reconstruction, primacy falls to the civilian side — “a host of civilian actors has a comparative advantage in addressing many of postconflict reconstruction’s wide range of needs”^{cvii} — especially in longer-term areas like capacity development. The responsibility of the military is to determine how best to get in a supporting role to enable the civilian lead agencies. During the 25th Infantry Division’s tour in Iraq, this was reflected in the comment that we “need to support the PRTs’ ends and ways with our means.”^{cviii} The *Counterinsurgency* manual sums it up well:

Military forces can perform civilian tasks but often not as well as the civilian agencies with people trained in those skills. Further, military forces performing civilian

tasks are not performing military tasks. Diverting them from those tasks should be a temporary measure, one taken to address urgent circumstances.^{cix}

A previous section already highlighted that the Army has to focus on tasks that “set the conditions for success” of civilian agencies executing reconstruction operations. It bears reiteration. The undeniable strength and “comparative advantage” of the Army in reconstruction operations is its presence - for both security and reconnaissance. As the World Bank has pointed out, “[f]ield presence is essential to monitor, to maintain coordination...and to respond flexibly to changes.”^{cx} The Army has the ability to be the “eyes and ears” of the reconstruction effort, gathering facts, talking to locals, cross-checking stories to determine legitimate requests (and also who might be lying), determining ground truth. Like any reconnaissance asset, though, the Army in reconstruction operations needs direction — specific information requests which can lead to collection plans. This is where it is critical to have close coordination with civilian agencies. Equally important is the requirement that the civilian and military personnel working on these information requirements and collection plans speak the same common reconstruction language.

More important to the effort than assigning responsibilities is the effort to form a single, cohesive team from disparate civilian and military personnel and organizations. This requires two primary endeavors — building an interagency essence and taking advantage of organizational difference, instead of letting them be divisive. First, according to James Wirtz, “Essence is a shared image of what the organization is all about.”^{cx} Currently, there is no interagency essence in reconstruction operations. There is no shared doctrine upon which to build a shared language, shared processes, or a

“shared image” of what the interagency reconstruction team looks like. Most of the things that cascade from doctrine — organization, training, education, exercises, etc. — are missing or only occur inconsistently. There is no dependable way to build familiarity, a key component of essence and teamwork. Contrast this with familiarity in the Army — in an active Army of over 500K, it is amazing how often Soldiers run into folks with whom they have previously trained or served. Similar things happen with foreign allied militaries.^{cxii} This needs to happen in the interagency community. A USAID officer plucked out of his country desk in Washington and sent to be the USAID LNO to a brigade conducting initial assessments in a post-conflict location like Tripoli should have the opportunity to walk into the brigade headquarters and recognize a friendly face with whom he previously trained or worked, leading to immediate bonding and acceptance.

Second, instead of bemoaning the fact that there are different organization cultures in the interagency team, organizations conducting reconstruction operations should take advantage of the strengths of the team. For example, it is well known that the military has a more deliberate planning system than civilian agencies. This can be used advantageously by giving the military “secretariat” responsibilities in an interagency reconstruction organization to guide the planning process. Other areas of primacy could include:

- Planning - interagency, with military as “secretariat” to guide the process
- Project and program development - civilian lead, with military support

- Reconnaissance - military lead, with civilian support to identify information requirements
- Assessment - interagency, with civilian lead

In the *Counterinsurgency* manual, there is a discussion about the “preferred” or “ideal” division of labor — “Whenever possible, civilian agencies or individuals with the greatest applicable expertise should perform a task.”^{cxiii} The manual contrasts the ideal with the “realistic division of labor,” where civilian members of the interagency team are not available. This is something that the interagency community has to fix - in a truly interagency effort, with a shared essence and “one team,” there would be no “division of labor.” Either physically or virtually, it is imperative to get civilian members of the team into the fight, from the beginning, in order to “entrust civilian tasks to civilians.”^{cxiv}

5. Guidelines for assessment of a reconstruction effort.

There are two main observations about assessments in current reconstruction efforts. First, they are a “critical contributing factor to successful execution.”^{cxv} Second, we are terrible at them. This is primarily due to an inability to identify clearly our goals, objectives, and desired effects (our focus); inconsistent, inaccurate, and inappropriate data collection and measures of effectiveness and performance; and, an inability to assess our measurements against the effects we want to achieve. Poor measurements lead to a weak (or no) ability to determine program direction (continue/modify/cancel), prioritization, and resource allocations. In this situation, there is no common operating picture, little integration, and simply knowing where you are is difficult, which can lead to fragmentation. Every organization is likely to develop its own perspectives, understandings, and intentions with respect to reconstruction. There is no “ability to

gauge the relative impact of different reconstruction activities and make timely adjustments.”^{cxvi}

Seven General Rules for Assessments

As previously mentioned, no two reconstruction operations will be the same, and, therefore, no two assessment mechanisms will be the same. However, the interagency community can develop doctrine to guide the process, which, when combined with experience, judgment, and local context, will enable in-theater interagency teams to gauge their efforts. Seven general rules for assessments are:

1. Focus on the end state and assess against desired effects
2. Have a process and dedicated personnel
3. Measure off the baseline data used to develop the reconstruction program
4. It's not physics; incorporate objective *and* subjective measures/data
5. Assessments are continuous; watch, monitor, engage
6. Assessment mechanism has to be collaborative, online, and unclassified
7. Pick a system and stick with it

Several implications fall out from these general rules for assessments. First, it is obvious, but, if you cannot define your goals, objectives, end states, or desired effects, it will be impossible to assess anything, leading to an inability to gauge relative impacts and make timely adjustments. Second, assessments are a full-time job. The assessment mechanism will fail if staff does the process as an additional duty. Proper

assessments require dedicated analysis cells, jointly staffed by supported and supporting interagency members, feeding back into decision-making processes at the supported organization. Third, assessments have to reside in an unclassified collaborative workspace so that all members of the interagency team can access them. This requires a dedicated network or website, collaborative planning tools (e.g. Microsoft SharePoint), and knowledge management.

Finally, you have to decide what to measure and then measure off something — a baseline — or else every assessment attempt will be a unique snapshot, with no ability to identify trends and patterns, good or bad. Selection of data sources is important, but having data does not equal having an assessment. You have an assessment when you take the data and observations and compare them against the desired effects and assess whether your program is on track or not. Assessment requires judgment, so interagency planners should not be afraid of subjective data. In fact, assessments solely based on hard numbers and objective data will not give an accurate picture to decision makers. Judgment also plays a part in interpreting data across relatively distinct geographical areas within a country — every province may be different, but there are usually some trends, patterns, and similar needs (shortages and challenges). For essential services reconstruction, the following are sample areas and data sources recommended for assessments:

General Assessments of Essential Services

What's there?

What's the current status (operational / not operational, efficiency)?

What are the issues? (focus on causes / effects)

What are the Operations and Maintenance plans / programs / issues?

What new development is planned?

Programs (Required conditions / obstacles / current status)

Project status (Completed / ongoing / planned (USG / Host Nation / Other))

Data Sources - what data available to give us metrics (subjective and objective)?

Subjective measures — “Development [pick periodicity (e.g. monthly, quarterly, etc.) and level (e.g. DG/PGOVT/Ministry)] Snapshots”

Capability

Effectiveness

Reliability

Public confidence ratings (e.g. Polling data and interviews)

Objective measures -

Daily / weekly / monthly / yearly statistics (e.g. power generation, oil refinery production, etc.)

Open Source Intelligence (OSINT) (e.g. mentions of essential services in local media)

Reports from Directors General and Ministries

Civil-Military Operations (CMO) reports

PRT reports

Numbers (#)

Hard #s (e.g. # sewage treated)

Soft #s (e.g. estimate of % of population with availability to XYZ ESS)(Compared to similar countries, not the West)

Objective + Subjective = Assessment (with benchmarks and trend indicators)

Rehab is a Long-Term Process

A caution is required in any discussion about reconstruction operations, especially in restoration and reconstruction of essential services. These are long-term, costly

requirements. Everything from assessing damage to key infrastructure to developing human capacity takes time, sometimes measured in decades. Installation of megawatts of power generation costs incredible sums and take years. Resource and personnel requirements for the interagency can strain any organization. But, there are no shortcuts to the process. These reconstruction operations require time and commitment, which can be difficult to sustain. They also require continuity in the interagency team. This is particularly challenging, as the deployment times and rotations for civilian and military personnel are invariably offset. Common doctrine which leads to shared understanding of problems, terminology, operational concepts, and viable solutions can greatly mitigate continuity problems in post-conflict reconstruction. The final section of the paper will lay out this and other interagency recommendations, then focuses on changes the Army can implement to better position itself to support civilian lead agencies in complex reconstruction operations.

The Silver Path

This paper started with a question from Thomas Szayna and his RAND Corporation research team. It will end with another. In considering how to integrate civilian agencies into stability operations, they asked, “What role should civilian agencies play in the execution of SSTR operations, what can they contribute, and are they ready to interact seamlessly with DoD, especially Army, personnel?”^{cxvii} Like the first question, the focus is off and needs reframing — what role should the Army play in complex operations, what can it contribute, and how can it better support the interagency effort and civilian lead agencies? The Army's warrant is not to change its interagency partners, but to prepare to support them in complex reconstruction

operations. It must maintain capacity to execute stabilization and reconstruction unilaterally, but only as the lesser fallback option, until the security situation matures enough for the lead civilian agencies to operate, and always trying to ensure short-term solutions do not hamper long-term development. Of course, this assumes that the interagency team *can* operate.

According to Eric T. Olson, the “U.S. Government has consistently fallen short in its attempts to organize for and implement reconstruction in a way that has led to an effective or efficient use of resources dedicated to that purpose.”^{cxviii} To remedy this, there is no silver bullet solution, no transmogrification, and the Army cannot unilaterally bring about greater interagency effectiveness in stabilization and reconstruction situations. But, there is a silver path to greater interagency effectiveness that encompasses a variety of actions and endeavors on which the Army can work, both solely and in conjunction with interagency partners. Before going down the silver path, this final section will first quickly review wicked problems and how they exacerbate complex reconstruction operations, then briefly consider the most salient points about the proposed operational concept of essential services reconstruction.

Reconstruction Operations Are Wicked Problems

This paper has argued that reconstruction operations are wicked problems. The environment is one of interactivity, uncertainty, and multi-causality. Problems are open-ended, with no finite solutions. There is always room for improvement, and it is difficult to identify and accept “good enough.” Reconstruction as a wicked problem is highly complex, highly resistant to resolution, ill-defined, and beyond the capacity of any one organization to solve. The team trying to develop resolutions for these wicked

reconstruction problems faces the challenges of defining the problem, locating the problem, and determining how to close the gap between current conditions and what needs to be. Resolution of these challenges requires an interagency approach, but current U.S. Government agencies, bureaus, and departments exist in an environment of conflict and competition, leading to fragmentation in the integrated approach. Planners from different organizations have different perspectives about the nature of the problem and possible resolutions. The solution to fragmentation is to first gain shared understanding of the problem, which will lead to shared resolutions and commitment.

Essential Services Reconstruction Concept

It is not necessary to review in detail the proposed operational concept for essential services reconstruction. A few points will suffice. First, it is necessary to reiterate the proposed place of essential services in the overall reconstruction pecking order — it should have primacy. Progress on all other stability sector frameworks and fronts requires reliable provision of essential services beyond the bare minimum to support humanitarian survival concerns. Second, the operational concept and its details can serve as a starting point for the interagency team trying to develop doctrine and a shared understanding of reconstruction. All other stability sector frameworks require a similar operational concept for their reconstruction or restoration. Shared understanding starts with agreement, and initial definitions are key. For essential services, this research developed three definitions: reconstruction; essential services; and, the purpose of essential services reconstruction.

Reconstruction is the process of rebuilding the degraded, damaged, or destroyed political, socioeconomic, and essential services frameworks (physical infrastructure and

institutions) of a country or territory to restore or create the enabling conditions for long-term development and a functioning peaceful society.

Essential services are the institutions, human capacity, and physical infrastructure that make up the interconnected administrative, energy, water, sewage, telecommunications, and transportation frameworks of a country.

The **purpose of essential services reconstruction** is to rebuild the essential services institutions, human capacity, and physical infrastructure of a country to provide for the needs of the population and restore or create the enabling conditions for long-term development and a functioning peaceful society.

Finally, two things will make or break essential services reconstruction programs — capacity development and assessment. It will not matter how much physical infrastructure the U.S. Government donates to a post-conflict country, if the human capacity of that country cannot operate and maintain it. It will be like the 25th Infantry Division, in Iraq — using CERP funds to refurbish water treatment plants that the U.S. Army Corps of Engineers had built only two years earlier. Assessments are likewise critical to reconstruction. The U.S. Government must be able to evaluate or estimate the nature and quality of its reconstruction programs, measured against objectives and desired effects, in order to gauge impact and make adjustments.

The Silver Path - Building an Interagency Reconstruction “Essence”

The U.S. Government Accountability Office (GAO) reported that both the Department of State and the Department of Defense believe “success in stabilization and reconstruction efforts will depend heavily upon the ability to develop an integrated, interagency approach.”^{CXIX} Yet, more disparities of approach still exist than commonalities. In order to overcome the challenges of wicked reconstruction problems, the U.S. Government broadly has to fix the areas of vision, doctrine, training, education, organization, resourcing, and culture.

Vision

For reconstruction operations, primacy falls to the civilian side. U.S. Government directives and statutes do not reflect this strongly enough. National Security Presidential Directive 44 establishes the Department of State as a “focal point” for stabilization and reconstruction operations. This is not sufficient to ensure effective and efficient synchronization and unity of effort. Stabilization and reconstruction operations executed by the U.S. are matters of national security, requiring management at the national level, so that it is harder for individual agencies to make parochial arguments and decisions. Because of this, interagency operations require statutory reform along the lines of the Stafford Act for emergency and consequence management.

A stabilization and reconstruction operations national security act would authorize the President to “establish a program of...preparedness that utilizes services of all appropriate agencies.”^{CXX} This program of stabilization and reconstruction preparedness would establish the vision for U.S. Government operations and would include the following: 1) identification of the Secretary of State as the Director of Stabilization and Reconstruction; 2) preparation of national preparedness plans for monitoring, assessing and warning systems for likely stabilization and reconstruction missions; 3) interagency doctrine; 4) education, training, and exercise programs; 5) post-operations critiques and evaluations (lessons learned); 6) annual review of programs; 7) coordination of agency, bureau, and department preparedness programs; 8) application of science and technology; and, 9) research.

Doctrine

In the interagency world of stabilization and reconstruction, doctrine is the key to gaining shared understanding and forcing integrated operations. The U.S. Government should establish an Interagency Task Force, with the Secretary of State appointed as the Chairperson, to manage U.S. Government stabilization and reconstruction preparedness planning. Its first task would be to develop draft interagency doctrine for stabilization and reconstruction operations. This doctrine will ensure delineation of overarching principles; a common lexicon; understanding of supported and supporting agencies; understanding of, and agreement on, each participating agency's roles, responsibilities, and procedures; and development of a deliberate planning system. Using this shared doctrine and understanding, the interagency team and individual agencies, bureaus, and departments will then be able to affect changes in organizations, training, education, and resourcing. While organizational culture is not as easily changed as these other areas, shared doctrine and understanding, coupled with interagency changes in the other areas, give the interagency team a much better chance to build a common essence.

Education and Training

The bottom line for education and training is that there is no interagency without familiarity. It is imperative to educate and train the interagency team together — “the effectiveness of the interagency process, interagency operations, and particularly the management and leadership of these efforts can be effectively enhanced only through education and experience on the part of those involved.”^{cxxi} This has to start early in civilian and military careers. As one Army leader noted, “It doesn't help to do it at the 20-

year point of everybody's careers. It needs to take place like we're doing it now, and we need to work in our training environment so that in fact if we are going to go some place in the world and operate together, we've done that in peacetime.^{cxxii} The basis of this education and training has to be the common doctrine.

Some interagency education efforts can start right away with existing departmental courses. For example, there is a functional course for military engineers called the Joint Engineer Operations Course. Based on lessons learned from Afghanistan and Iraq, it educates joint service personnel on the capabilities of each service's engineer organizations and the planning considerations when working in a joint contingency operation. This course should be modified, in conjunction with USAID, to form a Joint Interagency Engineer Operations Course.

Interagency training has two important considerations. First, improved interagency operations require more interagency training and exercises, which is a challenge. Because of resource and personnel disparities, the non-Department of Defense agencies have significant difficulties conducting training and daily business simultaneously (see Resourcing below). One way to mitigate this issue is to develop mechanisms to enable civilian interagency partners to participate virtually in training and exercises.^{cxxiii} Second, there will always be individual training programs in each agency, bureau, and department, but these have to be derived from the common doctrine. Each organization must build interagency principles, processes, and terminology into its specific training and exercise programs.

Organization

In addition to the Interagency Task Force mentioned above, there are two organizational changes that will improve interagency operations. First, the U.S. Government needs to establish, man, and equip deployable civilian-military interagency reconstruction assessment and support teams. These teams would have three focus areas (areas of expertise) to support the interagency team: planning; reconnaissance and assessment; and, program development and execution). Second, because these interagency reconstruction support teams will likely be small in size and limited in number, the interagency community needs to establish a deliberate reachback system to functional and technical experts. This “interagency collaborative network”^{CXXIV} would include established partnerships, across the interagency community, to determine which organization(s) had the requisite skills to satisfy any request for information or support from an in-theater interagency reconstruction support team. An example of these partnerships could include the U.S. Army Corps of Engineers' Engineer Research and Development Center (ERDC) partnered with USAID's Office of Infrastructure and Engineering (EGAT/I&E). This interagency collaborative network will require a dedicated, “formal, centralized knowledge management system.”^{CXXV}

Resourcing

Civilian agencies require greater funding for stabilization and reconstruction operations to benefit their primacy. One of the biggest complaints about the civilian side of the interagency partnership is its limited ability to deploy sufficient technical expertise or personnel for reconstruction operations. Carlos Pascual, former Coordinator for Reconstruction and Stabilization at the Department of State, has said there are “major

gaps in civilian capacity”^{CXXVI} and “if you don't have the numbers you can't do any of this because you can't have the training programs, you can't have the cross-agency experiences that are necessary to build up capabilities, everybody is basically just trying to figure out how they do what they need to do on their plate tomorrow and you don't make the progress that's necessary.”^{CXXVII} Getting more technical and deployment capacity takes more money for civilian agencies, even if it means taking it from other sources, like the Department of Defense.

Culture

Culture is the final element of the interagency silver path. When the interagency team comes together in a theater of operations to conduct reconstruction operations, the members need to know each other, speak the same language, and have common approaches to problem resolution. Solving wicked problems requires an holistic approach, and “part of the holistic approach...is to think inclusively.”^{CXXVIII} There is no current inclusive U.S. interagency culture, no interagency *essence*. All of the previous recommendations on the silver path would lead to an interagency reconstruction *essence*. They would generate interest and interdependence, familiarity, trust, credibility, and would facilitate a first reaction of coordination and collaboration, instead of conflict and competition. The interagency team must do everything possible, from interagency task forces to interagency golf scrambles at the Army Navy Country Club, to build and inculcate universally this *essence*. The U.S. must have “structured processes and organizations that are culturally prepared for interagency coordination.”^{CXXIX}

Army Adjustments

The Army has many “comparative advantages” in complex reconstruction operations that should allow it to be the premier enabling partner for civilian lead agencies. The problem is determining how best to support. Eric T. Olson's solution is that the Army “must focus on reconstruction tasks that will set the conditions for success of these civilian agencies.”^{cxxx} This section gives concrete Army adjustment recommendations based on Olson's three areas in which the Army can improve its reconstruction capabilities.^{cxxxi} These recommendations focus on improving Army support to essential services reconstruction operations, but many are important elements of supporting overall stabilization and reconstruction.

Improve the Army's ability to set conditions for the success of interagency partners

Two critical capabilities will improve the Army's ability to set conditions for interagency partners. First, the Army needs to place greater emphasis on infrastructure reconnaissance in order to be the “eyes and ears” of reconstruction and give interagency planners and decision makers the “ground truth” — to provide the civilian lead agencies with baseline data for project and program development and to assist the interagency team with assessment mechanisms for the overall effort. To do this, the Army needs to have the requisite doctrine and technical expertise, such as more technical engineers. These Army technical experts can assist the civilian lead agencies throughout the reconstruction operations, not just in the reconstruction reconnaissance phase. When the security situation prohibits significant civilian expertise to manage program execution, military engineers can serve as proxies, doing important tasks like

interacting with host nation customers (e.g. Iraqi Security Forces) and conducting quality assurance of local and international contractors. They will also be essential in gathering data for assessments, because they are technically familiar with the baseline assessments, the programs developed from them, and the desired effects.

To date, the U.S. Army Engineer School has a campaign plan for “Building Great Engineers” with the requisite skills to support reconstruction, but it is not clear that the doctrine sufficiently emphasizes these reconstruction reconnaissance tasks. It is also unclear whether the numbers of “great engineers” will be adequately available and dispersed throughout the Army's formation, with technical command and control elements, to support post-conflict reconstruction operations. There is a danger that the Army's technical experts will be like those of USAID — too small to make an impact — and the Army should review the organization and manning of the force to ensure it can cover reconstruction reconnaissance and infrastructure assessment for the interagency effort.

The second critical capability that is a “comparative advantage” of the Army is its communications architecture connectivity. The Army can use its deployable communications systems and teams to form the “backbone” of reconstruction information, knowledge management, and interagency collaboration networks. Critical to these coordination and collaboration systems is that they must be online and unclassified for maximum access, distribution, and shared understanding.

Improve preparation for reconstruction in COIN

Three initiatives will improve the Army's preparation for reconstruction operations.

First, the Army needs to know better who in its ranks has reconstruction skills. This is not always obvious, especially in the Reserve Component, where a National Guard Infantry officer may be a professional engineer in his civilian job. To do this, the Army needs to “create an up-to-date database and enforce a system to track the [reconstruction]-relevant civilian-related skills acquired by all active and reserve personnel as well as its civilian employees.”^{cxxxii} Second, the Army needs to “create horizontal “grassroots” links that can build habitual links and foster relationships between civilian and Army [reconstruction]-related planners and organizations.”^{cxxxiii} This will help the Army understand now the requests for information and support that it will receive later, both during planning and execution of reconstruction operations. Building partnerships is key — it is all about relationships. The Army should direct its organizations to establish technical partnerships with interagency partners (e.g. U.S. Army Engineer School with the Department of State's Foreign Service Institute or the U.S. Army Corps of Engineers with FEMA and USAID infrastructure and engineering offices). Finally, the Army should seek to place more personnel in exchange positions with interagency partners. This is not borrowed military manpower to backfill the organizations in order to enable them to send folks to interagency training. These are exchanges designed to increase familiarity in both directions.

Build more capability in Army units to execute key reconstruction tasks

The Army needs to continue to try to build more “great engineers.” They will be deployed as both individuals and units to reconstruction operations. One initiative the Army should consider is development of a functional reconstruction command, control, and support element, capable of providing a Brigade Combat Team, Provincial

Reconstruction Team, or theater interagency reconstruction organization with a complete technical engineer package — technical reconnaissance; engagement with host nation essential services institutions and local leaders; project and program planning, design, and development; project management and quality assurance; and assessment support. This would be an organization that could “set the conditions” — “a command and control element responsive to the overall campaign plan and to the tactical commander, and that is supported with capabilities resident in a unit whose mission is reconstruction and is organized and equipped accordingly.”^{CXXXIV} This organization would have similar capabilities as a Forward Engineer Support Team – Main (FEST-M), but more capacity to conduct high-level engagements with host nation personnel and to command and control non-U.S. Army Corps of Engineers elements (e.g. regular Army construction companies and assets, as well as Civil Affairs personnel).

The Army can use more technological capabilities to execute key reconstruction tasks. As mentioned earlier, we can enable civilian lead agencies and partners by providing them with communications, information technology, and knowledge management support. To enable this, the Army should “design a portable communications system that can be provided to essential external actors who do not have resources.”^{CXXXV} This system would include a robust collaborative planning workspace to which all interagency partners would have access. Finally, the Army needs to use leading edge technology at the lowest levels for reconstruction reconnaissance. Knowing that there are not enough “great engineers” to go around, the next best options are engineers of the great, but not technical variety, such as combat

engineers. These non-technical engineers can conduct infrastructure and reconstruction reconnaissance with technology, such as an iPod Touch-like device that has an interactive app to not only walk a young combat engineer through a water treatment plant, but also prompt and enable him to take pictures of relevant equipment, complete a report, and transmit it back to the appropriate technical engineers for assessment and analysis. With today's connectivity and technology, this young combat engineer could even be guided by a live reconstruction reconnaissance "pilot" sitting back in a more secure area.

Conclusion

In the terms of Horst Rittel and Melvin Webber, wicked reconstruction problems are malignant, vicious, tricky, and aggressive. To resolve these problems requires a U.S. Government interagency approach that does not exist today. The current dynamic is one of conflict and competition, with no truly integrated doctrine, organizations, training, education, planning, or operations. Because of resource disparities, lack of interagency organizations, and competing organizational cultures, there is no shared understanding of the problems and possible approaches for their resolution. Each organization does what it thinks is best for the problem, often at cross-purposes with other organization.

Solving these wicked reconstruction problems and the interagency dilemma requires, before anything else, common vision and doctrine. The vision has to come from the top — statutory changes that mandate development of stabilization and reconstruction preparedness planning, common doctrine, and interagency cooperation and operations. Reconstruction operations are primarily civilian in nature and demand

civilian leadership. The legislation should reflect this. The Department of Defense should be in support. Because reconstruction operations should be civilian-led should not confuse anyone — these operations are matters of urgent national security, because the failing, failed, and post-conflict states in which they occur are vital to international stability and U.S. national interests.

In addition to development of a common vision and doctrine for reconstruction operations, the U.S. Government will benefit from commitment to a silver path of initiatives that lead to greater interagency cooperation and the development of an interagency essence that is similar to the Department of Defense's jointness. Overall, the U.S. Government broadly has to fix the areas of vision, doctrine, training, education, organization, resourcing, and culture, to get to integrated interagency reconstruction operations. Without these fixes, the U.S. Government approach will remain fragmented, inefficient, and far less than effective.

A part of the doctrine development has to include determination of what reconstruction is and how it is done. This research has argued for the primacy of essential services restoration within reconstruction operations. Essential services, defined as the institutions, human capacity, and physical infrastructure that make up the interconnected administrative, energy, water, sewage, telecommunications, and transportation frameworks of a country, are the glue that hold together a modern society. They are crucial to the development of all other political and socioeconomic frameworks.

For the Army's part, it is well placed to be the premier enabling supporter for the civilian-led reconstruction operations. Its organizations, equipment, processes, and

dispersion on the battlefield enable it to provide deep and wide support to reconstruction. However, it has a number of changes and adjustments to make in order to be the best supporting partner for the civilian-led interagency effort.

Finally, the solutions recommended are not uniquely American. All countries attempting to engage in reconstruction activities struggle with how to best implement a whole-of-government or comprehensive approach. Each could substitute their national entities for the American agencies, bureaus, and departments listed in this research (e.g. Canadian Department of Foreign Affairs and International Trade (DFAIT) for the Department of State, or the United Kingdom's Department of International Development (DFID) for USAID). None would be wrong to attempt to develop interagency doctrine, processes, and culture to improve their ability to support reconstruction operations in post-conflict areas that have local, regional, or global implications.

Endnotes

i Commonwealth of Australia, *Tackling Wicked Problems: A Public Policy Perspective* (Canberra: Australian Public Service Commission, 2007), 15.

ii Thomas Szayna et al., *Integrating Civilian Agencies in Stability Operations* (Santa Monica CA: RAND, 2009), xiii.

iii U.S. Department of the Army, *Stability Operations*, Field Manual 3-07 (Washington, DC: U.S. Department of the Army, 2008), 1-12.

iv U.S. Joint Chiefs of Staff. DOD Dictionary of Military and Associated Terms. Joint Publication 1-02. Washington, DC: U.S. Joint Chiefs of Staff, 15 April 2011.

v James Jay Carafano, "Interagency Operations: General Geoffrey Keyes in Austria 1947-1950.," *Military Review* 90, no. 1 (January 2010): 63.

vi *DOD Dictionary*, http://www.dtic.mil/doctrine/dod_dictionary/ (accessed on 15 May 2011), emphasis added.

vii Szayna et al., *Integrating Civilian Agencies in Stability Operations*, 65.

viii Horst Rittel and Melvin Webber coined the term "wicked problem" in research on planning and systems analysis. They use the term in a "meaning akin to that of "malignant" (in contrast to "benign") or "vicious" (like a circle) or "tricky" (like a leprechaun) or "aggressive" (like a lion, in contrast to the docility of a lamb)" (see p.

160). This is the spirit of the term's use in this paper. It is not used in the informal sense of something great (“wicked cool”) or in the sense of something evil or morally wrong (“wicked vices”). The planning/design and business communities use the term, and it deserves a place in the policy world. See Horst W. J. Rittel and Melvin M. Webber, “Dilemmas in a General Theory of Planning,” *Policy Sciences* 4, no. 2 (June 1, 1973): 155-169.

ix Ibid., 160.

x Commonwealth of Australia, *Tackling wicked problems*, 1.

xi Steven Holtzman, Ann Elwan, and Colin Scott, *Post-conflict Reconstruction: the Role of the World Bank*. (Washington, DC: World Bank, 1998), 4.

xii Rittel and Webber, “Dilemmas in a General Theory of Planning,” 160. It is important to note that the “elusive political judgment” applies both to U.S. Government agencies attempting reconstruction and to the Host Nation entities.

xiii Ibid., 161-166.

xiv Commonwealth of Australia, *Tackling wicked problems*, 4.

xv Ibid., 11.

xvi Ibid., 6.

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