

Valued Sustainable Services

By

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OVERVIEW

The Valued Sustainable Services (ValSServ or VSS) concept leverages three enabling capabilities to help people obtain services that they value and can sustain with resources they are likely to have available. The enablers are:

- **Telecommunications** (radio, TV, cell phone, Internet, etc.), built on commercial infrastructures whenever possible;
- **Reliable Power**, using distributed and renewable sources (solar, wind, microhydro, hybrid, etc.) where there is no power grid;
- **Knowledge-Sharing Support**, such as reachback technical assistance.

ValSServ focuses on bottom-up projects that can be executed quickly at local levels, while being consistent with top-down, national strategies. It takes a system-of-systems approach, recognizing that projects generate “ripple effects” in the environment and networks in which they occur.

In addition, ValSServ emphasizes “population-centric” activities (i.e., activities suited to local resources and culture) that can contribute to economic development, stability, security, and governance.¹ To encourage positive outcomes, ValSServ considers “pre-conditions” that could increase the likelihood of project success, and “post-conditions” that support long-term strategic objectives. ValSServ also operates on the premise that private sector engagement is essential for long-term sustainability.

The integrated approach toward development and reconstruction offered by ValSServ aligns well with U.S. Government (USG) policy and doctrine, which emphasize planning and operations in complex environments.² Such situations require sensitivity to local conditions, shortfalls, and decision making processes, as well as close civil-military planning and cooperation. It is suited for helping to move from the “hold” to the “build” phases of counterinsurgency operations, as well as for long-term development and post-disaster recovery.

¹ ValSServ does not try to solve all the problems of stabilization, reconstruction, or development. For example, in many cases, security will be an overriding concern for the population. Security can establish the conditions essential to ValSServ projects, but since it is largely the province of governments, police, and armed forces, it is not expressly considered as part of ValSServ.

² For the purposes of this paper, complex environments involve civil-military participants in pursuit of common objectives that include post-war stabilization and reconstruction, humanitarian assistance/disaster relief, building the capacity of partner nations, and defense support to civil authorities within the United States. See Hans Binnendijk and Patrick Cronin, *Civilian Surge: Key to Complex Operations*. (Washington DC: National Defense University, 2009).

INTRODUCTION

ValSServ builds on infrastructures that are often undervalued in the usual development, reconstruction and stabilization approaches: Telecommunications, Reliable Power and Knowledge-Sharing Support. The objective of all ValSServ projects is to provide services that local populations value and can sustain with resources they're likely to have available. A ValSServ approach is based on several planning and operating principles:

1. Be population-centric—respect and work through local conditions, relationships, and requirements to develop close and genuine partnerships.
2. Concentrate on building sustainable capacity—people should be able to choose the services that meet their needs and that they can afford
3. Synchronize development and governance efforts
4. Amplify “faint signals” of potential risks and threats to enhance situational awareness and help achieve strategic and operational objectives
5. Design approaches for re-use elsewhere—promptly implementable and scaleable—being respectful of local conditions

These requirements are hard to meet in any environment. They become even harder in complex operations. They require engagement, agility, commitment, and coordination among potentially dozens of different parties—each with their own perspectives, policies, and agendas. Unity (or at least alignment) of effort is needed to pull components together where there is no unity of command.

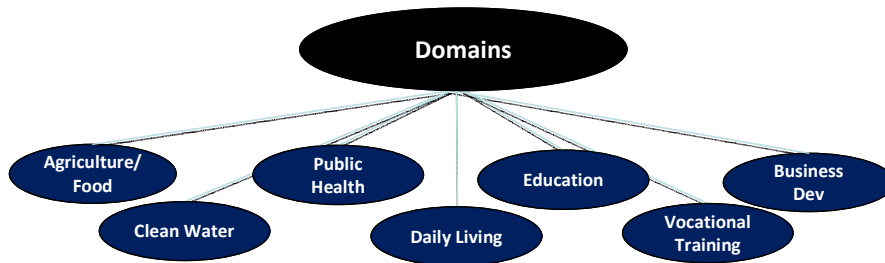
COMPONENTS OF ValSServ

ValSServ consists of *domains*, supported by *enabling* foundations (telecommunications, reliable power, and knowledge sharing support) and connected by *services*. By leveraging enablers, people obtain valued services, applicable in multiple domains that they can sustain with locally available resources. This process can improve the population's welfare and living standards and also can contribute to security.

Domains

Domains are groups of related functions that directly impact the welfare, living standards and security of populations in conflict/disaster zones or impoverished areas. For example, one possible set of domains could include Agriculture/Food, Clean Water, Public Health, Daily Living, Education, Vocational Training and Business Development.

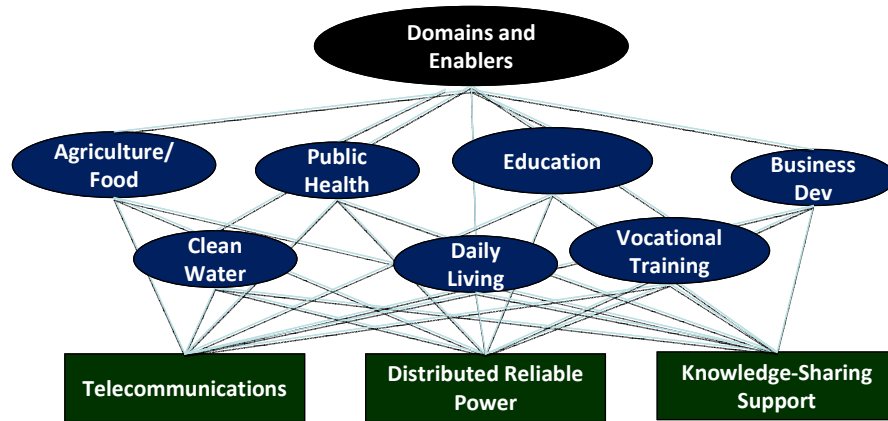
Figure 1a: ValSServ Domains



Enablers

Enablers consist of core underlying utilities that enhance the development of a wide range of services and domains. Telecommunications, Reliable Power, and Knowledge-Sharing Support form ValSServ’s critical enabling foundations.

Figure 1b: ValSServ Domains and Enablers



Telecommunications

The focus of this enabler is on *information transport mechanisms* such as radios, cell phones, satellite and microwave links, area networks, and equipment to tie deployable gear into local communication systems, as well as robust, low-power computers.³ Of particular importance is radio, which serves as a principal means of communication in many places but is typically overlooked by those coming from developed countries.

Telecommunications are transformational forces.⁴ They change societies, reframe international interactions, help determine economic winners and losers, and affect young people’s thoughts, values, and opportunities. Yet, in much of development planning, telecommunications are treated as neither essential services nor critical infrastructures.

Considerations for ValSServ Telecommunication planning include:

- Private sector initiatives are critical, but telecommunication build-outs need to be rationalized with government plans and overall strategies.⁵

³ Larry Wentz, *An ICT Primer: Information and Communications Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction*, Defense & Technology Paper 31, (Washington, DC: Center for Technology and National Security Policy, July 2006), available at http://www.ndu.edu/CTNSP/Def_Tech/DTP31%20ICT%20Primer.pdf.

⁴ The international term for information technology (IT) is ICT—information and communications technology. Radio is very important in much of the developing world, hence the emphasis on communications. This paper focuses on *information* and *telecommunications* because (a) more is involved than just technology, and also (b) non-technical communications (speaking, writings, etc.) are not the emphasis here.

⁵ Franklin D. Kramer, Larry Wentz, and Stuart Starr, *I-Power: The Information Revolution and Stability Operations*, Defense Horizon 55, (Washington, DC: Center for Technology and National Security Policy, February 2007, available at http://www.ndu.edu/CTNSP/defense_horizons/DH%2055.pdf. This paper argues that “Information and information technology (I/IT) can significantly increase the likelihood of success in stability operations—if they are engaged as part of an overall strategy that coordinates the actions of outside interveners and focuses on generating effective results for the host nation. Properly utilized, I/IT can help create a knowledgeable intervention, organize complex activities, and integrate stability operations with the host nation, making stability operations more effective.”

- What can be deployed, and where, will vary greatly by locale. In some cases, ValSServ will draw on existing local infrastructures and services. In other situations, infrastructures and services may need to be developed or imported. All equipment, however, should meet four criteria (abbreviated as R2S2): **R**apidly configurable; **R**apidly deployable; **S**calable, in diverse conditions; and **S**imple to set up, operate, and maintain.
- Bandwidth also may vary widely. The telecommunications availability framework (TAF) helps link service provider planning (and operator training) to specific challenges under different conditions of telecommunications availability. As one moves to the right within the TAF space, and more bandwidth becomes available, different types of communication setups and coordination become appropriate.

Table 1: Telecommunications Availability Framework (TAF)

| Domains / Services | Range of Communications Austerity | | | | |
|--------------------|-----------------------------------|------------------------------|----------------------|--------------------------------------------------------|-----------------------------------|
| | SMS-Only | Limited Bandwidth Capability | Voice Communications | Full Internet Bandwidth, but intermittent connectivity | Fully Sustainable Internet Access |
| Health Care | Process A | Process B | Process C | ... | ... |
| Education | Process N | ... | ... | ... | ... |
| Missing People | | | | | |
| ... | | | | | |

Reliable Power

While power is a recognized prerequisite for development and reconstruction, development projects often focus on large energy ventures such as dams and regional power grids. These projects can be susceptible to disruption and are expensive to build and maintain (though economies of scale do apply). The ValSServ approach focuses on distributed power unless stable, centralized power is clearly available. ValSServ seeks to leverage available resources, and provide relatively low cost, off-grid options to remote areas expeditiously. An off-grid initiative will provide a service that can be secured locally (by a valley, village, clan, etc.), as opposed to projects that focus on larger regions. In addition, with a smaller operating area, projects can be completed and made operational quickly.

This method can contribute to development, stabilization, reconstruction and disaster recovery. For example, it can allow for irrigation pumping, water purification, cool storage for agricultural produce, and chargers for cell phones, etc. Even simple projects, such as installing street lights or putting a light bulb in every kitchen, can lead to profound changes in terms of lives saved through better security, sanitation, skills gained by having evening hours available for study and the social impacts of freeing people from sunset-to-sunrise cycles.⁶

Considerations for ValSServ energy planning include:

⁶ Manuel Castells, *The Information Age: Economy, Society and Culture, Volumes I, II and III* (London: Blackwell, 1998). Jeffrey Sachs, *Common Wealth: Economics for a Crowded Planet* (New York: Penguin, 2008). Felipe Fernandez-Armesto, *Civilizations: Culture, Ambition and the Transformation of Nature*. (New York: The Free Press, 2001). Bruce Mau, *Massive Change*. (New York: Phaidon, 2004).

- Costs, evaluate based on the fully burdened cost (on-site price plus logistics tail and related factors) of energy installation and maintenance, e.g., can economic externalities and infrastructures support the operation? Can a sustainable economic model be developed?
- Capabilities, e.g., what resources, in terms of numbers of people, skill-sets and commitment, are available to support the operation?
- Physical environmental conditions, e.g., is there enough continuous wind for wind-turbines? Will water flows support micro-hydro power (MHP) year-round, etc.?

Knowledge sharing support

ValSServ power enables communications, which, in turn, enables knowledge sharing. However, the mere existence of communication channels is not sufficient to ensure effective knowledge sharing.

Developing good knowledge sharing procedures and requirements is hard. Some knowledge sharing master plans involve hundreds of actions. However, a relatively small number of policy refinements can improve knowledge sharing and provide needed services to the field faster. They include:

- Implementing the “share to win” concept where information is distributed widely, as opposed to the “need to know” concept that permits information sharing only with authorized individuals. Leaders have articulated the need for this change for years. However, behavioral changes at all organizational levels must be achieved to ensure proper implementation.⁷
- Allowing civil-military mission participants⁸ to share DOD’s radio frequency bandwidth under appropriate circumstances,⁹ as operational and other considerations allow.
- Promoting the sharing of UNCLASSIFIED imagery with as many participants as possible¹⁰ in formats that can be tailored in the field to user needs.
- Using metadata tagging to make information about SSTR/HADR/BPC contingencies more readily discoverable, accessible, and understandable across participating networks.¹¹

Each of these could be the subject of a paper in its own right. Collectively, knowledge sharing support needs to be a core part of ValSServ planning. If U.S. or coalition forces do not communicate, collaborate, translate, and engage effectively with local populations, they *cannot* achieve the social, political, and economic goals for which military forces have been committed. Similarly, for ValSServ to achieve its goals, information must be available for local sharing, and subject matter experts (SMEs) “offsite” must be willing to share their knowledge with local populations, whether by phone, radio, Internet, or in person.

⁷ Concerns over “wikileaks”-type pressures doubtless will lead to pressures to roll back “share-to-win” like concepts, but the lack of sharing also poses mission risks that should not be ignored.

⁸ Civil-military mission participants include other U.S. government agencies, international organizations, non-governmental organizations, private volunteer organizations, state, local, territorial, and tribal governments, indigenous security services, and others (including commercial firms and individuals as appropriate) directly contributing to the ongoing mission. The importance of cooperating with civil-military mission participants is described at length in *STAR-TIDES and Starfish Networks: Supporting Stressed Populations with Distributed Talent*, Defense Horizons 70, December 2009, published by the Center for Technology and National Security Policy (National Defense University Press), and chapter 20 of Binnendijk and Cronin, op. cit.

⁹ DoDI 8220.02 of April 30, 2009, *Information and Communications Technology (ICT) Capabilities for Support of Stabilization and Reconstruction, Disaster Relief, and Humanitarian and Civic Assistance Operations*. It is available at <http://www.dtic.mil/whs/directives/corres/pdf/822002p.pdf>.

¹⁰ The National Geospatial-Intelligence Agency (NGA) has been very forward leaning in this regard. Imagery sharing was an extremely effective enabler of relief efforts in Haiti.

¹¹ David Weinberger, *Everything is Miscellaneous: The Power of the new Digital Disorder*. (New York: Henry Holt, 2007).

Data Sharing

Sharing underlying data is an important component of knowledge sharing in digital environments. Data recipients may have different insights than the original data owners concerning the use of underlying data.¹² For example, metadata (data about data) tagging can assist in the rapid recovery of data and allow for the enhancement of images with innovative applications. The benefits offered by metadata tagging are of greater importance in Internet environments than in cases where voice serves as the primary means of communication. But, in all cases, important social components affect data sharing. Todd Huffman has proposed three principles for data sharing, based on extensive collaborative experience in many environments:¹³

1. Create immediate value for anyone contributing data: contributors of information should get an immediate return for their efforts.
2. Return contributors' data to them with improvements: any data that goes in should be available to download back out again. Further, any data should come back better than when it went in.
3. Share derivative works¹⁴ back with the data sharing community: urge users who create derivative works from shared data to contribute their products back to the group.

Over time, failure to follow these principles will blunt effective data sharing. Too often, data contributions, particularly to governments and corporations, are neither returned nor reciprocated. The result is a pervasive wariness in the private sector and the NGO/IO community concerning the release of their information. Conversely, the sharing of data can create positive feedback loops within a community. Such iterations can offer enormous benefits in improved accuracy and credibility. Examples of this “virtuous loop” of citizens creating significant value with government data when it is made available have been identified often —ranging from repairing potholes to health outbreak incident reporting.

Legitimate security concerns surrounding the sharing of data will always persist. However, the benefits of a responsible sharing environment should be weighted heavily in contrast to deeply ingrained inclinations to protect products as proprietary or sensitive.¹⁵

Key Enabler Requirements and Considerations

Of paramount importance in all ValSServ planning is local buy-in to address indigenous needs as local decision makers perceive them (rather than what outsiders think they should have)¹⁶ and designing infrastructure more resilient to disruption (intentional or accidental). Thus, the focus is bottom-up, beginning with local governance structures supported by technically qualified staff. The resilience of infrastructures depends on full engagement of owners, protectors and users in both the decisions employed during planning stages and the construction of infrastructure projects. The

¹² These themes ran throughout the Gov2.0 Summit, held in Washington, DC, Sept 9–10, 2009, available www.gov2.0summit.com. The www.data.gov website is intended to increase public access to high-value, machine-readable datasets from Federal sources.

¹³ These principles are from Todd Huffman of the Synergy Strike Force.

¹⁴ These include analyses, spreadsheets, charts, reports, etc.

¹⁵ See also Carole Dumaine, U.S. Department of Energy, “Common Security, Uncommon Challenges: Managing Risks in an Age of the Unthinkable,” keynote address to the 8th International Security Forum, Geneva, May, 2009.

http://www.oss.net/dynamaster/file_archive/090808/eeb6300b90fe044331e6a4c8c10006cc/GenevaSpeech1.1.pdf

¹⁶ In Afghanistan, for example, The *District Stability Framework*, developed by the COIN Training Centre—Afghanistan, notes that there has been a progression in how stability projects are supported: Initially “We did what we *thought* were good projects;” Then “We did what they *said they wanted* (wish list);” Then “We did what they *said they needed* (needs analysis);” Now “Based on what they say they need, analyze *why they need it* (root causes).” The goal is to change the environment and achieve stability.

protectors of an infrastructure should be as close as possible to being its owners and operators. Village-focused, distributed infrastructure projects satisfy those criteria.

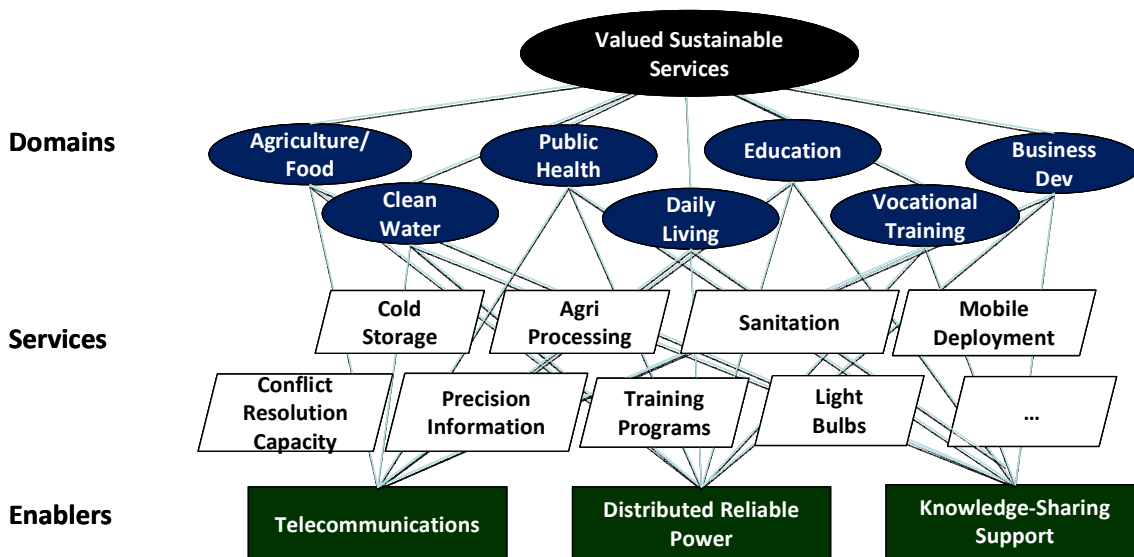
The impact of ValSServ enablers on existing social, political and cultural relationships must be analyzed thoroughly. Entire disciplines have been designed with the consideration of such relationships in mind.¹⁷ Socio-political and cultural sensitivities alone should not dictate when, where and what services are deployed, but a lack of sensitivity to these issues will certainly weaken the likelihood that the project will be effective and sustainable.¹⁸

In this vein, the *process* of building and deploying infrastructures can be as important as the services they enable. In addition to demonstrating commitment toward the local population the services can also strengthen social trust, enhance relationships, and deepen local commitment to protect and use the infrastructure (alternatively, if poorly implemented, such projects may exacerbate local frictions and power imbalances). A key objective in counterinsurgency (COIN) operations is removing the insurgency’s base of support amongst the local populace. The very process of ValSServ infrastructure-building can contribute to this counterinsurgency objective by providing jobs, building capabilities, and demonstrating commitment.¹⁹

Services

Services are sets of specific activities, practices or projects with clearly defined objectives, metrics and impacts. They link ValSServ domains to the key enablers. Figure 1c adds services to domains and enablers.

Figure 1c: ValSServ Domains, Services, and Enablers



¹⁷ <http://www.gnesd.org/centres.htm>

¹⁸ Mark Gerencser, Reginald Van Lee, Fernando Napolitano, and Christopher Kelly, *Megacommunities: How Leaders of Government, Business and Non-Profits can Tackle Today’s Global Problems Together*, [need rest of reference]

¹⁹ Kilcullen, *op. cit.* Conversations with Dave Warner and Don Smith, August 30, 2009.

ValSServ domains and their underlying services could include:

- **Agriculture/Food:** power for cool storage and on-site processing of agricultural products to reduce crop spoilage; information about market conditions, transportation routes, and weather forecasts via cell phone (or Internet, if available); information on irrigation design and power or its operation; fuel savings via integrated (solar/combustion/retained heat) cooking; reachback knowledge support to help fix farm equipment.
- **Public Health:** clean water (purification systems tailored to local conditions); extension of wideband Internet access to hospitals and teaching hospitals, including telemedicine; provision of satellite or other network services to remote clinics; cell phone-based services (extended to remote areas when possible) for prenatal and maternal care, using both interactive voice and text messaging in local languages.
- **Daily Living:** basic lighting for streets, stores and households (e.g., a light in every kitchen); low power heating and cooling.
- **Education:** extension of Internet services to universities and teaching hospitals; expansion of low-cost computer systems (e.g., One Laptop Per Child) based on lessons learned from existing projects; experimentation with “serious games” (a mobile version of “SIMVILLAGE,” perhaps, and cell phone-based learning) with provisions to provide more capability as more bandwidth and smaller phones become available.
- **Business Development:** encouragement of entrepreneurs; sharing of information on market opportunities; establishment of virtual marketplaces; coordination of buyer/seller relationships.
- **Training to Support Sustainable Economic Growth:** building local business capacity through focused and intensive entrepreneurship fellowship programs with hands-on instruction, training, and support around 1) basic business skills, 2) identification of specific business opportunities and business plan development and 3) “launch” support. The goal is to train local trainers to grow capacity on their own, while being aware of the ability of the market to absorb new job skills is critically important to sustainability. It does little good to raise expectations through training a student only to discover that there are not ways (jobs) to put the skills learned to productive use.

Implementing the services outlined in the ValSServ model could increase citizen satisfaction, as well as increase transparency of decision making and financial transactions, recognizing that approaches will need to be adapted to the ability of societies to absorb them. Done well, this could enhance governance and contribute to more effective rule of law through innovative justice and dispute resolution methods, sometimes involving cell phones and Internet access.²⁰

In any case, people are likely to find unanticipated uses for these enablers and services. It is neither possible nor desirable to dictate what will happen on top of these foundations. Ultimately, the choices belong to the local population, and they are likely to make more sustainable choices supported by the knowledge of options available to them.

²⁰ There is a rich community of research on “online dispute resolution” (ODR) and “alternative dispute resolution” (ADR) that may apply to many VSS environments. Work is being done through the Berkman Center at Harvard and the World Justice Forum.

ValSServ Planning and Coordination

Overarching ValSServ Skill Sets

Implementing a ValSServ project requires careful planning coordination. Emphasizing four skill sets (building a common vocabulary, understanding interdependencies, enhancing transparency and accountability, and closing execution gaps) can significantly improve the chance of success:

1. **Build a common vocabulary**

Many organizations participating in complex operations have different perspectives, agendas, and methods of articulating similar topics. The way in which issues are framed often dictates the options considered and the actions undertaken. Consequently, building “shared semantics” to create “shared mental models” for where, why, and how differences and disagreements exist is important to bridging the disconnects that often exist across organizations that share a mission objective.²¹ Building a common vocabulary, or at least common linguistic tools to communicate differences, can help shape alignments and frame discussions. Furthermore the rationalization and standardization of terminology is essential to building metadata dictionaries, which will heighten the “discoverability” of information on applicable networks.

2. **Understand interdependencies**

ValSServ activities are inherently interconnected. Sustainable impacts can be realized in diverse environments if the core enablers are made available. However, the services that “sit on top of these enablers” will differ depending on local conditions and requirements. For example, several villages can deploy information about agricultural pricing through cell phones but the impact of that information is likely to vary from village to village. Consequently, sensitivity to interdependencies and the socio-cultural practices that affect them becomes vital for ValSServ planning and operations.

3. **Enhance transparency and accountability**

The actual decision makers or thought leaders often differ from those identified by official titles or declarations of intent.²² For example, within a village the appointed mayor may have less authority than the local elders. Identifying who is really doing what, with whom, when, how, and with what results is important in planning ValSServ implementation as projects will be subject to local conditions. Consequently steps should be taken to understand relevant information that is not readily visible.

4. **Close the execution gap between strategic intent and operational reality²³**

²¹ Ralph Welborn and Vince Kasten, *The Jericho Principle: Collaborative Models of Innovation* (New York: John Wiley & Sons, 2003).

²² This is a particular problem for military personnel, who may only visit villages infrequently and are unlikely to have detailed local knowledge of whom to trust.

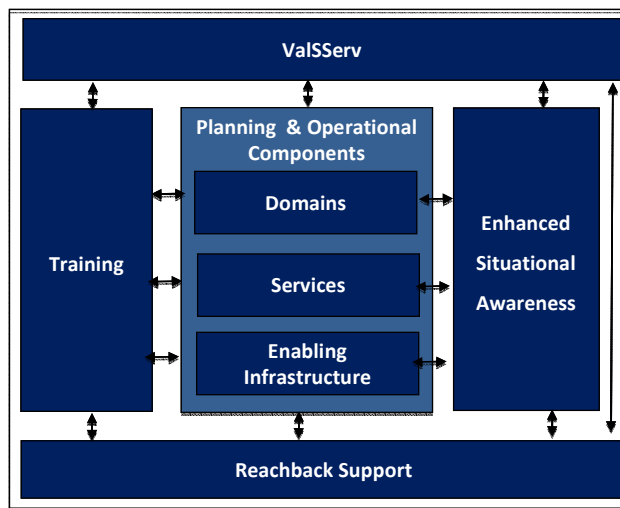
²³ Welborn and Kasten, *Get It Done: A Blueprint for Business Execution*, Op. cit.

ValSServ’s complex coordination requirements mean that particular attention be given to the gaps and potential gaps between concepts, planning, and execution. The best of intentions can fall victim to poor implementation if the realities on the ground are not understood. Recognize that disconnects in execution often result from disconnects in planning. Measures of Effectiveness (MoE) and Measures of Performance (MoP) should be considered from the beginning of a project.

ValSServ Planning and Coordination Framework

ValSServ planning and coordination take place within a framework that ties together three core elements (planning and operational components, enhanced situational awareness and training), all backed by reachback support (see figure 2).

Figure 2: ValSServ Planning and Coordination Framework



Core Framework Elements

1. **Planning and Operational Components.** Domains, services and the three enabling infrastructures.
2. **Enhanced Situational Awareness.** The ability to recognize and monitor subtle changes within local populations that signal possible events. For example, within Afghanistan, behavior changes within a local market could signal the presence of insurgents.
3. **Training.** Sets of discrete, short-term (usually 1-day) training modules covering each aspect of ValSServ from which customized courses can be created and delivered to various audiences to enhance civilian and government capability.
4. **Reachback Support**—information and assessment services are available from remote SMEs to enhance those available on the ground.

Enhanced Situational Awareness

As previously mentioned, ValSServ approaches support complex operations that include *long-term* development. Some environments, e.g., Afghanistan, may involve significant security challenges, with attendant risks and potentially serious economic challenges. In these types of situations,

enhanced situational awareness is crucial and can be gained through a variety of processes, technological platforms and analytical methods. The goal of enhanced situational awareness is to detect subtle changes, or faint signals, within a population that could signal emerging threats (or potential successes) or help evaluate the project's effectiveness.

Monitoring and feedback to enhance situational awareness are critical for the successful implementation of ValSServ projects. Often, the ripple effects of ValSServ -related initiatives may give rise to emergent patterns and sudden shifts in priorities, as projects generate tensions within populations. For example, a power project where all individuals within a village pay the same for service, could unwittingly benefit those who use more than their share of power. Another example might be instituting an irrigation project without first defining usage regulations; tensions within a village could rise quickly if an individual, or group, dominate the new technology.

One way to gain situational awareness is to use integrated open-source, unclassified information. For example, “instrumenting the edge”—obtaining feedback from those who are as close to the relevant population as possible—on issues related to the physical, information, and social networks. Developing trust within these networks is crucial in order to gain timely, adequate and truthful information. Opinions differ widely over how trust is earned in social networks. The 2007 Maritime Strategy asserts that “trust can’t be surged,” while others maintain that trust can be quickly built.²⁴ In many cases, trust can only be sustained over time through the building of enduring capacity.²⁵

While capacity building and social trust are crucial, so too are mechanisms to provide information and insight into potential risks and threats. Effective ValSServ projects can shift the risk profile. In Afghanistan for example, a key objective for ValSServ includes helping to separate the population from Taliban influence and control. Enhanced situational awareness through “instrumenting the edge” can contribute to this objective.

Answers to the following types of questions can help inform program planning and execution considerations:

1. What early warning indicators can help anticipate surprise and potentially emerging risks to ValSServ efforts?
2. Who actually exercises social control on the ground? How is this measured and analyzed? How and why do allegiances (groups) shift across time? Do any patterns, or correlations, exist between those shifts and different types of events, whether economic, social, political, military, or foreign policy? Based on the answers, can information be injected into the network to trigger responses that can be monitored or help strengthen or weaken allegiances?
3. How might real as opposed to stated decision makers and influencers be identified, particularly through the analysis of open-source, unclassified information? How might

²⁴ See, for example, Debra Meyerson, Karl E. Weick, and Roderick M. Kramer, “Swift Trust and Temporal Groups,” chapter 9 in R.M. Kramer and T.R. Tyler (eds) *Trust in Organizations: Frontiers of Theory and Research*, (Thousand Oaks, CA: Sage), 166-195

²⁵ The authors thank Dr. Paul Bartone, Senior Research Fellow, National Defense University for this insight. Dr. Dave Warner of the Synergy Strike Force emphasizes the critical need for sustained engagement with demonstrable results, based on his long experience in Eastern Afghanistan. Personnel rotation cycles that keep coalition officers and civilian officials from being present for the fulfillment of the promises they’ve made to local leaders undercut the credibility of all other coalition commitments in the eyes of the Afghans.

- such insights be used to tease apart the local population from armed groups, insurgents, or other “bad actors?”
4. Can a “faction signature” of communications be identified by understanding what types of media channels are used by different factions for different types of communications?
 5. How are “narrative structures” used to influence different populations or geographical areas? How can understanding of those structures be used as an early warning indicator of ideological, political, or military spread, or to identify “injection options” to influence messages and/or behaviors?
 6. Which media channels are used for which purposes? How do stories evolve across channels? How might such insights be used to enhance messaging responsiveness to accelerate positive messages, mitigate negative messages and influence behaviors of influence makers?

Training

Building local capacity is a key ValSServ objective. Training for local populations and government officials may be critical both to jump-start ValSServ activities and to sustain their impacts. One approach to training is called IMPACT (infrastructure, messaging, partnerships, awareness, core domains, transition). IMPACT training has a crisp objective: accelerate training for both local populations and government representatives around specific ValSServ topics and activities. Each topic consists of a set of short-term (typically 1-day) training modules (or classes) developed around specific topics.

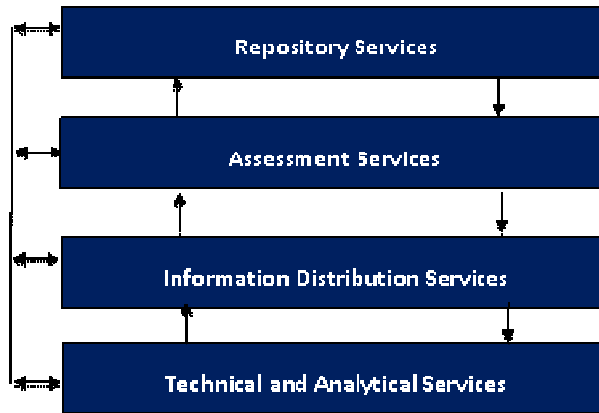
A training program or course is customized around the modules selected by the local population and/or government representatives based upon interest, relevance, and need. For example, under knowledge-sharing support, modules might cover emerging information management issues. These range from basic approaches, such as how to use the capabilities of cell phones effectively in remote environments, to sophisticated concepts such as chief information officer (CIO) training (where applicable). Under telecommunications, 5–10 modules could address different aspects of deploying communications infrastructures under different conditions.

Reachback Support

ValSServ is based on a “pull from the front” strategy (vice “pull from the rear”), since it focuses on needs of local populations and implementation in the field. Reachback support can complement this “front-focus” by providing services to support forward planning and deployment. At one level, reachback support can be as direct as having a person speaking the local language who can answer a farmer’s questions about how to fix his farm equipment. In other cases, reachback can be used to reduce planning time and deployment risks by providing information, assessment and implementation support to improve delivery of locally relevant solutions.

In order to collect information relevant to ValSServ projects (solutions, services, infrastructures) and provide informational retrieval mechanisms and assessment services, reachback support includes four categories, shown in Figure 3:

Figure 3: Reachback Support



Repository services include storage and retrieval of lessons learned, planning materials, and relevant researchable materials. The objective is to provide an available means, with both in-country and online components, to access potentially relevant material quickly for forward planning and operations.

Assessment services provide a suite of materials about previously implemented and current programs that may help accelerate planning and operations. These could range from in-country expertise to online diagnostic tools and searchable, typically wiki-based, taxonomies of essential services by vendor, type of operation, and use.

Information distribution services can range from telephones to an expanding set of online distribution platforms and tools, including analytical views, planning frameworks, and tools to support planning and operations.

Technical and analytical services can answer engineering design, operational support, and similar questions for people forward, if such capabilities are not available locally. In its simplest form it could be an experienced mechanic at the end of a phone line, but it also could include distributed teams of experts around the world.

ValSServ Planning and Execution Steps

The ValSServ project planning and execution steps listed below integrate concepts from the previous sections. These steps present a general sequence of activities to develop an informed understanding of the culture and needs of those requiring assistance, and ways to execute a ValSServ project. The steps can be iterated as new information is gathered and assessments are made.

| Step | Description |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Postulate Pre- and Post-Conditions | Postulate pre- and post-conditions (e.g., what needs to be in place <i>before</i> and <i>after</i> execution to increase the likelihood of sustainable impact and minimize the risks). Ask about desired objectives. Help to shape the ripple-effects of the project and its context. Assess and refine based on fieldwork. |
| 2. Propose Location | Propose potential villages, cities, and other areas for DES implementation to support local goals and development objectives. Tie to data on pre-conditions and the likelihood of reaching desired post-conditions. Adjust as needed. |
| 3. Design Project Objectives against MoE/MoP | Postulate project objectives for each location. Use local goals and applicable MoE/MoP to tie projects to objectives and increase utility elsewhere. Refine objectives based on fieldwork. Identify potential funding sources. |
| 4. Prepare for Fieldwork | Establish the fieldwork agenda: objectives, timing, interview structures and questions, data-sheets, and recording formats. Validate locally. |
| 5. Initiate Engagement—“Building the Social Relationships” | Engage in areas selected for implementation. Build/strengthen relationships, collect data to assess potential for high impact. Validate locally, adjust as needed, use local populations as interlocutors whenever possible. |
| 6. Assess Impact on Market System | Assess which sets of essential services to support. Consider their ripple effects across other essential services and local capacity development. Validate plans with local population. |
| 7. Assess Impacts on Social/Power Behavior | Assess how these initiatives can encourage, or mitigate, changes in behaviors. Understand how norms of behavior can be strengthened/modified to support desired post-conditions. Validate plans locally. |
| 8. Plan to Build Capacity | Develop business models, partnership plans, training programs, and related activities to build capacity so that the local population can sustain essential services with the resources they are likely to have available. Validate locally. |
| 9. Assess Delivery & Service “Kits” | Identify enabling capabilities (communications, power, information sharing), domains (agriculture, public health, etc.) and service “kits” (micro-credit over cell phone, irrigation pumping, ICT “service packs,” etc.) that would be useful, suitable for rapid deployment, and locally sustainable. Validate locally. |
| 10. Assess Risks, Develop Mitigation Strategies | Model potential risks and areas of breakdown and identify mitigation steps. Understand legal and regulatory constraints. Validate locally. |
| 11. Enhance Situational Awareness and Influence Messaging | Design mechanisms to enhance situational awareness about the progress of implementation and influence messaging throughout project implementation and beyond to ensure sustainability and desired results. Validate locally. |
| 12. Link Policies and Field Operating Procedures | Ensure that field personnel understand applicable policies and are given clear operational procedures. Validate with local population. |
| 13. Execute and Assess | Obtain resources, install enablers, and deploy services, through local channels wherever possible. Monitor, measure, assess, and adjust as necessary. |
| 14. Communicate Results & Shape Narrative | Communicate results, shape the narrative, and change behaviors (on many levels) based on lessons learned (good and bad). |

Benefits and Support to US Government Policy and Doctrine

Since 2004, U.S. policy and national security organizations have become more willing to engage with civil-military participants in complex operations. This change reflects major policy and doctrine changes for the U.S. military—increasing emphasis on conflict avoidance, pre-conflict peacekeeping, building capacity in partner nations (BPC), post-war stabilization and reconstruction (S&R), humanitarian assistance/disaster relief (HADR).

At their core, such approaches reflect recognition that the sorts of problems that generate complex operations cannot be solved by military means alone.²⁶ This has led to new models of public-private, “whole-of-government” and/or transnational efforts to meet the challenges of complex operations. The emergence of these new governance models has led to a more informed understanding of the requirements needed to achieve the political, social, and economic goals for which military forces are committed to in complex operations, for example:

- Two-way communication and close collaboration and engagement with both local populations and civil-military mission participants,
- A population-centric focus and an acknowledgement that local decision makers have “decision rights” to choose which types of projects and services are to be developed where, when, how, and by whom, and
- Private sector engagement and a commitment to building sustainable local capacity.

ValSServ directly supports this policy shift in a number of ways. It encourages building partner capacity through an emphasis on training and providing services that can be supported through local resources. ValSServ projects also provide a basis for post-war stabilization and reconstruction. In addition, the current policy shift towards increased civil-military engagement, particularly public-private, whole-of-government initiatives directly coincides with underlying ValSServ principles. A ValSServ approach can provide a strong foundation upon which to build future projects. The emphasis on locally-controlled, available, sustainable resources allows for the core enablers and services to be quickly distributed within the area of operation.

Next Steps

There has been significant high level support for ValSServ, but implementation will require people in the field to spend time on individual projects. Opportunities abound. A number of locations in Afghanistan have telecommunications (roughly 85% of the population is within cell phone coverage), reliable power (micro-hydro in Nangarhar Province, for example) and access to people willing to provide reachback support. Similar conditions exist in other countries.

Additional research is needed in areas such as:

²⁶ Binnendijk and Cronin, *Op. cit.* Defense Secretary Robert Gates stated this requirement bluntly: “We cannot kill or capture our way to victory... [we] need to work with and through local governments to avoid the next insurgency, to rescue the next failing state, or to head off the next humanitarian disaster.” Gates’ remarks before the U.S. Global Leadership Campaign, July 15, 2008, available at www.defenselink.mil/speeches/speech.aspx?speechid=1262. Additional influential guidance includes DoD 3000.05, NSPD-44, and the 2007 Maritime Strategy. Within Binnendijk and Cronin, see chapter 20 by Linton Wells II, Larry Wentz, and Walker Hardy, “Linking U.S. Capacity to Local Actors.”

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- Relationships between the provision of services and population satisfaction
- How to build trust rapidly in different cultures
- How to gather, validate, and instantiate lessons learned in complex environments
- How best to translate high level policies and doctrine into effective field operating procedures
- What legal and regulatory constraints apply in different circumstances
- The effectiveness of alternative dispute resolution mechanisms in diverse environments
- Which MoE/MoP to use

This could be an area of great opportunity.