

Mission Readiness

Creating Decision-Support Solutions to Address Complex
Operational Requirements and Fiscal Realities



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The high level of mission readiness that has long distinguished US military forces is under siege on many fronts. A decade of war has eaten into readiness resources, pushing warfighters to extraordinary operational tempos, condensing training, and stressing equipment to the breaking point. Increasing costs and decreasing budgets are forcing reductions in existing force structure, manpower, training, and maintenance, and constraining investments in future capabilities. According to the US Congressional Budget Office, the cost of the Department of Defense's (DoD) base-budget plans for 2013 through 2021 is \$508 billion higher in nominal terms than the funding that would be available to DoD under the Budget Control Act's limits on discretionary appropriations for national defense—and that is before sequestration's automatic cuts take effect.¹ The constantly changing threat landscape further complicates the readiness challenge because warfighters must be trained and equipped to confront a variety of potential adversaries on battlefields that are evolving irregularly, asymmetrically, and rapidly. Consequently, the DoD must find innovative ways to make readiness resource allocation and investment/acquisition trade-off decisions that more effectively produce prioritized capability and capacity, and minimize operational risk in meeting national military requirements.

Booz Allen Hamilton is helping military organizations develop and implement readiness decision-support solutions that provide a clear understanding of the relationships and trade-offs among requirements, resources, capabilities, capacities, costs, and risks. Our approach integrates the operational, analytical, and technical dimensions of the readiness production processes to arm organizations with the ability to measure, visualize, analyze, and understand how their decisions impact mission readiness in the context of cost, capabilities, capacities, and risk. This enables a data-driven

decision-support solution that goes beyond measuring and reporting current readiness to provide decision makers with the necessary information to more effectively allocate resources, justify and defend budget requirements, enhance mission effectiveness, and minimize risk in an increasingly fiscally constrained environment.

Our experience shows that an effective readiness decision-support solution is composed of four major building blocks:

- *Focus on the Specific Readiness Challenges or Goals to Be Addressed*
- *Create an Analytical Framework to Form the Right Relationships Among Requirements, Resources, and Costs*
- *Analyze, Integrate, and Aggregate the Necessary Data*
- *Apply the Right Tools and Technologies*

When developed and implemented using this approach, readiness decision-support solutions model the right readiness business processes; capture, validate, and apply the right data; and incorporate the right methodologies and metrics to produce actionable results to strengthen current and future readiness to meet mission goals.

Why Current Readiness Reporting Systems Are No Longer Enough

Readiness measures the ability of forces to carry out their assigned missions. Readiness can be assessed at the strategic, operational, and tactical levels. It can be measured by qualitative assessments, such as a commander's report that reflects judgment, experience, and observed performance; and by quantitative assessments of personnel, training, equipment status, maintenance cycles, supply chains, and other readiness factors. The Defense Readiness Reporting

¹ Congressional Budget Office, Long-Term Implications of the 2013 Future Years Defense Program, July 2012, p. v.

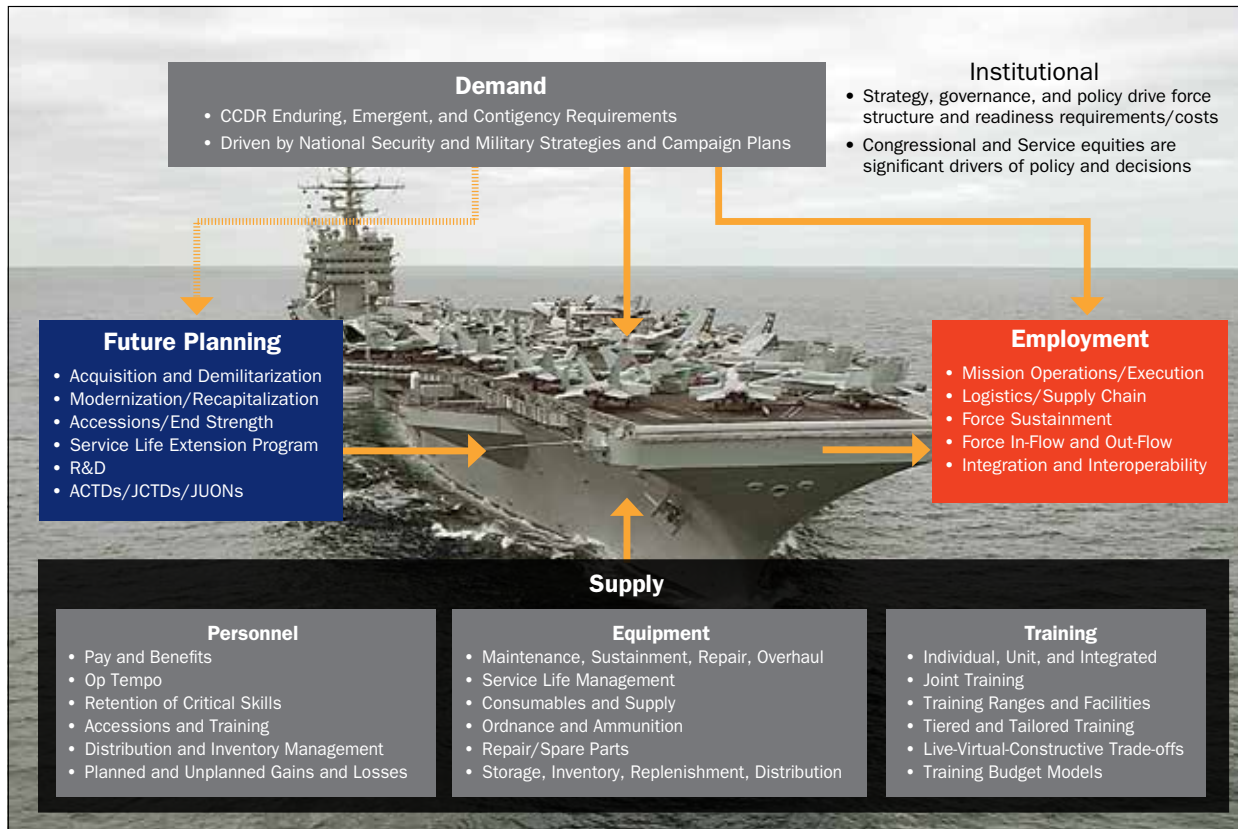
Systems (DRRS) and service-specific DRRS reporting programs collect current readiness and near-term projections to generate qualitative and quantitative readiness assessments.

When the military could afford to buy the readiness that forces needed, these reporting systems provided sufficient decision-support capabilities. In today's environment, these and other readiness reporting solutions are no longer sufficient to answer the more complex resource trade-off questions being faced by military leaders. For example, quantitative metrics are usually inventory-based only—measuring what the force has versus what it should have. This approach lacks

the ability to prioritize resources based on mission importance or to measure the readiness impact if specific resources are unavailable. Another weakness of many systems is an inability to connect costs to readiness, making it difficult for decision makers to adequately prepare readiness-related budgets, justify needed readiness funding, or make readiness-based resource allocation decisions. Military leaders recognize these challenges and need processes, metrics, data, tools, and systems that support timely decision making. Without the right solutions, they must often rely on reactive, time-intensive, ad hoc, or manual analyses to make critical decisions.

An effective readiness decision-support solution enables the DoD and military services to answer a variety of essential readiness questions:

Organization's Question	Associated Readiness Decision-Support Capability
What is the demand? What do I need to achieve? What are my priorities?	Mission Requirements
What do I need to supply to meet the demand?	Capabilities and Mission Essential Tasks
What do I need to ensure success?	Resource Requirements including Cost
Can I break readiness into actionable components that can be measured?	Readiness Hierarchy
What are my available assets? What are my gaps?	Total Asset Visibility Metrics Total Costs
What missions can I fulfill today? What is my readiness status?	Current Readiness
What are my most important least important resources?	Prioritized Deficiencies
What are my most important gaps? How much do they cost?	Prioritized Deficiencies and Life Cycle Costs
Where will I be in 6 months? A year? 4 years?	Projected Future Readiness
Am I progressing according to plan? Am I expending resources efficiently? If I'm off track, what should I do and when?	Earned Readiness™
What does the gap between requirements and resources mean?	Operational Risk
What will I lose if my budget is cut? What will happen to my readiness? Where do I take the cuts?	Readiness Impact Assessment & Analysis
How do I best allocate my resources to maximize my readiness?	Optimization

Exhibit 1 | The Readiness Production Process

Source: Booz Allen Hamilton

The Readiness Production Process

Readiness can be viewed as a supply-and-demand challenge. As shown in Exhibit 1, demand is driven by worldwide mission needs based on national security and military strategies, combatant commander requirements, and global security dynamics. The supply is composed of the personnel, equipment, training, ordnance and other resources needed to deliver ready forces. Resources also include the funds needed to procure, operate, and maintain the supply, which means that future planning and budgeting processes must factor in internal and total ownership costs. Leaders must ensure that resources and capabilities meet requirements—that the supply satisfies the demand—to enable mission accomplishment within fiscal constraints. Guesswork is insufficient in a time

of rising costs and falling budgets, because readiness gaps create operational risks. Decision makers need capabilities that can analyze the trade-offs among requirements, resources, capabilities, costs, and risks to make more informed resourcing decisions, support root-cause analysis and process improvement, manage complex portfolios, assess budget reduction impacts, and justify and defend budget requirements.

The Building Blocks of Effective Readiness Decision-Support Solutions

Many military organizations have engaged Booz Allen to help them strengthen their readiness analysis and decision-support capabilities. Although readiness solutions must be tailored to the unique requirements of each organization, we have found that all successful

implementations are built upon four foundational building blocks. These four building blocks are essential for developing and implementing solutions to address today's complex readiness challenges.

Building Block No. 1: Focus on the Specific Readiness Challenges or Goals to Be Addressed

Readiness solutions can range from mission or capability-based portfolio management at the strategic level to manning, training, and equipping forces within a force-provider organization at the tactical level. Whatever the challenge or goal, organizations must clearly identify, map, and assess the readiness production process that will be addressed. Ultimately, readiness solutions must be driven by the organization's mission, needs, and operating construct. Achieving the right focus requires a deep understanding of the readiness production processes and operational requirements. A thorough understanding and assessment of an organization's readiness production processes will ensure that the solutions are focused on an organization's readiness challenges and goals. A solution that is too broadly or too narrowly focused will likely be inefficient, ineffective, or both. The assessment should include an understanding of the current state, including benefits and challenges, as well as an understanding of the gaps or weaknesses to be resolved. Immersion in the operational environment, with a keen understanding of the mission, is critical to getting the solution right, especially to ensure that the readiness solution supports the processes, and not the other way around.

Building Block No. 2: Create an Analytical Framework to Form the Right Relationships Among Requirements, Resources, and Costs

Too often, organizations work within the confines of available data sources and formats and try to determine what can be produced from it. Instead, the up-front definition of what readiness questions need to be answered, and the outputs that need to be produced, should drive the design of the analytical framework and the associated data requirements. With this knowledge, organizations can design an analytical



framework and use established methodologies to create, align, and measure relationships between readiness elements such as tasks, resources, and cost. For example, subject matter experts can apply their understanding of the operational environment to assign qualitative levels of importance to each element on the mission or task. This process will provide greater fidelity and reveal which resources are needed for each mission and which resources are most important. Decision analysis methodologies can be applied to translate those qualitative priorities into quantitative measurements in a repeatable, traceable, and consistent way. These quantitative measurements provide higher weight—that is, higher priority—to resources that have more impact on readiness, demonstrating that resource sufficiency is more than the sum total of on-hand equipment inventory or available personnel. Associating costs to resources in this framework results in a powerful solution that can prioritize deficiencies and optimize the allocation of resources in the context of mission readiness. The framework design must be flexible enough to keep pace with an evolving operational environment, changing mission demands, and fluctuating resources, while providing the ability to address unanticipated questions and needs and support diverse warfighting capabilities.

Building Block No. 3: Analyze, Integrate, and Aggregate the Necessary Data

Reliable data is essential to achieving actionable results. Organizations are often surprised to discover that the expected data is either not available or riddled with data challenges. For example, data inaccuracies in external, stove-piped systems are dramatically brought to light when the data is exposed to the organization that knows the data best and is employed for analysis, reporting, and decision making. Data may also be incomplete or out of date, and there may be conflicts between “authoritative” databases, with no way to discern which information is accurate. Additionally, data within a system often changes without traceability of what information changed or why. Data must be validated at each step—from the time it is received until after it is incorporated into the solution. Employing automated quality assurance and validation checks can proactively identify data issues before they lead to erroneous outputs. Data engineers should work with data owners to improve their datasets, rather than trying to improve the data after it is received, which exacerbates problems in the long run.

Building Block No. 4: Apply the Right Tools and Technologies

A wide range of tools and technologies are available to support complex decision making—ranging from stand-alone models to advanced enterprise web applications. Too often, the urgent need for a readiness solution drives an organization to move too quickly into technical development and implementation. Leading with technology, rather than with a clear understanding of the readiness problem to be solved and the goals to be achieved, can result in suboptimal solutions—no matter how fast they are delivered. More likely, this approach ends up costing more time and money and still falls short of the goal while leaving dissatisfied stakeholders in its wake.

Instead, leading with the first three building blocks provides the rigor needed to set the readiness solution on the path to success by identifying the right policy, process, metrics, data, functional, security, and

technical requirements. This provides the right baseline from which to evaluate technology solutions. This approach generates the information needed to make sound technical investment decisions, particularly by giving decision makers a clear understanding of the technical trade-offs among alternatives. It guides the organization to the right technology decision instead of trying to back into a solution when technology is selected first. In addition, organizations should be guided by these key principles as they select specific technologies for each solution:

- Start with the end-state vision to ensure the solution will be scalable to support long-term as well as near-term needs.
- Apply a technology-agnostic perspective, thus allowing the requirements (operational, functional, data, analytical, security) to drive the solution.
- Build security into the solution from the beginning to protect information. Bolting it on after the fact requires rework.
- Involve stakeholders early in a collaborative environment to promote user adoption and transparency. Use techniques such as interactive mock-ups with working “click streams” that mimic a live system and true user experience to verify and validate requirements.
- Assess the technical, functional, and cost trade-offs of potential technologies in order to make informed investment decisions, including calculating return on investment.
- Provide flexibility to adjust to changing priorities and requirements.

As organizations put these building blocks in place, they also should integrate diverse operational, technical, and analytical skills into a cohesive team to jointly develop readiness solutions. Although most organizations tap into these areas of expertise to create readiness solutions, too often these three groups work separately, in a linear fashion, or stay within their specific roles. In contrast, experts with

different perspectives working collaboratively on the project spur innovation, ensure all stakeholder requirements are understood, and reduce delivery risk. Although this approach might seem more expensive, approaching the problem from multiple dimensions simultaneously delivers better solutions faster, more effectively, and with smaller overall investments.

Conclusion

In an environment where operational requirements are growing faster than available resources, military leaders face truly complex challenges. Gone is the era of simply “buying” readiness. Constrained budgets, scarce resources, increasing costs, and rapidly evolving and expanding mission requirements create a compelling need for improved readiness decision-support capabilities. Decision makers need access to reliable information quickly to answer a wide range of readiness-based questions backed by analysis. By following this approach and incorporating these building blocks into existing and new solutions, organizations will instill greater analytic rigor and improve decision making to minimize risk, allocate resources more effectively, and make informed trade-offs between current readiness and future readiness investments. With these capabilities, the DoD and military services can strengthen the readiness of our fighting forces and give them the best chance to succeed in performing their missions—both today and in the future.

About the Authors

Thom Crabtree is a Booz Allen Hamilton Senior Vice President and is responsible for leading the firm's Headquarters Operations Defense efforts for the US Navy and Marine Corps business. He specializes in all aspects of Force Generation, Workforce Optimization, Training and Readiness, and Capability production, assessment and analysis. Crabtree has more than 30 years of readiness experience, including Senior Executive Service (SES) roles such as the Executive Director and Chief of Staff at US Fleet Forces Command (USFF), USFF Director of Shore Installations Readiness, Director of Fleet Training, and Director of Fleet Readiness, Training, Logistics, and Maintenance within the Navy.

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The firm's management consulting heritage is the basis for its unique collaborative culture and operating model, enabling Booz Allen to anticipate needs and opportunities, rapidly deploy talent and

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