Agile Defense

Sustainable Cost Reduction on the Path to Greater Agility

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Foreword

Throughout history, great powers have been challenged to balance strategies and capabilities against available resources. From the Roman Empire to today, nations have felt the tug of resource limitations as they have sought to fashion comprehensive security strategies.

Those powers agile enough to adapt to the evolving security environment, while successfully leading change and managing precious resources, inevitably were sustained and have prevailed. Those powers that were hidebound and unadaptable often over-reached their resources and were doomed to decline and ultimately to irrelevance.

General John R. Allen, USMC (Ret)

former Commander, NATO International Security Assistance Force, and Commander, U.S. Forces Afghanistan

History has proven that weak states in decline - and nearly always in decline because of resource poverty – were far more dangerous than stable states or emerging powers. They could not adapt, they were not sufficiently agile in their national, institutional or operational behavior and were therefore more likely to use force to sustain a deteriorating status quo. Agility was not part of their ethos, nor could it be part of their solution.

As I left command of the largest wartime coalition in history – the fifty nations of the NATO International Security Assistance Force (ISAF) – it was clear to me the years ahead would carry many challenges not just for the Alliance itself, but for the individual NATO members and our twenty-two partner nations. I heard a common theme over and over from the many allied leaders who passed through my headquarters: "In the aftermath of our common cause in Afghanistan, the years ahead for my country and our Allies will be hard years of economic challenge as we juggle fiscal austerity with our NATO and/or national security requirements."

These fiscal pressures are further exacerbated by the substantial increase of the security challenges, some of them genuinely worrying, which seem only to be increasing. Thus our relevance as nations, individually and collectively committed to a safer, more secure and peaceful world, will be defined more and more by the balance and the careful equilibrium we're able to strike between the relevance of our strategies and their respective sustainability in an era of diminishing resources. This will require an unprecedented agility to adapt to change while embracing cost savings.

In keeping with its tradition of excellence in innovation and relevance, PwC presents an important framework for thinking about, and achieving, an approach to agile defense within which leaders and managers can enhance mission effectiveness and organizational efficiency while tackling the realities of a cost and resource constrained environment.

In the end, the reality of our security – collective or otherwise – will be based on our ability to find the right strategy and resource equilibrium. This is not just an Alliance or national imperative, it is a duty and responsibility of every commander and leader at every level in the defense sectors of all nations. The challenge, then, must be: ***it's not how much you have to spend, it's how well you spend it****. We can have effectiveness and efficiency in a resource constrained environment, and the concepts articulated in this paper can help enormously to that end.*

General John R. Allen, USMC (Ret)

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Executive Summary

Traditional strategic paradigms in defense and security have addressed enhanced threat environments with bigger budgets, more people, more equipment, and more infrastructure. To some extent this has been an effective strategy, but it is not one that is necessarily sustainable or well-suited to the emerging security environment which most nations, big and small, currently face. Rather, the increasingly complex and varied threats to national and international peace and security are demanding a more enlightened approach to both defense strategy and organization.

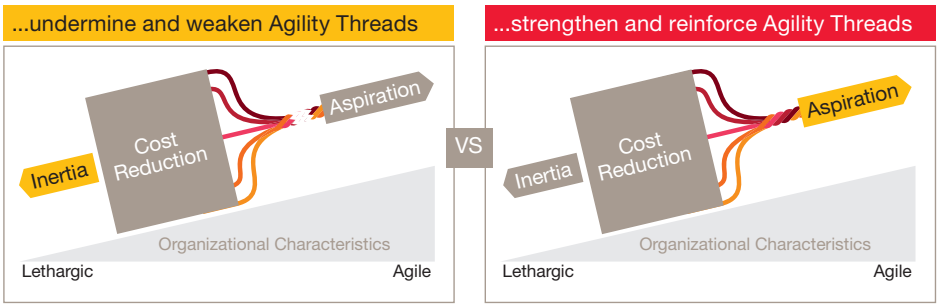
Three years ago we began exploring this topic through conversations with senior defense leaders around the world. The outcome of these discussions was a paper titled "Agile Defense" which outlined this concept and the organizational characteristics that defined the attributes an agile defense organization should cultivate and promote. In the interim, increasing budget pressures have exacerbated this demand for change as defense organizations have been forced to reduce spending dramatically even though the proliferation of security threats has proceeded unabated. These opposing dynamics will continue to raise significant questions about the future structures and capabilities of defense organizations, but perhaps no question will be more salient in the next several years than this one: ***"Can we reduce costs without sacrificing the mandate for even greater agility?"*** This paper attempts to answer that question in the affirmative.

The approach we espouse is focused on reinforcing the key threads of agility (Visibility, Velocity, Adaptability, Collaboration, and Innovation) while achieving complimentary improvements in five key cost areas (Human Capital, Infrastructure, Information Technology, Acquisition & Procurement, and Supply Chain). Within each cost area, we identify and examine proven techniques that provide the most promise for sustainable reductions.

We demonstrate further that if efforts to reduce costs in these areas are led by inspired leaders, and approached methodically with a keen sense for their impact on the characteristic threads of organizational agility, they can in fact accelerate change and lead ultimately to a more agile defense organization. Such efforts require focus and a relentless pursuit of cost reduction that enhances, rather than degrades, organizational agility.

Through the approach we outline in this paper, we hope to encourage and inspire defense leaders to address current cost-cutting challenges with an appreciation for the true organizational "upside" that cost reduction efforts can deliver when intentionally paired with a concomitant emphasis on agility as both an aspiration – and a mandate.

Cost reduction efforts can either...



5 threads of Agility:

Adaptability | Innovation | Collaboration | Visibility | Velocity

Key cost areas

Human Capital

- Manpower-Mission Alignment
- Capabilities Based Assessment and Workforce Analytics
- Blended Learning and Cross Training

Information Technology

- Prototyping and Agile Development
- Cyber and Information Assurance
- Business Intelligence
- Data Strategy and Optimization

Infrastructure

- Reliability Centered Maintenance
- Asset and IT Inventory Management
- Smart Grid, Facilities and Installations
- Joint Basing

Supply Chain and Logistics

- Best Value Maintenance
- Supply Chain Optimization
- Total Ownership Cost Reduction
- Burden Sharing

Acquisition & Procurement

- Cost Estimation
- Priority-Based Budgeting
- Industrial Base Analytics
- Strategic Sourcing

Context

The list of current and emerging threats to any nation's security is long, and growing. Weapons of mass destruction, longer range missiles, terrorism, cyber- attack, piracy, failed states, illegal trafficking, natural disasters, disease and limited energy and natural resources, have all joined conventional military threats to create a dynamic security environment that is challenging defense leaders in new ways.

So while there may be debate over what, or who, poses the greatest threat to a nation's security, there is broad consensus that the range of threats is becoming more varied and unpredictable. What this means for defense organizations around the world is that preparing to defend one's nation, and one's allies, from these challenges will require far more capable and adaptable strategies – and more capable and adaptable organizations to execute them.

As depicted in *Figure 1*, to maintain security and stability, ministries and departments of defense must adapt and shift in response to threats that cover a much broader spectrum of defense challenges. This fact is complicated by the concurrent fiscal pressures to cut defense spending that have been exacerbated by both the global financial crisis and the need in this resource-constrained environment to prepare for future threats while meeting the demands of ongoing operations.

Compounding this challenge, in many nations the non-interventionist trends in public opinion have advanced due to the complexity associated with communicating a positive and compelling cost-benefit equation relative to recent conflicts. Without a clear public mandate for greater defense investment, governments are responding to severe financial pressure by cutting budgets and forcing defense organizations to do more with less, do more with the same, or in some cases, *do less with less*.

Figure 1: The range of adversaries and their disruptive potential historically and today

In 2011, PwC began a conversation with senior defense leaders around the world on the concept of "Agile Defense" as a way to reconcile the tensions created by ever-evolving threats, increased reliance on technology, and tighter defense budgets for most nations and alliances. This publication builds upon the "Agile Defense" tenets, but focuses specifically on how budget pressure, and its concurrent mandate for cost reduction, can serve as a catalyst, rather than an inhibitor, of greater defense agility.

Specifically, we explore how defense organizations can promote, rather than undermine, their key agile characteristics as they seek to simultaneously reduce costs, accomplish current missions, and build future capabilities.

Why Agility Matters

It is clear that defense leaders face a daunting challenge in trying to balance resource constraints with the demand for more agile organizational capabilities. Agility is especially relevant to defense organizations because of the high-risk and fluid portfolio of threats that nations must manage. While we define agility as "perpetual awareness and the ability to be decisive and take action in an expedient and well-coordinated manner," other definitions may apply and be as effective in describing this organizational quality.

Essentially, agility at an organizational level is the strategic mix of standardization and flexibility, targeted at those organizational pressure points where they are not only needed today, but will most likely be needed tomorrow. We believe that there are five characteristics of an agile organization. We identify these characteristics as "threads" because of how they "weave" their way through the key elements of an organization in a complementary fashion – strengthening each other the more tightly integrated they are.

In agile organizations, these threads function to produce highly effective organizational responses that anticipate and mitigate a broad range of tactical and strategic challenges.

Many of the most effective private sector organizations have made agility a key strategic imperative in order to survive in hyper-competitive commercial markets. These organizations purposefully seek to reinforce their core agility characteristics when making resource trade-offs. They also tend toward leaner and flatter organizational structures that "de-layer" costs and assign capital to its highest and most effective use.

Defense organizations must adopt a similar posture, but it will become increasingly difficult for them to do so if they are not wise in responding to declining budget authorities which now appear to be the norm. The challenge, therefore, is for these organizations to cut costs judiciously and in a manner that sustains and enhances the organizational agility threads in proper equilibrium.

Agility is especially relevant to defense organizations because of the high-risk and fluid portfolio of threats that nations must manage.

The Five Characteristic Threads of Agility

Adaptability
The ability to adjust and meet changing mission requirements.

Innovation
The ability to generate and utilize new ideas, methodologies, and technologies.

Collaboration
The ability to leverage internal and external knowledge and resources to enhance the mission.

Visibility
The ability to create and maintain transparency to enhance fact-based decision making.

Velocity
The ability to recognize and respond with the requisite tempo to new circumstances and events.

Sustainable Cost Reduction as an 'Agility Accelerator'

Given the fiscal and political environment facing most nations after years of conflict and economic recession, defense organizations in these nations will continue to face significant budget pressure. This reality, coupled with the wide range of complex threats that characterize the 21st century security landscape, are requiring defense organizations to implement cost reductions that are both sustainable and do not restrict overall capability. Achieving these concurrent goals is a challenge and an aspiration – but it is also a mandate.

Conventional approaches to cost management in the defense sector have traditionally adopted a short-term focus, repeatedly targeting operating and maintenance expenses (e.g. delaying maintenance and reducing weapon system and personnel availabilities, deferring investment, reducing travel, hiring and pay freezes). However, these approaches often fall short in addressing substantive baseline operating costs and ultimately degrade a nation's ability to achieve mission requirements both locally and abroad as costs re-emerge and organizational capabilities atrophy.

In these traditional scenarios, defense organizations often achieve lower costs in the short term, but sacrifice agility in exchange. Such approaches are unwise and unsustainable, particularly at a time when the security environment is becoming more complex.

Understanding the Cost and Agility Relationship

The dual imperatives of increasing organizational agility and cutting costs may seem in conflict. Indeed, pursuing them as independent, or worse conflicting, goals will undermine agility and lead to longer-term increases in costs in the end. However, organizations that maintain a focus on agility while cutting costs will emerge leaner, more capable, and better poised to respond to future demands.

This period of dynamic change and long-term resource restrictions demands creative solutions and offers the opportunity to eliminate constraints previously seen as fixed by politics, policy, or organizational inertia. Defense organizations that sacrifice agility to cut costs will inevitably re-learn the often tragic lessons related to eras of demobilization followed by periods of intense and costly remobilization efforts.

So can organizations avoid these mistakes? The answer is an emphatic ***'yes'***.

Agile Leadership...and Management

The most essential success factor for increasing agility, while achieving sustainable cost reductions, is decisive and strong leadership. The strategies, priorities and practices that leaders put in place set the conditions for success or failure. Further, the behaviors that they personally exhibit, and those that they reward and tolerate, have a profound effect on whether they achieve sustainable savings and strengthen, or erode, their organization's agility.

Leaders that are to be successful in this environment must be adaptable, innovative and collaborative. They must have a vision and be able to successfully communicate this vision to all levels within their organization. They must also be capable of rapidly filtering and analyzing vast amounts of information and able to recognize and respond with appropriate tempo to new circumstances and events.

But even the most dynamic and effective leaders will not be successful in achieving their organization's full potential if they do not employ a more agile management style. Old processes, governance structures, and multi-tiered bureaucracies should be among the first targets of any organization looking to improve its agility and deliver on cost savings.

Most significant to the success of this approach is populating the organization with leaders, at all levels, who share an agile vision for themselves and for the culture of the organization. People across the organization must be walking and talking embodiments of the five key agility threads. It is the responsibility of the agile leader to find them, employ them in the right jobs, and reward them accordingly.

Setting and Executing a Strategy for BOTH Agility AND Sustainable Cost Reduction

With the right leaders in place, organizations then need to implement effective strategy, portfolio, and management practices to ensure that they achieve their goals. These strategies, portfolios, and practices must be more flexible and adaptable than in the past.

While defense organizations are often well-regarded for their strategic planning capabilities, the processes for developing and executing these strategies and plans are often bureaucratic, characterized by excessive committee work and unnecessary governance and multi-layered approval processes.

Once the leadership of the organization has determined that it will embark upon a more efficient and effective strategic planning process, it must set the strategy and then lead and manage the organization to achieve it.

The first step in setting a path for both agility and sustainable cost reduction is to simplify the process for developing and executing the strategy itself.

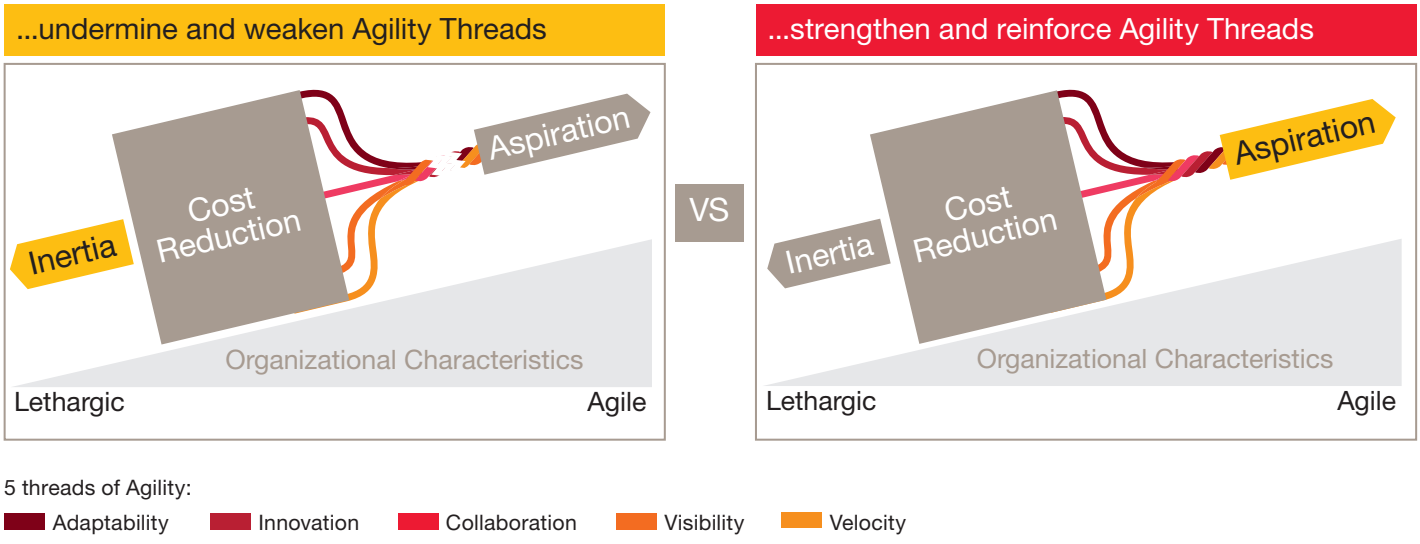
Once the leadership of the organization has determined that it will embark upon a more efficient and effective strategic planning process, it must set the strategy and then lead and manage the organization to achieve it. In this regard, the actual details of the strategic planning process and its resultant products (e.g., guiding documents and strategy maps) are less important than are the key actions to ensure that agility and sustainable cost reduction remain among its primary goals and outcomes. This requires defining these goals and measuring them regularly.

Many organizations are capable of achieving cost reduction through focused, short-term, efforts, but the progress achieved is often times short lived, and in some cases, has a dramatic impact on performance. Defense organizations that take a critical look, and focus on enhancing their agility through rigorous measures of performance will be more successful, adaptable, and efficient than those who do not.

Strengthening the Agility Threads

Successfully navigating a path to sustainable and effective cost reduction requires a deeper understanding and management of the relationship between these efforts and their likely effects on agility. The benefits and consequences from each decision must be considered before each cost reduction initiative is implemented. This relationship is illustrated by examining how the common elements of cost-reduction efforts may enable or threaten the Five Characteristic Threads of Agility.

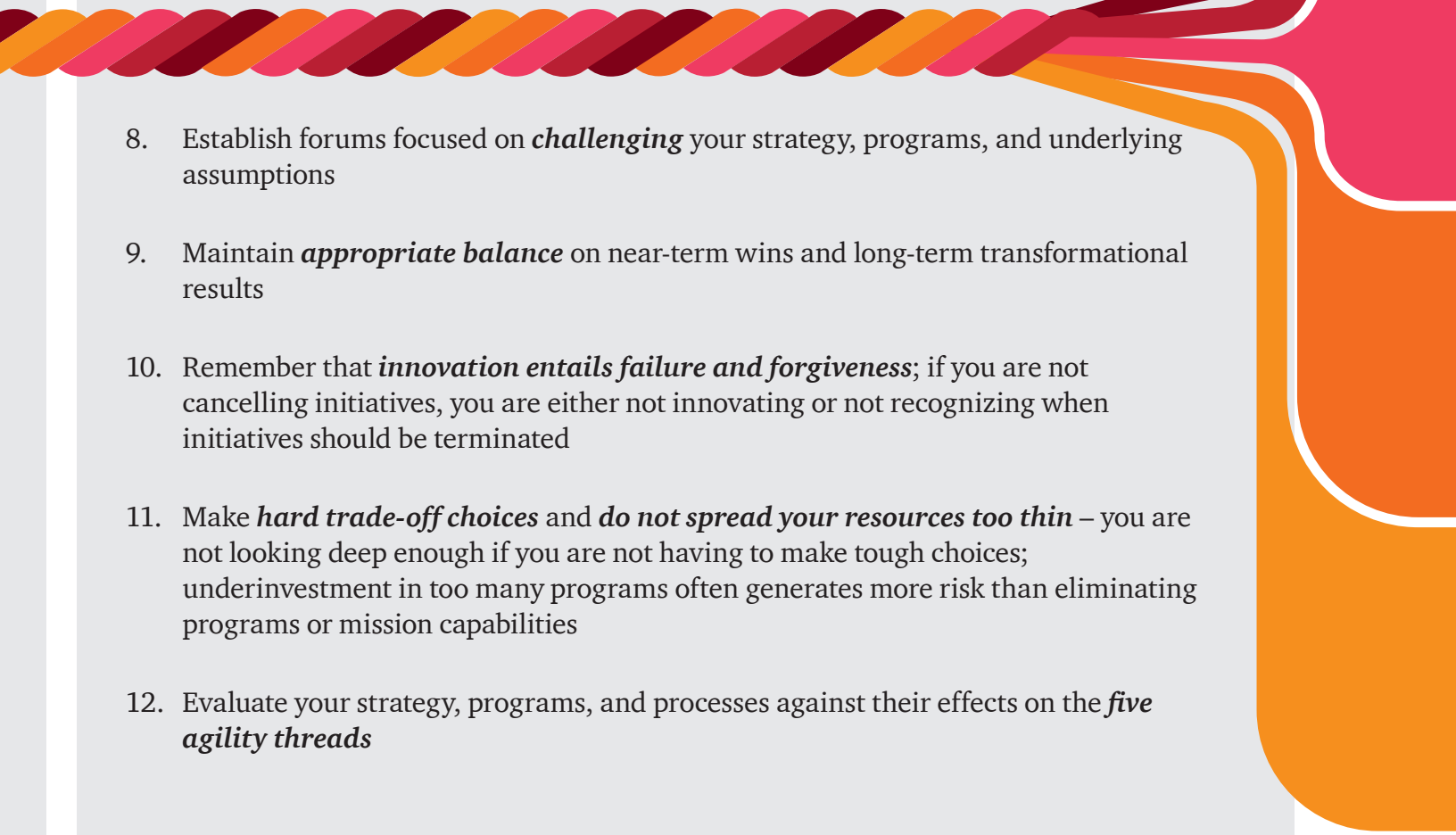
Cost reduction efforts can either...



Agile Defense ***Sustainable Cost Reduction***

12 Key Actions to Establish and Maintain Agility while Reducing Costs

1. Assemble ***decisive leaders*** who are simultaneously visionary, inspirational, and pragmatic
2. Define and maintain a focus on the ***ultimate outcomes*** your organization must achieve
3. Employ ***lean processes and governance*** to set your strategy and monitor execution
4. Ensure that you accurately understand your ***resource drivers*** and ***key cost areas***
5. ***Target*** cost areas that hold promise for sustainable savings
6. Establish ***outcome-focused metrics*** and ***take action*** based on results
7. ***Empower*** subordinates and hold them ***accountable for results***



8. Establish forums focused on ***challenging*** your strategy, programs, and underlying assumptions
9. Maintain ***appropriate balance*** on near-term wins and long-term transformational results
10. Remember that ***innovation entails failure and forgiveness***; if you are not cancelling initiatives, you are either not innovating or not recognizing when initiatives should be terminated
11. Make ***hard trade-off choices*** and ***do not spread your resources too thin*** – you are not looking deep enough if you are not having to make tough choices; underinvestment in too many programs often generates more risk than eliminating programs or mission capabilities
12. Evaluate your strategy, programs, and processes against their effects on the ***five agility threads***

on the Path to Agility

Thread	Elements of cost-reduction efforts that enable or threaten agility
Adaptability The ability to sense and adjust to meet changing mission requirements.	***Enablers*** + Target baseline operating costs and fixed costs vs. temporary fixes + Employ risk-based scenario planning that includes consideration for rare, unexpected disruptions + Consider 'reversibility' as a strategy for mitigating risk and uncertainty + Maximize interoperability when deciding where to cut and where to invest ***Threats*** – Employ 'fair share' approaches such as across the board, uniform cuts – Fail to completely eliminate or fully rehabilitate struggling programs, organizations, and systems – Defer investment costs to future years and cut near-term costs that will reemerge – Parochialism that forces inefficiencies to exist purely for political benefit
Innovation The ability to generate and utilize new ideas, methodologies, and technologies.	***Enablers*** + Create the motive for innovation by setting aggressive cost and performance targets and then empowering and holding leaders accountable for meeting them + Maintain balanced portfolios and include appropriate flexibility in budgets to exploit innovations + Emphasize partnerships with industry and academia – and quantify national value even beyond defense + Demand successful prototyping before making long-term commitments ***Threats*** – Punish risk-taking by using 'zero defect' personnel policies to identify workforce reduction targets – Focus on compliance and micro-costs versus outcomes and macro-costs in contracting – Start by only looking for incremental savings and establishing too many fixed constraints when determining cost reduction alternatives – Maximize interoperability when deciding where to cut and where to invest
Collaboration The ability to leverage internal and external knowledge and resource to enhance the mission.	***Enablers*** + Employ independent, transparent, and fact-based analysis and reward those who demonstrate an enterprise focus + Create opportunities for burden sharing and programs that cut across traditional boundaries + Establish collaboration and knowledge management tools supported by organizational culture and process change to enable virtual teams and avoid redundant efforts ***Threats*** – Focus on parochial interests, zero-sum mentality, and political considerations over joint requirements – Reward gamesmanship by allowing excessive budget reclaims and by repeatedly cutting organizations that effectively reduce their costs and expecting too little from others – Cut key enablers to workforce collaboration and development (e.g., cutting travel, training, and collaboration technology budgets)
Visibility The ability to create and maintain transparency to enhance fact-based decision making.	***Enablers*** + Establish clear, quantifiable objectives, monitor performance and report results + Reward early problem identification and hold those accountable who falsely claim success or hide issues + Invest in analytics and data quality to support cost visibility and common operating views + Process change to enable virtual teams and avoid redundant efforts ***Threats*** – Use limited funds to sustain legacy, stove-piped systems and data and defer or underfund programs that will modernize and integrate systems and data – Foster adversarial tensions rather than collaborative problem-solving between leaders and subordinates, or between oversight and funding bodies and executive organizations – Continue investment in lower-cost custom applications and process work-arounds which raise the long-term cost to achieving enterprise integration and visibility
Velocity The ability to recognize and respond with the requisite temps to new circumstances and events.	***Enablers*** + Employ committed, clear, and decisive leadership + Establish lean governance processes and accountability for investment and expenditure + Effectively manage cost and capacity of industrial base and multi-tiered supplier network in order to quickly adapt to changing requirements + Underpin implementation of cost cutting efforts with strong change and project management + Develop plans and processes that enable reversibility, rapid response, and 'fast track' acquisition ***Threats*** – Develop burdensome governance requirements and over-centralize decision-making – Employ unrealistic assumptions that eliminate highly plausible mission scenarios as rationale for cutting less desirable programs – Seek only 'best practices' as opposed to 'next practices' resulting in delays in starting and realizing benefits

Figure 2: Key Cost Areas and Proven Techniques for Reducing Costs while Increasing Agility

Key cost areas

Human Capital

- Manpower-Mission Alignment
- Capabilities Based Assessment and Workforce Analytics
- Blended Learning and Cross Training

Information Technology

- Prototyping and Agile Development
- Cyber and Information Assurance
- Business Intelligence
- Data Strategy and Optimization

Infrastructure

- Reliability Centered Maintenance
- Asset and IT Inventory Management
- Smart Grid, Facilities and Installations
- Joint Basing

Supply Chain and Logistics

- Best Value Maintenance
- Supply Chain Optimization
- Total Ownership Cost Reduction
- Burden Sharing

Acquisition & Procurement

- Cost Estimation
- Priority-Based Budgeting
- Industrial Base Analytics
- Strategic Sourcing

Achieving Sustainable Benefits in Key Cost Areas

Many organizations quickly dive into cost reduction initiatives without first understanding which cost areas hold the most potential for sustainable savings, the factors that drive costs within those areas, and the interdependent relationships between costs and achieving organizational outcomes.

In most organizations, however, there are a few common and substantial areas that hold the most promise for significant cost reduction initiatives while also supporting opportunities for greater organizational agility. These cost areas are Human Capital, Infrastructure, Information Technology, Acquisition and Procurement, and Supply Chain and Logistics (*Figure 2*).

In the sections that follow, we explore each of these cost areas and provide proven techniques that hold the most promise for sustainable cost reductions while also driving greater organizational agility in the long term.

Human Capital Costs

- Manpower-Mission Alignment
- Capabilities Based Assessment and Workforce Analytics
- Blended Learning and Cross Training

Unpredictable economic conditions have put renewed emphasis and scrutiny on streamlining operations and the optimal employment of people in most defense organizations. Changing technology and strategic restructuring are requiring new and different skills and knowledge which have resulted in increasing organizational costs and the associated costs of maintaining workforce readiness. Moreover, an aging workforce, a challenge faced by most industrialized nations, portends a significant loss of critical skills, expertise, and institutional knowledge.

There is a general tendency of most organizations to preserve the status quo. As such, the operating assumption across defense organizations for many years has been that the workforce it has is the workforce it needs. In addition, short-term planning horizons, decentralized and disconnected planning activities and political pressures have all reinforced the tendency to hold on to the people already in place. However, given changing missions and the uncertainty of future requirements, the assumption that the existing workforce is optimal is no longer valid.

As in many other government organizations, talent management may be one of the least agile aspects of a government defense organization. Because of numerous laws, regulations and policies, either increasing or decreasing the workforce levels in a government enterprise is likely to be cumbersome and very time consuming—not at all conducive to strengthening agility threads.

However, even in defense organizations, aligning mission to manpower requirements using a workload-based analytical approach allows decision makers to understand the relationship between manpower and mission requirements. This enables them to have the proper manning levels to accomplish the current and expected missions on time, to standard, with a known and acceptable level of risk.

Moreover, this approach enables decision makers to respond and react to changes in the mission when they occur. This is especially important in the supporting infrastructure, where the linkages between mission, workload, and required manpower are typically less rigorous than in the operating forces. More specifically, when implemented as part of a comprehensive cost reduction strategy, the following approaches can deliver lasting value, while also reducing cost and strengthening certain organizational agility threads such as adaptability, innovation, and visibility.

Workforce – Mission Alignment

Conducting an organizational analysis of the alignment between mission requirements and how the Workforce is being deployed can identify areas of overlap, minimize duplicative work, maximize efficiencies, and create a stronger, more resilient organization that is well suited for a budget constrained environment.

The insights gained from this analysis can better position organizations to make informed decisions around workforce reduction and/or reclassification. The result is a more cost-effective use of people, and a more adaptable, innovative resource pool which is positioned to improve overall agility, performance and mission effectiveness.

Capabilities Based Assessment and Workforce Analytics

Understanding and aligning an organization's workforce against current and future capability requirements helps identify critical manpower needs, skills gaps, and future requirements. Today, many defense organizations do not continuously evaluate the capability of their workforce against planned and future requirements, resulting in lost opportunities to reduce organizational costs.

The default approach to addressing capability gaps has been to hire new staff, resulting in increased recruiting, training, and on-boarding costs, and within some classifications, a bloated, underutilized workforce. Increasing the overall transparency and understanding of resource gaps can lead to more optimal shifting and training of resources, resulting in cost reductions, increased adaptability and greater velocity in addressing emerging or changing mission requirements.

Blended Learning and Cross-Training

Blended learning combines face-to-face, traditional classroom teaching with online distance learning, resulting in an approach to instruction that merges the best of both worlds. By employing remote training capabilities such as Live, Virtual, Constructive, modelling and simulation, or distributed, on-line training, defense organizations can achieve significant cost savings as well as improvements in overall training delivery. Additionally, secondary benefits including scalability, speed, access and flexibility, interactivity, collaboration, and increased throughput which can support increased productivity and reduced cycle times.

The benefits of this type of diverse training platform provide significant opportunities to cross-train staff in order to have more flexible, mission ready people. Cross-Training therefore positions an organization's staff to respond to varied and unpredictable challenges without the need to incur more costs from hiring the skills they don't have.

Thread	*Representative and Mutually Reinforcing Enablers – Human Capital*
Adaptability	• Cross-Training: provides a more balanced staff to meet the ever-changing demands of defense organizations. • Organizational analysis: provides leadership with a snapshot of available resources and allows for better allocation of these resources in the face of dynamic requirements.
Innovation	• Structured Mentor-protégé and intern programs: within the workforce these provide ways to transfer knowledge as domain expertise transitions out of the organization. • Reward staff that are willing to lead new initiatives and take on more responsibility.
Collaboration	• Blended Learning and Cross-Training: allows individuals with different skill sets to learn from each other and to become adept at multiple different skill areas, which allows for flexible entry into a variety of positions based on organizational needs.
Visibility	• Workforce analytics: matches up the forecasted requirements of the organization against the current skill set and identifies gaps. • Organizational analysis: gives leadership and recruiting personnel transparency to the current workforce's skill sets and helps plan for future needs.
Velocity	• Establishing clear, quantifiable objectives, monitoring performance, and reporting results ensures accountability within the organization. • Live, virtual, and constructive training capabilities: reduce productivity loss and allow for improved efficiency in training delivery and improved participation rates across a dispersed workforce • Capabilities Based Assessment: identifies critical Human Capital weaknesses, allowing an organization to build sustainable and differentiated capabilities that meet current and future requirements.

Infrastructure costs

- Reliability Centred Maintenance
- Asset and IT Inventory Management
- Smart Grid, Facilities and Installations
- Joint Basing

Defense organizations do not fully understand the total life-cycle cost of their infrastructure, nor how to determine the minimum levels of infrastructure investment required to support mission requirements. Further complicating this challenge is the fact that infrastructure data is housed in multiple systems and documents, resulting in considerable amounts of time and resources to discover, collect, manipulate and maintain this information for timely and effective decision making.

Addressing these challenges is necessary not just to reach financial goals, but to ensure that the infrastructure is properly sustained, restored and modernized – to reduce costs while preserving and enhancing the readiness of the forces. The proven approaches detailed below are designed to equip defense installation commanders and managers with the necessary information and decision management framework to ensure that they know what they have, where it is located, what condition it is in, who is using the facility and what it costs. In this way, they can make fact base decisions on where, how and what installations and facilities should be built, maintained and or divested.

Reliability Centered Maintenance

In responding to fiscal realities and directives to reduce costs, defense organizations normally sacrifice long term facility and weapon system availability by delaying maintenance in order to support immediate requirements. As a direct result, they merely shift costs to right in an unsustainable way while also negatively impacting overall agility and risk.

Defense organizations can change this undesirable end-state by changing their maintenance "behavior" to focus on solutions which improve the reliability, operational availability, and cost-effective sustainment of their facilities and weapon systems.

One such approach is Reliability Centered Maintenance (RCM). RCM focuses on building a maintenance regimen that times activity appropriately to reduce the probability of asset or mission failure. Such activities reduce the instances the organization has to respond to unexpected maintenance requirements that can potentially cripple organizational capabilities in the short term, drive cannibalization of parts and other unhealthy activities that damage overall long-term agility and efficiency.

Asset and IT Inventory Management

Developing a centralized asset management capability through the integration of real property functions across an enterprise can also significantly reduce an organization's total asset lifecycle cost. Leveraging improved real estate usage and conducting forensic space reviews to reduce space, and improve green initiatives for space management, can

produce significant cost savings. Additionally, significant cost savings may be realized through the identification of IT overlap in both hardware and infrastructure. Leveraging share technology, as well as understanding the utilization metrics of existing assets, can significantly drive down the cost of facilities management significantly. Through these techniques, improved real property usage can also have a direct impact on the adaptability of space, collaboration, and overall organizational visibility of assets and people.

Smart Grid, Facilities and Installations

Military installations are investing in energy saving technologies for buildings and utility systems. Initially, these technologies were purchased with the goal of reducing energy usage, but when fully deployed they also create building maintenance efficiencies. As the technologies are deployed across multiple buildings and utilities on an installation, and when they are coupled with reengineering of business processes and re-tooling of personnel, they can create what is referred to a "smart" facility.

In addition to its ability to leverage technology, such a facility is truly "smart" when it is able to drive a more efficient use of energy and safety/security operations, and a proactive maintenance approach that avoids the costs of downtime due to equipment failure.

When implemented successfully, defense organizations can achieve substantial cost savings while also improving their ability to respond better to emergencies and maintenance requirements that would normally inhibit normal organizational functions.

Joint Basing/Infrastructure Sharing

All defense installations employ military, civilian, and contractor personnel to perform common functions in support of facilities and personnel. Additionally, in many cases, these installations share a common boundary with minimal distance between the facilities. This creates a substantial opportunity to reduce costs by eliminating the duplication of efforts. Joint-basing with different services being granted exclusive responsibility for certain base functions is an approach that has been used to generate such savings. Additional opportunities for savings can be derived through the "right-sizing" of both owned and contracted commercial fleets of base support vehicles and equipment, consistent with the size of the combined facilities and supported populations.

Thread	*Representative and Mutually Reinforcing Enablers – Infrastructure*
Adaptability	• Reliability Centered Maintenance: allows an organization to improve overall maintenance of property and equipment with a reduction in overall spending by using historical performance indicators and predictive analytics to perform corrective actions. • Smart Grid, Facilities, and Installations: utilizing computer based control and automation establishes the capability to modify energy resource distribution, while also achieving energy efficiency on the electricity grid and in the energy users' homes and offices.
Innovation	• Smart Grid, Facilities and Installations: a frontier initiative for many organizations that can initially offer cost savings through reduced energy footprint, but over time can be used to gather facility data that can aid maintenance. • Asset and IT Inventory Management: Through increased visibility and accountability for success across the portfolio, an innovative culture is created to accelerate sustainable change.
Collaboration	• Joint Basing: consolidating common functions can eliminate personnel redundancies and allow for greater specialization of individual locations.
Visibility	• Asset and IT Inventory Management: this inventory capability can improve an organization's understanding of what it has and align it with what it needs. This approach lends itself to overall reduction in infrastructure footprint and better utilization of available space.
Velocity	• Joint Basing: the shared services model allows for an organization to specifically rely on individual locations for discrete functions. This permits for economies of scale and improved throughput time for these functions.

Information Technology (IT)

- Prototyping and Agile Development
- Cyber and Information Assurance
- Business Intelligence
- Data Strategy and Optimization

The past decade has seen a tremendous surge in IT spending to keep pace with defense, security and financial recovery requirements. Defense IT departments are under severe pressure to deliver new products and services that are faster and more cost-efficient than ever before.

Despite sky rocketing Information Technology spending, most defense organizations are dissatisfied with the return on IT investment. IT projects continue to be characterized by schedule slippage, budget overruns, and insufficient alignment with operational objectives and plans.

Further, new threats such as cyber terrorism are causing additional burdens on defense organizations to not only protect themselves internally, but to offer guidance and policy to aid their country's commercial sector in warding against attacks.

Across these organizations, leaders are seeking to stem spending, and many Chief Financial and Information Officers are finding that their past investment budgets are consumed with operational and maintenance requirements, limiting the organization's agility and ability to adapt with changing requirements. Finding, understanding, and responding to the cost drivers are not easy. However, IT cost optimization can be found in many areas. Investigating these cost drivers often uncovers hidden costs that can be eliminated or reduced.

Prototyping and Agile Development

In today's rapidly evolving business environment, software developers are expected to deliver more reliable products even faster. Many are adopting more effective methods of application development. In the past, rigid, inflexible development plans that have been fully mapped out in advance have collapsed in the face of unforeseen challenges. Design flaws might become apparent only during implementation of the application — when it's too late to fix them without costly reconfiguration and delays.

Today, many organizations, including those in defense, are finding that flexibility is increasingly critical in the development of reliable software and IT products. This demand for flexibility calls for a change in course for many developers and IT leaders who have been used to traditional software development methods with rigid specifications and requirements.

But change must be embraced across the entire organization. Often, developers are left to complete a predefined project with little or no input from the impacted stakeholders. This can result in software that doesn't solve operational needs and often is delivered late and over budget. This is unacceptable. Hence, a more flexible approach to development, fittingly titled "Agile Development", has been adapted in recent years.

"Agile Development" emphasizes continuous collaboration and recurring requirements reviews between operational units and IT, while planning and executing smaller work packages. With the continuous pressure to reduce costs, while maintaining and improving performance, defense organizations must adopt IT approaches like "Agile Development" in order to produce functioning applications that are delivered on time, and at or under cost.

Cyber and Information Assurance

Due to the fluid, evolving nature of cyber warfare and the increasingly diverse mission of defense organizations, the risks associated with compromised data continue to grow. Recent research has suggested that the cost of a single data breach in developed nations can cost up to $5 million, while the frequency of such breaches have risen 38% over the last year. In addition, there is the crippling effect that an attack can have on an organization's daily operations and reputation. In the end, poor cyber security and information assurance strategies cost money and degrade organizational performance and agility.

This upward trend in breaches demonstrates the need for all organizations to balance the overarching need to secure information assets with the operational need for rapid development, fielding, interoperability, and ready-access. Though establishing cyber and information assurance controls costs money up front, these measures will result in long-term cost savings as well as maintain the reputation mission readiness, and overall agility of the organization.

Business Intelligence

In order to capitalize on the wealth of data available in today's environment, organizations must be able to quickly identify, aggregate and analyze data to support management decision making. Defense organizations must also improve the quality and speed at which information is shared both internally and externally. The transparency of this information and the velocity at which decisions can be made are both key tenets of an organization's agility.

By investing in business intelligence solutions, in combination with a strong performance management capability, organizations can substantially improve their access to information, while also reducing costs associated with monitoring performance and the overall decision management timeline.

Additionally, the secondary benefits realized include: enabling an organization to demonstrate results against goals; increased visibility and management control; better focus and alignment of resources; improved forecasting capability; and improved quality of service delivery, while enhancing warfighter capabilities to achieve their mission.

Data Strategy and Optimization

The complexity of information technology tools and the amount of available data increase exponentially every day. Managing these tools, and the data they generate, requires an enterprise approach that is tightly coupled with the strategic goals and process implementation efforts.

Today, many opportunities exist to redefine a defense organization's data strategy and put the building blocks in place to consolidate and optimize data, allowing users to more quickly find, trust and use information to make decisions at the speed their job requires.

Such a capability improves effectiveness and efficiency across platforms, personnel, logistics, and finance. Additionally, designing a flexible, interoperable data environment to enhance the mission, rather than forcing the mission to change to fit the available tools, can exponentially increase collaboration and visibility across the enterprise while accelerating a defense organization's decision management timeline.

Thread	*Representative and Mutually Reinforcing Enablers – Information Technology*
Adaptability	• Data Strategy and Optimization: agile organizations must cope with the constantly changing technology landscape by adjusting their data strategy accordingly. • Prototyping and Agile Development: ensures that concepts are properly vetted and provides the flexibility required as requirements change.
Innovation	• Cyber and Information Assurance (IA): establishing and executing a fluid, holistic cyber and IA strategy that focuses on effectively, efficiently and collaboratively detecting significant cyber incidents can result in significant cost savings and the reduction and/or elimination of an event's impact before, during and after an occurrence.
Collaboration	• Prototyping and Agile Development: brings together and actively involves key stakeholders in the development of the solution so that alignment is reached and requirements are met; reduces assess and design phase timelines, allowing for faster implementation and realization of financial benefits throughout an organization.
Visibility	• Business Intelligence: provides transparency of information that enables increased visibility and management control over key business decisions. • Data Strategy and Optimization: leveraging share technology, as well as understanding the overarching data strategy, results in considerable amounts of time and resources saved to discover, collect, manipulate, and maintain information for timely and effective decision making.
Velocity	• Business Intelligence: immediate availability of business data allows for leadership to make faster and more informed decisions with an increased awareness for future needs. • Cyber and Information Assurance: ensures that decision makers and the warfighter has the information they need, when they need it and with the appropriate controls prevents significant resource impacts associated with cyber-related attacks.

Acquisition & Procurement

- Cost Estimation
- Priority-Based Budgeting
- Industrial Base Analytics
- Strategic Sourcing

Defense organizations arguably manage the most diverse and complex set of capital investment portfolios when compared to most other government and commercial enterprises. The complexities of delivering sea, land, and air platforms require an unprecedented level of coordination between and across internal and external stakeholders.

The outcomes of this coordination must result in identification and consolidation of duplicative contracting actions, increased standardization in procurement processes, and strict compliance with policy and regulations. Close coordination between requirements providers and the acquisition and procurement community is critical to prioritizing requirements across the acquisition and procurement portfolio, while also minimizing cost growth and/ or scheduling delays.

The ability to quickly and cost-effectively acquire defense systems that counter changing security threats is a critical attribute of an agile defense organization. Challenges to achieving this include a lack of flexibility, poor risk-sharing, cost overruns, undefined requirements, and a procurement timeline that grows with each year.

These challenges also present opportunities to reprioritize requirements, realign funding, evaluate the industry base and ultimately reevaluate the macro and micro-level acquisition and procurement strategies. The adoption of proven industry capabilities and improved analytical capability can directly lead to reducing costs, eliminating duplicative acquisitions, and streamlining acquisition and procurement processes.

Organizations that employ the required analytical rigor to evaluate their portfolio of programs throughout each acquisition phase are better positioned to strengthen their agility threads and quickly adapt to changing requirements.

Cost Estimation

As an increasing number of defense programs experience cost overruns, decision makers must understand the risk and uncertainty associated with each cost estimation product. To obtain the most accurate assessment possible, it is critical that advanced, reliable analytical methodologies are used and that the results are presented in a clear and concise manner that allow for more informed business decisions.

Furthermore, understanding and integrating cost, schedule and risk data to predict outcomes in terms of both cost and schedule allows an organization to adapt and strengthen agility in their capital investment processes.

Priority Based Budgeting (PBB)

PBB is a framework for analyzing and optimizing the delivery of services and outputs. It has been successfully deployed in both the private and public sectors to drive changes to service delivery models and complex support solutions.

Organizations that have adopted this framework regularly find and deliver savings of around 20% while minimizing the impact on outputs, including their organizational agility threads.

The PBB process involves the prioritization of spending according to the outputs and services delivered (the outputs and outcomes) as opposed to their inputs (e.g. supplier headcount, bought-in costs etc.). PBB is a highly participative process which makes full use of the knowledge and experience of management and staff.

In short, PBB offers a forensic approach to examining cost drivers and their link to services which enables defense leaders to make difficult decisions quickly, with the support of key stakeholders and a full understanding of risks and impacts across their entire portfolio of programs, assets, and people.

Industrial Base Analysis and Supplier Integration

Understanding the supply chain by conducting industrial base analysis and supplier integration can significantly reduce total life-cycle costs through improved buying power and increased

competition. Additionally, proactively identifying and understanding diminishing manufacturing sources or material shortages can dramatically reduce the impact of increased costs arising from supply shortages and also prevent disruptions across the defense logistics lifecycle.

By continuously analyzing and communicating future requirements, previous performance, anticipated inflation and overhead rates, defense logistics organizations are better positioned to understand future costs and make informed trade-off decisions (e.g. what to fix versus buy).

Additionally, through such analysis opportunities emerge to reduce total costs, strengthen existing collaboration/partnerships, and develop new industry relationships which have a direct impact on improving future planning, timely order fulfillment, and reducing the amount of capital required to maintain inventory positions.

Strategic Sourcing

With limited resources and wide-ranging requirements that often include supporting assets that are defense-specific, proprietary, and include items no longer in production, strategic sourcing can be particularly challenging for defense organizations. While these factors make it complex, there are some clear advantages that accrue to specific agility threads where defense organizations can achieve both substantial cost savings and increase overall organizational agility.

The most obvious is collaboration. Too often defense organizations assume an adversarial stance and tone with their suppliers. In most cases, this is counterproductive and leads to inefficiency as well as cumbersome and distrustful arrangements. Additionally, often these organizations issue requirements with insufficient understanding of the market dynamics among their suppliers. When defense organizations gain a deeper understanding of the industries that support them, and collaborate with industry to structure more effective arrangements, they generate value for their suppliers and themselves.

Collaboration with industry also sets a tone for the organization that impact organizational culture. Further, such an emphasis allows room for innovation and solutions that can better adapt to changing requirements.

This is not to say that suppliers should not be held accountable for performance, but rather it demonstrates the interdependent nature of the agility threads. By increasing visibility into demand, establishing clear performance requirements, and employing supplier scorecards, defense organizations will see improved operational performance while at the same time greater cost savings.

Thread	*Representative and Mutually Reinforcing Enablers – Acquisition and Procurement*
Adaptability	• Industrial Base Analysis and Supplier Integration: when performed continuously, this analysis can reduce the cost of raw material shortages by identifying market events and adapting to these events by adjusting planned orders or seeking alternatives. • Acquisition and Procurement: Properly defining scope and performance requirements and structuring contract terms in ways that provide incentives to industry to be efficient, timely, and within budget improves results and increases savings.
Innovation	• Cost Estimation: while this topic is nothing new for defense organizations, the shrinking budgetary environment requires more thoughtful and predictive cost estimation techniques that can help avoid shortfalls and still deliver expected mission requirements.
Collaboration	• Strategic Sourcing: Defense organizations must improve collaboration and communication with suppliers to gain an appreciation for the market dynamics within which they operate. This can help defense customers better tailor agreements with suppliers whereby both entities benefit.
Visibility	• Cost Estimation: Life cycle costing provides the baseline and insight into each cost element, as well as the visibility and the capability to measure performance during the acquisition/production and in-services phases. • Priority Based Budgeting: this is a highly participative process which makes full use of the knowledge and experience of management and staff, while providing insight into the cost, schedule and performance trade-offs required to deliver a successful portfolio/program.
Velocity	• Priority Based Budgeting: eliminates low productivity investments and operating costs to free up funding for more mission critical programs. • Industrial Base Analysis and Supplier Integration: Designs the optimal supply network and associated operating models aligned to business requirements, allowing an organization to quickly respond to fluid requirements.

Supply Chain Logistics

- Best Value Maintenance
- Supply Chain Optimization
- Total Ownership Cost Reduction
- Burden Sharing

While logistics and supply chain planning are enterprise-wide activities, many defense organizations approach these disciplines in an isolated fashion. The most effective enterprise supply chain and logistics capabilities are created through a holistic approach to the equipping and operating of platforms and weapon systems.

Achieving this holistic approach requires an integrated and balanced perspective guiding readiness with all supply chain and logistics elements. These elements must be properly planned, adequately resourced, and proactively managed.

Logistics personnel must develop the acquisition and sustainment strategies, policies and processes to meet defined readiness levels and coordinate with resource sponsors to see that required funding is in place. However, in today's budget constrained environment, a holistic approach to Supply Chain and Logistics management must consider all avenues for reducing cost through a network of service providers that extends beyond traditional organizational boundaries. The era of parochially-owned and parochially-maintained assets is over.

Defense organizations that want to cut cost and enhance agility should exploit existing opportunities to integrate all elements of logistics rather than using isolated single element reviews. These approaches not only decrease Supply Chain costs but can also improve system reliability, supply chain responsiveness, and promote improved logistics support. The successful execution of logistics and supply chain approaches can reduce the organizational risks associated with "out of control" financial processes, poor use of inventory investment resources, and sub-optimized logistics processes, while also achieving continuous, sustainable cost savings.

Best Value Maintenance & Repair (M&R) Spend Planning

Best Value M&R Spend Planning produces a funding allocation decision at any given budget level. It supports that funding allocation with an M&R program definition that facilitates best value when applied at the installation level. Specifically, the funding allocation quantifies the particular benefit to each asset within a defense organization's portfolio at any given reliability level. The reliability level, in turn, defines the M&R requirement and determines a level of cost and risk. Best Value M&R Spend Planning produces a portfolio-wide optimization solution that balances the benefit, cost and risk of individual asset M&R decisions. This methodology can be applied at both the asset or portfolio level across facilities, equipment, or weapon system.

Supply Chain Optimization

To address budget cuts, many budget defense organizations are re-evaluating their supply chains in search of savings. Unfortunately, many are not realizing these expected savings without a direct impact on the quality of the supply chain output. These results can be directly attributed to the rate of change and fluid nature of today's defense environment. Simply put, supply chain savings have been difficult to sustain as supply requirements constantly adjust.

Defense and security organizations that evaluate the impact of cost cutting initiatives across each aspect of their organization, while also considering the impact to each agility thread, are drastically more capable of remaining Agile and less impacted by continual budget reductions.

Additionally, in many cases, defense organizations are improperly evaluating a single element of the Supply Chain or are making decisions on a single asset, or asset group, without understanding the long-term cost impact on the portfolio of assets or the entire life-cycle.

To truly optimize, organizations can no longer make short-term decisions across a single component of their supply chain, but must assess each decision across the entire scope of activities. These activities include operations, demand, and supply planning, inventory management, warehousing operations, inventory positioning, transportation and logistics management and supply chain risk management.

By understanding each aspect of the supply chain and the overall costs associated with each supply chain function, defense organizations will possess a higher level of assurance that equipment inventories and acquisitions will be properly procured, maintained, monitored and managed.

Total Ownership Cost Reduction

In response to longstanding concerns about the adverse impact of defense budgetary and operational trends on force structure and readiness, Total Ownership Cost Reduction has been established as a standard business practice.

Declining procurement funds are resulting in a rapidly aging (and potentially inefficient and unsupportable) inventory. Rising operations and support (O&S) costs are consuming higher portions of defense budget resulting in less funding available for system upgrades on new systems.

While these trends are alarming, in recent years, world-class suppliers have demonstrated that they can achieve cost reductions while making major improvements in customer support and overall quality. Cost reduction through a systemic approach focused on total life-cycle costs should be complementary with an organization's improvement objectives. Defense organizations that take an enterprise approach to total ownership cost are best positioned not only to achieve cost reduction, but also sustainable, high- impact improvements in performance.

The path to total ownership cost reduction begins with the continual identification, assessment, and communication of affordability and cost reduction initiatives. But the impact on the organizations strategy, culture, processes, people, leadership and systems must be considered in order to maintain agility through these cost reduction efforts.

Defense organizations that evaluate the impact of cost cutting initiatives across each aspect of their organization, while also considering the impact to each agility thread, are drastically more capable of remaining agile and less impacted by continual budget reductions.

Distribution Network Design

Some defense organizations have vast distribution networks that offer force projection capabilities unparalleled in history. However, these distribution networks still hold significant opportunity for cost reduction and increased agility. Timely and efficient movement of goods and equipment is critical to the overall mission of defense organizations.

In many cases however, the overall transportation methods and approaches used are not evaluated as a system or network, but rather as independent variables. Additionally, strong political and service parochialism combined with inadequate data integration have historically prevented many defense organizations from being able to fully optimize their distribution networks.

The burning platform of resource scarcity provides an opportunity to weaken the historically strong forces of political and parochial interests. Modern

technology can overcome the data and systems issues if defense organizations adapt their legacy practices and modernize their processes.

Defense organizations must holistically evaluate the underlying structure of their distribution networks and redesign them to attain optimized performance for both current and future missions. The best transport methods, warehouse locations, inventory management policies and industrial supply base should all be considered. If brought up to standards long in place in industry, defense distribution network redesign could deliver billions in savings and provide defense organizations with greater agility throughout their supply chain.

Burden Sharing

Sharing the costs of operations and assets among organizations through consortia and shared-service organizations is long-standing commercial practice. As the cost of defense rises, defense organizations are becoming increasingly creative and expanding beyond traditional national boundaries to identify and exploit burden-sharing opportunities. They are collaborating domestically and internationally in programs that provide increased capability at lower costs.

Burden sharing frees up resources for other requirements and also increases collaboration to generate more effective solutions. Additionally, this type of collaboration drives greater agility in force deployment through shared sustainment resources and interoperable technology and organizations.

As costs for defense systems continue to rise, greater burden sharing will become a necessity, particularly for smaller nations who have severe budget constraints and cannot afford the massive investments required for certain systems such as tactical fighter aircraft, aerial refueling, and ships/submarines. This demand will heighten the requirement for defense organizations to adapt, innovate and collaborate on a much more significant scale than ever before.

Thread	*Representative and Mutually Reinforcing Enablers – Supply Chain & Logistics*
Adaptability	• Supply Chain Optimization: by designing optimization activities that consider the entire asset portfolio, defense organizations can take a more long term view of the business and adjust for the cost cutting objectives that consistently threaten mission success.
Innovation	• Total Ownership Cost Reduction: this standard business practice has not been fully embraced by defense organizations. By taking a Total Ownership Cost approach, organizations can continue to improve customer support and deliver high quality services while still reducing costs.
Collaboration	• Burden Sharing: this strategy creates capitalizes on relationships between organizations – this allows for collaborative development of solutions and ideas as well as freeing up resources for other requirements. • Distribution Network Design: leverages open networks, suppliers and customers to achieve Smart innovation and design excellence.
Visibility	• Best Value Maintenance & Repair (M&R) Spend Planning: offers a macro-level portfolio planning approach to M&R spending that gives leadership a high level view of M&R expenditures and the pipeline of near and long term repair requirements. • Total Ownership Cost Reduction: offers a forensic approach to examining cost drivers and their link to services, enabling leaders to take difficult decisions quickly, with the support of key stakeholders, and a full understanding of risks and impacts.
Velocity	• Distribution Network Design: network design allows organizations to see a variety of different network models and the associated changes in delivery times and the costs. As these techniques become more robust, organizations can pivot to better distribution strategies by employing these modeling techniques. • Best Value Maintenance & Repair Planning: Integrates financial and cross functional planning processes to balance maintenance, cost and risk requirements in a more rapid, real-time structure.

Conclusion

This paper has identified several areas where cost-cutting, when properly structured, can lead to greater organizational agility.

Today, many defense organizations are taking short-term approaches to address the constraints associated with their current budgetary environments. Such actions include reducing staff without reducing missions, delaying necessary modernization and allowing outdated legacy systems and processes to continue. This reduces service levels across the board, but without a full appreciation of the impact on overall capability—and agility.

Eventually, this short-term approach will lead to long-term degradation of organizational performance at a time when national security challenges are growing, and diversifying, without pause. Cost reduction initiatives, therefore, must be sustainable and must consider a more radical transformation of the defense organization. They must focus on, complement, and strengthen the key threads of organizational agility if they are to have a net positive impact over a sustained period of time.

Strengthening the agility threads must be an aspiration, and a mandate, for all defense organizations if they are to be successful in protecting their citizens, and in contributing to a safer world.

This paper has identified several areas where cost-cutting, when properly structured, can lead to greater organizational agility. Successful defense organizations of the future will be those that pay as much attention to understanding the relationship between cost efficiency and agility as they do to simply measuring their budgets.

It should be understood that these concurrent objectives are eminently possible if the approaches outlined in this paper are followed. Defense leaders should embrace these approaches to meet the security challenges that continue to expand in both their complexity and potential to disrupt society.

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