



# **Army Lean Six Sigma Deployment Guidebook**

**Version 5.0  
14 January 2011**

## Forward

In my remarks in the Forward to Version 4.0 of the Lean Six Sigma (LSS) Deployment Guidebook, I mentioned that, to truly exploit the potential of the Lean Six Sigma methodology, we must develop and sustain the ability to consistently tackle enterprise level projects and achieve transformational results. Now, some 18 months later as we get ready to release Version 5 of the Guidebook, I can announce that we are making progress in continuing to develop the continuous process improvement (CPI) expertise needed to tackle these projects. However, rather than continue at the same pace and remain satisfied with progress to date, I encourage Senior leaders at the highest levels to become fully engaged in increasing the pool of certified LSS practitioners needed to support ARFORGEN projects. Doing so will help us meet the Secretary of Defense's objective to increase funding available for mission critical functions by gaining the broader savings and efficiencies that will be realized through the successful completion of enterprise-level projects.

Since the Army established the Lean Six Sigma (LSS) program back in 2006, over 7,000 candidates have completed LSS training. However, of the candidates who completed training, only 26% have satisfied the necessary requirements and become certified as either Green Belt, Black Belt or Master Black Belt practitioners.

In order to become self sustaining and achieve significant transformational outcomes, the Army must have a cadre of certified LSS practitioners available to work on high priority, core enterprise projects. Since these types of projects may require the deployment of multiple LSS belts to address complex issues, our challenge for the next phase of the program should be to increase the pool of certified belts available. To this end, Deployment Directors, Process Leads and Project Sponsors must become fully engaged in ensuring that LSS belt candidates are provided the support needed to complete assigned projects and become certified belt practitioners.

This Guidebook represents the approved HQDA guidance governing the LSS deployment within the Army. As we lead the LSS deployment for the remainder of 2010 and beyond, we must ensure that the Army is getting the maximum return on the significant investment being made in the program by increasing the pool of certified belt practitioners available to work on projects at both the organizational and enterprise level. I expect leaders and LSS practitioners at all levels to aggressively apply this guidance and build the LSS capabilities required to support the Army leadership's vision for institutional adaptation.



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### What's New in Version 5

Change Number	Description	Effective Date	Entered By
5.0	<p>Re-formatted the document and converted the Financial Management Guidance and Operational Metrics sections into separate documents.</p> <p>All documents are now available on LSS Training Portal on AKO and in the "Important Links" section of PowerSteering.</p>	15 Dec 10	J. Shelley
5.0	Modified MBB Certification Criteria section to incorporate the requirements for Enterprise Level MBB (EMBB) certification	15 Dec 10	L. Schreiber
5.0	Modified "Requesting Certification of Non-Army Certified Master Black Belts" to match the new MBB certification criteria for MBB and ELMBB	15 Dec 10	L. Schreiber
5.0	Created a standalone "Training Hosting Organization Responsibilities" checklist.	15 Dec 10	L. Schreiber
5.0	Operational Benefits template was created in PowerSteering and an Operational Benefits description was included in the Guidebook as a separate document for ease of reference.	15 Dec 10	S. Shapley
5.0	'Stalled & Delinquent Projects' - the frequency of the cycle process was changed to once per quarter.	15 Dec 10	S. Shapley
5.0	LEAP was revised for additional awards and annual timeline inputted.	15 Dec 10	S. Shapley
5.0	The process for Replicating projects was added to Section 3.	15 Dec 10	J. Shelley
5.0	Section 5 was updated to incorporate guidance for leveraging the available LSS/CPI talent to drive the SecDef savings efficiency and the Army Campaign Plan initiatives.	15 Dec 10	J. Shelley

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# Section 1. Strategic Context

## 1.1 Army Transformation

In response to the changing strategic environment and the increased operational pace that began in the late 1990s, the Army profoundly changed the way we generate combat power. We transformed from a tiered, garrison-based, static readiness model to a cyclical readiness model that is expeditionary and dynamic. In the new model, which we call the “Army Forces Generation” (ARFORGEN), (see Figure 1.1 below), units advance through a structured progression of increasing unit readiness over time, resulting in recurring and predictable periods of availability of trained and ready forces. As designed, the ARFORGEN process allows the synchronization of manning, equipping, resourcing, training and all supporting services and infrastructure based on the requirements identified by the Combatant Commanders.

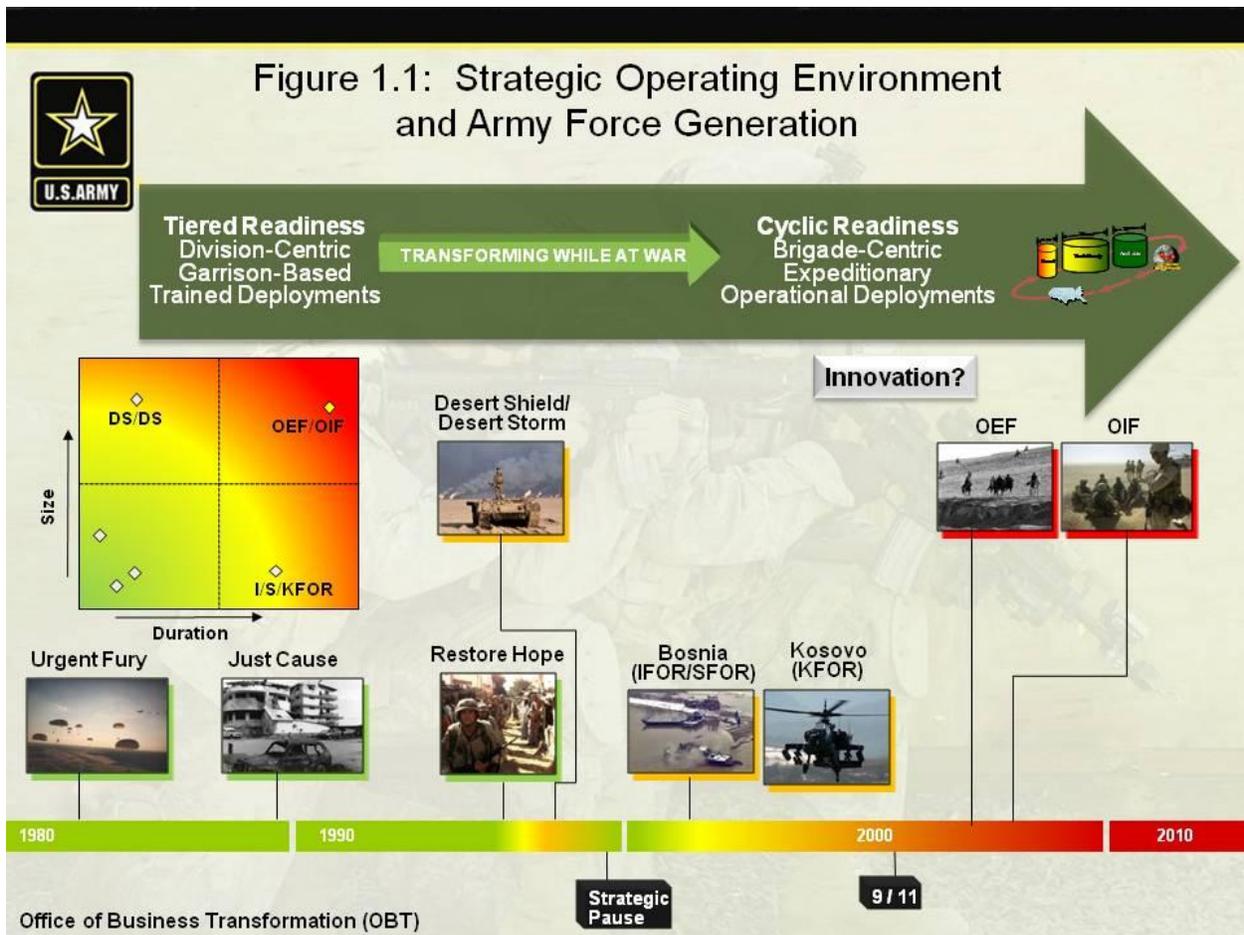


Figure 1.1

However, because too many of our internal processes and policies are still aligned with the old, tiered readiness model rather than the new ARFORGEN model, Army senior leadership has identified an additional transformation requirement. The new requirement calls for the Army's generating force institutions to better support the innovative and increasingly adaptive operational forces.

## 1.2 Additional Challenges and Uncertainties

Since we entered the era of continuous conflict and engagement that began in the late 1990s, the Army's operational requirements have outstripped our current resources and processes. As a result of extended deployments, readiness trends have declined, turbulence with the Force has been increased and the predictability usually afforded to Soldiers and their families has been reduced.

Providing required forces on a sustained basis at the current level and frequency is a tremendous challenge. In recent years, supplemental funding to support the war efforts and other contingencies has enabled us to address this challenge, at least in part. However, in today's economic environment we cannot expect supplemental funding to continue to be available at the same levels thereby exacerbating the resource challenges. Therefore, we must adapt the Army's culture, organizations, systems and processes to address these challenges and uncertainties. Failure to do so threatens the Army's ability to generate trained and ready forces and capabilities for the Combatant Commanders. To address the challenges of the emerging strategic environment, we must mitigate near-term risk and restore balance by 2011 through the following four imperatives: *Sustain*, *Prepare*, *RESET*, and *Transform*. (See Figure 1.2 below).

**Sustain.** To *sustain* our Soldiers, Families and Army Civilians in an era of persistent conflict, we must ensure that our Soldiers and their Families have the quality of life commensurate with the quality of their service and that we recruit and sustain a high-quality force.

**Prepare.** To *prepare* our Soldiers, units and equipment, we must maintain a high level of readiness for the current operational environments. *Prepare* also includes training Soldiers and units to conduct the full-spectrum of operations and providing them with the best equipment available. We will do this by implementing and adopting the ARFORGEN process.

**Reset.** To *RESET* our force, we must posture our Soldiers, units and equipment for future deployments and other contingencies. To accomplish this, we must revitalize our Soldiers and their Families by providing them the time and opportunity to recover. In addition, we must repair, replace and recapitalize our equipment and train Soldiers to accomplish the full spectrum of missions they will be expected to execute.

**Transform.** To *transform* our force, we must continuously improve our ability to meet the needs of the Combatant Commanders in a changing security environment by adapting our business processes to better support an expeditionary Army. In addition, we must develop agile and adaptive leaders ready for the full spectrum of operations.

To address these enduring themes, while transforming the Army, the Institutional Adaptation process, shown in Figure 1.2 below and outlined in Section 2 of this Guide, will be adopted.

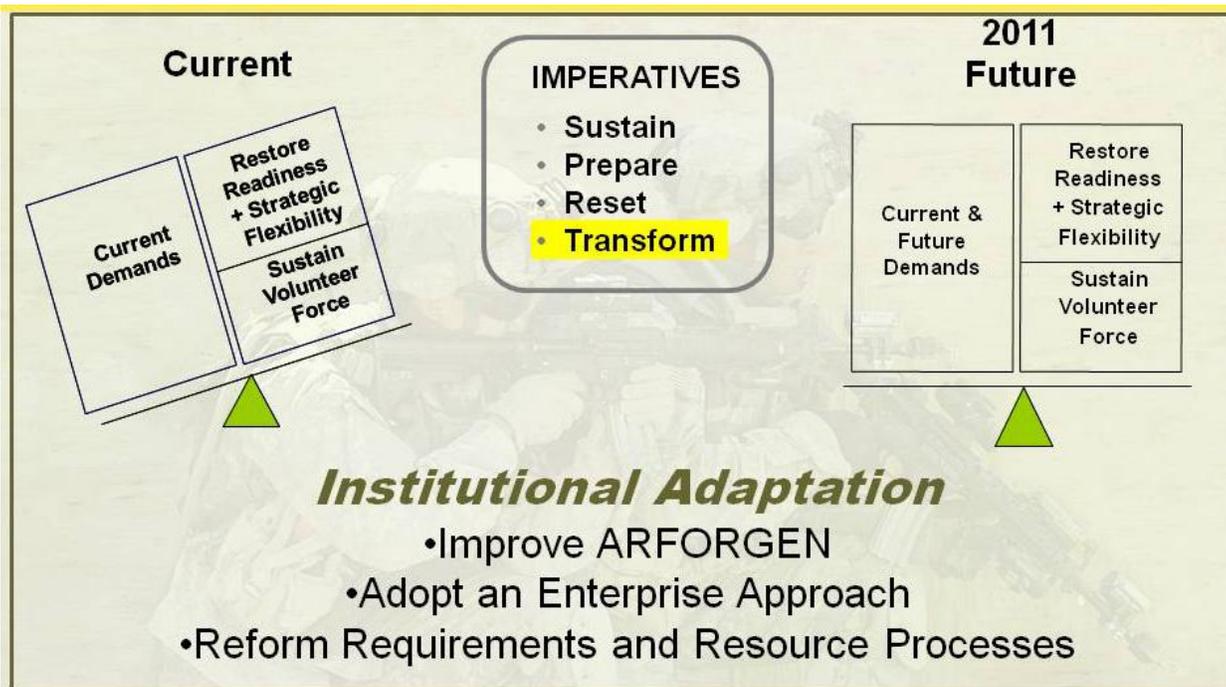


Figure 1.2

### 1.3 Opportunities

In 2008, the Secretary of the Army and Chief of Staff of the Army, consistent with the President's Management Agenda, as well as legislative and Department of Defense efforts, chartered the Enterprise Task Force (ETF), under the direction of the Chief Management Officer (CMO). The purpose of the ETF was to develop and oversee the implementation of efforts to instill an enterprise approach to advisory and decision making structures and processes within the Army.

In April, 2010, all functions of the ETF were consolidated and realigned as the Office of Business Transformation (OBT). The role of the OBT is to be the preeminent source of business process improvement and systems organization. In this role, the OBT is responsible for establishing an Integrated System for Army Business Operations that is designed to:

- Achieve a fully Integrated Management System
- Re-engineer Army business processes for efficiency and effectiveness
- Align management processes and programs to ARFORGEN

## **1.4 Purpose of the Lean Six Sigma (LSS) Deployment Guidebook**

This guidebook represents the approved Department of the Army guidance governing the LSS deployment within the Army. The vision for the Lean Six Sigma deployment has always been to develop a cadre of continuous process improvement experts who can routinely tackle enterprise level projects to achieve transformational results. As we lead the Lean Six Sigma deployment in 2010 and beyond, we are institutionalizing these capabilities at the organizational level to support the enterprise approach and institutional adaptation. It is recognized that as organizations chart their own way forward in the implementation of this program, they will team with other organizations and entities to advance their own continuous process improvement (CPI) capabilities. Nonetheless, those teaming arrangements and any associated contractual agreements must comply with the guidelines established herein. Experience has shown that failure to check and comply with this guidance prior to entering into agreements with other organizations or contractors has created significant problems for the respective organizations and the Army.

The LSS Program Management Office (PMO) will periodically release routine updates to this Guidebook. The current version will always be found in the Deployment Guidance section of the LSS Training page of the OSA-OBT Portal on AKO and in the “Important Links” section of PowerSteering.

## **Section 2. Leading Change in the Army**

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### **2.1 The Army's Approach to Institutional Adaptation**

The following three major elements have been identified as essential to successful institutional adaptation:

- First, the Army will improve how we execute our cyclical ARFORGEN model by revising the institutional support of the ARFORGEN process
- Second, the Army will adopt an enterprise approach by developing an Army-wide strategic management system that incorporates a refined governance process supported by an improved assessment architecture
- Third, the Army will reform its requirements and resource processes by establishing a more responsive and realistic requirements process and inculcating a cost culture that incentivizes good stewardship

The confluence of these three efforts is designed to improve both the effectiveness and efficiency of the Army and align our institutions to support the Army of the 21st Century and preserve our All Volunteer Force.

### **2.2 The Enterprise Concept**

The Army has established a set of tiered and aligned decision making structures and processes to support senior leadership in making informed decisions that will ensure the effective and efficient generation of trained and ready forces, while sustaining the All Volunteer Force. The collaboration, synchronization and transparency of effort generated by these structures and processes will assist the Army to think, act and operate as a single enterprise. These efforts are intended to:

- Leverage executive talent and capability by involving all of the Army's most senior institutional leaders in advising the Secretary of the Army and the Army Secretariat with regard to the management of this complex organization
- Establish inclusive and transparent forums to ensure that all relevant perspectives are considered and that well coordinated and synchronized courses of action are vetted and implemented
- Assign accountability for those outcomes that have significant and direct impact on the Army's ability to effectively and efficiently carry out its missions.
- Encourage decision-making at the most appropriate, effective and efficient level, consistent with law, applicable directives, regulations and orders

#### **2.2.1 Army Enterprise Board**

The first tier of these advisory and decision making structures and processes is the Army Enterprise Board (AEB) chaired by the Secretary of the Army. The AEB serves as the senior strategic-level

advisory body and advises the Secretary and the Chief Management Officer (CMO) on the pace and direction of Institutional Adaptation.

### **2.2.2 HQDA**

The second tier includes the existing advisory and decision making structures and processes within the Headquarters, Department of the Army (HQDA). These forums will review, identify and test opportunities for streamlined and improved policy development and implementation. The scope of their efforts is to ensure continued compliance with the law and to mitigate the risks of duplication of effort. These HQDA elements will identify opportunities for improvement in the current set of structures and processes in direct support of managing ARFORGEN and Army transformation.

### **2.2.3 Core Enterprise**

The third tier consists of the following four functionally aligned Core Enterprises (CEs) that are designed to achieve more collaboration and cross-communication across our command and control structures:

#### **2.2.3.1 Human Capital Enterprise (ASA(M&RA), G1)**

Responsible for effectively and efficiently recruiting, training, educating and developing Soldiers, Civilians and leaders for the Army and to design and integrate capabilities to meet current and future requirements of the Combatant Commanders.

#### **2.2.3.2 Materiel Enterprise (ASA(ALT), AMC)**

Responsible for strengthening stakeholder communication and collaboration in all phases of the materiel life cycle to insure innovative, effective, efficient and sustainable equipment to provide our warfighters with the decisive edge.

### 2.2.3.3 Readiness Core Enterprise

Responsible for synchronizing manning, materiel, services and infrastructure support to the Army's tactical units as they progress through the Reset and Train/Ready force pools of the ARFORGEN process shown in Figure 2.1 below.

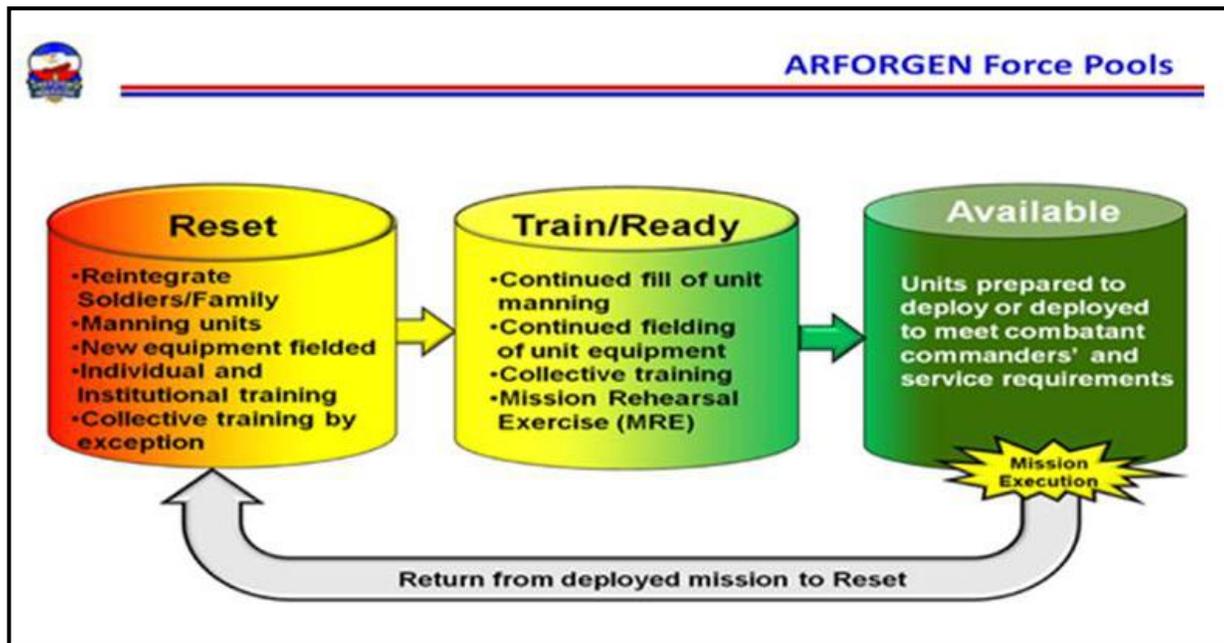


Figure 2.1

### 2.2.3.4 Services and Infrastructure Core Enterprise

Responsible for sustaining readiness and preserving the All-Volunteer Force by providing the most effective and efficient essential services and infrastructure, at the right place, at the right time.

### 2.2.3.5 Coordinating Instructions

In aligning into CEs, the Army does not intend to create silos since the work of one CE may directly impact another. In order to enhance integration and synchronization, the CEs must ensure cross-CE collaboration and cooperation. This will result in improved communication and development of innovative solutions and improvements. CEs are encouraged to resolve issues at their level. This vertical and horizontal integration will come through the clear understanding of the Army's core processes and the alignment of functional organizations to these processes.

Strategic issues affecting Army-wide policy, as well as those that cannot be resolved within the CEs, are submitted into HQDA forums or the AEB at the discretion of the CE leadership.

### **2.3 Lean Six Sigma Support to Institutional Adaptation**

Having conducted extensive research to find industry examples of successful business transformation initiatives that could work for the Army, a decision was made to adopt the Lean Six Sigma methodology. Since 2006, this methodology has been used by the Army to initiate wholesale change in the institutional culture, processes, policies and procedures. The intent of the Army continuous process improvement program, with Lean Six Sigma as the centerpiece, is to develop a cadre of continuous process improvement (CPI) experts who, once the deployment of these methodologies reaches the steady-state of self-sustainment, can routinely tackle enterprise level projects.

The Army's LSS program now comes under the purview of the Director, Office of Business Transformation as the Army recognizes that LSS will be one of the key tools in the effort to adapt the institution to better support ARFORGEN, incorporate an enterprise approach and revise the requirements process to meet the challenges of the dynamic strategic environment. As a result, we have the opportunity to integrate and exploit CPI/LSS capabilities to confront enterprise level problems and achieve transformational results across the Army.

Over the past couple of years, the LSS effort has produced significant results and developed substantial process improvement capabilities. We have seen successful projects completed at the larger organizational level, at the tactical unit/installation level and at the enterprise level.

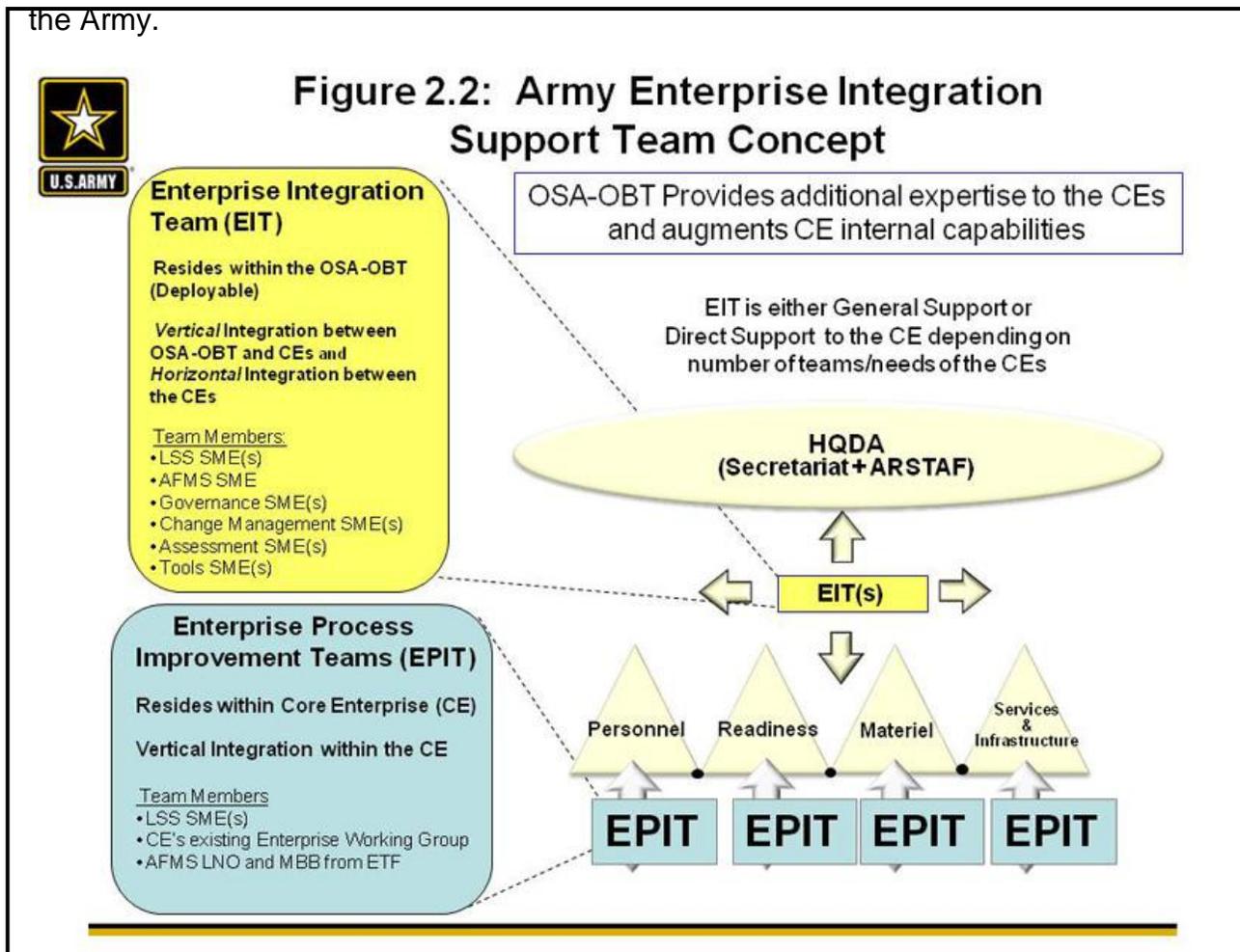
We have also applied lessons learned, updated our deployment maturity models, and identified the "steady-state" capabilities that will be required to support the enterprise approach for the long-term. In 2009, we institutionalized the CPI/LSS processes and capabilities required for 2010 and beyond. That institutionalization included developing adequate self-sustaining capabilities at the organizational level and permanently embedding programmatic functions within organizations of the institutional Army.

As the Army's enterprise approach matures, the senior leaders responsible for the four core enterprises will be looking to the organizations that have developed continuous process improvement and Lean Six Sigma capabilities for the skills and expertise to improve the processes within their respective operations. LSS Master Black Belts, Black Belts and Green Belts will be at the forefront of that effort. Each of the core enterprises produces a tangible output that can be measured in terms of time, cost, and/or quality. Accordingly, LSS methodologies employ empirically-based tools that focus on time and quality that can help us achieve the values-based decision making that we seek. The application of proven cost benefit analysis tools and techniques can help us achieve a cost culture that consistently strives to gain efficiency savings. For example, with each of the core enterprises, there are inherent functions and processes that must be analyzed and, in many cases, substantially improved to gain the efficiencies and improve the effectiveness of the outputs supporting the ARFORGEN process. Leaders will turn to the cadre of trained and motivated LSS practitioners to conduct the value stream mapping of the functions within each core enterprise. Those CPI/LSS experts will assist CE leaders in identifying where competing processes exist and determining how to prioritize projects that will improve the efficiency and effectiveness of the core enterprise. Once those

projects are identified and prioritized, core enterprise commanders will rely upon Master Black Belts and Black Belts to lead project teams to deliver results to improve and synchronize those processes.

In accordance with the concept depicted in Figure 2.2 below, LSS experts will also serve on Enterprise Process Improvement Teams (EPITs), where their expertise and project execution efforts will directly support vertical integration and life cycle management of the respective processes. Also, as shown in Figure 2.2, LSS experts will anchor a HQDA-level Enterprise-level Integration Team (EIT) that will provide general support and horizontal integration across the four core enterprises with value stream mapping, project prioritization and enterprise project execution. The Army Enterprise Board will call upon the best of the best LSS practitioners to tackle the toughest projects that impact

the Army.



**Figure 2.2**

Beyond the Army, the rest of the Department of Defense is responding to the requirements of Executive Order 13450 of 13 November 2007 and the National Defense Authorization Act of 2008. As the Office of the Secretary of Defense (OSD) became involved in the Continuous Process Improvement (CPI)/LSS efforts across the Department of Defense (DoD), a need for DoD-wide consistency was identified and an integration effort was launched. OSD identified four key focus

areas and organized teams to identify and address the top priorities relative to each. Those focus areas include:

Integration: The Army serves as the lead for the OSD Integration Team. The team's focus is on enterprise level collaboration to achieve exponential returns on investment (ROI) for DoD; transparency of CPI efforts and results; and enhanced capability to make data driven decisions across the DoD enterprise. The team is also working to promote access to DoD-wide CPI Points of Contact (POCs) and Subject Matter Experts (SMEs), while promoting a culture of CPI.

The Integration Team has identified core project deliverables and common DoD metrics and is working on a standard approach to encourage and enable collaboration and replication across DoD. The team has identified standard requirements for projects to be validated as DoD level replication/collaboration projects. The team has developed a Replication/Collaboration roadmap and is currently reviewing candidate projects from the Army and the Defense Finance and Accounting System (DFAS) that will be executed as part of a pilot program.

As a product of their efforts, the Integration Team released the New DoD CPI/Lean Six Sigma Community of Practice on 2 Jan 09. The following resources are available on the website:

- CPI resources, POCs, SMEs
- Components' project tracking tools (e.g. PowerSteering)
- Training opportunities
- Replication information/definitions/templates/opportunities
- Templates and tools
- Bi-monthly DoD data call briefs
- Team collaboration sites for each of the four focus area teams
- Defense Enterprise Performance Management Systems (DEPMS)

Consistency of Approach: The Consistency of Approach work stream is focused on the application and delivery of common CPI/LSS concepts, methodologies, tools and standards across DoD.

Strategic Alignment: This team is focused on the process of aligning goals, priorities, metrics and actions from top to bottom in the enterprise.

Human Capital: The HC team is working to institutionalize CPI personnel into the organizational infrastructure. The team has developed new, standardized position descriptions for GBs, BBs and MBBs. They are also working on replicating the Army's LSS awards program. The HC Team also continues to work on developing civilian Additional Skill Identifiers (ASI).

The Army leadership fielded significant resources for each focus area team and continues to work with the other Services and agencies to align and integrate the CPI/LSS efforts across the DoD. Since the Army LSS deployment is more mature and broadly deployed than most of the other DoD organizations, the Army has been able to provide tested solutions to many of the deliverables

required for the DoD effort. The Army's LSS Deployment Maturity Model, the Army's 28 Self-Sustaining Capabilities' and the Army Lean Six Sigma Excellence Awards Program (LEAP) all served as piloted, working solutions for the DoD CPI/LSS Deployment Project Teams. The Army continues to work in concert with the other Services and DoD Agencies to enable enterprise-wide capabilities to attack issues that cross Service and Agency boundaries.

## Section 3. Building and Sustaining LSS Capabilities

Much has been accomplished in applying LSS to improve Army institutional processes. However, there is still much to be done to build and sustain the capabilities that are required to institutionalize LSS to support institutional adaptation.

### 3.1 Evolution of the LSS Deployment Maturity Models

When the Army launched the LSS deployment, it relied upon commercial experiences, programs of instruction and maturity models. About a year into the full-scale deployment, the Army began to look for a different maturity model that would better meet our needs and explain things in language that Army commanders and LSS practitioners could understand. A model that relied heavily upon the Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTLM-PF) parameters was eventually adopted. Figure 3.1 depicts the current Army level LSS maturity model with the eight parameters depicted along the left, vertical axis.

		Steady-State "Vision" to support Enterprise Approach				
		Launch ~FY06	Build Momentum ~FY07	Accelerate Change ~FY08	Institutionalize ~FY09	Achieve Cultural Transformation ~FY10
<b>Mission/Customer Driven</b>	<b>Results</b>	Start-Up with Limited Returns	Positive ROI on Individual Projects	Positive ROI at Organizational and Army Levels	Best Practice Standards Met	Enhanced Strategic Capabilities; Resources Freed for Hi-Pri Op Needs
	<b>Strategy/Doctrine</b>	Vision Established with High Level Goals	Deployment Standards Established/Articulated	Strategy Links to Army Strategy Map and TAP	Enterprise Management; Early Innovation and Design Efforts	Fully Linked Strategy and Execution to Meet Mission/Customer Reqt
	<b>Organization</b>	Establishment of PMO, DD, and DA Structures	Schoolhouse Established With Contract Instructors	Growth of Internal Capabilities	Army Manned SH, LSS Structure Fully Operational	Process-Based, Service-Oriented Organizations
	<b>Training</b>	Initial LSS Leader Training	Full-Scale GB/BB Training and Certification	Ramp to Full Scale MBB Tng; Army Based POI In Schoolhouse	Full Scale MBB Tng; SAT Based Training; Army Manned SH	Reqt ID'd in TACITS; Schoolhouse Capacity Meets Requirements
	<b>Leadership</b>	Change Mandated By Few Visionaries	Initial Commitment; Burning Platforms at All Organizations	Strategic Leaders Involved in Personnel And Project Selection	"Tiered" Incentives; All Project Sponsors Are School-Trained	Leaders Committed & Empowered to Achieve Enterprise Management
	<b>Measurement, Analysis, &amp; Knowledge Mgmt</b>	Ad Hoc Tracking And Reporting	PowerSteering/ATRRS	Best Practices and Lessons Learned Shared Across the Army	Complete Integration With Army KM Systems	Fully Integrated Info Flow And Enterprise Management
	<b>People</b>	Driven Few	Volunteer Belt Candidates	Belt Candidates Selected From Top Performers	Cert Seen as Career Enhancing; Subsequent Projects Completed	LSS Integrated w/Award, Promotion, and Assignment Systems
	<b>Project Management</b>	Ad Hoc Selection of Low Hanging Fruit	Initial Prioritization of Projects and Resources	Systematic Selection IAW Army and Organizational Priorities	Transition To Portfolio Management	Process Management Supports Enterprise Management
SH= Schoolhouse	Level 1	Level 2	Level 3	Level 4	Level 5	

Figure 3.1

After identifying the phases of the deployment and applying key lessons learned during the initial phases of the deployment, the Army developed a "steady-state" vision of where we should be by 2010 in terms of each of the eight maturity model parameters to support the enterprise approach to

institutional adaptation. Once the Army identified this “steady-state” vision for each parameter, we mapped the logical intermediate steps along each parameter to get to the steady-state outcome.

Once the Army deployment maturity model was completed, we soon realized that some of the intermediate steps applied only to the Department of the Army level of analysis. Therefore, an organizational focus was applied and the Army developed a slightly modified version (see Figure 3.2 below) of the maturity model for the organizational level of the deployment.

		Steady-State “Vision” to support Enterprise Approach				
		Launch ~FY06	Build Momentum ~FY07	Accelerate Change ~FY08	Institutionalize ~FY09	Achieve Cultural Transformation ~FY10
<b>Mission/Customer Driven</b>	<b>Results</b>	Start-Up with Limited Returns	Positive ROI on Individual Projects	Positive ROI at Organizational Level	Best Practice Standards Met	Enhanced Strategic Capabilities; Resources Freed for Hi-Pri Op Needs
	<b>Strategy/Doctrine</b>	Vision Established with High Level Goals	Deployment Standards Established/Articulated	Tiered Strategy Links Army/Organizational Goals	Portfolio Management; Early Innovation/Design Efforts	Fully Linked Strategy and Execution to Meet Mission/Customer Reqt
	<b>Organization</b>	Establishment of Min LSS Support Structures	Establishment of LSS Governance Systems	Growth of Internal Capabilities	LSS Structure Fully Operational To Sustain Deployment	Process-Based, Service-Oriented Organizations
	<b>Training</b>	Initial LSS Leader Training	Full-Scale GB/BB Training and Certification	Ramp Up to Full Scale MBB Tn and Certification	Full Scale MBB Tng Supports Transition To Internal Capabilities	Tng Reqt ID'd & Tng Executed to Meet Self-Sufficiency Reqt
	<b>Leadership</b>	Change Mandated By Few Visionaries	Initial Commitment	Organizational Leaders Involved in Personnel And Project Selection	Leader Provide “Tiered” Incentives/Motivation	Leaders Committed & Empowered to Achieve Enterprise Management
	<b>Measurement, Analysis, &amp; Knowledge Mgmt</b>	Ad Hoc Tracking And Reporting	Nascent Tracking And Reporting Systems	Predictive Reporting; Communication of Success Stories	Real-Time Reporting And Info Sharing	Fully Integrated Info Flow and Enterprise Management
	<b>People</b>	Driven Few	Volunteer Belt Candidates	Belt Candidates Selected From Top Performers	Cert Seen as Career Enhancing; Subsequent Projects Completed	LSS Integrated w/Award, Promotion, and Assignment Systems
	<b>Project Management</b>	Ad Hoc Selection of Low Hanging Fruit	Initial Prioritization of Projects and Resources	Systematic Selection IAW Army and Organizational Priorities	Transition to Portfolio Management	Process Management Supports Enterprise Management
	Level 1	Level 2	Level 3	Level 4	Level 5	

Figure 3.2

## **3.2 Mission Analysis and Required Capabilities**

Using the respective maturity models, in 2008 the Army conducted a mission analysis to identify the required capabilities that would be needed in the “steady-state” to support the enterprise effort for the long-term. This mission analysis identified a total of 36 required capabilities, grouped into the eight maturity model parameters. The capabilities are listed in the “Required LSS Capabilities at Steady-State” document that can be found in the LSS Training Page on the Portal on AKO. A Critical Task Selection Board was convened to define the critical tasks required of each LSS role to support the required capabilities. This board consisted of all the major commands (including the Army Reserve and National Guard), subject matter experts and the LSS Program Management Office. This list of critical tasks helped us to systematically review, revise and validate our LSS programs of instruction (POI) using the Army’s Systems Approach to Training (SAT) process.

As the enterprise concept matures, LSS support to that concept will also evolve. New capabilities may be identified that will require adaptation of the LSS roles, tasks and/or programs of instruction. By following the SAT process, the Army established procedures to modify existing POIs and to develop POIs to meet new requirements as the deployment further matures. As an example, in 2010 the critical tasks for BB and GB roles were again reviewed by the task selection board moving two tasks from GB and BB to Sponsors and Executives and adjusting the taxonomy of 4 other tasks. This approach allows for the evolution of LSS capabilities while also providing consistency across the Army. All commands across the Army use the same core-based POI, testing and certification process, with the option of adding additional skills that may be needed within a specific command. This approach will continue to facilitate the ability of the Army to monitor any “gaps” between Army LSS capabilities and needs. Any such gaps can be referred to the Army’s Task Selection Board for appropriate action.

## **3.3 Guidance to Achieve “Self-Sustainment”**

In accordance with the LSS deployment maturity models, the Army institutionalized Lean Six Sigma in 2009 and is building the necessary self sustaining capabilities to support the enterprise approach to institutional adaptation. We must achieve the “steady-state” for these capabilities by FY1. Achieving this objective will require that leaders emphasize, and focus on, the following areas:

### **3.3.1 Embrace Enterprise Thinking and Cultural Change**

First and foremost, leaders at all levels must embrace enterprise thinking and adopt a what’s “good for the Army, good for the DoD and good for the nation” mindset. Occasionally, this may require sacrificing short-term for long-term benefits, or accepting changes that negatively impact one’s own organization to bring greater benefits to the enterprise.

### **3.3.2 Get Strategic Leaders Involved**

This is an obvious point, but the importance of Senior Leaders, including core enterprise leadership, being involved cannot be over-stated. Senior leaders at the highest levels must be engaged as sponsors on high-priority, core enterprise or ARFORGEN projects in order to achieve significant, transformational outcomes. Project Sponsor Workshops (PSWs) should be used to prepare these senior leaders to fulfill their responsibilities. Project Sponsors at all levels are key players and must provide the level of support needed by LSS practitioners to achieve results.

### **3.3.3 Build the Bench**

Long-term transformation requires building the bench of CPI/LSS expertise. We must continue to identify the most qualified and promising candidates and get them through the training and certification processes so that the Army can operate with its own cadre of experienced practitioners of change. Green Belts and Black Belts should be encouraged and incentivized to complete multiple projects to enhance their expertise. The best performers must be encouraged to become MBB certified practitioners so they can lead the Army’s LSS deployment and fulfill the critical roles in the enterprise approach described in Section 2. The critical roles are outlined in the “LSS Capabilities at Steady State” document in the Deployment Documents section of the Training Portal on AKO.

### **3.3.4 Commit Resources**

Enterprise level projects typically involve the commitment of significant resources, particularly the time of LSS practitioners, to achieve meaningful returns on investment. Enterprise-level projects may require the deployment of multiple LSS belts to address complex issues. We must get to the point where we can consistently deploy certified and experienced belts against Core Enterprises (CE) and the Army Enterprise Board (AEB) level projects. In the meantime, Deployment Directors, Process Owners, Project Sponsors and Master Black Belts must carefully monitor the activities of less experienced belt practitioners who are assigned to work on enterprise-level projects. Those leaders must remove barriers and provide the tools necessary, including appropriate coaching, to ensure those practitioners succeed, complete their assigned tasks/projects and meet the certification criteria specified in Section 7.

### **3.3.5 Manage the Enterprise Project Pipeline, Complete Projects and Demand Results**

With the adoption of the enterprise approach to institutional adaptation, the focus of the LSS effort is shifting to tackling projects identified by the CEs and the AEB. To achieve enterprise results, project

selection is crucial and the “pipeline” of projects must be managed so that projects are completed and high priority efforts receive the necessary resources. It is better to accomplish a smaller number of truly meaningful, enterprise level projects than numerous projects of lesser value. Maintaining the proper project pipeline and completing critical CE and AEB level projects, will be vital to the success of the enterprise approach.

An enterprise-level project is defined as a single DMAIC project (defined as a continuous action or operation), which utilizes the LSS methodology and could impact enterprise strategic objectives. It is a project whereby the process steps are conducted across several Army Service Component Commands within one or more Core Enterprise(s). The financial and/or operational benefits must directly link to the strategic goals of the enterprise and must encompass the complete process in all the Service Component Commands in which it is performed.

The project will be in PowerSteering with an assigned project LD number as a DMAIC gated project that has been reviewed against the ‘Project Charter 10-Point Checklist’. The Project Sponsor will be at the senior Army leadership level so that the required level of authority exists to ensure that the cross-functional recommendation(s) can be properly executed in an expeditious manner within all the affected Army Service Component Commands (rather than just one Service Command or installation). The solution is an ‘enterprise solution’; therefore enterprise compliance is necessary for success. Financial and/or operational results must encompass the complete process, in all the Service Commands in which it is performed.

**Note:** A link to the ‘Project Charter 10-Point Checklist’ is available in the Deployment Documents section of the LSS Training page of the OSA-OBT Portal on AKO.

### 3.3.6 Identify and Implement Replication of Valid Projects

Since the LSS program was first launched back in FY06, the skills and expertise of the practitioners certified through the LSS training program have increased significantly. The increase in skill levels and expertise has also brought a marked increase in the complexity and quality of the projects developed. In addition, the return on investment rate for Army LSS projects has been extremely high.

In order to maximize the impact of the processes that these projects improved and to leverage the results throughout the Army or other DoD elements, the LSS PMO developed a process for replicating completed projects.

Using this process, completed projects that contain results that could be adopted by one or more additional Army organizations or DoD elements with a minimal amount of effort vs. benefit, can be submitted for replication through the Process Owner. Projects submitted for replication should be of the type that will ultimately provide an additional return on investment to the Army and, potentially, the DoD.

The replication process developed for Army LSS projects contains the following levels of approval:

#### 1. Tier 1: Nomination for Replication Project/Best Practice

This project has been approved for replication by the Process Owner. The project meets all the minimum deliverables of an enterprise level replication project to include:

- Project Charter
- High level Process Map, preferably Value Stream Map
- FMEA and/or Cause and Effect Diagram
- Demonstrated use of one or more Advanced Statistical Tools (e.g., ANOVA)
- Solution Development/Identification Process
- Pilot Plan and Results
- Implementation Plan
- Control Plan and Training Plan
- Demonstrated Quality, Cost and/or Speed improvements (i.e., SQL, ROI/Savings, PLT, PCE, etc.), with Resource Management review and approval

## 2. Tier 2: Beta Tested Replication Project/Best Practice

Once a project's solution(s) has successfully completed one replication (beta test) and produced either one or both financial/operational benefits\*, then the project is upgraded to Tier 2.

3. Once a project's solution(s) has been successfully replicated in at least two other organizations (beta test plus one more) within the Army and produced either one or both financial/operational benefits\* and is approved to be forwarded to DoD—level for replication consideration across DoD, then the project is upgraded to Tier 3.

## 4. Tier 4: Approved/Completed DoD-level Replication Project/Best Practice.

Once the project's solution(s) has been successfully replicated across at least 2 DoD Components (beta-test plus one more) with a demonstration of either one or both financial/operational benefits\*, then the project is upgraded to Tier 4.

\*As with all projects, a Resource Manager must review and approve all operational and financial benefits.

### **3.3.7 Engage LSS Practitioners to drive SecDef and ACP Initiatives**

Since the Army Lean Six Sigma program was first launched in FY06 to the beginning of FY11, a total of 5438 Green Belt, 2259 Black Belt and 169 Master Black Belt candidates have been trained. Of the candidates trained, 1552 Green Belt, 625 Black Belt and 49 Master Black Belts have been certified. This means that senior leaders now have access to a cadre of experts with the analytical, cost benefit analysis and process mapping skills needed to effectively lead enterprise-level projects to help the Army meet the efficiency initiative goals set by the Secretary of Defense in June of FY10.

Since it was first implemented back in FY06, LSS methodology has proven to be an effective methodology for helping Army organizations achieve efficiencies and savings. To help the Army achieve goals established by the Secretary of Defense, the Secretary of the Army has tasked leaders to first focus their efforts on targeting waste, unnecessary duplication and business practices within their domains. Since LSS projects realized a financial benefit of \$4.29B for the Army, in FY10 alone, senior leaders should leverage the capability of this proven methodology to achieve the savings efficiency targets while establishing an enduring capability to reduce duplication, overhead and excess.

In addition, leaders are encouraged to use the trained and experienced LSS practitioners to conduct a cost benefit analysis and develop the process maps and gap analysis needed to ensure that efficiency savings are achieved and that their processes are strategically aligned to the highest priorities of the Army as contained in the Army Campaign Plan (ACP).

### 3.3.8 Track Projects and Validate Results

PowerSteering (PS), a web-based project portfolio management solution, is the system that the Army uses to track solutions and financial benefits for all continuous process improvement (CPI)/Lean Six Sigma (LSS) projects. PS is an easy-to-use software that provides senior leaders, CPI/LSS deployment directors, process owners and project managers a real time visibility, strategy alignment and CPI/LSS belt practitioner effectiveness to drive strategy and accelerate results (financial and operations) across the Army. PS can manage target financial benefits/savings, support the Army leaders and practitioners as users and track all the Army projects. This capability allows Army leaders to align local and enterprise-level projects and initiatives within their strategic goals and objectives. By providing "line-of-sight" visibility into the portfolios, Commanders, Senior Leaders, Deployment Directors, Process Owners and Project Managers have the information they need to make more effective project investment decisions, reduce costs and prioritize projects. Risks are identified and issues can be managed in real-time. The Army also uses PowerSteering to track operational and financial benefits derived from continuous process improvement and Lean Six Sigma projects.

The LSS Program Manager asked the Army Audit Agency (AAA) to conduct "attestation reviews" in 2007 and 2008 to determine whether the benefit calculations entered into PowerSteering were reasonable and reliable. The reviews identified three areas where we needed to improve our ability to accurately capture benefits data. First, we had to emphasize the critical role that the Resource Manager (RM) plays in developing cost estimates to support each project team when financial benefits are involved. Second, we needed to revise portions of this guidebook in order to make the guidance more clear and complete. Third, and most importantly, we had to get more LSS practitioners and RMs to understand and comply with the published guidance. To address these issues, we are relying on Deployment Directors, Deputy Deployment Directors, Deployment Advisors and Project Sponsors to ensure that their project teams – in particular the RMs and belts on those teams – have read the guidance provided in the Financial Benefits Guidance document. To ensure that training on the financial aspects of process improvement is readily available to RMs, belts and other team members, we have made the training available in an online format. These steps, and others outlined in our LSS training, will help ensure the Army has credible benefits data associated with its LSS deployment.

Following is a summary of the specific lessons learned from the 2008 AAA review:

- **Lesson Learned No. 1:** A Resource Manager must support each process improvement effort and be involved from the very beginning
- **Lesson Learned No. 2:** Financial benefits must be based on a real process improvement
- **Lesson Learned No. 3:** Financial benefits guidance applies to all process improvement efforts

- **Lesson Learned No. 4:** A business process and its costs extend over time
- **Lesson Learned No. 5:** There are few, if any, one-time process improvements
- **Lesson Learned No. 6:** Financial estimates should be adjusted when facts or assumptions change
- **Lesson Learned No. 7:** “Revenue generation” means that the Army will receive additional money

**Summary:** The financial benefits of the Army LSS program, as reported in PowerSteering, will be used to support decision-making and to report the success of the Army’s business transformation efforts. Since the credibility of the Army is at stake, it is important for the Army to have accurate, reliable cost estimates. To achieve this goal, all project teams must follow the guidance provided in the Financial Benefits Guidance document. A link to the document is available in the LSS Deployment Documents section of the LSS Training Portal on AKO and in the “Important Links” tab in PowerSteering. Following the guidance provided in the Financial Benefits Guidance document will insure that we really have learned from the feedback provided in the 2008 AAA review. If there are questions about the financial management aspects of LSS, RMs and other team members can forward them to: [BTFFinancial@conus.army.mil](mailto:BTFFinancial@conus.army.mil).

### **3.3.9 Develop the Next Generation of Metrics**

As noted in Section 3.3.8, the Army must do a better job of tracking and validating project benefits. The Army established the Financial Benefits Council to address the concerns described above. One of the major responsibilities of the council is to ensure that the data the Army reports to internal and external audiences is accurate and reliable. The council is expanding its scope to begin designing the next generation of benefits metrics that will truly support the Future Years, Defense Programs, Planning & Programming, Budgeting & Execution (DP/PPBE) processes. In particular, we must develop metrics that will support POM 12-17 decisions and the identification, prioritization, selection and synchronization of future enterprise-level projects.

### **3.3.10 Enforce High Standards**

The enforcement of high standards in training, certification and project completion is essential to developing LSS practitioners who can effectively apply LSS methodologies across the enterprise. The “Systems Approach to Training” (SAT) is a rigorous process that sets the baseline for the enforcement of standards in our LSS courses. High certification standards are also essential. For example, LSS MBBs must be able to successfully demonstrate their proficiency at performing multiple roles. The LSS certification criteria are outlined in section 7.0 of this Guide. Project execution and completion must also be carefully monitored to maintain program velocity and achieve outstanding results.

### **3.3.11 Look for Opportunities Beyond DMAIC**

As their LSS capabilities mature, organizations may find that they need to do more than just improve existing processes and must replace completely broken processes or design entirely new ones. In these circumstances, the DMAIC (Define – Measure – Analyze – Improve – Control) methodology may not be sufficient and other design/innovation techniques will be required, such as Design for Lean Six Sigma (DfLSS). This methodology follows a DMEDI (Design – Measure – Explore – Develop – Implement) approach to design, assess and build entirely new processes. In accordance with the maturity models discussed in Section 3.1, organizations should assess their requirements for new design/innovation efforts and weigh those requirements against their LSS maturity level to determine the right time to begin exploring these advanced approaches.

### 3.3.12 Get the Word Out

Achieving organizational buy-in, and overcoming preconceived biases and prejudices, is a never-ending fight. LSS leaders must actively seek opportunities to articulate success stories throughout the Army and within the academic, political and commercial communities. LSS leaders at all levels must execute a strategic communications strategy that generates support and commitment among all stakeholders who can impact, or will be impacted by, the transformation of the Army's generating force. Army organizations, with their local Public Affairs Officers (PAOs), must execute an organizational level communications plan aimed at generating support and commitment among their constituents. Communications at this level includes:

- Identifying target audiences and analyzing their commitment to institutional adaptation and the LSS deployment
- Identifying overarching themes, according to the needs of their audiences
- Aligning events and communications opportunities with media, resources and themes in a coherent plan to communicate regularly with those audiences

Deployment Directors must ensure that all success stories released for public dissemination have had the financial benefits validated by an organizational Resource Manager and operational benefits validated by an MBB. The LSS PMO will ensure that any success stories published at the Army level will have the financial benefits validated by a Resource Manager and operational benefits validated by the PMO MBB. Additionally, the PMO will have success stories approved for release by the OSA-OBT.

Sources for Army-level over-arching themes and supporting messages, tips, and techniques for strategic communication may be found in the following sites and documents:

- Army Posture Statement 2008 at <http://www.army.mil/aps/08/>
- Public Affairs (OCPA) Center on AKO

## **Section 4. Leadership Roles and Responsibilities**

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### **4.1 HQDA Leadership**

The Army LSS PMO currently provides guidance; develops policy; validates and resources requirements; and serves as the central point of contact within the Department of the Army for the LSS initiative. These PMO functions can be grouped into three main sub-categories:

- Common Service Provider (CSP) functions (i.e. day-to-day execution and coordination of LSS tools and services)
- Process Owner (FP) responsibilities (i.e. the development, writing, updating and dissemination of doctrine and policy)
- Schoolhouse (SH) functions (i.e. training and training support)

### **4.2 Migration of the LSS PMO Functions to the Institutional Army**

Since the inception of the LSS program, the PMO has functioned at HQDA and the major functions of CSP, FP and SH have evolved to support the development of long-term capabilities at the organizational level. It has always been the Army's plan, once these long-term organizational capabilities have been established, to permanently transfer these functions and responsibilities from HQDA and embed them into other organizations of the Institutional Army. Figure 4.1 below illustrates the LSS end state. The PMO mission and major functions of CSP, FP and SH will be fully migrated to the Institutional Army and will support the Army's Chief Management Officer (CMO). Additionally, options are being considered to embed the Process Owner and the School House into the same organization to create an LSS Center of Excellence (COE) that could further enhance the development of LSS capabilities and doctrine for the future.

The LSS PMO is currently working with the Army leadership and key stakeholders to determine the best course of action as to what organizations will assume the PMO's responsibilities described above. The LSS PMO will work closely with selected stakeholders during the transition to ensure transparency to the customers (Army commands and organizations) and a smooth handoff to the new owning organizations.

Figure 4.1: PMO Transition End State

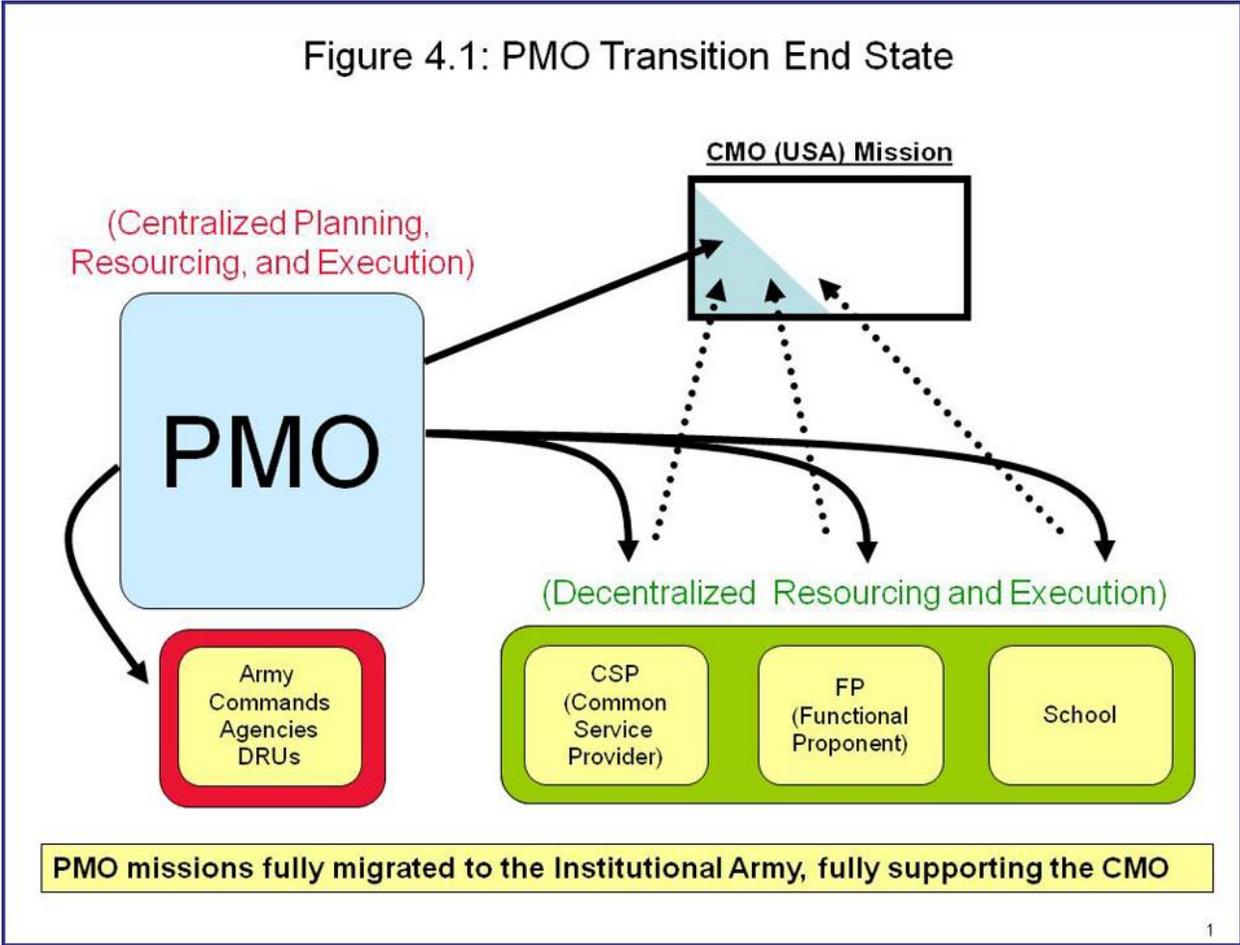


Figure 4.1

### 4.3 LSS Leadership at the Organizational Level

Figure 4.2 below illustrates the key LSS roles at the organizational level. For LSS project efforts, Black Belts and Master Black Belts report to the Deployment Director who, in turn, reports to the Commanding General, Director or Staff Director. The organization owns these resources and is accountable for project results and the returns on investment.

**NOTE:** The organizational structure depicted here is very generic and does not account for all possible participants or reporting chains.

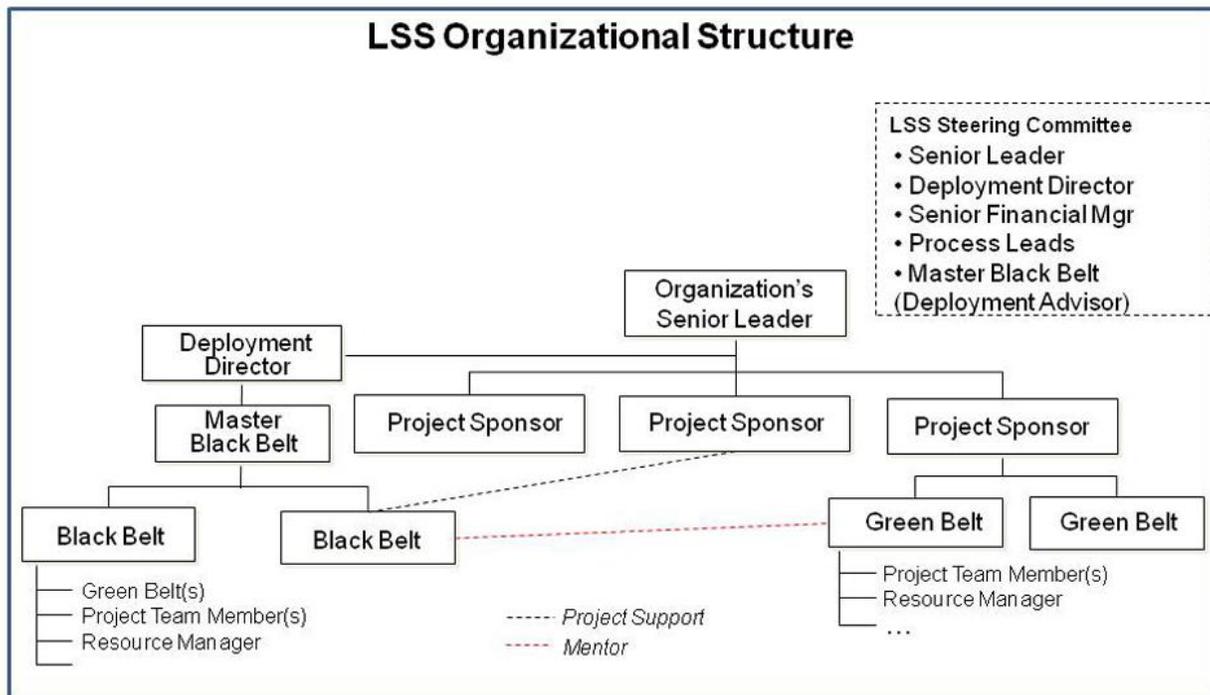


Figure 4.2

#### 4.4 Key LSS Roles and Responsibilities:

The responsibilities of each of the individuals depicted in Figure 4.2 above are summarized in Figure 4.3 below and explained in detail in sections 4.4.1 to 4.4.9 of this Guide.

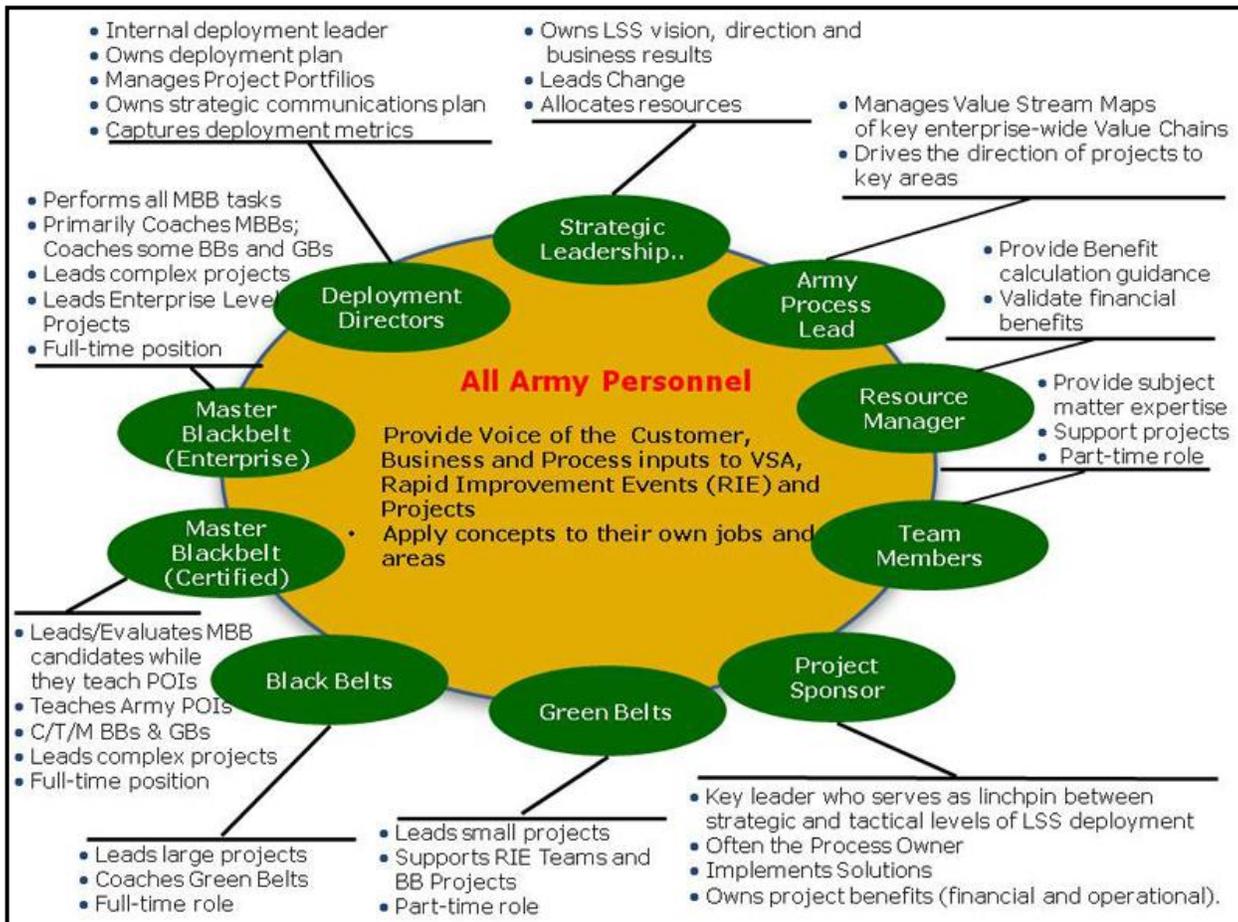


Figure 4.3

#### 4.4.1 Organizational Strategic Leadership

Engaged strategic leadership is critical to the successful implementation of LSS and management of LSS activities. As the owner of LSS, the strategic leadership must:

- Establish and communicate the organization's strategic objectives and communicate how LSS supports those objectives
- Inspire, own, drive and provide resources (manpower, funding and time) to support the successful deployment of LSS within the organization
- Lead by example with a clear and consistent message communicating the need to establish LSS as a standard operating procedure throughout the organization
- Hold their organization accountable for the success of LSS
- Ensure consistency and continuity of efforts
- Demonstrate commitment to LSS by selecting the best people as Master Black Belts, Black Belts and Green Belts and assigning them to solve the biggest problems
- Identify and prioritize the greatest opportunities across the organization, particularly as they are tied to the organization's goals, the Army Strategy and ARFORGEN
- Adopt proven and reliable cost benefit analysis tools and techniques to validate those continuous process improvement efforts that will help the Army achieve the savings initiatives goals established by the Secretary of Defense and the Secretary of the Army
- Enforce process discipline and rigor by requiring regular reviews of LSS performance metrics.
- Showcase and reward successful project team efforts

A major facet of executive engagement and involvement is the establishment of a Lean Six Sigma Steering Committee. This committee generally consists of the organization's senior leader or his/her deputy, the Deployment Director, a senior Resource Manager, critical Process Owners and the Master Black Belt Deployment Advisor. The purpose of this committee is to provide oversight and management of the LSS initiative and to champion the implementation of LSS activities and policies throughout the organization. The Steering Committee's specific functions include:

- Creating and guiding a comprehensive strategic plan based on the leadership's priorities and strategic focus areas
- Deploying organic MBBs to oversee LSS efforts within the strategic focus areas
- Initiating Project Identification and Selection Workshops (PISW) to identify specific project opportunities within each strategic focus area
- Identifying and prioritizing the project "pipeline" that emerges from each PISW
- Reviewing and approving solutions derived by the teams dealing with strategic projects
- Overseeing LSS deployment and implementation efforts
- Assessing control metrics (output metrics) for strategic level projects for a minimum of six months after project completion to ensure that performance improvement gains are maintained

#### 4.4.2 Deployment Director

The Deployment Director is a senior leader within the organization who reports directly to the commanding general, director or staff director. He/she develops the policies, objectives, plans and procedures to integrate LSS into the organization's strategic priorities and operations. Additionally, the Deployment Director ensures that the LSS efforts meet the guidelines, criteria and metrics established by the senior leadership and the LSS Steering Committee. Specifically, the Deployment Director must:

- Oversee the deployment of MBBs to lead LSS efforts within the strategic focus areas identified by the organizational leadership and the LSS Steering Committee
- Oversee the strategic level PISWs to assist the Steering Committee in identifying specific project opportunities within each strategic focus area
- Manage the "pipeline" of projects that emerge from the PISWs to include assigning and prioritizing project teams and ensuring higher priority, strategically aligned projects get first priority access to limited MBB, BB and GB resources
- Allocate resources to the project teams, based upon senior leadership and steering committee guidance, and help remove barriers to successful project completion
- Review and approve solutions derived by the project teams
- Ensure that Process Owners and/or Project Sponsors assess control metrics (output metrics) for a minimum of six months after project completion to ensure that performance improvement gains are maintained
- Establish a process to systematically share best practices and to replicate successful project outcomes, while avoiding unnecessary duplication of efforts
- Recruit Master Black Belts and Black Belts into the LSS infrastructure
- Ensure that the organization has an established procedure for assigning a Resource Manager to each project team
- In accordance with the guidance provided in Section 3.3.12, coordinate strategic communications efforts with key stakeholders on behalf of the organization
- Ensure two-way communications throughout the organization concerning LSS initiatives
- Track overall progress of the LSS deployment and provide the organization's leadership with feedback and recommend appropriate corrective action, as necessary

Table 4.1 below provides suggested routine reviews for the Deployment Director and the organization to assess the status of the deployment.

<b>Suggested Organizational LSS Status Reviews</b>					
The scale of the implementation, i.e. the size of the organization, the number of projects, the number of active LSS projects, etc. should be considered when deciding what items to include in each agenda. The example here would accommodate a very large organization with many active projects.					
<b>Meeting</b>	<b>Audience</b>	<b>Responsible Organizer</b>	<b>Frequency</b>	<b>Media</b>	<b>Agenda/Details</b>
Monthly LSS Steering Committee Meeting	LSS Steering Committee, MBBs, Process Owners, Project Sponsors, Organizational Staff Directors	Deployment Directors & Deputies (for Steering Committee Chair)	Monthly	PowerSteering	<ol style="list-style-type: none"> <li>1. Review strategic focus areas and links to Army Strategy.</li> <li>2. MBBs, Process Owners/Project Sponsors brief high priority projects related to strategic focus areas.</li> <li>3. Review recent PISWs and update prioritized project "pipeline"</li> <li>4. Steering Committee issues guidance on prioritizing resources to high priority projects.</li> <li>5. Steering Committee issues any other strategic guidance concerning LSS deployment.</li> </ol>
Weekly Update	Deployment Director, MBBs, BBs, Process Owners, Project Sponsors	Deputy Deployment Director (with MBBs) to be presented to Deployment Director	Weekly	PowerSteering	<ol style="list-style-type: none"> <li>1. Review strategic focus areas.</li> <li>2. Review status of projects, emphasizing high priority projects related to strategic focus areas.</li> <li>3. Review recent PISWs and updated "pipeline"</li> <li>4. Discuss problem areas and solutions.</li> <li>5. Discuss deployment maturity and strategies to increase capabilities.</li> <li>6. Identify issues to raise to higher levels.</li> </ol>
Project Tollgates	MBBs, BBs, GBs, Process Owners, Project Sponsors, and team members, including RM	Project Belt (to Project Sponsor)	At each DMAIC phase	PowerSteering	<ol style="list-style-type: none"> <li>1. Discuss project status, findings, recommendations and problem areas requiring Process Owner and/or Project Sponsor attention.</li> <li>2. Obtain approval to move to next phase.</li> <li>3. Get RM to validate stated financial benefits.</li> </ol>

**Table 4.1**

#### **4.4.2.1 Suggested Deployment Director Professional/Educational Background:**

Ideally, a Deployment Director possesses the following professional and educational background:

- Experience as a senior leader within the organization, with direct access to the commander or agency head
- Master's degree, preferably in Business, Engineering, or a technical/scientific subject (or equivalent work experience)
- A minimum of 10 years of professional work experience, ideally in leadership or management capacities
- 3-5 years of experience in process improvement (preferably as an LSS BB or MBB) with prior supervisory or personnel management responsibility
- Solid project management, team leadership and group facilitation skills.
- Sound knowledge of other key functions that provide critical inputs (e.g., Resource Management (to include the Planning, Programming, Budgeting and Execution (PPBE) process), Procurement, Contracting, Engineering, Supply Chain/Logistics, Operations, ARFORGEN, etc)
- Broad understanding of contemporary quality theory and a working familiarity with improvement tools and statistical analysis

#### **4.4.3 Project Sponsor**

The Project Sponsor is the key linchpin in the LSS deployment who integrates the “strategic” guidance and direction provided by the senior leadership with the “tactical” efforts of the project teams. The Project Sponsor is the organizational leader who owns the process and resources under consideration. He/she has the responsibility to ensure that the project team understands the expectations of the leadership and is responsible for delivering project results that meet the strategic objectives of the organization. This role cannot be delegated. Specific responsibilities of the Project Sponsor include:

- Working with the belt to determine the baseline data/status of the process being examined and developing specific metrics/targets for improvement
- Identifying organizational gaps/opportunities and nominating potential projects to the organization senior leadership or steering committee for prioritization in the organization's strategic “pipeline”
- Writing project charters that provide initial guidance to project teams
- Designating Black Belts or Green Belts to lead projects and assigning team members based upon Steering Committee priorities and guidance
- Ensuring that the organization's senior Resource Manager assigns a Resource Manager to the project team
- Providing resources and guidance to the team to ensure project success

- Ensuring that belt candidates, prior to participating in LSS training, are assigned projects with valid charters that they will work on during the training
- Removing or mitigating any obstacles that the team may encounter
- Overseeing and approving the tollgate reviews. As the gate approver, the Project Sponsor decides whether the team is ready to move to the next DMAIC phase
- Reviewing and validating, with the Resource Manager and MBB mentor, the benefit estimates at the Measure and Control DMAIC phases
- Reviewing and approving solutions derived by the project teams
- Recognizing and rewarding team successes
- Capturing and sustaining the improvement results, to include assessing control metrics (output metrics) for a minimum of six months after project completion to ensure that performance improvement gains are maintained
- Supporting the strategic communications efforts of the organization.

#### **4.4.4 Resource Manager**

The Deployment Director, Process Owner/Project Sponsor and assigned belts must ensure a Resource Manager is assigned to each LSS project team. While he/she may not attend team meetings on a regular basis, the RM is responsible for developing the financial benefit estimates for the project. The RM must approve financial benefit estimates at the Measure and Control Tollgates. Before a project can be completed and closed, the Resource Manager, in conjunction with the Project Sponsor, must validate and sign off on the final financial benefit estimate during the Control phase as a gate approver in PowerSteering. For a more complete discussion of the roles of the Resource Manager, see the Financial Benefits Guidance manual.

#### **4.4.5 Process Owners**

Process owners may exist at the Army or the organizational level. They manage the value stream maps of key enterprise-wide functions in the organization's strategic focus and construct. In addition, they synchronize the activities of projects being executed within their organization's strategic value chain. Process owners typically share many responsibilities with Project Sponsors, but are additionally responsible for removing barriers and working issues that span across organizational functions or "stove-pipes." Their responsibilities include:

- Assisting the belt in determining the baseline data/status of the process being examined and developing specific metrics/targets for improvement
- Assisting in the identification of organizational gaps/opportunities and recommending potential projects to the organization senior leadership or steering committee for prioritization in the organization's strategic "pipeline"
- Assisting the Project Sponsor in writing project charters that provide initial guidance to project teams
- Providing resources and guidance to the team to ensure project success

- Removing or mitigating any obstacles that the team may encounter
- Assisting the Project Sponsor in reviewing and validating, with the Resource Manager and MBB mentor, the benefit estimates at the appropriate DMAIC phases (see Financial and Operational Benefits Guidance documents)  
**Note:** These documents are available on the LSS Training Portal on AKO
- Reviewing and approving solutions derived by the project teams, in conjunction with the Project Sponsor
- Recognizing and rewarding team successes, in conjunction with the Project Sponsor
- Capturing and sustaining the improvement results, to include assessing control metrics (output metrics) for a minimum of six months after project completion to ensure that performance improvement gains are maintained
- Supporting the strategic communications efforts of the organization

#### 4.4.6 Master Black Belt (MBB)

The Lean Six Sigma Master Black Belt is a full-time dedicated position reporting to the Deployment Director (or in some cases, to the Process Owner). The MBB is the organization's "in house" expert for disseminating knowledge and training/coaching Black Belts (and Green Belts when appropriate). Additionally, the Master Black Belt takes a direct leadership role in leading complex, enterprise-wide or strategic-level LSS projects. Only Army certified MBBs are eligible to teach the Army LSS programs of instruction.

##### 4.4.6.1 Master Black Belt Functions

- **Leading Transformational Change.** The MBB is the leading catalyst for continuous process improvement within the organization. The MBB, in coordination with Senior Leadership and the Deployment Director, is responsible for driving the long-range vision for LSS throughout the organization.
- **Major Project Leadership.** The MBB leads large-scale projects and complex projects that involve multiple subordinate elements within the organization. He/she must coordinate these projects with the Deployment Director and the various Process Owners/Project Sponsors. MBB leadership includes identifying opportunities; defining and justifying projects; negotiating resources; launching project teams; managing team activities; training, coaching and mentoring of belts assigned to teams; leading teams to execute projects; tracking project status and results; anticipating and removing barriers; and developing team members. In those circumstances where the MBB is leading a project, he/she is responsible for producing results in conjunction with the Project Sponsors.
- **Technical Leadership.** The MBB provides direction as a subject matter expert on the application of LSS methods to the organization's senior leadership, Deployment Director, Process Owners, Project Sponsors and belts. He/she challenges Black Belts on their technical application of problem-solving tools to develop their skills. The MBB assists belts in preparing for tollgate reviews and participates in those reviews, when possible. The MBB consults with the other MBBs concerning managing change and the activities of the larger (Army-wide) Lean Six Sigma deployment.

- Recruiting, Coaching and Training of Team Members. The MBB assists the organization's Deployment Director in identifying potential Black Belts and Green Belts and recruiting team members into the LSS infrastructure. He/she provides the necessary training and coaching to team members to spread the understanding of LSS tools and methods.
- Communications. The MBB assists the Deployment Director, Process Owners, Project Sponsors and belts in executing the strategic communications plan for the organization. The MBB also ensures two-way open communication throughout the organization regarding LSS activities. This includes keeping the Deployment Director informed of program status and ensuring the coordination of activities with Process Owners, Project Sponsors and belts. The MBB must ensure best practices are communicated across the organization.
- Measuring Results. The MBB provides the Deployment Director with project results and recommends corrective action, as required, when overall results do not meet expectations. The MBB, together with the Resource Manager, is also responsible for validating the operational benefits of all projects before completion of the Control phase.
- Enterprise Level MBBs lead enterprise-level projects whereby the process steps are conducted across several Army Component Commands within one or more Core Enterprises. The financial and/or operational benefits achieved by these projects must directly link to the strategic goals of the enterprise and must encompass the complete process in all the Service Component Commands in which it is performed.

#### **4.4.7 Black Belt (BB)**

LSS Black Belts establish, coordinate and provide leadership for LSS projects. These projects should meet the guidelines and priorities established by the organization's senior leadership, the Lean Six Sigma Steering Committee, the Deployment Director and the Process Owner/Project Sponsor.

##### **4.4.7.1 Black Belt Functions**

- Lead LSS projects under the direction of the Project Sponsor and with the support of the Master Black Belt. Project leadership includes identifying opportunities; defining and justifying projects; launching project teams; leading team activities; tracking project status and results; removing barriers; and developing team members. The BB must also identify integration issues with other projects/processes and coordinate the improvements with the appropriate Process Owners and/or Project Sponsors.
- Provide the Process Owners/Project Sponsor, Deployment Director, and (if requested) senior leadership with the project results and recommend appropriate corrective action, when necessary
- Recruit other Black Belts, Green Belts and team members into LSS efforts and ensure the continuing development of team member skills
- Ensure projects are integrated with other organizational activities and the overall mission and strategic objectives
- Lead the project team in preparing for and executing tollgate reviews
- Assist the Deployment Director, Master Black Belt and Project Sponsors in the execution of the organization's strategic communications plan

- Ensure two-way communications throughout the organization regarding LSS activities. This includes capturing project lessons learned that should be disseminated to other projects or to other elements within the organization

#### 4.4.8 **Green Belt (GB)**

Green Belts are the “tip of the spear” in the LSS initiative and are responsible for managing and leading improvement projects on a day-to-day basis. Green Belts are trained in basic problem-solving techniques and receive regular guidance and direction from Black Belts assigned to their projects, as well as from Master Black Belts when available. Specific Green Belt responsibilities include:

- Leading individual projects that can be conducted within their level of expertise
- Supporting more complex Black Belt projects by leading specific efforts within their functional area of responsibility
- Advising Project Sponsors on the selection of team members
- Managing the administration and daily work assignments of team members
- Retaining official project records (e.g., collected records and data, spreadsheets, presentations, process maps, meeting minutes, etc.)
- Directing the preparation and presentation of tollgate reviews
- Assisting the Process Owner and/or Project Sponsor in implementing approved process improvement recommendations

#### **4.4.9 Team Members**

Most project teams are composed of 5-7 team members led by a Green Belt or Black Belt. These team members are subject matter experts who apply their individual skills and expertise to the problem under examination. Green Belts and Black Belts are expected to coordinate and exploit this expertise by applying the LSS methodology and honed facilitation skills. Team member activities include, but are not limited to:

- Gathering information, conducting interviews and analyzing data
- Participating in regular team meetings to identify, analyze and select possible solutions to problems
- Preparing tollgate review presentations
- Implementing solutions, under the supervision of Process Owners and/or Project Sponsors
- Identifying other project opportunities that fit within the organization's priorities
- Assisting the Resource Manager in developing financial estimates for the project, as prescribed in the Financial Benefits Guidance Handbook

While LSS team members normally participate as part-time resources, they provide a significant part of the effort in a typical project. Project responsibilities normally consume approximately one working day per week for each team member. This time may increase substantially prior to critical project milestones.

## 4.5 Responsibility Levels

The RACI chart shown in Figure 4.4 below depicts who in the organization is responsible (R), accountable (A), consulted (C) and informed (I) for various activities. The following definitions apply to each category:

- **Responsible:** This is the person who is ultimately responsible to the senior leadership for accomplishing the task or activity. There can only be one person responsible for any task or activity. Responsibility **CANNOT** be delegated.
- **Authority:** This is the person who is expected to accomplish the designated task. If multiple actions are required, there can be multiple people designated as individuals assigned authority in the RACI chart.
- **Consulted:** The individual(s) to be consulted **prior** to a final decision or action. This requires ongoing, two-way communications.
- **Informed:** The individual(s) that need to be informed after a decision or action is taken. This is one-way communications.

	Lead, Fund, Own Lean Six Sigma	Identify Project Opportunities	Create Project Charter	Select Black/Green Belts for L&G	Prioritize and Select Projects	Assign Black/Green Belts to Projects	Assign Team Members to Projects	Execute Projects	Monitor Projects (Milestones)	Develop/validate Project Financial Benefits	Develop/validate Project Operational Benefits	Remove Project Barriers	Capture/Sustain Project Results	Mentor Black/Green Belts	Certify Black/Green Belt Competency	Leverage or Replicate Opportunities
Senior Leaders	R	I	I	R	R	I		I	I			R	I	I	R	R
Deployment Director	A	A/R	C	A	A	R	I	I	I			I	I	A	A	C
Army-Process Lead	A	R/A	C	C	A	C	R/A	C	C			A	R/A	A	C	A
Project Sponsor	A	A	R/A	C	A	A	A/R	R	R	A/C	A/C	A	A/R	A	C	A
Black Belt		C	A/C		C	C	C	A	A	A/C	A/C	I	C	A	C	C/I
Green Belt		C	A/C			C	C	A	A	A/C	A/C	I	C			C/I
Team Member			C			C	C	A	A			I	C			C/I
Master Black Belt		A	A/C	C	C	A	C	C	A		R	I	C	R	A	C/I
Resource Manager			C							R			C			C
Organization	A	C		C				A	A			I	A	A	A	A

Responsible	R
Accountable	A
Consulted	C
Informed	I

Figure 4.4

## 4.6 Coaching and Teaching responsibilities

In addition to the RACI chart above, senior leaders, Deployment Directors, Process Owners and Project Sponsors can use Table 4.2 below to manage the coaching and teaching responsibilities of Enterprise Master Black Belts, Black Belts and Green Belts. For additional detail on the information contained in this Table, please refer to the explanations contained in Note 1 – Note 6 below.

LSS Role	GB Candidate	Certified GB	BB	Certified BB	MBB Candidate	MBB Candidate (certified BB)	Certified MBB	Certified Enterprise Level MBB	Deployment Director/Deputy Deployment Director
Administer Green Belt Exam (Note 4)									Note 3
Administer Black Belt Exam (Note 4)									Note 3
Teach MBB POI								Note 5	
Co-Teach Black Belt POI (Note 1)									
Co-Teach Green Belt POI (Note 1)				Note 4					
Teach Black Belt POI (Note 2 & 6)									
Teach Green Belt POI (Note 6)									
Teach PSW POI (Note 6)									
Co-Teach PSW POI (Note 1)									
Lead DMAIC Projects									
Lead EL DMAIC Projects									
Lead PISW/s									
Co-Facilitate PISW									
Coach BB Projects									
Coach GB Projects									

**Table 4.2**

**Note 1:** Co-teaching is defined as being the assistant instructor in the course with a certified MBB as the lead instructor.

**Note 2:** Lead teaching is defined as being the instructor responsible for coordinating all delivery of instruction with the assistant instructor, to include providing evaluation of the assistant instructor.

**Note 3:** Deployment Directors (DDs) and Deputy Deployment Directors (DDD), who are Army certified MBBs, may administer the Army LSS Black and Green Belt exam.

**Note 4:** On rare occasions when there is not an MBB available to teach, DDs may recommend to the Army LSS Training Office exceptionally qualified LSS BB personnel to co-teach the Army LSS GB course. Exceptionally qualified LSS BBs are personnel who are certified BBs and have been selected and registered to attend the Army LSS Master Black Belt course. The Army LSS Training Office will be the approval authority.

**Note 5:** Army certified MBBs can teach the MBB POI in accordance with the Army MBB instructor course POI.

**Note 6:** An Army certified MBB is required to be present during the conduct of all Army LSS POI training.

## Section 5. LSS Training

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### 5.1 Overview

The Army utilizes the Systems Approach to Training (SAT) for curriculum development. The Army's LSS curriculum is fully institutionalized and integrated with the Standard Army Training System.

The objectives of the LSS training program remain:

- Producing and sustaining a critical mass of trained Army Green Belt and Black Belt practitioners
- Producing and sustaining a sufficient number of Army Master Black Belts to make the Army self-sufficient in terms of LSS instructors, coaches, mentors, enterprise project leaders and Deployment Advisors
- Producing trained Project Sponsors and informed Strategic Leaders
- Producing and sustaining a standard Army core LSS curricula
- Facilitating the integration of the LSS curricula into the Army's institutional training base

### 5.2 Responsibilities

**5.2.1 HQDA Responsibilities.** HQDA provides LSS program management and the following training resources:

- Standard LSS curricula
- Electronic course completion certificate files for courses that use the Army core POI. The certificates will be created using names as they appear in ATRRS.
- Electronic training poster files
- Electronic course notebook files
- Information on creating simulation (SIM) kits
- Centralized planning of course offerings
- Centralized management of LSS training records
- PowerSteering, Minitab, Cost Estimating and ATRRS Training (in an eLearning format).
- Minitab licensing information

HQDA will also ensure compliance with Executive Order Number 13163 and applicable legislation to ensure reasonable training and testing accommodations for personnel with disabilities.

#### 5.2.2 Organizational Responsibilities

##### 5.2.2.1 Candidate Selection

Army organizations sending candidates to LSS training must insure that:

1. Belt candidates have completed pre-work assignments, meet all prerequisites, are registered in ATRRS and have a laptop computer with Minitab version 15 (as per AR 350-1 para 3-9-m).

2. Belt candidates selected must also have a valid LSS project assigned by their Project Sponsor and recorded in PowerSteering prior to registration.
3. An ATRRS Quota Manager is assigned to register students.

#### **5.2.2.2 Hosting Organization Responsibilities**

Army organizations hosting LSS Training are responsible for providing the following training resources:

1. Training facilities, as outlined in the “Training Hosting Organization Responsibilities” document available in the LSS Deployment Documents section of the LSS Training Portal on AKO.
2. Army certified MBB instructor.
3. Printed notebooks.
4. Printed training posters.
5. SIM Kit
6. Course textbooks.

Deployment Directors will notify the LSS Training Office twenty one calendar days prior to the first day of the course if any candidate requires special accommodations for training or testing, in accordance with Executive Order Number 13163 and applicable legislation.

### **5.3 Programs of Instruction**

All Army LSS courses must be approved by the Director of Training and entered into ATRRS prior to execution (as per AR 350-1 para 3-5). The Army LSS curriculum consists of the following programs of instruction:

#### **5.3.1 Project Sponsor Workshop**

This 24-hour curriculum provides organizational leaders with an understanding of Lean Six Sigma and the Army’s LSS strategy. Students gain an understanding of the Lean Six Sigma DMAIC methodology; the project identification and selection process; LSS roles and responsibilities; and tollgate reviews. This course is a mix of simulations, presentations and individual projects. The third day of the course is used to generate project charters for use by the participants’ organizations.

The target audiences for these workshops are Strategic Leaders (General Officers and Senior Executive Service), who will sponsor enterprise level projects and other organizational Project Sponsors (normally in the grade of Colonel and GS15 level). Attendees of lower grades will only be accepted if requested by the organization’s Deployment Director to the School Director.

The PSW should not be confused with the Project Identification and Selection Workshop (PISW) described in the next section.

### **5.3.2 Project Identification and Selection Workshop (PISW)**

The Project Identification and Selection Workshop is a two and one half day working session designed to identify and prioritize important LSS projects. Participants in this facilitated workshop identify strategic goals, customer requirements, organizational priorities and potential LSS projects. Successful completion of the workshop yields a prioritized list of potential LSS projects that are of high value to the organization.

### **5.3.3 Green Belt Course:**

Green Belt training is a two-week course that provides students with an understanding of LSS principles and tools, as well as project management fundamentals. Successful graduates can be active contributors to Black Belt projects and lead small-scale LSS improvement projects. Topics include: establishing effective improvement teams; understanding the voice of the customer; and implementing the DMAIC methodology. There is generally a three-week break between the two weeks of training so that candidates can work on their assigned LSS projects.

### **5.3.4 Black Belt Course**

Black Belt training is a four-week course that familiarizes students with the principles, practices and tools of LSS to maximize cost reductions and improve customer satisfaction. Topics covered include an overview of LSS, as well as all aspects of traditional DMAIC methodology and tools. Successful graduates will be able to identify non-value-added activities and lead teams tackling more complex projects. The BB curriculum accommodates students with no prior LSS experience and Green Belt training is not a prerequisite for Black Belt course attendance. There is generally a three-week break between each week of training so that candidates can work on their assigned LSS projects.

### **5.3.5 Master Black Belt Course**

Master Black Belt training is a three-week course that provides the foundation for organizations to have in-house experts to disseminate LSS knowledge and training. Successful graduates provide training, coaching and mentoring to Strategic Leaders, Deployment Directors, Process Owners, Project Sponsors, Black Belts and Green Belts. MBBs also execute and lead enterprise level projects. Topics covered include: teaching and coaching LSS; reinforcing behavioral concepts; and LSS curriculum “teach backs,” in which students instruct their peers. All MBB candidates (MBBc’s) must be certified Army Black Belts. In addition to LSS skills, MBBs must demonstrate leadership ability, organizational/management abilities, good instructional techniques, group facilitation skills and organizational change skills. All MBBc’s must have the skill sets required to execute the four pillars of LSS Self Sustainment (see Figure 5.1 below). There is generally a three-week break between each week of training so that candidates can work on their second LSS project.

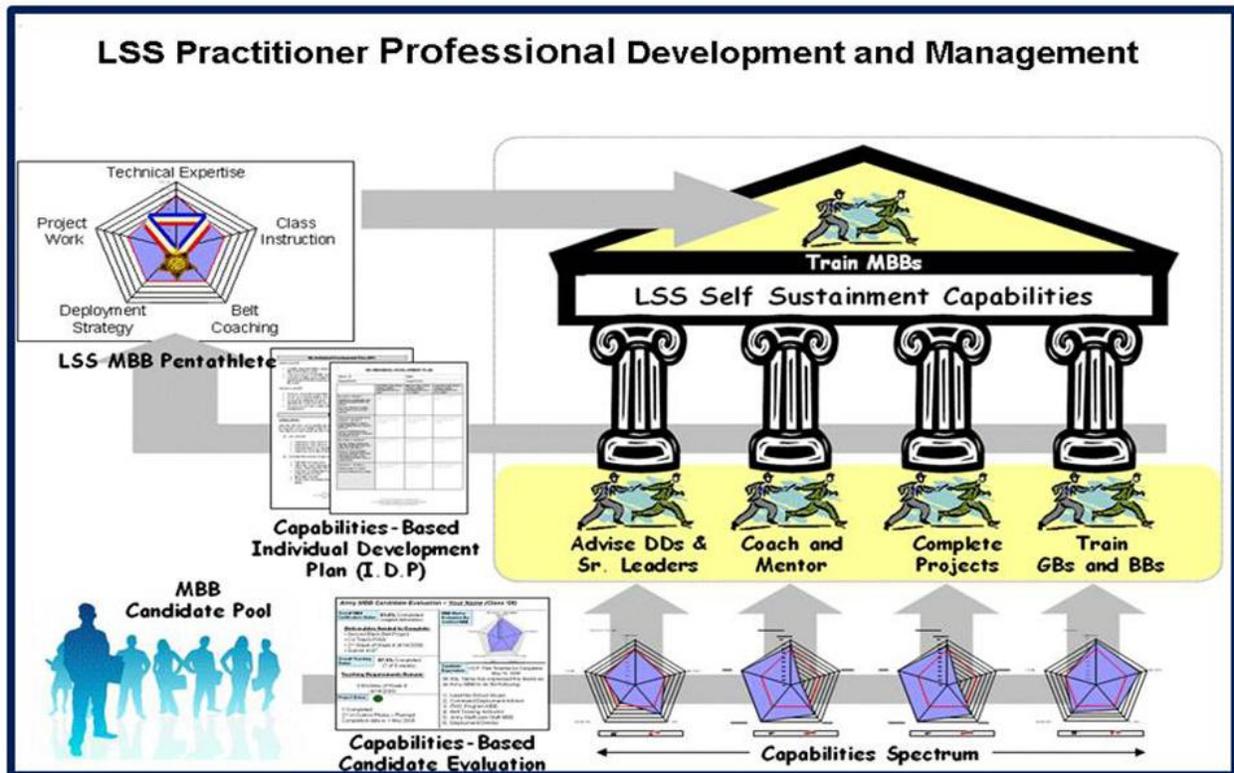


Figure 5.1

## 5.4 ATRRS

The Army Training Requirements and Resources System (ATRRS) lists all Army Lean Six Sigma courses and their respective schedules under school code 142. ATRRS is the system of record for approved course offerings and student registration (as per AR 350-10 para 2-1).

Organizations may request to host training from the Army LSS Training Team. Upon approval, the Training Team will upload the classes into ATRRS and make them available for student registration. Courses cannot be conducted, nor will credit be given to the students, if the course is not entered into ATRRS (as per AR 350-1 para 3-5 and section 5.3). Each organization must have a designated ATRRS quota manager to manage registrations. Further information on hosting training can be found in section 5.8.

## 5.5 Army Knowledge On Line (AKO)

HQDA maintains the LSS Training Portal on AKO. The LSS Portal contains:

- Training schedules
- LSS course materials
- LSS course pre-work
- Information and resources for hosting LSS training
- Training policy
- Frequently asked questions (FAQs)
- Training point of contact list
- Link to PowerSteering, Minitab, Cost Estimating and ATRRS training (in eLearning format)
- Training updates
- Links to the LSS Deployment Guide, the Financial Management Guidance Handbook and the Operational Benefits Guidance document

## 5.6 Selecting Students

Senior leaders and Deployment Directors should select LSS training candidates that are proven leaders (as per AR 350-1 para 3-11) and should ensure that the selected candidates have the ability to learn the skills required to complete the project identified during the 105 day planning process. The “LSS Training 105-Day Plan” can be found in the Deployment Documents section of the LSS Training Portal on AKO. Due to the technical nature of the curriculum, 100% attendance is required of all students attending training. LSS belts are the catalysts for change in the organization. They are responsible for bringing new ideas to their teams and creating a positive environment for improvement within the organization. Leadership skills are the essential element for success in implementing real change. For example, while a Black Belt must be competent in statistical methods, experience shows that leadership skills are often more difficult to learn than statistical methods. This is particularly true with the advent of statistical software, which can perform the required calculations.

### 5.6.1 Master Black Belt Screening Criteria:

Candidates being nominated for MBB training should meet the following criteria:

- Army LSS Black Belt certification and a proven record in the application of LSS methods
- Bachelors degree, preferably in Engineering, Business, Operations Research (or a scientific/technical subject), or equivalent work experience
- 8-10 years of professional experience
- Solid project management, team leadership and group facilitation skills

- Sound knowledge of other key functions that provide critical inputs (e.g., Resource Management (to include the PPBE process), Procurement, Contracting, Engineering, Supply Chain/Logistics, Operations, ARFORGEN, etc)
- In-depth understanding of statistical analysis tools/methodology, project management software, LSS continuous improvement techniques and basic financial principles
- Ability to lead and direct two or more improvement teams simultaneously
- Ability to lead and execute enterprise level projects
- Ability to manage risk and ambiguity within a project scope

**Note:** A sample MBB Nomination Package can be found in the Deployment Documents section of the LSS Training Portal on AKO.

### **5.6.2 Black Belt Screening Criteria:**

To qualify for participation in LSS Black Belt training, candidates should meet the following criteria:

- Associate's degree, preferably in Engineering, Business (or a technical/scientific subject), or equivalent work experience
- 2-4 years of professional experience
- Prior supervisory experience
- Solid project management, team leadership and group facilitation skills
- Basic knowledge of other key functions that provide critical inputs (e.g., Resource Management (to include the PPBE process), Procurement, Contracting, Engineering, Supply/Logistics, Operations, ARFORGEN, etc)
- Sound quantitative reasoning skills and the ability to do statistical analysis

## **5.7 Restrictions on LSS Training:**

HQDA uses the Army's Systems Approach to Training to set and enforce Green Belt, Black Belt, Master Black Belt and Project Sponsor training standards. Only Army certified MBBs can teach and/or lead/evaluate the Army POIs. While in this capacity, the Army certified MBBs are responsible to the Army LSS PMO, not to their commands. The training program is developed to support the capabilities that are essential for long-term success and the execution of enterprise-level projects. As a result, there are restrictions in effect, but those restrictions should be applied with the above intent in mind.

### **5.7.1 Restrictions on Personnel to be Trained:**

Army LSS training is limited to Active Duty military personnel, Reserve Component military personnel and Department of the Army civilians. Contractors will not be trained at Army expense, but may work on or coach LSS projects if trained by another source.

HQDA can approve the training of the following personnel on a case-by-case basis:

- Army personnel working in Joint or DoD assignments
- DoD personnel assigned to an Army organization

- DoD and other government personnel on a space available basis

The LSS Training Team is responsible for evaluating requests to train candidates other than Army personnel. Organizations must obtain approval from the LSS Director of Training before enrolling anyone other than Army personnel.

### **5.7.2 Restrictions on Funding:**

It is the Army's intent that Army funds only be used to train personnel via the Army approved LSS curriculum. As of 1 October 2007, course completion credit is not granted for LSS training conducted outside the Army program of instruction if paid for by Army funding. Course completion credit was possible for outside formal training if funded by sources other than the Army up until 30 September 2009. As of 30 September 2009, only candidates actively working an Army LSS project can apply for course completion credit (see section 7.5).

### **5.8 Hosting Training:**

Organizations may request to host training by contacting the LSS Training Team and providing the following information:

- Type of training (GB, BB or PSW)
- Dates for training
- Training location
- On site POC, phone number, email address and mailing address
- Number of seats to reserve
- Statement that students have valid projects entered in PowerSteering for LSS GB or BB courses
- Name of the certified Army MBB instructor who will lead the program of instruction

When the training team approves the request, the organization begins executing the 105-day planning sequence (see the "LSS Training 105-Day Plan" in the Deployment Documents section of the LSS Training Portal on AKO). Courses cannot be conducted until the Director of Training approves the request and the course is entered into ATRRS. Students will not receive credit if the course has not been entered into ATRRS.

### **5.8.1 Hosting Organization Responsibilities:** The hosting organization must:

- Ensure that all students are properly registered in ATRRS with valid assigned projects
- Provide a senior speaker to describe the organization's "Burning Platform"
- Purchase and distribute textbooks
- Collect student walk-in information and forward to the LSS Training Team
- Retain unused textbooks for future use
- Print student notebooks for each week of class
- Print wall posters, budget documents and job descriptions to support the simulation exercise
- Provide a classroom for 30 students with tables and chairs that can be reorganized to support simulation exercises. The classroom(s) should have projection capability, allow for hanging training aid posters and have two easels with butcher paper pads.
- Provide student critique sheets for use at the end of the LSS instruction
- Print and distribute course completion certificates (HQDA provided) to students who successfully complete the final exam. Destroy any remaining certificates.
- Provide a certified Army MBB to be the lead instructor to teach the Army LSS program of instruction

**Note:** For additional detail, see the "Training Hosting Organization Responsibilities" document in the Deployment Documents section of the LSS Training Portal on AKO.

### **5.8.2 HQDA Responsibilities:** HQDA must:

- Provide electronic files, ready for printing, for notebooks and wall posters
- Provide information on Federal Budget Simulation Kit construction and ordering options
- Provide electronic course work completion certificates in PDF format ready for printing for courses using the Army core POI. The certificates will be created using names as they appear in ATRRS.
- Maintain students' training status in ATRRS
- Enroll qualified students into the "awaiting Army LSS certification course" in ATRRS

## **5.9 Class-Fill Milestones**

In order to ensure classes are adequately filled and that training is cost-effective, HQDA will adhere to the following milestones:

- Six (6) Weeks Prior to Training. The LSS Training Team will open all un-filled seats for Army-wide fill
- Four (4) Weeks Prior to Training: The LSS Training Team will open the remaining vacant training seats to the Office of the Secretary of Defense and the Joint Staff, consistent with policy guidance.

- Three (3) Weeks Prior to Training. The LSS Training Team Lead will cancel the course if there are not at least 20 registered attendees with valid projects. Requests for exceptions must be submitted to the OSA-OBT LSS Training Team.

## **5.10 Program of Instruction Changes**

The LSS PMO reviews all submitted recommended changes for possible revisions to the five LSS programs of instruction. Deployment Directors, Deployment Advisors and certified MBB instructors may submit recommended changes. Other persons recommending changes must forward them to the Deployment Director, Deputy Deployment Director or the Instructor. Submitters should use DA Form 2028 and include the following information:

- Complete identification of which course, version, lesson, slide and paragraph numbers are the subject of the recommended change
- Clear and compelling explanation of why the recommended change is needed
- Clear description of the recommended change
- Complete contact information for the submitter and for the person who will be able to answer questions about the recommended change (title/rank, full name, email address and phone number)
- The completed form should be emailed to the mailbox OSA-OBT LSS PMO

## **5.11 Test (and Re-Test) Policy**

All Master Black Belt, Black Belt and Green Belt candidates must successfully complete the LSS belt final exam with a minimum grade of 70%. If a student fails the final exam, the following procedure applies:

- For GB and BB candidates who fail the final exam, the instructor will counsel the candidate prior to the candidate leaving the classroom on exam day. Candidates will be provided with a counseling statement informing them that they did not meet the minimum requirement and that they will have one opportunity to re-test.
- For MBB candidates who fail the final exam, the lead MBB instructor will forward the candidate's name, score and test to the OSA-OBT LSS Training Office. The LSS Training Team will notify the candidate's Deployment Director (DD) as the nominating official. The Deployment Director, or his/her representative, will contact the candidate. The DD will assign an organic MBB to conduct review sessions, provide coaching as needed and schedule the re-test exam date with the OSA-OBT LSS Training Office. If an organic MBB is not available, the Deployment Director will request OSA-OBT LSS Training Office support.
- All candidates must re-test within four weeks of the original test. The Deployment Director may request, from the OSA-OBT LSS Training Office, an exception to the re-test policy timeline if the belt candidate is not near a location where the re-test can be administered within four weeks of the original test.

- The candidate may choose, from the list of priority options below, the preferred method for taking the re-test. Deployment Directors will submit a request (e-mail is acceptable) to the OSA-OBT LSS Training Office requesting the applicable method for re-test.

**1<sup>st</sup> Priority:** On-site exam proctored by the organization's certified MBB and given in the candidate's work area without using Army TDY funds. The certified MBB will grade the exam, report the results to the candidate and submit the results to the OSA-OBT LSS Training Office.

**2<sup>nd</sup> Priority:** Re-test with an on-going LSS belt course near the work location ***that does not require TDY***. The candidate may join the review session conducted the day prior to the final exam, if space permits and with the approval of the instructor. The MBB instructor will be responsible for grading the exam, reporting the results to the candidate and submitting the results to the OSA-OBT Training Office.

**3<sup>rd</sup> Priority:** Belt re-test exams will be provided to a Test Control Officer (TCO) at an Army Education Center (AEC). It will be the organization's responsibility to locate and schedule the re-test with the AEC. The organization will provide the OSA-OBT LSS Training Office with name, email, and phone for the TCO. The OSA-OBT LSS Training Office will be responsible for getting the re-test to the AEC prior to the exam date. The re-test exam will be returned to the LSS Training Office by encrypted email. Once the exam is graded, the results will be provided to the Deployment and Deputy Deployment Directors.

**4<sup>th</sup> Priority:** Belt re-test exams will be proctored by an Army MBB candidate without using Army TDY funds. In this event, the OSA-OBT LSS Training Office will provide the requesting organization with the re-test exam. The completed re-test exam will then be returned to the OSA-OBT LSS Training Office by encrypted email. Once the exam is graded, the results will be provided to the Deployment and Deputy Deployment Directors.

**Note:** These prioritized alternatives provide Army Commands the flexibility to proctor the re-tests without having to use Army TDY funds. Army MBB candidate re-testing will not be delegated to Army Commands.

Candidates who fail to achieve a score of 70% on the re-test will not be allowed to continue as a LSS belt candidate. The LSS Training Team will notify candidates who have been removed from the program for academic failure. Requests to re-test are processed through the OSA-OBT LSS Training email box.

## 5.12 Annual LSS Training Requirements:

Army organizations will submit their annual training requirements to the LSS Training Team in accordance with the following process:

- The annual training plan with requirements for the next Fiscal Year (FY) will be submitted to the LSS Training Director's office no later than (NLT) 31 March.
- The annual training plan will include the following:
  - The types of classes requested (GB, BB, and PSW) and the number of personnel to be trained in each (by quarter)
  - The training location and class size for any training to be hosted by the organization (classrooms must have a capacity for 30 students)
  - The name of the organic lead MBB instructor for any hosted training. Classes which cannot be supported with organic MBBs will be annotated for "HQDA Support". The LSS PMO Training Office will then review the requirements and determine the appropriate instructor resourcing.
- Annual training requirements, including the command's request for resourcing, will be incorporated into the training schedule for the next fiscal year. The LSS PMO Training Schedule will be input into ATRRS and quotas allocated NLT 31 July.
- To allow for unforeseen changes OFFLINE TRAPs will take place:
  - 1-30 June for changes in 1<sup>st</sup> QTR of the next FY
  - 1-30 September for changes in 2<sup>nd</sup> Qtr
  - 1-31 January for changes in 3<sup>rd</sup> QTR
  - 1-30 April for changes in 4<sup>th</sup> QTR

## **5.13 Certification Project Portfolio Management**

### **5.13.1 Certification Project Milestones**

One of the primary goals of the LSS program is to help Army organizations develop a cadre of belt practitioners who are capable of taking on enterprise level projects and achieving excellent results. With a trained and experienced LSS force, Army organizations will become self sustaining in achieving their continuous process improvement (CPI) goals. In addition, organizations will be able to help the Army achieve the transformational results needed to support the ARFORGEN project by having experienced belt practitioners available to work on enterprise-level projects.

As outlined in Section 7 of this Guide, the skills needed to become certified as a belt within the Army are acquired through a combination of formal classroom training and practical experience gained by completing a LSS project. Only by completing the actual project, can a candidate apply for certification.

Because of the significant investment made by the Army, the LSS PMO has developed a process for tracking the status of candidate projects against the timelines that have been established for BB and GB certification projects.

As shown in Roadmap for Black Belt Projects (Figure 5.4) below, candidates are expected to complete the certification projects assigned as part of LSS training in a 6 month period. By the beginning of Week 4 of the training, the Analyze Tollgate should have been completed. After the training has been completed, candidates work on the Improve and Control Tollgates. Projects should be completed, and ready to be submitted for certification, two-months after the last day of training.

## Roadmap for Black Belt Training Projects

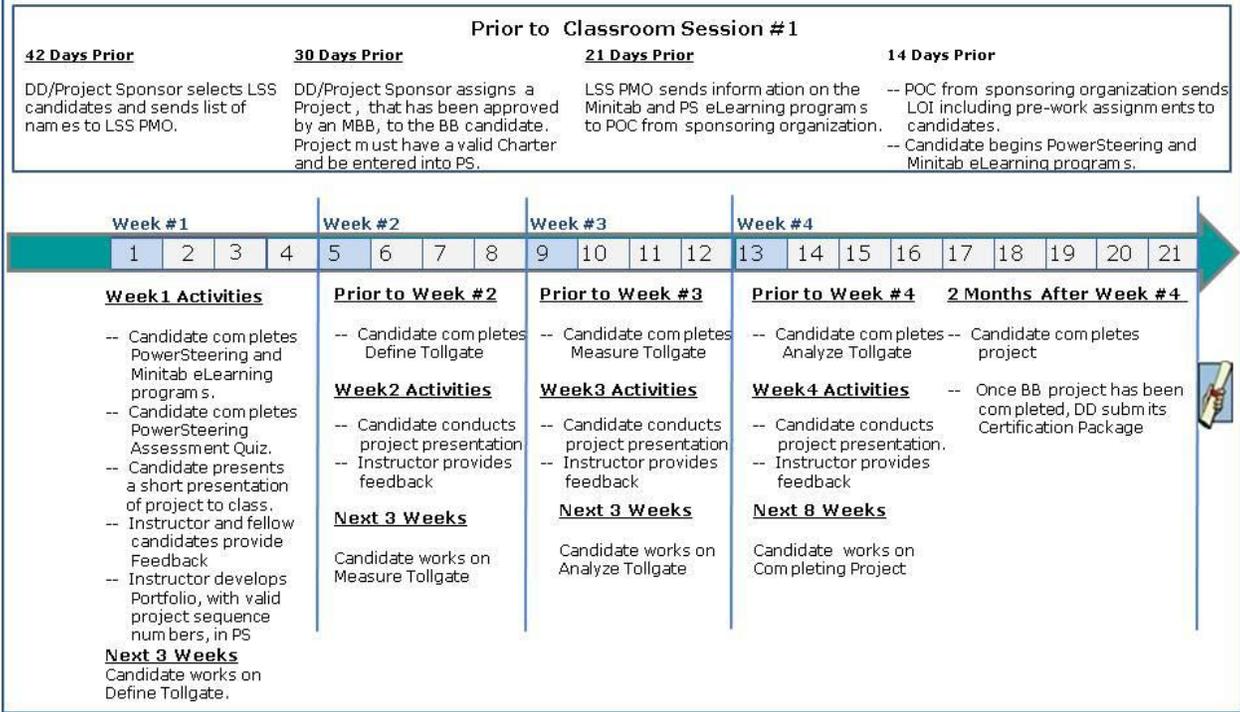


Figure 5.4

Candidates are given 4 months to complete projects assigned as part of LSS Green Belt (see Figure 5.5. below).

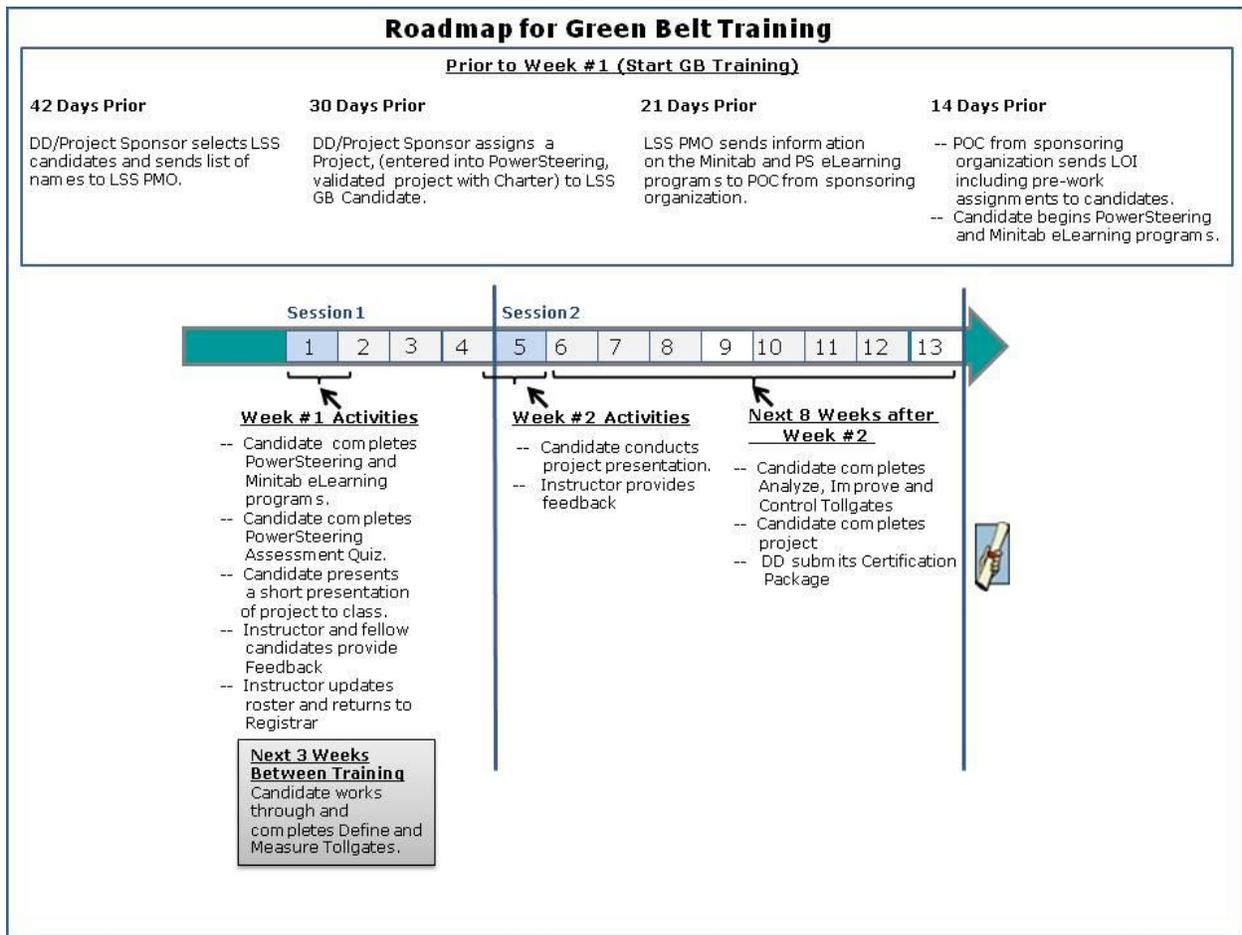


Figure 5.5

### 5.13.2 Certification Project Status Reporting

Lead instructors are responsible for monitoring the status of candidate projects to ensure that the timelines established for Green Belt and Black Belt training, shown in Figures 5.4 and 5.5 above, are being met. To assist instructors with this task, the LSS Training group will prepare a Portfolio in PowerSteering the week before a class is scheduled to begin. As shown in the example in Figure 5.6 below, the Portfolio will contain the certification projects the candidates will work on during training.

Name	Status	Project Owner
DASA-ZR_Improve Obligation Rates for NGREA Funds	On Track	
USMA Separations Improvements	Proposed	
Army Safety message receipt and compliance	On Track	
Reduce PCT for USMA Disenrollment Actions	On Track	
12152010 FBultman PEO I ACQ Evaluating AUPC impacts Change Management	Proposed	
G9 Improve Best Value Carrier Selection Definition and Process	On Track	
Vendor Feedback Loop	Proposed	
Reduce Cycle Time Required to Execute Summer Leaders Conference	On Track	

Figure 5.6

Then, as shown in Figure 5.7 below, instructors can get a clearer picture of the status of candidate projects in relation to the established timelines by viewing the Portfolio in the Dashboard. The LSS Training group will send an Excel version of the Dashboard to the lead instructor on the Thursday before each week of training.

Name	Project Owner	Progress Indicator	[GATE_DUE]	Last Change	Phase Days	Project Days
12152010 FBultman PEO I ACQ Evaluating AUPC impacts Change Management		1. Define + (Proposed)	12/31/2010	12/02/2010		
Army Safety message receipt and compliance		1. Define + (On Track)	12/31/2010	12/02/2010	2	2
DASA-ZR_Improve Obligation Rates for NGREA Funds		1. Define + (On Track)	12/31/2010	12/02/2010	42	42
G9 Improve Best Value Carrier Selection Definition and Process		1. Define + (On Track)	12/31/2010	12/02/2010	3	3
Reduce Cycle Time Required to Execute Summer Leaders Conference		1. Define + (On Track)	12/31/2010	12/02/2010	13	13
Reduce PCT for USMA Disenrollment Actions		2. Measure + (On Track)	01/28/2011	12/02/2010	27	30
USMA Separations Improvements		1. Define + (Proposed)	12/31/2010	12/02/2010		
Vendor Feedback Loop		1. Define + (Proposed)	12/31/2010	12/02/2010		

Figure 5.7

After the final week of an LSS training session, the LSS Training group will assume responsibility for managing the Portfolio and monitoring the progress of Candidate projects.

## 5.14 LSS Excellence Awards Program (LEAP)

The Secretary of the Army and the Chief of Staff, Army approved an annual Army LSS Excellence Awards Program (LEAP) on 31 July 2008. The intent of the LEAP is to recognize Army organizations and practitioners who demonstrate excellence in the building, sustainment and employment of CPI/LSS capabilities to support the enterprise approach to institutional adaptation. The intent of the program is also to provide a mechanism to share CPI/LSS best practices and lessons learned across the Army.

The award categories include:

- Organizational Deployment Award (ODA). This award recognizes LSS deployment excellence at the organizational level. One winner is selected in each of three organizational categories:
  - HQDA staff, to include the Secretariat and ARSTAF elements.
  - Headquarters of commands as defined in AR 10-87, Army Commands, Army Service Component Commands, and Direct Reporting Units (see Table 1 below). The National Guard Bureau is included in this designation for purposes of this program.
  - All subordinate organizations (i.e. installations, subordinate commands, Field Operating Agencies, Depots, Regions, etc.) of those headquarters identified in AR 10-87.
- Project Team Award (PTA). This award recognizes the outstanding contribution and results of individual LSS project teams. A total of eight PTA awards are presented in three categories:
  - Two winners are selected across the Army for Enterprise Level projects. This category includes Enterprise Level MBB LSS DMAIC projects that cross multiple functional boundaries and require significant involvement from multiple functional areas. For example, projects whereby the process steps are conducted across several Army Service Component Commands within one or more Core Enterprise(s), ARFORGEN, or Army Enterprise Board priorities could be included in this category.
  - Four winners are selected across the Army for Non-Enterprise Level projects. These projects would be classified as BB and/or GB level projects. This category includes LSS DMAIC projects whose scope remains within limited intra-functional boundaries. For example, projects that require little involvement outside the functional area included within the project scope would be included in this category. Two project winners are selected at the BB level and two project winners are selected at the GB level.
  - Two winners are selected from across the Army for Non-Gated projects that employ CPI/LSS methodologies and tools, but do not employ the DMAIC gated process. For example, Just-Do-It (JDI) or Rapid Improvement Event (RIE) that employs Design for Lean Six Sigma (DfLSS) or other design methodologies could be included in this category.
- Enterprise Level Project Sponsor Award (EPSA). This award recognizes the outstanding contribution and results performed by a Project Sponsor of an Enterprise Level MBB LSS DMAIC project. A total of one EPSA award is selected:

- This category includes a Project Sponsor of an Enterprise Level MBB LSS DMAIC project that crosses multiple functional boundaries and requires significant involvement from multiple functional areas. For example, an MBB project that utilizes LSS methodology with financial and/or operational benefits that directly links to the strategic goals of the enterprise with process steps within more than one of the Service Component Commands.

The annual Award Program has a cyclical timeline, which is listed below:

<b><u>Responsible</u></b>	<b><u>Milestone</u></b>	<b><u>Suspense</u></b>
LSS PMO	Publish Implementing Instructions	FYQ2
LSS PMO	Project Award Cut-Off Date	EOM JUNE
Deployment Directors	Send nominations to HQDA/LSS PMO	EOM JULY
LSS PMO	Winners Announced	FYQ4
LSS PMO	Awards Ceremony	FYQ1

## Section 6. PROJECT EXECUTION

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The Army will continue to **execute projects** and Rapid Improvement Events (RIEs) at the organizational level. However, to achieve the vision for institutional adaptation, the Army will increasingly tackle enterprise projects that affect core enterprise, ARFORGEN and Army-level processes. The Army must employ a systematic approach to identifying and executing all LSS projects, but must be particularly methodical in the selection and execution of complex, enterprise-level projects. Key aspects of project execution and program management include:

- Ensuring Project Sponsors are actively engaged in their projects by making sure the appropriate resources are assigned to a project team, the project stays on schedule and barriers to successful progress and completion are removed
- Conducting Project Identification and Selection Workshops (PISW) to identify and prioritize projects against strategic objectives, clarify project charters and assign resources. PISWs are critical at the core enterprise and Army levels to identify enterprise projects.
- Writing effective project charters to guide LSS teams, to include understanding the nature and magnitude of potential project benefits
- Providing adequate coaching resources to assist belts through the DMAIC project phases. Complex, enterprise level projects may have to be sub-divided into multiple projects.
- Conducting effective tollgate reviews of gated projects to manage scarce LSS resources and verify results. A key element of this function is developing and verifying benefit estimates.
- Effectively documenting projects, Rapid Improvement Events (RIEs) and non-gated projects, to include verifying their respective benefit estimates
- Tracking project status in PowerSteering to maintain program velocity, ensure the appropriate allocation of resources and achieve acceptable returns on investments for the LSS program

## **6.1 Project Identification and Selection Workshops (PISW)**

It is critical to establish and maintain a project pipeline that addresses important areas of opportunity. This is true at the Army organizational level, the core enterprise level, and the Army level. PISWs are conducted to assist leaders in developing and maintaining this project pipeline. The specific objectives of these workshops include:

- Identify, select and prioritize high-value LSS projects which are aligned and linked to the strategic goals and objectives of the organization, the core enterprise or the Army
- Engage key subject matter experts and stakeholders in project opportunities
- Develop SIPOC (Supplier-Inputs-Process-Outputs-Customer) maps and project charters for high-impact projects
- Identify projects as Master Black Belt, Black Belt, Green Belt, RIEs or Quick Wins

The PISW teaches leaders how to apply the rigorous, 5-step method outlined in Figure 6.1 below to identify and select projects.

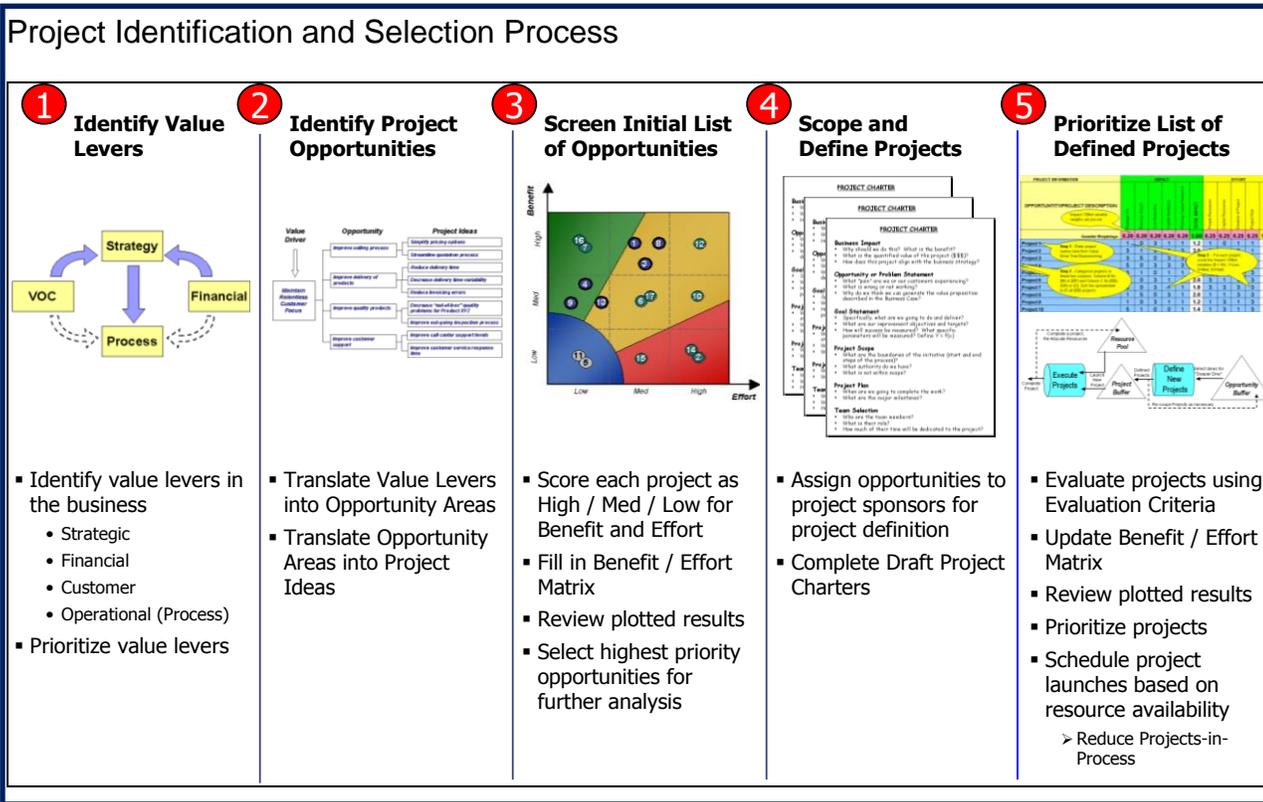


Figure 6.1

## 6.2 Project Chartering

Writing effective project charters is essential for providing LSS project teams with meaningful guidance that will produce significant results. Complex, enterprise-level projects should be written by the Core Enterprise leaders and may require multi-generation project plans with numerous charters to facilitate multi-faceted approaches. Project Sponsors are responsible for writing project charters.

## **6.3 Gated Project Tollgate Reviews**

### **6.3.1 Purpose**

Project Sponsors will review the progress of LSS projects during the tollgate reviews. Tollgate reviews occur at the end of each phase of a gated DMAIC project and are intended to:

- Make a decision as to whether the project needs more work in the current phase, to cancel the project or to move to the next phase
- Verify that all required tollgate deliverables have been completed IAW LSS Deployment Guidebook project completion and certification requirements (see Section 6.5, Standardized Tollgate Templates and the “LSS Certification Deliverables Checklist” in the Deployment Documents section of the LSS Training Page on the Portal on AKO)
- Track progress against the DMAIC Roadmap
- Review/re-validate/update the project charter
- Understand the tools used, data collected, analysis conducted, results and conclusions drawn (see the “Suggested Tollgate Questions for Project Sponsors” document in the Deployment Documents section of the LSS Training Portal on AKO).
- Review other variables affecting the project (support requirements, resources, barriers, issues, etc.)
- Require that a Resource Manager is involved and validates any financial benefit estimates and that an MBB/BB coach validates any operational benefit estimates
- Provide guidance on the way ahead and any changes in direction for the project or project team

### **6.3.2 Attendees**

- Belt – Required
- Project Sponsor – Required
- Project Team – Required
- Stakeholders – Preferred/Optional
- Deployment Director – Preferred/Optional
- Senior Leadership – Preferred/Optional
- Master Black Belt / Black Belt Coach – Preferred at all tollgates, but required at Define, Measure, and Control tollgates. The coach should also be present at Analyze and Improve if the operational benefits estimate has been changed.
- Resource Manager (RM) – Preferred at all tollgates, but required at Measure and Control tollgates. The RM should also be present at Define, Analyze and Improve tollgates if the financial estimates have been changed.

### **6.3.3 Gate Approval Responsibilities**

The Project Sponsor is responsible for ensuring that a Resource Manager and an MBB/BB coach are assigned and participating in each project. As shown in Table 6.1 below, the Project Sponsor also

serves as an electronic tollgate approver at each phase of a gated DMAIC project. The RM and the MBB/BB coach are required electronic gate approvers at the Measure and Control tollgates.<sup>1</sup> The RM and MBB/BB coach are also responsible for providing input at each phase to support the Project Sponsor’s decision as to whether more work is required, to cancel the project, or to move forward to the next phase.<sup>2</sup>

**Electronic Tollgate Approval – Table 6.1**

	Define	Measure	Analyze	Improve	Control
Project Sponsor	Required	Required	Required	Required	Required
RM	Optional	Required	Optional	Optional	Required
MBB/BB Coach	Optional	Required	Optional	Optional	Required

Table 6.2 below summarizes the overall responsibilities for the Project Sponsor, Resource Manager and Master Black Belt / Black Belt coach as they pertain to entering benefit estimates at each DMAIC tollgate and approving the tollgate reviews.

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<sup>1</sup> When the RM and the MBB coach electronically “approve” the Measure and Control tollgates, they are not necessarily concurring that the project should proceed to the next step. Rather they are saying: (1) they accept responsibility for the data, (2) the estimates and supporting documentation were prepared in accordance with the guidance provided in the “Financial Benefits Guidance” document and have been posted to the tollgate briefing and PowerSteering, as required, and (3) they have given the project sponsor a recommendation from their perspective. Their respective recommendations might be to cancel the project, but as long as the three requirements above have been met, they can “approve” the tollgate.

<sup>2</sup> The project sponsor’s approval does not necessarily mean that he/she has followed the recommendations of the RM or the MBB coach. The approval means that the RM and the coach have provided the required information and recommendations from their perspectives and that the Project Sponsor has taken all this into account in making a decision.

**Table 6.2 -- Summary of Gate Approver Responsibilities**

Participant	Define Tollgate	Measure Tollgate	Control Tollgate	Analyze/Improve Tollgates
Resource Manager	<p>Develop feasibility assessment, based upon project charter and available information, as to whether project is likely to produce financial benefits that warrant commitment of resources to proceed to the Measure phase.</p> <p>Provide feasibility assessment to Project Sponsor.</p>	<p>Approve baseline cost estimate and ensure documentation is posted in PS.</p> <p>Ensure estimates are posted to the “Working Estimate” tab.</p> <p>Make tollgate recommendation to Project Sponsor.</p> <p>Electronically approve tollgate.</p>	<p>Approve final financial benefits estimate.</p> <p>Ensure estimate is complete and developed IAW guidance.</p> <p>Ensure estimate is posted to “Final Estimate” tab and documentation is posted to PS.</p> <p>Make tollgate recommendation to Project Sponsor.</p> <p>Electronically approve tollgate.</p>	<p>If financial benefits estimate is revised:</p> <p>Approve financial benefits estimate.</p> <p>Ensure estimate is complete and developed IAW guidance.</p> <p>Ensure estimate is posted to “Working Estimate” tab.</p> <p>Ensure supporting documentation is posted to PS.</p> <p>Make tollgate recommendation to Project Sponsor.</p>

Participant	Define Tollgate	Measure Tollgate	Control Tollgate	Analyze/Improve Tollgates
<p>MBB/BB Coach</p>	<p>Develop feasibility assessment, based upon project charter and available information, as to whether project is likely to produce operational benefits that warrant commitment of resources to proceed to the Measure phase.</p> <p>Provide feasibility assessment to Project Sponsor.</p>	<p>Approve baseline operational metrics and ensure documentation is posted in PS.</p> <p>Approve Working Estimate of anticipated operational benefits.</p> <p>Ensure estimates are posted to the tollgate briefing.</p> <p>Make tollgate recommendation to Project Sponsor.</p> <p>Electronically approve tollgate.</p>	<p>Approve final operational benefits estimate.</p> <p>Ensure estimate is complete and developed IAW guidance.</p> <p>Ensure estimate is posted to the tollgate briefing.</p> <p>Ensure documentation is posted to PS.</p> <p>Make tollgate recommendation to Project Sponsor.</p> <p>Electronically approve tollgate.</p>	<p>If operational benefits estimate is revised:</p> <p>Approve operational benefits estimate.</p> <p>Ensure estimate is complete and developed IAW guidance.</p> <p>Ensure estimate is posted to the tollgate briefing.</p> <p>Ensure documentation is posted to PS.</p> <p>Make tollgate recommendation to Project Sponsor.</p>

Participant	Define Tollgate	Measure Tollgate	Control Tollgate	Analyze/Improve Tollgates
Project Sponsor	<p>Ensure RM and MBB/BB coach are participating on project team.</p> <p>Receive feasibility assessments from RM and MBB/BB coach.</p> <p>Decide if project warrants continuation to Measure phase.</p> <p>Verify all required deliverables are completed.</p> <p>Electronically approve tollgate.</p>	<p>Verify active participation by RM and MBB/BB coach.</p> <p>Verify completion of required deliverables, including posting of financial and operational benefit estimates.</p> <p>Consider recommendations by RM and MBB/BB coach.</p> <p>Electronically approve tollgate.</p>	<p>Verify active participation by RM and MBB/BB coach.</p> <p>Verify completion of required deliverables, including posting of financial and operational benefit estimates.</p> <p>Consider recommendations by RM and MBB/BB coach.</p> <p>Electronically approve tollgate.</p>	<p>Verify consideration of recommendations by RM and MBB/BB coach.</p> <p>Verify completion of required deliverables.</p> <p>As part of decision to move to next phase, decide if benefit estimates require revision.</p> <p>Electronically approve tollgate.</p>

### 6.3.4 Required Tollgate Deliverables

The “LSS Certification Deliverables Checklist” in the Deployment Documents section of the LSS Training Portal on AKO lists all required project deliverables by DMAIC phase. These required deliverables can also be found at the end of each DMAIC tollgate template in PowerSteering.

## 6.4 Project Coaching

The Project Sponsor is accountable for belt and belt candidate project schedules and the coaching plans to support those projects. Each belt and belt candidate will have an assigned coach as he/she executes a project. Again, complex, enterprise-level projects may have to be sub-divided into multiple projects and assigned to multiple teams. The allocation and synchronization of coaching resources is a key MBB responsibility and will be important to the success of these complex projects. Table 6.3 below illustrates the estimated coaching hours that each belt and belt candidate should receive during DMAIC projects (or sub-projects of complex, enterprise-level efforts).

The actual number of coaching hours required will vary based on the project scope and the belt’s experience. Belts typically receive coaching in 1-2 hour blocks, which can occur face-to-face or via audio teleconference.

MBB/BB coaches, as a best practice, should document the outcomes of each coaching session under the Project Status section in PowerSteering. The coaching report should serve as a mechanism to help the belt keep the project on track and identify issues or barriers to success. The coaching report should include a summary of key actions the belt needs to take in order to maintain project progress and positive results.

Belt	Estimated Coaching Hours
Master Black Belt Candidates	24-32 Hours/project
Black Belts	12-16 Hours/project
Black Belt Candidates	24-32 Hours/project
Green Belts <sup>3</sup>	4-8 Hours/project
Green Belt Candidates	8-16 Hours/project

**Table 6.3**

Beneath each phase in the Gates and Deliverables section of the Project Summary page, the belt will find links to the “Tollgate Templates” and “Phase Tools”. These resources can also be accessed from the the “Documents” and “Important Links” section of the Project Summary page.

## **6.5 Standardized Tollgate Templates and Non Gated Project Template**

### **6.5.1 Gated Project Tollgate Templates**

Standardized tollgate templates that contain the required tollgate and certification deliverables are posted in PowerSteering. The intent of standardized tollgate templates is to:

- Standardize the project presentations for tollgate reviews
- Clarify required phase/tollgate deliverables
- Increase GB/BB/MBB productivity by minimizing time spent developing slide formats and increasing time available for substantive project deliverables
- Document the life cycle of a project from charter to completion to include recording final benefit estimates (financial and/or operational)

These tollgate templates are designed to serve as the basis for each tollgate review. Depending on the nature and complexity of the DMAIC project phase, some slides may not be required or may be used for different purposes. Additional slides may be developed to address the specific circumstances of the project. It is expected that the templates will provide approximately 80% of the slides to be presented at the tollgate review. While these templates form the basis for the presentation, the content of the brief is at the discretion of the project belt, the MBB/BB coach and

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<sup>3</sup> Depending on the project scope and the organizational circumstances, Green Belt and Green Belt Candidate projects will be coached by either certified Black Belts or certified Master Black Belts.

Project Sponsor. Regardless of which slides are presented, all tollgates must contain the required tollgate/certification deliverables and fully explain the appropriate aspects of the project.

### **6.5.2 Rapid Improvement Event (RIE) Templates**

Those projects conducted as Rapid Improvement Events (RIEs) are entered into PowerSteering as “Gated” projects. For these projects, belts will utilize a standardized “RIE Project Template” to develop their accelerated DMAIC brief. The RIE Project Template can be found on the PowerSteering homepage in the Tollgate Templates folder in Important Links. After annotating the Define, Measure, Analyze and Improve phases as “complete,” the completed RIE Project Template will be uploaded into the Control phase in PowerSteering. The Project Sponsor must electronically approve the Control phase in PowerSteering, indicating that he/she approves the RIE Project Template. Additionally, an RM must electronically approve the Control phase in PowerSteering, indicating that he/she has validated any financial benefit estimates and has ensured complete documentation is included in the RIE Project Template or in another document attached to PowerSteering. Finally, the MBB/BB coach must electronically approve the Control phase in PowerSteering, indicating that he/she has validated any operational benefit estimates and has ensured complete documentation is included in the RIE Project Template or in another document attached to PowerSteering.

**NOTE:** See paragraph 6.3.3 and Table 6.1 for instructions on how to assign the Project Sponsor, RM and MBB/BB as electronic gate approvers for the Control phase.

### **6.5.3 Non-Gated Project Templates:**

Those projects that do not go through the five DMAIC phases are considered “Non-Gated” projects and will be entered into PowerSteering as such. For these projects, belts will utilize a standardized “Non-Gated Project Template,” which can be found on the PowerSteering home page in the Tollgate Templates folder in Important Links. This template will be uploaded into PowerSteering upon completion of the project. The template must contain documentation indicating the Project Sponsor has approved the project.

For non-gated projects that realize financial benefits, the types (i.e. cost avoidance, savings, revenue generation) and amounts of financial benefits achieved must be recorded on the final slide of the tollgate template and signed by the Resource Manager. The Resource Manager’s signature certifies that the financial benefits declared have been validated.

Finally, the template must include documentation that the MBB/BB coach has validated any operational benefit estimates and has ensured complete documentation is included in the Non-Gated Project Template or in another document attached to PowerSteering.

## **6.6 Project Tracking**

### **6.6.1 PowerSteering.**

The Army uses PowerSteering software, as its database of record, to track schedules and benefits for all process improvement efforts, to include LSS projects. Project Sponsors and belts are required to document/archive all LSS projects, to include non-gated (Quick Win type projects) and gated (RIEs and DMAIC projects) in PowerSteering, while Deployment Directors are responsible for ensuring their organizations’ projects are kept up-to-date in that database. Project Sponsors, Green and Black Belt candidates must complete preliminary PowerSteering training via the e-learning modules on the LSS Training Portal on AKO prior to attendance at the Project Sponsor Workshop or belt training.

### **6.6.2 Stalled and Delinquent Projects:**

The LSS PMO will exercise oversight of PowerSteering to ensure it is a reliable and accurate database of record for tracking the progress of projects and the potential benefits associated with those projects. This is essential because the data is used for resourcing decisions and strategic communications. Every three months, the LSS PMO will email the Deployment Directors and Deputy Deployment Directors a Stalled projects list and a Delinquent projects list. The definition of each is as follows:

- Stalled projects are defined as projects that have moved out of proposed status and have not had a tollgate review in over 90 days
- Delinquent projects are those projects that have moved out of proposed status and have not had a tollgate review in over 150 days

The LSS PMO will request that organizations provide a brief rationale to retain Delinquent projects in the active database. Projects without adequate rationale will be moved to the Z1 folder. Each project that is moved to the Z1 folder will remain there for 30 calendar days and then the project will be purged.

## **Section 7. Army LSS Belt Certification**

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HQDA is responsible for setting Army standards for certification of Green Belts, Black Belts, Master Black Belts and Enterprise-Level Master Black Belts. Certification standards are required to ensure standardization of LSS practices across the Army. As noted in Section 3.3.4, once belt candidates receive their training, Deployment Directors, Process Owners, Project Sponsors and MBB/BB mentors must provide the required resources and encouragement to ensure project completion and subsequent certification. This section will clarify certification standards and procedures.

### **7.1 Process to Apply for Certification as an Army LSS Belt**

Upon completing all requirements for the specified belt level, each candidate is responsible for initiating the request for certification. Candidates will initiate the process with a formal request (DA Form 4187 for military personnel or DA Memorandum for civilian personnel) through their respective chain of command, Project Sponsor and Deployment Director. Upon approval of the candidate's request, the Deployment Director will forward the request to the LSS PMO. The method of transmittance is via email to the [OSA-OBT LSS Certification mailbox](#). The subject line of the email must contain the candidate name and PowerSteering project sequence number as shown in the example that follows:

Subject: Request for (GB, BB, MBB) Certification: Last Name, First Name - LDXXXXX

If forwarded in hard copy, the packet will be mailed to:

**Department of the Army  
ATTN: LSS PMO, OSA-OBT  
2530 Crystal Drive  
Suite 10054, 10<sup>th</sup> Floor  
Arlington, VA 22202**

The LSS PMO will review each project against the certification criteria to make sure Army standards are being met. This review will verify that required deliverables and supporting documentation are captured in PowerSteering (the Army's database of record). Requests that do not contain the required deliverables and supporting documentation, or that fail to meet the specified certification criteria, will be returned to the originating organization for corrective action. See the "LSS Certification Deliverable Checklist" document in the Deployment Documents section of the LSS Training Page on the Portal on AKO for a list of required deliverables and supporting documentation. The LSS PMO may contact the candidate, Mentor, Deployment Advisor, or other POC to assist in expediting the corrective action. If no response is received within a 90 day period, the certification request will be removed from consideration and the Command will have to re-submit a new request.

Once belt candidates have been approved for certification, certificates, signed by the Director of Office of Business Transformation (OBT) are forwarded to the individual through the organization's Deployment Director. For military officer certified belts, the LSS PMO Training Team will forward the approved DA Form 4187, with appropriate Skill Identifier, to the belt via scanned document. It is then

the responsibility of the belt to forward the DA Form 4187 to the appropriate Human Resources Command (HRC) representative. For enlisted certified belts, personnel records are updated through ATRRS to TAPDB. Green Belts receive a “1X” skill identifier, Black Belts receive a “1Y” skill identifier and Master Black Belts receive a “1Z” skill identifier. Currently, there is no series or skill identifier for civilians, but the action to acquire skill codes for DA civilians is being pursued.

## **7.2 Green Belt Certification Criteria**

### **7.2.1 Requirements**

To become certified as an Army LSS GB, a candidate must:

- Complete the Army approved LSS GB program of instruction or provide proof of completion of formal LSS GB training from another accepted source
- Pass the Army LSS GB exam with a minimum score of 70%
- Complete a minimum of one LSS GB level DMAIC project; or lead three LSS Rapid Improvement Events; or lead five sub-tasks of a LSS BB level DMAIC project (one sub-task per DMAIC phase) and demonstrate active participation in the BB level project
  - The DMAIC project must have completed tollgate templates entered into PowerSteering and proper Tollgate approvals (see Section 6.3.3)
  - RIEs must have completed RIE Project Templates entered into PowerSteering (see Section 6.5.2) and proper approvals
  - When a GB seeks certification through a BB project, the BB project must be of sufficient scope to justify the use of an additional belt to support the project:
    - The project should provide the GB candidate an opportunity to ‘carve out’ a small work stream to take through the DMAIC process in support of the project and the sub-tasks should demonstrate appropriate mastery of the methodology
    - No more than two GB candidates can support a single BB project when seeking GB certification
    - Leading sub-tasks in BB projects requires Green Belt candidates to upload, in PowerSteering, under the appropriate phase, the document or tool completed with their name as the author
    - It is expected that Green Belt candidates will demonstrate tool knowledge and appropriate usage in each of the five phases of the methodology and actively participate/help the BB with their project
  - All projects used to meet certification requirements must have financial and/or operational data entered into PowerSteering, as prescribed in Financial Benefits and Operational Benefits Guidance documents. These documents are available in the Deployment

Documents section of the LSS Training Portal on AKO and also in the Important Links section of the PowerSteering homepage.

## 7.2.2 What to Submit

The forms and memos listed below need to be included in the certification package:

**NOTE:** Examples of the forms and memos can be found in the “Certification Requests Forms” folder in the Deployment Documents section of the LSS Training Page on the Portal on AKO.

- DA Form 4187 for military personnel (enter “LSS Certification and Skill Identifier” in the “other” section of Block 8 and request “Skill Identifier 1X” in Section IV)
- DA Memorandum for civilian personnel
- Ensure DA Form 4187 / DA Memorandum addresses:
  - The full social security number (SSN) on the DA Form 4187 and the last four of the SSN on the DA Memorandum to record course certification in ATRRS
  - Level, source, date of completion of formal LSS GB training and Army LSS course number
  - Date of passing score for GB final examination
  - Completed project title and PowerSteering sequence number
  - Name of Resource Manager and date of financial benefits validation. If there are no financial benefits, the Resource Manager must provide his/her concurrence
  - Name of BB/MBB coach and date of operational benefits validation for projects with no financial benefits
  - If both financial and operational benefits are involved, both the RM and the BB/MBB should be listed with the respective validation dates

## 7.3 Black Belt Certification Criteria

### 7.3.1 Requirements

To become certified as an Army LSS BB, the candidate must:

- Complete the Army approved LSS BB program of instruction or provide proof of completion of formal LSS BB training from another accepted source
- Pass Army LSS BB exam with a minimum score of 70%
- Complete a minimum of one LSS BB level DMAIC project; or lead five sub-tasks of a LSS Enterprise Level MBB DMAIC project (one sub-task per DMAIC phase) and demonstrate active participation in the Enterprise Level (EL) MBB level project
  - DMAIC projects must have completed tollgate templates entered into PowerSteering (see Section 6.5.1)
  - When a BB seeks certification through an EL MBB project, the EL MBB project must be of sufficient scope to justify the use of an additional belt to support the project:
    - The project should provide the BB candidate an opportunity to ‘carve out’ a sufficient work stream to take through the DMAIC process in support of the project; the sub-tasks should demonstrate appropriate mastery of the methodology
    - No more than four BB candidates can support a single MBB project when seeking BB certification
    - Leading sub-tasks in MBB projects requires BB candidates to upload, in PowerSteering under the appropriate phase, the document or tool completed with their name as the author
    - It is expected that the BB candidate will demonstrate tool knowledge and appropriate usage in each of the five phases of the methodology and actively participate/help the MBB with their project
  - All projects used to meet certification requirements must have financial and/or operational data entered in PowerSteering, as prescribed in the Financial and Operational Benefits documents. These documents are available in the Deployment Documents section of the LSS Training portal on AKO and also in the “Important Links” section of the PowerSteering homepage.

### 7.3.2 What to Submit

The forms and memos listed below should be included in the certification request package:

**NOTE:** Examples of these forms and memos can be found in the “Certification Requests Forms” folder in the Deployment Documents section of the LSS Training Portal on AKO.

- DA Form 4187 for military personnel (enter “LSS Certification and Skill Identifier” in the “other” section of Block 8 and request “Skill Identifier 1Y” in Section IV)

- DA Memorandum for civilian personnel
- Ensure the DA Form 4187 / DA Memorandum addresses:
  - The full social security number (SSN) on the DA Form 4187 and the last four of the SSN on the DA Memorandum to record course certification in ATRRS
  - Level, source, date of completion of formal LSS BB training and Army LSS course number.
  - Date of passing score for BB final examination
  - Completed project title and sequence number loaded in PowerSteering
  - Name of RM and date of financial benefits validation. If there are no financial benefits, the Resource Manager must provide his/her concurrence.
  - Name of the MBB coach and date of operational benefits validation for projects without financial benefits
  - If both financial and operational benefits are involved, both the RM and **the** MBB coach should be listed with the respective validation dates

## **7.4 Master Black Belt Certification Criteria**

As shown in Table 7.4 below, there are two certification levels available to candidates for acquiring MBB certification. Candidates can receive certification as an Army Master Black Belt level I and then an Army Enterprise Level (EL) Master Black Belt level II. The MBB track requires candidates to: complete projects, coach projects and successfully teach 100% of the Army BB POI. The EL MBB track is an additional certification that requires the completion of two EL MBB projects. Candidates who receive EL MBB certification will be recognized at an appropriate level ceremony.

## 7.4.1 Master Black Belt Requirements

<b>Master Black Belt Certification Criteria</b>	
<b>All MBB transitions require an EL MBB Board Approval This Certification is done by the CPI Program Office Only</b>	
<b>Certification Requirements for MBB Level I</b>	<b>Certification Requirements for EL MBB Level II</b>
Be a certified Army Black Belt.	Be a certified Army Master Black Belt, Level I.
Complete the Army approved Master Black Belt Program of Instruction.	Have a minimum of 3.5 years documented LSS experience; which may include both industry and military experience.
Pass Army LSS MBB exam with a minimum score of 70%.	Lead and complete at least two (2) Army enterprise level MBB projects (see section 3.3.1.1 for the definition of an enterprise level project) through a successful Control tollgate with appropriate documentation in PowerSteering.
Lead two (2) BB DMAIC projects through a successful Control tollgate with appropriate documentation in PowerSteering.	Coach at least one (1) Army Black Belt to Level I MBB certification.
Coach at least two (2) Army Black Belt DMAIC projects through successful Control Tollgate and be identified as the project mentor in PowerSteering.	
Lead a PISW that results in projects being loaded into PowerSteering.	
Possess the skills necessary for an MBB as described in section 4.3.6.1.	
Successfully teach 100% of the Army BB POI. The MBB Candidate Co-Teaching Policy is located under "Training Policies" on the Army LSS Training page on the LSS Training Portal on AKO.	

Table 7.4

## **7.4.2 Master Black Belt Candidate (MBBc) Program of Instruction (POI) Co-Teaching Evaluation**

As an Army MBBc participates in the facilitation and co-teaching of the Army Lean Six Sigma Black Belt program of instruction, he or she will be evaluated by the lead instructor at the end of each module taught.

Each Army MBBc must co-teach at least half of the modules in each week of the Black Belt course until all the modules have been taught. The weeks must be taught consecutively, with the modules taught in accordance with the Teaching Timing Template on the “MBBc Instructor Resources” and the “LSS Instructor Home” pages on AKO. This necessitates eight weeks of co-teaching and is done this way to enable the Army MBBc sufficient time to master the material each week in order to present a quality product.

To receive credit towards Army MBB certification, the Army MBBc must achieve a passing score from a certified MBB Level 1 evaluator. If a failing score is received for a particular module, the MBBc will have to re-teach the module to the point where the evaluator feels that the candidate has grasped the concepts, and can effectively teach, the particular module.

The Army MBBc Co-Teaching Policy and the Co-Teaching Schedule can be found under “Training Policies” on the Army LSS Training Portal on AKO.

### **7.4.2.1 Co-Teaching Prerequisites**

Prior to being scheduled to co-teach the LSS Black Belt POI, the Army MBBc must:

- Be a certified U.S. Army LSS Black Belt
- Pass the U.S. Army LSS Master Black Belt examination
- Develop an Individual Development Plan (IDP) with the assistance of a mentor
- Practice co-teaching with their mentor and obtain a positive recommendation from that mentor indicating readiness to begin co-teaching

Once the MBBc is assigned to co-teach a week of instruction, the MBBc must coordinate and discuss with the lead instructor the modules he/she will teach, the classroom logistics and how the lead instructor and co-instructor will facilitate the class.

### **7.4.2.2 Master Black Belt Candidate (MBBc) Project Identification and Selection Workshop (PISW) Evaluation**

Each MBBc is required to facilitate a Project Identification and Selection Workshop (PISW) for their Command resulting in the identification, selection and prioritization of high-value LSS projects. A certified MBB is required to provide mentoring to the MBB candidates as they oversee the planning and execution of the PISW, similar to the BB co-teaching process. The output of the PISW is a list of prioritized projects with charters entered into PowerSteering.

The following documentation is required for the PISW completion requirement. A PISW Completion Form (found in the folder in the Deployment Documents section of the LSS Training Page of the Portal on AKO) must be filled out by each MBBc and signed by the certified MBB who supervised the workshop, similar to the BB co-teaching requirement:

- Command/ARSTAF organization
- Date(s) of PISW
- Signature of candidate and certified MBB coach
- Project LDs entered into PowerSteering

### **7.4.3 What to Submit**

#### **7.4.3.1 Army MBB Level 1**

To apply for certification as an Army MBB Level 1, the following forms and memos should be included in the certification request package:

- DA Form 4187 for military personnel (enter “LSS Certification and Skill Identifier” in the “other” section of Block 8 and request “Skill Identifier 1Z” in Section IV)
- DA Memorandum for civilian personnel

- Ensure the DA Form 4187 / DA Memorandum addresses:
  - The full social security number (SSN) for the DA Form 4187 and the last four of the SSN for the DA Memorandum to record course certification in ATRRS
  - Level, source, date of completion of formal LSS MBB training, and Army LSS course number
  - Date of passing score for MBB final examination
  - Completed project titles and sequence numbers of all four projects (two BB and two mentored projects) loaded in PowerSteering
  - Confirmation that documentation is complete in PowerSteering for each of the four projects, to include validation of operational benefits by an MBB and validation of financial benefits by a Resource Manager
  - Confirmation that all modules of the BB POI have been successfully taught
  - Completed Project Identification and Selection Workshop Completion form should be emailed to the LSS PMO Certification Team

**NOTE:** Examples of the forms and memos that need to be submitted for certification can be found in the Certification Requests folder in the Deployment Documents section of the LSS Training Page of the Portal on AKO.

#### **7.4.3.2 Army Enterprise Level MBB Level II**

To apply for certification as an Army Enterprise MBB Level II practitioner, a certification package, that includes the forms and memos listed below, needs to be submitted to a Certification Board. The certification board will consist of five members: one MBB from the candidate's organization, two other Army MBBs, the LSS PMO Director and the Director of LSS Training.

- DA Form 4187 for military personnel (enter "LSS Certification and Skill Identifier" in the "other" section of Block 8 and request "Skill Identifier 1Z" in Section IV)
- DA Memorandum for civilian personnel
- Ensure the DA Form 4187 / DA Memorandum addresses:
  - The full social security number (SSN) for the DA Form 4187 and the last four of the SSN for the DA Memorandum to record course certification in ATRRS
  - Date of Army MBB, Level 1 certification
  - Completed project titles and sequence numbers of two Army Enterprise level projects loaded in PowerSteering
  - Confirmation of successful coaching of at least one MBB level I certification
  - Confirmation that documentation is complete in PowerSteering for the two Army Enterprise level projects, to include validation of operational benefits by an MBB and validation of financial benefits by a Resource Manager
  - Confirmation of at least 3.5 years of LSS experience which can include both industry and military experience

## 7.5 Requesting Green Belt/Black Belt Certification under Grandfathering Process

There may be circumstances when Army personnel have completed formal Green Belt or Black Belt training from sources other than the Army's LSS program of instruction. In order to ensure consistent training and certification standards, course completion credit will not be granted for LSS training completed outside the Army program of instruction after 1 October 2007 if paid for by Army funding. Course completion credit is possible for outside formal training if funded by sources other than the Army. It is the Army's intent that Army funds only be used to train personnel via the Army approved LSS curriculum.

Candidates requesting course completion credit under the grandfathering policy must meet the same certification guidelines as regular candidates. These include:

- Providing documentation of successful completion of formal training that covers, at a minimum, the same Lean and Six Sigma topics covered in the Army POI for the belt level they are seeking
- Documentation of those topics must be sent to the OBT-LSS Program Management Office for approval
- Passing the Army belt final exam and completing an Army project

The grandfathered candidates must complete and enter their Army LSS project(s) in PowerSteering as described in Section 6.6.1.

## 7.6 Requesting Certification of Non-Army Certified Master Black Belts

One of the key elements for the Army's LSS deployment is to build Master Black Belt capabilities that can routinely complete enterprise-wide projects that produce transformational results. Achieving this aspect of the vision requires a highly skilled, trained and motivated cadre of MBBs who can perform the entire suite of MBB tasks. The preferred method to obtain Army MBB certification is to fulfill all requirements as outlined in Section 7.4 above. However, Deployment Directors can also request constructive credit for the coursework and certification already achieved by government MBBs who have been certified by non-Army sources. This guidance outlines how these MBBs should apply for Army certification (see Figure 7.1 below).

**NOTE:** This policy applies only to military personnel and government civilians who are certified MBBs. Support contractors cannot be certified as Army MBBs through this policy.

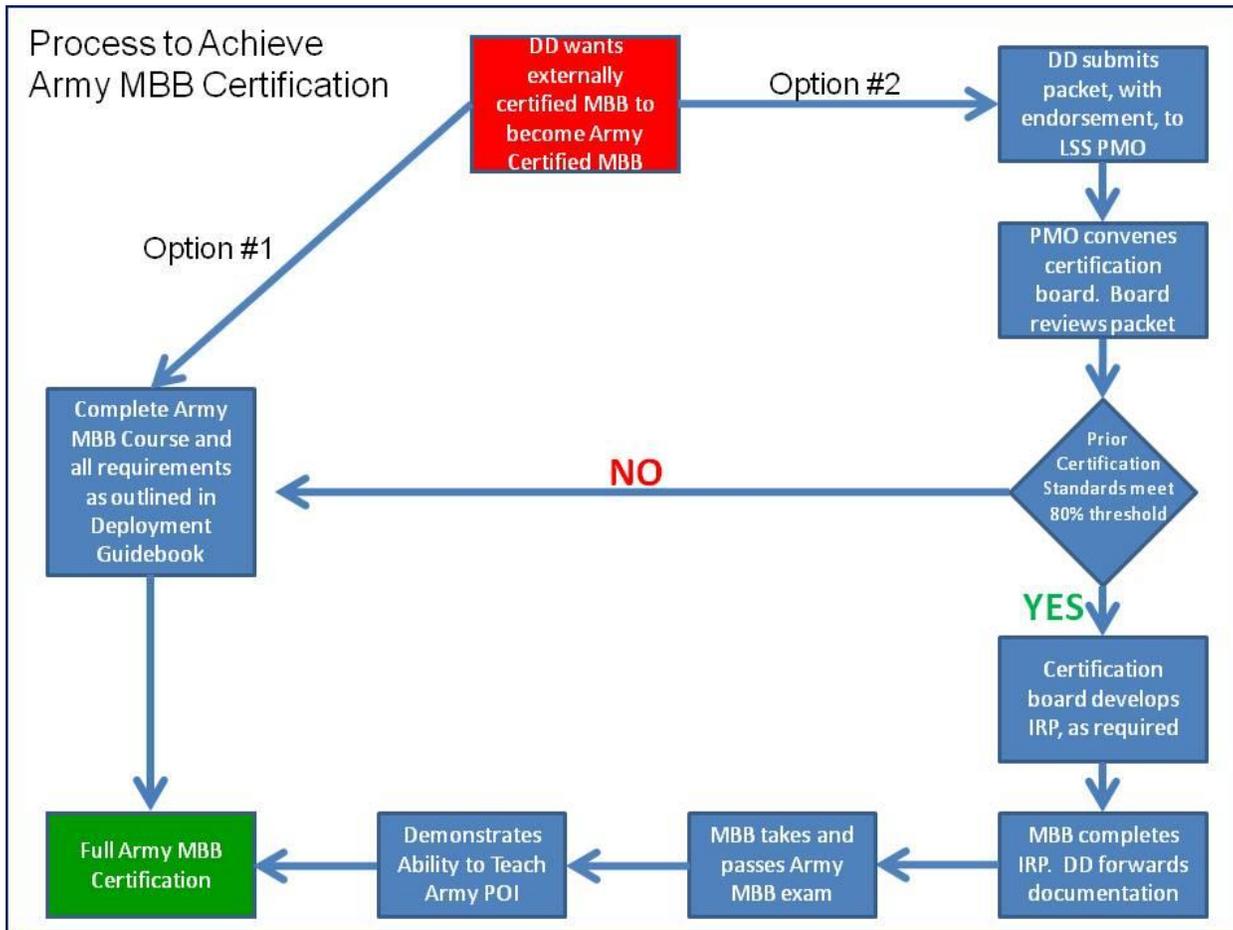


Figure 7.1

**Policy on Constructive Credit.** The Army can consider an MBB for constructive credit towards Army certification if the Deployment Director can demonstrate that the candidate's external certification criteria encompass 80% or more of the requirements below.

**Note:** Teaching the Army BB POI cannot be waived as part of the 80% of requirements.

The Army's certification requirements include the following elements:

1. Completion of a formal Black Belt program of instruction that includes both Lean and Six Sigma curricula (or completion of separate Lean and Six Sigma programs).
2. Passing the Army LSS Black Belt examination with a minimum score of 70%.
3. Leading two Black Belt DMAIC projects from Define through successful Control tollgates. At least one of these projects must be an Army project. (See note below reference required documentation.)
4. Coaching at least two Black Belt DMAIC Projects through a successful Control tollgate. These may be Army or non-Army projects. (See note below reference required documentation.)

**NOTE:** If the completed and mentored projects have been entered into PowerSteering, then the sequence numbers (i.e., LDXXXXX) should be included. If a project was completed outside the Army and is not posted in PowerSteering, it must be documented. Documentation formats, including commercially based products, are acceptable if they demonstrate project completion and the appropriate use of LSS tools and methodology. The “burden of proof” however, is upon the Deployment Director and the candidate.

5. Completing a nationally recognized Master Black Belt certification program that includes both Lean and Six Sigma curriculum. It is expected this curricula encompasses 90% of the Army MBB terminal learning objectives (TLOs) and topics or content.
6. Passing the Army LSS MBB exam with a minimum score of 70%.
7. Proof of successful teaching of all the lessons of a Black Belt course, which includes Lean and Six Sigma curricula.
8. Lead a Project Sponsor Workshop, Project Identification and Selection Workshop, or similar workshop.
9. For EL MBB level II, all of the above plus:
  - Leading two Enterprise-level MBB projects from Define through successful Control tollgates. At least one of these projects is required to be an Army project.
  - Coaching at least one BB to MBB certification.

The Certification Board may recommend an individual remediation plan (IRP) be developed to close any remaining capability gaps between the achieved certification standards and the Army requirements. Once MBB candidates complete this remediation plan, they will be required to pass the Army MBB exam with a minimum of 70%, with no more than one re-test.

In the absence of completing the Army MBB certification, the policy remains in effect that an externally certified MBB can perform the full suite of MBB tasks within his/her organization except that they cannot teach any of the Army LSS POIs, or act as a certification authority for organization participating in the self-certification program. Only Army certified Master Black Belts can be lead instructors for Army programs of instruction and certify projects for belt certification. However,

- The OBT LSS Program Management Office may authorize approved MBB contractors to be lead instuctors, or instructors, for Army programs of instruction.
- The OBT LSS Program Management Office may authorize approved MBB contractors to review projects for certification.

**Process to Apply for Constructive Credit.** A Deployment Director can request Army certification of an MBB who has been certified by a source other than the Army by submitting a packet to the LSS PMO. The Deployment Director must electronically send an endorsement and certification packet to [OSA-OBT LSS Certification mailbox](#). The packet should explicitly map the candidate’s current qualifications and experiences against the requirements outlined above, to include which level of MBB certification is being requested.

The cover memo to the packet will include the following information:

- Name (Last, First, MI)
- Full SSN to record certification in ATRRS

- Organization
- Phone number
- Status (Civilian/Military)
- BB certifying body
- BB test date and confirmation of passing score
- BB certification date (MM/DD/YYYY)
- BB curriculum course dates (MM/DD/YYYY-MM/DD/YYYY)
  - BB course curriculum (Modules Covered) detailed
- MBB certifying body
- MBB certification date (MM/DD/YYYY)
- MBB curriculum course dates (MM/DD/YYYY – MM/DD/YYYY)
  - MBB course curriculum (Modules Covered) detailed
- Exam required for MBB certification? (Y/N)
- MBB test date and confirmation of passing score
- Confirmation that BB curriculum has been taught
  - BB course curriculum (Modules Covered) detailed
- Confirmation that at least two LSS BB projects have been completed
  - One is required to be an Army project loaded into PowerSteering with all the DMAIC tollgate detailed
  - One can be outside of the Army. However, for these projects, copies of the DMAIC tollgate should be submitted to the LSS Program Office.
- # of LSS BB projects completed as BB
- # of LSS BB projects mentored as MBB
- # of Kaizens/RIEs conducted (optional submission – may be used as additional demonstration of LSS expertise)
  - Project titles
  - Dates
  - Brief details of tools used and results
  - Sponsors
- Other relevant comments?
- For EL MBB Level II the following documentation is needed in addition to the above:
  - # of LSS MBB Enterprise level projects completed
    - Note:** At least one of the projects must be an Army project
  - # of LSS MBB projects mentored as MBB
  - Documentation of at least 3.5 years of MBB LSS experience

The LSS PMO will convene a board to consider requests for Army MBB certification. That board may include: an MBB from the LSS PMO, the Director from the LSS PMO Training Division, an Army certified MBB from the requesting organization and an Army certified MBB from another organization that is similar in size and mission. This board will review the request packet and a majority of members must agree that the external certification process was rigorous enough to meet the 80% threshold identified above. The board may require additional information and may interview the candidate to clarify any issues.

If the board validates that the candidate's prior training and experiences meet the 80% threshold, and the candidate has completed an Army EL MBB project, the members will develop an IRP that will close any capability "gaps" between the external standards for certification and the Army standards. The board may require the MBB candidate, as part of the IRP, to audit and/or teach specific weeks of training within one or more of the five Army LSS courses in order to ensure adequate understanding of the specific nature of the Army's LSS deployment.

The requesting organization's Deployment Director is accountable for mentoring the candidate through completion of the IRP and maintaining completion documentation. Once the candidate completes the IRP and the Deployment Director provides documentation to the LSS PMO, the candidate will be scheduled to take the Army MBB exam.

Even if there are no individual capability "gaps" and an IRP is not required, an MBB candidate must take and pass the Army MBB examination to be certified under this provision. A score of 70% is required, with no more than one retake. Once the required test score is achieved, the individual will be awarded a probationary MBB certification.

Full Army MBB certification is achieved once the individual demonstrates the ability to successfully teach the Army POI.

**Purpose.** This policy provides the means to leverage government personnel who have been externally certified as MBBs to support the LSS deployment until the Army has developed a self-sustaining capability. This policy also ensures that the highest standards for certifying MBBs who can provide the full suite of required capabilities across the Army are maintained. Maintaining these standards will ensure the development of the capability to perform enterprise-wide projects that achieve transformational effects.