Army Lean Six Sigma

Deployment Guidebook

Release 2.0

Version 2.0

1 June 2007

Revision History

Change Number	Description	Effective Date	Entered By
1.0	Baseline	14 July 2006	M Schutta, George Group
1.0.1	Baseline update	17 July 2006	P Pankratz, GeorgeGroup
1.01a	Baseline Working Draft	19 July 2006	M Schutta, George Group
1.0.2	DD Comments Incorporated and Typos in TOC corrected section 3	29 July 2006	M McDonald, GG
1.03	DA comments incorporated per log	19 September 06	M McDonald, GG, M Schutta, GG
1.04	Updated comments from LTC Nikituk, added reference to 4187 for Belt Certification		
1.05	Certification, FMC, Stratcom changes integrated	1 Mar 2007	S. Pautz (GG)
1.06	Final Certification changes updated from 1.05	29 Mar 07-	
1.07	Final FMC rewording integrated	17 Apr 07	S. Pautz (GG)
2.00	Integrating all changes and release as 2.0	1 June 07	LTC Nikituk

Table of Contents

Section 1. Introduction

1.1 Purpose

The Army has selected Lean Six Sigma (LSS) as the process improvement methodology to support Army Business Transformation. LSS combines the principles of Lean (reducing and eliminating non-value activities) with Six Sigma (reducing variation, increasing quality) to improve process efficiency and process effectiveness. Any process – manufacturing, acquisition, logistics, administration, or service – can benefit from using this approach.

Because each Army organization is different, standardization and flexibility in the organization must be balanced to maintain a focused Army-wide deployment that will thrive and become embedded in the command's culture. Key to this balance is the need for each organization to have centralized LSS design and other functions led by the respective Deployment Director. These deployment directors will be the communication and standardization link to the Headquarters, Department of the Army (HQDA) LSS Deployment Team which resides within the office of the Deputy Under Secretary of the Army for Business Transformation (DUSA BT).

This document exists to guide Army decision makers in deploying LSS across their organizations. Critical decisions made during the deployment phase should follow best practices and capitalize on lessons learned to ensure success.

1.2 Scope

This document describes the overall deployment framework and specifically, the role of the Deployment Director for Army Lean Six Sigma. For cases in which HQDA has already established guidelines or set policy, this document includes and supports those elements.

1.3 Latest Version of the Army LSS Deployment Guide

This version of the Army LSS Deployment Guide (V2.0) was released in June 2007. The DUSA BT LSS Program Management Office will be releasing routine updates to this Guidebook. To ensure you have the latest copy, check the DUSA BT Army Knowledge Online (AKO) at https://www.us.army.mil/suite/folder/6055391.

1.4 Links to Additional LSS Deployment Documents

For more information about the Army LSS Deployment policy, plans, operating procedures, training, project case studies, best practices, and deployment metrics, please view the following web sites:

- DUSA BT public web site at http://www.army.mil/ArmyBTKC/index.htm contains general guidance for Army Business Transformation and Lean Six Sigma
- DUSA BT Army Knowledge Online (AKO) collaboration portal (requires AKO password) at https://www.us.army.mil/suite/page/187912 contains all Army Policy and Guidance Documents related to LSS, program metrics, training modules, links to PowerSteering, Newsletters, a LSS Discussion Forum, link to the DUSA BT Knowledge Center, links to other LSS sites, and a Calendar of Events.

- DUSA BT AKO Knowledge Center at https://www.us.army.mil/suite/kc/4578389 contains the files posted by the LSS Program Management Office to include copies of related Policy Memos, LSS Guide Book, monthly briefings to the LSS Deployment Directors, LSS Deployment Metrics, LSS Program Points of Contact, Training Calendars, and LSS Training Materials.
- PowerSteering Army Portal (requires AKO password) at https://businesssituationalawareness.army.mil/usarmycorp/login.jsp is a LSS project tracking and portfolio management system. It contains team members, charters, status, and related documents for all proposed, active, completed and cancelled LSS projects.

Section 2. Deployment Approach

In developing an approach to deploying LSS, the Army has defined a recommended LSS deployment management structure in order to ensure that the program is applied consistently across Commands, Direct Reporting Units and Army Staff organizations. Essential elements of the approach are described in the ensuing paragraphs.

2.1 Lean Six Sigma Goals and Objectives

The Secretary and Chief of Staff of the Army have provided the Army's mandate for Business Transformation. The Secretary has established the Deputy Under Secretary of the Army for Business Transformation, (DUSA-BT) as his Enterprise Deployment Director to coordinate Business Transformation. For more information about the DUSA BT, visit the follow web site at http://www.army.mil/ArmyBTKC/index.htm.

Our Army's fundamental strategic issue is that we have significantly more resource requirements than funding. In an effort to reduce these requirements and increase productivity, our vision is to transform business processes and functions in the Army to provide improved value, quality, and responsiveness for our customer while reducing ct and cost, all accomplished through a culture of continuous, measurable improvement. This ensures that we enhance our operational capability to meet an uncertain global security environment in order to maintain our solemn compact with the American people that we have upheld for over 230 years. To meet that commitment, the Army must transform the way we do business. This transformation is led from the highest levels of the Army and executed by trained Army soldiers and civilians. Ultimately, the Army will have a self-generating capability to achieve continuous, measurable improvement.

The Army will use proven methodologies seen in the most successful corporations to improve effectiveness and implement efficiencies that will free human capital and financial resources to better support operational requirements. LSS will be the primary forcing function for business transformation, for the Army. It is a multi-level management approach to optimize organizational performance. This approach encompasses several aspects such as fundamental beliefs and values, organizational infrastructure, education and training, methods and tools and project execution. Deploying these techniques will better identify processes that are no longer relevant, eliminate non-value added operations and positions.

Development of a plan to synchronize, integrate, and manage the execution of Business Transformation is vital to achieve the results that the American public expects of our Army. This deliberate process will provide the holistic approach necessary to institutionalize LSS enterprise-wide.

Business Transformation will have an operational impact. By applying these techniques, the Army can minimize the impact of expanding requirements, develop a competitive advantage by reforming processes to better support the operational forces, divest functions no longer relevant for our operational environment and reengineer processes to eliminate steps and increase responsiveness. In short, we can eliminate waste and focus on what is important – providing trained, equipped, experienced and manned forces to the Combatant Commander.

2.2 Guiding Principles

This section provides guiding principles that typically ensure a successful LSS deployment. These ideas apply to the LSS program since the management of a LSS initiative is itself a process. The spirit of "continuous improvement" applies to the deployment and management of LSS. Processes should always be designed with flexibility in mind and the ability to periodically introduce controlled, measurable changes.

2.2.1 Customer Centricity

Knowledge and deep understanding of what the customer values most is the starting point for all improvement activities. The foundation for this understanding is the successful completion of "Voice of the Customer" and "Value Stream" analyses, which readily determine areas of opportunity for improvement. Creation of Value Stream Maps is an important first LSS task. Value Stream Maps are information-rich diagrams that identify and display all key process steps (both value added and non-value added), and allow managers to see and recognize deficiencies in the end-to-end flow of both material and information as a product (or service) makes its way through the process.

2.2.2 Executive Engagement

Commanding Officers and Directors will demonstrate proactive engagement and visible participation in LSS as the initiative is deployed throughout the organization. Commitment is demonstrated from the very beginning by their active involvement in the upfront decisions about the "who", "what", "where", "when", and "how" of LSS – overseeing and guiding LSS projects to make sure these stay focused on command priorities. Setting of two-year and five-year performance goals that reflect gains in operating efficiencies and financial performance in a way that is consistent with the HQDA LSS initiative is a key piece of the command initiative. The executive command team will also establish a Command Lean Six Sigma Steering Committee to oversee the LSS initiative.

2.2.3 Operational Results

Projects and efforts will only be undertaken when there is evidence indicating the changes will result in tangible and quantifiable operational improvements. Activities and process steps that are determined by customers to be "non-value-added" from their perspective provide material opportunities for improvement. The goal is to identify command processes that are most mission critical, can provide the greatest operational, readiness, and financial benefits, and which can be most readily improved by the LSS techniques and tool sets.

2.2.4 Execution Infrastructure

The hierarchy of specific leadership roles (such as Command Lean Six Sigma Steering Committee, Deployment Director, Project Sponsor, Master Black Belts, Black Belts, and Green Belts) provides a means of integrating LSS projects into the "real work" of the command and sustain the rate of improvement.

2.2.5 Resource Commitment

A significant number of command personnel will be devoted to Six Sigma efforts on a full-time basis. For the Army LSS initiative, the number of Black Belts in the organization will be composed of at least 0.5% to 1% of full-time staff. Green Belts shall comprise a minimum of 5% of staff. Other employees and command personnel will also regularly participate on LSS improvement projects on a part-time basis.

2.3 Success Factors

Deployment of LSS across many organizations has led to the development of several critical success factors.

2.3.1 Clearly Defined Burning Platform

The organization must develop an effective "burning platform" and communicate that message to stakeholders so they understand and accept the need for change. The burning platform articulates the need for change and shows why the organization must use LSS to improve the organization. The message must contain specific goals to accomplish over the next 1-3 years. Goals will support the organization's mission and list required improvements in quality, speed and cost.

The Army has established a burning platform at the DA level. Each organization must be familiar with the DA message and use it to create a tailored message specific to its mission and vision. Creation and/or validation of the burning platform will occur during the initial assessment and deployment of LSS.

2.3.2 Strong Deployment Leadership

A strong and respected Deployment Director should lead the Lean Six Sigma Deployment on behalf of the organization's leadership. The individual should report directly to the Commanding Officer or Staff Director and serve as a senior advisor to the rest of the leadership team.

The Deployment Director's primary responsibility is to ensure that the organization executes a consistent, rapid, and effective deployment of LSS. This person will address major barriers that arise during deployment and ensure integration of management priorities. Section 3 provides a more detailed description of the Deployment Director's role.

2.3.3 Accountability for Results

As with any organizational effort, leaders must own business processes and maintain accountability for results. It is critical to maintain roles and responsibilities, especially for the Project Sponsors and Process Leads contributing to project effectiveness. Section 3 further outlines responsibilities and accountabilities that support an environment of continuous improvement.

Each organization will maintain accountability for results to HQDA. HQDA leadership and the Lean Six Sigma Program Management Office (PMO) will provide instruction in this area.

2.3.4 Rigorous Project Selection

Each organization must establish and maintain a project pipeline that addresses important areas of opportunity. For first-wave projects, organizations will follow a top-down approach that identifies and prioritizes projects based on expected benefit to the organization vs. expected effort to complete the project. Going forward, each organization will establish a process that best supports its goals and future state vision. Section 7 contains further guidance in project selection.

2.3.5 Matching of Problem and Approach

The LSS methodology provides a flexible approach to problem solving that matches the approach to the complexity of the project. Use Rapid Improvement Event teams for 5-30 day projects, Green Belt teams for projects lasting from 1 to 3 months, and Black Belt teams for projects expected to last from 3 to 5 months.

- Use Rapid Improvement Events (RIEs), for relatively straightforward problems. A team of 5 to 8 people can reasonably attack this type of problem over a period of 5 days, not including preparation time before the event or time afterward to tie up loose ends. Choose an experienced facilitator, with or without LSS certification, to lead the RIE.
- A Green Belt project typically requires between 1 and 3 months to perform with little or no additional time for preparation or follow-up. Such projects fall within the Green Belt's organization and do not span multiple organizations.
- Black Belt projects require more time than Green Belt projects (3 to 5 months) and require a deeper understanding than other types of projects. These projects do not have a straightforward solution and often involve several departments or organizations.

2.3.6 Minimal "Projects in Progress"

The Deployment Director should actively restrict the number of projects in process, and instead focus on rapid completion. Organizations often push as many LSS projects as possible into the pipeline in an effort to produce results. Because resources are limited, however, this approach increases the time to project completion for each project and delays bottom-line results.

The best number of projects in process depends on the number of Green and Black Belts, availability of team members, and the organization's experience level with LSS. During the initial stages of deployment, it is usually best to limit each Black Belt and Green Belt to one project at a time.

2.3.7 Thorough Results Tracking

It is important to track results for projects and use that information to improve the LSS deployment. Each project will include a Define phase that sets project goals and a Control Phase that measures results. Organizations will use the Army-wide system, Power Steering, to track and report results. Section 4 contains more detail on measuring success.

2.4 Lean Six Sigma Deployment Status Control

The Deployment Director should consider the type and frequency of LSS status meetings needed. The number of meetings and the frequency will depend upon the size of the command / agency as well as the maturity of the deployment. For example, early in the LSS deployment, a

command or agency may want to hold their deployment status reviews more frequently than once per quarter as is suggested in the table.

Table 1 Suggested LSS implementation status review meetings.

The scale of the implementation, i.e. the size of the command/agency, the number of projects, the number of active LSS projects, etc. should be considered when deciding whether to add these sessions to the agenda. This list provided here would accommodate a very large organization with many active projects.

Meeting Title	Audience	Responsible Organizer	Frequency	Media	Agenda/Details
Quarterly Deployment Status	Executive Steering Committee	Deployment Director	Quarterly	Formal Review	1. Review Top Level Deployment Metrics 2. Present Top Performing Completed Projects (10 min) for the quarter.
Monthly Deployment Status	Process Owners	Deployment Director & Process Owners	Monthly	Formal Review	1. Roll up and review all Deployment Metrics 2. Deployment Metric Roll Up 3. Selected Command Level Updates 4. Deployment Best Practice 5. "Issue of the Month" working session
Monthly Project Status	Master Black Belts Project Sponsors	Black Belts Green Belts	Monthly	Table-top Update	1. Review Projects (10 min) at Phase Gates 2. Review new project submissions for potential "in-queue" status.
Project Exception Reviews	Master Black Belts Project Sponsors	Black Belts Green Belts	As Needed	Table-top Update	1. Review Projects that are outside of control limits on performance.
Weekly Project Deck Update	Master Black Belts Project Sponsors	Black Belts Green Belts	Weekly	Tracking Software and Verbal Exception Reporting for Projects Outside of Control Limits	1. Input Project Status to Power Steering project tracking system 2. Exception reviews scheduled as required to maintain project schedules
Weekly Deployment Review	PMO Team Leads	PM	Weekly	Hard Copy	Key Deployment Metrics PMO Team Updates

2.5 Deployment Infrastructure

Figure 1 depicts the suggested organizational infrastructure to support a LSS deployment. Roles and responsibilities are defined further in Sections 2 and 3 of this document.

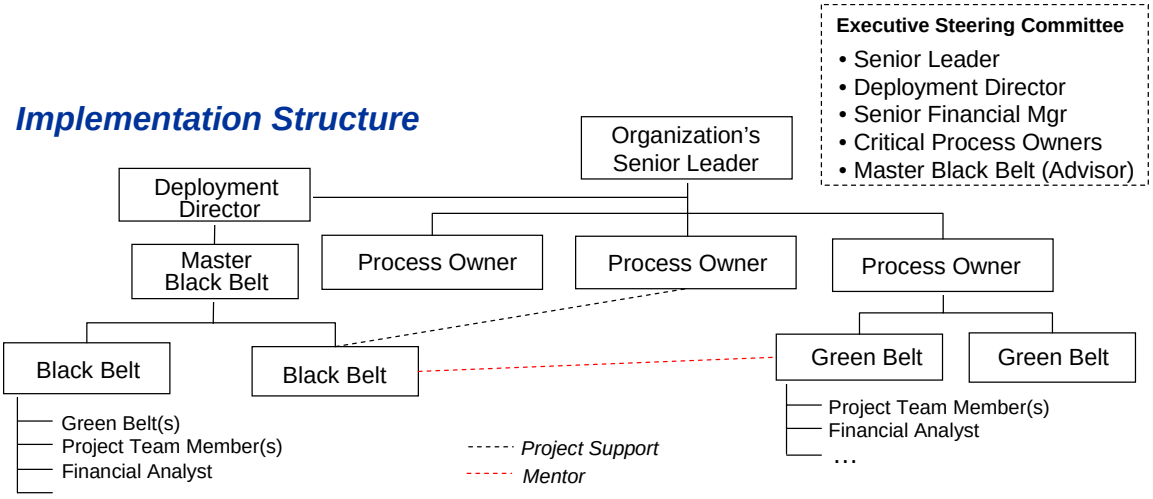


Figure 1 LSS Deployment Infrastructure. Notice that Black Belts and the Master Black Belt report into the Deployment Director who in turn reports to the Commanding Officer of Director.

Some points regarding deployment infrastructure:

- Black Belts and Master Black Belts report to the Deployment Director who in turn reports to the commanding officer or director. That is, these individuals are part of the organization they support, and not some LSS organization outside the control of the group they support. The command/agency owns these resources as well as accountability for results
- Army Process Leads (who may also be Process Owners) will manage Value Stream Maps of key Army Value Chains that will in turn drive the direction of projects to key areas
- 'Headquarters' provides expertise for deployment, training, mentoring, tracking, best practices
- A Deployment Team represents the interests of both the 'Organization' and the LSS Deployment

2.6 Lean Six Sigma Certification and Training Management

The DUSA-BT will be the certification body for Army LSS Master Black Belts, Black Belts, and Green Belts and the proponent for assigning Army Skill Identifiers and Skill Codes.

Section 3. Roles and Responsibilities

In developing a candidate selection and retention strategy, the following LSS deployment elements must be defined and well understood in order to promote successful implementation efforts:

- Job Descriptions/Requirements
- Candidate Selection Guidelines and Processes

3.1 Lean Six Sigma Roles and Responsibilities

In order to obtain the greatest possible benefit from LSS projects, each command will establish a high performance organizational infrastructure that provides support to the LSS teams and ensures that the various project teams are working to their best potential. The key roles are illustrated in Figure 2. In order for LSS project teams to be effective, the command creates a high performance infrastructure to support the teams in their project delivery efforts.

The remainder of this section discusses the various roles depicted.

Figure 3. Key Roles in a LSS Deployment

3.1.1 Executive Leadership

Command executive leadership is responsible for establishing the reasons and rationale for implementing LSS, and manages the deployment of LSS activities. Among the duties for executive leadership are the following:

- Inspire, own, drive, and provide funding for the LSS initiative.
- Lead by example with a clear and consistent message and a commitment to "walking-the-talk".
- Establish LSS as a standard operating procedure throughout the command.
- Hold their organizations and themselves accountable for the success of LSS.
- Ensure consistency and continuity of efforts.
- Demonstrate belief in LSS by selecting the best people as Black Belts and Green Belts and assigning them to solve the biggest problems.
- Identify greatest areas of opportunities at the command level and across the enterprise.
- Place a high value on process discipline and rigor.

Another major facet of executive engagement and involvement is through establishing and participating on a Command Lean Six Sigma Steering Committee. 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 command. This executive leadership team establishes the LSS program for the command, and serves as its guiding body from that point forward. The Command Lean Six Sigma Steering Committee is responsible for continuously monitoring the performance of the LSS initiative, and for adjusting the program when gaps between goals and project performance are identified (the LSS process is not producing the desired results, or a major change attributed to a special cause event has been determined).

The Command Lean Six Sigma Steering Committee:

- Provides overall Lean Six Sigma policy and guidance.
- Creates a strategic plan and a system of metrics – an "aim" for the organization.
- Allocates resources (human, material, and financial) to the project teams.
- Assigns command Black Belts and Green Belts to Project Sponsors for team leadership.
- Reviews and approves solutions derived by the project teams.
- Actively manages implementation efforts.
- Assesses control metrics (output metrics) for a minimum of six months after project realization to ensure that performance improvement gains are held.

3.1.2 Deployment Director – Roles and Responsibilities

The command Deployment Director establishes, coordinates and provides leadership for the command's LSS initiatives, including developing strategy, policies, objectives, plans, organizations and procedures focused on integrating LSS into the command's operations. Additionally, the Deployment Direct ensures that the command's LSS efforts meet the guidelines, criteria and metrics established by the Commanding Officer and the Command Lean Six Sigma Steering Committee. To see the latest list of Army Deployment Directors, visit the DUSA BT AKO site at https://www.us.army.mil/suite/folder/6055383 (this will require an AKO password).

3.1.2.1 Essential Deployment Director Functions and Major Activities

Below are the essential functions and major activities that the Deployment Director manages:

- Develop and maintain the infrastructure (metrics, process diagnostics/opportunity identification, project gating, resource allocation, best practice sharing, etc.) to support the LSS activities within the command and effectively coordinate these activities with the command's leadership/management team. Ensure that projects are properly defined, suitably staffed, and financially justified.
- Manage the development and maintenance of methods and systems for monitoring and measuring the command's LSS goals, objectives and metrics. Provide command leadership and management with performance information regarding results, and recommend appropriate corrective action if necessary.
- Recruit Black Belts into the LSS infrastructure, help them define/justify their projects, coach them in using LSS methodologies and developing good project management skills, provide them with resources, guidance, and direction, help them remove project barriers, and ensure the continuing development of their technical skills and leadership abilities.
- Interface with key internal organizations (personnel, intelligence, operations and plans, logistics, etc.) to establish LSS requirements related to individual staff function (G1, G2, etc.) requirements. These requirements should focus on overall command needs, and the associated functionality, reliability, and criticality of the processes. Ensure that LSS considerations are properly addressed as early as possible in the design/development phase
- Ensure two-way open communication throughout the command organization for LSS. This includes keeping the Command Lean Six Sigma Steering Committee informed of program status and ensuring the coordination of activities between Black Belts working on projects within the organization.

3.1.2.2 Deployment Director Professional and Educational Requirements

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

- Bachelor's Degree, preferably in Business, Engineering, or a technical/scientific subject, or equivalent work experience. An advanced degree is desirable.
- Minimum ten years of professional work experience, ideally in a leadership or management capacity.
- 3-5 years of experience in Process Improvement with prior supervisory or personnel management responsibility.
- Solid project management skills and team leadership skills.
- Sound knowledge of other key functions that provide critical inputs (i.e., Finance and Accounting, Purchasing, Engineering, Supply Chain/Logistics, and Operations).
- Broad understanding of contemporary quality theory, and a working familiarity with improvement tools and statistical analysis.

3.1.2.3 Deployment Director Success Enhancing Strengths

- Able to lead and direct a change process.
- Results-oriented "change agent" with strong persuasive abilities to proactively facilitate group dynamics.
- Able to operate effectively at all levels of the hierarchy to establish and maintain relationships and achieve widespread cooperation in pursuing the command's goals.
- Able to diplomatically deflect external interference and distractions
- Passionate about improvement and be able to influence, negotiate, and resolve conflicts to reach consensus around common goals.
- Understands LSS, project gating, resource allocation, quality and financial principles and is able apply them to analyze the planned activities.
- Inability to develop multi-functional, cross-company networks.

3.1.3 Master Black Belt – Roles and Responsibilities

The Lean Six Sigma Master Black Belt is a full time dedicated position reporting to a command's Lean Six Sigma Deployment Director. The Master Black Belt is responsible for driving the long-range technical vision of LSS including the development of technology road maps and working technically across functional areas.

The Master Black Belt is the command's "in house" expert for disseminating knowledge, identifying projects, and training/coaching primarily Black Belts (but also Green Belts where appropriate). Additionally, the Master Black Belt takes a direct leadership role in conducting large, more complex LSS program initiatives or projects that span across the command to improve critical processes that drive readiness and responsiveness, and which also improve financial results.

Above and beyond the LSS Black Belt training and certification, Master Black Belts will be required to attend all Master Black Belt training events, pass a written Master Black Belt exam, teach a minimum of two Black Belt training modules, and coach Black Belts and/or directly lead projects that sum to at least 10 projects in total. Successful completion of training, written exam and successful completion of improvement projects will lead to Master Black Belt "Certification".

3.1.3.1 Essential Master Black Belt Functions and Major Activities

Below are the essential functions and major activities that the Master Black Belt performs:

- Lean Six Sigma Project Leadership. Lead large-scale and complex improvement projects within a department, across departments, or even across the command, and effectively coordinate these projects with the command's Deployment Director and the various project teams.
    - Project leadership includes identifying opportunities, defining and financially justifying projects, negotiating resources, launching project teams, using good project management to manage team activities, training and coaching of resources assigned to the team, leading teams to execute projects with the

problem solving methodology, tracking project status and results, anticipating and removing project barriers, and developing team members.

  - It is also critical to identify integration issues with other projects/processes and coordinate the improvements with the appropriate project leader and process owners to accomplish the project goals.

- Technical Leadership: Provide consultation and direction as a subject matter expert on the application of LSS methods to the command's Deployment Director and associated Black Belts. Assist Black Belts in preparation for Milestone Reviews and challenge Black Belts on their technical application of problem-solving tools to improve project results. Participate in project Milestone Reviews when necessary and consult on LSS project implementations and managing changes within the activities of the larger (Army-wide) Lean Six Sigma organization.
- Recruiting, Coaching, and Training of Team Members:
  - Project Teams: Assist the command's Deployment Director in identifying potential Black Belts and recruiting Team Members into the LSS infrastructure. Provide necessary training, coaching and consultation to team members to spread the base of LSS tools and their application in project implementations.
  - LSS Command-Wide: Train Black Belts using the standard POI curriculum. Assess the progress of Black Belts during project applications, verify/validate Black Belt-led project savings, and assess the knowledge and skills of Black Belts for certification purposes. Identify implications of LSS project implementation (synergies and breakdowns).
  - Transfer Knowledge: Must be comfortable and able to stand up in front of an audience and present material in a variety of settings using multi-media simultaneously (transparencies, projectors, flipcharts, videos, PowerPoint presentations, lecture, and small group activities).
  - Must maintain a sense of diplomacy and an ability to recognize and reconcile personnel conflicts that may surface during training and team meeting sessions.
- Communications: Ensure two-way open communication throughout the organization for LSS. This includes keeping the Deployment Director informed of program status and ensuring the coordination of activities with other Black Belts. Ensure projects are integrated with other command activities and initiatives, improvement projects, and mission. Communicate best practices across the organization.
- Measuring Results: Manage the development and maintenance of methods, systems, and guidelines for measuring the degree to which the project goals, objectives and metrics are being met. Provide Deployment Director with the results and take corrective project action as required to improve on results below targets.

3.1.3.2 Master Black Belt Professional and Educational Requirements

Ideally, a Master Black Belt possesses the following professional and educational requirements:

- Bachelors Degree or educational equivalent, preferably in Engineering, Business, or Operations Research (or another scientific/technical subject), or an equivalent level of work experience.
- Minimum of 8-10 years of professional level experience.
- Existing LSS Black Belt certification, and a proven track record in the application of LSS methods to process improvement activities.
- Candidate will also demonstrate solid project management and team leadership skills.
- Sound knowledge of other key functions that provide critical inputs (i.e., Finance and Accounting, Purchasing, Engineering, Supply Chain/Logistics, and Operations).
- Must deeply understand statistical analysis tools/methodology, project management software, LSS continuous improvement techniques, quality theory, and basic financial principles, and be able to apply these to analyze the planned improvement activities.
- Ability to lead and direct two or more improvement teams simultaneously.
- Must be a results-oriented "change agent" who is an effective process and systems thinker. Must be able to manage risk and ambiguity within a project scope.

3.1.3.3 Master Black Belt Success Enhancing Strengths

- Technical Expertise: serves as an internal consultant and subject matter expert in the employment, methodology, and discipline of LSS.
- Coaching and Counseling: is adept at training, coaching, challenging and supporting others.
- Results Orientation: applies constant pressure to reach targets and achieve goals.
- Change Mastery: continuously seeks new and better ways to operate.
- Delegation Skills: effectively leads projects and assigns work to others, monitors progress, and sets limits.
- Able to draw from relationships and professional network to capitalize on the knowledge and resources of the entire organization and of other project teams

3.1.4 Black Belt – Roles and Responsibilities

LSS Black Belts establish, coordinate and provide leadership for the LSS projects within a command. These projects should be integrated with the command's LSS efforts and meet the guidelines, criteria and metrics established by the Command Lean Six Sigma Steering Committee, and the command's Deployment Director.

3.1.4.1 Essential Black Belt Functions and Major Activities

Below are the essential function and major activities that the Black Belts perform:

- Lead LSS projects within the command and effectively coordinate these projects with the command's Deployment Director and other improvement project teams. Project leadership includes identifying opportunities, defining and financially justifying projects, launching project teams, using good project management to manage team activities, leading teams to execute projects with the problem solving methodology, tracking project status and results, removing and elevating project barriers, and developing team members. It is also critical to identify integration issues with other projects/processes and coordinate the improvements with the appropriate project/process owners to accomplish the project goals.
- Manage the development and maintenance of methods and systems for measuring the degree to which the project goals, objectives and metrics are being met. Provide Deployment Director with the results and recommend appropriate corrective action.
- Recruit Black Belts, Green Belts, and Team Members into the LSS infrastructure, and ensure continuing development of their skills.
- Ensure projects are integrated with other command activities, improvement projects, and overall organizational mission.
- Assist the project team in preparing for Milestone Reviews.
- Must be comfortable and able to stand up in front of an audience and present material in a variety of settings using multi-media simultaneously (transparencies, projectors, flipcharts, videos, PowerPoint presentations, lecture, and small group activities).
- Must maintain a sense of diplomacy and an ability to recognize and reconcile personnel conflicts that may surface during training and team meeting sessions.
- Ensure two-way open communication throughout the organization for LSS. This includes keeping the Deployment Director informed of program status and ensuring coordination of activities among other Black Belts. In addition, this includes capturing project lessons learned that could be re-used for other projects.

3.1.4.2 Black Belt Professional and Educational Requirements

Below are the ideal professional and educational requirements for a Black Belt:

- At a minimum, an Associate's Degree, preferably in Engineering, Business or a technical/scientific subject, or equivalent work experience.
- At least 2-4 years of professional level experience in leading improvement teams.
- Prior supervisory experience and people management.
- Should have solid project management, communications, and team leadership skills.
- Should have some basic knowledge of other key functions that provide critical inputs (i.e., Finance and Accounting, Purchasing, Engineering, Supply Chain/Logistics, and Operations).
- Must demonstrate sound quantitative reasoning skills, and the ability to do statistical analysis.

3.1.4.3 Black Belt Success Enhancing Strengths

- Ability to lead and direct an improvement team.

- Must be a results-oriented “change agent” who is an effective process and systems thinker.
- Effectively communicate with all levels to maintain relationships and cooperation in pursuing the command’s goals.
- Must be able to influence, negotiate, and resolve conflicts to reach consensus around common goals.
- Understand statistical analysis tools/methodology, project management software, LSS techniques, quality theory, and basic financial principles, and be able to apply these to analyze the planned improvement activities.

3.1.5 Green Belt – Roles and Responsibilities

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 and well grounded in basic problem solving tools and techniques, and receive regular guidance and direction from the Black Belts assigned to their projects.

Green Belts shall:

- Manage the administration and daily work assignment of their team members.
- Along with the project Sponsor, pick people to serve on their LSS project team.
- Serve as the point of contact for “official” communications outside of the team.
- Retain official project records (collected records and data, spreadsheets, presentations, process maps, meeting minutes, etc.).
- Direct the preparation of Milestone Review presentations.
- Assist the Project Sponsor to complete all approved team recommendations.
- Support Black Belt projects and/or lead projects part-time in their function or area of responsibility.
- Maintain responsibility for delivering value and benefits as defined in the financial and operational impact.

3.1.6 Project Sponsor – Roles and Responsibilities

The Project Sponsor role is pivotal to the success of the LSS project teams. Appointed by the Command Lean Six Sigma Steering Committee, this person sets the milestones and other expectations for the project teams. The Project Sponsor, usually the manager with functional responsibility for the process under investigation, has the responsibility to ensure that the project team understands the expectations of their leadership and that the project is moving in a direction that will not be in conflict of the mission and goals of the organization. The Project Sponsor role cannot be delegated.

Other responsibilities of the Project Sponsor include the following:

- Plays a key role in identifying organizational gap/opportunity, initiating potential projects, identifying Black Belt/Green Belt to lead project, and is involved in identifying and clearly defining the project.

- Helps the Green Belt and Black Belt in selecting team members to work on the LSS project.
- Develops problem statement for the team, provides guidance on determining scope and setting project boundaries, and helps team in developing the Project Charter.
- Provides encouragement, resources, guidance, and insights to the team.
- Reviews and provides feedback on development of Milestone Review materials prior to presentation.
- Accountable for results addressed by the defined LSS project.
- Facilitates the progress of the project team by removing or mitigating any obstacles that the team may encounter.
- Oversees the progress of the teams at their periodic Milestone Reviews. The Project Sponsor decides whether the team is ready to move from one phase of the DMAIC process to the next.
- Responsible for capturing and sustaining improvement results.

3.1.7 Army Process Lead – Roles and Responsibilities

Many Value Streams for the services provided within the Army cross multiple organizational lines. The role of the Army Process Lead is to bridge any gaps that may exist between functional areas for which he or she has responsibility. Other responsibilities include the following:

- Owns the LSS cross-functional transformation plan for a specific Value Stream.
- Has overall responsibility for maintaining and prioritizing a portfolio of potential and ready for launch projects across the Value Stream.
- Owns resource redeployment plan within the Value Stream. One option for this is to reassign people within the Value Stream to other parts of the process.
- Co-owns financial results with respective Project Sponsors.
- Full time dedicated position reporting to leader of the command / agency.
- Leads discussion with the operations leadership to select projects, assign sponsors and ensure benefits are captured and pooled properly.

3.1.8 Finance Representative – Roles and Responsibilities

- See Section 9.2 for a discussion of the roles of the financial manager.

3.1.9 Team Members – Roles and Responsibilities

LSS project teams are the entire reason for being of the supporting infrastructure. People assigned as members of a LSS project team normally participate as part-time resources and provide a significant part of the effort behind the large amount of work performed in a typical project. Although project responsibilities will consume approximately one working day per week (on average), this time burden may increase substantially prior to critical project milestones. Most project teams are composed of 5-7 team members led by a Green Belt and guided by a LSS Black Belt.

Some key points to remember about project teams:

- The objective of all projects is realization of tangible operational improvement.
- Team projects are not team building exercises.
- Teams are not formed to meet training needs or to meet quotas.
- Teams are formed around solving important issues derived from metrics.

Project Sponsors will help team members manage the level of effort required to:

- Gather information, interview people, and analyze data.
- Participate in regular team meetings to review status and solve problems.
- Prepare Milestone Review presentations.
- Implement solutions.
- Identify other project opportunities.
- Free up approximately 20% of their time to their project teams.

3.1.10 Sample Deployment RACI Chart

The RACI chart depicts who in the organization is Responsible (R), Accountable (A), Consulted (C), and Informed (I) with respect to various activities. The following definitions apply to each category:

- **Responsible**: Individual/s who perform a particular task/activity; the doer, responsible for action/implementation. The degree of responsibility is defined by the Accountable person. Responsibility can be shared among several people.
- **Accountable**: The individual who has ultimate accountability and authority. There is only one Accountable (A) person for each task/activity. Accountability is assigned at the lowest competent level and implied at higher levels. Accountability cannot be delegated.
- While Accountability **CAN NOT** be delegated, Responsibility can be delegated.
- **Consulted**: The individual(s) to be consulted **prior** to a final decision or action. This requires ongoing two-way communication.
- **Informed**: The individual(s) that need to be informed after a decision or action is taken.

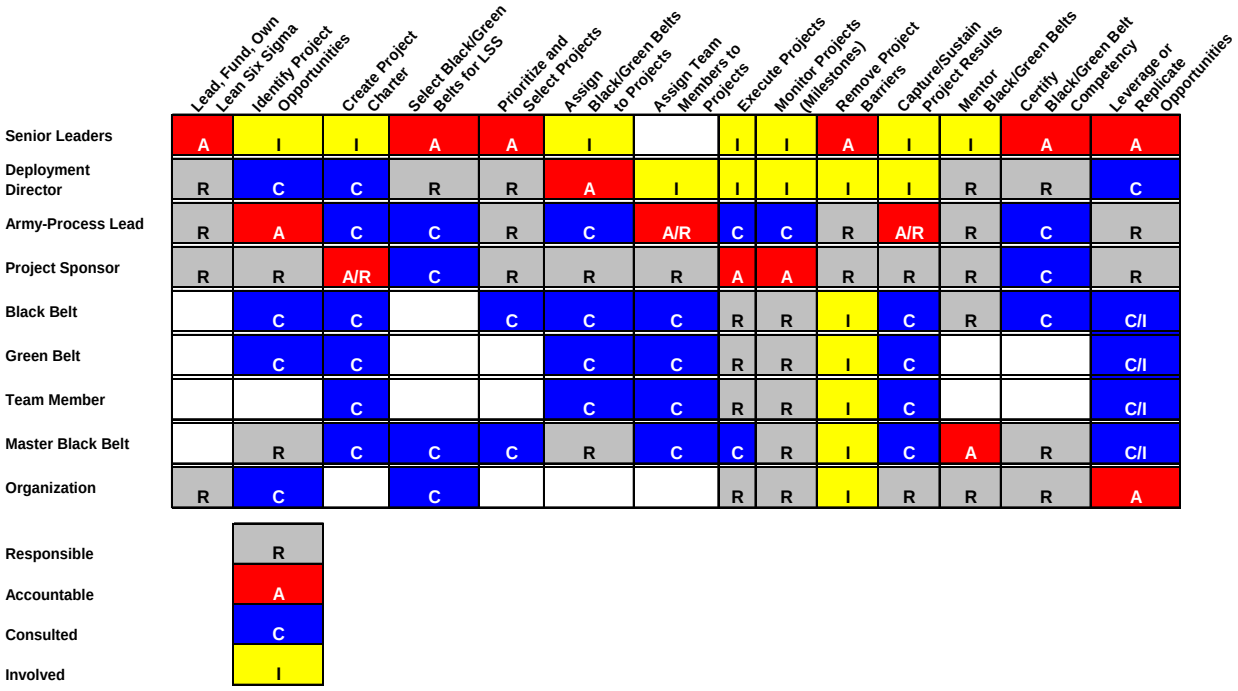


Figure 4. Sample RACI Chart The chart depicts the RACI chart used in the DA LSS deployment. Each individual Deployment Director should validate this chart with his or her organization and use it to communicate roles going forward.

3.2 Candidate Selection Guidelines and Processes

Select key Lean Six Sigma people from "future Army leaders". LSS Black Belts are the catalysts for change in the organization. They are responsible for bringing new ideas to their teams and creating a positive chain reaction of improvement within the organization. Leadership skills are an essential element of the success of implementing real change. LSS leadership demands the ability to handle ambiguity, challenge the status quo constructively, speak and think with data, and use analysis to make decisions, create plans, and take appropriate actions.

LSS requires a Black Belt to be competent in the application of statistical methods. This often leads to an expectation by an inexperienced Deployment Director that a person with good quantitative skills may be the ideal Black Belt candidate. In truth, 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 calculations for the Black Belt. It is for this reason that we recommend selection of the people that the organization cannot do without as their prime Black Belt candidates.

The Deployment Director must fully understand the belt selection and certification guidelines to ensure the command identifies and prepares the "right" people to lead the LSS deployment activities, run and participate in LSS projects. The table below lists the key skills required for these critical LSS deployment roles.

Table 2. Minimum competence levels expected for various LSS roles

	Team Members	Green Belts	Black Belts	Sponsors	Command Deployment Director	Master Black Belts	Army Depl. Dir.
Problem Solving Tools							
- Basic problem-solving tools - Statistical tools	L	M	H	L	M	H+	M
Program Management Tools							
- Scheduling - Task mgmt & execution - Delivering results	L	M	H	M	H	H+	H
Team Building and Leading							
- Teaching - Facilitation - Conflict management	L	M	H	M	M	H	H
Leadership							
- Strategic thinking - Ability to influence others - Sound decision-making	L	L	M	M	H	H	H+
Change Agent							
- Initiative, self direction - High risk tolerance - Desire to drive improvements - "Can-do attitude" - Passion for improvement	M	M	H	H	H	H	H
Coaching							
- Problem Diagnostic - Applied Experience - Mentoring	L	L	M	L	M	H+	H
Process Knowledge							
- "Process Thinking" - Holistic approach - Integrative outlook	H	M	M	H	M	L	L

Key:
L, M, H, H+ denote level of competence ranging from Low (L) to Medium (M) to High (H) and finally to highest expertise (H+)

The Deployment Director may also be responsible for developing a Black Belt selection tool. Appendix C contains an example Black Belt Selection tool created using Microsoft Excel.

Section 4. Measuring Success

Everyone knows that what gets measured gets done. Metrics are important to track progress, adjust as necessary, and serve as a source of celebration.

4.1 Project Metrics

LSS (LSS) projects yield a wide range of benefits. For Army LSS, benefits are viewed primarily from two perspectives, based on (a) whether they are financial and (b) whether they are quantifiable. The following table shows examples of typical project benefits, viewed from the two perspectives.

	Financial	**Non-Financial**
Quantifiable	Savings Cost avoidance Revenue generation	Process Lead Time Customer satisfaction Percentage of end items that meet performance specifications
Non-Quantifiable	Not applicable – all financial benefits are quantifiable	Enhanced internal communication flow Improved organizational culture

Any given LSS project can generate all three kinds of benefits: quantifiable financial benefits, quantifiable non-financial benefits, and non-quantifiable non-financial benefits. In all cases, there must be an identifiable cause-and-effect relationship between the project and the affected metric.

The following sections define or describe these benefits and provide examples.

4.1.1 Financial Benefits

The overarching financial management objective of LSS is to give the Army greater resource flexibility. Specific financial objectives are to generate savings, cost avoidance, and revenue. These objectives are defined as follows:

- Cost reduction. A cost reduction is a reduction in the number of dollars needed to meet a customer-established requirement by executing a certain process or function. All cost reductions are categorized as savings or cost avoidance.
    - Savings. Savings are defined as cost reductions that enable a manager to remove programmed or budgeted funds and apply them to other uses. In this definition, savings are viewed from an Army-wide perspective: an initiative that reduces costs in one organization or appropriation but increases costs elsewhere represents savings only to the extent that there is a net cost reduction that can be applied to other uses.
    - Cost avoidance. Cost avoidances are defined as all cost reductions that are not savings.

- Revenue generation. Revenue generation is defined as increasing the dollars that flow into the Army, over and above appropriated funds and customer funding received through a revolving fund.

As noted in the table, all financial benefits are quantifiable and are always measured in dollars.

4.1.2 Non-Financial Benefits

Non-financial benefits (also sometimes referred to as operational benefits or functional benefits) are any benefits that are not measured in terms of dollars. Examples include ct to complete a given process, the timeliness of deliveries to the customer, and the extent to which a product or service meets customer requirements. There can be linkages between financial and non-financial benefits, and in some cases, a non-financial benefit can lead to a financial benefit. For example, a reduction in ct or a reduction in the amount of rework required in a process will usually result in a cost avoidance or savings.

4.1.3 Quantifiable vs. Non-Quantifiable Benefits

A benefit is quantifiable if it can be measured and non-quantifiable if it cannot be measured. Note that determining whether a benefit can be quantified is not the same as determining whether it is objective or subjective. Subjective benefits are benefits that are a matter of opinion, and some subjective benefits can be quantified. A common instance of this is the measurement of customer satisfaction with customer surveys.

4.1.4 Examples of Benefits

This section provides examples to help clarify the definitions and descriptions. The table below is an index to the narrative examples that follow.

Table 3. Definitions and Descriptions of Types of Financial Benefits

No.	Type of Financial Benefit	Distinguishing Features
1	Savings	Reduces civilian or contractor manpower requirement and the associated costs
2	Non-financial benefit	Improves organizational culture
3	Savings	Legitimately lowers a customer requirement
4	Cost avoidance	Makes more efficient use of people's time, but people must remain on the rolls
5	Non-financial benefit	Improves ct, on-time completion, and rework
6	Savings	Reduces unit cost and reapplies the savings to perform more of the same process
7	Cost avoidance	Reduces the dollar value of an unfinanced requirement
8	No financial benefit	Reduces expenditures but fails to accomplish the mission
9	Potential savings	Requires viewing benefits from Army perspective, not local
10	Revenue generation	Makes use of the sale/outlease program
11	Savings and cost avoidance	Makes more efficient use of people's time, but people must remain on the rolls; reduces the cost of a contract

- Example 1: As a result of adding automation to a given process, the number of full-time civilian personnel or contractors working on that process will be reduced by 20. If these 20 people cost $2 million annually, that figure less the cost of the added automation is savings that can be reapplied to other requirements.
- Example 2: A newly assigned supervisor determines that her subordinates, although they are performing effectively, don't seem to have a good understanding of how their job contributes to the broader Army mission. She institutes a program of monthly briefings to give her subordinates a better appreciation of Army missions and responsibilities. As a result of these briefings, the group's performance does not improve, but the subordinates have a more positive attitude because they understand the importance of their task to the Army's mission accomplishment. This could be described as an non-financial, non-quantifiable benefit in the form of improved organizational culture.
- Example 3: An organization is performing a given business process to meet established customer requirements. Through discussion with the customer, the process owner determines that the current level of performance is no longer required. The requirement is decreased, and the process owner is able to reduce his need for supplies and material by $3 million per year while still satisfying the revised requirement. Even though the way in which the process is performed has not changed, there is a $3 million savings resulting from the change in requirements that the customer agreed to.
- Example 4: Throughout the Army, each of 20,000 employees devotes 10 hours per week to processing officer evaluation reports (OER). As a result of the business transformation initiative that provides improved software for the preparation of OERs, this time is reduced to six hours per week. The employees also perform other functions that require them to remain in the workforce, so there is no opportunity to reduce total labor costs. In this case, there is a cost avoidance equal to the cost of four person-hours per week for each of the 20,000 employees, less the cost of developing and deploying the improved software.
- Example 5: In example 4, a further assessment reveals that the reduction in processing time enables each organization to reduce the percentage of OERs that do not meet required submission dates, and that the software reduces the number of errors employees make when preparing OERs. Thus, in addition to the cost avoidance, there are three non-financial, quantifiable benefits: a reduction in ct, an increase in the percentage of OERs that are submitted on time, and a reduction in the number of OERs that have to be reworked to correct errors.
- Example 6: An Army depot is responsible for overhauling helicopters. The overhaul process costs $750K per aircraft, and the depot has funding of $75M to meet an Army requirement to overhaul 100 helicopters. The depot negotiates a new purchasing arrangement with external suppliers that grants quantity discounts on purchases of material used in the overhaul process, with the net result being that the depot is now able to overhaul each aircraft for $500K. This represents a cost reduction of $25M, because it will cost that much less to meet the requirement of overhauling 100 helicopters ($25M = 100 aircraft times the difference between $750K and $500K). Because the Army could remove the $25M from the depot with no adverse impact on the existing

requirement to overhaul 100 helicopters, this cost reduction represents savings. If the Army decides to continue to fund the depot with $75M and increase the workload to 150 helicopters, the $25M delta would still represent savings. The key point is that the funds could be removed with no adverse impact on the existing requirement; whether they are actually reapplied to a different function or to doing more of the same function does not affect the determination that this is a savings. Said differently, the identification and reapplication of savings can be described as a two-step process. First, the Army decides to implement the new purchasing procedures and thereby reduces the cost of performing the existing mission (overhauling 100 aircraft). At this point a savings has been identified. Second, the Army makes a conscious decision to apply the savings to doing more of the same work.

- Example 7: The Army decides that additional resources – i.e., more dollars than are currently programmed or budgeted – are needed in a given area. (This could be for any number of reasons, such as devoting in-house labor to a newly assigned mission or tasking a contractor to upgrade the capability of an existing weapon system.) The responsible organization determines that additional funding of $10M per year is needed, but the requirement remains unfunded. Before a funding decision is made, a business transformation initiative identifies a way to reduce the additional requirement to $8M per year. The $2M delta is a cost avoidance rather than a savings because it reduces a resource requirement but does not enable the Army to remove and to reapply programmed or budgeted resources.
- Example 8: An Army organization responsible for buying repair parts for combat vehicles is required by Army policy to maintain a 10-day supply of repair parts in its warehouses. The organization unilaterally decides to reduce its warehouse staff and, with the reduced staff, is able to maintain only an eight-day supply of parts. This change is not coordinated with Army policy-makers, who believe that this creates an unacceptable level of risk to mission accomplishment. There is no valid cost reduction in this case, because the organization is no longer able to meet the customer-established performance requirement. On the other hand, if the policy-makers had agreed that the stock reduction was acceptable, then there would have been a savings equal to the cost of the staff reduction.
- Example 9: Ten Army civilians are engaged in performing a business process. The manager determines that the process could be performed more effectively with a mix of six civilians and four military personnel. This reduces the organization's OMA costs (the cost of four civilians), but increases costs in the centrally managed MPA appropriation. As stated above, savings are defined from an Army-wide perspective. There would be a savings only to the extent that the four civilian positions that are eliminated cost more than the four military positions that are added.
- Example 10: An installation decides to be more aggressive in its pursuit of the sale and outlease program and as a result is able to identify excess acreage that can be brought into the program. The initiative is projected to produce a revenue stream of $3M per year. This is a financial benefit in the form of revenue generation.
- Example 11: At an installation, each of 20 employees spends five hours per week on a given process and they use supplies and materials that cost $800K per year. The installation improves the process so that it requires only three hours per week from each

employee. The employees also perform other functions that require them to remain in the workforce, so there is no opportunity to reduce total labor costs. The improved process reduces the requirement for supplies and materials to $600K. These supplies and materials are purchased on a contract where the funding can be reduced. In this case there is a cost avoidance equal to the cost of two person-hours for each of the 20 employees and a savings of $200K resulting from the reduced purchase of supplies and materials.

4.2 Deployment Metrics

While Executive Leadership is accountable for leading, funding, and owning the LSS initiative, the Deployment Director is often the person who is responsible for making this happen. Part of this responsibility is in tracking the performance of the LSS initiative in his or her command. Table 4 provides a list of potential metrics and parameters for the Deployment Director to consider when establishing deployment metrics to track and summarize for his/her leadership. Early in the deployment parameters such as number of people trained or the number of charters approved can be helpful for assaying the health of the initiative. Later on, however, these metrics can incorrectly focus attention on the activities performed and away from results. For this reason, it is recommended that the Deployment Director plan on a transition to results-focused metrics such as financial benefit.

Table 4. Potential LSS deployment metrics

METRIC	FOCUS
ID and Train Black Belts	
Total # BB's in training	Activity
% BB being trained vs. plan	Activity
% BB's to total population	Activity
% BB's that are full-time	Activity
ID and Train Leadership personnel	
Total # Leadership personnel trained	Activity
% Leadership personnel trained	Activity
ID and Train Project Sponsors	
Total # PS's trained	Activity
#PS's trained/BB Trained	Activity
% PS's trained/Total possible population of PS's	Activity
% PS's trained/Total Population	Activity
# PS's engaged in active projects / # PS's trained	Activity
Select and Charter Projects	
# approved charters/BB beginning training	Activity
# approved charters/BB identified	Activity
% BB's beginning training with approved charter	Activity

Table 4. Potential LSS deployment metrics	
METRIC	FOCUS
Project kill rate %	Activity
# project ideas/BB in training	Activity
Positive Financial Payback	
$ saved/$ budgeted to be saved (in order to be accretive)	Results
$ saved/project (average)	Results
average project ct completion	Results
% savings actually realized vs. projected in original charters	Results
% savings realized vs. realization schedule (realization schedule is put together before implementation)	Results
Involve All Subordinate Organizations	
% of locations that have met some basic metrics (i.e. each location should have it's own target for the metrics described earlier, primarily around DM's, PS's, BB's, etc.)	Activity
% of locations participating at all	Activity
Generate LSS Awareness and Buy-In	
% projects that have been completed on-time	Activity
% projects completing the Define Phase before second week of training begins (as evidenced be a gate review, additional metrics should be built around each successive phase completion, about one month/phase should be close)	Activity
Additional Results Focused Metrics	
1st pass defect rate %	Results
Organizational Process Efficiency % [OPE] (actual output / theoretical output)	Results

Note that most of the metrics provided in Table 4 describe activities and not outcomes. These measures can be especially useful early in the deployment before results start to be realized. In the end the focus must be on the results.

The Deployment Director should work closely with their Finance representative when establishing these controls and benefit calculations. Figure 4 shows the top-level Army LSS Deployment Metrics.

Figure 4. Army Lean Six Sigma Program Deployment Metrics

Program	Projects	People	Financials	Customer
# Projects per year by Army Cmd / HQDA	Average Cycle Time Decrease	% Sr. Leaders Trained	ROI for MBB and BB by Army Cmd / HQDA	VOC Baseline with % improvement in Cycle Time, Cost, Quality
Project Success Rates	Process Sigma Increase	% Staff Trained vs. Certified (MBB, BB,GB)	Total Army Command Cost Savings	
Average Time to Complete Projects	Average Process Cost Savings	% Army Courses with LSS in POI		
# Cancelled Projects		% of work force on LSS Teams/Projects		

4.3 Tracking and Auditing

The Army is using PowerSteering Software to track all LSS project, schedules and benefits Deployment Directors are responsible for keeping their command's projects up to date in Power Steering. In developing individual project financial objectives, the Deployment Director must establish minimum anticipated returns for BB projects, GB projects, and rapid improvement events.

Below is a typical planning guideline for minimum target returns:

- Black Belt:
  - Each Black Belt completes (on average) 2-3 projects per year
  - Each Black Belt project should have an average savings of $250k
- Green Belt:
  - Each Green Belt completes (on average) 2-4 projects per year
  - Each Green Belt project should have an average savings of $50k
  - These results are dependent upon:
    - Percent of time a Green Belt is dedicated to projects
    - Availability of mentorship from Black Belts / Master Black Belts
    - LSS maturity of organization (how well does management understand and embrace LSS)

One of the critical activities in an LSS financial control plan is periodic financial auditing of LSS projects. As stated in Section 9.5, HQDA will conduct selective audits or other reviews of the financial and operational data reported to HQDA. To supplement these audits and reviews, the Deployment Director should determine what specific auditing processes are appropriate for the

command. One consideration is that the financial auditing process may evolve as the Army's LSS deployment matures.

The Deployment Director must ensure that the Black Belt, Project Sponsor and Finance representative form a partnership in monitoring and auditing project financial performance. Below is an example division of responsibilities among Black Belts, Project Sponsors and the financial representative:

Additional Roles:

- Black Belt
    - Define current operational process and establish baseline with metrics and data
    - Determine project improvement relative to baseline and metrics
    - Define logic for benefits
    - Determine type of benefits
    - Calculate financial benefit outlook
    - Insure internal controls are improved or at least maintained
    - Support validation of benefits during realization
- Project Sponsor
    - Participate and support as needed
    - Sign-off at required tollgate reviews
- Financial Representative: See Section 9.2 for a discussion of the roles of the financial representative.

Section 5. Managing the Deployment

Managing the Deployment is critical to a successful Leans Six Sigma Deployment. While no change of any significance is going to be implemented without resistance, you can avoid much of the resistance that occurs when changes are implemented from the top by

- Fully understanding your organization (through the readiness assessment, see Section 6)
- Engaging people in shaping the initiatives in ways that support their personal goal (as well as those of your organization)
- Ensuring LSS resources are devoted to the organizations most serious problems
- Positioning LSS resources (Black Belts, etc.) as support for line management
- Recognizing that resistance to change is a way that people defend current good performance; what LSS offers in the opportunity for great performance
- Training all top managers, creating enthusiasm rather than forcing compliance

In developing a plan for managing the deployment, the Deployment Team must develop a robust change management plan and a Command-level communication plan.

5.1 Change Management

Active Change Management is a key element of successful LSS Deployment and its goal is to help change employees perspective, not specifically about a LSS initiative, but about how they view their business processes. The table below shows the typical employee perspective at the beginning of a deployment and the ideal perspective once LSS is embedded within the organizational cultural.

Table 5. Changing Employee Perspectives in LSS Deployments

From	To
Compliance. Giving "lip service" and saying, "I can live with it" regarding cultural change.	Commitment. Committing to, becoming engaged, and fully supporting cultural change.
Complexity. An orientation to creating and perpetuating complex, waste-filled internal value-chain processes.	Simplicity. An orientation to designing and improving value-chain processes so their elegance is in their simplicity and speed, not their excessive complexity.
Acceptance of Error. Acceptance of a certain margin of error with subsequent, often undisciplined, corrective action as the norm.	Elimination of Error. Six Sigma reigns as a constant goal in all we do; we strive relentlessly to push all our value-chain processes to this level. (Six Sigma = 3.4 errors per million opportunities)
Weak Measures. Incomplete or ambiguous financial measures for QIP projects undertaken; lax inspection of impact on bottom-line business results.	Hard Measures. Well-defined financial, "hard dollar," measures documented and linked to core business results before any improvement project is undertaken; then once begun, these measures are rigorously tracked as the project moves forward.

Table 5. Changing Employee Perspectives in LSS Deployments	
From	To
Silos. A “silo mentality” and the “art of passive resistance” combine to make studying and improving cross-functional value-chains problematical, if not often impossible.	Collaboration. A “collaborative mentality” and a norm of ”constructive debate & discussion” combine to make studying and improving cross-functional value-chain processes successful endeavors.
Impatience. Impatient, “results now” focus—scooping up the “low hanging fruit” and quickly declaring victory regarding process improvements.	Patience. Patient, longer-term focus—scooping up the “low hanging fruit” is recognized as only a momentum builder for the challenges of sustained, disciplined process improvements.

Figure 5. The top 10 Barriers and Success Factors for LSS Deployments

5.2 Risk Management

Risk management is a critical process for managing activities or circumstance that may result in negative consequences at the deployment level and project level. A sound risk management program will identify potential problems early enough to mitigate them before they affect the deployment / program objectives or timeline, resulting in a successful deployment.

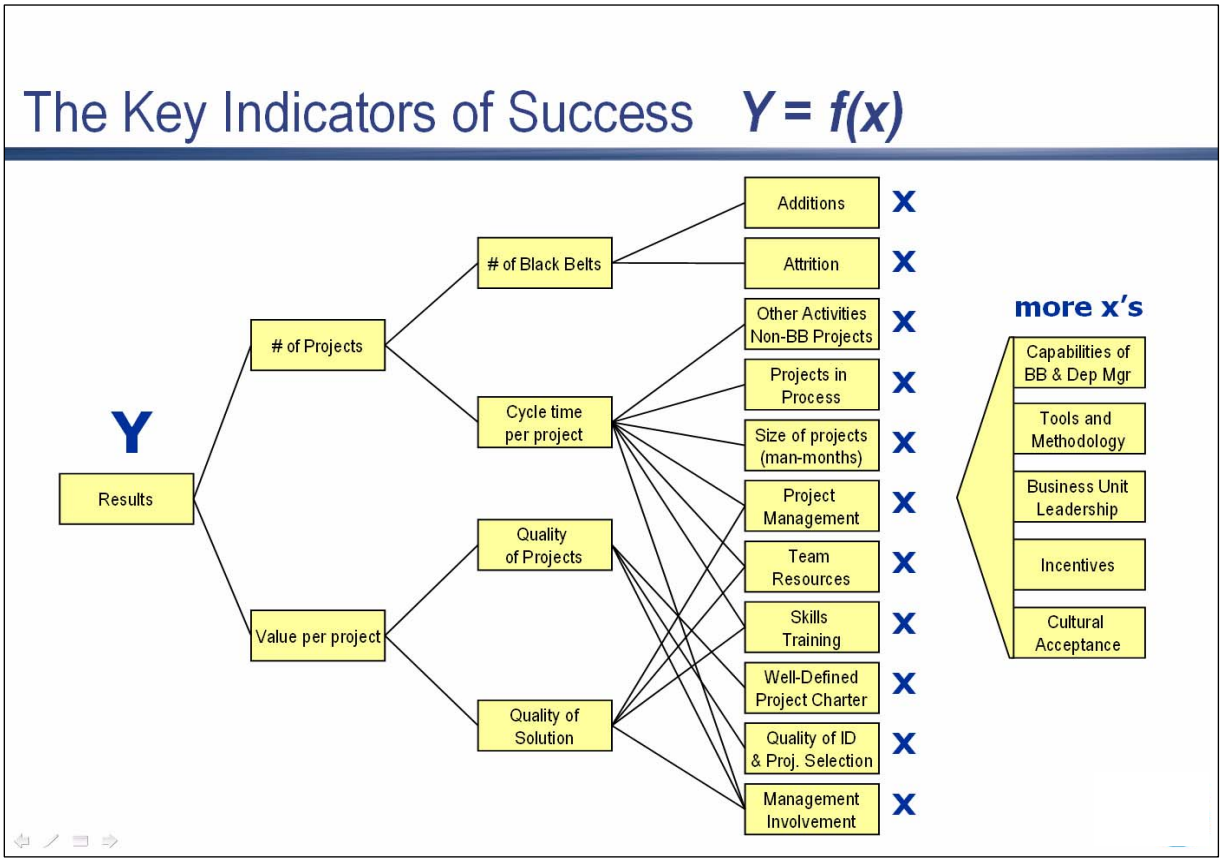
The best practice steps are defined below:

- Risk Identification: Identify issues or concerns that may prevent the deployment from progressing as planned. Risks may include organizational, technical, political, project related, operational and managerial aspects of the deployment.
- Risk Analysis: Classify risks according to likelihood and consequence.

- Risk Management: Develop a mitigation strategy for risks to either eliminate or reduce the likelihood and/or consequence of the risk.
- Risk Monitoring: Review risks periodically based on their classification. Risks will undoubtedly change in likelihood and consequence as the deployment develops. The benefit of maintaining and following a formal risk management process is that the negative consequences of an uncontrolled action can be minimized or negated.

The key indicators of success shown in the figure below are based on experiences of large scale, organizational-wide deployments A focus on the Critical X's of a deployment has been extremely effective in managing the potential failure areas. Detailed Failure Modes and Effects Analysis (FMEA) is useful to identify potential failure areas or barriers to overcome, assess the likelihood of occurrence and the negative impact, and identify actions to mitigate or reduce the likelihood of occurrence and/or the impact.

Figure 6. Y = f(X) Chart for LSS Deployments



A typical risk assessment identifies the following Potential Problems, Root Causes, and Proven Solutions (more risks, root causes, and solutions exist – these are the most common).

Table 6. Common Problems in a LSS Deployment			
	Potential Problem	**Root Cause**	**Proven Solutions**
1	Organization views LSS as “flavor-of-the-month” initiative	Multiple, past initiatives have been launched with high fanfare and little results or long-term staying power. Why will this be different?	Demonstrate top leadership commitment; genuine leadership engagement and involvement is critical (“walk the talk”) Selecting best people as Black Belts and / Deployment Directors Assigning them to the most important problems in the business Integrate into daily operation of the business
2	Results/benefits per project below expected levels	Poor project selection; poor project execution	Robust project selection process Ensure adequate levels of project coaching by Mobs Disciplined execution of tollgate review process – kill projects early if necessary Ensure effective team leadership training for Black Belts Ensure weekly engagement of Project Sponsors
3	Lack of commitment to LSS	Lack of belief on part of individuals that this does not apply to their part of the organization; misconception about how LSS works or applies; perception that Lean is just a way to cut headcount	Cascade leaders/sponsor workshops and awareness training throughout the organization Provide specific project examples and/or external contacts to discuss applicability to specific area Drive a balanced portfolio of projects through effective opportunity identification and project selection (X% customer satisfaction, Y% cost reduction, etc.)
4	Failure to select the “best people” as Black Belts and Deployment Directors	Would rather apply them to their own highest priorities; select “experts” versus “future leaders”; lack of commitment	Drive alignment of priorities through the project selection process Install robust Black Belt selection process See Item 3
5	Lack of confidence in results and organizational impact	Lack of insight into performance improvement at project level; lack of understanding of link to organizational benefits	Deploy detailed, conservative “rule book” or guidelines for tracking of project benefits and financial results Train key members of organization to certify/validate results Communicate successes Track benefits at organizational level
6	Poorly written project charters (lack of definition, scope too large) lead to longer project process lead-time due to increased time spent in the Define phase.	Lack of quality Deployment Director support during roll-out; Deployment Directors not fully understanding their roles and responsibilities; lack of communication of the charter review process	Inspect and evaluate charters prior to assignment to Black Belts Effective Project Sponsor and Deployment Director training Allow enough time between project selection and project launch MBBs provide mentoring to Sponsors MBBs focus on charters during coaching sessions

Table 6. Common Problems in a LSS Deployment			
	Potential Problem	**Root Cause**	**Proven Solutions**
7	Project Charters not developed by Project Sponsors, but instead by Black Belts. This is an indication of poor commitment because Project Sponsors do not actually "own" the projects.	Sponsors not trained, sponsors do not understand their role and/or importance of their involvement in the charter process, Deployment Directors are not actively engaged in the charter process	Ensure selection of projects relevant to organizational issues Ensure the right sponsors are assigned to projects Ensure sponsors involved in opportunity identification Ensure sponsors are trained prior to sponsoring projects Ensure MBBs are dedicating coaching time sponsors.
8	Overloading of project team member resources leading to longer project process lead time	Desire to staff all projects with the best people versus available people; failure to evaluate and manage capacity	Disciplined project launch process based on resource availability Insight into projects-in-process
9	Logistics associated with coordinating training events (materials, notifications, refreshments, etc.) not up to par	Speed of the roll-out, lack of capacity, lack of defined process, lack of skills	Appoint skilled training coordinator Develop robust training coordination process Continuously evaluate and take action on feedback from students for continuous process improvement
10	Failure to fill training classes	Lack of commitment; ineffective coordination of training events	See Items 1, 3, and 9
11	High Black Belt attrition	Lack of leadership commitment; lack of career path for Black Belts; failure to select “future leaders”	See Items 1 and 3 Appoint HR/Personnel resource to manage Black Belt selection and transition back into the organization Establish appropriate job descriptions and compensation levels Develop robust selection and performance evaluation process
12	No organizational buy-in into proposed project solutions	Lack of stakeholder involvement; lack of commitment to LSS	Ensure sponsors are actively engaged in project (MBBs and Deployment Directors to inspect) Identify stakeholders during Define; involve throughout project, particularly during tollgate reviews See Item 3

5.3 Command-Level Communication Plan

The Communication Plan identifies procedures used to manage communication for the Business Transformation Program. It goes beyond periodic status reporting for project management, and is based on a Change Management strategy, which has as its goal, to generate support and a level of commitment among all stakeholders, within and outside the Army who can impact, or will be

impacted by the Army's Business Transformation. Simply put, Business Transformation-related communication serves its audiences by communicating themes that help answer these five Change Management questions:

- Why are we doing this?
- Why must we do this now?
- How will this impact me and my organization?
- How will we work together to make this happen?
- What must I do to get ready?

This section provides guidance for organizations as they develop and execute their tactical communication plans.

5.3.1 Communications Roles and Responsibilities

The Deputy Under Secretary of the Army for Business Transformation, with the support of the office of the Chief of Public Affairs will execute its own strategic communications plan, which targets audiences that are Army-wide, and nation-wide. The strategic communication objective is to generate support across the Army as a whole, and among national institutions, commercial, legislative, and academic.

Office of the Chief of Public Affairs (OCPA) develops a Strategic Communication Plan to support Army-level Business Transformation. It coordinates among Army-level agencies to communicate strategic themes through Army-level media, national media coverage, legislative liaison, academic and industry collaboration. OCPA collaborates with command-level and local Public Affairs Offices (PAO) to integrate locally generated communications into Army-level messages.

Army Commands, Service Component Commands, and Direct Reporting Units, with their local PAO's will develop and execute a more tactical communications plan aimed at generating support and commitment among its own constituents. Communications at this level includes:

- Identifying target audiences and analyzing their readiness against the five questions posed above.
- Identifying overarching themes that respond to those questions, according to the special needs of their audiences.
- Aligning events and communications opportunities with media, resources, and themes in a coherent plan to communicate regularly with those audiences.

5.3.2 Guidelines for Action

5.3.2.1 Engage Command and installation-level Public Affairs Offices

Involve them early in deployment of Business Transformation initiatives. Introduce PAO to Project Sponsors, Master Black Belts, and Black Belts. Set expectations of subordinate commands and leadership to foster sustained relationships. Expect PAO participation in appropriate meetings where milestones, progress, and successes are discussed. Set expectations with PAO's to share appropriate newsworthy events with OCPA, for possible Army-wide dissemination.

5.3.2.2 Collaborate with PAO's to Target Appropriate Army Audiences

LSS Deployment Directors should target all appropriate audiences that will be impacted by, or who might influence the success of Army Business Transformation. Address audience communication needs according to how they would ask the five Change Management questions listed in the first paragraph of this section. Typical Communication messages to internal Army audiences should include the following topics:

- Awareness of the Command's vision for Business Transformation. How they can get involved.
- The sense of urgency ("Burning Platform" for Business Transformation and Lean Six Sigma Deployment.
- Progress Reports, Success Stories that demonstrate building momentum towards an irrevocable shift to a culture of continuous improvement.
- Professional Development opportunities.
- Celebrations of Achievement; Belt Certifications, project completions, etc.

5.3.2.3 Address External and Public Audiences

The PAO should help initiate and reenergize outreach/partnerships in the following areas:

- Local Community Colleges/university business schools
- Encourage your employee-students to tell the Army story, experience in their classrooms.
- Chamber of Commerce/business organizations
- Invitations to observe (Here's how we're doing it)

Add Business Transformation topics to your Speakers Bureau and to the 3-2-1- Expectations of Leadership.

5.3.3 Supporting Documents

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

- Army Business Transformation Knowledge Center: http://www.army.mil.ArmyBTKC/index.htm
- Business Transformation Change Management: http://www.army.mil/ArmyBTKC/enablers/cm/method4.htm
- Army Posture Statement 2006 at http://www.army.mil/aps/06/01_index.html
- Public Affairs (OCPA) Center on AKO http://www.us.army.mil/suite/page216363
- 2006-2007 Army Communications Guide http://akocomm.us.army.mil/2006acg/
- OCPA Business Transformation Communication Campaign Plan on BT Portal: http://us.army.mil/suite/doc/6284172

5.3.4 Change Management Curve

Figure below illustrates Readiness versus different Transition States. The Deployment Director should use the stages in the Change Curve to help gauge and adjust change management activities. For example, in the early stages of deployment, change management activities might be focused on building awareness through communications and briefings.

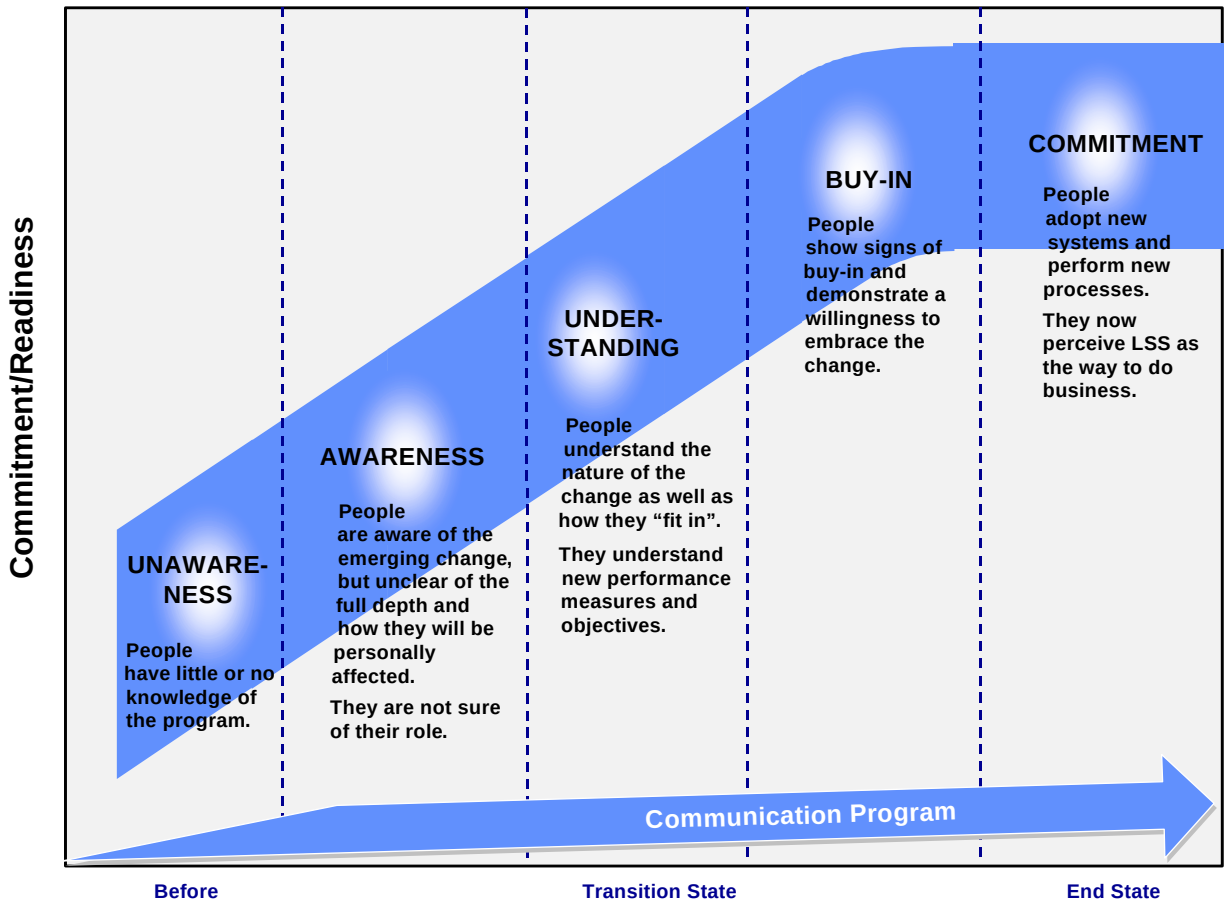


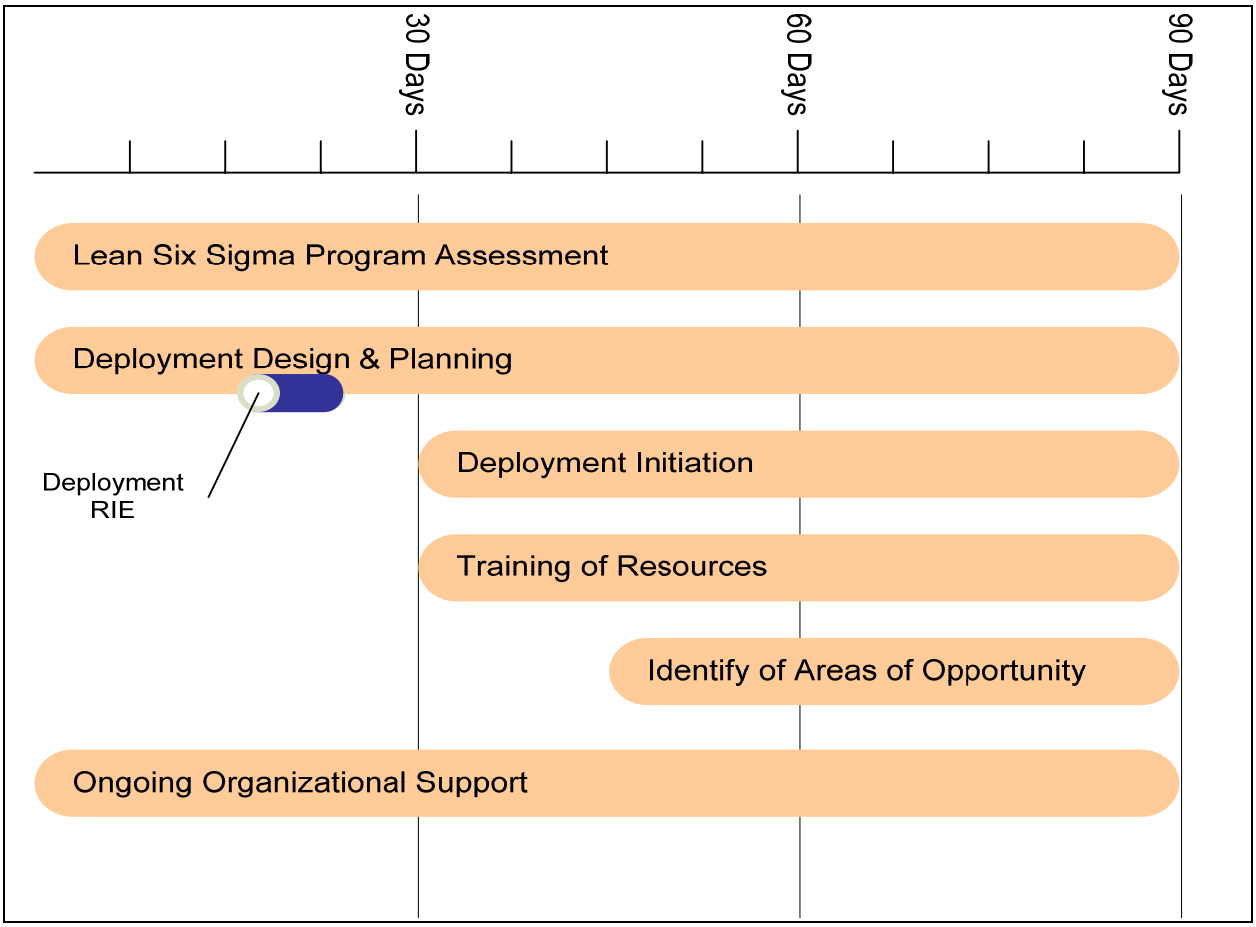
Figure 7. Change Curve

Section 6. The Lean Six Sigma Deployment Life Cycle

The initial ninety days of the LSS rollout sets the tone for the initiative in the command or agency. An effective rollout creates momentum and engenders excitement around the potential for the program. The Deployment Advisor and the Deployment Director will work with command leadership to set a course for deployment of the LSS initiative in the command or agency. This will be done in order to assist in the successful deployment of LSS and to institutionalize the process and product improvement capabilities offered.

Figure 8 illustrates the activities that would be planned for the first ninety days of the implementation. The figure shows the relative order in which assessments of the LSS initiative, planning of the deployment, delivery of training workshops, and general coaching and mentoring of command personnel would take place. These concepts are expanded in the ensuing sections.

Figure 8. Generic Initial 90 Day LSS Roll Out Activities



6.1 Assess Organizational Readiness to Launch Lean Six Sigma Initiative

Before the LSS deployment can be rolled out, some assessment of the state of the command from a LSS perspective will be needed. In many cases, a number of commands will already have some LSS elements in place when the Deployment Advisors are made available to them.

6.1.1 Integration with DA initiative

Each command and agency will likely have a need to tailor the LSS initiative to meet its own needs. Nonetheless, DA will need to be able to roll results up across the entire Army. This section addresses the specific points of integration that the Army requires.

- Training needs to utilize the Army LSS Program of Instruction (POI)
- All Black Belt and Green Belt training is to be performed by the LSS Program Management Office by LSS Program Management Office personnel
- Green Belt, Black Belt, and Master Black Belts certification standards are to be determined and administered by DA
- Results from projects must be quantifiable and be aligned with key mission objectives for the command
- Job descriptions are to be consistent with the DA program
- Pipeline control for most strategic projects to be maintained by DA

6.1.2 Identification of needs unique to the command or agency

Each command or agency is going to find that it has its own unique characteristics that will need to be addressed in the design of its LSS initiative. This is permissible if the integration points described in the previous paragraph are not compromised. The Deployment Team will be responsible for tailoring the initiative to meet the needs of the command.

6.2 Design and Plan LSS Deployment

Support implementation strategies & plans by developing and recommending an execution approach that maximizes and accelerates to potential to realize benefits with lower cost and risk

Figure 7 presents the typical outputs of the design and planning phase in a deployment. The deployment team will assist in the comprehensive creation of a realistic deployment plan, which will achieve the stated objectives of the deployment.

6.3 Initiate Deployment

The goal of deployment initiation is to provide for the management and execution of proposed implementation plans. Typically, an organization can develop these plans via a Deployment Rapid Improvement Event (RIE), an intensive weeklong sessions where the Deployment Team works with senior command leadership to make decisions regarding the LSS deployment in the command.

6.3.1 Create the Deployment Team

A Deployment Team will need to be created in order to design, plan, and execute the LSS initiative. Team members would include the Deployment Director, the Deployment Advisor, a financial staff member, key leadership. The Deployment Team will be the decision making body which will act as proxy for the Executive Steering Team.

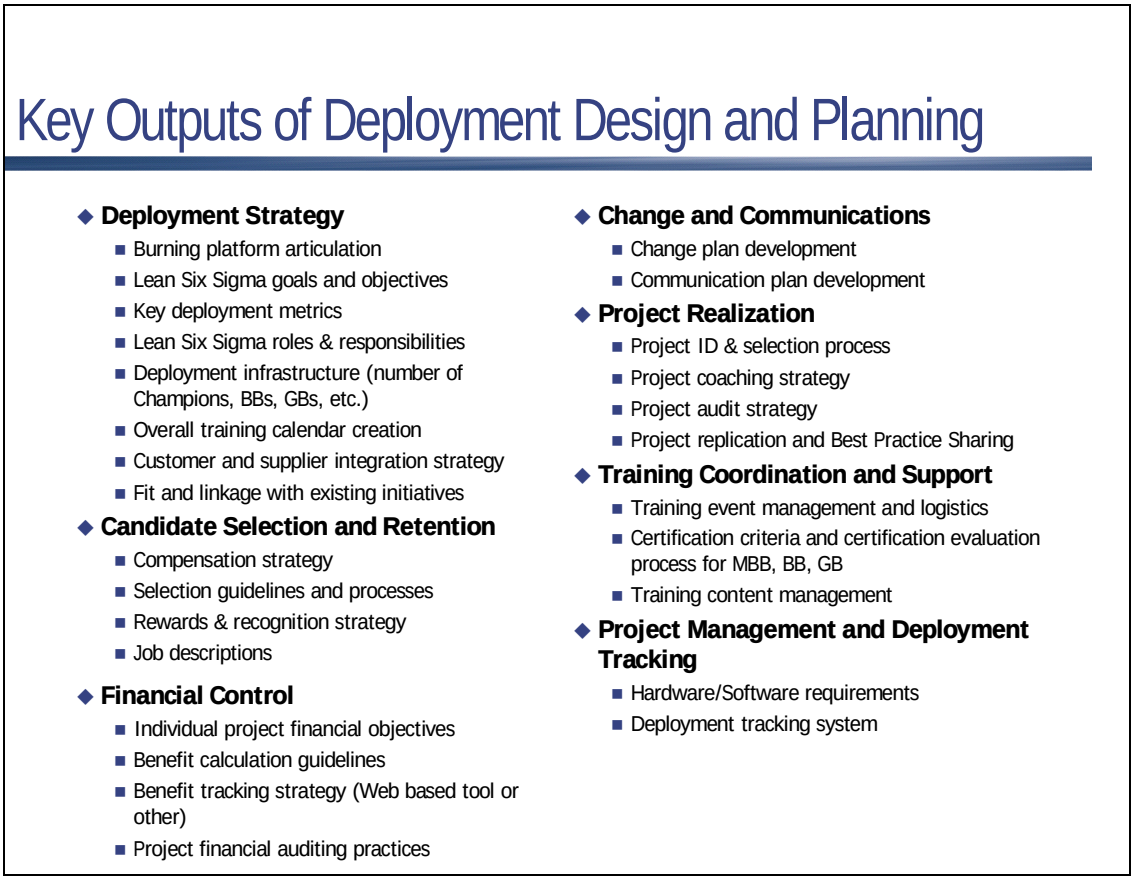


Figure 9. Expected results from the Deployment Design and Planning phase of the initiative.

6.3.2 Identify and Obtain Master Black Belt resources

Many of the commands will choose to augment their LSS capability by bringing in additional Master Black Belts. It will be the responsibility of the Deployment Director, with assistance from the Deployment Advisor, to integrate the activities of any additional Master Black Belts into the LSS plan for the command.

6.4 Train Resources

This section covers the planning activities and training of resources that will take place in the deployment of LSS at the command. All training is to conform to Army POI. The Executive Leadership Workshops, the Project Sponsor Workshops, and the Project ID and Selection Workshops as well as Lean Six Sigma Awareness training are to be organized and conducted at the command.

The HQDA LSS Program Management Office will conduct Green Belt, Black Belt, and Master Black Belt training.

6.5 Identify Areas of Opportunity

Army organizations should plan to develop multiple avenues to identify LSS project ideas including:

- Value stream analyses. This is a formal method for viewing the organization as it provides its services in terms of whether value, from the perspective of the customer, is being added at each activity along the process.
- LSS program assessment and gap analysis. Discussed in 6.1, the assessment provides a means to compare the current state of the LSS initiative to what is desired. Gaps are identified and projects are developed to close the gaps.
- Project pipeline. As part of the initiation of LSS, the Army has performed a series of Value Stream analyses on important processes. The project ideas created from these value stream analyses are part of a project pipeline managed by the Lean Six Sigma Program Management Office.
- Balanced scorecard. Some of the commands have used balanced scorecards as a means for understanding their performance against key strategic goals. Gaps identified by the balanced scorecard are another good source for determining opportunities.
- "Pain" in the organization. All organizations have situations where shortcomings are known to be opportunities for improvement.
- Employee recommendations. Often people who are closest to the work understand where the opportunities are.

6.6 Provide Ongoing Organizational Support

The following activities will be provided initially by the Deployment Advisor.

- Coaching & mentoring of command leadership around the LSS initiative.
- Project execution support
- Rapid Improvement Event execution support
- Coach & mentor Green Belt and Black Belt training candidates

Over time, as the command's LSS initiative matures, Master Black Belts belonging to the command will replace the Deployment Advisors.

Section 7. Project Realization

Project Realization involves several elements that combine to deliver completed projects and the corresponding results. These elements fall into the following categories:

- Project Identification and Selection
- Project Integration
- Project Milestone Review
- Project Coaching

7.1 Project Identification and Selection

Each organization must establish and maintain a project pipeline that addresses important areas of opportunity. Because project selection is critical to deployment success, the organization must apply a rigorous process to identify and select projects. Organizations will follow the 5-step method outlined in Figure 7.

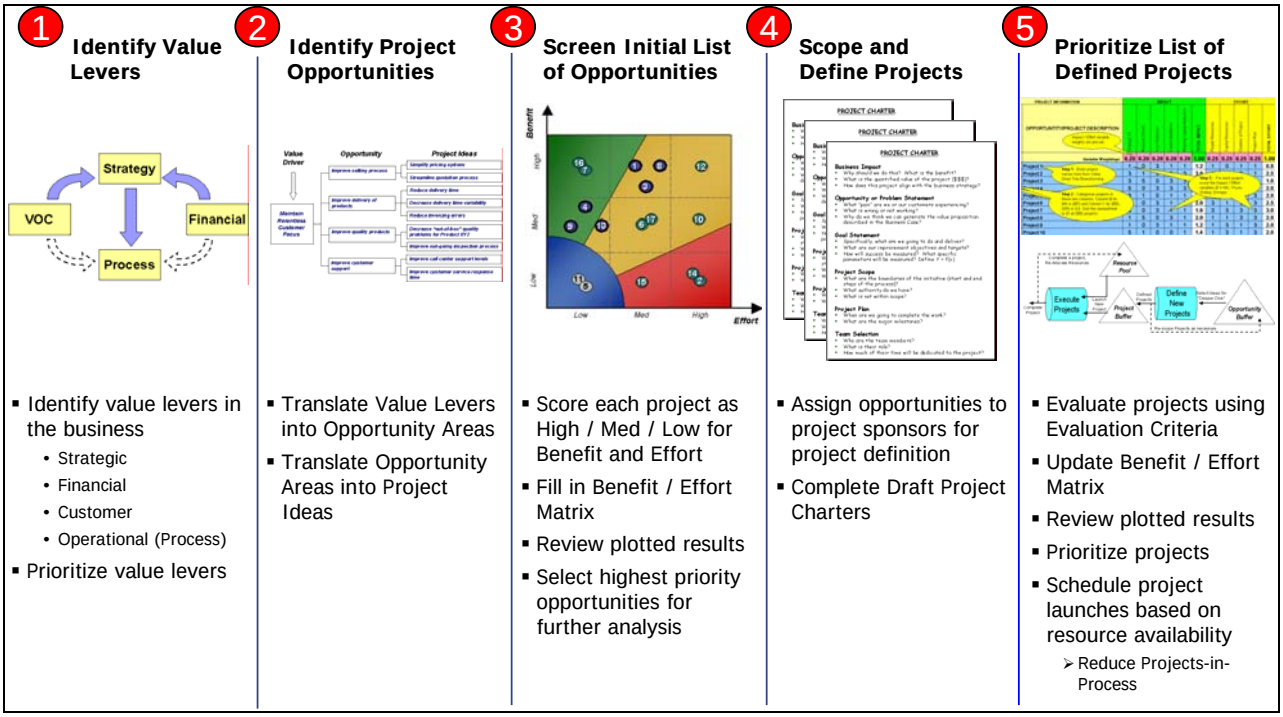


Figure 10. Project Identification and Selection Process

The Project Identification and Selection Workshop covers the 5-step process in detail. Contact the Lean Six Sigma PMO to receive this curriculum and schedule the corresponding workshop.

7.2 Project Integration

The organization will most likely have several types of ongoing projects as the LSS deployment unfolds. Deployment Directors will develop a process to manage non-LSS projects and integrate the timing and resource allocation of chartered LSS projects.

7.3 Project Milestone Review

Leaders will review progress of LSS projects with Project Sponsors and Belts by using Milestone Reviews. The Milestone Reviews occur at the end of each phase of a project and include the following elements:

- Review/Validate/Update Project Charter
- Track progress against the DMAIC Roadmap (Tools used, Results, Conclusions)
- Review other project variables (Barriers, Issues)
- Review Project Plans/Next Steps

Project Sponsor Workshops, Black Belt Training, and Green Belt Training all cover the subject of Milestone Reviews. Contact the Lean Six Sigma PMO for the appropriate material and training.

7.4 Project Coaching

The Deployment Director will maintain accountability for the Black Belt and Green Belt coaching plan. Each Belt and trainee will have an assigned coach as he or she executes a project. The coach's responsibility is to provide guidance and reinforce training to ensure a successful outcome. The table below illustrates the number of estimated coaching hours per BBs/GBs during training:

Belt	Estimated Coaching Hours
Black Belts	24-32 Hours/project
Green Belts	8-16 Hours/project

Belts typically receive coaching in 1-2 hour blocks, which can occur face-to-face, via audio teleconference (ATC), or through e-mail.

Section 8. Training and Certification

The LSS PMO will provide standardized training and certification through Programs of Instruction (POIs) and Certification Guidelines. To ensure consistency across the Army, all organizations will use approved POIs and guidelines to support deployment.

8.1 Training

LSS stakeholders will attend training specifically designed for each role outlined in Section 3. DA-approved trainers will deliver training and follow established POIs. The following POIs currently exist within the HQDA LSS curriculum.

- Executive Leader Workshop
- Project Sponsor Workshop
- Project Identification and Selection Workshop
- Black Belt Training Course
- Green Belt Training Course

The Lean Six Sigma PMO will work with each organization to determine availability, timing and location for training events. For those roles requiring training, the Deployment Director will establish a process for identifying qualified candidates that considers the attributes described in Section 3 of this document. The PMO will allocate Green Belt and Black Belt training seats based on resource availability, Army requirements, and other relevant factors. For the POIs above designated as workshops, the organization will most likely conduct local training according to the Deployment Director's schedule. For Green Belt and Black Belt training, the organization will most likely send trainees to a designated training facility as determined by the PMO.

Army organizations should also consider using portions of the POI material above to provide LSS Awareness training to building support for LSS across the entire organization. Ideally, this training would be provided to all employees; however, the Deployment Director will manage resources to schedule this training for the best effect. Awareness training helps ensure a hands-on understanding of LSS fundamentals. Awareness-level training typically includes:

- Army Burning Platform – 1 hour
- Lean Six Sigma Overview – 1 hour

The Deployment Director, as part of his/her responsibilities, should develop a comprehensive training plan for the leadership and project sponsors in their command.

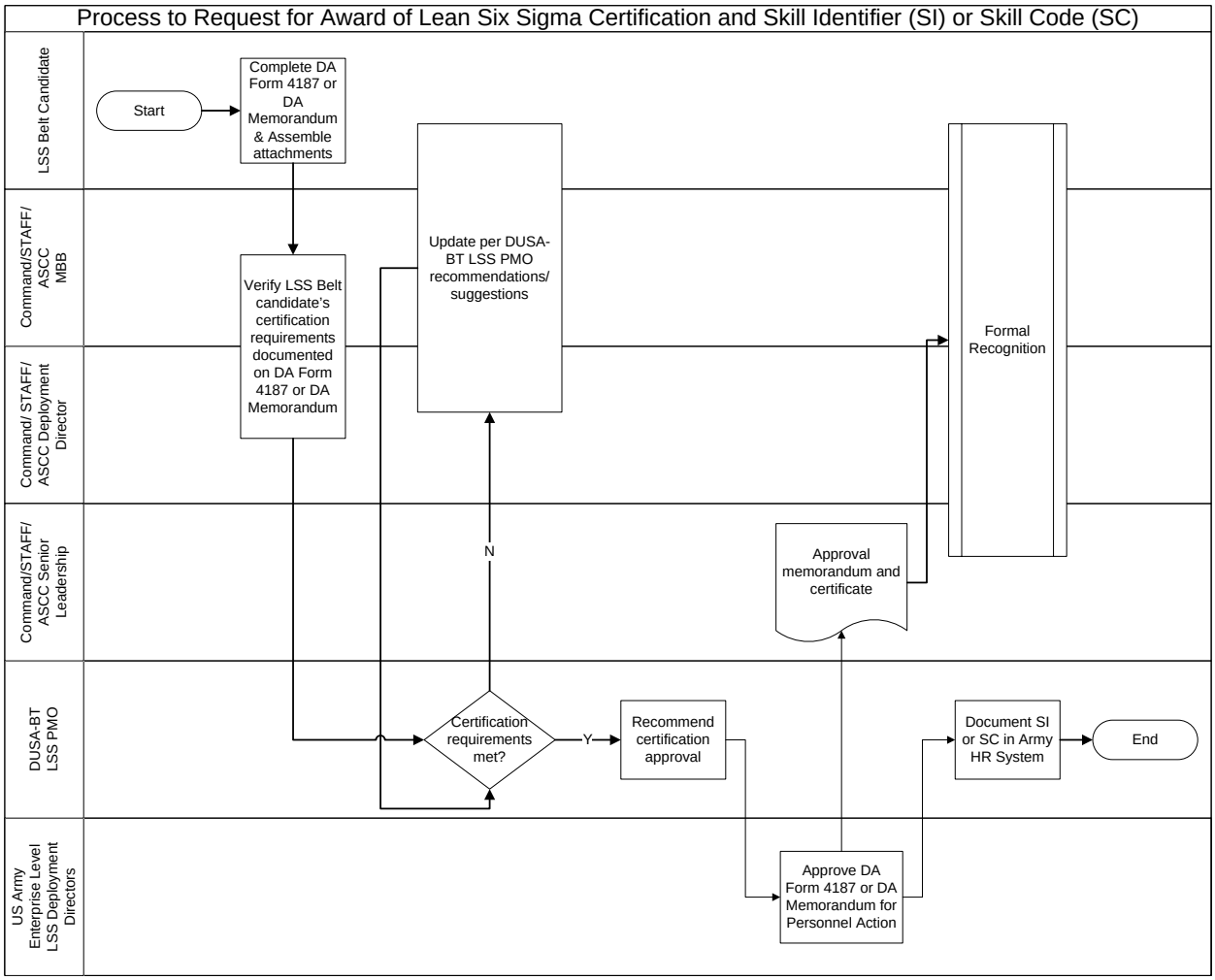
8.2 Certification Guidelines

The Deputy Under Secretary of the Army-Business Transformation Lean Six Sigma Program Management Office (DUSA-BT LSS PMO) is responsible for issuing specific Department of the Army (DA) standards for certification of Green Belts (GB), (see section 8.2.2), Black Belts (BB), (see section 8.2.3),and Master Black Belts (MBB), (see section to be published at a later date).

8.2.1 LSS Certification Process

Certification is initiated upon the completion of all requirements for the specified belt level. In figure 8, this process is depicted with appropriate responsibilities and handoffs indicated. The candidate will initiate the process with a formal request (see section 8.3) through their respective LSS Deployment Director and chain of command.

Figure 11. Process map illustrating the sequence of events for award of Lean Six Sigma Belt certification including approved military Skill Identifier (SI) or appropriate civilian Skill Code (SC)



Upon approval of the Headquarters Department of the Army Principal Officials and the Commanders or Directors of Army Commands, Army Service Component Commands, and Direct Reporting Units, or those officials' delegates, the request will be forwarded to the office of the DUSA-BT. Within the DUSA-BT, verification of the criteria will ensure that supporting

documentation is captured in the Army Databases of Record for the respective belt criteria. Requests that do not have the required documentation or that fail to meet the specified criteria will be returned to the originating organization for administrative correction or action. Requests that are verified will be submitted for approval by the Army enterprise-level co-deployment directors, DUSA-BT and Military Deputy, Assistant Secretary to the Army (Acquisition, Logistics and Technology), and for signature of the Army Certification Certificate. Copies of the approval documentation will be forwarded to the individual through the originating organization. The DUSA-BT will ensure that the necessary documentation is also forwarded to the appropriate Human Resource System for updating the individual's records.

8.2.1 Green Belt Certification Criteria

Requirements
Complete Army approved LSS GB Program of Instruction or demonstrate completion of formal LSS GB training
Pass Army LSS GB exam with a minimum score of 70%
Complete one LSS GB level project or three LSS Rapid Improvement Events (RIE) or lead sub-tasks of a LSS BB level project as a team member

What to submit
DA Form 4187 for military personnel or DA Memo for civilian personnel

The LSS GB candidate seeking certification will utilize the approved military Skill Identifier (SI) or certification and the appropriate designated Skill Code (SC) for civilian employees. The LSS GB candidate will submit DA Form 4187 or DA memorandum, as appropriate, with supporting documentation reflecting fulfillment of the requisite training requirements, for endorsement by the appropriate official within the offices of the Headquarters Department of the Army Principal Officials, or the Commanders or Directors of Army Commands, Army Service Component Commands, or Direct Reporting Units, or those officials' delegates. The certification request will be forwarded for review and approval to DUSA-BT PMO. The DUSA-BT LSS PMO will then coordinate award of certification in the appropriate Army HR system.

8.2.2 Black Belt Certification Criteria

Complete Army approved LSS BB Program of Instruction or demonstrate completion of formal LSS BB training
Pass Army LSS BB exam with a minimum score of 70%
Complete one LSS BB level project

What to submit

DA Form 4187 for military personnel or DA Memorandum for civilian personnel

The LSS BB candidate seeking certification will utilize the approved military Skill Identifier (SI) or the appropriate designated Skill Code (SC) for civilian employees. The LSS BB candidate will submit DA Form 4187 or DA memorandum, as appropriate, with supporting documentation reflecting fulfillment of the requisite training requirements, for endorsement by the Deployment Director, on behalf of their respective Headquarters Department of the Army Principal Officials, or the Commanders or Directors of Army Commands, Army Service Component Commands, or Direct Reporting Units, or those officials' delegates. The certification request will be forwarded for review and approval to DUSA-BT PMO.DUSA-BT LSS PMO will then coordinate award of certification in the appropriate Army HR system.

8.2.3 Master Black Belt Certification Criteria

To be published

8.3 Belt Candidate Actions to Request LSS Certification and Skill Identifier (SI) or Skill Code (SC)

Upon meeting all certification requirements, the LSS Belt candidate (with approval of their local commander or supervisor) shall document their Lean Six Sigma certification qualifications on DA Form 4187 or the formal memorandum, as appropriate. The items to be included are as follows (see Appendices I.1 and I.2):

- Level, source, and date of completion of Lean Six Sigma Green Belt or Black Belt training
- Date and Score for respective Belt Final Examination
- Completed Project Sequence Number in Lean Six Sigma Deployment Management System (currently PowerSteering)

The Deployment Director, on behalf of their respective Headquarters Department of the Army Principal Officials, or the Commanders or Directors of Army Commands, Army Service Component Commands, or Direct Reporting Units, or those officials' delegates, shall verify the candidate's prerequisites listed on the DA Form 4187 or DA Memorandum. The completed DA From 4187 or DA Memorandum will then be forwarded by the Deployment Director, with an endorsement of the request for certification, to the following:

Department of the Army
Attn: DUSA-BT, LSS PMO
101 Army Pentagon, Suite 5D556
Washington, DC 20310-0101

Deployment Directors can create a .pdf version of their candidate's application and e-mail to the DUSA(BT) LSS Certification e-mail box at: mailto:ARMYLSS.Certification@hqda.army.mil

Section 9. Financial Management Guidance

9.1 Purpose

This section of the Guidebook provides guidance for financial management issues associated with transformation initiatives. This guidance applies to all business transformation efforts, whether conducted using Lean Six Sigma or some other technique.

9.2 Role of Resource Managers

The individual responsible for each transformation project must ensure that the project team has access to a resource manager at the installation or command level.[1] The resource manager's responsibilities include, but are not limited to:

- Assisting the project team with the tasks listed below. Note that these bullets primarily address cost data. On a project that is projected to generate revenue, the tasks also apply to revenue generation data. Section 9.3 contains definitions for some of the terms used here.
- In the Define phase of a LSS project, determining the type of financial benefit (savings, cost avoidance, or revenue generation) the project is expected to generate, the baseline cost of the process under review, the projected cost of the revised process, and the projected cost of implementing the revised process.
- During the Improve phase of a LSS project, determining the forecasted process cost and forecasted cost of implementing the revised process.
- During the Control phase of a LSS project, determining the actual cost of the revised process and the actual cost of implementing the revised process.
- Identifying the information, data sources, and approach that will be used to develop cost estimates.
- Monitoring actual costs to determine whether projected financial benefits are being achieved, and developing corrective actions as necessary.
- Ensuring that cost data are entered into the PowerSteering software. (See Sections 9.5 and 9.7 for additional information on PowerSteering.)
- When savings are generated, assisting in identifying other programs to which the savings can be applied.

[1] In this document, "command" refers to the organizations that report directly to HQDA. This includes Army commands, Army service component commands, direct reporting units and field operating agencies.

In the preceding list of responsibilities, the references to project phases apply to LSS projects that use the DMAIC process. For all other business transformation projects, baseline and projected data are developed early in the project, and forecasted data are developed when the decision is made to implement a redesigned process. Actual data are developed initially when implementation of the redesigned process has begun and are updated throughout implementation.

9.3 Definitions

The financial objectives of LSS are to generate savings, cost avoidance, and revenue. Definitions of these terms, along with examples to clarify the definitions, can be found in Section 4.1 of this Guidebook. The following additional terms are also used in dealing with financial benefits:

- Process cost (recurring costs): Process cost is what it costs to perform a given business process.
- Implementation cost (one-time costs): Implementation cost is the incremental cost incurred to redesign the process and put the redesigned process in place.
    - Implementation costs include, but are not necessarily limited to, the cost of new or improved hardware or software, one-time training in new procedures, one-time development of new policy documents, building modifications, rearrangement of equipment, travel directly related to the project, and contractors brought on board to support a specific project.
    - Implementation costs do not include the cost of deploying and managing the business transformation program, software used to support the program or multiple projects, compensation for government personnel on the project team, or contractors who support the program or multiple projects.
- Baseline process cost: The baseline process cost is what the process will cost if we do nothing other than carry out existing plans. The baseline process cost is a snapshot that has a time dimension, meaning that the baseline is established at a point in time and reflects data for all years (year of execution, budget years, and program years) at that point in time.

If the financial benefit type is savings, the baseline process cost is a snapshot that reflects the funding in the program and budget for the process when the transformation project begins.

If the financial benefit type is cost avoidance, the baseline is a snapshot that reflects either the funding in the program and budget for the process when the transformation project begins or the costs associated with a validated but unfinanced requirement when the project begins.

If the financial benefit type is revenue generation, the baseline is a snapshot that reflects the projected revenue stream when the project begins.

Projected cost: A projected cost is an estimate of future costs, developed during the Define phase of a transformation project. Projected costs are developed for process cost and implementation cost.

Forecasted cost: A forecasted cost is an estimate of future costs, developed during the Improve phase of a transformation project. A forecasted cost is, in effect, an update of a projected cost. Forecasted costs are developed for process cost and implementation cost.

Actual cost: Actual cost is the real cost, known during the Control phase of a transformation project. Actual costs are developed for process cost and implementation cost.

In the preceding definitions, the references to project phases apply to LSS projects that use the DMAIC process. For all other business transformation projects, baseline and projected data are developed early in the project, and forecasted data are developed when the decision is made to implement a redesigned process. Actual data are developed initially when implementation of the redesigned process has begun and are updated throughout implementation.

9.4 Retention of Savings

HQDA will not "harvest" savings generated via business transformation. Commands will be permitted to retain and reapply these savings.

In the year of execution and the budget year, the reapplication of savings must comply with established reprogramming and transfer rules, such as the rules regarding transfers of funds from one appropriation to another.

For the program years, the normal PPBE process will occur. HQDA will not specifically target business transformation savings for harvesting. Commands will include their proposed reapplications of savings in their normal submissions of Schedule 8s to support development of the POM and BES. As always, HQDA will assess priorities and will allocate its limited funds to competing requirements to ensure that the Army makes the best possible use of constrained resources.

In most cases, the organization responsible for developing and implementing a transformation initiative will also be the organization that experiences the cost reductions. However, in some situations the responsible organization and benefiting organization will be different. For example, the DCS G-3/5/7 at HQDA is responsible for the mobilization process. If an initiative by G-3/5/7 to transform the process results in cost reductions, the reductions might occur to a limited extent at HQDA but will be felt to a greater extent in organizations such as FORSCOM, ARNG and OCAR. The retention of savings applies to benefiting organizations, i.e., the organizations whose funding is affected.

9.5 Entering Data and Computing Financial Benefits

HQDA has deployed PowerSteering, a project management tool that has been established as the database of record for business transformation. Project teams will enter financial data in PowerSteering, which must be used for all business transformation projects, whether conducted using LSS or some other technique. The check marks in the next table identify the financial data that must be entered.

	Process Cost	Implementation Cost
Baseline	X	N/A
Projected	X	X
Forecasted	X	X
Actual	X	X

When a user enters this information into PowerSteering, the software computes and displays financial benefits as shown in the following table. In this table, the term "benefit" is used to indicate either savings or cost avoidance; the computations are the same for either type of benefit. Note that for savings and cost avoidance the basic construct is *baseline data minus new data*. In the case of revenue generation the basic construct is reversed and becomes *new data minus baseline data*.

Project Phase	This	Minus This	Equals This
Define	Baseline process cost	Projected process cost	Projected gross benefit
	Projected gross benefit	Projected implementation cost	Projected net benefit
Improve	Baseline process cost	Forecasted process cost	Forecasted gross benefit
	Forecasted gross benefit	Forecasted implementation cost	Forecasted net benefit
Control	Baseline process cost	Actual process cost	Actual gross benefit
	Actual gross benefit	Actual implementation cost	Actual net benefit

When a project is in the Control phase, actual cost data should be updated in PowerSteering on a monthly basis.

The entries in the table are keyed to the phases of the LSS DMAIC process. For business transformation projects that do not use the DMAIC process, baseline and projected data are entered early in the project, and forecasted data are entered when a decision is made to implement a redesigned process. Actual data are entered initially when implementation of the redesigned process has begun and are updated throughout implementation. In all cases, PS will calculate and display projected, forecasted, and actual benefits as soon as the appropriate data are entered in the system.

9.6 Developing Cost Data

There are three approaches that may be used to develop cost data. In order of preference, from most to least preferable, the approaches are (1) using financial accounting systems, (2) using non-financial systems, and (3) developing independent estimates. Depending on the situation, multiple approaches may be used in concert in order to develop cost data for a project.

The preferred approach for developing cost data is to draw data from financial accounting systems, using existing account code structures. These structures include management decision packages (MDEP), Army management structure codes (AMSCO), program element (PE), functional cost accounts (FCA), and others. Although this is the preferred approach and in ideal situations is the easiest approach, most business transformation projects deal with processes and costs that cannot be easily identified in this manner.

Non-financial systems can provide information to support the development of cost data. For example, payroll or labor systems may be used to determine employment levels, and supply systems may be used to determine quantities of materials or supplies used for specific processes.

Cost data may be developed by means of an independent estimate using established cost estimating techniques. HQDA is preparing guidelines to assist project teams in developing cost estimates for business transformation projects. Commands will be informed when these guidelines are completed.

In many situations, project teams will use a combination of all three approaches to develop cost estimates.

Cost data should always be entered into PowerSteering in current, "then-year" dollars.

In developing cost data, questions may arise about whether personnel costs should be burdened or unburdened. Unburdened costs include basic compensation. Burdened costs include basic compensation, personnel benefits, and a share of support costs such as general supplies, facilities, and overhead. Because real-world scenarios may present a wide range of situations, it is difficult to prescribe a single answer that will apply to all projects. The general guidance is that costs should be burdened as if the financial benefit were savings. The objective is to be able to answer this question: "If a decision-maker decides to remove this money from the program or budget, what is the correct dollar amount?" Two examples may help to explain the intent:

- Situation 1: Five hundred people work in a cluster of buildings. A transformation project eliminates two staff positions in one of the buildings. This small change will have no impact on facilities costs. In this case the costing should include full personnel costs but no burden for facilities.
- Situation 2: Same as situation 1, except that this time the transformation project eliminates the need for all 500 people. The buildings will be "mothballed," and it is determined that utilities costs for the installation will measurably decrease as a result. In this case, the costing should include full personnel costs and facilities costs.

9.7 Supporting Information and Reviews of Financial Data

The financial data entered in PowerSteering are subject to review as determined by HQDA. When the Army Audit Agency conducts a review, it will be conducted as an "attestation" rather than a full audit. In these attestations, the objective will be to determine whether the data appear to be reasonable and reliable, are supported by back-up information, and were developed in a manner consistent with the guidance in this document.

The project team should maintain documentation to show how it developed the financial data entered in PowerSteering and to attach this supporting information to the project file in PowerSteering. HQDA has developed the Business Transformation Financial Workbook, an Excel file that can be used to assist in developing financial data and in documenting the supporting information. This Excel file can be downloaded from the Cost & Performance Portal at https://cpp.army.mil. To access the workbook, users should first log in and then scroll down to the box titled "BTM Quick Links" in the lower right-hand portion of the page. First-time users of the C&P Portal will be required to establish a user account. New accounts may be created by clicking on the tab titled "Request Access to C&P Portal" and then providing the requested information.

In the near future, the C&P Portal will enable users to view and download reports of business transformation financial benefits across the Army. These reports will include a wide range of capabilities, to include command-level roll-ups and Army-wide comparisons. Project status reports will also be available via the C&P Portal. The C&P Portal draws data directly from PowerSteering, which means that project teams will be able to enter data once (in PowerSteering) and then generate reports from both systems.

9.8 Points of Contact

Questions concerning the guidance in this section should be referred to the following points of contact:

- For questions about business transformation financial management policies and procedures not related to PowerSteering or the Cost & Performance Portal, contact the Business Transformation Financial Help Desk via e-mail at BTFinancial@hqda.army.mil.
- For technical questions about PowerSteering software, send e-mail to the PowerSteering Help Desk at https://businesssituationalawareness.army.mil/usarmycorp/help/help_login_with_admins.jsp?.
- For questions about the Cost & Performance Portal, contact the Cost & Performance Help Desk:
    - By telephone: Commercial: 703-614-4405 DSN: 224-4405
    - By e-mail: cpp.help@hqda.army.mil

Appendix A. Milestone Review Checklists

A.1 Define Checklist

QUESTIONS FROM COMMAND OFFICER KEY QUESTIONS CARDS

- What organizational goals and strategies does this project align with and what problem is it addressing?
- Who are the customers being served by this project? Describe the plans for involving them.
- What is/are the goal(s) and the improvement targets (in terms of speed, quality and cost)?
- What savings are expected from this project?
- What barriers to success have you identified for this project and what help do you need?

ADDITIONAL QUESTIONS TO BE ASKED

- Is this project important, i.e. has the project been chosen because it is in alignment with organizational goals and the strategic direction of the 'organization'?
- What is the problem statement – detailing (what) is the problem, (when) was the problem first seen, (where) was it seen, and what is the (magnitude or extent) of the problem. Is the problem measured in terms of Quality, Ct, or Cost Efficiency, not expected financial benefits? Ensure there is no mention or assumptions about causes and solutions.
- Does a financial business case exist, explaining the potential impact (i.e. measured in dollars) of the project on the organization?
- Is the project scope reasonable? Have constraints and key assumptions been identified? Have IT implications been addressed and coordinated with IT managers?
- Who is on the team? Are they the right resources and has their required time commitment to the project been confirmed with their supervisor?
- What is the high-level work plan? What are the key milestones (i.e. dates of tollgate reviews for DMAIC projects)?
- Who are the key stakeholders? How will they be involved in the project? How will progress be communicated to them? Do they agree to the project?

Comments

A.2 Measure Checklist

QUESTIONS FROM COMMAND OFFICER KEY QUESTIONS CARDS

- What did the Value Stream Map indicate about the process (e.g., bottlenecks, types of waste or process lead-time)?
- What is the gap between the baseline and target performance of this process?
- From the gap between the baseline and target performance of the process, what are the opportunities for improvement?
- What "quick wins" or rapid improvement events (RIE) has your team identified?
- What additional barriers are there to the success of this project and what help do you need?

ADDITIONAL QUESTIONS TO BE ASKED

- Has a more detailed Value Stream Map been completed to better understand the process and problem, and where in the process the root causes might reside?
- Has the team conducted a value-added and ct analysis, identifying areas where time and resources are devoted to tasks not critical to the customer?
- Has the team identified the specific input (x), process (x), and output (y) measures needing to be collected for both effectiveness and efficiency categories (I.e. Quality, Speed and Cost Efficiency measures)?
- Has the team developed clear, unambiguous operational definitions for each measurement and tested them with others to ensure clarity and consistent interpretation?
- Has a clear, reasonable choice been made between gathering new data and taking advantage of existing data already collected by the organization?
- Has an appropriate sample size and sampling frequency been established to ensure valid representation of the process we're measuring?
- Has the team developed and tested data collection forms or check sheets, which are easy to use and provide consistent, complete data?
- Has baseline performance and process capability been established? How large is the gap between current performance and the customer (or project) requirements?
- Have any opportunities to do Rapid Improvement Event projects been identified to accelerate momentum and results?
- Have 'learnings' to-date required modification of the Project Charter? If so, have these changes been approved by the Project Sponsor and the Key Stakeholders?
- Have any new risks to project success been identified, added to the Risk Mitigation Plan, and a mitigation strategy put in place?
-

Comments

A.3 Analyze Checklist

QUESTIONS FROM COMMAND OFFICER KEY QUESTIONS CARDS

- What would be the difference in process performance if the non-value added steps could be eliminated?
- Does a business case exist, explaining the potential impact of the project on customers, budgets, and its relationship to business strategies?
- What are the principle root causes that your team is addressing to improve this process?
- What indications are there that your results could be replicated across other process or commands?
- What changes to you problem statement or goals/targets are indicated by your analysis?
- What additional "quick wins" or rapid improvement events (RIE) has your team identified?
- What is the basis for the analysis conclusions that impact People, Equipment, and Budget? Value of re-allocation and/or increase?
- What additional barriers are there to the success of this project and what help do you need?

ADDITIONAL QUESTIONS TO BE ASKED

- Has the team examined the process and identified potential bottlenecks, disconnects and redundancies that could contribute to the problem statement?
- Has the team analyzed data about the process and its performance to help stratify the problem, understand reasons for variation in the process, and generate hypothesis as to the root causes of the current process performance?
- Has an evaluation been done to determine whether the problem can be solved without a fundamental 'white paper' recreation of the process? Has the decision been confirmed with the Project Sponsor?
- Has the team investigated and validated (or not validated) the root cause hypotheses generated earlier, to gain confidence that the "vital few" root causes have been uncovered?
- Does the team understand why the problem (the Quality, Ct or Cost Efficiency issue identified in the Problem Statement) is being seen?
- Has the team been able to identify any additional 'Quick Wins'?
- Have 'learnings' to-date required modification of the Project Charter? If so, have these changes been approved by the Project Sponsor and the Key Stakeholders?
- Have any new risks to project success been identified, added to the Risk Mitigation Plan, and a mitigation strategy put in place?

Comments

A.4 Improve Checklist

QUESTIONS FROM COMMAND OFFICER KEY QUESTIONS CARDS

- What has your team identified as the most promising potential solutions and what criteria did you use to identify them?
- Has a risk mitigation plan been developed to deal with identified improvement recommendations?
- What were the results of your pilot test?
- What adjustments to the process have you or will you be making?
- What are the key features of your improvement plan?
- What have been the key lessons learned to date?
- What additional barriers have you identified from the improvement recommendations to the success of this project and what help do you need?

ADDITIONAL QUESTIONS TO BE ASKED

- What techniques were used to generate ideas for potential solutions?
- What narrowing and screening techniques were used to further develop and qualify potential solutions?
- Do the proposed solutions address all of the identified root causes, or at least the most critical?
- Were the solutions verified with the Project Sponsor and Stakeholders? Has an approval been received to implement?
- Has the team seen evidence that the root causes of the initial problems have been addressed during the pilot? What are the expected benefits?
- Has the team developed an implementation plan? What is the status?
- Have changes been communicated to all the appropriate people?
- Has the team been able to identify any additional 'Quick Wins'?
- Have 'learnings' to-date required modification of the Project Charter? If so, have these changes been approved by the Project Sponsor and the Key Stakeholders?

Comments

A.5 Control Checklist

QUESTIONS FROM COMMAND OFFICER KEY QUESTIONS CARDS

- What savings have been realized?
- What additional potential projects has your team identified?
- What are the key elements of the control plan and who is responsible for them?
- How has the hard work and successful efforts of your team been recognized?
- What is your plan for advising other commands or process owners on your results and how to replicate them?

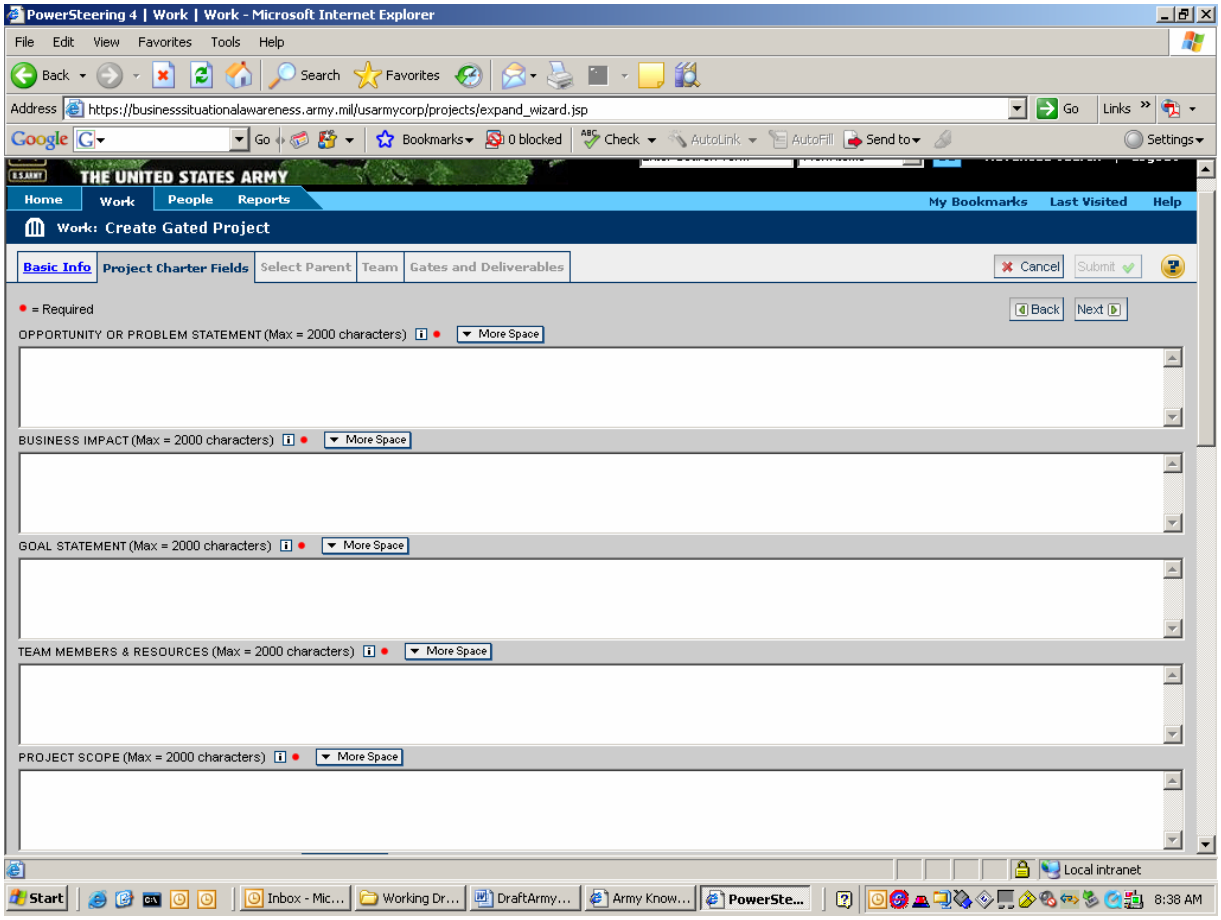
ADDITIONAL QUESTIONS TO BE ASKED

- Has the team prepared all the essential documentation for the improved process, including revised/new Standard Operating Procedures (SOP's), a training plan and a process control system?
- Has the necessary training for process owners/operators been performed?
- Have the right measures been selected, and documented as part of the Process Control System, to monitor performance of the process and the continued effectiveness of the solution? Has the metrics briefing plan/schedule been documented? Who owns the measures? Has the Process Owner's job description been updated to reflect the new responsibilities? What happens if minimum performance is not achieved?
- Has the solution been effectively implemented? Has the team compiled results data confirming that the solution has achieved the goals defined in the Project Charter?
- Has the Benefits Realization Schedule been verified by the Financial Representative?
- Has the process been transitioned to the Process Owner, to take over responsibility for managing continuing operations? Do they concur with the control plan?
- Has a final Storyboard documenting the project work been developed?
- Has the team forwarded other issues/opportunities, which they were not able to address, to senior management?
- Have "lessons learned" been captured?

Comments

Appendix B. 10-Point Project Charter Checklist

The figure below is the Screen Shot from PowerSteering and are required fields to be completed.



Opportunity/Problem Statement Block

The "Who/Where" identifies the location and area which is experiencing the process pain.

The "What" metrics should be related to the SIPOC Output metrics such as Quality, Ct, Cost/unit, Safety, DPMO, etc. and preferably bulleted and labeled for easy reference.

The "When" should describe the amount of time or number of transactions the process has been poorly performing

The "Extent" should use the EXACT same metrics as the "What" section and baselined with real historical data or placeholders then bulleted for easy reference.

Business Impact Block

Paragraph summarizes the business problem by including references to financial pain such as overtime, excessive costs, and high cost of capital, which is broken down into the three types of savings and estimated in dollars.

Goal Statement Block

The goals should state the level of reduction as a difference or a percentage for each of the metrics identified in the problem statement and include a "by date" then bulleted for east reference.

Team Selection Block

Team should consist of between 4-6 members, no more than 9.

Project Scope Block

The In-Scope will include the start and end of the process based on the SIPOC, as well as products, transactions and customers to be investigated while the Out-of-Scope will state what is not included in the In-Scope. The SIPOC should be available as reference at the time the charter assessment is occurring.

Appendix C. Example Black Belt Selection Tool

Black Belt Skills Assessment Tool

		RATE 0-5 According to Skills Proficiency Level Definitions							
Black Belt Candidate	Selection Criteria / Skills Score	1 Team Facilitating	2 Problem-Solving	3 Process Orientation / Systems Thinking	4 Change Facilitation	5 Communi-cation Skills	6 Computer Knowledge	7 Program & Project Mngmnt	8 Financial Analysis
	WEIGHT >	2	1	1	2	2	1	2	1
	MINIMUM >	4	3	3	4	4	3	4	3
Doe, John (EXAMPLE)	44	4	3	3	4	4	3	4	3
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								
	-								

Appendix D. Example Stakeholder Management Tool

Key Stakeholder	Impact (H/M/L)	Power (H/M/L)	Position (+,0,-)	Key Issues/Rationale for Position

Appendix E. Example MBB Coach Evaluation of Project Status

GG MBB COACH- John Smith	PROJECT TITLE	Projected BENEFITS (in $K)	SCHEDULE	SUPPORT from *Team Members*	SUPPORT from *Project Sponsor*	D	M	A	I	C	TOOLS USED TO-DATE	COMMENTS / ISSUES / RISKS	OVERALL RATING
Example - Joe Blackbelt													
BB1													
BB2													
Green		On track to meet or exceed goal	On track to complete project early or on time	Team Members are active participants and complete assignments	Sponsor is aware of project status, and active in removing barriers		Place Date in appropriate phase to indicate when the date the						Project will be successful
Yellow		On track to hit 80-99% of goal	On track to exceed project duration by 0-20%	Some Team Members are non -active participants and are not completing assignments	Sponsor has limited awareness of project status, of has not been delinquent in removing barriers								Project success is questionable
Red		On track to hit below 80% of initial goal	On Track to exceed project duration by 20% or more	BB is doing most of the work on the project, infrequent team meetings	Sponsor is not involved								Project will not be successful on the current plan

At a minimum, the MBB/Deployment Director should be tracking projects by Project Title, Project Benefits, Schedule, Support From Team Members/Project Sponsor, DMAIC Phase, Tools Used (to date), Issues, and overall rating. The specifics of project tracking will be determined by the Army's deployment of PowerSteering.

Appendix F. Generic LSS Deployment Checklists

F.1 GAP ANALYSIS

F.1.1 Lean Six Sigma Readiness

F.1.2 Primary Value Stream

F.1.3 Value Stream Analyses

F.2 PREPARE RESOURCES

F.2.1 Create Deployment Team

- **F.2.1.1** Determine number of Deployment Advisors (DA's) / Master Black Belts to be used
- **F.2.1.2** Validate required number of Subcommand Deployment Director (DD) resources throughout command
- **F.2.1.3** Determine LSS Deployment administrative assistance headcount requirement
- **F.2.1.4** Solidify role expectations / description for DD's
- **F.2.1.5** Develop & communicate additional Deployment Director qualification requirements / expectations
- **F.2.1.6** Identify GB & BB candidates
- **F.2.1.7** Applications accepted/reviewed by CG / Command DD
- **F.2.1.8** Interviews completed / candidate qualifications reviewed
- **F.2.1.9** Successful Candidates selected and notified
- **F.2.1.10** Compile & Send-out welcome "care package" to DD's
- **F.2.1.11** Schedule Deployment Team On boarding Session

F.2.2 Plan & Execute Executive Workshops

- **F.2.2.1** Identify opportunities for customization of Executive Leadership Workshops, Project Sponsor Workshops, and Project Identification and Selection Workshops (primarily through types of examples)
- **F.2.2.2** Identify burning platform presenters and schedule
- **F.2.2.3** Identify external presenters and schedule
- **F.2.2.4** Schedule Executive Leadership Workshops
- **F.2.2.5** Compile & Send-out invitations to Executives
- **F.2.2.6** Conduct Executive Leadership Workshops (See Detailed Deployment Checklist for tactical preparation)

F.2.3 Plan & Conduct Project Sponsor Workshops

- **F.2.3.1** Define project sponsor role
- **F.2.3.2** Identify project sponsor for each training project
- **F.2.3.3** Contact project sponsors for Wave 1 projects (invitation to workshop)
- **F.2.3.4** Schedule Project Sponsor Workshops
- **F.2.3.5** Identify burning platform presenters and invite

F.2.3.6 Identify external presenters and invite
F.2.3.7 Compile & Send-out welcome "care package" to Sponsors
F.2.3.8 Conduct Project Sponsor Workshops

F.2.4 Human Resource Considerations

F.2.4.1 Define/Refine High Level Deployment Roles & Responsibilities
- Executives
- Deployment Directors
- Project Sponsors
- Black Belts
- Green Belts
- Master Black Belts
- all levels of Mgmt
- Financial Oversight
- Review / tweak deployment RACI

F.2.4.2 Create reporting lines by Subcommand (BB's, DD's, Site Deployment Directors)

F.2.4.3 Establish profiles: Write, Feedback, Review, Tweak, Final Review
- Deployment Directors (DD's) - Subcommand Level
- Black Belts (BBs) - Subcommand /Unit Level
- Greenbelts (GBs) - Unit Level
- Site Deployment Directors (SDD's) - Unit Level

F.2.4.4 Establish Selection Process & Criteria: Write, Feedback, Review, Tweak, Final Review
- Black Belts (BBs) - Subcommand/Unit Level
- Green Belts (GBs) - Unit Level
- Site Deployment Directors (SDDs) - Unit Level

F.2.4.5 Develop Career Path/Integrate into existing Career Mgmt Process
- Adapt existing Career Mgmt system for BB path

F.2.4.6 Determine MBB HR Guidelines
- Review profiles: Review, Feedback, Tweak, Final Review
- Review Selection Process & Criteria: Review, Feedback, Tweak, Final Review
- Develop Career Path & Integrate with existing Career Mgmt system
- Review Guidelines with HR Council

F.2.5 Select & notify Black Belts

F.2.5.1 Establish Required number of resources by Subcommand
- Create Resource Breakdown Model: Subcommand/Unit/ Site
- Work with Subcommand leadership to understand requested BB representation
- Identify sites/garrisons/facilities requiring site Deployment Directors

F.2.5.2 Create Candidate Pool

F.2.6 Select & notify Green Belts

F.2.6.1 Establish Required number of resources by Subcommand
- Create Resource Breakdown Model: Subcommand/Unit/ Site
- Work with Subcommand leadership to understand requested GB representation

- Review with team to determine Wave 1 GB requirements
- Identify sites/garrisons/facilities requiring site Deployment Directors

F.2.6.2 Create Candidate Pool

F.3 DESIGN PROGRAM

F.3.1 Conduct Deployment Team Initial Team Session (RIE)

F.3.1.1 Design Deployment Team Onboarding Session
F.3.1.2 Conduct Onboarding of Deployment Team
F.3.1.3 Conduct Deployment Team Executive Overview
F.3.1.4 Conduct Deployment Team "LSS Deployment Overview"
F.3.1.5 Facilitate Deployment Team Launch (define charter, mission, ground rules, meeting frequency, roles, etc)

- Define Project Charter
- Define Mission Statement and ground rules
- Define Roles & Responsibilities
- Facilitate Deployment Team Launch (define charter, mission, ground rules, meeting frequency, roles, etc)

F.3.2 Develop detailed Master Deployment Team Plan and Event Schedule

F.3.2.1 DA's work with Command DD on 1st cut Timeline
F.3.2.2 DA's work with Subcommand DD's on Deployment Team intensity (# of resources, timing, etc.)
F.3.2.3 Deployment Team back-schedules program timeline from Wave 1 BB training
F.3.2.4 Deployment Team forward-schedules program timeline for sanity check
F.3.2.5 Solidify Wave I BB locations

F.3.3 Determine Program Integration Points

F.3.3.1 Identify other Command initiatives/mission objectives (ex. BRAC, ARFORGEN, etc.)
F.3.3.2 Develop integration points with LSS program

F.3.4 Develop Subcommand Consistency Plan

F.3.4.1 Create the list of items where consistency is a Key Success factor
F.3.4.2 Define where/why consistency is a requirement and where/why flexibility could be allowed
F.3.4.3 Determine overall consistency issues (gaps)
F.3.4.4 Quantify & Prioritize the gaps
F.3.4.5 Develop plans to address consistency issues (gaps)
F.3.4.6 Command DD's review gaps and Subcommand modifications to program design guidelines, logistics, timeline
F.3.4.7 Execute action plan to address Subcommand consistency issues (communication)
F.3.4.8 Design mechanism used to update Executive Team on Deployment Team Progress & Major Issues

F.3.5 Develop Financial Guidelines (rules for ALL to play by)

F.3.5.1 Ensure that a command or installation financial manager is designated to support the effort

F.3.5.2 Create Program Level savings roll-up model

F.3.5.3 Create Project Level savings guidelines (hard, soft): Level I, II, III, etc.

F.3.5.4 Establish results realization duration

F.3.5.5 Formalize results tracking roles & infrastructure

F.3.5.6 Recruit/identify resources to fill roles of project savings validation

F.3.5.7 Train tracking resources on financial guidelines

F.3.6 Develop command program savings targets & roll down to units (establish formal goals & metrics)

F.3.6.1 Establish incentive & compensation structure for Command & Subcommand Leaders

F.3.6.2 Establish program savings targets by Subcommand / unit

F.3.7 Develop and deliver communication plan

F.3.7.1 Develop key messages and media for each audience

- Identify audiences (all levels) and communication media
- Executive Team Level Messages
- Executive Team Level Messages to outside world
- Subcommand Leaders Message (Subcommand CO's) to units
- Middle-Management Message (Supervisor level) to General Staff: "3 minute message"
- BB/GBs to General Employees

F.3.7.2 Create LSS intranet site

- Develop concept, goals, & content for LSS intranet site (including general info. about LSS
    - Establish goal, design guidelines and structure
    - Create "look & feel" (using program branding & visual)
    - Create initial content
        - What is LSS and how to participate ("what's in it for me?")
        - Timeline for Deployment
        - Roles (BB, GB, DD, Unit Deployment Director, Leader, Sponsor)
        - LSS Test for building awareness
    - Create infrastructure to monitor/update intranet site
    - Design/program intranet site and launch

F.3.7.3 Create recognition and plan to communicate (& celebrate) early successes & wins

- Develop a model to identify project successes/wins
- Create framework for rewarding project teams for successes/wins
- Create infrastructure to evaluate and select successes/wins and reward mechanism
- Create newsletter for commands & distribution system
- Create input process to LSS intranet site

F.3.7.4 Develop and Launch Program Branding & Visualization

- Determine Name of the Program
    - Brainstorm & perform cut on names
    - Select candidates for names

- Decision by top management (on program name)
- Design LSS Visual
  - Design LSS Visuals options
  - Select candidates for visual
  - Decision by top management (on program visual)
- Deploy Branding and Visual
  - Implement format for Command dashboards (global standard)
  - Implement format for communication to general employees
- Create awareness
  - Identify, create, and source awareness give-aways (with Brand & Visual)
  - Establish plan to distribute "awareness give-aways" to improvement resources & teams
  - Establish medium to purchase awareness give-aways

F.3.7.5 Adopt Command Employee Survey for structured feedback (bottom-up feedback)

- Assess understanding of how LSS and Command Mission fit together
- Define metrics for LSS deployment efficiency (% involvement, degree of communication)
- Define metrics for LSS deployment effectiveness (perceived value of LSS, contribution to cost of operations, improves personal workplace, quality of decision-making, etc.)

F.3.7.6 Support consistency and integration plan for current programs

- Packaging: LSS

F.3.8 Proactive Program Risk Mitigation

F.3.8.1 Brainstorm initial list of potential program barriers / begin to mitigate
F.3.8.2 Identify mitigation action items for critical risks
F.3.8.3 Execute on risk mitigation action items

F.4 PROJECT SELECTION & PREPARATION

F.4.1 Develop / document training project scoping & selection guidelines

F.4.1.1 GG provides training project guidelines to Deployment Team
F.4.1.2 DD's review training project guidelines and provide feedback
F.4.1.3 Incorporate feedback into guidelines
F.4.1.4 Acceptance of command training project guidelines
F.4.1.5 Customize project sponsor workshop materials

F.4.2 Develop / document standard project scoping & selection guidelines

F.4.2.1 DD's provide feedback on project guidelines
F.4.2.2 Modify project guidelines based on feedback
F.4.2.3 Customize project sponsor workshop materials

F.4.3 Conduct Project Selection Training

F.4.3.1 Identify dates for training and attendees
F.4.3.2 Setup training sessions and communicate logistics to attendees
F.4.3.3 Deployment Team Project Identification & Selection training

F.4.4 Wave 1 Training Project Selection

F.4.4.1 Initial selection of training projects (Process Owner, BB, Deployment Director has the "A") for Wave 1
F.4.4.2 Identify team members for selected projects and gain commitment from Project Sponsors
F.4.4.3 Write Training Project Charters
F.4.4.4 Submit Training Project Charters to GGC MBB Trainer for review prior to training
F.4.4.5 GGC MBB provides feedback on training projects
F.4.4.6 Command DD's, GG MBBs, and Project Sponsors edit project charters (if necessary)
F.4.4.7 Command DD's, GG MBBs, and Project Sponsors agree on charters

F.4.5 Black Belt training project Assignment & Team Selection

F.4.5.1 Conduct Project/BB Applicability Assessment
F.4.5.2 Notify BB of training project assignment (BBs already selected, ref. 1.4 above)
F.4.5.3 Meet with BB to cover Project Charter (review background data, problem statement, scope, etc.)
F.4.5.4 DD's & DD's review team member commitment with Project Sponsors
F.4.5.5 Project Sponsors (with DD's/DA's/BB's) notify team members and provided brief background (LSS, Project)
F.4.5.6 Black Belt training project teams in place
F.4.5.7 Black Belts hold initial team meeting

F.4.6 Project Selection Assessments

F.4.6.1 Schedule project selection sessions by subcommand
F.4.6.2 Conduct project selection sessions by subcommand

F.4.7 Develop standard project case/success story/best practice template for Black Belts to follow

F.4.7.1 GG distributes standard best practice framework to DD's
F.4.7.2 DD's review GG standard template and provide feedback
F.4.7.3 Incorporate feedback into standard Army template
F.4.7.4 Provide input into Project Tracking Software selection team
F.4.7.5 Communicate template to BBs

F.5 TECHNOLOGY / SOFTWARE REQUIREMENTS

F.5.1 Source, Setup & Assign Standard Configuration Laptops to Black Belts & DD's

F.5.1.1 GGC to send hardware requirements
F.5.1.2 DD's to work with local IT to purchase and configure laptops
F.5.1.3 DD's to ensure delivery of laptop to BBs

F.5.2 Source a standard Statistical Software (establish purchase and dissemination points) / get it to BBs

F.5.2.1 Establish corporate purchasing point (at corporate or divisional responsibility)

F.5.2.2 Disseminate / successfully install the standard statistical software on BB & Deployment Director laptops

F.5.3 Create LSS Materials Database

F.5.3.1 Adapt PowerSteering to meet needs of command

F.5.3.2 Update initial structure and load content

F.5.3.3 Load additional content

F.5.3.4 Create Deployment Team instructions & communicate

F.5.3.5 Create (Wave 1) BB instructions & hand-off to LSS Admin

F.5.4 Assign Server and Software Ongoing Maintenance

F.5.4.1 Assign the responsibility

F.5.4.2 Provide any needed training to the support person

F.5.5 Implement Software Support Plan

F.5.5.1 Design the software support model

F.5.5.2 Review/Revise Model and Assign ownership of software support plan

F.5.5.3 Implement the software support model

Appendix G. Training Checklists

G.1 Executive Leadership Workshop Deployment Checklist

Activities	From	To	When	Comments
Arrange Training room venue requirements and other accommodation details	Command Admin	Training Site	T - 35 days	
Develop list of attendees	DD	Command Admin	T - 42 days	
Schedule LEAN SIX SIGMA kick off with Executive Steering Committee	DD	Sr Mgr admin	TA- 21 days	
Send attendees Information Package/Welcome letter from Commanding Officer	Command Admin	Attendee	T - 35 days	
Send prework (if any)	HQDA	Attendee	T- 35 days	
Confirm number of training attendees and hotel rooms required	Command Admin	Hotel	T- 5 days	
Send customized slides for binders	DD	Admin	T- 21 days	
Identify key audience issues/interest items to prepare instructors	DD	Instructors	T - 14 days	
Verify current version of slides to be printed	HQDA PM	Admin	T- 14 days	
Print training materials and ship to class location	Command Admin	Printer	T- 7 days	
Send final list of training attendees to Instructors	Command Admin	Instructors	T-3 days	
Make arrangements for group dinner	Command Admin	DD	T-3 days	
Meet/discuss with training instructors to prep for class	DD		T-1 days	
Instructors send class evaluations to PMO & DDs	Instructors	Command Admin	T+3 days	
Follow-up on all opportunities and feedback	DD	attendees	T+5 days	

Legend	
	Administrative Support
	Deployment Director
	HQDA
	Black Belt

G.2 Deployment Director/Project Sponsor Training Checklist

Activities	From	To	When	Comments
Arrange training room venue and accommodations requirements	Command Admin	Hotel	T - 35 days	
Develop list of attendees	DD	Command Admin	T - 42 days	
Send attendees invitation letter from Commanding Officer	Sr. Cmd Admin	Attendees	T - 35 days	
Send prework (if any)	Command Admin	Attendee	T- 14 days	
Project Sponsors get approval from DD for training projects	DD	Project Sponsors	T- 14 days	
Confirm # of attendees, accommodations, catering etc	Command Admin	Hotel	T- 5 days	
Verify version of slides to be printed	DD	Admin	T- 14 days	
Print materials and ship to class location	Admin	Printer	T- 7 days	
Send final list of attendees to instructors	Command Admin	Instructors	T-3 days	
Make arrangements for group dinner	Command Admin	DD	T-3 days	
Instructors send class evaluations to DD	Instructors	Command Admin	T+3 days	
PS polish Project Charters & send to Deployment Advisor	Project Sponsor	Deployment Advisor	T+3 days	
Deployment Advisor reviews Project Charters and returns to PS	Deployment Advisor	Project Sponsors	Black Belt Training - 14 days	

Legend	
	Administrative Support
	Deployment Director
	HQDA
	Black Belt

G.3 Black Belt Training Deployment Checklist

Activities	From	To	When	Comments
Post job position	DD	HR	TA - 56 days	
Interview candidates	Command HR	BB	TA - 35 days	
Command agrees to project start date & class dates	Command HR	BB	TA - 30 days	
DD adds BB names and info to class roster	DD	Admin	TA - 28 days	
BB makes travel arrangements to class	BB	Hotel	TA-28 days	
orders laptop and software for BB	BB	IT	TA-28 days	
BB class roster per group sent to Instructor	Admin		TA - 28 days	
Commanding Officer scheduled to greet BB candidates	DD	Sr Mgr admin	TA- 21 days	
HQDA mails prework to BBs & welcome letter w/details (books shipped and email)	HQDA	BB	TA - 14 days	
BB gets laptop and software loaded		BB	TA - 14 days	
Instructor emails welcome letter to BB	Instructor	BB	TA - 7 days	
Instructor emails reminder to BB to do prework	Instructor	BB	TA-1 day	
BB completes LEAN SIX SIGMA prework (12-20 hours)	BB		TA + 7 days	
BB receives Training Project Charter from Project Sponsor	Project Sponsor	BB	TA-7 days	
DD visits or calls BB to discuss class readiness	DD	BB	TA-7 days	
BB prints LEAN SIX SIGMA Binder material or loads onto CD	BB		LEAN SIX SIGMA-7days	
DD and instructor kick off training	DD		TA	
Commanding Officer with DD approve start of LEAN SIX SIGMA project work	DD		LEAN SIX SIGMA WK 1	

Legend	
	Administrative Support
	Deployment Director
	HQDA
	Black Belt