ARMY BUSINESS PROCESS IMPROVEMENT DEPLOYMENT AND SUSTAINMENT GUIDEBOOK

2019–2023

Version 6

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FOREWARD

The United States Army is the most dominant, lethal, warfighting organization on the globe. To maintain that superiority in combat capabilities, the Army continually refines and sometimes must transform its tactics, techniques, and procedures and reevaluate its organizational structure, as well as its personnel, training, and equipment needs. Interwoven in all of these refinements are the Army business processes that enable the operational changes required in today's volatile, uncertain, complex, and ambiguous world.

This guidebook sets the tactical direction for improving Army business processes while providing readiness at best value. Additionally, this document establishes a blueprint for the Continuous Process Improvement (CPI) Community of Practice (CoP) and informs our business partners—budget and cost analysts, business process reengineering practitioners, data scientists, enterprise architects, operations research and system analysts and value engineers—of our path forward to reduce waste and improve overall effectiveness and efficiency within the Army. Business processes cannot be allowed to be an additional rock in the rucksack of the warfighter. Business process improvement is about getting to the right outcome, and the right outcome is giving Soldiers what they need when they need it at the best value and at the right price for taxpayers.

The creativity, ingenuity, capability, and expertise of the total Army workforce is unequalled and will rise to the challenge of improving the way we do business.

Army Strong!

Dr. Charles T. Brandon III
Director, Army Business Process Improvement
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- The Army CPI, Office of Business Transformation, is the proponent for Army Business Process Improvement.

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1.1   Army Transformation

Our previous force generation model, commonly known as Army Force Generation (AFORGEN), was a progressive model designed to generate manned, equipped, and trained formations **to meet predictable deployment timelines** for known requirements in theater. Unfortunately, **AFORGEN left the Army at risk in meeting unforeseen contingencies with a trained and ready force**, as illustrated in figure 1.1. Therefore Army leadership determined that a more comprehensive force generation model, such as the Sustainable Readiness Model (SRM), is required to address evolving priorities.
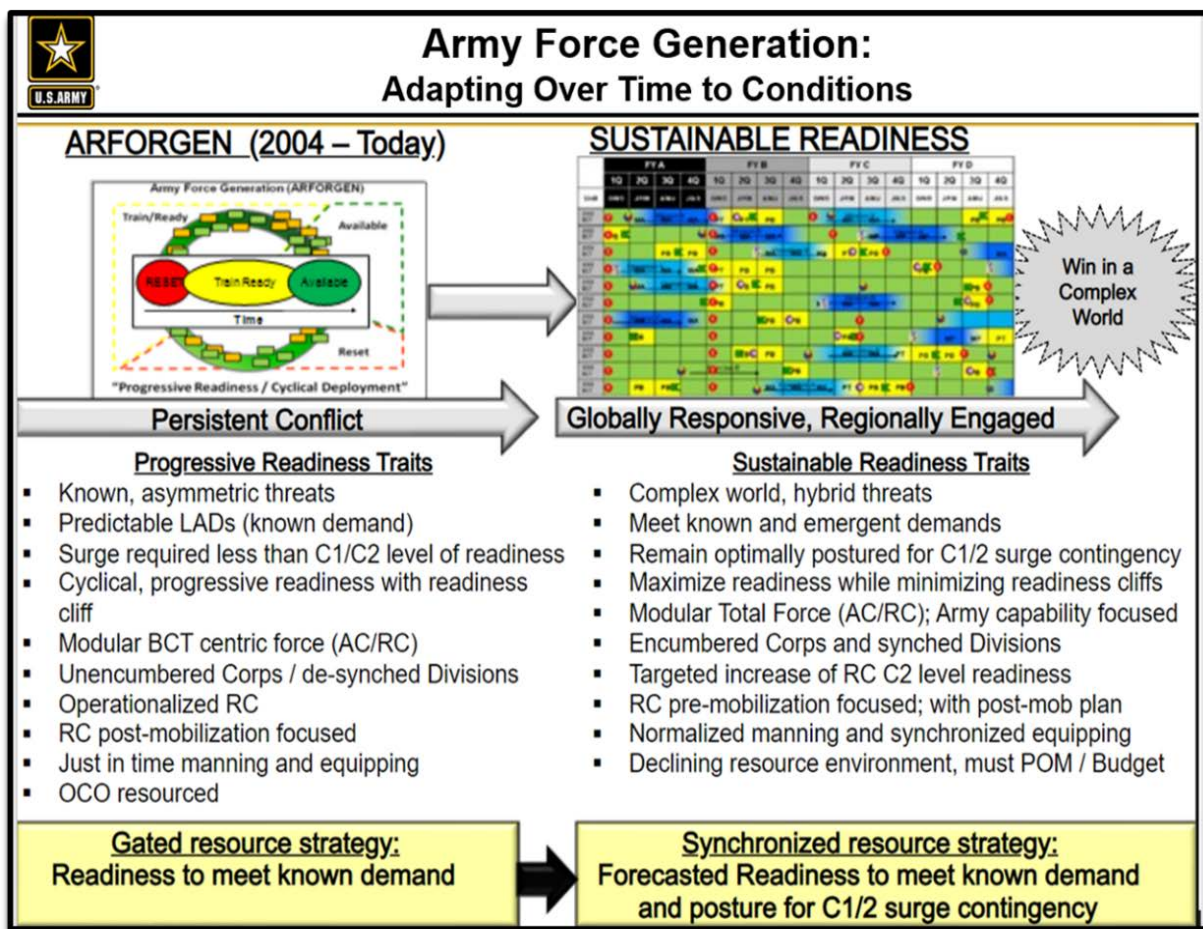
Figure 1.1: Army's **T**ransition **F**rom AFORGEN to SRM Force Generation Model

SRM is an evolutionary step in the process by which we provide trained and ready forces as the Army's contribution to the joint fight. By linking directly to the Army Operating Concept, SRM is designed to optimize available resources to generate higher levels of readiness across more formations in the Active, Guard, and Reserve Components (RC) to enable the Army to meet its global requirements while simultaneously being prepared to respond to uncertainty around the world.

The Army's goal under SRM is to achieve two-thirds (66 percent) combat readiness for global contingencies for the Total Army by 2023. Unlike ARFORGEN, there are no fixed progressive cycles for Regular Army units. The RC will remain on a 5-year cycle. SRM has three descriptive modules, as illustrated in figure 1.2.

- The **Prepare Module** consists of units rebuilding readiness and not involved in missions.

- In the **Ready Module**, units are achieving or sustaining a baseline level of Decisive Action proficiency and the ability to respond to contingencies. These units can be deployed on missions if required.

- The **Mission Module** constitutes units allocated to or assigned to an ordered mission. These units are validated, fully resourced, and immediately ready to conduct Decisive Action operations if required. The Army describes Decisive Action as "the continuous, simultaneous combinations of offensive, defensive, and stability or defense support of civil authorities' tasks."
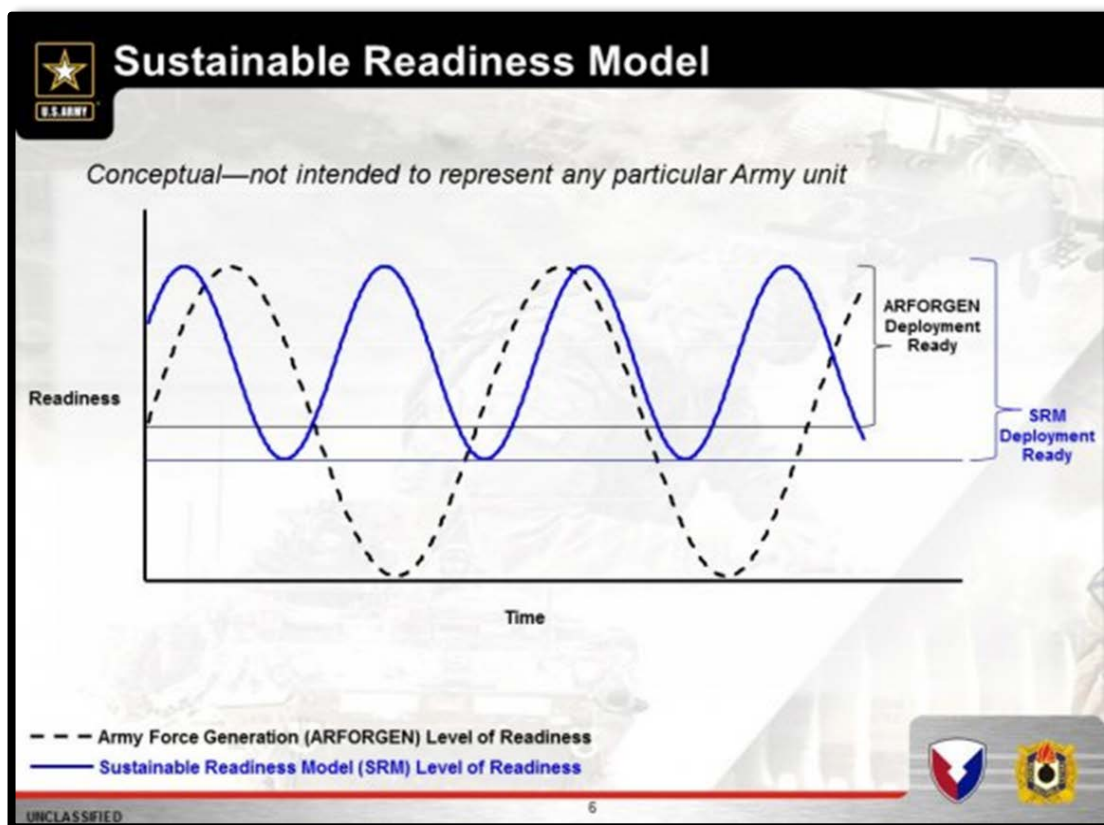
Figure 1.2: Army Evolves to Align to Sustainable Readiness Model

The Army contends SRM will provide it with greater flexibility than ARFORGEN in addressing contingency operations and prioritizing unit readiness. Other perceived benefits of SRM include but are not limited to:

- stabilizing manning to avoid abrupt readiness declines.

- resourcing units to sustain higher levels of readiness over longer periods of time.

- providing Army leadership with greater readiness visibility among units and permitting forecasting of readiness out to the next three to four years.

- informing Army resourcing and budgeting decisions.

Given our current Army environment, CPI methodology is well-suited to assist leaders in addressing the Army's challenges. CPI is an enabler to warfighters in improving their logistics throughput and capacity management in the theater of operations; in the Continental United States, it is an asset to better refine the Army's SRM module overview (as depicted in figure 1.2 on the previous page), and lastly is ideal to help target areas within the generating force for improvement in agility and versatility. Within the SRM process, our Army depends on transparency throughout the enterprise to provide the decision analysis capability to optimize resources and unit activity to minimize risk in accomplishing the Army's mission.

However, this transparency is challenged by policies and procedures that worked well in the industrial age but fall short in the information age. Too many of our internal processes and policies are still aligned with the old, ARFORGEN model instead of the new SRM. In this world of uncertainty and high demands placed on the Army, it is critical that every asset is optimized. With a seasoned, combat-experienced force as an asset, the Army will continue to capitalize on its human capital to reinvigorate the profession of arms and help shape the institutional side of the Army as well. SRM is sustainable, flexible, and works. The Army formations have gained greater predictability in planning and training for their deployments.

1.2   Challenges and Opportunities

Army Regulation 5-1 (Management of Army Business Operations), 12 November 2015, established a requirement for performance improvement capability. The Secretary of the Army directed that Army leaders focus on tying resources to outcomes, costing our processes, and rewarding those organizations that exhibit good stewardship. The goal of these directives is to achieve the highest level of readiness with the greatest efficiency.

In response, The Army Process Improvement Leaders Guide 2017–2021, 1 November 2016 (https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterI D=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D) identified four primary performance improvement priorities that can improve process effectiveness within the Army.

First, the Army must develop a multidisciplinary performance improvement capability and institutionalize information technology (IT) in Army training and schools.

The performance improvement CoP must identify the capabilities required for future Army leaders. We must collectively determine which performance improvement capabilities senior leaders, officers, warrant officers, and civilians need and then inculcate these capabilities into the schoolhouse and training forums across the Army. Only by integrating the various performance improvement disciplines, experimenting with integrated methodologies and tools, finding those combinations of capabilities that produce results, and then instilling capabilities appropriate to the grade within the Army structure will the Army be able to achieve its strategic goals effectively and efficiently.

Second, the Army must eliminate process activity, infrastructure, and organization structures that waste critical resources.

The Army operates today in an unpredictable environment. Changes occur in real time in the operational environment, and the generating force must respond to this unpredictability, even as resource constraints continue. These circumstances require leaders to ask basic and unsettling questions about their organizations' processes and infrastructure and aggressively weed out those organizational structures, infrastructures, and processes that do not add value and then innovatively apply technology and automation to those that do.

Third, the Army must improve the agility of generating processes through organizational redesign, innovation, process improvement, and integration.

To achieve the desired agility, organizational redesign, coupled with an end-to-end view of the generating force processes, is required. Organization structure should capture organizational purpose, and the end-to-end perspective drives increased integration to flatten organizational hierarchies. Creativity and innovation applied to processes, infrastructure, and structures that add value drives agility with no loss of effectiveness.

Fourth, the Army must employ technology as applicable to streamline Army processes.

The world is experiencing broad systemic reduction in activity costs fueled by electronic networks in combination with powerful personal computers and the cloud that overturns long held, basic organizing, fulfillment and infrastructure assumptions. However, costs can be negatively impacted if technology is used to automate activity that adds no value. Applying information technology capability to value added activity enables resource reductions without sacrificing effectiveness and applying cost effective information technology solutions to reduce cost is an approach to resource consumption reduction and improve agility. Robotic Process Automation (RPA) is an example of deployable technology that helps the Army obtain high return on investment (ROI), when leveraged against efficient information technology (IT) processes. Robotic Process Automation is a software robot installed in a user's computer, machine or

device that tracks human actions and replicates them to perform the complex, redundant and rule-based work performed on a daily basis. The software application automates tasks and processes otherwise performed by humans. Robotic automation helps the Army improve their overall productivity by reducing processing time. The time taken by RPA to process data and conduct rule-based calculations is less than a quarter of time a human resource would require, and will greatly help the Army meet its Title 10 Mission.
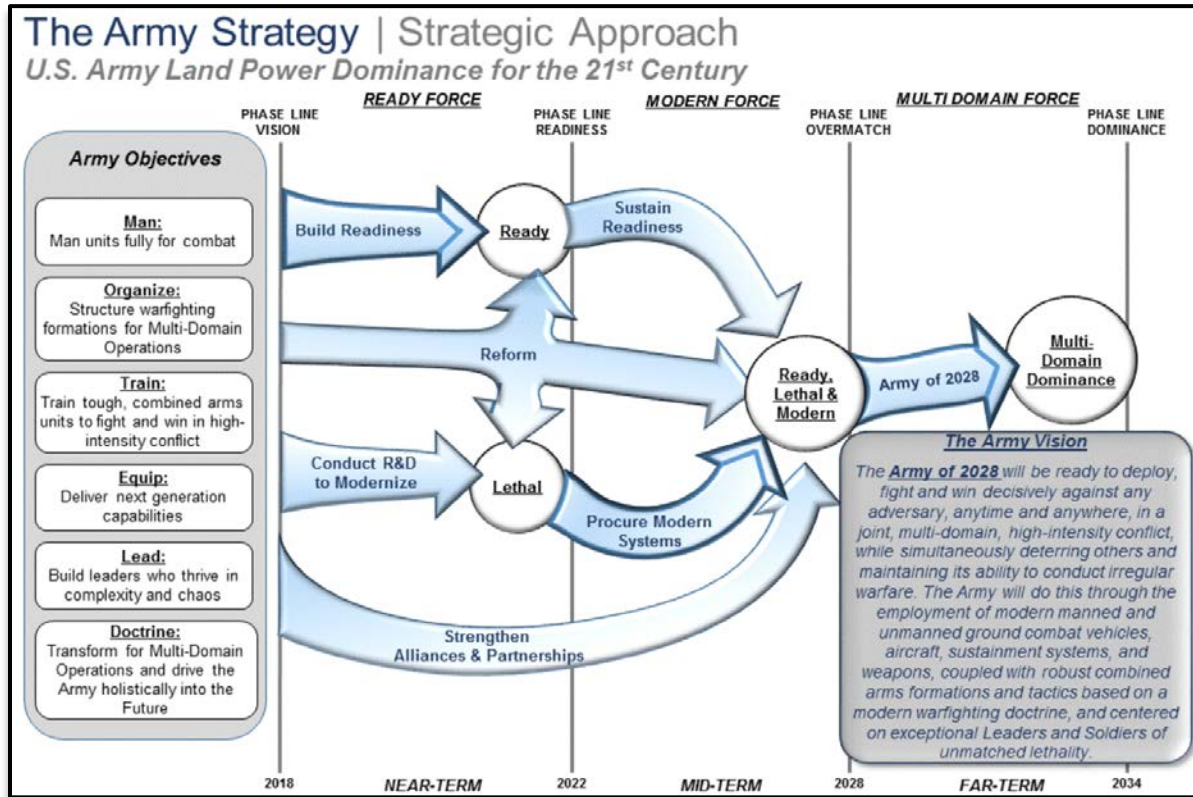
Figure 1.3: Army Strategy Establishes Four Lines of Effort to Meet 2028 Army Vision

To effectively execute these four primary performance improvement priorities, we must adapt the Army's culture, organizations, systems, and processes to address challenges and uncertainties related to process inefficacy. Failure to do so threatens the Army's ability to generate trained and ready forces and capabilities for the combatant commanders. The Army's generating force or institutional Army must be as agile, adaptive, and versatile as the operational forces it enables, where readiness is nonnegotiable.

1.3 Emerging Ideas, Techniques, and Technologies

The Army Business Strategy 2017–2021 establishes four lines of effort with specific objectives to chart a path of irreversible momentum toward 2028. These four lines of effort are **Readiness:** ensuring the Total Army is ready to deploy, fight, and win across the entire spectrum of conflict; **Modernization:** building greater capacity and capabilities in the longer term; **Reform:** improving the way the Army does business;

and **Alliances and Partnerships:** striving to integrate allies and partners into our operations to increase interoperability. The Army Strategy will unfold over the next decade in a series of phases as priorities shift across these lines of effort (see figure 1.3). Underpinning this strategic approach is an enduring commitment to take care of our people and live the Army Values in everything we do.

No single discipline or approach encompasses all the capabilities required to address the full spectrum of Army challenges. Successful challenge resolution is dependent on the successful integration of all resident Army capabilities that deliver analysis, course
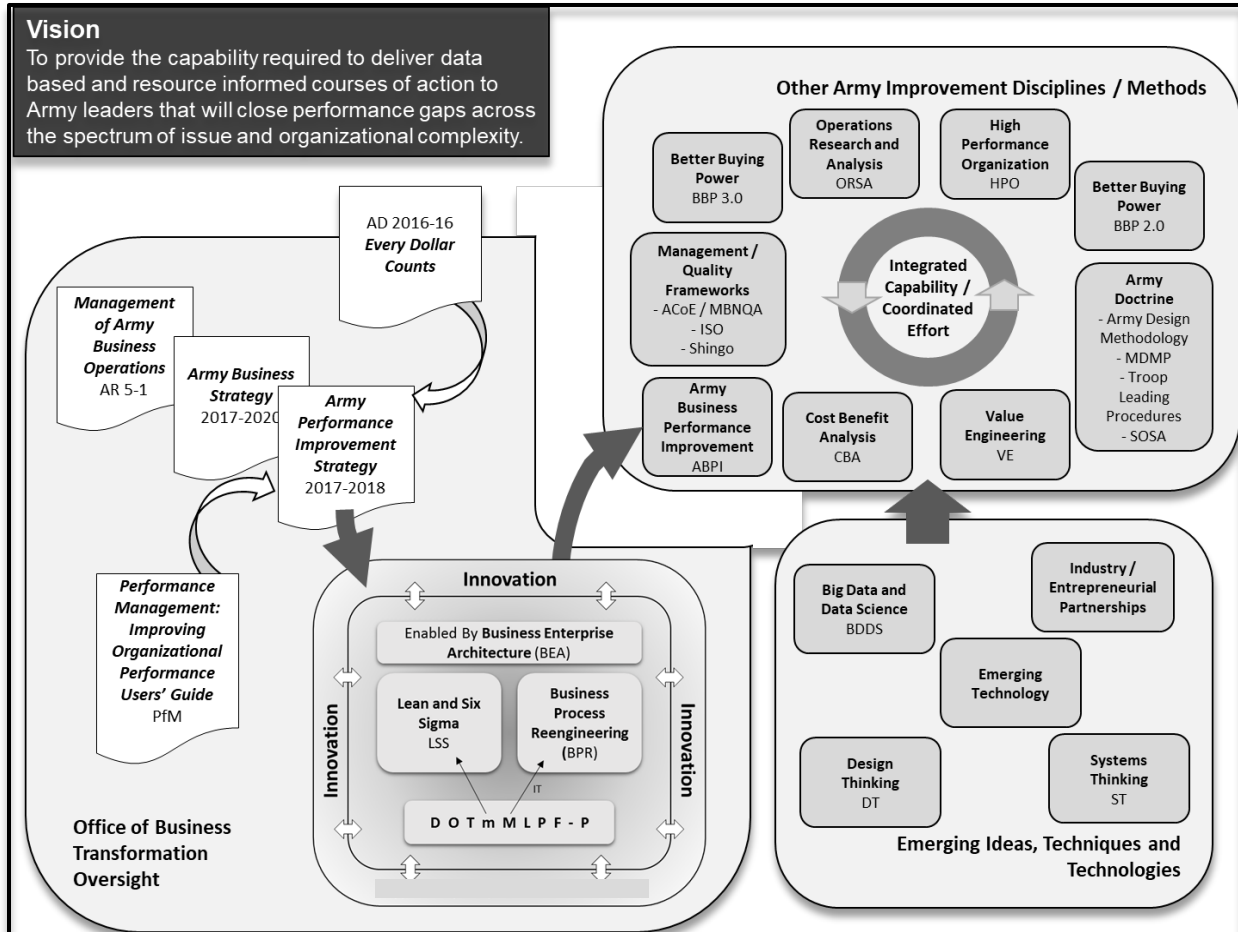
Figure 1.4: CPI Vision Enabled by Process Improvement Strategy

of action development insight, and sustainable solutions, as illustrated in figure 1.4.

With over 15,000 CPI-trained practitioners across the enterprise, an opportunity exists to integrate training with a variety of new and emerging process and performance improvement methodologies, such as Design Thinking, Systems Thinking, or Robotics Process Automation, and establish meaningful collaboration among the CPI CoP and associated partners (budget and cost analysts, business process reengineering practitioners, data scientists, enterprise architects, operations research and system analysts and value engineers), collectively identified as the Business Process

Improvement (BPI) CoP. The Army is well positioned to work as a team with a common goal and shared understanding. No challenge is to great or complex to achieve the highest level of readiness with the greatest efficiency.

1.4   Organizing Business Transformation

The Office of Business Transformation (OBT) was established through General Orders No. 2010-01 in February 2010. Today, OBT is an enduring organization within Headquarters, Department of the Army (HQDA). The Secretary of the Army approved the organizational design of the OBT on 1 June 2011. OBT is the preeminent source of business process improvement and systems organization. In this role, OBT is responsible for:

- establishing a fully Integrated Management System.

- reengineering Army business processes for efficiency and effectiveness.

- aligning management processes and programs to Readiness.

Although the staff assigned to OBT is small compared with other elements of the Army Secretariat and Staff, it leverages the efforts of the Army's Business Process Improvement Capability Managers (ABPICM) and CPI practitioners across the Army enterprise. The efforts of CPI are complementary to the efforts to transform the Army. CPI offers a proven and rigorous set of methodologies that any leader in the Army, regardless of echelon, can apply for the improvement of their processes. All CPI efforts are recorded in a program management database known as Army PowerSteering (https://armyps.army.mil/usarmycorp/). This program management tool serves the total Army by providing a repository of projects for information, assessment, and, more importantly, replication. The basic construct of the CPI network is that commands are responsible for training and certification of all LEAN (training only, no certification), Green Belt (GB) and Black Belt (BB) level practitioners, while HQDA still provides training and certification of Master Black Belts (MBBs). All CPI efforts support the goals and objectives of the Army's Chief Management Officer by targeting waste and unnecessary redundancy.

1.5   Purpose of the CPI Deployment and Sustainment Guidebook

This guidebook represents the approved Department of the Army guidance governing CPI deployment and sustainment within the Army. The vision for Army CPI has always been to develop a cadre of CPI experts who can routinely tackle enterprise-level challenges and achieve transformational results. As we lead the CPI deployment into the future, we continue to institutionalize these capabilities at the organizational level to support the enterprise approach and institutional adaptation. It is recognized that as organizations chart their own way forward in the implementation of this capability, they will team with other organizations and entities to advance their CPI outcomes. Nevertheless, those teaming arrangements and any associated contractual agreements must comply with the guidelines established in this guidebook. Experience has shown

that failure to check and comply with this guidance before entering into agreements with other organizations or contractors has created significant problems for the respective organizations and the Army.

The Army Business Process Improvement Office (ABPIO) will release routine updates to this guidebook. However, the next complete iteration (version 7) will not be available until 2023. The current version can be found in the Training and CPI Guidebook Documents section on milSuite at https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D and the Important Links section of Army PowerSteering at https://armyps.army.mil/usarmycorp/.

Section 2.   LEADING CHANGE IN THE ARMY

2.1   The Army's Approach to Institutional Adaptation

"The Army Vision of 2018 highlights how the Army is preparing for possible warfare against near-peer competitors, while simultaneously conducting irregular warfare." The Army will do this through the employment of modern manned and unmanned combat vehicles, aircraft, sustainment systems, and weapons, coupled with robust combined arms formations and tactics based on a modern warfighting doctrine and centered on exceptional leaders and Soldiers of unmatched lethality.

Here are the current Army priorities, highlighted in the Army Business Strategy 2017–21, aimed at improving the way we conduct our business operations:

•   Improvement and Assessment of Business Process Performance.

•   Developing Leaders and Managers.

•   Enabling Resource-Informed Decision-Making.

•   Information Technology Portfolio Management.

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

2.2   The Business Mission Area Framework

In accordance with Army Regulation 5-1, the Army's Business Mission Area (BMA) governance provides a balanced strategy for making decisions and recommendations based on enterprise strategic planning, integrated architectures, and outcome-based performance measures to achieve desired mission capabilities and outcomes directed by Title 10, United States Code. Specifically, the BMA governance promotes stewardship of resources, maximizing business operations outputs at any given resource level.

Working in coordination with the defense intelligence, warfighting, and enterprise information environment mission areas, the BMA guides, governs, and manages all business operational activities and associated business system portfolios within the Army.

The BMA is organized along five primary domains: acquisition (Assistant Secretary of the Army (ASA) (Acquisition, Logistics and Technology); financial management (ASA (Financial Management and Comptroller)); human resources management (ASA (Manpower and Reserve Affairs)/Deputy Chief of Staff, G-1); logistics (Deputy Chief of Staff, G-4); and installations, energy, and environment (ASA (Installations, Energy and

Environment)/Assistant Chief of Staff for Installation Management).that encompass Department of Defense (DoD)-validated business operational activities.

A domain is a subset of the BMA portfolio that aligns to areas of common operational and functional requirements. A BMA domain includes the core business processes of that mission subset and the business systems that predominantly support those core business processes.

2.3 CPI Support for Institutional Adaptation

Since 2006, the Army has used CPI methodology to change culture, processes, policies, and procedures. The intent of the CPI program is to develop a cadre of CPI experts who, once the deployment of these methodologies reaches the steady-state of self-sustainment, can routinely tackle Armywide enterprise-level projects.

The Army's CPI program now comes under the purview of the Director, OBT as the Army recognizes that CPI will be one of the key tools in the effort to adapt the institution to better support SRM, incorporate an enterprise approach, and revise the requirements process to meet the challenges of the dynamic strategic environment.

As a result, we have the opportunity to integrate and exploit CPI capabilities to confront Armywide enterprise-level problems and achieve transformational results across the Army.

Over the past decade, the CPI effort has produced significant results and developed substantial process improvement capabilities. We have seen this success in projects completed at the enterprise and Army command level, at the tactical unit and installation level, and in theater during active conflict.

We have also applied lessons learned, updated our deployment maturity models, and identified the "steady-state" capabilities that will be required to support the enterprise approach for the long term. During 2017, we institutionalized the CPI processes and capabilities required for 2018 and beyond. That institutionalization included developing self-sustaining capabilities at the organizational level and permanently embedding programmatic functions within organizations of the institutional Army.

As the Army's enterprise approach matures, senior leaders responsible for BMA domains will be looking to organizations that have developed CPI capabilities for skills and expertise to improve processes within their respective domains. CPI MBBs, BBs, and GBs will be at the forefront of that effort. Each core enterprise produces a tangible output that can be measured in terms of time, cost, and/or quality. Accordingly, CPI methodologies employ empirically based tools that focus on time and quality that can help us achieve the values-based decision making that we seek. The application of proven cost-benefit analysis tools and techniques can help us achieve a cost culture that consistently strives to gain efficiency savings. For example, within each of the five BMA domains, inherent functions and processes must be analyzed and, in many cases, substantially improved to gain the efficiencies and improve the effectiveness of the

outputs supporting the SRM process. Leaders will turn to the cadre of trained and motivated CPI practitioners to conduct the value stream mapping of the functions within each domain. Those CPI experts will assist domain leads in identifying where competing processes exist and determining how to prioritize projects that will improve the efficiency and effectiveness of core processes. Once those projects are identified and prioritized, domain leads will rely upon MBBs and BBs to lead project teams to deliver results to improve and synchronize those processes.

Section 3. BUILDING CPI CAPABILITIES

Much continues to be accomplished in applying CPI methodology to improve Army institutional processes as demonstrated by the annual LEAP Ceremony (defined fully in section 3.3.13). However, much remains to be done in continuing to build capabilities required to institutionalize CPI to support institutional adaptation.

3.1 Evolution of the CPI Deployment Maturity Models

When the Army launched the CPI deployment, it relied on commercial experiences, programs of instruction, and maturity models. About a year into the full-scale deployment, the Army began to look for a different maturity model that would better meet our needs and explain things in Army language. A model that relied heavily on the Doctrine, Organization, Training, Material, Leadership and Education, Personnel, Facilities and Policy (DOTLmM-PFP) parameters was eventually adopted. Figure 3.1 depicts the original Army-level CPI maturity model with the eight parameters (Results, Strategy Doctrine, Organization, Training, Leadership, Measurement Analysis and Knowledge Management, People and Project Management) depicted along the left, vertical axis.

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

Figure 3.1: Original DOTLmM-PFP-Based CPI Maturity Model as of 2005

After identifying the phases of the deployment and applying key lessons learned during the initial phases of the deployment, the Army developed a "steady-state" vision of where we should be by 2010 in terms of each of the eight maturity model parameters to support the enterprise approach to institutional adaptation. Once the Army identified this "steady-state" vision, we mapped the logical intermediate steps along each parameter to get to the steady-state outcome.

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

Mission/Customer Driven

Steady-State "Vision" to support Enterprise Approach

Figure 3.2: Current State: Organizational-Based CPI Maturity Model

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

3.2   Mission Analysis and Required Capabilities

Using the respective maturity models, the Army conducted a mission analysis to identify the required capabilities that would be needed in the "steady-state" to support the enterprise effort for the long term. This mission analysis identified 36 required capabilities, grouped into the 8 maturity model parameters. The capabilities are listed in

the "Required CPI Capabilities at Steady-State" document that can be found in the CPI Guidebook Documents folder on milSuite at https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D.   A Critical Task Selection Board was convened to define the critical tasks required of each CPI role to support the required capabilities. This board consisted of MACOM representation (including the Army National Guard and U.S. Army Reserve), subject matter experts, and the CPI Program Management Office. This list of critical tasks helped us to systematically review, revise and validate our CPI programs of instruction (POI) using the Army's systems approach to training process.

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

3.3   Deploying CPI

Deploying CPI requires an enormous amount of change throughout the organization. Of course, despite what we all may think and say, people generally do not readily accept change. People become accustomed to the "old system" in which they were rewarded, and change is often perceived as a threat to their overall security and comfort level. However, CPI methodology has a proven track record of success. On average, CPI deployments have produced a return on investment of 700 to 1 since launched in 2006. Through lessons learned, self-audits, and shared practices, the Army has mitigated some of the challenges of deploying new CPI capability by identifying the requirements necessary for a new deployment launch. The New Deployment Quick Reference Guide Checklist (table 3.1) articulates the actions and associated responsibility required for a successful new CPI deployment capability.

	Task	Responsible Owner
1	Obtain top level leadership support for CPI deployment	Commander/Senior Executive
2	Assign Army Business Process Improvement Capability Manager	Commander/Senior Executive
3	Assign Deputy Army Business Process Improvement Capability Manager	Commander/Senior Executive
4	Assign Senior Practitioner - Master Black Belt (MBB)	Commander/Senior Executive
5	Identify and Select Project Sponsors	Commander/Senior Executive
6	Assess Current Capability (Green Belt, BB, MBB)	MBB
7	Conduct Project Identification and Selection Workshop (PISW)	MBB
8	Determine Training Requirements	MBB
9	Identify ATRRS Quota Manager and schedule Requisite Training	MBB
10	Assign Projects to LSS Belts	MBB
11	Manage and Monitor Project Execution	MBB

Table 3.1: New Deployment Quick Reference Guide

Additional insight into deploying a new CPI capability can be found in sections 3.3.1 through 3.3.12.

3.3.1   Embrace Enterprise Thinking and Cultural Change

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

3.3.2   Get Strategic Leaders Involved

This is an obvious point, but the importance of senior leader—including core enterprise leadership—involvement cannot be overstated. Senior leaders at the highest levels must be engaged as sponsors on high-priority, core enterprise, or SRM projects to achieve significant, transformational outcomes. Project sponsor workshops, or one-on-one MBB coaching, should be used to prepare these senior leaders to fulfill their responsibilities. Project sponsors at all levels are key players who must provide the level of support CPI practitioners need to achieve results.

3.3.3   Build the Bench

Long-term transformation requires building the bench of CPI expertise. We must continue to identify the most qualified and promising candidates and get them through the training and certification processes so that the Army can operate with its own cadre of experienced practitioners of change. GBs and BBs should be encouraged and incentivized to complete multiple projects to enhance their expertise. The best performers must be encouraged to become MBB-certified practitioners so they can lead the Army's CPI deployment and fulfill the critical roles in the BMA as described in section 2.2. The critical roles are outlined in section 4.3 of this document.

3.3.4 Commit Resources

Enterprise-level projects typically involve the commitment of significant resources, particularly the time of CPI practitioners, to achieve meaningful returns on investment. Enterprise-level projects may require the deployment of multiple CPI belts to address complex issues. We must get to the point where we can consistently deploy certified and experienced belts against the 17 end-to-end processes and domain-level projects. In the meantime, ABPICMs, process owners, project sponsors, and MBBs must carefully monitor the activities of less experienced belt practitioners who are assigned to work on enterprise-level projects. Those leaders must remove barriers and provide the tools necessary, including appropriate coaching, to ensure those practitioners succeed, complete their assigned tasks or projects, and meet the certification criteria specified in section 8.

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

With the adoption of the enterprise approach to institutional adaptation, the focus of the CPI effort is shifting to address projects identified by the domains and end-to-end processes. To achieve enterprise results, project selection is crucial and the "pipeline" of projects must be managed so that projects are completed and high-priority efforts receive the necessary resources. It is better to accomplish a smaller number of truly meaningful, enterprise-level projects than many projects of lesser value. The maintenance of the proper project pipeline and completion of critical domain and end-to-end level projects is vital to the success of the enterprise approach**.**

An enterprise-level project is an Army wide project (defined as a continuous action or operation) that uses the CPI methodology and could affect enterprise strategic objectives. It is a project whereby the process steps are conducted across several Army Commands, Army Service Component Commands, or Direct Reporting Units. The financial and/or operational benefits must directly link to the strategic goals of the enterprise and must encompass the complete end-to-end process in all the Army Service Component Commands in which it is performed.

The project will be in Army PowerSteering with an assigned project LD number as a Define, Measure, Analyze, Improve, and Control (DMAIC)-gated project that has been reviewed against the "Project Charter 10-Point Checklist" illustrated in table 3.2 on the next page. The project sponsor will be at the senior Army leadership level so that the required level of authority exists to ensure that the cross-functional recommendation(s) can be properly executed in an expeditious manner within all the affected Army Service Component Commands (instead of just one command or installation). The solution is an "enterprise solution"; therefore enterprise compliance is necessary for success.

	Components of a Good Charter Checklist	Impacted Charter Segment
1	Project info block is correctly filled out and the project title includes an improvement action	Project Information
2	Paragraph summarizes the business problem by including references to financial pain such as overtime, excessive costs, high cost of capital which is broken down into the three types of savings and estimated in dollars	Busines Impact
3	The "Who/Where" identifies the location and area which is experiencing process pain	Opportunity/Problem Statement
4	The "What" metrics should be related to the SIPOC Output metrics such as Quality, Cost/unit, Safety, DPMO, etc. and preferrably bulleted and labeled for easy refernce	Opportunity/Problem Statement
5	The "When" should describe the amount of time or number of transactions the proecess has been poorly performing	Opportunity/Problem Statement
6	The "Extent" should use the EXACT same metrics as the "What" section and baselined with real historical data or place-holders then bulleted for easy reference	Opportunity/Problem Statement
7	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," bulleted for easy reference	Goal Statement
8	The In-Scope will include the start and end of the process based on 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 a reference at the time of charter assessment is occurring	Project Scope
9	Project Plan will set hard tollgate milestone dates for Define and Control then state estimated dates for Measure, Analyze and Improve	Project Plan
10	Team should consist of 4-6 members, and no more than 9 members	Team Selection
Optional	Charter can be signed by Sponsor, DC and Financial Representative	Leadership Commitment

Table 3.2: Project Charter 10-Point Checklist

Financial and/or operational results must encompass the complete process, in all the Army Service Component Commands in which it is performed.

Note: A link to the Project Charter 10-Point Checklist is available on the Important Links" section of Army PowerSteering at https://armyps.army.mil/usarmycorp/.

3.3.6 Identify and Implement Replication of Valid Projects

Since the CPI program was first launched back during fiscal year 2006 (FY06), the skills and expertise of the practitioners certified through the CPI training program have increased significantly. The increase in skill levels and expertise has also brought a

marked increase in the complexity and quality of the projects developed. In addition, the return on investment rate for Army CPI projects has been extremely high.

To maximize the effect of the processes these projects improved and to leverage the results throughout the Army or other DoD elements, the CPI ABPIO developed a process for replicating completed projects.

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

The replication process developed for Army CPI projects has the following levels of approval:

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

    This project has been approved for replication by the process owner. The project meets all the minimum deliverables of an enterprise-level replication project, which include:

    - High level process map, preferably a value stream map

    - Project charter

    - Failure mode and effects analysis and/or cause and effect diagram

    - Demonstrated use of one or more advanced statistical tools (such as analysis of variance)

    - Solution development or identification process

    - Pilot plan and results

    - Implementation plan

    - Control and training plans

    - Demonstrated quality, cost, and/or speed improvements (that is, Structured Query Language, return on investment/savings, process leadtime, process cycle efficiency, etc.), with resource management review and approval

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

    Once a project's solution(s) has successfully completed one replication (beta test)

and produced either one or both financial/operational benefits*, the project is upgraded to Tier 2.

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

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

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

Note: As with all projects, a resource manager must review and approve all operational and financial benefits.

3.3.7   Drive Secretary of Army and Chief of Staff of the Army Initiatives

Senior leaders have access to a cadre of experts with the analytical, cost-benefit analysis, and process mapping skills needed to effectively lead enterprise-level projects to help the Army meet modernization, readiness, and reform goals the Secretary of the Army has set. Since its first implementation during FY06, CPI methodology has proven to be an effective methodology for helping Army organizations achieve efficiencies and savings.

Since CPI projects realize both operational and financial benefits, senior leaders can leverage the capability of this proven methodology to achieve savings while establishing an enduring capability to reduce duplication, overhead, and excess.

In addition, leaders are encouraged to use the trained and experienced CPI practitioners to conduct a cost-benefit analysis and develop the process maps and gap analysis needed to ensure that efficiency savings are achieved and that their processes are strategically aligned to the highest priorities of the Army as detailed in the Army Business Strategy 2017 2021.

3.3.8   Track Projects and Validate Results

Army PowerSteering (PS) (https://armyps.army.mil/usarmycorp/), a web-based project portfolio management solution, is the system the Army uses to track the solutions and financial benefits from all CPI projects. Army PS is an easy-to-use software that provides senior leaders, ABPICMs, process owners, and project managers a real-time visibility, strategy alignment, and CPI belt practitioner effectiveness to drive strategy and accelerate results (financial and operational) across the Army. Army PS can manage target financial benefits and savings, support Army leaders and practitioners as users, and track all Army projects. This capability allows Army leaders to align local and enterprise-level projects and initiatives within their strategic goals and objectives.

By providing "line-of-sight" visibility into the portfolios, commanders, senior leaders, ABPICMs, process owners, and project managers have the information they need to make more effective project investment decisions, reduce costs and prioritize projects. Risks are identified and issues can be managed in real time. The Army also uses Army PS to track operational and financial benefits derived from CPI and associated projects.

The ABPICM asked U.S. Army Audit Agency to conduct "attestation reviews" during 2007 and 2008 to determine whether the benefit calculations entered into Army PS were reasonable and reliable. The reviews identified three areas where we needed to improve our ability to accurately capture benefits data. First, we had to emphasize the critical role that the resource manager plays in developing cost estimates to support each project team when financial benefits are involved. Second, we needed to revise portions of this guidebook to make the guidance clearer and more complete. Third, and most importantly, we had to get more CPI practitioners and resource managers to understand and comply with the published guidance. To address these issues, we are relying on ABPICMs, Deputy ABPICMs, deployment advisors, and project sponsors to ensure that their project teams—particularly the resource managers and belts—have read the guidance provided in the Financial Benefits Guidance document located on milSuite. To ensure that training on the financial aspects of process improvement is readily available to resource managers, belts, and other team members, we have made the training available in an online format. These steps, and others outlined in our CPI training, will help ensure the Army has credible benefits data associated with its CPI deployment.

Table 3.3 highlights lessons learned from the 2008 Army Audit Agency review:

2008 Army Audit Agency Review Lessons Learned
1	A resource manager must support each process improvement effort and be involved from the beginning
2	Financial benefits must be based on a real process improvement
3	Financial benefits guidance applies to all process improvement efforts
4	A business process and its cotsts extend over time
5	There are few, if any, one-time process improvements
6	Financial estimates should be adjusted when facts or assumptions change
7	"Revenue" generation means that the Army will received additional money

Table 3.3: Specific Lessons Learned From 2008 Army Audit Agency Review

Summary: The financial benefits of the Army CPI program, as reported in Army PS and highlighted in table 3.4, will be used to support decision-making and to communicate the success of the Army's business transformation efforts. Since the credibility of the Army is at stake, it is important for the Army to have accurate, reliable cost estimates. To achieve this goal, all project teams must follow the guidance provided in the Army Lean Six Sigma Financial Guidebook (Army Cost and Performance Portal). A link to the document is available in the Important Links" section of Army PowerSteering at https://armyps.army.mil/usarmycorp/and is highlighted at the end of section 3.3.8. By following the guidance in the Financial Guidebook we will ensure that we really have learned from the feedback Army Audit Agency provided in its 2008 review.

	Type of Benefit	Distinguishing Features of the Example
1	Savings	Reduces civilian or contractor manpower requirement and the associated costs
2	Savings	Legitimately lowers a customer requirement
3	Savings	Reduces unit cost and reapplies the savings to perform more of the same process
4	Savings	Requires viewing benefits from process-wide perspective
5	Savings	Reduces overall process cost, but has no financial benefit for the Army
6	Cost Avoidance	Makes more efficient use of people's time, but people must remain on the rolls.
7	Cost Avoidance	Reduces the cost of an unfinanced requirement
8	Savings and Cost Avoidance	Makes more efficient use of people's time, but people must remain on the rolls. Reduces the cost of contract
9	Potential Savings and Cost Increase	Requires viewing benefits from process-wide perspective
10	Operational	Improves cycle time, on-time completion, and rework
11	Revenue generation	Makes use of the sale and out-lease program
12	Revenue generation	Increases funding from non-Army customers in a revolving fund environment
13	Revenue generation	Involves MWR activity
14	No Financial Benefit	Reduces expenditurs but fails to accomplish the mission
15	No Financial Benefit	Cuts the budget but doesn't revise the process
16	Revenue generation, initially, but then no financial benefit	Anticipates a policy change that is eventually disapproved

Table 3.4: Sample Financial Benefits Within Army LSS Financial Guidebook

3.3.9 Develop the Next Generation of Metrics

The Army established the Financial Benefits Council to address the concerns just described. One of the council's major responsibilities is to ensure that the Army reports accurate and reliable data to internal and external audiences. The council was expanding its scope to begin designing the next generation of benefits metrics that will

truly support the Future Years Defense Program and Planning, Programming, and Budgeting Execution (PPBE) processes. In particular, we must develop metrics that will support Program Objective Memorandum 20–24 decisions and the identification, prioritization, selection, and synchronization of future enterprise-level projects.

3.3.10 Enforce High Standards

The enforcement of high standards in training, certification, and project completion is essential to developing CPI practitioners who can effectively apply CPI methodologies across the enterprise. The "Systems Approach to Training" is a rigorous process that sets the baseline for the enforcement of standards in our CPI courses. High certification standards are also essential. For example, CPI MBBs must be able to successfully demonstrate their proficiency at performing multiple roles. The CPI certification criteria are outlined in section 5 of this Guide. Project execution and completion must also be carefully monitored to maintain program velocity and achieve outstanding results.

3.3.11 Look for Opportunities Beyond DMAIC

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

3.3.12 Get the Word Out

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

- identifying target audiences and analyzing their commitment to institutional adaptation and the CPI deployment.

- identifying overarching themes according to the needs of their audiences.

- aligning events and communications opportunities with media, resources, and themes in a coherent plan to communicate regularly with those audiences.

ABPICMs must ensure that all success stories released for public dissemination have had the financial benefits validated by an organizational resource manager and operational benefits validated by an MBB. The OBT ABPIO will ensure that any success stories published at the Army level will have the financial benefits validated by a resource manager and operational benefits validated by the ABPIO MBB. Additionally, the ABPIO will have success stories approved for OBT to release.

3.3.13 CPI Excellence Awards Program

On 31 July 2008, the Secretary of the Army and the Chief of Staff, Army approved an annual Army CPI Excellence Awards Program (LEAP). The intent of LEAP is to recognize Army organizations and practitioners who demonstrate excellence in the building, sustainment, and employment of CPI capabilities to support the enterprise approach to institutional adaptation. All correspondence for LEAP should use the OBT CPI mailbox usarmy.pentagon.hqda-osa-obt.mbx.lss-awards--program@mail.mil. The program is also intended to provide a mechanism to share CPI best practices and lessons learned across the Army. Award categories are in the next table.

Type of Award	Brief Description	# of Awards	Remarks
Process Improvement Deployment Excellence Award (PIDEA)	Excellence at organizational level	8	Sub-Categories: Policy • (1) HQDA: Secretariat and Army Staff Execution • (1) HQDA: Secretariat and Army Staff • (2) AR 10-87 Army Commands • (1) AR 10-87 Army Service Component Commmands • (1) Direct Reporting Units • (2) Subordinate organizations to HQDA Staff and AR 10-87 Headquarters
Process Improvement Project Team Excellence Award (PIPTEA)	Outstanding contributions of independent CPI teams	10	Levels: • (2) Army enterprise level using DMAIC (cross-functional) • (4) Non enterprise level (2 BB and 2 GB projects) • (4) AR 10-87 Army Service Component Commmands

Table 3.5: LEAP Award Categories

To standardize and improve the LEAP process, OBT revised the competition categories policy. The new policy states:

1. Organizations grouped by category according to mandates from Army general orders and administrative publications:

    − **Categories:** HQDA Secretariat; HQDA Army Staff; Army Commands, Army Service Component Commands, and Direct Reporting Units as defined in Army Regulation (AR) 10-87; and subordinates to HQDA and AR 10-87.

2. Organizations that share ABPICMs will compete at the level of the senior organization. For example:

    − The Assistant Secretary of the Army (Manpower and Reserve Affairs) and the Deputy Chief of Staff, G-1 will compete at the HQDA Secretariat level.

- The Office of the Chief of Engineering and U.S. Army Corps of Engineers will compete at the HQDA Army Staff level etc.

3. Organizations grouped based on the following:

   - **Policy:** Transactional missions (for example, produce policy and budget guidance) will compete against organizations with similar opportunities. This includes organizations that act as the Army's lead for civilian or military policy and resources, or organizations that provide advice and assistance as a military advisor to the Army lead.

   - **Execution:** Production or execution mission will compete against organizations with similar opportunities. This includes organizations that manage or supervise policy and that execute resources in pursuit of that policy.

   - The revised policy resulted in the following category revisions captured in table 3.6.

	Headquarters	
	Secretariat	**Army Staff**
POLICY	• ASA (FM&C) • OGC • TIG • ASA(CW) • ASA(IE&E) • OAA • OCLL • OCPA • SB	• CCH • DAS • DCS G-4 • JAG • OACSIM • DCS G-2 • DCS G-3/5/7

	Headquarters		AR 10-87 Army Commands	AR 10-87 Army Service Component Commands	AR 10-87 Direct Reporting Units	Subordinate Organizations
	Secretariat	**Army Staff**				
EXECUTION	• ASA(AL&T) • CIO/G-6 • ASA(M&RA)/DCS G-1 • AAG • ANMC/ANC	• CAR • DCS G-8 • ARNG/DCNG • OCOE/USACE • OTSG/MEDCOM • PMG/USACIDC	• FORSCOM • TRADOC • AMC/SDDC	• USARCENT • USARCYBER/NETCOM • USAREUR • USARNORTH • USARSO • USASMDC/ARSTRAT • USASOC • USARAF/SETAF • USARPAC/EUSA	• USMA • ATEC • CHRA • FMC • HRC • IMCOM • INSCOM • MDW • USAASC • USAWC	• Depots • Program Executive Offices (PEOs) • Test Centers and Proving Grounds • Hospitals and Clinics • Installations • Army Divisions • Engineer Districts • States and Territories • Reserve Commands • Schools

Table 3.6: Revised LEAP Award Organizational Groupings

− The annual Award Program has a cyclical timeline, Table 3.7:

Responsible	Key Milestones	Suspense
ABPIO	Publish Implementing Instructions	1 September
ABPIO	Project Award Cut-off Date	30 September
ABPICM	Nominations Submission Deadline	22 October*
LEAP Evaluators	Evaluation Results Deadline	1 November*
ABPIO	Winners Announced	12 January*
ABPIO	Awards Presentation	17 March*

* - Suspense listed are subject to change

Table 3.7: Sample LEAP Timeline

Note: With the culmination of 2019 LEAP Award activities, and starting in 2021, LEAP Awards and LEAP Award process will only take place every 2 years, on odd number years.

Section 4.   ROLES AND RESPONSIBILITIES

4.1   HQDA Leadership

The OBT ABPIO currently provides guidance, develops policy, validates requirements, and serves as the central point of contact within the Department of the Army for the CPI initiative. These ABPIO functions can be grouped into three main subcategories:

- Common Service Provider functions (day-to-day execution and coordination of CPI tools and services)

- Process owner responsibilities (the development, writing, updating, and dissemination of doctrine and policy)

- Schoolhouse functions (training and training support)

4.2   CPI Leadership at the Organizational Level

Figure 4.1 illustrates key CPI roles at the organizational level. For CPI project efforts,
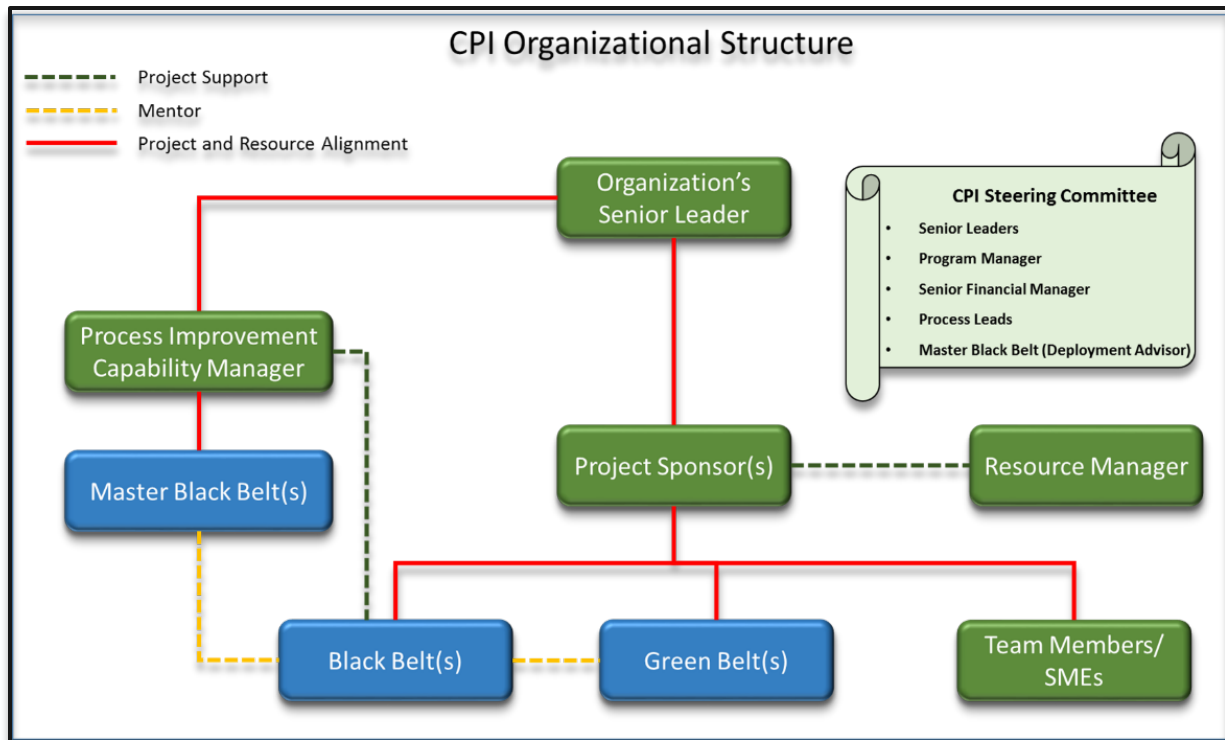
Figure 4.1: High-Level CPI Organizational Structure

BBs and MBBs report to the ABPICM who, in turn, reports to the commanding general, director, or staff director. For larger organizations, the ABPICM often appoints a Deputy ABPICM. The organization owns these resources and is accountable for project results and the returns on investment.

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

4.3 Key CPI Roles and Responsibilities

The responsibilities of each of the individuals depicted in figure 4.1 are summarized in figure 4.2 and explained fully in sections 4.3.1 to 4.3.9 of this Guidebook.
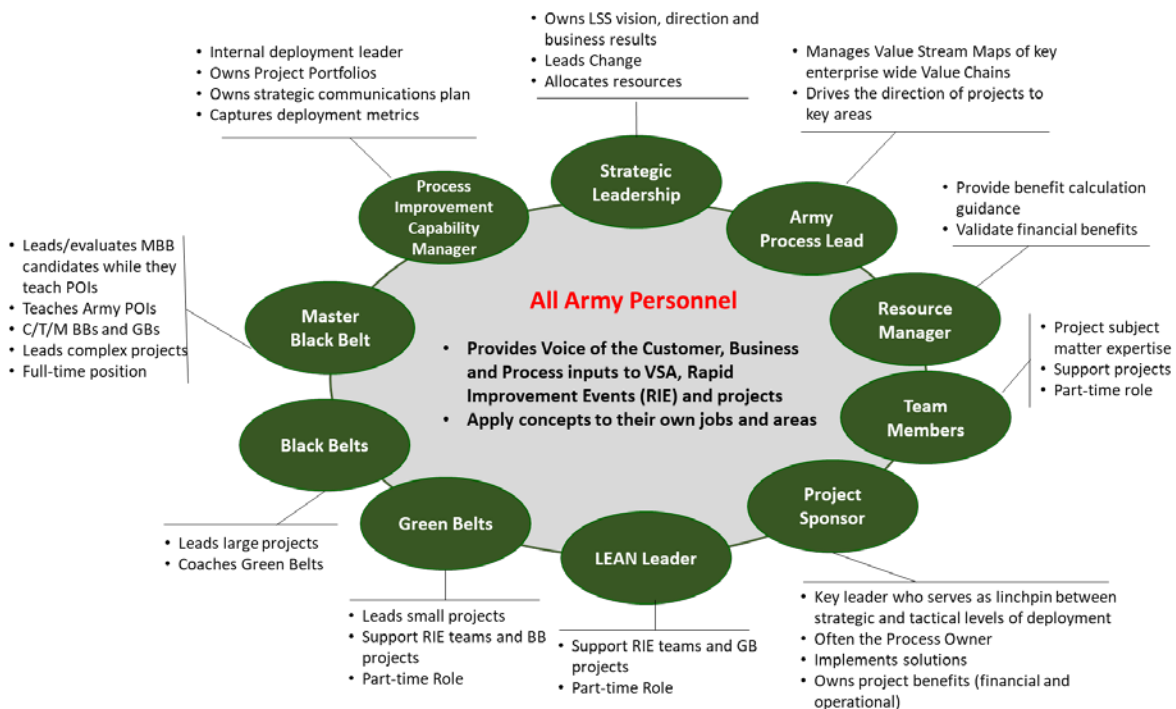
Figure 4.2: CPI Organizational Structure Defined

4.3.1 Organizational Strategic Leadership

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

- establish and communicate the organization's strategic objectives and communicate how CPI supports those objectives.

- inspire, own, drive, and provide resources (personnel, funding, and time) to support the successful deployment of CPI within the organization.

- lead by example with a clear and consistent message communicating the need to establish CPI as a standard operating procedure throughout the organization.

- hold their organization accountable for the success of CPI.

- ensure consistency and continuity of efforts.

- demonstrate commitment to CPI by selecting the best people as MBBs, BBs, and GB and assigning them to solve the biggest problems facing their organizations' Mission.

- identify and prioritize the greatest opportunities across the organization, particularly as they are tied to the organization's goals, the Army Strategy, and SRM.

- adopt proven and reliable cost-benefit analysis tools and techniques to validate those CPI efforts that will help the Army achieve the savings initiatives goals the Secretary of Defense and Secretary of the Army established.

- enforce process discipline and rigor by requiring regular reviews of CPI performance metrics.

- showcase and reward successful project team efforts.

A major facet of executive engagement and involvement is the establishment of a CPI Steering Committee. This committee generally consists of the organization's senior leader or his/her deputy, the ABPICM, a senior resource manager, critical process owners, and the MBB deployment advisor. The purpose of the committee is to oversee and manage the CPI initiative and to champion the implementation of CPI activities and policies throughout the organization. The committee's specific functions include:

- creating and guiding a comprehensive strategic plan based on the leadership's priorities and strategic focus areas.

- deploying organic MBBs to oversee CPI efforts within the strategic focus areas.

- initiating Project Identification and Selection Workshops (PISW) to identify specific project opportunities within each strategic focus area aligned to Commanders strategic goals.

- identifying and prioritizing the project "pipeline" that emerges from each PISW.

- reviewing and approving solutions derived by the teams dealing with strategic projects.

- overseeing CPI deployment and implementation efforts.

- assessing control metrics (output metrics) for strategic-level projects for a minimum of 6 months after project completion to ensure that performance improvement gains are maintained.

4.3.2 Army Business Process Improvement Capability Manager

The ABPICM is a full-time senior leader within the organization who reports directly to the commanding general, director, or staff director. He/she develops the policies, objectives, plans, and procedures to integrate CPI into the organization's strategic

priorities and operations. The APBICM can also appoint a deputy for larger populations. Additionally, the ABPICM ensures that the CPI efforts meet the guidelines, criteria, and metrics the senior leadership and steering committee established.

Specifically, the ABPICM must:

- support organizational strategic leadership in prioritizing, providing resources, and accelerating the progress of enterprise-level process improvement initiatives to enable the organization's key strategic priorities (that is, CPI Governance Body).

- help grow future organic talent.

- oversee the deployment of MBBs to lead CPI efforts within the strategic focus areas identified organizational leadership and the steering committee identified.

- oversee the strategic-level PISWs to assist the steering committee in identifying specific project opportunities within each strategic focus area.

- manage the "pipeline" of projects that emerge from the PISWs, which includes assigning and prioritizing project teams and ensuring higher priority, strategically aligned projects get first priority access to limited MBB, BB, and GB resources.

- allocate resources to the project teams, based on senior leadership and steering committee guidance, and help remove barriers to successful project completion.

- review and approve solutions the project teams derive.

- ensure that process owners and/or project sponsors assess control metrics (output metrics) for a minimum of 6 months after project completion to ensure that performance improvement gains are maintained.

- establish a process to systematically share best practices and replicate successful project outcomes while avoiding unnecessary duplication of efforts.

- recruit MBBs and BBs into the CPI infrastructure.

- ensure that the organization has an established procedure for assigning a resource manager to each project team.

- coordinate strategic communications efforts with key stakeholders on behalf of the organization in accordance with the guidance in section 3.3.12.

- ensure two-way communications throughout the organization concerning CPI initiatives.

- track overall progress of the CPI deployment, provide the organization's leadership with feedback, and recommend appropriate corrective action, as necessary.

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

4.3.3 Suggested Army Business Process Improvement Capability Manager Professional/Educational Background

The scale of the implementation (i.e. the size of the organization), the number of projects, the number of active CPI projects, etc. should be considered when deciding what items to include in each agenda. The example here would accommodate a very large organization with many active projects.

Meeting	Audience	Responsible Organizer	Frequency	Media	Agenda/Details
Monthly CPI Steering Committee Meeting	CPI Steering Committee, MBBs, Process Owners, Project Sponsors, Organizational Staff Directors	Army Business Process Improvement Capability Managers & Deputies (for Steering Committee Chair)	Monthly	Army PowerSteering	1. Review strategic focus areas and links to Army Strategy. 2. MBBs, Process Owners/Project Sponsors brief high priority projects related to strategic focus areas. 3. Review recent PISWs and update prioritized project "pipeline." 4. Steering Committee issues guidance on prioritizing resources to high priority projects. 5. Steering Committee issues any other strategic guidance concerning CPI deployment.
Weekly Updates	Process Improvement Capability Manager, MBBs, BBs, Process Owners, Project Sponsors	Deputy Process Improvement Capability Managers (with MBBs) to be presented to Process Improvement Capability Manager	Weekly	Army PowerSteering	1. Review strategic focus areas. 2. Review status of projects, emphasizing high priority projects related to strategic focus areas. 3. Review recent PISWs and updated "pipeline." 4. Discuss problem areas and solutions. 5. Discuss deployment maturity and strategies to increase capabilities. 6. Identify issues to raise to higher levels.
Project Tollgates	MBBs, BBs, GBs, Process Owners, Project Sponsors, and team members, including RM	Project Belt (to Project Sponsor)	At each DMAIC phase	Army PowerSteering	1. Discuss project status, findings, recommendations and problem areas requiring Process Owner and/or Project Sponsor attention. 2. Obtain approval to move to next phase. 3. Get RM to validate stated financial benefits.

Table 4.1: Suggested Organizational Deployment Status Review Schedule

Ideally, an ABPICM has the following professional and educational background:

- Experience as a senior leader within the organization, with direct access to the commander or agency head.

- Master's degree, preferably in business, engineering, or a technical or scientific subject (or equivalent work experience).

- Minimum of 10 years of professional work experience, ideally in leadership or management capacities.

- 3 to 5 years of experience in process improvement (preferably as a CPI BB or MBB) with prior supervisory or personnel management responsibility.

- Solid project management, team leadership, and group facilitation skills.

- Sound knowledge of other key functions that provide critical inputs, such as resource management (including the PPBE process), procurement, contracting, engineering, supply chain and logistics, operations, and SRM.

- Broad understanding of contemporary quality theory and a working familiarity with improvement tools and statistical analysis.

4.3.4 Project Sponsor

The project sponsor is the **_key linchpin in the CPI deployment_** who integrates the "strategic" guidance and direction provided by senior leadership with the "tactical" efforts of the project teams. The project sponsor is the organizational leader who owns the process and resources under consideration. He/she is responsible for ensuring that the project team understands leadership's expectations and **_for delivering project results that meet the organization's strategic objectives_**. This role cannot be delegated. Specific responsibilities of the project sponsor include:

- working with the belt to determine the baseline data/status of the process being examined and developing specific metrics or targets for improvement.

- identifying organizational gaps or opportunities and nominating potential projects to the organization senior leadership or steering committee for prioritization in the organization's strategic "pipeline."

- writing project charters that provide initial guidance to project teams.

- designating BBs or GBs to lead projects and assigning team members based on steering committee priorities and guidance.

- ensuring that the organization's senior resource manager assigns a resource manager to the project team.

- providing resources and guidance to the team to ensure project success.

- ensuring that belt candidates, before participating in CPI training, are assigned projects with valid charters that they will work on during the training.

- removing or mitigating any obstacles the team may encounter.

- overseeing and approving the tollgate reviews. As the gate approver, the project sponsor decides whether the team is ready to move to the next DMAIC phase.

- reviewing and validating, with the resource manager and MBB mentor, the benefit estimates at the Measure and Control DMAIC phases.

- reviewing and approving solutions the project teams derive.

- recognizing and rewarding team successes.

- capturing and sustaining the improvement results, to include assessing control metrics (output metrics) for a minimum of 6 months after project completion to ensure that performance improvement gains are maintained.

- supporting the organization's strategic communications efforts.

4.3.5 Resource Manager

The ABPICM, process owner or project sponsor, and assigned belts must ensure a resource manager is assigned to each CPI project team. Although he/she may not regularly attend team meetings, the resource manager is responsible for developing the financial benefit estimates for the project. He/she must approve financial benefit estimates at the Measure and Control tollgates. Before a project can be completed and closed, the resource manager, in conjunction with the project sponsor, must validate and sign off on the final financial benefit estimate during the Control phase as a gate approver in Army PS. A more complete discussion of the roles of the resource manager is in the Army Lean Six Sigma Financial Guidebook.

4.3.6 Process Owners

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

- assisting the belt in determining the baseline data or status of the process being examined and developing specific metrics or targets for improvement.

- assisting in the identification of organizational gaps or opportunities and recommending potential projects to the organization senior leadership or steering committee for prioritization in the organization's strategic "pipeline."

- assisting the project sponsor in writing project charters that provide initial guidance to project teams.

- providing resources and guidance to the team to ensure project success.

- removing or mitigating any obstacles that the team may encounter.

- assisting the project sponsor in reviewing and validating, with the resource manager and MBB mentor, the benefit estimates at the appropriate DMAIC phases (see Financial and Operational Benefits Guidance documents, which are available on PowerSteering).

- reviewing and approving, in conjunction with the project sponsor, the solutions the project teams derived.

- recognizing and rewarding, in conjunction with the project sponsor, team successes.

- capturing and sustaining the improvement results, to include assessing control metrics (output metrics) for a minimum of 6 months after project completion to ensure that performance improvement gains are maintained.

- supporting the organization's strategic communications efforts.

4.3.7 Master Black Belt

The Lean Six Sigma MBB is a full-time dedicated position reporting to the ABPICM (or in some cases, the process owner). The MBB is the organization's "in-house" expert for disseminating knowledge and training and coaching BBs (and GBs when appropriate). Additionally, the MBB takes a direct leadership role in leading complex, enterprisewide or strategic-level CPI projects. Only Army-certified MBBs are eligible to teach the Army CPI POIs.

4.3.7.1 *Master Black Belt Functions*

- **Leading Transformational Change.** The MBB is the leading catalyst for CPI within the organization. The MBB, in coordination with senior leadership and the ABPICM, is responsible for driving the long-range vision for CPI throughout the organization.

- **Major Project Leadership.** The MBB leads large-scale projects and complex projects that involve multiple subordinate elements within the organization. He/she must coordinate these projects with the ABPICM and the various process owners and project sponsors. MBB leadership includes identifying opportunities; defining and justifying projects; negotiating resources; launching project teams; managing team activities; training, coaching, and mentoring of belts assigned to teams; leading teams to execute projects; tracking project status and results; anticipating and removing barriers; and developing team members. In those circumstances where the MBB is leading a project, he/she is responsible for producing results in conjunction with the project sponsors.

- **Technical Leadership.** The MBB provides direction as a subject matter expert on the application of CPI methods to the organization's senior leadership, ABPICM, process owners, project sponsors, and belts. He/she challenges BBs on their technical application of problem-solving tools to develop their skills. The MBB assists belts in preparing for tollgate reviews and participates in those reviews, when possible. The MBB consults with the other MBBs concerning managing change and the activities of the larger (Armywide) Lean Six Sigma deployment.

- **Recruiting, Coaching, and Training of Team Members.** The MBB assists the organization's ABPICM in identifying potential BBs and GBs and recruiting team members into the CPI infrastructure. He/she provides the necessary training and coaching to team members to spread the understanding of CPI tools and methods.

- **Communications.** The MBB assists the ABPICM, process owners, project sponsors, and belts in executing the organization's strategic communications plan. The MBB also ensures two-way open communication throughout the organization

regarding CPI activities. This includes keeping the ABPICM informed about program status and ensuring the coordination of activities with process owners, project sponsors, and belts. The MBB must ensure best practices are communicated across the organization.

- *Measuring Results.* The MBB provides the ABPICM with project results and recommends corrective action, as required, when overall results do not meet expectations. The MBB, together with the resource manager, is also responsible for validating the operational benefits of all projects before completion of the Control phase.

- **Enterprise Level Activities.** Enterprise-level MBBs lead enterprise-level projects, where the process steps are conducted across several Army Service Component Commands within one or more BMAs. The financial and/or operational benefits these projects achieve must directly link to the strategic goals of the enterprise and must encompass the complete process in all the Army Service Component Commands in which it is performed.

4.3.8 Black Belt

CPI BBs establish, coordinate, and provide leadership for CPI projects. These projects should meet the guidelines and priorities established by the organization's senior leadership, the CPI Steering Committee, the ABPICM, and the process owner/project sponsor.

4.3.8.1 Black Belt Functions

- Lead CPI projects under the direction of the project sponsor and with the support of the MBB. Project leadership includes identifying opportunities, defining and justifying projects, launching project teams, leading team activities, tracking project status and results, removing barriers, and developing team members. The BB must also identify integration issues with other projects and processes and coordinate the improvements with the appropriate process owners and/or project sponsors.

- Provide the process owner/project sponsor, ABPICM, and (if requested) senior leadership with the project results and recommend appropriate corrective action, when necessary.

- Recruit other BBs, GBs, and team members into CPI efforts and ensure the continuing development of team member skills.

- Ensure projects are integrated with other organizational activities and the overall mission and strategic objectives.

- Lead the project team in preparing for and executing tollgate reviews.

- Assist the ABPICM, MBB, and project sponsors in the execution of the organization's strategic communications plan.

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

4.3.9 Green Belt

GBs are the "tip of the spear" in the CPI initiative and are responsible for managing and leading improvement projects on a day-to-day basis. GBs are trained in basic problem-solving techniques and receive regular guidance and direction from BBs assigned to their projects, as well as from MBBs when available. Specific GB responsibilities include:

- leading individual projects that can be conducted within their level of expertise. These projects should be conducted within a short time frame and focus on reducing waste and non-value added work.

- supporting more complex BB projects by leading specific efforts within their functional area of responsibility.

- advising project sponsors on the selection of team members.

- managing the administration and daily work assignments of team members.

- retaining official project records (such as collected records and data, spreadsheets, presentations, process maps, meeting minutes, etc.).

- directing the preparation and presentation of tollgate reviews related to their projects.

- assisting the process owner and/or project sponsor in implementing approved process improvement recommendations.

4.3.10 LEAN Leader

LEAN Leader is an ideal primer for Army leaders interested in CPI within the Army. LEAN Leader was designed for Army leaders who are unfamiliar with CPI and want to learn more about the LEAN methodology and how it is leveraged to improve process efficiency within the Army. LEAN Leaders are trained in the fundamentals of LEAN and are expected to become capable change agents, via tool use and exposure to key concepts, to contribute to process improvement within their respective areas within a short period of time. Specific LEAN Leader responsibilities include:

- contributing to individual projects with a focus on Lean tools and techniques, that can be conducted within their level of expertise.

- supporting more complex GB projects by leading specific efforts within their functional area of responsibility.

- advising project sponsors on the selection of team members.

- assisting the process owner and/or project sponsor in implementing approved process improvement recommendations.

4.3.11 Team Members

Most project teams are composed of five to seven team members led by a GB or BB. These team members are subject matter experts who apply their individual skills and expertise to the problem under examination. GBs and BBs are expected to coordinate and exploit this expertise by applying the CPI methodology and honed facilitation skills. Team member activities include, but are not limited to:

- gathering information, conducting interviews, and analyzing data.

- participating in regular team meetings to identify, analyze, and select possible solutions to problems.

- preparing tollgate review presentations.

- implementing solutions, under the supervision of process owners and/or project sponsors.

- identifying other project opportunities that fit within the organization's priorities.

- assisting the resource manager in developing financial estimates for the project, as prescribed in the Financial Benefits Guidance Handbook.

While CPI team members normally participate as part-time resources, they provide a significant part of the effort on a typical project. Project responsibilities normally consume approximately 1 working day a week for each team member. This time may increase substantially before critical project milestones.

4.4 Responsibility Levels

The RACI diagram in figure 4.3 on the next page depicts who in the organization is responsible (R), accountable (A), consulted (C), and informed (I) for various activities. The following definitions apply to each category:

- **Responsible:** This is the person who is ultimately responsible to senior leadership for accomplishing the task or activity. Only one person can be responsible for any task or activity. Responsibility CANNOT be delegated.

- **Accountable:** This is the person who is expected to accomplish the designated task. If multiple actions are required, multiple people can be designated as individuals assigned authority in the RACI chart.

- **Consulted:** The individual(s) to be consulted before a final decision or action. This phase requires ongoing, two-way communication.

- **Informed:** The individual(s) who need to be informed after a decision or action is taken. This is one-way communication.

	Senior Leaders	Capability Managers	Process Lead	Project Sponsor	Black Belt	Green Belt	Team Member	Master Black Belt	Resource Manager	Organization
Lead, Fund, Own Lean Six Sigma	R	A	A	A						A
Identify Project Opportunities	I	A/R	R/A	A	C	C		A		C
Create Project Charter	I	C	C	R/A	A/C	A/C	C	A/C	C	
Select Black/Green Belts for CPI	R	A	C	C				C		C
Prioritize and Select Projects	R	A	A	A	C			C		
Assign Black/Green Belts to Projects	I	R								
Assign Team Members to Projects		I	R/A	A/R	C	C	C	C		
Execute Projects	I	I	C	R	A	A	A	C		A
Monitor Projects (Milestones)	I	I	C	R	A	A	A	A		A
Develop/Validate Project Financial Benefits				A/C	A/C	A/C			R	
Develop/Validate Project Operational Benefits				A/C	A/C	A/C		R		
Remove Project Barriers	R	I	A	A	I	I	I	I	I	I
Capture/Sustain Project Results	I	I	R/A	A/R	C	C	C	C	C	A
Mentor Black/Green Belts	I	A	A	A	A			R		A
Certify Black/Green Belts	R	A	C	C	C			A		A
Leverage Or Replicate Opportunities	R	C	A	A	C/I	C/I	C/A	C/I	C	A

Responsible	R
Accountable	A
Consulted	C
Informed	I

Table 4.2: Sample RACI Diagram Depicts CPI Program Responsibility

4.5   Coaching and Teaching Responsibilities

In addition to the RACI chart, senior leaders, ABPICMs, process owners, and project sponsors can use table 4.3 on the next page to manage the coaching and teaching responsibilities of MBBs, BBs, and GBs. For additional detail on the information in table 4.3, refer to the explanations in the Notes captured below it.

CPI ACTIVITIES	GB Candidate and Certified GB	BB Candidate	Certified BB	MBB Candidate	Certified MBB	ABPICM, Deputy ABPICM
CPI ROLES						
Administer Green Belt Exam (Note 4)					▓	Note 3
Administer Black Belt Exam (Note 4)					▓	Note 3
Teach MBB POI					▓	
Co-Teach Black Belt POI (Note 1)				▓	▓	
Co-Teach Green Belt POI (Note 1)			Note 4		▓	
Teach Black Belt POI (Note 2)					▓	
Teach Green Belt POI					▓	
Teach PSW POI					▓	
Co-Teach PSW POI (Note 1)				▓	▓	
Lead DMAIC Projects	▓	▓	▓	▓	▓	
Lead EL DMAIC Projects					▓	
Lead PISWs					▓	
Co-Facilitate PISW				▓	▓	▓
Coach BB Projects			▓	▓	▓	
Coach GB Projects		▓	▓	▓	▓	

Table 4.3: CPI Practitioner Coaching and Mentoring Responsibilities

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

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

Note 3: ABPICMs and Deputy ABPICMs, as defined in section 4.3.2, who are Army-certified MBBs, may administer the Army CPI BB and GB exams.

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

Section 5.   CPI TRAINING

5.1   Overview

The Army uses the systems approach to training to develop curriculum. The Army's CPI curriculum is fully institutionalized and integrated with the Standard Army Training System.

The objectives of the CPI training program remain:

- producing and sustaining a critical mass of trained Army GB and BB practitioners.

- producing and sustaining a sufficient number of Army MBBs to make the Army self-sufficient in terms of CPI instructors, coaches, mentors, enterprise project leaders, and deployment advisors.

- producing trained project sponsors and informed strategic leaders.

- producing and sustaining a standard Army core CPI curricula.

- facilitating the integration of the CPI curricula into the Army's institutional training base.

Note: With the piloting and fielding of ABPIO's new 2020 belt curricula in January 2020, organizations will have an option to teach current 2X2 belt curricula, or teach the new 2020 curricula for calendar year 2020. Beyond calendar year 2020, all organizations will be required to teach 2020 POIs.

5.2   Responsibilities

5.2.1   HQDA Responsibilities

HQDA provides CPI program management and the following training resources, which can be accessed via milSuite (https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi):

- standard CPI curricula.

- electronic training poster files.

- electronic course notebook files.

- information on creating simulation kits.

- centralized planning of course offerings.

- resource on new and innovative approaches to process improvement

- centralized Army Training Requirements and Resources System (ATRRS) schoolhouse management with decentralized execution.

- Army PS, Minitab, cost estimating, and the ATRRS training (in an eLearning format).

- Minitab licensing information.

- providing electronic files, ready for printing, for notebooks and wall posters.

- providing information on Federal Budget Simulation Kit construction and ordering options.

- maintaining students' training status in ATRRS.

- enrolling qualified students into the "awaiting Army CPI certification course" in ATRRS.

HQDA will also ensure compliance with Executive Order 13163 (Increasing the opportunity for individuals with disabilities to be employed in the Federal Government) and applicable legislation to ensure reasonable training and testing accommodations for personnel with disabilities.

5.2.2   Organizational Responsibilities

5.2.2.1   Candidate Selection

Organizations sending candidates to CPI training must ensure that:

1. Belt candidates have completed prework assignments, meet all prerequisites (in accordance with AR 350-1 (Army Training and Leader Development), paragraph 3-9, are registered in ATRRS and have a laptop computer with Minitab version 18.

2. Belt candidates selected must also have a valid CPI project assigned by their project sponsor and recorded in Army PS before registration. The LD number must be generated by PS and not contain LD 999999 as this causes issues with ATTRS reconciliation.

3. The ABPICM (or Deputy ABPICM, if applicable) appoints an ATRRS quota manager from within his/her organization to register students.

5.2.2.2   Hosting Organization Responsibilities

Army organizations hosting CPI Training are responsible for:

1. identifying proper training facilities.

2. ensuring that all students are properly registered in ATRRS with valid assigned projects

3. providing a certified Army MBB (Department of the Army civilian or currently serving military personnel) to be the lead instructor to teach the Army CPI POI.

4. printing student notebooks for each week of class.

5. printing wall posters, budget documents, and job descriptions to support the simulation exercises.

6. purchasing and distributing textbooks.

7. providing a classroom for 30 students with tables and chairs that can be reorganized to support simulation exercises. The classroom(s) should have projection capability, allow for hanging training aid posters, and have two easels with butcher paper pads.

8. collecting student walk-in information and forward to the CPI Training Team.

9. retaining unused textbooks for future use.

10. providing a senior speaker to describe the organization's "Burning Platform."

11. providing student critique sheets for use at the end of the CPI Instruction.

12. printing and distributing course completion certificates to students who successfully complete the final exam.

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

Note: For additional detail, see the document entitled "Training Hosting Organization Responsibilities" in the Training and CPI Guidebook Documents section on milSuite.

5.3 Army Training Requirements and Resource System

ATRRS lists all Army Lean Six Sigma courses and their respective schedules under school code 142. ATRRS is the system of record for approved course offerings and student registration (in accordance with AR 350-10 Management of Army Individual Training Requirements and Resources), paragraph 2-1). HQDA will manage all ATRRS schoolhouse management functions.

Organizations will inform the Army CPI Training Team when they want to host training. The Training Team will upload the classes into ATRRS and make them available for student registration. Courses cannot be conducted, nor will credit be given to the students, if the course is not entered into ATRRS (in accordance with AR 350-1, paragraphs 3-5 and 5-3). Each organization must have a designated ATRRS quota manager to manage registrations. Students must be registered before the course start date (AR 350-10, paragraph 1-4w). Further information on hosting training can be found in section 5.8.

5.4 MilSuite

HQDA maintains the Training and CPI Guidebook Documents portal on milSuite.   The portal contains:

- training schedules.

- CPI course materials.

- CPI course prework.

- information and resources for hosting CPI training.

- training policy.

- frequently asked questions.

- training points of contact list.

- link to Army PS, Minitab, cost estimating, and ATRRS training (in eLearning format).

- training updates.

- links to the CPI Deployment Guide, the Army Lean Six Sigma Financial Guidebook, and the Operational Benefits Guidance document.

5.5 Programs of Instruction

All Army CPI courses must be approved and entered into ATRRS before execution (AR 350-1, paragraph 3-5). The Army CPI curriculum consists of the following POIs:

Note: High-level POI similarities and differences captured in tables 5.1, 5.2 and 5.3. Green Belt, Black Belt and Master Black Belt POI Future Curriculum subject to change.

5.5.1 Project Sponsor Workshop

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

The target audiences for these workshops are strategic leaders (general officers and members of the Senior Executive Service), who will sponsor enterprise-level projects and other organizational project sponsors (normally at the colonel or GS-15 level).

5.5.2   LEAN Leader

Lean Leader is a non-certification, week-long course that provides practitioners with comprehension of the fundamental methodologies utilized for LEAN problem solving. The LEAN Leader course covers basic LEAN improvement concepts, procedures and associated metrics. Upon course completion, LEAN Leaders can become central team members on an individual project or multiple projects.

5.5.3   Green Belt Course

Current Curriculum (End of Calendar Year (CY) 2019). GB training is a 2-week course that provides students with an understanding of CPI principles and tools, as well as project management fundamentals as illustrated in table 5.1. Delivered on a 2X2 schedule, GB candidates are offered an opportunity to immediately enroll in the BB course following successful completion of the first 2 weeks of the GB Course. GB candidates pursuing a BB are not required to complete a DMAIC project in advance of enrolling in the BB course. Additionally, successful graduates can be active contributors to BB projects and lead small-scale CPI improvement projects. Topics include establishing effective improvement teams, understanding the voice of the customer, and implementing the DMAIC methodology. Generally, a 3-week break occurs between the 2 weeks of training so that candidates can work on their assigned CPI projects.

Future Curriculum (Beginning of CY 2020). GB training is a 2-week class that targets first- and mid-level Army leaders, table 5.1. The class provides an efficiency intensive training approach that focuses on achieving quick wins through the application of LEAN tools and techniques during rapid improvement events. Additionally, students will be exposed to the Plan-Do-Check-Act framework and A3 problem solving methodology to assist practitioners in "leaning-out" (identifying and mitigating waste as defined by LEAN) Army processes, increasing Army capabilities, and reducing associated Army costs. Students who want to enroll in the BB Course must first successfully complete

	Current Curriculum	Future State Curriculum
Who Should Attend	Anyone interested in learning more about CPI, leveraging LSS concepts, tools and techniques.	First year and mid-level leaders interested in achieving quick wins leveraging LEAN concepts, tools and techniques.
Class Delivery Method	2X2 Schedule, allowing GB candidates with option to proceed to BB training course immediately following GB training.	Course Pre-Work, 2-Week Training Course.
Intended Class Focus	LSS	LEAN
Concepts, Tools and Techniques	DMAIC methodology	Plan-Do-Check-Act or PDCA framework, A3 Problem-Solving Methodology
Certification Requirements	Training, Standardized Testing, Completing Approved Project	Training, Standardized Testing, Completing Approved Project or Event

Table 5.1: Current and Future State GB Curriculum

the Army GB Certification process (attend training, pass exam, and complete certification project or event).

5.5.4 Black Belt Course

Current Curriculum (End of Calendar CY 2019). BB training is a 4-week course, delivered on a 2X2 schedule that familiarizes students with the principles, practices, and tools of CPI to maximize cost reductions and improve customer satisfaction as illustrated in table 5.2. Topics covered include an overview of CPI, as well as all aspects of traditional DMAIC methodology and tools. Successful graduates will be able to identify non-value-added activities and lead teams tackling more complex projects. The BB curriculum accommodates students with no prior CPI experience, and GB training is not a prerequisite to attend the BB course. Generally, a 3-week break occurs each week of training so that candidates can work on their assigned CPI projects.

Future Curriculum (Beginning of CY 2020). A BB candidate is someone who has successfully completed the GB course before enrollment. The BB course is a 3-week course that builds on the LEAN skills learned in the GB course and adds indepth statistical analyses, as shown in table 5.2, formerly taught in the MBB course (for example, parametric and non-parametric data). Additionally, exposure to tools enables candidates to collect and analyze process data, identify root causes of suboptimal performance, develop and pilot a changed process to negate identified weaknesses, and present commands with proposed new processes to achieve a desired result. This course targets midgrade and senior leaders and covers the full range of CPI concepts,

	Current Curriculum	Future State Curriculum
Who Should Attend	Certified GB candidates or GB candidates who have successfully completed the first two-weeks of GB Training and have an interest in pursuing BB Certification.	Mid-level and Senior leaders who have completed all GB Certification requirements and have an interest in pursuing BB Certification.
Class Delivery Method	4-week Course, 2X2 Schedule, allowing GB candidates with option to proceed to BB training course immediately following GB training.	Course Pre-Work, 3-Week Training Course.
Intended Class Focus	CPI	Heavy Statistical Focus
Concepts, Tools and Techniques	DMAIC methodology	Statistical Methodologies, Normal and Non-Normal data Approaches
Certification Requirements	Training, Standardized Testing, Completing Approved Project	Training, Standardized Testing, Completing Approved Project

Table 5.2: Current and Future State BB Curriculum

tools, and techniques. To receive certification, similar to the GB course, the candidate must complete the training, pass a comprehensive end of course written examination, and complete a project that demonstrates mastery of the analytical skills taught within the course.

5.5.5 Master Black Belt Course

Current Curriculum (End of Calendar CY 2019). MBB training is a 3-week course that provides the foundation for organizations to have in-house experts to disseminate CPI knowledge and training, as illustrated in table 5.3. Successful graduates provide training, coaching, and mentoring to strategic leaders, APBICMs, process owners, project sponsors, BBs, and GBs. MBBs also execute and lead enterprise-level projects. Topics covered include teaching and coaching CPI; reinforcing behavioral concepts; and CPI curriculum "teach backs," in which students instruct their peers. All MBB candidates (MBBCs) must be certified Army BBs. In addition to CPI skills, MBBs must demonstrate leadership ability, organizational and management abilities, good instructional techniques, group facilitation skills, and organizational change skills. All MBBCs must have the skill sets required to execute the four pillars of CPI Self-
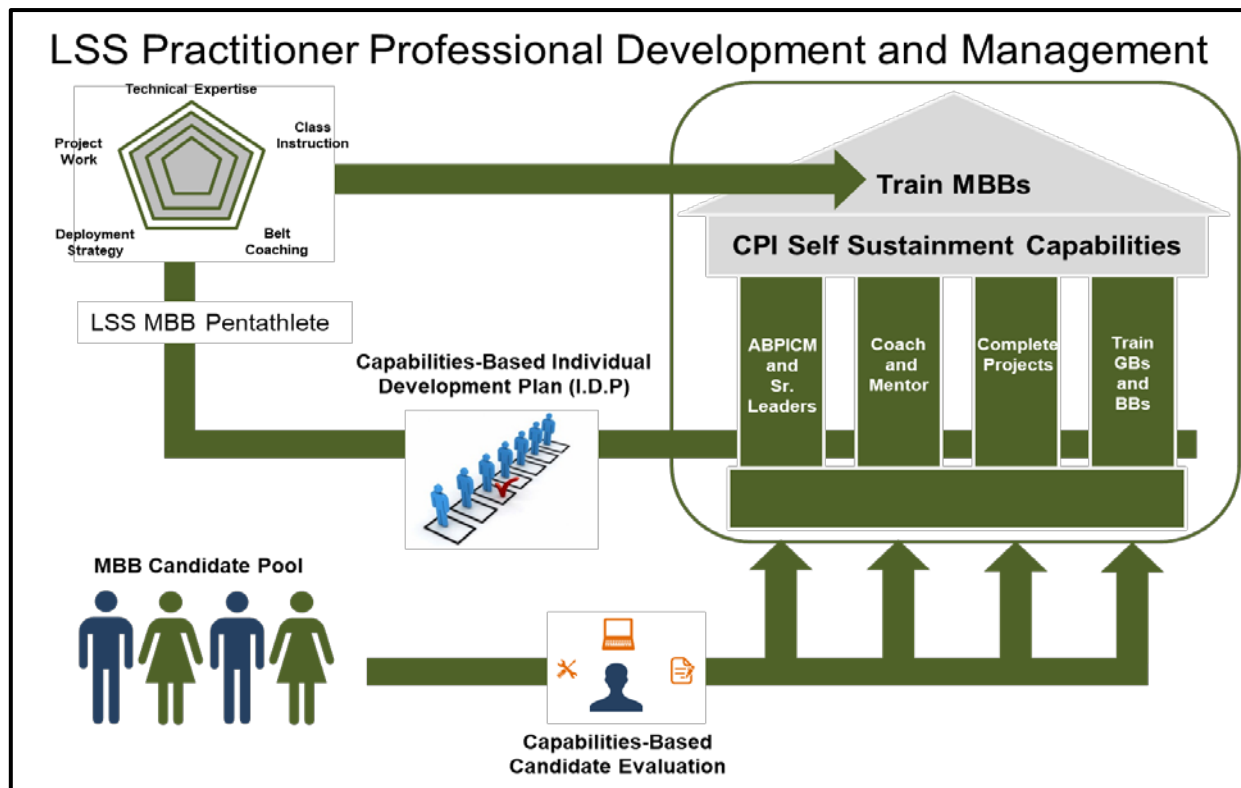
Figure 5.1: MBBs Self-Sustainment Pillars

Sustainment, figure 5.1. Generally, a 3-week break occurs between each week of training so that candidates can work on their second CPI project.

Future Curriculum (Beginning of CY 2020). An MBBC is someone who has successfully achieved BB certification and is interested in driving improvements for a command. As illustrated in table 5.3, the statistics taught in the current MBB curriculum will now be taught in the BB curriculum. The future state Master Black Belt course is a two-week course that focuses on providing MBB candidates with the tools to become a trusted advisor to senior leadership across the Army. It is the responsibility of the Master Black Belt to ensure that CPI programs are focused on Army strategy and

	Current Curriculum	Future State Curriculum
Who Should Attend	Certified BBs who demonstrate good leadership ability, organizational management ability and group facilitation skills	Senior leaders who have completed all BB Certification requirements and are interested in driving CPI for a Command
Class Delivery Method	3 - Week Course	Course Pre-Work, 2-Week Training Course
Intended Class Focus	CPI tool mastery, Statistical mastery	Enabling MBB candidates to become a trusted advisor to senior leadership across the Army and ensuring CPI programs focus on Army priorities.
Concepts, Tools and Techniques	Statistical Methodologies, Normal and Non-Normal data Approaches	Facilitation, Systems and Design Thinking
Certification Requirements	Training, Standardized Testing, Completing (2) Approved Projects	Training, Standardized Testing, Completing (2) Approved Projects

Table 5.3: Current and Future State MBB Curriculum

priority. This course targets certified BB senior leaders and covers concepts, tools, and techniques, such as facilitation, systems thinking, and design thinking (these examples are not all-inclusive). Similar to the GB and BB courses, to receive certification, the candidate must complete the training, pass a comprehensive end of course written examination, and complete two projects that demonstrate mastery of the "trusted-advisor" skills taught within the course.

5.6 Selecting Students

Senior leaders and Army Business Process Improvement Capability Managers should select CPI training candidates that are proven leaders (as per AR 350-1 para 3-11) and should ensure that the selected candidates have the ability to learn the skills required to

complete the project identified during the 105 day planning process. The "CPI Training 105-Day Plan" can be found in the Training and CPI Guidebook Documents Portal on milSuite. Due to the technical nature of the curriculum, 100% attendance is recommended of all students attending training; 85% attendance is required or the student must recycle to another course. CPI belts are the catalysts for change in the organization. They are responsible for bringing new ideas to their teams and creating a positive environment for improvement within the organization. Leadership skills are the essential element for success in implementing real change. For example, while a Black Belt must be competent in statistical methods, ***experience shows that leadership skills are often more difficult to learn than statistical methods***. This is particularly true with the advent of statistical software, which can perform the required calculations.

5.6.1 Green Belt Screening Criteria

To qualify for participation in CPI Green Belt training, candidates should meet the following criteria:

- No educational requirement.

- Operates in support of or under the supervision of a Project Sponsor, Black Belt or Master Black Belt.

- Analyzes and solves problems.

- Involved in quality or a continuous improvement project.

- Has ability to demonstrate their knowledge of CPI tools and processes.

Note: With consideration of new POI mentioned in section 5.5.3, the Green Belt screening criteria will change.

5.6.2 Black Belt Screening Criteria

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

- Associate's degree, preferably in Engineering, Business (or a technical/scientific subject), or equivalent work experience.

- 2-4 years of professional experience.

- Prior supervisory experience.

- Solid project management, team leadership and group facilitation skills.

- Basic knowledge of other key functions that provide critical inputs (e.g., Resource Management (to include the PPBE process), Procurement, Contracting, Engineering, Supply/Logistics, Operations, SRM, etc.).

- Sound quantitative reasoning skills and the ability to do statistical analysis.

- GB Certified.

Note: With consideration of new POI mentioned in section 5.5.4, the Black Belt screening criteria will change.

5.6.3 Master Black Belt Screening Criteria

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

- Army CPI Black Belt certification and a proven record in the application of CPI methods

- Bachelor's degree, preferably in Engineering, Business, Operations Research (or a scientific/technical subject), or equivalent work experience.

- 8-10 years of professional experience.

- Solid project management, team leadership and group facilitation skills.

- Sound knowledge of other key functions that provide critical inputs (e.g., Resource Management (to include the Planning, Programming, Budgeting and Execution PPBE process), Procurement, Contracting, Engineering, Supply Chain/Logistics, Operations, SRM, etc.).

- In-depth understanding of statistical analysis tools/methodology, project management software, CPI continuous improvement techniques and basic financial principles.

- Ability to lead and direct two or more improvement teams simultaneously.

- Ability to lead and execute enterprise level projects.

- Ability to manage risk and ambiguity within a project scope.

Note: With consideration of new POI mentioned in section 5.5.5, the Master Black Belt screening criteria will change.

Note: A sample MBB Nomination Package can be found in the Training and CPI Guidebook Documents Portal on milSuite.

5.7 Restrictions on CPI Training

HQDA uses the Army's Systems Approach to Training to set and enforce Green Belt, Black Belt, Master Black Belt and Project Sponsor training standards. Only Army certified MBBs can teach and/or lead/evaluate the Army POIs. The training program is developed to support the capabilities that are essential for long-term success and the

execution of enterprise-level projects. As a result, there are restrictions in effect, but those restrictions should be applied with the above intent in mind.

5.7.1 Restrictions on Personnel to be Trained

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

Commands can approve the training of the following personnel on a case-by-case/space available basis:

- Army personnel working in Joint or DoD assignments.

- DoD personnel assigned to an Army organization.

- DoD and other government personnel on a space available basis.

The Commands are responsible for evaluating requests to train candidates other than Army personnel. Organizations must obtain approval from the Command, Army Business Process Improvement Capability Manager or their representative before enrolling anyone other than Army personnel.

5.7.2 Restrictions on Funding

As of 1 October 2007, course completion credit is not granted for CPI training conducted outside the Army program of instruction, if paid for by Army funding; however, up until 30 September 2009, course completion credit was possible for outside formal training if funded by sources other than the Army. As of 30 September 2009, candidates attending training not funded by Army, can only apply for course completion credit, if they are actively working an Army CPI project.

5.8   Training Execution

Organizations are required to inform the CPI Training Team, through the USARMY Pentagon HQDA OSA-OBT Mailbox CPI Training, when they are going to conduct a GB, BB and/or PSW and providing the following information:

- Type of training (GB, BB or PSW).

- Dates for training.

- Training location.

- On site POC, phone number, email address and mailing address.

- Number of seats to reserve.

- Statement that students have valid projects entered in Army PowerSteering for CPI GB or BB courses.

- Name of the certified Army MBB instructor (Department of the Army civilian or currently serving military personnel) who will lead the program of instruction.

When the training team acknowledges that the course has been loaded into ATRRS, the organization begins executing the 105-day planning sequence (see the "CPI Training 105-Day Plan" in the Training and CPI Guidebook Documents Portal on milSuite). Courses cannot be conducted until the course is entered into ATRRS (as per AR 350-1 para 3-5). Students will not receive credit if the course has not been entered into ATRRS.

5.9   Class Fill Milestones

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

- 45 days prior to training: ATRRS quotas, without a hold, are open for Army wide fill.

- Three (3) weeks prior to training: The CPI Training Team Lead will notify the sponsoring command if there are less than 12 registered attendees, with valid projects, registered in ATRRS. The course may be non-conducted if there are less than 12 registered attendees.

- 15 days prior to training: Quota holds will be released for Army-wide fill.

5.10 Program of Instruction Changes

The ABPIO reviews all submitted recommended changes for possible revisions to the five CPI programs of instruction (PSW, MBB, BB, GB and LEAN Leader). Army Business Process Improvement Capability Managers, Deployment Advisors and certified MBB instructors may submit recommended changes.   Other persons recommending changes must forward them to the Army Business Process Improvement Capability Manager, Deputy Army Business Process Improvement Capability Manager or the Instructor. Submitters should use DA Form 2028 and include the following information:

- Complete identification of which course, version, lesson, slide and paragraph numbers are the subject of the recommended change.

- Clear and compelling explanation of why the recommended change is needed

- Clear description of the recommended change.

- Complete contact information for the submitter and for the person who will be able to answer questions about the recommended change (title/rank, full name, email address and phone number).

- The completed form should be emailed to the mailbox USARMY Pentagon HQDA OSA-OBT Mailbox ABPIO.

5.11 Test (and Re-Test) Policy

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

- For GB and BB candidates who fail the final exam, the instructor will counsel the candidate prior to the candidate leaving the classroom on exam day. Candidates will be provided with a counseling statement informing them that they did not meet the minimum requirement and that they will have one opportunity to re-test.

- For MBB candidates who fail the final exam, the lead MBB instructor will forward the candidate's name, score and test to the OSA-OBT CPI Training Office. The CPI Training Team will notify the candidate's Army Business Process Improvement Capability Manager (ABPICM) as the nominating official. The Army Business Process Improvement Capability Manager, or his/her representative, will contact the candidate. The ABPICM will assign an organic MBB to conduct review sessions, provide coaching as needed and schedule the re-test exam date with the OSA-OBT CPI Training Office.

- All candidates must re-test within four weeks of the original test. The Army Business Process Improvement Capability Manager may request, from the OSA-OBT CPI Training Office (via the USARMY Pentagon HQDA OSA-OBT Mailbox CPI Training), an exception to the re-test policy timeline if the belt candidate is not near a location where the re-test can be administered within four weeks of the original test.

- The candidate may choose, from the list of priority options below, the preferred method for taking the re-test. The Army Business Process Improvement Capability Managers will submit a request (e-mail is acceptable) to the OSA-OBT CPI Training Office requesting the applicable method for re-test.

    o **1st Priority:** On-site exam proctored by the organization's Army certified MBB (Department of the Army civilian or currently serving military personnel) and given in the candidate's work area without using Army TDY funds. The certified MBB will grade the exam, report the results to the candidate and submit the results to the OSA-OBT CPI Training Office.

    o **2nd Priority:** Re-test with an on-going CPI belt course near the work location *that does not require Temporary Duty (TDY)*. The candidate may join the review session conducted the day prior to the final exam, if space permits and

with the approval of the instructor. The MBB instructor will be responsible for grading the exam, reporting the results to the candidate and submitting the results to the OSA-OBT Training Office.

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

- o **4th Priority:** Belt re-test exams will be proctored by an Army MBB candidate without using Army TDY funds. In this event, the OSA-OBT CPI Training Office will provide the requesting organization with the re-test exam. The completed re-test exam will then be returned to the OSA-OBT CPI Training Office by encrypted email. Once the exam is graded, the results will be provided to the Army Business Process Improvement Capability Managers and Deputy Army Business Process Improvement Capability Managers.

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

- GB and BB candidates who fail to achieve a score of 70% on the re-test will not be allowed to continue as a CPI belt candidate. The CPI Training Team will notify the candidate's Army Business Process Improvement Capability Managers, and Deputy Army Business Process Improvement Capability Managers, that the candidate has been removed from the program due to academic failure. Requests to re-test are processed through the OSA-OBT CPI Training email box.

- MBB candidates who fail to achieve a score of 70% on the re-test will be removed from the MBB program. The individual can continue to perform the duties of an Army CPI BB practitioner. The CPI Training Team will notify the Army Business Process Improvement Capability Managers that the MBB candidate has been removed from the MBB program due to academic failure.

- All belt candidates who fail to achieve a score of 70% on the re-test must wait one year before they can apply to retake the course, through their Army Business Process Improvement Capability Managers and/or Deputy Army Business Process Improvement Capability Managers.

5.12 Annual CPI Training Requirements

Army organizations will submit their annual training requirements to the CPI Training Team in accordance with the following process, illustrated below in Table 5.4:
The fiscal year (FY) runs from October through September. "FY 0" refers to the current fiscal year. "FY -1" and "FY +1" refer to the previous and subsequent fiscal years respectively.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Design	FY - 1 Hit List		Assess FY - 1			Design FY + 1			Build FY + 1		Enroll FY + 1	
Execution	Execute FY 0											

Table 5.4: Sample CPI Training Cycle (Designing and Executing Training)

Key dates in developing the FY XX LSS Training Schedule:

1. Submission window 16 Jan - 15 Mar XX-1. Deployments turn in MBB Order of Merit List and the dates, locations, seating capacity, number of students, planned instructors, and point of contact for each class (PSW, BB, GB) they will host in the coming FY.

2. Class load approval NLT 1 Apr XX-1. Dir, CPI ensures proposed classes will satisfy expected training needs and that the classes are properly resourced. Any projected shortfalls are addressed on a case-by-case basis. Some hosts may be asked to accommodate additional students. Some commands may be asked to host training.

3. Adjudication window 20 May - 31 XX-1. The approved class load is entered into ATRRS and quotas are allocated. The product of this effort is shared to the community of practice for validation.

4. FY 19 LSS Schedule published on milSuite NLT 1 Aug 2018. This is the day enrollment opens for classes beginning on the first day of FY 2019 (1 Oct 2018)

5. Annual training requirements will be incorporated into the training schedule for the next fiscal year. The CPI ABPIO Training Schedule will be input into ATRRS and quotas allocated NLT 31 July XX-1.

Note: The annual training plan will include the following:
- o Types of classes requested (GB, BB and MBB) and the number of personnel to be trained in each
- o The class dates for each phase
- o The training location and class size for any training to be hosted by the organization (classrooms must have a capacity for 30 students)
- o The name of the organic lead MBB instructor

Additional training guidance can be found within the Lean Six Sigma Training Management Handbook and can be found on milSuite.

5.13 Certification Project Portfolio Management

5.13.1 Certification Project Milestones

One of the primary goals of the CPI program is to help Army organizations develop a cadre of belt practitioners who are capable of taking on enterprise level projects and achieving excellent results. With a trained and experienced CPI force, Army organizations will become self-sustaining in achieving their Continuous Process Improvement (CPI) goals. In addition, organizations will be able to help the Army achieve the transformational results needed to support the SRM by having experienced belt practitioners available to work on enterprise-level projects. As outlined in Section 5 of this Guide, the skills needed to become certified as a belt within the Army are acquired through a combination of formal classroom training and practical experience gained by completing a CPI project. Only by completing the actual project, can a candidate apply for certification.

5.13.2 Certification Project Status Reporting

Commands are responsible for ensuring that the appropriate tags are updated in PowerSteering to reflect which course a candidate has been enrolled in. Lead instructors are responsible for monitoring the status of candidate projects to ensure that the timelines established for Green Belt and Black Belt training are being met. Instructors can get a clearer picture of the status of candidate projects in relation to the established timelines by viewing the Portfolio in the Dashboard, as shown in Figure 5.2.

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

Figure 5.2: Sample Project Dashboard Capability within PowerSteering

Section 6.   PROJECT EXECUTION

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

- ensuring Project Sponsors are actively engaged by ensuring the appropriate resources are assigned to a project team, the project stays on schedule and barriers to successful progress and completion are removed.

- conducting Project Identification and Selection Workshops (PISW) to identify and prioritize projects against strategic objectives, clarify project charters and assign resources. PISWs are critical at the core enterprise and Army levels to identify enterprise projects.

- writing effective project charters to guide CPI teams, to include understanding the nature and magnitude of potential project benefits.

- providing adequate coaching resources to assist belts through the DMAIC project phases. Complex, enterprise level projects may have to be subdivided into multiple projects.

- conducting effective tollgate reviews of gated projects to manage scarce CPI resources and verify results. A key element of this function is developing and verifying benefit estimates.

- effectively documenting projects, Rapid Improvement Events and non-gated projects, to include verifying their respective benefit estimates.

- tracking project status in Army PowerSteering to maintain program velocity, ensure the appropriate allocation of resources and achieve acceptable returns on investments for the CPI program.

6.1   Project Identification and Selection Workshop

It is critical to establish and maintain a project pipeline that addresses important areas of opportunity. This is true at all Army levels. Project Identification and Selection Workshops, or PISWs, are conducted to assist leaders in developing and maintaining project pipeline. The specific objectives of these workshops include:
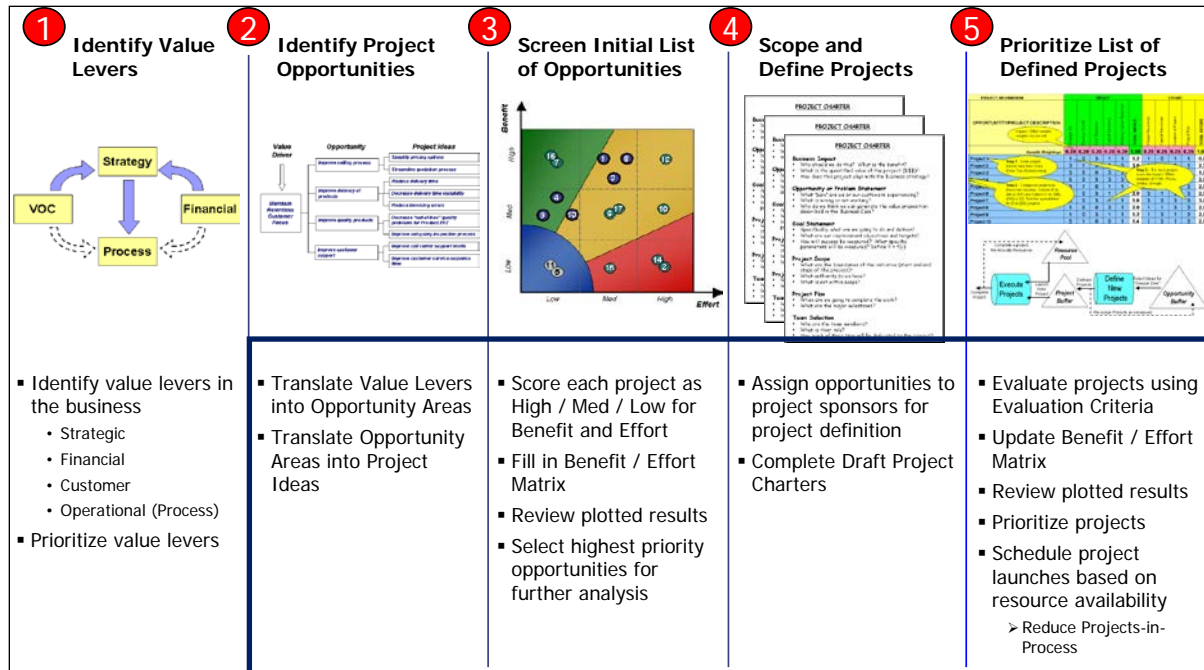
Figure 6.1: Five-Step Process for Project Identification and Selection

- identifying, selecting and prioritizing high value CPI projects aligned and linked to core enterprise or Army strategic goals and objectives.

- engaging key subject matter experts and stakeholders in project opportunities.

- developing Supplier-Inputs-Process-Outputs-Customer, or SIPOC, maps and project charters for high-impact projects.

- identifying projects as MBB, BB, GB, or RIE level.

- teaching leaders the application of the rigorous 5-step method outlined in Figure 6.1, to identify and select projects.

6.2 Project Chartering

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

The Project Charter 10-Point Checklist, Section 3.3.5, can assist in ensuring that the proper Charter elements are included within the living document.

6.3   Project Mentoring

The Project Sponsor is accountable for belt and belt candidate project schedules, including the supporting coaching plans. Each belt and belt candidate will have an assigned project mentor as they execute a project. Again, complex, enterprise-level projects may require segmentation into multiple projects and assigned to multiple teams. The allocation and synchronization of coaching resources is a key MBB responsibility and will be important to the success of these complex projects. Table 6.1 illustrates the estimated coaching hours that each belt and belt candidate should

Belt	Estimated Coaching Hours
Master Black Belt Candidates	24 to 32 Hours per project
Black Belts	12 to 16 Hours per project
Black Belt Candidates	24 to 32 Hours per project
Green Belts	4 to 8 Hours per project
Green Belt Candidates	8 to 16 Hours per project

Table 6.1: Practitioner Coaching Estimates

receive during DMAIC projects (or subprojects of complex, enterprise level efforts).

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

Project Mentors, as a best practice, should document the outcomes of each coaching session under the Project Status section in Army PowerSteering. The coaching report should serve as a mechanism to assist the belt keeping the project on track and identifying issues or barriers to success. The coaching report should include a summary of key actions, required by belts, to maintain project progress and positive results.

In PowerSteering, beneath each phase in the Gates and Deliverables section of the Project Summary page, the belt will find links to the Tollgate Templates and Phase Tools. Additionally, resources be accessed from Documents and Important Links sections of the Project Summary page.

6.4   Gated Project Tollgate Reviews

Projects following the five DMAIC phases are considered gated projects and are documented within PowerSteering as such. For these projects, belts will utilize a

standardized Gated Project Template, which can be found in PowerSteering DMAIC Tools tab of the belt's home page (https://armyps.army.mil/usarmycorp/).

6.4.1 Purpose

Project Sponsors review the progress of CPI projects during the tollgate reviews. Tollgate reviews occur after each DMAIC project phase and are intended to:

- ascertain whether a project needs more work within the current phase, should be cancelled, or is approved to move to the next phase.

- verify that all required tollgate deliverables have been completed in accordance with the Army Business Process Improvement Deployment and Sustainment Guidebook's project completion and certification requirements (Section 6.5, Standardized Tollgate Templates and the CPI Certification Deliverables Checklist in the Training and CPI Guidebook Documents Portal in milSuite).

- track progress against the DMAIC Roadmap.

- review, revalidate and update the project charter.

- understand the tools used, data collected, analysis conducted, results and conclusions drawn (examples can be found within the Suggested Tollgate Questions for Project Sponsors document in the Training and CPI Guidebook Documents Portal on milSuite).

- analyze other variables impacting project success (support requirements, resources, barriers, challenges, etc.).

- involve Resource Managers to validate financial benefit estimates and Project Mentors to validate operational benefit estimates.

- yield guidance on the way ahead, including changes in direction for project or project teams.

6.4.2 Attendees

- Process Owner is required.

- Belt is required.

- Project Sponsor is required.

- Project Team is required.

- Stakeholders are preferred or optional.

- Army Business Process Improvement Capability Manager is preferred or optional.

- Senior Leadership is preferred or optional.

- MBB or BB Coach is preferred at all tollgates, but required at Define, Measure, and Control tollgates. The coach should also be present at Analyze and Improve if the operational benefits estimate has changed.

- Resource Manager is preferred at all tollgates, but required at Measure and Control tollgates. The Resource Manager is also present at Define, Analyze and Improve tollgates, if the financial estimates have changed.

6.4.3 Gate Approval Responsibilities

The Project Sponsor is responsible for ensuring that a Resource Manager and a Project Mentor are assigned and participating in each project. As shown in Table 6.2, the Project Sponsor also serves as an electronic tollgate approver at each phase of a gated DMAIC project. The RM and the Project Mentor are required electronic gate approvers at the Measure and Control tollgates. [1]The RM and Project Mentor are also responsible for providing input at each phase to support the Project Sponsor's decision as to whether more work is required, to cancel the project, or to move forward to the next phase. [2]

Table 6.3 summarizes the overall responsibilities for the Project Sponsor, Resource

	Define	Measure	Analyze	Improve	Control
Project Sponsor	Required	Required	Required	Required	Required
Resource Manager	Optional	Required	Optional	Optional	Required
Project Mentor	Optional	Required	Optional	Optional	Required
Process Owner	Optional	Optional	Optional	Optional	Optional

Table 6.2: Electronic Tollgate Approval

Manager and Project Mentor pertaining to reporting and approving benefit estimates at each DMAIC tollgate approval review.

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[1] When the RM and the Project Mentor electronically "approve" the Measure and Control tollgates, they are not necessarily concurring that the project should proceed to the next step. Rather they are saying: (1) they accept responsibility for the data; (2) the estimates and supporting documentation were prepared in accordance with the guidance provided in the Army Lean Six Sigma Financial Guidebook and have been posted to the tollgate briefing and PowerSteering, as required; and (3) they have given the project sponsor a recommendation from their perspective. Their respective recommendations might be to cancel the project, but as long as the three requirements above have been met, they can "approve" the tollgate.

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

	Resource Manager	Project Mentor	Project Sponsor
Define	• Develop feasibility assessment, based upon project charter and available information, as to whether project is likely to produce financial benefits that warrant commitment of resources to proceed to the Measure phase • Provide feasibility assessment to Project Sponsor	• Develop feasibility assessment, based upon project charter and available information, as to whether project is likely to produce financial benefits that warrant commitment of resources to proceed to the Measure phase • Provide feasibility assessment to Project Sponsor	• Ensure RM and Project Mentor are participating on project team • Receive feasibility assessments from RM and Project Mentor • Decide if project warrants continuation to Measure phase. • Verify all required deliverables are completed • Electronically approve tollgate
Measure	• Approve baseline cost estimate and ensure documentation is posted in Army PS • Ensure estimates are posted to the "Working Estimate" tab • Make tollgate recommendation to Project Sponsor • Electronically approve tollgate	• Approve baseline operational metrics and ensure documentation is posted in Army PS • Approve Working Estimate of anticipated operational benefits • Ensure estimates are posted to the tollgate briefing • Make tollgate recommendation to Project Sponsor • Electronically approve tollgate	• Verify active participation by RM and Project Mentor • Verify completion of required deliverables, including posting of financial and operational benefit estimates • Consider recommendations by RM and Project Mentor • Electronically approve tollgate
Analyze and Improve	• Approve final financial benefits estimate • Ensure estimate is complete and developed IAW guidance • Ensure estimate is posted to "Final Estimate" tab and documentation is posted to Army PS • Make tollgate recommendation to Project Sponsor • Electronically approve tollgate	• Approve final operational benefits estimate • Ensure estimate is complete and developed IAW guidance • Ensure estimate is posted to the tollgate briefing • Ensure documentation is posted to Army PS • Make tollgate recommendation to Project Sponsor • Electronically approve tollgate	• Verify active participation by RM and Project Mentor • Verify completion of required deliverables, including posting of financial and operational benefit estimates • Consider recommendations by RM and Project Mentor • Electronically approve tollgate
Control	• If financial benefits estimate is revised: 　◦ Approve financial benefits estimate 　◦ Ensure estimate is complete and developed IAW guidance 　◦ Ensure estimate is posted to "Working Estimate" tab 　◦ Ensure supporting documentation is posted to Army PS 　◦ Make tollgate recommendation to Project Sponsor	• If financial benefits estimate is revised: 　◦ Approve financial benefits estimate 　◦ Ensure estimate is complete and developed IAW guidance 　◦ Ensure estimate is posted to tollgate briefing 　◦ Ensure documentation is posted to Army PS 　◦ Make tollgate recommendation to Project Sponsor	• Verify consideration of recommendations by RM and Project Mentor • Verify completion of required deliverables • As part of decision to move to next phase, decide if benefit estimates require revision • Electronically approve tollgate

Table 6.3: Project Phase Approver Responsibility Summary

6.4.4 Required Tollgate Deliverables

The CPI Certification Deliverables Checklist in the Training and CPI Guidebook Documents Portal on milSuite lists all required project deliverables by DMAIC phase. The deliverables can also be found at the end of each DMAIC tollgate template within Army PowerSteering.

6.5   Tollgate Templates for Gated and Non Gated Projects

6.5.1   Gated Project Tollgate Templates

Standardized templates containing required tollgate and certification deliverables are posted within Army PowerSteering. The intent of standardized tollgate templates is to:

- homogenize project presentations for tollgate review.

- clarify required phase/tollgate deliverables.

- increase GB, BB and MBB productivity by reducing time spent developing slide formats and increasing time available for substantive project deliverables.

- document project life cycle from charter through completion, including final benefit estimates reporting (financial and/or operational).

Tollgate templates are the basis for each tollgate review. Depending on the nature and complexity of the DMAIC project phase, some slides may not be required, or may be used for different purposes. Additionally, slides may be developed to address specific circumstances of projects. The templates will provide approximately 80 percent of required information that needs to be presented at tollgate review. These templates form the basis for presentation, the content of the brief is at the discretion of the project belt, the Project Mentor and Project Sponsor. All tollgates must contain the required tollgate and certification deliverables that fully explain the appropriate aspects of the project.

6.5.2   Rapid Improvement Event Templates

Projects conducted as Rapid Improvement Events, or RIEs, are entered into Army PowerSteering as Gated projects. For these projects, belts utilize standardized RIE Project Template to develop their accelerated DMAIC brief. The RIE Project Template can be found on the Army PowerSteering homepage in the Tollgate Templates folder in Important Links section. After annotating the Define, Measure, Analyze and Improve phases as complete, the RIE Project Template will be uploaded into the Control phase in Army PowerSteering. The Project Sponsor must electronically approve the Control phase within Army PowerSteering, indicating that they approve the RIE Project Template. Additionally, a Resource Manager must electronically approve the Control phase within Army PowerSteering, indicating that they have validated financial benefit estimates and have ensured that completed documentation is included in the RIE Project Template or in another document attached to Army PowerSteering. Finally, the Project Mentor must electronically approve the Control phase within Army PowerSteering, indicating that they have validated operational benefit estimates and have ensured that completed documentation is included within the RIE Project Template or within another document attached to the project within Army PowerSteering.

Note: Paragraph 6.4.3 and Table 6.3 provide guidance on assigning Project Sponsor, Resource Manager and MBB, or BB, as electronic gate approvers within the Control phase.

6.5.3   Non Gated Templates

Projects not following the five DMAIC phases are considered Non Gated projects and entered into Army PowerSteering as such. For example, belts utilize a standardized Non Gated Project Template, located on the Army PowerSteering home page in the Tollgate Templates folder within the Important Links section.   The template is uploaded into Army PowerSteering upon project completion. The template contains documentation indicating Project Sponsor approval.

For Non Gated projects realizing financial benefits, type (i.e. cost avoidance, savings, and revenue generation) and amount of benefit achieved is recorded on the final slide of the tollgate template and signed by the Resource Manager. The Resource Manager's signature certifies that the financial benefits declared have been validated.

Finally, the template includes operational benefit estimate documentation, validated by the Project Mentor, is included or within another document attached to Army PowerSteering.

6.5.4   Black Belt Project Rubric

Army Regulation 5-1, the Army Business Strategy, and the Army Innovation Strategy specify additional requirements to intelligently and aggressively improve business operations through:

- execution of CPI projects, a key bridge between operational needs and effective and efficient business outcomes.

- observations, identified by OBT, containing high degrees of variation in the quality of the projects used to certify BBs.

The BB Rubric provides a ***standard scoring tool*** to consistently assess and evaluate BB certification projects with respect to the following characteristics:

- Evidence-based decision making.

- Competence applying LSS tools and methods.

- Use of graphical, analytical, and statistical methods in accordance with established practice.

- Deploy LSS methods as taught in the CPI curriculum.

Organizations are applying the BB Rubric, Figure 6.2, to each certification review effective 01 January 2018. Guiding principles for the BB Rubric include:

- deploying customizable standards within units or commands. However, custom standards must meet minimum thresholds identified by the OBT CPI Office.

- following BB Rubric during project execution. This includes BB candidates and coaches.

- confirming submitting a final rubric for all BB certification projects.

- reviews by ABPICMs digitally signing document.

- attaching signed copy of rubric to PowerSteering prior to project certification and closure.

Note: Red boxes below indicate editable fields within Rubric

Lean Six Sigma (LSS)
Black Belt (BB) Project Rubric

Evaluation Status

Evaluator:		Date:	
Evaluator Phone:			
Evaluation Result:	Congratulations! The rubric standards are satisfied.		

Organizational Information

Project Owner:	
Process Owning Org:	
CPI Director:	

LSS BB Certification Project Information

Project Name:	
Powersteering Seq Num:	

Evaluation Rating Scale Assessment of DMAIC project phase requirements for inclusion and correct application within each rubric section	5 **Meets Requirements** Phase element Is satisfactorily addressed and effectively applied.	4 **Acceptable** Phase element Is adequately addressed and effectively applied. The conclusions for a Phase element are correct and supporting relevant evidence is provided, but the method used lacks quantitative or qualitative robustness. For example: only a histogram was used to conclude that a process is stable.	3 **Minor Revisions Needed** Phase element conclusions are supported by the methods used and relevant evidence, but there is an error in the procedure. For example: the right tool or method was used but a mistake was made in the calculation or application.	2 **Moderate Revisions Needed** Relevant evidence is provided for the conclusions derived from the methods used for the Phase element. However, the results are incorrect or insufficient. For example: five data points were evaluated using a linear regression and the analysis yielded a correlation coefficient of -0.538, and the conclusion was "the relationship is linear."	1 **Significant Work Needed** Phase element conclusions are not supported by the methods used or relevant evidence is missing. For example: the wrong tool was used and the conclusion reached is not supported	0 **Required Element Missing**

Rubric Rating

Rubric Section	Points Earned	Max Points	Percent Performance		Comments and Feedback
Define section	20	20	100.0%	%	
Measure section	30	30	100.0%	%	
Analyze section	20	20	100.0%	%	
Improve section	20	20	100.0%	%	
Control section	15	15	100.0%	%	
Totals:	**105**	**105**	**100.0%**	**%**	

Requirements to Qualify for Inclusion in the LSS Black Belt Certification

- Total Points Earned equal to 70% or greater of Maximum Points for the total project and a minimum of 70% for each phase is satisfactory performance
- Total Points Earned less that 70% of Maximum Points for the total project or less than a minimum of 70% for any phase then the rubric will indicate "The rubric standards are not achieved"
- A maximum of 5 points is awarded for each element within each rubric section. The number of elements in each section multiplied by 5 is the Maximum Possible Points for that rubric section. The sum of the points awarded for each element in a section is the Points Earned for that rubric section. The ratio of Points Earned divided by Maximum Possible Points is used for determining the Percent Performance for each section and for the Total Percent Performance.
- Points will be awarded relative to the correct and effective application of the tools or methods used.
- If the project is missing one or more of the pillar elements (i.e. Project Charter, Data Collection, Measurement System Evaluation (MSE), Root Cause Analysis, Generate Solutions, and the Control Plan) the rubric will indicate "The rubric standards are not achieved." A missing element will receive a score of "0."

Figure 6.2: Black Belt Rubric enables CPI Project Standardization

Section 7.   Knowledge Management

7.1   Project Tracking

7.1.1   Army PowerSteering

The Army uses PowerSteering software as its database of record to track schedules, and benefits for improvement efforts including CPI projects. Project Sponsors and belts must document and archive CPI projects, to include non gated (e.g. quick win type projects) and gated (e.g. RIEs and DMAIC) projects within Army PowerSteering. ABPICMs are responsible for keeping organizational projects current within the database. Project Sponsors, GB and BB candidates must complete preliminary Army PowerSteering training via the e-learning modules, located in the Training and CPI Guidebook Documents Portal on milSuite, prior to attending Project Sponsor Workshop or belt training.

7.1.2   Stalled and Delinquent Projects

The ABPIO and Army organizations exercise oversight of Army PowerSteering to ensure its reliability and accuracy in recording progress of projects and the potential benefits associated with those projects. This is essential because the data is used for resourcing decisions and strategic communications. Army organizations manage their projects that are not on track.

7.1.3   Army PowerSteering Administration

The Army uses Powersteering as the database of record for efforts supporting business transformation and CPI. A knowledge management repository, PowerSteering enables business transformation and CPI stakeholders with the capability to:

- manage and align project, portfolio or program activities. Mentors and project sponsors monitor financial and operational benefits of a defined group.

- provide Army leadership with real time progress updates.

- facilitate project execution with embedded status report, version control, document sharing and issue log features.

Section 8.   ARMY CPI BELT CERTIFICATION

HQDA is responsible for setting Army standards for certification of Green Belts, Black Belts, and Master Black Belts. Certification standards are required to ensure uniformity and consistency of CPI practices across the Army. As noted in Section 3, once belt candidates receive their training, Army Business Process Improvement Capability Managers, process owners, project sponsors and mentors must provide the required resources and encouragement to ensure project completion and subsequent certification. This section will clarify certification standards and procedures, for current belt programs of instruction. With the arrival and piloting of the 2020 CPI program of instructions by end of calendar year 2019, updated belt certification requirements will be forthcoming, and published in next version of the guidebook.

8.1   Process to Apply for Certification as an Army CPI Belt

Upon completing all requirements for the specified belt level, each candidate is responsible for initiating the request for certification. Candidates will initiate the process with a formal request (DA Form 4187 for military personnel or DA Memorandum for civilian personnel) through their respective chain of command, Project Sponsor and Army Business Process Improvement Capability Manager. See the "Certification Process Flow" document in Training and CPI Guidebook Documents Portal on milSuite. Upon approval of the candidate's request, the Army Business Process Improvement Capability Manager will forward the request to the Command's certifier. The Command's certifier is the ABPICM, designated via MOU between the organizations GO/SES/ABPICM.

Organizations without a current MOU in effect do not have the authority to self-certify. Since ABPIO retains responsibility for certification, those organizations without an MOU must send their documentation and recommendation to the certification inbox for ABPIO decision.

The OBT Certification inbox is USARMY Pentagon HQDA OSA – OBT Mailbox LSS Certification usarmy.pentagon.hqda-osa-obt.mbx.lss-certification@mail.mil

Note: The exception to this is all projects associated with a MBBc's certification. The ABPIO will continue to review and certify BB projects that are either coached, or completed by, MBB candidates for MBB certification. The method of transmittance for projects associated with MBBc certification is via email to the USARMY Pentagon HQDA OSA – OBT Mailbox CPI Certification mailbox.

The Command's certifier will review each project against the certification criteria to make sure Army standards are being met. This review will verify that Army training is documented in ATRRS and required deliverables and supporting documentation are captured in Army PowerSteering, the Army's database of record for CPI projects.

Requests that do not contain the required deliverables and supporting documentation, or that fail to meet the specified certification criteria, will be returned to the originating organization for corrective action. See the "CPI Certification Deliverable Checklist" document on the Army Business Process Improvement Deployment and Sustainment Guidebook located in milSuite within the Training and CPI Guidebook Documents Portal, for a list of required deliverables and supporting documentation. The Command's certifier may contact the candidate, mentor, deployment advisor, or other POC to assist in expediting the corrective action.

Once belt candidates have been approved for certification, certificates are forwarded to the individual through the organization's Army Business Process Improvement Capability Manager. For military officer and warrant officer certified belts, the Command's certifier will forward the approved DA Form 4187, with appropriate Skill Identifier, to the belt via scanned, encrypted document. It is then the responsibility of the belt to forward the DA Form 4187 to the appropriate Human Resources Command (HRC) representative. For enlisted certified belts, personnel records are updated through ATRRS to Total Army Personnel Database (TAPDB). Green Belts receive a "1X" skill identifier, Black Belts receive a "1Y" skill identifier and Master Black Belts receive a "1Z" skill identifier.

8.2   Green Belt Certification

8.2.1   Requirements
To become certified as an Army CPI GB, a candidate must:

- Complete the Army approved CPI GB program of instruction or provide proof of completion of formal CPI GB training from another accepted source.

- Pass the Army CPI GB exam with a minimum score of 70%.

- Complete a minimum of one CPI GB level DMAIC project; or lead three CPI Rapid Improvement Events; or lead five sub-tasks of a CPI BB level DMAIC project (one sub-task per DMAIC phase) and demonstrate active participation in the BB level project.

    o The DMAIC project must have completed tollgate templates entered into Army PowerSteering and proper Tollgate approvals.

    o RIEs must have completed RIE Project Templates entered into Army PowerSteering and proper approvals.

    o When a GB seeks certification through a BB project, the BB project must be of sufficient scope to justify the use of an additional belt to support the project. Projects should:

- provide the GB candidate an opportunity to 'carve out' a small work stream to take through the DMAIC process in support of the project and the sub-tasks should demonstrate appropriate mastery of the methodology.

- support no more than two GB candidates, per BB project, when seeking GB certification.

- offer opportunities to lead sub-tasks in BB projects which requires GB candidates to upload the document or tool completed in Army PowerSteering, under the appropriate phase with their name as the author.

- demonstrate GB candidates tool knowledge and appropriate use in each of the five phases of the methodology.

- All projects used to meet certification requirements must have financial and/or operational data entered into Army PowerSteering, as prescribed in Financial Benefits and Operational Benefits Guidance documents. These documents are available in the Training and CPI Guidebook Documents portal on milSuite and also in the "Important Links" section of the Army PowerSteering homepage.

8.2.2 What to Submit

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

Note: Examples of the forms and memos can be found on the Army Business Process Improvement Deployment and Sustainment Guidebook Page in milSuite.

- DA Form 4187 for military personnel (enter "CPI Certification and Skill Identifier" in the "other" section of Block 8 and request "Skill Identifier 1X" in Section IV)

- DA Memorandum for civilian personnel

- Ensure DA Form 4187 / DA Memorandum addresses:

  - The full social security number (SSN) on the DA Form 4187 and the last four of the SSN on the DA Memorandum to record course certification in ATRRS

  - Level, source, date of completion of formal CPI GB training and Army CPI course number

  - Date of passing score for GB final examination

  - Completed project title and Army PowerSteering sequence number

o   Name of Resource Manager and date of financial benefits validation. If there are no financial benefits, the Resource Manager must provide his/her concurrence

o   Name of BB/MBB coach and date of operational benefits validation for projects with no financial benefits

o   If both financial and operational benefits are involved, both the RM and the BB/MBB should be listed with the respective validation dates.

8.3   Black Belt Certification Criteria

8.3.1   Requirements

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

- Complete the Army approved CPI BB program of instruction or provide proof of completion of formal CPI BB training from another accepted source.

- Pass Army CPI BB exam with a minimum score of 70%.

- Complete a minimum of one CPI BB level DMAIC project; or lead five sub-tasks of a CPI Enterprise Level MBB DMAIC project (one sub-task per DMAIC phase) and demonstrate active participation in the Enterprise Level (EL) MBB level project.

    o   DMAIC projects must have completed tollgate templates entered into Army PowerSteering (see Section 6.5.1).

    o   When a BB seeks certification through an EL MBB project, the EL MBB project must be of sufficient scope to justify the use of an additional belt to support the project:

        o   The project should provide the BB candidate an opportunity to 'carve out' a sufficient work stream to go through the entire DMAIC process in support of the project; the sub-tasks should demonstrate appropriate mastery of the methodology and applicable lean six sigma tools.

        o   No more than two BB candidates can support a single MBB project when seeking BB certification.

        o   Leading sub-tasks in MBB projects requires BB candidates to upload, in Army PowerSteering under the appropriate phase, the document or tool completed with their name as the author.

        o   It is expected that the BB candidate will demonstrate tool knowledge and appropriate usage in each of the five phases of the methodology and actively participate/help the MBB with their project.

- All projects used to meet certification requirements must have financial and/or operational data entered in Army PowerSteering, as prescribed in the Financial and Operational Benefits documents. These documents are available in the Deployment Documents section of the CPI Training portal on milSuite and also in the "Important Links" section of the Army PowerSteering homepage.

8.3.2 What to Submit

The forms and memos listed below should be included in the certification request package (Examples of these forms and memos can be found in the "Sample Certification Forms" within the Training and CPI Guidebook Documents Portal on milSuite):

- Department of Army (DA) Form 4187 for military personnel (enter "CPI Certification and Skill Identifier" in the "other" section of Block 8 and request "Skill Identifier 1Y" in Section IV).

- DA Memorandum for civilian personnel.

- Ensure the DA Form 4187 / DA Memorandum addresses:

    - The full social security number (SSN) on the DA Form 4187 and the last four of the SSN on the DA Memorandum to record course certification in ATRRS.

    - Level, source, date of completion of formal CPI BB training and Army CPI course number.

    - Date of passing score for BB final examination.

    - Completed project title and sequence number loaded in Army PowerSteering.

    - Name of RM and date of financial benefits validation. If there are no financial benefits, the Resource Manager must provide his/her concurrence.

    - Name of the MBB coach and date of operational benefits validation for projects without financial benefits.

    - If both financial and operational benefits are involved, both the RM and the MBB coach should be listed with the respective validation dates.

8.4 Master Black Belt Certification Criteria

Candidates can receive certification as an Army Master Black Belt. Army MBB candidates cannot receive dual credit for projects, each practitioner will require a different project, appropriately annotated in Army PowerSteering. For MBB, the projects must be Enterprise MBB level projects (see section 3.3.5 for the definition of an enterprise level project), appropriately annotated in PowerSteering. The ABPIO reviews

and certifies MBBs. The ABPIO will also continue to review and certify BB projects that are either coached, or completed by, MBB candidates for MBB certification.

8.4.1 Master Black Belt Candidate (MBBc) Program of Instruction (POI) Co-Teaching Evaluation

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

Each Army MBBc must co-teach at least half of the modules in each week of the Black Belt course until all the modules have been taught. The weeks must be taught consecutively, with the modules taught in accordance with the Teaching Timing Template on the "MBBc Instructor Resources" and "CPI Instructor Home" pages on milSuite. This necessitates eight weeks of co-teaching and is done this way to enable the Army MBBc sufficient time to master the material each week in order to present a quality product. For planning purposes, the MBBc should plan three hours of preparation for every hour of instruction.

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

The Army MBBc Co-Teaching Policy and the Co-Teaching Schedule can be found under "Training Policies" within the Training and CPI Guidebook Documents Portal on milSuite.

8.4.1.1 Co-Teaching Prerequisites

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

- Be a certified U.S. Army CPI Black Belt.

- Pass the U.S. Army CPI Master Black Belt examination.

- Develop an Individual Development Plan (IDP) with the assistance of a mentor.

- Practice co-teaching with their mentor and obtain a positive recommendation from that mentor indicating readiness to begin co-teaching.

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

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

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

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

- Command/ARSTAF organization.

- Date(s) of PISW.

- Signature of candidate and certified MBB coach.

- Project LDs entered into Army PowerSteering.

8.4.2 *What to Submit*

8.4.2.1 *Army MBB*

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

- DA Form 4187 for military personnel.

- DA Memorandum for civilian personnel.

- Ensure the DA Form 4187/DA Memorandum addresses:

    o The full social security number (SSN), encrypted, for the DA Form 4187 and the last four of the SSN for the DA Memorandum to record course certification in ATRRS.

    o Level, source, date of completion of formal CPI MBB training, and Army CPI course number.

    o Date of passing score for MBB final examination.

- Completed project titles and sequence numbers of all three DMAIC projects (second BB and two mentored projects after passing the MBB test) loaded in Army PowerSteering.

- Confirmation that documentation is complete in Army PowerSteering for each of the four projects, to include validation of operational benefits by a MBB and validation of financial benefits by a Resource Manager.

- Completed Project Identification and Selection Workshop Completion form should be emailed to the USARMY Pentagon HQDA OSA – OBT Mailbox CPI Certification mailbox.

Note: Examples of the forms and memos that need to be submitted for certification can be found in the Training and CPI Guidebook Documents Portal on milSuite.

8.5 Traditional and Non-traditional Pathways to LSS GB and BB Certification

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

Additionally, to better align the Army's CPI program with industry standards, ABPIO has segmented and further defined the term "grandfathering." Grandfathering, formerly an ambiguous term used to describe the justification process for the Army's acceptance of external candidates' external training and certification accomplishments. Moving forward the Army will segment Grandfathering into two terms fully defined below and explained further within the Lean Six Sigma Training Management Handbook:

Training equivalence (formerly known as Constructive Credit) means that ABPIO agrees with the nominator that the applicant has passed an outside POI with at least 80% overlap with the Army CPI POI. This qualifies the applicant to take the appropriate level – proctored Army exam.

Note: Rarely, the exam will be waived if ABPIO agrees with the nominator that the exam for passing certain programs is sufficient to prevent an unnecessary retest.

Certification Equivalence (formerly known as grandfathering) means that ABPIO agrees with the nominator that the applicant has sufficient training and experience to

warrant certification. An Individual Development Plan may be created to close any experience gaps (projects, instruction, mentoring, facilitation, etc.)

Note: Rarely, the requirement for a project in PowerSteering can be waived if ABPIO agrees with the nominator that the applicant is already performing at the required level of proficiency.

8.6 Requesting Army Certification of Non-Army Certified Master Black Belts

One of the key elements for the Army's CPI deployment is to build Master Black Belt capabilities that can routinely complete enterprise-wide projects that produce transformational results. Achieving this aspect of the vision requires a highly skilled, trained and motivated cadre of MBBs who can perform the entire suite of MBB tasks. The preferred method to obtain Army MBB certification is to fulfill all Army belt requirements. However, Army Business Process Improvement Capability Managers can also request training equivalence for coursework and certification already achieved from non-Army sources. This guidance outlines how these MBBs should apply for Army certification (see Figure 8.2, next page).

Note: This policy applies only to military personnel and government civilians who are certified MBBs. Support contractors cannot be certified as Army MBBs through this policy.
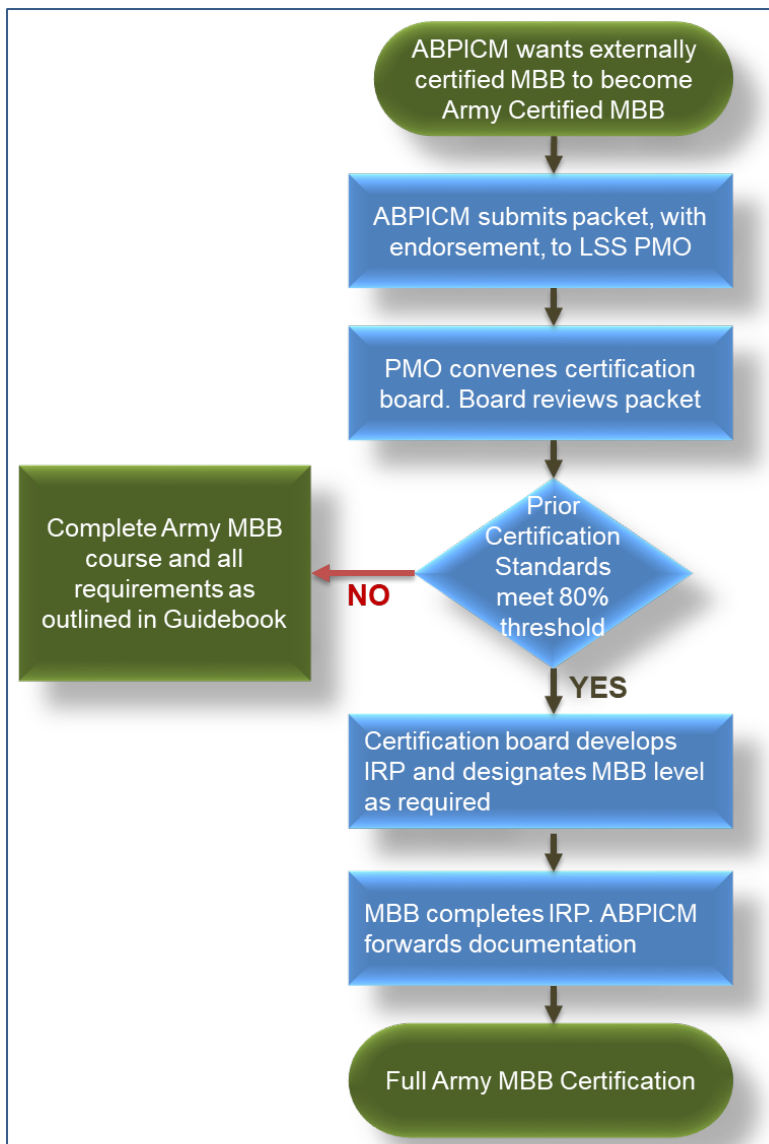
Figure 8.1: Army Certification Process of Non Army Certified MBBs

8.6.1   Policy on Training Equivalence

The Army can consider a MBB for training equivalence towards Army certification if the Army Business Process Improvement Capability Manager can demonstrate that the candidate's external certification criteria encompass 80% or more of the requirements below.

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

The Army's certification requirements include the following elements:

1. Completion of a formal Black Belt program of instruction that includes both Lean and Six Sigma curricula (or completion of separate Lean and Six Sigma programs).

2. Passing the Army CPI Black Belt examination with a minimum score of 70%.

3. Leading two Black Belt DMAIC projects from Define through successful Control tollgates. At least one of these projects must be an Army project. (See note below reference required documentation).

4. Coaching at least two Black Belt DMAIC Projects through a successful Control tollgate. These may be Army or non-Army projects (see note below reference required documentation).

Note: If the completed and mentored projects have been entered into Army PowerSteering, then the sequence numbers (i.e., LDXXXXX) should be included. If a project was completed outside the Army and is not posted in Army PowerSteering, it must be documented. Documentation formats, including commercially based products, are acceptable if they demonstrate project completion and the appropriate use of CPI tools and methodology. The "burden of proof;" however, is upon the Army Business Process Improvement Capability Manager and the candidate.

5. Completing a nationally recognized Master Black Belt certification program that includes both Lean and Six Sigma curriculum. It is expected this curricula encompasses 90% of the Army MBB terminal learning objectives (TLOs) and topics or content.

6. Passing the Army CPI MBB exam with a minimum score of 70%.

7. Lead a Project Sponsor Workshop, Project Identification and Selection Workshop, or similar workshop.

8. For MBB, all of the above, plus having successfully taught the Army BB POI and:

- Leading two Enterprise-level MBB DMAIC projects from Define through successful Control tollgates. At least one of these projects is required to be an Army project.

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

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

- The OSA – OBT, ABPIO may authorize approved MBB contractors to be lead instructors, or instructors, for Army programs of instruction.

- The OSA – OBT, ABPIO may authorize approved MBB contractors to review projects for certification.

8.6.2 Process to Apply for Training Equivalence

An Army Business Process Improvement Capability Manager can request Army certification of a MBB who has been certified by a source other than the Army by submitting a packet to the OSA – OBT, ABPIO. The Army Business Process Improvement Capability Manager must electronically send an endorsement and certification packet to the USARMY Pentagon HQDA OSA – OBT Mailbox CPI Certification. The packet should explicitly map the candidate's current qualifications and experiences against the requirements outlined above.

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

- Name (Last, First, MI)

- Full SSN to record certification in ATRRS

- Organization

- Phone number

- Status (Civilian/Military)

- BB certifying body

- BB test date and confirmation of passing score

- BB certification date (MM/DD/YYYY)

- BB curriculum course dates (MM/DD/YYYY-MM/DD/YYYY)

    o BB course curriculum (detail of modules covered)

- MBB certifying body

- MBB certification date (MM/DD/YYYY)

- MBB curriculum course dates (MM/DD/YYYY – MM/DD/YYYY)

    o MBB course curriculum (detail of modules covered)

- Exam required for MBB certification? (Y/N)

- MBB test date and confirmation of passing score

- Confirmation that at least two CPI BB projects have been completed

    o One is required to be an Army project loaded into Army PowerSteering with all the DMAIC tollgate detailed

    o One can be outside of the Army. However, for these projects, copies of the DMAIC tollgate should be submitted to the CPI Program Office.

- # of CPI BB projects completed as BB

- # of CPI BB projects mentored as MBB

- # of Kaizens/RIEs conducted (optional submission – may be used as additional demonstration of CPI expertise)

    o Project titles

    o Dates

    o Brief details of tools used and results

    o Sponsors

- Other relevant comments

- For MBB, in addition to the above, confirmation that the Army BB curriculum has been taught

    o Army BB course numbers

o   # of CPI MBB Enterprise level DMAIC projects completed

Note: At least one of the projects must be an Army project

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

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

The requesting organization's Army Business Process Improvement Capability Manager is accountable for mentoring the candidate through completion of the IRP and maintaining completion documentation. Once the candidate completes the IRP and the Army Business Process Improvement Capability Manager provides documentation to the OSA – OBT, ABPIO, the candidate will be scheduled to take the Army MBB exam.

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

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

Section 9.   CPI SUSTAINMENT CAPABILITY

9.1   Guidance to Achieve Self-Sustainment

In accordance with the CPI deployment maturity models, section 3.1, the Army institutionalized Lean Six Sigma in 2009 and will continue to strengthen self-sustaining capabilities required to support its enterprise approach to institutional adaptation. The Army must maintain steady-state for these capabilities. To sustain this objective, leaders must emphasize and focus on mitigating Common Army CPI Deployment Failures Modes in Table 9.1.

Common Army CPI Deployment Failure Modes	Catastrophic	Severe	Correctable Missteps
1) Lack of leadership support/High leadership turnover	X		
2) Lack of "true" understanding surrounding CPI deployment purpose and benefits	X		
3) Not aligning projects to what matters in the Army	X		
4) Lack of the appropriate philosophical assumptions to add value and the Army influence decision-making process	X		
5) Lack of leadership commitment to provide resourcing required to complete projects		X	
6) Attempting to "boil the ocean" with Army process improvement projects		X	
7) Addressing Army challenges in silo		X	
8) Emphasis on training, not project execution		X	
9) Driving projects solely on suspense dates			X
10) Creating an overly complex CPI system			X

Catastrophic - high likelihood of an unsuccessful CPI Deployment
Severe - over time, if not addressed, drastically increases the likelihood of an unsuccessful CPI Deployment
Correctable Missteps - early, correctable indicators of an unsuccessful CPI Deployment

Table 9.1: Common Army CPI Deployment Failure Modes

9.2   Catastrophic Failure Modes

9.2.1   Lack of leadership support / High leadership turnover

As described in section 3.3.12, leadership buy-in is paramount in sustaining a CPI program. There are endless case studies illustrating ineffective CPI programs due to an ability to acquire only mid-level management support. . Conversely, there are countless success stories which highlight a strong correlation between CPI success and top-level leadership support and commitment.

In order to sustain CPI, leadership should visibly exude enthusiasm and an unwavering commitment to CPI for everyone in the organization to see. The Army Continuous Process Improvement Quarterly newsletter, Figure 9.1, broadcasts improvement efforts that have been initiated or completed.

Staff dedicate themselves to a project or initiative if there is leadership buy-in and a public demonstration of enthusiasm. To achieve desired results require transparency, collaboration and delivering value-added results.

ARMY CONTINUOUS PROCESS IMPROVEMENT
Quarterly

Top Stories

- **Army Continuous Process Improvement: Next Steps**
- **Applying More Science to Army Data: The Growing Need for Data Science in the Army**
- **Army Continuous Process Improvement and Robotics Process Automation**

Training News

2019 Upcoming MBB Courses
- MBB19-002 – Pentagon, Arlington Virginia: 8 Apr, 6 May, 3 Jun

Upcoming Events

- CPI Forum: 21 March 2019

To submit CPI news articles and announcements for publication follow the editorial guidelines outlines in the CPI milSuite page and email: usarmy.pentagon.hqda-osa-obt.mbx.lss-helpdesk@mail.mil

Note from the OBT CPI Director

2018 was truly a year of transformation. The Army stood up a new Army Command, The Futures Command, and in doing so launched a series of organizational changes across the Army; at the same time the Army Secretary launched an aggressive Reform Program which has reduced Headquarter staff, identified opportunities to realign functions, eliminate non value added activities and identify opportunities to improve our business process to redirect funds and other resources toward readiness and modernization.

As a result, we have seen both disruption to and growth in the application of process improvement. As leaders seek answers to the many reform related issues, the CPI community has been stepping up to the plate to provide key support in two main areas: process documentation and analysis, and development of performance measures and metrics. As we launch into 2019 we must focus on three primary lanes: Reform, Reform and Reform. There were 181 reform initiatives submitted that fell into our communities area of influence. If you are not engaged - then you can become irrelevant quickly as every organization is involved from the principle level down. Let's continue to lead the charge on reforming the Army's processes. This is our time to shine and show our value. Reform is where we will make our mark, get engaged and stay engaged!

Army Strong

Charles T. Brandon III

Charles T. Brandon III

OBT CPI Program Office, FY 19

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Figure 9.1: Sample Army Continuous Process Improvement Quarterly Newspaper

Army Business Process Improvement Capability Managers, Deputy Army Business Process Improvement Capability Managers, Sponsors, MBBs, BBs, GBs and LEAN Leaders all play a significant role in how CPI is perceived throughout an organization. Oftentimes, it is easy to align unsuccessful CPI deployments to lack of leadership engagement only. However, practitioners must able to communicate in language that leadership can understand (e.g. Readiness, enabling resource informed decision-making and IT Portfolio Management) and see how CPI application fits. If more practitioners exemplified this skill set, a shift in how CPI would be deployed to address Army priorities would occur.

According to Gerras and Wong's U.S. Army War College article "Changing Minds in the Army: Why it is so difficult and what to do about it" (October 2013): "There is a need for Army senior leaders to question their deep-seated beliefs on critical issues periodically and base their decisions on the most current information, rather than relying solely on what they have long believed to be true." CPI practitioners are trained on a wide array of tools and techniques to influence Army senior leaders with data supported assertions and recommendations.

CPI practitioners must establish themselves as a trusted advisor within organizations to obtain a "seat at the table" and drive meaningful improvements for the Army.

9.2.2   Lack of "true understanding" surrounding CPI deployment purpose and benefits

Limited Army leader exposure, to CPI deployment purpose and benefits, is a common hurdle that CPI practitioners must resolve prior to acceptance and support. Understanding what motivates Army leaders helps CPI practitioners focus their efforts toward Army priorities. Training resources, aligning improvement efforts and institutionalizing agility are three techniques to assist practitioners in helping illustrate the benefit and purpose of a CPI Deployment.

9.2.2.1 *Provide relevant Training, where applicable*

Army leaders are similar to the rest us, sometimes they do not know what they do not know. Therefore Army leaders, especially those who do not have an operations, IT or process improvement backgrounds, may not have much exposure to the LEAN and Six Sigma tools. Therefore, CPI practitioners must dedicate one-on-one time with leaders to illustrate how certain CPI tools can address existing challenges and enable/enhance the decision-making process. This discussion should focus more on outcomes resulting from the CPI tool rather than the tool itself.

Once CPI practitioners gain the confidence of Army leadership by showing results, as opposed to methodology, then and only then can practitioners expect to be included in future efforts to help reach solutions faster, cheaper and with better quality.

A renewed appetite for CPI will grow and re-energize the Army's emerging problem-solving culture. However, it cannot be overstated that results are the key to relevancy.

9.2.2.2 *Tie Improvement Efforts to Army Strategic Goals and Priorities*

Establishing stronger partnerships with the Army's Financial Management community, within each command, should be a priority of CPI practitioners.

Many practitioners realize that improvements are oftentimes difficult to calculate a hard dollar saving. As a result, some Army leaders may discredit CPI validity if they cannot repurpose the funds saved on projects. To avoid this common mistake it is imperative to align all projects to an Army Strategic Goal and/or Priority.

An industry best practice is encourage scrutiny of all projects, not aligned to Army Strategic Goal and/or Priorities, by MBBs, Sponsors and Capability Managers as there is no shortage of opportunity for efficiency within the Army. However, CPI practitioners must engage in meaningful conversations with Army financial leaders to validate project success which in turn will help craft the communication required to effectively communicate with Army leaders. Otherwise, practitioners may be accused of trying to use "smoke and mirrors" to validate efforts and justify the costs of program itself.

9.2.2.3 *Multiple layers of engagement are required for persuasion*

Unfortunately a cookie-cutter approach to convince Army leadership of the value of CPI does not exist. As the Army evolves, so must our approach to illustrate our value to the Army which will result in sustainable buy-in from leadership. For example, if a CPI practitioner supports an Army leader who prefers to realize faster results than the communicated DMAIC timeline will allow for, then that CPI practitioner should modify and accelerate their approach to meet and exceed the expectations of Army leadership. Agility, flexibility and balance will prove to be pivotal factors of success as the Army continues its CPI Journey.

9.2.3 **Not aligning projects to what matters in the Army**

Demonstrating clear alignment between CPI projects and the Army's strategic goals and priorities has proven difficult for some organizations.

Judging from a random sampling of PowerSteering, most project objective statements represent variations on a theme and relate to common issues such as process improvement, efficiency statements and institutionalizing culture. However, what is not clear, based on historical data, is how Army commands are really doing in fulfilling their mission. One assumption is that unless commands have been able to translate success into actionable metrics and specific behaviors, chances are CPI is viewed as ineffective. Therefore, practitioners must be able to articulate that CPI represents an aspect of a management framework that can help analyze, validate and reinforce the Army vision.

9.2.3.1 *Transition from Change Agents to Transformation Agents*

The importance of aligning CPI projects to overarching Army goals and objectives is a resounding theme throughout Section 9. While results vary from project to project, true Army transformation can only occur when projects are aligned with Army Goals and priorities. Additionally, the Army can achieve transformation once it is able to establish and maintain a real performance (problem-solving) culture. Combining technical and cultural strategies is key; and it is important to build early success through achievable projects that can produce an immediate and meaningful impact.

By building and broadening CPI practitioner experiences and skillsets, the Army can utilize existing internal capability to deliver benefits on an ongoing basis. Sustaining this momentum and taking CPI to an even higher level requires strengthening management and leadership systems through operating mechanisms and performance reviews that link individual efforts to the Army's Goals and objectives, or desired results.

When viewed as a management initiative, CPI represents a systematic approach linked to Army goals and a way to connect resources with processes. CPI can be leveraged as a platform for selecting and developing leaders, a format to pursue and measure the right projects, and a strategy to achieve measurable long-term Army financial and quality results.

Key CPI Sustainability Factors	
Organizational Design	Are improvement effforts being conducted across the entire Army?
Staffing	Are dedicated resources being selected to lead initiatives?
Development	Are options available for continuing education, experential or project-based training and exposure to cross-functional capabilities?
Measurement and Accountability	Are projects measured using the "right" metrics and aligned to Army priorities?
Rewards and Recognition	Is there a process for celebrating success and are rewards aligned to key Army metrics?
Communication	Is there a detailed plan to provide clear and consistent communication at all levels of the Army?
Information Technology	Is there sufficient IT solutions or software programs in place that easily monitors results and impact to Army Priority and goals?

Table 9.2: Key CPI Sustainability Factors and Considerations

However, the most successful CPI organizations realize it is not just about statistical tools or training. In order to achieve true success, CPI Organizations can perform a self-assessment, Table 9.2, to assess, analyze and determine how internal efforts are contributing to CPI Sustainability.

9.2.4 Lack of the appropriate philosophical assumptions to add value and influence the Army decision-making process

Decision-making is knowing *if* to decide, then *when* and *what* to decide. Additionally, decision-making involves understanding the consequence of decisions. Decisions are the means by which a commander translates the Army's vision of the end state into action.

CPI practitioners are trained to translate data to leadership in a meaningful manner, to influence decision-making. Oftentimes a full DMAIC project is not required. Instead, projects focused on solving smaller issues faster (and supported by data), enables leaders to move the Army forward. Only in this manner will Army leadership reenergize their CPI appetite and rebrand our community as results-driven organization.
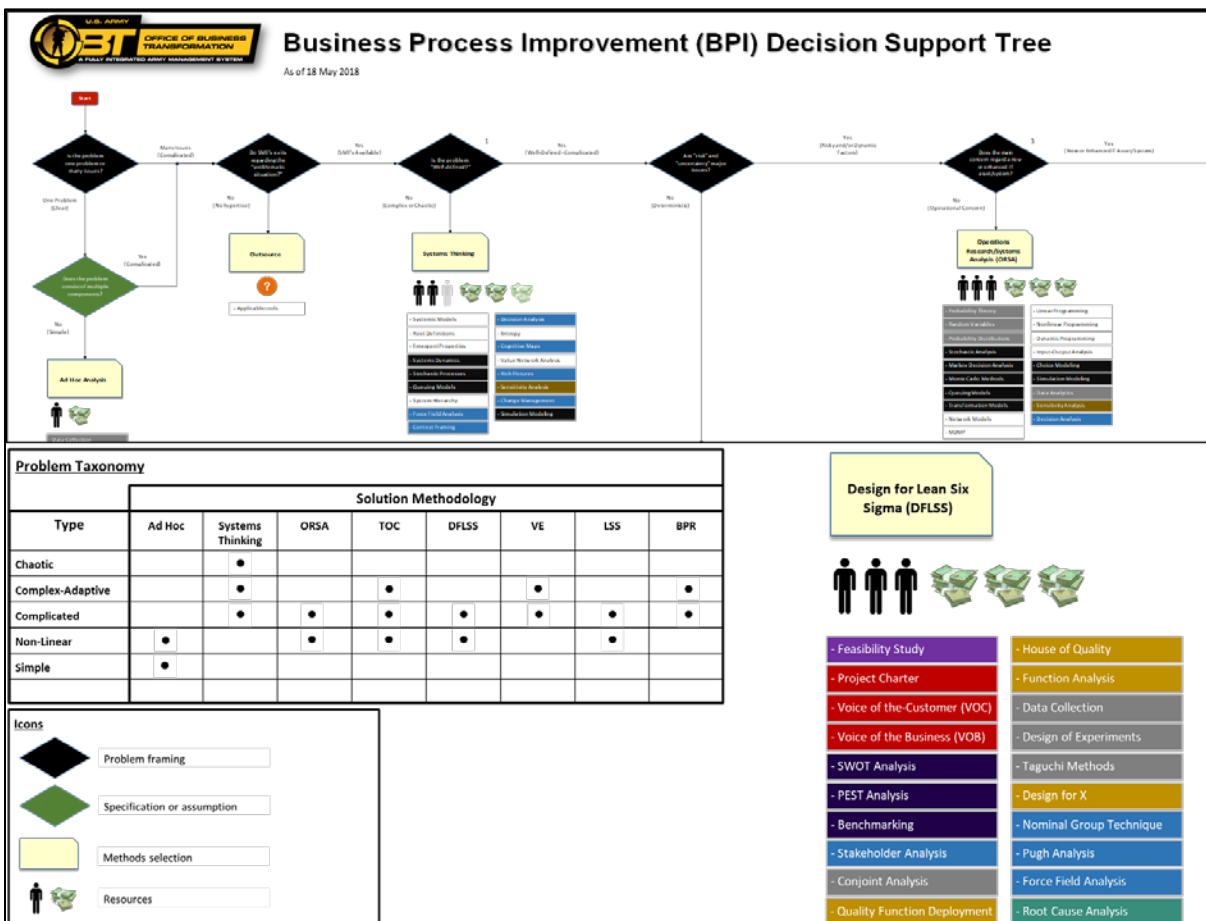

Figure 9.2: Business Process Improvement Decision Tree Excerpt

In summary, CPI practitioners must be able to recognize when CPI is not the optimal methodology to use to solve some of the Army's toughest challenges. To assist The BPI Decision Support Tree, Figure 9.2, is a quick reference guide for decision-makers to

utilize when appraising business problems and then selecting the most appropriate improvement discipline, based on the nature of the problem to be solved. The goal is to facilitate rapid linkage between decision-makers and the Army's broad array of improvement-oriented resources. The Decision Tree is located on milSuite (https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=con tentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D).

9.3 Severe Failures

9.3.1 Lack of leadership commitment to provide resources required to complete projects

As mentioned in the Foreword, there should be additional focus on understanding why so many practitioners have gone through CPI training but some never reach certification. Unlike private industry where CPI Practitioner's only responsibility is CPI, most Army practitioners have other jobs and competing priorities that prevent some Army leadership from allowing trained practitioners the appropriate time to complete certification projects. Managers of Army personnel should be made aware of the

commitment (training and project requirements) in advance of sending personnel to training.

Additionally, CPI Leaders should know where there CPI capability exists. The Army continues to operate in a complex strategic environment that requires unprecedented agility, malleability and compatibility. To ensure success in addressing evolving priorities such as readiness, modernization and reform, the Army must increase transparency which enables collaboration and results in improved employee engagement. To improve transparency and drive awareness visual depiction of the certified (GB, BB and MBB) practitioners, segmented by civilian/military status, across the Army was developed, Figure 9.3.

9.3.2 Attempting to "boil the ocean" with Army process improvement projects
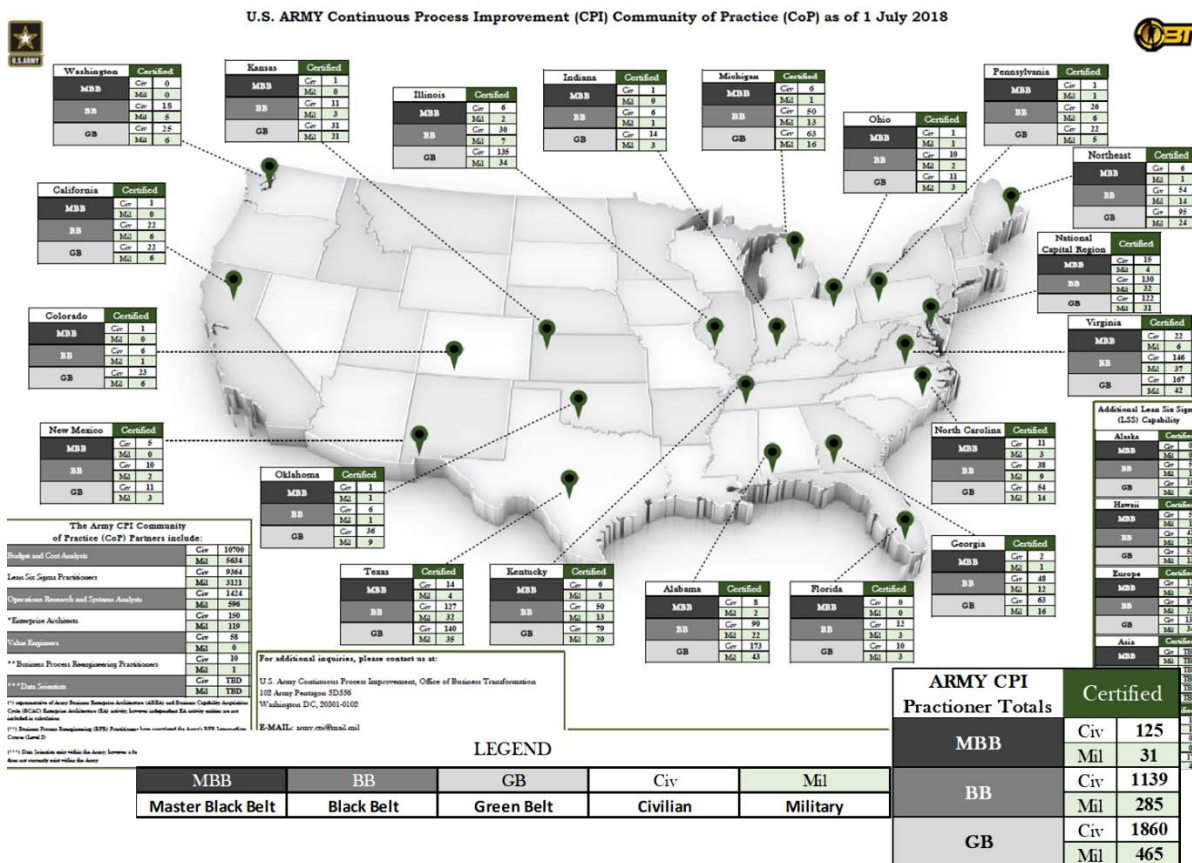

Figure 9.3: Army CPI Capability

9.3.2.1 *What does "boiling the ocean" look like, and how to avoid*

Unless scope is carefully managed, it's easy for a CPI practitioner or team to take on more than they can handle in a work stream or project.

One common cause for "boiling the ocean" is analyzing too much data. While there may exist answers to unanswered questions in data, practitioners should be focused on procuring the "right" data that will lead to solving scope of the problem identified in the Project Charter.

Another common cause is not streamlining work streams. For example, a practitioner may leverage an Ishikawa diagram for a command. Charged with finding cost saving opportunities within a process, the practitioner may be afforded multiple instances to achieve the aforementioned goal. Therefore it is imperative that the practitioner focus on one achievable result and make progress, rather than trying to address them all and achieving very little.

9.3.3   Addressing Army challenges in silo

Although the CPI CoP support different commands, leaders and strategic goals and objectives; there still may be opportunities for CPI Deployments to learn from one another's experiences. A great forum to share successful projects and implementations is the CPI Forum, conducted quarterly. All CPI CoP practitioners are welcome to join and participate in the lessons learned portion of the call as well as be made aware of Department level challenges which may be driving the priority with the Army.

9.3.4   Emphasis on training not on project execution

The CPI CoP must train to maintain and build capability, but we must change Army leadership's perception of being a training organization. The CPI CoP is about results, and only through results will we be able to show our value to the Army.

9.4   Correctable Misstep Failures

9.4.1   Driving projects on suspense dates

As mentioned earlier, projects should be aligned to Army strategic goals and initiatives. Very similar to section 9.3.4, if the CPI CoP does not deliver projects which are deemed valuable to the Army (impacts to readiness, modernization and reform) then we will be consistently defending our value.

9.4.2   Creating an overly complex CPI system

Too much bureaucracy can curtail any CPI Deployment. The CPI CoP must ensure compliance to AR 5-1 without becoming an organization known only for its policy and procedures rather than the results that are realized.

Section 10.   Reference Documentation

The official knowledge management site for the Headquarters Department of the Army (HQDA) Office of Business Transformation (OBT) CPI is in milSuite (Link: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi). This site provides information about the HQDA OBT CPI program office point of contacts, news articles, useful links, featured documents and more.

Outlined in the Table 10.1 are key supporting documents that are pertinent for deployment of CPI in an organization.

Document Name	Description	Reference Location/Copy
Army Regulation 5-1 **Management of Army Business Operations**	This regulation establishes responsibilities and policy for the management framework for Army Business operations.	Latest version of the document can be found in Army Publishing Directorate: http://armypubs.army.mil/ProductMaps/PubForm/AR.aspx
Army Lean Six Sigma Deployment Guide Book	The Guidebook represents the approved HQDA guidance governing the LSS deployment within the Army.	Latest version of the document can be found in PowerSteering and milSuite: https://armyps.army.mil/usarmycorp/ https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
Army Lean Six Sigma Financial Guidebook	This Guidebook provides financial management policy and procedures associated with Army business transformation initiatives, with a focus on the methodology for estimating financial management benefits.	Latest version of the document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
Army CPI Trifold	Provides an overview of the Army CPI program	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
Continuous Process Improvement Maturity Model	This Assessment is designed to assess organizational maturity in eight distinct categories: Results, Strategy/Doctrine, Organization, Training, Leadership, Measurement, People, and Project Management	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D

Army Continuous Process Improvement Strategy	Provides tactical and strategic context as to: How CPI fits into the Army strategy,How CPI is evolving to be "How the Army Thinks" not "What it Thinks," Best approaches in capability identification, development and sustainment, How CPI can be used to imp[act the Army's most pressing and complex challenges	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
The Army Business Strategy 2017-2021	The Army Business Strategy provides a strategic foundation upon which the Army can apply enterprise approaches for the improvement of business operations to generate and sustain readiness.	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D.
Army Directive 2016-16 Changing Management Behavior Every Dollar Counts	Memorandum released by the Office of the Secretary of the Army. The purpose of this directive is twofold: adapt financial management practices and improve outcomes.	The official copy of the Army Directive 2016-16 can be found in the Army Publishing Directorate: http://armypubs.army.mil/ProductMaps/PubForm/ArmyDir.aspx
Lean Six Sigma Leader's handbook	The purpose of this LSS Leader's Handbook is to put in one place the key principles and guidance that will make LSS leaders successful in accelerating the pace of business transformation.	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
Lean Six Sigma Glossary	This document provides a list of LSS terms used.	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
Getting Results from Lean and Six Sigma	This document provides some insightful information about obtaining results from Lean and Six Sigma initiatives.	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D
CPI Decision Matrix	This document illustrates the Business Process Improvement Decision Matrix which highlights the appropriate methodology to follow for certain problems encountered by the Army.	The document can be found in milSuite: https://www.milsuite.mil/book/community/spaces/orion/obt/armycpi/content?filterID=contentstatus%5Bpublished%5D~category%5Bcpi-guidebook-documents%5D

Table 10.1: CPI Reference Documents

Section 11.   Glossary

Acronym	Meaning
AEC	American Education Center
ABPO	Army Business Process Improvement Office
ARFORGEN	Army Force Generation
AKO	Army Knowledge Online
AME	Army Management Enterprise
AMC	Army Materiel Command
AR	Army Regulation
ATRRS	Army Training Requirements and Resources System
ASA(ALT)	Assistant Secretary of the Army for Acquisition, Logistics and Technology
ASA(M&RA)	Assistant Secretary of the Army (Manpower & Reserve Affairs)
BB	Black Belt
CAMBB	Certified Army Master Black Belt
CMO	Chief Management Officer
CSP	Common Service Provider
CoP	Community of Practice
CONUS	Continental United States
CPI	Continuous Process Improvement
CE	Core Enterprise
CBA	Cost-Benefit Analysis
DFAS	Defense Finance and Accounting System
DP/PPBE	Defense Programs, Planning & Programming Budgeting &Execution
DMAIC	Define, Measure, Analyze, Improve and Control
DA	Department of Army
DCS	Deputy Chief of Staff
DCMO	Deputy Chief Management Officer
DoD	Department of Defense
ABPICM	Army Business Process Improvement Capability Manager
DABPICM	Deputy Army Business Process Improvement Capability Manager
DMEDI	Design, Measure, Explore, Develop and Implement
DOTLmM-PFP	Doctrine, Organization, Training, Material, Leadership & Education, Personnel, Facilities & Policy
EL	Enterprise Level
FY	Fiscal Year
GB	Green Belt
G-1	General Staff for Personnel, Manning and Administration
HDQA	Headquarters, Department of Army
HC	Human Capital
HRC	Human Resources Command
IRP	Internal Review Package
LSS	Lean Six Sigma
LEAP	CPI Excellence Awards Program
MBB	Master Black Belt
MBBc	Master Black Belt Candidates
OBT	Office of Business Transformation
OCPA	Office of the Chief of Public Affairs
OSA	Office of Secretary of Army

OSD	Office of the Secretary of Defense
PPBE	Planning, Programming, Budgeting and Execution
PS	PowerSteering
PO	Process Owner
ABPIO	Army Business Process Improvement Office
POI	Program of Instruction
PISW	Project Identification and Selection Workshops
PSW	Project Sponsor Workshop
POC	Points of Contact
RIE	Rapid Improvement Events
RC	Reserve Component
RM	Resource Manager
RACI	Responsible, Accountable, Consulted and Informed
RPA	Robotics and Process Automation
SH	School House
Sec Army	Secretary of Army
SIM	Simulation
SSN	Social Security Number
SME	Subject Matter Experts
SRM	Sustainable Readiness Model
TDY	Temporary Duty
TLO	Terminal Learning Objective
TAPDB	Total Army Personnel Database

Table 11.1: List of Acronyms and Associated Definitions

Section 12.　　References

1. Headquarters, Department of the Army, The Army Business Strategy 2017-2021.

2. Memorandum, Secretary of the Army, 15 April, 2016, subject: Army Directive 2016-16 (Changing Management Behavior: Every Dollar Counts).

3. Headquarters, Department of the Army, Army Regulation 5-1, Management of Army Business Operations

4. U.S. Army Training and Doctrine Command Pamphlet 525-3- 1, The U.S. Army Operating Concept, Winning in a Complex World 2020-2040.

5. Memorandum, Under Secretary of the Army, 14 December, 2016, Army Ideas for Innovation (AI2) Program Implementation Plan.

6. Secretary of the Army Mark T. Esper, Initial message to the force from the 23rd secretary of the Army, November 21, 2017.

7. Gen. Mark A. Milley, 39th Chief of Staff Initial Message to the Army, September 1, 2015.

Section 13. Appendix

Goals	Objectives
1: Business process performance related to readiness and other operational outcomes is objectively assessed, and fact-based conclusions are drawn to systematically improve the Army's capability to deliver readiness at best value.	**1.1:** Army Critical processes identified and codified.
	1.2: Measures of Effectiveness established for all identified critical processes.
	1.3: Enterprise performance opportunities are routinely identified and acted upon.
	1.4: BPI operational benefits are linked to Army Strategic Measures.
2: Strengthen the BPI COP's ability to contribute to supporting leaders with data for resource informed decision making.	**2.1:** Assess capabilities of the BPI COP against the capabilities required for resource informed decision making.
	2.2: Modify existing BPI training to close gaps identified in the assessment.
	2.3: Promote and support opportunities to provide BPI training in Army Schoolhouses.
3: Business process performance related to readiness and other operational outcomes is objectively assessed, and fact-based conclusions are drawn to systematically improve the Army's capability to deliver readiness at best value.	**3.1**: Assess Army BPI performance relative to operational and cost measures for each identified critical process.
	3.2: Assess Army BPI performance relative to strategic and unit readiness measures for each identified critical process.
	3.3: Evaluate processes that have not been identified as "critical" with a rationalization of the process existence.
4: Enterprise measures of process improvement effort effectiveness that are credible, auditable and aligned to Senior Leader strategic priorities.	**4.1**: Assess reported Army BPI Enterprise Measures to assure leader priorities are being reported.
	4.2: Assess the way success metrics are reported to assure the target audience receives the most effective communication.

Table 13.1: Summary of Business Process Improvement Goals and Objectives

The reference to commercial or nongovernmental entities or products in this document does not constitute an official endorsement or approval.

Army Business
Process Improvement
Deployment and
Sustainment
Guidebook
2019-2023