DCMA Manual 4502-05

Continuous Process Improvement

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Office of Primary Responsibility	**Corporate Governance Capability**
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Purpose: This issuance, in accordance with the authority in DoD Directive 5105.64, "Defense Contract Management Agency (DCMA)":

 • Implements policy pursuant to DoD Directive 5010.42, "DoD-Wide Continuous Process Improvement (CPI)/Lean Six Sigma (LSS) Program," DoD Instruction 5010.43, "Implementation and Management of the DoD-Wide Continuous Process Improvement/Lean Six Sigma (CPI/LSS) Program," and DCMA Instruction 4502

 • Provides and defines Agency procedures executing continuous process improvement to include program objectives and operations, improvement identification and execution, documentation requirements and personnel responsibilities

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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY. This issuance applies to all DCMA organizational elements.

1.2. POLICY. It is DCMA policy to:

a. Execute Continuous Process Improvement (CPI) program in accordance with (IAW) DoD Directive (DoDD) 5010.42, "DoD-Wide Continuous Process Improvement (CPI)/Lean Six Sigma (LSS) Program," and DoD Instruction (DoDI) 5010.43, "Implementation and Management of the DoD-Wide Continuous Process Improvement/Lean Six Sigma (CPI/LSS) Program."

b. Develop and deploy a broad-based, CPI approach to help meet organizational objectives as aligned to the Agency's Strategic Plan.

c. Foster improvements via collaboration through Knowledge Management (KM), and leverage new innovations and technologies.

d. Integrate Process Improvement Efforts (PIE) as an integral part of the Agency's Business Capability Framework.

e. Develop and maintain CPI knowledge across the Agency.

f. Capture and publicize results and lessons learned as outcomes of PIEs.

g. Execute this Manual in a safe, efficient, effective and ethical manner.

SECTION 2: RESPONSIBILITIES

2.1. DIRECTOR, DCMA. The DCMA Director will: Implement DCMA policies IAW DoDD 5010.42; subsequently delegated to Director, Process Management and Optimization Division to establish, oversee, and monitor the CPI program.

2.2. DIRECTOR, PROCESS MANAGEMENT AND OPTIMIZATION DIVISION. In addition to the responsibilities in Paragraph 2.7., the Director of Process Management and Optimization Division will:

a. Establish and oversee Agency-wide implementation of CPI program to include procedures, metrics, reporting and cultural adoption IAW DoDD 5010.42 and DoDI 5010.43.

b. Serve as the principal staff advisor on CPI to the agency's senior leaders consistent with the Director's intent, Agency's Strategic Plan, DoD Guidance and private sector best practices.

c. Identify strategic CPI opportunities and facilitate effective proposal evaluation, requirement definition, execution, and documentation of results for PIEs within a collaborative governance structure.

e. Conduct quarterly CPI program reviews for effectiveness, compliance, metrics and achievement of objectives, maturity assessment and issues with results presented to senior leadership.

f. Maintain oversight of Agency's CPI training, mentoring, and certification standards. Ensure adequate quantity and currency of skilled CPI personnel through monitoring of developmental activities.

g. Employ Agency's KM structure to optimize shared communication, tools, and synergy; track active and completed PIEs at strategic, operational and local levels, indicating financial, mission or other benefits.

2.3. CONTINUOUS PROCESS IMPROVEMENT PROGRAM MANAGER. The manager will functionally execute all duties and responsibilities of the CPI program:

a. Serve as the Agency's senior functional for CPI. Support effective PIE portfolio management and implementation of the overall CPI program.

b. Develop and implement guidance, procedures, metrics, and deployment plan for the CPI program IAW DoDD 5010.42 and DoDI 5010.43.

c. Monitor CPI Program maturity and health via improvements completions, certifications and training and develop other reporting measures quarterly IAW DoDI 5010.43 and the Agency's program.

d. Advise at all levels employment of CPI tools and methods for improving mission effectiveness and efficiency to include strategic alignment and performance initiatives.

e. Support utilization of the Agency's KM structure and liaison with OSD CPI site to maintain centralized process improvements database and maximize knowledge sharing capability.

f. Function as the nexus for connecting champions, belt facilitators and proposed PIEs via information resource applications by suitability factors such as experience, skillsets, and temperament.

g. Manage a formal training and mentoring program to give new personnel skill building assistance to succeed in their CPI efforts following procedures detailed on the Resource Page.

h. Provide assistance, training and skills development to the Business Capability Boards (CB), Commander and Directors, deployment leads, champions, belt facilitators and employees to enhance organizational learning and ensure consistency of approach.

i. Conduct "Forums" and manage community of practice sites for key CPI roles such as belt facilitators, champions, and Performance Improvement Officers (PIO) as needed to communicate program expectations, receive feedback, and provide informal knowledge on a regular basis.

j. Prepare the quarterly Agency's improvement status reviews as follows:

   (1) Provide to all Business CB Managers the current status of Agency level PIEs.

   (2) Summarize and provide assessment of PIEs at the Agency and subordinate levels for activity, progress and results reporting.

k. Develop, monitor, and report program performance for quarterly CPI program reviews. Topics include effectiveness, compliance, metrics and achievement of objectives, issues, maturity, and other significant areas.

l. Certify DCMA Black Belts (BB) and Green Belts (GB) with thorough review of training records and vetting of improvements; appropriate use of methodology, adequacy of results and completeness of documentation IAW DoDI 5010.43.

m. Conduct external to Agency CPI credentials reviews. Award reciprocity for both training and certification at all levels as requested by employees. Utilize acceptable training and certification approaches IAW DoDI 5010.43.

2.4. CORPORATE GOVERNANCE CAPABILITY BOARD MANAGER. In addition to the responsibilities in Paragraph 2.5., the Corporate Governance CB Manager:

a. Guide Agency-level process improvement integration.

b. Conduct Agency quarterly PIEs status reviews with senior leadership on all Agency-level efforts.

c. Lead prioritization review of new Agency-level PIEs based on resource constraints.

2.5. CAPABILITY BOARD MANAGERS. The CB Managers will:

a. Serve as the senior leader with responsibility seeking to improve capability process improvements. When shortfalls are identified, the CB Manager will address the deficiency utilizing a chartered PIE, highlighting objectives, approaches, stakeholders and other key considerations.

b. Create clear PIE traceability with a business problem or opportunity that is integral to execution of Agency's strategic plan.

c. Confirm that deployed PIE solutions meet Agency business requirements, deliver expected benefits, and provide return on investment.

d. Ensure the Capabilities leverage existing and de-conflict proposed process improvement solutions.

e. Initiate proposals, charters, assign champions and appoints CPI belt facilitators for Capability-focused Agency-level PIEs.

f. Monitor, support execution and report on progress of portfolio of PIEs under assigned Capability at designated Agency senior leadership meetings.

2.6. COMPONENT HEADS AND OPERATIONAL UNIT COMMANDERS/DIRECTORS. In addition to the responsibilities outlined in Paragraph 2.7., the Executive Directors, Directors, and Operational Unit Commanders/Directors will:

a. Implement CPI methodologies for process improvements addressing headquarters, region and center unique requirements and mission.

b. Promote CPI methodologies to all subordinate organizations to foster process improvements in support of specific local requirements and mission.

2.7. CONTRACTING MANAGEMENT OFFICE COMMANDERS/ DIRECTORS. Contract Management Office (CMO) Commanders/Directors will:

a. Promote CPI methodologies to support DCMA's requirements and mission.

b. Utilize CPI methodology and other data driven improvement tools and techniques to assist in addressing performance gaps and shortfalls as determined necessary.

c. Prioritize organizational improvement activities through an actively managed portfolio of PIEs to maximize organizational results.

d. Develop and assign individuals to fill critical roles: belt facilitators, champions, deployment lead, and PIO as needed to support process improvement. These roles may be assigned as a collateral duty within each organization as determined necessary.

e. Ensure needed CPI skills development through formal and informal training is supported to facilitate execution of successful PIEs.

f. Ensure champions and belt facilitators with their teams report on the progress of PIEs improvements, validate completed PIE benefits and document completion. Fully document PIE final outcomes in KM structure to foster leveraging and replication.

g. Review key CPI program indicators such as improvement opportunities, improvement status, results validation, and personnel availability at least quarterly and providing updates to the Process Management and Optimization Division.

2.8. EXECUTIVE DIRECTOR, TOTAL FORCE. In addition to the responsibilities outlined in Paragraph 2.7., the Executive Director, Total Force will:

a. Support CPI training by programming and funding student and instructor travel to the extent resources are available.

b. Arrange for suitably appointed facilities for the training and technology support for remote CPI training.

c. Provide for centralized course registration services and completion records through the Agency's training system of record.

d. Manage CPI certification in the Agency's system for personnel records.

2.9. BELT FACILITATORS. Belt facilitators are formally trained CPI GB and/or BB employees who have been trained by OSD or another authority, as recognized by the Process Management and Optimization Division. Certified Belts at either the GB or BB level are confirmed to have successfully facilitated one or more PIEs with measurable results. GBs and BBs will actively maintain CPI skills currency through the following:

a. Provide ongoing CPI support to their respective organization.

b. Lead or participate in at least one PIE for their organization or the Agency annually.

c. Seek certification and self-guided CPI skills development.

d. Conduct one CPI skills refresher, local training event, or lead a course session annually.

e. Report CPI engagement hours monthly.

f. Report PIE status and results regularly utilizing Agency's KM structure.

g. Mentor at least one GB candidate through their first GB-level PIE annually; applies to certified BBs and Master Black Belts (MBB) mission permitting.

2.10. CHAMPIONS. Champions are senior employees trained in CPI concepts and have direct strategic oversight, vision and role responsibility for guiding individual PIEs. Champions will:

a. Develop PIE concepts and approve PIE charters to include scope, expected outcomes, estimated Return on Investment (ROI) and ensures alignment with the strategic plan.

b. Provide sponsorship and monitor their PIE and remove obstacles to ensure progress and achievement of desired outcomes.

c. Approve PIE implementation, document outcomes and approve PIE completion.

2.11. DEPLOYMENT LEAD. Deployment leads are senior employees trained in CPI concepts and have strategic vision and role responsibility for identifying multiple PIEs opportunities as part of strategic planning. Deployment leads will:

a. Chair an appointed working group to facilitate identification, development, prioritization, and management PIEs for their respective Region, Component, Division or CMO.

b. Engage with respective CB to share effective and broadly applicable PIEs for possible Agency-wide adoption.

2.12. PERFORMANCE IMPROVEMENT OFFICER. PIOs are trained in CPI concepts to serve as the key organizational unit CPI representative for improvement execution and CPI program compliance. PIOs will:

a. Promote communication concerning PIE creation, status and reporting in the Agency's KM structure.

b. Identify, execute, and communicate CPI PIE replication or collaborative opportunities, and share guidance.

c. Assist belt facilitators to report PIE progress, completions, validate results, benefits and ensure proper documentation.

d. Serve as the organizational deployment lead if tasked.

2.13. EMPLOYEES. Employees are strongly encouraged to:

a. Complete CPI Awareness Training, a web-based training program. This training is recommended for all employees in the Agency and is a prerequisite for higher level CPI training. Additionally, participation in PIEs is highly encouraged along with seeking CPI team member training.

b. Utilize Agency's suggestion system of record to submit proposals for potential or to share completed PIEs that have broad applicability within the Agency.

c. Consider CPI principles and tools for daily execution of standard work, problem-solving responsibilities, and efficiency of work.

SECTION 3: PROCEDURES

3.1. OVERVIEW. DCMA will employ CPI, a disciplined problem-solving framework composed of multiple methodologies to become more efficient in its operations and more effective in its support to the warfighter. These methodologies provide the framework for successful implementation and the sustainment of an improvement culture across all organizational levels of the Agency.

3.2. INSTITUTIONALIZING THE CONTINUOUS PROCESS IMPROVEMENT PROGRAM. DCMA will institutionalize LEAN Six Sigma (LSS) and other data driven improvement concepts and tools within Agency culture. Promote PIEs as the framework to iteratively improving business performance and achieving organizational synergy.

a. Sustained CPI success requires a "top-down" deployment strategy supported by leadership all levels to implement effective CPI program management through the following:

(1) Communicate CPI objectives and promote a CPI culture by using common improvement terms of reference and practices.

(2) Implement fully-vetted team solutions based on fact-based, data supported decisions.

(3) Collaborate across the Agency to minimize duplication of effort and promote full transparency of CPI activities across the Agency.

(4) Communicate improvement information, opportunities, and results across all functional areas to achieve exponential benefits and ROI.

(5) Implement effective change management techniques as an integral part of the CPI program. Utilize the Agency's change management guidance to achieve consistency of techniques.

(6) Utilize CPI techniques to support fact-based studies, employ modeling and simulation methodology, and implement data science techniques as needed to enable organizational improvement and support enhanced data assurance in the Agency's processes.

(7) Employ trained champions and facilitators to ensure effective improvement outputs with additional consideration based on certification, suitability, skillsets, and CPI knowledge.

(8) Deploy and maintain comprehensive program support structure and applications to include knowledge sharing, training, skills, collaboration, and communication to reinforce the CPI community at all levels of engagement and activity.

b. CPI efforts in the Agency will have an integrated, tiered structure to provide strong and continuously visible leadership throughout all levels of the organization to promote a CPI culture of innovation and teamwork. The Tier 1 is comprised of DCMA's Senior Leadership and CB

Level. Tier 2 resides at Component Head level, and Tier 3 is the CMO or Directorate level. The three tiers, their integrated relationships, and feedback vehicles are described as follows:

(1) Tier 1 - Agency-Level. Implementation of the Agency's strategically aligned CPI program requires the following senior-level elements:

(a) Senior Leadership will provide guidance and develops Agency-level cross functional PIEs. Initiate PIE charters, assign champions and appoint BB facilitators.

(b) Business CBs provide guidance and approval to initiate Agency level PIEs involving capability focused efforts as a structured approach to mature operational execution.

(c) Process Management and Optimization Division Director is the Agency's CPI deployment lead and provides MBB both facilitator support and program consultation.

(2) Tier 2 - Component-Level. Component Heads and CPI leadership implement an operationally focused program. The Component deployment lead manages the overall implementation, to include subordinate organizations, supported by a PIO along with trained Champions, and belt facilitators. Component Heads will fill CPI roles as needed:

(a) CPI deployment lead chairs an appointed group to facilitate identification, development, prioritization, and management of CPI PIEs for the Component. The deployment lead receives PIE feedback and monitors results. Engage with respective CB to share effective and broadly applicable PIEs for possible Agency-wide adoption.

(b) The PIO serves as the key CPI representative for PIE execution and CPI program compliance. Promote communication concerning PIE creation, status and reporting in the Agency's KM structure. Additionally, PIOs identify, execute, and communicate CPI PIE replication or collaborative opportunities, and share guidance. The PIO will assist the belt facilitator reporting on PIEs; documenting progress, completions, benefits and ensure proper documentation.

(3) Tier 3 - Local-Level. Tier 3 is field focused composed of CMO Commanders or Directors, subordinate HQ and Component directors and their respective CPI leaders. A local CPI deployment lead manages the overall effort supported by a PIO with champions and belt facilitators. Commanders and Directors will fill CPI roles as needed:

(a) CPI program deployment lead chairs an appointed group to facilitate identification, development, prioritization, and management of PIEs for the organization. The CPI deployment lead receives PIE feedback and monitors results. Engages with Component CPI deployment lead to share effective and broadly applicable PIEs for possible Component adoption.

(b) The PIO serves as the key CPI representative for PIE execution and CPI program compliance. Promote communication concerning PIE creation, status and reporting in the Agency's KM structure. Additionally, PIOs identify, execute, and communicate CPI PIE

replication or collaborative opportunities, and share guidance. The PIO will assist belt facilitator reporting on the progress of PIEs, validate completed PIE benefits and ensure proper documentation. Program deployment lead and PIO roles may be combined.

3.3. CONTINUOUS PROCESS IMPROVEMENT PROGRAM DEPLOYMENT.
Leadership at all levels will apply a disciplined CPI deployment approach that is focused on the alignment of goals and priorities throughout their organizations. The processes and approaches to select and deploy high priority PIEs are key. The elements of an effective CPI deployment include:

a. Align the CPI program to the published DCMA Strategic Plan ensuring Agency's goals and priorities are directly addressed through prioritized PIE selection.

(1) Robust performance management methods are essential to identifying performance gaps and problems for resolution using CPI methods. Considerations are clear linkage to Agency's Strategic Plan, alignment to management internal controls, policy and metrics, and ROI expectations.

(2) Proposed Agency-level PIEs will be chartered to ensure adequately expressed problem statement, business opportunity, scope, resources, and expected benefits/ROI.

b. Selection and management of PIEs is a core activity to ensure focused improvement results at all levels and is most effectively implemented under a portfolio of PIEs approach. Agency-level PIEs will be executed under the CB framework making full use of the Agency's Intake system of record and KM structure to capture emerging needs and prior successes. Lower Tier PIEs will align to organizational needs with respective leadership determining selection prioritization and management. Consult with Process Management and Optimization Division, CPI Program Manager for assistance to establish improvement goals and facilitate scoping, selecting, and management of performance PIEs.

(1) PIE Scope Development. These basic types of improvement effort scopes are described as follows. The Resource Page contains checklists, forms and other documentation products that support the completion of PIEs.

(a) Just-Do-Its. These PIEs are very small in scope, entirely within a manager's purview, and can be implemented without in-depth analysis or benefits reporting. Just-Do-Its include simple process improvement activities such as using CPI tools to organize a work process or a team event designed to update an outmoded spreadsheet or form. They do not require formal charters, but may be logged into the Agency's KM structures to support sharing and replication.

(b) Practical Problem Solving Method (PPSM). These PIEs are small in scope and fit entirely within a manager's purview. They can be rapidly implemented by a team lead without in-depth training, analysis or benefits reporting. The PPSM approach formalized under the Orange Belt methodology relies on primarily "LEAN" problem solving in an eight step effort. This techniques contains simple process improvement activities; performance gap, measurement,

data collection, root cause, flow and waste elimination and solution selection determination in addition to other optional LSS tools. They do not require formal charters, but will be logged into the Agency's KM structures to support sharing and replication of results.

(c) Rapid Improvement Events (RIE). These PIEs are generally small in scope, entirely within a manager's purview and can be implemented rapidly with resources at hand. RIEs are generally 2 to 3 day events where a small team tackles an issue using prepared research then generates a team solution generally involving reduction of waste and variation plus improving work flow. These work center led efforts will have formal charters and will be logged into the Agency's KM structures to support sharing and replication of results.

(d) Integrated Process Teams. Integrated Process Team (also known as Working Groups) type PIEs are generally referred to broadly as efforts and initiatives and can be executed at all levels within the Agency. These efforts are diverse and vary greatly with respect to mandates, goals and expected outcomes. The appointed team tackles an issue using leadership guidance, problem research and analysis, and applicable improvement tools then generates a proposed team solution for champion and process owner approval and enactment. These efforts will have charters and are logged into Agency's KM structure. Data collection, documentation, and benefits tracking are included to support decisions.

(e) GB PIEs are generally organizational level initiatives or below. These efforts are small in scope, and entirely within an organization's span of control, but the solutions are not apparent and require some data collection and team analysis using LSS tools, and following the Define-Measure-Analyze-Improve-Control (DMAIC) tollgate structure (management progress check-ins). These efforts use ad-hoc teams of subject matter experts that are tasked to improve processes within their immediate work centers. GB PIEs are usually identified, approved, and executed locally, but can be directed from higher authority. In general, GB PIEs will be fairly simple in scope and take no longer than 60 to 120 days to complete.

(f) BB PIEs. These PIEs are generally formally managed with planned reviews that are ideal for Agency-level initiatives but could be executed at lower levels in the Agency. Efforts of this scope are more complex than GB PIEs, usually having multiple factors with significant cross-functional impact. Most follow the DMAIC flow but could also be a Business Process Reengineering (BPR) or a design for six sigma approach such as Define-Measure-Analyze-Design-Verify (DMADV). The solutions to BB PIEs require in-depth data collection and deep team analysis using LSS tools. A BB PIE must have a senior manager or executive as champion to ensure that the entire scope (and therefore the executable solution) lies within their span of control to implement. In general, BB efforts take 3 to 6 months to complete.

(2) PIE Selection and Prioritization. PIEs are selected and prioritized based on various factors including:

(a) Rely on data-based performance metrics by establishing performance baselines to identify improvement effort opportunities for closing gaps.

(b) Conduct value stream analyses that address all of the potential nodes, interfaces, and activities as they relate to creating or measuring value to the customer and constraints to product flow.

(c) Align and measure goals at each level of the Agency in order to validate causal relationships, key stakeholder roles and responsibilities, and positive impact up and down the value chain.

(d) Use strategic alignment and implementation of a structured PIE selection regimen utilizing a "Benefits and Efforts" review or another disciplined approach and tailoring PIE scopes to address the performance gaps.

(e) Develop a charter proposal (also referred to as "charter for action"). This is the start of a PIE. The charter clearly states current performance gaps, designated approaches, and desired outcomes. The charter must be validated by the champion's signature as acknowledgement of the problem and intent to provide resources for the assigned belt facilitator to execute against.

(f) Adopt and modify existing PIEs, also called replication, rather than rely primarily on new starts. This leveraging approach harnesses the prior organizational learnings to decreases subsequent analysis and solution implementation effort.

(g) Validate related PIEs and initiatives for applicability and potential duplication using DCMA's KM structure is mandatory before starting a new PIE. Belt facilitators must verify all linkages to existing policy, Agency configuration management and business architecture on the PIE charter.

(3) Portfolio Management. Capability Leads, Commanders, and Directors will manage their respective integrated PIE portfolio based on various key factors, including:

(a) Identify champions who are empowered and accountable for achieving process improvement success, as well as selecting employees with high potential who are best suited to execute PIEs. It is equally important to gain concept approval (buy-in) by each PIE's properly identified process mangers, key stakeholders, and improvement team.

(b) Ensure resources (funding and human capital) have been allocated for PIEs from selection through implementation as many require startup or initial costs.

(c) Assess the portfolio of active PIEs every 3 months to confirm adequate progress is being made and establishing indicators for terminating PIEs when successes and/or progress is not being achieved.

(4) PIE Completion. Capability Leads, Commanders, and Directors will strive to generate measurable benefits over time through successful PIE completions. Actions that promote PIE completion include:

(a) Set realistic and attainable PIE completion dates through consultation with champions, belt facilitators, stakeholders, subject matter experts, and customers.

(b) Reassessing progress against planned effort results and completion dates and resetting as needed. Ideally, this reassessment will occur at the PIE's 180-day mark, and again at the 1-year mark, for both completed and on-going PIEs.

(c) Incorporate the requirement to apply CPI principles and techniques in DoD contracts and partnering arrangements whenever practicable.

c. Benefits Tracking and Reporting Results. Directors, Commanders, and Capability Leads will consult with the Process Management and Optimization Division, CPI Program Manager as needed to establish well defined, credible benefit targets for each approved effort. Actions that promote benefits tracking and results include:

(1) Establish a PIE baseline to clearly understand current performance levels.

(2) Categorize PIE benefits into categories such as performance, savings, cost avoidance, customer satisfaction or other operational value.

(3) Develop quantifiable benefit targets for tangible benefits and estimation of ROI; categorized as financial, mission or other.

(4) Establishing a mix of readily attainable and challenging targets.

(5) Assess progress toward achieving benefits targets and re-evaluating targets upward or downward, as appropriate.

(6) Track attainment of benefits targets, maintaining auditable historical records of target achievements, and logging achieved ROI, and reporting results.

(7) Conduct a validation review after the final phase of a PIE is completed. Follow-on validation reviews are to be conducted at 6-month intervals. Assess if results are adequate, are being realized, and if applying successful activities beyond the scope of the original PIE is feasible.

d. ROI Estimation. Business CB Managers, Commanders, and Directors will estimate an ROI that captures estimated saving plus the costs through completion for all significant PIEs. Completed PIEs will log the resulting benefits (monetary and non-monetary) as part of the final summary. Report benefits as Type 1) Savings, 2) Cost Avoidance, and 3) Other Intangible IAW detailed procedures in located on the Resource Page.

3.4. CONSISTENCY OF APPROACH. DCMA will implement the CPI program under the operational direction at all levels of the Agency from Directors, Commanders and CB Managers with the support of the CPI Program Manager. Utilize a common set of detailed standards for training, certification, deployment, and operational approaches for execution of CPI across the

Agency IAW DoDD 5010.42, DoDI 5010.43 and the DoD Guidebook, "Continuous Process Improvement Transformation Guidebook," and as detailed the resource page of this Manual.

a. Employ the fundamental concepts and core competencies of LSS, and other CPI methodologies that are commonly used throughout the DoD, as part of a structured approach for analyzing and improving their processes to accomplish their organizational mission more efficiently and effectively on a continuing basis.

b. Leverage the right tools and methods for improving mission effectiveness and efficiency to include performance gaps. Utilize LSS, Theory of Constraints, Design for Six Sigma and BPR, plus additional approaches for innovative data-driven improvement techniques.

c. Employ a PIE identification and selection or equivalent methodology to translate their organizational performance gaps into executable charters on at least an annual basis.

d. Monitor CPI Program maturity and health via PIE completions, certifications and training and develop other reporting measures quarterly. Track and report OSD training IAW DoDI 5010.43 and the Agency's program for CPI metrics, training and certification.

e. Engage CPI personnel to facilitate problem solving teams to address inspection deficiencies and strategic gaps.

f. Utilize the Agency's KM structure and liaison with OSD's CPI site to maintain centralized PIE database and maximize knowledge sharing capability.

g. Develop CPI Communication Plan. Ensure all participants have a full understanding of the Agency's mission, vision, and strategy and requirement to align their CPI efforts to these elements.

(1) Broadcast CPI successes and opportunities through various communications formats and forums available throughout the Agency.

(2) Encourage a supportive CPI climate that encourages open, two-way communication among all members of the CPI/LSS leadership, teams, and work groups.

h. Maintain a consistent, multi-faceted organic CPI training program to progressively train the Agency workforce. CPI Manager will provide training courses and utilize certification standards be consistent with the DoD CPI/LSS program to ensure cross-organizational acceptance of recognized core competencies (certification reciprocity), and support Agency teaming and PIE accomplishment. All support requests and approvals will be processed IAW detailed procedures in located on the Resource Page.

i. Support formal training and mentoring opportunities for CPI skill building and drive successful PIEs. Ensure belt facilitators are fully assisted through completion of certification, skills updating and documentation of PIEs. CPI training and certification actions are managed

under the Total Force Professional Development guidelines and IAW procedures detailed on the resource page.

j. Support "Forums" for key CPI roles such a belt facilitators, champions, PIOs as needed to communicate program expectations, receive feedback, and provide informal knowledge on a regular basis.

k. Prepare for the Agency's quarterly PIE status reviews as follows IAW and procedures detailed on the resource page:

    (1) Provide Director, Deputy Director, and senior leaders summarized status on all PIEs at the Agency level.

    (2) Provide status updates on all subordinate PIEs for activity, progress and results reporting utilizing Agency's KM structure.

l. Develop, monitor, and report program performance for quarterly CPI program reviews. Topics include effectiveness, compliance, metrics and achievement of objectives, issues, maturity, and other significant areas per procedures detailed on the Resource Page.

m. Employ effective internal controls that result in the DCMA making data-driven improvements in productivity, efficiency and performance against mission IAW DoD guidance, DCMA policy and procedures detailed on the resource page.

    (1) Document effective process improvement program; capability through Agency guidance, procedures, metrics, and deployment plan for effective CPI PIEs.

    (2) Ensure CPI personnel are available, current and able to perform improvement activities for the Agency.

    (3) Verify all Agency improvement efforts are well documented to include visibility and transferability of validated results.

n. Recognize successful RIEs and contributions to a successful CPI program.

    (1) Reward successful teams and key individuals to encourage greater interest and commitment to the CPI program.

    (2) Demonstrate leadership commitment in promoting results-driven CPI efforts.

    (3) Highlight new ideas and encourage innovation among the workforce.

GLOSSARY

G.1. DEFINITIONS.

Agency Intake System. DCMA's official system for submitting improvement ideas and proposals for consideration at the capability board level.

BB. Designation for an individual trained to the team lead level. Highly skilled facilitator of performance improvement concepts. Typically, 160 hours of detailed CPI concepts, in-depth analysis, and statistical knowledge and complex improvement execution skills.

Belt. Refers to a process improvement personnel trained in LSS tools and techniques on a scale similar to martial arts. From introductory level to expert level the scale is generally considered White, Yellow, Orange, Green, and Black with modifiers as needed.

BPR. The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed.

Capability Manager. Executive leader that chairs a designated business CB under the capability framework providing guidance for executing Agency-level improvements.

Certified Belt. A trained belt at a designated level that has typically completed one or more improvements and have their improvement work peer reviewed by senior level Belts as appropriate. An individual is "certified" by the Agency under OSD guidelines as a skilled improvement personnel at the designated level.

Champion. A senior-level executive or manager who has an overarching interest in an improvement's success (also called an executive or improvement sponsor). The champion for a PIE is generally one echelon senior to the process owner, or can elect to serve double-duty as the process owner. They offer assistance, encouragement, and financial resources, and is also able to break down any barriers to improvement success and remove disruptive team members, if required.

Charter. Document that contains overview of project, rationale for effort, objectives and constraints, stakeholders, risks, benefits and other considerations. Typically signed or formally acknowledge with in and organization and can be updated as needed.

Chief Management Office. The principal management office for the Secretary and Deputy Secretary of Defense to optimize the business environment across the Defense Agency. The Head is also referred to as Chief Management Officer.

Component. Term used to describe each of the discrete organizational elements of DCMA whose leader reports directly to the Director.

Component Head. The head of DCMA organization that reports directly to the Director.

CPI Deployment Lead. CPI knowledgeable individual charged with deploying the CPI program within an organization. Typically that person has received champion training or has prior experience as a belt.

CPI Program Manager. Individual appointed to lead the CPI program activities and ensure execution of the Agency's CPI program.

Data Science. A multi-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data in various forms, both structured and unstructured.

DMADV. Design for Six Sigma gated process creation method that employs requirements determination, design and verification activities. It is used when no prior process or product exists and denotes utilizing DMADV phases of the improvement.

DMAIC. Gated review process improvement method that is employed for sizable improvements. The individual phases refer to as DMAIC which describes the type of improvement actions taken for an effort that updates an existing process.

GB. Designation for an individual trained to the team lead level. Skilled facilitator level of process improvement lean six sigma concepts. Typically 40 hours of key concepts, in-depth knowledge, and improvement execution skills.

Key Performance Indicator. A measurable value that demonstrates how effectively a process is achieving key objectives, inputs or outputs.

KM. The systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge. DoD Components ensure compliance with Enterprise Service Management Framework in accordance with DoDI 8440.01, "Information Technology Service Management."

KM Structure. The collection of tools, applications, software, and hardware utilized to collect store and process data and information within an organization. Examples include but are not limited to, websites, community interaction tools, SharePoint, specialized workload tools and file repositories.

LEAN. Branded name referring to the methodology focused on work flow improvement, customer value, error reductions and eliminating process waste.

MBB. Highly skilled BB with typically 5 years of experience. Possesses an additional 90 hours of training to develop and deliver CPI training, mentoring, and improvement portfolio management at a high organizational level.

Methodology. A body of methods, rules, and postulates employed by a discipline; a particular procedure or set of procedures.

Modeling. To depict a physical, mathematical, or otherwise logical representation of a system, entity, phenomenon, or process.

Orange Belt. Designation for informal learn as you go using practical problem solving methodology and improvement documentation using a single page format. Allows work leads to implement improvement activities and actions without formal training.

Outcome. Level of organizational performance or achievement due to a high level process, product or service provided. Outcome measures are typically indicators of organizational level effectiveness.

PIE. Effort with defined beginning and end in time, and therefore defined scope and resources undertaken to create a unique product, service or result. Described collectively and inclusively as a project, initiative, business reengineering, working group and or focused improvement activity.

PIO. Skilled operational analyst that serves as the key continuous representative and clearinghouse for PIE and training compliance for their organization.

Portfolio of Improvements. A set of improvement proposals, improvement, linked sub-improvement managed synergistically to achieve operational performance goals and strategic objectives.

PPSM. Standardized approach to define a problem; understand performance gaps, set improvement targets, identify root causes, chose countermeasures and implement. Documents a concise and common format for presentation of data, information and improvement facts. Provides an easy to understand eight step common improvement structure on a single A3 paper sized (11.7 inches by 16.5 inches) format.

Process Owner. The individual(s) responsible for the entire process being improved (end-to-end), as well as the implementation of all approved process changes. The process owner meets with the Belt and the team as needed and supports the team by creating an environment that enables the necessary changes to be made on time and within budget. Additionally, the process owner actively supports the improvement, empowers the team to collect data and conduct pilots, and formally signs off on improvement reviews.

ROI. The ratio between the net values in dollars returned/avoided by the cost in dollars of the effort (financial). Non-financial return on investment is typically labelled as achieving business benefits resulting from actions, expenses or decisions and are typically measured against organizational key performance indicators and outcomes.

Simulation. A method for implementing a model over time. Also, a technique for testing, analysis, or training in which real-world systems are used, or where real-world and conceptual systems are reproduced by a model.

Six Sigma. A disciplined, data-driven methodology for process improvement that focuses on satisfying customer requirements by reducing and controlling process variation.

Theory of Constraints. A systematic approach to optimize resource utilization by identifying, exploiting, subordinating, elevating, and reassessing constraints in the process. A constraint is any resource whose capacity is less than the demand placed upon it. Theory of constraints attacks constraints and barriers (a restriction or other block to increases in output).

White Belt. Designation for an individual trained to the introductory level of performance improvement LSS concepts. Typically 2 hours of key concepts, high-level knowledge and introductory skills.

Yellow Belt. Designation for an individual trained to the robust team member level of performance improvement LSS concepts. Typically 10 to 15 hours of key concepts, practical project knowledge and intermediate skills.

GLOSSARY

G.2. ACRONYMS.

BB	Black Belt
BPR	Business Process Reengineering
CB	Capability Board
CMO	Contract Management Office
CPI	Continuous Process Improvement
DMADV	Define-Measure-Analyze-Design-Verify
DMAIC	Define-Measure-Analyze-Improve-Control
DoDD	DoD Directive
DoDI	DoD Instruction
GB	Green Belt
KM	Knowledge Management
IAW	in accordance with
LSS	LEAN Six Sigma
MBB	Master Black Belt
PIE	Process Improvement Effort
PIO	Performance Improvement Officer
PPSM	Practical Problem Solving Method
RIE	Rapid Improvement Event
ROI	Return on Investment

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REFERENCES

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