



DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
2300 E STREET NW
WASHINGTON DC 20372-5300

IN REPLY REFER TO
BUMEDINST 5220.5
BUMED-M09B4
7 Apr 2011

BUMED INSTRUCTION 5220.5

From: Chief, Bureau of Medicine and Surgery

Subj: NAVY MEDICINE CONTINUOUS PROCESS IMPROVEMENT/LEAN SIX SIGMA

Ref: (a) through (n), see enclosure (1)

Encl: (1) References
(2) Definitions
(3) Navy Medicine Continuous Process Improvement/Lean Six Sigma Business Rules
(4) Navy Medicine Continuous Process Improvement/Lean Six Sigma Metrics
(5) Acronyms

1. Purpose. Per the authority in references (a) through (n), listed in enclosure (1), this instruction:

a. Establishes policy and provides guidance to institutionalize and fully implement Continuous Process Improvement (CPI)/Lean Six Sigma (LSS) throughout Navy Medicine (NAVMED) in alignment with the Department of Defense (DoD) and Department of the Navy (DON).

b. Recognizes CPI/LSS as an essential approach for improving organizational performance and achieving strategic and operational priorities at all levels of the enterprise.

2. Cancellation. BUMED memo 5220, Ser M09B4/09UN093000252 of 21 Apr 2009, Navy Medicine Continuous Process Improvement/Lean Six Sigma Guidance; BUMED memo 5220, Ser M09B4/E08UN093-000757 of 21 Nov 2008, Continuous Process Improvement Management System (CPIMS) Deployment and Utilization.

3. Applicability and Scope. All NAVMED commands and activities will integrate planning and performance improvement initiatives with CPI/LSS methodologies and tools.

4. Definitions. Listed in enclosure (2).

5. Background

a. References (a) through (n) have established CPI/LSS as the DON and NAVMED's primary process improvement methodology, following proven success in DoD agencies and throughout the public sector. DON has implemented sustaining measures for CPI/LSS including identification of personnel codes to readily identify Green Belt (GB) practitioners within the active duty enlisted and officer communities. Similar codes are under development for active duty Black Belt (BB) practitioners.

b. Prior to 2006, NAVMED utilized a variety of process improvement tools and methodologies to improve clinical and business processes, including Total Quality Management, and Find, Organize, Clarify, Understand, Select-Plan, Do, Check, Act (FOCUS-PDCA). While performance improvements were achieved, it was recognized that more analytic, disciplined, and data-driven methodologies were needed for breakthrough improvements across the organization. Consequently, NAVMED adopted CPI/LSS as the principal problem-solving methodology. In 2006, the Bureau of Medicine and Surgery (BUMED) provided Lean Six Sigma Awareness Training to NAVMED Flag Officers and Senior Executive Service (SES) individuals. The training highlighted leadership's challenges and support for NAVMED's dual mission of warfighter readiness and health care delivery. This was followed by more in-depth training for commanding officers, executive officers, senior civilian leadership, and command enlisted leaders. In late 2006, selected candidates from each of the NAVMED Region Commands began training as CPI/LSS practitioners, specifically BBs and GBs.

c. Since 2006, ongoing training has been conducted at leadership and practitioner levels, ensuring utilization of LSS and Theory of Constraints (TOC) tools throughout the organization to identify opportunities for improvement and develop leveraged interventions that can be sustained and shared throughout NAVMED.

6. Discussion

a. CPI/LSS has been adopted in manufacturing, business, and service-oriented industries, including health care in for-profit, non-profit, and public sectors. It complements well established and accepted performance improvement methodologies such as those adopted by Patient Safety and Risk Management to satisfy Joint Commission requirements for clinical quality, Root Cause Analysis (RCA), Failure Mode Effects Analysis (FMEA), and advanced business analytics and modeling. Each of these methods can be found in LSS events, and their complementary approach demonstrates applicability in clinical quality, as well as business-focused activities.

b. CPI/LSS provides a logical progression in maturing the organizational approach to process improvement at all levels. At the strategic level, CPI/LSS aligns NAVMED with its customer base and delivers real improvements by providing the foundation for standardization, alignment, and streamlining of processes required to deliver NAVMED's Strategic Goals, including the qualifying and quantifying of benefits attained. At the operational level, it provides product and service attributes within customer specifications and dramatically reduces process variation and causes of defects or errors. This will improve business, workforce, and clinical processes resulting in a Lean Enterprise.

c. NAVMED delivers World Class Care, anytime and anywhere. Attentive stewardship of organizational resources is required to fulfill and sustain health care and business operations. This must be accomplished in spite of fiscal pressures and challenges. In successful CPI/LSS deployments where projects are identified and supported by leadership, aligned to the organization's strategy, and resourced with capable belt practitioners, significant return on investment (ROI) is expected and attained. For CPI/LSS execution to be effective, it needs to

become an intrinsic way of doing business in order to foster a culture that is focused on quality, safety, customer satisfaction, and cost-readiness. This requires active engagement and participation from all levels of leadership.

7. Policy

a. Senior leaders shall serve as executive champions for their organization's CPI/LSS activities. They shall implement the standards and practices outlined and identify, prioritize, and execute CPI projects in alignment with DON, Military Health System (MHS) and NAVMED Strategic Goals.

b. High Level Value Stream Analysis (VSA) shall be conducted to identify and prioritize areas for needed improvement. Facilitated Executive Planning Sessions (EPSs) will also be used to engage leadership in strategic project identification as addressed in enclosure (3).

c. Improvement opportunities shall focus on issues of priority relating to quality, safety, and business processes. The ROI, both qualitative and quantitative, should be considered to ensure that leadership is embarking on projects that maximize the use of scarce resources.

d. The CPI/LSS program and project ROI (financial and mission benefits) shall be measured and tracked using metrics identified in enclosure (4).

e. NAVMED comptrollers will review and oversee the LSS/CPI financial benefit validation process. Comptrollers will function as advisors to LSS/CPI project team on financial matters. Comptrollers will provide or arrange for training and standardization for calculating and validating financial benefits and ROI. Comptrollers will also coordinate actions with project champions, Master Black Belts (MBBs) and Command Lead Belts on expected and actual project ROI calculations. Financial benefits shall be reviewed by the Budget Division (BUMED-M83) prior to reporting in Continuous Process Improvement Management System (CPIMS), and financial benefits will be retained by Deputy Chief, Resource Management/ Comptroller (BUMED-M8).

f. NAVMED personnel trained as Black Belts shall complete their assigned training project and two to four projects per year based on a 0.5 to 1.0 full-time equivalent (FTE) utilization. Appropriate utilization of a Black Belt resource should generate measurable financial and mission benefits yielding at least a two to one return on the training and salary investment. Special consideration is afforded to comptrollers to attend training without the accompanying project completion expectation due to their responsibility for validation of financial benefits.

g. GBs shall complete their assigned training project and may complete one to three rapid improvement events or projects per year based on a 0.1 to 0.25 FTE utilization.

h. All personnel participating in CPI/LSS activities that demonstrate measurable improvements in processes and add value to the customer will be appropriately recognized using the personnel evaluation and award systems.

8. Responsibilities

a. Chief, BUMED shall:

(1) Develop and publish CPI/LSS policy, aligning with Secretary of the Navy (SECNAV) and DoD guidance.

(2) Utilize SECNAV-directed standardized reporting systems throughout NAVMED and complete reports as required.

b. Deputy Chief, Resource Management/Comptroller (BUMED-M8) shall:

(1) Review estimated and actual benefits through CPI/LSS and report benefits attained per procedures outlined in reference (d).

(2) Identify regional independent reviewers (IRs) to review and validate financial benefits for CPI/LSS projects.

(3) Establish and publish business rules on financial validation of benefits specific to NAVMED, as identified in enclosure (3).

(4) Coordinate with NAVMED Region Commanders on assignment of CPI/LSS practitioners on BUMED-M8 sponsored health care process improvement initiatives to maximize local adoption and sustainment.

c. Deputy Chief, Information Management (IM)/Information Technology (IT) (BUMED-M6) shall ensure approved IM/IT software and capability is in place to support CPI/LSS program and is standardized with DON.

d. Director, Office of Strategy Management (OSM) (BUMED-M09B4) shall:

(1) Serve as Principle Advisor to the Deputy Chief, BUMED (BUMED-M09) on issues relating to CPI/LSS and its deployment throughout Budget Submitting Office (BSO)-18.

(2) Formulate policy recommendations and direct CPI/LSS program strategies, objectives, metrics, reporting, and evaluation requirements.

(3) Serve as the NAVMED CPI/LSS Deployment Champion and Executive Sponsor to the NAVMED LSS CPI Advisory Board (CPIAB).

e. NAVMED LSS CPIAB shall:

(1) Provide CPI/LSS subject matter expertise and guidance on strategies, tools, and product development for program effectiveness.

(2) Evaluate project portfolios and coordinate with BUMED Codes, NAVMED Region Commanders, and Navy Medicine Support Command (NMSC) CPI/LSS Program Management Office (PMO) for BSO-18 projects and replication of solutions.

f. NAVMED Region Commanders shall:

(1) Identify priorities for process improvement aligned to Regional Business Plans and NAVMED Strategic Goals for chartered CPI/LSS project activity. The NAVMED Region Commanders are responsible for the CPI/LSS project activity execution in their area of responsibility (AOR).

(2) Direct replication of solutions within their AOR and submit validated “best practices” to the appropriate BUMED code or Corporate Executive Board for policy consideration to standardize practice across BSO-18.

(3) Implement Echelon III level CPI/LSS business rules outlined in enclosure (3) to integrate the tools and methods of CPI/LSS with business and clinical improvement initiatives.

(4) Appoint a primary and alternate regional IR to review and validate financial benefits associated with CPI/LSS Projects as outlined in reference (d) and enclosure (3). Ensure regional IR coordinates reporting of CPI/LSS financial benefits information with BUMED-M83, Budget Division, per reference (h).

(5) Staff the Regional Black Belt (RBB) and MBB positions with a minimum of one RBB and one MBB.

g. Commander, NMSC shall oversee the CPI/LSS PMO.

h. Director, NMSC CPI/LSS PMO shall:

(1) Identify requirements to develop and maintain a cadre of trained and experienced champions, GBs, BBs, and MBBs.

(2) Evaluate and assist the NAVMED Regions in providing cost-effective CPI/LSS training programs and delivery options.

(3) Provide program management functions to implement, evaluate, and support the CPI/LSS effort across BSO-18.

(4) Ensure development and implementation of tools and products, CPI/LSS Web site, communications plan, training plan, resource plan, and periodic assessment, analysis, and reporting activities.

i. Commanders, Commanding Officers, and Officers in Charge of NAVMED Facilities shall:

(1) Identify priorities for process improvement aligned to command, region, and NAVMED Strategic Goals for chartered CPI/LSS project activity.

(2) Identify active duty and civil service candidates for CPI/LSS training exhibiting the necessary aptitude, skills, and availability to perform follow-on practitioner duties as described in enclosure (3).

(3) Implement CPI/LSS business rules outlined in enclosure (3) to integrate the tools and methods of CPI/LSS with business and clinical improvement initiatives and to meet minimum expectations to utilize trained belt practitioners and project champions for CPI/LSS project activity.

(4) Appoint a minimum of two BBs for medical centers, one BB for family practice teaching hospitals, and one GB for other naval hospitals and naval health clinics. Other NAVMED commands are expected to work with the RBB and/or MBB to determine the appropriate number and level of belt practitioners for their command.

(5) Appoint a Financial Subject Matter Expert (FSME) for project activity and assistance with identifying financial benefits associated with CPI/LSS Projects as outlined in reference (d).

(6) Establish expectations/objectives in the personnel evaluation and award systems for participating in CPI/LSS activities.

(7) Ensure all staff members complete White Belt Training.

9. Miscellaneous

a. Enclosure (5) provides a complete list of acronyms cited in this instruction.

b. Additional resources for the CPI/LSS Program can be found on the LSS Community Site

(1) Please use the following Web site link for new BUMED SharePoint users: <https://esportal.med.navy.mil/bumed/lsspmo/Pages/default.aspx>. This will require new users to register their CAC certificates to access the LSS Community Site.

(2) Please use the following Web site link for existing BUMED SharePoint users: <https://es.med.navy.mil/bumed/lsspmo/Pages/default.aspx>.

10. Form and Reports

a. NAVMED 5220/1 (2-2011), Lean Six Sigma Training Nomination and CPI/LSS Computer Software Request is available electronically at: <https://navalforms.daps.dla.mil/web/public/home>.

b. Reports required by this instruction shall be generated by data entered into CPIMS. The use of CPIMS is required by reference (i).

A handwritten signature in black ink that reads "A. M. Robinson, Jr." in a cursive style.

A. M. ROBINSON, JR.

Distribution is electronic only via the Navy Medicine Web Site at:
<http://www.med.navy.mil/directives/Pages/default.aspx>

REFERENCES

- (a) SECNAV memo, Transformation through Lean Six Sigma of 3 May 2006
- (b) BUMED memo on Lean Six Sigma of 26 Oct 2006
- (c) Lean Six Sigma Infrastructure and Deployment within Navy Medicine, Concept of Operations of 28 Nov 2006
- (d) SECNAVINST 5220.13
- (e) DoDDIR 5010.42 of 15 May 2008
- (f) DoD Continuous Process Improvement/Lean Six Sigma Transformation Guidebook, Revision 1, Jul 2008
- (g) DoD Continuous Process Improvement/Lean Six Sigma Program Office memo 01/2009, Body of Knowledge and Certification Requirements of 24 Feb 2009
- (h) BUMED Financial Policy Directive 09-02 of 3 Apr 2009
- (i) SECNAVINST 5220.14
- (j) DoDINST 5010.43 of 17 Jul 2009
- (k) BUMED Surgeon General Guidance for 2010, Nov 2009
- (l) SECDEF memo OSD 06410-10, Improving Department of Defense Business Operations of 4 Jun 2010
- (m) NAVPERS 18068F, Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards, Volume 2, Navy Enlisted Qualifications, Jan 2011
- (n) DON Navy Manpower Analysis Center memo Ser 10/198, Establishment of Additional Qualification Designation (AQD) Code 2C1 Continuous Process Improvement/Lean Six Sigma Green Belt Certified Officer, 7 Sep 2010

DEFINITIONS

Note: These terms and definitions are for the purpose of this instruction

1. Continuous Process Improvement (CPI). A comprehensive philosophy of operations that is built around the concept that there are always ways in which a process can be improved to better meet the needs of the customer and that an organization should constantly strive to make those improvements. It is a strategic approach for improving reliability (of outputs and products), cycle time (shorter process times), cost (less resource consumption), quality, and productivity through the use of contemporary continuous improvement tools and methodologies.
2. Lean. A systematic approach using a set of tools and techniques that focus on the elimination of waste and non-value added activities while simultaneously improving quality. Value is defined by the customer. The results of Lean include improved cycle times, resource requirements, capacity, and production. Examples of Lean activities in Navy Medicine include Rapid Improvement Events (RIEs), as well as the Value Stream Map/Analysis (VSM/VSA).
3. RIE. A short-term, high intensity effort to address a specific problem. It is also referred to as a Kaizen or Rapid Improvement Workshop.
4. Value Stream. The specific activities required to design, order, and provide a specific product or piece of information, from concept to launch, order to delivery into the hands of the customer. In DoD, a term used to encompass all the planning, execution, products, and services that go into an organization-wide process to create value for the customer.
5. VSM/VSA. A technique used to analyze the flow of materials and information currently required to bring a product or service to a consumer.
6. Six Sigma. A disciplined, systematic, and data driven methodology used to identify and analyze root causes and to eliminate process variations and deficiencies. Six Sigma provides both a methodology and a metric for pursuing near perfection in all processes and defect free quality. An example of a Six Sigma Project Methodology used in Navy Medicine is Define, Measure, Analyze, Improve, and Control (DMAIC), using the phases of DMAIC to address complex problems.
7. Theory of Constraints (TOC). A philosophy and methodology for addressing logical thinking, scheduling and controlling resources, and measuring performance. The philosophy emphasizes that a systems constraint exists in any process and controls the output from the entire process.
8. Lean Enterprise. A business organization that delivers value to its stakeholders, with little or no superfluous consumption of resources (materials, human, capital, time, physical plant, equipment, information, or energy).

NAVY MEDICINE CONTINUOUS PROCESS IMPROVEMENT/
LEAN SIX SIGMA BUSINESS RULES

1. Governance and Communication

a. The Bureau of Medicine and Surgery (BUMED) Office of Strategy Management (OSM) Director serves as the designated Deployment Champion for the Continuous Process Improvement (CPI)/Lean Six Sigma (LSS) Program at Navy Medicine (NAVMED) and is responsible for developing CPI/LSS policy for the organization.

b. The NAVMED LSS CPI Advisory Board (CPIAB) provides oversight and guidance for the NAVMED CPI/LSS Program as follows:

(1) Consists of the BUMED Lead Black Belt (BB) from OSM as Chair and Regional BBs and Master Black Belts (MBBs) and technical advisors/subject matter experts as members.

(2) Serves in an advisory capacity to provide policy and practical application recommendations for the integration of LSS as a CPI methodology to improve strategic and operational performance across the Budget Submitting Office (BSO)-18. Scope of duties include:

(a) Formulates policy recommendations to BUMED via Director, OSM based upon data collection, analysis and evaluation, and documented best practices.

(b) Reviews and evaluates LSS project portfolio and program measures of effectiveness (enclosure (4)).

(c) Provides feedback, technical expertise, and recommendations to Director, OSM, LSS Program Management Office (PMO), and Regional LSS program managers for improving implementation, coordination, and application encompassing infrastructure development, integration of CPI methodologies to optimize benefit, and project Return on Investment (ROI), strategic alignment, project selection and improvement replication, and key performance measures.

(3) Communicates both vertically and across the regions as described in Figure 1.

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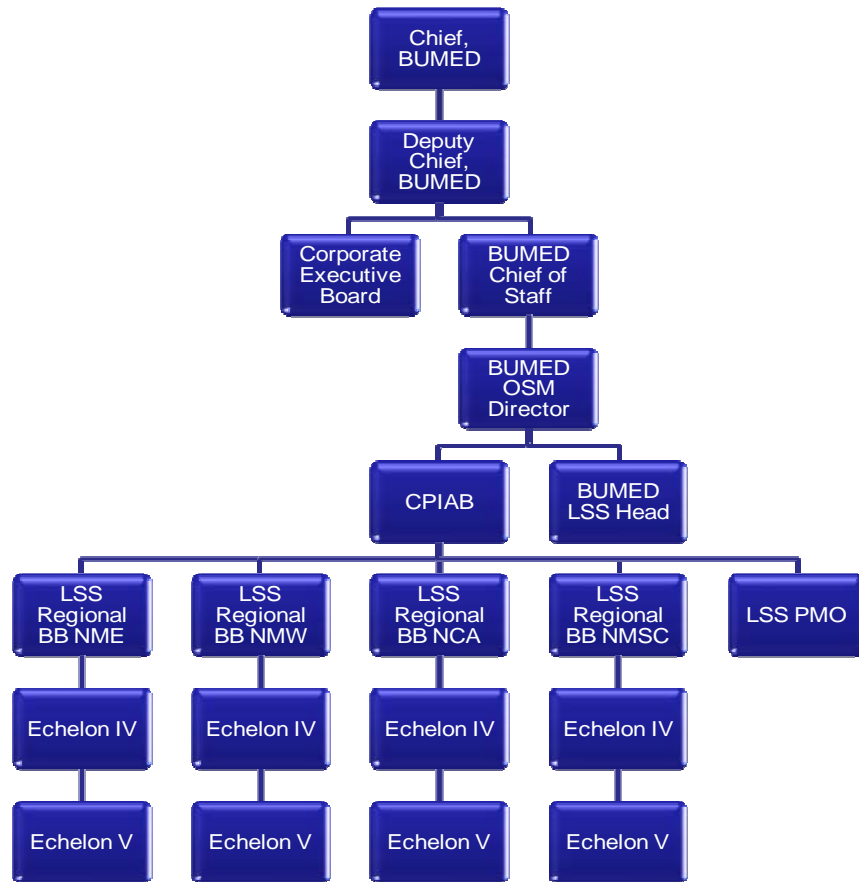


Figure 1. CPI/LSS Communication Flow

c. The CPI/LSS PMO at the Navy Medical Support Command (NMSC) supports execution of guidance and policy through the following activities:

- (1) Executing contract and budget plan of CPI/LSS resources.
- (2) Maintaining position descriptions for belt practitioners.
- (3) Maintaining and publishing business rules and Standard Operating Procedures (SOPs) for processes supporting the program.
- (4) Providing tools/product development.
- (5) Coordinating CPI/LSS training.
- (6) Reviewing CPI/LSS Green Belt (GB) and BB curriculums from outside NAVMED and conducting gap analyses.

(7) Establishing requirements for professional certification of belt practitioners and maintaining certification rosters.

(8) Obtaining/renewing licenses for Information Technology (IT)/Information Management (IM) solutions that support the CPI/LSS Program.

(9) Maintaining tools/templates for CPI/LSS and the CPI Management System (CPIMS).

(10) Communicating and marketing CPI/LSS.

(11) Conducting annual program assessment.

(12) Collating, preparing, and providing analysis of NAVMED CPI/LSS Program metrics and reports.

(13) Maintaining and updating all documents to support CPI/LSS Program, including but not limited to program Web site, CPI/LSS Program overview briefs, program business rules, and Secretary of the Navy (SECNAV)/Department of the Navy (DON) reports.

2. Organizational Assessment. At a minimum, the maturity of the NAVMED CPI/LSS Program will be assessed at the enterprise level annually. Assessments will be conducted by the NMSC CPI/LSS PMO using an agreed upon survey instrument. Results of such surveys will be used to determine recommendations for enhancing the maturity of the program and optimizing CPI/LSS for NAVMED. Additionally, Echelon III and/or subordinate commands may conduct self-assessments of their CPI/LSS progress as they deem appropriate.

3. CPI/LSS Roles and Responsibilities

a. Deployment Champion. Executive who leads CPI/LSS implementation and sustainment to ensure alignment with corporate strategy.

b. Project Champion. Champion-trained business leader who provides senior management guidance, resources, and leadership on a CPI/LSS initiative.

c. Process Owner. Manager who is directly responsible for a process. He or she owns the results and must sustain improvements. He or she validates mission benefits.

d. Financial Roles

(1) Independent Reviewer (IR). Separate from the project team. The IR is responsible for reviewing and validating project estimates and actual financial benefits. Additionally the IR is responsible for locking the financial metrics.

(2) Financial Subject Matter Expert (FSME). Part-time member of the project team who is appointed to assist with calculation, categorization, and identify Budget Line Item (BLI) or Budget Activity Group (BAG) financial information. He or she will also provide appropriation type and identify how a process is funded by types of expenses.

e. Practitioner Roles

(1) Master Black Belts (MBBs). CPI/LSS experts responsible for CPI/LSS strategy, training, mentoring, deployment, and results.

(2) Regional Black Belts (RBBs). CPI/LSS practitioners responsible for CPI/LSS deployment and results for the NAVMED Region Commander.

(3) Command Belts. CPI/LSS practitioners who are responsible for CPI/LSS deployment and results for their commander, commanding officer, and officer in charge including command reports and administrative support for CPI/LSS. The Command Belt is typically a BB except in smaller commands which may designate a lead GB as Command Belt.

(4) Black Belts (BBs). CPI/LSS practitioners who lead improvement teams, work projects, and mentor GBs.

(5) Green Belts (GBs). Practitioners who apply CPI/LSS skills to do projects in their job areas. Green Belts typically lead RIEs and may also support BBs who are completing projects.

f. Team Members. Individuals who receive focused CPI/LSS training and support projects in their areas.

4. Improvement Opportunity Identification and Selection. An important aspect of successful CPI/LSS institutionalization is the selection of projects that have strategic value to the organization.

a. NAVMED identifies and communicates organizational mission, strategic priorities, and goals from top to bottom within the enterprise. These priorities serve as the foundation for CPI/LSS opportunities and project selection.

b. In conjunction with the strategic planning process, commands shall evaluate their CPI/LSS improvement opportunities. CPI/LSS activities should be identified and sponsored by the command executive leadership governing body.

c. The RBBs and MBBs provide coordination of and support for Executive Planning Sessions (EPSs) to identify and prioritize CPI/LSS opportunities.

d. Commands are expected to complete CPI/LSS activity with quantified benefits commensurate with their size and belt staffing.

e. At the enterprise level, the NAVMED LSS CPIAB shall evaluate completed improvement efforts and place high priority on replication of appropriate projects throughout the enterprise.

f. All process improvement activity shall be recorded in CPIMS according to the business rules and SOPs maintained by the NMSC CPI/LSS PMO.

5. Belt Identification and Selection. Another important aspect of successful CPI/LSS Programs is selecting the right candidates to assume the GB and BB roles and responsibilities.

a. Successful belt practitioners possess an interest in CPI/LSS coupled with advanced communication skills. For all belts, process orientation, inclination toward data analysis and an understanding of customer orientation/focus are integral qualities.

b. BBs possess technical aptitude, ability to influence, business acumen, and advanced problem-solving skills. The ability to train and mentor others are critical skills. BB candidates should be chosen from those considered to be future leaders of the organization.

c. Selection of candidates for training should take into consideration the optimal blend of civilian and military belts at the command, as well as time availability for each belt to complete expected process improvement activity.

d. Belt training is an investment, particularly for BBs, and it is therefore important to select candidates who are likely to complete process improvement activities as outlined in the expectations above.

6. Expectations of Belt Practitioners

a. Report to training with a project charter that has been reviewed by Regional/Command BB and signed by the Project Sponsor.

b. Successfully complete required training and initial project.

c. Complete projects as set out in the policy.

d. Maintain competence in specialty in preparation for next assignment and/or return to full time non-CPI/LSS position.

e. CPI/LSS Belt expertise should be identified in transfer or return to full time non-CPI/LSS position. Recognizing their ability will assist in their being utilized as a CPI/LSS resource as permitted by next assignment.

7. BB/GB Training. All CPI/LSS training will adhere to the established DON Bodies of Knowledge (BoKs).

a. NAVMED 5220/1, Lean Six Sigma Training Nomination and CPI/LSS Computer Software Request will be completed by individuals requesting LSS/CPI training, as well as the software required to perform their duties as a Champion or LSS/CPI practitioner. Completed forms are then signed by the individual's leadership and routed to the Regional BB/MBB for signature. The signed documented is then routed to the NMSC PMO training and software point of contact for action.

b. Individuals receiving training from a variety of sources outside of DON such as college, on-line, or industry courses will receive acceptance of the training if their course contains the elements delineated in the applicable DON BoK.

c. Individuals who have received training outside the DON courses will submit their curriculum/tests to the NMSC CPI/LSS PMO for the curriculum to be evaluated for equivalency and any gap in training requirements identified.

d. Gaps in training requirements will need to be met prior to endorsement for training certification.

8. Certification. Individuals applying for GB or BB certification will submit required training and project materials to the NMSC CPI/LSS PMO for review. Certification will then be awarded based upon successful achievement of established criteria maintained by the NMSC LSS/CPI PMO.

9. Replication

a. Roles and Responsibilities

(1) Regional BBs/MBBs identify and implement replication opportunities within their region with the support of leadership.

(2) The NAVMED LSS CPIAB reviews, selects, and implements opportunities for inter-region and enterprise replication.

b. Process

(1) Projects identified as a Replication Candidate will be tagged as such in CPIMS by belt practitioners.

(2) Projects will be reviewed by Regional BBs and MBs and reviewed for replication within a Region.

(3) Projects will be reviewed by NAVMED LSS CPIAB and considered for replication across the enterprise.

(4) Support for replication activities will be provided by the NMSC LSS/CPI PMO as needed.

(5) BUMED OSM will coordinate with BUMED codes, clinical advisory boards, and executive workgroups to develop policy if indicated.

c. Definitions

(1) Project Replication involves chartering teams to repeat or replicate a project done at another site. The teams would meet all tollgates required of any project but would employ the same methodology used by the original team with the goal of arriving at the same end point.

(2) Solution Implementation refers to the transfer across the NAVMED Enterprise of a clearly defined process that was the result of a LSS project. Teams may be chartered to implement the new process but LSS tools and tollgates are not required.

10. CPI Software Tools and CPIMS

a. NAVMED projects shall be entered into CPIMS in the templates provided. Specific guidance on the information to be entered is located in the CPIMS SOP maintained by the NMSC CPI/LSS PMO. Examples of projects conducted and entered are as follows:

(1) Six Sigma. Define, Measure, Analyze, Improve, Control (DMAIC).

(2) Lean. Rapid Improvement Event (RIE).

(3) Just Do It (JDI)

(4) Other Process Improvement (OPI)

b. EPSs and Value Stream Analyses (VSAs) shall also be entered into CPIMS using the templates provided.

c. Projects that are generated from an EPS or VSA shall be linked to that EPS or VSA in CPIMS.

d. Data Entry Responsibilities. Data entry into CPIMS is role-based and dependent upon an individual's position on a project team. Additional responsibilities are expected for individuals who serve in the Command/Regional practitioner positions. Specific guidance on required entries and corresponding timeline based upon an individual's role is located in the CPIMS SOP maintained by the NMSC CPI/LSS PMO available on the NAVMED LSS Community Site, Policies and SOPs Link, SOP Folder, and CPIMS Subfolder.

(1) Please use the following Web site link for new BUMED SharePoint users. (<https://esportal.med.navy.mil/bumed/lsspmo/Pages/default.aspx>). This will require new users to register their CAC certificates in order to access the LSS Community Site

(2) Please use the following Web site link for existing BUMED SharePoint Users: <https://es.med.navy.mil/bumed/lsspmo/Pages/default.aspx>.

e. Data Entry Timelines. Projects must be entered into CPIMS within 1 week of charter signature. Specific guidance on required entries and corresponding timeline based upon project type or improvement activity performed is located in the CPIMS SOP maintained by the NMSC CPI/LSS PMO. CPIMS is the official reporting system for NAVMED CPI/LSS projects. It is imperative that the system be kept up-to-date to accurately report project activity and benefits attained.

f. CPIMS, Minitab, and iGrafx users will submit NAVMED 5220/1. Completed forms are then signed by the individual's leadership and routed to the Regional BB/MBB for signature. The signed documented is then routed to the NMSC PMO training and software point of contact for action. An electronic copy of this form will be maintained at the NMSC CPI/LSS PMO.

g. Minitab and iGrafx licenses are issued by and maintained in the NMSC CPI/LSS PMO by the appointed Command License Custodian.

11. Financial Validation

a. Roles and Responsibilities

(1) Project Lead (Belt). Responsible for the calculation, categorization, and reporting into CPIMS of all mission and financial benefits associated with the LSS project through the Control Tollgate. Belts may also be called upon to assist project sponsors/champions in determining actual financial and mission benefit results during the validation phase of the project.

(2) Process Owner. Accountable for project results. He or she is responsible for identifying the proper subject matter experts, including an FSME to assist the project lead/belt and their team in the calculation and categorization of financial benefits, and in determining the appropriate unit of measure for mission benefits. The Process Owner is responsible for the identification and communication of project results with the customers and leadership. He or she is also responsible and accountable for coordinating expected benefits of the process and for ensuring financial benefits of Navy appropriated money are reported in the Program Budget Information System (PBIS) upon project closeout.

(3) IR. Separate from the project team, typically a Comptroller or Comptroller representative, trained to review and validate project financial results prior to the Control Tollgate to ensure the validity of the estimated financial results of the project. Additionally, the

IR will perform the financial validation of actual cost savings or cost avoidances resulting from the project at project close-out. The IR is responsible for inputting the PBIS issue number in CPIMS for any cost savings or cost avoidance with Navy appropriated money. He or she is responsible and accountable for coordinating expected benefits of the process and for ensuring benefits are reported upon project closeout. The IR will coordinate with BUMED-M83 before locking the initial and final financial benefit metric estimate.

b. Process

(1) Locking the Financial Metrics. The IR will lock the Benefits Documentation (BD) when the project finishes the Control/Post-Event for Estimates and Validate phase for Actuals.

(2) Unlocking the Financial Metrics. The Project Belt will document the rationale behind the adjustment(s) in the BD. The Project Belt will then notify the IR with an explanation of why the metrics need to be “unlocked”. Within 2 business days of notification, the IR will unlock the metrics and notify the Project Belt. Once the Belt has made the necessary adjustment(s), he or she will notify the IR requesting that the metrics be re-reviewed and re-locked.

(3) The Project Belt will notify the IR when the project is ready for financial review.

(4) Belts cannot delete metrics.

(5) All figures will be calculated on a fiscal year basis.

(6) Financial benefits must be tracked to Program Elements (PEs)/BLI for Navy funding or BAG for Defense Health Program (DHP) and linked by the project number that generated the benefits.

(7) If Labor is saved, the associated non-labor costs must be accounted for.

(8) Financial benefits generated from anticipated increased Prospective Payment System (PPS) earnings and Third Party Collections (TPC) shall be categorized as cost avoidance. For PPS financial benefits to be realized there must be an increase in the workload metric that drives the PPS earnings. Validation of actual benefits for PPS must be supported by documented workload metrics that exceed the start point within the functional area. Financial benefits cannot be claimed for a project that causes a funding deficit (unfunded requirement) within the organization. Claiming benefits that do not materialize can increase the risk for unfunded issues in a command.

(9) Project close outs must be approved by the Champion after the Control Tollgate. For repeatable processes, 2 to 6 months is an appropriate timeframe for process and financial validation to occur. If a non-repeatable process, then project close out should be scheduled upon completion of the next natural business cycle.

(10) Gate Approver (Command Belt) must ensure all projects have benefits documentation completed and loaded into CPIMS before a Gate Approver can approve the Control/Post-Event Tollgate. Additionally, he or she must ensure all projects have been reviewed by the IR during the Control/Post-Event and Validate Phases and before the project is closed out.

c. All process improvement activity shall be in compliance with the Benefits Validation Process (reference (d)). Additional guidance can be found on the NAVMED LSS Community Site, Policies, and SOPs Link, SOP Folder, Benefits Subfolder.

(1) Please use the following Webs site link for new BUMED SharePoint users: (<https://esportal.med.navy.mil/bumed/lsspmo/Pages/default.aspx>). This will require new users to register their CAC certificates in order to access the LSS Community Site.

(2) Please use the following Web site link for existing BUMED SharePoint Users: <https://es.med.navy.mil/bumed/lsspmo/Pages/default.aspx>.

NAVY MEDICINE CONTINUOUS PROCESS IMPROVEMENT/
LEAN SIX SIGMA METRICS

1. Program Measures of Effectiveness (MOE) reported to the Navy Medicine (NAVMED) Corporate Executive Board and/or the Department of the Navy (DON) are as follows:
 - a. Count of active projects aligned to each strategic goal.
 - b. Average cycle time for completed Lean projects (Rapid Improvement Events).
 - c. Average cycle time for completed Six Sigma (Define, Measure, Analyze, Improve, Control Black Belt) projects.
 - d. Black Belt to Project Ratio.
 - e. Program Return on Investment.
 - f. Validated Mission Benefit.
 - g. Projected Mission Benefit.
 - h. Project Champions percent of Goal.
 - i. Black Belts (Full Time Equivalent) percent of Goal, percent Available.
 - j. Green Belts percent of Goal, percent Available.
 - k. Total Actual Cost Savings (\$) – Navy Appropriations.
 - l. Total Actual Cost Avoidance (\$) – Navy Appropriations.
 - m. Total Actual Cost Savings (\$) – Defense Health Program (DHP) Appropriations.
 - n. Total Actual Cost Avoidance (\$) – DHP Appropriations.
 - o. Count of Completed Projects by Lead Benefit (Financial, Productivity Improvement, Operational, Energy and Environmental, Personnel).
 - p. Estimated Actual Cost Savings (\$) – Navy Appropriations.
 - q. Estimated Actual Cost Avoidance (\$) – Navy Appropriations.
 - r. Estimated Actual Cost Savings (\$) – DHP Appropriations.

- s. Estimated Actual Cost Avoidance (\$) – DHP Appropriations.
 - t. Count of Active Projects by Lead Benefit (Financial, Productivity Improvement, Operational, Energy and Environmental, and Personnel).
 - u. Count of projects generated from Executive Planning Session (Chartered by command executive board).
 - v. Count of projects/ideas in the queue.
2. Project level metrics. Projects should include the following:
- a. Process Capability Metric before/after.
 - b. Project Financial Benefit (if applicable).
 - c. Project Mission Benefit (quantified).
 - d. Critical Process Indicators or Process of Care measures. These are processes/activities that drive the improved outcome; prevention interventions, clinical processes; compliance.
3. Project level metrics should be tied to outcomes. Examples of such outcomes:
- a. Customer satisfaction could be tied to re-enrollment.
 - b. Percent compliance with sterilization of procedural equipment tied to infection rate.

ACRONYMS

AQD	Additional Qualification Designator
AOR	Area of Responsibility
BAG	Budget Activity Group
BB	Black Belt
BD	Benefits Documentation
BLI	Budget Line Item
BoK	Body of Knowledge
BSO	Budget Submitting Office
BUMED	Bureau of Medicine and Surgery
CPI	Continuous Process Improvement
CPIAB	Continuous Process Improvement Advisory Board
CPIMS	Continuous Process Improvement Management System
DHP	Defense Health Program
DMAIC	Define, Measure, Analyze, Improve, Control
DoD	Department of Defense
DON	Department of the Navy
EPS	Executive Planning Session
FMEA	Failure Mode Effects Analysis
FOCUS-PDCA	Find, Organize, Clarify, Understand, Select – Plan, Do, Check, Act
FSME	Financial Subject Matter Expert
FTE	Full Time Equivalent
GB	Green Belt
IM	Information Management
IR	Independent Reviewer
IT	Information Technology
JDI	Just Do It
LSS	Lean Six Sigma
MBB	Master Black Belt
MHS	Military Health System
MOE	Measures of Effectiveness
NAVMED	Navy Medicine
NAVPERS	Navy Personnel
NMSC	Navy Medicine Support Command
OPI	Other Process Improvement
OSD	Office of the Secretary of Defense

OSM	Office of Strategy Management
PBIS	Program Budget Information System
PE	Program Element
PMO	Program Management Office
PPS	Prospective Payment System
RBB	Regional Black Belt
RCA	Root Cause Analysis
RIE	Rapid Improvement Event
ROI	Return on Investment
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SES	Senior Executive Service
SOP	Standard Operating Procedure
TOC	Theory of Constraints
TPC	Third Party Collections
VSA	Value Stream Analysis
VSM	Value Stream Map