

Part 407 – Workload Management Process Improvement

Subpart C – NRCS Continuous Process Improvement (CPI) Program

407.0 Purpose

The purpose of this policy is to establish and assign responsibilities for CPI as an approach to assess and improve the efficiency and effectiveness of NRCS processes in support of the agency's conservation mission.

407.1 References

The following laws, Executive orders, and other directives apply to this policy:

- (1) [Clinger-Cohen Act of 1996](#).—This landmark information management reform requires agencies to determine whether their administrative and mission-related business processes should be improved before investing in major information systems to support them. In addition, the Office of Management and Budget (OMB) has reinforced this reform by requiring that investments in major information systems proposed for funding in the President's budget should, among other things, support work processes that have been simplified or otherwise redesigned to reduce costs and improve performance.
- (2) [Government Performance and Results Modernization Act of 2010](#).—Provides the framework for defining and measuring how well an agency is meeting its mission goals.
- (3) [Chief Financial Officers Act of 1990](#).—Addresses the need for agencies to have accurate financial information to understand and manage their operations (**Reference:** [GAO, special publication](#)).
- (4) [H.R. 5064 – 113th Congress \(2013-2014\) – Lean and Responsive Government Act](#).—Requires the head of each Federal agency to describe the implementation of continuous process improvement in the agency's periodic update on agency performance. Defines "CPI" as a management methodology (commonly referred to as "Lean Six Sigma") that combines tools to improve process speed, reduce waste, and incorporate requirements with data driven project analysis to provide products and services with improved quality at lower cost.
- (5) [Federal Information Technology Acquisition Reform Act \(FITARA\)](#).—Passed by Congress in December 2014, expands Clinger-Cohen Act powers with additional CIO authorities to improve IT management and coordination. The act is generally aimed at the agency (Department) level with intentional delegation authority. This law represents the first major overhaul of Federal information Technology (IT) in almost 20 years requiring CIO oversight and approval for—
 - All IT planning, programming, budgeting, execution, management, governance.
 - All IT contracts, reprogramming of IT funds, hiring of IT personnel.

407.2 Definitions

A. Cost Avoidance.—All cost reductions that are not savings, including, but not limited to improvements in efficiency, productivity, cycle time, timeliness, and resource utilization.

- B. **Cost Savings.**—Refers to money saved that will not be programmed in the future. Cost savings are defined as cost reductions that enable a manager to remove programmed or budgeted funds and apply them to other uses. In this definition, savings is viewed from an enterprise perspective: an initiative that reduces costs in one organization or appropriation, but increases cost elsewhere, represents savings only to the extent that there is a net cost reduction that can be applied to other uses.
- C. **CPI (Continuous Process Improvement).**—A comprehensive philosophy based on methodologies that rely on a collaborative team effort to improve performance by systematically reducing waste and variation.
- D. **DMAIC.**—Define, measure, analyze, improve, and control.
- E. **Effectiveness.**—The capability of producing the desired quality and outcomes.
- F. **Efficiency.**—To accomplish a task or meet an objective with the least waste and effort.
- G. **Productivity.**—A measure of efficiency and effectiveness related to a product or service.
- H. **Value.**—Processes that—
- (1) Are done right the first time.
 - (2) Change the form, fit, or function.
 - (3) Are desired by the customer.
- I. **Nonvalue.**—Any or all of the eight wastes: transportation, inventory, motion, waiting, overproduction, overprocessing, defects, and underutilization of people or resources.
- (1) **Transportation.**—Transporting items or information that is not required to perform the process from one location to another.
 - (2) **Inventory**—Inventory or information that is idle (not being processed).
 - (3) **Motion.**—People, information, or equipment making unnecessary motion due to workspace layout, ergonomic issues, or searching for misplaced items.
 - (4) **Waiting.**—Waiting for the previous step in the process to complete.
 - (5) **Overproduction.**—Producing too much of a product before it is ready to be used.
 - (6) **Overprocessing.**—Performing any activity that is not necessary to produce a functioning product or service.
 - (7) **Defects.**—Products or services that are out of specification that require resources to correct.
 - (8) **Under Utilization of People or Resources.**—Employees and/or resources that are not effectively engaged in the process.
- J. **Resources.**—Funding, people, time, and tools necessary to complete CPI efforts.
- K. **CPI Cadre.**—A group of NRCS employees trained and certified in CPI methodologies capable of forming, training, or leading CPI efforts in support of meeting the agency’s mission.
- L. **Performance.**—Delivering intended outcomes.
- M. **No Business Value Added.**—Steps that add no value, as defined by the general CPI body of knowledge, to the overall process, but cannot be eliminated due to existing laws or policies. For example, Federal laws, OSHA, or safety requirements, etc.
- N. **CPI Team.**—A team staffed with full time CPI practitioners and senior leadership that support NRCS CPI processes.
- O. **Deployment Team.**—The CPI cadre and senior leadership responsible for deploying CPI for a process improvement effort.

P. Practitioner.—A CPI certified NRCS employee responsible for leading projects and teams.

Q. Certification.—NRCS will recognize three primary levels of CPI certification: green belt, black belt, and master black belt.

- (1) A green belt is an employee who has completed the required prerequisite training and participated in multiple process improvement evolutions. A green belt can lead CPI “do it” projects and rapid improvement events (RIEs), and participate in higher-level projects lead by black belts and master black belts. Green belts also assist in basic data capturing and analysis and perform administrative functions required to support black belts in the execution of higher level projects.
- (2) A black belt is an employee who has completed the required prerequisite training, is a certified green belt, and has participated in and led at least two DMAIC projects. A black belt can lead CPI “do it” projects and RIEs, participate in higher-level projects lead by master black belts or other black belts, and coach and mentor green belts to support their projects. Black belts also execute data capturing and analysis, and perform all functions required to support black belt level projects to include leading value stream analysis, teaching yellow belt and green belt classes, and development of charters and tollgate briefs.
- (3) A master black belt is an employee who has completed the required prerequisite training and has been certified a master black belt by an accepted certifying organization. Master black belts are responsible for alignment of CPI efforts, and for communicating with senior leaders regarding CPI progress and results within the agency. Master black belts lead and support the agency process improvement program by mentoring black belts and ensuring black belts are providing CPI services within the organization that support agency goals and objectives. Master black belts also monitor data capturing and analysis, and ensure data aligns with organizational requirements. Master black belts ensure that black belt tollgates are completed, recorded, and approved for information and potential leveraging in other areas.

407.3 Background

NRCS CPI program mission is to enhance processes by—

- (1) Improving productivity and performance.
- (2) Increasing flexibility to meet NRCS mission needs.
- (3) Decreasing waste and reducing errors.
- (4) Analyzing processes to identify and address the root cause of a problem.
- (5) Evaluating problems using fact based data.
- (6) Focusing resources on the people, machines, and systems that add value.
- (7) Improving processes through continuous controlled experimentation.
- (8) Making decisions based on long-term improvement.
- (9) Updating or creating standardized processes according to CPI principles.
- (10) Sharing knowledge with internal and external suppliers, customers, and other stakeholders.

407.4 Policy

A. NRCS Policy

- (1) **Structure**

An established structure to support CPI implementation will be utilized. The CPI structure consists of the following:

- Associate Chiefs for Operations and Conservation
- Strategic Planning and Accountability – Deputy Chief
- Strategic Performance Planning Division – Division Director
- Strategic Performance Planning Division – Planning Team Lead
- Strategic Performance Planning Division – CPI Program Manager
- CPI Cadre
- Practitioners

(2) Practitioners

(i) White Belt Training

- NRCS Staff.—Training through [Aglearn](#) or by an approved green belt or black belt using the NRCS-approved white belt curriculum is a prerequisite for employees prior to participating in a CPI project.
- NRCS Leadership.—Upon request, master black belt and black belts provide onsite training to increase awareness and support for CPI.

(ii) Yellow Belt Training

- NRCS Staff.—Training for employees through [Aglearn](#) or face-to-face training by an approved black belt using the NRCS approved yellow belt curriculum.
- NRCS Leadership.—Upon request, master black belt and black belts provide onsite training to increase awareness and support for CPI.

(iii) Green Belt Training and Certification

- NRCS staff nominated by the interested individual’s supervisor.
- Training will be provided by NRCS approved black belt or agency approved external certification provider.
- Requirements.—Complete green belt training and pass class exam. Participate in two CPI events. Lead two CPI events. See Section 407.6, “Criteria for Certification.”

(iv) Black Belt Training and Certification

- Green belt approved employees.
- Approved by a State Conservationist, Director of the Caribbean Area or Pacific Island Area, or division/center director.
- Training will be provided by NRCS certified master black belt, or agency approved external certification provider.
- Requirements.—Complete black belt training and pass class exam. Lead two full DMAIC projects. See Section 407.6, “Criteria for Certification.”

(v) Master Black Belt Training and Certification

- Black belt certified employees.
- Approved by a State Conservationists, Director of the Caribbean Area or Pacific Island Area, or division director, and agreed by NRCS CPI director.
- Training will be provided by external certification provider.
- Complete required course curriculum and pass a certification exam.

(vi) Champion Training

- Potential project leads, process owners, and NRCS leadership with the authority to implement change.
- Required for project leads and process owners unfamiliar with CPI principles.

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- Training is provided by approved black belts, master black belts, or through AgLearn.

B. Projects

(1) Projects may be identified or proposed from all levels of the organization; however, a CPI project must meet the following criteria.

Types

- Do It
 - Rapid Improvement Event
 - High Level (Complex CPI Project)
- (2) Requirements.—all CPI projects must, at a minimum—
- Have measurable benefits (dollars, FTEs, reduced errors, etc.).
 - Assist the agency with meeting annual goals or objectives and align with the agency’s strategic plan.
 - Meet other requirements as listed in figure 407-C1.

Figure 407-C1

Types	Typical Requirements	Reporting Requirement	Approval Requirements
Do It	Known problem with a recognized solution Completed in 2 weeks	Charter Final results sent to CPI program manager via chain of command	Supervisor
Rapid Improvement Event	Known problem without a recognized solution A problem with low to medium complexity Implemented through a high-intensity short-term improvement event (3-7 days) Must have a team of two or more Does not require advanced statistical analysis. Led by a greenbelt.	CPI charter Final results sent to CPI program manager	Must have a champion or sponsor Approved by SPPD/CPI lead

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- (3) Approve applicable CPI guidance, standards, and best practices information for NRCS.
- (4) Support and promote CPI education, training, and certification procedures consistent with USDA guidelines and standards, and include CPI in individual employee performance objectives as appropriate.

E. The Strategic and Performance Planning Division director, planning team lead, and CPI Program manager will—

- (1) Serve as the agency improvement officers.
- (2) Establish the NRCS CPI Program and run day-to-day logistics.
- (3) Chair the CPI cadre.
- (4) Develop and maintain applicable CPI policies, guidance, standards, and best practice information for NRCS.
- (5) Manage CPI deployment and communication plans.
- (6) Provide oversight and coordination for CPI project selection and implementation.
- (7) Capture and monitor deployment and project metrics.
- (8) Develop and implement appropriate education and training procedures, and promote CPI career development opportunities.
- (9) Establish and track CPI education, training, and certification procedures consistent with USDA guidelines and standards, and include CPI in individual employee performance objectives as appropriate.

See for Exhibit 1, CPI Project Approval - Project Justification and Approval Form

F. CXOs; Regional Conservationists; Deputy Chiefs; State Conservationists, including Directors, Caribbean and Pacific Island Areas; and subordinate supervisors will—

- (1) Ensure implementation of CPI policies consistent with this directive and the guidance in CPI Handbook (in development; expect to published FY 2017).
- (2) Participate in project selection and chartering, including State-specific projects.
- (3) Ensure necessary resources are allocated for CPI projects within their State or organizational unit.
- (4) Support and promote CPI education, training, and certification procedures consistent with USDA guidelines and standards, and include CPI in individual employee performance objectives as appropriate.
- (5) Ensure timely implementation of approved improvements.
- (6) Ensure controls are utilized for sustained improvement.
- (7) Recommend, initiate, and implement projects. If the project extends beyond the control of the supervisor or manager, the proper chain-of-command should be utilized to contact the CPI agency lead.

G Certified CPI practitioners will—

- (1) Coordinate team selection in consultation with the project champion.
- (2) Lead improvement project teams.
- (3) Lead and/or participate in CPI projects based on achieved levels of certification.
- (4) Coordinate when necessary with the CPI agency lead.
- (5) Report project progress to SPPD.

H. Project champion and sponsors will—

- (1) Provide executive support role for the CPI projects.
- (2) Review project progression at toll gates.
- (3) Support and provide resources for improvement team success.

I. CPI team members will—

- (1) Actively participate in CPI projects.
- (2) Complete assigned tasks on schedule.

J. NRCS employees are encouraged to gain appropriate CPI knowledge and are responsible for identifying opportunities to improve business processes and communicating these opportunities to their supervisors.

407.6 Criteria for Certification

A. White Belt and Yellow Belt

Does not require certification or prerequisite

B. Green Belt

(1) Education

- (i) High school diploma or equivalent and relevant training in candidates field of experience
- (ii) Attend yellow belt or equivalent training

(2) Work Experience

Minimum 3 years of operations, operational support, business, technical, or managerial or supervisory experience

(3) Technical Capability

High school mathematics and basic CPI training and instruction to lead process improvement projects

(4) Computer Proficiency

Microsoft Office (Word, PowerPoint, Excel, Outlook)

(5) Team Skills

Ability to facilitate or lead problem-solving activities in group setting

(6) Training and Project Experience

- (i) Complete CPI training and pass required exam
- (ii) Minimum participate in one and lead one CPI project within 1 year

C. Black Belt

(1) Education

High school diploma or equivalent and relevant training in candidates field of experience

(2) Work Experience

- (i) Minimum 3 years of operations, operational support, business, technical, or managerial or supervisory experience
- (ii) Technical application as a member or leader CPI-related project teams
- (iii) Must be certified green belt

(3) Technical Capability

- (i) Project management experience
- (ii) Ability to conduct a business case analysis
- (iii) Ability to teach and apply DMAIC
- (iv) Demonstrated ability to apply statistical methods

- (4) Computer Proficiency
Microsoft Office (Word, PowerPoint, Excel, Outlook, Visio, Project), and Minitab
- (5) Team Skills
 - (i) Ability to facilitate or lead large groups and address conflicts
 - (ii) Ability to motivate and influence
 - (iii) Exhibit an executive presence and credibility
- (6) Training or Project Experience
 - (i) Complete CPI training and pass required exam
 - (ii) Lead a minimum of two CPI projects and participate in three to five CPI events

D. Master Black Belt

- (1) Education
High school diploma or equivalent and relevant training in candidate's field of experience
- (2) Work Experience
 - (i) Minimum 5 years of operations, operational support, business, technical, or managerial or supervisory experience
 - (ii) Technical application as a member or leader CPI-related project teams
 - (iii) Must be certified black belt
- (3) Technical Capability
 - (i) Project management experience
 - (ii) Ability to conduct a business case analysis
 - (iii) Ability to teach and apply DMAIC
 - (iv) Demonstrated ability to apply and teach statistical methods
- (4) Computer Proficiency
Microsoft Office (Word, PowerPoint, Excel, Outlook, Visio, Project), and Minitab.
- (5) Team Skills
 - (i) Ability to teach and mentor black belts and leaders in CPI methodologies
 - (ii) Ability to facilitate or lead large groups and address conflicts
 - (iii) Ability to motivate and influence
 - (iv) Exhibit an executive presence and credibility
- (6) Training or Project Experience
 - (i) Complete CPI training and pass required exams
 - (ii) Two years' experience as a Lean Six Sigma black belt