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Manpower and Organization

CONTINUOUS PROCESS IMPROVEMENT (CPI)

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This publication implements Air Force Policy Directive (AFPD) 38-4, *Continuous Improvement and Airmen Powered by Innovation.* It assigns responsibilities and establishes guidance for the implementation of the Air Force CPI/LSS program. This instruction applies to all civilian employees and uniformed members of the Regular Air Force, Air Force Reserve, and Air National Guard. While it may be supplemented at any level, all proposed supplements must be routed to SAF/MG for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through Major Command (MAJCOM) publications managers. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Air Force Instruction (AFI) 33-360, Publications and Forms Management, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records Information Management System. This publication describes processes prescribing the creation of various records and/or reference one or more information technology (IT) system/database. This publication requires collection and maintenance of information protected by 5 U. S. Code 552A, *Records Maintained on Individuals*. The authorities to collect the data and information and maintain the records

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SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include realigning the Continuous Process Improvement Program Management Office and reassigning this instruction's Office of Primary Responsibility to the Business Capabilities Directorate, SAF/MGB, providing enhanced guidance on certification requirements, revising various roles and responsibilities, and prescribing Command-specific guidance and support requirements.

Chapter 1

PROGRAM OVERVIEW

1.1. Purpose. It is every commander's obligation to maximize the productivity of every asset and resource in both business and warfighting processes. Implementing performance management provides an effective means for commanders to execute their "Manage Resources" and "Improve the Unit" obligations outlined in AFI 1-2*, Commander's Responsibilities*. Accordingly, this instruction establishes USAF's CPI program. It also assigns detailed roles and responsibilities to support and implement the same. Further, it establishes performance standards and education and training requirements for certification.

1.1.1. Key principles contained in these methodologies include alignment of mission and metrics at all organizational levels, redesigning processes to improve flow and reduce waste, eliminating factors that degrade product quality, identifying and overcoming process constraints or even completely redesigning processes using clean-sheet thinking. Consistent application of these principles enables Airmen to integrate continuous process improvement concepts into daily routines. This will improve performance across the full spectrum of AF operations. Airmen will better manage resources, improve units and underwrite a path to faster decision making and agile maneuvering in both warfighting and business operations.

1.1.2. The USAF Deputy Chief Management Officer (SAF/MG) is responsible for maintaining and providing direction and policy for an AF-wide, system-based performance improvement program. To accomplish this, SAF/MG established a CPI program to drive process transformation.

1.1.3. CPI efforts focus on process effectiveness and efficiency across the AF using principles that apply to all work processes. Grounded in proven, industry-standard process-improvement tactics, CPI aims to significantly increase Air Force combat capabilities and replicate across the DoD where possible.

1.1.4. Every process can be improved. Consistent application of CPI enables Airmen to become true stakeholders in output and outcomes and is key to integrating CPI across the Air Force.

1.2. Desired End State. Consists of:

1.2.1. Institutionalized use of continuous process improvement and innovation concepts, tools, techniques, and procedures into the Air Force culture. Successful execution of continuous process improvement projects and relentless replication of the improvements across the AF.

1.2.2. A common set of CPI standards for training and certification of CPI practitioners at the levels of Green Belt (GB), Black Belt (BB), and Master Black Belt (MBB).

1.2.3. A knowledge management and information sharing capability that captures demonstrated performance improvements.

1.2.4. A Total Force program that connects Airmen to Senior Leaders and provide awards for approved improvement ideas.

1.3. Alignment.

1.3.1. The most effective CPI efforts fully support improving the Air Force's contribution to the National Defense Strategy and attainment of SECAF and CSAF priorities.

1.3.2. CPI and Innovation projects should aim to improve:

1.3.2.1. Productivity of every resource/asset.

1.3.2.2. Equipment, infrastructure, platform and service availability.

1.3.2.3. Responsiveness and agility in decision-making.

1.3.2.4. Safe, reliable, repeatable operations.

1.3.2.5. Energy efficiency.

1.4. Waiver requests for this publication (AFI 38-401). SAF/MGB Standards and Methods Branch is the waiver approving authority for non-tiered requirements in this publication. Include a copy of any waivers or exceptions issued regarding the publications and forms management requirements found in this publication when submitting products to AFDPO for publishing.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. The Deputy Under Secretary of the Air Force, Management (SAF/MG):

2.1.1. Implement CPI policies consistent with *DoDI* 5010.43 and guidance approved by the DoD CPI Senior Steering Committee.

2.1.2. Advocate for the necessary resources and provide guidance to affect full synchronization, integration, and application of CPI capabilities across organizational and functional boundaries.

2.1.3. Approve policy and procedures for implementing and managing AF CPI.

2.1.4. Periodically review functional policy to ensure measures of performance and effect are established for all processes resulting from that policy.

2.1.5. Highlight performance deficiencies in the context of one or more end-to-end AF processes that drive CPI opportunities and/or events.

2.1.6. Approve requirements and standards for CPI education, training, and certification, including internal and external education and training sources.

2.1.7. Work closely with Master Process Officers (MPOs) to solicit feedback on AF CPI and discuss potential events in order to identify improvement opportunities.

2.1.7.1. Sponsor and conduct project work to resolve identified deficiencies.

2.1.7.2. Report results of major project work, corrective actions, and policy changes to the Enterprise Productivity Improvement Council (EPIC).

2.2. The Deputy Under Secretary of Air Force Management Master Process Officer (SAF/MG MPO) will:

2.2.1. Serve as the functional and Office of Primary Responsibility for AF CPI and focal point for all CPI matters/issues.

2.2.1.1. Represent the AF at the DoD CPI Senior Steering Committee.

2.2.1.2. Establish and maintain a database of CPI practitioners and projects to support communication of CPI efforts and promote replication of leading business practices across the AF.

2.2.2. Propose resources and guidance to affect full synchronization, integration, and application of CPI capabilities across organizational and functional boundaries for SAF/MG advocacy.

2.2.3. Be a USAF-certified CPI BB.

2.2.4. Develop policy and procedures for implementing and managing AF CPI.

2.2.5. Define and maintain standards and methods for employing CPI tools.

2.2.6. Develop requirements and standards for CPI education, training, and certification, including internal and external education and training sources.

2.2.6.1. Ensure CPI training is developed and implemented in accordance with

2.2.6.1. Ensure CPI training is developed and implemented in accordance with AFI 36-2651, *Air Force Training Program.*

2.2.6.2. Establish CPI certification standards and criteria for GB, BB, and MBB practitioners.

2.2.6.3. Certify BB and MBB practitioners.

2.2.6.4. Ensure all GB course completions are updated in the CPI portal.

2.2.7. Support SAF/MG in carrying out responsibilities as EPIC Chair.

2.2.8. Conduct project work as directed by SAF/MG.

2.2.9. Work closely with MAJCOM and Headquarters Air Force Functional Master Process Officers to solicit feedback on AF CPI and discuss potential AF-wide event opportunities.

2.3. The Headquarters Air Force 2-Letter Directorates will:

2.3.1. Establish and implement a CPI program in pursuit of improvement goals and projects aligned to commander's/director's/superintendent's intent and organizational improvement strategy.

2.3.2. Appoint one primary Master Process Officer and alternate(s) as required to support the directorate process management and improvement activities. Send an electronic copy of the appointment letter to USAF Pentagon SAF-MG Mailbox MGB Workflow at **usaf.pentagon.saf-mg.mbx.mgb-workflow@mail.mil**.

2.3.3. Highlight performance deficiencies in the context of one or more end-to-end AF processes that drive CPI opportunities and/or events.

2.3.4. Share CPI results that contribute to the transformation of AF processes.

2.3.5. Work closely with SAF/MG and other Master Process Officers to solicit feedback on AF CPI and discuss potential AF-wide events.

2.3.5.1. Sponsor and conduct project work for the AF.

2.3.5.2. Report results of major project work, corrective actions, and policy changes to the EPIC.

2.3.6. Coordinate CPI policy and guidance with SAF/MGB.

2.4. The Director, Force Development (AF/A1D) will: Manage AF Continuous Process Improvement Executive (CPIE) training course attendance for General Officers, Senior Executive Service members, Command Chief Master Sergeants, and Headquarters Air Force Functional Area Managers.

2.5. The MAJCOM/Field Operating Agency (FOA)/Direct Reporting Unit (DRU) Commanders will:

2.5.1. Establish and implement a CPI program in pursuit of improvement goals and projects aligned to commander's/director's/superintendent's intent and organizational improvement strategy.

2.5.2. Appoint one primary Master Process Officer (MPO) and alternate(s) as required to support organizations and assigned FOA process management and improvement activities. Ensure a copy of the appointment letter is sent to USAF Pentagon SAF-MG Mailbox MGB Workflow at **usaf.pentagon.saf-mg.mbx.mgb-workflow@mail.mil**.

2.5.3. Highlight performance deficiencies in the context of one or more end-to-end processes that drive CPI opportunities and/or events.

2.5.4. Share CPI results that contribute to the transformation of AF processes.

2.5.5. Work closely with SAF/MG and Master Process Officers to solicit feedback on AF CPI and discuss potential AF-wide events. Sponsor project work for the AF.

2.6. The Commander, Air Education and Training Command (AETC/CC) will:

2.6.1. In coordination with SAF/MG, ensure CPI and innovation training concepts and methods are included in accession programs, technical training courses and professional military education (PME) curricula.

2.6.2. Support CPI Education and Training at educational institutions as defined by policies, corporate decisions, and/or memoranda of agreement to:

2.6.2.1. Deliver BB and Senior Leader academic courses and certify instructors capable of teaching these courses.

2.6.2.2. Establish appropriate annual CPI and Innovation Education and Training requirements.

2.6.2.3. In coordination with SAF/MG, ensure AU will:

2.6.2.3.1. Develop, instruct, and manage CPI Education and Training course curricula and course execution commensurate with allocated resources. (**T-1**)

2.6.2.3.2. Provide senior level oversight and execution of all mutually approved courses in accordance with AU standards.

2.6.2.3.3. Provide supervisory management of its assigned personnel. (**T-1**)

2.6.2.3.4. Provide a course critique summary for each class conducted and submit to SAF/MG at least quarterly. (**T-1**)

2.6.2.3.5. Ensure all BB course completions are updated in the CPI portal.

2.7. The Master Process Officer will:

2.7.1. Represent their organization to SAF/MG.

2.7.2. Be an AF-certified BB. If only GB certified, MPO will establish and implement a plan to become BB trained within six months and AF BB certified within twelve months of being appointed MPO. See **Chapter 4**, **Attachment 2** and **Attachment 3** for certification requirements. Master Process Officers who are other-than-AF BB trained, must complete a one-day AF Practical Problem Solving Method course within three months of appointment.

2.7.3. Advise and assist commanders/directors and their staffs in implementing a continuous improvement approach to process management. Process management will include establishment of improvement goals and aligning and prioritizing performance improvement initiatives toward goal attainment.

2.7.4. Coordinate, as needed, with the office of the Administrative Assistant to the Secretary of the Air Force (SAF/AAR), to obtain CPI support when assigned to a HAF directorate with fewer than 30 personnel and no assigned AF-level FOA.

2.7.5. Develop CPI-certified personnel required to meet organizational performance management and CPI requirements.

2.7.6. Assist leadership in coordinating, scheduling and documenting CPI education and training sufficient to meet organization requirements.

2.7.7. Update the AF CPI Portal with the most current points of contact as changes occur. Update practitioner and project data quarterly.

2.7.8. Ensure CPI instructors use the SAF/MGB-approved curriculum.

2.7.9. Record all CPI course completions in the CPI portal and ensure graduates are awarded the appropriate Special Experience Identifier (See **Attachment 4**).

2.7.10. Establish an active mentoring program for practitioners assigned across the MAJCOM, DRU Directorate and FOA.

2.7.11. Review packages and recommend nominees for BB and MBB training.

2.7.12. Actively advertise CPI capabilities with leadership and promote successful projects to ensure maximum replication.

2.7.13. Encourage Airmen to submit project(s) to the Airmen Powered by Innovation (API) program, Spark Tank, and innovation campaigns. Refer to AFI 38-402, *Airmen Powered by Innovation and Suggestion Program*, for submission procedures.

2.7.14. Work closely with and provide support to subordinate organizational Process Managers on CPI issues.

2.7.15. Evaluate subordinate organizations process management maturity, sufficiency, and MAJCOM-level concerns. Recommend corrective action to commanders and MAJCOM Inspector Generals to address shortfalls and deficiencies.

2.7.16. Collaborate with SAF/MG and other Master Process Officers to solicit feedback on AF CPI and discuss potential AF-wide events. Sponsor and conduct project work for the AF.

2.8. All wing commanders, center/complex directors and school commandants will:

2.8.1. Appoint a primary Process Manager and alternate(s) as required to support process management and improvement activities for the organization and subordinate and tenant units. **(T-1).**

2.8.2. Identify and implement leading practices to resolve unit deficiencies and maximize performance. **(T-1).**

2.8.3. Establish effects, outcome, and performance goals consistent with the organization's mission requirements, include key effects and performance indicators, and other critical metrics for each unit, as well as collection, tracking, and reporting processes. Review status quarterly. **(T-1).**

2.8.4. Build skills to support process management and process improvement requirements. **(T-1).**

2.8.5. Approve and implement a process that ensures practitioner training/certification nomination packages are approved by the first O-6/equivalent in the chain of command. **(T-3).**

2.8.6. Approve and implement a process that ensures a practitioner with the proper skillset and competency to complete a given CPI project is assigned to the project. **(T-3).**

2.8.7. Align improvement projects to National Defense Strategy and AF priorities. **(T-3).**

2.8.8. Improve current processes while producing the required capability with minimum resource commitment. **(T-3).**

2.8.9. Develop supplemental guidance as required to address subordinate organizations' CPI and innovation implementation details not addressed in this publication. **(T-2).**

2.9. The Process Manager (PM) will:

2.9.1. Advise and assist commanders/directors and their staffs in implementing a continuous improvement approach to process management. This includes identifying and categorizing wing-, group-, and squadron-level processes, aligning processes to strategic USAF guidance and prioritizing performance improvement initiatives. **(T-1).**

2.9.1.1. Assist commanders in ensuring improvement projects are aligned to National Defense Strategy and AF priorities. **(T-1).**

2.9.1.2. Assist commanders in identifying, diagnosing, and resolving unit deficiencies to maximize performance. Consider adopting existing leading practices. **(T-1).**

2.9.1.3. Conduct projects as directed by the commander. **(T-3).**

2.9.1.4. Assist commanders in assigning a practitioner with the proper skillset and competency to CPI projects **(T-3).**

2.9.1.5. Coach and assist Airmen with improvement and/or innovation ideas through development of a business case analysis and idea pitch to support principal decision maker's assessment and approval processes. **(T-1).**

2.9.2. Be an AF-certified BB. If only GB certified, PM will establish and implement a plan to become BB trained within six months and AF BB certified within twelve months of being appointed PM. See **Chapter 4**, **Attachment 2** and **Attachment 3** for certification requirements. PMs who are other-than-AF BB trained, must complete a one-day AF Practical Problem Solving Method course within three months of appointment.

2.9.3. Assist in establishing or refining effects (outcomes) goals and performance goals consistent with the organization's mission requirements. Guide development of measures of effect and performance, collection, tracking and reporting processes for each unit. Monitor new and existing goals for deficiencies and trends. **(T-1).**

2.9.4. Use the AF CPI Portal for CPI program management. **(T-1).**

2.9.5. Maintain current state process models and artifacts (e.g., Business Process Modeling swim-lane diagrams, Suppliers, Inputs, Process, Outputs, and Customers (SIPOC) diagrams, data dictionaries, performance standards) in the USAF Process Model Library. **(T-1).**

2.9.6. Maintain an updated list of CPI practitioners on the CPI Portal. **(T-1).**

2.9.7. Build up Airmen and practitioner skills to support process management and process improvement. **(T-2).**

2.9.7.1. Establish a mentor program for wing practitioners. **(T-2).**

2.9.7.2. Review packages and, in coordination with supervisors, recommend nominees from their unit/organization to commanders for CPI training. **(T-1).**

2.9.7.3. Ensure local GB training uses SAF/MGB-approved curriculum. **(T-1).**

2.9.7.4. Use the AF CPI Portal to upload, track, and report CPI training certifications, and completed projects for their unit and subordinate units or organizations. **(T-1).**

2.9.7.5. Assist unit/organization AF CPI certification candidates in building and submitting certification packages. **(T-2).**

2.9.8. Consider submitting projects to API for community support opportunities and potential individual and team recognition. Refer to AFI 38-402, for submission procedures. **(T-3).**

2.9.9. Brief CPI capability and successes at local professional development seminars or newcomer information avenues. **(T-3).**

2.9.10. Support AF tenant units without a PM with CPI consultation, facilitation and training. Support to non-AF tenant units is authorized on a non-interference basis. **(T-3).**

2.10. Commanders/Directors at all levels will:

2.10.1. Promote and use CPI methodologies to fulfill requirements in AFI 1-2 and AFI 90-201, *The Air Force Inspection System*. **(T-2).**

2.10.2. Ensure the organizational improvement plan aligns with and helps implement our National Defense Strategy and AF Priorities. (**T-1)** Commanders will ensure CPI projects support the plan, addressing gaps between current and standard performance measures. **(T-1).**

2.10.3. Establish effects or outcome goals and performance goals consistent with the organization's mission requirements and monitor for deficiencies and trends. **(T-2).**

2.10.3.1. Use GB and BB practitioners to assist in developing organizational improvement plan(s) and key performance and effective measures. **(T-3).**

2.10.3.2. Use GB and BB practitioners to assist in using CPI methodologies to address key performance gaps, and self-assessment or inspection findings/deficiencies. **(T-3).**

2.10.4. Foster a culture of continuous improvement. Use a governance forum to ensure CPI projects are aligned to the organization's improvement plan(s), resolve and prevent recurrence of deficiencies. **(T-2).**

2.10.5. Champion projects, ensure progress, monitor targets of 5% GB trained and 1% BB trained practitioners, and prioritize upcoming CPI opportunities quarterly. **(T-1).**

2.10.6. Ensure process owners adopt the most current performance standards and practitioners align continuous improvement efforts. Implement leading practices to resolve unit deficiencies and meet performance and effects goals. **(T-1).**

2.10.7. Build a cadre of practitioners to support the unit. The unit/organization will develop at a minimum, a cadre of 5% GB trained and 1% BB trained personnel. (**T-1**) Commanders should drive development of CPI capability in every career field.

2.10.8. Improve process performance using data to identify and eliminate root causes to yield resource savings, improve mission capability and increase readiness and lethality. **(T-1).**

2.11. Master Black Belt and Black Belt Mentors:

2.11.1. Observe and mentor both GB and BB candidates in a manner that increases their skills to become AF certified.

2.11.2. Nominate these same candidates for AF CPI certification.

Chapter 3

EDUCATION AND TRAINING REQUIREMENTS

3.1. Overview. To provide Airman the knowledge and skills to consistently improve and innovate, the Air Force has established three levels of training and certification. The first level of training is GB. GB training provides CPI practitioners the knowledge to effectively apply CPI tools to improve task and process performance. GB certification verifies a practitioner's skills meet the minimum standards for GB certification. Certified GBs seeking to improve more complex process or organizational performance should attend BB training course. BB certification verifies a practitioner's skills meet the minimum standards for BB certification. The highest training and certification level is MBB. Certified BBs seeking to improve more complex organizational or AF performance should attend a MBB training course. MBB certification verifies a practitioner's skills meet the minimum standards for MBB certification.

3.2. Practical Problem Solving Method.

3.2.1. This training cultivates a standard, innovative, critical-thinking culture to improve the way the AF works. Improving day-to-day processes, resolving unit deficiencies, developing performance goals, and developing and implementing leading practices regardless of organizational level, are the heart of CPI efforts.

3.2.2. This problem-solving method serves as the framework for the application of all improvement and innovation approaches, methodologies, tools and techniques available to the practitioner. Practical Problem Solving Method training is provided during accession and PME courses.

3.2.3. This training can also be provided just in time to anticipated need by AF-certified practitioners. Target population: All Airmen participating in CPI projects.

3.3. Fundamentals Course. The Fundamentals Course is foundational CPI training. It introduces the core CPI methodologies. The Fundamentals Course training is provided by a certified GB practitioner. (Note: a practitioner who has attended GB training, but has not received GB certification may be authorized to provide Fundamentals Course training on a case-by-case basis.) Practitioners delivering Fundamentals Course training must use the standard curriculum posted on the AF CPI portal. Target population: All new Airmen.

3.4. Green Belt Training.

3.4.1. GB training is the gateway for AF GB certification and introduces more detailed CPI methodologies, tools, problem solving, and facilitation techniques. GB training is provided via two sources: 1) Technical training courses, or 2) a certified BB practitioner. Practitioners delivering GB training use the standard curriculum directed by SAF/MGB. Target population: Members striving to become certified GB practitioners.

3.4.2. Master Process Officers will ensure practitioner records are built in the CPI Portal, prior to the candidate attending GB class. (T-1) GB instructors will update the practitioner's record with training data. (T-3)

3.4.3. After successful completion of GB training and/or subsequent certification, personnel should update their military and/or civilian records with the appropriate Special Experience

Identifier (SEI) or Defense Civilian Personnel Data System (DCPDS) code. See **Attachment 4** for the list of relevant SEIs.

3.4.4. GB training instructors must be approved and annotated in the CPI Portal by their PM before instructing. Instructors are encouraged to attend the Air Education and Training Command Basic Instructor Course or equivalent.

3.5. Black Belt Training.

3.5.1. BB training is the intermediate level of CPI training for a practitioner. It is designed to increase knowledge, skills, and abilities using CPI tools, as well as further develop facilitation and advanced problem-solving techniques. At the conclusion of the BB Course, candidates will have enhanced competencies. The course is taught by Air University's Eaker Center for Professional Development's CPI Education and Training team. Practitioners must be nominated to attend the course. Nomination requirements are provided in **Attachment 2**. Target population: Non-Commissioned Officers, Company Grade Officers and Civilians responsible for managing and improving performance.

3.5.2. The MPO submits the practitioner's complete BB training nomination package to the AU CPI Education and Training team for review. The AU CPI Education and Training team either returns the package to the MPO for corrections or forwards the package with recommendation, of concur or non-concur, to SAF/MGB for a final decision.

3.5.3. Master Process Officers will ensure practitioner records are built and maintained in the CPI Portal prior to a candidate being nominated to BB class. (T-1)

3.5.4. Continuous Process Improvement Education and Training instructors will update those who successfully complete BB training in the AF CPI portal.

3.5.5. Personnel receiving BB certification should update their military and/or civilian personnel records with the appropriate SEI or DCPDS code. See **Attachment 4** for the list of relevant SEIs.

3.6. Master Black Belt Training.

3.6.1. MBB training is the most advanced level of CPI training for a practitioner. It is designed to further develop and increase knowledge, skills, and abilities using CPI tools, as well as further develop facilitation and problem solving techniques with a focus on AF-wide and/or end-to-end issues. The certification is targeted toward personnel more senior in either CPI experience or grade due to the nature of interaction with the senior leaders in charge of the Air Force's end-to-end processes. Target population: BB certified Senior Non-Commissioned Officer, Field Grade Officer and Civilians who are responsible for wing-level capabilities and performance management and improvement.

3.6.2. The AF MBB training course is under development. MBB training is personal professional development the AF encourages, but is not currently an AF requirement. Airmen desiring MBB certification under another DoD source, should request it through their Master Process Officer to SAF/MGB.

3.7. Senior Leader Education.

3.7.1. The Senior Leader Course (SLC) provides AF leaders with the information required to successfully sponsor and champion CPI work, an overview of continuous improvement

methods and tactics, techniques, and procedures and how they assist leaders in maximizing the output of operations processes at all levels. This includes defining and scoping problems or performance gaps where results fall short of organizational operational excellence goals; measuring, managing, and monitoring performance; strategically aligning organizational goals and objectives; and prioritizing improvement project selection. Students will learn and master the skillset for measuring and monitoring performance. The course introduces leaders to CPI concepts and uses an industry tour to provide first-hand exposure to CPI mindset and tools. Target population: squadron and group leadership teams responsible for organizational performance and improvement. This SLC is hosted by the Master Process Officer or Process Manager and scheduled via the CPI Portal. Normally, the AU CPI education and training director provides instructors but may authorize adjunct instructors.

3.7.1.1. Adjunct instructors must be approved by CPI Education and Training Director and must meet the following requirements: be nominated by a MAJCOM Master Process Officer; complete a two-week AU course in "Theories and Principles of Adult Education;" observe a CPI Education and Training instructor delivering the course; and deliver the course under the tutelage of a CPI Education and Training instructor until qualified.

3.7.1.2. Procedures for scheduling and supporting a SLC are found on the AF CPI portal.

3.7.1.3. Instructors delivering the AF CPI Senior Leader Course will ensure a class roster is provided to the appropriate MAJCOM Master Process Officer(s) and SAF/MGB. (**T-1**)

3.7.1.4. After successful completion of the SLC, civilian employees should update their civilian training record in DCPDS according to accepted procedures.

3.7.2. Continuous Process Improvement Executive Course (CPIE). The Continuous Process Improvement Executive course provides executive leaders insight to CPI principles and how to employ these principles as they transition responsibilities from running operations to running the AF. The course includes sessions on strategic alignment, lean tools, PPSM, coaching from a recognized flag-officer equivalent mentor, and usually, an industry tour or equivalent. Target population: General Officers {O-7 and O-8}, Senior Executive Service (SES) and Defense Intelligence Senior Executive Service (DISES) (Tier 1 and Tier II); and Command Chief Master Sergeants (Wing level and higher).

3.7.2.1. The Air Force General Officer Management Office (AF/A1LG) and Director, Force Development, Deputy Chief of Staff for Manpower, Personnel and Services, (AF/A1D) are responsible for General Officer, Senior Executive Service members and Chief Master Sergeant development programs to include course registration and scheduling. SAF/MG is responsible for CPIE content development and delivery.

3.7.2.2. Personnel receiving CPI training should update their military and/or civilian personnel records in accordance with **Attachment 4**.

Chapter 4

CERTIFICATION, CURRENCY, AND EQUIVALENCY

4.1. Certification.

4.1.1. Air Force CPI certification demonstrates practitioner credibility to commanders and project customers. It also provides a developmental path for CPI practitioners and ensures a standard CPI approach is deployed across the AF. Basic certification requirements are listed in **Attachment 3**.

4.1.2. Air Force CPI certification consists of three elements: completing CPI training, demonstrating the required soft and hard skills necessary by capturing CPI work to an established standard, and gaining a recommendation from the individual's commander and AF CPI-certified practitioner. AF CPI BB certification candidates must have completed their AF CPI BB academics prior to starting the CPI project they submit for AF CPI BB certification.

4.1.3. To ensure rigor in AF certification standards, process work submitted for certification should be scoped at the appropriate level of complexity and aligned with AF strategy.

4.1.3.1. GB CPI certification must improve a single AF process by a minimum of one process performance measurement (in terms of speed, quality, cost, etc.) within at a minimum one organization. CPI team size must be no less than six personnel and may involve GBs supporting the candidate. Process performance must be measured within the last six months and documented on the A3-sized PPSM.

4.1.3.2. BB CPI certification must improve a single process by at a minimum of two process performance measurements (in terms of speed, quality, or cost) within at a minimum of two organizations. CPI team size must be no less than eight personnel and may involve GBs supporting the candidate. Process performance must be measured within the last six months and documented on the A3-sized PPSM.

4.1.3.3. MBB CPI certification must improve an AF-wide process by at least two process performance measurements (in terms of speed, quality, or cost) and across two or more units/organizations. CPI team size must be no less than eight personnel and the candidate must mentor at least one BB supporting the effort. Process performance must be measured within the last six months and documented on the A3-sized PPSM.

4.1.4. Candidates may need to accomplish multiple CPI projects to demonstrate proficiency. Candidates request certification through their certified practitioner mentor by submitting a current A3-sized PPSM. Current A3-sized PPSM format and scoring methodology are posted on the AF CPI portal.

4.1.5. Personnel receiving AF CPI certification should update their military and/or civilian personnel records with the appropriate SEI or DCPDS code. See **Attachment 4** for the list of relevant SEIs. **(T-1).**

4.2. Currency. After certification, practitioners should continue personal development to facilitate and conduct CPI projects to hone their skills and reinforce the cultural maturity of CPI in the AF. Additionally, practitioners are encouraged to: seek continuing education available through DoD sources, (e.g. Air Force Institute of Technology, Gemba Academy, Defense

Acquisition University, etc.) to renew skills; network with other professionals; and continue to read, watch, and listen to CPI materials to learn more and stay apprised of the latest trends.

4.3. Equivalency.

4.3.1. Equivalency means ‘equivalently trained’ and not ‘equivalently certified.’ Candidates with CPI/LSSBB/MBB certifications from industry, academia, or non-AF agencies may be considered for AF CPI BB trained equivalency and may request equivalency consideration through their Master Process Officer. The Master Process Officer will initiate an Air University proctored AF CPI BB test to determine the candidate’s level of CPI knowledge. **(T-1)** The minimal passing score is 70%. If the candidate does not meet the minimum score, the candidate may retake the equivalency test at a time set forth by AU. If the candidate fails a second time they are ineligible for equivalency and must take the normal path for AF CPI BB certification. **(T-1)** The candidate passes the AU proctored test, they are deemed AF CPI BB equivalently trained and ready to follow the same path as all other AU CPI BB school graduates toward certification.

4.3.2. Certifications previously received under Air Force Smart Operations (AFSO) for the 21st Century (AFSO21) and the AFSO construct are automatically considered equivalent to the certifications outlined in this instruction; there are no additional action required for equivalency.

RICHARD W. LOMBARDI
Deputy Under Secretary of the Air Force,
Management
and Deputy Chief Management Officer

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoDD 5010.42, *DoD-Wide Continuous Process Improvement (CPI)/Lean Six Sigma (LSS) Program* 15 May 2008

DoDI 5010.43, *Implementation and Management of the DoD-Wide Continuous Process Improvement/Lean Six Sigma (CPI/LSS) Program* 17 July 2009

DoD Lean Six Sigma (LSS) Belt Certification Procedures, LSS-9001 Basic, 27 February 2013

HAFMD 1-19, *Deputy Under Secretary of the Air Force, Management* 28 April 2017

AFH-1, *The Airman Handbook* 1 October 2017

AFI 1-2, *Commander's Responsibilities* 8 May 2014

AFI 33-360, *Publication and Forms Management* 1 December 2015

AFI 36-2651, *Air Force Training Program* 3 January 2019

AFI 38-402, *Airmen Powered by Innovation and Suggestion Program* 9 February 2019

AFI 90-201, *The Air Force Inspection System* 2 November 2018

AFMAN 36-2806 *Awards and Memorialization Program* 10 June 2019

AFMAN 33-363_AFGM2019-01, *Management of Records* 31 May 2019

AFMD 1-19, *Deputy Under Secretary of the Air Force, Management* 28 April 2017

AFPD 38-4, *Continuous Improvement and Airmen Powered by Innovation Program* 23 August 2018

10 USC 8013, *United States Code, 2006 Edition, Supplement 4, Title 10 – Armed Forces*

EO 9397, *Executive Order 9397 Numbering System for Federal accounts Relating to Individual Persons* 22 November 1943

5 U. S. Code 552A, *Records Maintained on Individuals* 1 January 1990

DoDD 5000 Series, *Operation of the Defense Acquisition System* 5 November 1990

Prescribed Forms

None

Adopted Forms

AF Form 2096, *Classification/On-The-Job Training Action*

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSO—Air Force Smart Operations

AFSO21—Air Force Smart Operations for the 21st Century

API—Airmen Powered by Innovation

AU—Air University

BB—Black Belt

BPM—Business Process Management

CMO—Chief Management Officer

CPI—Continuous Process Improvement

CPIE—Continuous Process Improvement Executive Course

DCMO—Deputy Chief Management Officer

DCPDS—Defense Civilian Personnel Data System

DoD—Department of Defense

DoDD—Department of Defense Document

DoDI—Department of Defense Instruction

DRU—Direct Reporting Unit(s)

EPIC—Enterprise Productivity Improvement Council

FOA—Field Operating Agency

GB—Green Belt

LSS—Lean Six Sigma

MAJCOM—Major Command

MBB—Master Black Belt

MPO—Master Process Officer

OPR—Office of Primary Responsibility

PM—Process Manager

PME—Professional Military Education

PPSM—Practical Problem Solving Method or Model

SEI—Special Experience Identifier

SIPOC—Suppliers, Inputs, Process, Outputs, and Customers

SLC—Senior Leader Course

Terms

A3-sized PPSM—Standard documentation for the PPSM, named after the size of paper that commercial CPI practitioners use for this purpose. The term 'A3-sized PPSM' is based on the international paper size standard and is 11.7 inches wide by 16.5 inches in height making it approximately twice the size of the typical sheet of printer paper. It is used to succinctly capture the CPI effort in a storyboard briefing format.

AF CPI—Formerly known as AFSO, AFSO21, or CPI. Anchored in lean, an operating philosophy that emphasizes the relentless eradication of non-valued activity in pursuit of mission effectiveness. AF CPI uses several widely accepted methodologies, including application of lean tools, six-sigma analysis, theory of constraints analysis, and business process reengineering analysis within a construct of the USAF Practical Problem Solving Method (AF Airman Handbook 1). Enables Airmen to eliminate waste while maximizing customer value.

AF CPI Portal—Website that is used for AF CPI and project management. Replaces and combines the AF CPI Portal site and Continuous Process Improvement Management Tool (CPI-MT

Black Belt (BB)—BBs are experienced process improvement practitioners and have significant and recognized process improvement experience. BBs are equipped with skills and competencies to facilitate teams across unit boundaries to solve complex process/performance problems, particularly those with vertical/horizontal integration, i.e., cross functional/cross echelon. BBs display a mastery of CPI tools and principles on a level that delivers transformation and sustainable lean operations across a unit's value streams. BBs observe and mentor both GB and BB candidates in a manner that increases their skills to become AF certified. BBs nominate these same candidates for AF CPI certification.

Business Process Reengineering/Process Reengineering (BPR/PR)—A comprehensive process requiring a change in the fundamental way business processes are performed. Business Process Reengineering/Process Reengineering identifies unnecessary activities, eliminates them, and wherever possible, automates manual procedures.

Business Case—For AF CPI, a business case is the information required by the primary decision maker or champion sufficient to inform the Practical Problem Solving Model Step 5 tollgate "Authorization to Proceed" with implementation. The minimum information required includes a summary of the problem, and supporting data, improvement target, cause analysis and mitigation strategy. Complexity of the mitigation strategy correlates to the level of detail needing to be presented to the decision maker. This definition is not intended to supersede the definition of business case analysis as defined in the DoDD 5000 series for acquisition personnel or for acquisition processes.

CPI Project—An improvement effort to which PPSM and CPI tools are applied. May be used to maximize function effectiveness prior to assessing need for new manpower determinants model. May generate just-do-its, rapid improvement events (RIE), or additional subordinate CPI projects as countermeasures. Sometimes referred to as CPI events

Champion—A senior manager who ensures his/her projects are aligned with the organization's strategic goals and priorities, provides the Six Sigma team with resources, removes organizational

barriers for the team, participates in project tollgate reviews, and essentially serves as the team's backer. Although many organizations define the terms "Champion" and "sponsor" differently, they are frequently used interchangeably.

Facilitator—An individual who guides a group through a specific part of the process for a specific period of time. Responsible for ensuring the team follows the CPI process, all parties are heard, the team starts and finishes on time, and all objectives of the activity are met. Facilitators have experience in the CPI process, but rely on Team Leaders, Team Members and Subject Matter Experts to provide process-specific knowledge. The facilitator must be neutral, guiding the problem solving process, but without preconceived notions regarding solutions. For this reason, many facilitators find it easier to facilitate projects outside their own organization.

Fundamentals Course—The AF is in the process of developing a Fundamentals Course. It introduces new Airmen to the basic CPI methodologies to indoctrinate into the CPI culture. The Fundamentals Course training is provided by a certified GB practitioner.

Green Belt (GB—GBs are entry-level process improvement practitioners. They operate under the mentorship of experienced BBs and/or MBBs. GBs are equipped with basic problem solving skills and competencies to eliminate waste and maximize customer value to solve process problems that do not cross organizational boundaries. GB work includes the deployment and application of lean principles, concepts and methods locally, within a work cell, work group or value stream. Problems requiring more complex tool/technique application require the GB to seek out a BB for assistance.

Lean—A CPI methodology focused on work flow, customer value, and eliminating process waste; unique from traditional process improvement strategies in that its primary focus is on eliminating non-value added activities.

Master Black Belt (MBB)—MBBs are process improvement practitioners with extensive experience and are capable of facilitating the most complex and difficult process improvement challenges. The depth and breadth gained through years of experience, uniquely equip them with the necessary skills to mentor senior leaders and BBs. The AF is developing a MBB course.

Master Process Officer (MPO—An individual typically assigned full-time to represent, train and mentor practitioners, as well as lead the strategy to ensure improvement projects chartered are the right strategic projects for the organization. After becoming BB certified, MPOs are able to certify GB candidates and nominate candidates for BB certification.

Practical Problem Solving Method (PPSM)—Standardized approach to properly define a problem, its root cause, countermeasures, and countermeasure implementation. Provides a concise and common format for presentation of data, problem solving facts and information. Eases benchmarking and sharing of leading practices when similar problems arise in other areas. The structure provides a common language which more easily translates into common understanding.

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

Team Lead—An individual responsible for the overall improvement effort under their lead. They identify project requirements in terms of technology, manpower, expertise, materials etc. The team lead presents project requirements, charter, countermeasures, and communicates results to the Champion for approval or acceptance.

Team Member—Team members are divided into four categories: Project champion: provide resources and remove barriers. Team leader: organize and conduct meetings, insure that information exchange occurs. Action item owner: complete assigned tasks. Team member: complete assigned tasks.

Theory of Constraints—A systematic approach to optimize resource utilization by identifying, exploiting, subordinating, elevating, and reassessing constraints in the process. Scientific principles are applied as a set of logical thinking processes to develop transformational breakthrough business solutions. A constraint is any resource with capacity less than the demand placed upon it. Theory of constraints attacks constraints and barriers (a restriction or other block to increases in output).

Attachment 2

TRAINING REQUIREMENTS

A2.1. Green Belt Training.

A2.1.1. Green belt training is designed to provide innovators and problem solvers an understanding of tools and methodologies to innovate, improve performance and solve problems at the task and process levels.

A2.1.2. Green belt training is available locally for all Active Duty, Guard, Reserve, and civil servant Airman. See the CPI portal for additional green belt training information.

A2.1.3. Black belt training is designed to provide innovators and problem solvers understanding of tools and methodologies to innovate, improve performance and solve problems at the process and organizational levels.

A2.1.4. Black belt training is available through Air University Eaker Center for all Active Duty, Guard, Reserve, and civil servant Airman. See CPI Portal for additional black belt training information.

A2.1.5. Master black belt training: Master black belt training is designed to provide innovators and problem solvers an understanding of tools to innovate, improve performance and solve problems at the organizational and enterprise levels.

A2.1.6. Master black belt training is available through SAF/MGB for all Active Duty, Guard, Reserve, and civil servant Airman. See CPI Portal for additional black belt training information.

A2.1.7. Airman attending training should seek out opportunities to apply and master the skills learned to innovate, improve performance and solve problems.

A2.2. Requirements to attend BB training:

A2.2.1. GB certification is required.

A2.2.2. Nomination letter from practitioner's commander or division chief, indicating intention to employ the practitioner as a BB to improve the unit/organization and a commitment to obtain certification.

A2.2.3. Draft BB-scoped project A3-sized PPSM (Step 1) with problem statement to bring to course. Continuous Process Improvement Education and Training can then mentor the practitioner, providing feedback on the project scope, problem statement, and recommended methodology during the course.

A2.2.4. Submit nomination packages through the Master Process Officer to CPI Education and Training. Continuous Process Improvement Education and Training recommends nominees to SAF/MGB for final approval.

A2.3. Requirements to attend MBB training:

A2.3.1. BB certification is required.

A2.3.2. Nomination letter from practitioner's commander or division chief, indicating intention to employ the practitioner as a MBB to improve the unit/organization and a commitment to obtain certification.

A2.3.3. Draft MBB-scoped project A3-sized PPSM (Step 1) with problem statement to bring to course. AF MBB can then mentor the practitioner, providing feedback on the project scope, problem statement, and recommended methodology during the course.

A2.3.4. Submit nomination packages through the MBB for approval.

Attachment 3

AF CPI CERTIFICATION AND EQUIVALENCY REQUIREMENTS

Table A3.1. Certification and Equivalency Requirements (Equivalency requirements are annotated by Note 4). (T-1)

Certification	GB	BB	MBB
Prerequisite	None	GB	BB
Complete Training	AF CPI GB Course	AF CPI BB Course or equivalency achieved. Must be completed prior to starting the CPI effort that the candidate will submit for BB certification	AF CPI BB Course or equivalent
Demonstrate CPI Effort to Applicable Standard Notes 1, 2, 4	One GB scoped effort submitted via an A3-sized PPSM worksheet	One BB scoped effort submitted via an A3-sized PPSM worksheet	One MBB scoped effort submitted via an A3-sized PPSM worksheet
Recommendation/ Endorsement Notes 2, 3, 4,	BB recommends candidate for certification; Commander signs AF Form 2096/ Civilian supervisor endorses recommendation	BB recommends candidate for certification; Commander signs AF Form 2096/ Civilian supervisor endorses recommendation	BB recommends candidate for certification; Commander signs AF Form 2096/ Civilian supervisor endorses recommendation
Completed AF Form 2096	Yes (military)	Yes (military)	Yes (military)
Certification Authority	BB on Approved Certifier List	SAF/MGB	SAF/MGB

Note 1: Use the PPSM rubric as your A3-sized PPSM template and use the grade sheet found on the AF CPI Portal to self-evaluate your PPSM.
Note 2: Use endorsement memo templates as found on the AF CPI Portal.
Note 3: Use the PPSM rubric and grade sheet as found on the AF CPI Portal to develop an MPO recommendation.
Note 4: BB and MBB equivalency candidates must pass an AU proctored AF CPI BB test with a minimal passing score of 70%; only two equivalency testing attempts per candidate are permitted.

Attachment 4

SPECIAL EXPERIENCE IDENTIFIER (SEI) MATRIX

Table A4.1. SEI Matrix.

	Enlisted SEI and SEI Title	Officer SEI and SEI Title	Civilian DCPDS Code and Code Title
Orientation	See Note 1 for link	See Note 2 for link	SO0 AFSO21 Orientation
GB Training	0G5 See Note 1 for link	G5 See Note 2 for link	SO1 AFSO21 GB/ Level 1 Training
GB Certification	005 CPI GB Certification	05 CPI GB Certification	SOL1 AFSO21 GB/ Level 1 Certification
BB Training	MAFSO21 See Note 1 for link	MAFSO21 See Note 2 for link	SO2 AFSO21 Level 2 Training
BB Certification	006 CPI BB Certification	06 CPI BB Certification	SOL2 AFSO21 BB/ Level 2 Certification
MBB Training	NA	NA	NA
MBB Certification	007 CPI MBB Certification	07 CPI MBB Certification	SOL3 AFSO21 MBB/ Level 3 Certification
SLC	NA	NA	SOL AFSO21 Senior Leader Course (GS15/equivalent)
Executive	NA	NA	SOE AFSO21 Executive Course (SES)

Note 1: Air Force Enlisted Classification Directory at MyPers.af.mil.
Note 2: Air Force Officer Classification Directory at MyPers.af.mil.