



**MARINE CORPS INSTALLATIONS NATIONAL CAPITAL
REGION—MARINE CORPS BASE QUANTICO**

**CONTINUOUS PROCESS IMPROVEMENT
GUIDEBOOK**

2023



**MCINCR-MCBQ Continuous Process
Improvement Guidebook**

Version 1

2023



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
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This Continuous Process Improvement Guidebook is issued as guidance for all persons at Marine Corps Installations National Capital Region - Marine Corps Base Quantico, effective this date.

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SECTION 1. PURPOSE OF THE GUIDEBOOK

1.1 Purpose. The purpose of this guidebook is to foster a culture of performance excellence through Continuous Process Improvement (CPI) and innovation throughout Marine Corps Installations National Capital Region – Marine Corps Base Quantico (MCINCR-MCBQ).

1.2 Intent. This guidebook is by design ‘lean.’ It follows both the precepts of the CPI program that it establishes, and mission orders. It deviates from previous, and largely unsuccessful, efforts that focused on program management rather than on achieving outcome-based results. This guidebook’s priority is on providing improvement services tailored to the customer’s requirements. It establishes the minimum program structure necessary. This guidebook requires decentralized execution, thus allowing the latitude, flexibility, and responsiveness to meet the customer’s changing requirements and demands. Its intent is to instill a constant drive for superior quality, improved cycle time, reduced cost, and elimination of waste, variation, and non-value activity.

SECTION 2. CPI MISSION, VISION, AND GOAL

“As good as we are today, we will need to be even better tomorrow to maintain our warfighting overmatch.”

“The National Defense Strategy has directed us to focus in new areas, and this requires us to think, innovate, and change.”

38th Commandant’s Planning Guidance 2019

2.1 CPI Mission. To improve processes throughout MCINCR-MCBQ by making them easier, better, faster and cheaper in order to enhance Marine Corps training, readiness, warfighting capability, and quality of life for Marines, Sailors, and their families.

2.2 CPI Vision. CPI is institutionalized throughout the MCINCR-MCBQ, with every level of the organization, down to the Common Output Level of Service (COLS) sub-function level, having trained CPI practitioners, empowered and engaged in a relentless pursuit of perfection.

2.3 CPI Goal. MCINCR-MCBQ is recognized throughout the Marine Corps Installations Command (MCICOM), as a high-performance organization providing superior effective and efficient customer service.



SECTION 3. CPI STRATEGY AND CONCEPT OF OPERATIONS

“While our service never seeks change for change’s sake, we have always embraced it when change had the potential to improve our lethality and effectiveness.”

“If Americans can apply for home loans and sign legal contracts using their smartphones, we can streamline our administrative requirements, use the types of standardized digital forms that are ubiquitous today, and simplify our Marines’ lives...”

TALENT MANAGEMENT 2030 (November 2021)

3.1 CPI Implementation Strategy

CPI is a Change Management program. Effective Change Management requires a process to effectively manage change. CPI provides the mechanism to bring about positive change using a proven, logical, straightforward method.

Change Management begins its focus at the Installation/Command or tactical level. The installation process improvement program sets the foundation needed to improve processes at operational, then strategic levels. Tactical level improvements should focus on developing efficient processes at the individual Marine and Civilian Marine level. Operational (or Regional) level improvements focus on the elimination of barriers to create an environment that fosters innovation in order to meet mission requirements across installations. Strategic (MCICOM) level improvements focus on providing the resources necessary to continually improve tactical and operational level processes, while providing management with information regarding readiness so that resources can be fully utilized.

MCINCR-MCBQ reaches its full potential by embracing change. Positive Change Management requires a solid foundation. Successful Change Management requires improvement for both the process side, and the human side. A culture that supports and drives continuous improvement is necessary to achieve change throughout MCINCR-MCBQ. Improvement opportunities should not be limited to a select few, however, it should be engrained in Marines and Civilian Marines throughout MCINCR-MCBQ to create a culture striving for constant improvement in everything that the MCINCR-MCBQ does.

Figure 1 Depicts the MCINCR-MCBQ Change Management / CPI relationship.

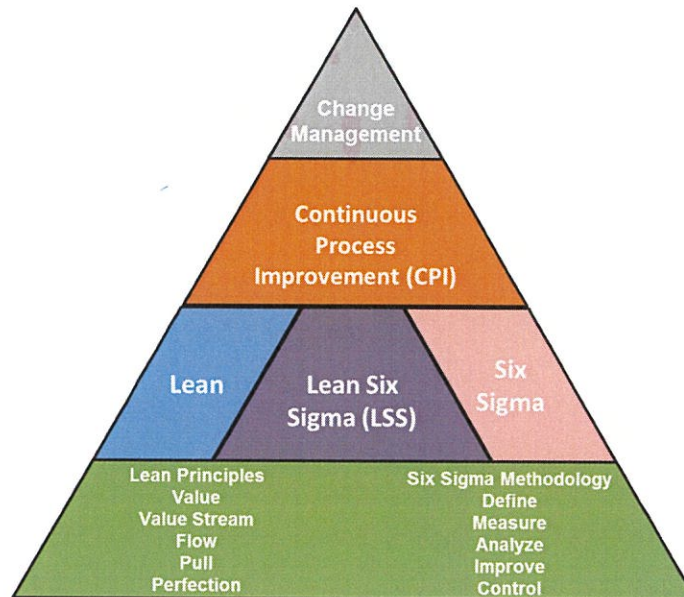


Figure 1 – MCINCR-MCBQ Change Management Pyramid

3.2 Concept of Operations

CPI is a two-pronged approach. It improves products and service through both numerous tactical level incremental improvements, and operational/strategic major breakthrough improvements. To effectively execute the two-pronged CPI approach, MCINCR-MCBQ uses two proven improvement methodologies: Lean and Six Sigma.

Lean: Primarily oriented on numerous tactical level improvements that in their totality achieve significant results. Focuses on workflow, customer value, and eliminating nonproductive or wasteful activities. Lean CPI events are normally Rapid Improvement Events (RIE) or “Just Do Its”.

Six Sigma: Primarily oriented toward major, complex operational/strategic level improvements. A data driven methodology that focuses on requirements, planning, execution, and controls to reduce process variation. Six Sigma CPI events are normally Define, Measure, Analyze, Improve, Control (DMAIC) projects.

3.3 Identification of Improvement Opportunities

The identification and prioritization of projects comes from either a top-down focus for operational/strategic opportunities, or a bottom-up focus primarily for tactical opportunities. A top-down focus allows leadership to identify critical mission process improvement opportunities. A bottom-up focus allows process owners and subject matter experts (SMEs) to identify areas of opportunity that may

otherwise be invisible to those outside the immediate process. Both techniques are important to identify the full range of problems or opportunities for process improvement.

Figure 2 shows the process improvement identification process.

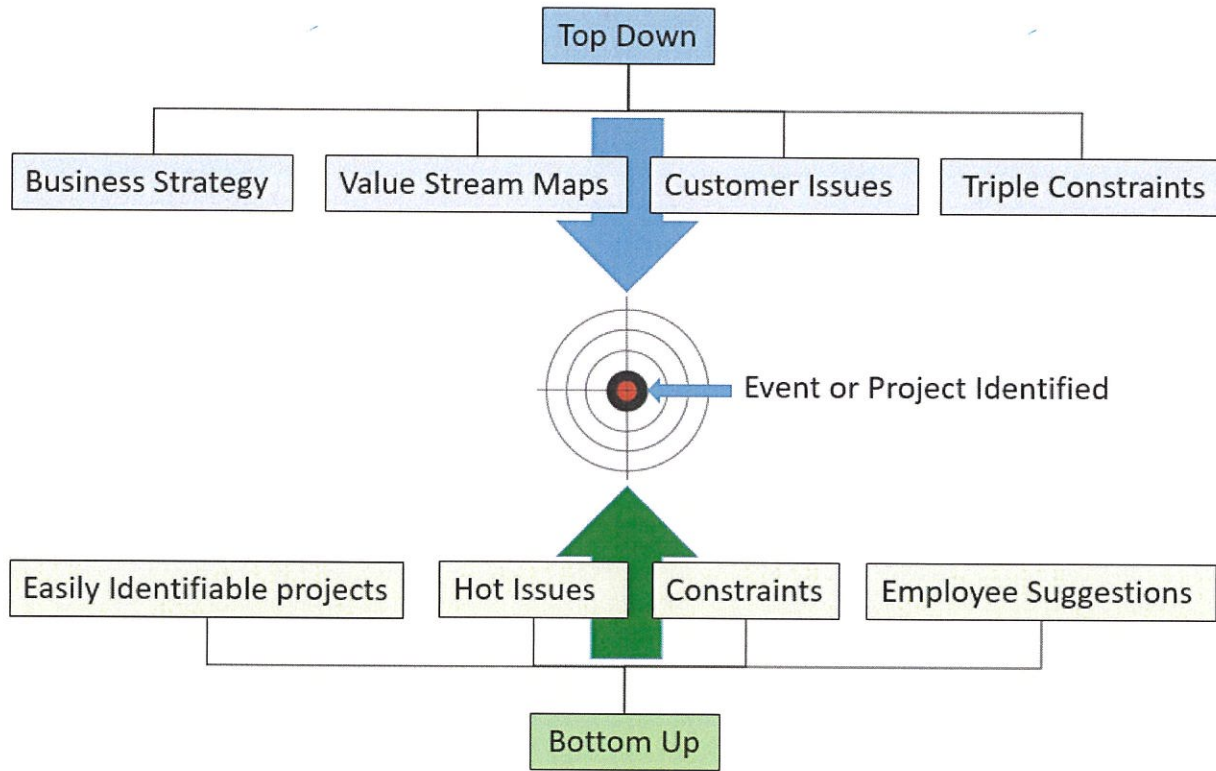


Figure 2 – MCINCR-MCBQ Improvement Opportunity Identification

3.4 CPI Event Planning and Execution

Using the preceding project identification process, every MCINCR organization down to the COLS sub-functional area should establish processes to identify CPI events to be conducted. From Figure 2 it should be apparent that CPI event identification needs to be flexible and responsive to multiple inputs that can identify CPI opportunities. The CPI event process, and resulting CPI plan, needs to be tailored to the level of the organization, and focused on the process to encourage and drive event identification, prioritization, selection and execution. This CPI Plan is not intended to constrain the event selection responsiveness with an inflexible and extended schedule of projected events. Rather, at the tactical and functional area level, the event process needs to be a battle rhythm focused on identification and quick execution of RIEs. At the region / MCICOM level where Operational and Strategic projects are the focus, requiring longer execution



timelines and greater coordination of limited CPI assets, a more deliberate plan is justified, while still maintaining flexibility to adjust to rapidly emerging targets of opportunity.

3.5 Project Reporting

Ultimately the value of CPI projects are results on the ground, not in a power point presentation. However, to maximize the results of projects that could be replicated at other organizations, it is important to document and share the improvement actions and results. Therefore, the purpose of project reporting is to share throughout MCINCR-MCBQ and beyond, lessons learned, improvements of significant impact that can be replicated at other organizations or across MCINCR and the MCICOM enterprise. MCINCR-MCBQ will determine which CPI Projects, RIEs or “Just Do Its” meet the threshold that they will benefit a wider audience, and shall be retained by the MCINCR-MCBQ CPI Program Office.

SECTION 4. MCINCR-MCBQ CPI ROLES AND RESPONSIBILITIES

4.1 Roles and Responsibilities

Execution of CPI at every level of MCINCR-MCBQ is supported by the roles and responsibilities outlined below.

4.2 Command Leadership

Region, and Installation Command Leadership have the responsibility to drive installation performance improvement. Leadership identifies the top-down driven CPI initiatives and strategically aligns performance improvement initiatives with command goals and objectives. Identify improvement opportunities within programs, implement actions designed to achieve target performance levels and improvement objectives, and sustain the process improvements by monitoring performance measures. Commanders/Executive Officers, Directors, Department Heads, and Senior Managers serve as project sponsors and identify improvement initiatives, provide resources (people and funding), and remove barriers for improvement initiatives.

4.3 MCINCR-MCBQ CPI Office (G-7 Performance & External Affairs)

MCINCR-MCBQ G-7 staff are experienced experts in process improvement methodologies and lead development of CPI practitioners. Responsibilities include the following:

- Region CPI Champion responsible for implementing the region CPI Program
- Eliminates barriers to CPI implementation
- Conducts Region CPI training and provides coaching/mentoring.
- Provides reinforcing CPI support to Installation CPI programs
- Provides additional Change Management/CPI capabilities in the areas of strategic management, business analysis, assessments, performance management systems, and improvement methodologies. They possess skilled facilitators who are able to lead teams to solutions and actions to achieve performance objectives.
- Certifies Marine Corps Yellow Belt, Green Belt, Black Belt and Master Black Belt practitioners.

4.4 Yellow Belts/ Project Team Members



Yellow Belts (YBs) are basically trained in CPI, and are either leaders/project sponsors or functional SMEs in their organizations. YBs serve on CPI project teams formed to improve processes in their functional areas. SME's may attend introductory YB training prior to participating in CPI projects. However, this isn't always possible. The project facilitator can provide YB level instruction in a just-in-time approach, during the course of the project.

4.5 Green Belts/Rapid Improvement Events

Green Belts (GBs) are the backbone of the tactical level CPI program. GBs are trained in the basic CPI tools primarily focused on Lean type CPI improvements. GBs are also SMEs in their organization. GBs primary function is to conduct CPI RIEs, or "just do its", in their area of functional expertise. GBs may serve on project teams led by Black Belts. Experienced certified GBs may conduct YB/GB training. GBs are usually collateral duty positions. The goal is for every MCINCR-MCBQ functional area to have a resident GB capability. Training and certification standards are contained in section 5.3 below.

4.6 Black Belts

Black Belts (BBs) are key to the spectrum of tactical/operational/strategic CPI events. BBs are CPI experts, knowledgeable and skilled in leading project teams in the use of CPI tools and methodologies. BBs conduct CPI projects with larger scope and impact. BBs also train, mentor and certify YBs and GBs. Experienced certified BBs may also conduct BB training, mentor and certify less experienced BBs. BBs are primarily located in the MCINCR-MCBQ G-7. Ideally, BBs hold full-time CPI positions. Training and certification standards are contained in Section 5.3 below.

4.7 Master Black Belts

Master Black Belts (MBBs) are responsible operational/strategic level projects and for CPI program implementation. MBBs are very experienced BBs with advanced training and MBB certification. MBBs are CPI Champions and the CPI program manager within their organization. MBBs play a key role in the overall design and execution of the CPI program ensuring that it remains focused on customer requirements, is current, and aligned to the changing mission needs. MBBs are also responsible for training, mentoring and coaching leadership on CPI capabilities. MBBs conduct complex, cross functional projects commensurate with their experience, MBBs can conduct training, mentoring, and certification at all CPI levels. MBBs are ideally full-time positions and primarily reside at the Region and MCICOM headquarters. Training and certification standards are contained in Section 5.3 below.

Figure 3 below graphically depicts the CPI organization.

MCINCR-MCBQ Command Level Infrastructure

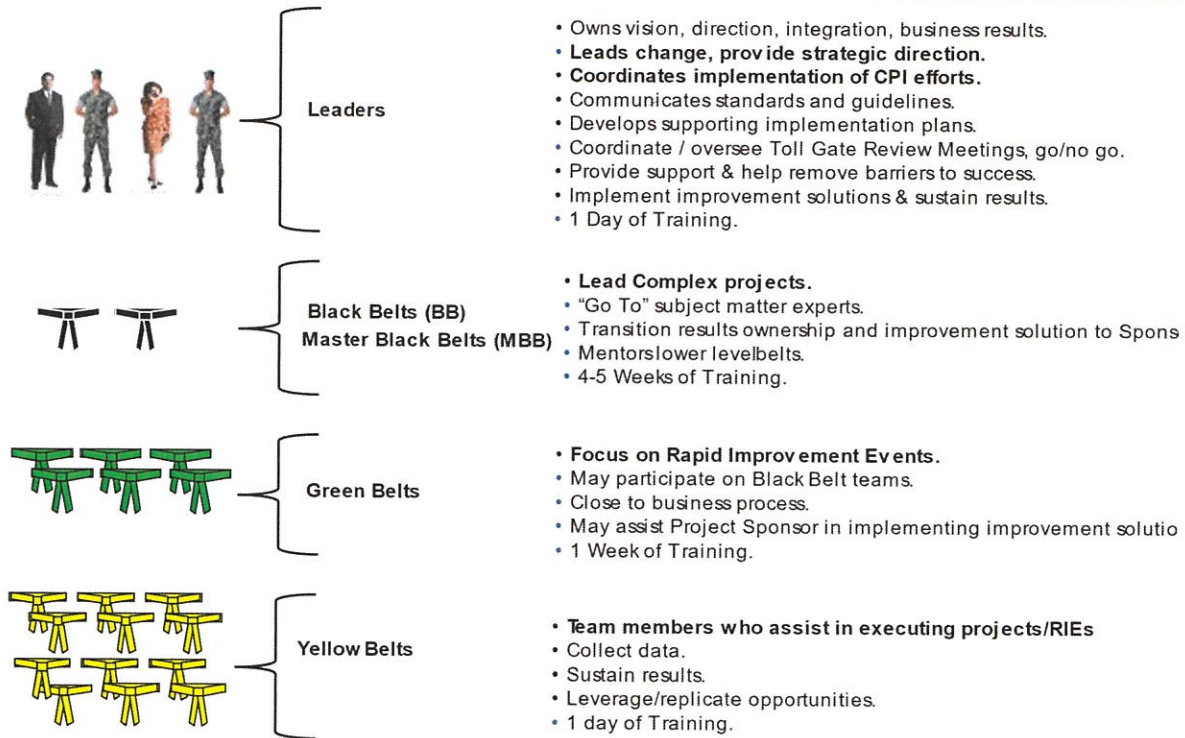


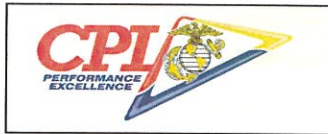
Figure 3 – MCINCR-MCBQ Command Level Infrastructure

SECTION 5. CPI TRAINING AND CERTIFICATION

5.1 CPI Practitioner Training and Skill Certification

MCINCR-MCBQ G-7, is charged with developing and keeping relevant and current the general CPI training course curriculums for the courses outlined in Paragraph 5.2 below. The training course curriculum is developed based on meeting the MCINCR-MCBQ customer CPI requirements. This benefits MCINCR-MCBQ by developing high level skills sets that recognizes and is responsive to the Marine Corps culture and MCINCR-MCBQ requirements.

MCINCR-MCBQ has established recommended criteria for CPI certification at the Green, Black, and Master Black Belt levels. Formal skill certification enhances the organizational integrity of CPI through a common body of knowledge and enhances the professional credentials of MCINCR-MCBQ CPI practitioners.



5.2 CPI Training Courses

CPI Training includes self-study and classroom training to address the training and educational needs of various CPI roles throughout the Command. The following courses are sponsored, coordinated, and/or delivered by MCINCR-MCBQ CPI Program Office.

- Yellow Belt Training – This 1-day (CETs: 8) classroom training is conducted by Marine Corps YB Instructors using the MCINCR-MCBQ YB curriculum. It is designed to provide CPI concepts and tools awareness training to all personnel within a command. It is also used to provide just-in-time training to project team members. There is no prerequisite to attend.
- Green Belt Training – This 5-day (CETs: 40) classroom training is conducted by Marine Corps GB Instructors using the MCINCR-MCBQ GB curriculum. The purpose of this course is to provide students with the basic tools and skills to plan, lead and facilitate RIEs or small DMAIC projects within their commands. In order to complete the course, students must pass a comprehensive exam at the conclusion, with a passing grade of 75%. Alternative course providers are available and approved on a case-by-case basis. Prerequisite to attend – Complete Yellow Belt Training.
- Black Belt Training – This 4–5-week (160 hours) classroom training is provided by an appropriate industry or federal service training based on the American Society for Quality (ASQ) Body of Knowledge (BOK). The purpose of this course is to provide advanced CPI instruction and to prepare participants to lead DMAIC projects. In order to complete the course, students typically must pass a comprehensive exam at the conclusion, with a passing grade of 75%. Alternative course providers are available and approved on a case-by-case basis. Prerequisite to attend – Attain Green Belt Certification

5.3 CPI Belt Training Certifications Requirements

The Marine Corps has established training and certification criteria for CPI GBs, BBs and MBBs. While certification is strongly encouraged, it is not required to conduct CPI process improvement events commensurate with the training level achieved. The CPI certification framework acknowledges the experience and skill levels of CPI practitioners as they become increasingly effective with advanced applications of integrated tools and more sophisticated analyses. See Figure 4 for a list of all training certification requirements.

The MCINCR-MCBQ certification process is based on a proven learn-by-doing approach designed to reinforce training and achieve process improvement results. Individuals are recommended to receive formal classroom training to understand CPI concepts, but true mastery is achieved through the application of the concepts, resulting in process improvements, under the guidance of a qualified CPI mentor. This certification process develops capable and competent certified professionals while achieving high impact improvements for the Marine Corps.

MCINCR-MCBQ CPI Training and Certification Matrix				
	Yellow Belt (YB)	Green Belt (GB)	Black Belt (BB)	Master Black Belt (MBB)
Prerequisite Certification	None	YB	GB	BB
Complete Training	Marine Corps YB Course (8 Hours) <u>Or</u> Appropriate industry or federal service training	Marine Corps GB Course (40 Hours) <u>Or</u> Appropriate industry or federal service training	Appropriate industry or federal service training	Appropriate industry or federal service training
Exam Requirements	None	Pass Comprehensive GB Exam with at least 75%. <u>Or</u> Pass appropriate industry or federal service exam	Pass appropriate industry or federal service exam	Pass appropriate industry or federal service exam
Demonstrate Project Work	None	1 RIE, GB Scope	1 Project, BB Scope	1 Project, MBB Scope
Mentor Requirements	None	None	None	Yes, Mentor 2 Projects
Certification Authority	MCINCR-MCBQ CPI Office	MCINCR-MCBQ CPI Office w/ BB Recommendation	MCINCR-MCBQ CPI Office w/ BB Recommendation	MCINCR-MCBQ CPI Office w/ MBB Recommendation
Documentation Requirements	MCINCR-MCBQ CPI Office establishes documentation requirements			

Figure 4 – MCINCR-MCBQ CPI Training and Certification Matrix



Note: All previous Marine Corps CPI certifications will be recognized as current and valid under this guidebook, and MCINCR-MCBQ will recognize CPI training and certifications from other Marine Corps organizations. Training and certifications from outside of Marine Corps sources, determined by a certified BB to be commensurate with MCINCR-MCBQ standards, will be recognized.

5.4 CPI Instructors.

Instructors in Marine Corps CPI courses (YB through BB) should demonstrate capabilities to an experienced instructor in both classroom instruction skills and mastery of course content for the level of material being taught. Demonstration should be shown at the Region/Installation level prior to teaching any level of belt instruction. Enclosure 1 can be used as a method to evaluate potential instructors.

Section 6. GOAL

The desired end state of this guidebook is that it drive the continual improvement of performance throughout MCINCR-MCBQ.

The contents of this guidebook are a means to the end state, not an end in itself. Therefore, the MCINCR-MCBQ G-7 is charged with updating this guidebook as a living document, responsive to customer requirements and feedback, to reinforce the successful aspects of the guidebook, or to modify or remove any aspects of the guidebook that prove to be barriers to improvement.



Enclosure 1: SAMPLE MCINCR-MCBQ CPI INSTRUCTOR EVALUATION FORM

Name of Individual Being Certified _____

Signature of Certified Instructor _____ Date _____

Certifying Instructor checks each column as YES, NO, or NA (Not Applicable)			
	YES	NO	NA
1. Mastery of course content			
a. Ensured that overall course objectives were thoroughly communicated and effectively met.			
b. Ensured that objectives for each lesson were thoroughly communicated and effectively met.			
c. Demonstrated thorough understanding of all course topic areas.			
d. Ensured that all questions were thoroughly answered.			
e. Ensured that information presented was technically correct.			
2. Exercises and Simulations			
a. Ensured that exercise/simulation set-up was complete before exercise/simulation began and without disruption or distraction to students.			
b. Ensured that thorough instructions for exercises/simulations were provided.			
c. Ensured that exercises/simulations debriefs reinforced the exercise learning points.			
3. Classroom Dynamics			
a. Effectively delivered the instruction for each course lesson.			
b. Established and maintained a positive and professional atmosphere.			
c. Effectively managed group dynamics of participants.			
d. Interacted appropriately and effectively with other instructor(s) and students.			
4. Course Management			
a. Ensured that room was conducive to training (size, layout, etc.).			
b. Ensured that all needed training materials were on hand and correct (equipment, supplies, student binders, certificates, exams, etc.).			
c. Ensured that time was used effectively throughout course.			
Certifying Instructor – document all items evaluated as NO on separate page.			
Certified Instructor Overall Recommendation	Satisfactory <input type="checkbox"/>		Unsatisfactory <input type="checkbox"/>

