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CERTIFIED COMMISSIONING TECHNICIAN

CXT OVERVIEW

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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MODULE

6

CX Technicians (CxT) Responsibilities

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CERTIFIED COMMISSIONING TECHNICIAN CXT OVERVIEW

The Certified Commissioning Technician (CXT) plays a crucial role in the commissioning process of construction projects. They act as the "eyes and ears" of the Commissioning Authority (CxA), executing directives outlined in the Commissioning Plan while maintaining a clear line of communication with the CxA.

Learning Objectives

- Course Overview and Introduction
- Definition & History of Commissioning
- Why is building commissioning needed?
- Technical, communication, and CX skills
- Commissioning Process Overview
- CX Technicians (CxT) Responsibilities
- Specialist Certification in CX Services
- Cost and benefits of building CX
- CX Challenges and Emerging Issues
- Summary and Resources
- CxT Practice Exam: Test Your Knowledge!



INTRODUCTION

Pre-Commissioning Phase

- Review of the Commissioning Plan, training, and familiarization.
- Development of inspection checklists.
- Understanding project specifications, system designs, and relevant codes and standards.

Construction Phase

- Monitoring and reporting on project progress.
- Conducting regular inspections of the construction site.
- Documenting findings in daily reports and submitting findings to the Commissioning Authority.
- Identifying defects or deviations from the approved design.
- Effective communication with the Commissioning Authority.

CERTIFIED COMMISSIONING TECHNICIAN ROLE IN CONSTRUCTION PROJECTS

Functional Testing of Systems

- Reviewing testing protocols and ensuring systems are ready for evaluation.
- Executing functional tests as directed by the Commissioning Plan.
- Documenting results and noting discrepancies.

Post-Commissioning Phase

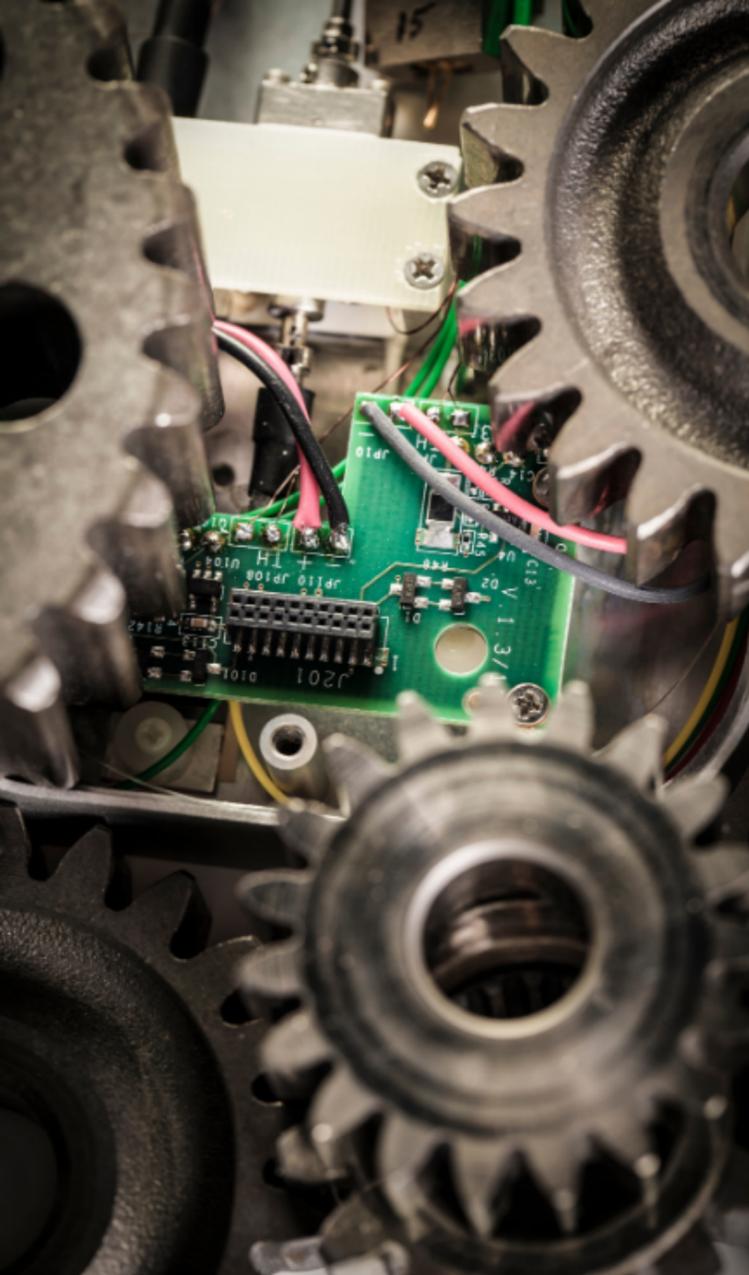
- Ensuring long-term integrity and performance of commissioned systems.
- Final verification, training operations staff, and post-occupancy evaluation.



CP ROLES, RESPONSIBILITIES

- Commissioning is a quality-oriented process that ensures the design, installation, and functional testing of building systems.
- The commissioning team comprises various stakeholders with distinct roles and responsibilities.
- Developing the Commissioning Plan: The team is responsible for creating a comprehensive plan outlining the goals, scope, schedule, resources, and methodologies for the commissioning process.
- Defining Owner Requirements: The team engages with the building owner to understand and document their operational needs and expectations.
- Design Review and Coordination: The team conducts a thorough review of design documents to ensure alignment with the commissioning plan and the owner's requirements.
- Verification and Testing: The team verifies that installations adhere to the design specifications during the construction phase.
- Documentation and Reporting: The team maintains detailed records of the commissioning process, including test results, issues encountered, and resolutions implemented.
- Training and Handover: The team facilitates training for the facility management staff on the systems' operation and maintenance.
- Post-Occupancy Evaluation: The team may conduct post-occupancy evaluations to assess the performance of the systems in real-world conditions.





MENTORING AND TRAINING ON SYSTEMS AND PROCEDURES

- Mentoring is essential in commissioning, especially in projects involving new technologies and processes.
- Training programs should be structured to the specific systems and procedures used in the project.



Team Roles and Project Scope Throughout Project Phases

- Each team member has defined roles and responsibilities.
- These roles include the Commissioning Manager, Systems Engineer, and Field Technician.

COMMISSIONING PROJECT PHASES AND SCOPE

- The commissioning process typically unfolds across several project phases: design, construction, and occupancy.
- The commissioning team collaborates with the design team to establish performance criteria and review design documents.
- The construction phase ensures that systems are installed according to the specifications.
- The occupancy phase involves testing and validation of systems to confirm they operate as intended.



MANAGING INTERPERSONAL RELATIONSHIPS

- The commissioning process is a critical phase in project management, particularly in construction and engineering sectors.
- The commissioning team is a multidisciplinary group of professionals responsible for overseeing, managing, and executing the commissioning activities.
- The importance of interpersonal relationships in commissioning is highlighted.
- Strategies for relationship management include active listening, conflict resolution, and building trust and respect.





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CONTRACTUAL ARRANGEMENTS AND RISK MITIGATION

- Scope of Work: Contracts outline specific tasks and deliverables expected from the commissioning team.
- Payment Terms: Understanding these terms is crucial for managing cash flow effectively.
- Liability and Indemnification: Contracts typically include clauses outlining the liabilities of each party and indemnification provisions to protect against losses or damages.



RISK MITIGATION STRATEGIES

- Early Identification of Risks: The team conducts thorough risk assessments during the planning phase.
- Regular Communication with Stakeholders: Regular meetings and updates facilitate proactive problem-solving.
- Contingency Planning: The team develops contingency plans that outline alternative strategies in case of unforeseen events.
- Performance Monitoring: Continuous monitoring of systems and processes during the commissioning phase allows for the early detection of issues.



COMMISSIONING AND MEASUREMENT INSTRUMENTS IN FACILITY MANAGEMENT

- Commissioning is a systematic process that ensures a facility's systems are designed, installed, tested, operated, and maintained according to the owner's operational requirements.
- Measurement instruments are used to evaluate system performance, validate design specifications, and ensure optimal operation.
- Thermal Instruments: Measure temperature variations in systems like HVAC components.
- Flow Measurement Devices: Assess flow rates of air and water in HVAC systems.
- Pressure Measurement Tools: Measure static and dynamic pressures in ducts, pipes, and equipment.
- Electrical Measurement Instruments: Measure voltage, current, and power quality in electrical systems.
- Sound Level Meters: Measure noise levels in mechanical systems to ensure compliance with acoustic standards.
- The role of commissioning measurement instruments is crucial in ensuring building systems perform as intended and contributing to successful operation of facilities.





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THANK YOU

