

BEYOND
SMART CITIES



welcome to
BEYOND SMART CITIES

A hand holding a miniature world with a city, trees, and a waterfall.

B E Y O N D
S M A R T C I T I E S

COMMISSIONING CERTIFIED TECHNICIAN

CXCT REFRESHER

ONLINE TRAINING BY KRISHNAJI PAWAR

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

KNOWLEDGE IS POWER

L E A R N . B E Y O N D S M A R T C I T I E S . I N

BEYOND
SMART CITIES

MODULE
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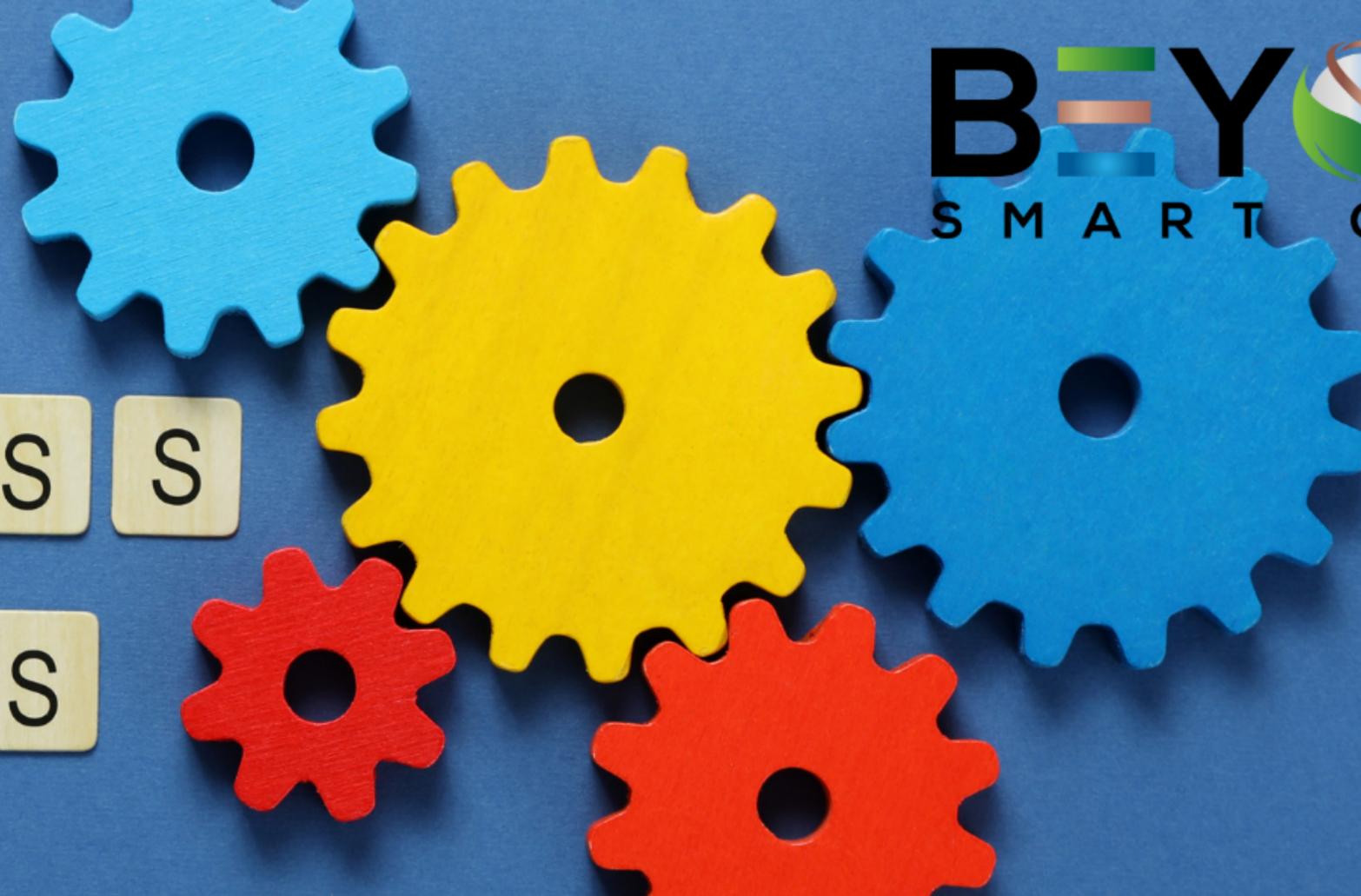
CxT Responsibilities by Phase - Design Phase

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**BUSINESS
ROLES**

**COMMISSIONING
CERTIFIED
TECHNICIAN
CXCT REFRESHER**

A commissioning technician plays a crucial role in engineering and project management, particularly in the construction and manufacturing sectors. Their responsibilities include effective communication with the commissioning authority, conducting site inspections, reporting daily progress, and quality control. Effective communication ensures that all relevant team members understand their roles and responsibilities in delivering a successful commissioning outcome.

Learning Objectives

- **Course Overview and Introduction**
- **CCxT's Technical, Communication, and Commissioning Skills - Working knowledge of Procedural Standards**
- **HVAC Systems - Why is CxA of buildings necessary?**
- **Basics of field TAB , HVAC systems - Trained on jobsite safety and PPE**
- **CxT Responsibilities by Phase - Design Phase**
- **Pre-function tests include sheet checking and installation tests.**
- **Point-to-point calibrate MEP and sensor systems.**
- **Verify TAB pre-functional tests and CxT responsibilities**



INTRODUCTION

- **Effective Communication with Commissioning Authority:** The commissioning technician serves as a bridge between the commissioning authority and the operational teams involved in the commissioning process. This includes the transfer of technical information and alignment of expectations regarding project deliverables.
- **Conducting Site Inspections:** The technician is responsible for routinely assessing the installation and performance of systems and equipment. They confirm the installation of all components in accordance with specifications and their intended functionality.
- **Reporting Daily Progress to Commissioning Authority:** The technician must report daily progress to the commissioning authority, keeping them informed, facilitating decision-making, and providing a historical record of the commissioning process.

COMMISSIONING TECHNICIAN RESPONSIBILITIES IN ENGINEERING AND PROJECT MANAGEMENT



- Not Modifying or Interpreting Commissioning Process Without Authority: The technician must adhere to established protocols and procedures to avoid significant risks, such as safety hazards or non-compliance with regulatory standards.
- Implementing Tasks Delineated by Commissioning Plan and Authority's Assignment: The technician must carry out specific tasks as outlined in the commissioning plan and as assigned by the commissioning authority. This includes system testing, performance validation, documentation, and stakeholder meetings.
- Precision and attention to detail in implementing tasks are crucial for achieving the commissioning objectives.
- The role of a commissioning technician is multifaceted, requiring a blend of technical expertise, communication skills, and adherence to established protocols.

BUILDING COMMISSIONING PROCESS

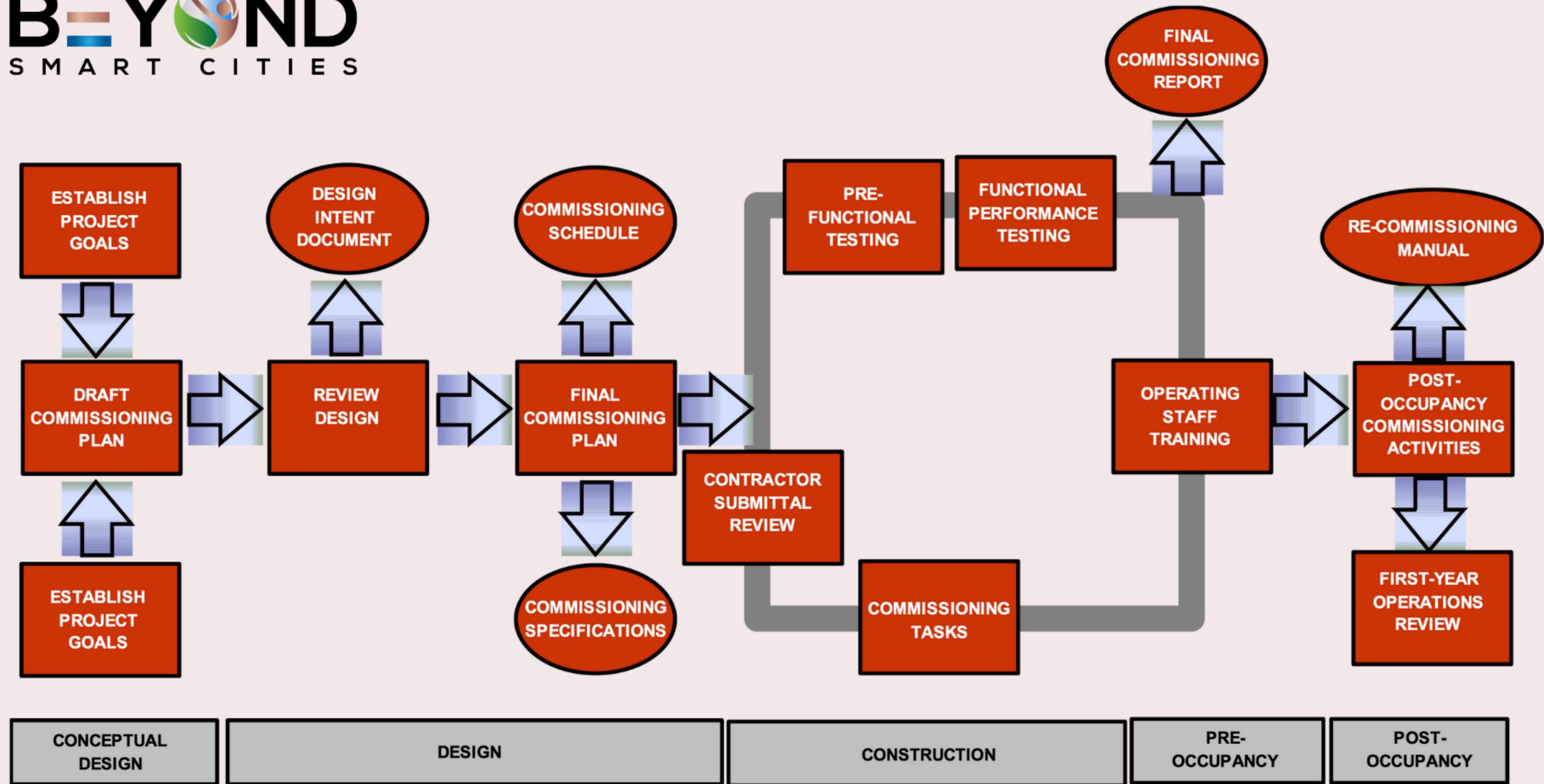
- Establishes standards and procedures for building system commissioning, especially in HVAC, building automation systems, and indoor environmental quality.
- The commissioning process is systematic to ensure optimal performance, energy efficiency, and occupant comfort.
- Key phases include pre-design, design, construction, occupancy, and operations.
- The pre-design phase establishes project goals, defining owner's requirements, performance metrics, and sustainability goals.
- The design phase involves collaboration with architects, engineers, and stakeholders to ensure design meets requirements.
- The construction phase involves inspections, observing construction activities, and functional testing.



BUILDING COMMISSIONING PROCESS

- The occupancy and operations phase involves ongoing evaluation and fine-tuning of building systems.
- The success of the NEBB commissioning process relies on stakeholder collaboration.
- The commissioning process is the integrated application of a set of engineering techniques and procedures to check, inspect, and test every operational component of the project—from individual functions such as instruments and equipment, up to more complex entities such as subsystems and systems.
- Commissioning Process: a quality focused process for enhancing the delivery of a project.
- The commissioning process is a team effort





DESIGN PHASE RESPONSIBILITIES

During the design phase, the CxT plays a vital role in laying the foundation for successful commissioning. They collaborate with the Commissioning Authority (CxA) to organize and conduct the Design Phase Kickoff Meeting, aligning all stakeholders on the project's objectives and commissioning goals. They assist in drafting System Verification Checklists (SVC) and Functional Performance Tests (FPT), which outline the criteria for evaluating system performance.



DESIGN PHASE RESPONSIBILITIES +



- Collaborate in Kickoff Meetings: The CxT organizes and conducts the Design Phase Kickoff Meeting, aligning all stakeholders on the project's objectives and commissioning goals.
- Prepare Verification Checklists: The CxT assists in drafting System Verification Checklists (SVC) and Functional Performance Tests (FPT), essential tools for evaluating system performance.
- Understand Project Objectives: The CxT must be aware of design development milestones and overarching project objectives, including sustainability goals.
- Communicate with the Commissioning Authority (CxA): The CxT acts as the "eyes and ears" of the CxA, reporting on design issues that may affect the commissioning process.
- Documentation Review: The CxT reviews design documents, specifications, and drawings to ensure they meet the commissioning requirements outlined in the Commissioning Plan.
- Input on System Design: The CxT provides valuable insights based on their field experience, suggesting alternative technologies to the CxA for consideration.

DESIGN PHASE RESPONSIBILITIES ++

The responsibilities of the CxT during the design phase are multifaceted and critical to ensuring a successful commissioning process. This collaborative approach enhances the quality of field services and fosters a culture of accountability and excellence throughout the project lifecycle.





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THANK YOU

