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COMMISSIONING AUTHORITY
CXA OVERVIEW
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C),GSAS CGP,GCP,ISO 14001
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MODULE 01

Introduction and Course Outline

KRISHNAJI PAWAR - CEO & FOUNDER
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COMMISSIONING AUTHORITY

CXA OVERVIEW

The Commissioning Authority - CxA Overview training program aims to equip people with the knowledge, principles, guidance, and resources needed to effectively implement and manage building commissioning and its professional credentials.

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BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



Krishnaji Pawar is founder and CEO of Beyond Smart Cities. Before being named CEO in January 2020, Krishnaji held leadership roles at Beyond Smart Cities in both Sustainability ,Energy & Environmental Consultancy.

Specialized in developing sustainable design strategies for Green Building Certification Systems (LEED, GSAS, etc.), Energy & Water Conservation, Commissioning, Environmental Impact Assessment & Environmental Management Systems.

Currently responsible for 3,787 million square feet Green Building /Energy modeling Consulting since January 2008 in UAE, India and Qatar.

Learning Objectives

- Course Overview and Introduction
- Definition and History of Building Commissioning
- Why is building commissioning needed?
- Building Commissioning Process Overview
- Professional Certification in Commissioning
- Cost and benefits of building commissioning
- Summary and Resources
- CxA Sample Exam Question

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INTRODUCTION

- Green buildings are increasingly prevalent in Asia, but their performance often falls short due to poorly commissioned HVAC systems.
- The course provides an introduction to building commissioning, answering four key questions: why commissioning is necessary, how to perform proper commissioning, and the history of building commissioning.

BUILDING COMMISSIONING OVERVIEW

- It covers the building commissioning process, professional certification, cost and benefits, and a sample exam question.
- The course also discusses the relationship between commissioning and sustainability certification programs like LEED.
- The course encourages starting with building commissioning to prevent dysfunctional buildings in India and the GCC.



EFFICIENT BUILDING PERFORMANCE IMPORTANCE

- Changes in people's expectations and business environment necessitate efficient building performance.
- The built environment protects health from environmental issues like heat, air pollution, rain, and noise.
- Buildings should not become pollution sources and health hazards.
- Decreased resources like water and energy, and increasing costs of their usage, necessitate better performance.



EFFICIENT BUILDING PERFORMANCE IMPORTANCE+

- Investors expect higher returns on investments, leading to improved building valuation and management models.
- The complexity and automation of building technology necessitates the start-up of individual components and total system operation.
- Major green building certification systems now require HVAC system commissioning, but proper system performance should be a basic requirement for new construction and refurbishment projects.





KEY DEFINITION & MEANING



Commissioning is a process - a systematic process of ensuring that a building performs in accordance with the design intent, contract documents, and the owner’s operational needs.

Basis of Design (BOD)
A document that records the concepts, calculations, decisions, and product selections used to meet the owner’s project requirements and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.

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ASHRAE: American Society of Heating Refrigerating and Air-Conditioning Engineers is an international organization with a mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

Basis of Design (BOD):The documentation by the design team of the primary thought processes and assumptions behind design decisions that are made to meet the Owner's Project Requirements. The BOD describes the assumptions used for sizing and selection of systems (i.e. codes, standards, operating conditions, design conditions, weather data, interior environmental criteria, other pertinent design assumptions, etc.).

Building Performance Monitoring & Metric:Using tools that compile building data into a few useful metrics to help operators understand whether their building technology is working as intended.

Owner’s Project Requirements (OPR)
A written document that details the functional requirements of a project, i.e., the expectations of how it will be used and operated, It also includes project goals, measurable performance criteria (e.g., energy efficiency goals), cost considerations, success criteria and relevant benchmarks, and supporting information.



Commissioning Process (CxP):A quality-focused process for enhancing the delivery of a project includes commissioning process activities specified by the owner or required by a code or standard. The process focuses on verifying and documenting that all of the systems and assemblies under the scope of commissioning are planned, designed, installed, tested, operated, and maintained to meet the owner's project requirements.

Commissioning Final Report (CxFR): A document that records the activities and results of the commissioning process and is developed from the final commissioning plan with all of its attached appendices.

Commissioning Plan (CxPlan) : A dynamic document that outlines the organization, schedule of activities, allocation of resources, and documentation requirements of the commissioning process The document shall be updated frequently, at least at the end of every phase, with the tasks and documents related to the coming phase.

Commissioning Provider (or Authority (CxA) or Agent): An organization or individual identified by the owner who sets up the commissioning team and leads, plans, schedules, and coordinates the activities to implement the commissioning process
Commissioning Team (Cx Team) : Individuals and agencies who, through coordinated actions, are responsible for implementing the commissioning process.

CERTIFIED COMMISSIONING AUTHORITY (CXA) OVERVIEW

- An ANAB-accredited and DOE/Better Buildings recognized program.
- Recognizes independent building commissioning professionals with technical, management, and communications skills.
- Aligns with the U.S. Department of Energy's Better Buildings program.
- Available to industry professionals leading, planning, coordinating, and managing commissioning teams.
- Includes managing commissioning projects, preparing documentation, conducting commissioning activities, coordinating operator training, and conducting warranty phase activities.
- CxA certificants work independently and on behalf of building owners.





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Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists, Commissioning Specialists, Environment Specialists, Health & Safety Specialists, Fire Safety Specialists, Climate Change Specialists & Green Products/Technology Manufacturers with independent talent around the globe.

Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.

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