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COMMISSIONING SPECIALIST
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CERTIFIED COMMISSIONING MANAGER
CCM TRAINING PROGRAM
ONLINE PROFESSIONAL COURSES LED BY THE WORLD'S TOP SPECIALISTS
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

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

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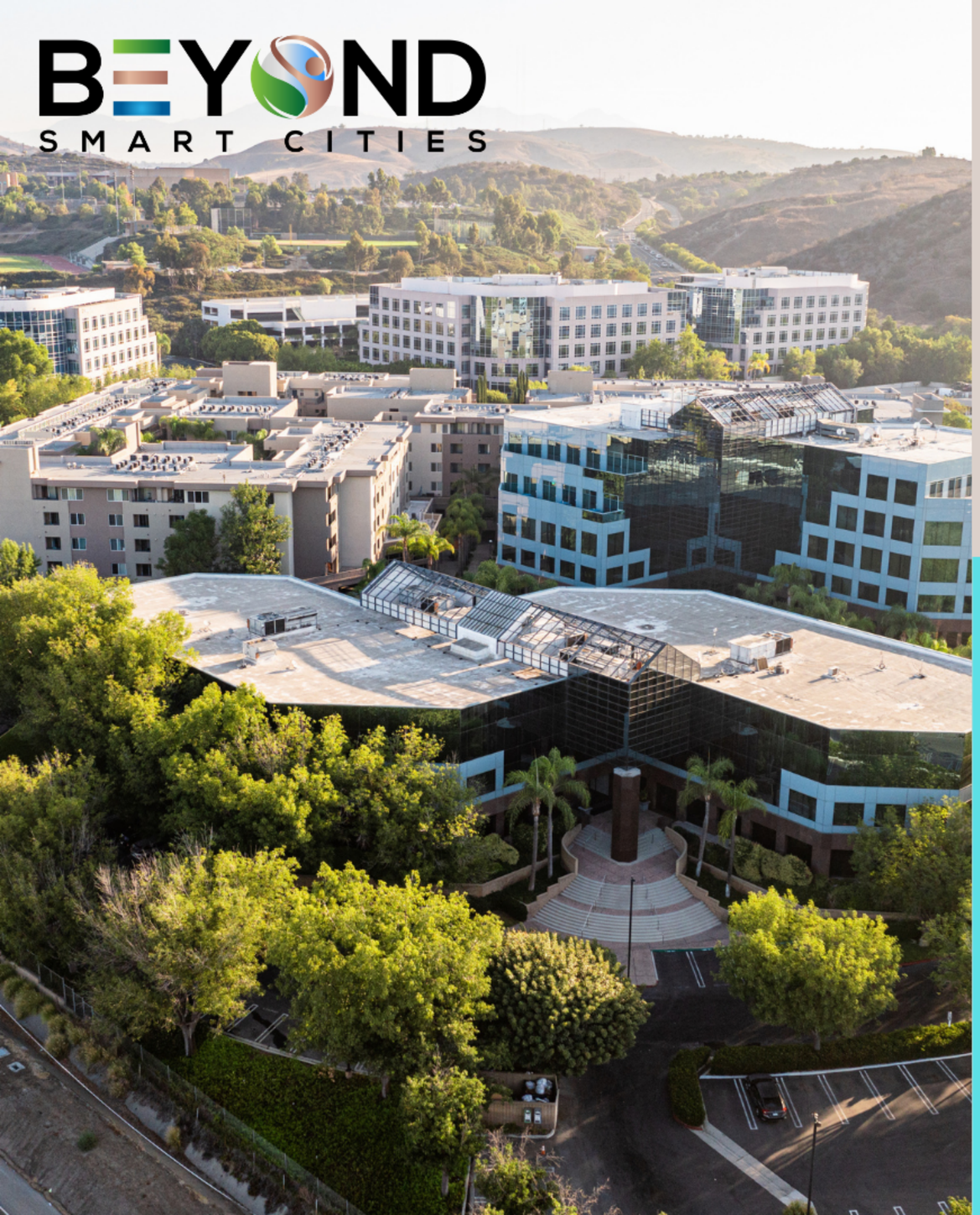
BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



- Krishnaji Pawar is the company's founder and chief executive officer.
- Before being named CEO in January 2020, Krishnaji held leadership positions in both sustainability and energy and environmental consulting at Beyond Smart Cities.
- Since January 2007 in the UAE, India, and Qatar, responsible for 3 767 million square feet of green building and energy modeling consulting.
- Since joining the Green Building Technology Platform in 2007, he has been known for his courageous leadership and his passion for the company's mission to create economic opportunities so that people can live better lives.
- After graduating from Visvesvaraya with a degree in mechanical engineering, he began his career as an energy engineer at Pacific Controls and Company.



WELCOME TO BEYOND SMART CITIES

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.



CERTIFIED COMMISSIONING MANAGER - CCM TRAINING PROGRAM

The Certified Commissioning Manager training program covers comprehensive energy-efficient building commissioning strategies. Over the course of five hours, attendees gain a thorough understanding of building commissioning principles, processes, and project management.



CERTIFIED COMMISSIONING MANAGER - CCM TRAINING OVERVIEW

Practical knowledge on the skills, strategies, communication, and documentation protocols essential to applying the commissioning process to "real-world" projects will be covered in this CCM Commissioning Workshop in addition to the commissioning process as described in the Commissioning Guideline, ASHRAE Guideline 0, and ASHRAE Standard 202.

Learning Objectives

- Overview of the CxA Process
- Certification Programs for CxA Professionals
- CxA Team and Managing CxA Projects
- Procuring CxA Services and Preparing CxA Documents
- Predesign Phase of the CXA Process
- Design Phase of the CXA Process
- CxA Specifications
- TAB Fundamentals and Reviewing TAB Reports

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INTRODUCTION

- The industry of building commissioning is an intriguing phenomenon.
- In one sense, progress has been made over the past 40 years.
- In another sense, recognition and acceptance in the facilities development and management industry are still in their infancy.
- There are currently fewer than a few hundred identified providers of building commissioning services.
- Moreover, among the few providers, there is still a significant disparity in commissioning strategies.
- The majority of owners and other parties hire architects during the construction phase of projects, while others hire them late in the design phase or during predesign.

Learning Objectives

- Construction Phase: CxA Process
- Occupancy Phase: CxA Process
- Managing training activities
- Economics of CxA
- Conducting ongoing CxA
- Conducting Existing Building CxA
- Retro CXA
- Building Enclosure CxA Process

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- Many providers do not anticipate being retained until the end of the design phase or after construction has begun, and they do not actively promote the advantages of participation during the early design phases.
- Some enlightened owners—those who have experienced the benefits of employing suitably qualified commissioning services—have engaged such services.
- Providers early in the design or predesign phases are at the forefront of a market transformation movement.
- Diverse organizations are at the forefront of this movement, which aims to improve the effectiveness of energy conservation programs by developing and implementing techniques to ensure the achievement of program objectives.
- Commissioning a building is one of the techniques.

Learning Objectives

- Sustainability, energy management, and resiliency
- CxA High Performance Green Buildings
- Summary and Resources
- Sample OPR
- Sample BOD
- Sample CxA Plan
- Sample CxA Report
- Sample Design Review

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- The positive results achieved over the past 20 to 25 years are encouraging and have prompted a positive movement toward advancing the building commissioning process in order to improve energy conservation results.
- As well as the additional advantages gained when building commissioning quality assurance programs are developed and implemented properly.
- The building commissioning industry must now establish standards and provide education to improve the results of the building commissioning quality assurance process and the performance of commissioning service providers in order to achieve results that are beneficial to owners, design professionals, contractors, and anyone else who recognizes and promotes the benefits to be gained.
- All participants in the facilities development and management industry can improve the outcomes of their endeavors by incorporating a well-developed quality assurance program into their capital development programs, as outlined in the CCM online training.
- We hope that the CCM training will provide direction and provoke thought along the way.

CERTIFIED COMMISSIONING MANAGER CCM PROGRAM - OVERVIEW

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- Significant advancements have been made in the field of building commissioning since the initial release of CCM Training course.
- To ensure the translation's efficacy for various stakeholders such as commissioning service providers, building owners, developers, design professionals, and contractors, it is deemed appropriate to undertake updates to the document.
- We hold the belief that the information and ideas presented offer a more comprehensive understanding of the various issues and factors that need to be addressed when constructing new facilities in the 21st century.
- It is becoming increasingly evident that a formal building commissioning program is essential for the successful functioning of most newly developed buildings in the present era.



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- The implementation of a commissioning program holds significant importance in the context of intricate science facilities that utilize variable air volume (VAV) heating, ventilation, and air conditioning (HVAC) systems.
- Commissioning may be considered a critical aspect of a capital project, particularly for owners who lack a proficient operations staff.
- One plausible alternative entails the implementation of a requirement for the capital program to undertake a formal commissioning process for each newly constructed facility, ensuring the delivery of a fully operational building to the designated owner.





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What is the definition of commissioning?

- Commissioning is a comprehensive quality assurance program implemented by the owner that encompasses various stages of the project, starting from the predesign phase and extending through the design and construction phases.
- The program ultimately aims to ensure sustainable operation by the owner's staff.
- Regardless of the approach taken, commissioning can be a challenging task if the project is not approached correctly.
- Conversely, commencing the project from its initial stages and pursuing it with unwavering commitment, alongside the collaboration of consultants and contractors, facilitates the establishment of an efficient and well-functioning program.
- The roles of various stakeholders involved in the building commissioning process are extensively outlined in CCM Training.

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- This includes the design professional, contractor, testing contractor, commissioning authority, and building owner.
- The training explores various aspects related to the commissioning process, including equipment testing, system functional performance testing, intersystem functional performance testing, scheduling, documentation, training, costs, advertising for and selecting a commissioning authority, and other relevant considerations that may arise during the process.
- After the training, one should be convinced of the importance of building commissioning in capital construction program success.
- Furthermore, it becomes evident that the expenses associated with building commissioning are comparatively lower than the expenses incurred by neglecting to commission newly constructed facilities.
- The training also provides information regarding retrocommissioning, which refers to the commissioning process that is implemented in facilities that have not undergone commissioning procedures in the past.



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- This highly effective tool effectively addresses and rectifies the numerous operational challenges that afflict the majority of current buildings.
- The process employs a rigorous assessment of equipment and systems, which have been specifically designed for new construction projects.
- However, there are variations in the composition of the commissioning team and the roles they play compared to those involved in new construction projects.
- Building commissioning has emerged as a significant undertaking in the new millennium for numerous organizations and institutions.
- Commissioning can be regarded as a cost-effective risk management strategy that is specifically tailored to prevent assuming control of an underperforming facility that fails to meet the project requirements of the owner.





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If one lacks prior experience in building commissioning, it is guaranteed that this book will furnish knowledge that will lead to a significant advancement in the correct path towards establishing an efficient building commissioning program for one's organization or institution.

If an individual has encountered a commissioning process that yielded outcomes below their anticipated level, it is probable that they will discover the necessary information to significantly enhance the results of their subsequent commissioning endeavor.

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LEARNING OBJECTIVES

Following completion of this program, participants will be able to:

- Describe the purpose, methodology, and benefits of the construction project commissioning process.
- Identify and differentiate the five phases of new construction commissioning — (1) pre-design, (2) design, (3) construction, (4) acceptance, and (5) post-acceptance — and the activities performed in each, as well as comprehend the distinguishing characteristics of existing building commissioning.
- Describe the essential documentation and deliverables for delivering quality commissioning services.
- Specify the roles and responsibilities of all commissioning team members within the commissioning process, with a focus on the commissioning provider's role.

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