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

04 - B

CxA Team and Managing CXA Projects

KRISHNAJI PAWAR - CEO & FOUNDER

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

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CERTIFIED COMMISSIONING MANAGER - CCM TRAINING OVERVIEW

The CX Team is indispensable to the process of commissioning building systems. The CxP cannot independently complete commissioning activities and deliverables. Typical Cx Team members include specialty trades, specialty consultants, suppliers, and manufacturers; equipment and system start-up specialists; building automation system (BAS) programmers; and information technology (IT) staff or consultants.

Learning Objectives

- A commissioning team
- The commissioning provider
- Occupants, end users, operations, and maintenance
- Architects and design professionals
- The General Contractor
- Electrical, mechanical, and plumbing contractors
- Exterior enclosure contractors
- Testing Firms & Comparing commissioning approaches
- Cost comparison & Conflict of interest comparison
- The integrated approach

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WHAT ELEMENTS COMPRISE A COMMISSIONING TEAM?

- If there were only one answer, the length of this lecture would be approximately 5 minutes.
- The fact remains, however, that there are numerous possible configurations for a construction project's commissioning team.
- In addition, there are many factors to consider when making a decision, such as the expertise required to perform the various tasks, the optimal costs to complete the tasks, the potential for delays in project completion, and the potential for conflicts of interest.
- This lecture will attempt to contextualize these factors so that the best decisions can be made for the organization's specific requirements.



Comparison of Commissioning Approaches

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- The above parties can commission the facility independently.
- Sometimes called single-party commissioning.
- With minimal input from the other four parties, the single-party commissioning authority must commission.
- If the design professional, owner, or independent commissioning authority is the only party, predesign and design phases allow reasonable participation to improve commissioning program quality assurance.
- The contractor or TAB firm may only participate in construction, warranty, and operations, ignoring predesign and design.



COMPARISON OF COMMISSIONING APPROACHES



- The owner employs the commissioning authority to provide quality oversight for the entire commissioning program and assigns in-house personnel to serve as trainees and witnesses during the commissioning activities.
- The commissioning philosophy is incorporated into the design procedure. Specifies the commissioning process during design, participates in construction commissioning meetings, trains staff, and is responsible for design phase quality control.
- Under the direction of a testing contractor that the prime contractor has hired, the construction contractor is in charge of the construction phase of quality control and coordinates, schedules, and carries out all commissioning testing.
- The commissioning authority assists the owner, design professionals, and construction contractors by overseeing the commissioning process and is responsible for all phases of quality assurance.

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COMPARISON OF COMMISSIONING APPROACHES

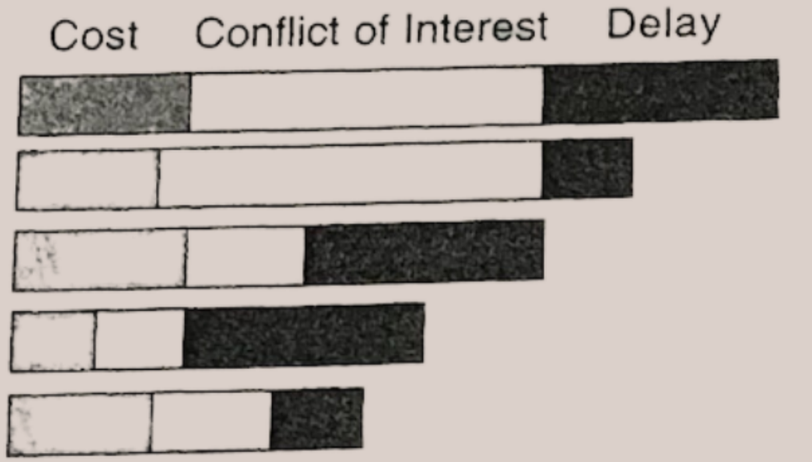
CxA: Design Professional

CxA: Contractor

CxA: Independent Party

CxA: Owner

Integrated Approach





COST COMPARISON

- The single-party approach with the design professional or an independent party as the commissioning authority is likely to incur the highest costs, given that the participants are compensated at the professional level.
- These alternatives will likely incur higher transportation and per diem expenses while the parties are on-site.
- The single-party approach with the owner as CxA will likely be the least expensive because the salaries of the participants will likely be lower than those of the other three parties.
- The approach with the contractor as the CxA is likely to be less expensive than the alternatives with the design professional or an independent party as the CxA and more expensive than that with the owner as the CxA because the majority of participants are compensated as traders.
- Due to the fact that contractors' commissioning personnel are typically already on-site when problems necessitating corrective work arise, they can either continue with the corrective work or return to other construction activities.





COMPARISON OF CONFLICTS OF INTEREST



- If commissioning is recognized as the owner's quality assurance tool for the functional integrity of the facility, then the CA's role must include evaluating the quality of the work performed by both the DP and the contractor.
- Due to the vast number of subcontractors and suppliers involved in the project, the contractor is likely to have the highest potential for conflicts of interest.
- Similarly, the design professional is likely to have the second-highest conflict of interest potential.
- The likelihood of a conflict of interest between the independent commissioning authority and the owner is only slightly greater than that of the owner.
- The independent CxA should have no economic or political ties to the design professional or contractor.

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THE INTEGRATED APPROACH



- Integrated commissioning is a balanced combination of various factors.
- Each party's role acknowledges the potential for conflicts of interest, but the potential conflicts are managed as a result of the independent CA's role.
- The activities are overseen by the commissioning authority and the owner, who have minimal conflicts of interest.
- Due to the fact that the contractor is responsible for coordinating and integrating commissioning activities with other construction activities, there is minimal potential for delay and fewer opportunities to use the excuse that another party delayed the work.
- Integrated commissioning facilitates the commissioning authority's participation in the predesign and early design phases of a project.

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THE CONCLUSION



- Two concerns raised by colleagues nationwide must be addressed before developing this concept. The idea that (1) the contractor must build a functional building and (2) the designer must ensure that it works as intended. This happens occasionally, but not often. There are too many horrors.
- Owners have heard stories of broken buildings for years after contractors and designers left. Thus.
- To avoid this, use another quality assurance method. The method is building commissioning.
- which may affect CA's decision.

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CONTACT US

+91 6363032722

info@beyondsmartcities.in

learn.beyondsmartcities.in

#55,HMR Layout ,Bengaluru ,India



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