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WELCOME TO BEYOND SMART BUILDING COMMISSIONING - SBCX

ONLINE TRAINING

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6. Hand-Off Phase SBCx



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NEXT



The objective of the hand-off phase is to ensure that facility staff and occupants have the understanding and documentation necessary to properly operate and maintain the changes and improvements made during the EBCx process, so the performance improvements persist over time. Tasks include updating and delivering key documentation, training staff, and planning for future ongoing commissioning (OCx) or monitoring-based commissioning efforts (MBCx).



Commissioning is gaining increasing recognition as a cost-effective strategy for reducing commercial building energy use. Although the success and cost-effectiveness of commissioning projects depends on how well the benefits of commissioning persist over time, this aspect of commissioning is not well understood.

Learning Objectives

- Brief Introduction
- Hand-off phase SBCx

Introduction

- Transition from commissioning to O&M. Updated documentation is included in the Systems Manual and commissioning reports. Measures for performance persistence include preventative maintenance, training of facility managers, operations and maintenance employees, and occupants, performance tracking, and smart commissioning plans (SBCx).
- A comprehensive training session helps users understand the SBCx results, how and why modifications were made, and how to operate and maintain linked systems during the hand-off phase. ECMs and FIMs that directly affect end-users, such as improved thermostats or lighting controls, may be included in SBCx training. Training uses the operations guide, O&M manuals, and system sequences.
- Technical and technological application training for OCx may begin at this stage or earlier for combined EBCx+OCx projects. Staff and other concerned parties are trained on the technological product(s)' navigation and features and advanced data analytics duties.



Hand-off Phase SBCX

Here we create required reports, data analysis, additional facility requirements, and recommendations to share with you

The project signoff and training phase of the project including:

- Customer review of deliverables
- Training of stakeholders
- Development of lessons learned

During the hand-off phase, the following are updated and delivered to the owner:

- Sequences of Operation Document sequences are directly impacted by the SBCx process. Update or rewrite sequences for all key systems and equipment, including setpoints and reset schedules.
- Final SBCx Report Prepare the report as a record of the SBCx activities and measures implemented for the owner. This will become an important document for the building and an invaluable resource for current and future building operators. The final report typically includes:

Implementation Phase SBCX Activities

- O&M Manuals and As-Built Documentation Update O&M manuals and as-built documentation as required. If the owner has acceptable, up-to-date O&M manuals, then the manuals only need to be modified to include any changes to equipment or operations that were made as part of the SBCx project. If current manuals are nonexistent or inadequate to support effective O&M of the existing equipment, the owner should consider including a task in the SBCx scope to create or improve them. This would ideally include digitising into a file or folder structure all O&M and site documentation, such as drawings, specifications, submittals, TAB reports, control drawings, sequences, energy studies, warranties, PM plans, etc. This would include all site data, not just that generated in the SBCX process.
- Preventive maintenance procedures Update preventative maintenance procedures as required to ensure systems continue to operate efficiently.
- one-line schematic diagrams of major systems Create or update one-line diagrams of systems impacted by the SBCx. Accurate one-line diagrams will help facility staff troubleshoot issues and maintain optimum performance.

Train staff and end users

- Training should be pervasive throughout the commissioning process. At the hand-off phase, conduct formal training to ensure operations staff understand the EBCx findings and implemented changes. Training activities ensure that operators understand the theory behind the implemented changes ("why") as well as how to control and maintain the changes ("how").
- Training may also include the end users for ECMs and FIMs that directly affect or are controlled by the end user's occupants. For example, upgraded thermostats or lighting controls that the end users will directly control and adjust are two examples.



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