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WELCOME TO
ADVANCED EXISTING
BUILDING COMMISSIONING
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KRISHNAJI PAWAR - CEO & FOUNDER
GREEN BUILDING
COMMISSIONING



# 8.SUMMARY AND RESOURCES

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COMMISSIONING SPECIALIST CURRICULUM

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# Learning Objectives

- Summary
- Resources

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Over the past decade, commissioning an existing building has led to energy savings of 10, 20, or 30% without considerable capital investment. Energy payback is usually under three years. Building comfort, system performance, and maintenance costs are also enhanced. Commissioning usually requires no capital input, although it often identifies maintenance needs before completion. Commissioning operations often reveal capital upgrades or retrofits, allowing for more accurate benefit estimation than a standard audit. Facilities staff involvement can increase staff technical skills.




# Summary

- EBCx is like new construction commissioning (NCCx). It tests, improves, and optimises system performance. Owners and project stakeholders develop and execute the process in an operating—or even occupied—facility, which changes its scope and sequence.
- EBCx starts and concludes with an up-to-date Current Facility Requirements (CFR) for the systems and equipment being commissioned, like the NCCx OPR. New and existing building commissioning produces a specified and documented facility and/or equipment that works as planned.
- EBCx helps operate systems that optimise energy and water use, provide a safe, healthy facility, and save operating expenses. CxPs train O&M employees and document installed building systems.
- The Owner's aim to address operating and performance issues, replace or update old equipment, take advantage of utility incentive programmes, improve asset value, change occupancy space and systems, or comply with regulatory requirements or efficiency goals determines commissioning activities.
- Commissioning determines project approach, specifics, and plans. This may include a building "tune-up" to complete system replacement and commissioning. Portfolio Owners can use EBCx on many facilities to integrate systems.

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# Summary – EBCx

The purpose and scope of EBCx is contained within one or more of these definitions:

1. Retro-commissioning (RCx) is commissioning an existing building that has never been commissioned before.
2. Recommissioning (ReCx) occurs when a building that has already been commissioned undergoes another commissioning process. The decision to recommission may be triggered by a change in building use or Ownership, the onset of operational problems, or some other need.
3. Monitoring-Based Commissioning (MBCx) utilizes primarily monitored data (versus primarily manual tests and checks) originating from the Building Automation System (BAS) or other meters processed with special analysis tools, sometimes referred to as Energy Management and Information Systems (EMIS).
4. System-Specific Commissioning is a tailored application focused on a small subset of targeted systems in a building, such as indoor environmental quality or chiller plant efficiency.
5. Ongoing Commissioning (OCx) continuously gathers data about existing systems and building performance and continuously or regularly evaluates the data to ensure proper operation and to improve performance, usually dependent on hardware and software tracking tools and by a separate contractual arrangement after completion of NCCx or EBCx.



# Excellence in Commissioning Buildings for the Spaces We Share

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# Who We Are

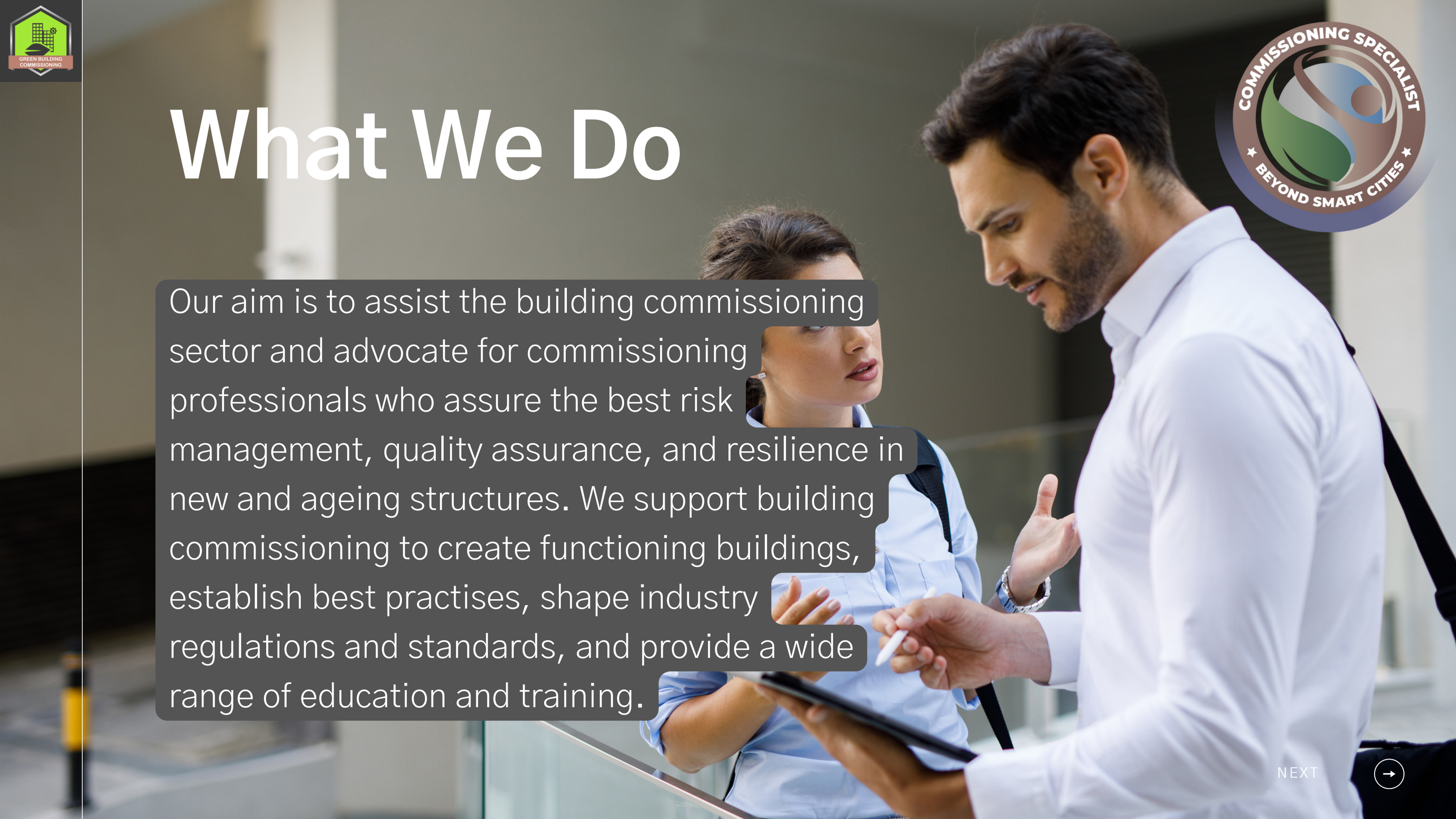
Beyond Smart Cities is the world's first marketplace for green technology. It connects millions of sustainability experts, green building experts, energy experts and commissioning experts with independent talent from all over the world.

Our mission is to build and support a global community of experts with the highest standards of professional practise in sustainability, green building, energy, commissioning and managing GHG emissions.

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# What We Do

Our aim is to assist the building commissioning sector and advocate for commissioning professionals who assure the best risk management, quality assurance, and resilience in new and ageing structures. We support building commissioning to create functioning buildings, establish best practises, shape industry regulations and standards, and provide a wide range of education and training.



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# Online specialist courses taught by the world's leading experts. Empowering each specialist for success.

Whether you're a commissioning provider or a building industry stakeholder, we have online courses that will help you start, expand, or refresh your knowledge of the commissioning process and technical applications.

Question Bank questions are multiple-choice. 500+ simulated questions can help students pass the exam. The latest CCP, ACP, BCxP, CxA and CBCP tests are simulation-compatible.

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# Resources

- Building Commissioning Handbook, third edition (2017): Building Commissioning Association/APPA: Chapter 4, EBCx and Appendix 1-1, “How to Hire a Commissioning Team”
- ASHRAE Standard 202-2018: Commissioning Process for Buildings and Systems ASHRAE Guideline 0.2-2015: Commissioning Process for Existing Building Systems and
- Assemblies
- ASHRAE Guideline 1.2-2019: Technical Requirements for the Commissioning Process for Existing HVAC&R Systems and Assemblies
- ASHRAE/BCxA Commissioning Stakeholders Guide (including QBS section)




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