

# Retro-Commissioning

The Devil is in the Detail

Some building owners see their buildings as a....  
Basket Case





And building  
additions that  
just don't seem  
to work?



# Early Retro-Commissioning

Wickham Terrace Mill was initially used as a treadmill powered grain mill and then retro fitted to become a wind powered grain mill



# Changes for the Worse

Lack of systems integration  
with upgrades and additions

Many Owners and  
Facility Managers

Lack of initial commissioning

Building documentation  
not kept in line with  
upgrades

Lack of adequate maintenance  
and too many quick fixes

Little or no building  
tuning and performance  
evaluation





# Information is King

How do you know where you are going if you don't know the way?



What documentation exists to help evaluate the buildings performance?

Investigate the buildings actual performance!

# Retro-Commissioning Process Overview

Planning Phase



Investigation Phase



Implementation Phase



Hand Over Phase



# Planning Phase



- Set project objectives
- Select commissioning lead
- Document current operating requirements
- Perform initial site walk through
- Develop the Retro-Commissioning Plan
- Assemble the retro-commissioning team
- Hold a project kick-off meeting



# Investigation Phase

- Review facility documentation
- Perform diagnostic monitoring
- Perform functional tests
- Perform simple repairs
- Develop a Dilapidation Report
- Prioritise and select operational improvements

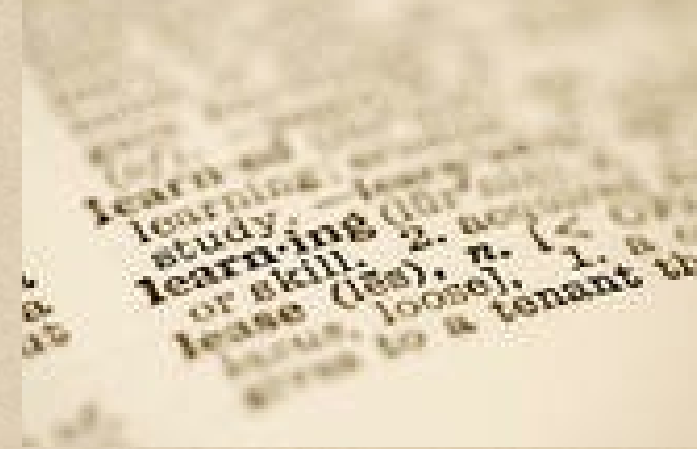


# Implementation Phase

- Develop Implementation Plan
- Setting a timetable
- Implement selected improvements
- Verify results against plan



# Hand Over Phase



- Develop Final Report
- Update or compile new Operation and Maintenance Manuals
- Update or compile new Commissioning and Building Tuning Plans
- Provide Training for operational staff
- Hold handover meeting with Owner / Client
- Implement continual building tuning strategies



# Success or Failure

The success of retro-commissioning can be found in the following areas:

- Improved system operation
- Improved equipment performance
- Increase O&M staff capabilities and expertise
- Increase asset value
- Energy savings
- Improved indoor environmental quality (IEQ)
- Low tenant staff churn
- Improved building documentation



# Further Information

- Portland Energy Conservation, Inc (PECI)
- California Commissioning Guide - Existing Buildings
- NEBB Procedural Standard for Retro-Commissioning of Existing Buildings

Thank You