



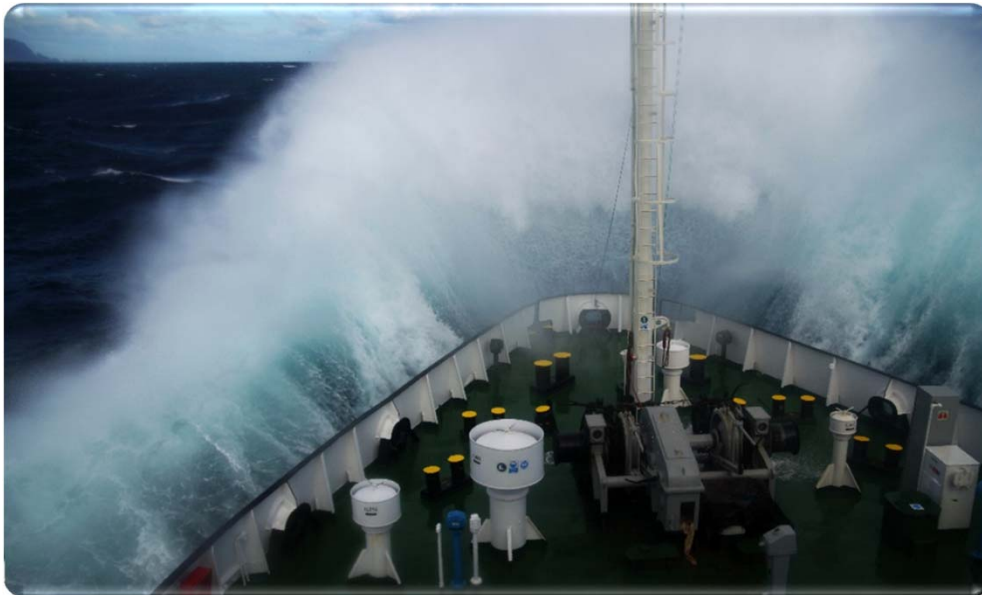
# Commissioning

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# Commissioning

From shipbuilding...



The systematic process of checking and optimizing all of the building's equipment and control systems to ensure efficient operations.

**Commissioning**  
New Building

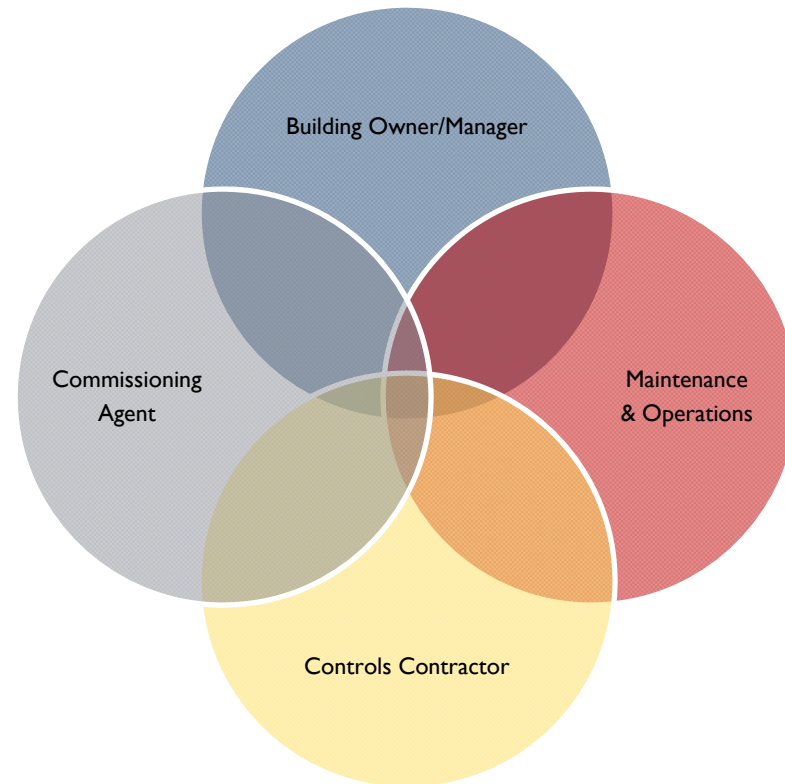
**Re-Commissioning**  
Existing Building

**Retro-Commissioning**  
Existing Building

**Continuous  
Commissioning**  
Existing Building

# Commissioning Process

- 1) Select a Commissioning Agent
- 2) Identify Goals
- 3) Collect Preliminary Data
- 4) Site Visit investigation with Maintenance staff and Controls Operator.  
*Many no-cost issues fixed.*
- 5) Final Report Documentation and Improvement Plan
- 6) Completion and Commissioning of remaining improvements



# Identify Goals & Priorities

- Save Energy?
- Reduce Maintenance?
- Reduce Complaints?
- Reduce Liability?





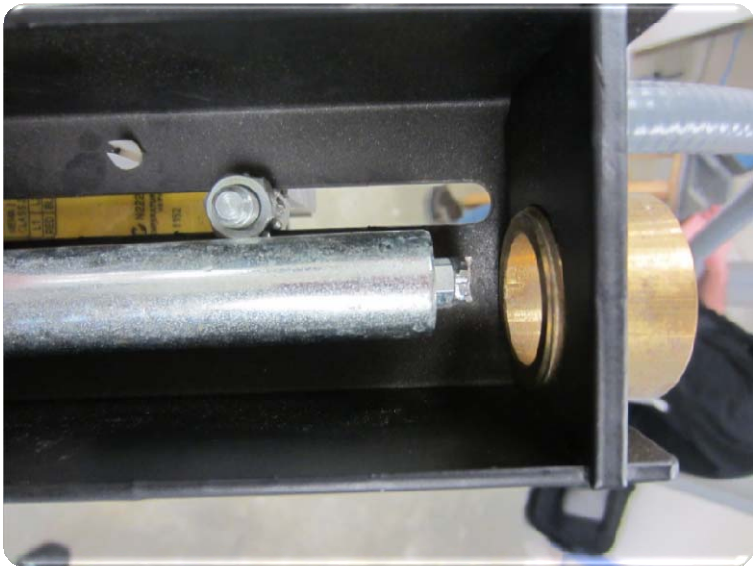
# Interview Staff, Management, Tenants



- Maintenance Records
- Routine complaints
- New equipment?
- Regularly failing equipment?
- Recent changes to the facility?

# Systems Examined

- Ventilation
- Heating and Hot Water
- Cooling
- Terminal Units
- Lighting



Check on each system:

- ✓ Function
- ✓ Communication
- ✓ Interaction
- ✓ Schedules
- ✓ Adjustments
- ✓ Safeties
- ✓ Alarms

# Case Study I

## Midsize Office Building

### 90,000 SF Office Building in the Anchorage

Retro-Commissioning Project

<b>Before:</b> Air Handler operating 24 hours per day	
<b>After:</b> Air Handler operating 12 hours per day	
Estimated Electrical Savings:	<b>\$41,000 per year</b>



# Case Study 2

## Healthcare Facility

### 150,000 SF Healthcare Facility in Alaska

Retro-commissioning



**Before:** The AHU had no minimum air position set point. When the outside temperature was below 55°F, all air was recycled. There was no fresh air

**After:** Minimum OA requirements met, healthier building

**Not an energy savings finding**

**Will affect Health and Liability**



# We can't do it because...

- Too much risk
- Building already works as well as it can
- Not too many complaints
- We already had an energy audit
- We just got a new \_\_\_\_\_, so it must be working right



# Questions?



You either pay for energy waste...  
... or for energy improvement.