Improving City Resiliency While Minimizing Risk through Long-Term Capital Planning

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Learning Outcomes
- Deliver comprehensive data and information
  - Condition, lifecycle, replacement schedule
  - Cost of select facilities and properties
- Track deferred maintenance
- Translate facility data into multi-user visuals
  - Enable high quality decision-making & prioritization
- Support capital forecasting and budgeting

Facility Challenges
- Growing deferred maintenance backlog
- Limited financial resources & time
- Lack of integration with building systems & automation
- Piecemeal projects & tenant improvements

Why Long-Term Strategies?
- Short-term solutions and price-driven shortcuts may be perceived as problem solving...
- In reality they end up costing institutions and organization much more!

Different Needs

Facility Manager Role
- Trades Supervisor
- Facility Manager
- Executive
Facility assessments are consultative services that document, analyze, and benchmark the current condition of an organization's facility assets, and make data actionable by combining condition data with financial analysis to identify capital planning priorities.

Why do Facility Condition Assessments?

- Prioritize capital improvement, efficiency, and deferred maintenance needs in your buildings
- Identify and quantify facility conditions, deficiencies
- Calculate potential for energy savings with retrofits
- Forecast, strategize and plan for future facility costs

Too Much Data, Not Enough Answers

- Data is the new natural resource
- Time is the new currency
- Technology-driven, human-centered growth

FCA Process Overview

Learn
Audit
Analyze
Report

Step 1: Learn

Customer Pain Points
- Ongoing unresolved problems
- Projects failing to address issue
- Staffing concerns
- Code violations
- Technology burdens
- End client requirements
- Leadership requires supporting data

Assessment/Data Types
- Asset Condition
- Operational Data
- Organizational Need

Facility Stakeholder Interviews

Condition Assessments
- Areas of expertise
- Personal experiences
- Legacy knowledge
- Standard terminology
- Address fears

Operational Assessments
- General roles
- Challenges
- Successes
- Measures of success
- Priorities
Step 2: Audit

**Collect Assessment Data**
- On-site at each location
- Review building elements in the scope of work
  - Architecture/structure
  - Mechanical/electrical/plumbing
  - Site/civil
- Potential to revise the scope
  - Energy conservation
  - Life/safety or code compliance
  - Data transfer to CMMS
- Follow-up stakeholder discussions

Audit: Site Survey

**Quantitative Assessment**
- Count/Quantity
- Make/model/serial number
- Installation date
- Design life
- Remaining life

Audit Site Survey

**Qualitative Assessment**
- Condition
- Deficiency
- Recommended action
- Energy conservation
- Occupant impact
- Risk
- Serviceability

Whoever is evaluating your facility needs to be familiar with the variety of building systems. And, also understanding what depth of information is most important to you. There is a wide variety of ways to conduct condition assessments... make sure your end goals are well understood before embarking on the site audit.

Step 3: Analyze

**Analyze the Collected Data**
- Analyze audit data
  - Quantitative
  - Qualitative
- Generate repair or replacement costs
  - Consistency with existing cost data
  - Identify opportunities for efficiency
- Consider stakeholder interviews

Integrative Analysis
Step 4: Reporting

- Summarize quantitative and qualitative information about the facility
- Calculate a priority for each asset based on data
- Deliver detailed asset data in a usable format
  - Upload template into CMMS
- Produce a multi-year capital replacement budget
- Provide a visualization of asset conditions

Score The Assets

<table>
<thead>
<tr>
<th>Asset Condition</th>
<th>Energy Impact</th>
<th>Occupant Impact</th>
<th>Estimated Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed condition of the asset</td>
<td>Level of energy consumption from the asset</td>
<td>Expected impact on using workspaces for business needs should the asset fail</td>
<td>Estimated replacement cost in real dollars</td>
</tr>
<tr>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td></td>
</tr>
</tbody>
</table>

Rule of Thumb: High Score = High Priority

Reporting and Prioritization

Facility condition assessment visualization tools empowers you to make data-driven investments in your facility.

Visual tools to drive energy and/or operationally focused decision making!

The Past

A single source of facility data. Filtered by criteria most important to you. Accessible via a powerful and flexible tool. Built to help you make decisions.

Turn Data into Answers
**Process Overview**

- Review Existing Conditions
- On-site Interviews
- Team Update Meetings
- Data Organization
- Present Findings

**LEARN** Comprehensive Facility Condition Assessment

**AUDIT**

**ANALYZE**

**REPORT**

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**Why Perform a FCA?**

- Central database for facilities information
- Data granularity (e.g., central plant, sub-meters)
- Keep institutional knowledge (information lives within database vs a few gatekeepers)
- Financial resources determined annually – ahead of time
- Optimize and prioritize projects/costs
- Address aging facilities with outdated equipment and systems

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**Questions?**

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