



THE VALUE OF FCAs TO SUSTAINABILITY FOR CAMPUSES

AGENDA



Introduction



Integrated Asset Management



Defining Sustainability Goals



Updating Your Plan



Questions

INTRODUCTION



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- Over 23 years of experience collaborating with public sector institutions across North America on sustainability and all aspects of facility and infrastructure asset management



INTEGRATED ASSET MANAGEMENT

Integrated Asset Management – Setting the Stage

- Most organizations have separate groups looking after Sustainability, Capital Planning & Facilities Operations.
- Each group typically has their own goals and objectives
- Each group typically has their own budget or funding
- To achieve excellence in your facilities these groups need to work together.



INTEGRATED ASSET MANAGEMENT



Importance of Integrated Approach



- The goal from the Sustainability perspective is to reduce energy use, GHG emissions and enhance indoor environment. These goals rely heavily on Capital Planning and Operational Excellence
- Remember the in achieving your sustainability goals the facility needs to serve its purpose/function.
- There is a close relationship between Sustainability, Capital Planning & Facilities Operations. True excellence cannot be achieved individually.

Performance Excellence and Operational Excellence



- Most energy and GHG reduction initiatives require the facility and equipment to be operated in a particular manner.
- The cheapest and often easiest reduction strategies involve optimizing building controls however will rely on ongoing operations to maintain the strategies and calibration of sensors.
- Changes in facility use or function can derail the GHG reduction strategy.
- Maintenance practices allow equipment to continue to operate at their peak performance.

Performance Excellence and Capital Planning Excellence

- Energy and GHG reduction opportunities can be capital intensive particularly upgrading equipment.
- Some reduction opportunities may rely on other building components (e.g. Solar on a roof)
- Timing is very important. When are capital renewal activities planned for?
- Some Capital Renewal activities cannot wait for a performance-based solution. Best practice to have that performance-based solution already.



Operational Excellence and Capital Planning Excellence

- The lifecycle of equipment can be extended through preventative maintenance practices.
- Communication of operational issues can be key to identifying Capital Renewal timing.
- Changes in operations of a facility can lead to the need to modify a building rather than a simple replacement.





DEFINING YOUR SUSTAINABILITY GOALS

Sustainability Goals

- Sustainability has a broad definition. Our focus of Sustainability here is on Energy, GHG and Cost Reduction
- Many organizations have or are in the process of creating a sustainability master plan.
- The first step is to have clearly defined goals for your portfolio.
- Have you integrated Sustainability into your Facilities Master Plan?



Key questions you need to answer



- What is your objective?
- By when are you trying to achieve your target? Short term and long-term goals. Remember you do not need to get their all at once.
- How are you measuring success?
- Have you Benchmarked your buildings?
- What funding is available?
- How are you going to determine the path forward of each facility? – Energy Audits.

Types of Energy Audits

- ANSI/ASHRAE/ACCA Standard 211-2018 - Standard for Commercial Building Energy Audits
- Defines three types of Energy Audits (EA)
 - ASHRAE Level 1 – Walkthrough Energy Audit
 - ASHRAE Level 2 – Energy Survey and Engineering Analysis (Detailed Audit)
 - ASHRAE Level 3 - Detailed Analysis of Capital-Intensive Modifications (Not a full building audit)



How Do You Get What You Need?



When Requesting Energy Audits (EA) Consider:

- Define the type of audit (remember there is no full building level 3 EA);
- Identify your goals;
- Energy Modelling or Calculation method?
- What do you have for Utility Information and what format is it in?
- Determine what building an EA makes sense to do and what level is needed. Use your FCA to help determine this and consider benchmarking.

What Should you Expect in Your Detailed EA?

- Link to Capital Renewal and consideration of timing;
- Review of Operational opportunities (often through control systems) not just Technology Upgrades;
- The EA should identify where the energy is used;
- The EA will only be as accurate as the information provided;
- Complex opportunities will have initial identification of savings and may require a second stage to a Level 3 analysis before proceeding.



Measuring Success of Your Sustainability Goals



- Remember you can't save what you can't measure. How are you going to prove success of your plan.
- In a campus setting having a global energy meter makes it hard to validate your efforts and difficult to predict future savings.
- A first step for any campus is to install a means of metering individual facilities (at a minimum). Can be done using electricity, gas and btu meters.
- This can be taken a step further by sub metering individual equipment. If your campus has a central plant for heating and/or cooling it is suggested to submeter this equipment.



UPDATING YOUR PLAN

Why are FCAs Important to Sustainability

- FCAs can help determine what to do with a building – invest or demolish/abandon
- Allows you to align sustainability initiatives with renewal timing.
- Can be used to provide insight of other building components that renewal may impact sustainability initiatives.
- Most Energy Audits indicate energy saving concepts however do not indicate timing.



Adding Sustainability to Your Facilities Plan

- Consider all aspects when creating a plan for implementation. Some key questions:
 - What is the future of this facility?
 - When are components due for replacement?
 - How does this change impact operations of the facility?
 - What is the future plan for the space?
 - Can one measure generate cashflow to pay for other opportunities?



Planning Tips



- Plan long term – Remember the timing of your plan.
- Align goals and needs with other departments.
- Look for opportunities to utilize funding from other sources in the organization (Capital Renewal topped up with Sustainability funding)
- Where outside funding (Government or Utility) is available evaluate if it makes sense meeting the requirements.



Q & A

THANK YOU FOR ATTENDING

- ▶ Visit our website at rothiams.com
- ▶ Follow us on [LinkedIn](#)
- ▶ Connect with us directly through email at curtis.loblick@rothiams.com or call **(587) 340-4387**



VISIT OUR
THOUGHT
LEADERSHIP
PAGE

A screenshot of the Roth IAMS website homepage. The header features the company logo and a navigation bar. Below the header, there is a call to action: "ASK BILL ANYTHING! CLICK HERE TO BOOK A FREE 20 MINUTE CONSULTATION NOW." The main content area is divided into three columns: "About" (including core values, history, and philosophy), "Thought Leadership" (including publications, webinars, and an e-book), "Services" (listing various asset management and software solutions), "Join Our Team" (with job postings and contact information), "Media Releases" (recent news items), "Clients" (listing various government and industry sectors), and "Contact" (providing phone numbers for Canada and USA offices).

A screenshot of the Roth IAMS LinkedIn profile page. The header shows the company logo and a banner image of a modern building. The profile name "Roth IAMS" is displayed, along with the tagline "Collaborating to provide facility and asset data and software that you can trust." Below this, it states "Business Consulting and Services · Oakville, Ontario · 630 followers · 51-200 employees". A section titled "Joga & 22 other connections work here" is visible. At the bottom, there are buttons for "Message" and "Following", and a navigation bar with options for "Home", "My Company", "About", "Posts", "Jobs", and "People".