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CloudFIMs: Putting good data to great use

A smarter approach to energy efficiency and equipment reliability

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Could your building be more energy efficient?

Operating buildings in an energy efficient way is becoming increasingly important. Quite often, poorly performing equipment remains undiscovered for long periods of time, resulting in businesses spending too much on energy. Today, tenants expect more from their buildings. User experience, comfort and a heightened awareness of sustainable energy practices are putting more pressure on building owners. Simultaneously, building owners face pressure to lower operating costs. Adopting a more modern approach to building operations can deliver significant savings. In fact, energy efficiency measures can result in energy savings of 30 percent for HVAC.

CloudFIMs from Siemens offers a smarter approach

To overcome these problems, building owners and operators are seeking new data driven approaches that more proactively identify issues and address them based on their potential impact. CloudFIMs, use performance data and trends from the building automation system to identify Facility Improvement Measures (FIMs) which can be implemented remotely for immediate savings. By identifying and correcting schedule and programming issues, buildings maintain an energy efficient and continuously optimized environment.

Highlights

Leverage cloud-based analytics from Siemens to proactively identify Facility Improvement Measures (FIMs) and implement them remotely to maintain an efficient and continuously optimized environment.

Key benefits

- Reduce OPEX spending by proactively identifying energy and operational efficiency improvement measures
- Improve equipment reliability and reduce risks associated with costly downtime.
- Reduce total cost of building ownership
- Prioritize possible improvement measures based on business impact
- Take actions remotely and ensure issue resolution is quantified

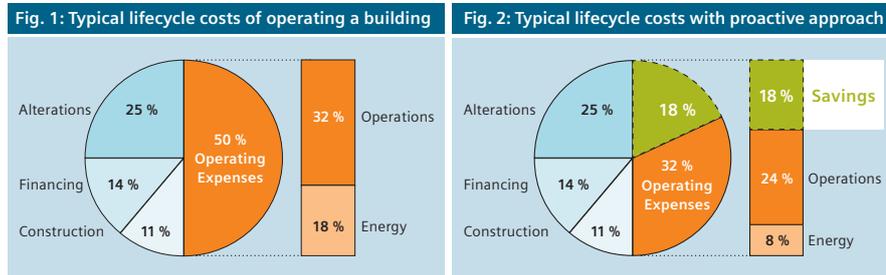
Equipment options available

- Air Handling Units (AHUs)
- Boiler plant
- Chiller plant (KPI monitoring)



Controlling the cost of ownership and enabling savings

Over the 40-year lifecycle of a building, the cost to operate the building and for the energy it consumes accounts for 50 percent of the building's total cost (Figure 1). Research shows that building owners and operators who take a more proactive and comprehensive approach to building maintenance, which includes CloudFIMs from Siemens, can reduce a building's overall cost of ownership by roughly 18 percent (Figure 2).



Sources: Association of Energy Engineers, Lawrence Berkeley Labs

Using the latest in building analytics from Siemens Navigator, CloudFIMs focus on the most common facility issues and enables remotely implemented actions that proactively and decisively achieve your desired results. Navigator also delivers the CloudFIMs dashboards which give customers visibility into building performance by deploying a robust set of analytics to track and report operational issues, and track savings that result from remote corrections.

How CloudFIMs deliver energy savings impact

CloudFIMs have been carefully crafted to show quick, high-impact energy savings results, and includes repairs that can be identified and diagnosed remotely. CloudFIMs can detect and proactively improve a wide range of facility improvement measures (FIMs):

CloudFIM	Description
AHU – Heat recovery shows a low efficiency or isn't working	Heat recovery can reduce up to 70 percent of the heating or cooling energy for an air handling unit depending on the indoor and outdoor conditions
AHU – Simultaneous heating and cooling prevention	Prevents reheating and recooling air simultaneously, which can save up to 20 percent of a facility's energy
AHU – Overventilation prevention	Prevents heating or cooling outside air for no reason and protect customers from draft. This can save up to 15 percent of an AHU's energy costs including electricity, heating and cooling energy
Boiler – Low efficiency prevention	Reducing the boiler temperature or the return temperature can increase the energy efficiency of the heat generation by up to 10 percent
Boiler – Identification of a bad hydraulic behaviour	A good hydraulic balance in the heating loop increases boiler efficiency by up to eight percent and improves comfort
Chiller – Increasing the chilled water setpoint	Increasing the setpoint temperature of a chiller can enable more free cooling (reduce the operation time of a chiller) and increase the chiller performance of three percent/°C.
Chiller – Reducing the cooling water setpoint	Reducing the cooling water setpoint increases the performance of a chiller to one percent/reduced °C
Chiller – Low efficiency prevention	Monitoring and maintaining the inlet and outlet temperatures in the right range, increase the efficiency and the life cycle of a chiller.

Navigator

The cloud-based energy and asset management platform

Analyze data

- Leverage advanced fault detection and diagnostic capabilities
- Identify inconsistencies and possible root causes
- Gain transparency into equipment and building performance

Create actionable insight

- Identify possible actions to improve performance
- Prioritize actions based on cost-effectiveness and impact
- Quantify the expected benefits and any potential risks

Secure, flexible remote connection

- Flexible – Siemens can connect wirelessly, via VPN client, virtual network, or separate network connection.
- Secure – ISO 27001 Certification applies to VPN client and virtual networks to specify the requirements for establishing, implementing, maintaining, and continually improving an information security management system within the context of the organization.

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