



6th Annual ACEEE Energy Efficiency Finance Forum

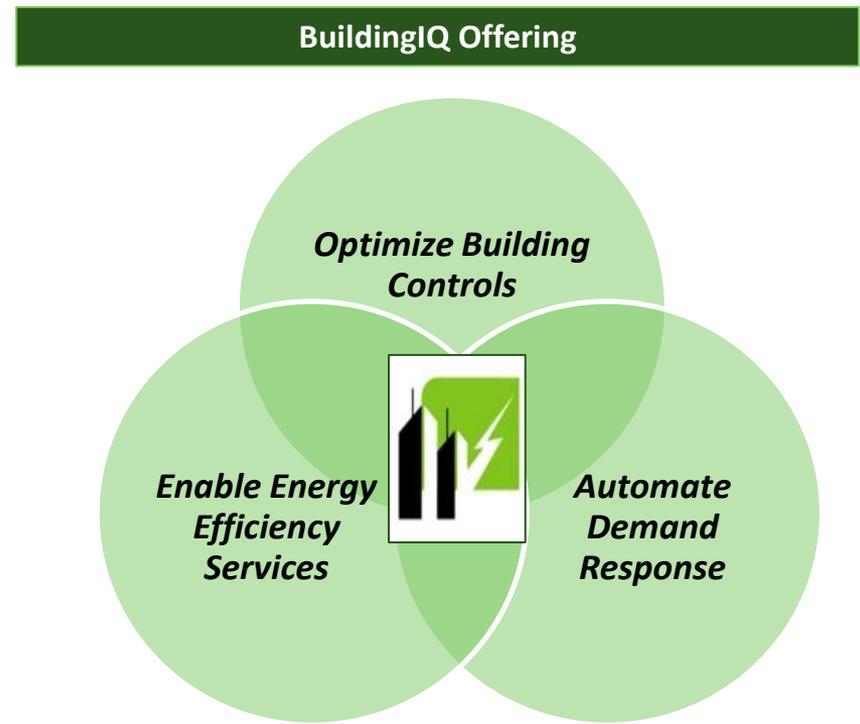
Building Energy Intelligence



BuildingIQ Overview

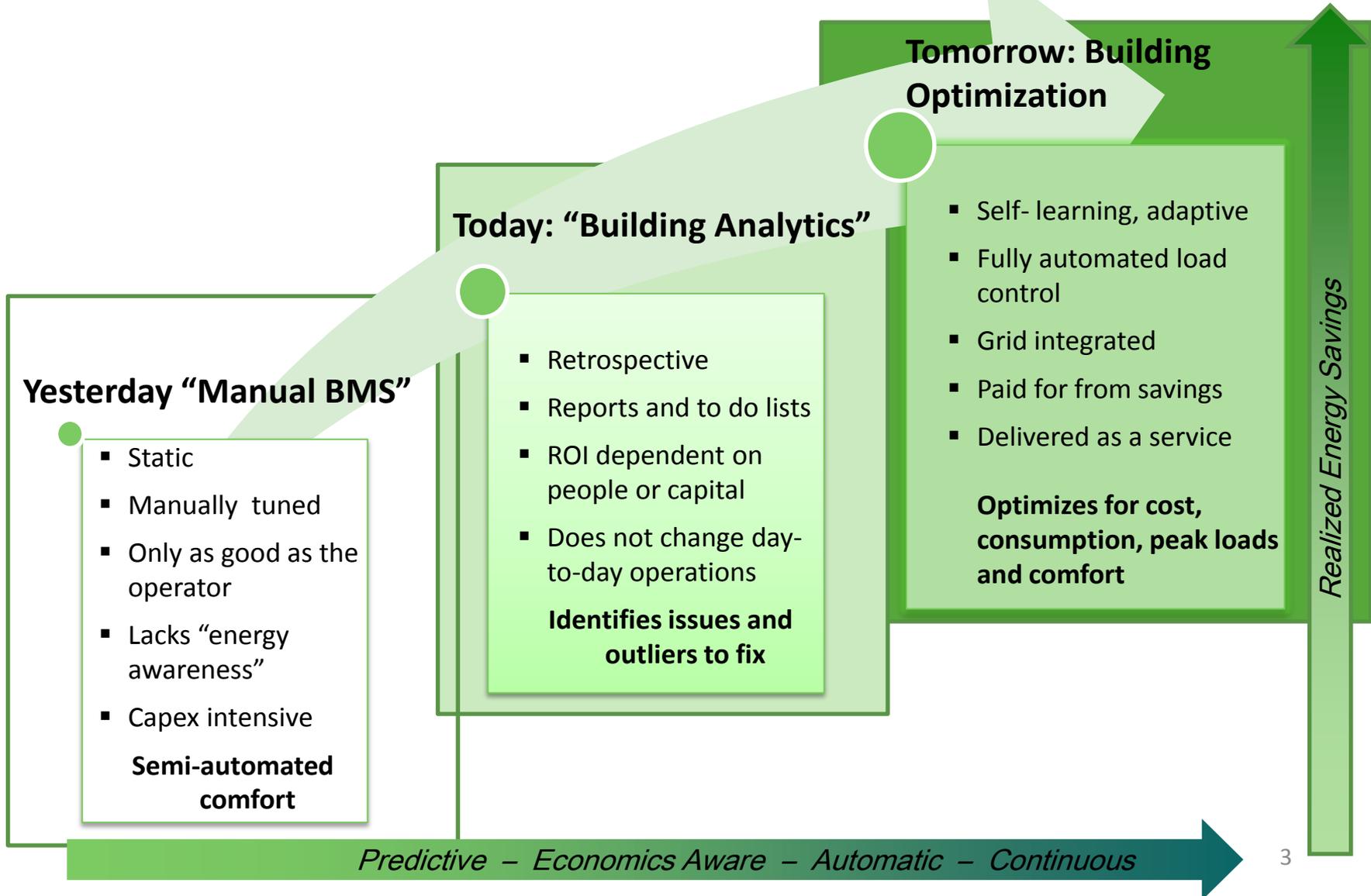
BuildingIQ: integrated software suite to **optimize energy use** by enabling **Smart Buildings** connected to the **Smart Grid**

- Over **30-man-years of R&D** – created by Australia’s national labs
- Over **15m sq ft** of commercial office and retail under contract with top **REITs and government**:
 - **A and B grade** buildings
 - **40k– 2.5m** sq ft
 - integration with **all major BMS**
- **Up to 40% HVAC energy savings** and **30% peak load reduction** during DR events
- Subscription based service – **not capex**





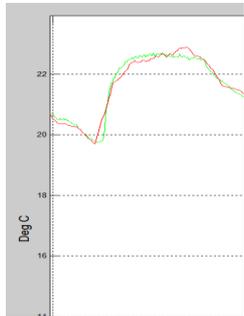
Evolution of the Smart Building





Technology and Applications

- Unique n
- Unlike E
- Accurate condition



Optimization for efficiency, demand response and fault detection

the global specialist in energy management

Powered by BuildingIQ

Mobile Options Help

Configure
Monitor
Admin
Faults
Demand Response
Forecast
Reporting
Help Desk

Fault Dashboard
Fault History
Fault Settings Console

FaultIQ Dashboard

Page preference time zone: GMT +11:00 Status

- Kendall Property Management
 - ARTEK Investments Ltd.
 - US Commercial Real Estate
 - Victory Park, NYC
 - 1 Victory Plaza
- Carteret Asset Management
 - Europa Properties Inc.
 - Cambridge Partners Inc.
 - Hotel Portfolio
 - California Hotels + Casinos
 - Blackjack Hotel + Casino
 - Texas Hold'em Casino

Real-Time Active Fault Dashboard

Location(s) from Tree

Stage 1 Alerts:	Click icon or row to drilldown	# Individual Faults Outstanding	Energy Savings Potential	Time Oldest Outstanding Fault First Occurred	Days Outstanding Oldest Fault	Oldest Outstanding Fault	Newest Outstanding Fault
Electricity Usage High (Hi-E-Use)		8	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	12-Jan-2011 14:20:35	2.25	FIX IN PROGRESS	IN REVIEW
Electricity Demand High (Hi-E-Dem)		8	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	12-Jan-2011 14:20:35	5.33	IN REVIEW	ALERTED
Comfort Over Temperature (Comf-OT)		6	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	12-Jan-2011 14:20:35	0.50	FIX IN PROGRESS	IN REVIEW
Plant & Control (P+C)		10	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	12-Jan-2011 14:20:35	2.67	ALERTED	ALERTED
BIQ System (BIQ-Sys)							

Fault Type Drilldown: Sensors

Fault Type ID	Fault Type Name	Stage 1 Alerts	Energy Saving 1-5	Cost to Install 1-5	Comfort Impact 1-5	Action
06.001	Sensor Outside Range	3 Alerts	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, red, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, yellow, white); border: 1px solid #ccc;"></div>	Action
06.003	Large Sensor COV	2 Alerts	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, red, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, yellow, white); border: 1px solid #ccc;"></div>	Action
06.007	Noisy Sensor	1 Alert	<div style="width: 100%; height: 10px; background: linear-gradient(to right, blue, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, red, white); border: 1px solid #ccc;"></div>	<div style="width: 100%; height: 10px; background: linear-gradient(to right, yellow, white); border: 1px solid #ccc;"></div>	Action

Confidential

Powered by BuildingIQ

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BuildingIQ Owner Benefits

- Increase NOI and property values **without capex**
- Reduce **energy spend and drive Energy Savings**
- **Automate DR** events and **charges**
- **Identify** errors
- Generate **Energy Efficiency initiatives**
- Extend **energy management capabilities**

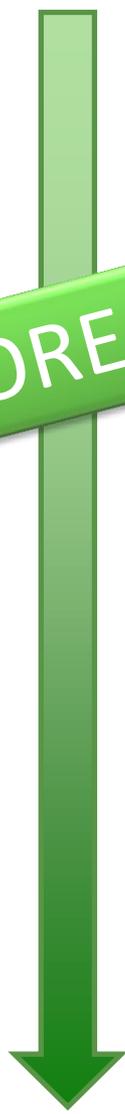
**CASH FLOW
TECHNOLOGY FOUNDATION
MAINTENANCE BEST PRACTICES**



Why do buildings need to be smarter?



- Energy demand
- Cost/ Complexity of power
- Economic pressures
 - Occupancy
 - Earnings
- Dependence on energy performance
 - Tenants
 - Government
 - Investors
- New technologies and alternative energy sources



- Opex and capex budgets
- Highly skilled operations
 - Management
 - Retirement
 - New lower-skilled hires
- Ability to proactively manage energy in buildings
- Ability to standardize best practices across portfolio

BOTTOM LINE: DO MORE WITH LESS



Barriers to Scaling EE Finance

Ensuring building performance post the project to deliver expected ROI

