The New Landscape
Challenges and Changes in the
Building Management Industry

March 27, 2014
Green Labs Symposium
Hosted by Boston Green Ribbon Commission

“Walking with Owners”

March 27, 2014
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I$^2$SL in Brief
(International Institute for Sustainable Laboratories)

• Promote
  – A non-governmental organization promoting sustainability objectives consistent with and enhancing Labs21, a former federal program of EPA and DOE

• Vision
  – To engage a global network of collaborators to move laboratories and other high-technology facilities into balance with the natural world.

• Mission
  – Educate, share, and promote the development of sustainable, high-technology facilities through worldwide partnerships.

Presentation Overview

• Fine-Tuning Management
• Inform Behavior
• Living on the Edge
• Music “An Informational System”
• Standardized Communication
• Finding Stakeholders
• Measuring Results
Management Realities

- High-tech buildings, such as laboratories, data centers, cleanrooms, and hospitals are resource intensive.
- On a square-foot basis, labs alone often consume at least four to six times as much energy as a typical office building.
- They are very costly to build, operate and maintain.
- Involve more regulatory oversight, including health and safety, hazardous materials management, etc.
- Often require 24-7 operations.
- Contain specialized equipment, maintain unique processes, and often require a level of higher security.
- Continually influenced by evolving technologies.

Roadmap to Performance

- Many labs and other high technology facilities are not speculative buildings, but long-term investments
- Designed and engineered to attract the greatest intellectual resources that are available.
- Built to meet dynamic and flexible requirements which will influence the building’s life-cycle performance.
- To addressing the complexities of these and other buildings, performance demands information that ensures performance and guides behavior.
- Unlike automobiles, buildings have many hands-on “drivers” and no shared guidance, user manual, or “dashboard.”
- Nevertheless….
Everyday Dashboards
(performance guides)

Active Diet Management

Nutrition Facts

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<th></th>
<th>Calories</th>
<th>Calories from Fat</th>
<th>Total Fat</th>
<th>% Daily Value</th>
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<td>Sodium</td>
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<td>2g</td>
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<tr>
<td>Total Carbohydrate</td>
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<tr>
<td>Sugars</td>
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<tr>
<td>Protein</td>
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Guiding Behavior

Building Dashboard but No Guidance for or from Others
Training for Behavior
(authority having jurisdiction - AHJ)

Train for an Outcome
Start Early!
(authority having jurisdiction)

Customized Planning
Easy-to-Read Signage

Built Environment
(a solution for a single human activity)
Environment for Living
(Solutions for Multiple Activities)

Living on the Edge
Communicating Information

Communicate for Results

- Understandable
- Efficient
- Standardized
- Consistent
- Comprehensive
- Influential
Human Behavior Influenced through Communication

We Can Play That!
So Can We!

Standard Language
Complex Built on Simple

Trained and Responsible

- Drawing a parallel to buildings…
Simple to Complex

Outside is Not the Only Challenge
Major Influences

Say Goodbye
Embrace Fullest Participation

Start Early
Engage All Stakeholders

With Tools for Life Cycle Performance

BIM Lifecycle View
Using Standardized Communication

To Benefit the Investor
With a Coordinated Solution

For Robust Participation
Communicate for Results

Understandable
Efficient
Standardized

Consistent
Comprehensive
Influential

Thank You

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