Productivity the Power of People

The Future of Building Automation

The Self Learning Edge Revolution

SPEAKERS

Jim Sinopoli, PE, RCDD Principal Smart Buildings
http://automatedbuildings.com/editors/jsinopoli.htm

Brad White, P.Eng, MASc Principal SES Consulting, Inc.
Maximizing Human Comfort
The Trillion Dollar Opportunity in Transforming Existing Buildings

Ken Sinclair, (Moderator) Editor/Owner/Founder
AutomatedBuildings.com
http://automatedbuildings.com/editors/ksinclair.htm

"Our Assets are People, not Technology.

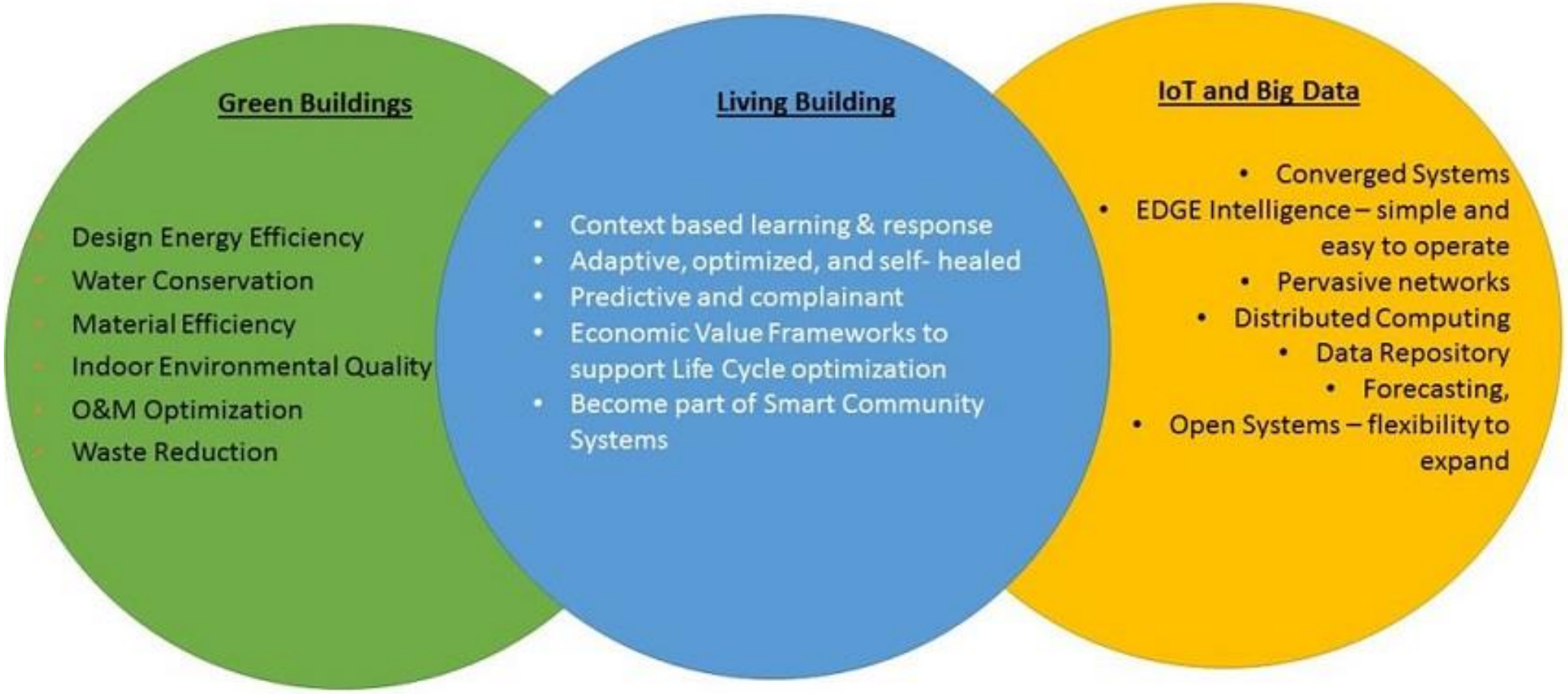
The IoT Future of Building Automation

Be the Catalysis / Harbinger of our IoT Future

- full embrace of IoT's self-manage and self-heal while reinventing purposeful, productive, desirable buildings and accommodations.
- satisfaction and productivity the new measured variables
- new performance metrics surrounding new parameters
- industry mashups with other rapidly evolving industries such as the lighting LED revolution
- every lighting fixture and air conditioning outlet becoming a self-learning device with automated interaction
- evolving open software that is rapidly creating the function, form, and focus
- grow our only resource/asset our people younger, by reaching out to youth with messages about our vibrant, vital and rewarding industry.

IoT and Big Data are Transforming Green Buildings into Living Buildings

From article Johnson Controls India Engineering Center

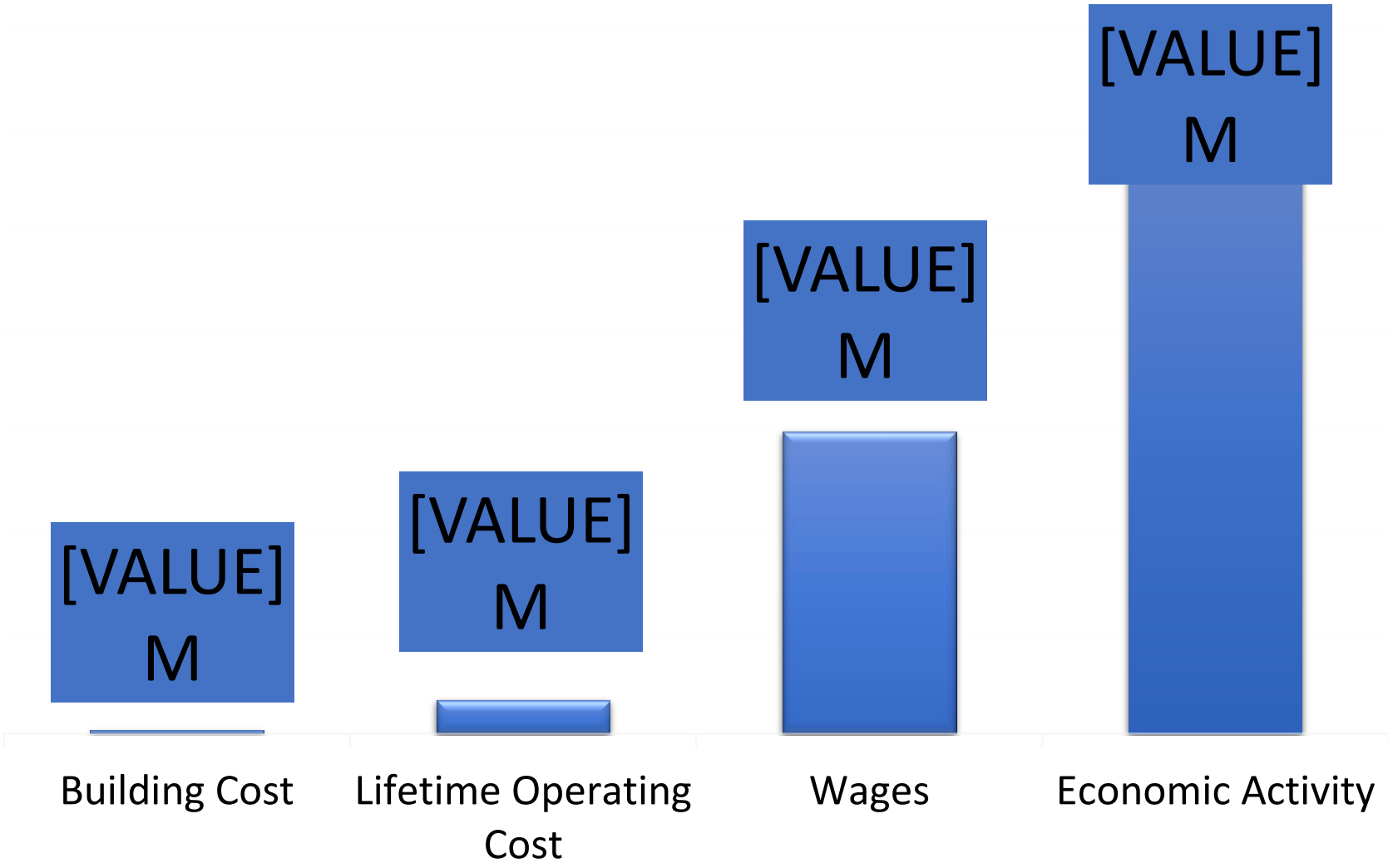


Merging the Two Domains

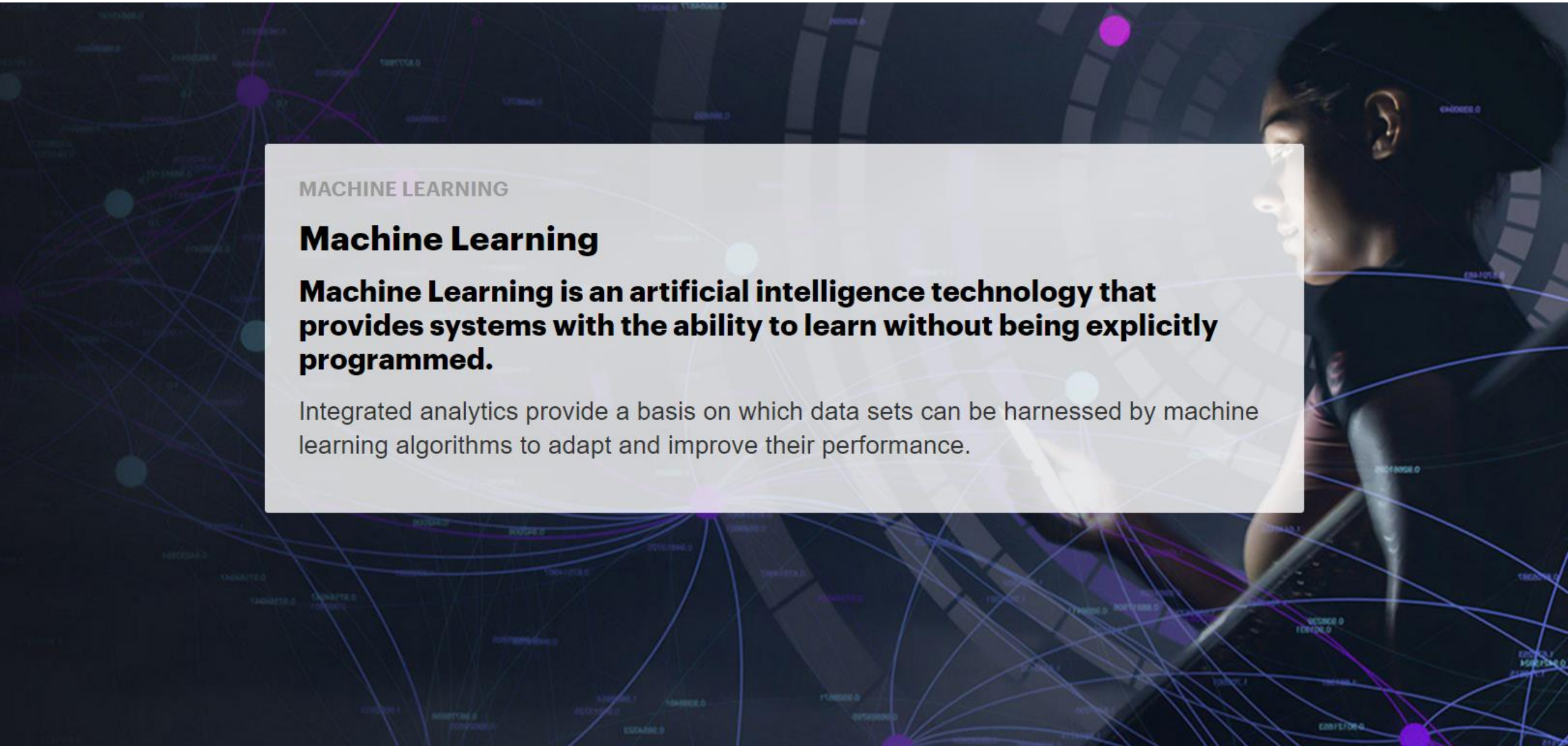
HVAC and Lighting

By merging the two domains, we have a robust network of permanently powered devices which we can leverage as a communication network. LED's make the story even better; as these devices are intelligent, carrying their in-built processors which can do more than simply drive the LED. - Trevor Palmer, VP Controls, Applications & User Experience, Acuity Brands, Distech Controls

100,000 sq ft Building



Learning from others
77%
Individual focused work, desk based
76%
Collaborating on focused work
72%
Collaborating on creative work
64%
Informal, un-planned meetings
63%
Air quality
37%
Noise levels
30%
Variety of different types of workspace
29%
Temperature control
28%



MACHINE LEARNING

Machine Learning

Machine Learning is an artificial intelligence technology that provides systems with the ability to learn without being explicitly programmed.

Integrated analytics provide a basis on which data sets can be harnessed by machine learning algorithms to adapt and improve their performance.

Sponsored

Amazon Echo - White

Amazon Echo Dot 2nd Generation ...

Voice-operated appliances from Amazon, Google, and Microsoft are going to be huge

Google Home Controller - Wireless

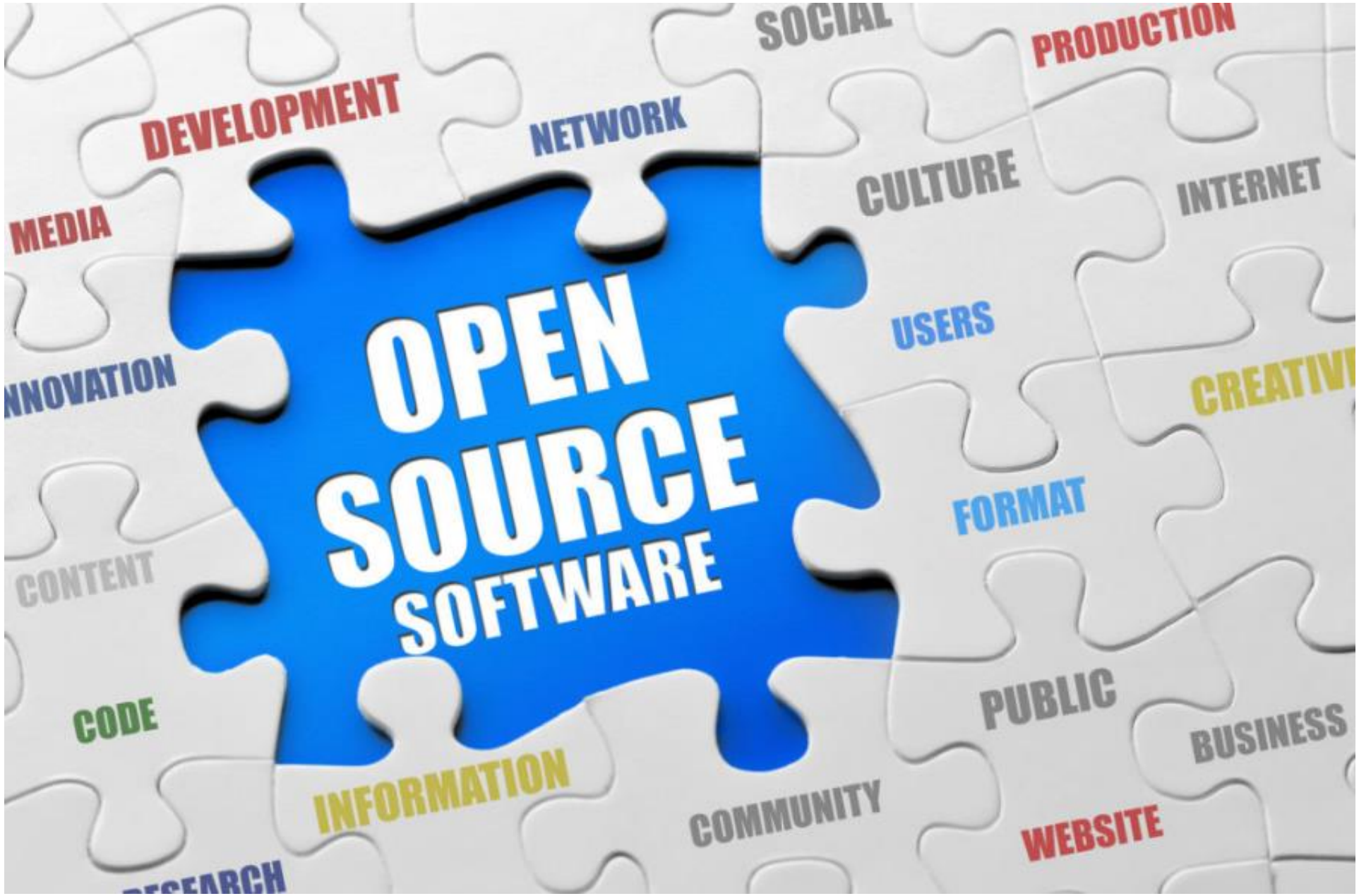
4.5 ★★★★★ 42 user reviews

First autopilot
One of the First Self Learning Systems

- Developed in 1912
- Demonstrated in 1914

Detailed Policies and Logic For Self Learning

- Array of data, data sources and pre-determined rules
- More variables in a decision
- Extensive planning
- Broad policies touching energy, operational costs and tenant comfort.
- Decide how the building should adapt to changes and how it should perform.
- Near real time data from the building systems and facility management systems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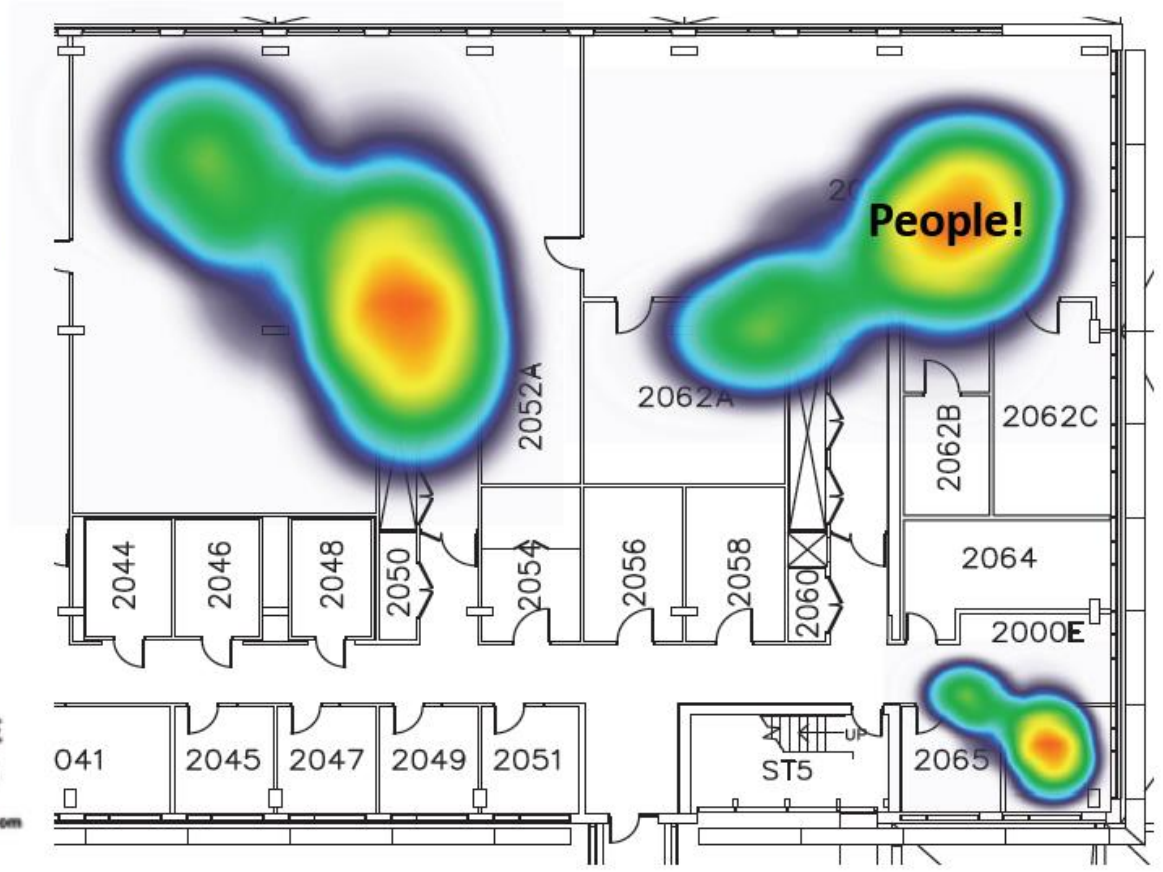
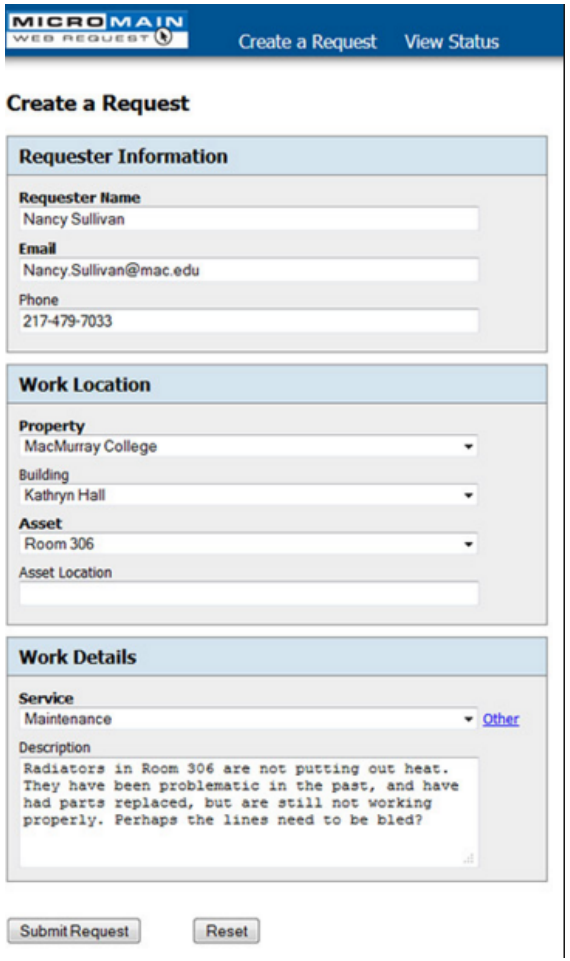
WEBSITE

IT Based Occupancy Pilot Project



Re-Imagining the Service Request

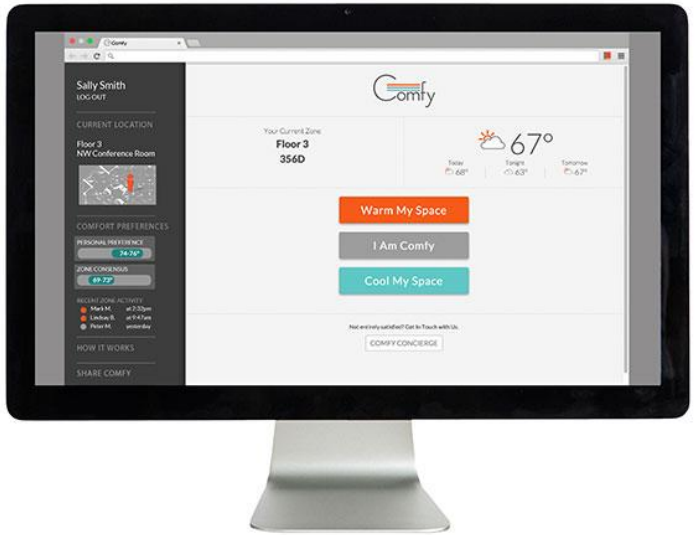


vs.

HVAC by Engineers

vs.

HVAC by Behavioural Experts



Sedona Alliance

Opportunity for Open Control

Mon. January 30| 10:30 AM - 11:30 AM | N239

an open control technology designed to assist system integrators in quickly implementing IP-based building automation programs. Using a drag-and-drop programming methodology, components are interconnected onto a wire sheet and configured to create applications.

Analytics and Data:

Are We Focusing on the Most Important Thing Productivity?

Mon. January 30| 1:30 PM - 2:30 PM | N239

Productivity as the new measured variable requires a considerable change in thinking and attitudes towards maintaining buildings and assets, including the budgets to support it, and the resources to execute it. The impact on the total value of productivity of the people present plus sharing the space via hoteling of our building environment that drives a completely new metric will be discussed.

Elevating Occupant Engagement and Maximizing Human Comfort

Tue. January 31| 9:00 AM - 10:00 AM | N239

presentation will expand on the merit of interconnectivity and its role in tenant engagement and human comfort. The concepts of building intelligence and its potential to elevate the tenant experience will be explored. Learn how the Internet of Things (IoT), and other social media platforms can enhance system interaction and the ability of your building to support and react to changing tenant behavior.

The Power of People an Industry Discussion

Tue. January 31| 1:30 PM - 2:30 PM | N239

Industry thought leaders in this panel discussion will provide their views on productivity, occupant engagement, and comfort. If we only consider energy as the justification then we are missing the bigger issue – the impact on the building environment and ultimately people.

Please join us and share your views at our fifth annual Connection Community Collaboratory.