

June 2009

## Article

[AutomatedBuildings.com](http://AutomatedBuildings.com)**Save Energy in Old Buildings, 1 Year Payback****Cypress EnviroSystems**[\(Click Message to Learn More\)](#)

# Are New Real Estate Risks Creating The "Tipping Point"?

Now the risks of doing nothing different may be even greater than rewards of being progressive.



**Tom Shircliff and Rob Murchison,**  
Co-Founders,  
**[IntelligentBuildings®](#)**

For a number of years many industry leaders and manufactures have been advocating a converged and "intelligent" approach to procuring and managing building systems. The reasons are well documented and include the IT-state of most controls systems, ubiquity of the Internet Protocol (IP) and networks in general, reduction of capital and operating expenses, centralization of property management and the [link](#) between sustainability and IT. The latter is part of the more recent trend that Thomas Friedman says is part of IT (Information Technology) meeting ET (Energy Technology). The [Economist](#) refers to the "Energy Internet".

[Articles](#)[Interviews](#)[Releases](#)[New Products](#)[Reviews](#)[Editorial](#)[Coming Events](#)[Sponsors](#)[Site Search](#)[Blogs](#)[Archives](#)[Past Issues](#)[Home](#)

This is not just advocacy but fact-based reasoning that is supported by most system architectures and even the M&A path of world-leader Cisco Systems. In the real estate space alone, Cisco has pushed from networking into access controls, video surveillance, digital signage media management, building automation middleware and now the [smart electrical grid](#). This not only shows a continuous and "connected" path for these elements but also makes clear that building systems procurement and management is driven more and more by networking and IP from the core of the building all the way to and past the meters. Those in the A&E and real estate vendor community that cling to a silo system mentality will have an increasingly difficult time as developers and managers in all types of real estate build strategies around networking , sustainability and the grid.

While the technical makeup of systems is important the key factor has been the financial benefits because the early market is driven by economic buyers. It doesn't matter that you can buy and converge intelligent systems until you can answer the "so what" for the strategic decision maker. However, there are a growing number of case studies for intelligent systems such as lighting controls, fault detection and diagnostics (FDD), security, parking etc. that show hard dollar return on investment with short and compelling payback periods. For example Power over Ethernet (PoE) is exciting technology but the real benefits to the owner are lower capital expense because there are fewer electrical outlets requiring conduit, labor etc. and lower operating expenses because of the more efficient use of energy and MAC (move, add and change) flexibility as well as operations and maintenance leverage. This makes it real for those in control of the purse strings and changes mere advocacy into actual movement in the marketplace. This has been gradual so far and those that make the move are held up as shining examples of innovation, and risk/reward pioneers.

*However, the risk/reward equation is changing. Sure, the technical soundness and financial benefits are still there but now the risks of doing nothing different may be even greater than rewards of being progressive. If you do nothing different with your development and operational strategies you stand to lose capital incentives, building improvement opportunities, operational cost savings and future flexibility. Additionally, you may be reactionary and on the defensive with potentially expensive retrofit requirements.*

There are financial incentives from all levels of government in the form of grants, tax rebates and other vehicles that are now big enough to matter to any pro forma and the strong potential of regulation and legislation could mean longer permitting, retrofit requirements and increased

monitoring and control needs. All of this combined with the aforementioned financial and technical reasons should provide ample motivation for owners and managers to develop a strategy and standards for more intelligent real estate. A progressive strategy should be built on sound business fundamentals, the operational impact of technology and risk mitigation. Risk mitigation should limit the impact of governmental requirements *and* contribute to operational efficiency and sustainability.

In a very short time government at various levels has created a "carrot and stick" approach that has immediate and future impact on procurement and management of buildings.

We see "carrot" examples in recent legislation and programs such as:

- Federal: The American Recovery and Reinvestment Act of 2009 (ARRA) of 2009 includes funding to support energy independence and modernize infrastructure that provides \$4.5 billion for smart grid and billions more for energy efficiency and conservation. Buildings will be directly and indirectly affected by these large investments and incentives.
- State: New York's Green Building Tax Credit Program (Corporate) that allows up to \$2 MM per building. We recently read about the Empire State Building's renovation that is expected to reduce the skyscraper's energy use by 38 percent a year by 2013, at an annual savings of \$4.4 million according to the [NY Times](#).
- Local: Municipalities have various *incentives for sustainability* including Seattle-King County City LEED Grants Program and the Santa Monica, CA LEED Grant Program offering tens of thousands of dollars per building in grants. There are many other cities that have such plans or are developing them.

Additionally, the government incentives, especially those in the smart grid have caused a flood of "who's who" companies to invest and develop, including Cisco, GE, Google, Oracle, SAP and many others. The resulting benefits of this investment and development such as demand response incentives and real time pricing are greatly leveraged by more efficient, "intelligent" buildings and the associated improvements that are required. Incentives and pricing efficiency can directly help fund such building improvements. Duke Energy even calls this demand side energy efficiency "[The Fifth Fuel](#)".

There is also evidence of "sticks" such as:

- The Environmental Protection Agency (EPA) declared [Carbon dioxide](#) is a "major hazard" to Americans' health. This means that either there will be legislation to deal with it or the EPA will regulate it according to Sen. Barbara Boxer, D-Calif., who chairs the Senate committee dealing with climate legislation. Buildings use about half of all the energy we consume and produce correspondingly half of the GHG, according to data from the US Energy Information Administration, which is obviously going to have a functional impact on commercial buildings (17% of the US total) to comply with legislation or regulation.
- We might take a hint from the United Kingdom where since October 2008 all properties - homes, commercial and public buildings - when bought, sold, built or rented need an Energy Performance Certificate ([EPC](#)). Larger public buildings also need to display an energy certificate.
- Renewable Energy and Energy Efficiency Portfolio Standards (REPS) laws are currently in a [majority of states](#). North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (REPS), enacted by [Senate Bill 3](#) in August 2007, requires all investor-owned utilities in the state to supply 12.5% of 2020 retail electricity sales (in North Carolina) from eligible energy resources by 2021. HOWEVER, up to 25% of the requirements may be met through energy efficiency technologies, including combined heat-and-power (CHP) systems powered by non-renewable fuels. After 2021, up to 40% of the standard may be met through energy efficiency. This is anticipated to drive significant incentive programs from the utilities in order to meet the requirement and maximize the allowance from the demand side.



In summary, there are coincidental changes taking place both in and around the real estate industry that include technology, energy and regulatory aspects. These changes promise profound and continuing impact on the way buildings are built and managed. The magnitude of the impact and associated risks have created the "tipping point" for building owners and managers to embrace an intelligent, converged strategy for building and managing real estate.

Copyright© IntelligentBuildings® 2005-2009

### About IntelligentBuildings®

IntelligentBuildings® provides strategic consulting for key stakeholders, owners and property managers in the commercial, institutional and corporate real estate environments. Key focus areas are strategy development, organizational alignment and financial analysis. [www.intelligentbuildings.com](http://www.intelligentbuildings.com)



A banner advertisement for Proteus V and Eagle Technology. On the left is the Proteus V logo with the text "Facilities Management Software". In the center, it says "Energy Efficiency and Sustainability interfaced to Building Automation Systems." and "Call 1-800-388-3268 or click here". On the right is the Eagle Technology logo with a city skyline graphic.

[Click Banner To Learn More]

[\[Home Page\]](#) [\[The Automator\]](#) [\[About\]](#) [\[Subscribe\]](#) [\[Contact Us\]](#)

### Events

### Our Sponsors

### Want Ads

### Resources

#### [Atlanta LEED Exam Courses](#)

Learn from LEED Professionals Signup now!  
Get LEED Certified

#### [Automated Demand Response](#)

Reduce Energy Usage and Get Paid ! Fully  
Automated No Cost Solutions