

Niagara Energy Harvesting Wireless



Open Standards



Control Networks



Products & Solutions



- ❖ **It creates market disruptive SMART web based solutions for building controls**
- ❖ Which enable **its Global Partners** to deliver smart lighting controls which **Save Energy, Money and Address Sustainability**

Why Energy Harvesting Wireless?

Why Wireless Energy Harvesting?

◆ Key Issues

- Cost of installing control input devices
- Rising cost of electricity
- DRM/Security of Supply
- CO₂, Carbon Tax/CRC, Regulation/Building Standards
- Operations & Maintenance
- Sustainability

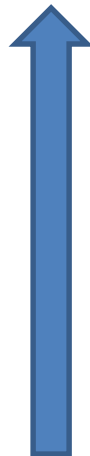
◆ Key Outcomes

- 15%, reduction in installation costs, new build
- 70%, reduction in installation costs, retrofit
- Energy savings & Unparalleled flexibility
- Vendor and maintainer independence
- Reduced O&M, increased Business profitability
- Higher asset valuations & building ratings
- Address Sustainability and CSR targets

To Change Your Business From This?



**Time/
Effort**

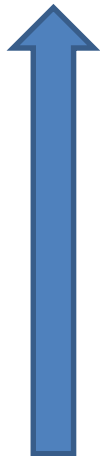


Return

To Being Niagara "Smart", Means More Like This!



**Time/
Effort**

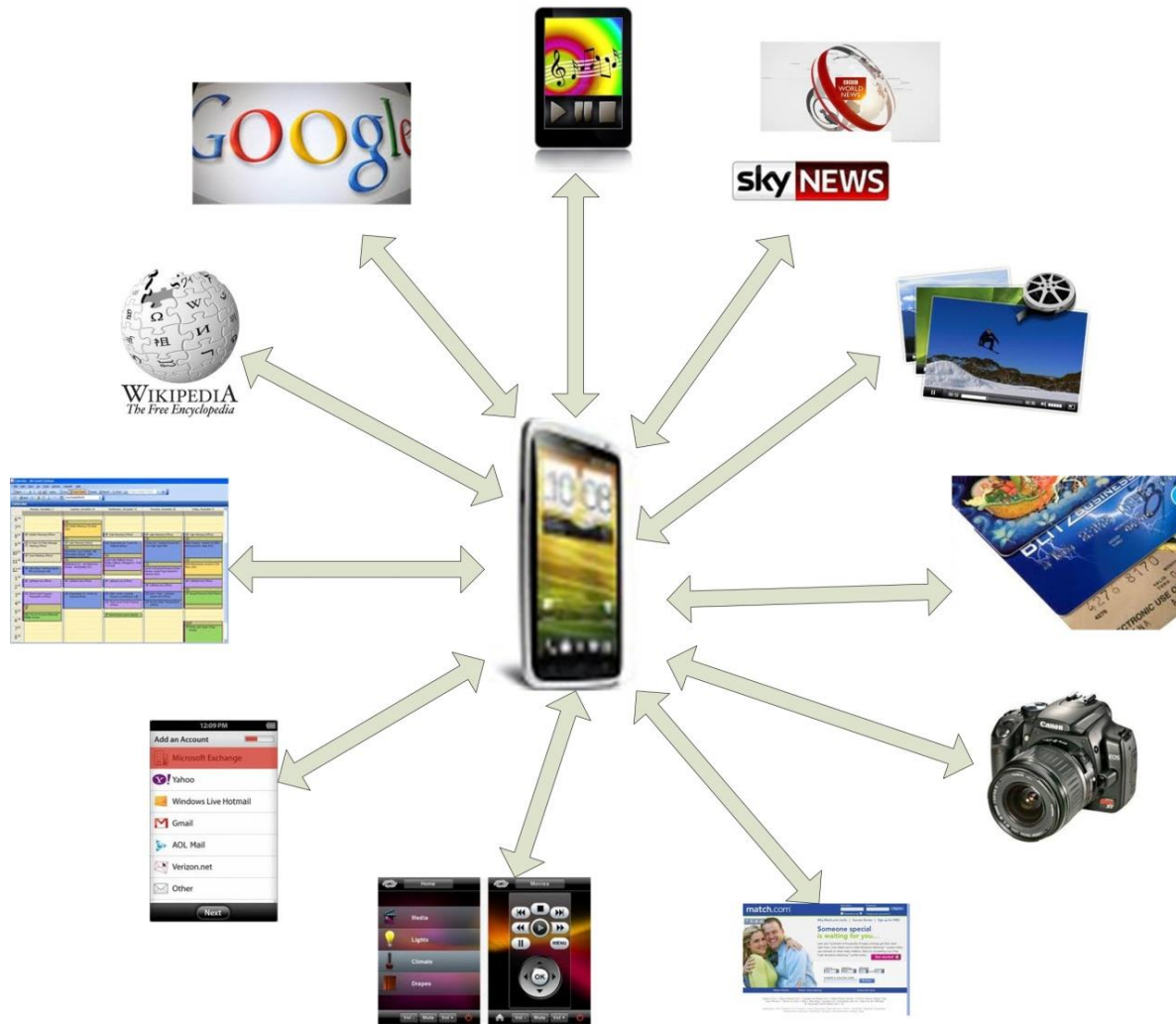


Return

While Addressing End Client Key Issues

- ◆ Energy saving
- ◆ Vendor independence
- ◆ Web based solution
- ◆ Understanding the benefits of converged technology
- ◆ Cost savings
- ◆ Flexibility
- ◆ Real-Time access to value data
- ◆ Increased asset values and building ratings
- ◆ Projects and global scale

Convergent technology?



Building Controls Example:



Whose Convergent Technology? Tridium's Niagara®!

- ❖ World's de-facto standard convergent web technology platform.
- ❖ In essence, a software framework for building device-to-enterprise applications and Internet-enabled products.
- ❖ A unified platform to easily build Internet-enabled products and software applications for controlling and managing diverse "smart" devices across an enterprise in real time.
- ❖ 20,000+ certified Niagara engineers, 1,000s of organisations
- ❖ 400+ global OEMs producing building management, automation and energy management solutions based upon Niagara installed in 500,000+ buildings. See www.tridium.com.

Whose Wireless Energy Harvesting Technology?

EnOcean®

- ◆ A Global Open published standard for intelligent wireless device networks, ISO/IEC14543-3-10
- ◆ Low power enables energy harvesting from the environment
- ◆ 25M+ installed devices globally and growing at 20%+ per year
- ◆ 300+ EnOcean device and solutions manufacturers
- ◆ EnOcean Alliance Equipment Profiles (EEP) provide guarantee of interoperability

What is being delivered to End Clients Today?

- ◆ **Proprietary**
- ◆ **Complex**
- ◆ **Costly**
- ◆ **Limited data**
- ◆ **Energy savings?**
- ◆ **Inflexible**

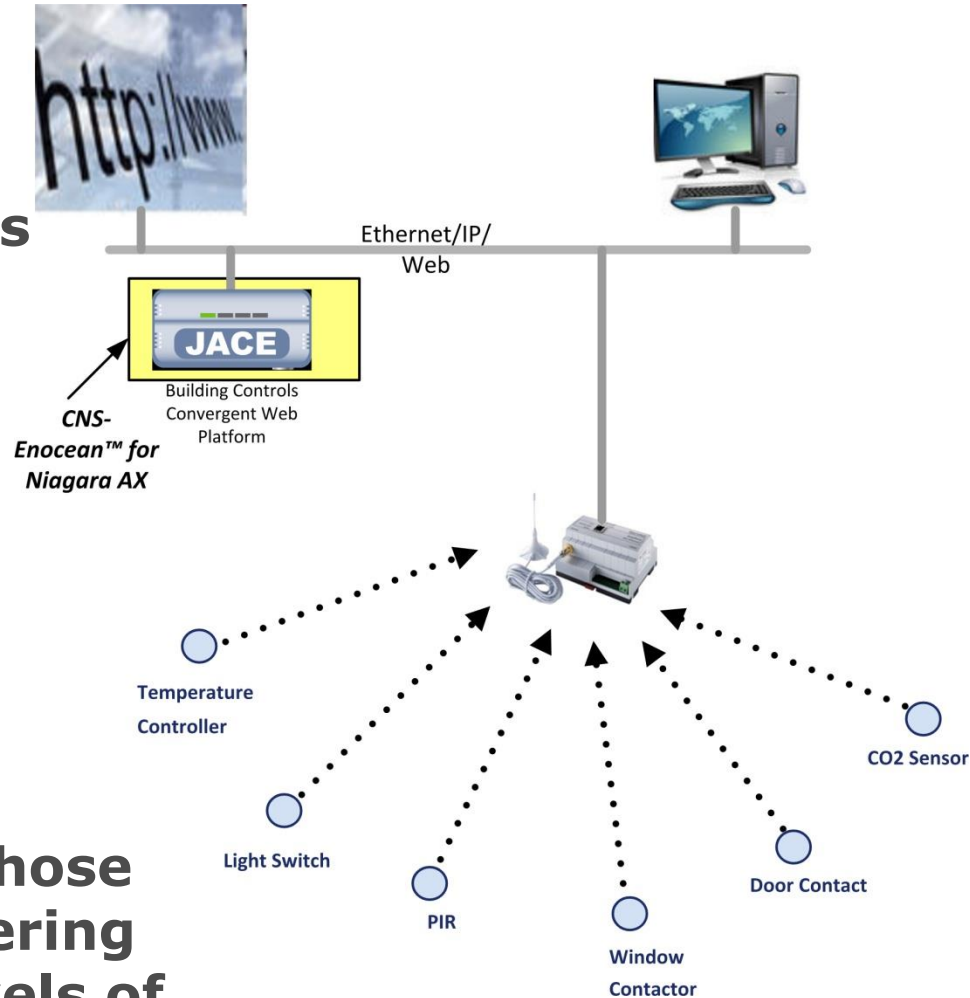
What Do End Clients Want?

- ◆ **Choice**
- ◆ **Convergence**
- ◆ **Simple**
- ◆ **Information**
- ◆ **Energy saving**
- ◆ **Flexibility – to be in real control!**

Web based Niagara solution for EnOcean wireless switches and sensors -

- ◆ Commissioning
- ◆ Control
- ◆ Maintenance
- ◆ Management
- ◆ Visualisation
- ◆ Analytics

Delivered by organizations whose business depends upon delivering high quality solutions and levels of service.



- ❖ **The most vendor independent EnOcean solution globally** – Many open standard EnOcean device suppliers, many Niagara web convergent platform OEM suppliers and 1000's of System Integrators
- ❖ **Seamlessly co-exists with other applications** running on Niagara web convergent platforms, so offering a **High Return on Investment!**
- ❖ **Reduced** commissioning time, errors and risk
- ❖ **Simple** to understand architecture, **low** installed component count, providing **low risk and cost solution**
- ❖ **Internet of Things (IoT)** solution

To discover more!

- ◆ **Web:** cns-enocean.com
- ◆ **Twitter:** twitter.com/cns_enocean
- ◆ **LinkedIn:** [cns-enocean for Niagara Group](https://www.linkedin.com/company/cns-enocean-for-niagara-group)

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