

#### Internet of Things Glossary

API	Application Program Interface	BLE Beacons	Bluetooth Low Energy Transmitters
Geometri	Mapping Postioning & Analytics	Cloud	Internet Based Computing
DG Logic	Connecting the Internet of Things (IoT)	Fog	Close to Source Device Computing
Byte Light	Retail Mapping	Blue Dot	Pinpoint Positioning Via Bluetooth
VLC	Visible Light Communications	Geo-Fence	Mobil Device Location

Energy Management is just the tip of the iceberg...

## Consider the paradigm shift....



# The Internet of Things (IoT) is connecting **Networks, People, Devices, and Data** to **enable analytics, insight and action**.

## Lighting & Building Controls WILL drive IoT expansion



- + **Right Location:** Where there are people, there are lights & HVAC
- Right Connection:
  Constant power, consistent placement, and onboard intelligence create ideal method of deploying a dense sensor/beacon network
- + Right Time:

Ongoing Energy retrofits create a funding mechanism & natural pull for infrastructure upgrades

## **Tiered Strategy Drives Transformation**



**Smarter Buildings, Campuses, Cities** 

## **IoT Framework**

#### **IoT Solutions**

Packaged Horizontal and Vertical Solutions from Acuity and <u>Partners</u>

IoT Platform Distributed Software Services & APIs

IoT Ready Infrastructure

IoT technology embedded in core products



## Acuity IoT Framework



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## IoT Horizontal Technologies – Eclypse Unifying Platform



# Unifying systems, collecting data and hosting applications

 One Platform for Lighting and HVAC: Critical systems don't need complicated and custom integration, we do that for you!

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- BMS
- nLight
- Fresco
- nLight AIR (Spring 2017)
- Fully software upgradeable over the life of a job
- Platform to host T3 and T4 Applications

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## IoT Horizontal Technologies – DG Logik IoT Platform



**DSLinks** 

SCADA

Niagara

WebCtrl

Services

Facebook

Twitter

BACnet Modbus

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## IoT Horizontal Technologies – Precise Indoor Positioning



## -ByteLight-

#### **1. Intelligent LED luminaires**

- + Ultra-accurate Visible Light Communication (VLC)
- + Consistent Power & Placement for BLE Beacons
- + Integrated Wireless Controls for Energy Savings, Code Compliance, & Asset Management
  - + Can be integrated into custom fixtures
    - + Zero Planned Maintenance

#### 2. Flexible Mobile Device Software/API

+ Selects from <u>all available location data</u> to generate the most accurate "Blue Dot" position

+ Simple feature-rich APIs provide location and geo-fencing calls to IOS & Android applications

+ Secure & Scalable Cloud Services



**Space Utilization** 

## IoT Horizontal Technologies – Edge Video Analytics









## **Acuity Brands IoT Vertical Solutions**

#### **Smart Retail**



# **Smart Retail**

% % % %

SALE

% % %

## Checkout & Store

ngagemer

Metrics

% % % %

SALE % % % % % % %

% % %

Employee

Optimization Enhanced BOPUS

## Smart Airports

Міжнародна Реєстрація 流 个

Сиstoms

(i) Інформація Information

Wayfinding Queue management Shopping Enhanced Parking &

# Smart Office

#### Dashboarding

Space Utilization Search & Find People & Rooms Emergency Response

# **Future Possibilities!**



## **Smart Education**

Dynamic Lighting Automated Glare Control Enhanced Outdoor Security Emergency Response

# Smart Healthcare

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CALL

Wayfinding & Navigation Asset Tracking & Tractability

Visitor/Patient Tracking Enhanced Parking & Security

# Smart Warehousing

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Oynamic Pickin' Pack Routing Asset Track & Traceability Employee location &

Optimization Automated Materials Handling

## Smart Campus

## Intelligent Lighting

Optimized Parking Enhanced Security Traffic & Pedestrian Analytics

## **One Framework, Many Benefits**

An ideal choice for commercial buildings and properties, retail stores and malls, higher education campuses and cities to deploy IoT solutions. The IoT leads to revolutionary applications that can dramatically improve the way people live, learn, work and play.

#### **Create Smarter, Efficient Buildings**

- Connect with building automation systems
- Analyze and reduce energy use
- Track and maintain assets

#### **Interact with People**

- Indoor way finding
- Room availability
- Omnichannel marketing

#### **Evolve to Smart Cities & Campuses**

- Parking management and availability
- Traffic analytics and management
- Security and safety alerts



# Questions?