## Connectivity - Challenges and Opportunities

IoT – What is it?
The Home - Historical Business Models
Cloud Based Automation
How to Think About Cyber Security
Home Automation or Service?









#### IoT – What Is It?

- A combination of
  - Sensors Every increasing both stand alone and integrated into other devices
  - Connectivity Also ever increasing in the form of wired and wireless; open and proprietary. All form "pipes to the cloud."
  - People and Processes Enabling better or new business models; both to take out costs or create new sources of profit
- How Big?
  - 2014 2 Billion connected devices shipped into an installed base of 6 billion devices
  - 2012 (predicted) 8 Billion devices shipped into an installed base of 30 billion devices
- End Markets
  - Home and buildings
  - Expanding to Transportation, health, and cities









#### The Home - Historical Business Models

- Think about frequency of homeowner interaction
  - A/V, Security, Lighting
  - HVAC, Irrigation, Garage Doors High End Homes
  - All functions under one roof
- Security Recurring Revenue Model Under threat
  - Make it up in monitoring historically around 20% saturation
  - Security "Awareness" a new growth opportunity
- Think Compound Applications
  - Healthcare and Smart Homes
  - Appliance monitoring and predictive maintenence
- Dis-Integration in the Cloud
  - IFFT, HomeKit, and Google Home









## **Cloud Based Automation**

- Think Location Time Occupancy Action
  - Turn your Lutron lights on if your Nest Protect detector a smoke alarm emergency
  - Turn your Honeywell thermostat up if your phone is within
     5 miles of your house
  - Turn your outdoor lights on if your phone is within 1 mile of your house and the time is past sunset

Simple to do – but not every <u>can</u> or <u>wants</u> to do it









# How to Think About Cyber Security

- The Target incident
- Areas of Security
  - Device
    - Defend by limiting range of action
  - Network
    - Leverage existing tools and techniques
  - Site









## Home Automation or Service?

- Both but.....
- Hardware and Software technology enables ease of installation and set-up
  - Starter installs \$1,000 for 5 connected light switches
  - Security awareness starter kits
  - Thermostats, etc.
  - Remember The power is in the ensemble and not the individual instrument
- Fuel delivery companies have what utilities and security covet –
   Good customer relationships Leverage!
- Service will come but needs people and process integration















