



INTERNET OF THINGS

BEYOND THE HYPE

#IOT #PEOPLE #IIOT #INDUSTRY40 #M2M #SMARTCITY #ANALYTICS #FINTECH
#SELFDRIVINGCAR #SENSORS #DEVICES #BIGDATA #CLOUD



Founder IoT Leuven Meetup

@ Userfull

Business Alignment mgr.

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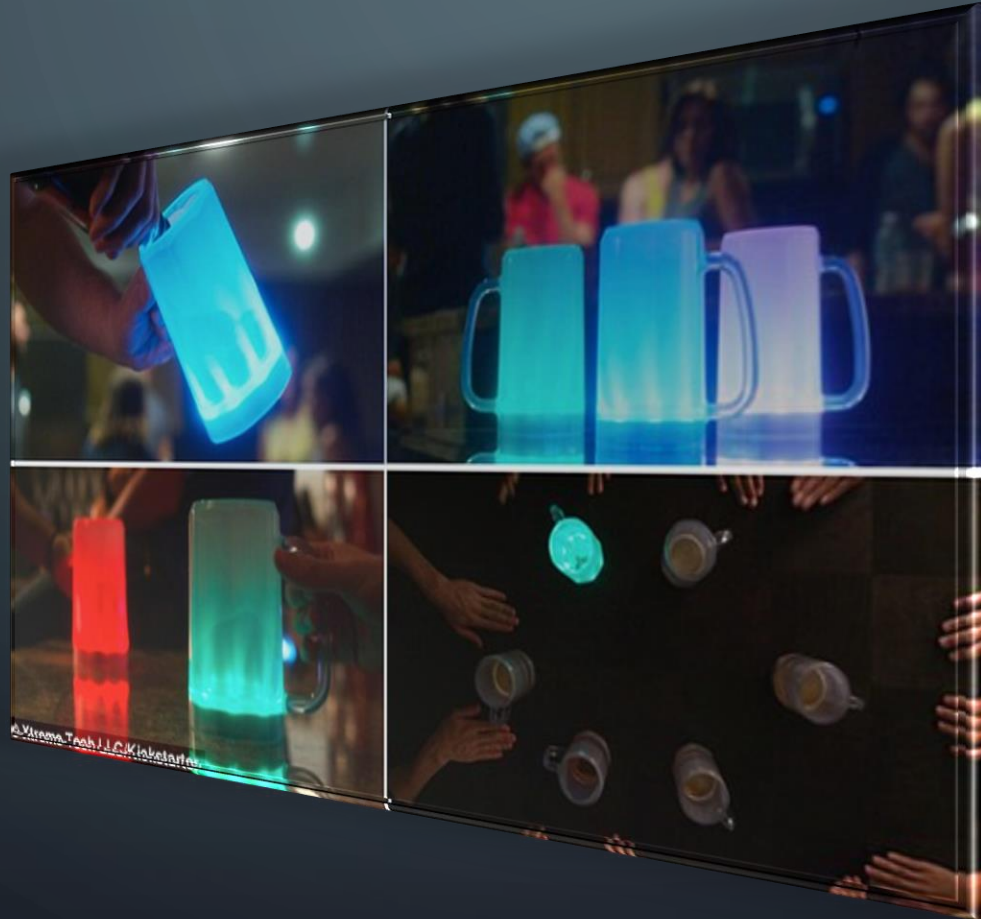


<http://twitter.com/bartKeybergh>

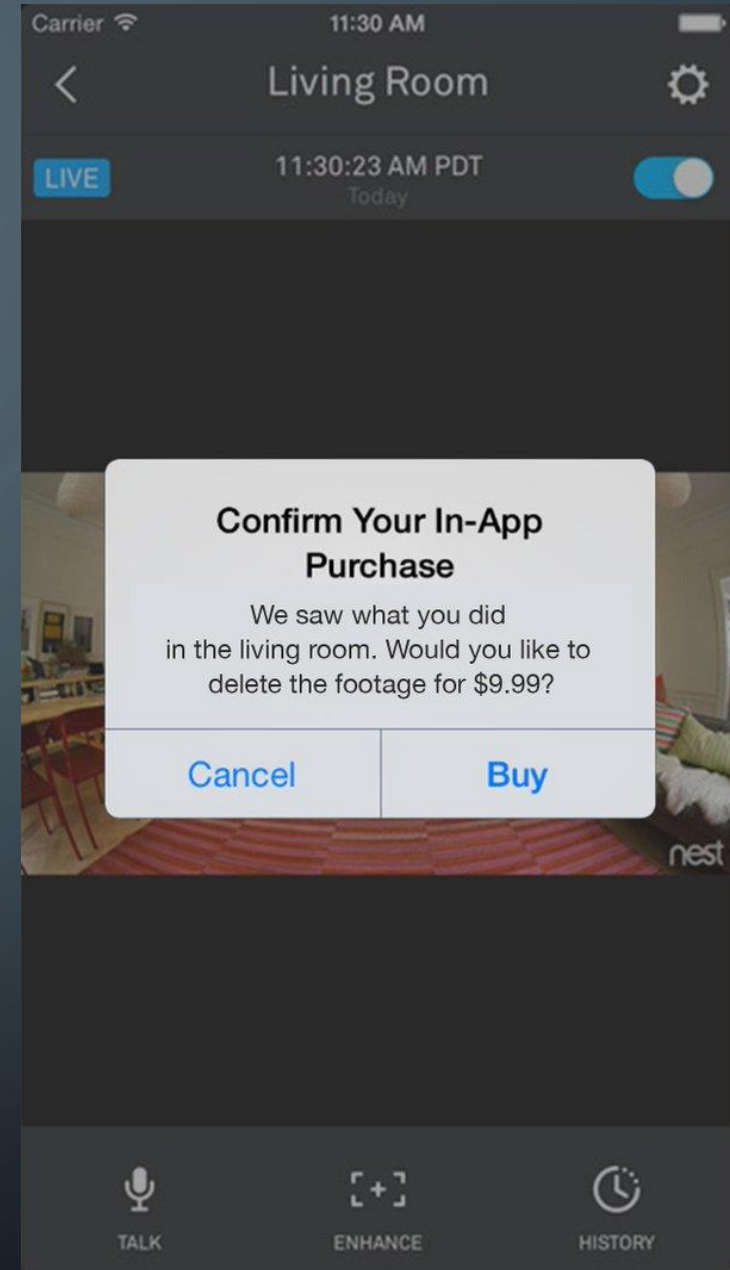


<http://bartkeybergh.blogspot.be>

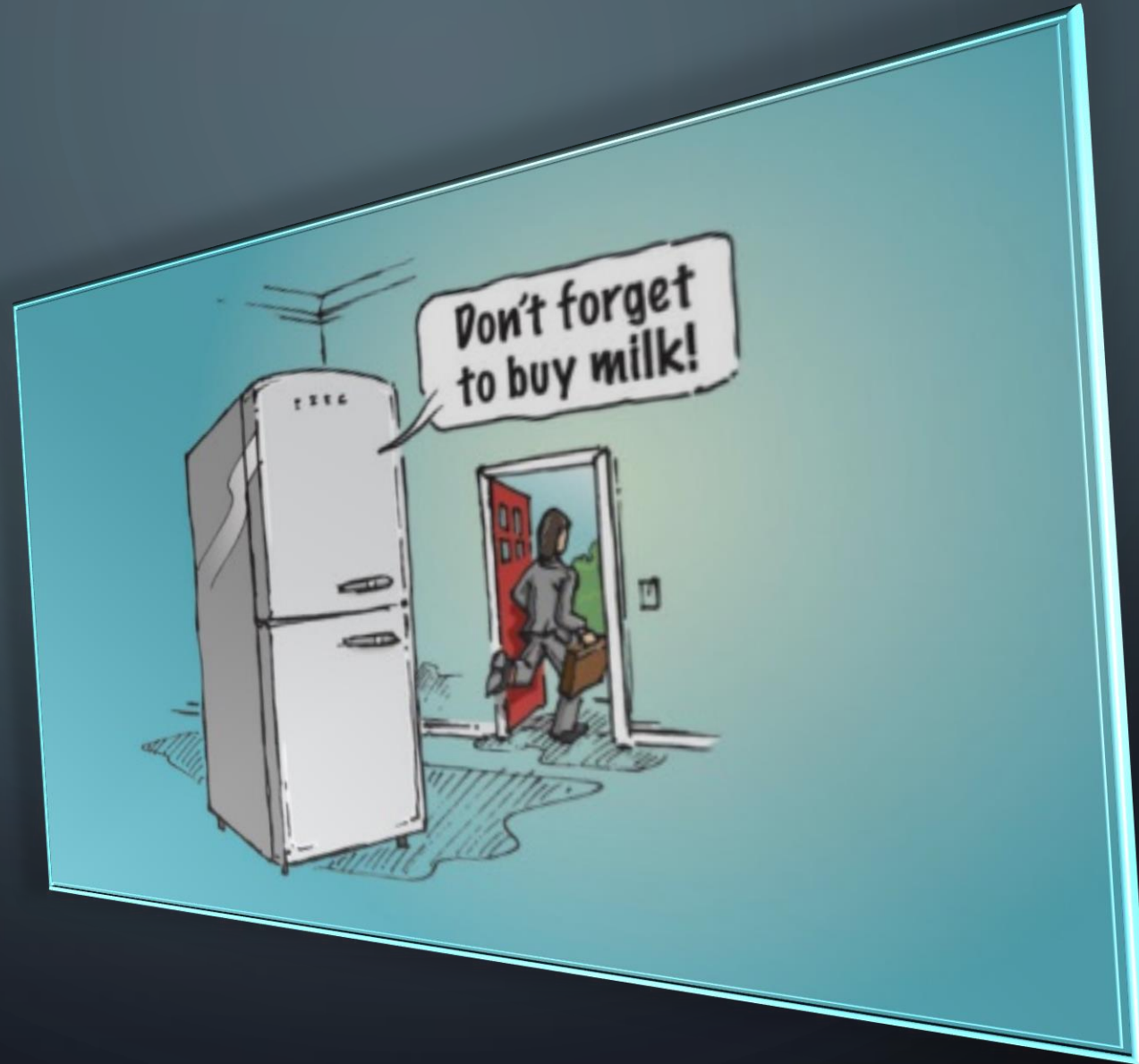
THE WRONG IMAGE OF #IOT



THE WRONG IMAGE OF #IOT



THE WRONG IMAGE OF #IOT



WHAT'S UNDER THE HOOD

- Devices & device/asset mgt.
- Battery
- Sensors
- Connectivity
 - Low power
 - Broadband
 - WIFI

A COMPLEX LANDSCAPE

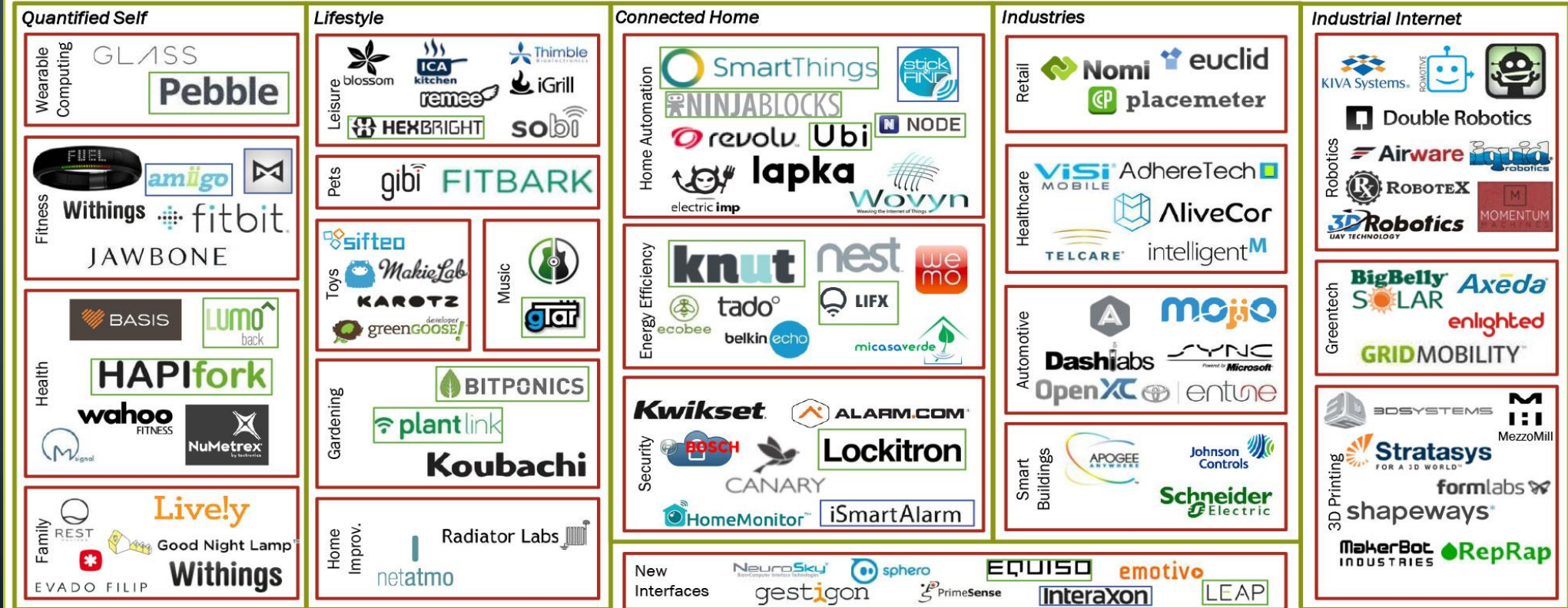
- Security – IAM
- Storage - Cloud
- Analytics
 - Real-time (streaming)
 - Technical stage
 - Business knowledge (KPI's)
- Front-end
 - Apps
 - MobileFirst solutions
 - Triggers

INTERNET OF THINGS LANDSCAPE

Platforms & Enablement (Horizontal)



Applications (Verticals)



Building Blocks



SWOT

STRENGTH

- Opportunities
- Cost saving
- Focus on business
- Add value in services
- Innovation
- Hot topic & trending
- Efficiency gaining

WEAKNESS

- Standards
- Security (software & devices)
- Solution complexity
- Asset mgt.
- Roadmap
- Battery life
- Connectivity
- Still early stage
- Openness - API

SWOT

OPPORTUNITY

- Healthcare
- Transport
- Quantified self
- Industry
- Environmental
- Wearables
- (Streaming) analytics & Big Data
- Automation
- Predictive maintenance
- LBS 2.0

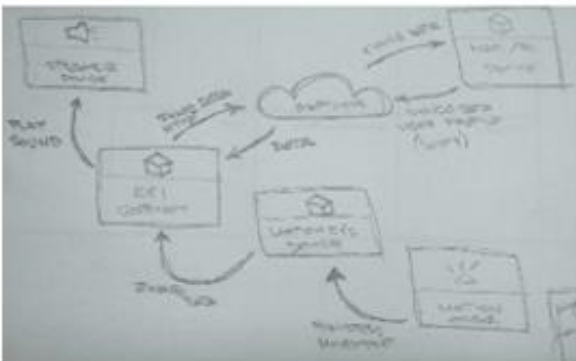
TREATH

- Image
- Lack of trust
- Hackers
- No End2End implementator(s)
- Expectations mgt.
- Connectivity

THE IOT CANVAS – DESIGNING THE IDEA

| | | | | |
|----------------|-------------------|-----------------------------|--------------------|--------------|
| THINGS | END POINTS | MIDDLEWARE | AUTOMATION | USERS |
| | DATA MODEL | THIRD PARTY SERVICES | WIDGET | |
| DIAGRAM | | | DESCRIPTION | |

APPLIED IOT CANVAS: SMART HOUSE

| THINGS | END POINTS | MIDDLEWARE | AUTOMATION | USERS |
|--|---|--|--|---|
| Water barrel/pump Weather station (Alecto WS-5000) Solar panel(Solar log) Washing Machine (Beko) Dryer Dishwasher | Water level sensor Valve control Allnet logger Smart-Relay box | Raspberry PI XBee Gateway Messaging Broker | waterBarrel>90% && solar panel >90%, valve=1&&washer =1 solar panel >90% <appliance>Power =1&&program=1 | House owner (Head geek) Family members Community members from weather websites |
| | DATA MODEL | THIRD PARTY SERVICES | WIDGET | |
| | Valve control - int Weather station - complex Solar - complex Appliances - bool | Wunderground | Weather, water, solar - Graphs Appliance control - toggle status | |
| DIAGRAM | DESCRIPTION | | | |
|  | <p>"I'd like to make an automation project that "senses" the weather outside (rain, sun radiation and darkness), takes into account the electricity produced by the solar panels and that than automatizes certain household appliances or the central heating.</p> <p>I would like to have such a system because I want our house to be smarter and less energy-consuming and thus more environmentally friendly."</p> | | | |

IoT Canvas for the 'Smart Greenhouse' Makers project @smartliving_io

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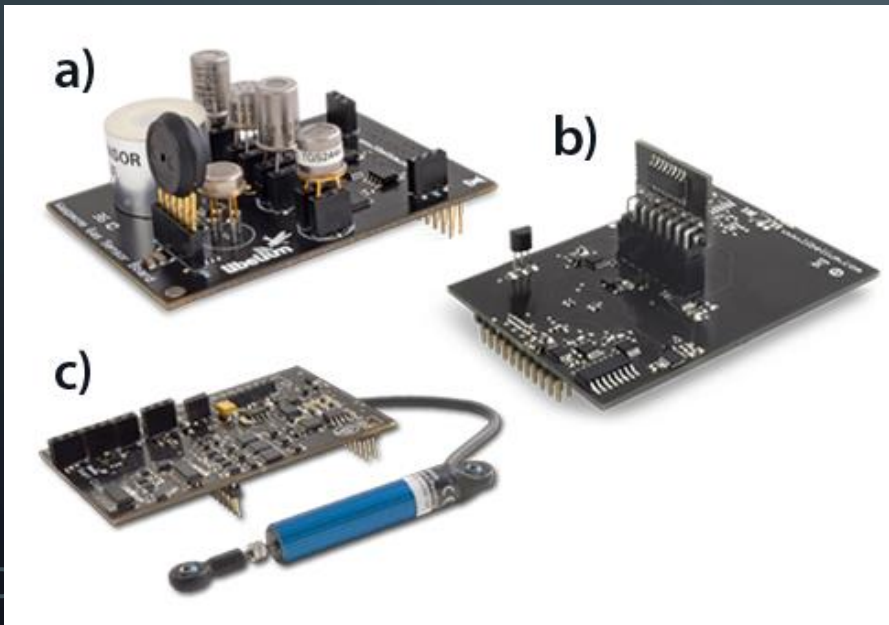
IoT Canvas for the 'Smart Greenhouse' Makers project @smartliving_io

IOT IN ACTION – SMARTCITY SANTANDER [SPAIN]

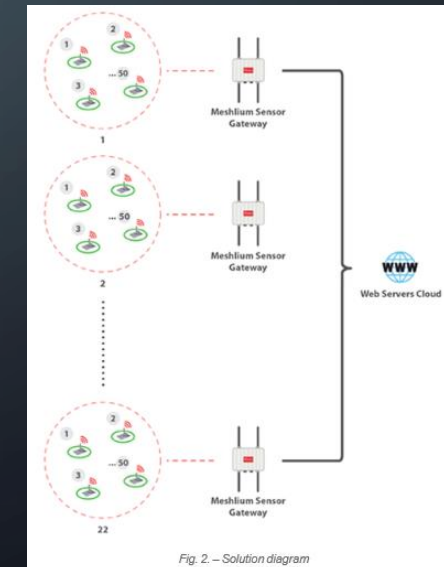


Smart Parking – LoRaWAN /
Sigfox (double radio)

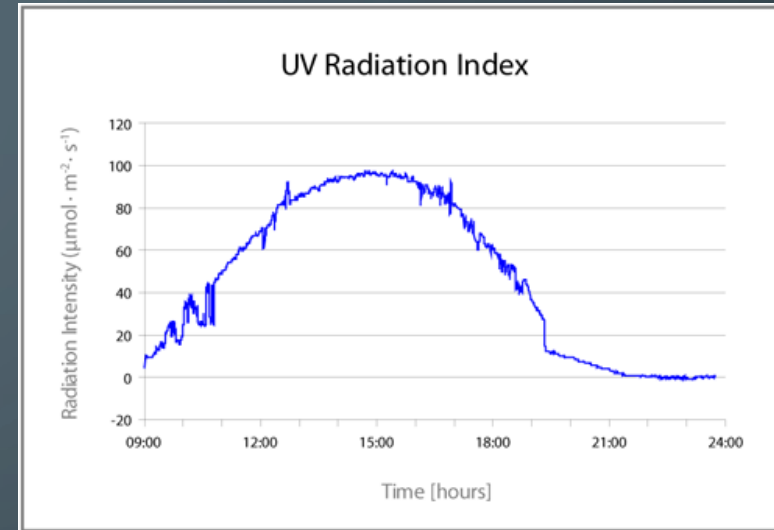
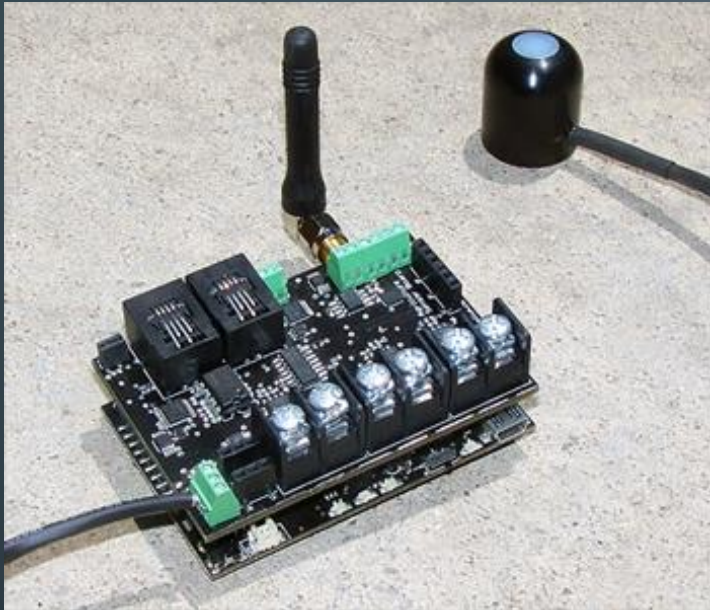
On-road, surface → In
production 2016



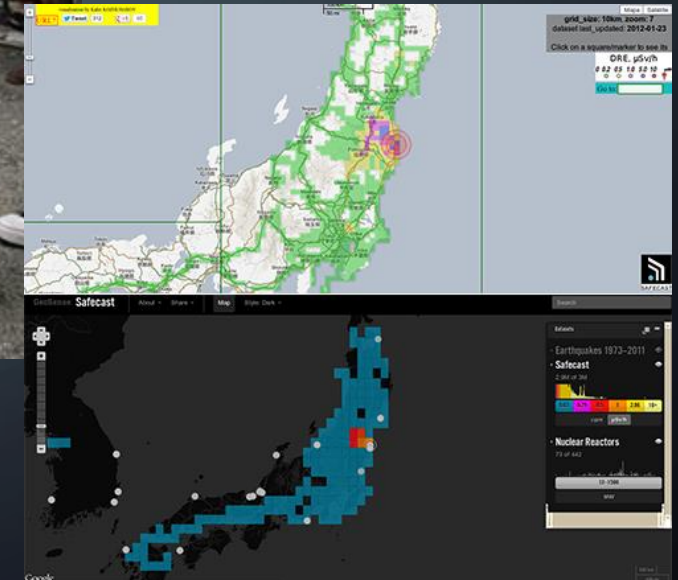
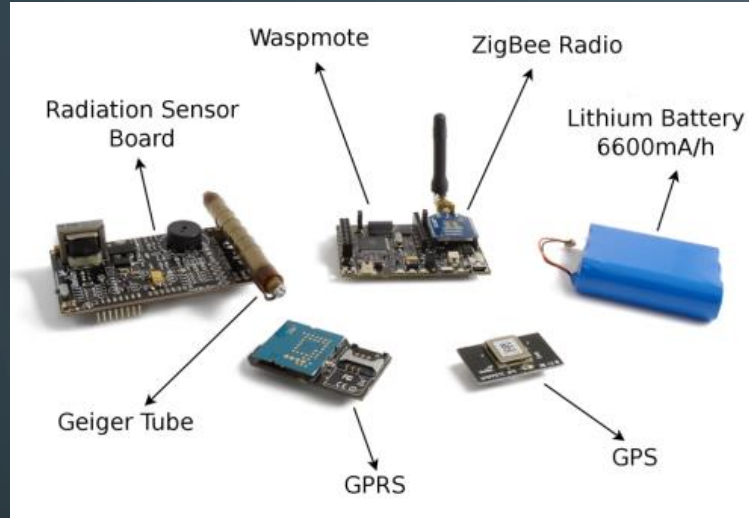
- Temperature
- Luminosity
- CO
- Noise
- Free Parking Slots

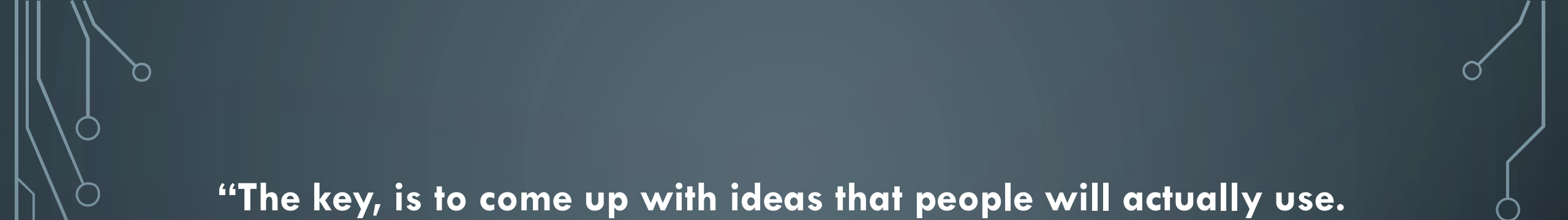


IOT IN ACTION – RADIATION IN THE SUMMER



IOT IN ACTION – RADIATION SENSOR





**“The key, is to come up with ideas that people will actually use.
Processing data to provide actionable insights is what it’s all about.
It’s not the things that matter it’s processing the data.**

**Just like a fridge,
it’s what’s inside,
and how you use it, that counts.”**

@bartkeybergh

