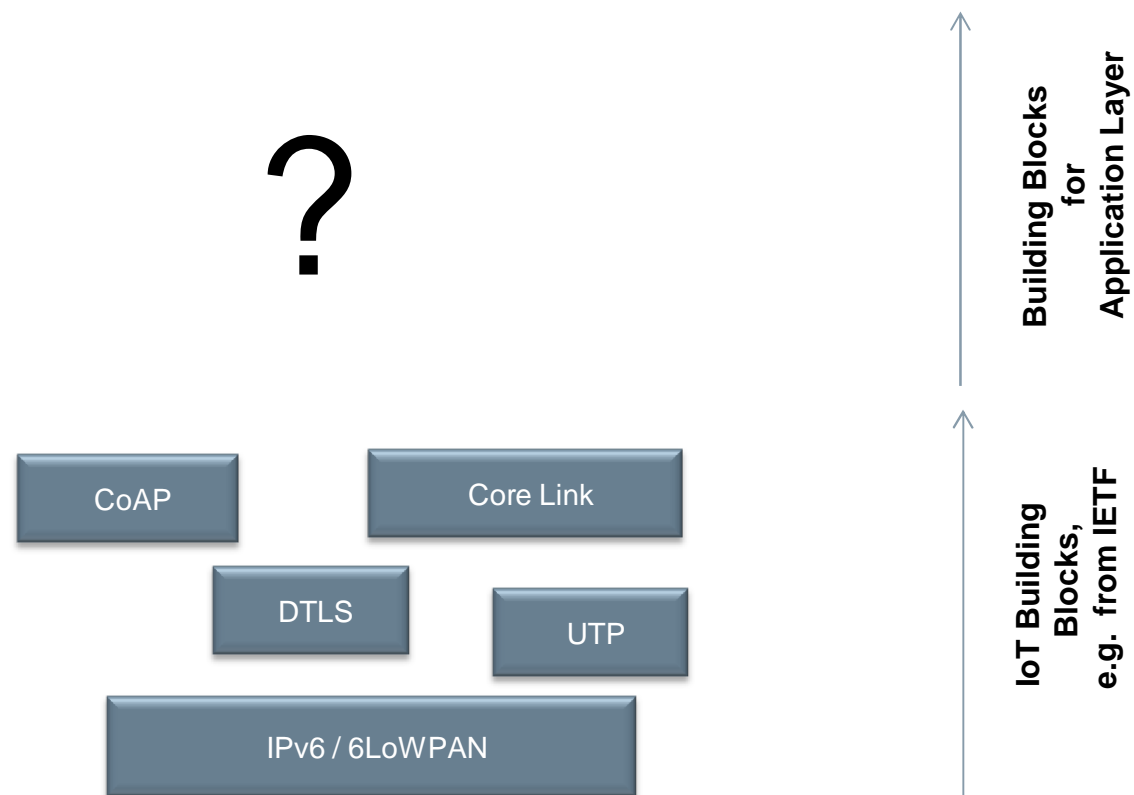


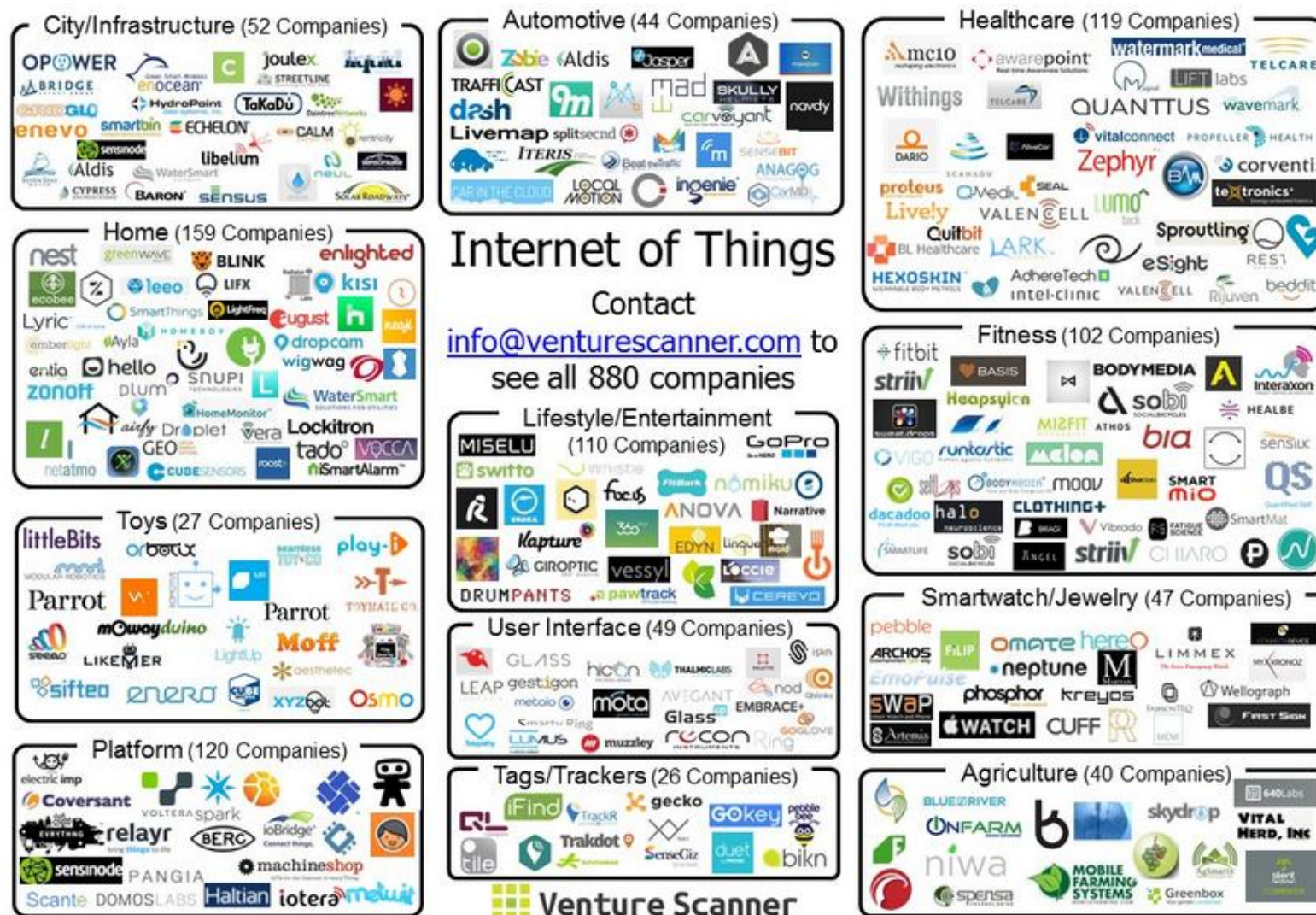
# Building Blocks for an Interoperable Web of Things – W3C WoT and BIG IoT

Siemens Corporate Technology | April 2016 | www16 Conference | [Sebastian.Kaebisch@siemens.com](mailto:Sebastian.Kaebisch@siemens.com)

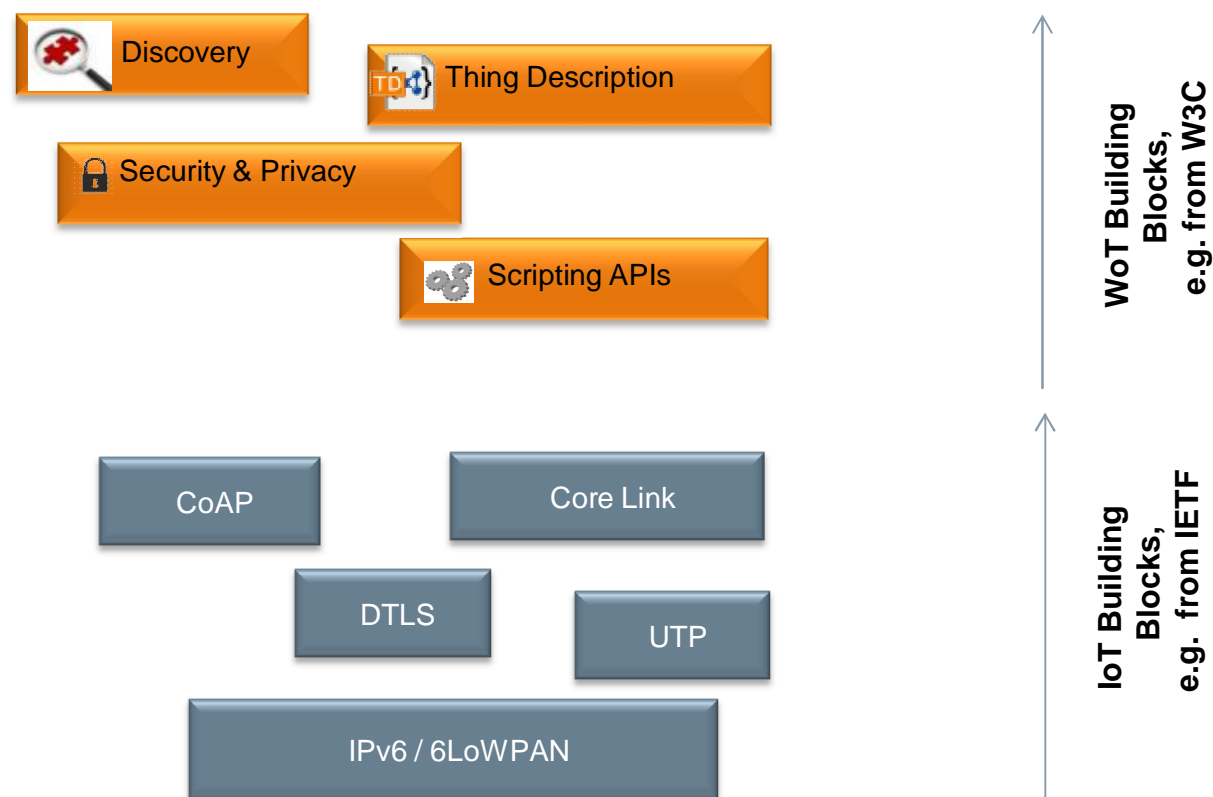
# The Missing Building Blocks



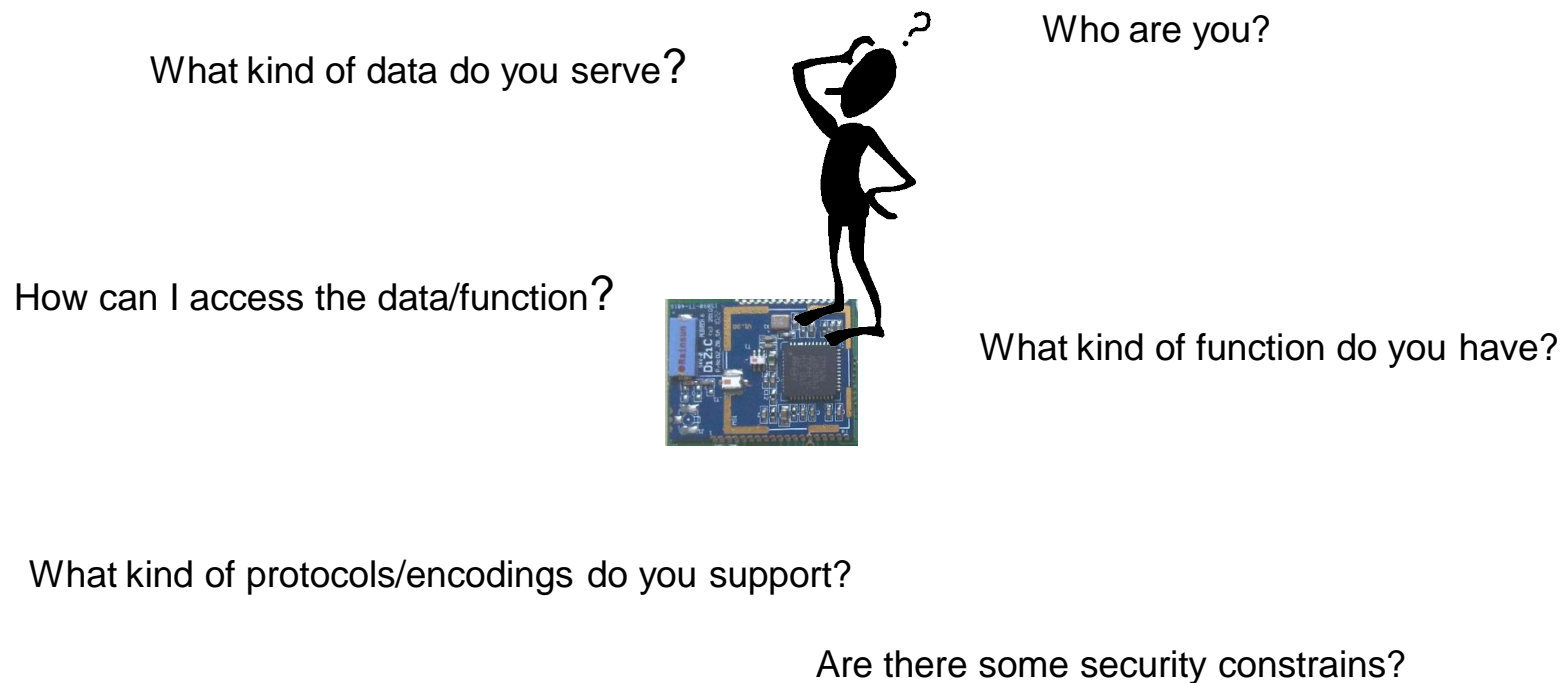
# IoT Application Landscape – Interoperability?



# W3C Web of Things Group: Standardizes Common WoT Building Blocks for an Open Application Layer To Enable Cross Domain IoT Applications



# Motivation for a WoT Thing Description (TD)

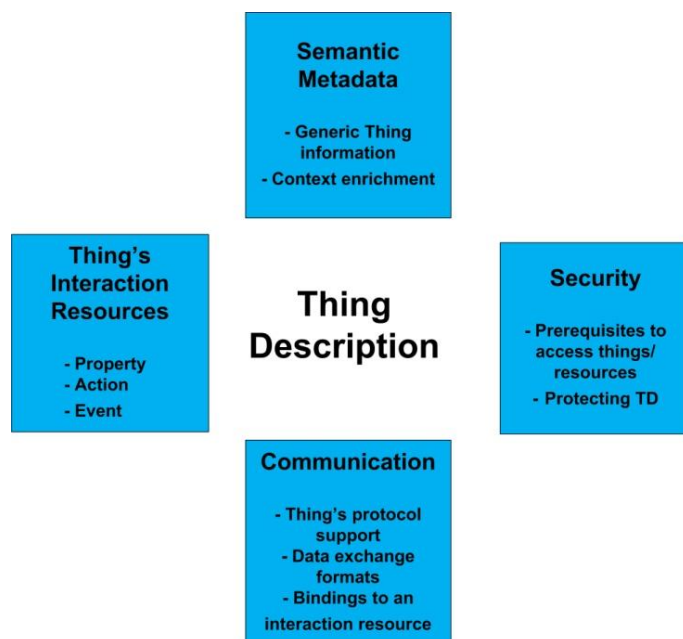


**Atomic use cases:** engineering, application/service development, discovery / identification, plug & play (e.g., T2T), monitoring, ...

# TD Overview

- Goals:**
- minimal vocabulary set to describes Things capabilities and how to access/use these
  - extensible to add domain specific and unspecific context
  - optimized representation for being feasible to resource constrained Things

## Current Working Assumption



## JSON-LD Sample

```
{
  "@context": ["http://w3c.github.io/wot/w3c-wot-td-context.jsonld"],
  "@type": "Thing",
  "name": "MyTemperatureThing",
  "uris": "coap://www.mytemp.com:5683/",
  "encodings": ["JSON"],
  "properties": [
    {
      "name": "temperature",
      "valueType": "xsd:float",
      "writable": false,
      "hrefs": ["temp"]
    }
  ]
}
```



# BIG IoT EU Horizon 2020 Project: Bridging the Interoperability Gap of the Internet of Things (BIG IoT)



[www.big-iot.eu](http://www.big-iot.eu)



[info@big-iot.eu](mailto:info@big-iot.eu)

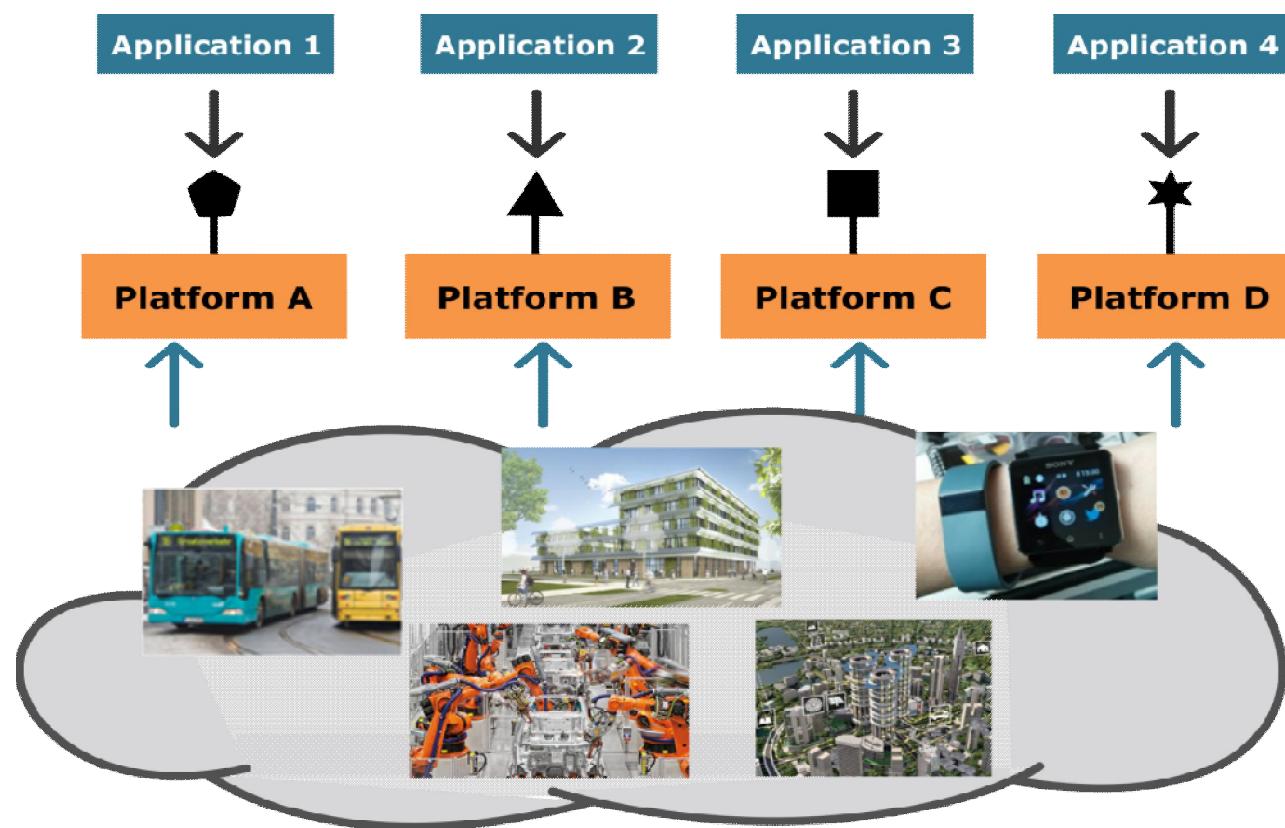


[@BIG\\_IoT](https://twitter.com/BIG_IoT)



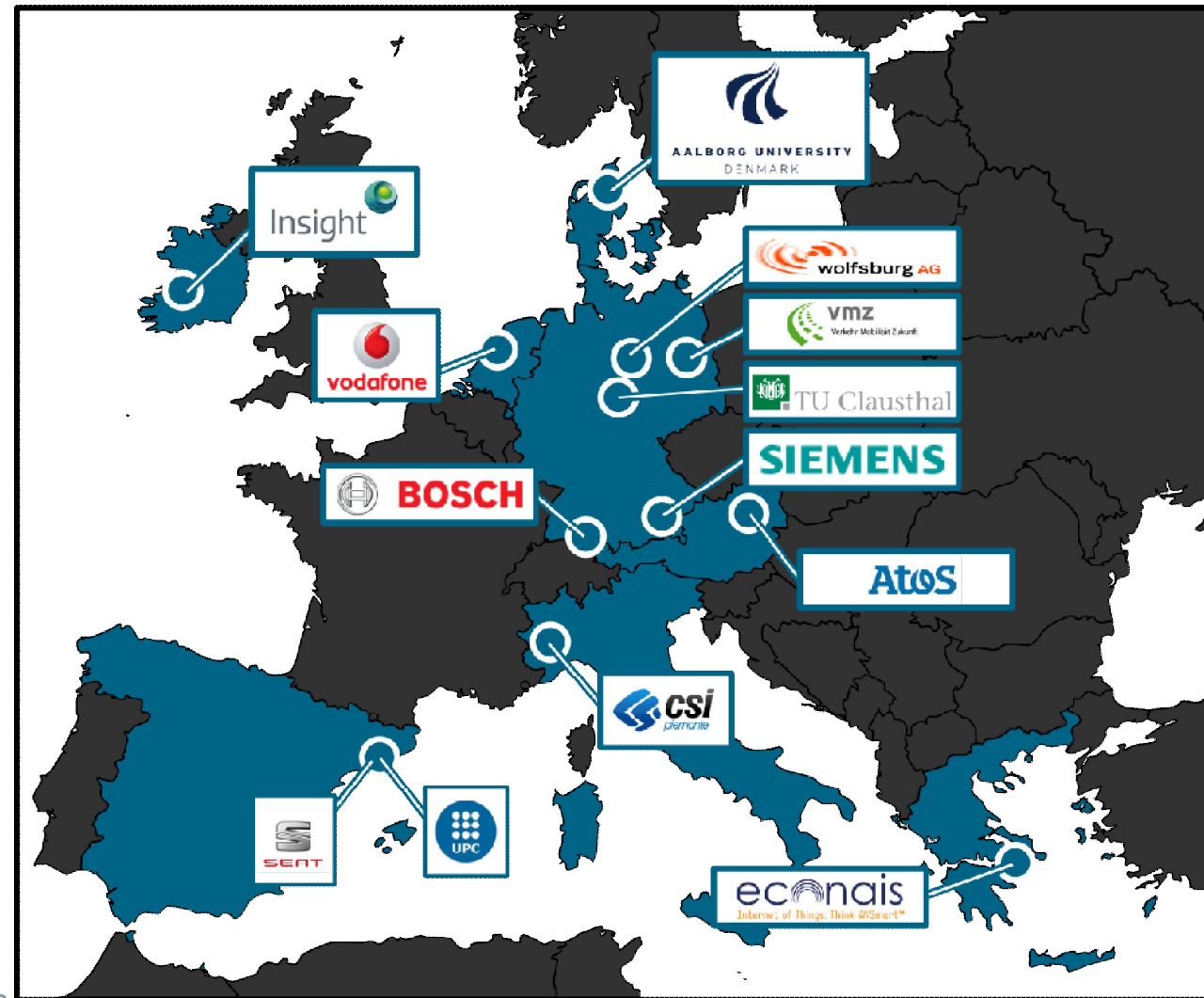
BIG-IoT project group

## Problem: Missing Interoperability on Platform-Level





## BIG IoT Partners

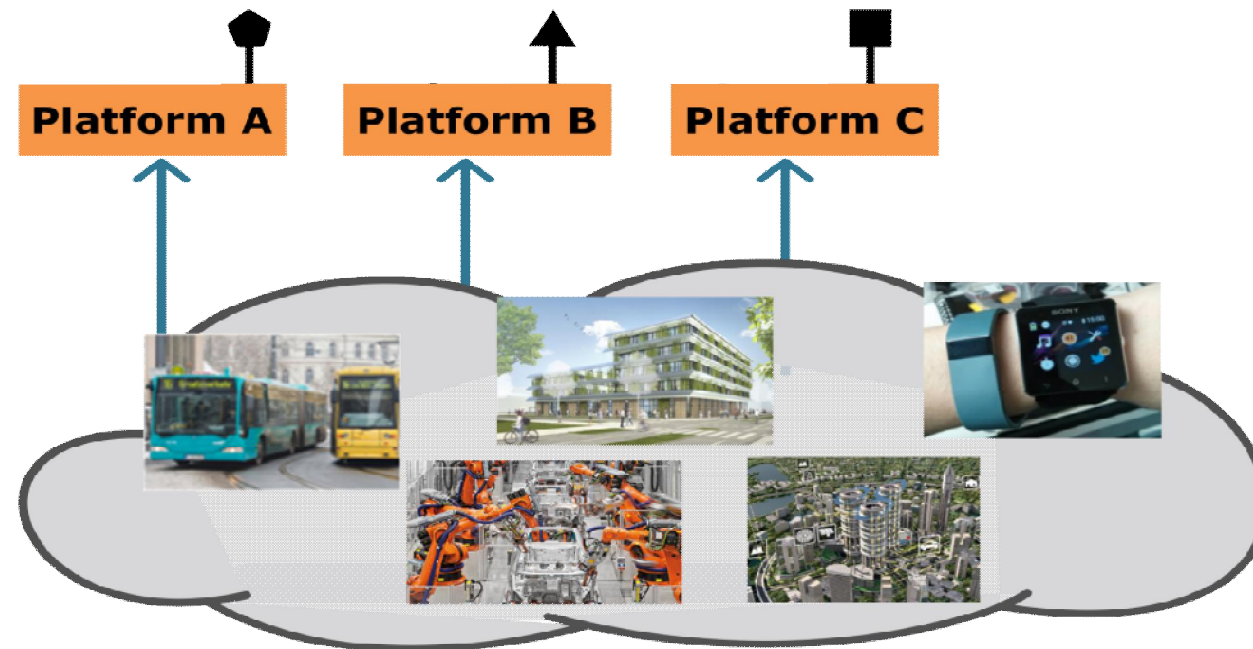


## What we are not doing!

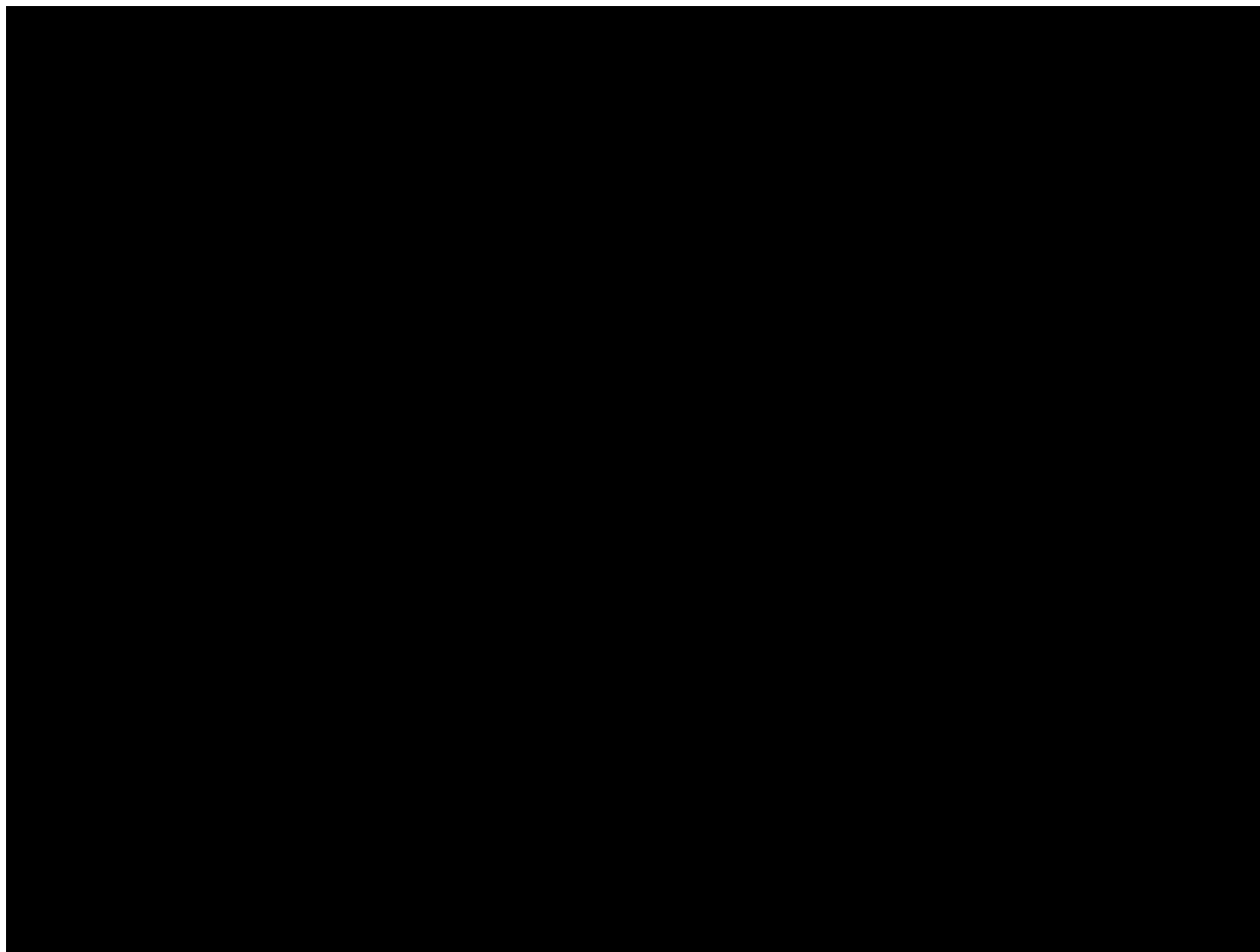
# N+1

(not yet another IoT platform)

# BIG IoT Approach



# BIG IoT Video



## Collaboration of W3C WoT and BIG IoT

- Evolve W3C WoT's **thing description** to **platform description**
  - enables “understanding” of what a IoT platform can serve us
  - concepts will rely on the W3C WoT TD and scale it up to the **platform level**
- Important for Thing-2-Thing (T2T) interaction demos/scenarios in BIG IoT  
Examples:
  - Things from city infrastructure (e.g., traffic lights) and vehicles
  - danger detection (e.g., bicycle vs. vehicle)
  - ...
- Based on our experiences we can give input to the W3C WoT group and vice versa

# Questions