Internet-of-Things

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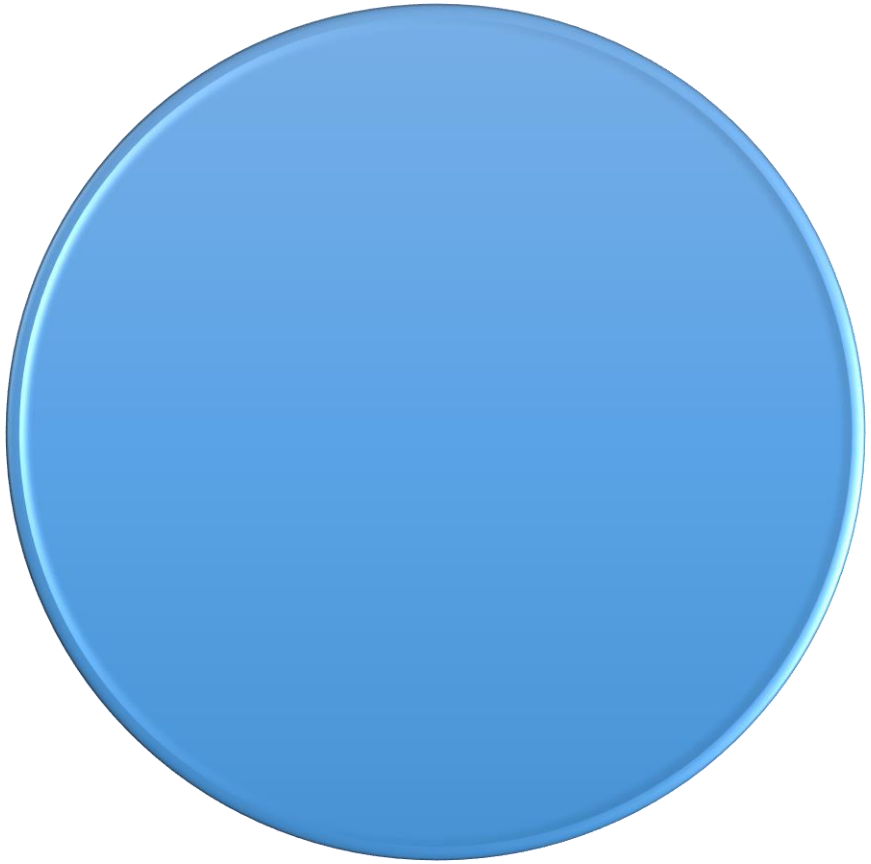
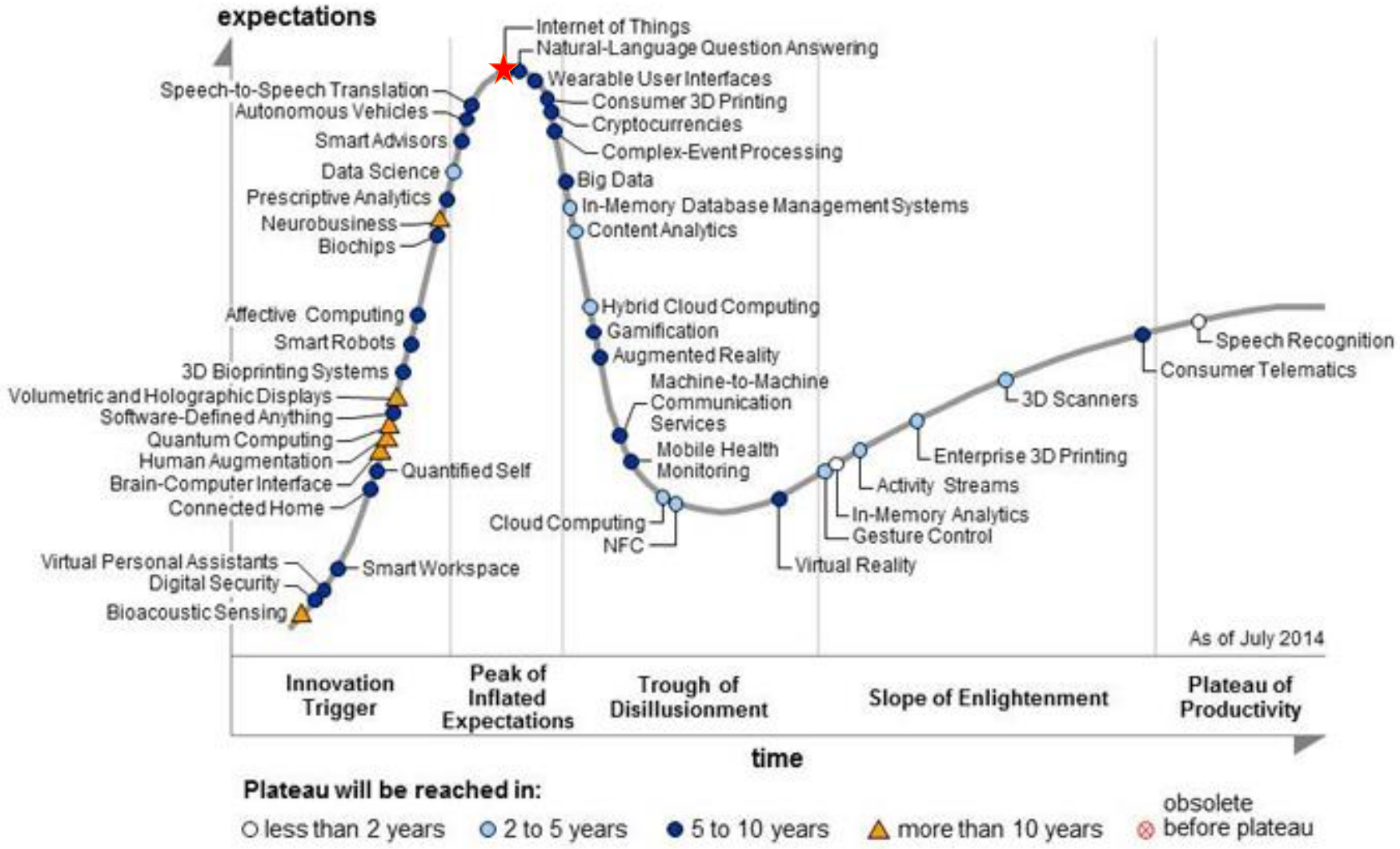
Agenda



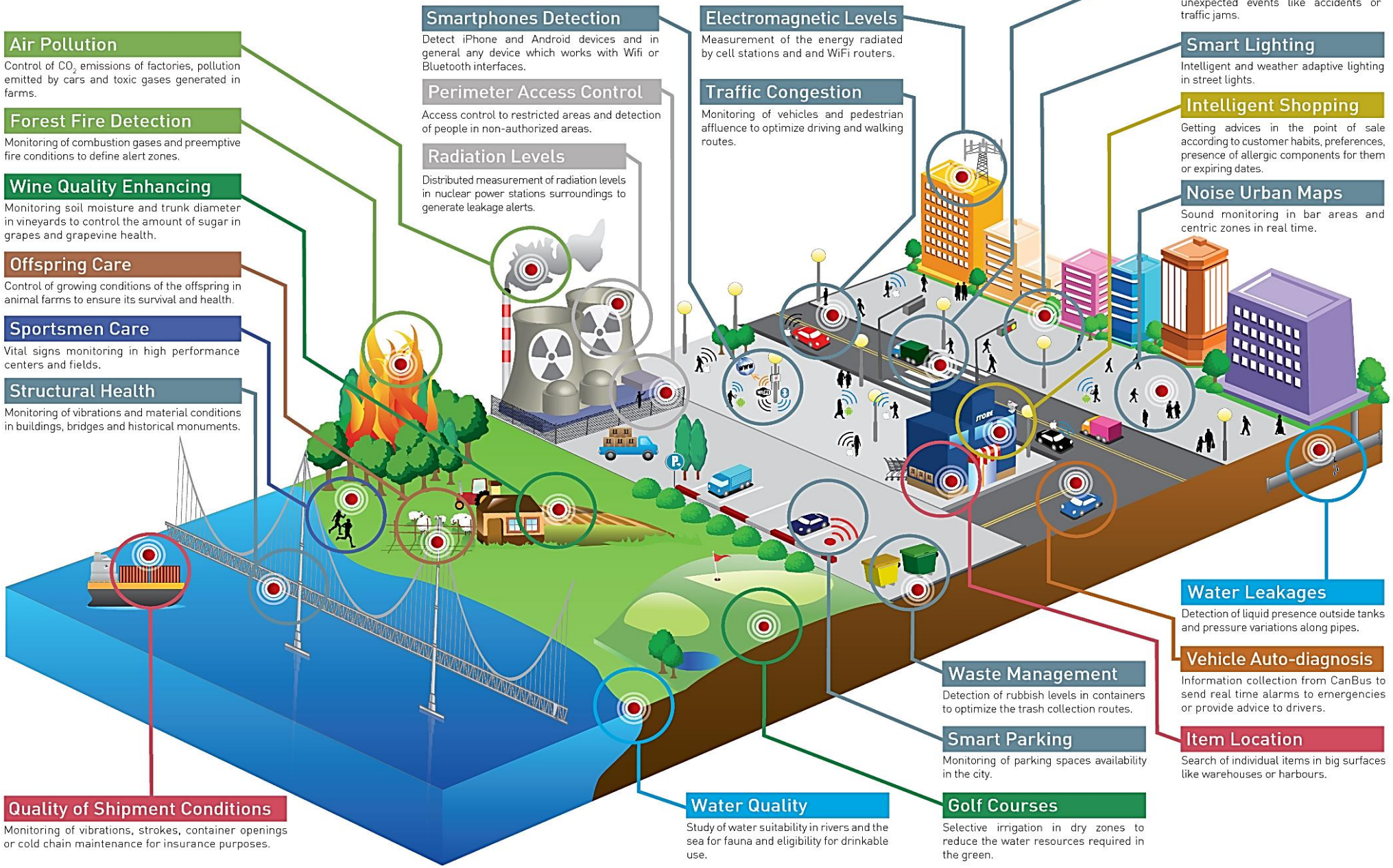
- IoT: Hype or Reality?
- Various Applications of IoT
- What is IoT Anyway?
- Types of IoT
- Example Use Cases
- The IoT Journey
- Cloud of Things and Services
- IoT Challenges
- Key Takeaway
- Q & A

IoT: Hype or Reality

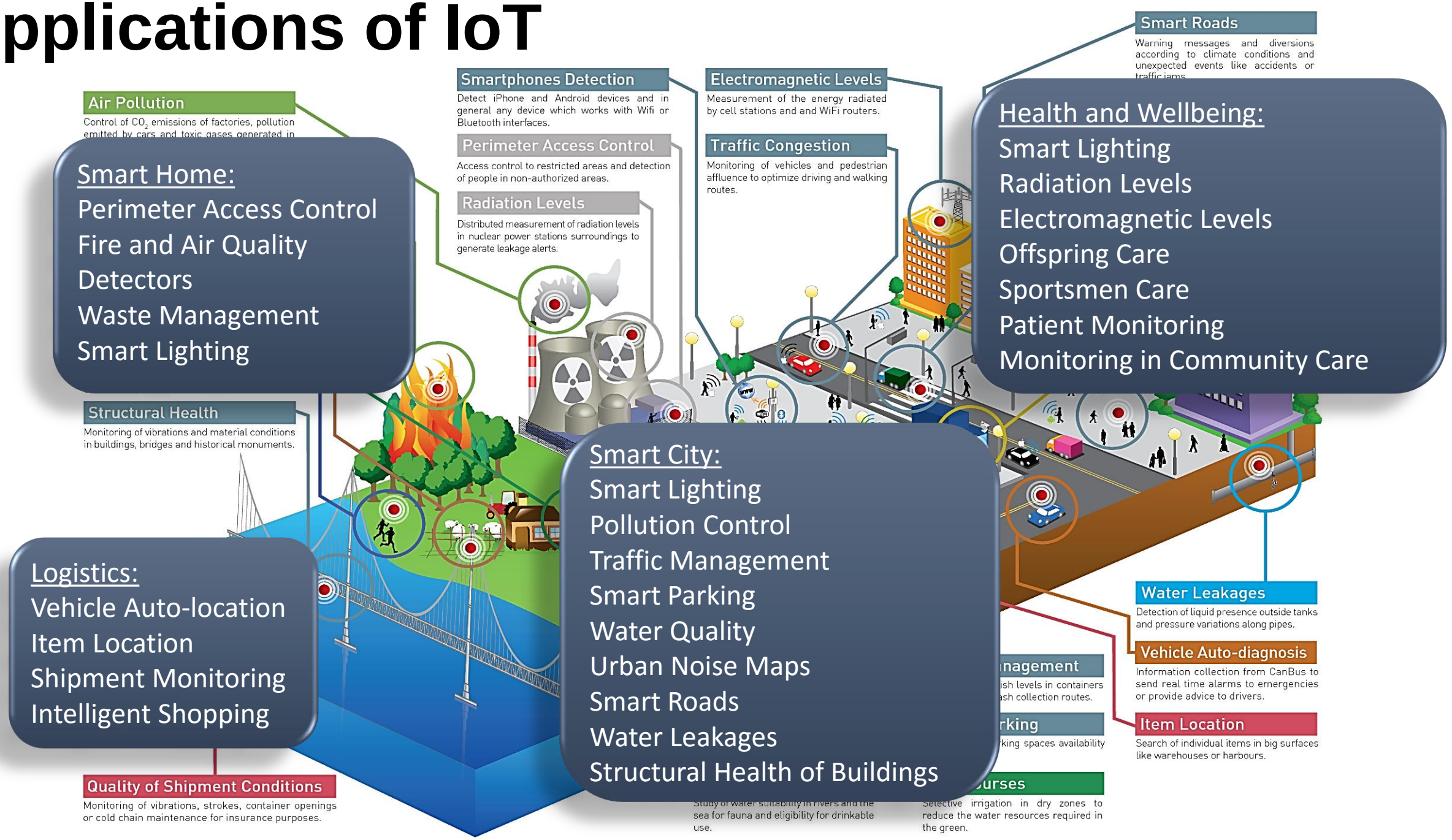
"It's Official: The Internet Of Things Takes Over Big Data As The Most Hyped Technology"
– Forbes Headline, 18-Aug-2014.



Applications of IoT



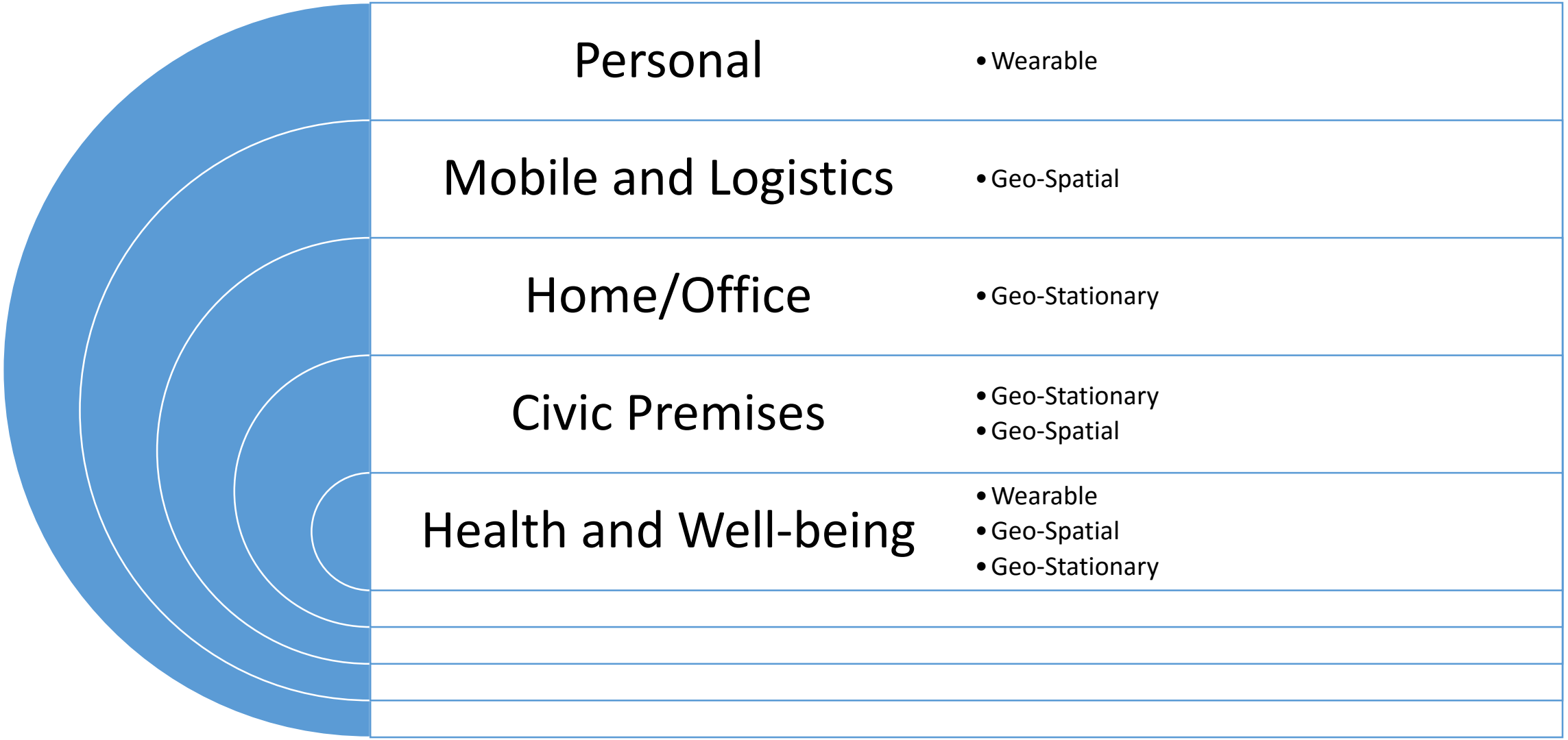
Applications of IoT



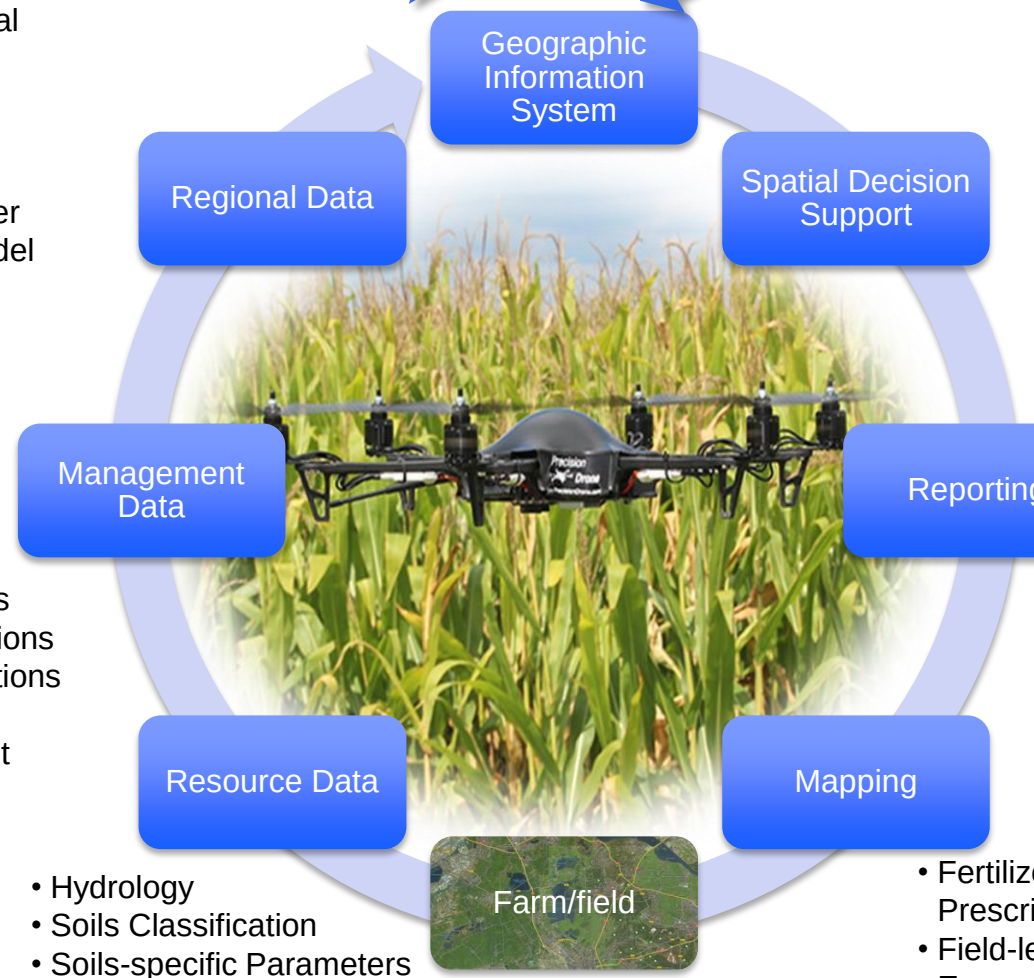
What is IoT?

Network of 'physical objects' (things) that have internet connectivity, which facilitates communication between those objects and other internet-enabled devices and systems.

Types of IoT


Personal
• Wearable
Mobile and Logistics
• Geo-Spatial
Home/Office
• Geo-Stationary
Civic Premises
• Geo-Stationary
• Geo-Spatial
Health and Well-being
• Wearable
• Geo-Spatial
• Geo-Stationary

Example Use Case 1: Agriculture



- Regional perspective
- Temporal change
- Surface features

- Satellite Images and Videography

- Crop Condition Assessment
- In-field variability analysis

- Moisture
- Evapotranspiration

- Country and Regional boundaries
- Agriculture statistics
- Public Land Surveys
- Grain Silos
- Land Use/Land Cover
- Digital Elevation Model
- Environmental Constraints

- Cost Comparisons
- Crop Planning Optimization
- Variability Analysis
- Simulation/Modeling

- Field maps
- Templates
- Tables
- Charts
- Records
- Reports
- Compliance

- Plantings
- Tillage Operations
- Fertilizer Applications
- Pesticide Applications
- Irrigation
- Pest Management
- Yield/Harvest

- Hydrology
- Soils Classification
- Soils-specific Parameters
- Terrain model
- Slope and Aspect
- Fertility

- Fertilizer/Chemical Prescriptions
- Field-level nutrients
- Economic summaries
- Site specific applications

Example Use Case 1: Agriculture

Wall-Ye Robot Features:

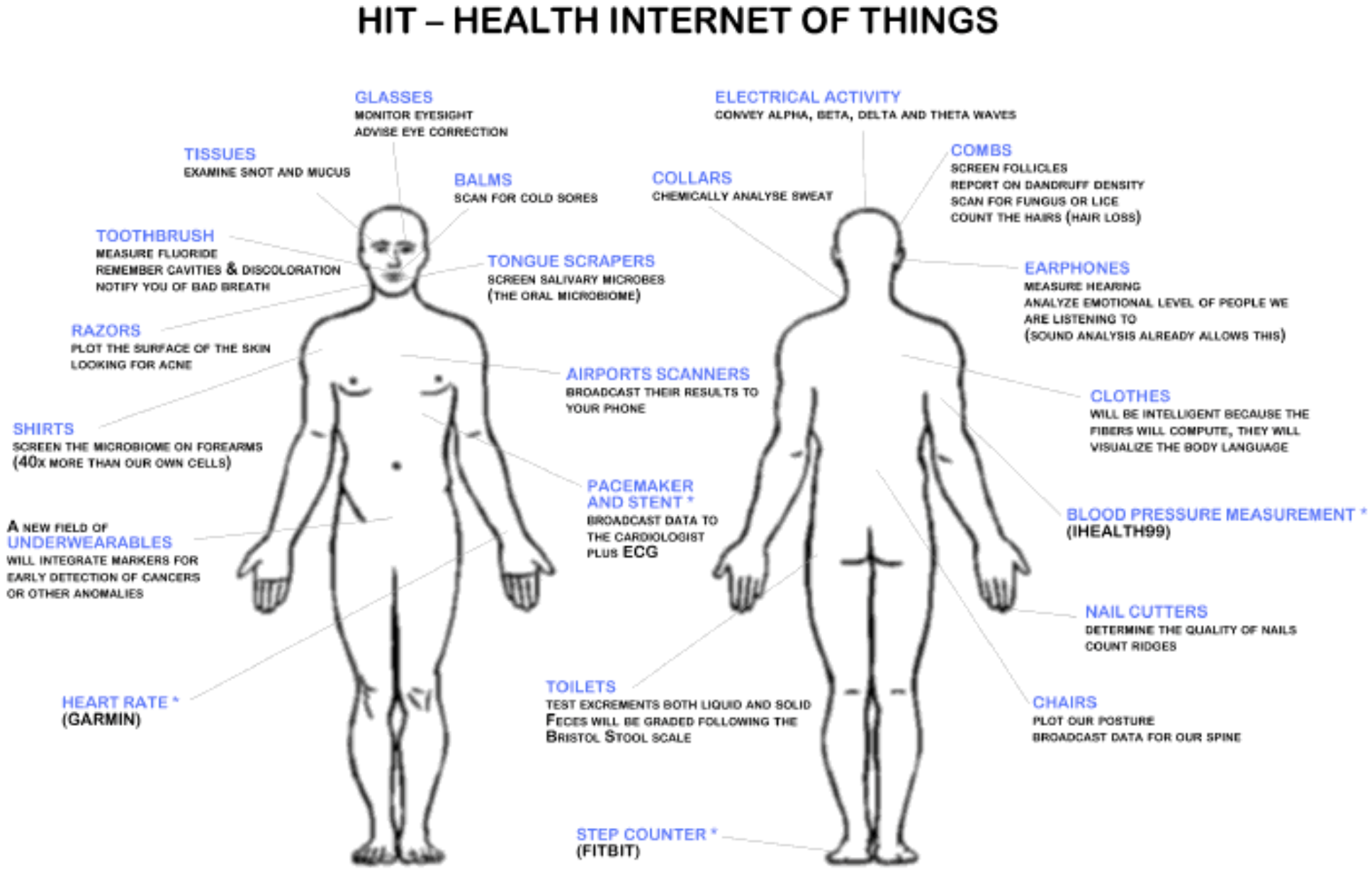
- Tracking technology,
- Mapping to move from vine to vine,
- Recognise plant features,
- Capture and record data,
- Memorise each vine,
- Synchronise six cameras and
- Guide its arms to wield tools.

Wall-Ye Robot Benefits

- Reduce fertilizer costs
- Reduce chemical application costs
- Reduce pollution by precise use of chemicals.
- Improve crop yields
- Provide better information for farming decisions
- Provide better farm records essential for sale and succession.

A vineyard robot, Wall-Ye

Example Use Case 2:



The IoT Journey

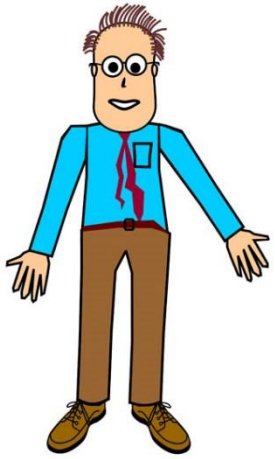
Evolution to Machine-to-Machine Systems

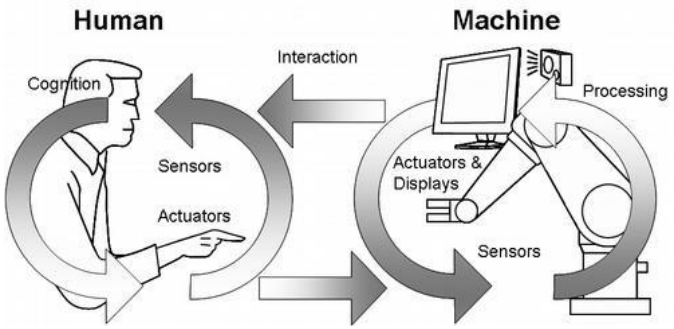
Man

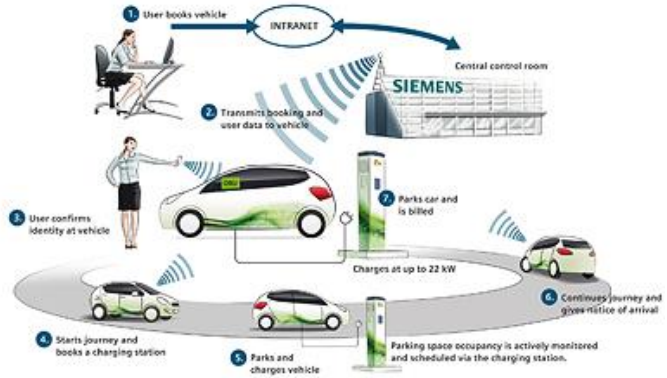
Machines

Man-machine Systems

Machine-Machine Systems

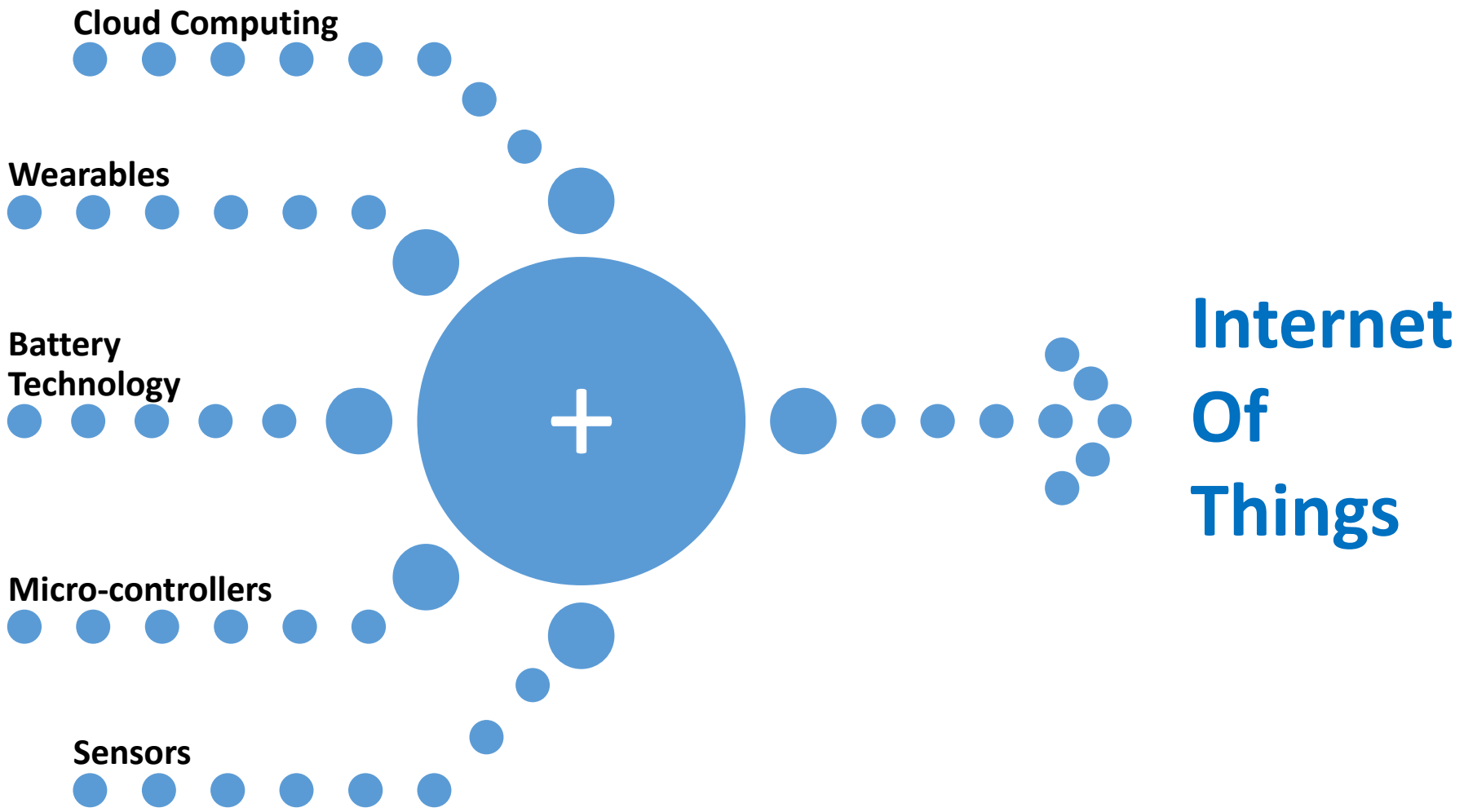




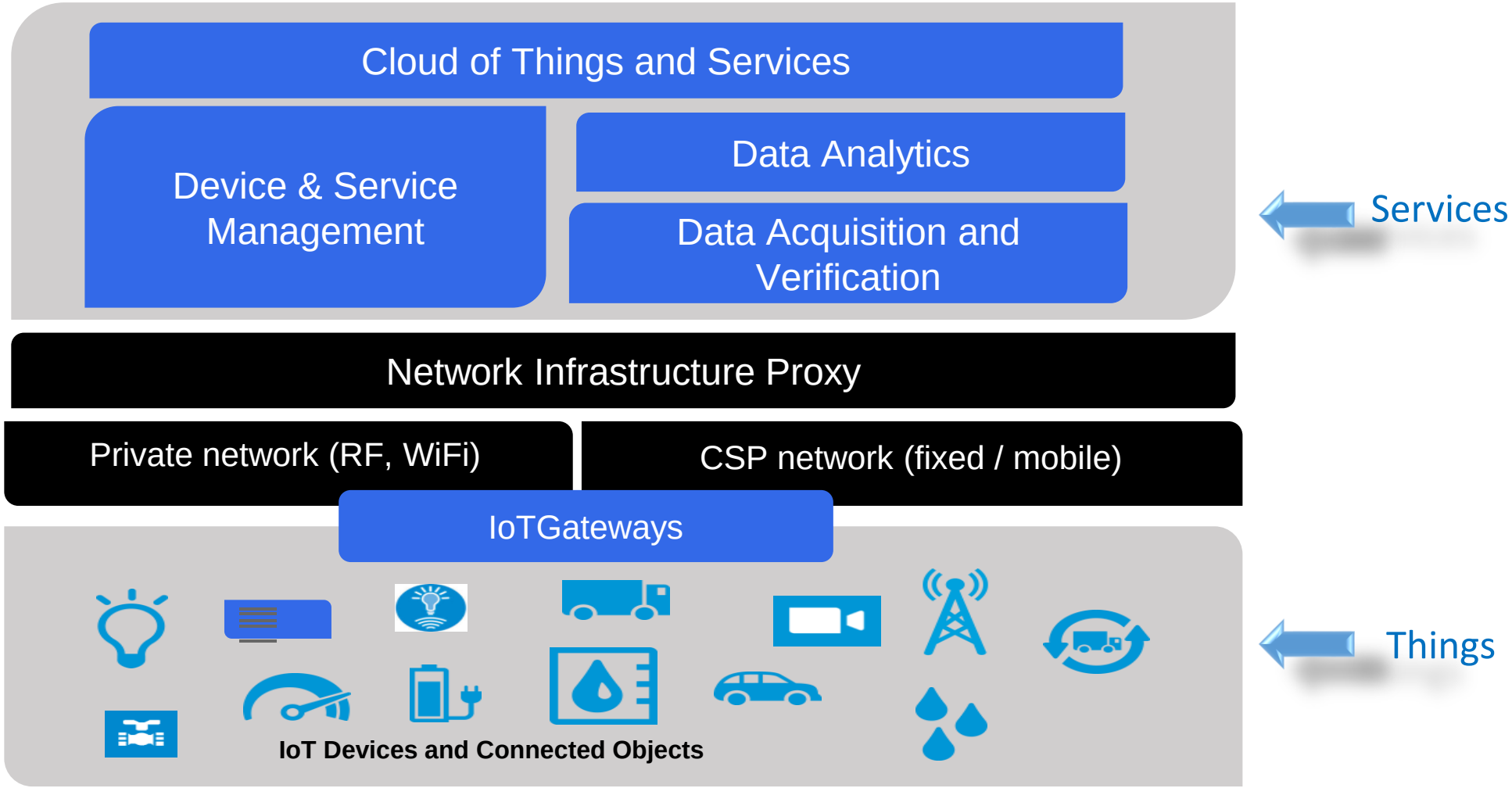


The IoT Journey

Convergence of Key Technologies



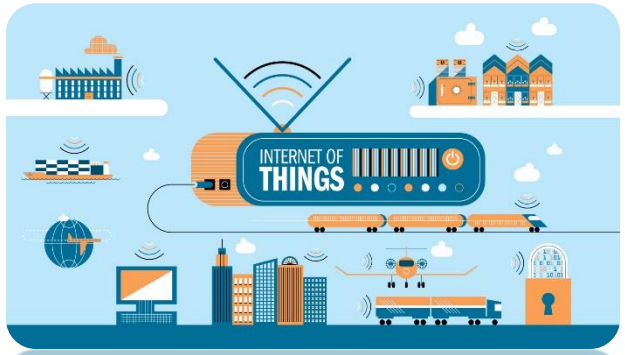
The Things-Service Paradigm



Cloud of Things and Services

THINGS

Cloud-centric IoT



Cloud related functions in IoT

SERVICES

IoT-centric Cloud

IoT related functions in Cloud

IoT Challenges and Opportunities

Challenges

The IoT Hub

- Wearable
- Mobile
- Home

Security

Data Protection

Opportunities

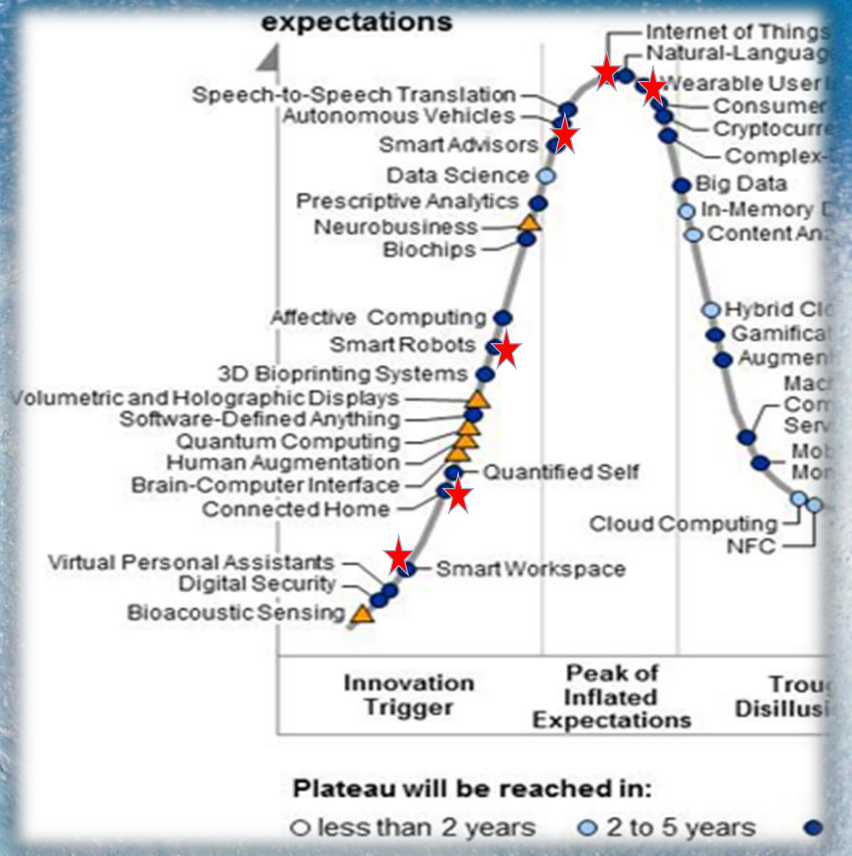
Hub Candidates

- iWatch
- Smart phone
- Xbox One or TV

Security Containers

Data Philanthropy

Key Takeaway



The Time For IoT Has Arrived!

Q&A

Thank You