

Internet of Things in our daily lives

Ravi Kishore Kodali

ravikkodali@gmail.com

National Institute of Technology, Warangal

Daily routine – activities vary

- Sleep - How well and how long
- Fitness and sports - How long and burnt calories
- Eat - Right quantity?
- Healthy Diet?
- Commute to work place - How long (self driving?)
- Work - On time or late
- meetings, field work,
- - scheduling resources
- . Commute to home - How long
- . Shopping
- . Entertainment

- Alerts
- Your current location
- Weather Information
- Travel Information
- Health Information
- Safety Information
- Comfort
- Digital/Mobile Banking

3 I's in IBM's Smarter Planet

- **Instrumented:**

- Information captured wherever it exists remote sensors
 - By 2020 30 billion Internet-connected, sensor-enabled objects
 - another 182 billion that could easily be enabled.

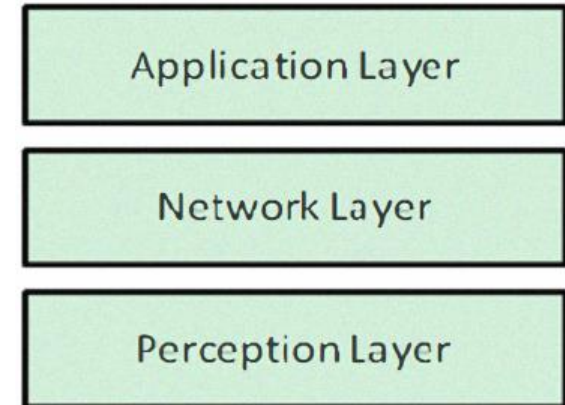
- **Interconnected**

- Information moved from the collection point to consumer

- **Intelligent**

- Information processed
- analyzed
- and acted upon to derive greater knowledge and value.

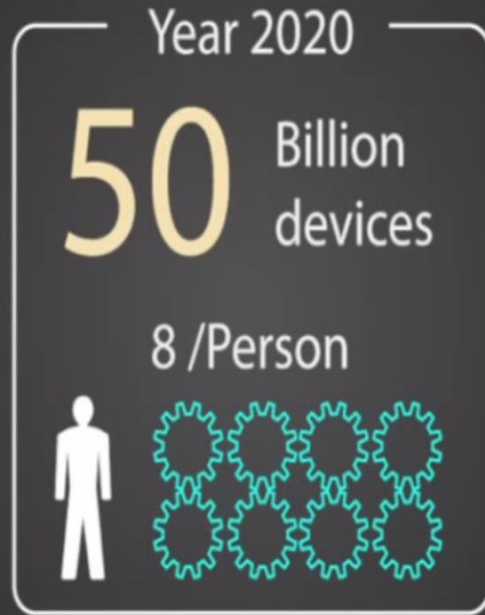
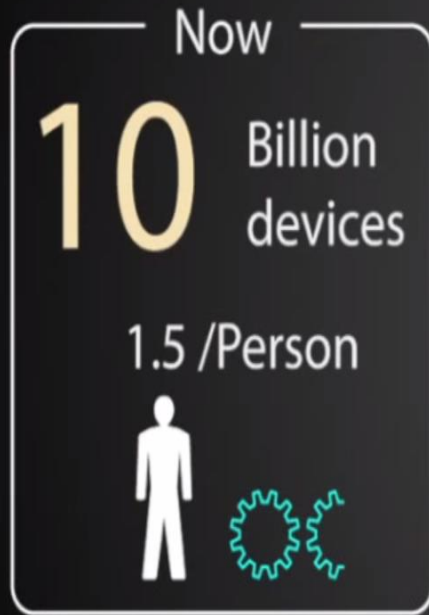
5 senses



Instrumented

- The world has been getting increasingly instrumented
- IDC (premier global market data intelligence firm)
 - by 2020, 30 billion Internet-connected, sensor-enabled objects
 - and another 182 billion that could easily be enabled.
- Powerful computing capability
 - inexpensively delivered
 - in forms so small that it is being put into things no one would recognize as computers
 - RFID tags in stand-alone products,
 - Sensors
 - cars,
 - appliances,
 - rail lines,
 - highways,
 - power grids,
 - golf balls,
 - fitness and health monitors,
 - shoes,
 - and even baby clothes.
 - Devices are being embedded across processes and global supply chains and even in natural systems, such as agriculture and waterways.
 - These physical objects with embedded devices are the “things” that will make up the “Internet of Things.”

IoT Predictions 2020



Automotive
\$202 Billion



Healthcare
\$69 Billion

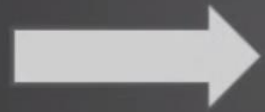


Utilities
\$36 Billion



Consumer electronics
\$445 Billion

Better



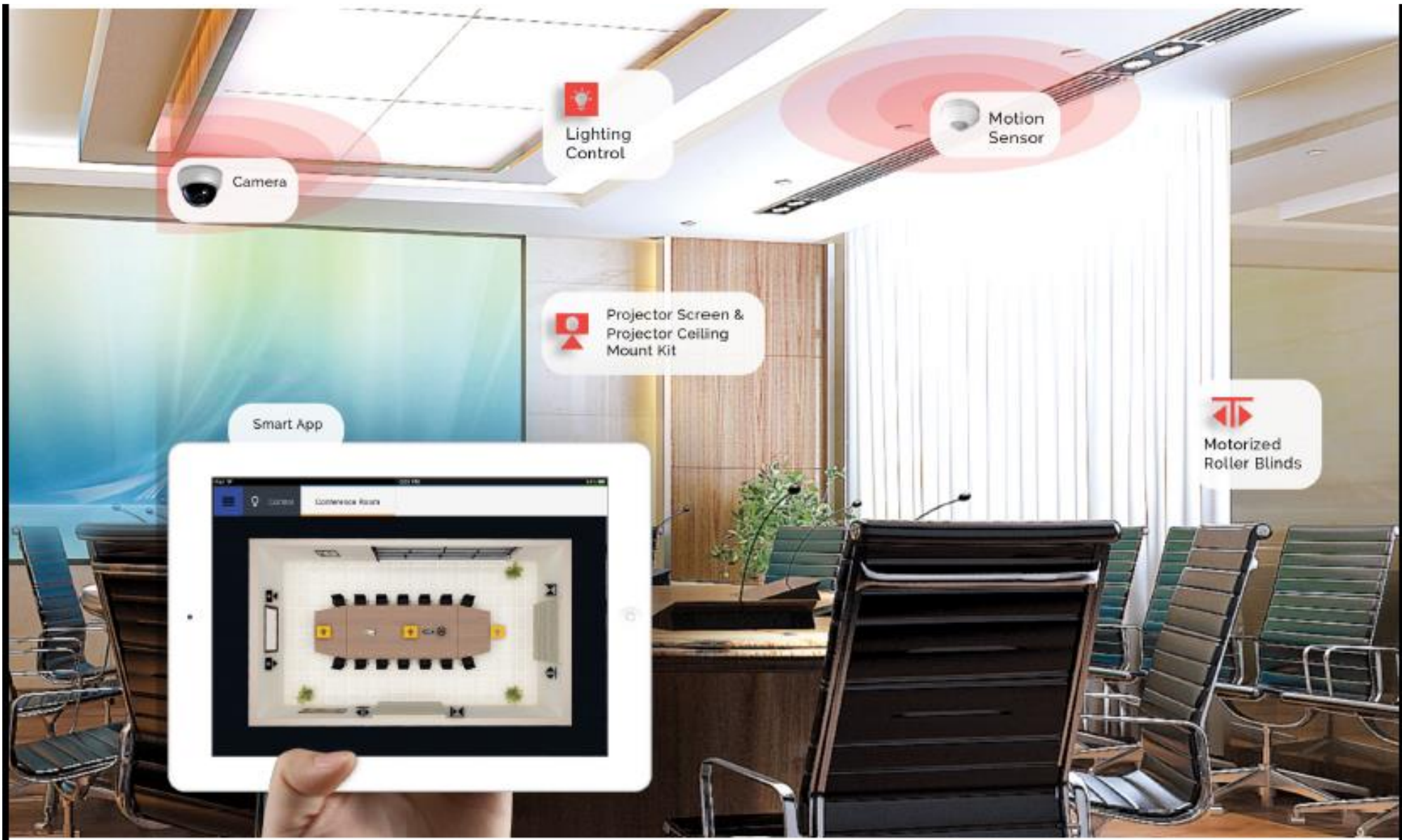
Health

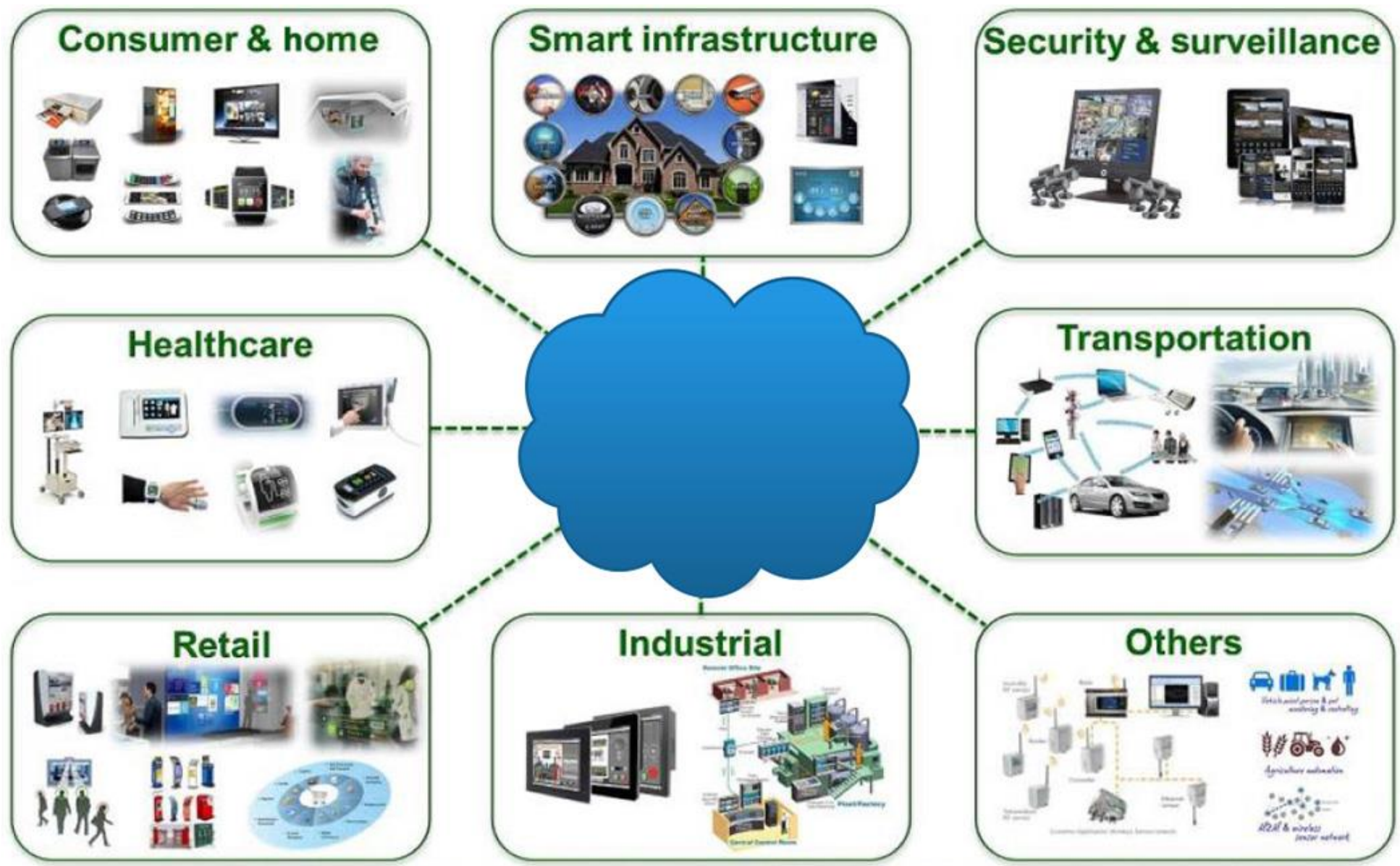
Safety

Comfort

Convenience

Wisdom





Consumer & home



Smart infrastructure



Security & surveillance



Healthcare



Transportation



Retail



Industrial



Others



Smartness: awareness and response to the environment

- smartphones, smart watches, smart eyeglasses, smart implants, and so on
- applications like smart homes and cities
- What can make computing devices qualify to be smart ?
 - What makes a fitness tracker smart?
 - A smart fitness tracker “understands” the activity being performed
 - running, swimming, walking, sleeping
 - Anticipates the type of data to be processed for that activity
 - number of steps
 - heart rate
 - Sleep pattern
 - and provides feedback and advice to the user relevant to that activity
- a smart computing device
 - aware of the context in which it receives information from sensors
 - and automatically derives the appropriate response for that context
- A smart computing application will
 - anticipate the context
 - learn from it
 - and adapt to the user needs.

Smart Cities and Smart Village clusters

- Smart parking
- Intelligent Transport System
- Smart urban lighting
- Waste management
- Smart city maintenance
- Tele-care
- Citizen safety
- Smart Grid
- Smart Energy
- Water Management
- IoT will be critical in making these cities smarter

Useful links

- http://bhuvan.nrsc.gov.in/bhuvan_links.php
- <https://www.flightradar24.com>
- <https://railradar.railatri.in/>
- <https://www.google.co.in/maps>

Thank you

My contact:

Ravi Kishore Kodali

ravikkodali@gmail.com

089852 30362