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The Internet of Things – input to sub-workshop 4 (Vision)

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The Internet of Things - enabling things to communicate

Potential for major changes

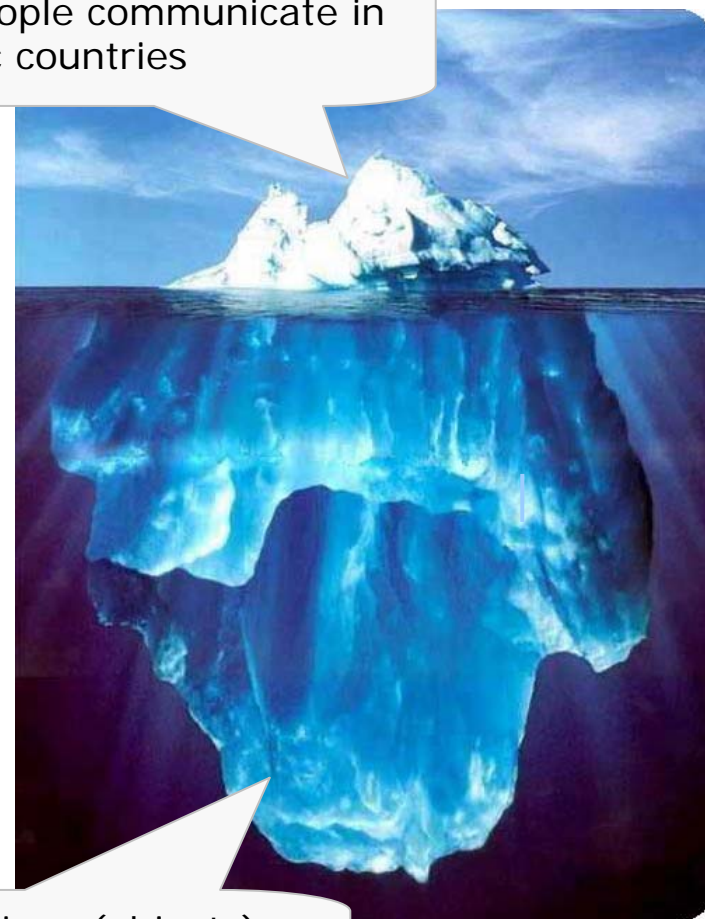
- Bringing the “real world” and the Internet together
- Transport, environment, health, agriculture
- Integration of services across value chains and industry actors
- Global services
- Mission critical systems, real time information?



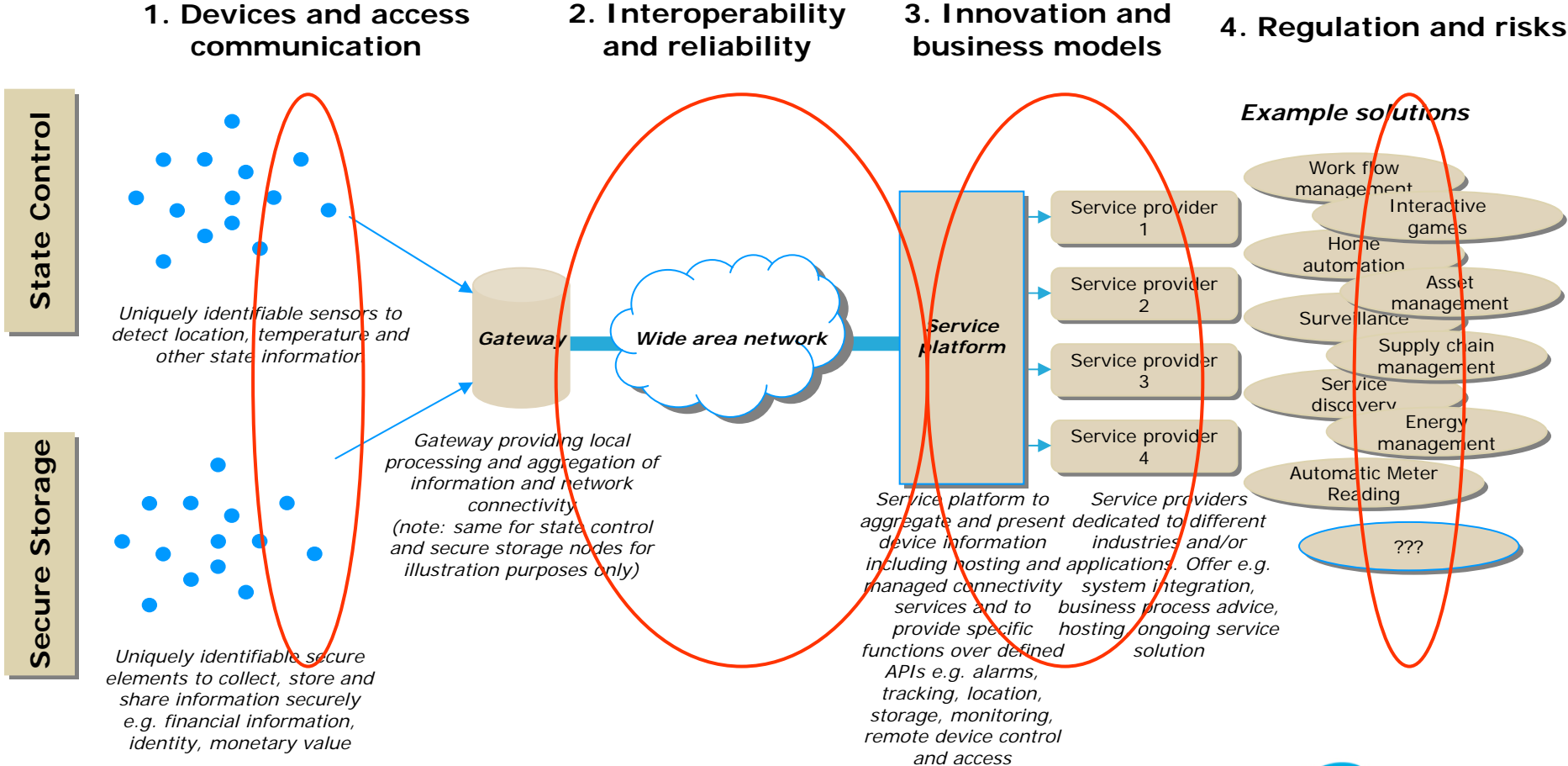
We cannot predict the most useful applications and use cases

- 100 - 180 mill machines (objects)
- 40% will communicate

23 mill people communicate in the Nordic countries



There are important issues to address and resolve in order to support the development of the Internet of Things

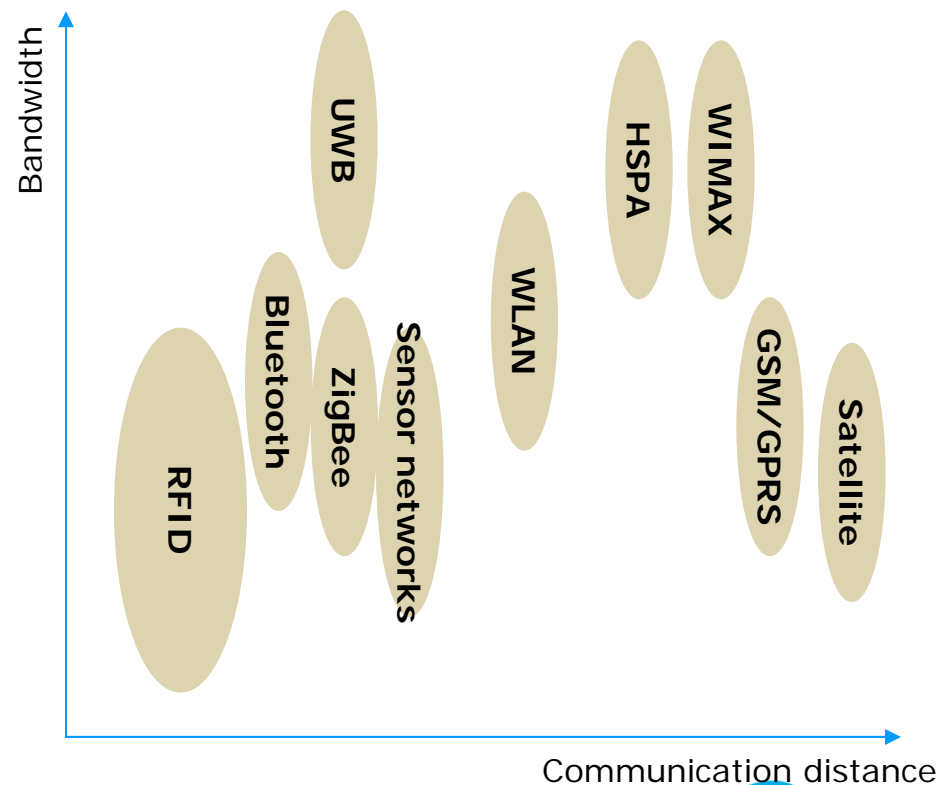


1. Devices and access communication

Issues

- Different use cases will require a different mix of access technology and terminals
- Cost of communication
- Cost per node
- Form factors – battery life time, environmental resilience, size
- Coverage / service availability

Different applications will require different access communication



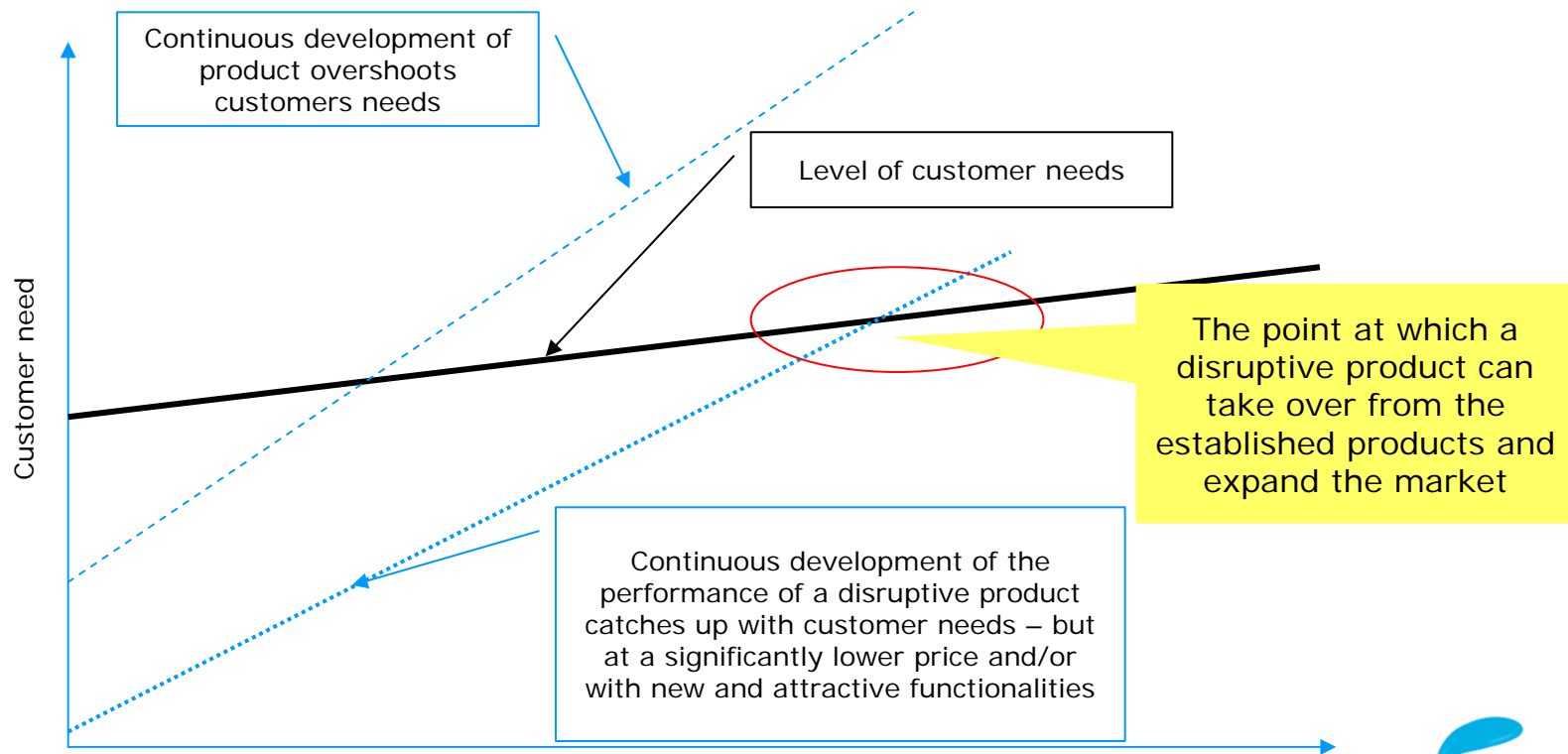
Illustrative only

2. Interoperability and reliability

- Reliability of the Internet?
 - Does the Internet as we know it today, have sufficient strength to also carry mission critical traffic and high volumes for the Internet of Things?
- The real time enterprise depends on reliable and timely information, but at what cost?
 - How do we get “good enough” service at a cost low enough to stimulate innovation?
- Need for standardisation?
 - Application level to exchange information
 - Communication layer
- Is the current commercial Internet model suited for the QoS required for Internet of Things?

3. Innovation and business models

**How do we build the Internet of Things to encourage innovation?
(Standardisation to create a stable foundation, reward investment)**



4. Regulation and risks

Regulatory issues

- Implications for industry specific regulation e.g. communication, food safety
- Handling and storing of personal information
- Access to sensitive information

Risks

- Health risks (perceived or real) from radiation due to widespread presence of wireless objects
- Increased reliability of electronic information creates additional vulnerability
- Impact on emergency services?