IoT as a proponent of new Business Models and Social Engagement in Smart Cities

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Internet of …

- Internet of services…

- Internet of content…

- Internet of people…

- Internet of things…

- For a while I was worries that there will be different Internets

Is there an Internet of Things?

- In late 1980s Mark Weiser coined **'ubiquitous computing'**

  ➔Some of his reference scenarios are used today

- In late 1990s telecom operators discussed challenges and opportunities for integration of smart devices in the ICT infrastructure

  ➔Was seen largely as a software problem
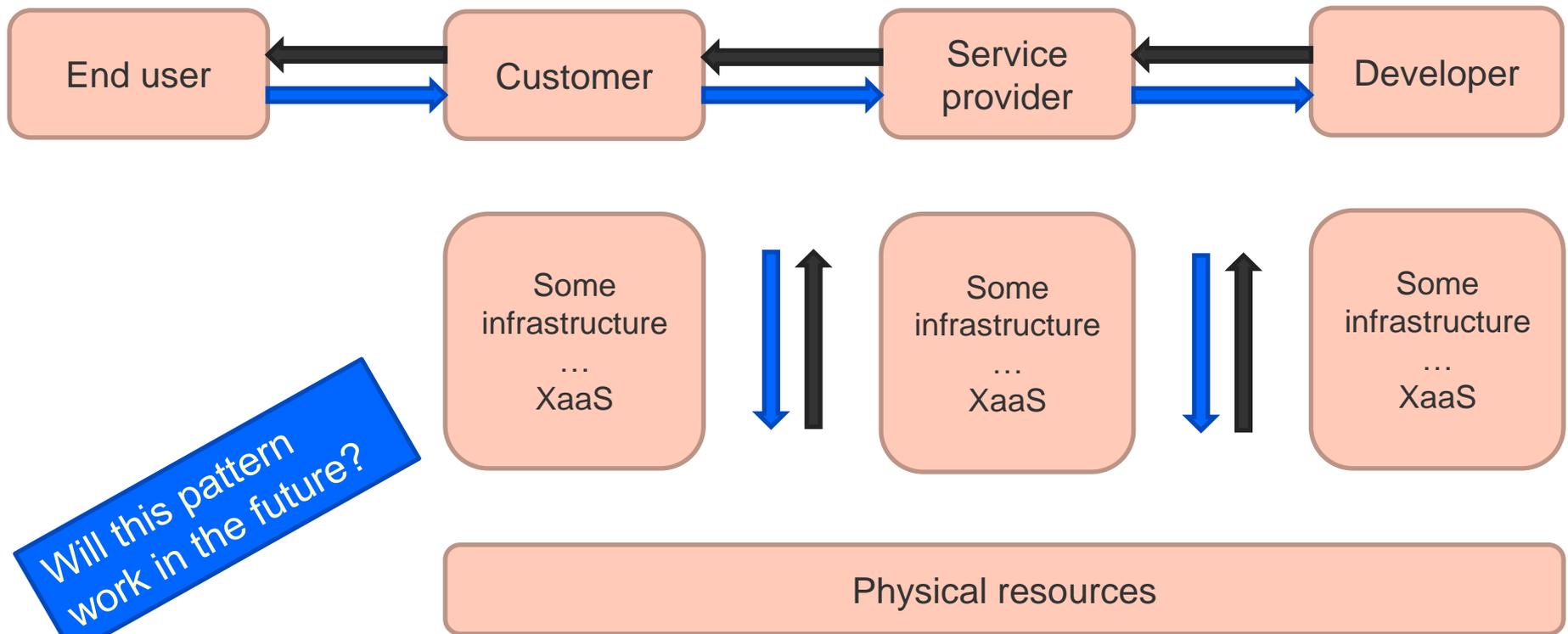
- The questions were and are fundamentally the same

Billions of … what?

- "Billions/trillions of smart objects will communicate…" Mismatch in perception?
  - ➔ In 2010 according to ITU these were 5 billion mobile subscriptions, with 1 million being mobile broadband
- "Smart phones" have multiple wireless interfaces, and include other sensor devices like GPS, accelerometers, gyroscopes…
  - ➔ We can easily postulate a double billion figure for all these devices that were/are connected via the mobile network
  - ➔ Operators manage and operate this
- So where is the problem?

Limits of growth

- Today, all business models assume a certain average revenue per user (ARPU)
- The sum of all revenues will reach a boundary that is related to a certain percentage of the GDP of societies
- Whatever this limit is, it will be reached, and the only way to increase the number of devices and objects will be to significantly lower the costs per unit
  - ➔ capital expenses (CAPEX) for developing, manufacturing and deploying the devices and the supporting infrastructure
  - ➔ operational expenses (OPEX) for operating them

Simplified business models/value chains


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┌──────────┐      ┌──────────┐      ┌──────────┐      ┌──────────┐
│ End user │ ◄─── │ Customer │ ◄─── │ Service  │ ◄─── │Developer │
│          │ ───► │          │ ───► │ provider │ ───► │          │
└──────────┘      └──────────┘      └──────────┘      └──────────┘
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Some infrastructure … XaaS

Some infrastructure … XaaS

Some infrastructure … XaaS

Will this pattern work in the future?

Physical resources

Service flow   Revenue flow

Topics for interactive discussion

- IoT as enabler of new business opportunities in Smart Citiess

- The role of Smart Cities stakeholders in the development of a successful business ecosystem

- The role of communities and social media/networks in IoT applications

- Incentives and barriers for citizens' engagement in Smart Cities