

Block 2: Foundations of managing urban infrastructure systems

6. The role of the ICTs

Prof. Matthias Finger

Session overview



In this session you will learn about the <u>impact of the information and communication technologies</u> (ICTs) upon the management of urban infrastructure systems, more specifically about:

- Efficiency gains
- The empowered role of the customer
- New, ICT-based <u>services</u>

Efficiency gains



Duplication or mirroring of the infrastructures thanks to the ICTs (sensors, RFID, cameras, data management) (data layer)

For example:

Sensors can <u>alert</u> if a pipe breaks and trigger rapid intervention

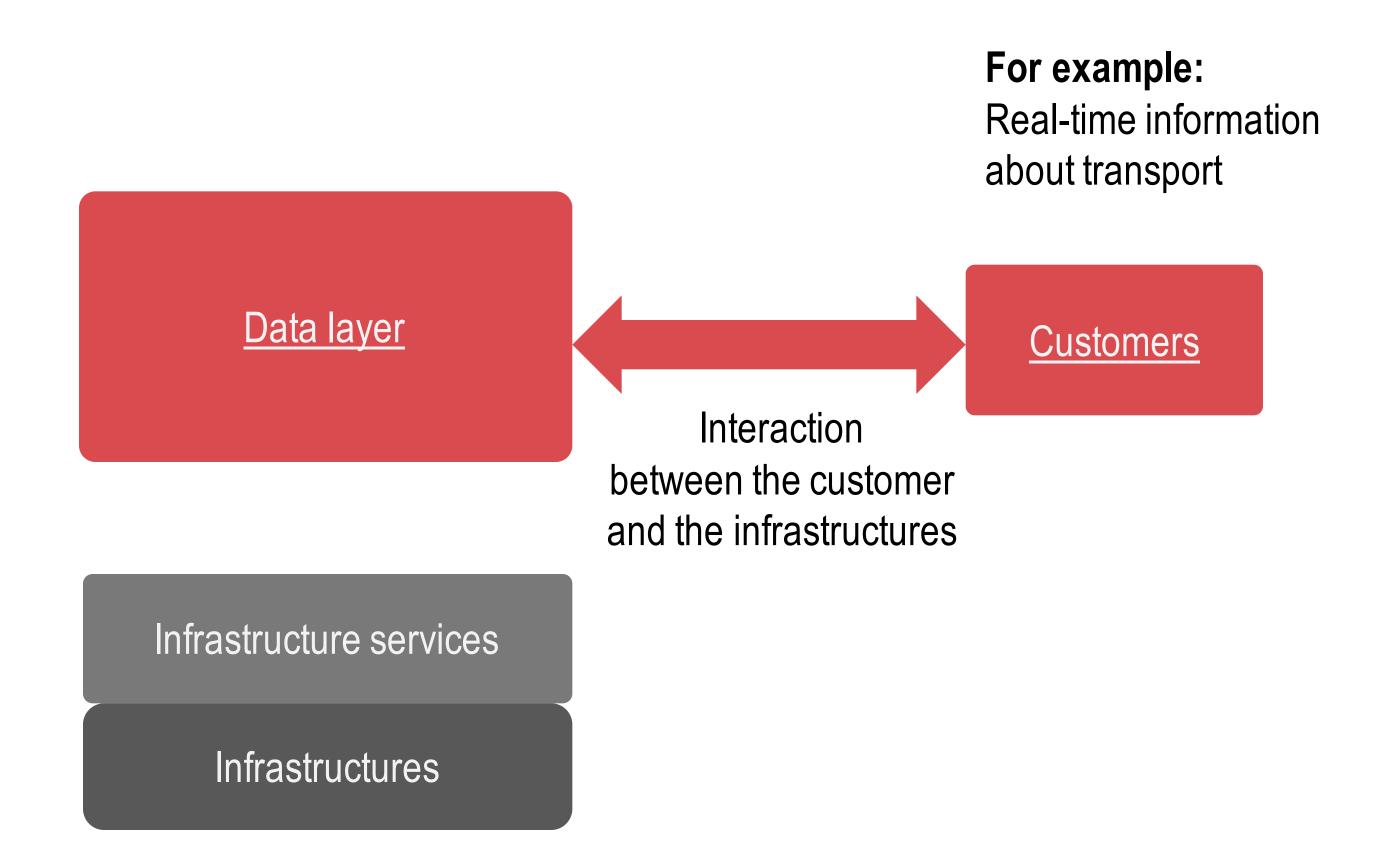
More <u>efficient</u> operations and maintenance

Infrastructure services

Infrastructures

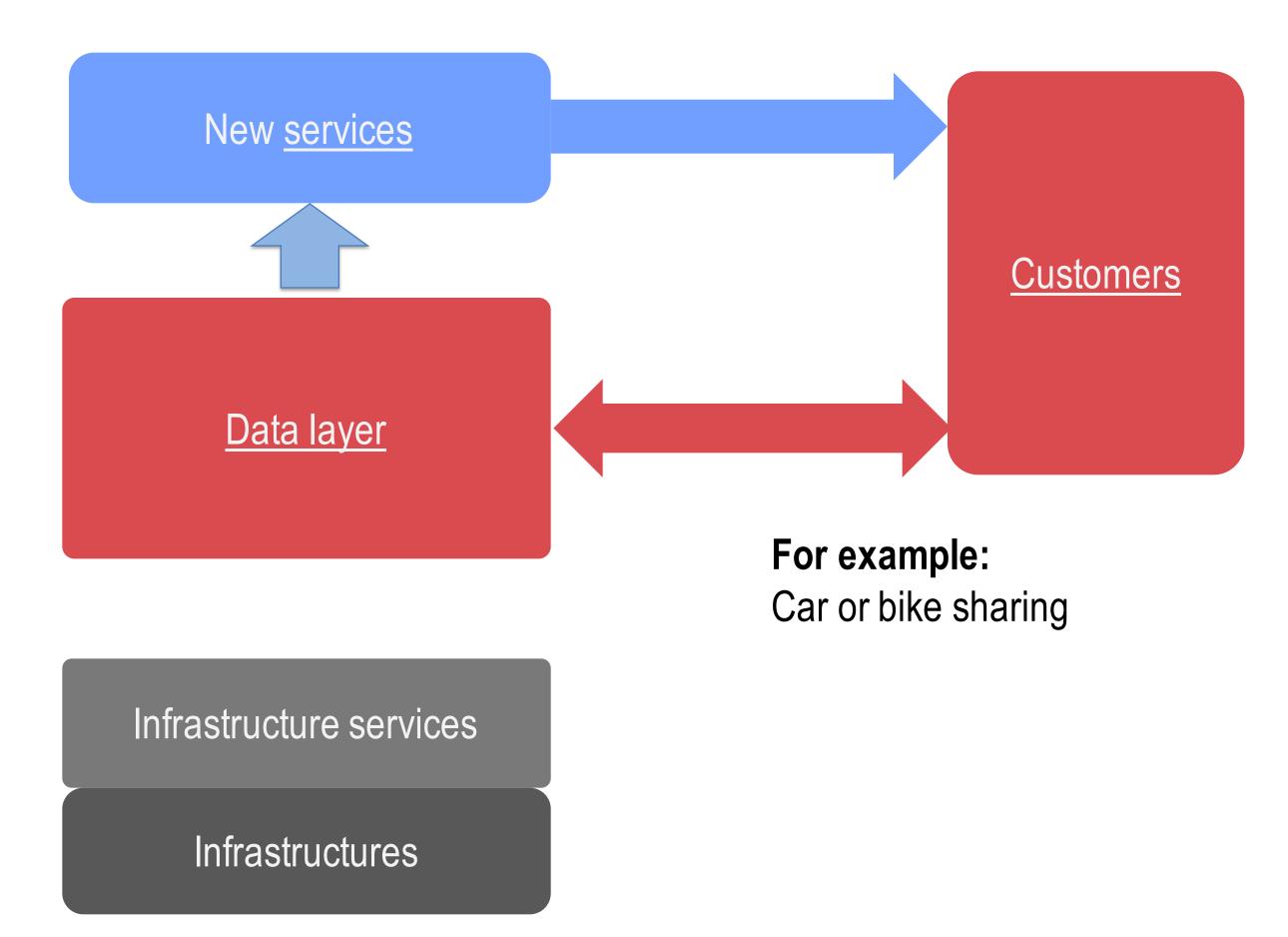
The empowered role of the customer





New ICT-based services





Conclusion



In this block, you have heard about:

- what urban infrastructure managers do
- how they deal with <u>stakeholders</u>
- what main <u>dimensions</u> they have to address
- about the main <u>schools of thought</u> they can refer to, and
- about the role of the ICTs

In the next two blocks we will talk about managing urban energy and transportation systems