RECAP

(2017-2019)

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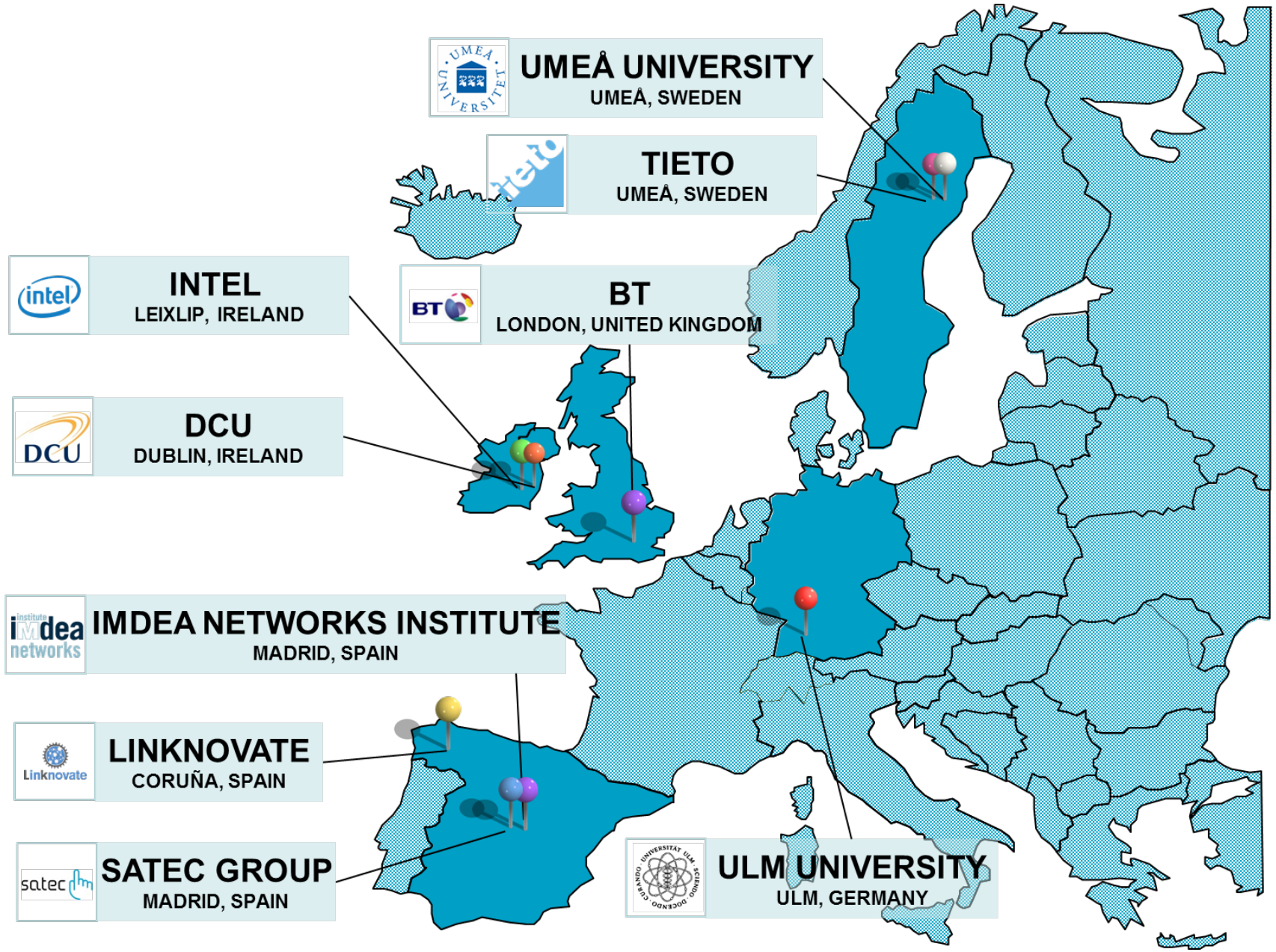
Reliable Capacity Provisioning and Enhanced
Remediation for Distributed Cloud Applications

http://recap-project.eu recap2020


UMEÅ UNIVERSITY
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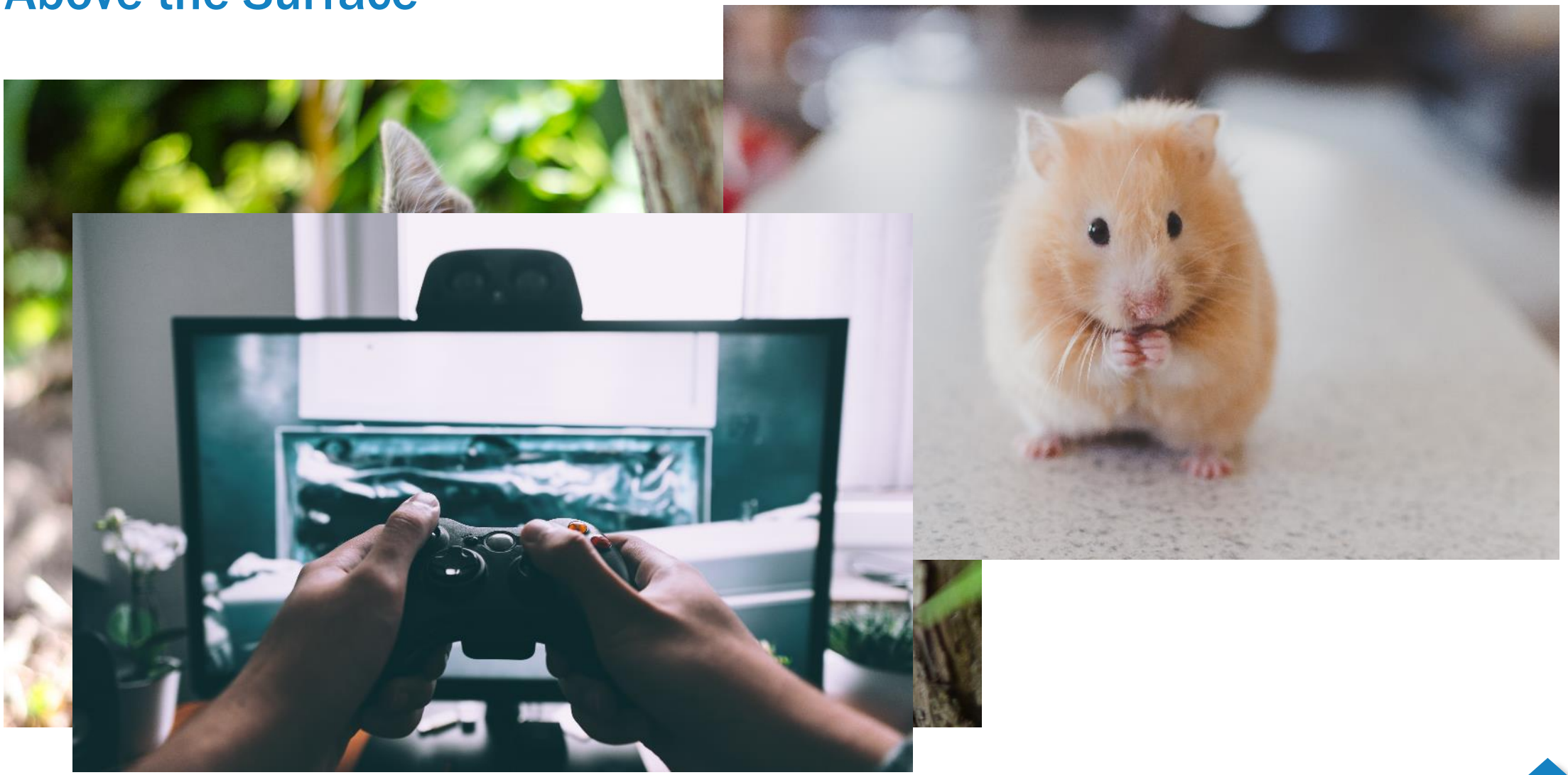
Reliable Capacity Provisioning and Enhanced Remediation for Distributed Cloud Applications

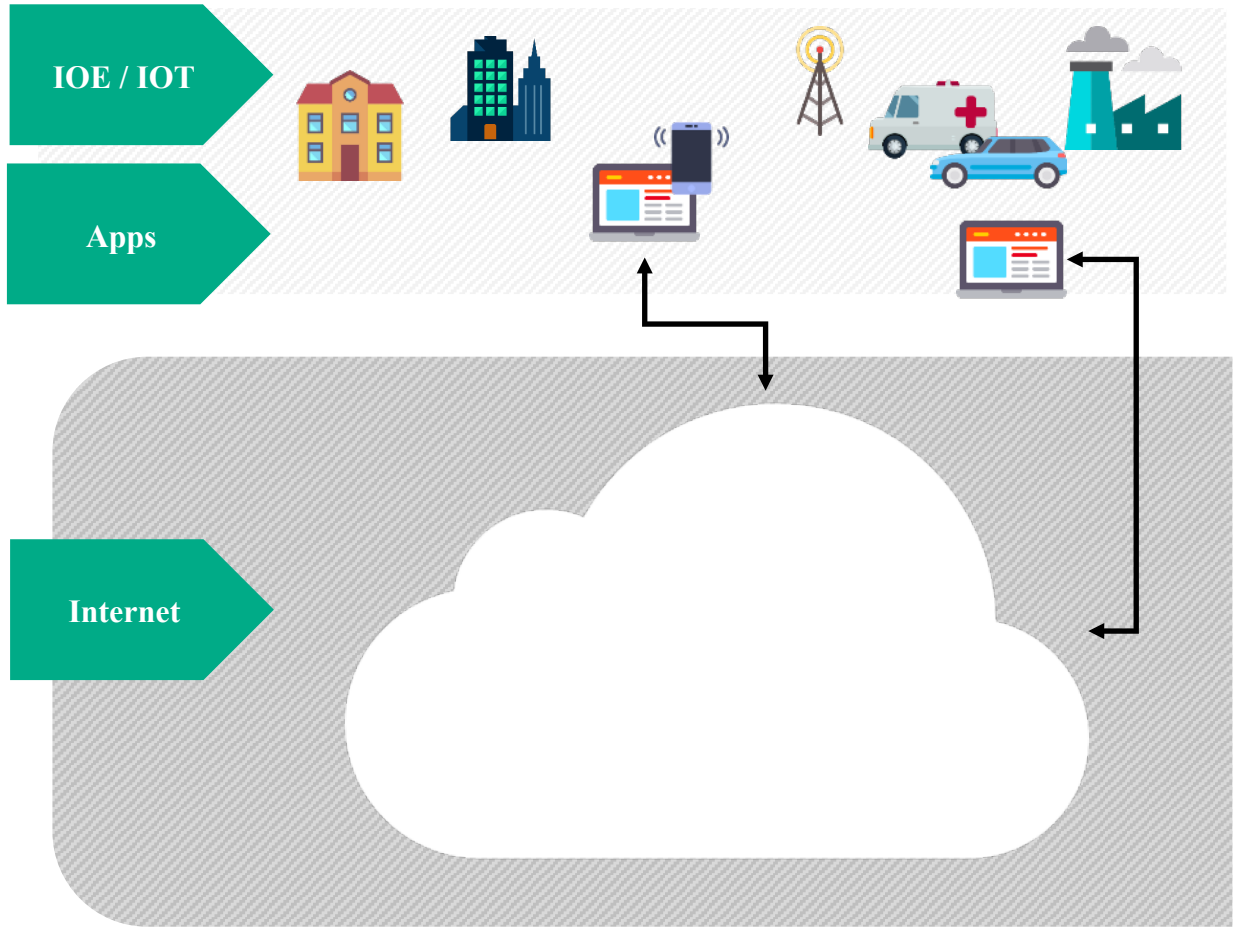
Above the Surface



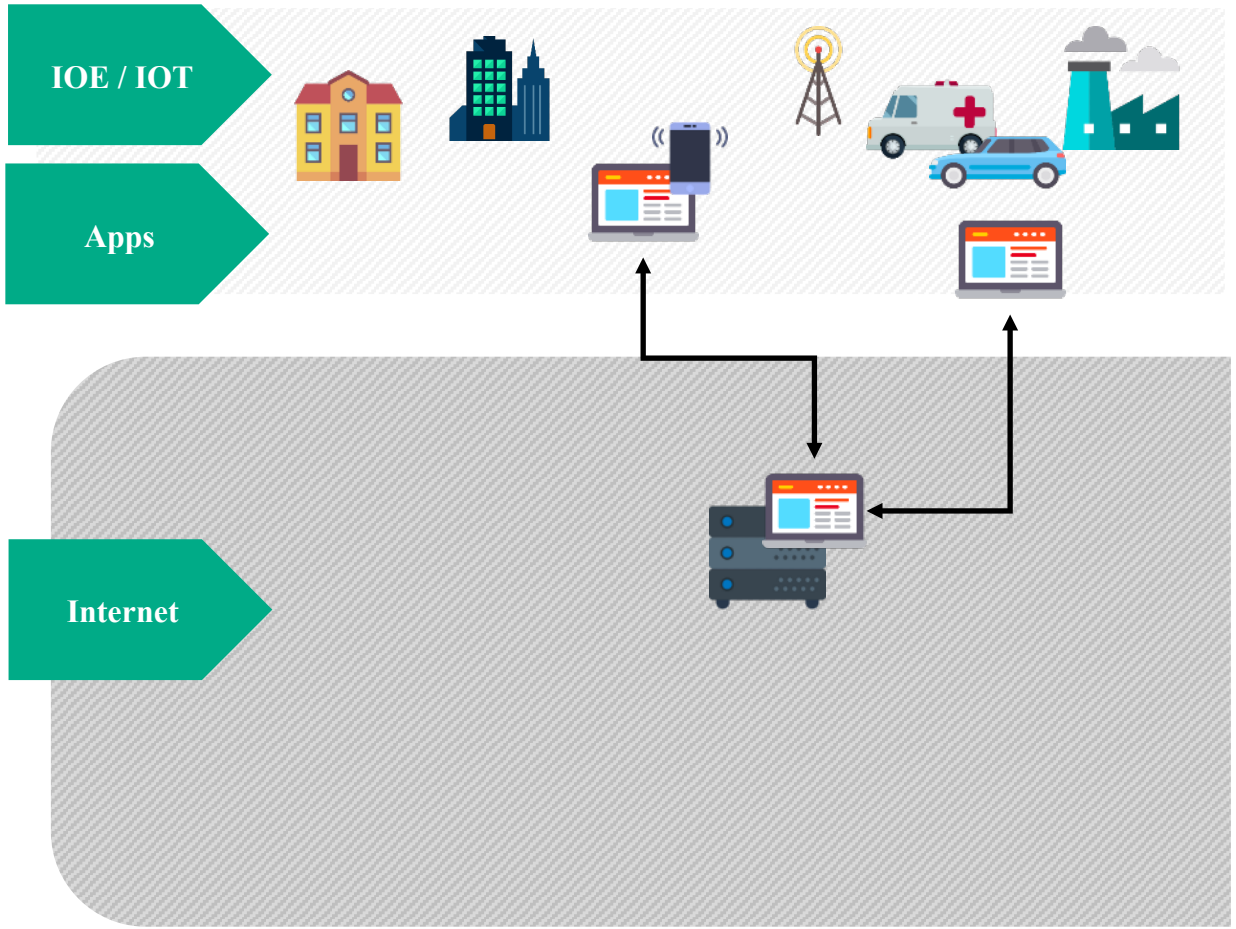
Major Annoyance: Slow Internet

- Something is wrong on your end
- Something is wrong on the Internet
- Something is wrong on the other end

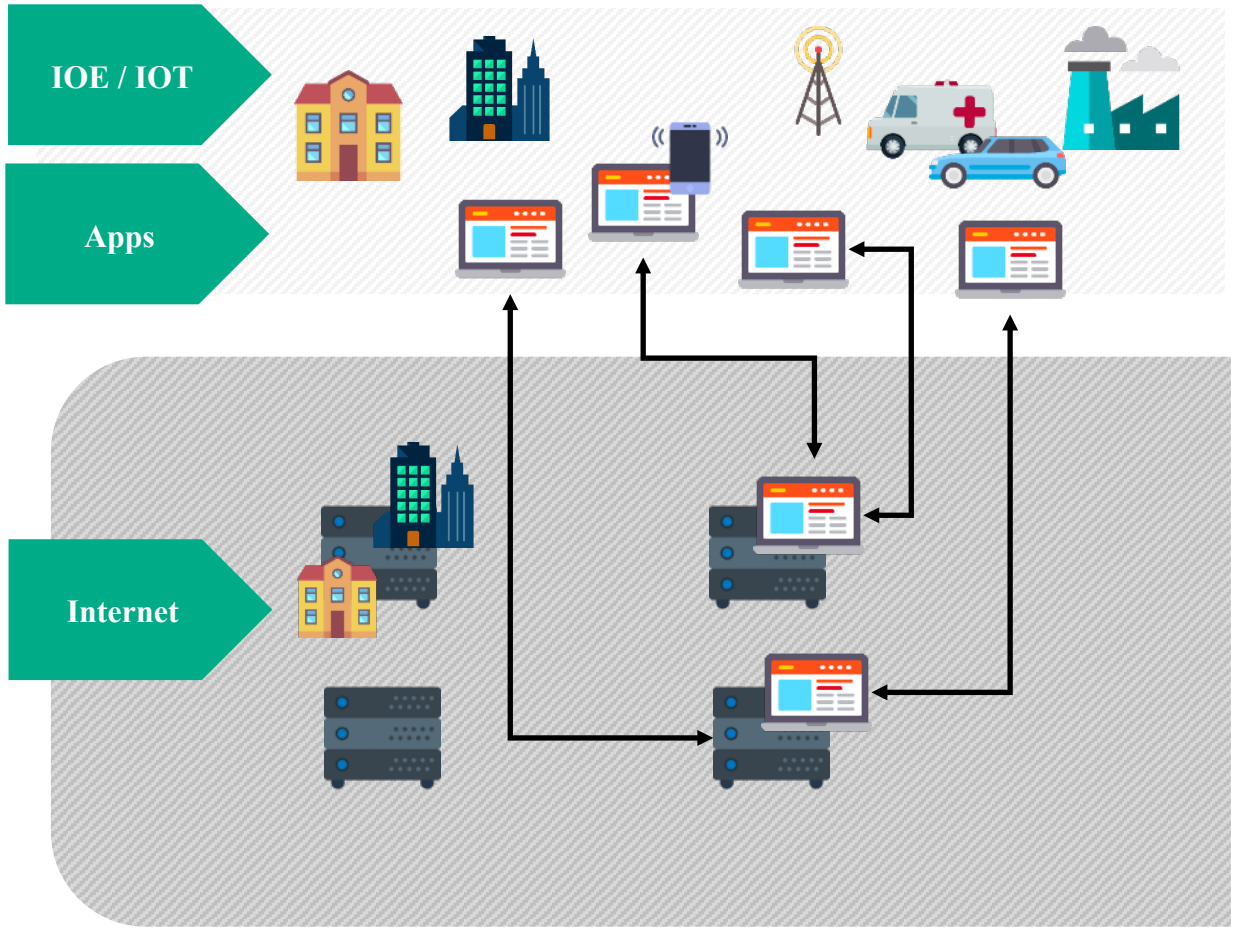
The Internet



The Internet



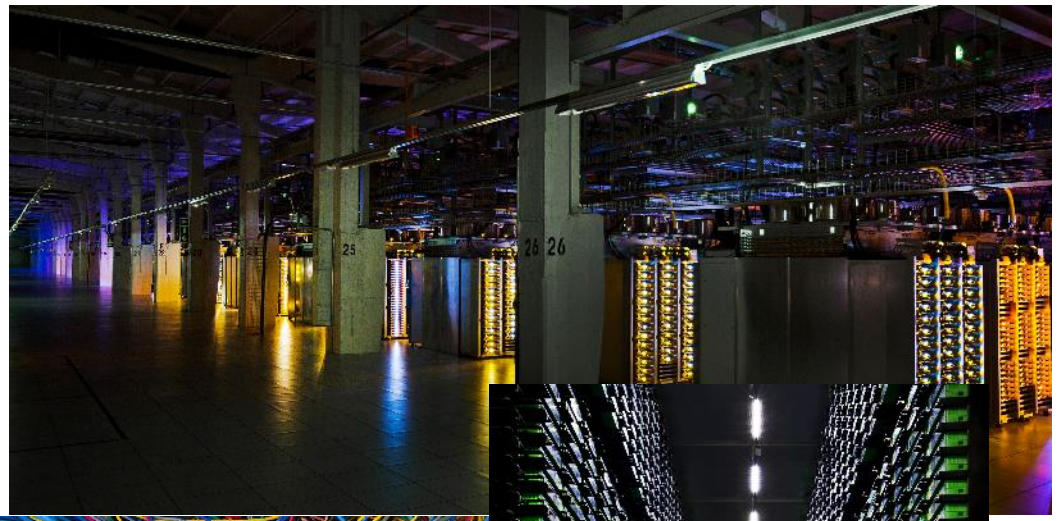
The Internet—Internals

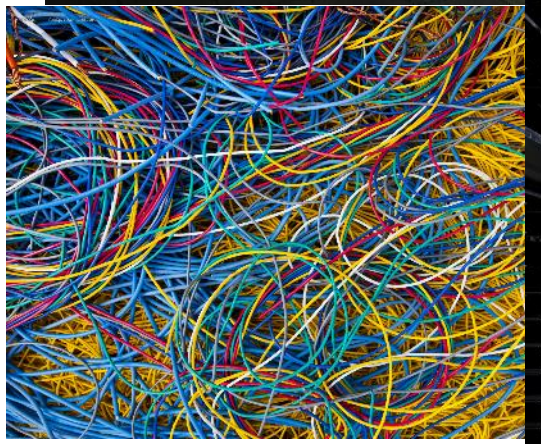


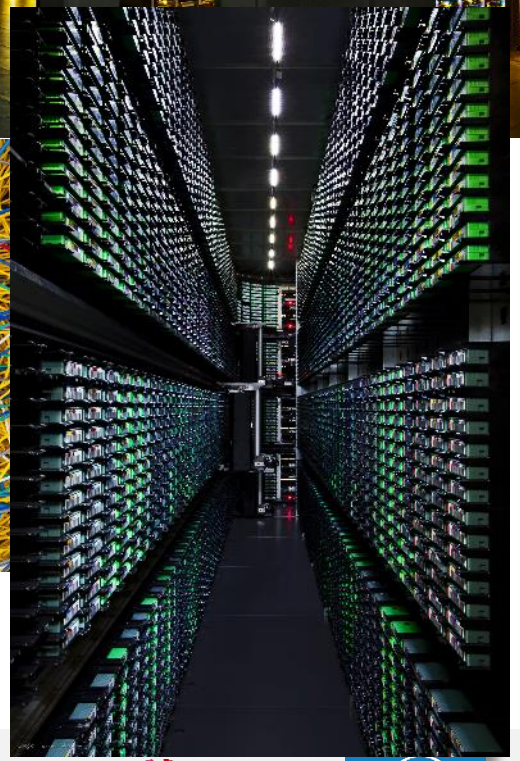
Research questions

- How many instances?
- Which hardware for which application?

The Internet—Data Centres





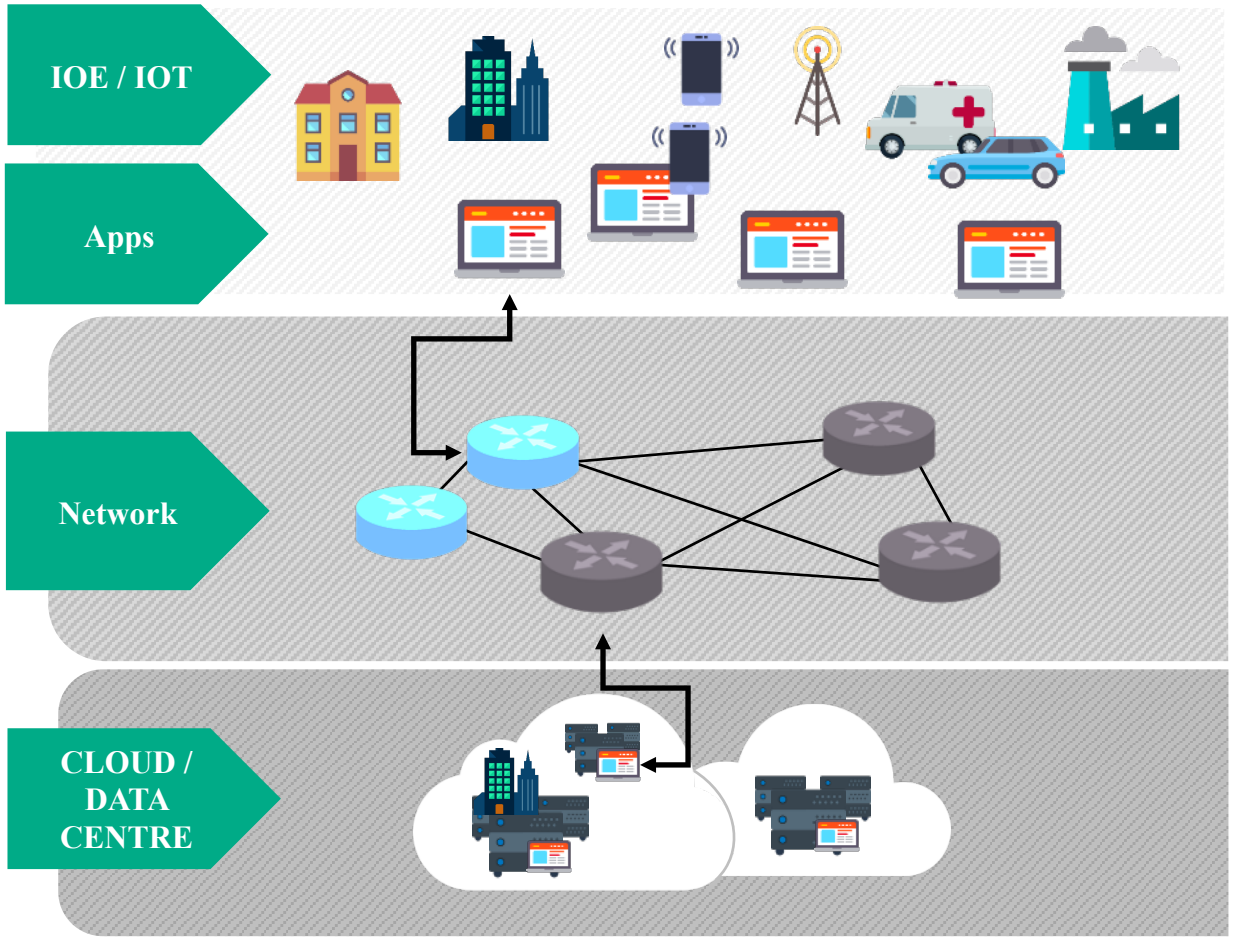


The Internet—Data Centres

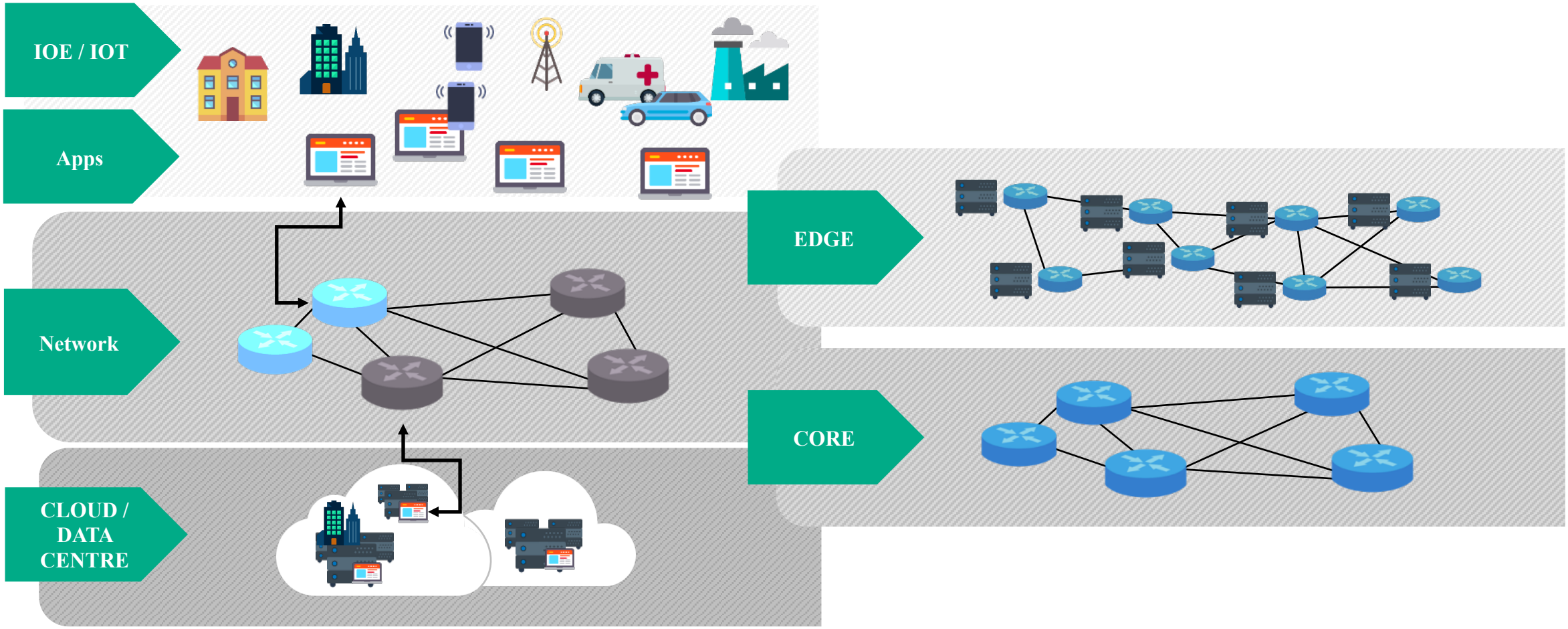
Research questions

- Which data centre to use?

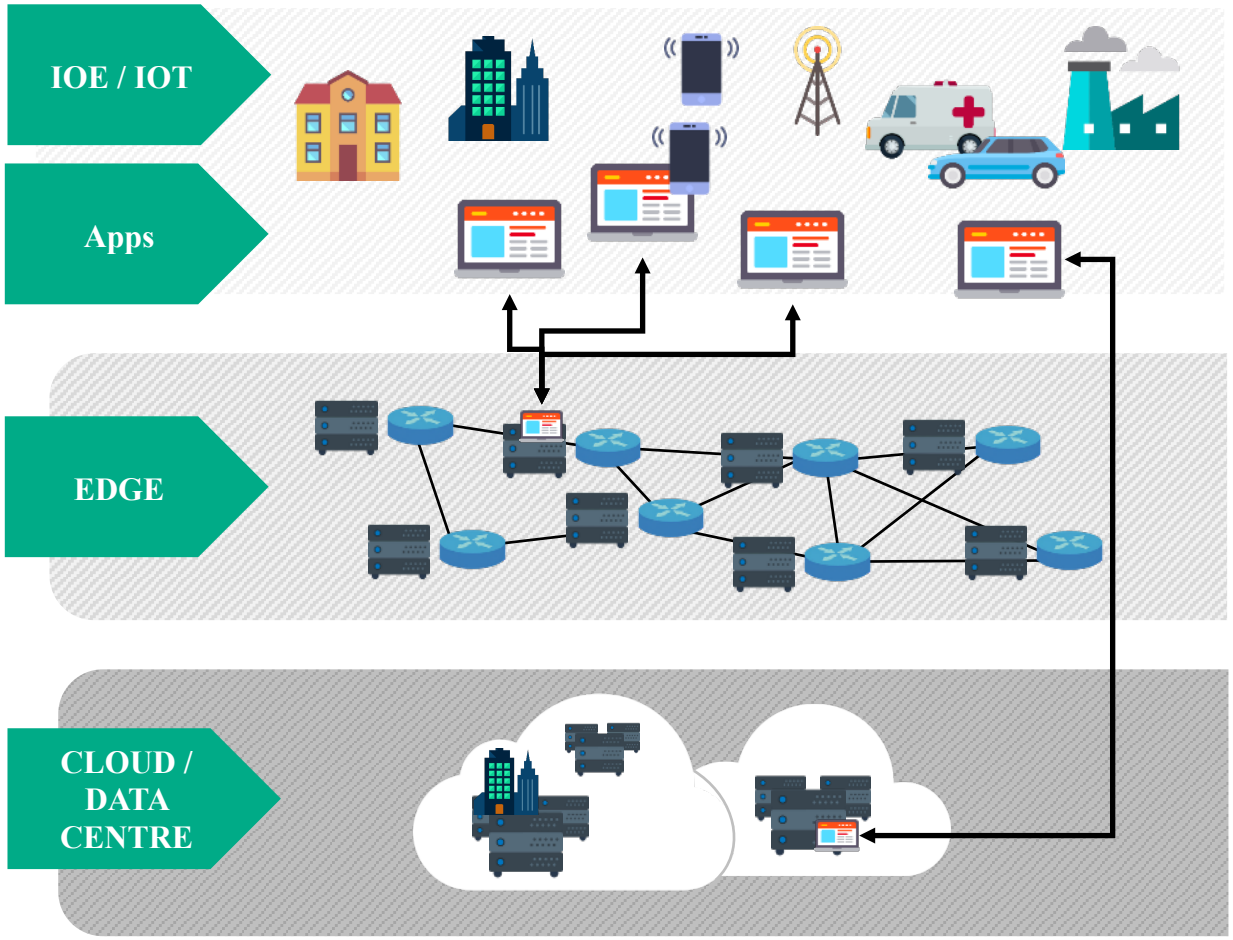
The Internet—Networks



The Internet—Network Types



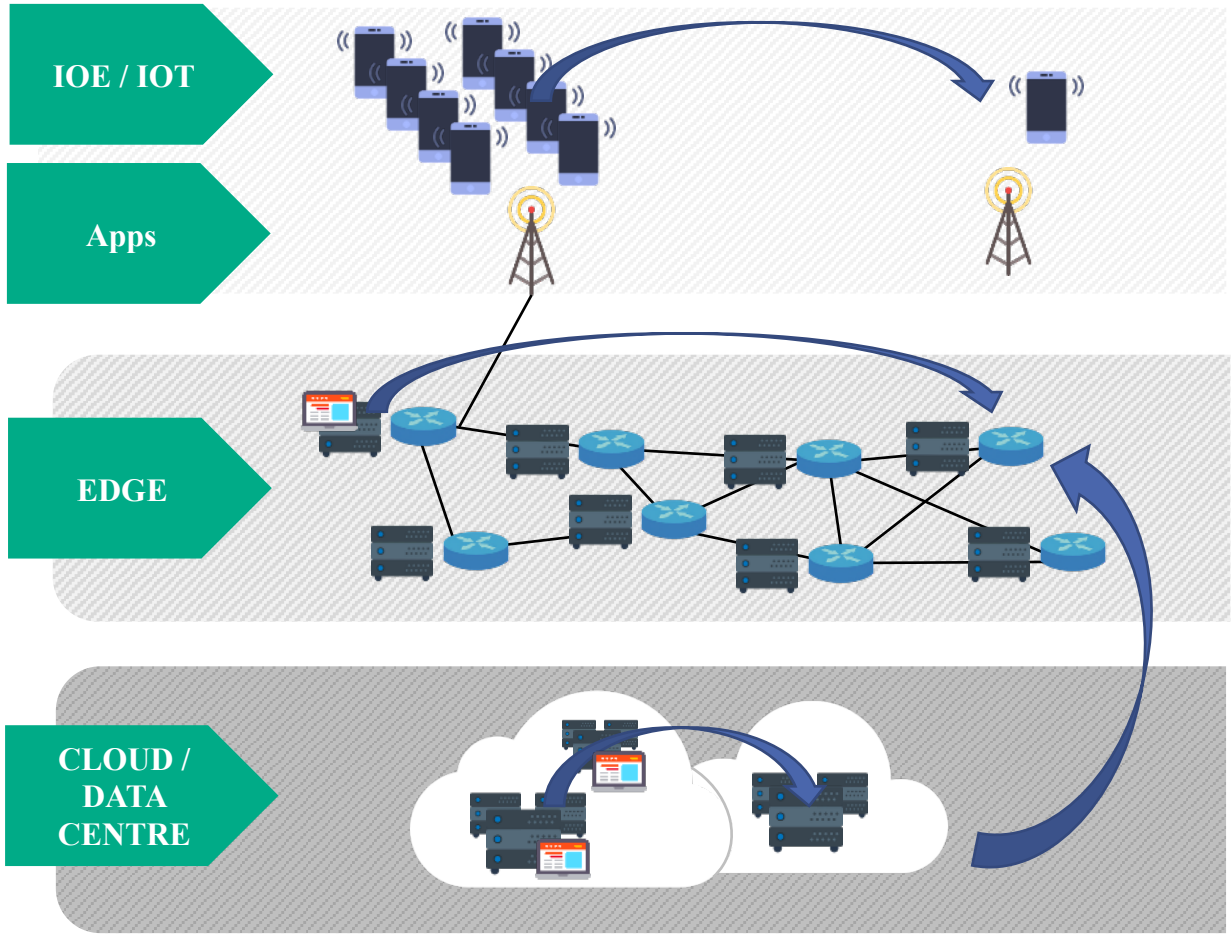
The Internet—Edge Networks



Research questions

- Which parts to offload?
- Where to offload to?
- (When to) move parts around?

RECAP Optimisations



essence

- automated optimisation
- machine learning

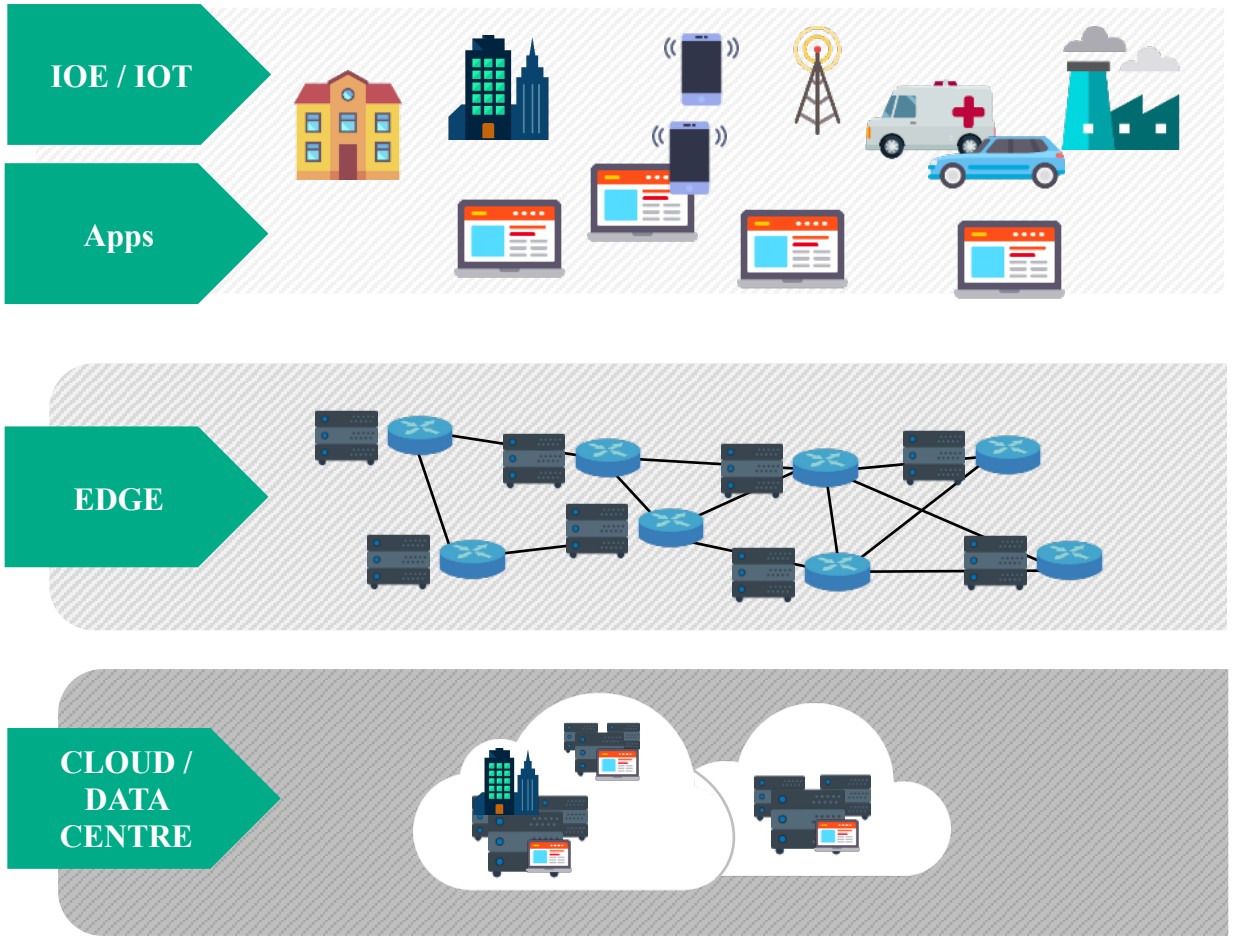
resolved issues:

- Geolocation
- Demand spikes

influencing:

- latency
- power consumption

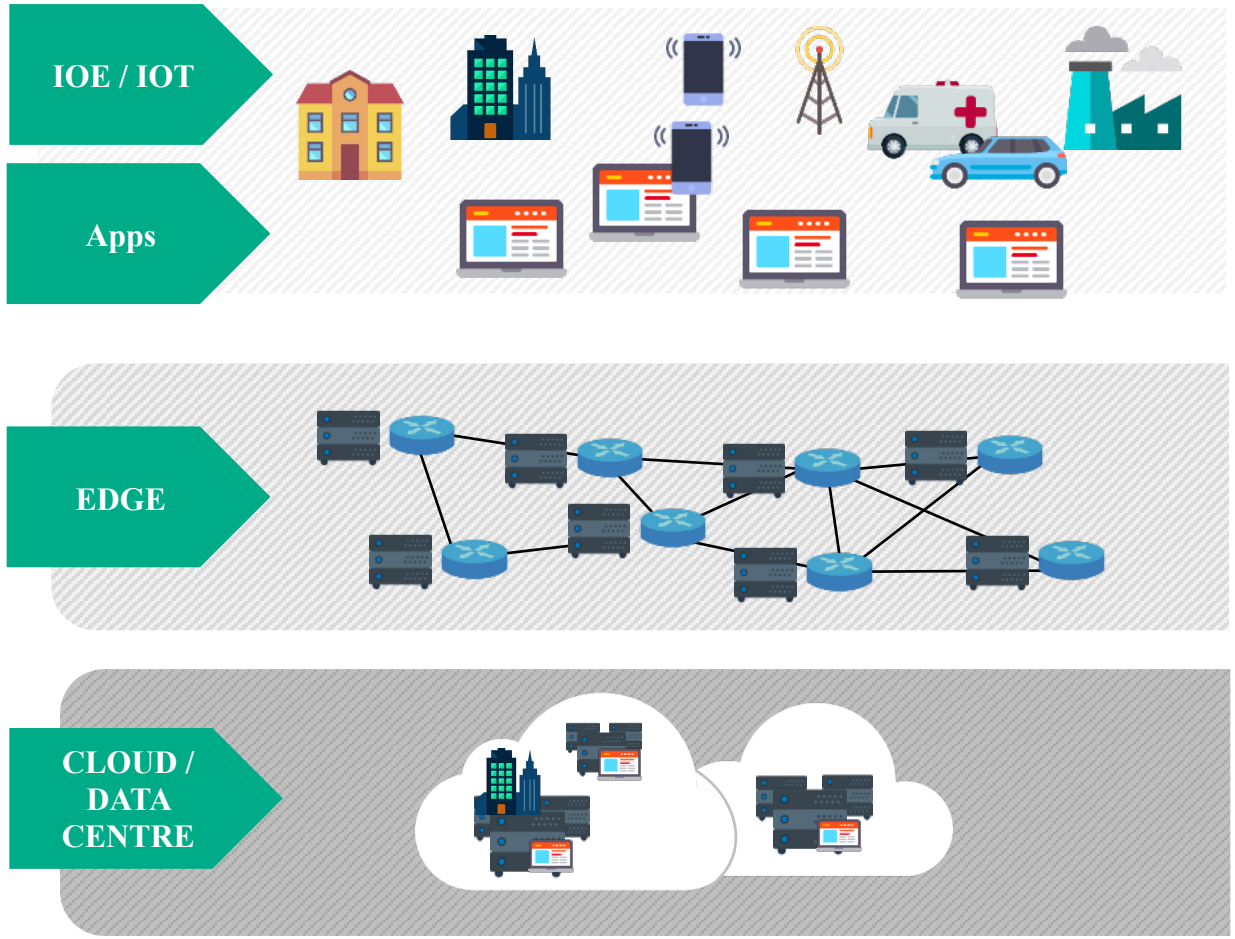
User Benefits



Better service quality

- Lower latency
- Lower prices
- Higher availability

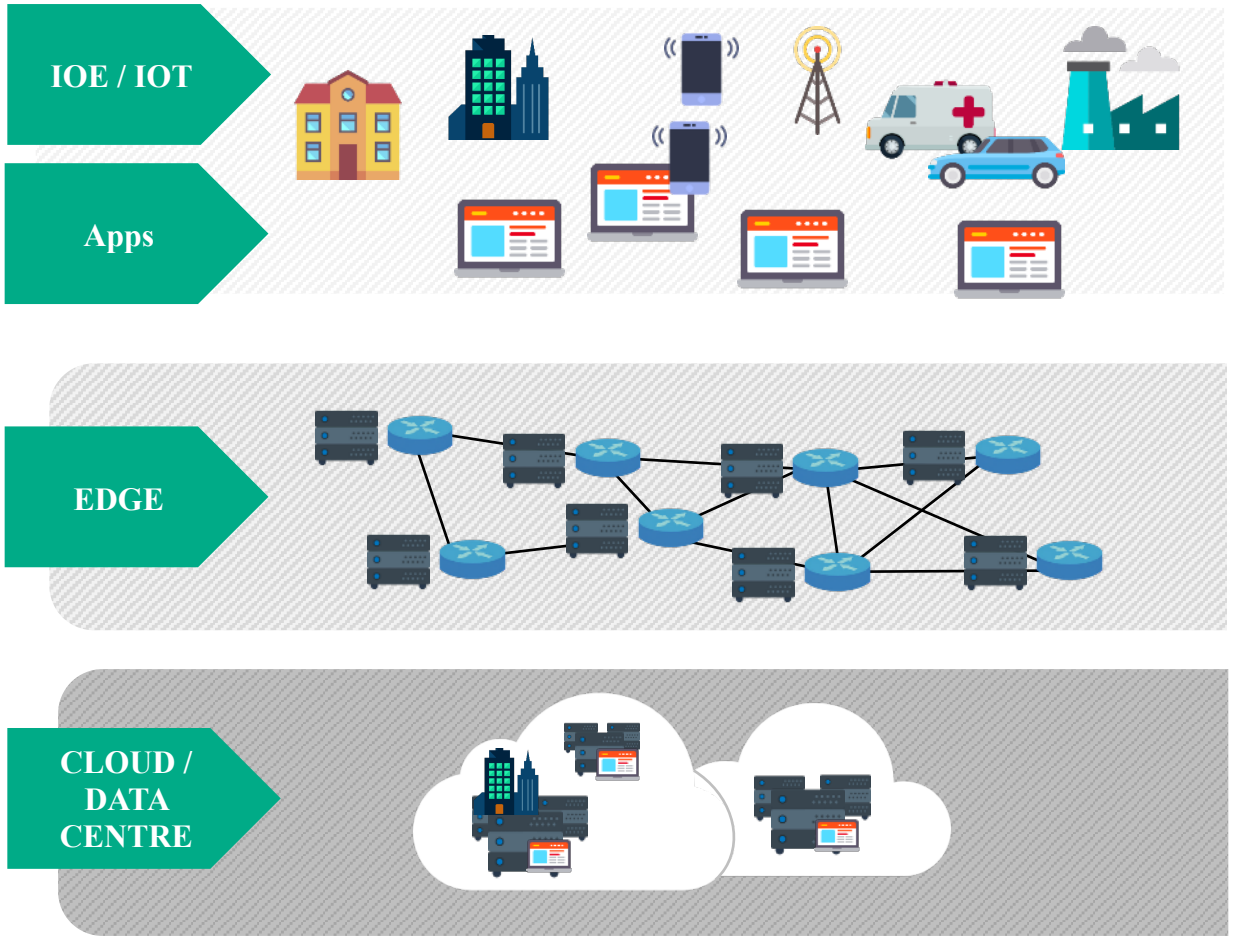
Operator Benefits



- Higher automation
- Cheaper operations
- Less down-time
- Less power consumption

- Adaptation to users

Societal Benefits



- Reduced power consumption
- OpenAccess policy
  - Access to knowledge
  - Access to Code
- Jump-start
  - app developers
  - data centre operators

THANK YOU

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Call: H2020-ICT-2016-2017 ■ Topic: ICT-06-2016

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