Identity Management within convergence networks and IoT

ITU Regional Forum on “Internet of Things, Telecommunication Networks and Big Data as basic infrastructure for Digital Economy”

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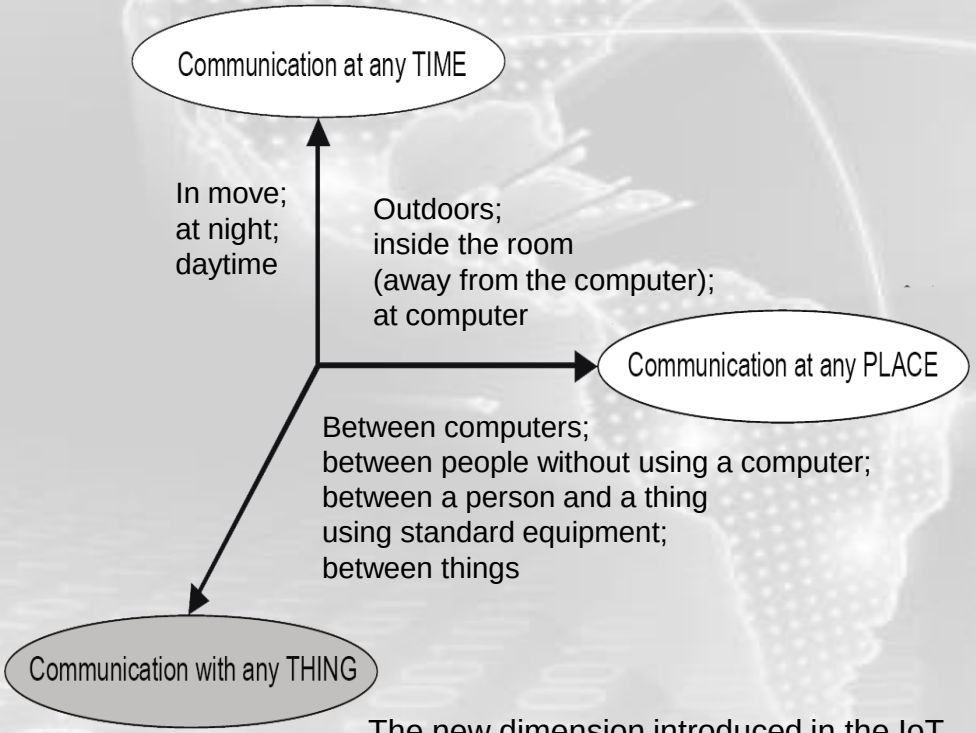
Next Generation == Convergence paradigm

Y.2060 (06/2012)
Overview of the Internet of things



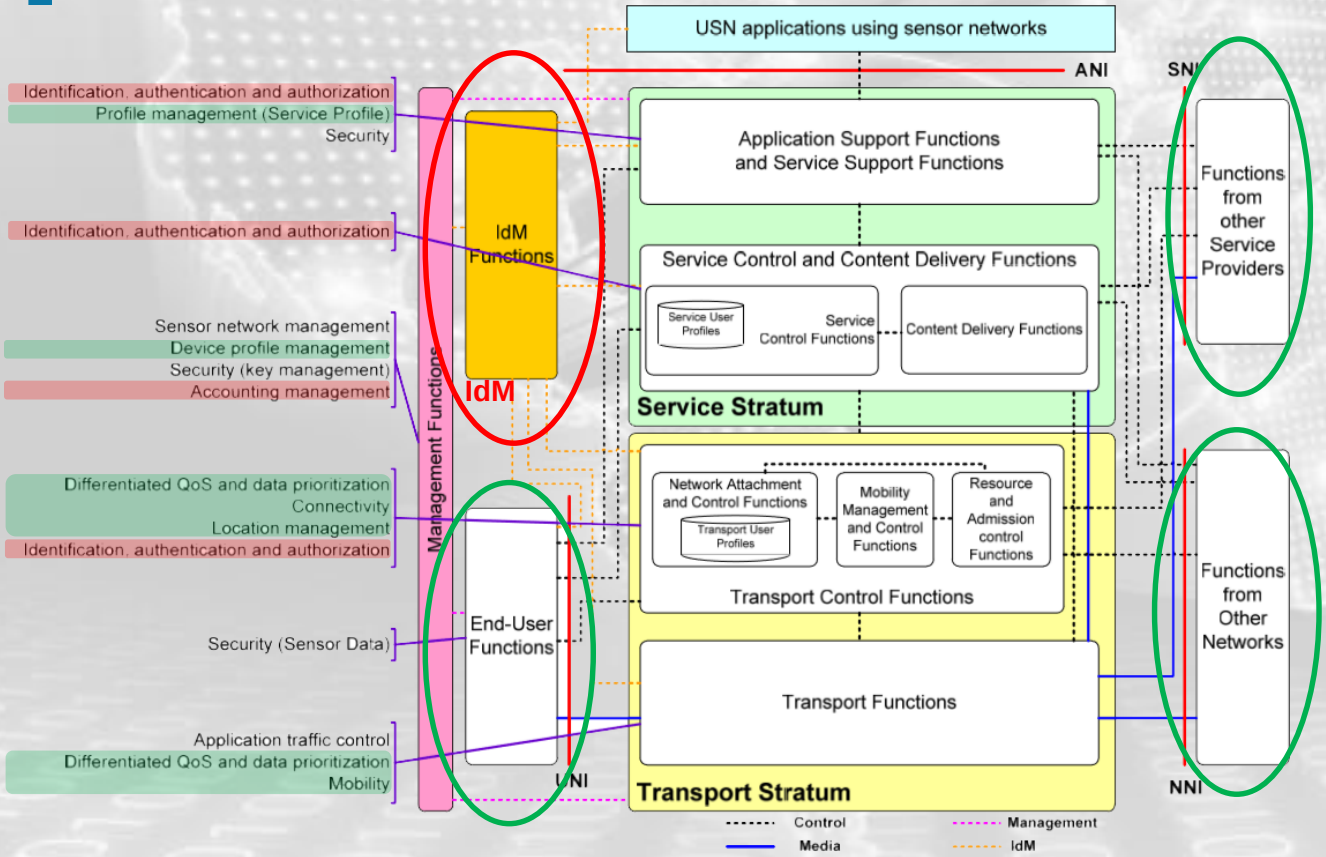
The new dimension introduced in the IoT

5 aspects of convergence:

1) Access
2) Interaction & Interconnection
3) NNA
4) Services
5) Rates and Tariffs

Forming the basis of a convergent environment in which (1) **any user** at (2) **any time** and in (3) **any place**, using (4) **any own identifier** (s) and (5) **own device** (s), can receive from (6) **any chosen operator** the necessary (7) **service "here and now"**

Overall functional architecture model

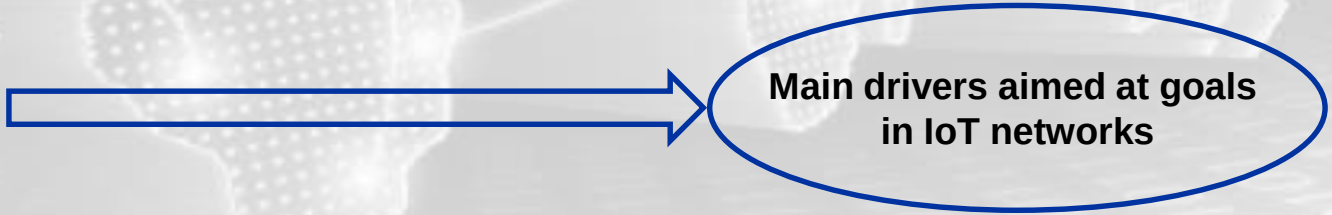


Y.2026
Functional requirements and architecture of the next generation network for support of ubiquitous sensor network applications and services

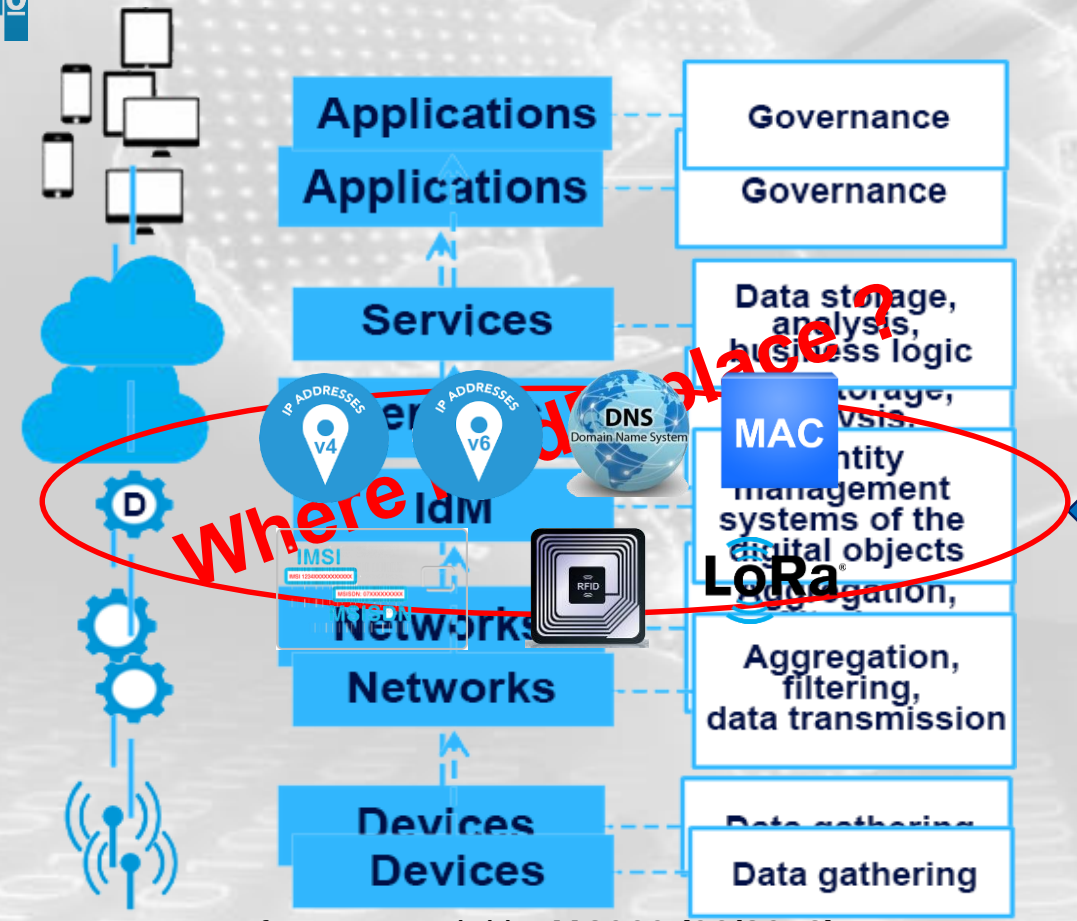
ANI	Application Network Interface
USN	**Ubiquitous Sensor Network**
UNI	User network interface
SNI	Service node interface
NNI	Network-to-network interface
IdM	ID Management

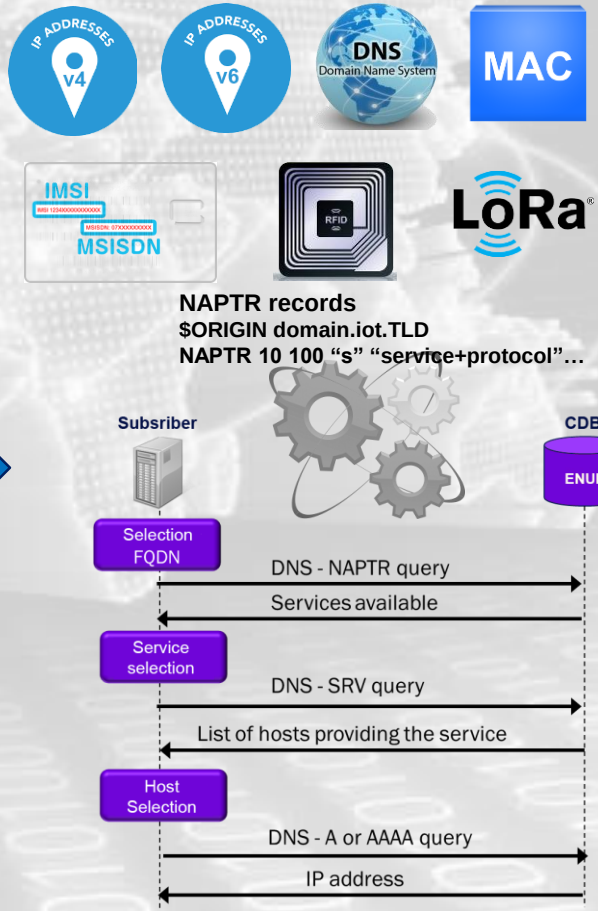
Relevant and necessary convergence features to support of the USN applications and services

- Open service environment
- Differentiated QoS and data prioritization
- Connectivity
- Location management
- Scalability
- Portability
- Security
- Personalization
- Identification
- Authentication, Authorization, Accounting and charging



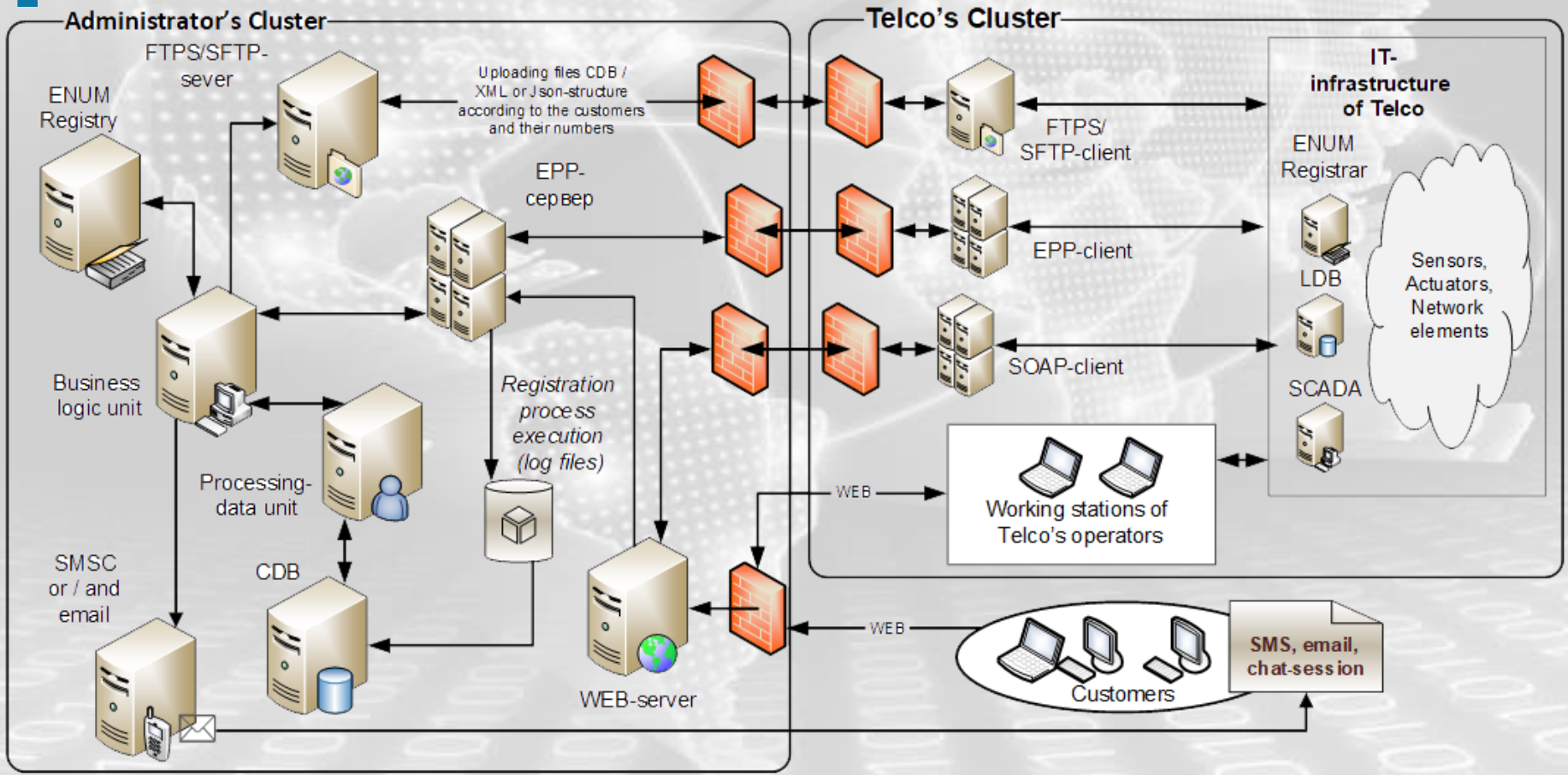
Place IdM in the general architecture



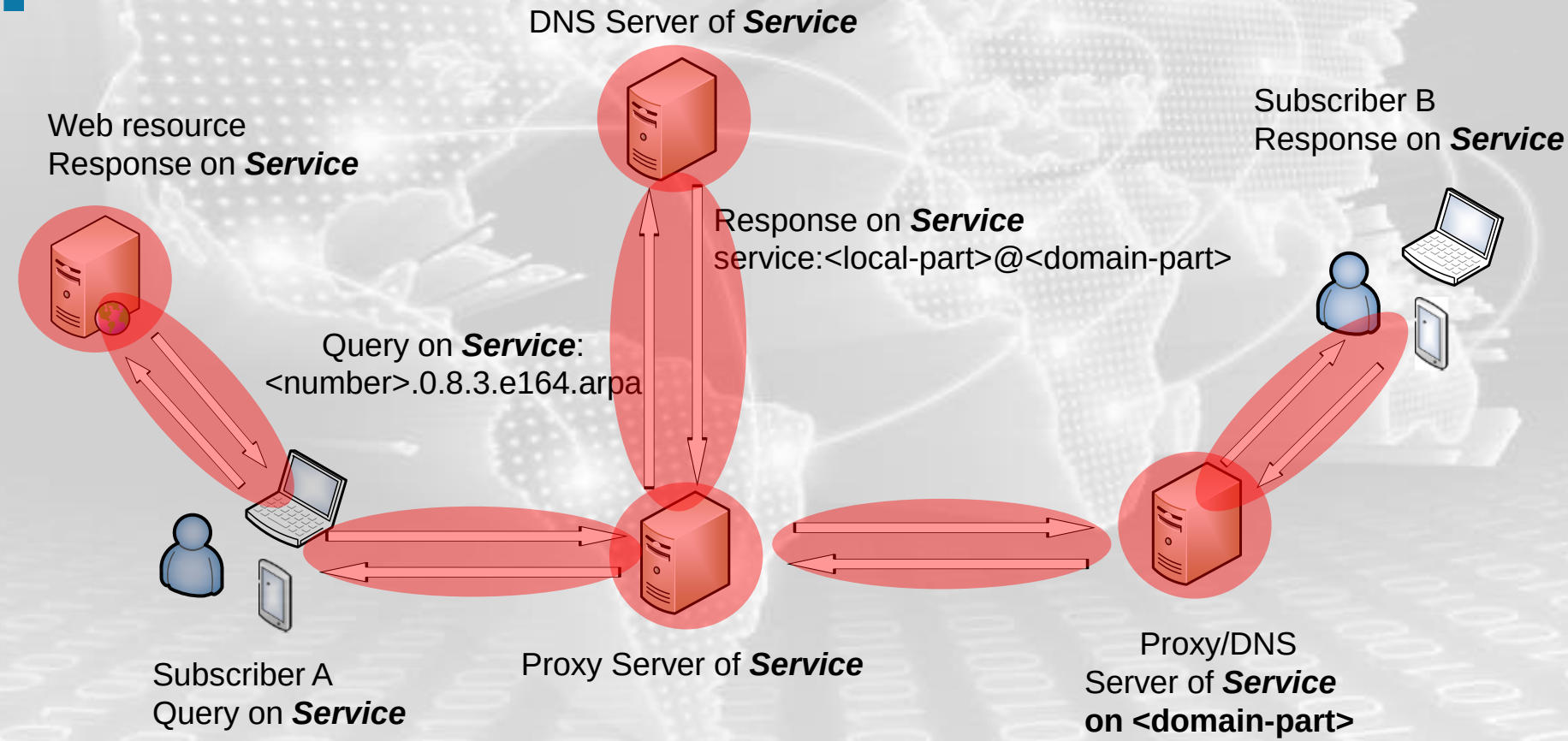


IoT reference model by **Y.2060 (06/2012)**

The proposed architecture of the IdM system



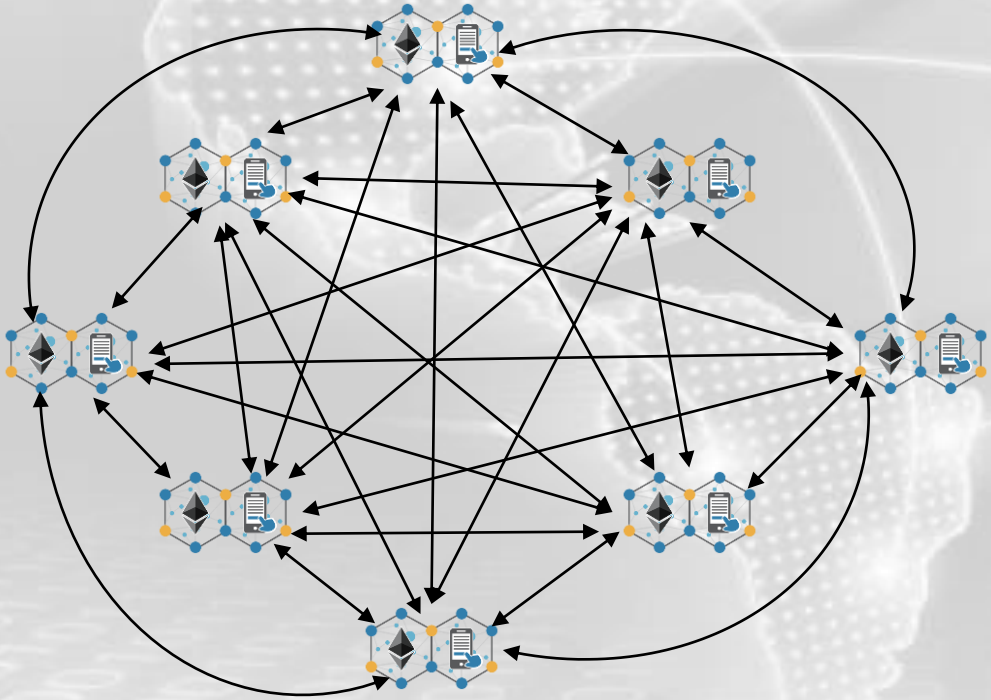
IdM/DNS and security

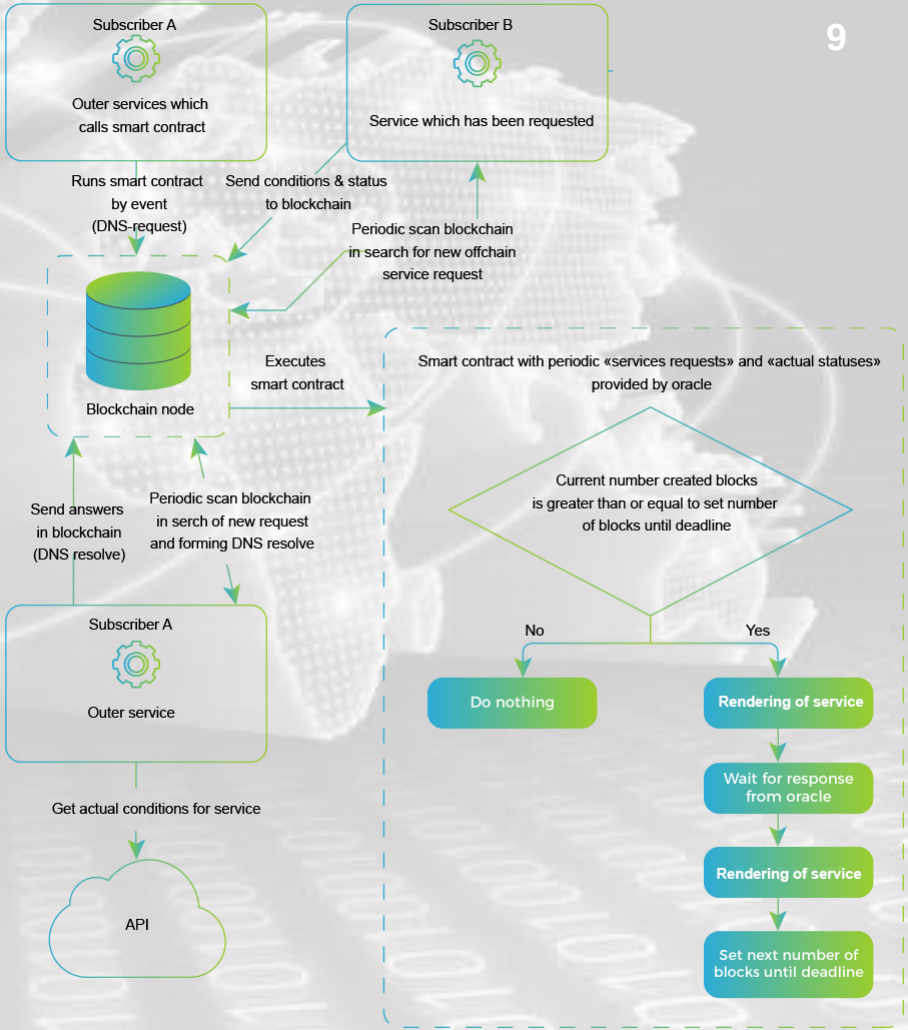


Practical Case:

Security, Mobility, and Identity

IdM/Blockchain and security





Effect of the convergence on the IoT properties and features

- ~~Full~~ support USN applications ~~and services~~
- Multistakeholders and multi-user ~~trusting~~ environment ~~within network structures~~
- ~~Easy~~ connectivity of any elements – sensors and actuators
- ~~Personalization of the Services~~
- Technologically ~~in~~dependent identification of digital objects and services
- Identifiers’ ~~and Services’~~ Mobility
- Security
- ~~Scalability of the Network and Subject Solutions~~

Thanks!
Questions?

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