reTHINK General Overview

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ETSI NTECH#13, December 16th 2015

Summary

✓Structure

✓Objectives

✓Achievements

✓Next Steps

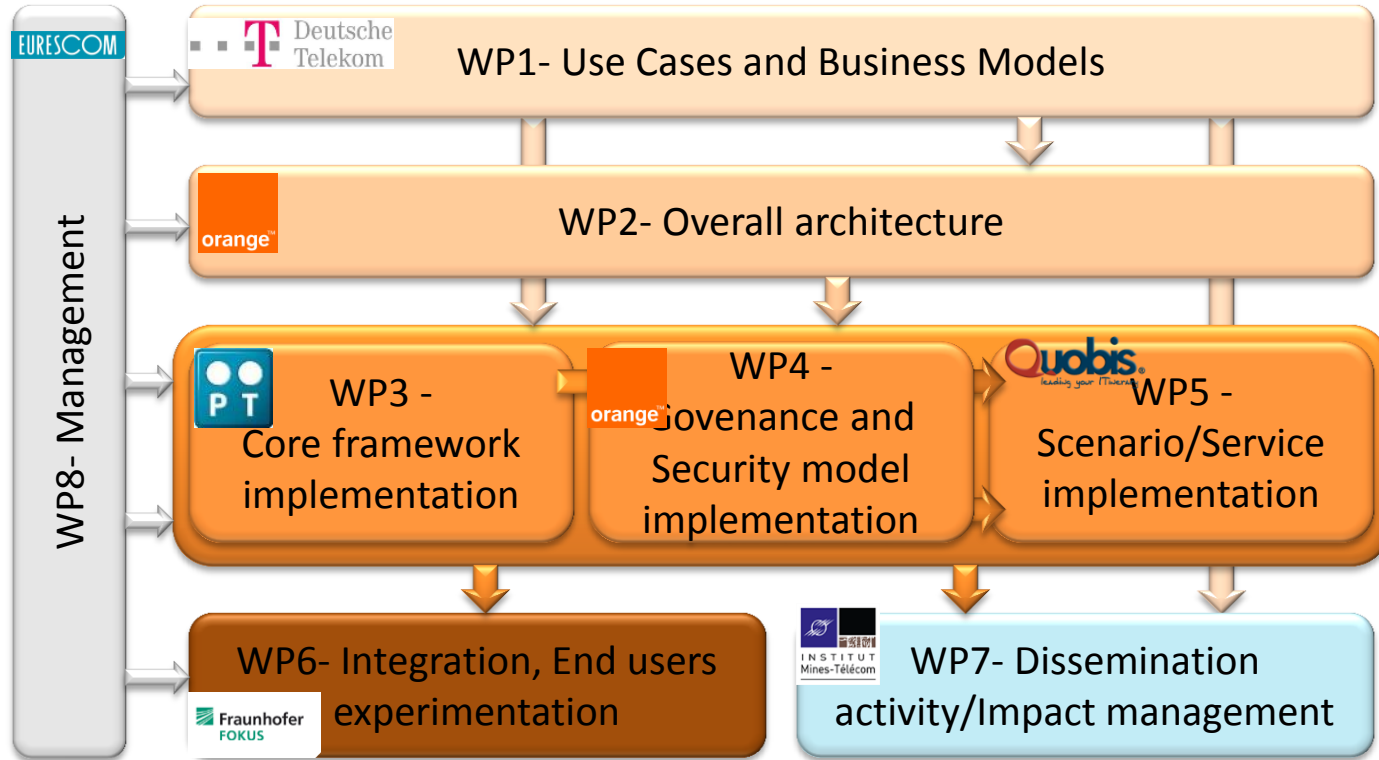# STRUCTURE

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reThink consortium

- Operators: Orange, Portugal Telecom, Deutsche Telekom

- SME : Eurescom, Quobis, APIzee

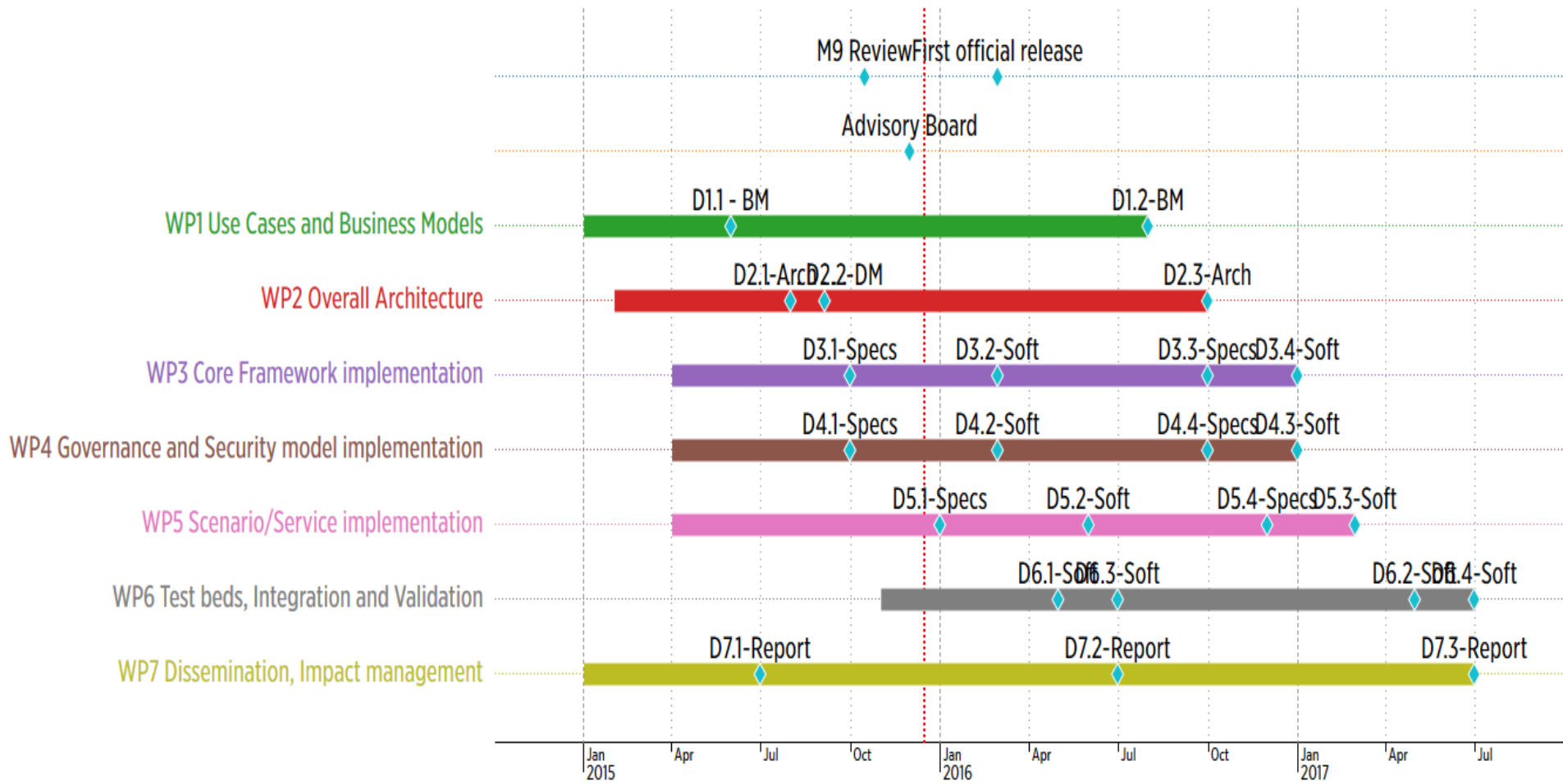- Academics : IMT, TU Berlin, Fokus Franhofer, INESCID

reThink Work Breakdown Structure

WP8- Management

WP1- Use Cases and Business Models

WP2- Overall architecture

WP3 - Core framework implementation

WP4 - Govenance and Security model implementation

WP5 - Scenario/Service implementation

WP6- Integration, End users experimentation

WP7- Dissemination activity/Impact management

reThink roadmap

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OBJECTIVES

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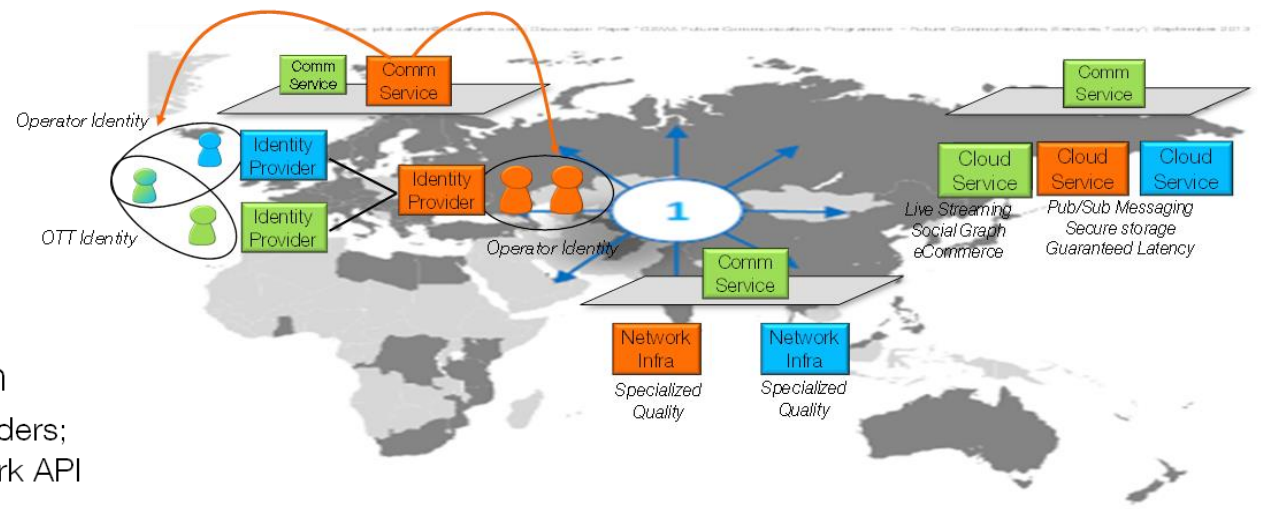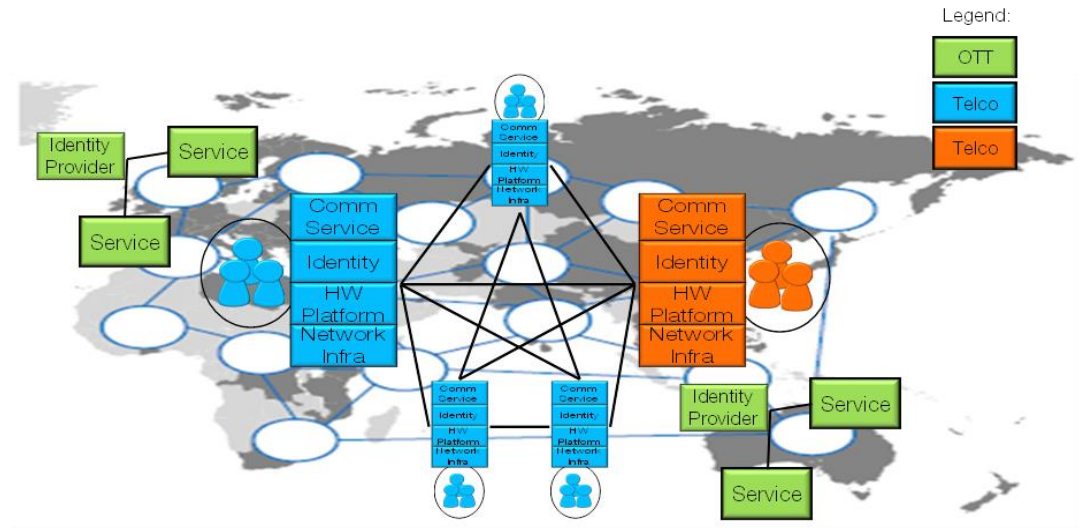
A New paradigm

Federated Distribution Model

Telco federation agree on the new communication service ⇨ Each Telco distribute to its own user base ⇨ The Telco federation distribute region-wide / world-wide.

From here

To there ?

Horizontal Distribution Model using Identity Providers; Cloud Providers and Network API (SDN)

Two Ways, Two worlds

- Old Fashioned Federated Telco World
- Federation requires well defined standards to enable universal interoperability
- Telco federation is worldwide (although locally regulated) but standards agreements takes a long time
- Lack of differentiation between Telco, limited Innovation, High Delivery Costs
- Strong Trustful Identity
- Reliable Service

- OTT World, Vibrant but Walled Garden
- OTT Silos locked-in:
- Can't interoperate with users from other domains
- No portability of Identity or User Data

- OTT are not constrained by Standards
- OTT are much more competitive and Agile
- OTT are leading Communication Innovation
- Privacy issues

Third way: Changing the DNA of Telcos and Webcos

A new GENOME: Good Enough Network of Moving Endpoints

➢ It is a change of DNA for Telcos
  – Position services between VoLTE and VoIP
  – Non-territorial, quick to launch
  – Independent identities
  – Adopt 'Good Enough' QoS service
  – Accept 3rd party software downloads to devices

➢ It is a change of DNA for Webcos
  – Independent identities
  – Interworking with non-subscribers
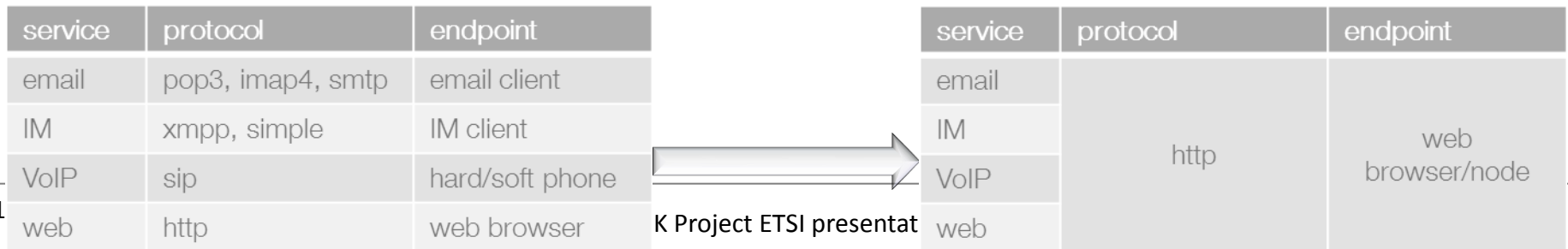 – Collaborative QoS routing with SLA

GENOME:
Good Enough Network of
Moving Endpoints

Opportunities and Solutions

❑ **Beyond Web Calling and Telco networks, reTHINK proposes**

– Global, rich, contextual,

– Instant inter-operability for non-subscribers

– Open to all, unlicensed,

– Easy development for new startups

– Few standards, no waiting for adoption

❑ **Based on a distributed framework on the Web**

– New paradigm focused on the User

– Choice on Trust level

– Choice on QoS level

– Based on the Hyperty concepts

– No inter-service standards

– Minimal core network platform, low cost infrastructure

– Applied broadly to any communication mean (H2H, M2M)

service	protocol	endpoint		service	protocol	endpoint
email	pop3, imap4, smtp	email client		email		
IM	xmpp, simple	IM client		IM	http	web browser/node
VoIP	sip	hard/soft phone	⟹	VoIP		
web	http	web browser		web		

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Identity & Trust

➢ **Identity is User's**

   – Users choosing their Identity provider

   – Same 'public' identity for several services (not service-bound)

   – Users can choose and change service providers easily

   – No lock-in to any service

➢ **Subscribing to multiple calling services**

   – Subscribe to Skype, Facebook and Orange (web-Talk) for different services

➢ **Trust becomes explicit**

   – Related to the social network

No Silos,

No lock-in

No exclusivity

Supporting QoS aiming at Net Neutrality

➢ **reTHINK enables Online QoS Communication**
- QoS enforced by media relays through the Internet
- QoS is enforced by policy gateways (driven by session control)

➢ **reTHINK Provides a framework for ANYONE to offer web calling with QoS**
- Looking forward to avoid degradation of competing flows
- QoS is access controlled through brokering

➢ **QoS by collaboration – not Federation**
- Internet style reciprocal collaboration
- Multiple business models

ACHIEVEMENTS

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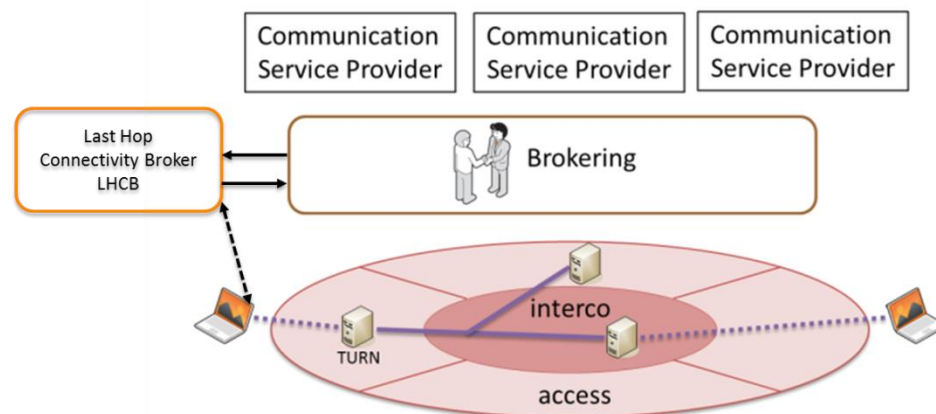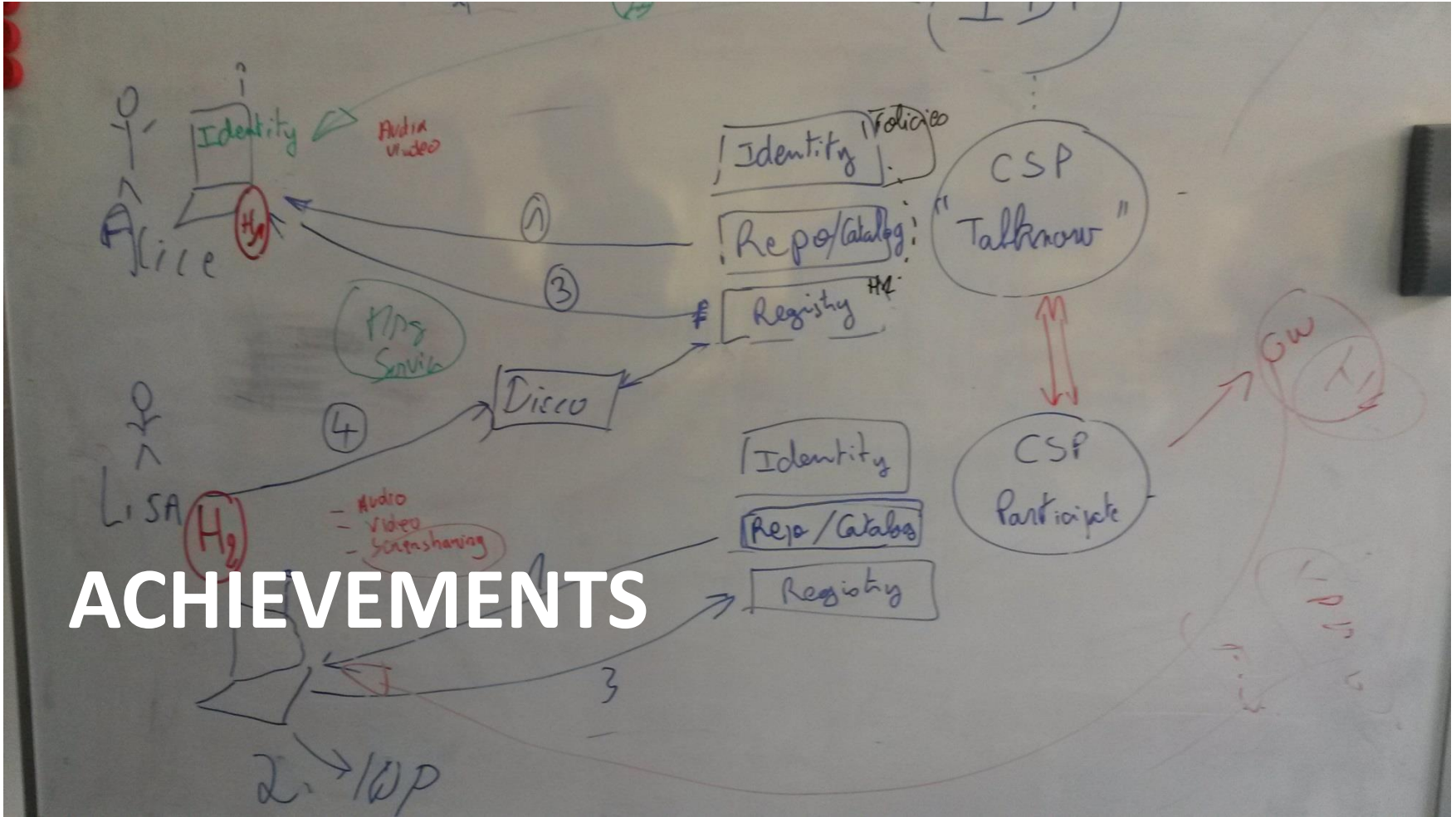
Objective 1: To provide a communication framework based on hyperty concept
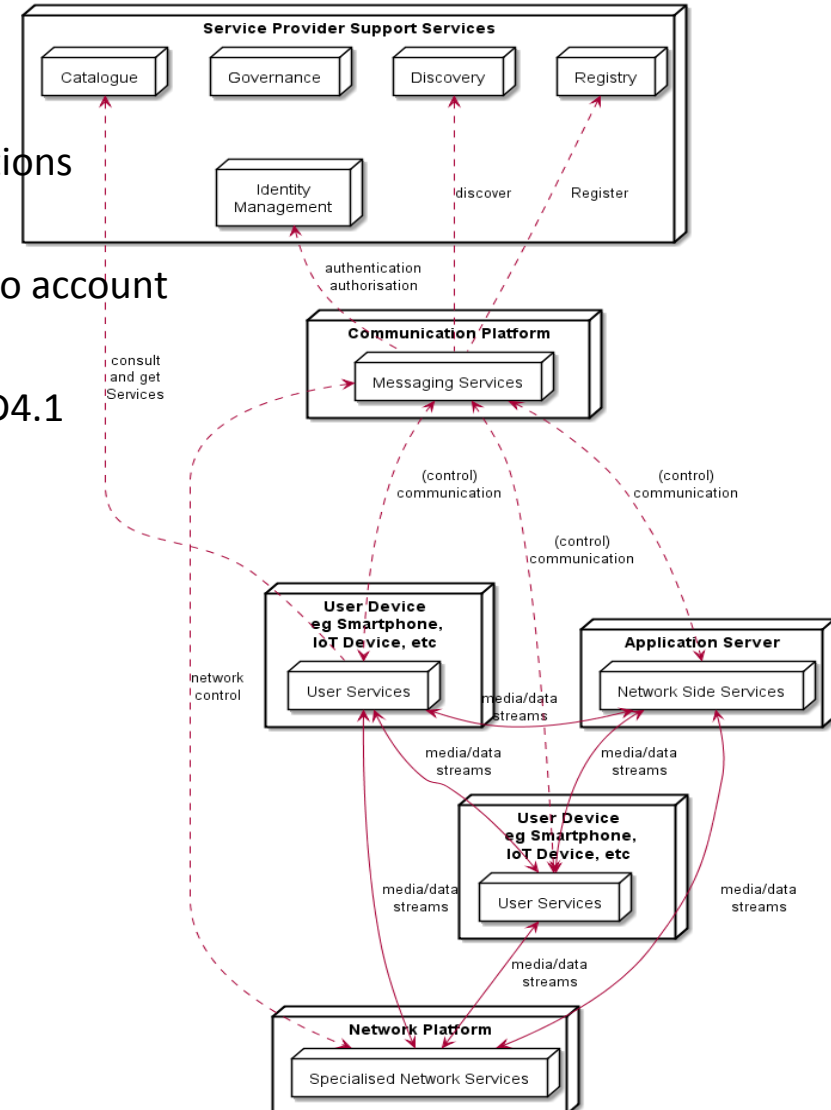
What we have achieved

- A common understanding of the overall functions
- Definition of the hyperty understood by all
- 95 requirements to be analyzed and taken into account
- A full disruptive architecture
- First technical deliverables D2.1, D2.2, D3.1, D4.1

What we must achieve

- Implement Phase One
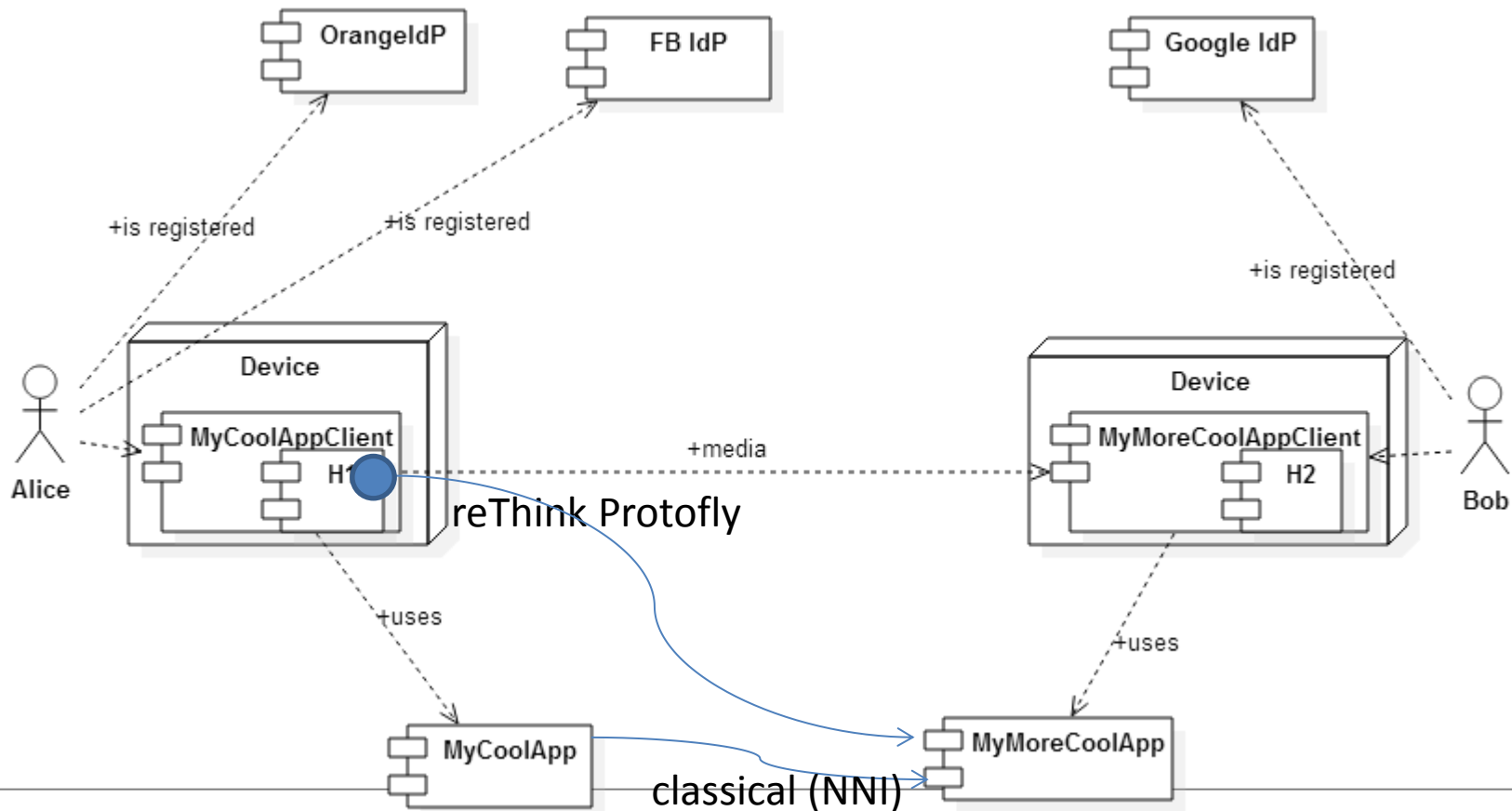- Create testbeds
- Deploy

Objective 1: Highlights

An architecture based on the Hyperty concepts: distributed framework, deployment on the clients node of the service logics

Interoperability means with the Protocol on the Fly concept

reThink Protofly

classical (NNI)

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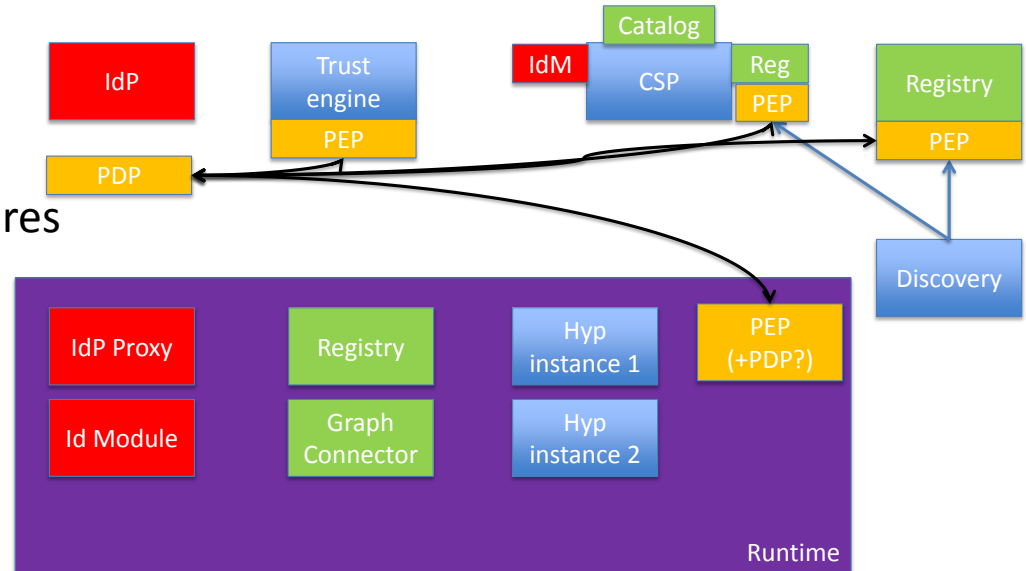# Objective 2: To design and develop security and portability features

What we have achieved

- State of the art
- Identify some use cases
- Stated about discovery feature
- Delivery of D4.1
- Portability functions
- First architecture on identity/security issues
- Developed main building blocks

What we must achieve

- Refine Design
- Develop client identity features
- Deploy first services

A disruptive identity and trust model that will fit to any customer need, from H2H to IoT communications

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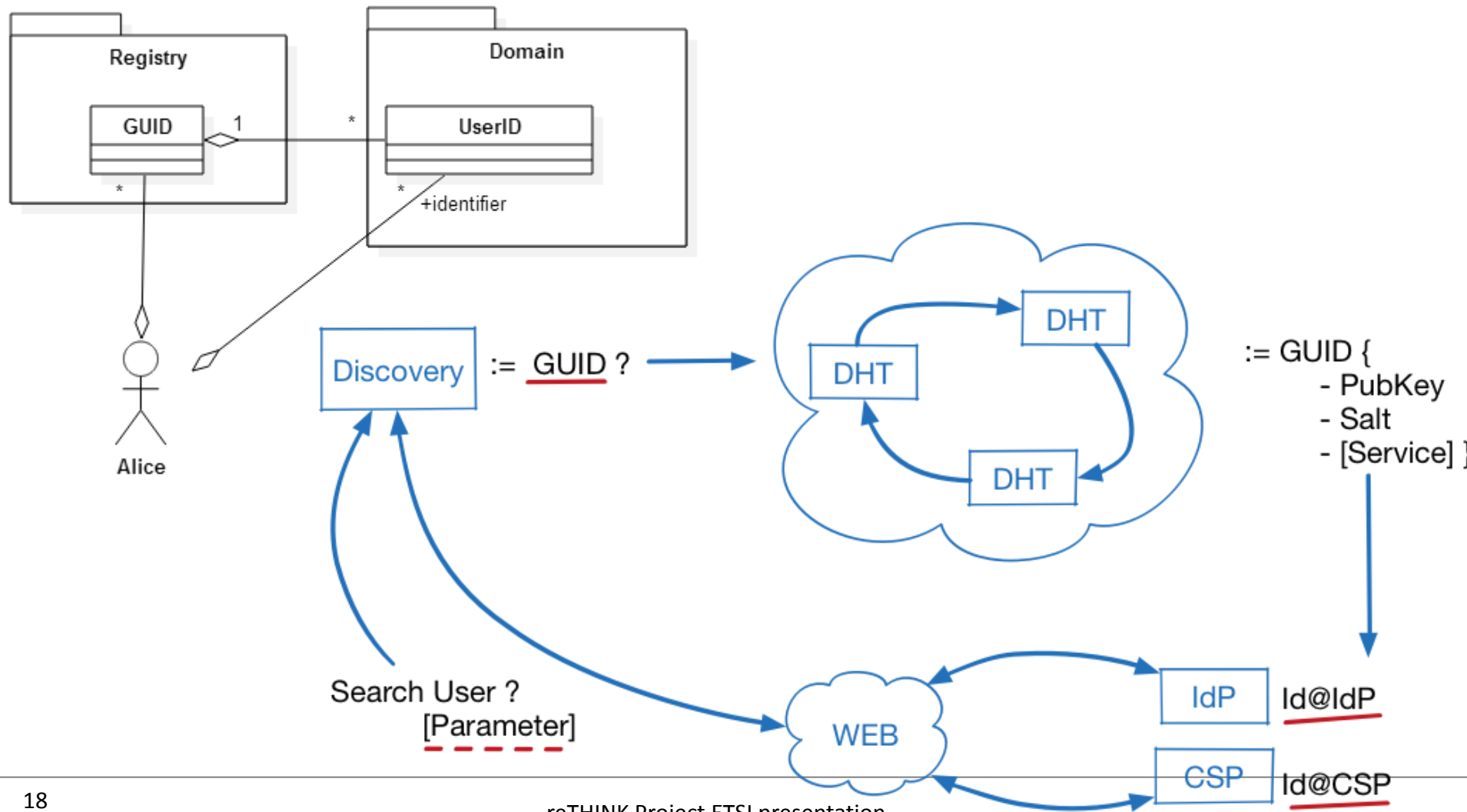
Objective 3: To examine the business impact of the concept
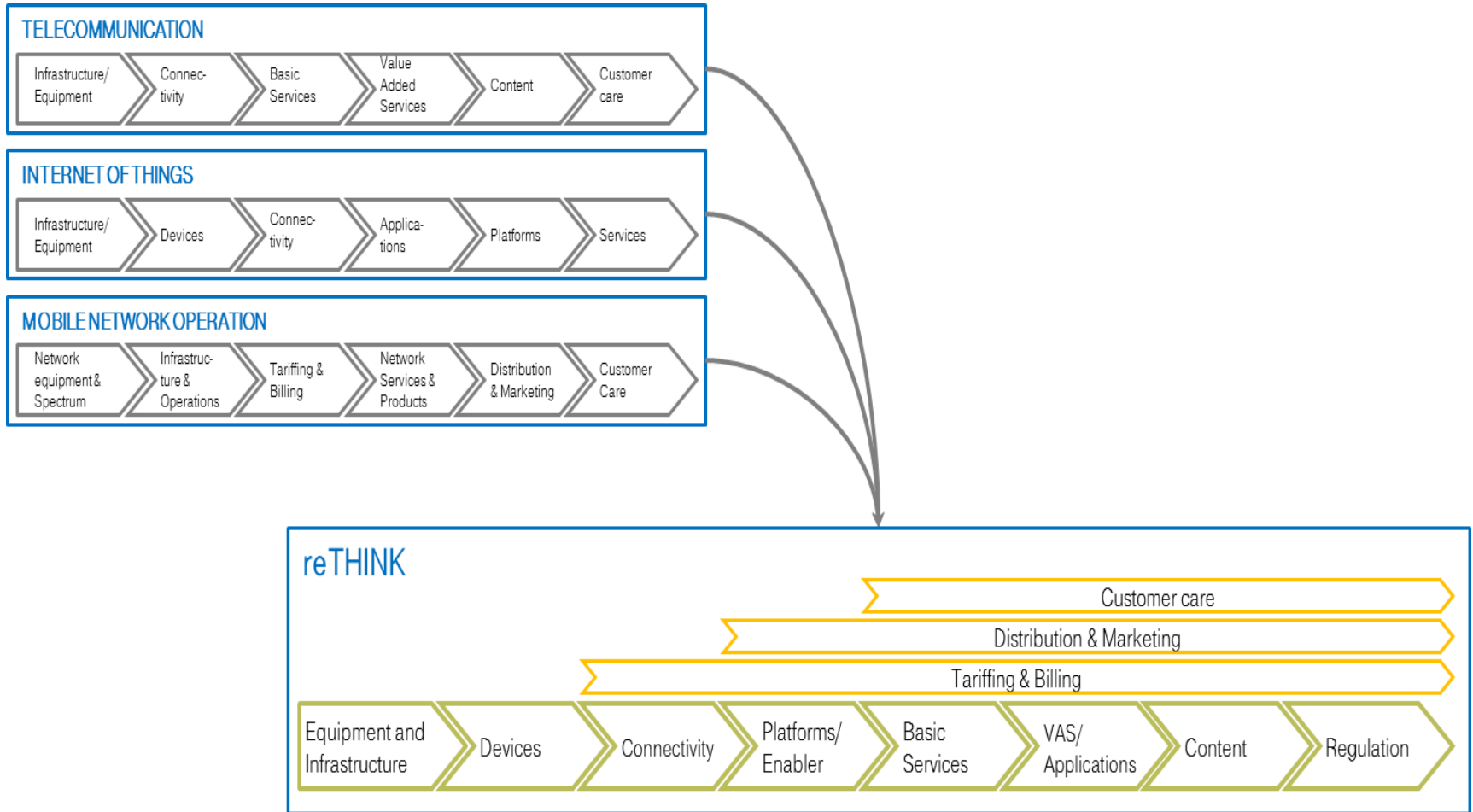
What we have achieved

- Wide range of use cases
- Value chain analysis and business models
- Business processes
- First deliverable D1.1

What we must achieve

- Iterate and refine

TELECOMMUNICATION
Infrastructure/Equipment → Connectivity → Basic Services → Value Added Services → Content → Customer care

INTERNET OF THINGS
Infrastructure/Equipment → Devices → Connectivity → Applications → Platforms → Services

MOBILE NETWORK OPERATION
Network equipment & Spectrum → Infrastructure & Operations → Tariffing & Billing → Network Services & Products → Distribution & Marketing → Customer Care

reTHINK
Customer care
Distribution & Marketing
Tariffing & Billing
Equipment and Infrastructure → Devices → Connectivity → Platforms/Enabler → Basic Services → VAS/Applications → Content → Regulation

New value chain is formed by eliminating redundancy and rearranging value added steps

Objective 4: To validate its effectiveness

What we have achieved

- Wide range of use cases
- Choose first scenarios services to implement
- Identify hyperties

What we must achieve

- Implement first service Hyperties
- Identify architectural issues, or core implementation issues
- Implement and deploy services

Objective 5: To realize standardization and exploitation activities

What we have achieved

- https://rethink-project.eu/
- Participation to Events, and papers
- IETF Draft proposal
- Deliverable D7.1

What we must achieve

- Submit papers
- Support standardization proposals
- Dissemination and exploitation

NEXT STEPS

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Developing Further Areas of Research

- ➢ Peer to Peer Interaction
  - – How far can you go with P2P?
  - – M2M with QoS

- ➢ Distributed Session Control
  - – Empowering endpoints
  - – Discovering web users

- ➢ Identity and Trust Circles
  - – The role of the IdP
  - – Native social networking

- ➢ QoS over the Internet
  - – Conveying QoS policies over Internet
  - – Inter network signalling for QoS

- ➢ Converged Web-Telecom
  - – Context calling, social networking
  - – Maximizing local processing of services

Reach for Further Areas of Research

reThink next steps

❑ Provide the phase 1 core framework (Feb 2016)

❑ Revisiting the architecture based on the phase 1 prototype

❑ Iterate with the business and architecture work to integrate feedback
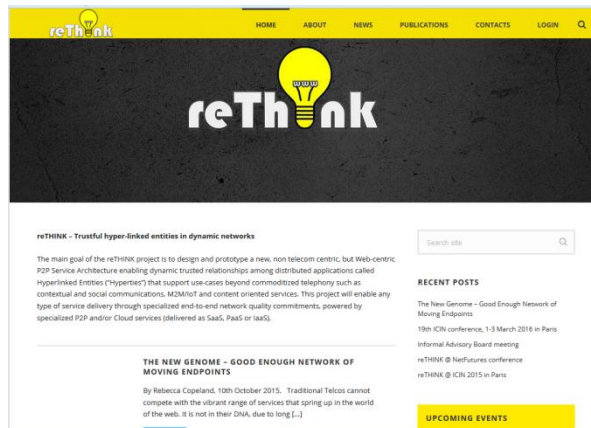
❑ Develop and deliver the first services (May 2016)

❑ Accelerate dissemination

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More information

➢ https://rethink-project.eu/

➢ https://twitter.com/rethink_eu

Thank You!

Simon Bécot