



# Cloud for Europe /C4E/

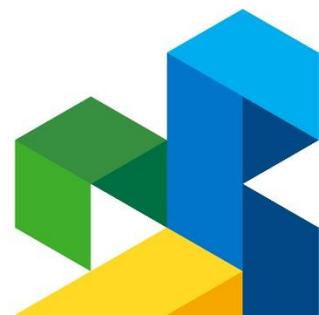
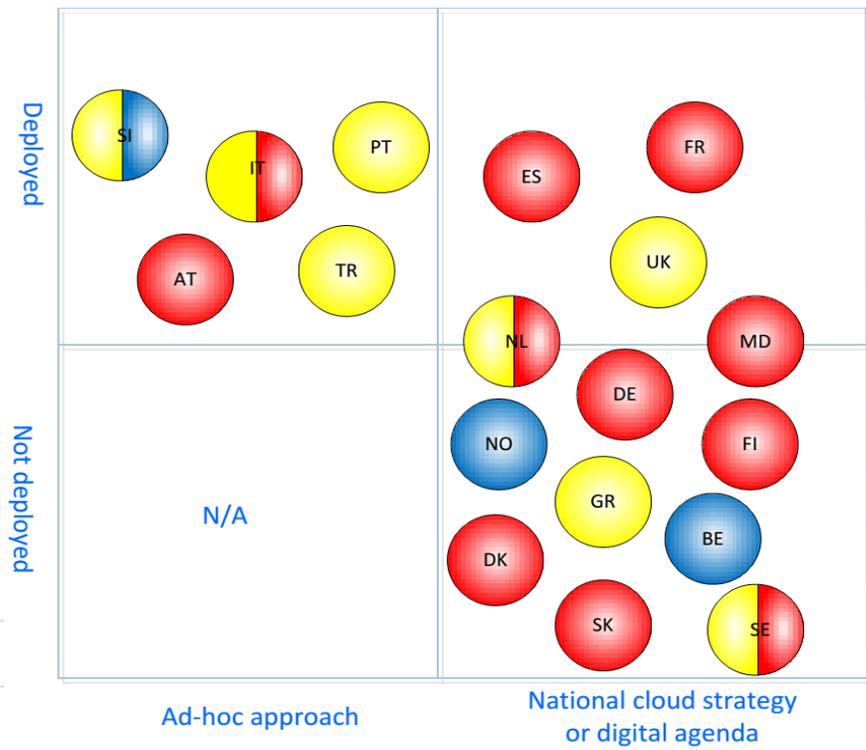
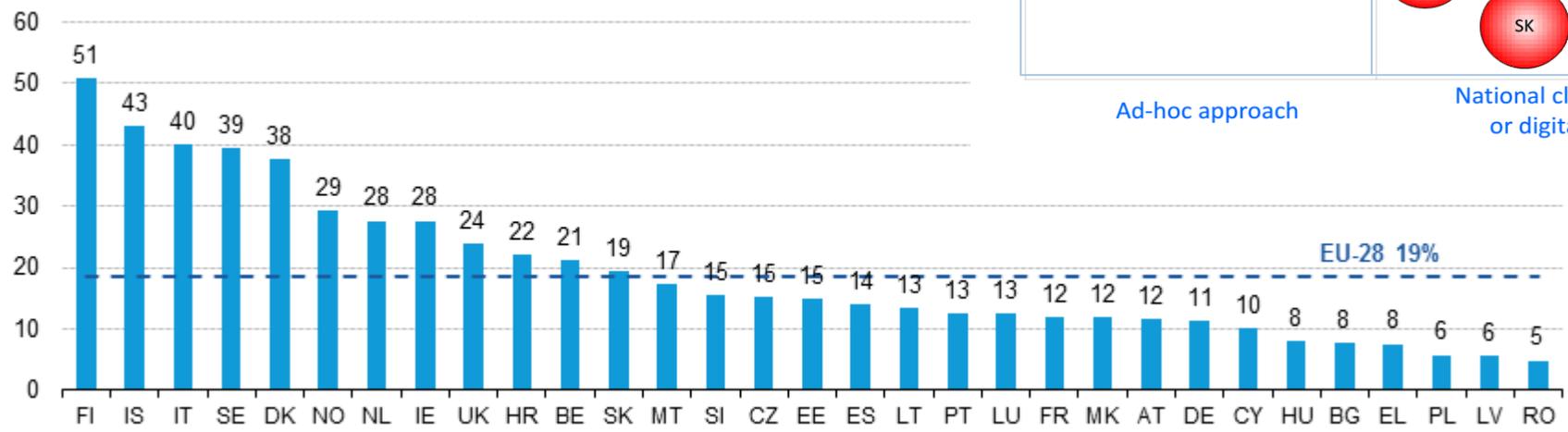
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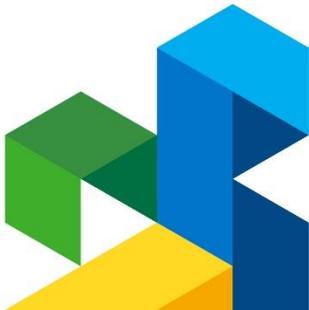
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# Agenda

- ▶ European Cloud Partnership
- ▶ C4E intro
  - ▶ Timeline
  - ▶ Consortium
- ▶ Federated Certified Services Brokerage
- ▶ Secure Legislation Aware Storage
- ▶ What's next



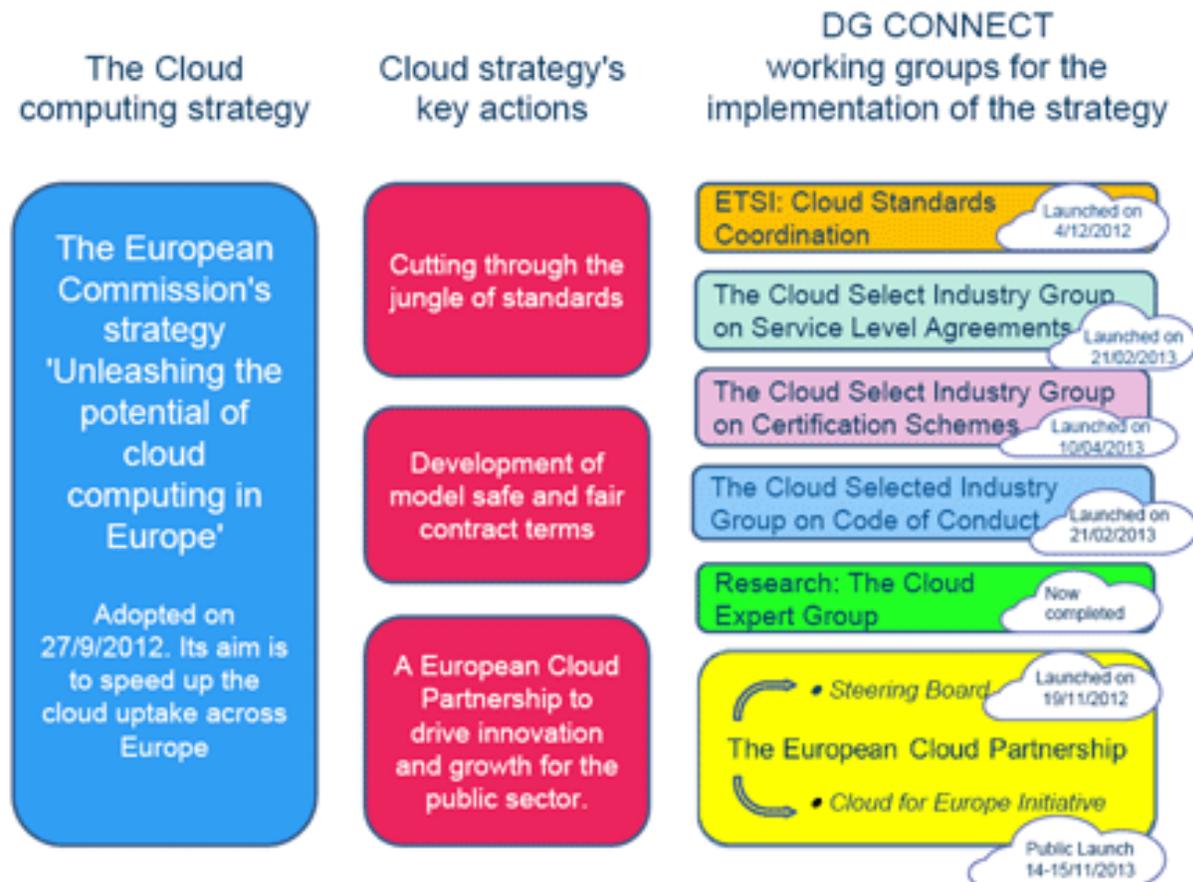


# European Cloud Partnership /ECP/



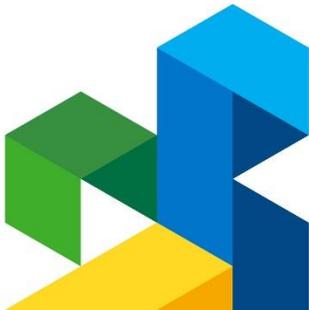
# ECP: EU Cloud Strategy

► "Unleashing the Potential of Cloud Computing in Europe" *September 2012*



# ECP: Agenda & Goals

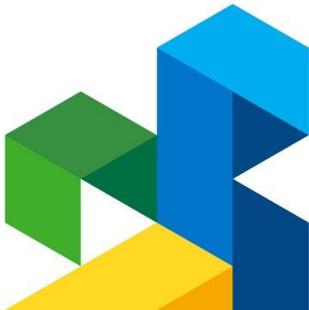
- ▶ Research Program aka FP7 – Cloud For Europe
- ▶ Horizon 2020 – 2015 Work package (40)
  - ▶ ICT 8 - Boosting public sector productivity and innovation through cloud computing services
- ▶ Trusted Cloud Europe
  - ▶ Framework for supporting the definition of common cloud computing best practices
  - ▶ Survey (Marec-Máj 2014) - questions surrounding cloud-active policy, procurement rules, geographical restrictions, and single digital market





# Cloud for Europe

## /C4E/



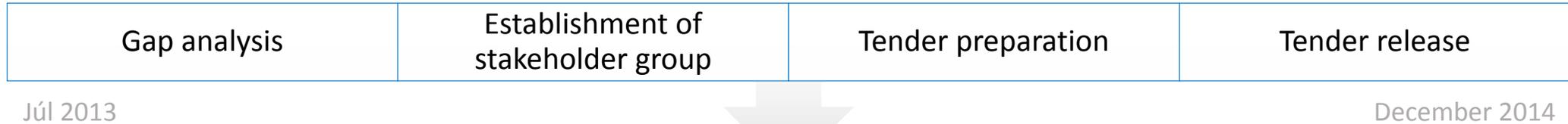
# C4E: Intro

- ▶ Started in June 2013 and runs until November 2016
  - ▶ Managed by AGID
- ▶ Consortium of **24 partners**, from **12 countries**
  - ▶ ..., MF SR, ...
- ▶ Goals
  - ▶ **Identifying obstacles** for cloud use in the public sector
  - ▶ Defining services that **overcome** these obstacles
  - ▶ Procuring research from industry to find **innovative solutions** for cloud services

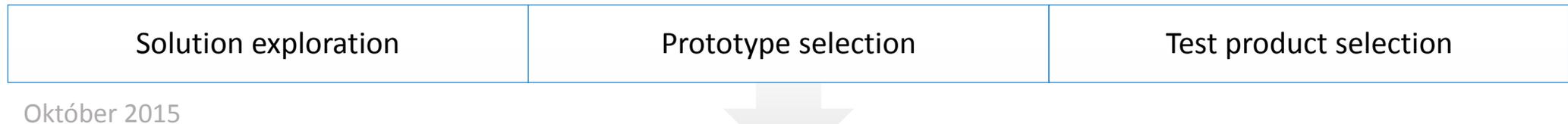


# C4E: Timeline

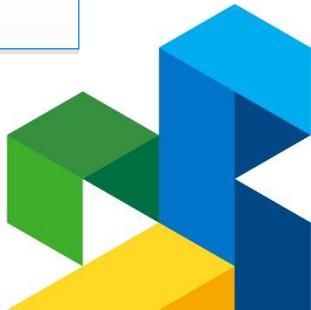
## Pre-commercial procurement (PCP) preparation



## PCP tender implementation



## Sharing



# C4E: Consortium



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## ▶ InterWay

- ▶ 1997, BA/ZA/LM, 51-200, Cloud/Strategy/Architecture/Integration/...

## ▶ Liberologico

- ▶ 1999, Pisa IT, 11-50, Cloud/IoT/Mobility/SocialCRM/...

## ▶ TeamNet / Ymens

- ▶ 2001, RO/HR/TR/BG/BE, 800+, Cloud/Integration/Healthcare/Engineering/...

## ▶ University of Messina

- ▶ 1548, Messina IT, 11 Faculties, Distributed and Parallel Computation Systems/...





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# Federated Certified Services Brokerage /FCSB/



# FCSB: Lot specific requirements

## ▶ Interoperability

- ▶ Declarative and distributed service metadata registry governance
- ▶ Intelligent service discovery mechanism operating in federated ecosystem of services
- ▶ Orchestration logic for determining plan and overseeing service migration

## ▶ Certification

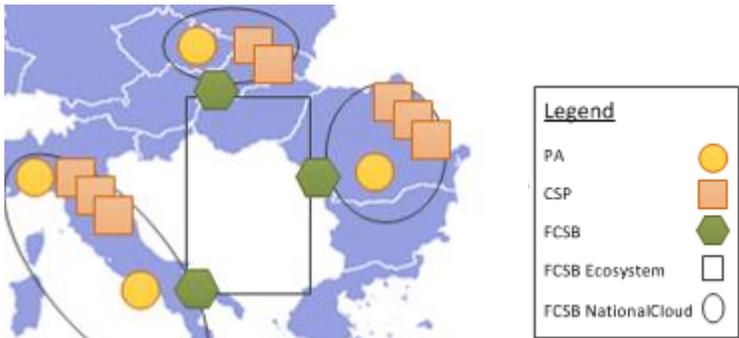
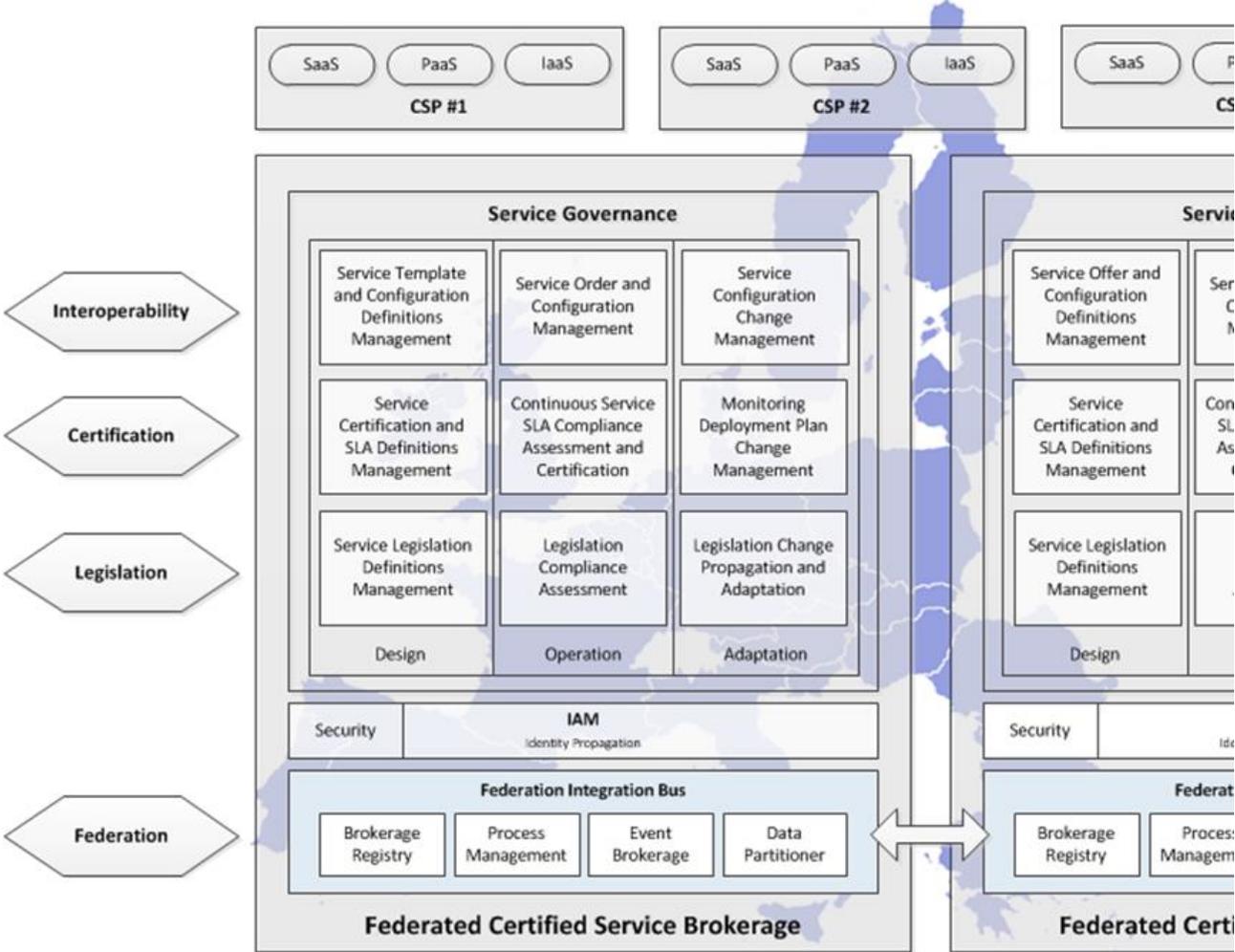
- ▶ Service location-aware monitoring platform
- ▶ Distributed monitoring platform for last mile verification

## ▶ Legislation

- ▶ Complex and agile data model for legislative domain
- ▶ Develop the methods and interfaces for easy legislative change propagation
- ▶ Develop the methods and interfaces for securing services legislative compliance



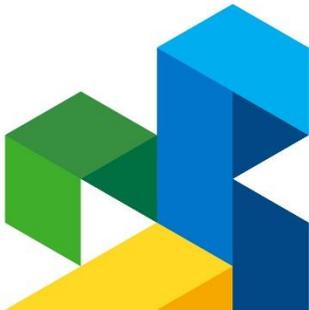
# FCSB: Vision





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# Secure Legislation Aware Storage /SLAS/



# SLAS: Lot specific requirements

## ▶ Digital Archiving and Preservation

- ▶ Long term preservation of data to be implemented in new cloud storage services
- ▶ Provide a solution for data snapshots and data replication.
- ▶ Ensure data integrity and data recovery

## ▶ Legislation-Compliance of a Cloud Storage Service

- ▶ Auditing of the cloud storage service for assess the adequacy and compliance with the target legislation framework
- ▶ Designed to scale up to about 100.000 customers, tens of cloud storage providers and hundreds of different cloud services

## ▶ Legislation-aware Data Provision and Access

- ▶ Define legal rules and constraints in a structured way and associate these rules to data objects
- ▶ The assisted, semi-automatic or automatic, management of dynamic data authorization



# SLAS: Vision

- + Financials
- + Human Capital Management
- + Incentive Compensation
- + Procurement
- + Projects
- Supply Chain Management
  - Dashboards
  - Cost Management
    - Transactional Analysis Samples
      - + Cost Transaction report
      - + Costing On hand Balances
      - + Prompts
      - + Report Components
  - Embedded Content**
- + Order Orchestration
- + Product Management
- + Warehouse Operations





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# Quo Vadis

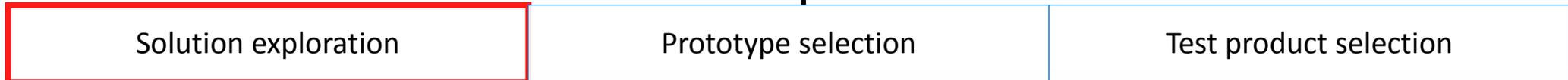


# FCSB & SLAS: Solution Exploration

## Pre-commercial procurement (PCP) preparation



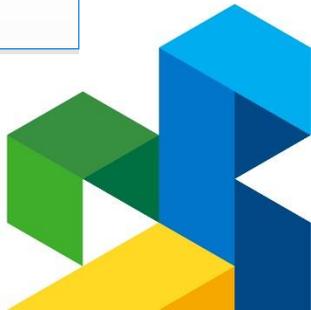
## PCP tender implementation

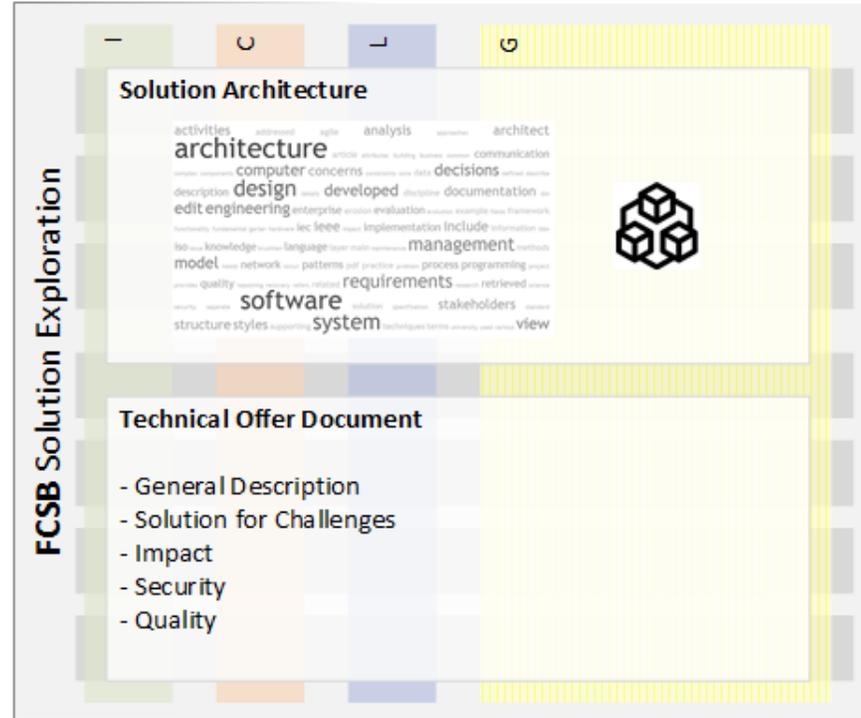


Október 2015

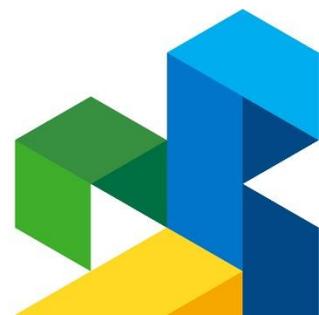


## Sharing





- External Drivers**
- ETSI CSC Final Report: Use cases, ...
  - Cloud SIG on {Certification, Code of Conduct, SLA}
  - ISO/IEC 27018:2014 - Personally Identifiable Information
  - Cloud Reference Architecture: ISO/IEC 17789, NIST, ...
  - ISO/IEC CD 19086 SLA Framework (1,2,3)
  - Federated and Self-Manageable Cloud Infrastructures
  - FP7 Projects: Broker@Cloud, SLA@SOI, CloudWave, Optimis, Beacon, Dalos, ...



# Ďakujem za pozornosť



# Backup Slides



