

# Cloud Services Based on Open Standards and Open Technologies

The Way Forward – Building on CSC

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# **Enabler and Driver of Digitisation**

Cloud technologies and Cloud services are at the core of Digitisation

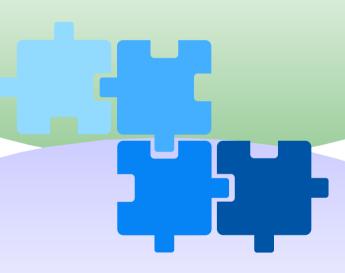
Providing cognitive solutions to physical systems

Open Cloud Platforms, Hybrid Cloud services

"On board" Cloud, SaaS, IaaS, PaaS

There is no such thing like "The Cloud"

**COGNITIVE SOLUTIONS** 



PHYSICAL LAYERS



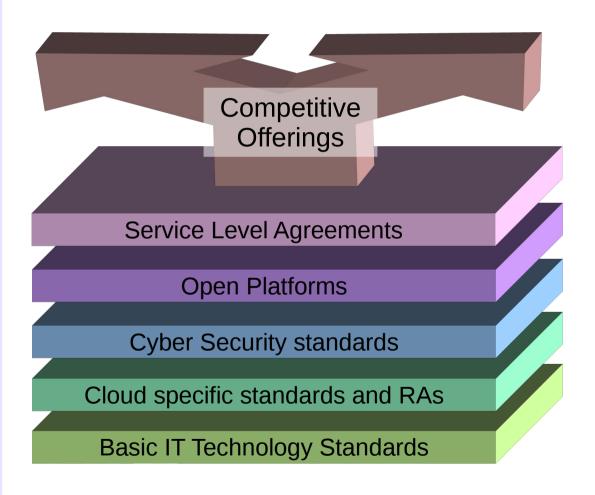
# **Cloud – Primarily a Service**

Cloud technologies are a service

Cloud services build on technical standards and on open platforms

On top of standards and open source Cloud platforms competitive technologies and offerings differentiate Cloud Service Providers

This includes competitive technologies for security and privacy





GOVERNMENT

## **Open Cloud Technologies Ecosystem**

#### **OPEN SOURCE**



**Use Cases** 

Roadmaps / Landscaping

Service Level Agreements

**Reference Architectures** 

**Technology Standards** 

**Open Cloud Platforms** 

Reference implementations

Promulgation of technologies

**Cloud Services** 

Setting rules / Regulatory requirements

**Industrial/ Innovation policy** 

Promoting technology adoption

**Use Cases** 

**Market development** 

**Awareness** 

INDUSTRY ASSOCIATIONS
AND CONSORTIA

**Future technology** 

**Use Cases** 

RESEARCH



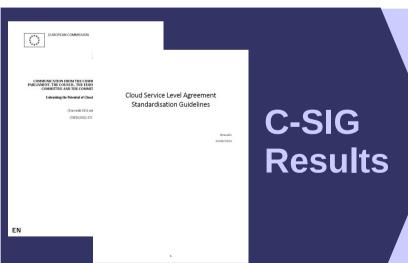
## **Leading Contributions from Europe**



CSC Reports Broad overview including standards landscape, security, open source

Well recognised in Europe and beyond

Trusted information resulting from open process



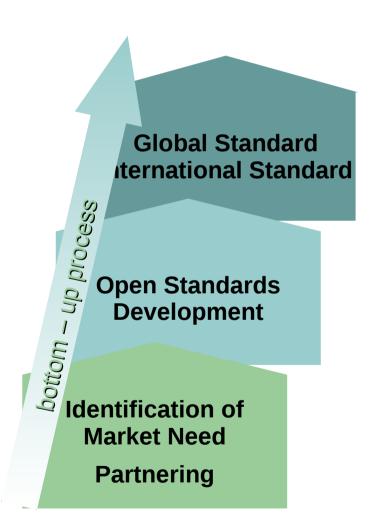
Successful initiative on Innovation Policy – promote the uptake of Cloud services in Europe

Highly valuable results, in particular Code of Conduct and Service Level Agreements

Way forward: publication (e.g. ETSI White Paper, OASIS) and promotion



## **Rely on Global and International Standards**



Relevant and successful Cloud standards are developed globally in bottom up process

Global and International Standards are critical for competitiveness and market success

Broad range of standardisation deliverables available globally

Way forward: promote implementation and use of global and international standards; focus on actions listed in EU Rolling Plan (RP) and proposed for EU Priority ICT Standards Plan (PISP)



### In Focus: International Cloud Standards

**SC 38** 

Cloud specific standardisation deliverables





JTC 1 Information Technology **SC 27** 

Cyber Security Standards

Including Security Techniques

Including Reference Architecture, SLA frameworks

Way forward Strong back up of international standardisation activities

Promoting implementation of international standards

Governments (EU Commission, Member States) should join international working groups and collaboration process

Complement with work going on in ETSI TC Cyber and in fora/consortia

## In Focus: Open Source

Benefits of Open Source (from CSC Phase 2 report, p. 12)

A development model based on recurring and incremental releases and improvement that fits well with concepts such as "continuous delivery", "team based development" and "agile development";

Modular and clearly defined products and services with **improved flexibility for customization**;

Support to multiple underlying environments as a key factor to **avoidance of lock-in**.

There are a number of highly innovative open source projects ongoing providing open source Cloud platforms

Focus on open collaboration – open source foundations rather than "benevolent dictator" structure

Provide open PaaS and laaS for innovation and competition on top of such open source Cloud platforms

Way forward Include Open Source Cloud Platforms into the bigger picture of open technologies in the area of Cloud services

Based on findings from CSC Phase 2 report, promote the use of open platforms alongside with open standards

Continue work on best practices / defining processes for collaboration between open source and standardisation



Thanks very much for your attention.

Happy to discuss further.