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Transformational Cloud Government (TCG): Transforming Public Administrations with a Cloud of public services

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Agenda

01. Current Situation
02. TCG: Definition
03. TCG: Goal

04. TCG: Concept
05. TCG: Implementation
06. TCG: Innovations

07. Conclusions
Current Situation in eGovernment services

Provision of a set of disjointed online services

Provision of services that are closed, not modular, proprietary and often not reusable

Provision of services that are not user-centered or efficient

Lack of cross-border interoperability
Current Situation: Policy Context

eGovernment Action Plan 2016 – 2020

Source:
Transformational Cloud Government (TCG): Definition

A managed, citizen centric, process of Cloud Computing-enabled change within the public sector and in its relationships with the private and voluntary sectors, which puts the needs of citizens and businesses at the heart of that process and which achieves significant and transformational impacts on the efficiency and effectiveness of government (*)

Technologies, processes and policies
Technology, Organization, Legal, Socio-economic aspects

(*) inspired on the definition of OASIS. Transformational Government Framework Primer version 1.0. ; 2011
TCG: Goal

To facilitate to Public Administrations a set of tools, techniques and best practices to foster the adoption of cloud computing

To provide more efficient internal software to be used by the public sector

To provide services that implement what really matters to the citizens: ensure data portability, data privacy and interoperability
TCG: Concept

Cloud Government platform
- eGovernment platform
  - eServices structural and behavioral analysis
  - Target cloud platform selection
  - Deployment/delivery model selection
  - eGovernment cloudification
  - Cloud security strategy

Federation of Cloud Offerings
- Intelligent cloud service discovery and aggregation
- Cloud services arbitrage and negotiation (Quality, SLA, performance)
- Monitoring and assessment of aggregated cloud services
- Legal compliance/assessment of single and aggregated cloud services (against legislation and security policies)

cGovernment App Store
- Ecosystem of governmental applications developed by the private sector
- Compliant and accredited applications
- Trustworthy.

cGovernment Regulatory Framework
- Analysis of the economic benefit of using cloud-based services
- Cloud adoption
- Best practices for confidence increase in cGovernment
- Civil Servants and citizens attitude analysis

Impact Framework
- Analysis of the economic benefit of using cloud-based services
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TCG: Implementation Approach

Cloud adoption impact analysis

1. PA readiness assessment
2. Use assessment
3. Attitude assessment
4. Regulatory assessment
5. Policy recommendation

Online eGov Service (n tier app)

a. Cloud migration feasibility assessment
b. Business logic modelling
c. Cloud target selection
d. Cloud target modeling
e. Forward engineering (Cloudification + optimization)
f. Deployment assessment

g. Operation assessment

Cloud target selection

- c1. Requirements specification
- c2. Aggregation and prioritization of services
- c3. Final selection of prioritised cloud services and providers

Federation of Cloud services and standard SaaS apps

- c21. Intelligent discovery of Cloud Services
- c22. Certification of Cloud services

Cloud aware citizens, policies And civil servants

Cloud native eGov service

Operated on Cloud certified services for public administrations

Monitoring of Cloud Services

- g1. Legal compliance monitoring
- g2. SLA monitoring
TCG: Innovations

Implementation of the TCG concept.

Framework for the technical migration (development and operation phases) of eServices to the cloud paradigm.


Provision of mechanisms for non-functional properties assessment of cloud services in the public sector.

Provision of quality assessed and legally compliant applications and cloud services.

Development of a framework to measure the socio economic impact of the adoption of Cloud Computing in the public sector.
TCG: Conclusions

TCG is an innovative approach for the next generation public service delivery, while fostering the adoption of cloud computing paradigm from a holistic point of view (technologies, processes and environment) as a transformative technology that can lead to changing the value chain and relationship between actors (citizens, public sector, technology providers) promoting new types of infrastructures, novel processes and interoperable services (both at technological and organizational level) in a secure and regulation compliant environment.
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TCG: Innovations

- **Transform the relationship** between the public sector, the users of public services and 3rd party providers of supporting services (i.e. Cloud Services providers),
- **Transform the delivery of public services** while transforming public administration processes and **improving effectiveness and efficiency** of public administrations.
- Foster the **legal compliance** of cloud services as required by the Public Administrations, **data portability and interoperability** as well as avoidance of **vendor lock-in** by introducing an open intermediate layer.
- Support the **re-architecting of eGovernment applications towards a cloud-based architecture** so that the public sector can benefit from the advantages that cloud computing presents.
TCG: Innovations

Federation of cloud offerings and cGov App Store

• Provide **value-added services**, promoting **data portability, security and interoperability** through specific components and connectors.
• Services to be discovered and aggregated range from the traditional discovery and federation of resources up to DBaaS, DPaaS, NaaS, Identity Management as a Service and standard SaaS applications such as email, CMS or calendar.
• **Offering of cGovernment applications**, quality assessed and legally compliant, that can be extended to other Member States.
• **Enforce reliability and trustworthiness of cloud infrastructures**, offering dynamically adjustable indicators monitored by our federation of cloud offerings, which will include regulatory aspects in order to provide audited services with respect to security and legal concerns.
TCG: Innovations

Cloud Computing socio-economic and legal issues in the public sector

• Investigate to what extent stakeholders are prepared to adopt cGovernment as a new way of delivering public services, whilst improving administration’s efficiency and effectiveness.
• Provide insight into the conditions that are necessary to adopt cloud computing in an administrative context: readiness, level of use, economic impact and social impact.
• Generate strategic and operational recommendations for cGovernment adoption, which is already unique, and will therefore also make it possible to generate a blueprint for innovative administrations using cGovernment.