Data Privacy in the Cloud E-Government Perspective

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EGIZ E-Government Innovationszentrum

A-SIT Zentrum für sichere Informationstechnologie - Austria / Secure Information Technology Center - Austria

Outline

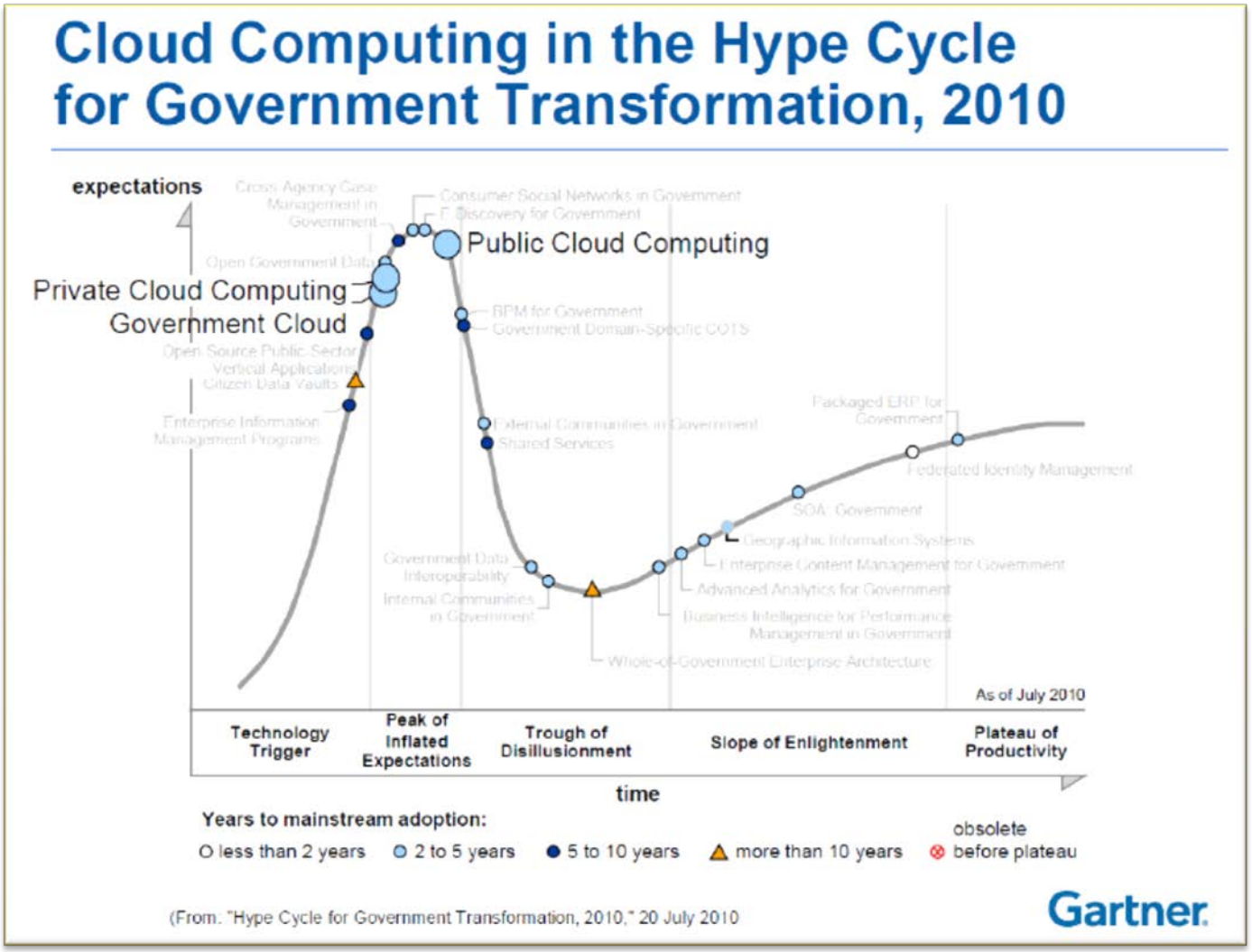
- Austrian Approach
  - Position Paper by Platform Digital Austria
  - Main Findings on Privacy and Policy Challenges
- Relation to EU Initiatives
  - How can eID fit in?

Position paper

- Platform Digital Austria
  - Coordination and Strategy Committee of the Federal Government for eGovernment in Austria
- AG Cloud whitepaper (*unpublished*) on
  - Legal
  - Structural
  - Economic
  - Technical
  - Business Process

aspects, effects, opportunities, and risks

Cloud and Government IT?



Overview of Findings

- **legal**
  - \- Data protection issues, ...
  - \- Influence on contract, ...
  - \- Procurement law
- **economical**
  - \+ Standardization of IT infrastructure and services, ...
  - \- Functional adaptation cost adjustments,
  - **+/-** Operating costs vs. capital costs
- **structural**
  - \+ Faster service provisioning
  - \+ Flexible bandwidth, ...
  - \- LockIn effects
  - \- Silo solutions
  - \- Compliance with governance rules, ...
- **technical**
  - \+ Standardization, scalability, ..
  - \- Identity management
  - \- Technical audit, ...

Technical Aspects

- Standardization
- Scalability
- Identity and rights management
- Tenancy, security
- Cloud Management
- Technical revision
- Patch Management

Legal Aspects

- **Public Cloud:**
  - processing of personal data largely excluded,
  - no possibility of contractual adjustment
  - “Take it or leave it” contracts
- **Virtual Private Cloud:**
  - minor customization options compared to public cloud
- **Private Cloud:**
  - offers the best conditions to meet data protection
- non-personal or not ‘very’ sensitive data are an option for Cloud usage
- Contractual issues, procurement law issues!

Data protection issues (1)

- Controller vs. processor (as of EU Data Protection Directive)
  - Controller remains responsible and accountable:
    - Data security measures: protection against accidental or unlawful destruction; unauthorized access; access logs
    - Data subject rights: information, deletion, correction, objection

    … can be hard to achieve with existing clouds
- Cross-border transfer
  - Defined within EEA (*and with a few countries where comparable levels of protection of personal data are found*)
  - Prior authorization by DPA otherwise
  - Generally prohibited in a few cases

Data protection issues (2)

- Applicable law in cross-border transfer
  - Controller has to fulfill domestic obligations
  - For cross-border permissions, the foreign processor needs to declare adherence to that obligations
    - Clouds possibly operating under various legislations
    - Further complexity with off-shoring
- Aspects to be considered
  - Access: Subject's information rights
  - Destruction: Defined policies? Residual copies?
  - Retention: How long remains data in the cloud?
  - Compliance: Against what?
  - Audit: Periodic inspections?

E-Government may be

- Informational processes
  - e.g. law information system
  - no immediate data protection dimension
- Transactional processes
  - Processing personal data
  - Authentication / quality eID plays a major role

eID Cloud – something new?

- It is changing some of the basic assumptions
- The one to one model CLIENT-SERVER is no more possible
  - it is CLIENT - CLOUD - SERVER
    - for legal considerations
    - for contractual considerations
    - for technology considerations
    - for data protection and privacy considerations
- Most users will not yet recognize this difference

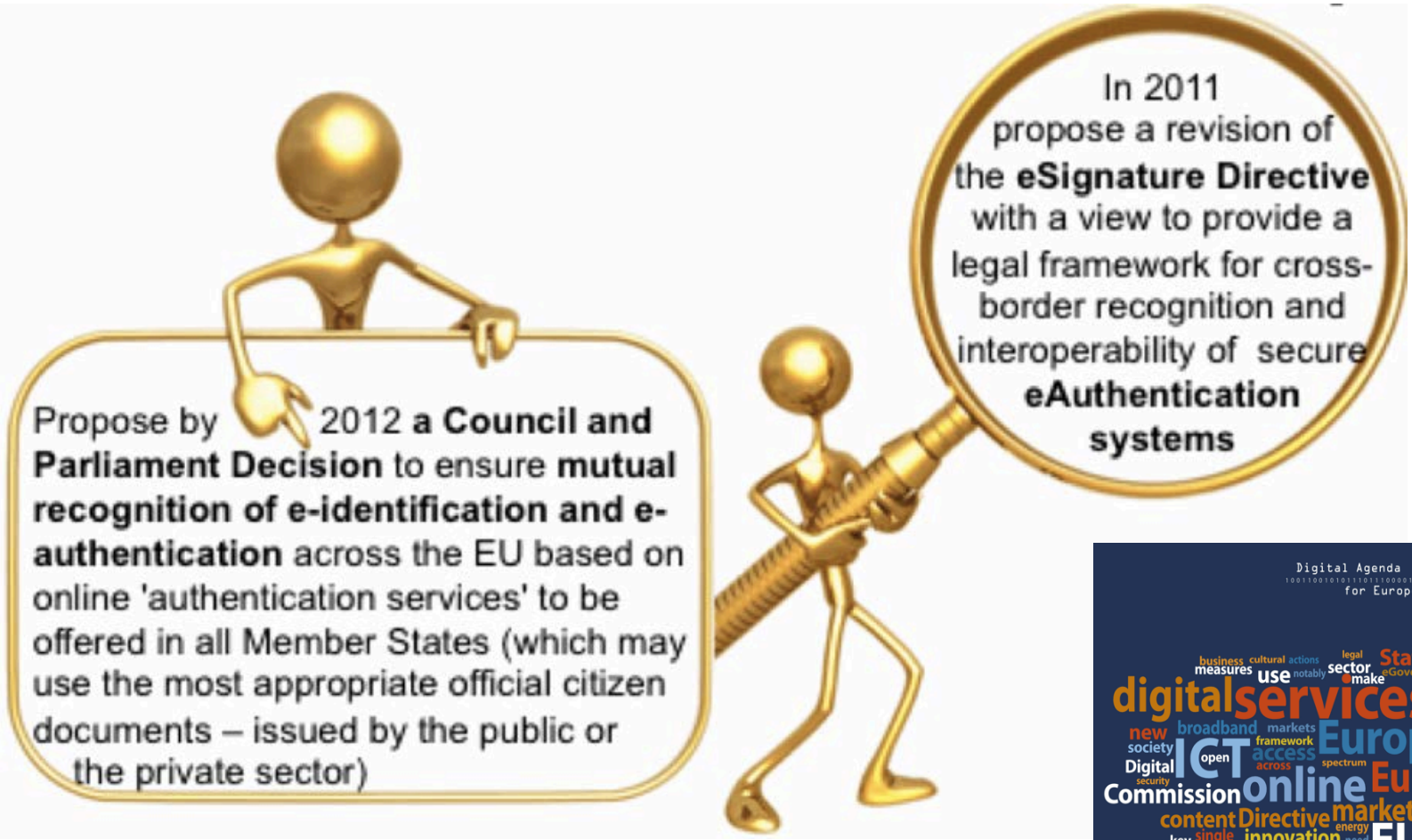
There is a difference

- eID and security will bring highly impacting changes
- The cloud will show the need to react
  - eID and technological quality
  - security and crypto-based technologies
  - policies and standards
- Yet there is a big difference
  - encryption/crypto-based confidentiality hardly possible
  - user control on the physical level non-existent

Cloud impacting eID?

- New approaches (like eID) must be “cloud compatible”
  - From the point of view of security
  - From the point of view of privacy and intellectual property protection
- We might possibly need to twist on both ends
  - In the eID domain
  - In the cloud domain
  - To yield contractual, legal/regulatory, commercial and technical acceptance

National strategy alone? Digital Agenda for Europe



STORK on EU eID interop.

- Interoperability frame-work on top of national eID infrastructure
- To a large extend relies on MS-to-MS trust
  - SP trusting MS PEPS
  - MS-to-MS protocol shielding IdPs
  - Different in “MW-model”
- **How can a Cloud fit in?**

Conclusions

- Cloud Computing on E-Government “radar”
  - Promises of cost reductions
  - Thus might assist getting efficiency gains
- Legal, technical, organizational issues
  - Citizen’s personal data in transactional services
  - May not interfere with citizen fundamental rights
  - Challenging with current public cloud contracts
- Quality eID in the Cloud to be addressed

Thank You!

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