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Sovereignty, Security, and Geopolitics

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Background

acceptability

security

authenticity

electronic administration

A LEADING EXAMPLE

e.g. AT:
a law gets only into force after being sealed electronically and on the internet

eID (eIDAS)
an intrument for trust

QWACs (eIDAS)

the private sector is:
especially on the internet – very US driven following a different risk model (mainly money oriented) -- essential for digital soverignty

Structure

- the structure of an administration has to follow the constitutional baselines – e.g. Austria is a federal state
- the overall structure has huge influence e.g.
  - on the sovereignty of a country
  - where are the data stored
  - what is authentic (name on the land register – follows the contract)
  - how can a decentralized model cope with authenticity (e.g. health care and social wellfare,…)
  - who can allign data of various registers – the user, the administration ?

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Structure

THE BIG PICTURE – THE BASIS OF DATA PROTECTION AND SECURITY

- the big picture is a clear contribution to transparency
- a big picture contributes to avoiding duplicity
- a big picture allows clarity thus security
- a big picture eases the exchange of technologies – making the use of new technologies easier

Services and Mobile

- AT – a first mover in mobile
  - Handy-Signatur in the eIDAS context
  - the first member state to notify mobile eID at level HIGH
  - AT EU-presidency „MOBILE FIRST“
- citizen strongly expect administration available in a mobile first context without the need for a „computer“
- this paradigm changes the world for services
- mobile services include some forms of Cloud
- mobile is adding complexity – needs more scrutiny with securty and remaining in the driver seat

Services and Mobile

- mobile brings a set of players into the scene of administration
  - the provider for the service of administration
  - the internet provider
  - the mobile network provider
  - the system of the mobile device (e.g. APP to APP communication)
  - the manufacturer of the mobile device
- what does this mean to security?
- what does this mean to sovereignty?
- where does the administration have an influence on the service at all – as it is increasingly using standard (private sector) technologies?

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Services and Mobile

- Services on a mobile device intrinsically will involve cloud
  - Without the user being aware or noticed
  - This has to be taken into account when designing mobile services for administrations
  - Cloud can be a hidden breaking point when it comes to sovereignty
- Cloud also limits the offline capabilities
  - When preparing data
  - When viewing results (e.g. PDF documents)
  - …

DILEMMA - COMPROMISE

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POLITICS IN THE BACKGROU

eID

- Who controls eID – **big players tend to insist on being the master of eID** (Google,….)
- Who is liable – while many service ask for control over eID liability is in most cases left behind
  - ❑eIDAS is THE EXCEPTION – liability is assigned to the Member State responsible for issuing
  - ❑eIDAS does not require explicit or implicit „extra agreements“ – such agreements would ask for prior identification and therefore a very complex legal situation

- **As one key element of sovereignty is identity the main question is HOW TO CONVINCE ESSENTIAL PLAYERS TO ACCEPT NATIVE eIDAS**

eID

- eID: basis to protect interests of users and their privacy
- eID: would be the solution to dramatically limit phishing and many other hacking activities
- eID: still not laded at system designers of many systems and **especially of cloud**

standards and openess

- Standards and open systems are the key to many tasks
  - Prevention of „vendor lock-in“
  - Cooperation among loosely coupled entities
  - Transition among providers
  - Fail safe systems as well as sovereignty
  - International cooperation

- **It needs a widely available and accepted documentation**

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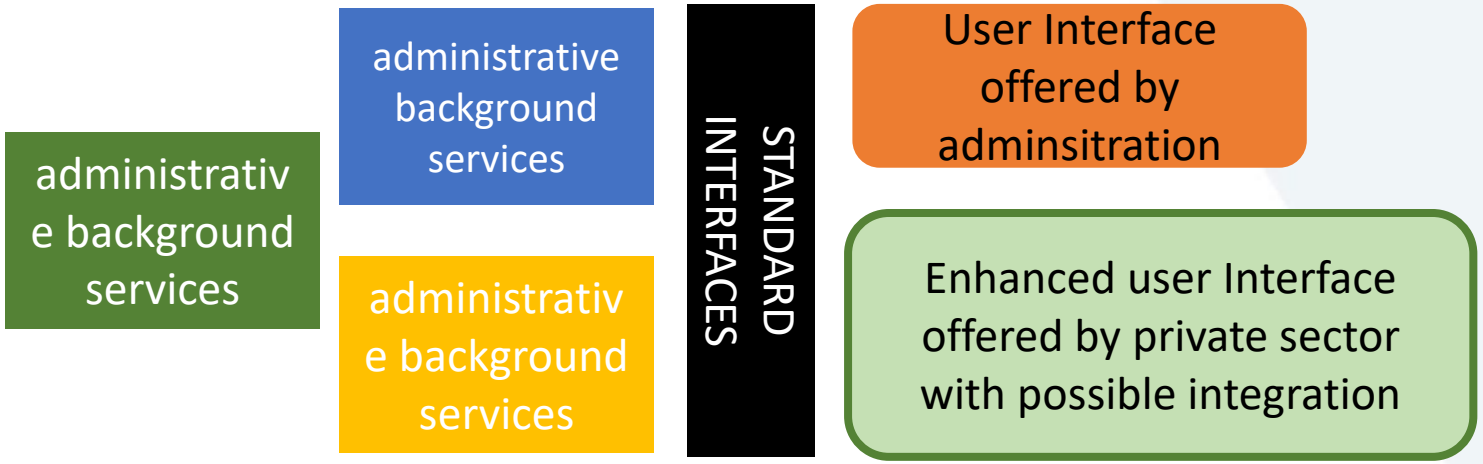
MEETING THE DIFFERENCE - LIABILITY

embracing the private sector

- The frequency of using private services is ways higher than of public services
- Intelligent integration of public and private services can ease the administrative burden (e.g. car registration, e.g. building a home,….)
- Offering standard interfaces to public services can yield a win - win situation
  - cost reduction
  - integration
  - frequent use effect



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Cloud – the elephant in the room

- Mail systems
- Social media
- Mobile devices
- Large WS packages (Microsoft, ….)
- Online platforms and services
- IOT (MQTT)
- …..

THE QUESTION IS NOT ARE WE USING CLOUD BUT HOW ARE WE USING CLOUD

CLOUD TENDS TO BE EVERYWHERE – WITHOUT THE USER BEING AWARE

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It is about HOW we use cloud

- The average user will not now where there is cloud behind
- Cloud increasingly centralizes know-how
  - To fully take advantage of the cost efficiency **know how will be reduced to a minimum**
  - **What know-how is needed to remain agile?**
- Cloud services are not interchangeable
  - **Having an increased lock-in factor**
    - Via the incompatibility
    - Via the know-how reduction

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Cloud and sovereignty

- Sovereignty of administrations has at least two aspects
  - **Not being dependent form a different administration**
  - **Ensuring confidentiality**
- **Not being dependent**
  - Where are my data today – **where will they be tomorrow**
  - What about GDPR
  - Who can **stop / modify my services**
- **Ensuring confidentiality**
  - Is encryption the solution – **beyond pure data storage?**

having met the security and sovereignty demands – is cloud still competitive?

Social media

- The political must haves?? :
  SOCIAL MEDIA, BLOCKCHAIN, ARTIFICIAL INTELLIGENCE
- Social media are under the (full) control of companies with their own interests and policies
  - What does this mean for an administration
  - Where can an administration profit from social media
  - LIABILITY
  - SOVERIGNTY
  - CONTROL

WE TEND TO SUPPORT THE WRONG ASSUMTION THAT PUBLIC AND PRIVATE SECTOR STAND ON THE SAME GROUND

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BLOCK CHAIN VS SOVEREIGNTY

Blockchain

- Like with many new technologies it is about understanding the technology
  - BLOCKCHAIN an unbreakable chain of elements PLUS each element is validated
  - **Who validates? COMMUNITY versus AUTHORITY**

- What does this mean for administration
  - The legally backed up role of the community for validation is inexistent?
  - How to match liability with blockchain?

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Blockchain – public administration

- Unmodifiable chaining can be a very valuable element
  - Proof of completeness of a file
  - Proof of turning in in time
  - Files with partial offline phases (e.g. visit of a building site)
- AT example : receipt (Registrierkassenverordnung)
  - Any business has to chain (hash-chain) all receipts.
  - Start 1.1. each year first receipt deposited
  - The rest may be offline
  - Handing out a single receipt will be proof of a criminal act if the seller changed something in the chain of previously issued receipts
  - Check only when explicitly asked for by the authority

AI AND BASIC VALUES

Artificial Intelligence

- Laws are deemed to be complete and deterministic – still it is human text not an algorithm
- There have been attempts to design legal systems interpretable like an algorithm – no real successful case known so far
- AI prepares decisions according to „similar cases and probability“ of the past
  - How to align the paradigms?
  - **Can an AI system make an administrative decision?**
  - How to handle liability and complaints about misbehavior of the AI system?

Artificial Intelligence – practical use

- It greatly depends how the system is trained
- Decision proposals might vary as the system is under an ongoing training – **the legal situation DOES NOT**
- AI can still be very useful
  - As an assistant to find administrative processes for users
  - As a tool to grab into the knowledge base – not pretending being complete!
  - In online help
  - As a learning tool

Cross border – getting non citizen on board

- eIDAS – the European solution enabling equal service for all within the EU
- Big players not acting EU-friendly
  - Not offering mechanisms and tools for digital sovereignty
  - Not offering mechanisms and tools to determine liabilities
- Legal obligations – the only way out
  - ❑**to offer eIDAS compliant native services**
  - ❑as there are also legal obligations on the other side – especially with lawful access without exception for administrative services

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eGov for all

- It is key to leave no one behind
- **We cannot and shall not force the very unskilled and the minors into digital**
- Acting on behalf – part of the solution for inclusion

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we are half way

- With standard services integrating with the private sector
- With security and transparency
- With digital sovereignty

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THANK YOU FOR YOUR ATTENTION

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REINHARD POSCH

RP Title: principles of a secure electronic administration
Short description: the overall structure of services has a substantial influence on the possible use and misuse of data. Thus the big picture not only contributes to transparency but also sets out the baseline for data protection and other aspects. We all live in a world where mobile devices play a key role in communication and data processing. This brings a set of players – the service provider, the mobile communications provider and the manufacturer of the mobile system – on the plan where users will not be aware of possible dataflows and where Cloud plays a central role. Where it comes to privacy or consent in services eID is the basis to protect the users interests. It is key to understand the impact of Cloud not only on privacy but also on sovereignty especially as the way into Cloud is often one way. From a public administrations point of view – we might use public services like a few times a month and private services several times a day - openness is the only way to harvest synergies with the private sector. Public administration is challenged to use Social Media as well as new technologies like Blockchain and Artificial Intelligence – how will these technologies change public administration? How to get non residents on board? This are specific challenges for an „eGov for all“ approach that still reflects the values of the society and in many cases public services exhibit clear differences compared with the private sector.