Justitia 4.0
Digitalization of the Swiss Justice System

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Disclaimer:

The speaker has been the responsible project manager for developing and implementing of the platform until April 2024. This speech reflects his personal opinion and is no official communication from the Justitia 4.0 program. All information in the slide deck are derived from public sources.

Program Justitia 4.0

- erklaervideo_de.mp4

Challenges within the Justice System in Switzerland

- Tons of paper
  - The digitalization efforts within the justice system have only started a few years ago
  - The current IT-systems are predominantly outdated on a technical view and have been designed and developed as stand-alone systems; no generally accepted technology standards exist
  - Existing legal rules and regulations partially force the public authorities to deal with physical files and documents

- Federal structures
  - The justice system lays predominantly within the responsibility of the Cantons (comparable to the States in the US)
  - There are at least 27 (26 Cantons plus Federal level) different legal bases, responsibilities, sets of rules and regulations, business processes, public administrations and «Digitalization Strategies»

- Cultural bias towards preserving the status quo
  - The justice system (courts, justices etc.) applies the existing law. Changing the law is not its job (separation of power). This axiom is heavily reflected in the culture of this authorities. Many people and institutions involved react very reluctantly towards change.

Program Justitia 4.0

- The goal of the Justitia 4.0 program is to lead the digital transformation of parts of the justice system.

- Starting in 2019 the program is planned until 2029.

- The program is financed by the Cantons (KKJPD) and the Federal Court
  - Cost estimation: CHF 85 mio.

- Besides the Justitia 4.0 program there is another program in place financed by the Cantons to harmonize the IT in the area of the criminal justice.
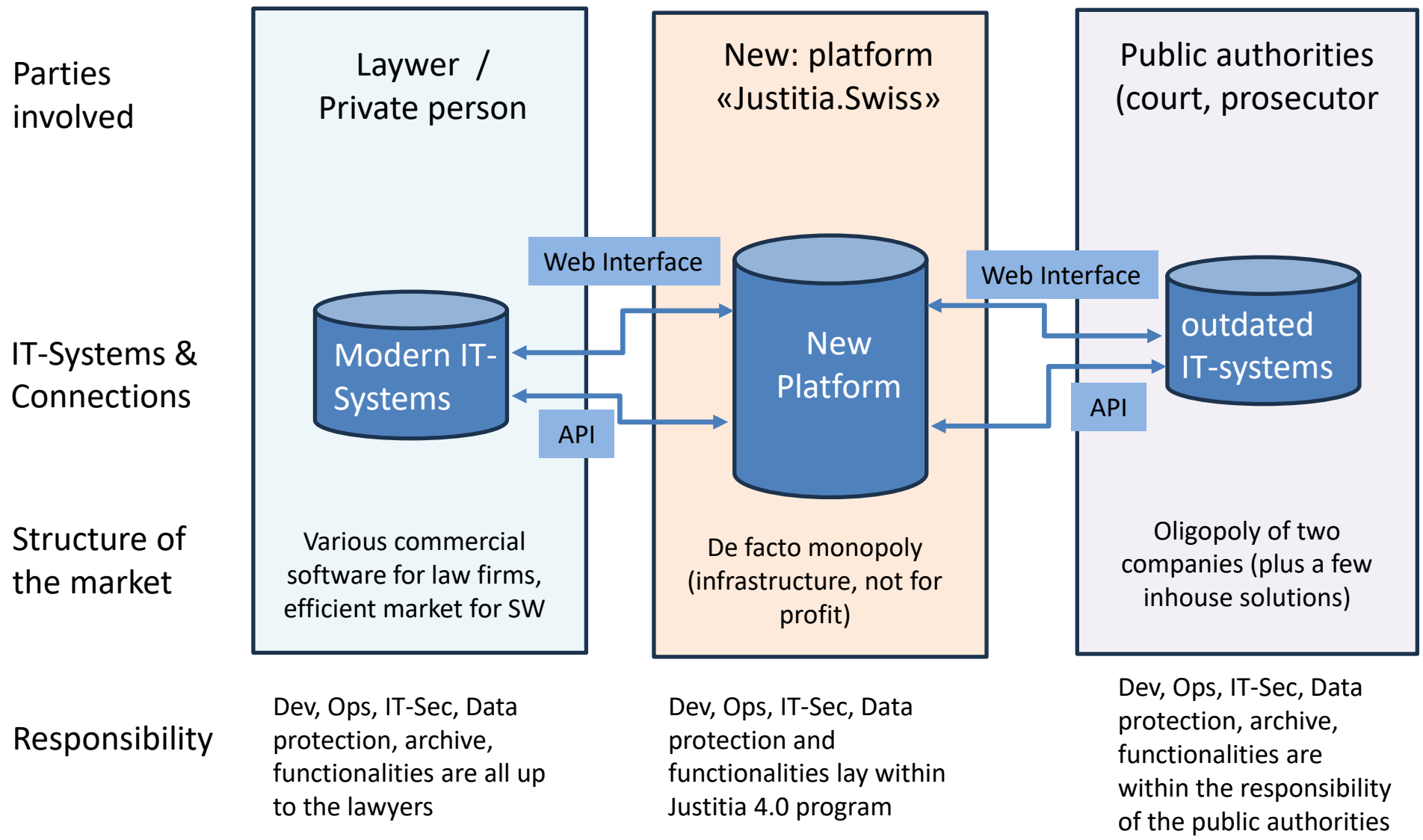
Platform Project «Justitia.Swiss»

- The core of the entire Justitia 4.0 program is the exchange platform «Justitia.Swiss»

- All non-verbal communication between lawyers or private persons and the justice authorities as well as the authorities between themselves will be transported on a mandatory basis via platform.

- The development of the platform has been realized with external partners like Zühlke (Dev) and ELCA (Ops)

- Project budget has been roughly CHF 6 mio.

- The legal basis for the platform, the BEKJ law (Bundesgesetz über die Plattform für die elektronische Kommunikation in der Justiz) is not ready yet. It will be part of the next legislation session in the Council of States. After this, the details of the implemention of the law (Verordnung) will be developed. The platform has therefore been developed on a educated guess basis to the best of our abilities to safe time.

- **The platform went live on April 2nd 2024 within the financial budget, the timeframe set and the functionalities required.**

Areas of responsibility within the eco system

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Parties involved	Laywer / Private person	New: platform «Justitia.Swiss»	Public authorities (court, prosecutor

IT-Systems & Connections

Modern IT-Systems — Web Interface → New Platform — API → ← Web Interface — outdated IT-systems — API

Structure of the market

Various commercial software for law firms, efficient market for SW	De facto monopoly (infrastructure, not for profit)	Oligopoly of two companies (plus a few inhouse solutions)

Responsibility

Dev, Ops, IT-Sec, Data protection, archive, functionalities are all up to the lawyers	Dev, Ops, IT-Sec, Data protection and functionalities lay within Justitia 4.0 program	Dev, Ops, IT-Sec, Data protection, archive, functionalities are within the responsibility of the public authorities

Functionalities of the platform «Justitia.Swiss» MVP version

- Transactions and viewing rights between the parties involved

- All files are individually encrypted on the platform
  - No clear information visible even for platform administrators (or successful attackers)
  - Even in an unlikely event in which an attacker could get into possession of a key, only one particular file would we affected

- All files are virus scanned before being stored on the platform

- Platform runs 24 / 7 in three different data centers

- Access via Web portal and API
  - Some SW providers for law firms are already using the label "Platform ready" in ads

- Authentication of users is done by multiple external IDP providers

- WCAG 2.1 AA certified for accessibility

Characteristics of the platform «Justitia.Swiss»

- All code is open source (public money, public code) without a license
- The platform has been developed according to „privacy by design" and „privacy by default" practices
- The platform is ethically correct. It does what it has to do, nothing less but also nothing more (no hidden functions)
- No AI, no content based analytics
- No content can be seen in clear form by the Operators of the platform
- Data are only stored on the platform as long as it is needed for the justice case. No archive functionalities are provided except the log files
- System is hosted in Switzerland on designated Hardware owned by Justitia 4.0, no access from abroad
- Operators are checked for security
- Operation Model with reports, checks, audits rights etc. has been established

Lessons learned

- Importance of stakeholder management
  - Taking care of all user groups is crucial but finding the optimal level of ignorance is key
  - Take one step at the time and continuously communicate

- Agile SW development within a non-agile project framework is a nice challenge
  - Agile sounds good and modern, but only a few protagonists in the public sector really know what it means

- Strong external partners are key
  - Let the pros do their work

- Decision making
  - «It's much easier to ask for forgiveness than for permission»
  - Nothing is hampering the success more than decisions not taken

- Test, test, test
  - Distinction between a bug and a missing functionality is difficult to explain to average users

- Strong focus on the Operation Model from the beginning

Questions and Comments

? !

annex

Sendungsfluss Dokumente auf der Plattform (Dateien)

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J 4.0

Sendungsfluss Beispiel

Verfahrensbeteiligte

Verfahrensleitung

Profil-Speicher Schlüssel

IDP

IDP

Dateien

www.justitia.swiss

Geprüfte Dateien

Verschlüsselte Dateien

Dossier stor

Dateien

www.justitia.swiss

Virus-check

Encryption

Decryption

TLS

Pro Datei

Siegelung der Hashwerte der Sendung

Justitia.Swiss

TLS

Hashwert

Anwälte Private

Eingangsquittung

Gerichte Stawa.

Abruf-, Nichtabholquittung

Systemgrenze der Plattform Version MVP