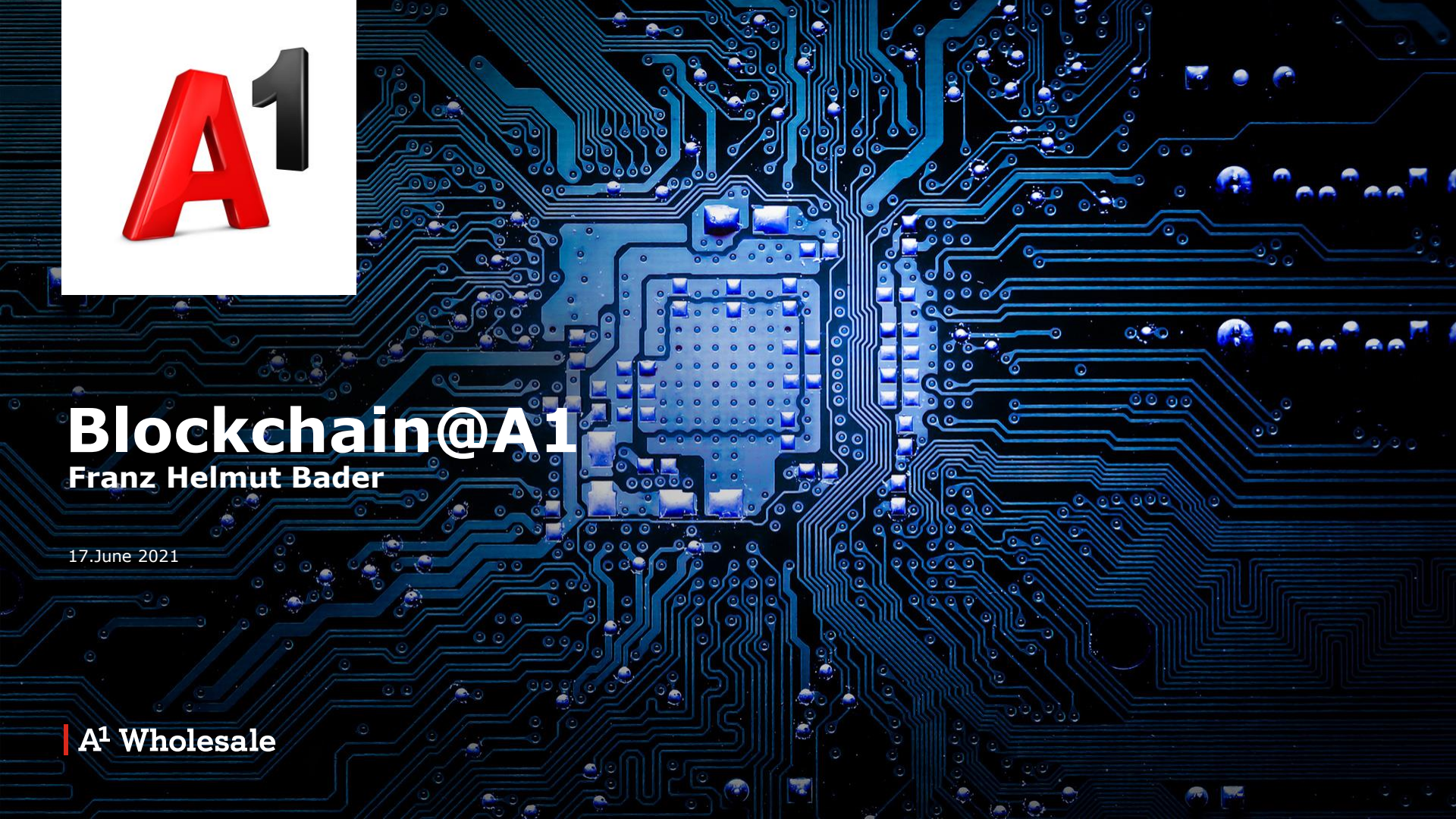


Blockchain@A1

Franz Helmut Bader

17.June 2021

A1 Wholesale

Wholesale is enabling Telecommunication Services world-wide.

Wholesale

Mobile
Mobiel Date &
Operator Billing

Voice
Voice Interconnetion

Roaming
Roaming Agreements

Satellite
Broadcasting

Data
Connectivity &
IP Upstream

Retail customers

…can use their mobile abroad.

…are able to call anybody worldwide.

…can pay digital content via mobile phone.

…can have access to the internet worldwide.

…are able to watch TV from everywhere.

Draft for internal discussion

Industry challenges meet DLTs

dispute resolution

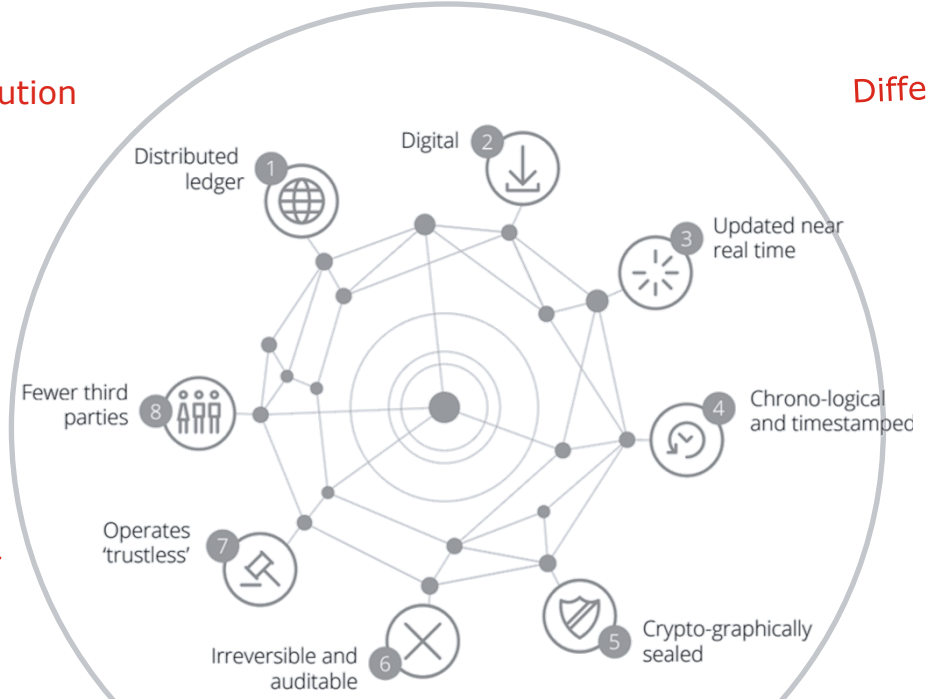
Data Clearing

Financial Clearing

Coopetition and trust

New services

exposure to fraud



Differing standards

Manual processes

timelines for delivery

SLA management

emerging traffic types

Draft for internal discussion

The idea is to unlock this potential through industry-wide collaboration.

- Design a collaboration **network of carriers** with support from vendors, and industry bodies

- Establish **Blockchain** as a trusted single source of truth

- Develop **Smart Contract** based applications to enforce commercial agreements and to drive automation

- Collaborate with industry bodies to thrive standardization, co-develop Usecases, and drive adoption

Draft for internal discussion

CBAN was founded in 2020 to take control of the governance for this collaboration network

_cban

Communications Business Automation Network

MEMBERSHIP & GOVERNANCE

COLLABORATIVE DEVELOPMENT

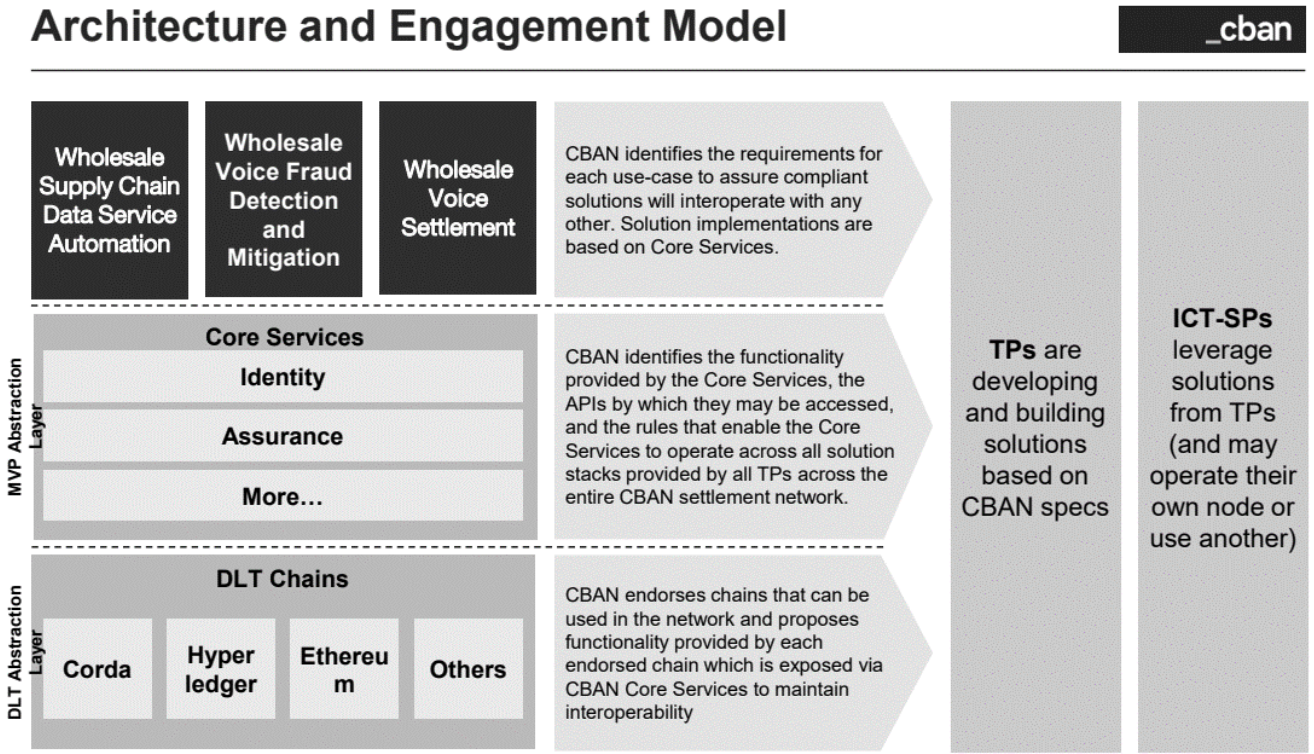
ADOPTION OF STANDARDS

CBAN Members

A1 Telekom Austria Group, colt, PCCW Global, 中国电信 CHINA TELECOM, LUMEN, vodafone, TELECOM ITALIA, Telefónica, TELSTRA, BT, orange, BTS Business Telecommunications Services, HGC GLOBAL COMMUNICATIONS 環球全域電訊, GLOBAL CLOUD XCHANGE, IDT, T · · ·

Draft for internal discussion

The CBAN reference architecture is the glue that ensures vendor interoperability and enforces network governance



www.cban.net

Draft for internal discussion

Current focus is on four initial usecases

Voice Settlement

- Rating, reconciliation, and settlement of international voice traffic
- *Proof of concept completed*

Data on Demand

- Supply chain for DoD services

Mobile Roaming

- Calculate and Settle Discounts
- *Trial running since 08/2020 with several partners*

Fraud Mitigation

- Identify/Verify WS Fraud
- Specification work ongoing
- *PoC planned*

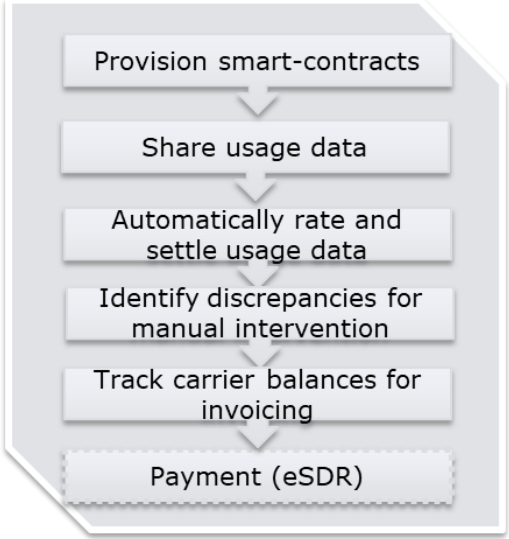
Draft for internal discussion

Voice Settlement

Draft for internal discussion

Goal: Improve the quality and speed of settlement by reducing disputes and automating inter carrier processes

- **Main challenges:**
  Differing standards/processes from carrier to carrier; rating complexity; GDPR; paper/smart contract coexistence; sales will have to adapt; no replacement of old billing system; market adoption
- **Team:**
  Stephan Baudisch(PM); Gerhard P. Leitner(IT); Gottfried Marschitz & Gerald Anderka(WS Billing); Julia Trögl (Sales); Andreas Obermayer (Routing)
  + external vendor(MVP development)
- **Next Steps:**
  Redesign scope to increase MVP efficiency and extend the PoC

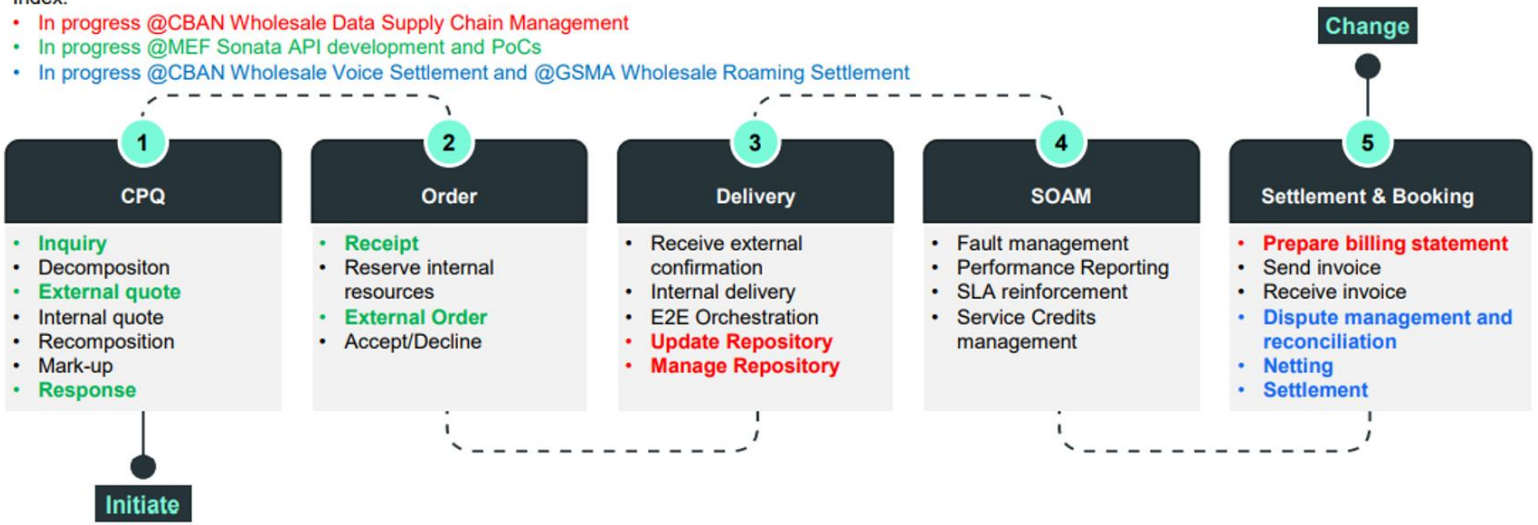


Data on Demand

Draft for internal discussion

Goal: Unleash the commercial potential of on-demand services and benefit from new revenue streams from existing network infrastructure.

Index:
- In progress @CBAN Wholesale Data Supply Chain Management
- In progress @MEF Sonata API development and PoCs
- In progress @CBAN Wholesale Voice Settlement and @GSMA Wholesale Roaming Settlement



Mobile Roaming

Draft for internal discussion

Goal: reduce the time and efforts involved in managing roaming discount agreements (negotiation, calculation, reconciliation, dispute management)

- **Main challenges:**
  complexity and diversity of commercial models; integration with clearing houses; GSMA alignment; market adoption
- **Team:**
  Stephan Baudisch(PM); Nizar Sadellah(Roaming); Gerhard P. Leitner(IT);
  + external vendor(MVP development)
- **Next Steps:**
  Commercial Launch by XMAS; expansion to Billing and Charging Evolution (BCE); interoperability with other ledgers/vendor solutions

Fraud Mitigation

Draft for internal discussion

Goal: Use the power of CBAN and Blockchain technology to identify and proof fraud (verify CLI, Origination and Termination of calls)

- **Main challenges:**
  complexity and diversity of commercial models; integration with legacy systems; market adoption
- **Team:**
  Stephan Baudisch(PM); Manfred Moormann(Business Development); Djordje Jovicic(Product Management); Gerhard P. Leitner(IT); Stefan Langer (IT)
- **Next Steps:**
  Make or Buy decision; Proof of Concept; extend to other fraud cases; integrate with other MVPs for process automation (report, dispute, billing)

Conclusions on voice and roaming testruns clearly highlight the potential.

- **Ultra fast reconciliation** process **in minutes** instead of month and years
- **Fewer disputes**: The availability of a shared single source of truth can reduce the number of settlement disputes **up to two thirds**.
- **Dispute activities get streamlined** through standardized data exchange, workflow integration, and automation rules. (reduce time from weeks or even months down to days, with less people involved)
- Faster settlement time **improves cash flow** and can enable even shorter cycles.

Scale effect depends on number of carriers and usecases!

Draft for internal discussion

This is just the beginning. There is more on the horizon…

- **Add new features to usecases**
  (e.g. VoLTE/5G Roaming)
- **A1 intragroup adoption**
  (for internal efficiency gains)
- **Introduce new usecases**
  (e.g. DoD, network slicing, IoT-SLA)
- **Expand the ecosystem**
  (e.g. MOBI group)
- **Eliminate 3rd party intermediaries**
  (e.g. Clearinghouse, epayment)

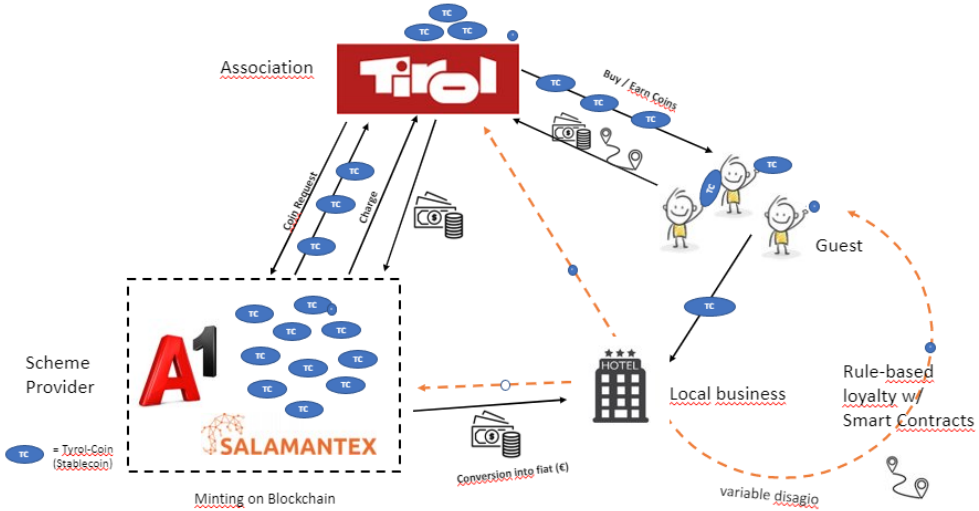
Draft for internal discussion

Other Blockchain projects @ A1

Tokenisation-as-a-Service

We provide a scalable token aaS platform for ecosystems. Ecosystems use this loyalty coins (eg. Tyrol-Coins) as a sort of local currency to foster local consumption: Hotels, gastronomy, commerce.

- economic promotion of a local ecosystems
- increase of local revenues
- preventing the outflow of funds abroad
- higher tax incomes
- incentivize behavior of people within the ecosystem



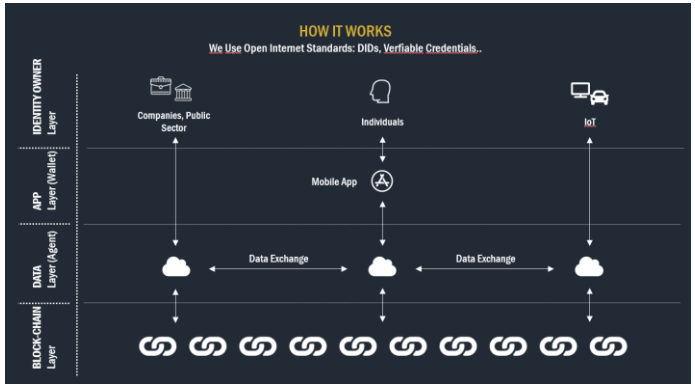
Draft for internal discussion

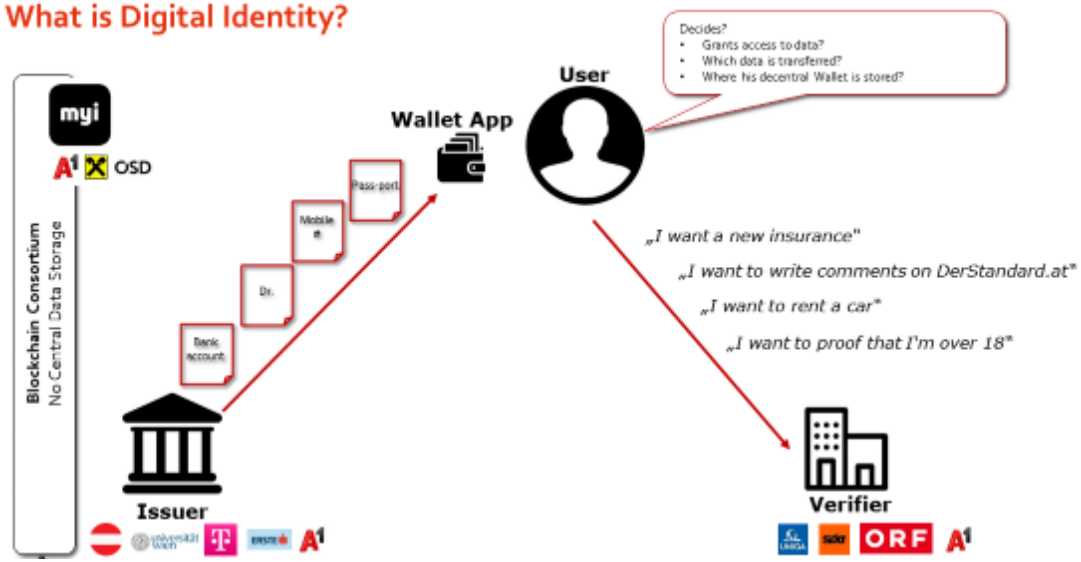
Other Blockchain projects @ A1

Digital Identity (self-sovereign Identity)

We provide a solution for verified digital identities based on DIDs (decentralisied identifiers) and citizen wallets. We provide an attribute ecosystem.

- prove identity in a digital world
- account and password management
- data security & privacy
- Improve & automate business processes





Draft for internal discussion

Thank you
A1 Wholesale