

TeleTrust-Informationstag "Blockchain"

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B2B Marketplace Platform

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TeleTrust
Pioneers in IT security.



B2B Marketplace Platform



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Very Special Thanks to Sama Partners for the Sponsorship of our Participation at the
TeleTrust Blockchain Conference on the 13th of July, Frankfurt am Main.

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Agenda



1. Motivation & Use Case Introduction
2. UI / UX
3. Blockchain Benefits & Concerns
4. Blockchain Maturity
5. B2B Market Scenario
6. Technology Stack
7. Hyperledger Fabric Challenges
8. Q&A



Steffen Ortolf

Blockchain, AI & IoT Engagement Manager at Deutsche Bahn



Dr. Michael Kuperberg

Lead Blockchain Architect at Deutsche Bahn

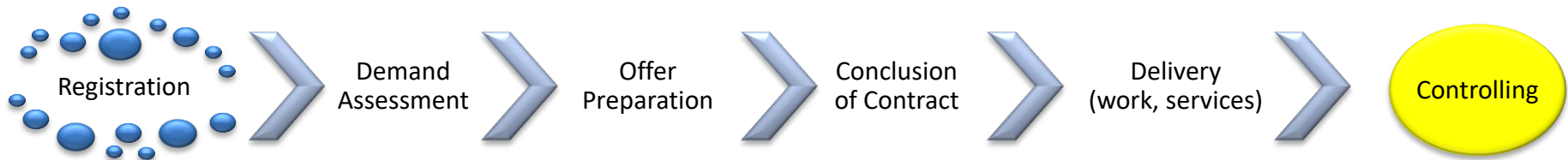


Bertalan Vecsei

External Blockchain Architect at Deutsche Bahn

1. Motivation & Use Case Introduction

- Service procurement within an existing commercial relationship, for pay-as-you-go and fixed-scope services



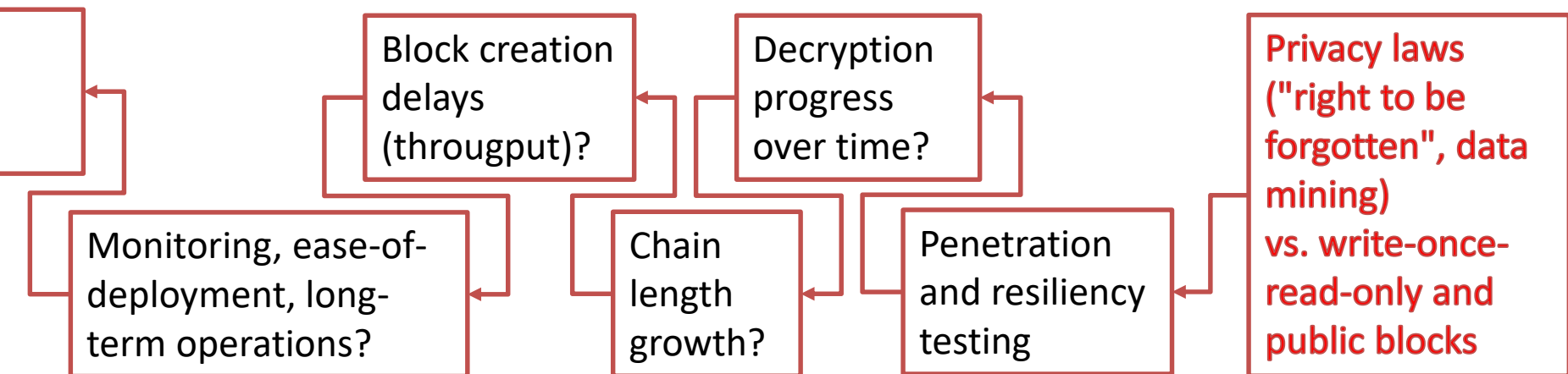
- **Streamlining the process – disruptive if beneficial**
- End-user first: satisfaction in browser, on mobile devices, in Windows 10 apps
- Standardization, eliminating legacy dependencies and interfaces
- **Trustworthy** contract lifecycle and replicated storage; automation
- Transparency, auditability, improvement of *business performance*
- **Blockchain for trust, out-of-the-box security:**
non-repudiation, tampering protection, etc.
- Marketplace approach and a "platform" with high reuse potential
- Initial release: two *internal* business units (ca. 15 users), simple onboarding
- Vision: Blockchain Smart Contracts to trigger payments once these are due

3. Blockchain Benefits & Concerns

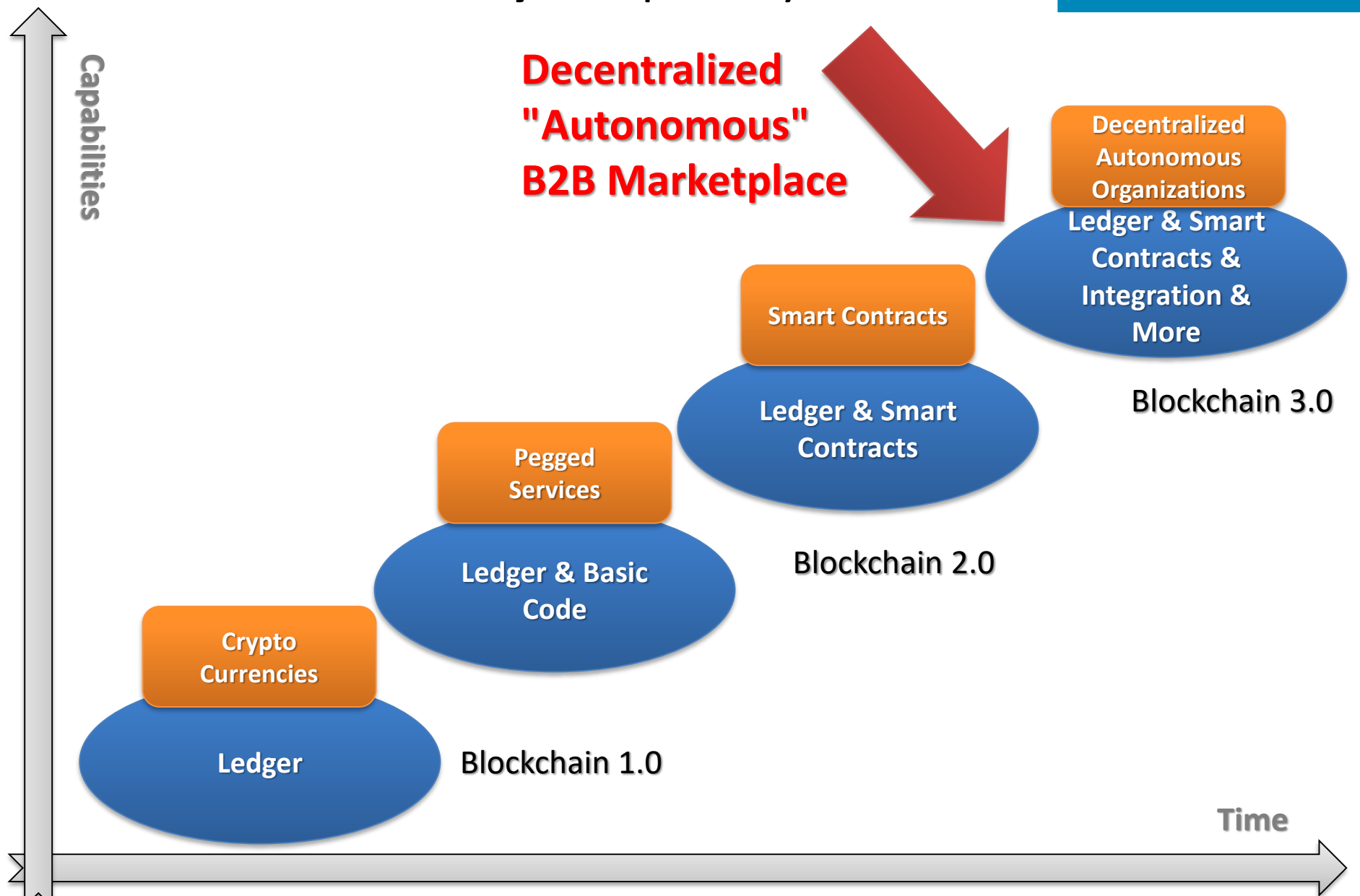
- Replication, cryptography out-of-the-box – but without guarantees! Efficiency, speed?
- Initially "Swedish tax records" approach to privacy, unlike in traditional integration tools
- Early/hyped technology: cryptoassets (Bitcoin, ...) are the major public application → project risk, moving target
- Integration into orchestrators and of third-party systems: major challenge (cf. self-scheduling, endorsement, transactions/rollbacks, interfaces)



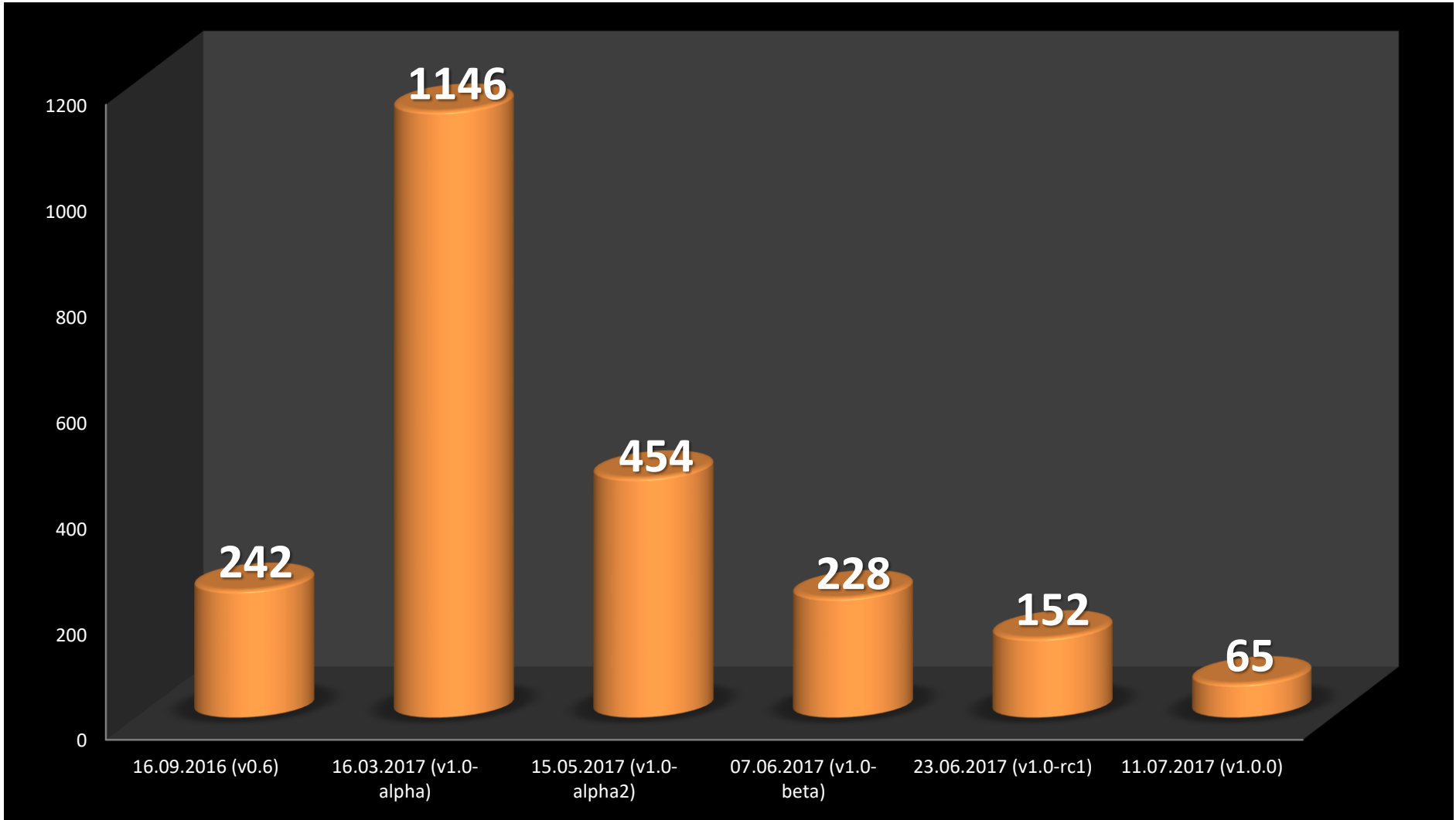
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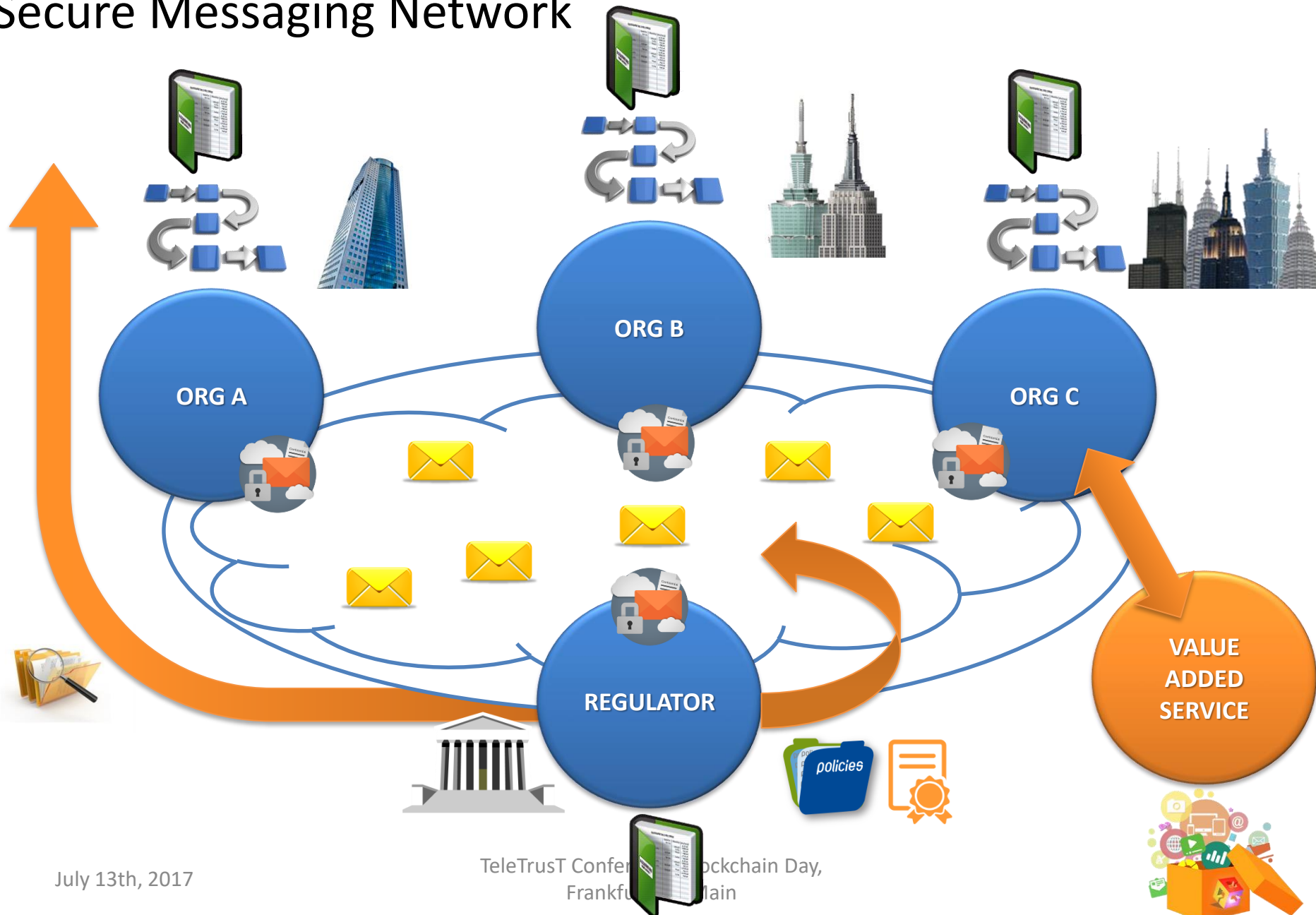
4.1 Blockchain Maturity – Capability Evolution



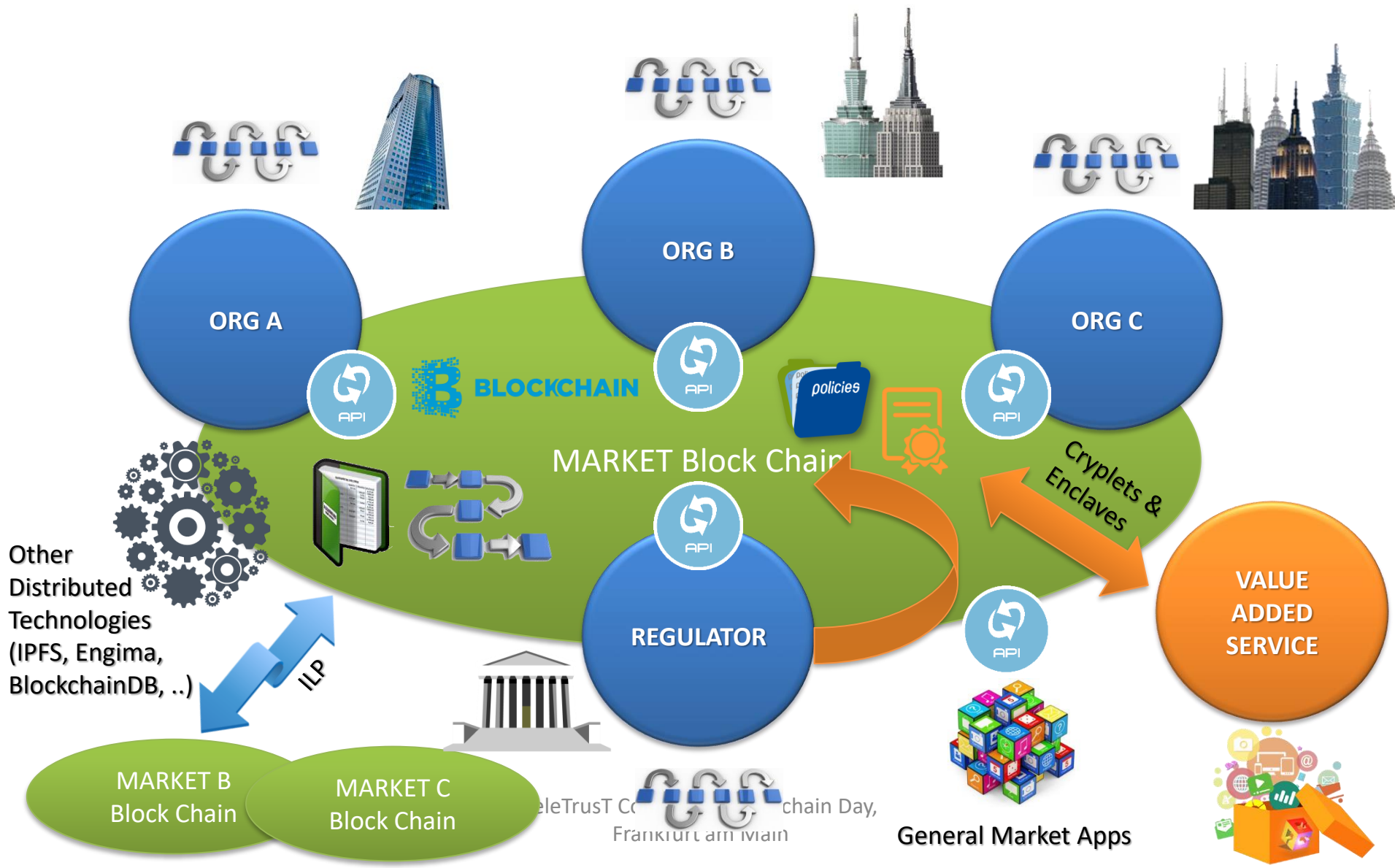
4.2 Blockchain Maturity – Technology Stability



5.1 B2B Market Scenario Today: Secure Messaging Network

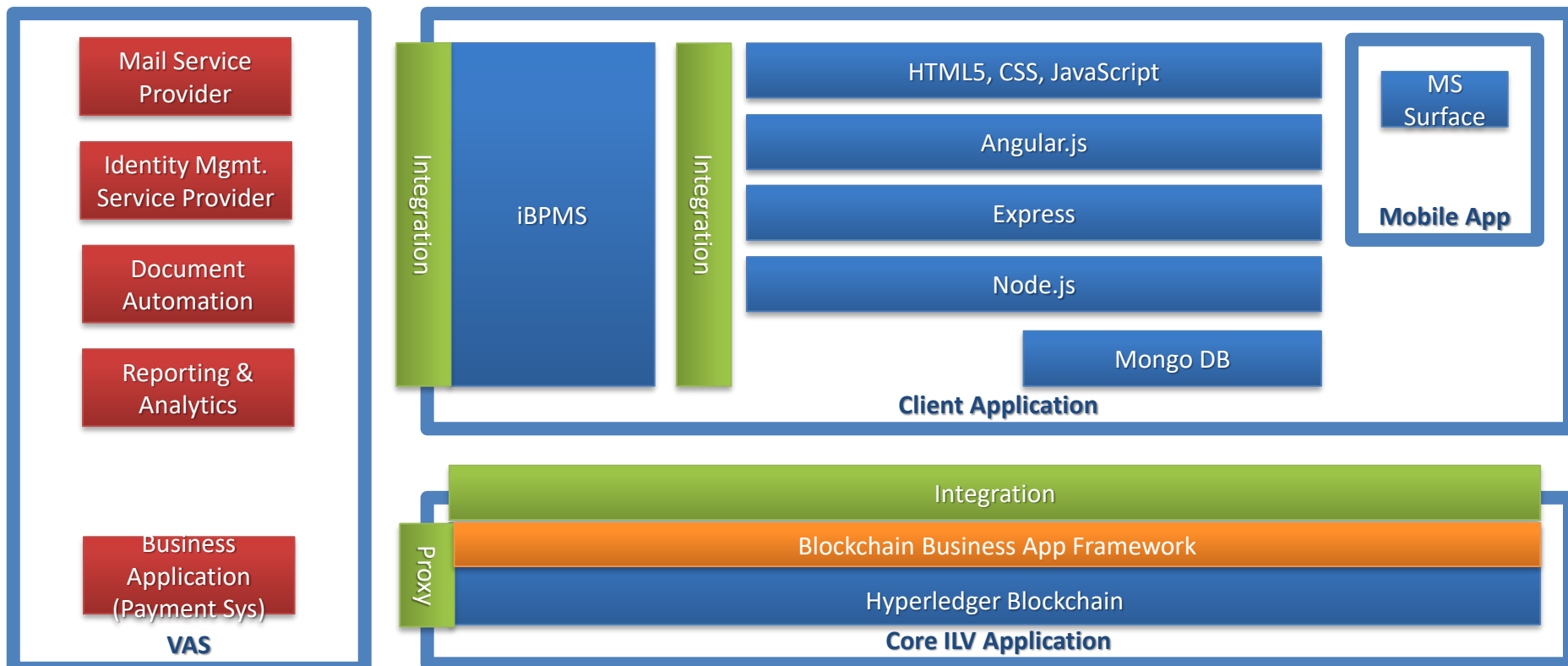


5.2 B2B Market Scenario Tomorrow: Shared Blockchain Ecosystem



6. Technology Stack

- Amazon EC2 Cloud
- **Hyperledger Blockchain** (Docker, Java CC, Node.js SDK)
- Standard **MEAN Web App** Framework (Mongo, Express, Angular.js, Node.js)
- **Web Technologies** (HTML5, CSS, etc.) & Frameworks (Bootstrap, SASS, jQuery, etc.) & UX Design (Sketch)
- Stateful Process Orchestration & Workflow Component (**iBPMS**)
- Integration via Event Driven & Service Oriented **Middleware** Technologies (REST, ActiveMQ, JBoss MW, etc.)
- **Document Automation** (XSL-FO, Apache FOP, etc.)
- **Legacy** Application Technologies
- **Microsoft Surface** (C++ / C# / Microsoft Visual Basic / JavaScript & HTML5)
- **Blockchain Business App Framework** (custom framework built on top of Fabric utilizing several other Technologies)



7. Hyperledger Fabric Challenges



Secure "DB & Procedures"

Hype & Interest

IBM, SAP, Accenture, 142+ Members

Adoption of Cryptocurrencies



Plug & Play

Open Source

Integration

Interfacing (Lib vs Service)

Stability (Java, DEV Mode)

Content Management

Infrastructure & Performance

Business Logic Positioning

???

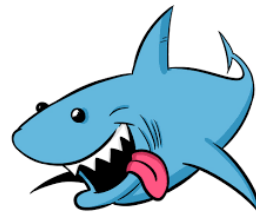
Know-how & Support

Security (Privacy)

Pure Technology vs. Business App.

Consensus & Concurrency

Regulations "Right To Be Forgotten"



Lack of certain Capabilities, Features

Migration, Replay

Chaincode Lifecycle Mgmt.

THANK YOU



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July 13th, 2017

TeleTrust Conference Blockchain Day,
Frankfurt am Main

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