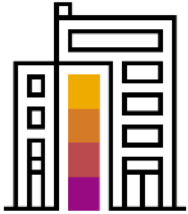


SAP Innovation Awards 2021 Entry Pitch Deck

Providing Trust to Contract Management via Hyperledger Fabric Blockchain

MHP Management- und IT-Beratung GmbH

PUBLIC



Company Information

Headquarters Ludwigsburg, Baden-Württemberg, Germany

Industry Automotive, Manufacturing

Web site <https://www.mhp.com/de/home>

- MHP Management- und IT-Beratung GmbH is one of the leading consulting companies, founded in 1996 and a subsidiary of Porsche AG (81.8%)
- Currently, more than 2,800 employees from 19 locations advise and support over 300 customers worldwide.
- MHP's special consulting approach is the symbiosis of management and IT consulting. As a digitization expert, we optimize and digitize our customers' processes across the entire value chain with our Management Consulting, System Integration, Managed Services and Digital Services and Solutions service areas.
- As an industry expert - especially for mobility and manufacturing - we offer our customers not only comprehensive IT expertise, but also in-depth management and process know-how. We also transfer strategic innovations to other industries.
- On a national and international level, we support companies both strategically and operationally. With extensive international project experience, an established partner network and our international locations, we support our clients in their (inter)national projects and globalization plans.

Contract Management via Hyperledger Fabric Blockchain

MHP Management- und IT Beratung GmbH



The blockchain provides us transparency and trust to the contract initiation and management, between us and our suppliers - without the need of any third party!

Challenge

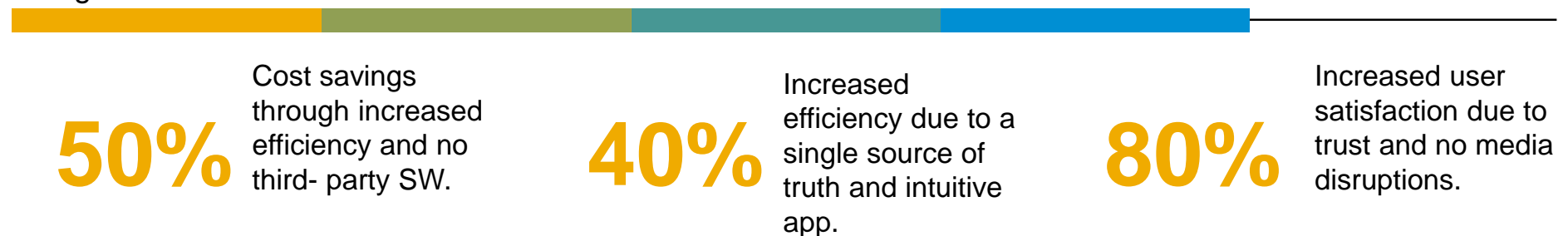
The contract management processes of our customers are highly non-transparent and inefficient. Media disruptions result in uncertainty about compliance and contract/offer data authenticity. A third-party platform is costly and difficult to securely link with e.g. on premise financial systems.

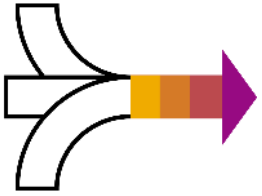
Solution

A common, intuitive contract management platform was built with an SAPUI5 user interface. It offers the sharing of documents without the need of a trusted third party. A blockchain as security layer thereby guarantees the process documentation, general compliance and data immutability certification.

Outcome

Our POC proved the SAP Cloud Platform-based realization of a contract management platform. Thereby, blockchain increased the process transparency, compliance and efficiency without trusted third parties. The SAP Cloud Platform enables future direct links to internal on prem systems and use cases as blockchain-based billing.

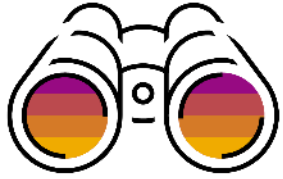




Business Challenges and Objectives

- Our customers contract initiation and management processes are highly non-transparent, inefficient and not compliant with processes due to existing media disruptions.
- The absence of trusted administration platforms results in uncertainty about process compliance and data authenticity.
- Offer and contract documents are changeable or manipulatable after contract conclusion.
- Third-party contract management platforms are unwanted due to their high costs, difficult compatibility with sensible data and difficult link with on premise systems.

-
- Concept a simple, but truthful contract management application on SAP Cloud Platform using a user centred approach like Design Thinking and realize it based on Blockchain.
 - Enable contract initiation, management and monitoring in a secure, trustful and user-friendly way.
 - Enforce contract management process compliance and data immutability as well as their proofs.
 - Include user management, user roles and digital approval processes.
 - Allow in future an easy and high secure connection of contract data with master data and finance processes in S4 systems (Outlook: POC step two).



Project or Use Case Details

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Benefits and Outcomes

Business or Social

- Increased efficiency of 40% because employees spend less time per contract thanks to created single source of truth and intuitive app design
- Enablement of trust between contracting parties and avoidance of financial losses through absolute process transparency and document security
- Avoidance of non-process-compliant contract conclusions due to automatic compliance proofs

IT (optional)

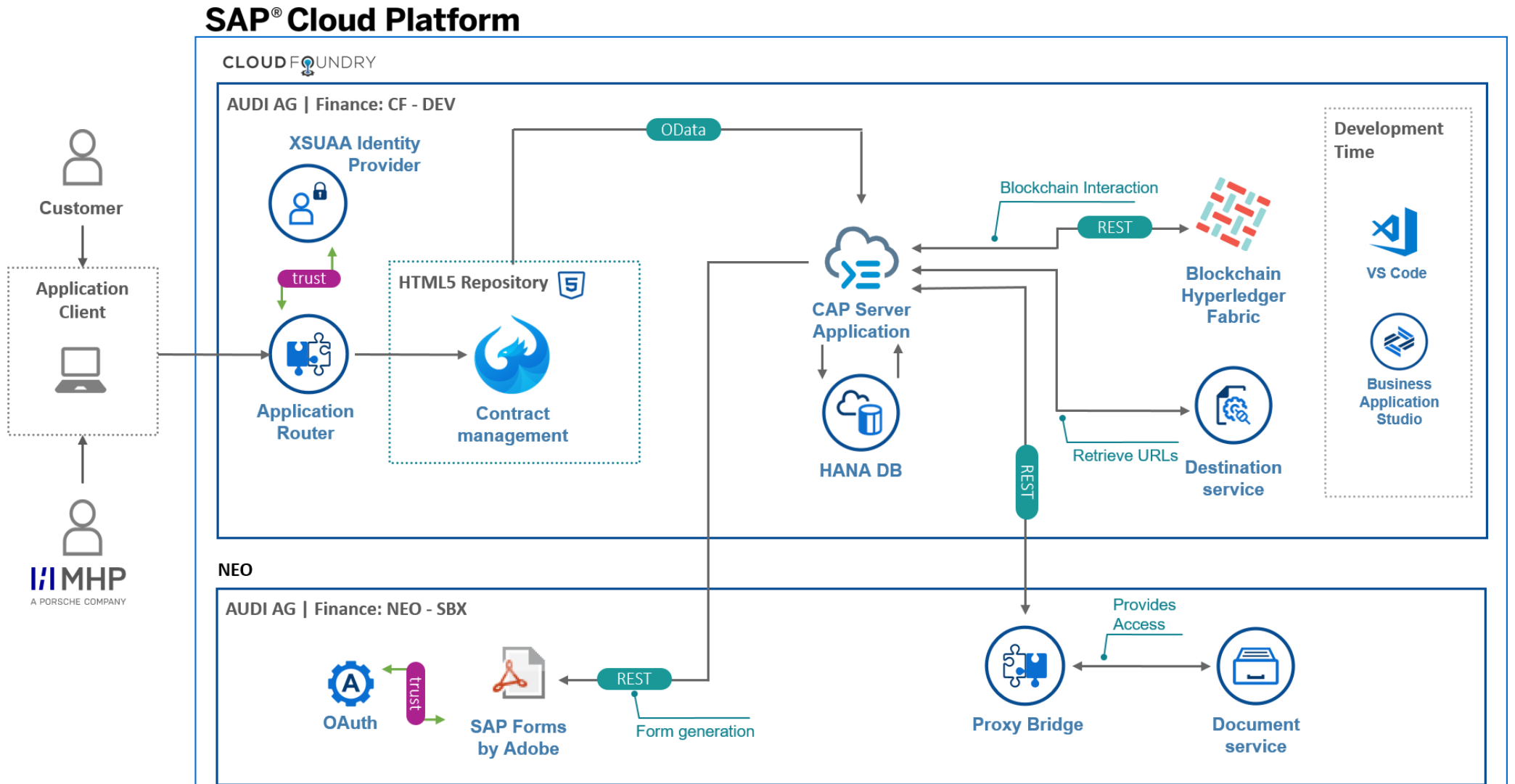
- Increased document security and immutability as well as the possibility for validation based on blockchain
- User friendly and self-explaining SAPUI5 user frontend
- Usage of SAP Cloud Platform allows secure connection to SAP S/4HANA on premise booking and finance systems for later imports of e.g. sensible master data
- Cost reduction of up to 50% due to replacement of expensive and non-trusted third-party software

Human Empowerment

- Increased usability because of intuitive and clearly arranged SAPUI5 application
- Increased user satisfaction by 80% because the absence of media disruptions and overfilled email inboxes let users be less stressed
- More time for more value-adding tasks for the employees: e.g. quality checks, involvement of the legal department, strategy development



Architecture





Deployment

Deployment status POC

Date **Number of users** Ten test users

SAP® technologies used: SAP product		Deployment status (live or proof of concept [POC])	Contribution to project
1	Hyperledger Fabric Service on SAP Cloud Platform	POC	Trust layer: Immutable and secure storage for process history and document authenticity proofs (hashs)
2	SAP HTML5 Application Repository service for SAP BTP	POC	Representation of user friendly and intuitive application
3	Document Service on SCP Neo	POC	Storage of exchanged data (e.g. offer, NDA)
4	SAP Forms by Adobe	POC	Autom. creation of order confirmation incl. process history
5	SAP Cloud Application Programming Model	POC	Orchestration of CF and Neo services (Business Logic)

If you have used one or more of the services or support offerings from SAP Services and Support during the implementation or deployment phase, please indicate which one(s) below with an

- | | | |
|--|--|--|
| <input type="checkbox"/> SAP MaxAttention™ | <input type="checkbox"/> SAP ActiveAttention™ | <input type="checkbox"/> SAP Advanced Deployment |
| <input type="checkbox"/> SAP Value Assurance | <input type="checkbox"/> SAP Model Company | <input type="checkbox"/> Others: |
| <input type="checkbox"/> SAP Innovation Services | <input type="checkbox"/> SAP Innovative Business Solutions | |



Advanced Technologies (1 of 2)

The following **advanced technologies** were part of the project.

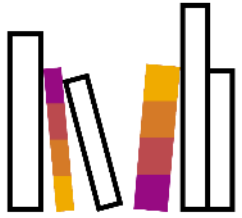
Technology or use case	Product used*	Contribution to project and how product used integrates with SAP products
1 Machine learning or artificial intelligence Robotic process automation, conversational AI, AI-based knowledge graph		
2 Intelligent data management Multi-cloud, data virtualization and governance, smart data tiering, persistent memory, data privacy		
3 Advanced and augmented analytics <ul style="list-style-type: none">• Real-time and streaming analytics, spatial analytics• Natural language query and generation• AutoML to identify trends, patterns, outliers• Predictive analytics (time series analysis and forecasting, regression, classification)		
4 Data and analytics solutions in the cloud <ul style="list-style-type: none">• Unified data and analytics cloud platforms by SAP• Modern/self-service data to analytics		



Advanced Technologies (2 of 2)

The following **advanced technologies** were part of the project.

Technology or use case	Product used*	Contribution to project and how product used integrates with SAP products
5 Advanced cloud integration <ul style="list-style-type: none">• API economy (monetization and API marketplaces)• AI-based or crowdsourced integration• High throughput, low-latency digital integration hub		
6 Industry cloud platform		
7 Blockchain	Hyperledger Fabric	<ul style="list-style-type: none">• Realization of contracting business logic via smart contracts (example: a contract conclusion is only possible if a clerk and a manager on both sides confirmed)• Immutable tracking of process history on blockchain (example: who, what, when)• Immutable storing of document and comment hashes for data authentication proof• Integration with other SCP services (and future on prem systems) via CAP service
8 Internet of Things		
9 3D printing		



Additional Information

For future stages, a connection of the blockchain-based contract management platform with on prem systems is planned in order to achieve a simple and secure data integration of e.g. master data. That also builds the basis for future integrated use cases like automatic billing processes based on contract data that can be also realized on a blockchain.