



SAP Innovation Awards 2019 Entry Pitch Deck

Global Aerospace Supply Chain - 'From Sourcing to Support' -
S/4 HANA on a blockchain
Capgemini UK

Introduction to S/4 HANA on a blockchain



Capgemini UK

"Quote"

"We set out to invest in building real capability, in real applications to realise true value for our customers. Building the S/4HANA Demonstrator on a Blockchain and creating A&D use cases really brought to life the benefits of this solution to running a complex global supply chain. The reaction from customers has been hugely positive"

Nigel Thomas - Head of Aerospace and Defence, Capgemini UK

Challenge

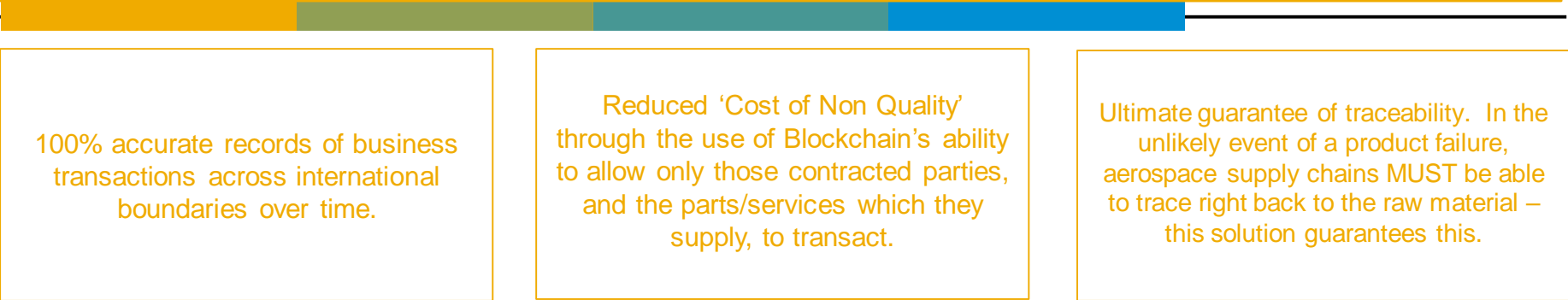
In a complex global supply chain, we need absolute accuracy. This includes the need for 100% legal, trade and regulatory compliance. In addition, any technology solution supporting \$billions of international trade still needs to enable urgency, agility and guarantee product assurance – from raw material to finished goods in service.

Solution

Know your product and its provenance throughout its lifecycle from raw material to finished product. Optimising processes with flexibility, improvements in speed and accuracy of these business processes through globally connected assets, tracking, automation and SAP technologies such as HANA, SCP and Leonardo. Emerging technologies such as IoT, blockchain and 3D printing have been conceptualized in this end-to-end business transformation implementation program.

Outcome

A platform demonstrating highly automated services with assurance based on a long term repository relevant across the whole product lifecycle. Leveraging existing investments to delivery real value.





Business Challenge & Objectives

A&D is a competitive industry and subject to stringent regulations and safety requirements. Managing and analysing data is burdensome within a single organization, products deployed a global level with lifecycle measured in decades makes for a phenomenal challenge. Further hampered by a constant drive to increase productivity with constrained resources.

The objective is to demonstrate how technology can leverage existing investments, aid the accessibility of data and increase automation while supporting the fundamental requirements of the industry.



Project / Use Case Details

The use case is from the perspective of a service provider operating a highly automated service. The demo is a portal view interfacing with blockchains and operators ERP systems.

The scenario we have is almost a reverse auction trigger for example AOG, evaluating and selecting vendors based on capability and recent performance. All tracked in blockchain.

Blockchain provides assurance, providing control and compliance with approved part. Necessary if we are automating.

Blockchain is a long term repository. Relevant for the lifecycles in this industry.

We start with a trigger from IoT updating the blockchain, the interface is a SAP portal but could equally be ERP or web portal.

This scenario is geared towards creating competitive environment to react quickly. There is still a break in process for human for non-system activities. There may be potential to be automated as well.

We can accomplish this using smart contracts – automation following logical rules. Building on connected platforms via blockchain.

As we step through we can see, all interactions storing key data such as purchase orders and updating the blockchain.



Benefits and Outcomes

Business / Social

Efficiency through smart contracts – automation following logical rules. Building on connected platforms via blockchain

IT

Innovate and leveraging existing landscapes:

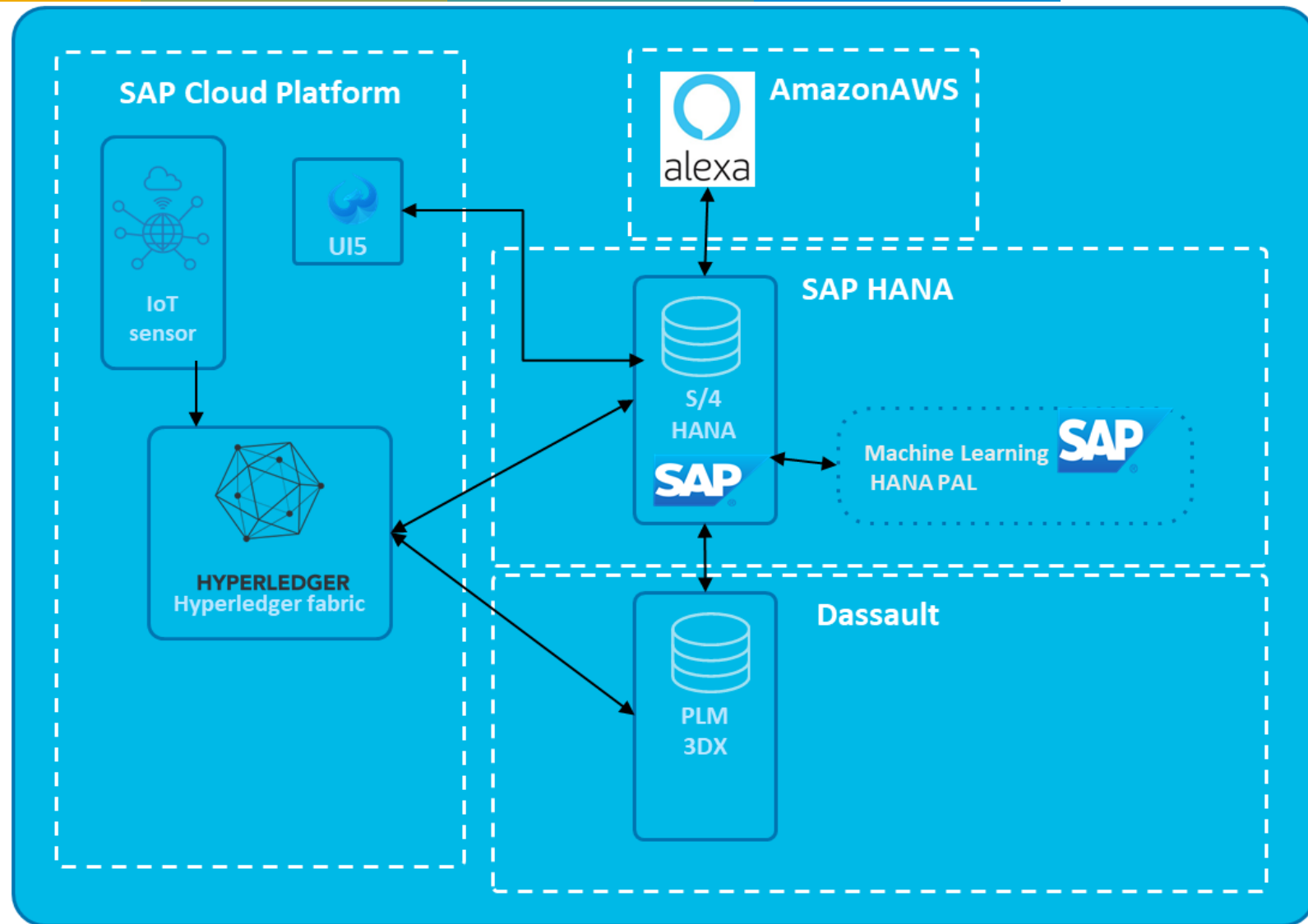
Cloud, IoT, SAP S/4, UI5 and Blockchain

Human Empowerment

Human decision making supported by computational power and connected systems



Architecture





Deployment

Date of Deployment or POC: PoC

Number of live users:

SAP Technologies Used:

SAP Cloud Platform	PoC
SAP S/4HANA	PoC
SAP S/4HANA PAL	PoC

Server Processor:

Linux Distribution:



Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes/No	Contribution to Project
1.	Machine Learning / Artificial Intelligence	Yes	Planned for future
2.	IoT	Yes	Yes
3.	3D printing	Yes	Yes
4.	Blockchain	Yes	Hyperledger Fabric is the underlying technology
5.	API Economy / Integrate the Intelligent Enterprise	Yes	Planned for future
6.	Cloud Native / Event Based Architectures	No	NA
7.	Extending the digital core with SAP CP / ABAP in SAP CP	Yes	Planned for future
8.	SAP Leonardo Application (extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)	Yes	Design Thinking workshop