



SAP Innovation Awards 2019 Entry Pitch Deck

Introducing Performance Based Business Model With E2E
Process Integration

Thomas Kriechbaum - HOERBIGER Wien GmbH

Introducing Remote Field Monitoring With Smart Compressors

HOERBIGER Wien GmbH



“Quote”

Service and maintenance have become more efficient. We can identify machine issues earlier and better plan the deployment of technicians. Machine downtime has been reduced and thus the invoiced services increased.

Thomas Kriechbaum,
CPO

Challenge

Locally distributed compressors require manual recording and processing of operations data. Consequently, efforts are high and process is prone to faults.

Solution

Compressors are equipped with telemetry device and transmission unit. Received IoT data is automatically processed to calculate billing relevant KPIs. Business rules trigger service tickets, if needed.

Outcome

Enable performance-based billing, provide real-time information on compressor status, deploy staff less frequently on site, fewer errors during data recording. Simplified and automated reporting and invoicing process.

Increased services revenue
due to improved uptime by
15%

Staff effort savings of 18%
due to real-time information
on compressor status and
more precise planning of
service tours and intervals

Faster time to invoice, due to
throughput time
improvements of 30%



Partner Information

proxia Consulting Group **Implementation & Process Consultancy Partner**



In my view, the following qualities displayed by proxia were essential factors: sound and complete planning, excellent near shoring capacities, a very experienced team of developers and proxia's corporate culture. I experienced how responsive a team can be. proxia's consultants always went the extra mile for HOERBIGER.

Thomas Kriechbaum, CPO HOERBIGER Wien GmbH



Business Challenge & Objectives

HOERBIGER rents and operates more than 400 Wellhead Compressors for extractors of remote oil fields in over 70 locations in Latin Americas. Customers pay HOERBIGER based on actual use of the compressor (as-a-Service model / performance based billing). To ensure flawless operations and to collect billing relevant information HOERBIGER technicians have to visit each compressor on a daily basis recording this information paper-based. A major weakness of this process was the manual work for data registration and processing that was extremely time-consuming and prone to faults.

- Increased availability of compressors
- Enhanced efficiency of field service technicians
- Reduction of overall service costs
- Speedy and transparent invoicing
- Fully integrated process from machine to invoice
- Processes consistently geared to the business model



Project / Use Case Details

- **Automatic recording of compressor operating data:** The compressors have been equipped with a telemetry device that transmits machinery status and performance data to SAP Cloud Platform IoT services.
- **Machinery Monitoring:** Compressors operations data is displayed in real-time via a user-friendly interface to provide an overview to the service staff at any time on their desktop and mobile devices.
- **Reporting of service levels reached:** The Service Reporting component automatically generates daily and monthly reports including KPIs relevant for compressor operation: Operating hours, workload, availability, reliability, mean time to repair and mean time between failures.
- **Contract management:** Business rules and parameters used for creating reports and bills are defined: Specify operating hours and availability, contractually guaranteed performance, and allowed tolerance levels
- **Billing of services:** The implemented billing solution automatically generates the values needed for billing: The service provided and the resulting costs
- **Ticket management (SAP C4C):** Service tickets triggered by the monitoring process and the corresponding error codes are transferred automatically to ticket management.
- **Invoicing (SAP ERP):** The invoice values determined and approved using the billing software are passed on to the SAP ERP, which takes care of actual invoicing.



Benefits and Outcomes

Business / Social

Support of a new innovative business model

- Outcome based contract
- Performance-based billing
- Basis for developing predictive services
- Revenue increase

Enhanced service management efficiency through

- Reduced costs for generating reports and invoices
- Simplification and automation of the reporting process
- Simplification and automation of the invoicing process

IT

Knowledge Set-up in the areas
(As basis for further use):

- SAP Leonardo Internet of Things
- SAP Cloud Platform Integration
- SAP Cloud Platform HANA DB / XS (NEO)
- SAP Cloud Portal
- SAP Cloud Connector
- SAP Cloud for Customer (Service)
- SAP Cloud Identity

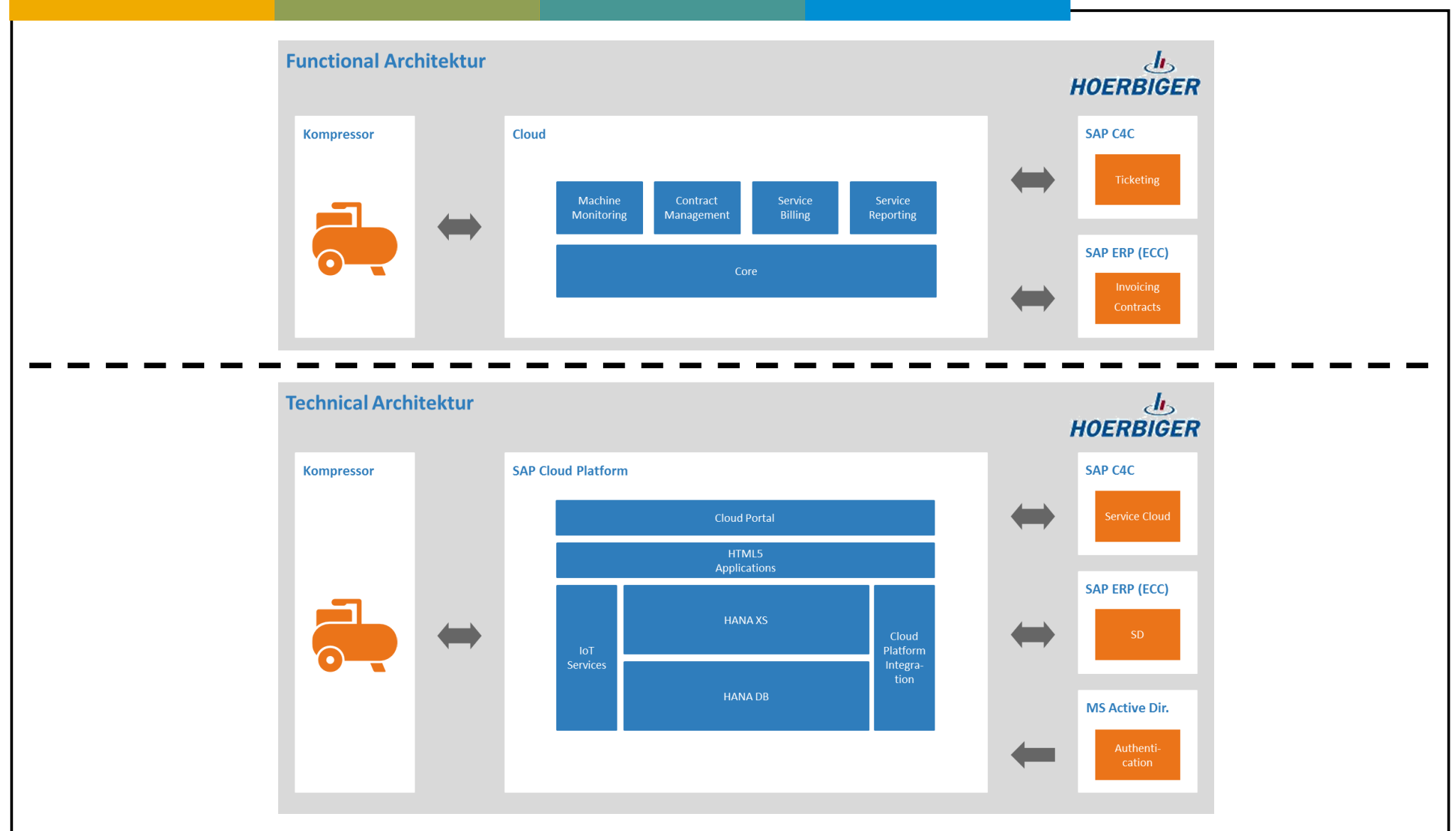
Human Empowerment

Enhanced field service efficiency through

- Real-time information on compressor status and performance
- Improved monitoring and more precise planning of service tours and intervals
- Staff deployed less frequently on site
- Repair times and material recorded on site using mobile devices
- Fewer errors when recording repair costs



Architecture





Deployment

Date of Deployment or POC: 07/2018

Number of live users: ~130 users / ~ 400 machines (IoT)

SAP Technologies Used:

SAP Leonardo Internet of Things	Live
SAP Cloud Platform Integration	Live
SAP Cloud Platform HANA DB / XS (NEO)	Live
SAP Cloud Portal	Live
SAP Cloud Connector	Live
SAP Cloud for Customer (Service)	Live
SAP Cloud Identity	Live

Server Processor: N/A, complete CP deployment

Linux Distribution: N/A, complete CP deployment



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	Foreseen in a later release of the solution	Predictive maintenance
2.	IoT	Yes	Data source for compressor's operational data and failure codes
3.	3D printing		
4.	Blockchain		
5.	API Economy / Integrate the Intelligent Enterprise		
6.	Cloud Native / Event Based Architectures		
7.	Extending the digital core with SAP CP / ABAP in SAP CP	Yes	Connector between compressor and SAP backend applications / Business rules layer
8.	SAP Leonardo Application (extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)		