Experience Intelligent ERP with SAP S/4HANA Cloud

CAA118
Speakers

Las Vegas
September 24–27, 2019
Oren Shatil

Barcelona
October 8–10, 2019
Matthias Haendly

Bangalore
November 13–15, 2019
Tina Malik
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Introduction

The Foundation of the AI Assembly Line
SAP Data Intelligence

Transform Current Processes
Using Machine Learning & Conversational AI

Transform Your Intelligent Enterprise with
Intelligent Robotic Process Automation
Introduction
Artificial intelligence: the hype vs the reality

50% Struggle with the complexity of AI

86% Not getting the most out of their Data

85% Fail to make it to production

2 Powering the Intelligent Enterprise with AI—Forrester 2018
3 The Age of Analytics: Competing in a Data Driven World – McKinsey 2016
Enterprises are struggling with implementing artificial intelligence

67% Consider ML & AI important business initiatives

33% Confident in their ability to implement AI

1 Source: Forrester Hybrid Data Management Study
What is enterprise AI?

Manage the data

Manage the development

Manage the delivery
What is intelligent information management?

Discover and refine

Compose, conduct, and orchestrate

Govern and comply
The human aspect of intelligent technologies

Thinking / Decision Making
SAP Data Intelligence

Listening & Speaking
SAP Conversational AI

Acting
SAP Intelligent RPA

At the heart of your business
Intelligent Applications
The Foundation of the AI Assembly Line
SAP Data Intelligence
Using SAP Data Intelligence to successfully deploy the Intelligent Enterprise

Create powerful data pipelines to leverage your data projects and to orchestrate the data processing.

Harness the advanced machine learning content to accelerate and scale and automate your Data Science projects.

Manage metadata across a diverse data landscape and create a metadata repository.

One solution to support the end-to-end workflow of delivering intelligent enterprise applications and business processes.

- Access & connect data
- Govern & discover data
- Prepare & label data
- Build scalable & flexible data pipelines
- Deploy & integrate intelligent applications
- Monitor & orchestrate the lifecycle
The foundation of the AI assembly line

Streaming Data | Structured Data | Unstructured Data

Connect    Learn    Scale    Consume
The foundation of the AI assembly line

Connect

- Streaming Data
- Structured Data
- Unstructured Data

Learn

- Data Hub Orchestration
- Agile Data Preparation
- Machine Learning
- Deep Learning

Scale

Consume
The foundation of the AI assembly line

Streaming Data
Structured Data
Unstructured Data

Connect

Data Hub Orchestration
Agile Data Preparation
Machine Learning
Deep Learning
Deploy Models
Monitor Performance
Refine and Enhance
Replace and Retire

Learn

Scale

Consume
The foundation of the AI assembly line

Streaming Data  Structured Data  Unstructured Data

Connect

Personalized Interaction
Visualize and Respond
Automate Business Processes

Learn

Data Hub Orchestration
Agile Data Preparation
Machine Learning
Deep Learning
Deploy Models

Scale

Refine and Enhance
Monitor Performance
Replace and Retire

Consume

Connect  Learn  Scale  Consume ▲
SAP Data Intelligence for Enterprise AI

Create and deploy

Understand and explain

Automate and scale
SAP Data Intelligence for intelligent information management

**Business Application Transformation**

Streamline innovation initiatives around business applications, supporting enterprise transformation programs

- Customer risk intelligence with SAP S/4 HANA Cloud
- Timesheet analytics with Fieldglass

**IoT Ingestion and Orchestration**

Transform IoT event streams into enterprise-ready data, and derive actionable insights

- Predictive maintenance
- Manufacturing product as-a-service
- Intelligent logistics

**Data Warehousing**

Build a multifaceted data warehouse, across diverse and distributed data assets

- Customer 360 view
- Marketing campaign effectiveness
- Renewable energy production simulation
SAP Data Intelligence
Tool Components

SAP Data Intelligence

Identify
- Machine Learning Scenario
- Connection /Storage Management
- Data Discovery
- Data Processing

Data Preprocessing
- Model Creation
- Model Training
- Model Validation

Model Creation

Model Deployment
- Integration into Application
- Automation & Maintenance

Deployment & Operations
Transform Current Processes Using Machine Learning & Conversational AI
Intelligent Technologies work together for end-to-end automation

**Optimize**
existing processes for more efficiency or reliability

**Extend**
current business processes beyond efficiency gains to capture new sources of value

**Transform**
the company’s value chain or business model to capture new revenue streams
Embedded intelligence
Embedded AI methods and automation delivering breakthrough business value in all scenarios
Implementing machine learning in SAP S/4HANA

**Moderate ML requirements** like forecasting, key influencer, trending can be solved with classic algorithms like regression, clustering, classification or time series analysis etc. are **embedded in S/4HANA.**

**More complex ML requirements** that require deep learning algorithms based on neuronal networks or blending with also external data and more complex algorithms including image recognition, sentimental analysis or natural language processing are build side-by-side on SAP Leonardo ML on SAP Cloud platform.

The process typically follows several steps and results in ML application patterns to improve and automate business processes.

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**Use Case Idea**

- **Collect Data**
  - Collect & Prepare data, calculate & consolidate

- **Design ML Models**
  - using algorithms

- **Train**
  - increase the **predictive confidence** and **predictive power** during continuous evaluation, **validation** and fine tuning based on own company data
Intelligent ERP: **Conversational AI**
New horizontal coverage with SAP CAI

- **SAP CoPilot** is the unified and efficient conversational interface for the entire SAP portfolio: the digital assistant.
- **SAP Conversational AI** provides a development platform that allows to train, build, connect and monitor intelligent chatbots, replacing the SAP CoPilot skill builder with improved User Experience, planned for 2020
- A user is not using individual skills but one bot which identifies intents in the users questions and responds based on predefined use cases. A user can use natural language instead of predefined sentences to trigger use cases. **SAP Conversational AI** is planning to provide a horizontal coverage of an LoB instead of individual skills
- All SAP CAI bots will be integrated into the digital assistant, **SAP CoPilot**. SAP CAI is accessible and usable via [https://cai.tools.sap/](https://cai.tools.sap/)

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**Bot identifies intent and triggers Use Case**

- **Intent identified**
- **Business Use Case**
  - “Show me customer projects for customer xyz”
  - Here are projects for customer xyz:
- **Navigation Use Case**
  - “Where can I find information about customer xyz?”
  - Here’s information about Customer xyz:
  - Do you want to jump directly to the app Customer Overview? Should I take you there?
- **FAQ Use Case**
  - “How do I create a new project?”
  - To start a project, users usually go to the app “xyz”, assign project members, …
  - Do you want to create a project now?

**If no intent is identified, fallback is triggered**

**Bot offers next step if possible and FAQ Use Case moves to Business Use Case**
Transform Your Intelligent Enterprise with Intelligent Robotic Process Automation
SAP Intelligent Robotic Process Automation Solution
Powered by SAP Leonardo for enabling Intelligent Enterprises

Interact

Conversational AI (CAI)
- Chatbots to interface
- Handover to execution bot

Execute

Intelligent Bot (RPA)
- Multiple bot workflows for handsfree execution

Optimize

Machine Learning (ML)
- Self-learning bots with dynamic adaptability, learn from exceptions

Interfacing
Performing Tasks
Robust Bots and Improve

SAP Intelligent Robotic Process Automation
How intelligent robots enhance automation

SAP Intelligent Robotic Process Automation

Record
Capture the process flow and skills to train bots

Build
Assemble bots, add skills, APIs, services, triggers

Run
AI-enabled bots in action, mimic the user, repeat

Monitor
Health check, expedite

SAP® Cloud Platform

SAP® C/4HANA

Leonardo Intelligent Technologies

Pre-Built S/4 Bots

SAP S/4HANA
SAP SuccessFactors
SAP Ariba
SAP Concur
SAP Fieldglass

Chatbots, ML services
Third-party applications
Non-SAP systems
Tools eg. Excel, PowerPoint
Capabilities of SAP Intelligent Robotic Process Automation

Integration for the intelligent suite designing and deploying robots across systems and deployments

API Leverage making bots robust

Out-of-the-box automation with prebuilt bots for SAP products

Reinvented processes with deeper insights
How can an RPA solution generate business value?

**Improve operations**
to mobilize resources for high-value tasks at lower costs

**Increase service quality**
to reduce cycle times for revenue generating transactions

**Increase compliance**
and analysis capabilities (through e.g. well-documented audit trails)

**Reduce human errors**
and gain speed and efficiency
### Sample of intelligent RPA use cases in SAP S/4HANA

<table>
<thead>
<tr>
<th></th>
<th>Q2 / Q3 2019</th>
<th>Q3 / Q4 2019</th>
<th>Q4 2019 &amp; Beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td>• Disputes management - customer interaction</td>
<td>• Manage bank statement manually</td>
<td>• Outgoing payment file without file interface and/or bank integration</td>
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<tr>
<td></td>
<td>• Automated upload of general ledger entries</td>
<td>• Supplier invoice entry</td>
<td>• Post general journal entries</td>
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<tr>
<td></td>
<td>• Manage payment advice</td>
<td>• Check deposit list upload</td>
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<tr>
<td></td>
<td>• Supplier invoice status checks</td>
<td>• Mass reversing journal entry functionality</td>
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<td></td>
<td>• Supplier down payment request</td>
<td>• Mass reset and reversal of payment runs</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Manage bank statement manually</td>
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<tr>
<td><strong>Procure</strong></td>
<td>• Purchase order confirmations</td>
<td>• Auto update of shipping status from logistics provider tracking number</td>
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<td></td>
<td>• Supplier master data</td>
<td>• Export purchase requisition to Microsoft Excel template</td>
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<tr>
<td></td>
<td>• Create purchase requisition</td>
<td>• Quality management – creation of inspection results for good received</td>
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<tr>
<td></td>
<td>• Purchase order confirmation (OP)</td>
<td>• Prepare RFQ</td>
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<td></td>
<td></td>
<td>• Bundling of purchase requisitions</td>
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<td></td>
<td></td>
<td>• Operational purchasing – source of supply determination</td>
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<tr>
<td><strong>Sales &amp; Delivery</strong></td>
<td>• Manage sales order – automated upload down payments</td>
<td>• Manage sales orders: create sales order with multiple order entry types.</td>
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<td></td>
<td></td>
<td>• Create sales quotation</td>
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<td>• Create sales contract</td>
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<td>• Create sales inquiry</td>
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Related SAP TechEd Learning Journeys

- CAA3 – Move to SAP S/4HANA
- CAA4 – Get to SAP S/4HANA Cloud
- CAA5 – Extend, integrate and embed Intelligence into SAP S/4HANA

Related SAP TechEd sessions

- CAA806 – SAP S/4HANA: The Intelligent ERP Road Map
- CAA460 – Implement Bots with Robotic Process Automation (RPA) in SAP S/4HANA Cloud
- LT107 – Intelligent RPA Embedded into SAP S/4HANA Cloud
- CAA263 – Develop an End-to-End Intelligent Process for an Intelligent Enterprise

Public SAP Web sites

- SAP Community: www.sap.com/community
- SAP products: www.sap.com/products
- SAP S/4HANA Cloud: www.sap.com/s4-cloudrelease
- SAP Activate Roadmap Viewer: go.support.sap.com/roadmapviewer
- SAP Best Practices Explorer: rapid.sap.com/bp
Thanks for attending this session.

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