



Service Ticket Intelligence with SAP Leonardo Machine Learning

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INTERNAL

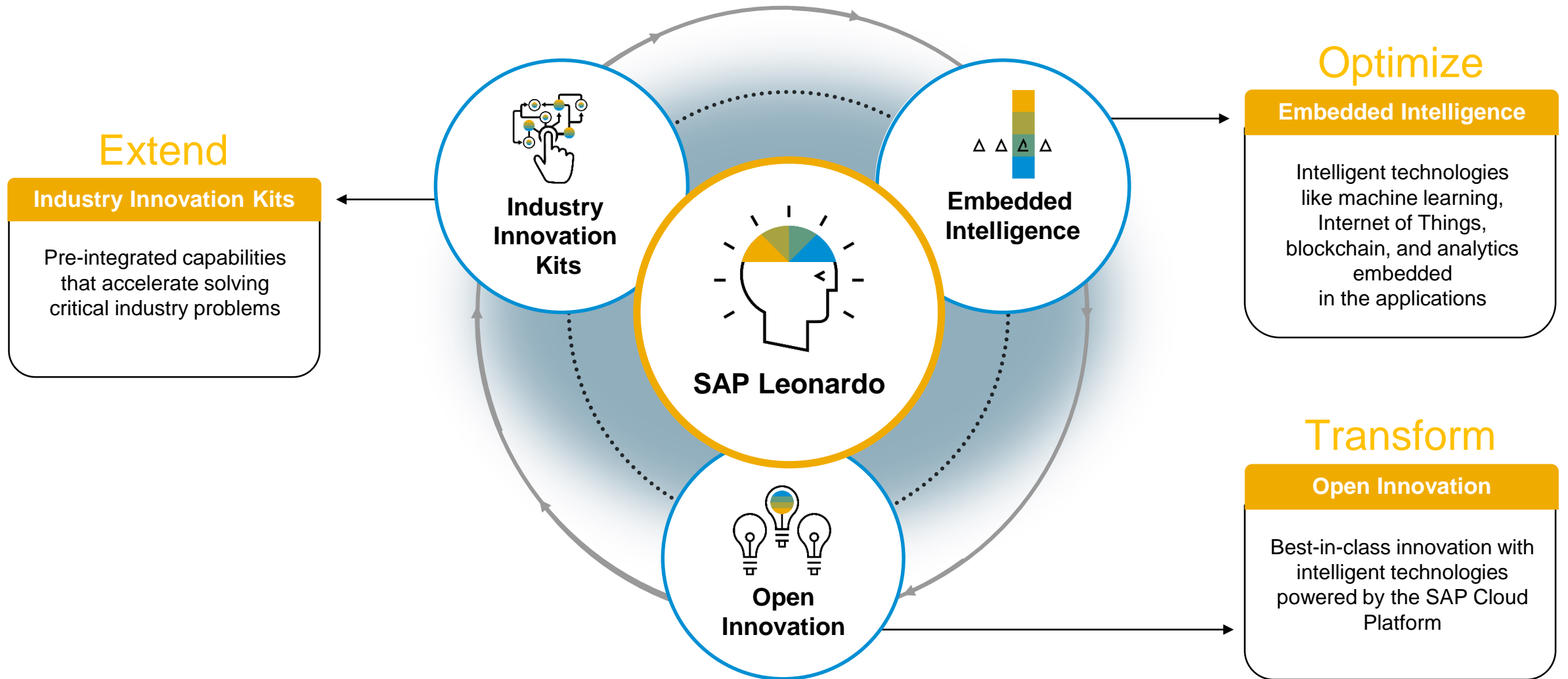
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SAP Leonardo powers enterprises with *intelligent technologies* for every *business process*, to create better *outcomes*



Machine Learning will reinvent Businesses

• **60%**

Of human tasks will be automated by 2025

• **97%**

Image recognition accuracy today (better than human rate 95%)

• **95.1 %**

Speech recognition accuracy today (better than human rate 94.1%)

• **\$18B**

Enterprise Machine Learning Market by 2020

Process Automation

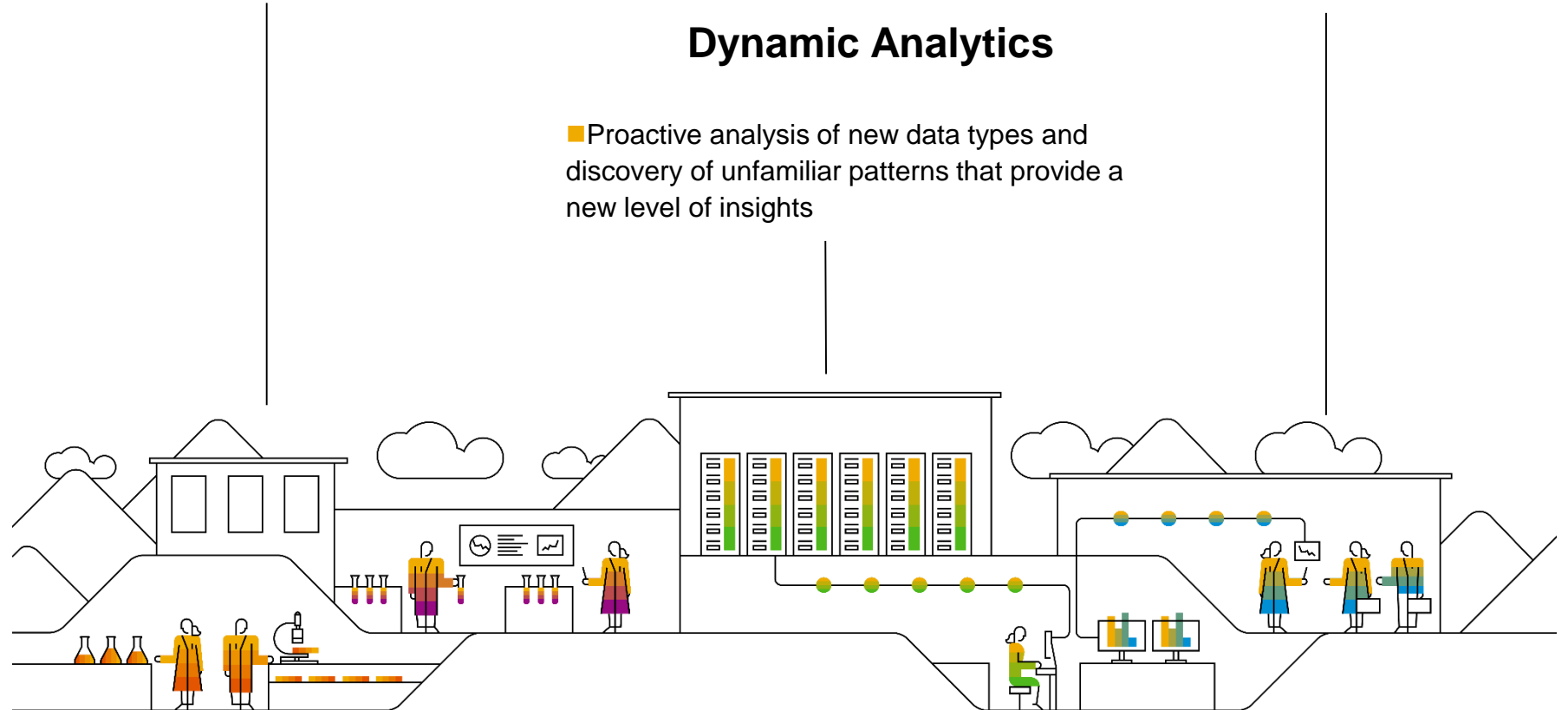
Full automation of business processes, from HR to payments processing, to workflow approvals for purchase orders and sales execution

Next-gen UX


User experience based on voice, vision and messaging will replicate how people interact in real life and increase business productivity

Dynamic Analytics

■ Proactive analysis of new data types and discovery of unfamiliar patterns that provide a new level of insights



How SAP Leonardo ML helps to deliver the Intelligent Enterprise

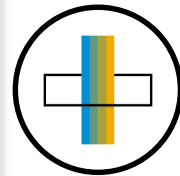


77%
of the world's transaction revenue touches an SAP system

26
Industries

7
lines of business

The world's largest business network



Open and flexible building blocks

Intelligent Applications

- Conversational AI
- Intelligent Process Automation
- ML & Project Data Science Platform

On SAP Cloud Platform & SAP HANA

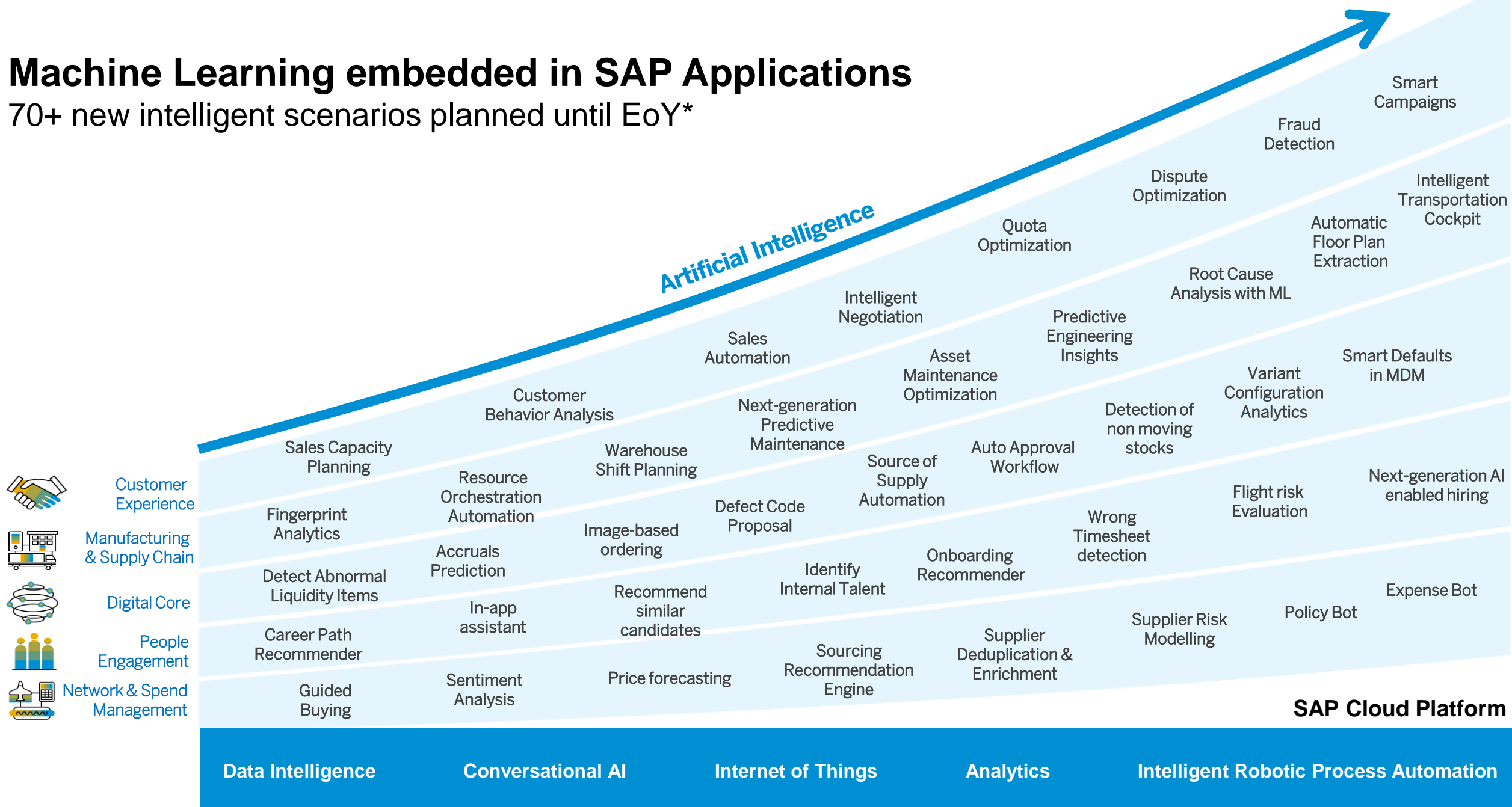


Business Outcomes

- Increase revenue
- Re-imagine processes
- Quality time at work
- Customer satisfaction
- Enabling innovations

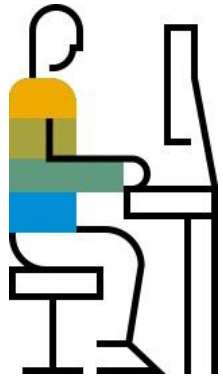
Machine Learning embedded in SAP Applications

70+ new intelligent scenarios planned until EoY*



*Subject to change

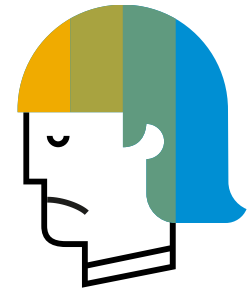
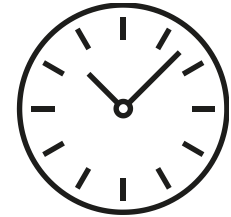
Missed customer service time window



Bob,
Customer Service

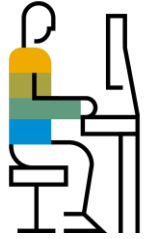
Service tickets (157)

Normal	6821	Missed appointment by your service team	Open
Normal	6822	Problem	Open
Normal	6823	Fridge app OS version	Open
Normal	6824	Fridge door does not close properly	Open
Normal	6825	Missed appointment by your service team	Open
Normal	6826	Fridge door does not close properly	Open
Normal	6827	Need help for Wi-Fi connection	Open
Normal	6828	Do you really care your customer?	Open
Normal	6829	Missed appointment by your service team	Open
Normal	6830	Could not open door	Open
Normal	6831	Fridge app OS version	Open
Normal	6832	Missed appointment by your service team	Open
Normal	6833	Fridge door does not close properly	Open
Normal	6834	Strange sounds	Open
Normal	6835	Problem	Open
Normal	6836	Need help for Wi-Fi connection	Open
Normal	6837	Fridge app OS version	Open
Normal	6838	Missed appointment by your service team	Open
Normal	6839	I cannot wait any longer to receive my fridge!	Open

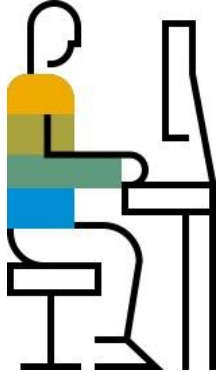


Jen,
Customer

Solution! SAP Service Ticket Intelligence



Benny,
Billing enquiry
expert



Bob,
Customer service
champion

Billing and payment queries		

Product returns tickets		

High-priority complaints		

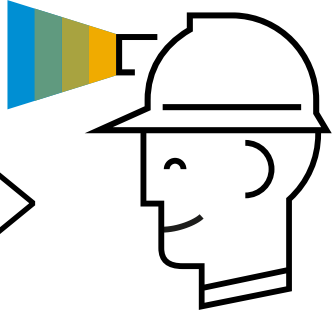
Ticket 6833

Assignee: Jeff Khoo Support Team: Field Agent

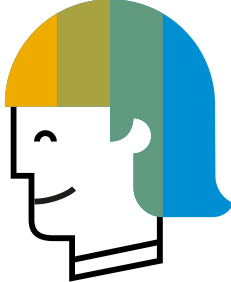
Service Category: Technical Support

Top Recommended Solution:

- ▶ Faulty fridge door
- ▶ Faulty door magnet

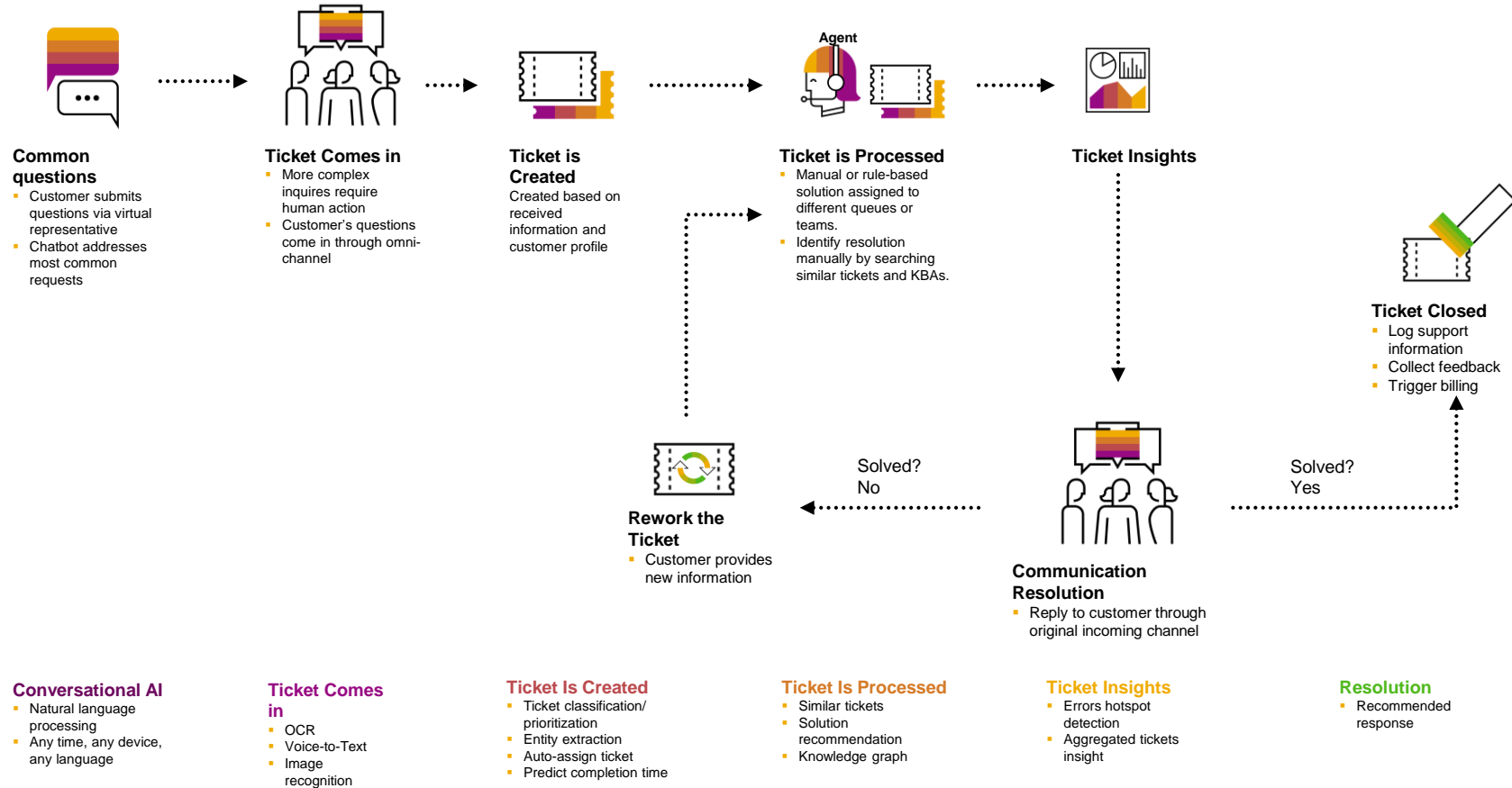


Jeff,
Field Agent



Jen,
Customer

Intelligent Customer Service – Entire Journey



50%
Of customer support interactions will be digitalized or occur in online communities by 2018³

527%
Improvement in customer profit margin in companies with best-in-class customer experience management¹

72%
Of business cite improving customer experience as their top priority²

Sources:
 1. SAP Center for Business Insight 2017 calculation based on Aberdeen Group's study "CEM Executive's Agenda 2016: Aligning the Business Around the Customer."
 2. "A Customer-Obsessed Operating Model Demands a Close Partnership with Your CIO," Forrester Research, April 2016.
 3. "IDC FutureScape: Worldwide Social and Customer Experience 2017 Predictions," IDC, Doc #US40342515, November 2016.

SAP Service Ticket Intelligence

Accelerate customer service in an omnichannel front office



SAP Service Ticket Intelligence automatically processes customer inquiries to deliver best-in-class customer service.

Improved service response times with automated processing

Integration with SAP Service Cloud reduced time to value

Enablement of customer service to scale with increased digital interactions

*SAP Service Ticket Intelligence does not replace knowledge management solutions.

Accelerate customer service in an omnichannel front office

Customer Reference

Pre-Processing E-mails Automatically Gives cc energie Time to Focus on Serving Customers



Business Problem

Customer interaction centers are faced with an increased volume and speed of customer interactions from rapid digitization. As a result, the service agent now has to manage much more interactions, at the same time having to meet higher expectations in terms of response times and a seamless handover across interaction channels.



Solution & Benefits

With Service Ticket Intelligence customer service agents can minimize repetitive tasks and focus on tasks that create value to the organization.

Service Ticket Intelligence automates the classification and processing of customer service requests – whether they are submitted by phone, e-mail, the Web, or chat. The application uses machine learning models to categorize customer inputs from a variety of channels into internal service groups. It also suggests service proposals, helping to resolve issues faster and improve service outcomes.



SAP Solutions Involved



The following SAP solutions are part of this use case:

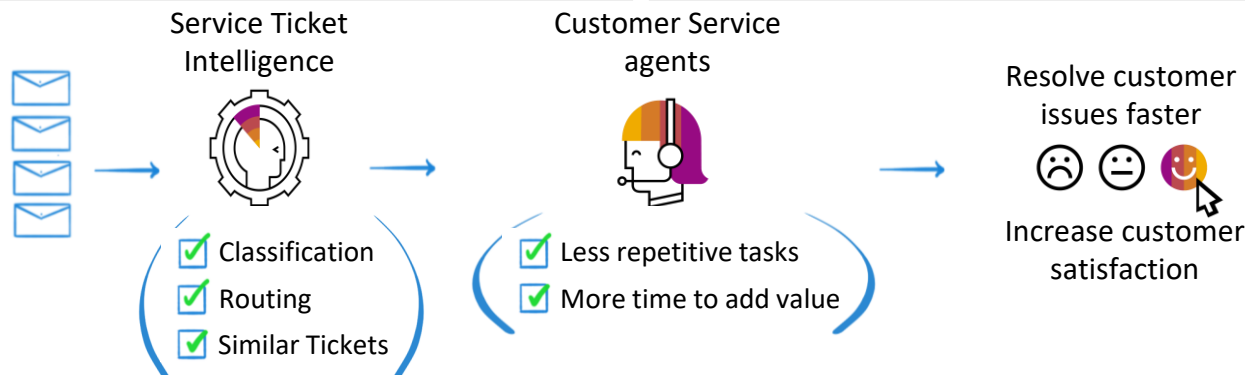
- SAP Leonardo Machine Learning Foundation
- SAP Service Cloud Enterprise Edition or SAP CRM or SAP S/4HANA Customer Management

Integration



The use case can be consumed using one of the following two options:

- Native integration with SAP Service Cloud Enterprise Edition
- Integration with SAP CRM using the SAP notes 2646975, 2506240 and 2673363
- Individual integration with any other ticketing solution



Automated Shared Service Framework

Business Problem



Shared Service Centers in organizations are often a multi-inbound channel for internal and external standard inquiries about various topics, such as when an invoice will be paid or a confirmation of a service. Therefore, this Shared Service Centers experience high workloads with queued worklists.

Solution & Benefits



With Service Ticket Intelligence the service category of the incoming inquiries can be predicted and the inquiry can be routed to the right processor for the predicted service category.

For standard inquiries, such as the request for information on the status of an invoice or an address change, Intelligent Robotic Process Automation can fetch those inquiries based on the inquiry categorization and process and answer those inquiries automatically.

Inquiries that cannot be processed automatically are routed to a service agent.

SAP Solutions Involved



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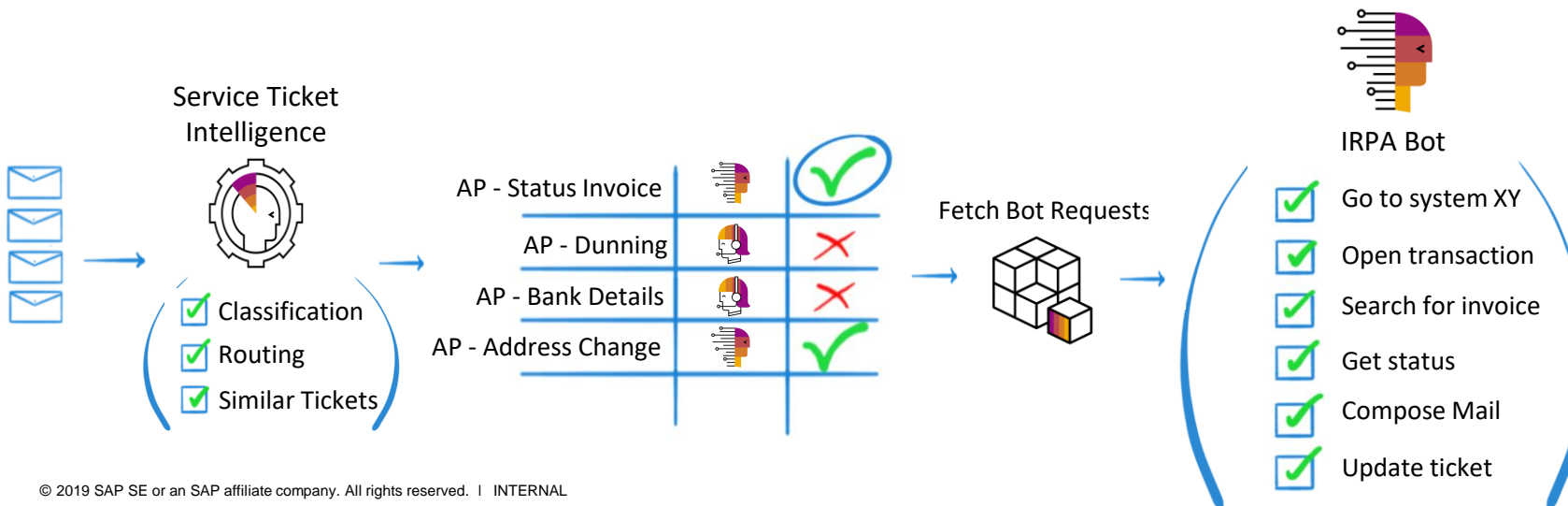
- SAP Leonardo Machine Learning Foundation
- SAP Leonardo Intelligent Robotic Process Automation
- SAP Shared Service Framework for S/4HANA

Integration

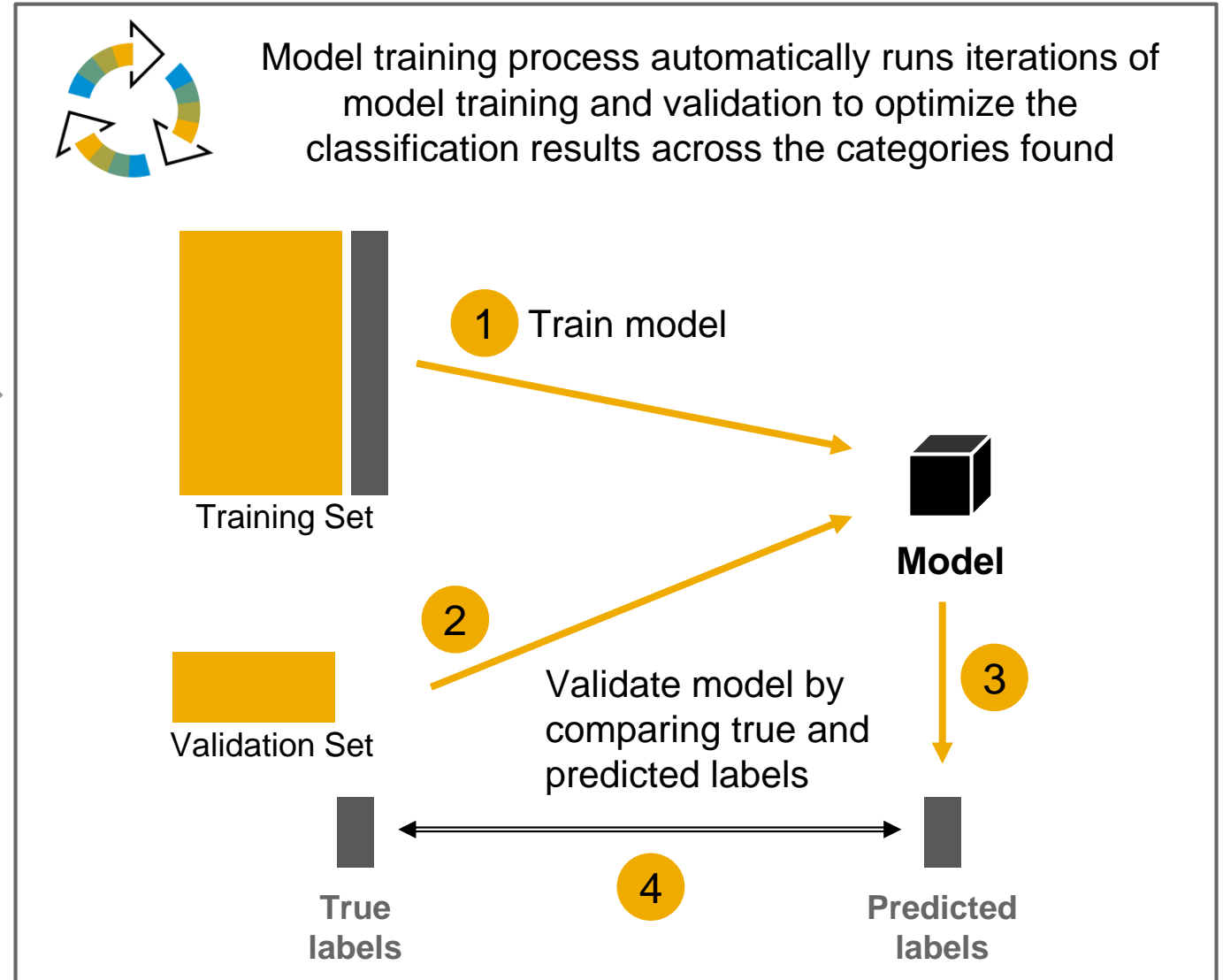
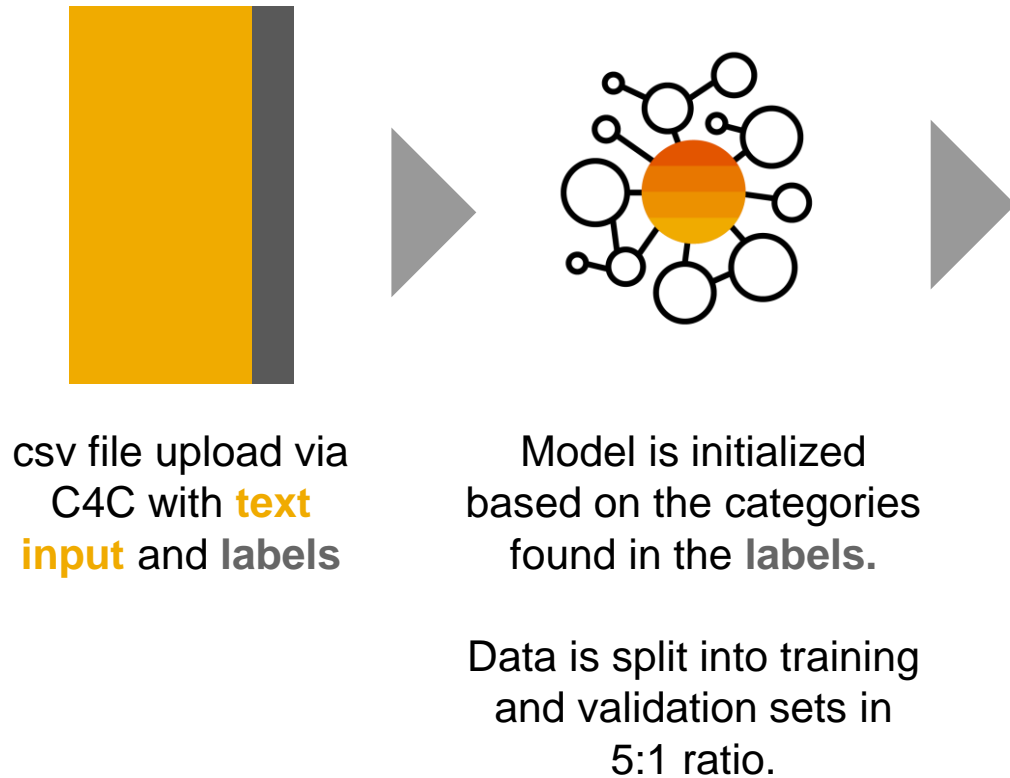


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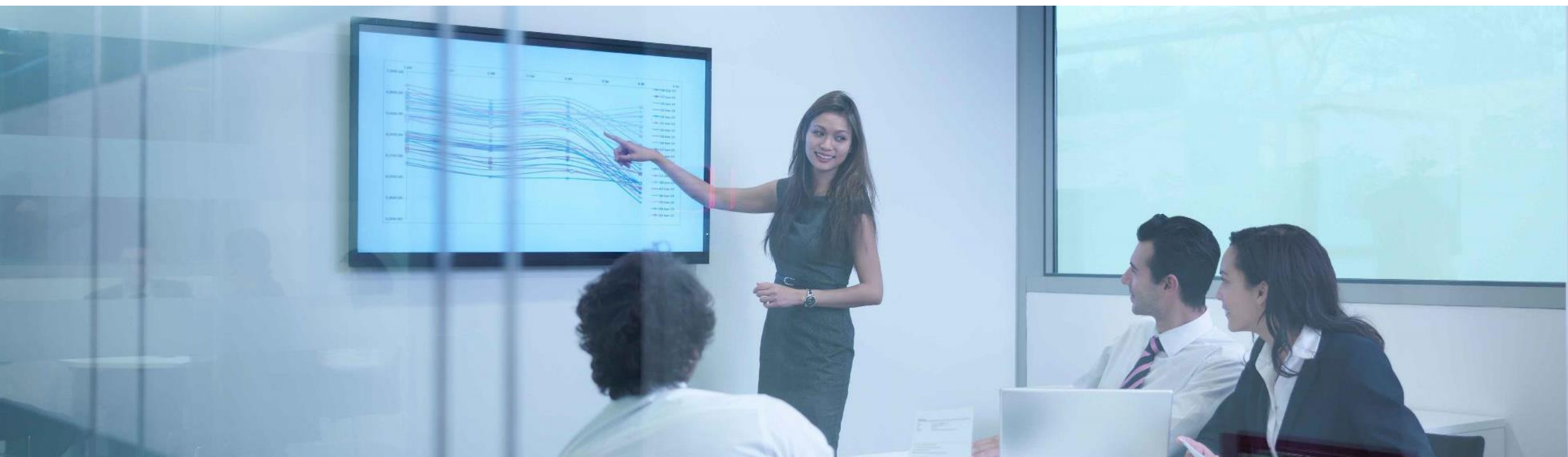
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What happens during model training?



Demo



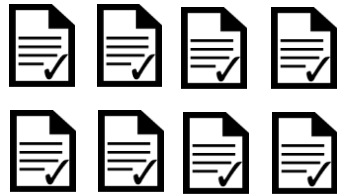
Integration

SAP Cloud for Customer and SAP Service Ticket Intelligence

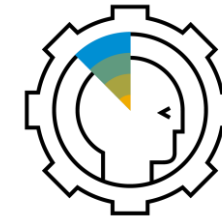
SAP Cloud for Customer

SAP Service Ticket Intelligence

Training process



Historical customer problem descriptions, service category, and related resolutions, (for example, KBAs or useful links)



Machine learning training

Inference process



Incoming customer service tickets



Service category proposals and recommended solutions*



Recommendations in solutions center for the service agent



Run service ticket classification service and solution matching service

*Based on similar historical questions

Pre-Processing E-mails Automatically Gives cc energie Time to Focus on Serving Customers

cc energie implemented the SAP® Service Ticket Intelligence application, part of SAP Leonardo Machine Learning, to analyze e-mails and identify which action to take such as pushing to high priority or forwarding to the relevant person. This pre-processing ensures communication is handled in the fastest way possible, helping the company maintain excellent customer service.

- Faster processing of incoming emails with AI and automated processes for sorting and forwarding – thereby also saving time for team leaders who previously managed and distributed these manually.
- Easier classification of communication due to machine learning capabilities that identify language and keywords such as “urgent”, “complaint”, or “CEO”. Accuracy is tested and adapted on a monthly basis.
- Increased data volume on customer communication that will help with reporting, complaints processing, and further developments in the future.
- Further scope identified for use of these tools in other departments beyond data science, such as reporting and for input of paper communication.
- Simple implementation and support as part of SAP Early Adopter Care program, with expert knowledge, access to development departments, and guidance on solutions that would integrate well into existing SAP environment.

“These tools have opened up **new possibilities** for us. And, with **SAP Early Adopter Care**, we had all the support we needed, from preparing data, to training, and beyond – **we couldn’t have done it by ourselves.**”

Mihaita Marinescu, SAP CRM Architect, cc energie sa



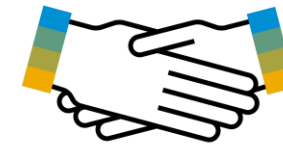
Engagement options

Ready to Use



- Available features in roadmap
 - As integrated functionality in **SAP Cloud for Customer, enterprise edition**
 - As a prepaid cloud subscription based on number of records (service tickets) processed on **SAP Cloud Platform**

Ready to Co-Innovate



- New features/integrations in roadmap
- Chatbot for automated responses
- Use cases combining Leonardo functional services with Service Ticket Intelligence

Thank you.

Contact information:

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