

# Revolutionize the Enterprise Space with Conversational Al and Chatbots

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**CUSTOMER** 



#### **Present**

Messaging apps have surpassed social networks



Users are reaching "app fatigue"





~\$230 million in chatbot funding in 2016

#### The future



# 3,000,000,000 smartphone users



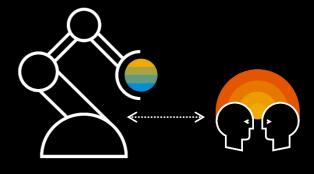
85%

Bot-based human-to-business communications



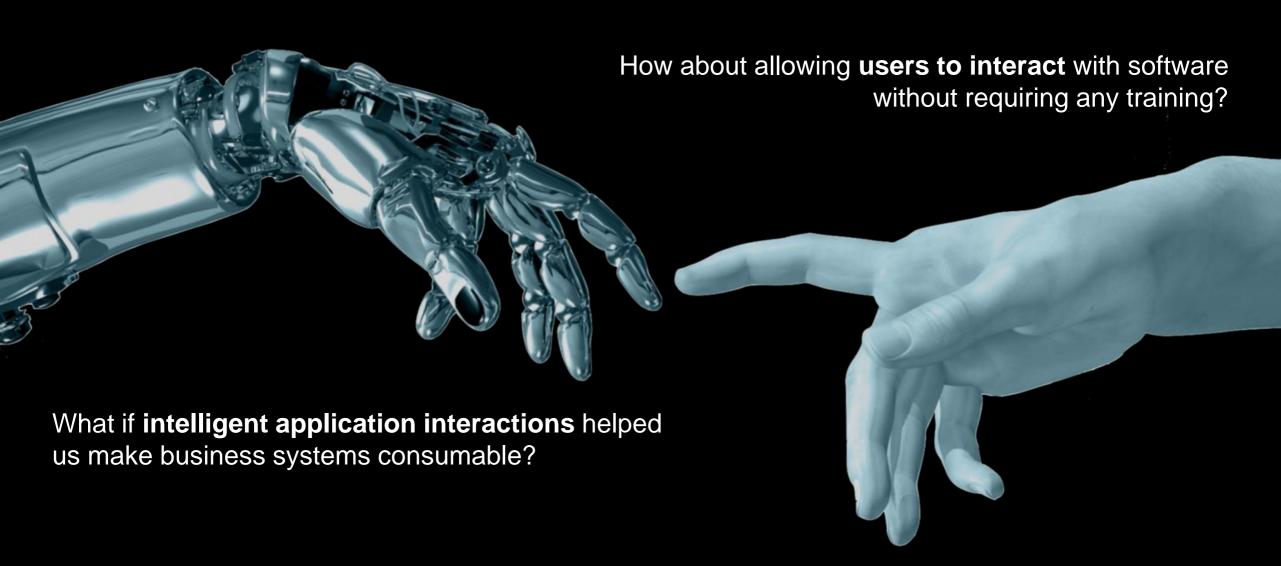
30%

No-screen communications



More conversations with bots than the spouse

# Conversational artificial intelligence (AI) at SAP



### The journey toward enterprise Al

#### **Basic chatbots**

- Built by developers using predefined rules
- Terminal-like commands
- Basic task fulfillment, such as:
  - Get status
  - Approve workflow
  - Yes/no flows
- Isolated applications, usually single channel

#### **Al assistants**

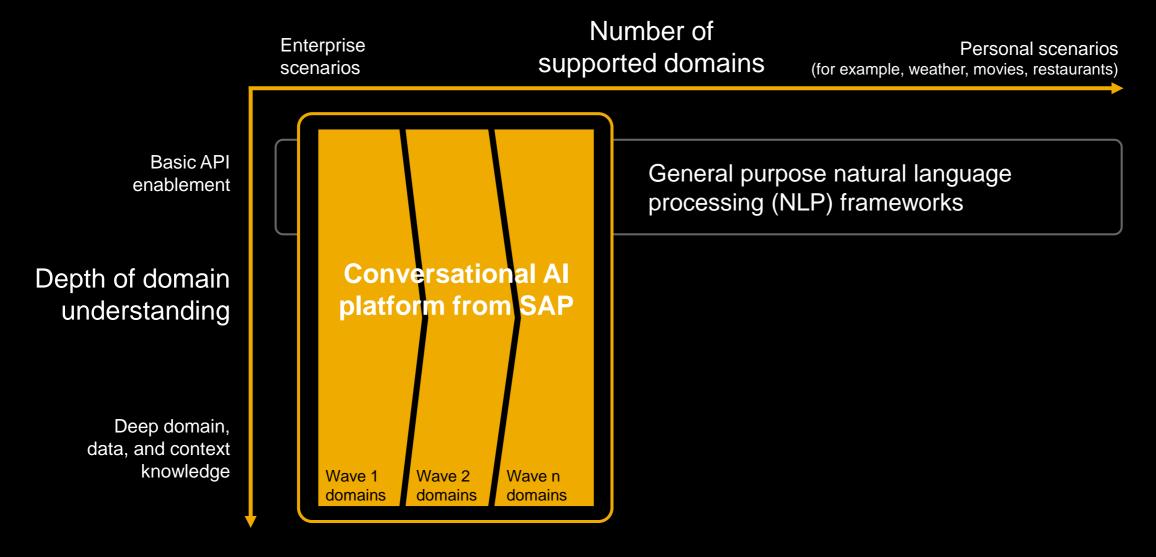
- Trained using machine learning and data, not code
- Robust voice and text understanding of more than they were taught
- Contextual, personalized actions, user memory
- Aggregate bots cohesively, expose them through any channel
  - Messaging platforms (such as Slack)
  - Smart speakers (such as Echo)
  - Phones (such as Siri)

#### **Enterprise Al**

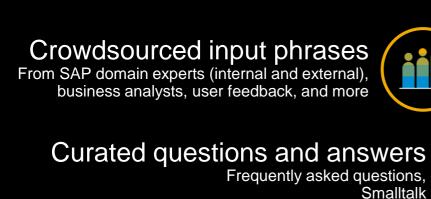
- Systems learn how users work; users don't have to learn how systems work
- Comprehensive understanding of unstructured/structured data
- Autonomous discovery and optimization of processes
- Act autonomously and proactively; users focus on high-value work

We're here today.

## SAP's unique edge to conversational Al



## SAP's unique edge to conversational Al





### SAP's domain corpora

Training and help, policy and process documents, knowledge bases, support tickets, topic modeling, and more



#### SAP metadata

API documentation, field attributes, smart templates for SAP Fiori apps, and more



Learning from various sources of structured and unstructured enterprise data

#### User context

History, location, time, role, sequence, and more



#### **Conversational AI at SAP**



# **Deep natural language understanding and insights**

- Al enables computers to learn how users work.
- Users no longer have to learn how business solutions work.
- Al is built on 45 years of business process expertise and content.



# Using voice and chat to get the job done

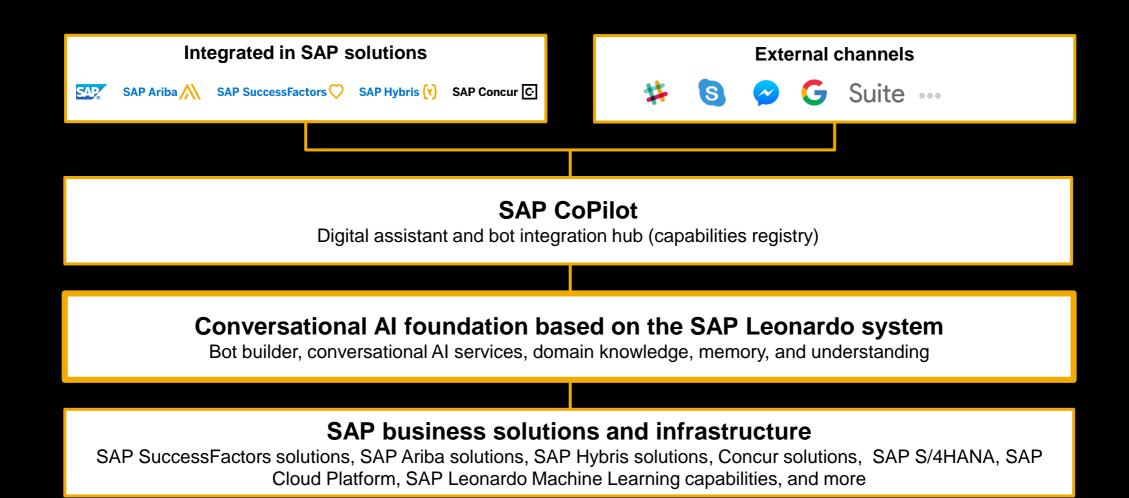
- Faster task execution, less frustration
- Ability to build custom conversational apps
- SAP CoPilot digital assistant across SAP
- Anywhere, anytime, any channel
- Messengers, smart speakers, and more



# **Engaging conversational applications**

- Conversational analytics
- Conversational commerce
- Conversational HR
- Conversational customer service
- Conversational travel
- And many more ...

## **Conversational AI landscape from SAP**



# **Chatbots for the enterprise**



Accuracy



Context awareness



Memory retention



Domain understanding

### Transforming data into conversational apps



Employee self-services
Customer support
Technical support
E-commerce interactions

Request information (written or spoken)

Enriched response (written or spoken)



#### Input interpretation

Determine intent

Identify entities

"Understand" input



#### **Dialog execution**

Response

Information

**Function execution** 

**Dialog flow** 



# Conversation model and management

Response generation

FAQ handling

Smalltalk management

**Personality** 

**Content management** 



#### **Enterprise systems and data**

### **Example: procurement bot**

#### **Procurement process:**

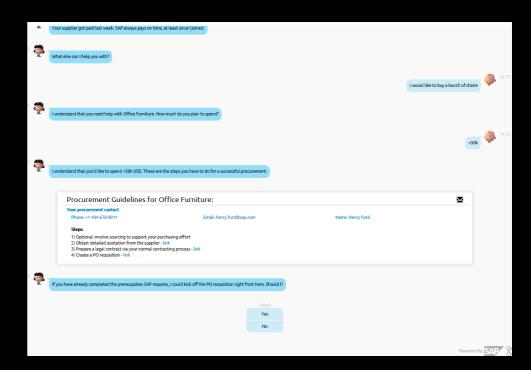
Simplify the steps in the procurement process by using machine learning and conversational application

#### **Motivation**

- Reduce the complexity of procurement by simplifying the way to interact
- Reduce time for procurement from hours to minutes

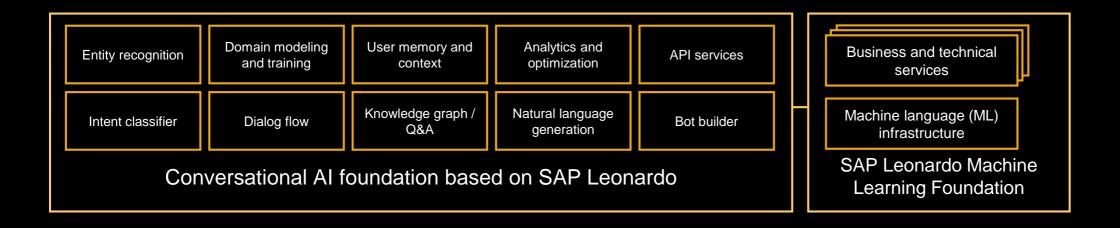
#### **Features**

- Guide users in the procurement process; automatically create PO and handle workflows
- Answer common questions regarding procurement and policies
- Utilize role-based information



# Conversational Al foundation based on SAP Leonardo – the engine for the next computing paradigm

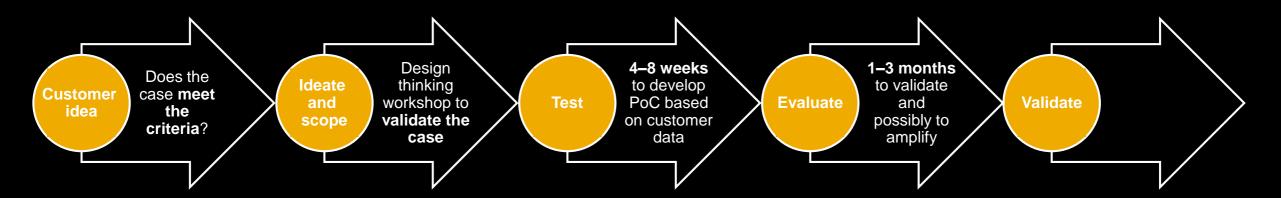
- State-of-the art, machine learning—based natural language understanding
- Utilizing SAP's proprietary business logic and data, metadata, and context
- Allowing SAP solution groups (priority 1), system integrators, and customers (priority 2) to create conversational apps (such as chatbots), seamlessly integrated with SAP software
- Enterprise-grade compliance (audit trails, FINRA, SOX, security, authorization, and more)
- The beginning of enterprise AI: learning from user behavior across applications and systems



# How you can co-innovate on, roll out, and scale conversational applications by SAP?

- Join our beta program for the SAP CoPilot digital assistant
  - Across various functional areas throughout SAP's solution portfolio
  - Beta release upcoming, onboarding co-innovation customers right now
- Co-innovate with us on your conversational applications all the way to production
  - Use cases in SAP Ariba, SAP SuccessFactors, Concur, and SAP Hybris solutions, SAP S/4HANA, and more
  - Custom scenarios or join existing efforts
- Build on SAP's industry-leading enterprise software platforms and services
  - Conversational applications hosted on premise or in the cloud in SAP's data centers
  - Utilizing rock-solid text analysis and natural language processing capabilities in SAP HANA
  - Proven enterprise support models and infrastructure
  - Cohesive efforts around conversational applications across SAP (such as product support, localization, translation, field services, and more)

### **Co-innovation process**



SAP market-driven innovation is looking to find **next-generation solutions** based on real customer challenges

Understand the business scenario challenges and explore viable ideas

Agile developing of a proof of concept (PoC) in small multi-disciplinary team with close contact weekly with customer

Customer:
evaluate PoC outcome
internally
SAP:
market evaluation

Validate possible next steps for:

- Potential SAP scalability
- Customer specific

 Legal coverage:
 FBA
 Collaboration agreement/TEA

### Co-innovation

#### Engagement framework

Ideate and seed Prototype and validate Develop Co-innovation SAP standard product Idea / Feasibility: Standard Desirability: Early Standard Codevelop idea pool project setup analysis development adopter release Solving a real Challenge First UI Codevelopment business mockups on Tests at customer SAP Custom Development organization Solution problem with paper site with customer enabler innovative data User story Value analysis technology Customer Projects result Customer gets Decision on dev. project open license on project SAP ships prototype code pre-versions for Customer for go-live. customer testing project Each party covers its own cost NO follow-up Stop **COLLABORATION** FBA **FBA** SEAP / EULA / CD-CONTRACT AGREEMENT/ TEA

# Thank you.

Contact information:

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