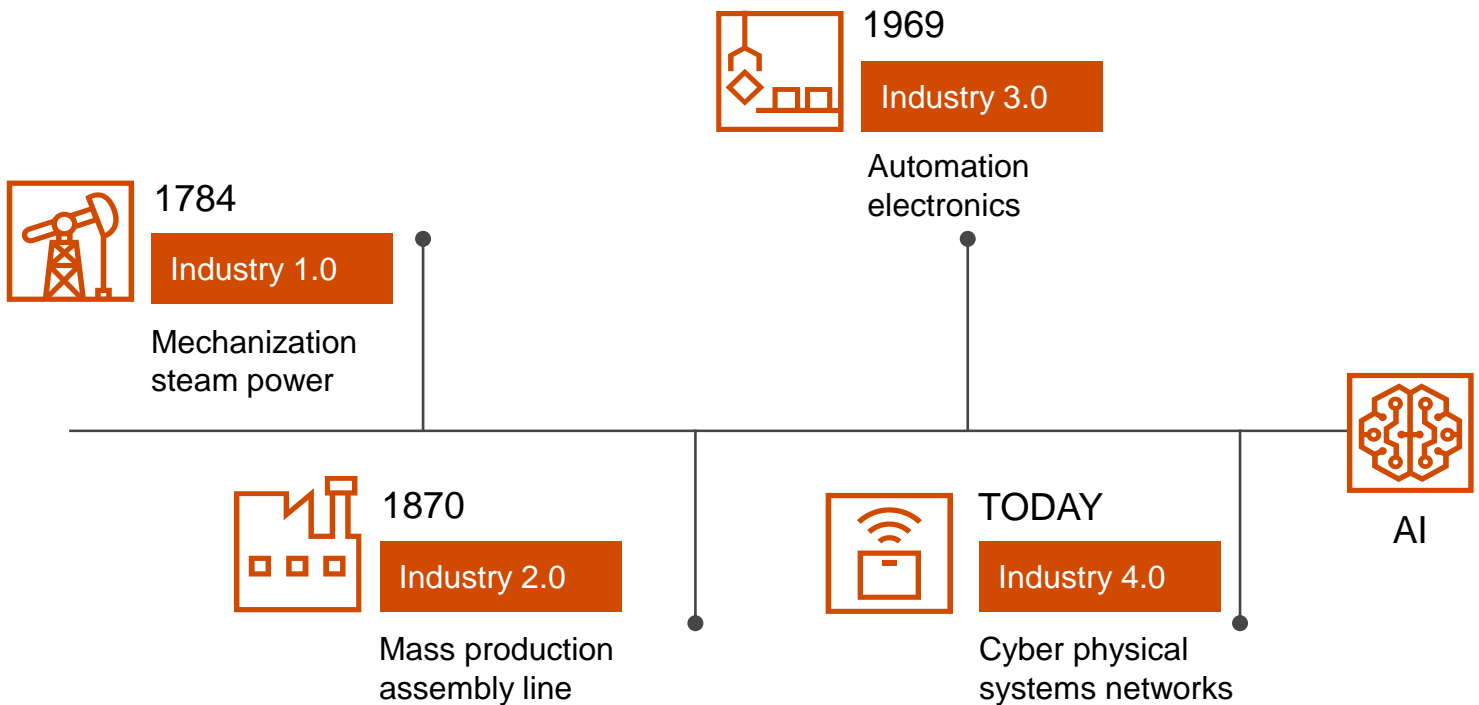


Accelerating Customer Experience (CX) with SAP Commerce & Conversational AI



Preparing Businesses for Tomorrow with Conversational AI

The Fourth Industrial Revolution is upon us, bringing technologies such as AI, IoT, and Blockchain. More than ever, businesses need to consider how to best leverage these solutions, reimagining the way they operate an intelligent and integrated customer experience. One such solution to consider is Conversational AI and the use of text and voice-based messaging apps to automate communications between businesses and their customers. As consumers continue to make greater use of these channels, businesses can seize the opportunity to integrate Conversational AI technologies.



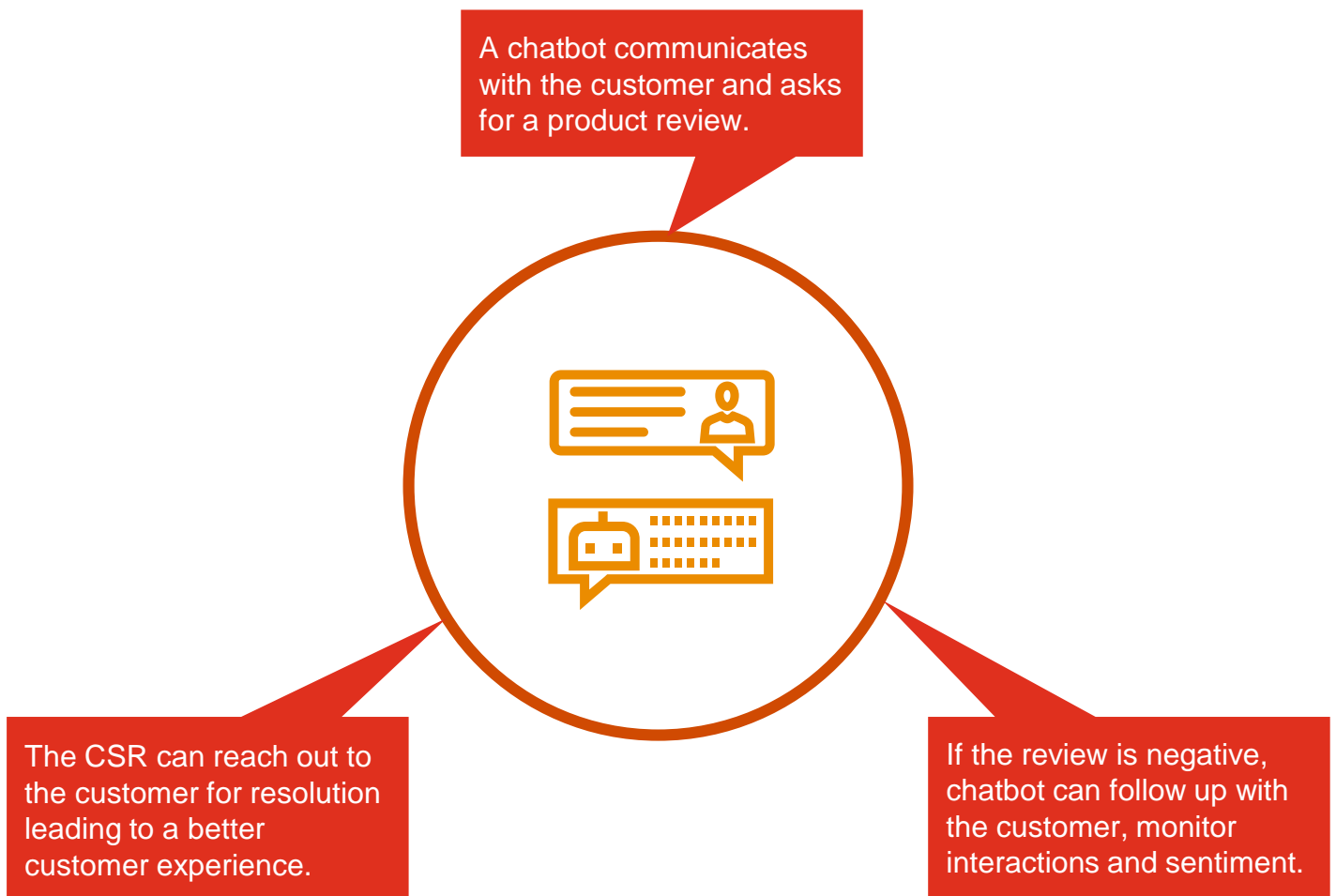
Three Key Benefits of Conversational AI with SAP Commerce

1	Fast, Accessible Service	2	Personalized Interactions	3	Cost-Saving Automation
<p>Virtual conversational agents can be available 24/7 in the customer's channel of choice. Businesses with high volumes of customer service inquiries can serve customers in real time without worrying about agent availability.</p>		<p>AI empowers virtual conversational agents to learn from customer interactions, adjusting messaging based on customer behaviour. Businesses can then offer a tailored customer experience, which can increase brand satisfaction and loyalty.</p>		<p>Every customer service task that can be automated with virtual conversational agents is money back for businesses. Powerful AI agents can handle complex customer service interactions without ever involving a human party.</p>	

Distinctive New Conversational AI Channels

Smart Chatbots

Powered by AI, Smart Chatbots are designed to automatically mimic a human response. These chatbots can message back and forth with customers throughout their commerce journey while also gathering data, and generating a more personalized experience. Through sentiment analysis, the chatbot can classify user messages as positive, neutral, or negative and craft appropriate responses. For instance, a chatbot can ask customers for a product review – if the review is negative, the chatbot can follow up with whether or not the customer would like to open a service complaint. Recommendations from the chatbot can become more sophisticated as it continues to learn about the customer's behavior and buying patterns.



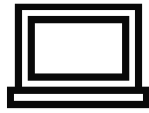
Distinctive New Conversational AI Channels

Voice Technology

Voice technology, enabled by AI, represents the next major disruption to the more traditional commerce channels and presents consumers with a new mechanism for purchasing. The general awareness of voice technology is high amongst consumers, thanks to the rise of Smart Speakers and allows ease of purchasing, particularly for those with limited access to storefronts or who face online purchasing challenges, such as the growing number of consumers with disabilities.



57% of respondents had utilized voice technology functionality on their smartphones



29% of respondents had utilized voice technology functionality on their tablets, laptops, and desktops



27% of respondents had utilized voice technology functionality on their speakers

**Source: PwC Consumer Intelligence Series voice assistants survey, 2018*

To help ensure the success of voice technology backed by AI, B2B and B2C solutions need to focus on the following:

- Refine the algorithm: A combination of customer account information, purchase history, voice commands, and other inputs should be used to create a personalized experience for consumers.
- Tailor the conversation to the customer: Voice assistants need to adapt to customer requirements during conversations in order to refine the product matrix accordingly.
- Improve voice biometrics: Solutions that can capture nuances around languages, accents, and regional dialects will see increased customer satisfaction due to smoother user experiences.

Leveraging voice technology

Low-cost, less complex products

Voice technology as a purchasing channel is currently best suited to less complex and cheaper products, such as groceries and household items. Consumers are familiar with these purchases and do not typically spend much time on decision-making.

Private space

Consumers prefer to use voice technology at home or in cars because of privacy concerns. This opens the door to voice purchasing based on advertisements while watching TV or listening to the radio, or for a customer to purchase groceries while cooking.

Examples of Conversational AI Integrating with SAP Commerce

A B2B2C Conversational AI Solution

Rebecca brings her dog to a neighbourhood veterinary clinic. The vet has set up her account with a veterinary pharmaceuticals site built on SAP Commerce. This site is integrated with AI Voice Assistants, which allow the vet to use voice technology during his appointments. Using verbal cues to a smart speaker during Rebecca's appointment, the vet captures account information and the dog's health notes which builds the foundation of Rebecca's online account. Through her personal smart speaker at home, Rebecca can verbally complete her account setup, submit her dog's prescription order and set up delivery. The veterinary pharmaceuticals site has enabled both the vet and the vet's client to simplify their needs using voice technology.



A B2C Conversational AI Solution

Gary takes the bus during his daily commute through a busy urban area. To help Gary and other commuters find the best route home, the city's transportation bureau has implemented an intelligent virtual assistant to complement their SAP Commerce site. Gary can open the site on his phone and tell the virtual assistant, "I need to take a bus to Essex." The virtual assistant then calculates a route, taking in mind Gary's location, the many city bus routes, and the locations of each of the buses on each route, noting any delays. The virtual assistant responds, "I've calculated the fastest route and there is a bus leaving from 34th Street and 3rd Avenue in 10 minutes. You will arrive at Essex at approximately 6:52pm." With the help of his new AI-powered assistant, Gary and the other commuters will be able to seamlessly travel through the city.



How SAP Commerce Aids in Facilitating Conversational AI

SAP has taken a number of steps in making its C/4HANA solutions conversational, while further enhancing core strengths and capabilities such as Time-to-Market and Modular architecture.

SAP Conversational AI – formerly known as Recast.ai – leverages the power of Natural Language Processing (NLP) technology capable of building human-like AI chatbots in any language. It also provides other software development kits, such as bot builder and bot connector which are open-source and hosted on GitHub.

For mid-market brands, retailers and companies, with a prebuilt direct integration from Live Person, SAP Upscale Commerce makes it possible to launch a cutting-edge digital store with advanced conversational AI in a matter of weeks. The solution's high flexibility provides customers with an outstanding experience across all form factors, while using their preferred messaging platforms.

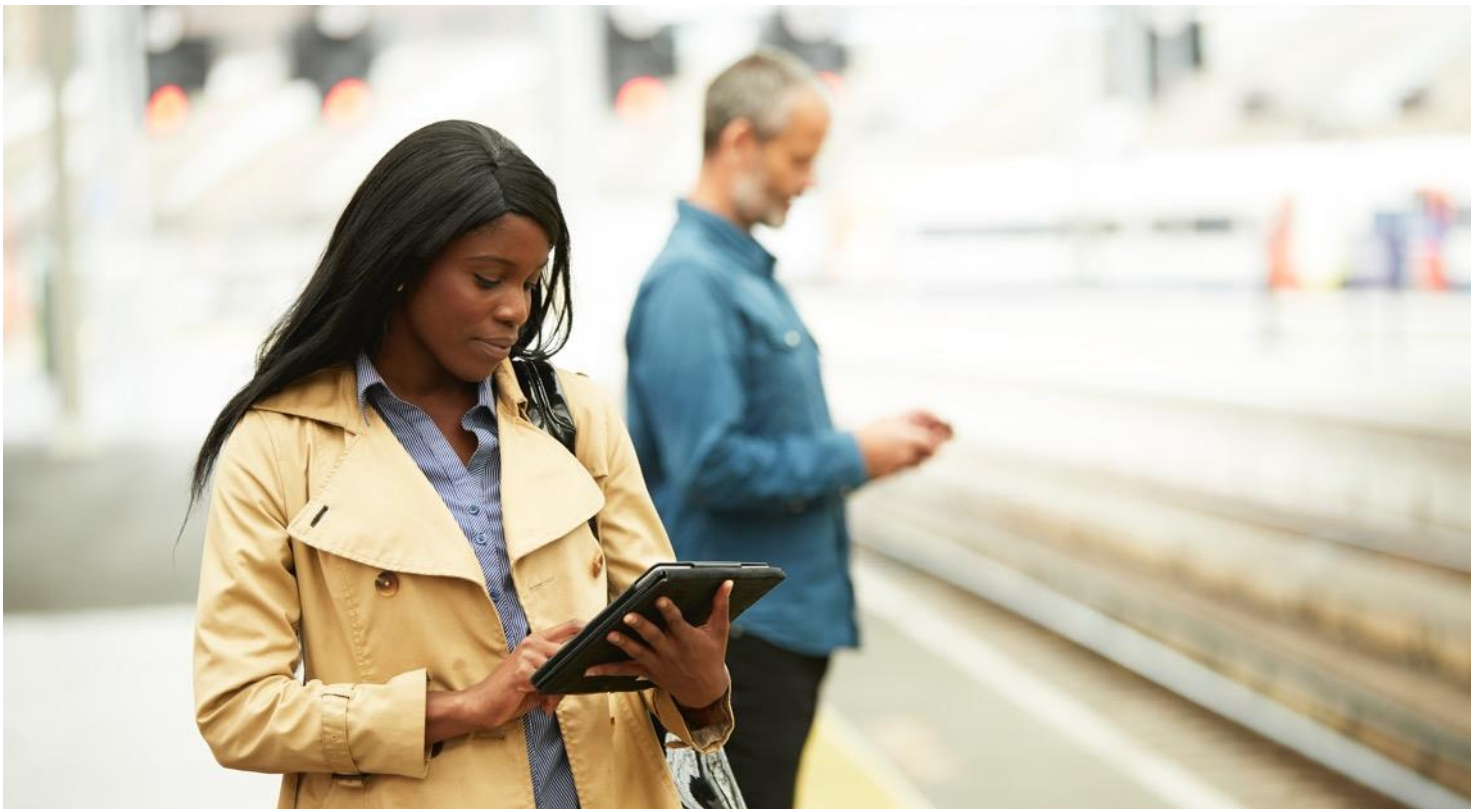
SAP Customer Experience Labs developed Charly, a prototype chatbot which integrated SAP Commerce's backend with Facebook Messenger on the front-end, allowing customers to order groceries through conversational AI.



PwC's Vision for Conversational AI and SAP Commerce

PwC recognizes conversational AI as the next natural interface for business transactions. To meet business outcomes and drive profits, PwC's blueprint consists of four main business components:

1	Enterprise Systems	2	Conversation Interface	3	Language Processing Capabilities and Actions	4	Development and Management Needs
Identify the systems to be integrated with SAP Commerce and the integration touch points for the conversational agent.		Identify the stimulating points in a customer's commerce journey where the conversational agent needs to make intelligent decisions.		Determine the sophistication level for machine learning, intent recognition, and dialogue management.		Establish business processes and the norms for data security and testing.	



A Conceptual Solution for Conversational AI and SAP Commerce

Requirements and Technical Specifications

Identify target consumer, potential costs and brand risks, and benefits from automation, and layout Commerce and Conversational AI capabilities and functionalities that satisfy these requirements

Analysis and Reinvestment

Track performance, review conversation logs and usage metrics, and update the Conversational AI and Commerce solutions with new data and design insights

Management and Security

Manage the Commerce site and Conversational AI for quality control, perform software maintenance when required, and ensure data is being collected and secured

Script Design and Data Collection

Determine Conversational AI domain, automation tasks, and conversation process flow, and collect dialogue data that reflect these design goals

Architecture

Design architecture that includes front-end conversational components, back-end components, with integrations to Commerce and databases

Development and Testing

Develop the language capabilities of the Conversational AI and the features of the Commerce storefront and test and refine the solution

Deployment

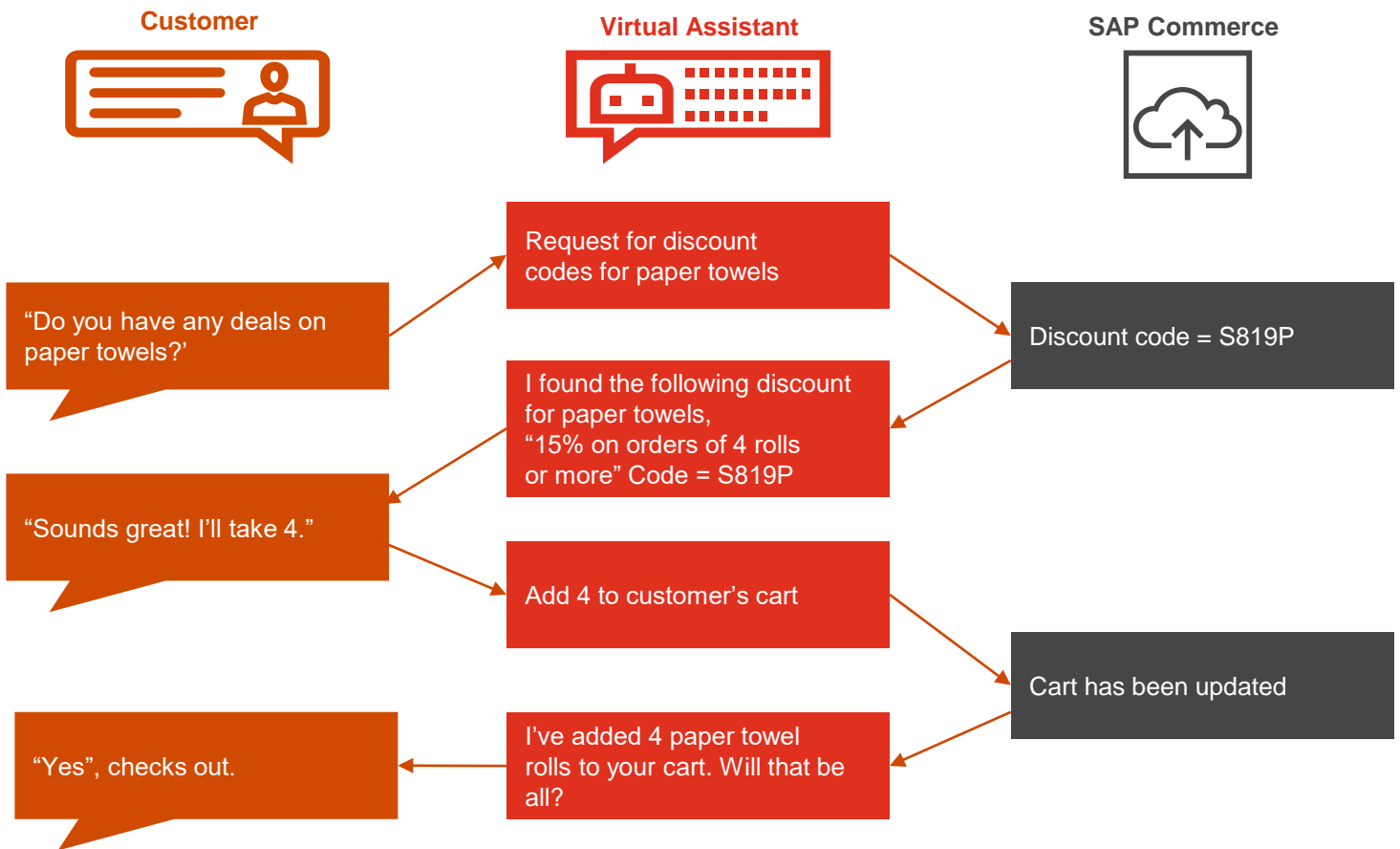
Deploy the Commerce site and Conversational AI and ensure integrations with front-end interfaces and back-end enterprise systems are stable and secure



PwC's Modern Delivery Framework for Agile Transformation

We're here to help you create an end to end solution. To do so, PwC has developed a modern delivery framework: AIRe (Align, Innovate, Release, Evolve). AIRe is business-led, collaborative, and aligned with the business objectives that drive predictable value, speed, focus, and agility. AIRe incorporates industry standard Agile development approaches, such as Scrum and Scaled Agile Framework (SAFe), and PwC proprietary techniques such as BXT for delivery and digital accelerators.

By focusing on significant planning, review, and organizational readiness, PwC can help businesses successfully design, adopt, and execute an Agile transformation.



Conclusion

By leveraging new digital technologies combined with the power of artificial intelligence, we work with organizations to build unique, scalable, innovative and state-of-the-art capabilities focused on improving customer satisfaction and driving business value. Simple, easily deployable chatbots and sophisticated, data-driven models can be applied across a spectrum of domains and can automate business processes.

Contact us to learn more about how SAP digital technologies can help with your business objectives, leveraging C/4HANA on the front-end with the power of S/4HANA on the back-end, to provide an intelligent and integrated customer experience across all channels.



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