Conversational AI

The next wave of customer and employee experiences
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What is Conversational AI?

Defining conversational AI and its components
Conversational AI is the next wave of customer and employee experiences

Cost-efficient digital experiences

For the first time, advances in automation, artificial intelligence (AI) and natural language processing (NLP) make it possible to design cost-efficient digital experiences. Now, where information can be purposeful, simple and natural, customer conversations with organisations increasingly resemble conversations with employees in-person.
WHAT IS CONVERSATIONAL AI?

A *programmatic and intelligent* way of offering a *conversational experience* to mimic conversations with real people, through digital and telecommunication technologies.

01 Informed by rich data sets and intents

02 Providing customers with informal, engaging experiences that mirror everyday language

03 Digitally enabled products, platforms, and experiences relating to communication, sales and service consultations as well as other customer services
Conversational AI brings together eight technology components

01 Natural Language Processing (NLP)
- Ability to "read" or parse human language text
- Pre-requisite for understanding natural sentence structures versus simple keyword “triggers”

02 Intent Recognition
- Ability to understand what the user is requesting, even if phrased unexpectedly
- Good intent recognition is vital if you don’t want to annoy your users with roadblocks in the experience

03 Entity Recognition
- Understand that some text refers to informative abstract categories (entities) such as "February 2" = Date
- Necessary for more complex commands and analysis

04 Fulfilment
- The ability to pull data from web services or databases using APIs, run conditions and inform the Dialog Manager

05 Voice Optimised Responses
- Ability to engage in conversation in a humanlike manner and show emotions to deliver an optimised experience

06 Dynamic Text to Speech
- Converts written text to natural sounding speech, supporting various languages, voices and accents
- Allows for emphasis of capital letters and tonal inflection

07 Machine Learning
- Learn how to better respond to the user by analysing human agent responses
- Necessary to improve intent recognition

08 Contextual Awareness
- Ability to follow conversation history, translate, recall and memorise information over conversations
- Necessary for natural, human-like back and forth conversation

Supporting elements

01 Reporting & Monitoring
The ability to tell you how your conversational agent is performing by providing insights and analytics.

01 Security & Compliance
The ability to mitigate security risks. Security & logging capabilities vary amongst platforms.
Customer outcomes

The opportunities for organisations and their customers
Conversational AI is an enabler to personalisation

The opportunity presented by conversational AI

Using conversational AI, organisations can provide personalised and differentiated experiences that build relationships with their customers. Each interaction can feel like a 1:1 conversation that is context-aware and informed by past interactions.

**Underpinned by...**

<table>
<thead>
<tr>
<th>Social media Chatbot</th>
<th>Web &amp; mobile Chatbot</th>
<th>Voice devices Virtual assistant</th>
<th>Contact Centre Virtual agent</th>
<th>Agent Assisted by AI for recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.g. Facebook Messenger</td>
<td>E.g. Automated webchat for sales or support</td>
<td>E.g. Google Home Amazon Alexa</td>
<td>E.g. Conversational Interactive Voice Response (IVR)</td>
<td>E.g. Nuance and Amazon Connect voice recognition</td>
</tr>
</tbody>
</table>

**Content management**

**Customer strategy**

**Embedded with...**

**Technological advances in AI and NLP**
Cognitive agents are going beyond keyword matching. Advancements in NLP processing speed, machine learning models and data availability have made this possible.

**Platforms maturing**
As Conversational AI technology becomes more popular, the development platforms become more mature. They come with easy to grasp drag-and-drop interfaces, allowing business users to build and manage agents themselves.

**Flexible technology integration/APIs**
As organisations move to Software as a Service (SaaS) solutions, integration capabilities are getting fast and more sustainable, capable of keeping up with changing business needs and technology.
Solve both customer and business needs

Organisational outcomes

<table>
<thead>
<tr>
<th>Use case example</th>
<th>Improve customer acquisition</th>
<th>Reduce churn</th>
<th>Increase revenue per customer</th>
<th>Reduce cost-to-serve</th>
<th>Increase employee satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Omni-channel experience</strong></td>
<td></td>
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<tr>
<td>Integrate channels with each other so customers receive consistent support</td>
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<tr>
<td><strong>Self-service</strong></td>
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<tr>
<td>Enable customers to complete the task they need whenever and wherever they want in a cost-efficient manner</td>
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<tr>
<td><strong>Real-time personalisation</strong></td>
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<tr>
<td>Personalised products, service, offers, and content in real-time based on the customer context and needs to offer a differentiated experience</td>
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<tr>
<td><strong>Sentiment analysis</strong></td>
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<tr>
<td>Identify, quantify and extract emotions across channels to understand the social sentiment of their brand, product or service</td>
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<tr>
<td><strong>Automatic knowledge base &amp; content creation</strong></td>
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<tr>
<td>Identify the most relevant data insights to automatically create custom content for each user and provide service recommendations to employees</td>
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<tr>
<td><strong>Predictive sales leads</strong></td>
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<tr>
<td>Score users’ likelihood of converting based on internal and external data, enabling sales to prioritise leads</td>
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<tr>
<td><strong>Conversational interfaces</strong></td>
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<tr>
<td>Enable users to have conversations that feel natural with machines by speech or text</td>
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</tbody>
</table>
Customers and businesses are reaping the benefits of conversational AI

Deloitte has supported organisations across diverse industries to deliver Conversational AI to improve customer and employee outcomes.

**Improve customer acquisition**
- Makes it easy for customers to find information and make a purchase anywhere and anytime
- Offer customers personalised products, recommendations and content more likely to meet their needs
- Provide agent decision-support with next best offer suggestions
- Rapidly scale up and down to always serve new customers in a cost-efficient manner

**Reduce cost to serve**
- 15 – 70% cost reduction opportunities depending upon the customer channel interactions deflected into Conversational AI enabled channels
- Short payback period with low integration costs and high potential return on investment
- Algorithms are organically trained as customers use the virtual agents, enabling cost-efficient continuous improvement

**Reduce churn**
- Provide customers with the support needed to resolve issues whenever they want, increasing customer satisfaction
- Offer employees insight into customers’ feelings to inform next best step recommendations

**Improve employee satisfaction**
- Basic routine tasks can be automatically completed by the AI-enabled virtual agents, allowing employees to perform more high-value and meaningful work
- Offer employees support from a virtual agent on how to best support the customer
- Share sales leads recommendations with employees, allowing them to better achieve their sales targets

**Increase revenue per customer**
- Basic routine customer interactions will be performed by the virtual agent, freeing up employee capacity to sell products and services
- Gather, analyse and act on the customer’s preferences and irritations to design tailored products, offerings, and promotions

Source: Deloitte analysis, 2019
Industry growth

Our understanding of the industry context and financial impacts
Industry growth and tangible impacts of Conversational AI

Early benefits from the adoption of Conversational AI mean the global AI-derived business value is expected to grow by an average of 30% annually.

- **Increase in Net Promoter Scores**: Organisations can increase their NPS when using Conversational AI to effectively provide a consistent quality of service.
- **Increase in sales conversion rates**: Organisations can significantly increase their conversion rates when using Conversational AI in sales process.

Conversational AI Market by Region

The Conversational AI market size is expected to grow from AUD 6 billion in 2019 to AUD 22.6 billion by 2024, at a CAGR of 30.2%, during 2019-2024.

Source: Adapted from Gartner, 2018
How to get started

Launching your Conversational AI journey
Discovering the potential of Conversational AI for your organisation

To get started, you need to understand where you are on your Conversational AI journey.
What stage most sounds like your organization?

01 Imagine

We know we need Conversational AI, but we require a strategy to tell us where we are in order to start, set a direction and test the use cases for the technology.

02 Deliver

We have selected a Conversational AI product or products and the technology to support them. But we need to validate with users to prove assumptions and benefits, pilot and integrate them.

03 Run

We have successfully run Conversational AI enabled services. We're ready to scale, continuously improve and optimise these sustainably.
The opportunity at hand

We can help you develop a strategy that outlines the vision, objectives, opportunity areas and action plan on how Conversational AI can be integrated into the organisation.

Key questions

These are the types of questions we'd typically discuss with you and your team.

<table>
<thead>
<tr>
<th>What are your customer experience aims?</th>
<th>How will you prioritise opportunities?</th>
<th>How will you test the new channel and proposition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What experience do you want to create for customers and employees, and which conversational channels have relevance?</td>
<td>What are the guiding principles to translate customer priorities into an AI-led strategy?</td>
<td>What is the right use case to demonstrate value while minimising risk?</td>
</tr>
<tr>
<td>How can you align Conversational AI initiatives with your organisation’s goals, vision and strategy?</td>
<td>What framework will you use to prioritise initiatives to maximise the value and outcomes of your opportunities for your community?</td>
<td>What is the right strategic technology to drive cognitive solutions and will it work in our ecosystem?</td>
</tr>
<tr>
<td>How could you join up your existing channels to create a personalised experience?</td>
<td>How should your Conversational AI initiatives be managed as a portfolio?</td>
<td>How do we establish the knowledge base and content that is required to power Conversational AI technology?</td>
</tr>
</tbody>
</table>

Example activities

- Run a Conversational AI lab or Use Case ideation workshop
- Conduct a Conversational AI maturity assessment
- Technology Partner and Platform Assessment
- Research/engage employees and customers to generate foundational insights
- Design & build Conversational AI solution prototype/s with stakeholders
- Develop a roadmap and KPIs to measure outcomes
Designing and launching

We can help further your initiatives by applying a rapid method to design, pilot and launch scalable Conversational AI experiences that address customer and employee needs.

Key questions

These are the types of questions we’d typically discuss with you and your team.

**Are you addressing the right opportunity or challenge?**
- Does it address unmet needs of consumers and/or employees?
- What are you currently doing to alleviate existing pain points?
- How will the solution affect behaviours or help with current challenges?
- Is the solution financially viable?

**What are the critical features, people, and systems needed to deliver a valued service and is it feasible and viable for your organisation?**
- How will you support your staff to effectively deliver a Conversational-AI-supported service model?
- What skills do you need to build in your internal team?
- How do we integrate with your core systems and processes, and ensure escalation to human agents when required?

**How will you test the new channel and proposition?**
- Who are the target groups for the pilot?
- How will you measure pilot success and what customer testing strategy will you implement?
- What resources, partnerships, and technologies do you need to build it?
- How do you test and manage unknowns and risks?
- What operating model and governance structures are required?

Example activities

- **Customer Testing to evaluate feasibility and viability of concepts**
- **Create Conversational Style Guide and multimodal design principles**
- **Identify operating model and balance AI with human hand-off**
- **Complete Design and Build of prioritised use cases**
- **Integrate with core systems and processes**
- **Pilot and launch solutions**
Scaling and improving

We can support your ongoing delivery and improvement of Conversational AI. Helping you continuously optimise, we can shape growth and development opportunities.

Key questions

These are the types of questions we’d typically discuss with you and your team.

What resources, partners and platforms do you need to maintain the solution?
- Does your organisation have staffing bandwidth to support services?
- Do you have the technical knowledge and skills to support the Conversational AI service?
- Do the financial incentives for employees allow for volume growth?
- What partners and platforms could better enable service delivery?

How will you scale the solution?
- What operating model and governance structures are required?
- What are your scaling diagnostics and criteria?
- How will you approach scaling the number of use cases and customers served?
- Where will you scale first?
- How do you facilitate adoption?

What further opportunities do you see for Conversational AI in your organisation?
- How are you currently performing against benefit realisation targets and consumer and/or employee expectations?
- Are you currently deriving insights out of the gathered data to identify areas of further improvement?
- How can you reduce the cost and risk of your solution?

Example activities

- Refine and optimise solution based on customer research outcomes
- Scale number of use cases and customers served by solution
- Iterate through Train and Test cycles to improve AI accuracy
- Develop onboarding and training approach for customers and staff
- Assess regulatory changes (when applicable) and adapt service or business model
- Leverage Machine Learning to progressively automate the solution
Deloitte assets
Our industry leading tools and accelerators
Deloitte assets

Our industry leading tools and accelerators

**TrueVoice**

*An outcome-based voice analytics platform*

**Context**

Deloitte addresses the challenge to interpret behavioural and emotional interaction in a voice conversation in order to deliver an impactful experience. It helps to understand both customers' communication style and suggest the next-best-action to agents in a centralised view.

**Benefits**

TrueVoice can improve customer satisfaction by benchmarking all interactions and empower agents to deliver a consistent experience. Additionally, it reduces risk by monitoring 100% of customers' interaction to enhance regulatory compliance.

**Voice Content Analyser**

*Scaled analysis of digital content against voice metrics*

**Context**

Deloitte recognises that content is vital for curating effective and valuable citizen experiences, including voice interactions. This tool enables voice search, search engine optimisation and integrating experiences with voice assistants or other new channels.

**Benefits**

The voice content analyser can assess the competency of a webpage content against voice engine optimisation metrics. It also provides actionable feedback to build readable and relevant content; supporting target customers to achieve their aims.
Context
Conversational AI is a tool designed to be customised by industry, enabling deeply specific conversations that customers find most useful. It functions as a common conversational brain to ensure consistent, accurate responses that are true to the brand.

Benefits
Conversational Accelerators allow for a “write once, deliver anywhere” approach, enabling cross-platform applications to be developed more quickly and deliver better outcomes for customers across all conversational platforms.

Context
TrustCX Tool is an analytic system that will monitor, in real-time, performance and responses. The voice tools inform survey language, improve customer personas, segmentation, and content relevance to ensure the right person is surveyed at the right time to maximise response rates.

Benefits
The TrustCX tool can measure your initial baseline through various areas: trust score, culture, KPIs, vulnerability, and policy. It effectively closes the customer feedback loop and builds trust for your customers.

Context
Industry-aligned accelerators enable conversations that customers find most useful, acting as a common conversational brain to ensure consistent, accurate responses true to the brand.

Benefits
Conversational Accelerators allow for a “write once, deliver anywhere” approach. Cross-platform applications can be developed more quickly and deliver better outcomes for customers across all conversational platforms.

Context
Conversational Playbook provides a playbook for selecting, testing, designing, and proving the value of conversational experiences that can be used to drive a consistent approach across the organisation.

Benefits
The Conversational Playbook provides a reusable and repeatable methodology for creating truly effective conversational experiences. It reduces the risk of running conversational initiatives and provides proof-points to assist in the creation of business cases and measuring success.
Success stories

How we’ve guided organisations on their Conversational AI journey
CONVERSATIONAL AI

Success story

Financial services company

Context

Deloitte was engaged to help design and develop a chatbot to answer common questions. A conversational design strategy was developed and training across the organisation was rolled out in anticipation of broader adoption of the chatbot.

Benefits

In just a few months, the chatbot dealt with 14,000 interactions, resolving queries with a 90% accuracy rate. The chatbot has now been trained with more knowledge and includes a seamless transition to live chat where required.
Telecommunications company

Context
Deloitte helped a leading telecommunications company to develop a Voice Interaction Design Playbook detailing the methodology and guidelines to create valuable voice interactions for the client’s customers.

Benefits
The company now has a standardised approach to conversational design, including detailed steps and resources to guide and accelerate future voice projects. They also have a prioritised list of voice use cases to take to market which have been customer tested, are viably sound and feasible for a first release.
Voice-powered hospital care

Context

Deloitte built an AI enabled patient communication solution which allows patients to request assistance by simply speaking their request. AI prioritises and smart-routes requests to the right resources and nurses are alerted to requests.

Benefits

The product enables patients to receive an immediate response, confirming they have been heard and that a nurse is on their way. Patients can receive support in a timely manner, operate smart rooms and book appointments. It also helps nurses prioritise workflows, removing unnecessary activities, resulting in improved patient outcomes.
CONVERSATIONAL AI

Success story

Voice design, build & launch

Context

Deloitte assisted Queensland Health to design, build and implement a new call centre solution using the Amazon Connect platform, automation, and chatbot integrations. Queensland Health’s internal IT Support experienced high call volumes and in particular high volumes of password resets after long weekends from health employees who would forget their passwords.

Benefits

An integrated and intelligent solution was created with integrations to Active Directory, API calls to ServiceNow and the creation of call workflows. Average Call wait time has been reduced to 2 minutes and 30 seconds and abandonment rate was reduced to ~5%.
Chatbot design, build & launch

Context

Deloitte was engaged to develop a Chatbot to serve as a digital front gate for customer service via the website channel. The client sought to improve the demand management of customer service requests within its contact centre, where extended call wait times were leading to a frustrating experience for some customers.

Benefits

The Chatbot has helped retain users by removing several key customer pain points, such as limited operating hours. It has also helped to free up capacity within the contact centre.
Voice proof of concept & scaling plan

Context

Deloitte worked with a NSW government agency to develop a proof of concept (PoC) to explore whether new customer contact technologies (Amazon Lex) could be used to improve capacity in a cost effective way that did not impact the customer experience.

Benefits

The PoC provided evidence for cognitive contact centre technology and its ability to provide a customer experience aligned with their brand. PoC tests indicated reductions of average handling time by 77%, with success rates that exceeded expected baselines. Use cases were then identified for scaling the cognitive technology, which indicated significant operational savings.
Act now

Unlocking the organisational value of Conversational AI
Act now

Many organisations swirl in an endless loop of proof-of-concept or trying tools labelled Conversational AI. They do not transform to change how they operate, what they provide, and the perception of their customers.

01 Explore
- Organisations examining the benefits for Conversational AI or have just purchased products
- Setting up the supporting system such as building the customer analytics platform
- No real change to the organisation or how it provides services or is perceived.

02 Experiment
- Organisations piloting use cases of Conversational AI in isolation rather than holistically along the business value chain to extend capabilities
- Still largely focused around same business, operating, and customer models
- Data-driven platforms remain aspirational

⚠️ Don’t get stuck here!

03 Scale
- Adapting Conversational AI across business units and becoming more synchronised and less siloed working
- Relevance demonstrated among wider ecosystem partners with more advanced changes to current business, operating and customer models
- Often new platforms established and becoming data driven

04 Optimise
- Business, operating, and customer models are optimised for digital and profoundly different from prior business, operating, and customer models
- Customer centric, data driven, platform based, and delivery focused
- Perception of the organisation has fundamentally changed and AI enabled ways of working are the norm
Our offers and team

Introducing our experts and how we can help
Why Deloitte?

We bring together dedicated expertise in technology platform implementation as well as AI and Machine Learning, underpinned by our focus on Customer Experience.

01 We have industry expertise and partnerships with AI technology providers

02 We have deep expertise in AI and Machine Learning

03 We take a human-first approach to designing effective Conversational AI
Our expertise

Ecosystem enabler

Our ecosystem of AI vendors, industry experts and experienced delivery teams enable us to offer end-to-end integrated services, from strategy, design, implementation and data and insights.

*This allows us to genuinely answer the question our clients pose of ‘Why Deloitte?’ and differentiate us from our competitors.*

Automation

Our Analytics and Cognitive practice gives Deloitte the capability to create more intelligent conversational experiences that deliver greater cost savings and customer outcomes over time.

*We can combine our use cases to pass on the benefits to our clients, providing traction and giving us the ability to customise ‘Out of the Box’ solutions, or create our own.*

Conversational User Experience

Our Conversational User Experience team determines that the customer is at the center of every conversational experience we create and deliver experiences that exceed expectations.

*We can reduce the risk of conversational initiatives through understanding your customers and their needs, and using our design expertise to drive to a successful outcome.*
## A sample of our offers

<table>
<thead>
<tr>
<th>Offers</th>
<th>Client Challenge</th>
<th>Unique Capabilities</th>
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</thead>
<tbody>
<tr>
<td><strong>01 Imagine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AI lab</td>
<td>Defining where to get started with Conversational AI, including business and customer use cases.</td>
<td>- Conversational AI lab for execs including real examples</td>
</tr>
<tr>
<td>AI strategy &amp; roadmap</td>
<td>Building a strategy for Conversational AI and defining how to integrate with other channels to increase capacity, reduce costs, improve employee and customer experience.</td>
<td>- Metrics - PoC methodology - Chatbot front end accelerator - User testing guides</td>
</tr>
<tr>
<td>Proof of concept (PoC) &amp; proposition design</td>
<td>Understanding a unique proposition for the channel, defining what AI technology will work to support organisational outcomes and how it can be scaled.</td>
<td>- PoC methodology - Chatbot front end accelerator - User testing guides - Market Gravity - Voice design playbook</td>
</tr>
<tr>
<td><strong>02 Deliver</strong></td>
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<tr>
<td>Technical delivery</td>
<td>Delivering new technologies, designing interfaces that work and building integrations to deliver seamless solutions.</td>
<td>- Conversational designers - Content specialists - Technical design and build - Integration with business-critical systems</td>
</tr>
<tr>
<td><strong>03 Run</strong></td>
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</tr>
<tr>
<td>Omni-channel &amp; operational diagnostic</td>
<td>Optimising Cognitive AI solutions to increase revenue per customer, reduce churn and reduce cost to serve. Understanding the value and performance of the customer experience in real time through trust and sentiment analysis.</td>
<td>- True Voice - Voice Content Analyser - Next best conversation accelerators - Conversational analytics dashboard - CX Trust tool</td>
</tr>
<tr>
<td>Manage and scale</td>
<td>Supporting the day to day technology and scaling the platform to more customers with new use cases.</td>
<td>- Conversational Designers - Technical design - Managed support and service</td>
</tr>
</tbody>
</table>
Ready to have a conversation?

Let’s chat.

Robert Overend  
Partner, Customer Strategy and Design  
Deloitte Digital  
roverend@deloitte.com.au

Simon Stefanoff  
Conversational AI Practice Lead  
Deloitte Digital  
ssstefanoff@deloitte.com.au

Paul Jackson  
Partner, Analytics and Cognitive  
Deloitte Digital  
cladams@deloitte.com.au

Steve Rayment  
Partner, Technology Enablement  
Deloitte  
srayment@deloitte.com.au

Simon Cooper  
Director, Customer Strategy and Design  
Deloitte Digital  
simcooper@deloitte.com.au

Debra Taylor  
Voice Content and Search Principal  
Deloitte Digital  
detaylor@deloitte.com.au
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