Trends & AI in the Contact Center
2023 Global Contact Center Survey
Survey Demographics – Global Data
Developed in response to a rapidly evolving contact center landscape, this survey was designed to help understand what’s next in the contact center space across strategy, customer experience, and operational/technical capabilities.

2023 Survey witnessed record participation!

Respondents represent 9 Industries

Headquartered in 11 Countries

Across 6 Regions

With varying customer bases touching both B2C and B2B and internal customers such as IT or HR

- Consumer: 28.6%
- Banking: 20.2%
- TMT: 16.7%
- Insurance: 15.5%
- LHSC: 9.5%
- Others: 9.5%
2023 Global Contact Center Survey
Survey Findings – Global Responses
Customer Experience and Cost to Serve: A “Both/And” Imperative

While customer experience remains the top priority among contact center executives, leaders are still being challenged to meet the ever-changing expectations of their customers and differentiate themselves from competitors by improving the client experience while focusing on cost containment initiatives.

Leaders are looking to implement strategies and corresponding initiatives that help to optimize CX and operational efficiency by investing in strategic initiatives where initiative benefits overlap customer experience and cost.

Deploying additional self-service capabilities, modernizing contact center infrastructure and deploying agent enabling technology are the three highest priority investment areas.
2023 Global Contact Center Survey
Survey Findings – Global Themes
2023 Global Contact Center Survey Themes

**Customer Experience and Cost to Serve: A “Both/And” Imperative**

### Channel Orchestration

- **Right-channeling**
  - 55% of respondents who have implemented the strategy aim to balance customer experience and cost

- **Proactive Outreach**
  - 36% of respondents proactively reach out to customers reducing inquiry volume
  - Successful outreach programs eliminate high volume transactions with timely updates and solutions that enhance the customer experience, improving brand loyalty

- **Enhancing Self-Service**
  - 86% of contact center executives surveyed plan to deploy additional self-service capabilities over the next two years as data suggests customers prefer options to self-serve

### Talent Initiatives

- **Developing and Retaining Remote Workers**
  - 76% with a Work from Home program believe that bringing agents into the center for moments that matter helps to build culture/loyalty and aids in the development and retention of employees
  - Training and Culture Events are the most important in-person experiences

- **Job Enrichment**
  - Companies are implementing salary adjustments 53%; and developing career paths 47%; to attract and retain workers

- **Service Capacity**
  - 63% of respondents are working to fill staffing gaps while leaders are worried about negatively impacting their service levels and CX scores
  - 83% of contact center leaders are partnering with a BPO to provide flex capacity

### Cognitive Enabled Technology

- **Investing in AI**
  - 81% of contact center executives are investing in AI for agent-enabling technologies to improve the agent experience and operational efficiency

- **Use of Analytics and Insights**
  - 81% of respondents have invested in voice and text analytics (increased from 62% 2 years ago)
  - Contact centers are using voice/text analytics for Call/Contact Driver Analysis, Insights for ‘at risk’ customers, and Service Quality

- **Re-evaluate / Refresh prior investments**
  - As few as 7% of respondents report their cognitive capabilities are delivering significant value to the organization
  - Expansion of use cases will offer the greatest ability to maximize benefits from technology investments

Contact center leaders are developing 3D Servicing Strategies to create a seamless tech and talent experience across all service channels.
2023 Global Contact Center Survey
Survey Findings – Channel Orchestration
Survey Findings – Channel Orchestration

- 45% of contact centers do not steer their customers to a particular channel pro-actively.
- Of the remaining 55% of contact centers, 74% use right-channeling to pro-actively steer their customers to channel best suited to support the interaction intent type whereas the remaining use a static approach of steering based on lowest cost and shortest wait time.

Currently 78% of contact centers have high or medium usage of phone.
The number is expected to decrease to 49% in 2 years.
Most phone volumes are expected to be absorbed by real-time & asynchronous messaging - 24%, social media - 10%, and self-service channels - 9% with investment in these channels.

Distribution of contact centers for channel mix

Usage of pro-active steering by contact centers

- Yes, we try to steer customers to a channel best suited to support the interaction intent type.
- Yes, we try to steer to the lowest cost channel.
- Yes, we try to steer to the channel that has the shortest wait time.
- No, we let our customer pick what channel to interact with us in.

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Current State
- Phone (voice - agent-handled): 26%
- Real-Time and Asynchronous Messaging: 44%
- Social Media (Posts on social media and other community pages): 41%
- Self-service (IVR, web portal, Virtual Agent, Chatbot): 31%
- Email (email and web forms): 26%

Future State (2 years from now)
- Phone (voice - agent-handled): 48%
- Real-Time and Asynchronous Messaging: 21%
- Social Media (Posts on social media and other community pages): 19%
- Self-service (IVR, web portal, Virtual Agent, Chatbot): 15%
- Email (email and web forms): 30%

- High usage (80-100%)
- Medium usage (50-70%)
- Low usage (10-40%)
- Do not plan to use this channel 2 years from now

- Yes, we try to steer to the channel that has the shortest wait time.
- Yes, we try to steer to the lowest cost channel.
- Yes, we try to steer to a channel best suited to support the interaction intent type.
- No, we let our customer pick what channel to interact with us in.

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Global Themes - Talent Initiatives

WFH Program – In office activities

- 69% of contact centers have a work from home program
- The number is expected increase to 73% in 2 years
- Contact centers that have a WFH program and capitalize on onsite gatherings mention training and culture events are generally conducted in person
- 24% of respondents do not perform any training/coaching/events/hiring/tech support related activities in person, working in a wholly virtual environment

Staffing shortage and corrective measures

- 63% of contact centers are currently facing a staffing shortage
- 64% of such contact centers are implementing at least three of the eight corrective measures listed with salary adjustments, developing career paths and deploying additional self-service capabilities leading their efforts
2023 Global Contact Center Survey

Global Themes – Cognitive Enabled Technology
Global Themes – Cognitive Enabled Technology

Distribution of contact centers based on AI capabilities

- **Chat Bot**
  - Fully deployed – offering significant value to the organization: 26%
  - Fully deployed – not delivering value expected: 29%
  - Partial deployment – expanding use cases: 14%
  - Pilot/Testing: 7%

- **Virtual Voice Assistant**
  - Fully deployed – offering significant value to the organization: 36%
  - Fully deployed – not delivering value expected: 29%
  - Partial deployment – expanding use cases: 14%

- **Agent Assist (Internal Facing Chat Bot)**
  - Fully deployed – offering significant value to the organization: 40%
  - Fully deployed – not delivering value expected: 30%
  - Partial deployment – expanding use cases: 12%
  - Pilot/Testing: 14%

Distribution of contact centers based on usage of voice analytics

- **Do you use voice/text analytics in contact centers to improve service?**
  - Yes: 81%
  - No: 19%

- **Customer Insights/Retention (e.g., vulnerable customers)**
  - Fully deployed – offering significant value to the organization: 65%
  - Fully deployed – not delivering value expected: 65%
  - Partial deployment – expanding use cases: 14%
  - Pilot/Testing: 9%

- **Quality risk**
  - Fully deployed – offering significant value to the organization: 65%
  - Fully deployed – not delivering value expected: 65%
  - Partial deployment – expanding use cases: 14%
  - Pilot/Testing: 9%

- **Call/contact driver analysis**
  - Fully deployed – offering significant value to the organization: 65%
  - Fully deployed – not delivering value expected: 65%
  - Partial deployment – expanding use cases: 14%
  - Pilot/Testing: 9%

- **Call Quality Evaluation Automation**
  - Fully deployed – offering significant value to the organization: 40%
  - Fully deployed – not delivering value expected: 40%
  - Partial deployment – expanding use cases: 24%
  - Pilot/Testing: 3%

- **Escalation/Complaint Identification**
  - Fully deployed – offering significant value to the organization: 35%
  - Fully deployed – not delivering value expected: 35%
  - Partial deployment – expanding use cases: 29%
  - Pilot/Testing: 3%

- **Real-time behavioral coaching to agents**
  - Fully deployed – offering significant value to the organization: 31%
  - Fully deployed – not delivering value expected: 31%
  - Partial deployment – expanding use cases: 24%
  - Pilot/Testing: 3%

- **Call transcription/notes elimination**
  - Fully deployed – offering significant value to the organization: 28%
  - Fully deployed – not delivering value expected: 28%
  - Partial deployment – expanding use cases: 21%
  - Pilot/Testing: 3%

- **Regulatory Compliance**
  - Fully deployed – offering significant value to the organization: 15%
  - Fully deployed – not delivering value expected: 15%
  - Partial deployment – expanding use cases: 12%
  - Pilot/Testing: 3%

- **Automated coaching suggestions to team leads**
  - Fully deployed – offering significant value to the organization: 9%
  - Fully deployed – not delivering value expected: 9%
  - Partial deployment – expanding use cases: 7%
  - Pilot/Testing: 3%

- **Agent Churn**
  - Fully deployed – offering significant value to the organization: 9%
  - Fully deployed – not delivering value expected: 9%
  - Partial deployment – expanding use cases: 7%
  - Pilot/Testing: 3%

- **Others**
  - Fully deployed – offering significant value to the organization: 3%
  - Fully deployed – not delivering value expected: 3%
  - Partial deployment – expanding use cases: 2%
  - Pilot/Testing: 3%

- 80% of contact centers are actively engaging in some stage of AI deployment
- 17% of contact centers have fully deployed all three AI technologies agent assist, virtual voice assistant and chat bot
- 20% of contact centers have no plan of investing in any of the three AI capabilities
- 81% of our respondents indicated they are using voice/text analytics to improve service
- Among those using analytics, 65% use it for customer insights/retention, quality risk identification and call/contact driver analysis followed by call quality assessment at 40%
Trends and AI In the Contact Center
Introductions

Today’s Objectives

• How and why to use AI in the Contact Center
• Generative AI in the Contact Center

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Potential Conversational AI Use Cases

1. Traditional (Voice / Chat) AI Virtual Assistant
   - Content Creation

2. Avatar-Based Assistant
   - Translation

3. Summarization
   - Knowledge Ontology (Q&A Pairs)

4. Social Media Moderation
   - Sentence Completion & Paraphrasing

5. Text-to-Speech and Speech-to-Text

To discuss: What impacts customer care interactions
Transforming Customer Experience with Conversational AI

*Imagine If You Could...*

- **Provide on-demand 24/7 service with high CSAT** for customers to receive effective support when they need it for new reservations, change existing reservations, etc.

- **Simplify access to critical information** for customers and employees to be more effective in their decision making and completing the business purpose

- **Leverage predictive ML models** to accelerate getting to the *right* outcome faster, improving areas such as ‘next-best-action’

- **Empower employees** to complete core job functions more efficiently and accurately

- **Provide personalized and contextual recommendations** to customers so they maximize their product or service usage

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**Up to 120 point NPS Improvement**

NPS Scores improved for Deloitte client when shifting from traditional service to CAI enabled engagement

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**3x faster...**

... self-service transactions via CAI vs. traditional UI methods

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**50%+ deflection**

Deloitte has recognized through experience that AI bots can routinely complete 40-60% of customer business purpose without escalation to human support

Source: Deloitte Experiences

1 Under the right conditions; Deloitte has achieved as high as 90% containment on targeted use cases
Primary Areas of CAI Impact

**High-Level Impact**
Solutions for clients, employees and business partners business problems...

- in **less time**
- of **higher value**
- decreasing cost burden

**Conversational AI Opportunities**
CAI solutions can both solve end user problems and leverage end user data to create efficient business outcomes

1. **Self-Service**
   - Enable end-user omni-channel engagement with both Human and AI agents (e.g., call center, web interface, app, text message)

2. **Real-Time Recommendations**
   - Analyze historical and real-time data via AI / ML models, to offer recommendations to both AI and Human agents (e.g., sales opportunities during calls)

3. **Business Evolution**
   - Generate continuous insights from end user conversations to optimize customer care service and business operations
Conversational AI Solution Framework

### Sales and Service Transformation

**TrueServe™**

TrueServe™ is Deloitte’s comprehensive Digital Contact Center solution suite which can be delivered as an all-in-one solution or in a modular fashion to meet Disney’s needs where they are in their service transformation journey.

**Demo (video):**

### Customized Solution Development

**Trusted Vendor Relationships**

Deloitte has built relationships with CAI ecosystems vendors, helping serve clients interested in pursuing CAI initiatives on their chosen vendor platforms.

### Frontline AI

- Nvidia processing (supercomputer) capability
- Lowest Word Error Rate in ASR/STT engine
- Easy to customize LLM for business purposes
- Edge AI with reduced latency and improved accuracy
- Visual Conversational Capabilities powered by LLM
- Higher accuracy of predictive analytics and pattern recognition
- Dedicated Center for AI Computing with Deloitte
- Certification of 100+ trained personnel in accelerated AI modelling

Deloitte’s assets, accelerators, and partnerships enable robust CAI solution deployment.
The Nuts and Bolts of Conversational AI

Persona & Personalization

- Customer 1
- Customer 2
- Customer N
- Employee A
- Employee B
- Employee N
- Partner X
- Partner Y
- Partner N

AI Self Service & Right Channeling

- Call Center
- SMS/Text
- Email
- Web
- Social

- Speech-to-Text (STT)
- Natural Language Processing
- Text-to-Speech (TTS)

User Outcomes

- Get Personalized Assistance Based on History and Context
- Complete Tasks Easily w/ Seamless Integrations
- Access Product/Service Info Immediately
- Experience Non-repetitive Conversation for Agent Transfers
- Get Consistent Quality Experiences Across All Channels

Conversation enables any user To engage in the channel(s) of their choosing

And have a natural language conversation supported by insights derived through predictive AI

To achieve desired business outcomes and improved customer satisfaction
### Definition for Generative AI and Large Language Models

**Generative AI...**
- Is an umbrella term for an automated process that uses algorithms to manipulate or synthesize data.
- Produces images, audio, video or human-readable text.
- Is different from discriminative AI, which draws distinction between different kinds of input and produces, same, predetermined output, for similar inputs, every time.
- Is named so because the AI creates something that didn't previously exist.

**Large Language Model...**
- Is a Machine Learning Algorithm that can perform a variety of natural language processing tasks.
- It generates and classifies text, answers questions in a conversational manner, and translates text from one language to another.
- Is large because it is trained on a large (billions of parameters) volume of data.
- Behavior changes autonomously, as it learns with continuous input of data.
- Can be further fine-tuned with business data to conduct specific business functions.

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**Generative AI is not a replacement** for traditional conversational AI, but **an augmentation** to improve contact center operations.
Generative AI and Large Language Models applicability to Contact Centers

Customer Engagement
- Always Available with Answers
- Easier to Build Business Conversations
- Faster Training for Quicker Insights
- Interact with Customers in their Language
- Easy Access to Information
- Improved Agent Assistance Generating Next Words / Sentences
- Net New Improvement

Agent Experience
- Improved Agent Assistance Generating Next Words / Sentences
- Easy Access to Information
- Based Recommendation
- Context Based Recommendation
- Interact with Customers in their Language
- Communicate in Independent Language
- Content Creation with Channel-based

Engagement Modes (Kiosk, Avatar)
- Language Independent Interaction
- Novel Customer Engagement Modes
Conversational AI Reference Architecture

Enterprise Systems
- Avatar Management
- CRM
- Knowledge Management
- Document Management
- Intelligent Automation
- Information Systems
- Messaging Systems
- Workforce Management
- Analytics & Reporting
- SCM
- Expert Systems
- ERP
- Workflow Management
- Machine Learning
- Large Language Models
- Data Lake
- Enterprise Analytics

NOTIFICATIONS

Virtual Agent
- Interaction Designer
- Control Center
- Small Talk Engine
- Conversation Engine
- User Management

ASR/STT Engine
- Speech Recognition
- Text-to-Speech

Voice Portal
- MRCP Module
- Sip Module
- Codes
- VXML Module
- Media Server
- Analytics
- Media Server

ACD & Call Routing
- ACD & Call Routing
- Skill Based

Enterprise IVR
- Voice Recording
- IVR Flows
- Voice Biometrics
- Survey
- Analytics
- Sip Interface

User Management
- Screen Pop
- W/ Conversation History

Agent Assist
- Enterprise Connector
- Recommendation Systems
- Social Connector
- Information Discovery Assistant
- Sentiment Analysis
- Live Transcription
- Voice Analytics
- Smart Reply Assistant
- LLM Assistant

Tts Engine
- Text-to-Speech

Virtual Agent
- Interaction Designer
- Control Center
- Small Talk Engine
- Conversation Engine
- User Management

MCP Module
- SDKS Libraries

NOTIFICATIONS
- Sip Transfer
- Agent Escalation
- JSON/Https
- Webhooks
- Rest WebServices
**Common Pitfalls to Avoid**

**WHAT TO AVOID**

- Analytics as an after-thought with poorly articulated business outcomes and minimal ways to measure benefits
- Multiple, uncoordinated siloed experiences for different channels, products, & services
- Insufficient talent, unable to understand, build, and work with AI
- Lack of an improvement plan to incorporate a feedback loop and address model drift
- Fragmented operations, carrying technical debt across the organization

**WHAT WORKS**

- Integrate business outcomes & **analytics at the forefront**
- **Curate unified user experiences** across channels, products, services with both centralized and federated components
- Understand and plan for **talent implications to** support AI capabilities
- Adopt a **mindset of continuous improvement** as part of discovery, testing, training, and tuning the system
- **Optimize technical readiness** with the right infrastructure to meet data, security, and AI needs
Issue

Call center operating cost has become prohibitive (~$1.5 billion in OPEX), principally due to ineffectiveness of the current solution to efficiently address customer needs. This situation resulted from an increased reliance on human agents contributing to increased spend. The technology with time was out-of-date, needing disruption, revamp, and rethinking, with increasingly higher expectation from customers. The demography of the user was changing with time, including their modes/styles of interactions with the enterprise. The millennial’s attention span and level of expectation from a service provider accelerated this need to embarking on transformation. Client also faced a problem of ~$750 million/year in uncollected debt and increasing over time.

Solution

The client engaged Deloitte to transform their call center into a contact center of the future and to map out architecturally significant customer user cases. Deloitte developed the enterprise application architecture, architecture decision records, and the capability map, centered around Google’s CCAI platform, leveraging Dialogflow as the AI Brain for intent recognition, while integrating with client’s IVR, CRM, and other backend applications through an API gateway.

Additionally, Deloitte built an ‘AI in the cloud’, voice virtual agent (VVA) in AWS Cloud that delivered a natural, more efficient and engaging customer experience, collecting payments from in-collection customers. This AI system leverages several ML models built for personalized negotiation with customers when they call in and are in conversation with the AI agent.

Impact

The Google CCAI enabled transformation is underway, and currently the AI brain is routing ~35% of the total call volume. After implementing all prioritized omnichannel use cases in the voice/chat/SMS AI channels, net saving is targeted to be $500 million/year

Meanwhile, the ‘AI in the cloud’ VVA running in AWS Cloud is already generating exemplary results:

• More than 30 million annual calls handled by the VVA in production
• 90% containment rate (calls never get to a human)
• $150 million in annual savings
• 2X rate of collection
What does an Evolutionary Roadmap look like?

**MVP**
- Platform Foundations
- Launch Voice (bot) enabled Contact Center to cater to IVR, FAQ bot and Skill based Routing
- Chat (bot) FAQ
- Analytics Dashboard and Reports

**Operate**
- Team members are part of the initial MVP build and release
- ITSM (IT Service Management) process orientation
- Document Application Run Book
- Create Standard Operating Procedures (SOP)

**Ongoing Operate Services**
- Perform KTLO (Keying the Lights On) services
- Review and refine ITSM processes
- Refine run book and SOP
- Baseline service level objectives
- Finalize reporting data sources

**Multi-modal**
- Support multi-channels to run in parallel
- Enable Customer Engagement across channels – SMS, Email
- Self-service Integrations with backend systems
- Sentiment Analysis and Keyword based notifications
- Enable Session Management

**Omnichannel**
- Enable Customer Engagement across channels, maintaining history and context
- Content managed centrally via a single repository for all channels
- Integration to CRM / Product / Service for fulfilment
- Integrate with Field CRM to enable 360-degree view of the customer
- Highly interactive process automation and orchestration

**Hyper-personalization**
- Relevant Journeys personalized based on context, preferences, sentiment, and channel
- Human in the loop with warm handoff and supervised machine learning & training
- Enable Call Transcription
- Enable next best action for Agents
- Continuous optimization for improved experience, thereby higher CSAT, loyalty, and trust

**Optimization and beyond**
- Perform Services
- Continuous improvement initiatives
- Status reports – weekly & monthly
- SLO dashboards
What do Talent and Core Skillsets look like?

**CAI Technical Delivery Manager**
Elaborates end to end architecture and design from channels to agent integration. Ensures the development is in alignment with leading practices and will achieve the planned business goals; Guide all technical roles on the project, QA their work.

**Conversation Designer**
Designs non-linear conversations in accordance with leading practices for the key personas and channels, defines agent personality, writes scripts for natural conversations.

**CAI Linguist**
Creates intent libraries by data mining, and content understanding e.g., follow-up intents, evaluates NLU performance for automating the customer experience.

**CAI Platform Developer**
Builds conversation flows, collaborates on NLU Models, data integrations on the core AI platforms; as needed: API and frontend work.

**CAI Solutions Architect**
Constructs the AI Platform architecture, including microservices, database, storage, CAI Platform Design & Build (e.g., Connect / Lex / Polly, CCAI / Dialogflow, OneReach PDE) Defines the telephony and SIP network architecture to support voice integration (e.g., Genesys, Avaya).

**ML/Data Scientist**
Develops machine learning models (complement NLU models) to inform the conversations driven by AI.

**Data Governance Lead**
Develops approach and structure for managing data models and identifies roles, responsibilities, data tools to develop insights for use by CAI solutions.

**Security & Compliance Specialist**
Develops implements, maintains, and oversees internal security policies and procedures.
## What to Look For When Making Solution Decisions

### PLATFORM

**U X**
- Conversation Design
- Multi-Channel Model

**A I**
- NLP, NLU/NLG
- Dialogue Manager
- Machine Learning

**I N T E G R A T I O N**
- Session Management
- API
- Data & Security

**A N A L Y T I C S**
- Insights

### USER EXPERIENCE

1. **What do we know about you?**
   - User Demographics
   - Role, Status, Age, Geography, Education, Channel Used
   - User Journey
   - Contextual insight, contact history

2. **What are you saying now?**
   - Speech Analytics
   - Natural Language Understanding / Processing
   - Context-driven interpretation

3. **How are you saying it?**
   - Sentiment Analysis
   - Emotional Quotient (EQ)
   - Complaint’s sensing, Self harm threat tracking
   - Cognitive and/or Speech challenges

4. **Who are you?**
   - Individualized Data
   - User preferences
   - Adaptive learning & continuous improvement

### DATA & ANALYTICS

Insight-driven platform and analytics framework to accelerate the design-develop-test-deploy cycle with automated analytics and reporting....

- **Visualize Key Metrics** - Summarize business level outcomes and KPIs. Manage changes to content, flow, or business process allowing comparisons to baseline

- **Reinforce design with Analytics** - Perform descriptive and prescriptive analysis with conversation history and customer attributes data to reveal customization needs across segments

- **Perform real-time A/B Testing** to drive continuous improvement through the customer journey