TATA COMMUNICATIONS

Cavell

The AI Maturity Journey for Contact Centres: Why Orchestration, Scale, and an Operating System Matter

AI is Now Firmly Established in the Contact Centre

Most enterprises have already moved to the Cloud and are using some form of AI in customer interactions.

> **The question facing CX leaders is no longer whether AI works, but whether it can be trusted at scale and impact business outcomes.**

This whitepaper explores how large enterprises across Europe, North America, the Middle East, and APAC are moving from early AI deployment to more advanced use cases in the contact centre. It focuses on organisations with complex environments, high interaction volumes, and strict regulatory requirements.

The analysis is based on Cavell's primary research. This includes in-depth interviews and focus groups with senior contact centre and CX leaders working in organisations with more than 1,000 employees.

In total, 14 enterprise decision-makers were interviewed across EMEA, APAC, and North America. These discussions focused on real deployments, operational challenges, and regional differences, rather than vendor roadmaps or future promises.

The findings show that productivity gains are real. AI is improving agent efficiency, supporting faster resolution, and helping teams handle rising interaction volumes. These benefits are strongest in structured use cases such as chat, email triage and knowledge retrieval.

However, the research also shows clear limits. As AI is pushed into more complex workflows, many organisations hit operational barriers. These include poor system integration, legacy backend platforms, regulatory constraints and uneven infrastructure maturity across regions. In these environments, AI can understand customer requests but may not always be able to act on or complete them.

Voice AI brings these challenges into sharp focus. Unlike chat, voice interactions have very low tolerance for delay or failure. Even small pauses or broken escalation flows damage trust. As a result, voice has become the most demanding test of AI readiness in the contact centre.

This paper argues that orchestration, not features, now determines AI success. The ability to connect systems, maintain context, manage escalation and meet regulatory requirements will define which organisations can scale AI reliably. For CX and contact centre leaders, the focus must shift from adopting new tools to strengthening the foundations that allow AI to perform consistently. This paper sets out what that means in practice and highlights the actions leaders should take next.

This whitepaper has been developed in partnership with Tata Communications, a global digital ecosystem enabler powering today's fast-growing digital economy in more than 190 countries and territories.

Executive Summary

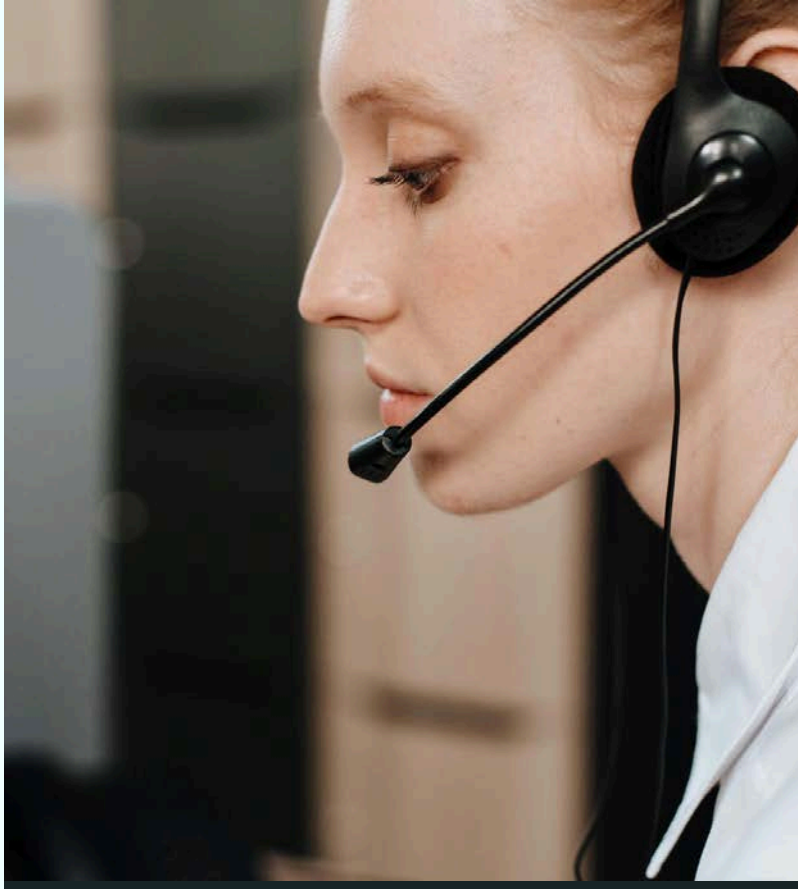
Across North America, Europe, the Middle East, and APAC, Contact Centre leaders are no longer debating whether to adopt the cloud or experiment with AI. Both are already embedded in most enterprise environments.

Among the enterprises interviewed directly for this research, AI deployments are showing measurable impact: a 30% improvement in agent productivity when handling email tickets in one European retail case, and another company seeing a sharp decrease in their legacy chatbot's escalation rate, dropping from 20% to 5% after upgrading it with AI.

> **Yet the interviews reveal a consistent pattern: the constraint is no longer access to AI features. It is the ability to deploy these and navigate a mix of regulatory, technology and cultural differences.**

In the Middle East, a luxury optical retailer reported pressure from customers to deliver products within the hour, and pressure on customer service to match that increased speed expectation. In Germany, works council restrictions have prohibited call recording, limiting training and monitoring capabilities. In Indonesia, on-premise infrastructure and data localisation constraints still limit the expansion of Cloud-based AI.

Voice AI has also begun to be tested, with many companies finding that it is a highly demanding test case, that reveals underlying issues with data, knowledge bases, backend systems, and network quality, demonstrating that as AI expands into more complex and synchronous workflows, orchestration maturity — across CRM, billing, provisioning, compliance and network layers — will be the determining factor in whether it succeeds or fails.



While many think of AI as a standalone SaaS solution, as companies start to integrate it more, and demand more from it in real-time, orchestration will define the ceiling of AI performance.

"The question has shifted from 'can AI do this?' to 'can we rely on it during a live customer interaction?"

— Enterprise CX & IT Leader

AI is Already Delivering Value in the Contact Centre

Action for CX leaders: Focus on low-hanging use cases. Start with structured interactions such as chat, email triage and knowledge retrieval.

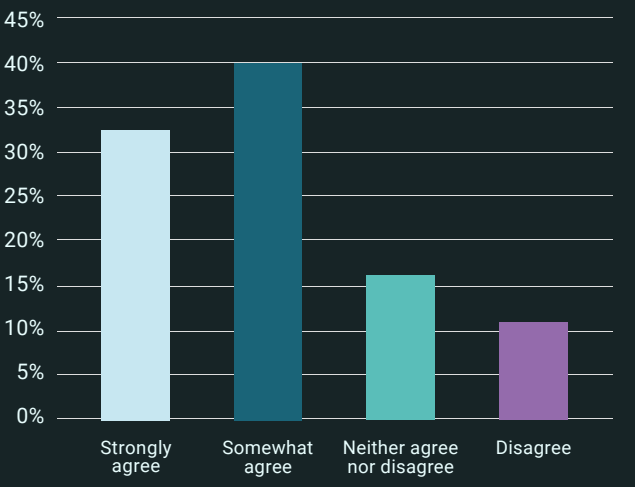
Set clear success measures for each use case. Track impact on handle time, resolution rate and customer effort.

AI adoption use cases are already seeing major results. One example from a European online retail platform showed that AI was now meaningfully contributing to resolving over 40% of the organisation's cases.

In a large airline operating in India, AI-driven chat support has improved digital deflection for structured tasks like checking flight times or changing details on a booking. However, the same leader emphasised that urgent travel disruptions still drive customers to voice, where performance expectations are far higher.

In healthcare technology support operations across Europe, AI is being deployed not to replace agents but to retrieve documentation from tens of thousands of technical documents. This can now be achieved in real time, improving diagnostic speed and agent confidence.

As a customer service agent, do you believe the AI tools deployed by your organisation have improved the customer experience?



72.5% of customer service agents believe AI tools have improved the customer experience.

AI in live deployment is being used to effectively:

- Understand customer intent.
- Enable simple self-service.
- Review calls at scale.
- Assist agents with knowledge retrieval.
- Assist within clearly defined interaction boundaries.

However, fewer examples of more complex AI deployments were found, even amongst some very large national retailers, airlines, or banks. The reality is that these companies said they had considered more advanced use cases but found gaps in their trust of the new tools.

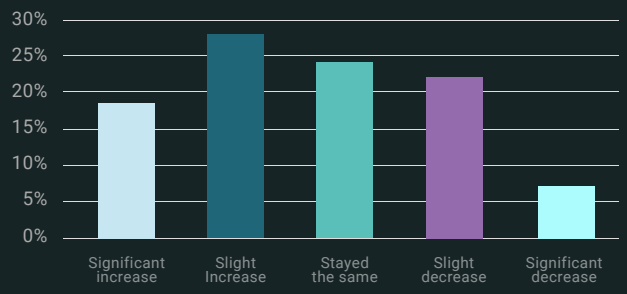
Efficiency vs. Complexity

It is worth acknowledging that while AI is delivering value, the demand for agents' work is higher than ever.

Across our survey base, agents report being busier than ever: 46% report an increase in task volume, and 45% report an increase in task complexity after the deployment of an AI solution at their company. This shows that while AI is being deployed and driving innovation, it is also affecting the agents who collaborate with it. This demonstrates the pressure to deploy AI in a well-orchestrated manner that does not just turn the AI into another system that creates more work for agents.

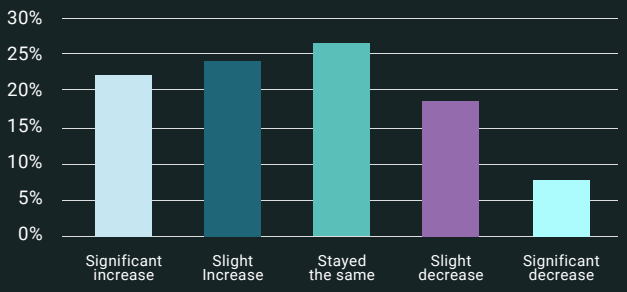
As one contact centre leader from the Philippines reported, their automation systems and case management tools were working very well, but an agent still had to go into the CRM to make any necessary modifications. So, despite the automation, more work was created for the agent due to a lack of integration. As this was a core issue with the design of the systems, every single agent was affected. It became a company-wide issue as agent efficiency was then determined by how well an individual could work around the flaws in the system.

Impact of AI deployment on the volume of tasks that an agent needs to perform



While many expect AI to simply reduce work, this data shows that 47% of agents actually report an increase in task volume.

Impact of AI deployment on the complexity of tasks that an agent needs to perform



The standout statistical outcome here is that 46% of agents reported an increase in task complexity, while only 26% saw a decrease.

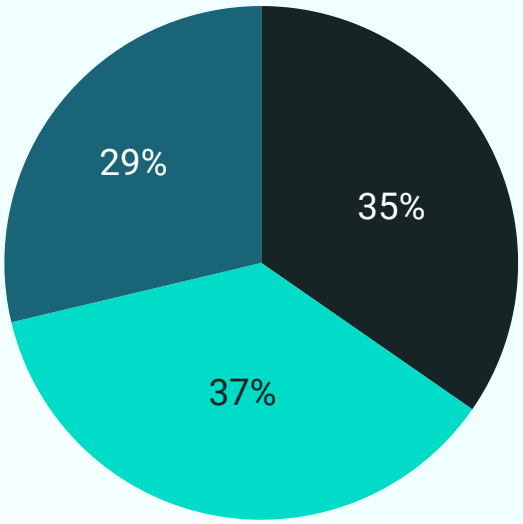
Cloud Modernisation is Necessary but Not Sufficient

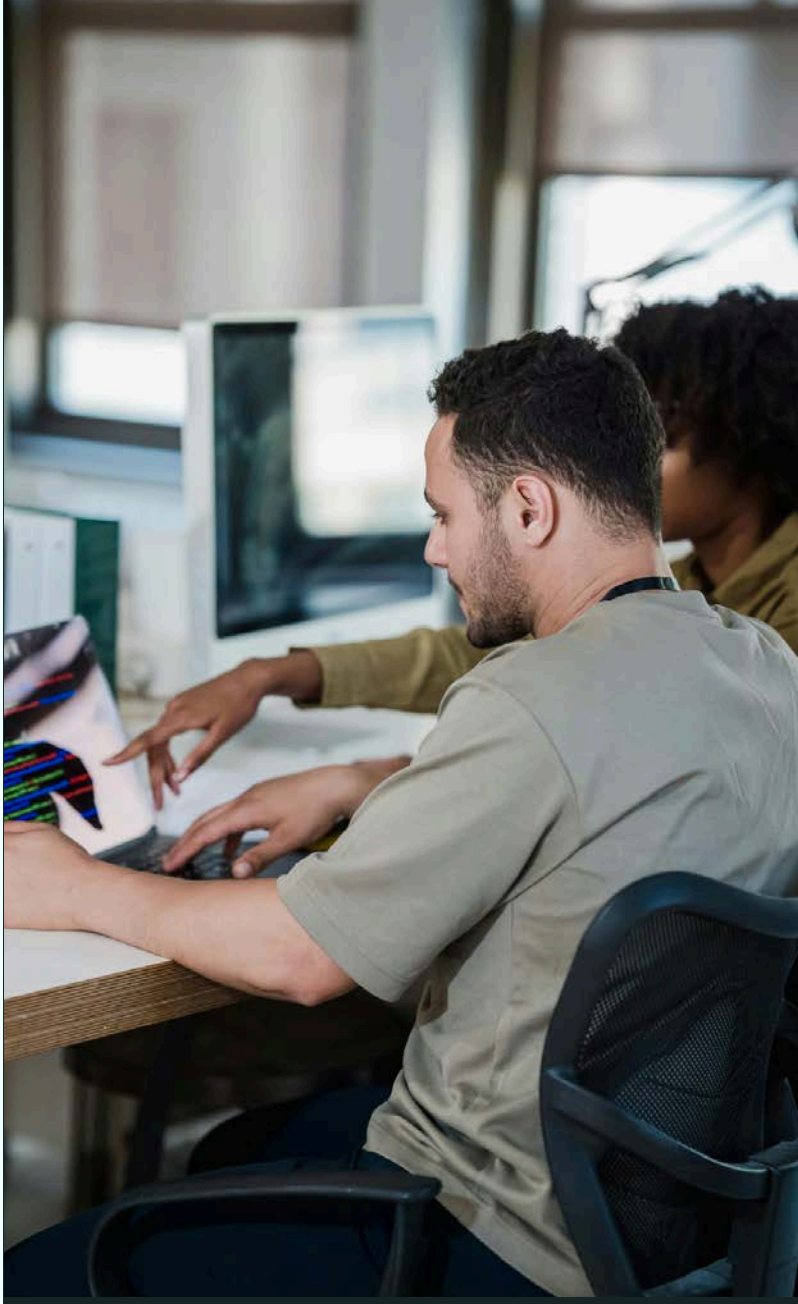
Action for CX leaders: Treat Cloud migration as a base layer. Use it to improve visibility and deployment speed.

Prioritise integration across CRM, billing, provisioning and compliance. AI will not scale if these remain fragmented.

Five years ago, Cloud migration dominated Contact Centre strategy. Today, in most of the environments we studied, Cloud delivery is assumed. In Cavell's latest EMEA and NA Contact Centre Decision Maker research, 64% of contact Centres are now deployed in a Cloud or hybrid environment.

Split of Cloud vs on-prem vs hybrid Contact Centre





An Italian national utility company combined fragmented contact centre and legacy telephony systems into a unified Cloud platform and reported strong gains in the quality of both calls. Overall outcomes also improved as customer journeys became less fragmented. Though they reported encountering problems with regulators when trying to enable some of the more advanced capabilities.

On the other hand, some companies do go in the other direction.

A Philippines-based telecom company recently moved back to a locally sourced on-premises contact centre to have absolute control over cost. In addition, some public sector companies in European markets have been returning to on-premise for full control over their technology stack.

However, the consensus is that Cloud migration improves routing, visibility and deployment agility. But while it does this for the contact centre, it is not miraculously eliminating organisational fragmentation.

Across interviews, leaders consistently described architectures where:

- CRM systems were modernised, but billing and provisioning remained legacy.
- Consumer and enterprise customer journeys ran on separate stacks.
- Compliance logging systems operated outside conversational platforms.
- Backend modification authority required manual intervention.

In mid-market environments, particularly in emerging APAC markets, infrastructure maturity remains uneven. A major Indonesian bank described limited AI deployment due to on-premise Cisco infrastructure and data residency requirements. Cisco's own annual AI Readiness Index backs this point up, with 28% of respondents to that survey saying their infrastructure cannot support AI at scale. That data comes from a global source, so less mature markets will likely be even further behind.

While some areas lag behind, many companies are already seeing successful AI deployments with meaningful benefits.

Operational Orchestration

Where AI Meets Operational Reality

Action for CX leaders: Audit where AI cannot complete a task today. Map the hand-offs to legacy systems and remove blockers. Consider where you can add orchestration layers to provide a unified interface to users.

Design escalation as a core feature. Preserve context and reduce re-authentication and repetition.

"Most CCaaS platforms now claim to offer similar AI features. The difference we see is how consistently those features perform once they are embedded into real workflows."

— Technology Director,
Global Enterprise Contact Centre

Orchestration Gaps

As AI expands into more complex workflows, gaps in orchestration become visible.

1. AI is not being built to act across systems

In multiple interviews, leaders described a common friction point: AI sits within CCaaS, but billing plan modification or provisioning changes still require manual intervention in separate legacy systems.

The result is a structural ceiling. AI can understand the request. It cannot complete the task. One Contact Centre Manager said of their own AI system, "If it [their agent assistance platform] cannot trigger a workflow or change what happens next, it remains advisory rather than operational."

In North America, 30% of agents report using four or more systems during a typical customer interaction. Only 29% of agents in large (1,000+ seats) contact centres say these systems are well integrated. This shows that the CCaaS industry has a long way to go until it can be considered 'well integrated'.

Number of apps used during a customer interaction

Agents juggle 3+ apps

Agents use multiple systems per interaction.

57%

Agents juggle 4+ apps

Agents use multiple systems per interaction.

30%

Agents juggle 5+ apps

Agents use multiple systems per interaction.

17%

"Very well" integrated at enterprise

Drops from half at enterprise scale.

29%

Orchestration Gaps

2. Integration done incorrectly can be worse

At a large bank in the Philippines where the company built its own integrations, leaders emphasised that agent-assist tools must respond quickly. If the assistant is slow to respond, agents abandon it because it increases handle time, and they are still judged by that metric. In their self-built environment, development platforms were pushed to live agents and their use was mandated, but agents quickly found workarounds to do their jobs rather than rely on a half-baked deployment.

3. Escalation is becoming a strategic choice

Escalation is often treated as a fallback. In practice, it is the most fragile part of AI deployment. Re-authentication, system switching and loss of conversational context add friction that customers immediately perceive when they reach a human agent that does not have the context they should have.

There are also moves in Europe to ban dark loops that lack an escalation option built into the automated system, which some governments have flagged as an anti-consumer practice.

4. Regulatory constraints

In Spain, new regulations now include AI interaction time in the mandatory maximum answering time (which must be under 3 minutes), so systems must be designed to either ease escalation or effectively resolve customer queries.

This fundamentally changes Voice AI deployment logic. AI cannot experiment freely if response timing is regulated. Customers should not be allowed to have long, iterative conversations with frontend AI systems. This creates the risk that an escalation could cause the company to breach its mandatory metrics.

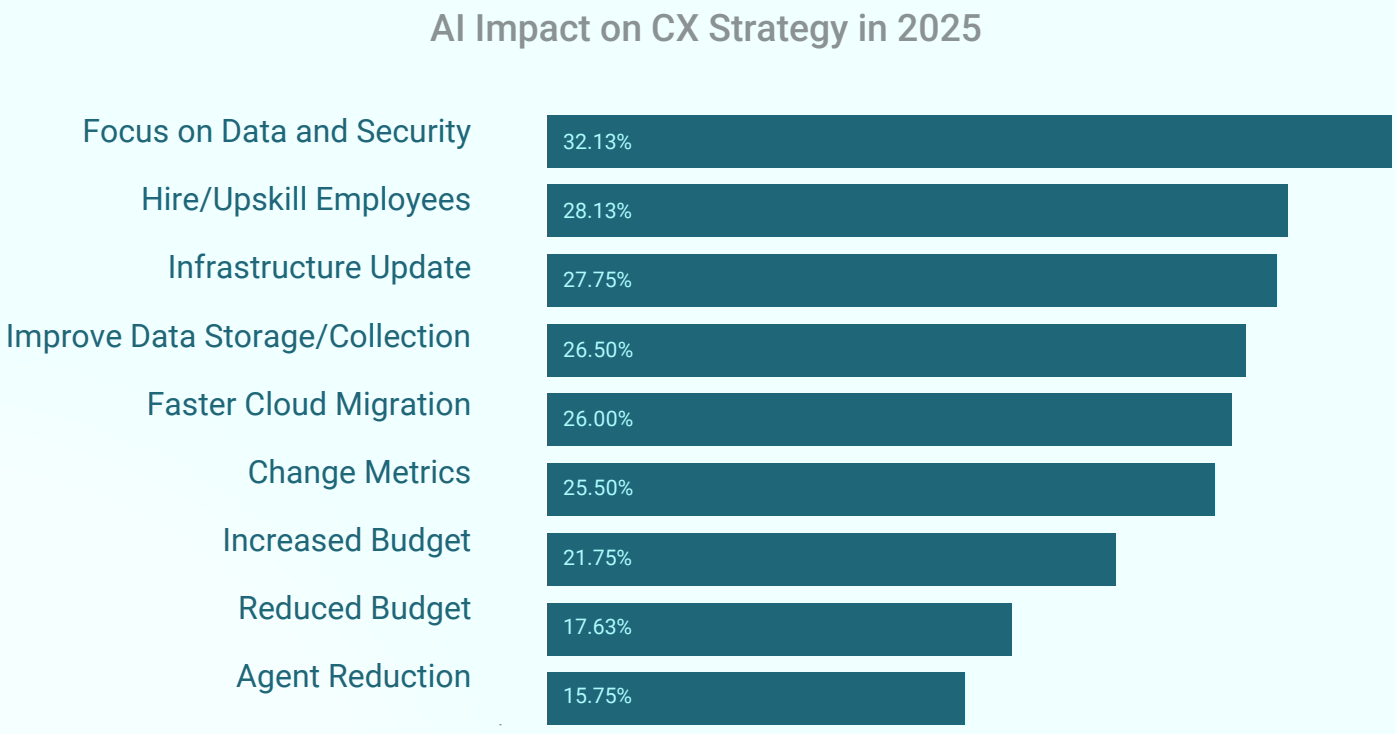
In these environments, AI expansion is shaped as much by compliance architecture as by technical capability.

5. Infrastructure constraints

In Indonesia, financial services leaders described limited AI deployment due to on-premise infrastructure and data localisation rules. Investment in integration is needed before AI scale becomes practical. While larger companies are embracing infrastructure reform, the mid-market across the globe is beginning to recognise that infrastructure changes are needed to enable their next steps.

These constraints are structural, not feature-related, and show that for many companies, infrastructure needs to improve to support AI.

This is also evident in Cavell's research, when asked about the impact of AI on CX strategy 32% of contact centre decision makers reported that it had increased their focus on data and security. 28% reported that it had forced them to hire and upskill employees, and 27.75% reported that it had required an infrastructure update.



Voice AI: The Real Test of AI Maturity

Action for CX leaders:
Test end-to-end latency, not just model speed. Measure delays from backend systems, escalation and the network.

> **Only scale voice AI once knowledge, customer data management, orchestration and escalation are reliable. Small pauses can break trust.**

"In voice interactions, even small pauses break the experience. Customers notice at once."

— CX Lead
Large Enterprise Contact Centre

Voice AI is prominent in strategic roadmaps across regions. However, voice introduces stricter performance thresholds. In Germany, a retail leader noted:

"If a voice-based system hesitates, customers don't think it's processing, they think something is wrong."

Voice is synchronous. Tolerance for delay is low.

AI latency accumulates across layers:

- Model latency: Modern inference is typically sub-second. Delays above 1–1.5 seconds feel unnatural.
- Workflow latency: Backend validation. and modification may add 2–3 seconds.
- Escalation latency: Re-authentication or system switching may add 5–15 seconds.
- Network latency: Carrier routing and cross-region cloud transport introduce variability.

Since chat and text-based AI are more tolerant of latency, many companies are not aware that they have deeper challenges with orchestration and latency. However, as companies start to experiment with voice, it begins to expose challenges that companies did not realise they had.

What This Means for CX and Contact Centre Leaders

Action for CX leaders: Define where AI should stop today and where you want it to go next. Build the system with that roadmap in mind.

> **Assess orchestration maturity before expanding into complex workflows. Treat integration and session continuity as infrastructure.**

Across the interviews, enterprise leaders are not struggling to access AI, in many cases they are receiving more pitches from AI companies than they can process. Where they are struggling is in reliably embedding AI into their business and identifying which use cases will stand the test of scale and deliver ROI.

But there are some strategies that successful enterprises are taking to properly handle the future of AI in Customer Experience.

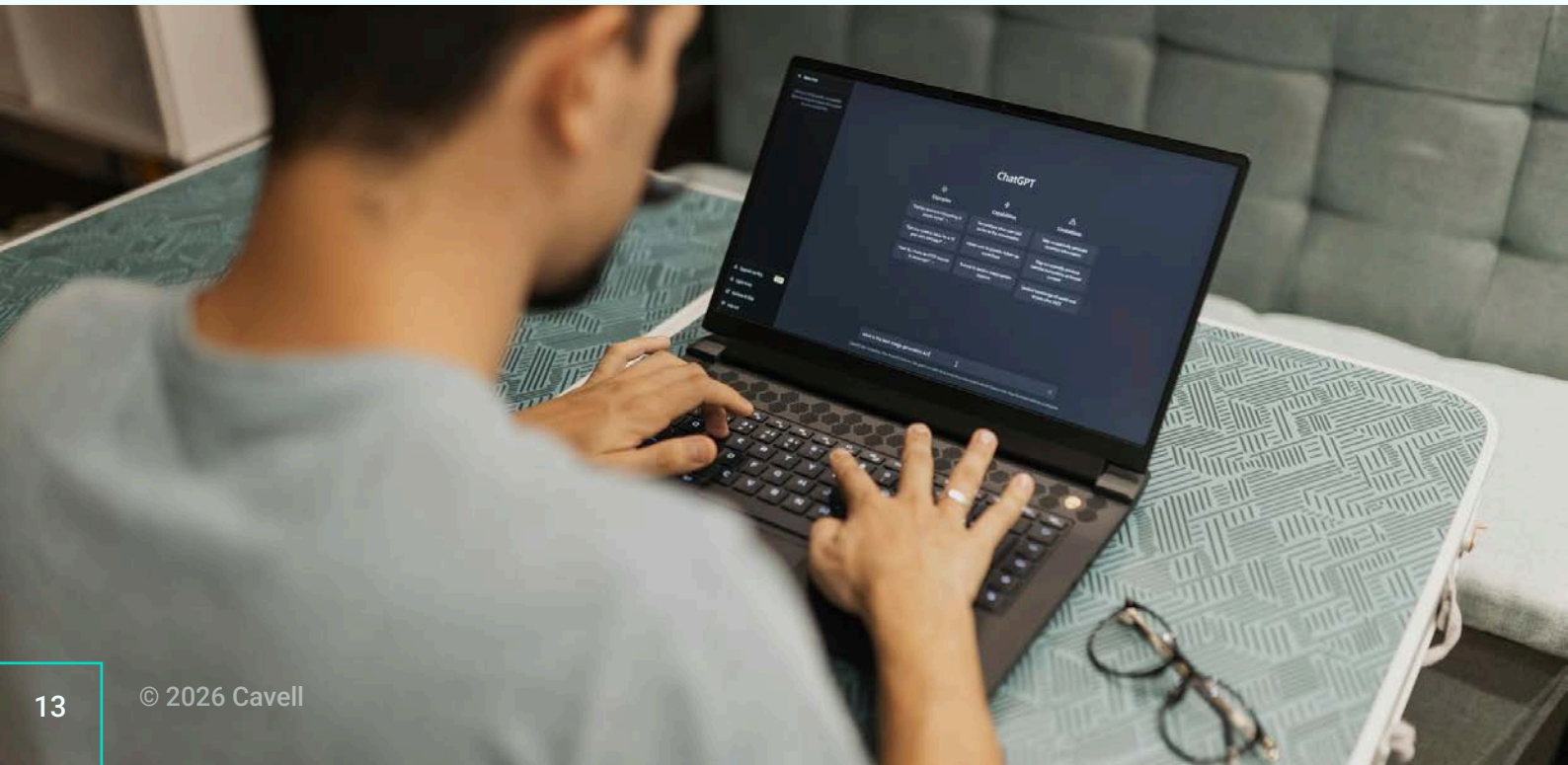
Deciding where the AI stops, and building for where you want it to go in the future

In multiple interviews, AI was reported to be able to answer FAQs, capture intent, and create cases, but many said it was not operating at the level they wanted.

Enterprise leaders make sure they understand the scope and limits of their AI systems, where they sit now and where they want them to go:

- Should my AI be able to interact with customer data?
- Can it create new sales orders?
- What manual processes am I comfortable with being automated, and what do I want to keep in human hands?

Many enterprises we interviewed lacked a clear understanding of the next steps for their systems and were still deploying point solutions. When we asked whether they wanted to automate anything in the future, they didn't have a clear answer, which also meant they weren't building the system they had now to be ready for upgrades later!



Treat escalation as a core feature

Escalation is often described as a fallback or a sign that your automation has failed. In practice, it is the most sensitive point in the workflow. Especially as AI systems grow more complex, there will be more emphasis from both regulators and consumers on what happens when the AI fails.

Enterprise leaders should examine:

- Does context persist between AI, platforms and agents?
- Is the customer required to re-authenticate moving from AI to a human agent, due to poor integration or lost context?
- Are agents forced to re-enter data?
- Do your customers have to repeat their needs between agents and AI?

Escalation design decides whether AI enhances or disrupts live interactions. No matter how advanced the AI you deploy to your customers is, if they have to struggle to escalate to a human and repeat the entire automated interaction when they get there, you have already lost them.

Measure end-to-end latency, not just model speed

Many AI companies are selling their products and talking about the latency of their own solutions. However, the picture is more complex, with multiple factors contributing to the speed of response to the end customer.

In India, an airline leader described how even brief pauses during urgent travel calls escalate customer frustration, especially during critical service issues.

While for AI-powered chat interactions, this is less of a feature, as companies start to turn more to Voice AI, performance issues will become much more apparent and contact centre decision makers should ask what the end result will be. Customers will not be happy with a Voice AI conversation that requires a long pause after every response, and filler words quickly become tiresome.

Strategic Roadmap

Align AI deployment with regulatory reality

In this paper, we've laid out many regulatory developments in Italy, Spain, and Germany, but most countries are beginning to develop regulations governing the use of AI in customer service and interactions.

Enterprise leaders must evaluate:

- What regulations have similar markets deployed?
- What KPIs will regulations expect you to meet for your customers?
- How will you be allowed to access/ mangage and store data?
- What data sovereignty requirements are likely to affect your industry?

In the current political landscape, AI cannot be deployed without an awareness of your country's regulatory position on the technology.

Assess orchestration maturity before expanding use cases

Higher-maturity organisations described treating orchestration as infrastructure.

They ensured:

- API maturity across CRM, billing and provisioning.
- Event-driven integration.
- Persistent session state across channels.
- Integrated monitoring across workflow stages.

Lower-maturity environments place AI in silos and build basic integrations, which can delay or degrade AI responses.

Enterprise leaders should assess orchestration readiness before expanding into high-complexity voice or transactional use cases.

What Contact Centre Leaders Want to Fix First

Action for CX leaders: Use frontline priorities to guide investment. Fix integration, knowledge access and reporting before adding new AI layers.

Remove friction for agents. Slow or unreliable tools increase handle time and will be abandoned.

During the interviews, Cavell also asked each Contact Centre decision-maker what the first thing they would fix would be if they had unlimited staff/resources and a budget.

This summary of their responses sheds light on the challenges facing the field right now.

"Voice, our customers want to pick up the phone, so we need to automate that properly"

– European National Utility Company

"Fix our integrations with our CRMs, they don't save historical data on customer interactions properly, but it's a much bigger issue to fix than it sounds"

– Global Retailer

"Getting real-time knowledge systems into the hands of our support engineers. They are travelling so much and waste so much time looking up information that should be at their fingertips"

– Specialist Medical Manufacturing Company

"Fixing our data management systems, we can't deploy new systems because of them"

– A large Philippine banking outsourcing operation.

"Better reporting, analytics and management, our clients always want more and more data"

– US Healthcare BPO

"Self-service, our customers call us, and they think that is the fastest way to get an urgent response, but if we built self-service right, they wouldn't need to"

– A Large Indian National Airline

Executive Takeaways for CX Leaders

These are the key actions from each section of this whitepaper. They are written for contact centre and CX leaders.

AI is already delivering value in the contact centre

Focus on use cases that already work well. Start with structured interactions such as chat, email triage and knowledge retrieval.

Set clear success measures for each use case. Track impact on handle time, resolution rate and customer effort.

Cloud modernisation is necessary but not sufficient

Treat Cloud migration as a base layer. Use it to improve visibility and deployment speed.

Prioritise integration across CRM, billing, provisioning and compliance. AI will not scale if these remain fragmented.

Where AI meets operational reality

Audit where AI cannot complete a task today. Map the hand-offs to legacy systems and remove blockers.

Design escalation as a core feature. Preserve context and reduce re-authentication and repetition.

Voice AI: the real test of AI maturity

Test end-to-end latency, not just model speed. Measure delays from backend systems, escalation and the network.

Only scale voice AI once knowledge, orchestration and escalation are reliable. Small pauses can break trust.

What this means for CX and Contact Centre leaders

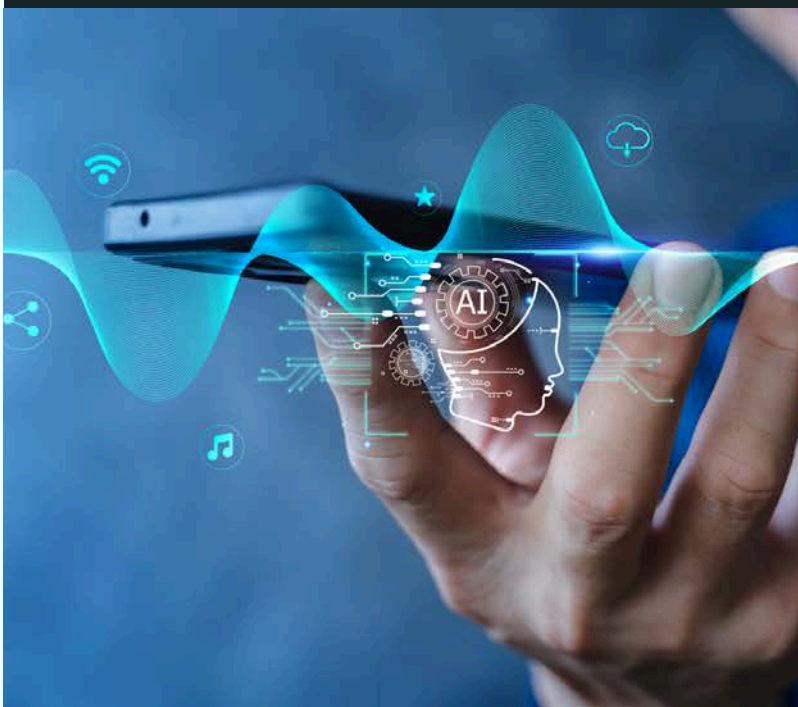
Define where AI should stop today and where you want it to go next. Build the system with that roadmap in mind.

Assess orchestration maturity before expanding into complex workflows. Treat integration and session continuity as infrastructure.

What Contact Centre managers want to fix first

Use frontline priorities to guide investment. Fix integration, knowledge access and reporting before adding new AI layers.

Remove friction for agents. Slow or unreliable tools increase handle time and will be abandoned.



Conclusion

Across interviews in multiple regions, a clear pattern has emerged. AI is moving quickly in the contact centre. Productivity gains are real. Customer acceptance is growing.

However, many organisations are not yet ready to use AI at scale.

The biggest barriers are not the AI tools themselves, but the systems and processes around them. In Cavell's latest Contact Centre decision maker survey, security of customer data was reported as the largest concern that respondents had, with 28% of all respondents putting this as their top worry.

As AI is used in more complex workflows, success depends on orchestration. Contact centres need strong links between CRM, backend systems, compliance tools and networks. Where these foundations are weak, automation stalls and customer experience suffers.

Voice AI highlights these issues more clearly than any other channel. Voice interactions have low tolerance for delay or failure. This makes voice the strongest test of AI readiness in the contact centre today.

For CX leaders, the priority is clear. Focus less on adding new AI features and more on fixing the foundations. Improve integration. Protect context as customers move between systems. Design escalation carefully. Measure performance end to end, not just at the AI layer.

For contact centre managers, the goal is reliability.

AI must support agents, not slow them down. Knowledge, data and workflows must be easy to access during live interactions.

As AI capabilities continue to improve, the organisations that progress fastest will be those with strong orchestration, well-managed data, and a clear understanding of how their contact centre systems work together.

These are the teams that will turn AI into consistent, trusted customer experiences.

Research and Methodology

All data in this whitepaper comes from Cavell industry research, considering best practices for conducting market surveys and interviews.

Data in this report comes from three market research reports:

A Contact Centre Decision Makers Survey conducted in January 2025 of over 800 respondents from across NA, EMEA and the UK.

A survey of Contact Centre Agents working in the NA region.

A series of Enterprise Contact Centre Leader interviews and focus groups conducted with companies with more than 1000+ employees across EMEA, APAC, and NA. A total of 14 decision makers were interviewed in depth for their insights on their own Contact Centre and the developments in their regions.

About Cavell

Cavell gives strategic advice to organisations enabling the Intelligent Workplace. We deliver independent research, actionable analysis and strategic advisory services to communications providers, technology vendors and investors who are shaping the future of business communications.

Cavell's team combines years of accumulated telecoms industry experience with enterprise and SMB surveys and proven market intelligence to provide a suite of services including market research, commercial and technical due diligence, strategy advisory services and leading industry events.

About the Author

Finbarr Begley – Senior Analyst
Finbarr's primary research focus is the Contact Centre market, but he also manages Cavell's enterprise and end-user research. He is considered an expert commentator on the CCaaS market, regularly called on to speak and write for industry-leading companies. Although he has a degree in philosophy and theology, he has worked in the technology sector for over 13 years, originally in B2B tech PR, and became a Cavell analyst in 2019.

Sponsor's Perspective

Uniting AI, Humans and Orchestration

Tata Communications helps global enterprises reimagine customer experience through the convergence of AI, human expertise, and intelligent orchestration. As customer expectations evolve toward faster, more personalised, and outcome-driven engagement, enterprises continue to face challenges with fragmented systems and disconnected customer journeys.

Our Kaleyra CCaaS solution brings together human-like Voice AI, flexible CCaaS deployments, and an intelligent Total Experience orchestration layer for connected, seamless, and scalable customer experiences.

The Voice AI agents enable real-time human-like conversation interface that is intelligent and multi lingual. While our own Kaleyra CCaaS empowers seamless collaboration between AI and human agents while supporting flexible deployment models across cloud, on-premises, hybrid, and BYOH environments, we also provide the flexibility of other partner CCaaS offerings. The orchestration layer connects AI, agents, CRM systems, and enterprise workflows into a unified ecosystem that transforms conversations into real business outcomes.

Together, this enables enterprises to move beyond isolated automation towards intelligent collaboration between AI-driven efficiency and human expertise. The result is faster resolutions, improved customer satisfaction, lower cost to serve, and connected omnichannel engagement delivered securely and at a global scale.

Unlike fragmented solutions that require enterprises to depend on multiple vendors across AI, contact centre, workflow orchestration, and communications infrastructure, Tata Communications provides a unified, end-to-end customer engagement ecosystem through a single strategic partner.

Ready to bridge the gap between legacy systems and the future of Total Experience?

Schedule a consultation

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