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Enhancing the customer experience with AI can be a win-win, provided human judgment and understanding are central.

Scaling live support with AI

A live agent spends hours each week manually documenting routine interactions. Another combs through multiple knowledge bases to find the right solution, scrambling to piece it together while the customer waits on hold. A third types out the same response they've written dozens of times before.

These repetitive tasks can be draining, leaving less time for meaningful customer interactions – but generative AI is changing this reality. By automating routine workflows, AI augments the efforts of live agents, freeing them to do what they do best: solving complex problems and applying human understanding and empathy to help customers during critical situations.

"Enterprises are trying to rush to figure out how to implement or incorporate generative AI into their business to gain efficiencies," says Will Fritcher, deputy chief client officer at TP. "But instead of viewing AI as a way to reduce expenses, they should really be looking at it through the lens of enhancing the customer experience and driving value."

Doing this requires solving two intertwined challenges: empowering live agents by automating routine tasks and ensuring AI outputs remain accurate, reliable, and precise. And the key to both these goals? Striking the right balance between technological innovation and human judgment.

A key role in customer support

Generative AI's potential impact on customer support is twofold: Customers stand to benefit from faster, more consistent service for simple requests, while also receiving undivided human attention for complex, emotionally charged situations. For employees, eliminating repetitive tasks boosts job satisfaction and reduces burnout. The tech can also be used to streamline customer support workflows and enhance service quality in various ways, including:

- **Automated routine inquiries:** AI systems handle straightforward customer requests, like resetting passwords or checking account balances.
- **Real-time assistance:** During interactions, AI pulls up contextually relevant resources, suggests responses, and guides live agents to solutions faster.

Key takeaways

1. Generative AI enhances both customer and service-side experiences by automating routine tasks, leading to faster issue resolution for customers and improved job satisfaction for customer support agents.
2. Addressing challenges related to accuracy, precision, and reliability is essential to fully realizing the benefits of generative AI. Organizations are implementing advanced safeguards to address ongoing concerns.
3. The true value of generative AI emerges when human strengths – like judgment, creativity, and empathy – complement AI's efficiency, creating a seamless blend of technology and human expertise.

Fritcher notes that TP is relying on many of these capabilities in its customer support solutions. For instance, AI-powered coaching marries AI-driven metrics with human expertise to provide feedback on 100% of customer interactions, rather than the traditional 2% to 4% that was monitored pre-generative AI.

- **Call summaries:** By automatically documenting customer interactions, AI saves live agents valuable time that can be reinvested in customer care.

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Will Fritcher, Deputy Chief Client Officer, TP

Ongoing issues with accuracy, precision, and reliability in generative AI

As organizations strive to integrate generative AI into every facet of their operations, they face an onslaught of challenges pertaining to accuracy, precision, and reliability – three interrelated but distinct aspects of AI performance.

"There's not yet a gold standard for addressing these concerns; most organizations are still trying to figure it out," says Abhishek Sengupta, practice director on the IT services team focusing on data, analytics, and AI at global research firm Everest Group. "But there are some techniques, technologies, and processes that organizations are experimenting with, and this conversation about responsible or trusted AI is gaining in popularity."

After all, a highly advanced AI system is useless if it directs customers to the wrong troubleshooting guide or rebooks a flight to an incorrect destination.

As generative AI becomes more mainstream and enterprise-level adoption expands, these experiments will only become higher stakes. Addressing persistent issues associated with accuracy, precision, and reliability will require a holistic approach – one that encompasses everything from data management and model development to overarching operational processes.

Perhaps the most notorious issue related to AI accuracy is the phenomenon of hallucinations: instances where AI generates content that is factually incorrect or even entirely fabricated. "Hallucinations are indigenous to the way in which large language models (LLMs) – and specifically, transformer-based models – operate," explains Arnal Dayaratna, research vice president of software development at market intelligence firm IDC. "From a purely foundation-model perspective, hallucinations are a table-stakes attribute of these technologies."

Beyond hallucinations, AI faces several other fundamental challenges. Models often misinterpret ambiguous inputs, leading to responses that are technically correct but irrelevant. They struggle with cultural nuances and industry-specific terminology. And most importantly, they cannot truly understand context and emotion the way humans do.

Understanding generative AI's output quality

Accuracy, precision, and reliability are related concerns for generative AI applications, but they each refer to a slightly different aspect of output quality.

Accuracy
Factual correctness and truthfulness

Precision
Relevance and specificity of outputs

Reliability
Overall consistency and dependability of a system, including safety and ethical considerations

Source: Compiled by MIT Technology Review Insights, 2025

Although prepared for technology, enterprises lag in risk and governance when deploying generative AI

The percentage of organizations that think they are highly prepared for generative AI across the following areas:

45%	41%	37%	23%	20%
Technology infrastructure	Data management	Strategy	Risk & governance	Talent

Source: Compiled by MIT Technology Review Insights based on "Now decides next: Moving from potential to performance," Deloitte, 2025

In customer support operations, these limitations have real-world implications. An AI system might misinterpret a customer's frustration about a billing error as a technical issue or fail to recognize when a routine inquiry signals a more complex underlying problem. If the system's performance degrades over time, it might begin suggesting outdated solutions or fail to recognize new product features.

The business consequences of these missteps can be significant—when a customer is upset about a service interruption during a major family event, for instance, no number of AI-generated responses can replace a live agent's ability to listen, empathize, and craft a response that acknowledges both the practical and emotional aspects of the situation.

However, live agents working in customer experience also need support beyond AI. In a recent survey of a cross-section of employees, **McKinsey found that** "heavy users and creators of generative AI overwhelmingly feel they need higher-level cognitive and social-emotional skills to do their jobs." As AI picks up more of the repetitive tasks, enterprises need to consider investing in supporting employees to develop the emotional and critical thinking skills required to best work in harmony with the technology.

Solutions for boosting generative AI's accuracy, precision, and reliability

Companies are developing structured approaches to ensure AI remains a reliable tool for live agents. Some of the specific tactics to accomplish this include:

- **Reinforcement learning from human feedback (RLHF):** This technique incorporates human judgments into the AI training process, allowing the model to learn from human preferences and improve its outputs over time. By leveraging human expertise and emotional intelligence, RLHF helps bridge the gap between raw machine outputs and context-aware responses.
- **Guardrails for AI-generated content:** These are hard boundaries for the types of content generative AI is permitted to produce. They're typically designed to rein in AI's most harmful tendencies, such as generating offensive, biased, or factually incorrect content.

71% of company executives say they include generative AI to boost their human workers' capabilities.

Source: Compiled by MIT Technology Review Insights based on data from "What do organizations need most in a disrupted, boundaryless age? More imagination," Deloitte, 2025

How TP is integrating generative AI for accurate and reliable customer service

Over the past decade, **TP** has spearheaded thousands of digital transformation projects, proving that the integration of generative AI into workflows can strengthen brand-customer connections.

TP's approach to generative AI centers on creating a feedback loop where human judgment continuously refines AI performance. Techniques like reinforcement learning from human feedback (RLHF) and human-in-the-loop (HITL) enable TP experts to apply their emotional intelligence to address more complex or emotionally charged customer issues. Additionally, TP employs robust guardrails, such as:

Ethical AI advisory councils

These groups address concerns around data security, bias, and compliance.

Specialized LLM teams

TP's "ring-fence" teams in India focus on refining AI capabilities for multilingual and multicultural contexts.

Analytics-driven coaching

Combining AI-driven insights with human expertise, TP provides real-time feedback to customer experts, improving call quality and resolution rates.

Another critical pillar is the company's focus on workforce development. "We're building expertise from the ground up," says Fritcher, describing TP's comprehensive training programs that help frontline staff better understand and work with LLMs. This investment in human capability is complemented by strong relationships with AI and tech specialists within client organizations, ensuring solutions remain tailored to specific client needs and contexts.

- **Constitutional AI:** This approach – a more comprehensive, codified form of guardrails – is designed to mitigate risks associated with AI-generated content while maintaining the model's utility. It attempts to build safety into LLMs by ensuring they follow a set of principles that align with organizational, legal, social, and ethical standards.

- **Engaging AI experts:** Partnering with specialists who understand both the technical capabilities and realistic limitations of AI systems can help organizations implement proper safeguards, develop effective human-AI workflows, and ensure AI outputs align with business objectives.

Space at the table for accuracy-boosting innovation

The importance of collaboration and partnership in improving LLM accuracy, precision, and reliability cannot be overstated, notes Dayaratna. It may be one of the only ways, for example, to address challenges like reducing hallucinations – a problem that, due to the nature of LLM technology, will almost certainly require ancillary technologies to solve.

"We're at a really exciting moment, because there's opportunity for startups and other vendors to introduce technologies that specialize in the reduction of hallucinations and inaccuracies generated by LLMs," Dayaratna says, citing examples of emerging platforms dedicated to identifying deepfakes or plagiarism. "There's a tremendous opportunity for a new segment of technologies that really specialize in enhancing accuracy and precision."

As organizations continue to navigate obstacles associated with adopting generative AI at scale, the goal shouldn't just be to deploy ever more powerful systems – but instead, to develop AI people can rely on and trust. Success with this powerful new technology will be measured not by the complexity of AI integrations, but by their ability to empower people to solve problems with both precision and compassion.

What MIT's research says about human and AI collaboration

As generative AI transforms customer interactions, two recent studies from the Massachusetts Institute of Technology reveal insights into optimizing human-plus-AI workflows.

Research from MIT's Center for Collective Intelligence found that human-AI teams excel in creative tasks, but often underperform in decision-making scenarios. For instance, when generating empathetic customer responses or crafting content, human-AI collaboration leverages AI's efficiency and human creativity to achieve superior outcomes. However, for data-driven decisions like troubleshooting or policy enforcement, AI systems often outperform these teams on their own, suggesting that task type should dictate collaboration strategies.

A separate MIT study highlights how the quality of AI training data significantly impacts performance in judgment-based tasks. When AI models are trained on descriptive data—focused on factual features rather than context—they tend to make harsher, less nuanced decisions compared to humans.

For example, a descriptively trained AI might misinterpret a minor customer complaint as a severe issue or enforce rigid policies that a human would approach with more flexibility. This emphasizes the need for training AI with contextually aligned, rule-based data to reflect real-world judgment scenarios.

Key takeaways for customer support scenarios include:

- **Use AI for repetitive tasks like documentation and resource retrieval.**
- **Use humans for tasks like resolving emotionally charged customer issues and applying contextual judgment in sensitive situations.**
- **Train AI models with contextually relevant, judgment-based data to enhance fairness and accuracy.**
- **Blend human creativity and empathy with AI's efficiency, focusing collaboration on creative or nuanced tasks while allowing AI to handle data-intensive processes independently.**

"Scaling live support with AI" is an executive briefing paper by MIT Technology Review Insights. We would like to thank all participants as well as the sponsor, TP. MIT Technology Review Insights has collected and reported on all findings contained in this paper independently, regardless of participation or sponsorship. Laurel Ruma was the editor of this report, and Nicola Crepaldi was the publisher.

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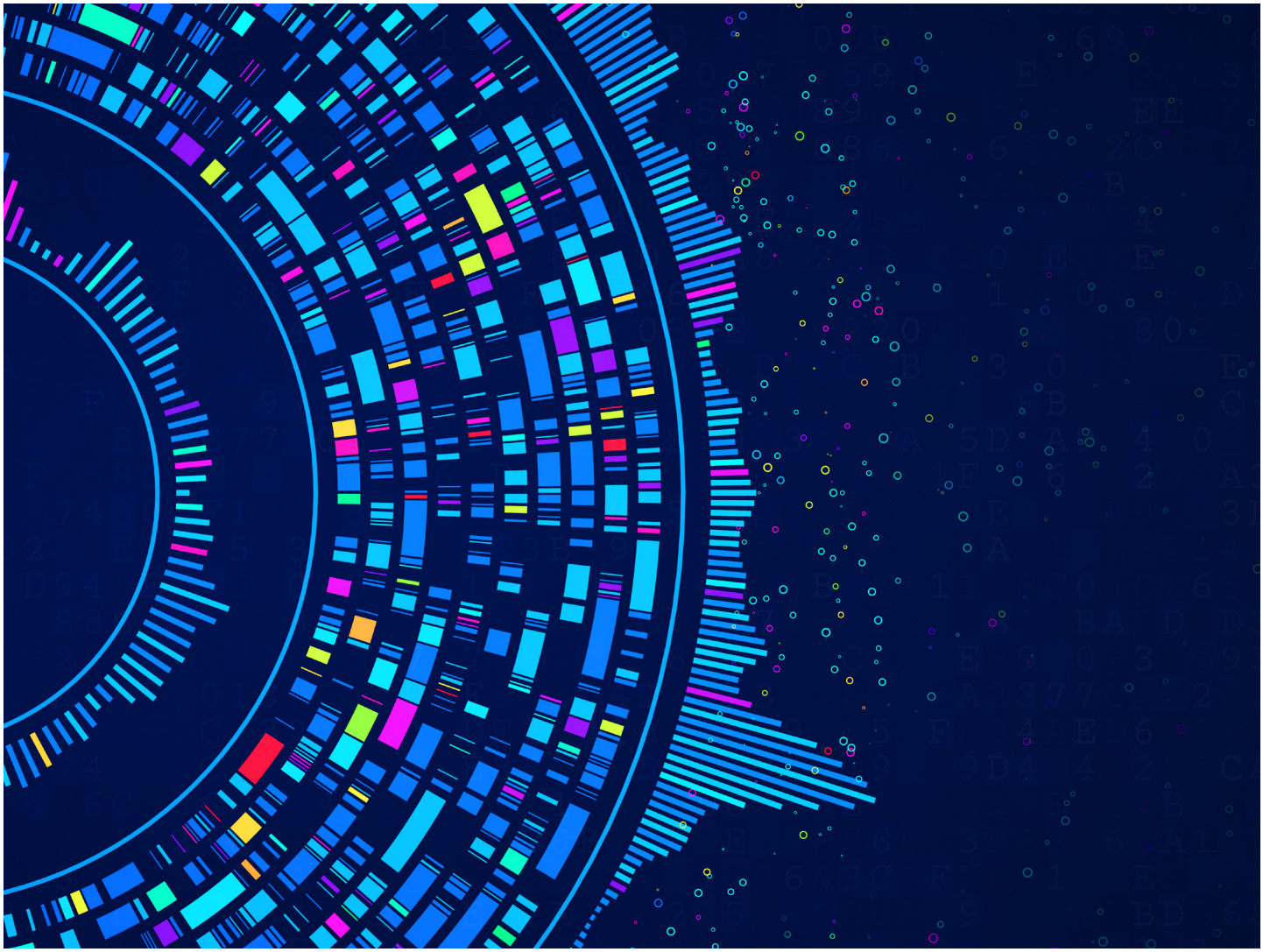

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