



Zero-touch service desk: Transforming IT support by 2030 with AI agents

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Executive summary

As AI convergence accelerates, traditional, human-dependent service desks are becoming unsustainable. Currently, most organizations achieve only about 40% automation, leaving IT support reactive, expensive and inconsistent.

By 2030, leading organizations are expected to reach 80–90% autonomous resolution. This shift will transform IT from reactive firefighting to predictive prevention. In the future, incidents are eliminated before they arise, resolution times drop from hours to minutes, and IT drives productivity and growth.

The journey starts with AI-driven knowledge engineering, change adoption and measuring digital employee experience. It evolves through self-healing infrastructure, intelligent self-service and AI-led service desks. At each stage, traditional service desk tasks are eliminated, while human roles shift to orchestrating, governing and refining AI operations.

Users will gain faster, more consistent and personalized support. Organizations benefit from lower costs, greater productivity and higher service quality. As with insurance companies, zero-touch IT service desk across industries builds a strong foundation for enhanced customer service, regulatory compliance and scalable innovation.

Zero-touch IT: The future of autonomous service desks powered by AI

This white paper outlines a shift toward zero touch IT operations, where AI agents prevent, detect and resolve issues autonomously—often before users are aware of a problem. Drawing on its experience supporting 7.5 million users across 45 million service interactions, Cognizant has observed that many service desk incidents follow predictable patterns that can be identified and eliminated upstream.

The paper presents a structured, four-layer journey to zero-touch operations. Underlying this transformation is the convergence of generative AI, agentic automation, predictive analytics, observability and device intelligence. These technologies allow AI systems not only to understand and recommend solutions, but also to take action across enterprise systems, rolling back changes, provisioning access, ordering hardware and coordinating remediation with full governance and auditability. As devices themselves become intelligent and self-diagnosing, IT environments increasingly maintain and repair themselves.

Ultimately, zero-touch service desks deliver a superior human experience rather than diminishing it. This white paper emphasizes that organizations that begin this transformation now will gain lasting competitive advantage, while those that delay risk falling behind in an AI-first world.

The persistent 60% IT burden

Despite years of investment in automation, most organizations today operate their service desks at only around 40% automation, leaving the remaining 60% of IT support work dependent on human intervention. This remaining workload is not made up of complex or exceptional issues, but largely of repeatable, predictable problems that persist because they are detected too late and resolved too manually. As a result, IT teams remain trapped in reactive operating models characterized by bottlenecks, inconsistent outcomes, escalating costs and inefficient use of skilled resources.

This human-dependent model is increasingly misaligned with modern digital expectations. As organizations rely more heavily on technology to support productivity, customer service and regulatory compliance, even minor IT disruptions can ripple across teams, time zones and business functions. Traditional service desks, built around ticket handling and post-incident response, struggle to deliver the seamless, friction-free technology experience that employees now expect. The continued focus on managing high volumes of incidents—rather than eliminating their root causes—prevents IT organizations from shifting attention toward strategic value creation and operational resilience.

Without proactive detection, systemic insight and large-scale automation, these issues continue to reappear, consuming disproportionate effort and cost. This persistence of avoidable demand highlights the core challenge IT leaders face today: the problem is no longer how efficiently incidents are handled, but why so many of them exist at all.

The service desk revolution

The convergence of multiple evolving technologies creates the perfect environment for customer service transformation. Generative AI, predictive analytics, device intelligence and hyperautomation capabilities combine to enable truly autonomous IT operations that were not possible just a few years ago.

Current automation levels provide the foundation for more comprehensive transformation. Most organizations handle routine, predictable tasks through existing automation systems, but the journey from 40% to 80–90% autonomous resolution requires fundamental changes in approach, technology architecture and operational philosophy.

This evolution isn't about eliminating humans from IT operations entirely. Instead, it represents a paradigm shift where service desks become primarily automated and proactive, with human agents elevated to handle only the most complex or sensitive situations. Professional roles evolve from reactive problem-solving toward designing, orchestrating and continuously improving AI-enabled operations.

The 2030 vision of competing in the AI-first world

At 8:15 am in Singapore, an employee opens her laptop, expecting to check emails before her first client meeting. Today, silent failures such as an email synchronization issue, a misapplied patch, or a degrading device triggers frustration, service desk calls and lost productivity, often escalating into a broader incident.

By 2030, in an AI-first environment, these disruptions will not occur. Minutes before the workday begins, AI-powered observability will detect anomalies, identify root causes, roll back faulty changes, test permanent fixes and deploy remediation across affected systems automatically. The employee will remain unaware that a problem ever existed. Across the organization, work will continue uninterrupted as IT shifts from reacting to incidents to preventing them altogether. In this future state, technology friction disappears and resolution happens in minutes rather than hours, and human effort is redirected from firefighting to innovation, judgment and value creation, creating a decisive competitive advantage.

For insurance organizations, zero-touch IT operations will enable superior customer service by ensuring professionals have seamless access to systems and data they need to serve customers efficiently. When technological friction disappears, human expertise can focus entirely on relationship building, complex claims handling and strategic innovation.

A four-layer journey to zero-touch IT operations

Zero-touch IT operations do not emerge through a single technology deployment. They are achieved through a structured progression across four layers, each eliminating categories of traditional service desk interactions while building toward autonomous operations. This journey enables organizations to move from reactive support to predictive prevention in a controlled and governed manner.

Knowledge engineering and change adoption layer

The journey begins with establishing a strong foundation of AI-driven knowledge and change management. Zero-touch operations require intelligent knowledge systems that continuously learn from incidents, system changes, and user interactions. These systems automatically capture, synthesize and distribute organizational intelligence, creating a continuously evolving knowledge base that improves over time.

In parallel, change adoption mechanisms proactively guide users through system updates, policy changes and process modifications. Rather than reacting to confusion or errors after changes are deployed, AI-driven change bots provide contextual guidance and preventive support. Continuous measurement of digital employee experience (DEX) ensures that automation improvements translate into real productivity and satisfaction gains, allowing organizations to refine interventions in real time.

Self-healing infrastructure layer

At this level, organizations implement predictive and proactive infrastructure capabilities that prevent incidents before users are impacted. AI-powered analytics continuously monitor system health, identifying patterns that historically precede failures. When anomalies are detected, automated systems initiate remediation actions such as creating tickets, ordering replacement hardware, scheduling service visits and coordinating resolution, without requiring user involvement.

Device intelligence plays a critical role in this layer. Modern devices increasingly incorporate self-diagnostic capabilities, allowing hardware and software components to report issues, initiate corrective actions and integrate directly with automated service desk workflows. As a result, entire classes of infrastructure-related incidents are resolved upstream, before performance degradation or disruption occurs.

User self-resolution layer

When prevention is not possible, intelligent self-resolution capabilities ensure that users can resolve issues independently. At this layer, advanced AI agents provide natural language interaction and deep contextual problem-solving, drawing on organizational knowledge bases, historical tickets and system architectures. These virtual agents deliver multilingual, human-like support that adapts to user preferences and communication styles.

Real-time voice and conversational AI further enhance self-resolution by understanding context, urgency and user intent. These systems are designed to resolve the majority of routine and repeatable issues without escalating, significantly reducing service desk demand while maintaining consistent user experience.

AI-led service desk layer

The final layer addresses complex issues that require active intervention. Here, generative and agentic AI orchestrate end-to-end workflows across enterprise systems, combining data, decision logic and automated execution. AI systems move beyond recommendation to action—resetting credentials, provisioning access, updating configurations and coordinating remediation across platforms, all with full governance and auditability.

Human involvement is reserved for the most complex or sensitive situations, supported by agent-assist capabilities that provide real-time guidance and contextual insights. In this model, human roles evolve from reactive ticket handling to designing, governing and continuously improving AI-enabled service operations.

What enables zero-touch transformation

Multiple evolving technologies converge to create the perfect environment for zero-touch transformation. And understanding them explains why this transition is both inevitable and imminent.

Natural language processing and multilingual support improvements mean AI systems become indistinguishable from human agents for most issues. These systems understand context, tone and intent while responding appropriately to emotional cues and cultural nuances.

AI-native hyperautomation with integration capabilities allows AI to act across multiple systems rather than simply providing information. Modern AI agents execute complex workflows, coordinate between platforms and take decisive action to resolve issues.

Predictive and proactive support represents the most significant advancement. AI-powered analytics from telemetry data across applications and devices identify and resolve issues before users notice them. Detecting elevated CPU utilization or failing hard drives automatically triggers ticket creation, part ordering technician scheduling and complete resolution without human awareness or intervention.

Device intelligence and self-healing systems ensure future hardware becomes more intelligent. Devices will self-diagnose, report status and take remedial measures by calling automated service desk APIs. This creates self-maintaining technological environments where problems are resolved at their source.

The revolution in customer experience

Traditional service desks create inconsistent experiences, which are dependent on individual agent knowledge, mood and availability. AI-powered systems deliver speed and accessibility that human operations cannot match. Resolution times drop from hours to minutes. Users receive immediate assistance regardless of time zones, holiday schedules or staff availability.

Consistency eliminates human service quality variability. Every user receives identical high-quality support, regardless of which agent they might interact with in traditional systems. AI systems don't have bad days, lack training, or provide incomplete information.

Personalization ensures AI adapts to individual communication preferences. Users who prefer detailed technical explanations receive that, whereas those seeking simple steps receive concise guidance. AI systems adjust interaction styles while maintaining consistent solution quality.

Zero-touch experience encompasses five key elements:

- Self-healing systems resolve issues before users notice them, eliminating entire categories of service desk interactions
- Proactive notifications inform users of potential issues and provide automated resolutions, maintaining transparency without requiring action
- Automated fulfilment handles requests for access, software, hardware and services without human intervention
- Natural language interaction provides human-like communication when user engagement becomes necessary
- Seamless human hand-off escalates complex or sensitive issues to human experts with complete context and recommended solutions

Real-world implementation: Cognizant's client successes

Transformation from traditional to AI-enabled service delivery is happening now across major organizations worldwide. Cognizant's WorkNEXT™ suite demonstrates this evolution in practice.

Our digital workplace services strategy examines experience through three lenses: engineering, engagement and execution. This approach, built on a resilience-first mindset focuses on building systems that don't break, detecting problems before they impact users and providing seamless resolution when issues occur.

Cognizant's experience with a global real estate services company operating across 80+ countries with over 100,000 users, exemplifies this transformation. The challenge involved regionally siloed service desks, lack of structured governance, high-cost delivery models and insufficient agility to adapt to changing service demands.

Cognizant consolidated services from 50+ incumbent subcontractors into a unified service delivery. The transformation implemented outcome-based commercial models, integrated service delivery and comprehensive automation using predictive intelligence and service catalogue automation.

Results demonstrate AI-enabled transformation potential:

- 78% first-call resolution leading to faster issue resolution through integrated team efforts
- 12% enhanced customer satisfaction improvement from 82.58% to 95% in the first year
- 40% reduction in email volume through automated email parser implementation
- 70% of chat tickets are addressed by chatbot, with 2,800 tickets resolved without human intervention
- 68% reduction in mean time to repair, dropping from 116 hours to 36 hours

These metrics indicate a fundamental transformation in service delivery capability. Work volume previously requiring hundreds of staff now operates with dramatically reduced human intervention while delivering superior user experience.



The insurance sector application

Zero-touch IT operations create multiple strategic advantages for insurance organizations. Internal operational excellence serves as the foundation for delivering superior customer service while automation capabilities developed for internal use naturally extend to customer-facing operations.

Transforming internal employee support enhances customer service delivery by ensuring insurance professionals have seamless access to systems, data and applications needed to serve customers effectively. When IT operations run invisibly through AI orchestration, human expertise focuses entirely on customer relationships and complex problem-solving.

Policy administration and claims support automation represent natural extensions of internal capabilities. AI systems managing employee IT requests can handle customer service inquiries, process routine claims and support policy modifications. This creates consistency between internal operations and customer experience while reducing costs across both domains.

Regulatory compliance improves in automated environments with the aid of AI systems. Automated decision-making creates complete audit trails, applies consistent rules, and reduces human error, leading to compliance adherence. AI systems monitor regulatory changes in real-time and implement required updates across all processes instantly.

Moving from traditional frameworks to prioritizing technology

Evolution to zero-touch operations requires fundamental shifts in organizational thinking. Traditional frameworks that focus on people, process and technology must evolve to prioritize technology, capability and innovation.

Evolving roles from ticket handlers to AI orchestrators represents the most significant change. Rather than handling repetitive queries, professionals focus on engineering AI agents, designing automated workflows and managing strategic aspects of service delivery.

This transition shifts focus from processing individual requests to architecting entire service ecosystems. Human expertise becomes more valuable as professionals design, oversee and continuously improve AI-enabled operations.

Moving from ticket-based to outcome-based service models shifts focus from tracking individual transactions to ensuring user productivity and satisfaction. This requires new metrics, different governance approaches and reimagined success criteria.

API-first architectures enable AI orchestration across multiple systems and platforms. This technical foundation supports integration capabilities that will allow sophisticated automation.

The future favors prevention over IT problem management

Zero-touch IT operations create a substantial competitive advantage that compounds over time. Organizations successfully navigating this transition will operate with cost structures, service quality and innovation capacity that traditional providers cannot match.

By 2030, user expectations will assume seamless and invisible IT operations. Organizations still dependent on traditional service desk models will struggle to meet these expectations while maintaining competitive cost structures.

Superior service delivery enables business growth extending far beyond IT operations. When operational costs decrease dramatically, investment capacity for innovation increases proportionally. When service quality improves consistently, customer satisfaction and retention follow naturally.

For insurance executives, the path forward is clear: begin transformation to zero-touch operations now, or watch competitors gain advantages that become increasingly difficult to overcome. Technology exists today to start this journey. Economic benefits are proven across multiple implementations. Competitive advantages are both immediate and cumulative.

Partnership opportunities exist to accelerate this transformation. Cognizant's WorkNEXT suite provides platforms, expertise and proven methodologies to guide organizations through every phase of the journey from traditional operations to zero-touch excellence.

The future belongs to organizations that stop managing IT problems and start preventing them. Zero-touch transformation begins with embracing that future today.

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