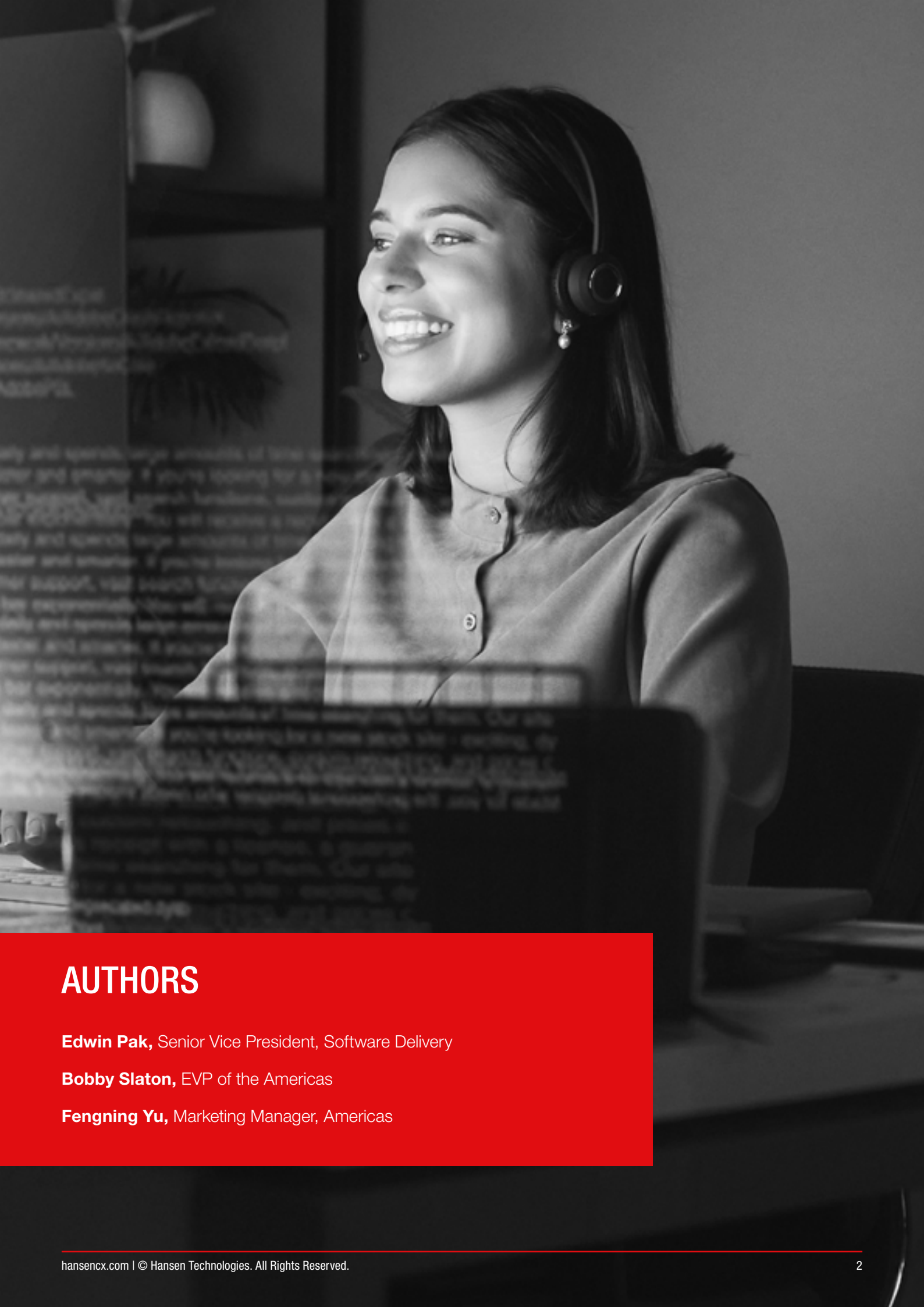
HANSEN

THE UNIFIED ADVANTAGE:

HOW A CONNECTED CIS ECOSYSTEM TRANSFORMS UTILITY CUSTOMER SERVICE



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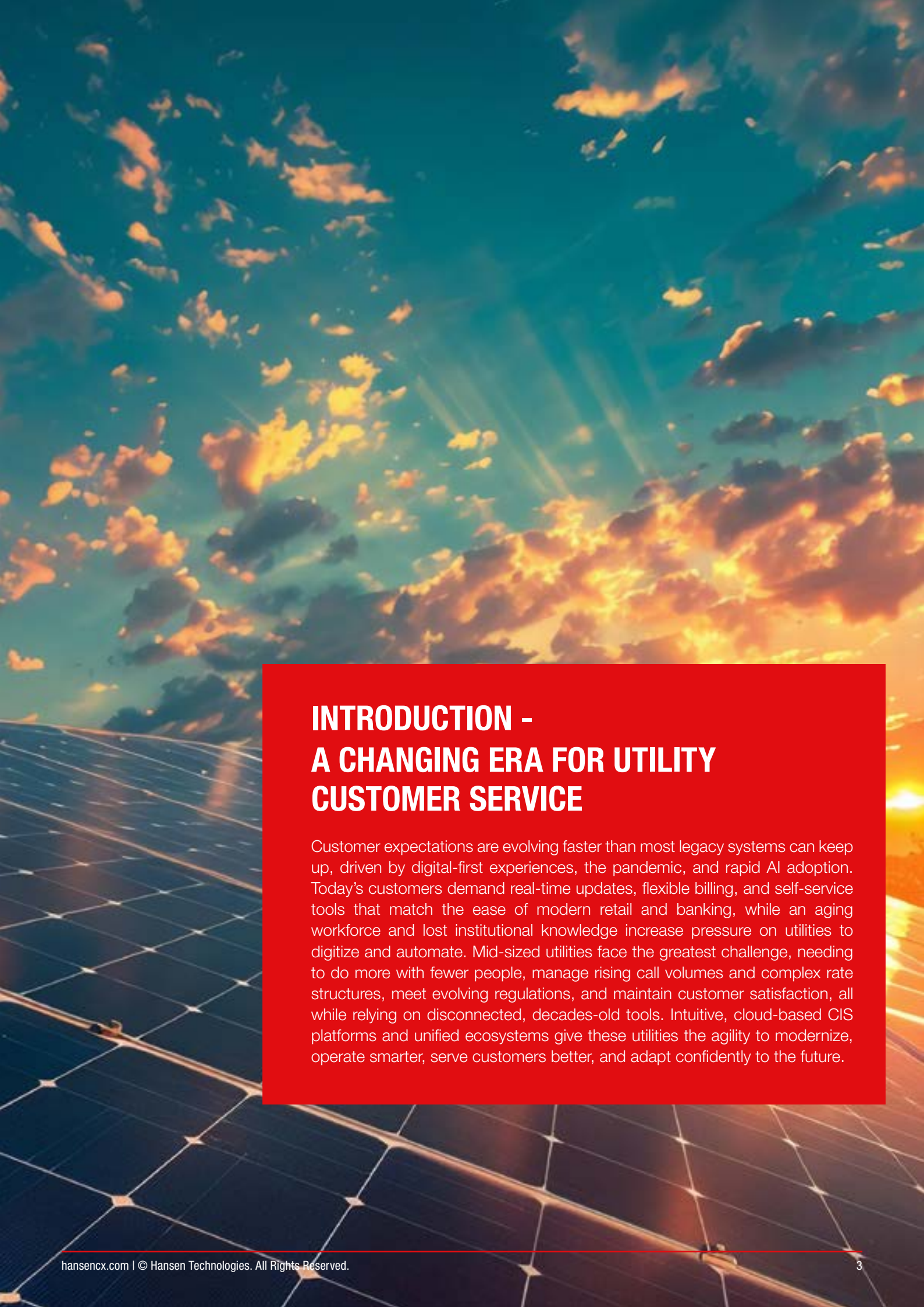


INTRODUCTION - A CHANGING ERA FOR UTILITY CUSTOMER SERVICE

Customer expectations are evolving faster than most legacy systems can keep up, driven by digital-first experiences, the pandemic, and rapid AI adoption. Today's customers demand real-time updates, flexible billing, and self-service tools that match the ease of modern retail and banking, while an aging workforce and lost institutional knowledge increase pressure on utilities to digitize and automate. Mid-sized utilities face the greatest challenge, needing to do more with fewer people, manage rising call volumes and complex rate structures, meet evolving regulations, and maintain customer satisfaction, all while relying on disconnected, decades-old tools. Intuitive, cloud-based CIS platforms and unified ecosystems give these utilities the agility to modernize, operate smarter, serve customers better, and adapt confidently to the future.

THE CUSTOMER SERVICE CRISIS IN MID-SIZED UTILITIES

Mid-sized electric, gas, and water utilities across North America are face a growing customer service crisis driven by structural, technological, and demographic pressures. Issues once manageable such as longer call queues, inconsistent billing experiences, and clunky customer portals have escalated into systemic failures that erode customer trust and strain operations. J.D. Power's 2024 Gas Utility Residential Customer Satisfaction Study reports overall customer satisfaction fell 11 points to 729, lowest since 2015, with steep declines in billing, payment, and customer care (J.D. Power, 2024). More than 60 percent of companies report increasing call volumes, a trend persisting long after the pandemic. These pressure converge as customer expectations outpace utilities' ability to adapt.

Workforce challenges intensify operational strain as retirements drain institutional knowledge, leaving centers short-staffed and reliant on newer hires struggling with legacy UIs, undocumented workflows, and outdated systems. Annual agent turnover reaches 30–45 percent across industries, with many utilities experiencing similar rates (Insignia Resource, 2025). Remaining agents handle over 80 calls per day, navigating multiple screens and performing manual data entry for basic tasks like payments, move-ins, and bill explanations (VCC Live, 2025), increasing errors, slowing resolutions, and driving customer dissatisfaction.

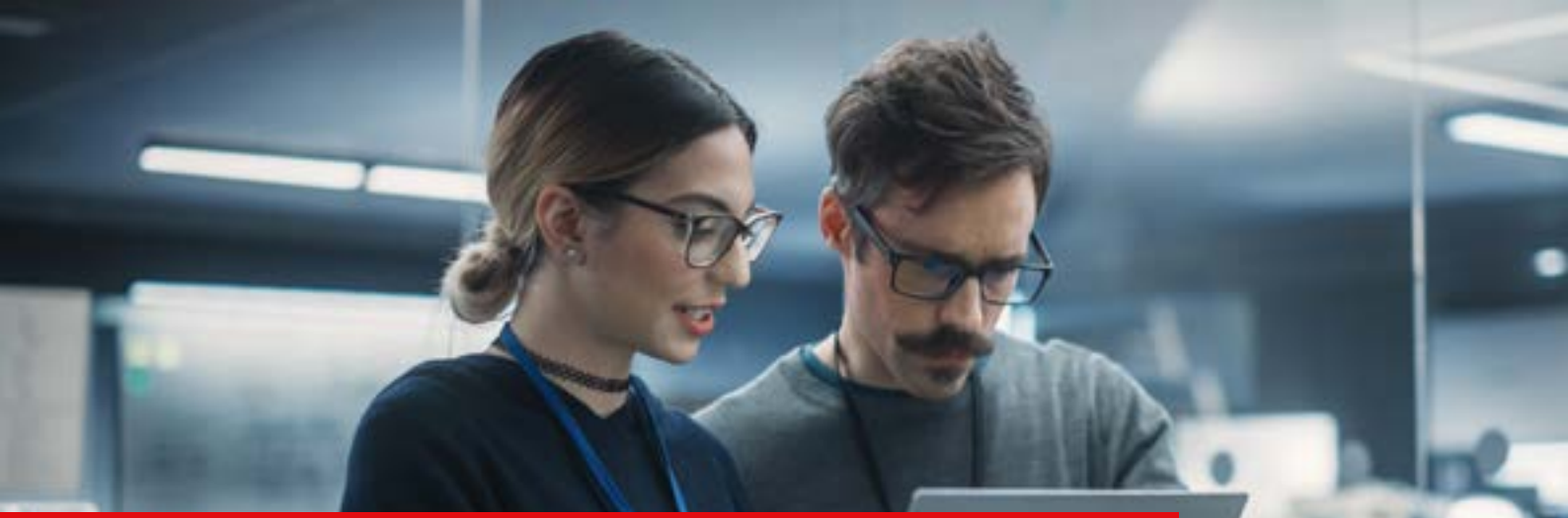
Decades-old CIS platforms intensify operational strain, requiring heavy IT involvement for simple updates and relying on batch processes that delay critical customer data, causing outdated balances, unposted payments, and lagging usage to reach digital channels and increase call volumes. Disconnected systems force CSRs to piece together billing, payments, metering, service orders, and customer interactions, while integration failures with AMI, OMS, GIS, or payment gateways produce incorrect outage details, inconsistent balances, missing meter reads, and mismatched service orders, eroding trust and driving complaints. Meanwhile, strict or poorly tuned validation rules create large AMI exception queues, missing or incorrect reads trigger estimated bills and disputes, and complex rate structures, from time-

of-use pricing to community solar credits, push legacy CIS platforms beyond their limits, making accurate calculation and clear presentation increasingly difficult.

Customer expectations are rising rapidly, with consumers demanding real-time information, intuitive digital tools, mobile-first engagement, and transparency around outages, usage, and billing, over 60–70 percent expect proactive communication, personalized insights, and high-quality self-service options (Zipdo, 2025). Despite increased use of utility websites (35%) and mobile apps (17%) as primary channels (J.D. Power, 2024), only 44 percent of customers are "digitally engaged," and 41 percent find digital interactions harder than with other providers. Many utilities still lack essential capabilities such as payment plans, consumption analysis, outage reporting, multilingual and ADA-compliant interfaces, and SMS engagement, while underdeveloped analytics leave CSRs unable to explain high bills or access interval data, limiting machine-learning pilots. Integration failures compound these issues, particularly during storms, when OMS, GIS, and payment gateways may fail to sync with CIS, causing inaccurate outage maps, misdirected crews, call spikes, and cascading operational disruptions.

Financial and regulatory pressures further constrain modernization budgets, increasing the risk of CIS failures, such as inaccurate bills, mishandled collections, or poor outage communication, that can damage reputation and trigger compliance issues. Meanwhile, the accelerating energy transition with rooftop solar, EVs, batteries, community solar, and virtual power plants introduces complex bidirectional flows and new rate designs, demanding CIS flexibility most mid-sized utilities lack and adding pressure on service, billing, and operational teams.

Together, these challenges represent a full-scale customer service crisis. Without substantial investment in CIS modernization, integration, analytics, and workforce enablement, the gap between customer expectations and utility capabilities will continue to widen, placing customer satisfaction, regulatory compliance, and operational resilience at risk.



THE STRATEGIC IMPERATIVE: REDEFINING UTILITY CX FOR THE DIGITAL ERA

Modern utilities are increasingly judged as service brands. Even in regulated markets, customer satisfaction scores influence regulators, boards, and public trust. Yet only 39 percent of utilities feel prepared for a digital-first environment (Zipdo, 2025). Meeting expectations requires a CIS ecosystem built around agility, intelligence, and real-time information.

Integration is the foundation, with utilities adopting API-first, event-driven connections across CIS, MDM, portals, mobile apps, payment systems, and AI agents to eliminate channel inconsistencies and ensure customers, CSRs, and operators see the same real-time data, critical as 72 percent of customers now expect immediate access to consumption and account information (Zipdo, 2025). Clean, well-governed CIS data is equally vital, supporting accurate billing, reliable communication, and effective analytics for usage insights, bill forecasting, anomaly detection, and personalized recommendations, while dashboards give managers clear visibility into performance, workflows, service requests, payments, and customer interactions. Utilities are increasingly embracing modular, integrated point solutions over monolithic platforms, upgrading specific areas like payments, MDM, or digital engagement without rWeplacing their entire CIS. This approach mirrors the telecommunications industry's Open Digital Architecture, where interchangeable software components exposed through open APIs enable plug-and-play modernization, rapid innovation, and support for sub-brands without full system rebuilds. Unlike monolithic platforms that struggle to innovate across billing, AI, data management, and self-service, integrated ecosystems give utilities the agility to adopt best-of-breed capabilities as needs evolve.

AI is becoming a powerful force multiplier that many utilities have yet to fully leverage, enhancing customer self-service through smarter portals, apps, and virtual agents that handle bill explanations, usage anomalies, payment plans, and routine tasks without human intervention, shifting simple transactions away from the call center and freeing CSRs to focus on higher-value interactions. Internally, AI provides CSRs with real-time insights, bill explanations, and recommended next steps; gives operators early warnings and suggested actions based on data patterns; and equips managers with predictive dashboards for proactive planning. In parallel, UI modernization is a priority, with utilities redesigning CSR interfaces for unified, single-view access to CIS data to reduce training time and errors, while customer-facing interfaces offer clearer options, easier navigation, faster access to insights, and two-way communication through SMS alerts, in-app notifications, and confirmations that boost transparency, reduce calls, and help customers feel informed and supported.

Modern CIS platforms must also support new energy transition programs like EV rates, community solar, flexible billing, and evolving regulatory requirements. Cloud-based CIS solutions are an equalizer, enabling mid-sized utilities to modernize at a lower cost. SaaS and hybrid models allow faster updates, new features with less customization, and reduced technical debt.

Redefining customer experience requires real-time integration, clean data, AI-enabled insights, intuitive UI, strong self-service, and modern communication tools. With 78 percent of utilities investing in digital engagement platforms (Zipdo, 2025), the industry is moving forward. The next step unify these efforts under a cloud-enabled CIS strategy that improves speed, accuracy, and transparency, strengthening customer satisfaction, operational resilience, and long-term trust.

WHAT FUTURE-READY CUSTOMER SERVICE LOOKS LIKE

Future-ready customer service in utilities is built on clarity, speed, intelligence, and consistency powered by a CIS ecosystem that unifies customer channels, internal workflows, and operational teams. Modern utilities treat service as a continuous flow of real-time information and automation, not a reactive function. This shift is urgent; only 35 percent of customers use utility websites and 17 percent use mobile apps as their primary contact channel, despite apps outperforming all other digital channels by 60 points in satisfaction (J.D. Power, 2025).

A DAY IN THE LIFE: BEFORE AND AFTER CIS MODERNIZATION

Before CIS Modernization

CSRs juggle multiple systems to answer basic questions, switching between screens for balances, payments, consumption data, service orders, and notes, while move-ins, move-outs, payment arrangements, and adjustments rely on manual entry and outdated spreadsheets, leaving supervisors dependent on static reports that arrive hours or days later. Customers, meanwhile, encounter outdated balances caused by overnight batch updates and limited self-service options, forcing calls for payments, outages, and billing questions, an inefficiency that costs utilities with 2 million customers between $20 and $40 million annually (Blink UX, 2025) and contributes to stagnant digital satisfaction scores of just 594 out of 1,000, far below expectations and other industries (J.D. Power, 2025).

After CIS Modernization

A unified CIS ecosystem integrates customer information systems (CIS), meter data management (MDM), AI-enabled automation, self-service tools, and industry-standard integrations into one secure, cloud-ready environment. AI-powered virtual agents handle common inquiries instantly, balances, outages, payments, and bill explanations reducing queues. When customers reach CSRs, the CIS should consolidate billing history, payments, usage data, meter information, credit status, communication history, and service orders into a single view. AI surfaces relevant details, highlighting recent account activity, identifying potential issues, recommending next steps, and automatically tracking the conversation making tasks like payments, processing move-ins and move-outs, creating service orders, and completing adjustments or reversals faster and error-free.

Supervisors benefit from real-time operational visibility. Predictive dashboards reveal call drivers, billing exceptions, workflow congestion, adoption patterns, service order volumes, and customer sentiment more clearly. Operations teams use AI-driven trend analysis to identify potential issues with meters, billing, or field activities before they escalate. Customers gain bill forecasts, usage alerts, and proactive notifications. Internally, predictive insights anticipate call spikes, high-bill cycles, delinquency surges, and possible data anomalies critical since 50 percent of customers find billing frustrating and 62 percent want enhanced digital billing tools (Zipdo, 2025).

Portals and mobile apps become intuitive, accurate, and preferred by customers because they present real-time information. Customers can manage their accounts, adjust payment arrangements, analyze usage, upload documents, report outages, and track service orders instantly. Two-way communication, SMS alerts, in-app messaging, and notifications that keeps customers informed and reduces calls. Automated workflows simplify compliance and rate updates. The CIS creates an environment that is simple for customers, efficient for CSRs, transparent for supervisors, and resilient for utilities.

Future-ready customer service is built on a unified CIS foundation with AI-driven intelligence and predictive analytics, combining real-time information, automation, and seamless integration. AI handles routine issues and delivers personalized insights, while CSRs use guided workflows, unified screens, and AI recommendations to reduce cognitive load and improve accuracy, and supervisors rely on predictive dashboards for proactive decisions. Cloud and SaaS deployment accelerate modernization, lower IT overhead, and support programs like EV rates, community solar, and flexible billing.

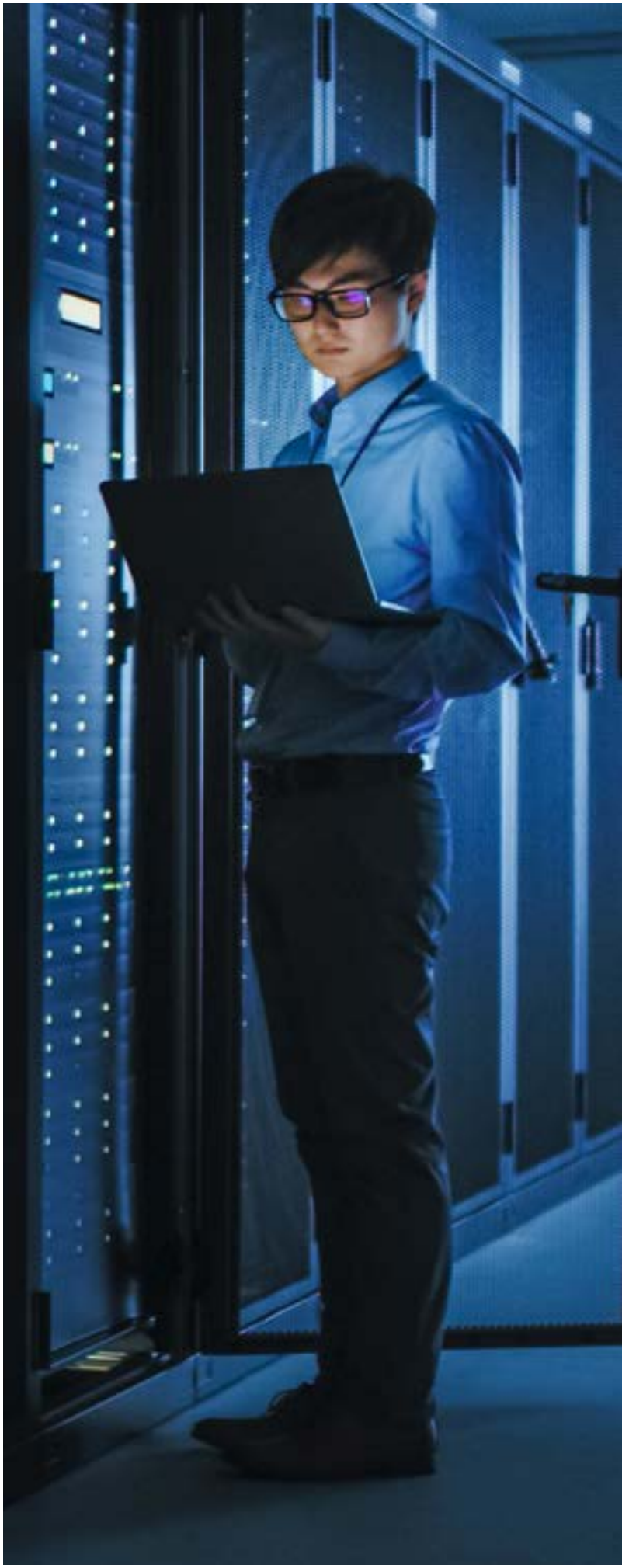
A modern roadmap integrates CIS, AI, data governance, and digital transformation: AI virtual agents manage billing, payments, outages, and usage inquiries; unified IVR provides real-time answers; CSRs receive AI-assisted bill analysis and predictive guidance; and leaders track call spikes, operational risks, and customer behavior. Standardized integrations across MDM, OMS, GIS, AMI, payments, portals, and operational apps enable faster innovation, lower total cost of ownership, and more responsive service, helping utilities deliver clearer, faster, and more reliable customer experiences in an increasingly digital energy landscape.

BUSINESS OUTCOMES THAT MATTER

Migrating to a cloud-based, intuitive CIS is a transformative decision for mid-sized utilities seeking measurable outcomes and long-term operational resilience. When that CIS is part of a unified ecosystem, combining CIS, MDM, AI, self-service, and industry-standard integrations, the impact extends across every customer-facing and operational workflow. Automated, guided onboarding within this environment directly addresses high CSR turnover, reducing ramp-up time for new hires by up to 30% (SuperAGI, 2025).

Automation and AI-driven routing allow service teams to resolve inquiries up to 20% faster, freeing staff to focus on complex interactions that improve both customer satisfaction and operational performance (Freshworks, 2025). With real-time meter data, customer history, billing details, and communication tools unified in one place, agents have the context needed to solve issues quickly and accurately.

Unified self-service tools empower customers to manage routine tasks independently, doubling online account engagement and improving satisfaction through easier access and personalization (Document360, 2025). By bringing self-service, billing, operational workflows, and AI together in a single platform, utilities gain consistent experiences, system-wide visibility, and a scalable foundation for ongoing innovation. Collectively, these outcomes show how a cloud-ready CIS within a unified ecosystem can significantly improve operations, customer experience, and future readiness.



HOW HANSEN'S UNIFIED CIS ECOSYSTEM SOLVES THE CHALLENGE

Hansen's unified ecosystem represents the modern standard for utility transformation by integrating Customer Information Systems (CIS), Meter Data Management **(MDM)**, AI-driven **virtual agents**, work management, and customer self-service into a single, secure, cloud-ready platform. Unlike traditional CIS environments that rely on disconnected modules and custom-coded integrations, this unified approach streamlines meter-to-cash operations end-to-end, eliminates manual workarounds, and enables rapid innovation without costly complexity.

At the core is a **unified data layer** that ensures customer, meter, billing, and service information flows consistently across systems, enabling real-time AMI visibility, accurate billing, and transparent self-service, key to improving satisfaction, trust, and digital engagement. This foundation is extended through the **Hansen Integration Framework (HIF**), which goes beyond Hansen applications to provide a flexible, secure, industry-leading integration layer that connects rapidly and reliably with third-party systems. Built on modern API standards, HIF simplifies interoperability with OMS, GIS, payments, customer engagement platforms, analytics tools, and emerging technologies, ensuring a seamless, connected ecosystem.

To accelerate modernization, Hansen is developing a library of pre-built, productized integrations that reduce implementation costs, testing cycles, and upgrade risks. These versioned, supported connectors ensure compatibility as vendors update their platforms, providing utilities with a future-proof, low-maintenance integration strategy that avoids the costly rework of custom interfaces. This approach mirrors the **modular, composable architecture** that transformed telecommunications, where open APIs enabled providers to plug in best-of-breed components and quickly launch new offerings without full system replacements. Utilities adopting Hansen's unified, open architecture gain the same flexibility: they can modernize targeted areas first, confidently integrate point solutions, and continuously adapt as new capabilities emerge.

For Customer Service and Experience leaders, the ecosystem delivers immediate, measurable benefits, from faster CSR onboarding through **guided workflows** to lower call volumes enabled by AI-assisted routing, virtual agents, real-time AMI data, and transparent self-service, while billing and operations teams gain accuracy and agility through automated processes, integrated MDM validation, and configurable rate structures that reduce IT dependency. An **API-first** integration framework ensures seamless interoperability with OMS, GIS, payments, and partner systems, supported by NIST-aligned security and continuous monitoring. By combining intuitive design, intelligent automation, and a **cloud-ready architecture**, Hansen's unified ecosystem defines the modern utility platform, enabling utilities to modernize confidently, operate smarter, and elevate customer experience with meaningful efficiency and CX improvements in months, not years.

PARTNER ECOSYSTEM: EXTENDING VALUE BEYOND CIS

Additionally, for midsize utilities, managing multiple vendors for customer engagement, payments, and GIS often creates complexity, delays, and higher costs. Hansen's unified ecosystem addresses this through productized integrations with strategic partners like SEW (customer portal and workforce management), Paymentus (payment processing), and Esri (GIS). Unlike custom-built connections, productized integrations are pre-engineered, tested, and supported by both vendors, ensuring seamless interoperability across platforms.

The key advantage lies in future-proofing: under a productized model, Hansen and its partners commit to maintaining the integration as their respective platforms evolve. This eliminates the need for utilities to fund and manage costly rework every time a vendor releases a new version. Quarterly updates and compatibility checks are handled collaboratively, reducing upgrade risk and lowering total cost of ownership.

Hansen assumes a coordination role across the partner network, acting as the single point of accountability when issues arise. This removes the burden from utilities of troubleshooting between vendors, accelerating resolution and minimizing operational disruption. For midsize utilities with lean IT teams, this approach translates into faster deployments, predictable support, and the confidence to adopt innovation without fear of integration failures.

SECURITY & COMPLIANCE: EMBEDDED ACROSS THE HANSEN ECOSYSTEM

Security is foundational to Hansen's unified ecosystem designed to protect customer data, ensure regulatory compliance, and safeguard operations across the meter-to-cash lifecycle. Rather than treating security as an add-on, Hansen embeds NIST-aligned controls, continuous monitoring, and automated threat detection across every layer of the platform, including CIS, MDM, partner integrations, and customer-facing portals.

Built on AWS's secure global infrastructure, the ecosystem leverages industry-leading encryption, identity and access management, and compliance certifications to meet regulatory requirements across North America. Hansen enhances this with role-based access controls, audit logging, vulnerability management, and a shared-responsibility model that maintains protection as utilities scale or add new capabilities. The platform also enforces secure API management, ensuring all integrations, whether productized or custom, adhere to strict authentication, encryption, and governance standards, reducing the risk of breaches and maintaining data integrity across OMS, GIS, payments, and workforce systems.

By adopting a security-by-design approach, Hansen enables utilities to modernize confidently, knowing that customer data, operational processes, and compliance posture are protected end-to-end.

WHY NOW? THE COST OF WAITING

For many mid-sized utilities, legacy customer information systems have ecome more of a liability than an asset, driving hidden costs through high maintenance, technical debt, frustrated employees, and declining customer satisfaction. Each year these systems remain in place, utilities spend more on patchwork integrations, manual workarounds, and specialized IT support just to keep operations running, while younger IT and customer service professionals gravitate toward cloud-based, intuitive tools, making outdated technology a drain on both budgets and talent. At the same time, regulators and customers demand greater transparency, faster response times, and stronger security, while cyber threats grow and compliance requirements tighten. Utilities that delay modernization face mounting operational, financial, and reputational risks, whereas those investing in cloud and API-first architectures gain the flexibility, resilience, and scalability to meet future needs and access funding increasingly tied to digital-ready infrastructure, proving that the best time to modernize may have been years ago, but the second-best time is now.

CONCLUSION

Modernizing customer service isn't just a technology upgrade, it's a strategic transformation that determines how effectively a utility serves its community now and in the future. Hansen's unified CIS ecosystem delivers configurable workflows, embedded automation, AI-driven assistance, and a partner network that extends capabilities beyond the core platform, giving utilities the speed, intelligence, and adaptability to reduce handle times, improve billing accuracy, accelerate CSR onboarding, and create frictionless digital experiences. As expectations rise and resources remain constrained, midsized utilities need intuitive, integrated, future-ready solutions, and Hansen empowers agents, strengthens operations, and provides the consistent, connected, and transparent experiences customers expect. With cloud flexibility, API-first extensibility, and a best-in-class security posture, utilities can modernize without disruption and innovate without unnecessary risk, achieving measurable results in months, not years, while personalized demos or transformation consultations help launch the next chapter in customer service modernization.

Modern Utility Transformation Readiness Checklist

Use this checklist to assess whether your utility is positioned to modernize efficiently, adopt best-of-breed capabilities, and deliver elevated customer experience.

1. Platform & Architecture

- ☑ Our CIS ecosystem supports modular, plug-and-play components rather than a monolithic platform.
- ☑ We have a strategy to modernize individual capabilities (e.g., MDM, self-service, billing) without a full system replacement.

2. Integration Readiness

- ☑ Our integration layer is flexible, secure, and scalable rather than dependent on custom-coded interfaces.
- ☑ We can integrate with key systems, OMS, GIS, payments, customer engagement, analytics, without heavy IT effort.

3. Customer Experience (CX) & Digital Engagement

- ☑ CSRs have access to unified customer and meter data to resolve calls faster and more accurately.
- ☑ We offer AI-driven/self-service tools and guided workflows that reduce call volume and improve user experience.

4. Operational Efficiency

- ☑ Our MDM and CIS operate with automated validations, reducing billing exceptions and manual work.
- ☑ We support configurable rates and workflows that avoid costly IT support or hard-coded logic.

5. Security & Compliance

- ☑ Our systems operate in an environment aligned with NIST-based security standards.
- ☑ We have continuous monitoring, audit trails, and automated error handling across integrations.

6. Future-Proofing & Innovation

- ☑ Our ecosystem allows us to adopt best-of-breed applications as new innovations emerge.
- ☑ Our roadmap includes API-first modernization, enabling faster deployment of new channels or automation.

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