

Utilities Digital Services 2025 Market Insights™

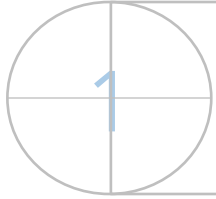
Reimagining energy operations
with AI, predictive insights, and
next-gen digital platforms

August 2025

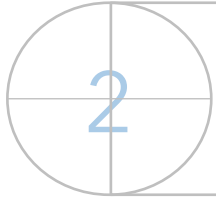
Table of contents

• About the Utilities Digital Services 2025 Market Insights report	3
• Executive summary	4
• Demand-side trends	8
• Infosys profile	14
• Appendix	18
• Key contacts	22

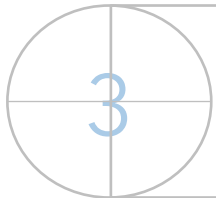
About the Utilities Digital Services 2025 Market Insights report



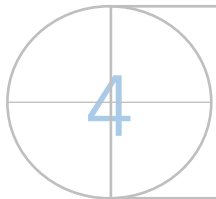
The utility industry is experiencing a major shift toward sustainability, efficiency, and customer-centric operations. Advanced technologies such as AI, IoT, and blockchain are transforming energy generation, distribution, and consumption. This evolution is enabling smarter grids, cleaner energy, and more responsive services.



With rising demand for clean energy and real-time intelligence, utilities are adopting digital solutions to boost efficiency and reliability. These advancements enable proactive maintenance, flexible pricing, and stronger grid resilience, laying the foundation for a smarter, greener energy ecosystem.



Avasant's ongoing conversations with industry leaders indicate that integrating AI and Generative AI is now a key focus for utilities aiming to boost efficiency and elevate customer experience. Utilities are leveraging Gen AI to simplify customer engagement, improve outage response, and deliver tailored energy insights.



The *Utilities Digital Services 2025 Market Insights* report can help enterprises craft a robust strategy based on the industry outlook, best practices, and digital transformation. This report also highlights key market trends and Avasant's viewpoint on the direction of the industry over the next 12 to 18 months.



Executive summary

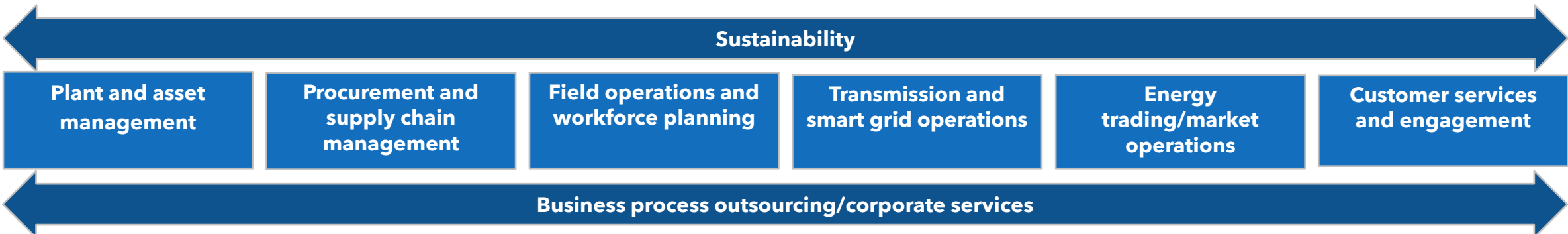
Defining the utilities digital services scope

This report highlights the digital services offered by service providers to companies operating across the following industry subsegments:

Subindustries	Description	Examples
Electricity	It includes all the companies engaged in the generation, transmission, distribution, and retailing of electricity.	
Gas	It comprises all the companies responsible for the exploration, production, transmission, and distribution of natural gas.	
Water	It encompasses all the companies involved in the sourcing, distribution, and retailing of water resources, as well as those involved in the treatment of wastewater.	

Digital services definition: These services drive digital transformation using technologies such as AI, ML and analytics, automation, blockchain, cloud, cybersecurity, intelligent automation (IA), IoT, AR/VR, and digital twins across utility services. The service providers’ offerings to be assessed in this study are consulting, POC development, build and test implementation, system integration, customer experience, and maintenance.

We will assess the service providers’ offerings across the following service line components:



Executive summary

Key drivers



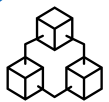
DER adoption and electric vehicle (EV) surge are driving DERMS and V2G integration for dynamic grid optimization



The need for accurate forecasting is accelerating the adoption of time series foundation models



Extreme weather events and infrastructure complexity are catalyzing agentic AI deployment



Decentralized energy markets and ESG compliance are boosting blockchain adoption

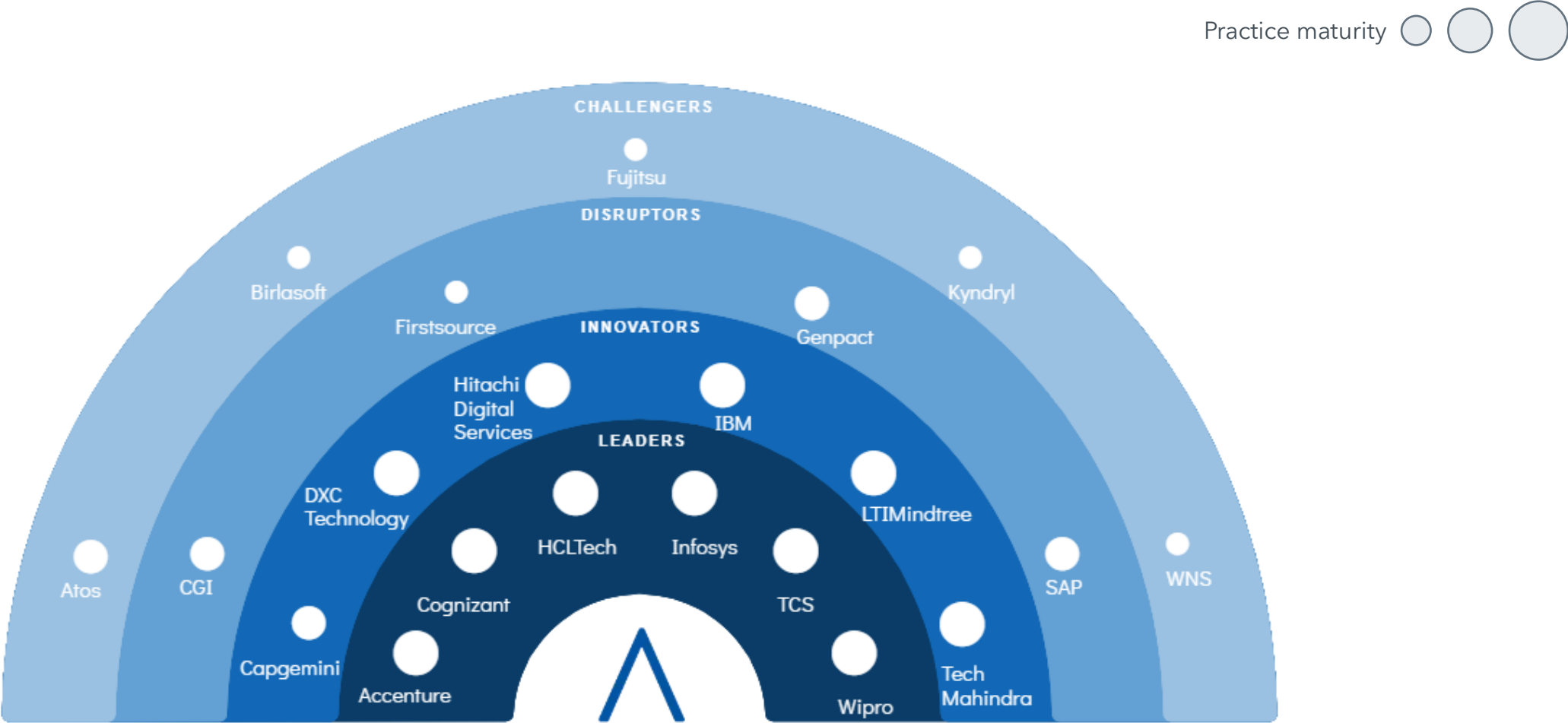


Billing complexity and legacy ERP limitations are prompting a shift to cloud-native M2C platforms

Enterprise response

- The rise in EV adoption, rooftop solar installations, and other distributed energy resources (DERs) is pushing utilities to modernize grid operations.
 - Utility companies are deploying Distributed Energy Resource Management Systems (DERMS) integrated with vehicle-to-grid (V2G) technologies to manage bidirectional power flows, optimize localized energy distribution, and enhance grid flexibility, leveraging real-time data and predictive analytics.
- An increased focus on forecasting accuracy and operational efficiency is accelerating the adoption of foundation models trained on time series data.
 - Utility enterprises are integrating these models into energy management and trading platforms to optimize load prediction, pricing strategies, and asset maintenance planning by leveraging real-time data and predictive analytics.
- The growing complexity of grid infrastructure and the need for faster, data-driven decisions are accelerating the transition to agentic AI platforms in utility operations.
 - Utility companies are deploying AI agents that interact with SCADA systems and IoT sensor networks to automate tasks such as storm damage assessment, grid reconfiguration, and site monitoring.
- The shift toward decentralized energy ecosystems is driving the implementation of blockchain-based platforms across utility operations.
 - Utility companies are leveraging smart contracts and distributed ledgers to enable peer-to-peer energy trading, virtual net metering, and carbon credit verification—automating compliance, ensuring transparent transactions, and empowering prosumers to actively engage in local energy markets.
- The shift to low-code meter-to-cash (M2C) platforms is modernizing utility billing and customer engagement processes.
 - Utility enterprises are adopting platforms such as Kraken and SAP BRIM to accelerate revenue cycles, implement dynamic pricing models, and enable flexible, cloud-native billing operations, while integrating customer and usage data systems to deliver real-time insights, personalize energy offerings.

Avasant recognizes 21 top-tier service providers supporting the utilities industry in digital transformation



Note: Please refer to Avasant's *Utilities Digital Services 2025 RadarView* for detailed insights on the service providers and supply-side trends.



Demand-side trends

Utilities are transforming grid operations to meet evolving energy demands by implementing intelligent, real-time, and decentralized management systems

Utilities are adopting technologies such as DERMS, ADMS, and edge systems to integrate distributed energy, improve grid flexibility, and support the clean energy transition, boosting resilience, efficiency, and sustainability.

Strengthening grid integration	Optimizing energy demand	Supporting clean transition	Enhancing grid intelligence	Enabling energy trading
Gismo Power unveiled mobile solar carports with bidirectional electric vehicle (EV) chargers capable of powering EVs, nearby buildings, and the grid, while also drawing energy from both the vehicles and solar panels.	PG&E, with Microsoft and Schneider Electric, launched Flex Connect—a DERMS-based solution to speed up grid access for EVs and batteries by managing power demand.	ComEd adopted DERMS to support Illinois' 100% clean energy goal by 2050. The platform enabled over 1 GW of DER integration, driving rapid residential and commercial growth while minimizing the need for grid upgrades.	SCE rolled out a centralized Grid Management System that combines DERMS, ADMS, SCADA management, and a forecasting tool, enabling real-time DER coordination and improved grid reliability.	Avista piloted a “micro-transactive grid”, using an edge-based DERMS to coordinate solar, batteries, and load controls. The system enables building-to-building energy trading and boosts microgrid resilience.
				

Utilities are operationalizing decentralized energy strategies by using DERMS and ADMS for targeted goals, from EV integration and demand optimization to microgrid trading and clean energy compliance, demonstrating varied but concrete progress toward intelligent grid modernization.

Source: Avasant Research

Utilities are leveraging AI foundation models on time series data to enhance forecasting, streamline pricing, and optimize asset maintenance

With rising focus on efficiency and resilience, utility companies are using physical AI for real-time DER management. This will enhance load prediction, pricing, and asset maintenance, resulting in lower costs and improved grid reliability.

Technologies used	Use cases	Illustrative examples
Physical AI	To enhance grid adaptability and efficiency	 Con Edison uses real-time Physical AI to manage the grid such as a neural network, analyzing live data from DERs to adjust inverter settings, storage, and curtailment, while reinforcing actions that improve voltage and reduce curtailment.
Climate models	To strengthen climate resilience and grid reliability	 Xcel Energy incorporated NOAA's CMIP6 climate models into its operations to improve climate impact forecasting, helping it plan for an expected 15% increase in electricity demand during summer.  Duke Energy integrated NOAA's CMIP6 climate models to strengthen long-term planning and grid preparedness, enabling it to better anticipate rising temperatures and manage peak summer demand surges.

Utility companies are using AI and climate models to fine-tune grid performance in real time and anticipate seasonal demand shifts, signaling a shift toward data-driven adaptability and planning.

Utilities are enhancing operational efficiency by adopting agentic AI platforms that automate grid assessment, reconfiguration, and monitoring

The growing complexity of grids, rise in renewables, and higher customer expectations are driving utility companies to adopt AI for demand forecasting, outage management, maintenance, and customer support, boosting reliability, efficiency, and sustainability.

Utilities	Strategies/methodologies	Description
	 Deployment of AI agents	Eneco in Belgium deployed AI agents to serve over one million customers, cutting outages, speeding up response times, and reducing reliance on manual operations.
	 Enhancing forecast accuracy	UK's National Grid ESO leveraged AI to enhance electricity demand forecasting by 33%, leading to lower costs and significant reductions in carbon emissions.
	 AI-powered turbine control	Iberdrola in Spain implemented AI to anticipate drops in wind speed, enabling timely turbine adjustments to ensure consistent energy production and optimize wind power utilization.
	 Conversational AI integration	E.ON deployed over 30 conversational AI solutions, achieving a 70% automation rate across customer and employee interactions. The multichannel AI system gathers real-time feedback to enhance service quality and efficiency.
	 Intelligent infrastructure monitoring	Exelon adopted NVIDIA's AI platform for drone-based grid inspections, improving defect detection, boosting reliability, and reducing emissions through more efficient maintenance.

Utility companies are adopting AI through targeted use cases, spanning outage response, forecasting, turbine control, and asset inspection, indicating a focused push toward operational efficiency and grid reliability.

With the rise of decentralized energy, utilities are adopting blockchain to enable secure peer-to-peer trading and ensure transparent, efficient energy markets

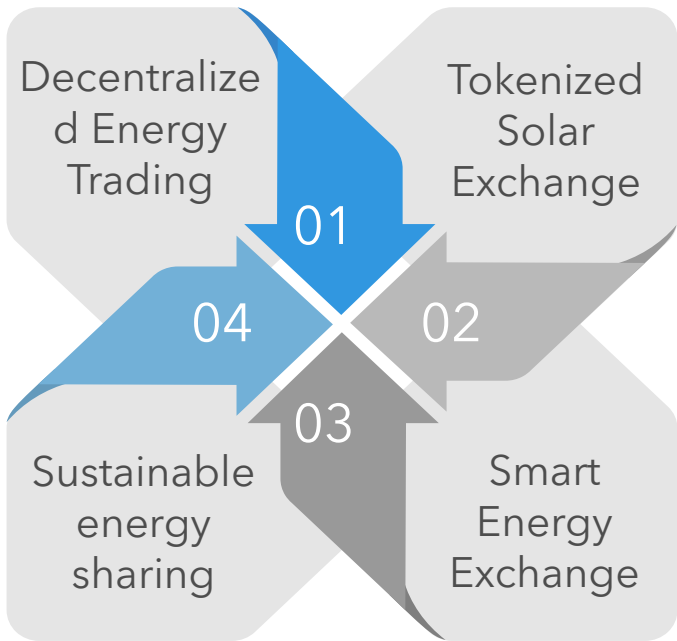
Blockchain-powered peer-to-peer energy trading empowers consumers to exchange solar energy in real time, accelerate renewable adoption, and reduce dependence on centralized systems, creating a more flexible and resilient energy future.

01 LO3 ENERGY

LO3 Energy is scaling its blockchain-based Brooklyn Microgrid to regions such as South Australia, enabling secure peer-to-peer renewable energy trading and boosting grid stability.

04 bcpG

Powerledger, BCPG, and Thailand's Metropolitan Electricity Authority (MEA) have enabled blockchain-based P2P solar energy trading in Bangkok's T77 precinct, allowing secure and transparent energy exchange across diverse buildings.



02 TATA POWER-DDL

Tata Power-DDL and Powerledger launched a blockchain-based P2P solar trading trial in North Delhi, enabling real-time energy trading across 150 meters and 2 MW of solar PV, while integrating EV chargers and battery storage.

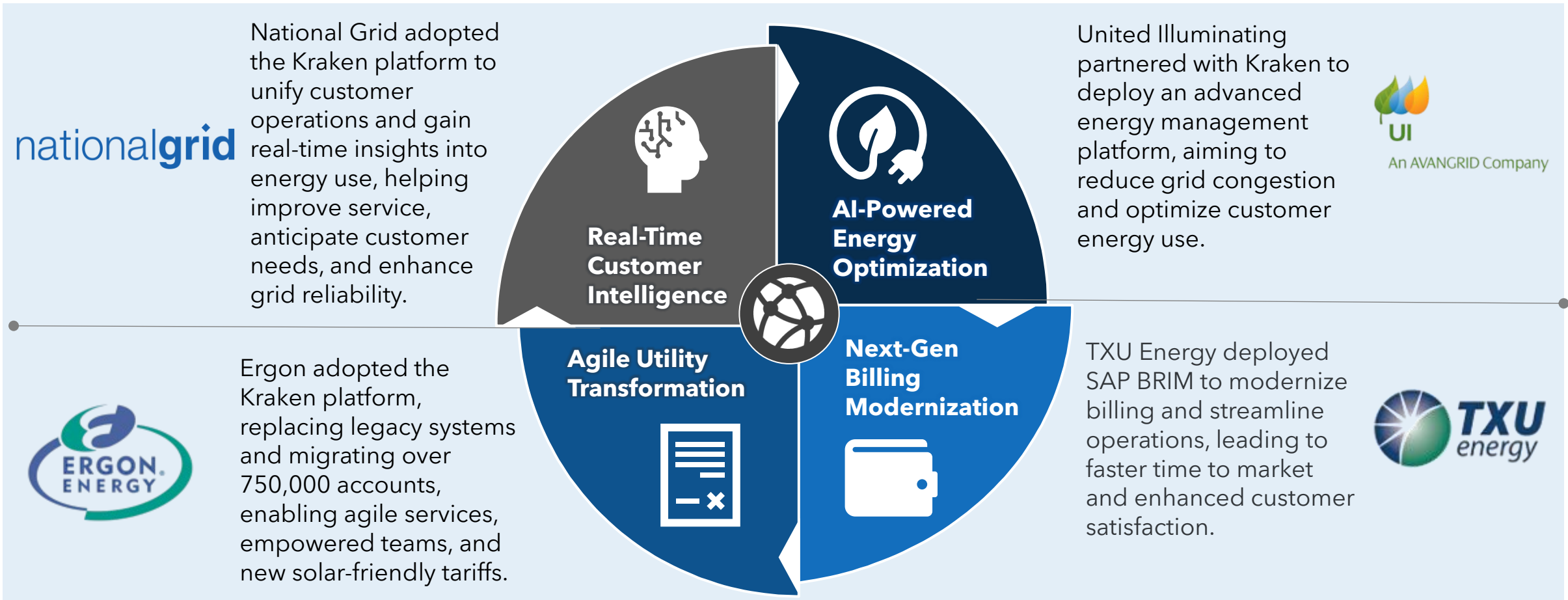
03 CESC LIMITED

Powerledger, CESC, and ISGF launched a P2P energy trading project in Kolkata with over 1,000 participants. Using blockchain, the trial showed how P2P trading boosts consumer savings and supports DISCOMs' renewable targets.

Utilities are using blockchain-based P2P trading across various regions to enable real-time solar exchange, increase consumer participation, and reduce reliance on centralized grid systems.

Facing growing demand for speed and flexibility, utilities are turning to low-code meter-to-cash (M2C) platforms to streamline billing and personalize services

Utility companies are turning to low-code platforms such as Kraken and SAP BRIM to streamline billing, enable dynamic pricing, and deliver real-time insights—boosting efficiency and personalization.



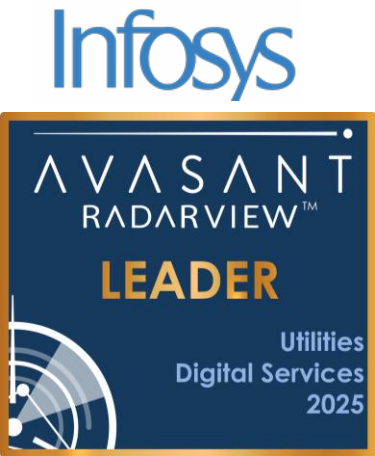
Utility providers are leveraging platforms such as Kraken and SAP BRIM to retire legacy systems, streamline billing, and improve customer engagement, demonstrating a clear shift toward digital agility, operational efficiency, and data-driven energy management.



AVASANT

Infosys profile

Infosys: RadarView profile



- Practice maturity ★★★★★
- Investments & innovation ★★★★★
- Partner ecosystem ★★★★★

Offers tailored solutions for utility clients by utilizing partnerships to enable predictive maintenance and improve supply chain efficiency.

Practice overview		Industry-specific solutions/offerings		Sample clients
- Practice size: 14,000 - Active clients: 140 - Delivery highlights: N/A				- An American electricity and gas company - An Australia-based electricity distribution company - A European electric utility - An America-based public utility - An electric utility company
13.3% Revenue share for FY 2025 in energy, utilities, resources, and services 8.4% YOY growth in energy, utilities, resources, and services, FY 2024-2025		KRTI 4.0	A solution to optimize assets through predictive insights and secure remote management	
		REC Platform	A platform leveraging blockchain to securely automate the verification, issuance, and trading of RECs*	
		PACE 2.0	An AI-driven solution to accelerate utilities' shift from legacy CIS ¹ to Oracle CC&B ² , C2M ³ , and CCS ⁴	
		Rates GPT	An AI assistant to help utilities streamline rate inquiries and billing for utilities	
Partnerships/alliances				
	Partnered to enable AI-based grid planning with seamless integration of Distributed Energy Resources			Service line coverage Plant and asset management Procurement and supply chain management Field operations and workforce planning Transmission and smart grid operations Energy trading/market operations Customer services and engagement BPO/Corporate services Sustainability
	Leveraged its copilot to improve grid reliability and operational efficiency			
	Leverage its Azure-based Data Mesh and Marketplace to help utilities cut costs and boost agility			
	Partnered to optimize EV fleet energy use and enable V2G through an AI-driven platform			

Darker color indicates higher industry concentration: ●●●●●

*REC: Renewable energy certificate

¹CIS: Customer information system, ²CC&B: Customer care and billing, ³C2M: Customer to meter, ⁴CCS: Customer cloud service

Infosys: RadarView profile

Case studies

Client	Capability	Summary	Business impact
An electric utility company	• Analytics • Cloud	• The client faced challenges due to incomplete connectivity models and a disjointed distribution planning process, resulting in reduced efficiency and planning accuracy. • Infosys helped with long-term grid planning by integrating load profiles, distributed energy resources (DER) forecasting, and Integration Capacity Analysis (ICA) modules, and enabling external publishing of ICA results.	• Improved planning accuracy • Enabled greater DER integration • Enhanced operational efficiency
A European utility company	• Analytics • Automation • Cloud	• The client faced scalability and infrastructure limitations, making it difficult to support evolving business needs and prompting the need to exit their captive data center. • Infosys facilitated the SAP S/4HANA transformation by executing a downtime-optimized migration, performing complex data conversions, and repointing over 250 interfaces for seamless integration.	• Reduced downtime and cost • Improved operational efficiency by 70% • Enhanced user experience • Reduced manual effort
An America-based public utility	• Analytics	• The client struggled with incomplete and inaccurate distribution network connectivity, resulting in slower outage identification and prolonged restoration times. • Infosys improved grid resiliency by designing a data-driven solution to identify and auto-correct errors in the distribution network's connectivity model using statistical analysis and a centralized data lake.	• Improved accuracy from 80% to 95%
An Australia-based electricity distribution company	• Automation • Cloud	• The client struggled with outdated SAP systems, high costs, and limited scalability, prompting the need for cloud migration to streamline operations and enable growth. • Infosys upgraded and migrated the client's ERP and S/4HANA systems to SAP Cloud, streamlining platforms, fixing integrations, and ensuring a smooth, low-impact transition.	• Improved meter data delivery by 30% • Enhanced security and maintainability • Achieved minimal downtime

Infosys: RadarView profile

Analyst insights

Practice maturity



- Infosys offers an agentic AI-powered wildfire response solution tailored for utilities to address the increasing risk of wildfires. The solution uses intelligent AI agents to predict fire spread, assess grid vulnerability, and detect potential outages. These agents recommend proactive, prescriptive actions with human oversight and automatically notify stakeholders—for instance, sending safety alerts to customers—to support faster, more informed responses.
- To enable a smooth and efficient rollout of advanced metering infrastructure (AMI) for utility clients, Infosys provides tailored AMI service offerings that streamline implementation, boost operational efficiency, and decrease AMI-related efforts, resulting in reduced overall costs. These solutions help build a smart grid that meets both utility sector demands and evolving customer expectations.
- It offers interactive chatbots and web portals to guide customers through DER system recommendations and onboarding, according to their preferences. Additionally, it leverages Gen AI to analyze historical maintenance data across distribution network assets, enabling early prediction of potential equipment failures.

Investments and innovation



- Infosys has established a GridOS delivery center in Hyderabad to provide end-to-end implementation and support services for ADMS, distribution management system (DMS), and outage management system (OMS) solutions to its energy sector clients.
- It announced a \$36M agreement to acquire MRE Consulting, a firm specializing in technology and business consulting for the energy and utilities sector. This acquisition is expected to strengthen Infosys' capabilities and expand its expertise in the energy domain.
- Infosys has set up a delivery center in Gujarat, aiming to develop it into a TechFin* hub by leveraging AI, Gen AI, cloud, and blockchain for advanced digital solutions. Additionally, its acquisition of Noah Consulting LLC has enhanced its expertise in information management and consulting for the gas sector.

Partner ecosystem



- Infosys has partnered with IDARE to enhance its offerings through AI-driven business intelligence and digital twin technology. This collaboration enables Infosys to deliver customized solutions across industries by leveraging IDARE's strengths in predictive and prescriptive analytics, big data, and decision intelligence.
- It is advancing grid modernization through strategic partnerships with companies such as GE Vernova, Schneider Electric, Envelio, and Thinklabs AI. These collaborations focus on integrating power systems engineering with AI and data-driven technologies. It is also establishing a Center of Excellence (CoE) for GE GridOS and co-developing innovative use cases alongside GE Vernova to drive smarter, more efficient energy solutions.
- It has also partnered with Google to drive go-to-market strategies, specifically targeting supply chain and capital markets transformation.

*A TechFin hub serves as an innovation center that leverages emerging technologies, such as AI, blockchain, and cloud computing, to design and deliver advanced financial products and services.



Appendix: About RadarView

Utilities Digital Services 2025 RadarView assesses providers across three critical dimensions

Practice maturity

- This dimension evaluates the type, market acceptance, and quality of offerings in the utilities space. It also assesses the strength of the overall practice with respect to its size, certified employees, embedded expertise in emerging technologies, and value chain coverage.
- The width and depth of the client base, practice revenues, the use of proprietary/outsourced tools and platforms, and future strategy are important factors that contribute to this dimension.

Investments and innovation

- This dimension measures the strategic direction of investments and resultant innovations in the offerings and commercial model and how these align with the future direction of the industry.
- The overall strategic investments, both organic and inorganic, in capability and growth, technology development, and human capital development, along with the innovations that the service provider develops, are critical aspects of this dimension.

Partner ecosystem

- This dimension assesses the nature of the provider's partnerships and ecosystem engagement. It evaluates the partnerships' objective (codevelopment or co-innovation) and the provider's engagement with technology solutions or product providers, startup communities, and domain associations.
- The kind of joint development programs around offerings, go-to-market approaches, the overall depth of partnerships, and their leverage to deliver superior value to clients are this dimension's important aspects.

Research methodology and coverage

Avasant has based its analysis on several sources:

Public disclosures

Publicly available information from sources such as Securities and Exchange Commission filings, annual reports, quarterly earnings calls, and executive interviews and statements

Market interactions

Discussions with enterprise executives leading digital initiatives and influencing service provider selection and engagement

Provider inputs

Inputs collected through the service provider capability decks and structured briefings from June 2025 to July 2025

Of the 27 service providers assessed, the following are the final 21 featured in the Utilities Digital Services 2025 RadarView:



Reading the RadarView

Avasant has recognized service providers in four classifications:



Leaders show consistent excellence across all key dimensions of the RadarView assessment (practice maturity, investments and innovation, and partner ecosystem) and have had a superior impact on the market as a whole. These service providers have shown true creativity and innovation and have established trends and best practices for the industry. They have proven their commitment to the industry and are recognized as thought leaders, setting the standard for the rest of the industry to follow. Leaders display a superior quality of execution and a reliable depth and breadth across verticals.



Innovators show a penchant for reinventing concepts and avenues, changing the very nature of how things are done from the ground up. Unlike leaders, innovators have chosen to dominate in a few select areas or industries and distinguish themselves through superior innovation. These radicals are always hungry to create pioneering advancements in the industry and are actively sought after as trailblazers, redefining the rules of the game.



Disruptors enjoy inverting established norms and developing novel approaches that invigorate the industry. These service providers choose to have a razor-sharp focus on a few specific areas and address those at a high level of granularity and commitment, which results in tectonic shifts. While disruptors might not have the consistent depth and breadth across many verticals like leaders or the innovation capabilities of innovators, they exhibit superior capabilities in their areas of focus.



Challengers strive to break the mold and develop groundbreaking techniques, technologies, and methodologies on their way to establishing a unique position. While they may not have the scale of the service providers in other categories, challengers are eager and nimble and use their high speed of execution to great effect as they scale heights in the industry. Challengers have a track record of delivering quality projects for their most demanding Global 2000 clients. In select areas and industries, challengers might have capabilities that match or exceed those of the providers in other categories.

Key contacts

Primary contact



Subhrata Pati

Senior Research Analyst
subhrata.pati@avasant.com

Contributors



Joe Hogan

Fellow
joe.hogan@avasant.com



Robert Joslin

Partner
robert.joslin@avasant.com



Sahaj Kumar

Associate Research Director
sahaj.kumar@avasant.com



Swapnil Bhatnagar

Partner
swapnil.bhatnagar@avasant.com

Disclaimer

Unauthorized reproduction or distribution in whole or in part in any form, including photocopying, faxing, image scanning, e-mailing, downloading, or making available any portion of the text, files, data, graphics, or other materials in the publication is strictly prohibited. Prior to photocopying items for internal or personal use, please contact Avasant to ensure compliance with Avasant or third-party intellectual property rights and usage guidelines. All trade names, trademarks, or registered trademarks are trade names, trademarks, or registered trademarks of Avasant, its licensors, or the applicable third-party owner. No express or implied right to any Avasant or third-party trademarks, copyrights, or other proprietary information is granted hereunder. Avasant disclaims, to the fullest extent under applicable law, all warranties and conditions, expressed or implied, with respect to any content provided hereunder, including, without limitation, warranties of merchantability and fitness for a particular purpose. Avasant does not assume or guarantee and hereby disclaims any and all liability for the quality, accuracy, completeness, or usefulness of any information contained herein, which shall be inclusive of any and all direct or consequential damages or lost profits. Any reference to a commercial product, process, or service does not imply or constitute an endorsement of the same by Avasant. This publication is for information purposes only. By distributing this publication, Avasant is not engaged in rendering legal, accounting, or other professional services. If legal, accounting, or other advisory services or other expert assistance is required, the services of a competent professional person should be sought.

AVASANT

EMPOWERING BEYOND

GET CONNECTED



www.Avasant.com