SIEMENS

2025 COMPANY OF THE YEAR

Driving impact across the customer value chain

RECOGNIZED FOR BEST PRACTICES IN THE EMEA SMART WATER MDM INDUSTRY

FROST & SULLIVAN

Table of Contents

Best Practices Criteria for World-class Performance 3

Top Transformations Impacting Growth in the Smart Water MDM Market 3

The Smart Water Transformation in Europe, the Middle East, and Africa 4

Siemens: A Trusted Leader in Water Management 6

Gridscale X Meter Data Management: The Next-Generation Platform Powering Digital Transformation 7

Gridscale X Meter Data Management: Granular Data Analysis for Actionable Insights 8

Gridscale X Meter Data Management: Best in Class Billing 8

Gridscale X Meter Data Management: Empower water consumers with data usage 9

Proven Success in Delivering Large-Scale Projects Across the Region 10

A Remarkable Journey Toward Sustained Growth in the Industry 14

Conclusion 16

What You Need to Know about the Company of the Year Recognition 16

Best Practices Recognition Analysis 17

Visionary Innovation & Performance 17

Customer Impact 17

Best Practices Recognition Analytics Methodology 18

Inspire the World to Support True Leaders 18

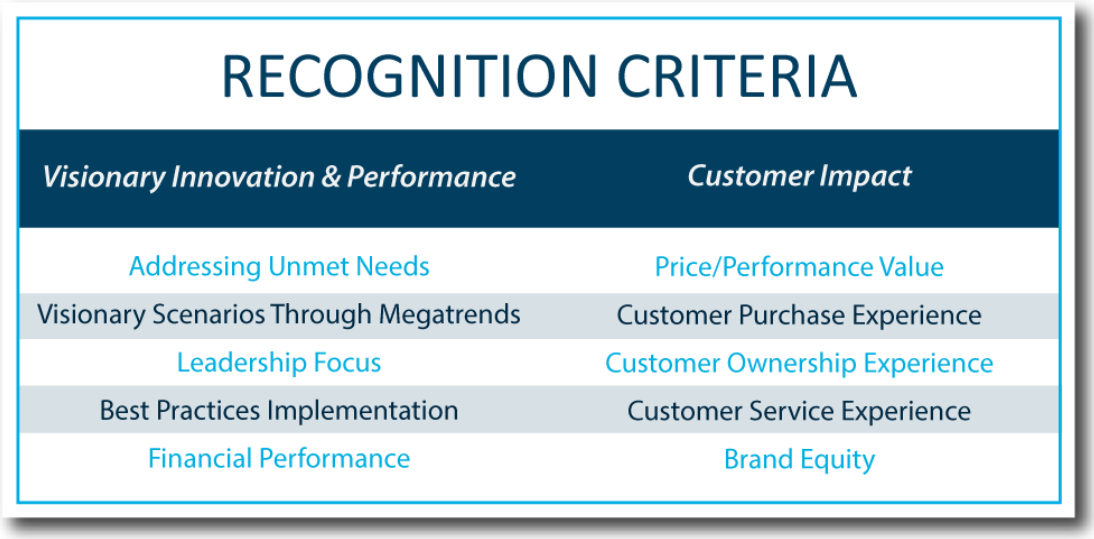
About Frost & Sullivan 19

The Growth Pipeline Generator™ 19

The Innovation Generator™ 19

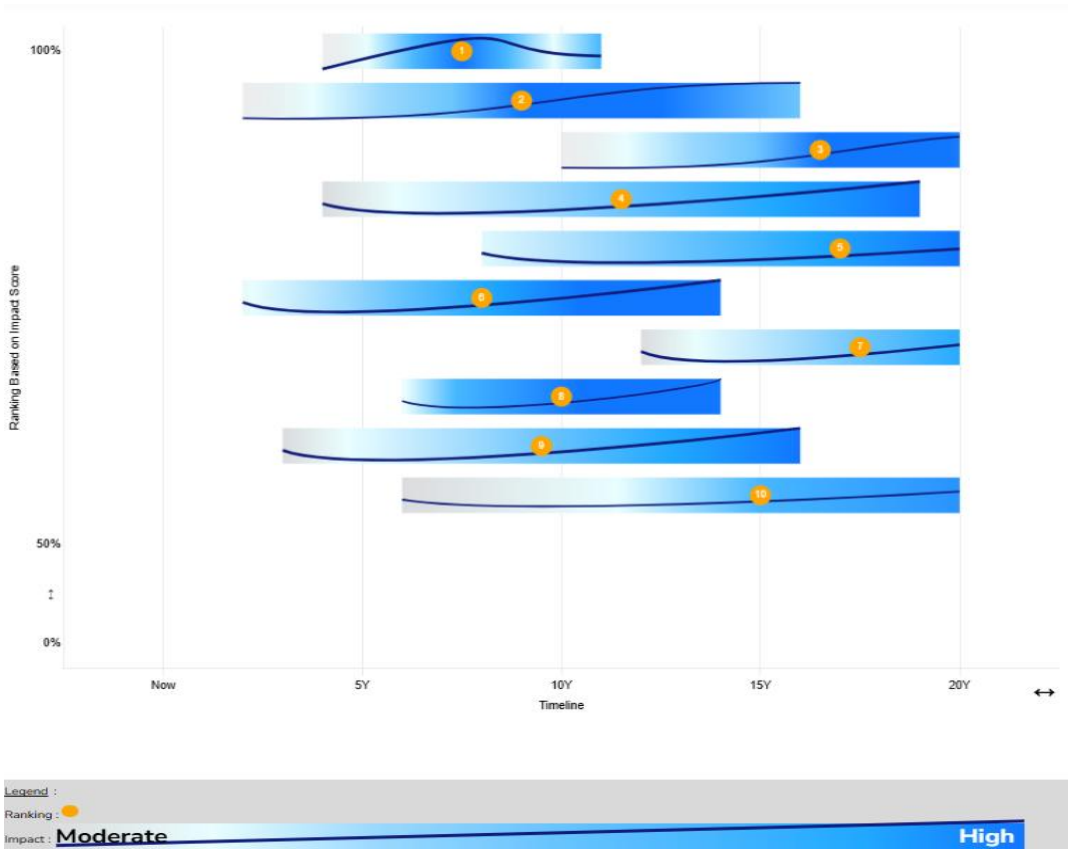
Best Practices Criteria for World-class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each recognition category before determining the final recognition recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Siemens excels in many of the criteria in the smart water MDM space.



Top Transformations Impacting Growth in the Smart Water MDM Market

Rank	Strategic Imperative	Timeline	Impact (%)	Impact Curve
1	**Geopolitical Chaos** Impact of regional conflicts on water infrastructure projects in MENA	2029 - 36	71	Oscillatory
2	**Internal Challenges** Overcoming data privacy concerns in smart water meter data sharing	2027 - 41	68	Logistic
3	**Competitive Intensity** Global tech firms entering the EMEA smart water market	2035 - 48	66	Logistic
4	**Transformative Mega Trends** Regulatory changes driving the adoption of sustainable water technologies in EMEA	2029 - 44	64	Exponential
5	**Industry Convergence** Energy and water management integration for sustainable smart cities	2033 - 51	62	Exponential
6	**Compression of Value Chains** Use of mobile apps for real-time water quality monitoring by consumers	2027 - 39	61	Exponential
7	**Geopolitical Chaos** Sanctions and trade restrictions affecting smart water technology imports	2037 - 48	59	Exponential
8	**Competitive Intensity** Emergence of digital twins in water management for competitive analysis	2031 - 39	58	Polynomial
9	**Disruptive Technologies** Use of AI for leak detection and prevention in smart water networks	2028 - 41	57	Exponential
10	**Transformative Mega Trends** Climate change adaptation strategies using predictive analytics in water management	2031 - 49	56	Polynomial



The Smart Water Transformation in Europe, the Middle East, and Africa

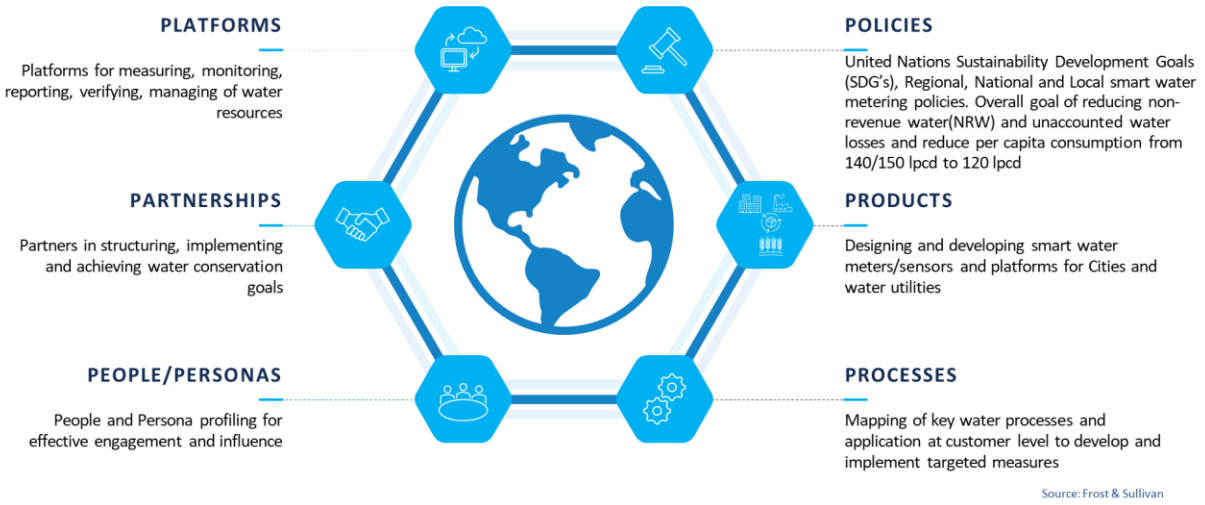
Water utilities across Europe, the Middle East, and Africa (EMEA) region face multiple challenges, including rapid urbanization, extreme weather events (e.g., droughts and flooding), regulatory compliance pressures, and evolving customer expectations. To address these issues, utilities have embarked on a digital transformation journey, progressing at different stages of technological adoption and maturity. An increased focus on the demand-side and customer-side management are key strategic drivers in shaping the future of water utilities, emphasizing the measurement and optimization of water consumption. Market players' ultimate goal is to reduce per capita water usage, with some regions aiming to decrease consumption from 200 liters per capita per day (lpcd) to 150 lpcd. In the United Kingdom, for example, the target is to lower per capita water consumption to 122 liters per day by 2037–2038.[1]

The 6P Framework for the Future of Sustainability & Circular Economy provides a strategic pathway to achieving net zero by guiding the transformation of water management from policy development to advanced digital platforms. This framework is built on six key pillars (Policies, Products, Processes, People/Personas, Partnerships, and Platforms) which collectively drive innovation and efficiency in water utilities.

[1] Frost & Sullivan Interview with Siemens (February 2025)

6P Framework for Future of the Sustainability & Circular Economy – A Pathway to Net Zero

The future of sustainability will rely on delivering ***"more with less"*** and shaped by the pathway of policies through to platforms.



Source: Frost & Sullivan

Policies such as the United Nations Sustainable Development Goals and national smart water metering initiatives set the foundation for regulatory compliance and conservation efforts, targeting reductions in non-revenue water (NRW) losses and per capita water consumption. These policies influence the development of products (e.g., smart meters, sensors, and digital platforms) designed to enhance water efficiency.

Processes play a crucial role in mapping operational workflows and implementing targeted measures for optimization. Equally important are people and personas, ensuring stakeholder engagement and fostering behavioral change to promote responsible water use. Partnerships between utilities, technology providers, and policymakers accelerate the adoption of conservation strategies and digital solutions. At the heart of this framework are platforms, which integrate real-time data, monitoring, and analytics to support proactive decision-making. Siemens, through its Gridscale X Meter Data Management, known as SIWA MDM to water only utilities, fully aligns with this approach, empowering utilities with the tools to drive digital transformation, enhance sustainability, and ensure efficient water resource management.

Governments and utility operators are investing in Advanced Metering Infrastructure (AMI) and digital water management solutions to enhance water conservation, minimize NRW losses, and optimize network operations. As climate change intensifies water stress across EMEA, utilities are prioritizing real-time, data-driven decision-making. With NRW losses averaging 23% in Europe Union (EU) distribution networks and reaching up to 50% in some European regions, smart water metering and digital twins have become essential for sustainable water distribution and regulatory compliance.[2] Therefore, AMI-based smart metering solutions are expanding in EMEA, accelerated by advancements in Low-Power Wide Area Network technologies that enable real-time remote data transmission.

Regulatory support and government-led initiatives are key in EMEA as markets shape the adoption of smart water management solutions. Countries including the United Kingdom (UK), Spain, Italy, Saudi Arabia, the United Arab Emirates, and South Africa are investing in infrastructure as part of their broader

[2] *Frost Radar™ on the Global Smart Water Metering Market* (Frost & Sullivan, May 2023)

digital transformation and sustainability efforts. For instance, Saudi Vision 2030 has prioritized smart metering deployment, artificial-intelligence (AI)-driven leak detection, and digital twin technology to optimize distribution networks.

Cybersecurity is another critical concern, given the increasing cyber threats targeting critical infrastructure. With the implementation of the EU' s Network and Information Systems Directive 2 and United States Environmental Protection Agency cybersecurity guidelines, EMEA countries are strengthening security frameworks to protect water utilities.

Looking ahead, AI-driven analytics, cloud-based water management platforms, and Metering-as-a-Service business models are positioned to drive growth. However, smart water metering adoption varies across regions. For example, in Europe, despite regulatory mandates and sustainability goals, fewer than 40% of UK households currently have water meters, let alone smart meters.3 Still, projections indicate that every household will be equipped with a smart meter due to increased pressure to meet conservation targets and provide consumers with transparent usage data. To this end, utilities aim to lower average daily usage from 150 liters per person to around 120 liters.[4]

In contrast, the Middle East faces severe water scarcity, making precise measurement and monitoring essential. While lack of regulatory enforcement alongside high investment costs slow adoption, smart metering is critical for ensuring long-term water security. High-frequency monitoring enables utilities to adjust distribution strategies based on real-time demand, which is crucial in regions where utilities and governments must account for every drop of water.

In Africa, smart metering implementation relies on infrastructure modernization. Many utilities are transitioning from outdated manual systems to digital solutions to meet the growing demand. As cities expand and water distribution networks grow more complex, real-time measurement and management become increasingly important.

With uneven adoption across different markets, momentum is building as utilities recognize the operational and financial advantages of smart meter data management (MDM). Within this context, Siemens is dedicating more resources to the water sector and focusing on water market developments. The company recognizes the growing importance of water management in the years ahead. This heightened focus is driving robust growth as utilities that adopt digital water management continue to invest in advancements.

Siemens has strong expertise in digital automation, AI-powered water analytics, and cybersecurity-driven MDM solutions. By leveraging strategic partnerships, advanced Internet of Things connectivity, and AI-driven operational intelligence, the company demonstrates its leadership in digital transformation for water utilities.

Siemens: A Trusted Leader in Water Management

Founded in 1847 and headquartered in Germany, Siemens has a reputation as a leader in water and wastewater management. Leveraging over 170 years of domain expertise, the company provides cutting-

[3] Frost & Sullivan Interview with Siemens (February 2025)
[4] Ibid.

edge MDM solutions through a robust portfolio that integrates advanced analytics, automation, and cloud-based technology. Siemens supports over 200 utilities worldwide, managing approximately 120 million meters.

The company's smart water MDM solution originated from the inability of many utilities to measure real-time consumption and detect inefficiencies. Historically, water metering was conducted on an infrequent basis, making it difficult for utilities to optimize operations, detect leaks, and manage distribution effectively. Consumers, in turn, had limited visibility into their usage, making conservation efforts challenging. Therefore, Siemens developed an MDM solution designed for continuous monitoring, real-time data analysis, and actionable insights. Its first implementation took place in a United States municipality managing electricity and water services.[5] Initially driven by electricity needs, the integration of water and electricity data enabled the detection of unauthorized usage, identification of vacant properties, and optimization of service delivery.

Today, early adopters are reassessing their systems, recognizing the value of advanced functionalities such as consumption pattern analysis, event-driven monitoring, and seamless integration with operational workflows. With rising consumer expectations, there is a growing demand for tools that provide insights and communicate them directly to end users. The focus has shifted to proactive conservation measures, leveraging smart meter data to influence customer behavior and promote sustainable water use.

The transition from on-premises, customized systems to cloud-based Software-as-a-Service (SaaS) solutions introduces another major transformation. Frost & Sullivan finds that Siemens has been instrumental in this evolution, helping utilities move away from costly, rigid infrastructures toward scalable digital platforms. As smart meter data volumes grow exponentially, Siemens' collaboration with utilities to refine business processes and transform raw data into actionable insights has become a key competitive advantage.

As digital transformation reshapes the industry, the company remains at the forefront, equipping utilities with region and customer-specific tools to optimize operations, enhance engagement, and support long-term sustainability.

Gridscale X Meter Data Management: The Next-Generation Platform Powering Digital Transformation

Gridscale X Meter Data Management, formerly known as EnergyIP® MDM, is Siemens' next-generation platform designed to help utilities efficiently manage vast amounts of meter data across electric, water, gas, and multi-commodity systems. It is a vendor-agnostic system that empowers utilities with actionable insights, robust data processing capabilities, and advanced automation tools. This platform processes more than 120 million meters connected to MDM across over 200 utilities worldwide, enabling integration with AMI Head-End Systems and Customer Information Systems.[6]

Gridscale X Meter Data Management provides a flexible architecture that processes massive volumes of interval data in near real-time to manage high-frequency meter readings, detect anomalies, and integrate advanced analytics. However, one of its key differentiators is its configurable deployment models: With on-premises deployment, utilities retain full control over their software infrastructure, managing system

[5] Frost & Sullivan Interview with Siemens (February 2025)
[6] Siemens Meter Data Management (MDM) for Water Utilities (Provided by Siemens, February 2025)

maintenance and security updates internally. In a hosted deployment, Siemens or a partner handles hosting and integration, reducing information technology (IT) infrastructure burdens while still allowing for system customization. For maximum efficiency, the SaaS deployment offers a fully cloud-managed solution that minimizes IT complexity, ensures automatic updates, and provides impressive system availability through Amazon Web Services (AWS) Cloud services. Compared to traditional on-premises solutions, Gridscale X Meter Data Management SaaS delivers substantial cost savings, often exceeding $100,000 annually.[7][8]

Gridscale X Meter Data Management: Granular Data Analysis for Actionable Insights

> *"Frost & Sullivan applauds Siemens' industry expertise and commitment to innovation which empowers utilities to confidently rely on Gridscale X Meter Data Management to leverage meter data and intelligence to drive digital transformation while maintaining high reliability, security, and customer satisfaction standards."*
>
> ***- Frederick Royan***
> ***VP Research***

Gridscale X Meter Data Management delivers granular consumption insights, tracking water usage at 15-minute intervals. Utilities can detect leaks as small as one liter per hour and be proactive to prevent escalated damage. Customer-side leakage detection continuously tracks abnormal water flow, and backflow detection pinpoints irregular meter readings. The system includes non-revenue water analysis, identifying losses due to leaks, theft, or inefficiencies in the distribution network. Low flow rate detection analyzes hourly consumption averages to identify potential infrastructure issues. To further enhance water management, utilities can leverage machine learning algorithms to automate anomaly detection and AI for revenue protection.[9]

Another key capability is Event and Data Action Management (EDAM), a state-of-the art module that allows utilities to proactively detect anomalies, non-revenue water losses, and meter failures. High-usage detection and water consumption patterns are monitored in real time, triggering alerts when usage exceeds predefined thresholds. EDAM allows utilities to configure and filter alerts based on specific thresholds and regulatory requirements, enabling proactive maintenance and minimizing service disruptions.

The MDM integrates with billing systems, workforce management tools, customer engagement platforms, and asset monitoring technologies. With Gridscale X Meter Data Management, operational efficiencies greatly improve well beyond the belief that an MDM is only used for meter-to-cash.

Gridscale X Meter Data Management: Best in Class Billing

Gridscale X Meter Data Management collects vast amounts of data often prone to data errors, communication failures and incomplete meter reads. It is critical to ensure accurate billing, in a consistent format, from multiple meter vendors and models to meet regulatory requirements. Siemens provides a

[7] "Cost savings per year" (Siemens website: https://www.siemens.com/global/en/products/energy/grid-software/meter-data-management/saas.html)
[8] "Siemens and AWS: Create without limits" (Siemens website: https://www.sw.siemens.com/en-US/digital-transformation/cloud/siemens-aws-partnership/)
[9] Frost & Sullivan Interview with Siemens (February 2025)

best in breed automatic validating, editing and estimating (VEE) process, with options for manual intervention.

The meter-to-cash process reduces billing discrepancies and enhances financial stability. Utilities implementing Gridscale X Meter Data Management have seen significant improvements: The system ensures 99.9% data accuracy by identifying and resolving meter inconsistencies before they affect billing.[10] Its intuitive user interface simplifies data monitoring and exception handling, leading to 85% faster daily operational task completion.[11]

> *"Frost & Sullivan recognizes Siemens' commitment to customer-centric solutions, positioning the company as a leader in the digital water revolution. As utilities worldwide pursue greater sustainability, efficiency and resilience, Siemens MDM platform serves as a critical enabler, providing the advanced technology needed to achieve these goals. "*
>
> ***- Manuel Albornoz***
> ***Best Practices Research Analyst***

Siemens MDM is well-known for its vendor-agnostic design; More importantly, Siemens has developed and implemented adapters to various connecting solutions for decades allowing utilities the freedom to choose the best available technology year after year without vendor lock-in. Unlike traditional MDM systems that restrict utilities to proprietary ecosystems, the platform empowers them to adopt the best available technology without vendor lock-in. With over 20 years of industry experience, Siemens ensures compatibility with leading metering vendors alongside cloud-based scalability that enables effortless operation expansion.[12]

As cybersecurity threats and data privacy regulations grow increasingly stringent, Siemens has made enterprise-grade security a top priority. Leveraging AWS Cloud Security, the platform provides real-time threat detection and continuous monitoring while built-in regulatory compliance ensures adherence to regional and global data protection laws. Automated security updates reduce risk exposure, and AI-driven risk assessments allow utilities to identify and address potential vulnerabilities. Finally, in SaaS mode, Siemens fully manages security and compliance, reducing infrastructure overhead for utilities.

Frost & Sullivan applauds Siemens' industry expertise and commitment to innovation which empowers utilities to confidently rely on Gridscale X Meter Data Management to leverage meter data and intelligence to drive digital transformation while maintaining high reliability, security, and customer satisfaction standards.

Gridscale X Meter Data Management: Empower water consumers with data usage

Beyond its vast operational benefits, Siemens provides users with more control over their water usage. The platform offers a customer portal with self-service options and integrates with many consumer portals available, allowing consumers to track their consumption, receive automated alerts for potential

[10] "What makes a VEE process superior" (Siemens website: https://www.siemens.com/global/en/products/energy/grid-software/meter-data-management/meter-data-management-video-library.html)
[11] "Faster daily tasks" (Siemens website: https://www.siemens.com/global/en/products/energy/grid-software/meter-data-management/saas.html)
[12] "Why should I choose Gridscale X Meter Data Management, formerly known as EnergyIP MDM X from Siemens?" (Siemens website: https://www.siemens.com/global/en/products/energy/grid-software/meter-data-management/saas.html)

leaks, and adjust their habits. Utilities can combine granular usage data with smart pricing models to provide demand-based pricing strategies and prepay solutions, enabling efficient water bill management.

Proven Success in Delivering Large-Scale Projects Across the Region

Siemens' deep expertise in the water and wastewater sector is demonstrated by its extensive customer base of over 180,000 utilities and more than 500 global partnerships.[13] The company's MDM platform is the largest grid software deployment in the industry, a success evidenced in large-scale projects such as Northumbrian Water Group's, Dubai Energy and Water Agency (DEWA), Thames Water, Kahramaa, and Botswana Water.

The customer journey begins with an in-depth pre-sales phase, during which Siemens collaborates closely with utilities to align with their existing infrastructure. Once the company secures the contract, its expert teams configure the system, establish integration points, and secure data flow. Siemens provides direct implementation services and also partners with third-party specialists.

The implementation is the beginning of an ongoing alliance. Formalized user groups provide a continuous feedback loop, and twice a year, Siemens hosts in-person meetings where utilities share best practices, discuss emerging challenges, and influence future product enhancements. Quarterly calls offer regular touchpoints for updates and troubleshooting. The user community meets monthly with product managers to discuss detailed technical topics for product improvements. The company also facilitates regional events, particularly in markets like Saudi Arabia, where utilities benefit from engaging with peers to address their unique regulatory and operational concerns. Siemens recently won the MDM contract with ENOWA, a subsidiary of Saudia Arabia's NEOM dedicated to establishing a leading structure for water and sustainability energy systems in Saudi Arabia.

To improve customer experience, Siemens has made substantial investments in enhancing the user interface (UI). The company's product teams collaborated with utilities worldwide for several years, analyzing workflows and pinpointing pain points. This effort resulted in a modernized UI framework that simplifies key functions, enhances data visibility, and improves overall system usability, ensuring a more intuitive and efficient user experience. Moreover, Siemens' Customer Success Group plays a critical role in ensuring that utilities derive maximum value from the system. By maintaining a 360-degree view of customer needs, this team bridges the gap between product management and end users' experience.

Use Case #1: Thames Water - Reducing Consumption and Leakages Through Smart Metering

Challenges: Thames Water, the UK's largest water and wastewater services provider, faced increasing pressure to address water conservation challenges while ensuring supply-demand balance for its 15 million customers. The company needed a scalable solution to reduce overall consumption, identify water wastage, and detect customer-side leaks. The inefficiencies of manual meter readings and delayed data collection hindered its ability to proactively manage water distribution. Additionally, Thames Water had

[13] Siemens Meter Data Management (MDM) for Water Utilities (Provided by Siemens, February 2025)

set an ambitious goal to deploy two million smart meters by 2028, requiring an advanced system capable of handling vast amounts of consumption data while ensuring compliance with UK regulatory standards.[14]

Solution: Siemens deployed Gridscale X Meter Data Management to automate data processing, validation, estimation, and editing (VEE). The system detects irregularities such as excessive household usage or leaks at the customer level, enabling proactive issue resolution. It also integrates remote event and read frequency configurations, allowing Thames Water to optimize its metering infrastructure while ensuring precise and seamless billing. With the capacity to manage over 7 billion registers and process 10 million data points daily, the platform delivers unmatched scalability to support the company's long-term smart metering strategy.[15]

Benefits: The implementation of Siemens' smart metering solution has transformed Thames Water's conservation program by increasing consumer awareness, enabling more precise leak detection, and supporting regulatory targets for reducing per capita consumption. The data-driven approach has enhanced customer engagement, allowing individuals to track and adjust their water usage, leading to a measurable decrease in waste. The platform has optimized billing accuracy, reducing disputes and ensuring customers are charged based on precise usage rather than estimates.

"We are focused on improving and optimizing our smart metering journey to increase installation rates, to maximize demand reductions through behavioral change, and to drive accurate billing. Our successful partnership with Siemens and investment in their Gridscale X Meter Data Management SaaS, formerly known as EnergyIP MDM X, is critical in supporting us to manage the large volumes of metering data we receive and maximizing the opportunities this data provides to us and our customers."

— Richard Channell, Head of Smart Metering Strategy, Thames Water 2024.[16]

Use Case #2: DEWA - Enabling a Smarter Water Network

Challenges: DEWA sought to modernize its water network, integrating smart infrastructure to optimize efficiency and sustainability. The utility, which serves over 981,000 water customers, needed to address infrastructure gaps, streamline network monitoring, and automate water distribution processes. Water loss reduction was a key priority, requiring a data-driven approach to consumption validation and anomaly detection.[17] As part of its broader smart grid strategy, DEWA aimed to enhance operational efficiency, minimize transmission losses, and introduce value-added services to improve customer satisfaction.

Solution: Siemens deployed Gridscale X Meter Data Management, integrating automated register and interval VEE to detect anomalies while leveraging the Analytics Foundation for deeper insights into consumption patterns. The system enables efficient communication across metering, telecommunications, and IT networks. This advanced setup supports continuous water network optimization, real-time event tracking, and a proactive approach to leak detection.

Benefits: Siemens' smart metering platform aligned DEWA with its goal of reducing losses and increasing operational transparency. The integration of real-time analytics has enabled faster identification of

[14] Siemens Customer References (Provided by Siemens, February 2025)
[15] Ibid.
[16] Ibid.
[17] Ibid.

inefficiencies, contributing to a 5.3% reduction in water network losses and establishing DEWA as a leader in smart utility management.[18] The platform has strengthened customer engagement by providing more detailed consumption data. The utility also reported achieving one of the lowest customer minutes lost per year globally in 2021, at just 1.43 minutes, demonstrating a significant improvement in service reliability.[19] Today, DEWA is one of the few water utilities worldwide that has installed smart water meters for all its customers.

Use Case #3: Botswana Water - Overcoming Geographic and Operational Constraints

Challenges: The Water Utilities Corporation of Botswana faced operational inefficiencies due to its vast geographical coverage and limited resources. Traditional meter reading cycles were ineffective, leading to delays, data discrepancies, and human errors in file transfers. The utility struggled with high operational costs due to frequent staff movement across remote locations, affecting timely meter data collection. In addition, poor asset monitoring resulted in unaddressed water losses, theft, and inefficient billing practices, highlighting the need for a centralized and automated solution.

Solution: Siemens integrated advanced MDM capabilities with real-time analytics for detecting water leaks, pressure fluctuations, and consumption anomalies. Gridscale X Meter Data Management platform centralized data management, replacing manual file transfers with automated data collection and validation processes. Siemens further integrated engagement tools to improve transparency and awareness.

Benefits: The adoption of Siemens' solution has led to a significant improvement in metering and billing, minimizing revenue losses caused by inaccurate readings. By leveraging predictive analytics, the utility has enhanced operational visibility, enabling proactive responses to leakages and asset failures. The platform's centralized repository has facilitated seamless data collection, ensuring consistent monitoring across Botswana's dispersed water infrastructure. Customer satisfaction has increased, as accurate metering and improved billing processes have led to greater trust in the utility's services.

Use Case #4: Northumbrian Water Group - Detecting Household Leaks at Scale

Challenges: Northumbrian Water Group (NWG), serving 4.5 million people across the UK, faced increasing regulatory pressure to reduce household water leaks and per capita consumption in line with Ofwat's conservation targets.[20] At the core of NWG's customer philosophy is a commitment to helping consumers use less water, making smart metering a key strategic initiative. Therefore, the utility set an ambitious goal to deploy one million smart meters by 2030, which required a robust, cloud-based data management solution to track hourly consumption, detect anomalies, and enhance billing transparency.[21] NWG sought a high-speed, scalable solution capable of processing large volumes of data efficiently while maintaining security, flexibility, and interoperability. After a thorough evaluation, NWG selected Siemens' SaaS platform for its rapid implementation, open architecture, and collaborative approach. The utility also

[18] Ibid.
[19] Ibid.
[20] Ibid.
[21] "NWG uses MDM SaaS to identify leaks as small as 1 litre per hour" (Siemens website: https://www.siemens.com/global/en/products/energy/references/nwg.html)

aligns with a cloud-first IT strategy, ensuring long-term scalability and efficiency in water resource management.

Solution: Siemens integrated its system into NWG's smart metering infrastructure, delivering real-time anomaly detection to identify household leaks with precision. Collaborating closely with NWG, Siemens played a key role in designing, testing, and deploying Europe's largest smart water metering platform. With 15-minute interval reads, NWG gains actionable insights that enhance proactive customer engagement and accelerate leak detection.[22] The utility can now identify continuous water flow, notify customers in real time, and resolve leakage issues before they escalate.

Benefits: Siemens' cloud-based platform has provided NWG with unparalleled scalability, operational flexibility, and rapid leak detection capabilities. By delivering granular consumption insights directly to customers, the system has driven greater engagement, fostering behavioral changes that support long-term water conservation. It has streamlined operations by reducing unnecessary field visits and enhancing overall network reliability. NWG's cloud-first IT strategy was successfully implemented ahead of schedule, with Siemens chosen as the preferred partner for both quality and cost-effectiveness. The project also marked Siemens' largest Grid Software SaaS deployment to date. Leakage detection rates doubled from 9% to 18%, enabling NWG to identify smaller leaks on a previously unachievable scale.[23] Customers are now actively engaging with their data, using real-time insights to better manage water consumption.

"We went out to market to look for who could help us with smart metering and specifically the data that could potentially overwhelm us, we ran through an extensive process. Siemens came out top on quality and cost. We are receiving meter reads now every 15 minutes. We need to turn this data into insight and then into action, and that' s where we really get to engage with our customers."

— Nigel Watson, Chief Information Officer, Northumbrian Water Group 2024.[24]

"The Gridscale X Meter Data Management SaaS, formerly known as EnergyIP MDM X, implementation is a critical cornerstone in our smart metering journey, allowing us to effectively manage the large volumes of metering data we will receive and to drive efficient operational activity for both our customers and our wider business, providing access to granular smart data at the click of a button. Being able to rely on Siemens expertise in this area gives us confidence that we can achieve our smart metering ambitions now and in the future."

— Gary Adams, Head of Smart Transformation, Northumbrian Water Group 2024.[25]

Use Case #5: Kahramaa - Digitalizing Water Management with Real-Time Insights

Challenges: Kahramaa, Qatar's sole water and electricity utility, manages over 1 million smart meters across residential, government, industrial, and commercial sectors. The utility required an advanced solution to optimize real-time data collection, enhance billing accuracy, and improve consumption analytics.[26] Key challenges included a high volume of customer connection requests, manual meter

[22] Siemens Customer References (Provided by Siemens, February 2025)
[23] Ibid.
[24] Ibid.
[25] Ibid.
[26] Ibid.

reading inefficiencies, and ambitious water conservation targets. Additionally, Kahramaa sought a fully integrated smart meter data management system to drive sustainability, efficiency, and transparency in its operations, aligning with Qatar's long-term vision for a digitized, high-quality water distribution network.

Solution: Siemens introduced 30-minute interval readings, real-time event tracking, and predictive analytics for loss detection and operational optimization.[27] The solution was fully integrated with AMI and CIS, providing a 360-degree view of consumption and billing information. By fast-tracking the digitization of Qatar's water distribution, Kahramaa gained unprecedented transparency, enabling smarter resource allocation. Additionally, the user-friendly interface enhanced customer satisfaction, while the automated meter-to-cash process improved revenue collection and financial performance.

Benefits: With Siemens MDM, Kahramaa has significantly enhanced billing accuracy, revenue collection, and customer engagement. AI-driven analytics have delivered deep insights into consumption patterns. The scalable system architecture ensures long-term adaptability as Qatar continues its digital transformation. Notably, the project initially reached 200,000 customers in just 18 months, and by 2024, it has expanded to serve over 1 million customers.[28] This transformation has positioned Kahramaa as a leader in smart water and electricity management, driving sustainability, efficiency, and operational excellence.

"Kahramaa and Siemens have partnered in many projects over the decades. This helps us in aligning our expectations, resulting in a collaborative approach that secured the smart metering project. This enabled us to synchronize the needs of Kahramaa customers and be up to date in the ever-changing AMI and smarter grid scene."

— Ms. Amal Al Mansouri, IT Manager, Kahramaa 2024.[29]

Frost & Sullivan recognizes Siemens' commitment to customer-centric solutions, positioning the company as a leader in the digital water revolution. As utilities worldwide pursue greater sustainability, efficiency, and resilience, Siemens' MDM platform serves as a critical enabler, providing the advanced technology needed to achieve these goals.

A Remarkable Journey Toward Sustained Growth in the Industry

Over the years, Siemens has strengthened its presence in the smart water MDM sector, particularly in the Middle East. The company has secured key customers in the region, many of which are joint electricity and water providers, reflecting a broader trend of multi-utility companies seeking integrated solutions for managing both commodities. Qatar has been a notable early adopter, recognizing the strategic importance of real-time water monitoring to optimize distribution and reduce losses. In Saudi Arabia, Siemens actively participates in knowledge-sharing initiatives, enabling existing customers to discuss best practices with prospective utilities.

[27] Ibid.
[28] "Siemens full MDM Suite for electric and water meets Kahramaa's needs" (Siemens website: https://www.siemens.com/global/en/products/energy/references/kahramaa-gsw.html)
[29] Siemens Customer References (Provided by Siemens, February 2025)

Africa represents another growth area, with Siemens already serving utilities in countries like Botswana. The continent's rapidly growing urban population and the need for infrastructure modernization make smart metering a logical investment for improving service reliability and reducing water losses. However, financial and logistical barriers hinder widespread adoption, as smart metering requires significant upfront investment. Siemens addresses these challenges by offering scalable solutions that allow utilities to transition in phases, balancing cost considerations with long-term benefits.

Siemens has witnessed significant growth in the smart water meter data management market, with increasing momentum in recent years. While energy metering remains the dominant segment of its MDM business, water metering has emerged as a key area of expansion. Adoption remains gradual due to the sector's long sales cycles, with many utilities still in the early stages of evaluating smart water solutions. These customers require extensive business development efforts, education, and proof of value before committing to large-scale deployments. Therefore, Siemens has seen increased activity in regions where smart water metering projects receive regulatory and financial support.

Siemens' strong brand equity plays a crucial role in its positioning within the smart water utility sector. The company has a well-established and trusted name, particularly across Europe. Its deep technical expertise, extensive history in infrastructure projects, and reputation for quality provide a strong competitive advantage. In countries such as Spain, where Siemens already has a significant presence in water management, it has successfully reinforced its MDM solution as a natural extension of its existing capabilities. Leveraging this brand recognition, Siemens continues to strengthen partnerships and align more closely with its water and wastewater divisions to ensure a cohesive market strategy. The company's ability to offer both multi-commodity utilities, under the brand Gridscale X Meter Data Management, and water-only utilities, known as SIWA MDM, a proven MDM solution enables Siemens to serve a broad spectrum of utilities, from those managing multiple resources to those focused on water.

Frost & Sullivan recognizes Siemens' ability to navigate complex sales cycles, foster long-term business development, and seamlessly integrate MDM within its broader portfolio as critical factors in strengthening its leadership in smart water management. Siemens' MDM platform is more than just a meter data management system; it serves as a comprehensive digital transformation tool for the water industry.

Conclusion

Siemens' Gridscale X Meter Data Management (MDM) is at the forefront of smart water management, leveraging advanced analytics, artificial intelligence-driven automation, and real-time monitoring to optimize utility operations moving from a standard meter to cash solution to a data driven solution providing insight and getting value out of the data already stored into the MDM. With a vendor-agnostic design, adaptable deployment models, and industry-leading cybersecurity, this solution offers utilities the scalability, efficiency, and security required to meet the challenges of a rapidly evolving industry. By seamlessly integrating with Advanced Metering Infrastructure, Customer Information Systems, and workforce management systems, Siemens empowers utilities to enhance operational reliability, minimize water losses, and elevate customer engagement. As global water challenges grow more complex, Siemens remains dedicated to innovation, providing utilities with the tools to drive digital transformation, promote sustainability, and ensure the delivery of high-quality water services.

With its strong overall performance, Siemens earns Frost & Sullivan's 2025 Europe, Middle East, and Africa Company of the Year Award in the smart water MDM industry.

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What You Need to Know about the Company of the Year Recognition

Frost & Sullivan' s Company of the Year Recognition is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Recognition Analysis

For the Company of the Year Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed to create growth opportunities across the entire value chain

Visionary Scenarios Through Megatrends: Long-range scenarios are incorporated into the innovation strategy by leveraging mega trends and cutting-edge technologies, thereby accelerating the transformational growth journey

Leadership Focus: The company focuses on building a leadership position in core markets to create stiff barriers to entry for new competitors and enhance its future growth potential

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate consistent, repeatable, and scalable success

Financial Performance: Strong overall business performance is achieved by striking the optimal balance between investing in revenue growth and maximizing operating margin

Customer Impact

Price/Performance Value: Products or services offer the best ROI and superior value compared to similar market offerings

Customer Purchase Experience: Purchase experience with minimal friction and high transparency assures customers that they are buying the optimal solution to address both their needs and constraints

Customer Ownership Excellence: Products and solutions evolve continuously in sync with the customers' own growth journeys, engendering pride of ownership and enhanced customer experience

Customer Service Experience: Customer service is readily accessible and stress-free, and delivered with high quality, high availability, and fast response time

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty, which is regularly measured and confirmed through a high Net Promoter Score®

Best Practices Recognition Analytics Methodology

Inspire the World to Support True Leaders

This long-term process spans 12 months, beginning with the prioritization of the sector. It involves a rigorous approach that includes comprehensive scanning and analytics to identify key best practice trends. A dedicated team of analysts, advisors, coaches, and experts collaborates closely, ensuring thorough review and input. The goal is to maximize the company' s long-term value by leveraging unique perspectives to support each Best Practice Recognition and identify meaningful transformation and impact.

		VALUE IMPACT	
STEP		WHAT	WHY
1	**Opportunity Universe**	Identify Sectors with the Greatest Impact on the Global Economy	Value to Economic Development
2	**Transformational Model**	Analyze Strategic Imperatives That Drive Transformation	Understand and Create a Winning Strategy
3	**Ecosystem**	Map Critical Value Chains	Comprehensive Community that Shapes the Sector
4	**Growth Generator**	Data Foundation That Provides Decision Support System	Spark Opportunities and Accelerate Decision-making
5	**Growth Opportunities**	Identify Opportunities Generated by Companies	Drive the Transformation of the Industry
6	**Frost Radar**	Benchmark Companies on Future Growth Potential	Identify Most Powerful Companies to Action
7	**Best Practices**	Identify Companies Achieving Best Practices in All Critical Perspectives	Inspire the World
8	**Companies to Action**	Tell Your Story to the World (BICEP*)	Ecosystem Community Supporting Future Success

*Board of Directors, Investors, Customers, Employees, Partners

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO' s growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

The Growth Pipeline Generator™

Frost & Sullivan' s proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fueled by the Innovation Generator™.

Learn more.

Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Megatrend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)

