

The Intelligent Sustainable Enterprise for the Utilities Industry

Inspiring and shaping a digital world that reinvents power generation, transmission, distribution, and retail

May 2022

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THE BEST RUN



Transforming into a New World of Energy

The utilities industry finds itself in the center of a massive global shift toward sustainability and renewable energy sources. The transition has had a profound impact on society and is driving the industry's own transformation. The movement toward sustainable energy, integrated mobility, and more livable future cities requires utilities companies to develop intelligent solutions for energy generation and storage, water, and waste management while also striving for energy efficiency in their own operations.

The utilities industry is being reshaped by four trends:



Market dynamics are changing: New regulatory and sustainability requirements as well as reporting necessities are shifting traditional utilities. At the same time, new players penetrate the traditional utilities market with energy and nonenergy products and services.



Prosumers are emerging: Decarbonized energy generation is being promoted, primarily through the use of renewable energy sources (sun, wind, water, biomass, and more). As a consequence, prosumers are decentralizing the industry, and power supply increases in volatility and affordability.



Focus is shifting to decarbonization: There is growing support for the adoption of renewable, sustainable energy sources and creation of energy communities by developing traditional customers into prosumers. Sensors and meters attached to power-consumption or power-generation devices are being leveraged to stabilize the grid.



Digitalization is threatening security: Connectivity is enabled through digitalization, but the threat of cyberattacks must be considered. Digitalization leads to increasingly efficient and resilient operations. Smarter asset management includes a fully digital allocation of spare parts, work, and logistics services. Smart asset operations and maintenance create cost-efficient, compliant, and safe energy and water distribution.

Thought-leading utilities are designing their journey into the new world of energy based on an understanding of the system they operate in and which outcomes they want to drive for people, communities, society, the environment, and their stakeholders.

Business Model Innovation

We anticipate that by 2025, the cost of energy from solar power, wind power, and energy storage will be competitive with traditional power-generation technologies in most of the geographies of the world. Simultaneously, many utilities will have concluded the digital transformation projects that will fundamentally change how they operate.

Business models will move from the pure selling of energy to providing comprehensive services for digital energy prosumers – businesses and consumers who generate their own energy and feed it back to the grid. Grid operation will be automated with smart grids and local energy balancing. New providers for services such as virtual power plants or local energy exchange will be established.

Strategic Priorities for Utilities to Run as Intelligent, Sustainable Enterprises

Innovative utilities companies manage the balance of operating efficiently under their established business model of generating, distributing, and selling energy while they are searching for new sources of revenue and business outcomes. The following success strategies show a range of approaches based on evolving existing products and processes and exploring disruptive new business models.



Drive operational excellence: Synchronize demand-side management to the smart operation of assets to minimize waste and expensive practices. Use analytics to drive the translation of strategic and excellent operations into cost savings through the supply chain, and increase self-service capabilities and the use of artificial intelligence (AI) to decrease service costs.



Focus on regulatory compliance and security: Ensure full auditability of processes; holistic, end-to-end business reporting; and KPIs for sustainability targets and local regulators. Streamline regulator communication and processes, develop rock-solid regulatory cases, and communicate sustainability targets and achievements. Lead a smart and engaged workforce to accelerate growth and innovation aligned with local regulatory and sustainability priorities, including data privacy support, the General Data Protection Regulation (GDPR), and other privacy regulations.



Explore new revenue streams: Transition from large-scale generation to sustainable sources, affordable energy, and the lower marginal cost of renewables. Gain a greater share of customer spend by personalizing marketing plans to target exponential consumption growth and consumer demand. Empower new, refreshed value propositions and service offerings, and create marketplaces for energy-related products and installation services such as electric vehicle chargers and solar panels.



Build customer intimacy: With individuals becoming more involved in the energy transition, capture the broadened scope of energy and engage with customers through an omnichannel digital connection while generating insights to make informed decisions. Leverage data insights to enable anticipation of and rapid response to customers' changing wants and needs, and transition from commodity vendor to energy advisor and enabler of sustainable programs.



Drive sustainability: The utilities industry has taken the path of sustainability for some time now by developing programs around renewable power plants, distributed energy resources, grid management, and energy prosumers. Build your sustainability agenda to decarbonize the full value chain and the economy by leveraging new solutions such as carbon reporting and emissions management.

Reframing “Customer Intimacy”

Experience management will be key for utility service providers moving forward. It begins with understanding what is happening based on operational performance data (O-data) and business data (IT-data). Relating experience data (X-data) from customers, employees, subcontractors, and suppliers with IT and O-data is the foundation for improving organizational performance and delivering better business outcomes.

Source: SAP Performance Benchmarking



8%–10%

Reduction of maintenance costs

From Best Practices to the Vertical Edge

In a digital world, energy services innovation is no longer the monopoly of marketing and engineering. Innovation must become an integral part of each department and discipline, so they all contribute to the evolution from industry best practices to next practices, right to the “vertical edge.” This enables cross-functional teams to experiment with new ways to create unique value for customers, thus generating top-line and bottom-line improvements while achieving ambitious sustainability goals.

	Best Practices	Next Practices	Vertical Edge
DRIVE OPERATIONAL EXCELLENCE	<ul style="list-style-type: none"> Maintenance processes are based on preventive maintenance, and the processes are partially automated. 	<ul style="list-style-type: none"> A new enterprise asset-centric transformation is supported by an intelligent asset management system. 	<ul style="list-style-type: none"> Networked systems of digital twins are leveraged to enable the orchestration of complex interactions between equipment installed autonomously.
FOCUS ON REGULATORY COMPLIANCE, SUSTAINABILITY, AND SECURITY	<ul style="list-style-type: none"> Standard metering and market communication processes are partly automated. Maintenance processes are standardized according to ISO 55000 over the utilities organization. Cumbersome sustainability reporting 	<ul style="list-style-type: none"> Smart metering and market communication processes are fully automated. Smarter asset management is enabled with a fully digital allocation of spare parts, work, and logistics services. Reporting for sustainability goals are completely automated. 	<ul style="list-style-type: none"> Smart metering insights and market communication are available as a service. Security of supply is ensured by predicting, simulating, and optimizing asset health with machine learning and digital twin technology. Sustainability reporting is embedded.
EXPLORE NEW REVENUE STREAMS	<ul style="list-style-type: none"> Utilities propose standard offers using standard meter devices that are read monthly or yearly. New service and product offerings consider sustainability aspects. 	<ul style="list-style-type: none"> Utilities can be creative in launching new offers combining commodity (dynamic tariff based on smart meters) and noncommodity products quickly. Utilities can leverage their ecosystem to sell more services. 	<ul style="list-style-type: none"> Any individual can consume energy and related products and services through a simplified shopping and billing experience.
BUILD CUSTOMER INTIMACY	<ul style="list-style-type: none"> Customer engagement is executed using different channels and different teams while providing a uniform experience across all platforms. 	<ul style="list-style-type: none"> End-to-end customer journey mapping and customer experience across the value chain for digital and personal interactions. 	<ul style="list-style-type: none"> Customers collaborate in ongoing engagements to become sustainable energy prosumers.
DRIVE SUSTAINABILITY	<ul style="list-style-type: none"> Utilities are shutting down carbon-based power plants and investing in renewables. Utilities offer new products and services for energy prosumers. 	<ul style="list-style-type: none"> Intelligent technologies help to optimize operations of renewable energy assets. Utilities offer holistic services to decarbonize the supply chain of their customers. 	<ul style="list-style-type: none"> Smart grids become self-sustaining with energy flexibilities from large-scale and distributed renewable energy resources.

Competing as Ecosystems

Transformation and innovation go beyond the four walls of the enterprise. Ecosystems are forged to combine the power of partners to deliver more business value to customers. Rapidly implementing processes across enterprises and with a clear focus on win-win partnerships creates a competitive edge, powered by efficient business networks.

Innovation at the Vertical Edge

Moving from proven best practices to the vertical edge takes courage. Nine out of ten ideas and initiatives will fail in the search for the unicorn. This startup attitude needs a culture and systems that foster rapid innovation and the willingness to take risks and learn from failures.

Drive Operational Excellence

In times of global crises, operational excellence is more important than ever to ensure the security of supply. The shift to renewables to fight climate change, the pressure on the workforce from the COVID-19 pandemic, broken supply chains due to the war in Ukraine – the utilities industry needs to meet all of these challenges. Utilities must embrace emerging technology and automation, unlocking value and enabling flexible workforce models to provide agility. Intelligent automation will enable employees and contingent workers to be augmented by AI, machine learning (ML), and a virtual workforce, freeing them to be more focused on innovation and delivering exceptional value to clients. At the same time, AI and ML will help to increase asset life, ensure asset availability, and reduce asset costs.

BEST PRACTICES

Maintenance processes are based on preventive maintenance, and the processes are partially automated.

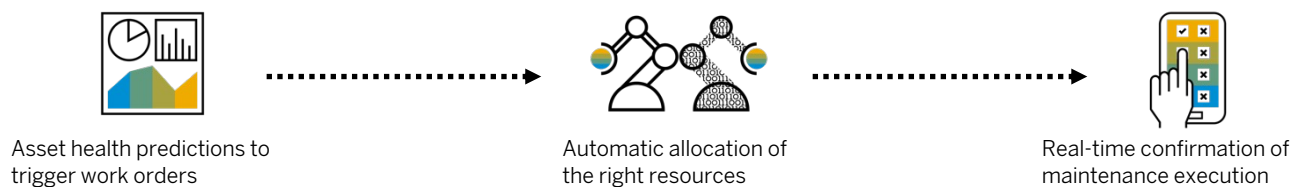
- Work order process is triggered by static preventive maintenance plans or failure notes.
- Maintenance work order is manually scheduled and then printed.
- Asset status is determined on-site; required spare parts or resources might be missing.
- Second visit to the asset is required to perform maintenance work.
- Maintenance work is confirmed on paper, and asset management system is updated the next day.



NEXT PRACTICE

A new enterprise asset-centric transformation is supported by an intelligent asset management system.

- Work order process is triggered by asset health predictions based on granular sensor data or by real-time condition monitoring.
- Precise knowledge of asset status allows automatic allocation of the right resources and spare parts and optimizes the route.
- Maintenance work is confirmed, and asset status is updated in real time through the mobile asset management application.



Innovations at the Vertical Edge

Evolution of pure energy to an energy service world requires a service-centric transformation supported by an intelligent asset management system.

+34%

Improved electric reliability on intelligent grid circuits when using predictive maintenance

1.9x

More projects delivered within or below budget

20%–50%

Increase in the productivity of interventions on simple projects by optimizing the allocation of resources (skills, geography, and so on)

Source: SAP Performance Benchmarking

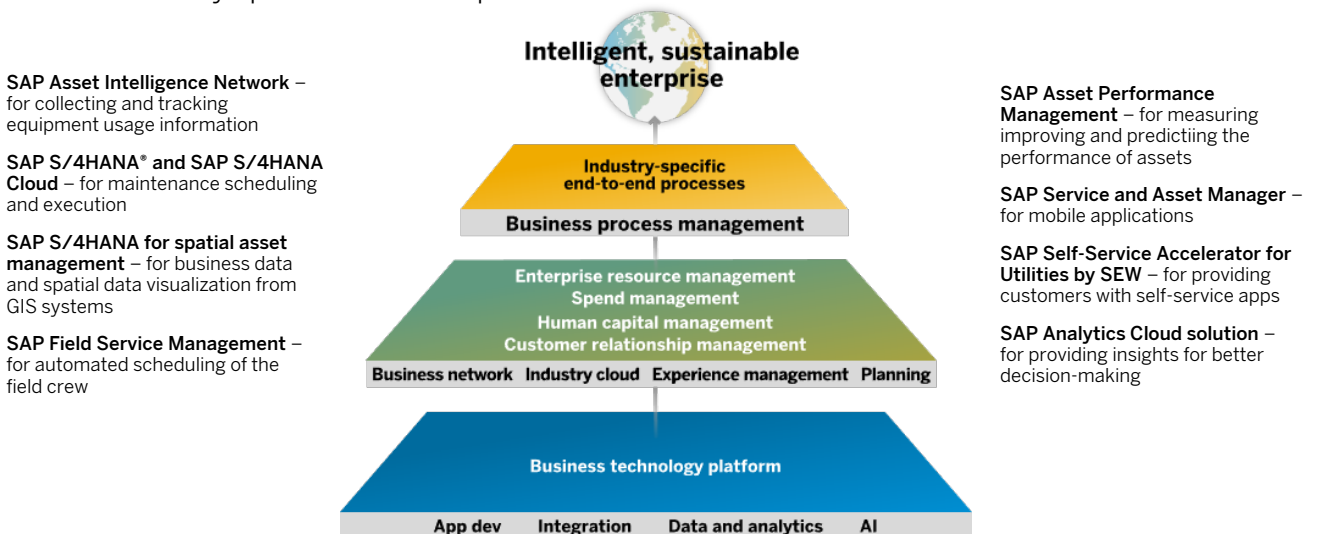
SAP® Solutions for an Operational Excellence Approach

SAP proposes an intelligent asset management suite of solutions for asset performance management and asset operations and maintenance. These solutions provide a network-centric approach to connect business processes across the asset lifecycle. SAP offers the capabilities to define, monitor, execute, and optimize asset service and maintenance strategies by providing the level of collaboration, interoperability, and analytical insights needed.

Required Capabilities

Enterprise asset management	Metering and markets	Customer experience	Field service excellence	Bill to cash	Finance and HR
<ul style="list-style-type: none"> Identify critical assets and define optimized maintenance strategies Monitor asset operations and maintenance in real time Support predictive analysis of asset health Replace manual transactions with digital processes 	<ul style="list-style-type: none"> Use ML algorithms to support the work-intensive process of implausible meter readings Manage and report smart-meter rollouts in real time Gain a holistic view and full transparency of the entire meter lifecycle management 	<ul style="list-style-type: none"> Identify profitable service lines and customers by offering real-time reporting Reduce the time to market to create new offerings Provide all end customers with relevant self-service processes across all channels 	<ul style="list-style-type: none"> Enable easier analysis of all offered services Automate the end-to-end customer service journey: from customer requirement until execution and signature Increase work efficiency with AI optimization 	<ul style="list-style-type: none"> Identify profitable service lines and customers by offering real-time reporting Run instant and accurate billing 	<ul style="list-style-type: none"> Procure and manage contingent labor and services to optimize delivery across regions Onboard and train employees quickly and seamlessly Empower employees to make decisions in real time Analyze profitability across multiple dimensions

The architecture for the Intelligent Enterprise in the utilities industry starts with SAP Business Technology Platform and business applications from SAP, including industry cloud solutions that support organizations with their industry-specific end-to-end processes.



“In choosing an intelligent, predictive maintenance solution, integration with our core ERP systems was key. With SAP S/4HANA and SAP Intelligent Asset Management solutions, we have one unified system that provides everyone with the visibility they need to work efficiently and effectively.”

Massimo De Filippi, Director of Technical and Information Services and Design, [RetiPù S.r.l.](#)

20%

Reduction in FTE costs for maintenance

15%–20%

Reduction of preventive maintenance interventions

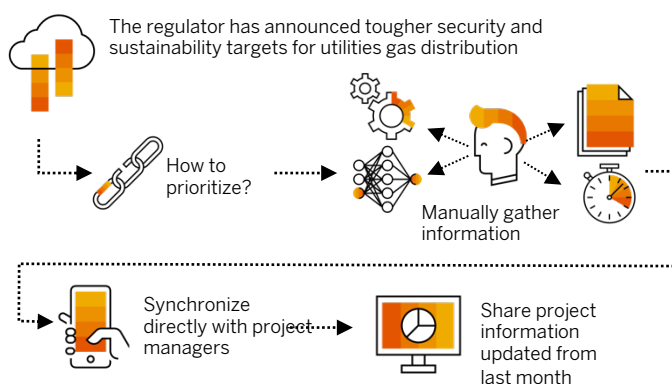
Regulatory Compliance and Security

During the lifecycle of a utility asset such as a substation, a power plant, or a gas pipeline, many regulations, compliance and sustainability requirements must be fulfilled. This starts with close collaboration with authorities when planning and building an asset, and continues with permit and work clearance requirements during the operational phase of the asset as well as during decommissioning – financial as well as sustainability regulations must be followed. Solutions for enterprise asset management from SAP support the whole asset lifecycle and the ISO 55000 Asset Management standard. This enables digital planning and maintenance processes and real-time access to all asset-related data and, therefore, ensures regulatory compliance, safety, and security.

BEST PRACTICES

The project portfolio manager plans projects using consolidated and standardized information with manual allocation of the project workload, equipment, and spare parts.

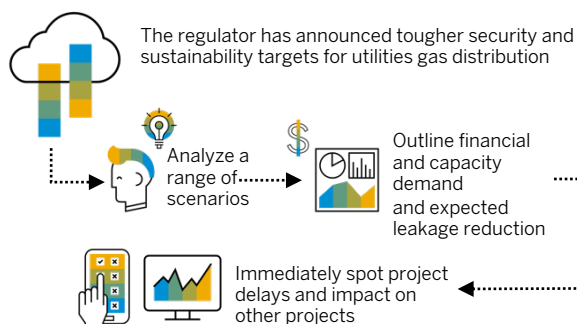
- The portfolio managers have to include the new security and sustainability targets in the scoring of the existing projects. They have to find top priority opportunities to improve the target delivery.
- The portfolio manager must contact different stakeholders and gather information to get insights to validate possible scenarios.
- The portfolio manager assigns project managers. With an assistant, they follow the project managers' activities throughout regular calls to get the latest updates.
- The portfolio manager needs some time before they can communicate project portfolio updates to the board and regulator.



NEXT PRACTICE

The project portfolio managers plan projects using tight integration of project and maintenance systems for fully digital allocation of workload, equipment, spare parts, and logistics services.

- The portfolio manager include the new security and sustainability targets in the scoring of the projects to find improvement opportunities. They analyze a range of scenarios to understand – based on geospatial data – the pipeline materials, vulnerable places, and traffic. This helps to adjust and optimize the project plans.
- For each of the scenarios, the portfolio managers outline financial and capacity demand and the expected leakage reduction. Therefore, the projects can be budgeted, planned, and approved in the next portfolio review meeting.
- The projects that are part of the increased security program are released for execution. Project managers are assigned to start planning and monitor project execution. The portfolio managers are able to immediately spot project delays and impact on other projects.



Innovations at the Vertical Edge

Ensure regulatory, safety, security, and sustainability compliance during the whole lifecycle of utility assets, whether substations, power plants, or gas pipelines.

8%

Reduction of canceled projects for organizations with high portfolio and project management (PPM) maturity compared to organizations on a low PPM maturity level

52%

Reduction in preventable incidents (in first two years) with the implementation of the SAP Environment, Health, and Safety Management (SAP EHS Management) application

104%

Increase in employee participation in safety programs with the implementation of SAP EHS Management

Source: SAP Performance Benchmarking

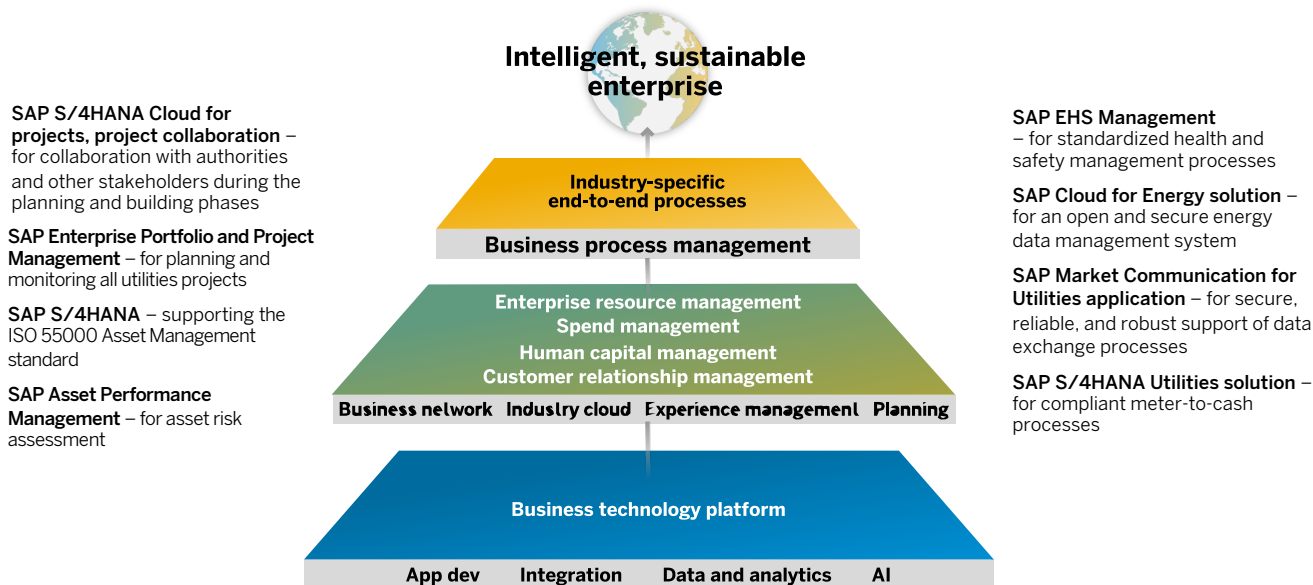
SAP Solutions for a Regulatory Compliance and Security Approach

SAP solutions help ensure regulatory and sustainability compliance not only in enterprise asset management but in all steps of the utility value chain. This includes reporting for local regulators and compliant market communication processes, as well as data privacy support for regulations such as GDPR and CCPA in customer communications.

Required Capabilities

Enterprise asset management	Metering and markets	Customer experience	Field service excellence	Bill to cash	Finance and HR
<ul style="list-style-type: none"> Gain real-time insights to help ensure environmental health and safety compliance Support ISO 55000 standard Ensure maintenance safety in dangerous environments Handle work permits 	<ul style="list-style-type: none"> Enable timely and accurate support of regulatory compliance through embedded market communication processes Support calibration and inspection for various meter types Ensure full auditability for all metering Enable sustainability reporting 	<ul style="list-style-type: none"> Run instant and accurate billing Provide full support for billing internal or external parties for time and material Gain customer's trust by proposing a strong GDPR service 	<ul style="list-style-type: none"> Incorporate guided procedures into mobile application to the internal and external field technicians Ensure 100% match of technical profile with job description and accreditations 	<ul style="list-style-type: none"> Develop the bill into an exceptional information letter through ongoing customer feedback and insights Enable invoice for overage and underage 	<ul style="list-style-type: none"> Procure and manage contingent labor and services to optimize delivery across regions Provide predefined reports Configure reporting tools for nonenergy products and services

The architecture for the Intelligent Enterprise in the utilities industry starts with SAP Business Technology Platform and business applications from SAP, including industry cloud solutions that support organizations with their industry-specific end-to-end processes.



SAP EHS Management has greatly helped standardize health and safety management processes for both workers and the environment. It integrates with SAP software for better alignment and collaboration across companies.



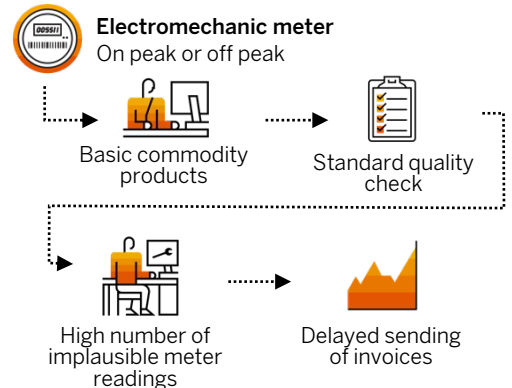
New Revenue Streams

Utilities are facing tremendous competition coming outside the traditional utilities' borders (oil and gas companies, B2B utilities customers themselves, grocery market, and so on). Due to shrinking margins, the utility market cannot focus just on the classic energy and water business (as a commodity) anymore. Utilities need to differentiate, and customers are demanding new, additional products and services (such as maintenance services and insurance) complementing the classic energy and water products. The new normal is the possibility to offer the customer this combination between commodities and noncommodities while considering energy infrastructure constraints.

BEST PRACTICES

Utilities propose offers based on standard metering devices.

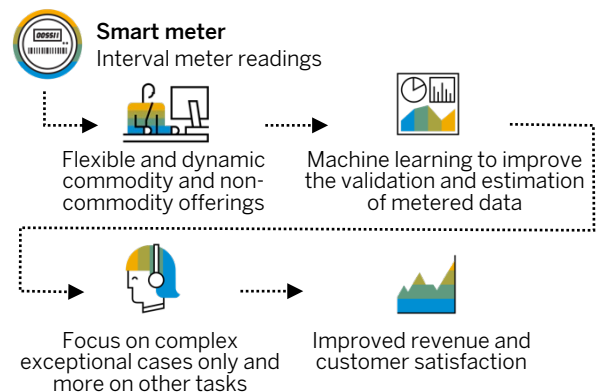
- Yearly discrete meter readings are collected through customer self-reading or other manual processes.
- As a consequence, the product manager has limited possibilities to propose new energy offers to the market.
- Second impact: During the meter-to-cash process, the system runs basic quality checks and collections of relevant information for meter readings.
- Third impact: Agents must manage a high number of implausible meter readings, and it is difficult to prioritize the corrections.
- The final effect is delayed revenue and increased cost to serve.



NEXT PRACTICE

Utilities can be creative and beat the competition by launching new offers quickly.

- Smart meters offer the possibility to use fine-grained information for existing and new products and service offerings.
- The product manager can propose products and services that meet the customer's individual profile. In addition, dynamic time-of-use blocks, exceptional days, and other flexibilities in pricing can be offered.
- ML algorithms support and enable a high-quality standard for the imported metered data.
- The meter data expert can focus on more interesting and challenging cases as overall efficiency is improved through more-intuitive user interfaces and process supported through ML scenarios.
- The required information can be found easily and enables smooth collaboration with colleagues.
- Invoices are released on time. Finance is very positive and provides feedback on the improved revenue forecast and customer satisfaction.



Innovations at the Vertical Edge

Reduce the time to market of new offers, gain more flexibility, and have an exclusive customer experience to differentiate against increasing competition. Bundle commodities and noncommodities in an offer that can be converged into a single invoice.

20%–40%

More flexibility on time-of-use product creation – for FTE reduction

30%

Increase in customer self-service through e-commerce

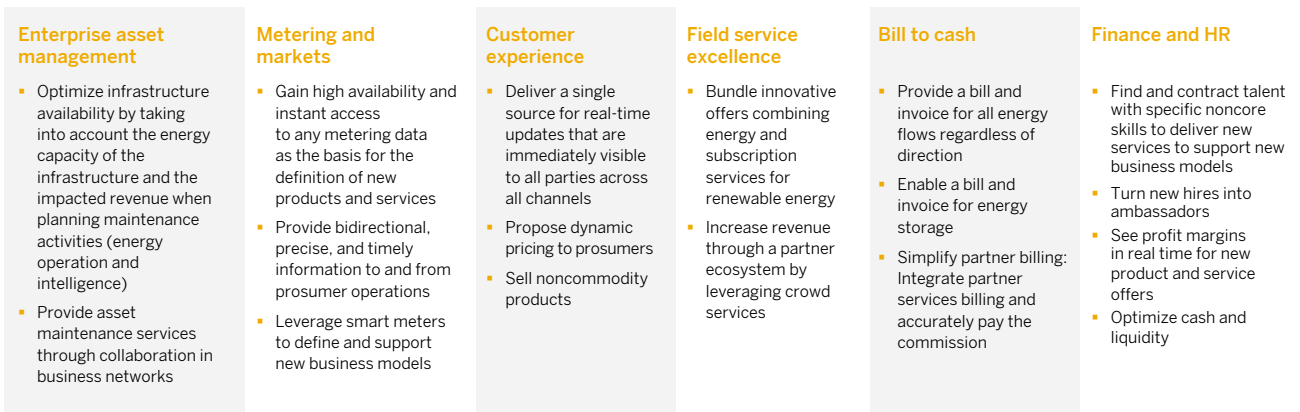
5%–10%

Increased margin related to incremental revenue on new products and services

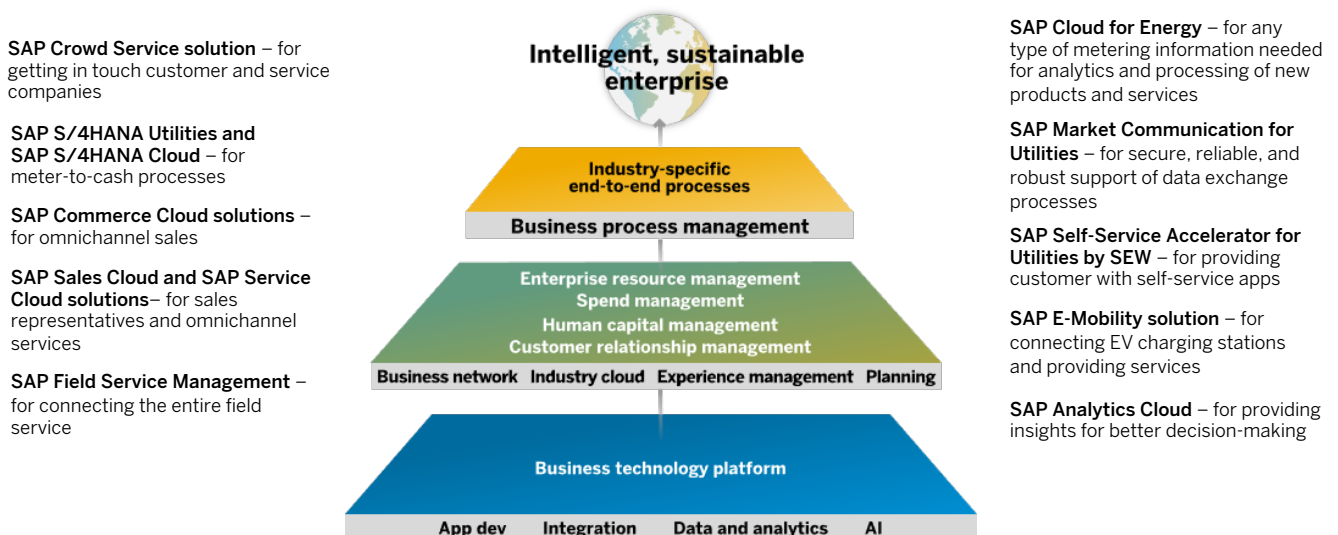
SAP Solutions for a New Revenue Stream Approach

Time to market for new and existing products and services is the key to success of any utility company. SAP supports this by giving companies the ability to integrate commodity and noncommodity products and services easily, from product configuration through invoicing of aggregated components. This allows a utility to offer a single customer experience that can be evaluated and correlated with the processes.

Required Capabilities



The architecture for the Intelligent Enterprise in the utilities industry starts with SAP Business Technology Platform and business applications from SAP, including industry cloud solutions that support organizations with their industry-specific end-to-end processes.



[ENGIE LATAM](#) needed to boost efficiency and agility in the company's third-largest business unit to capitalize on growth. ENGIE LATAM executed a successful and cost-effective transition to SAP S/4HANA and the SAP S/4HANA Utilities solution in just nine months across more than 50 legal entities.

Saul Kempner, chief information officer of ENGIE LATAM, said: "SAP S/4HANA is a key component in our integration journey and digital transformation road map for the Latin American region."



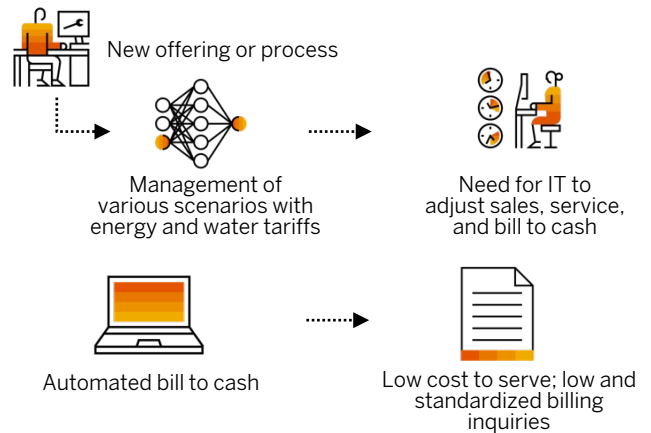
Customer Intimacy

The shift from a classic utility role to a sustainable energy and water service partner forces a customer-facing organization to become more creative and responsive. On the other side, consumers want freedom to explore and choose how and when to engage. Understanding customer journeys and modeling interaction channels and offerings along this paradigm becomes a game changer for utilities.

BEST PRACTICES

Execute a customer service and sales strategy through different channels and teams with coordinated and synchronized processes to provide a harmonized customer experience.

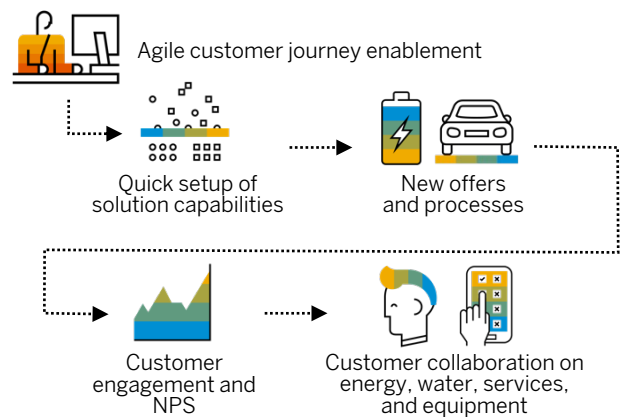
- A product manager creates a special offer for EV home charging. It combines charging equipment with an off-peak tariff at a lower rate. The product manager works with IT to integrate the new offering with existing processes.
- A customer service director wants to align the chat channel with the self-service channel to offer simplified move-in and move-out request processing. IT makes this happen quickly.
- A customer invoice contains energy, water, and billing information and helpful links for how to save money and engage in sustainable programs.
- KPIs for cost-to-serve and customer satisfaction are good.



NEXT PRACTICE

Enable flexible customer experience journeys, and engage with prosumers to combine traditional and new business.

- A business specialist can create a new product or service directly and quickly. The new offer integrates with existing processes and channels automatically.
- A customer service director introduces a survey in the chat channel to promote green offerings. It is added to all standard customer service requests. This captures communication consent and engagement leads.
- Customers are in full control of their digital identity, online privacy, and preferences when dealing with the utility.
- With each interaction, including bills, self-service, social, or personal, customers receive personalized recommendations and offers.
- KPIs for customer effort (CES), net promoter score (NPS), and customer satisfaction (CSAT) are above industry average



Customer Experience at the Vertical Edge

Transform to customer freedom, and collaborate in sustainable business on a digital engagement platform.

25%–35%

Less effort to create new offers

25%

Lower staff turnover in the customer engagement center

18.2%

Increase in margin per client thanks to a voice-of-the-customer program, versus the average 2.9%

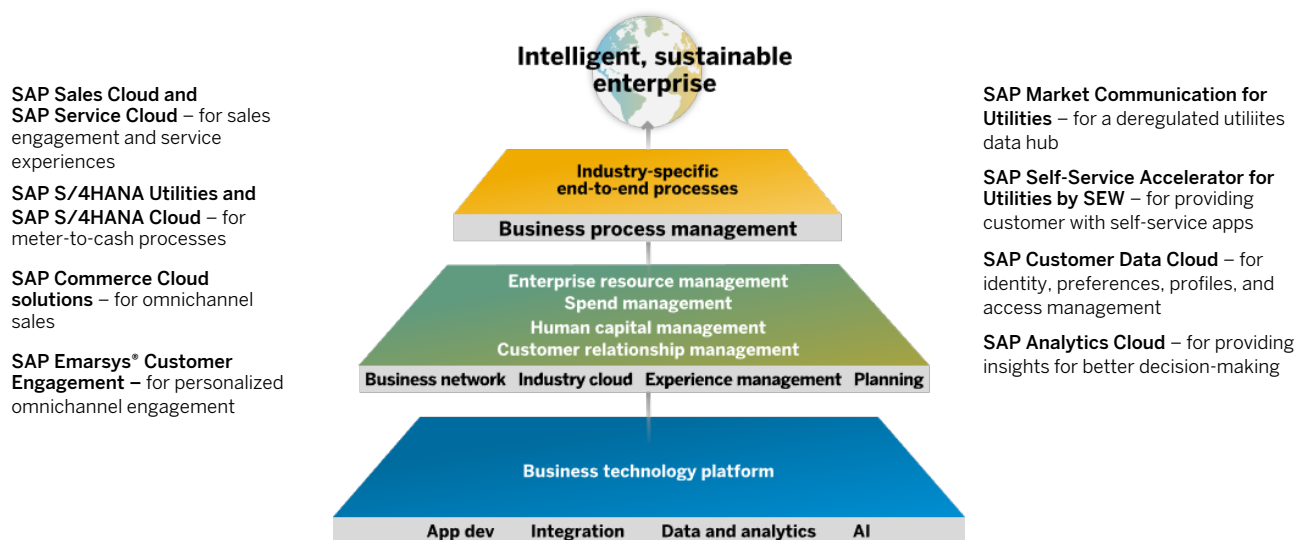
SAP Solutions for the Customer Experience

Support an end-to-end customer experience at a lower cost to serve. SAP Customer Experience is an integrated suite of cloud solutions for customer service, marketing, sales, and commerce that helps you to foster relationships – while growing the bottom line.

Required Capabilities

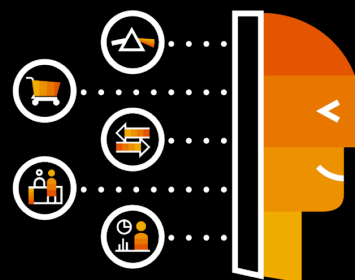
Customer service excellence	Marketing as a growth driver	Sales empowerment to sell more	Omnichannel commerce
<ul style="list-style-type: none"> Customer interaction and service management for utilities Collaborative regulatory processes Self-service accelerator for utilities Document presentment Experience management for service 	<ul style="list-style-type: none"> Marketing recommendations Campaign management and optimization Sentiment and interest analysis Customer identity management for business to consumer 	<ul style="list-style-type: none"> Account and contact management Sales management for energy and water Opportunity and pipeline management Sales quotation management Order capture Sales analytics Mobile sales Experience management for sales 	<ul style="list-style-type: none"> Commerce for utilities Omnichannel content management Product content and catalog management Bundling, configuration, and subscriptions Digital asset management

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[Mercury.NZ Limited](#) was looking to digitalize and enhance the interactions customers had through its customer engagement center. Its previous processes and systems meant that turnover of staff was high, customer self-service was challenging, and the ability to elevate the workforce above operational processes was limited. By placing a focus on its people, equipping them with the right tools to do their best work and the freedom to make good decisions, Mercury knew that its people would deliver the best possible customer experience.

Daniel Green, manager of Service Design and Delivery for Mercury, said, “We went through a step change of improving the processes and making it better for our people, which ultimately makes it better for our customers. If you give people the environment to be their best selves, people will be happier in their jobs, and that will result in improved customer satisfaction.”



Drive Sustainability

SAP and Oxford Economics identified key areas where energy and utilities executives can navigate their sometimes-contradictory directives to increase sustainability, innovation, and supply chain resilience while remaining competitive with other measures that matter to consumers. As executives begin to tackle their supply chain sustainability issues, scrutiny from customers, stakeholders, and regulators will only increase. Meeting sustainability challenges may determine financial performance and company survival, not to mention create a more hospitable world for future generations.

BEST PRACTICES

To accurately monitor, plan, and predict energy consumption and cost, data must be integrated.



Gather disparate information about data related to sustainability and environmental, social, and corporate governance (ESG); multiple data sources; and nonharmonized data structures



Bridge the gap between driving sustainability in operational processes and systematic strategic planning to reach corporate sustainability ambitions



Connect actions with measurable outcomes on a company-wide scale to identify the measures with the biggest impact



Manage rising expectations of investors and other external stakeholders for detailed and up-to-date ESG data

NEXT PRACTICES

Provide end-to-end customer lifecycle management and customer data integration across the value chain for meaningful interactions.



Data sourcing: Preshipped data models to support established reporting frameworks (for example, the Global Reporting Initiative, sustainability accounting standards board, and World Economic Forum's Stakeholder Capitalism Metrics)



Performance insights: Capturing of abatement projects and actions in the SAP Sustainability Control Tower solution



Performance improvement: Holistic sustainability and ESG dashboards based on the integrated key figure ledger



Stakeholder reporting and communication: High-quality, automated reports based on the integrated key figure ledger, and publishing as statutory report documents

Innovations at the Vertical Edge

Go for a new data structure, which covers sustainability parameters. Get new evaluation possibilities to create insights and gain an Intelligent Enterprise approach to optimize processes. Run your business sustainably with new capabilities for assessment, evaluation, and optimization.

15%

Increase in total assets committed to sustainable and responsible investment strategies in Europe

38%

Increase in U.S.-domiciled assets under management using sustainable strategies

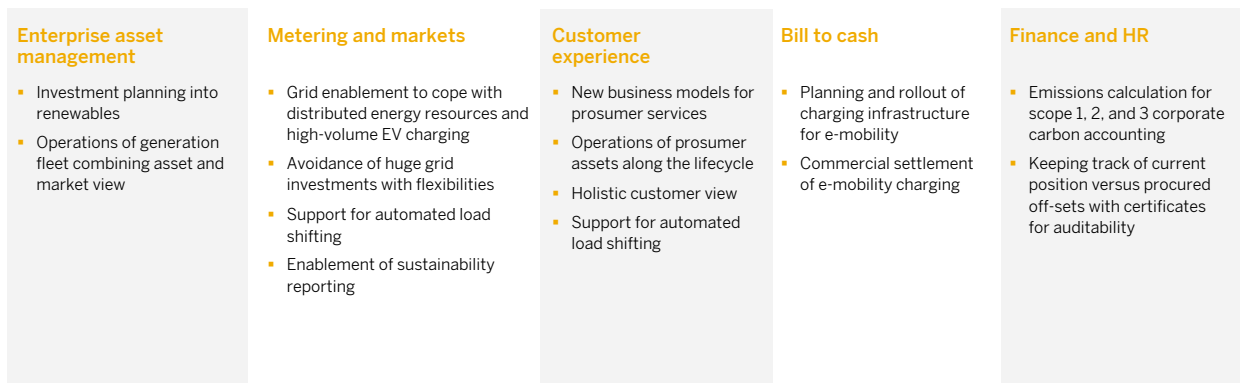
92%

Of S&P 500 companies publishing sustainability or corporate responsibility reports in 2020

SAP Solutions Supporting a Sustainable Utilities Industry

SAP proposes an intelligent suite to help utilities stepping into the evolution of a sustainable supply chain. SAP can help utilities prioritize sustainability in the supply chain to meet an increasing regulatory burden, reduce costs of energy consumption, and meet customer demands. With SAP solutions, utilities can increase visibility into their own or their suppliers' processes and take concrete steps to realize sustainability goals. Cloud, mobile, and the IoT are the backbone of the modern energy supply chain.

Required Capabilities



The architecture for the Intelligent Enterprise in the utilities industry starts with SAP Business Technology Platform and business applications from SAP, including industry cloud solutions that support organizations with their industry-specific end-to-end processes.

SAP Concur® solutions – for curbing CO₂ emissions caused by employee trips and spending

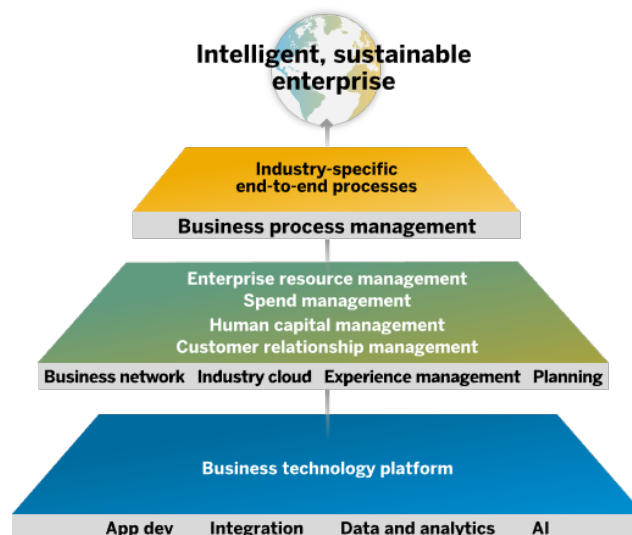
SAP Logistics Business Network – for material traceability

SAP Ariba® solutions – EcoVadis supplier sustainability rating and SAP Ariba Supplier Management – for managing supplier sustainability risk, performance, and improvement

SAP S/4HANA for EHS environment management – for corporate GHG emissions and emissions calculations

SAP Profitability and Performance Management – for blending sustainability and profitability for comprehensive business steering

SAP S/4HANA for waste and recycling – for optimizing the management of waste collection



SAP Cloud for Energy – for managing and analyzing big metering data

SAP Product Footprint Management – for product footprint calculation

SAP's industry cloud: e-mobility – for sustainable and convenient electric mobility

SAP Sustainability Control Tower – for sustainability impact measurement and valuation

GreenToken by SAP – for raw material traceability

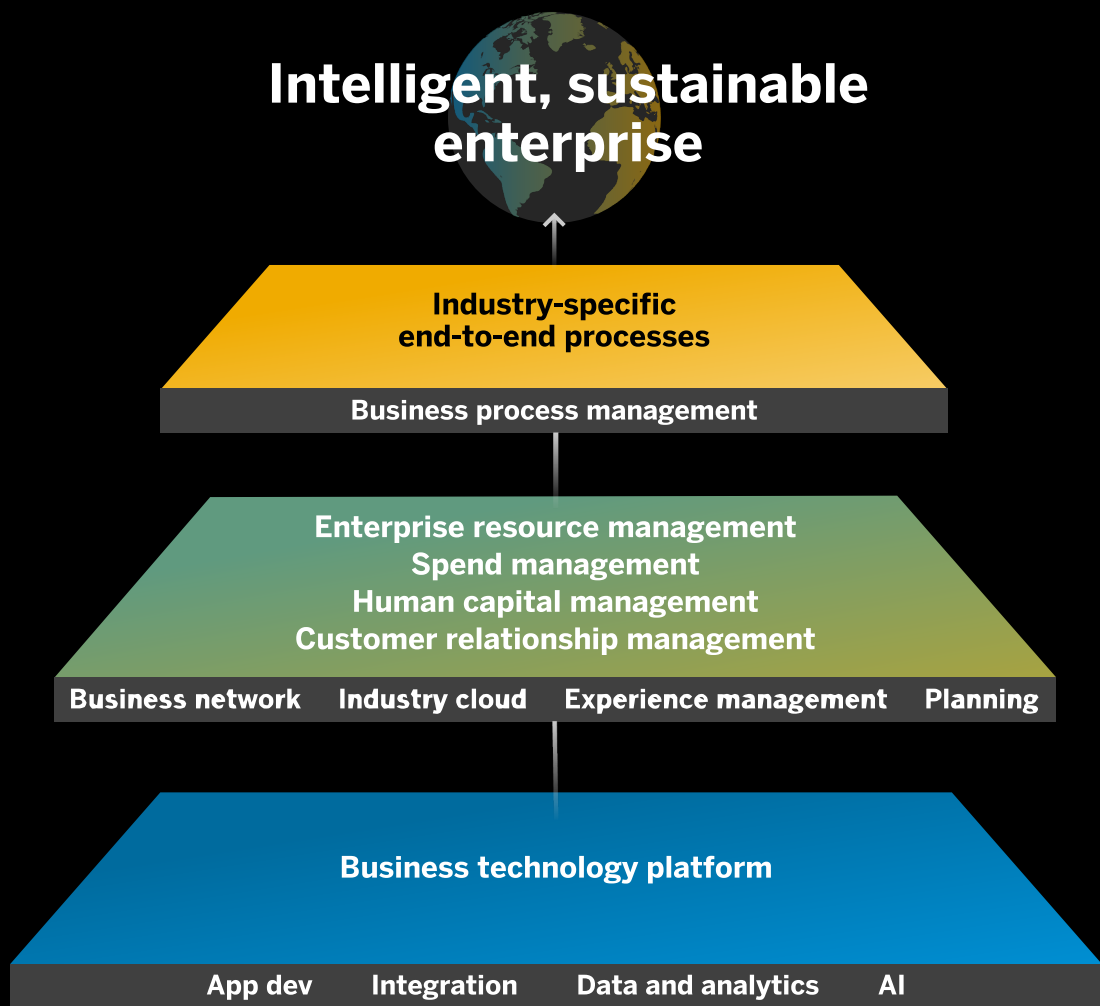
[Anglian Water](#) recognizes that to achieve sustainability, it must understand the human elements of it. Explore Anglian Water's dedication to fostering a flourishing environment, reducing its environmental footprint, and making a positive difference in the communities it serves.



SAP's Industry Cloud: A Joint Innovation Space

We enable our customers to become intelligent, sustainable enterprises by bringing together our comprehensive portfolio of solutions and technology in service to customers' business process needs.

- It starts with our platform technology that provides the foundation of application integration, extension to a robust ecosystem of solutions, and data and AI.
- Then our industry-leading business applications work together spanning front-end and back-end systems that only SAP can provide.
- This all comes together to provide the customer with support for the end-to-end, industry-specific business processes they need to run as an intelligent, sustainable enterprise.



Industry Innovation Spaces

Stand-alone applications struggle to deliver relevant business value. Enterprise applications always need access to essential business domains such as products, assets, factories, cost centers, employees, and customers. SAP's industry cloud provides direct access to business domains and processes in the intelligent suite through APIs. At the same time, our business and technology services provide the tools and infrastructure to create and run innovative industry cloud solutions.

Intelligent Technology at Your Fingertips

Business innovation needs digital technologies that are ready to use to solve a business problem.

SAP's industry cloud solutions, built on SAP Business Technology Platform, provide a full set of technologies ranging from user interfaces to robotic process automation to artificial intelligence and machine learning. All can be used readily in new solutions.

Open Innovation Platform and Ecosystem

SAP's industry cloud is the way for our partners and SAP to deliver solutions for customers that unlock new levels of efficiency, extend end-to-end business processes at the edge, and enable innovative business models.

SAP partners find a unique environment in our industry cloud in which the data domains and business processes of the intelligent suite and our business networks are readily accessible through open APIs. This allows our partners to accelerate innovation by focusing on the differentiating business capabilities they want to build and deliver to our joint customers.

This enables a spectrum of partnership and innovation models ranging from close co-innovation over identified white spaces to completely open innovation spaces with free competition to drive customer value.

The innovation models are complemented by a set of commercialization models that are strongly correlated to the value the solutions deliver to the business of our customers.

Freedom of choice is a key value, so customers can choose any partner or hyperscaler to deploy their industry cloud solutions.

Open Ecosystems Deliver More Innovation

Open platforms, available to the wider ecosystem, have consistently delivered more innovation and choice for customers. Therefore, our industry cloud solutions can be run by the major infrastructure-as-a-service providers, giving our customers the freedom to implement their own individual platform strategy.



RISE with SAP: Driving Business Innovation Together

Every enterprise needs to develop new business models to avoid being disrupted, gain efficiencies to fund innovation, and transform mission-critical systems without business risk. RISE with SAP is the solution.

RISE with SAP is a comprehensive solution with:

- Cloud ERP for every business need
- Industry next practices and extensibility
- Analytics and business process intelligence
- Outcome-driven services from SAP and partners

Discover the value of RISE with SAP



Take the lead with industry innovation for top-line, bottom-line, and green-line growth

- ✓ Grow revenue by creating differentiating business models in your industry
- ✓ Increase margin with built-in industry-specific processes and best practices
- ✓ Unlock new efficiency with intelligent automation across mission-critical processes
- ✓ Manage sustainability with company-wide transparency and controls



Never stop improving with continuous insight to optimize business processes

- ✓ Prioritize optimization opportunities with instant analysis of processes, activities, and tasks
- ✓ Sharpen process performance based on actual system usage, best practices, and industry benchmarking
- ✓ Accelerate your progress with tailored insight on where to automate business processes with AI



Secure your business with a trusted partner for your needs, every step of the way

- ✓ Run your mission-critical operations at their best around the globe
- ✓ Reach the cloud without compromise with solutions for every business and every regulatory requirement
- ✓ Take charge of change using a versatile platform to speed innovation
- ✓ Own your tomorrow with a guided journey and outcome-driven practices from SAP and our partners

RISE with SAP is built to fit your needs

RISE with SAP is designed to support your business needs – for your industry, in your geography, for your regulatory requirements – with SAP responsible for the holistic service-level agreement, cloud operations, and technical support. It includes:

Cloud ERP
SAP S/4HANA Cloud

Business process intelligence
Business process intelligence starter pack

Business platform and analytics
SAP Business Technology Platform (CPEA credits)

Business networks
SAP Business Network Starter Pack

Outcome-driven services and tools
From partners

RISE with SAP is the foundation for an intelligent, sustainable enterprise in the cloud. We look forward to joining our customers on their transformation journey into the future. Find out more about [RISE with SAP](#).

SAP's Comprehensive Partner Innovation Ecosystem

SAP has been a proud solution provider for the utilities industry for almost four decades – starting from humble beginnings and growing into a position of supporting the core business of our customers. Ninety-one percent of utilities companies in the Forbes Global 2000 run SAP.

SAP's industry cloud opens the doors for a new level of co-innovation with customers and partners, enabling next practices and new business models that help our customers capture the new opportunities of servitization and outcome-based businesses and take the next step toward becoming intelligent enterprises.

Our open partner strategy gives our customers the choice of whom they work with to design the business models of the future, whom they partner with to define and implement business processes for efficiency and growth, and whom they trust with running their infrastructure.

There are many journeys utilities can take into the digital economy to become intelligent enterprises. No matter which they choose, our scalability, security, global reach, vibrant business networks, and business process knowledge across utilities and adjacent industries are success factors for our customers, our ecosystem, and SAP.

Our utilities partner ecosystem includes, among others:



Engagement Model

SAP is a partner for the utilities industry in the long run. We have established a co-innovation and collaboration model with many of our customers that is based on mutual trust and long-standing, value-based relationships.

This is the foundation to chart the journey into the new world of customer centricity, explore new revenue streams, adhere to regulatory compliance and security, and drive operational excellence to capture the opportunities and tackle the risks in the digital economy.

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