KPMG

Powering the Energy Orchestrator

How SAP S/4HANA enables utility transformation

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Executive summary

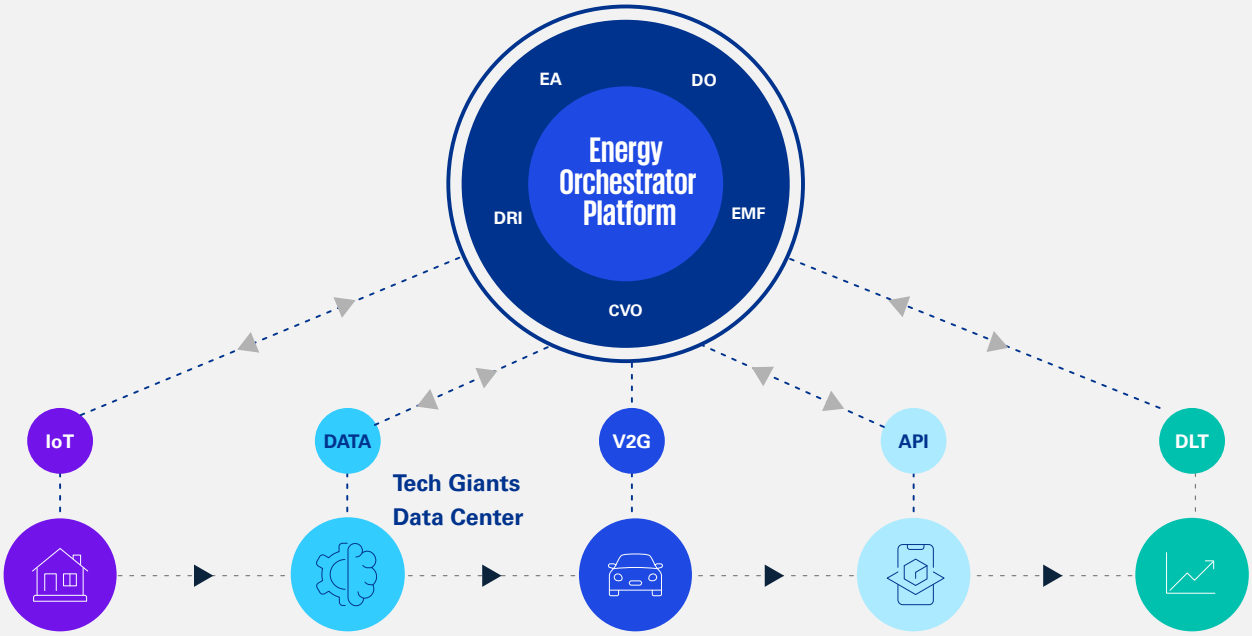
The utility industry stands at an inflection point as the traditional business model evolves into the Energy Orchestrator paradigm. This shift requires not only technological capabilities, but also a comprehensive transformation of operations, data management, and ecosystem coordination. SAP S/4HANA can serve as the digital foundation for this evolution, providing utilities with the real-time intelligence, integration capabilities, and flexible architecture needed to orchestrate complex energy ecosystems. By leveraging SAP S/4HANA in collaboration with experienced business integrators like KPMG, utilities can accelerate their transformation, minimize risks, and maximize value creation opportunities in the evolving energy landscape.

Platform Orchestration: The Future state

This paper is part of a three-part series, where part one introduces the Energy Orchestrator concept while part two examines the operating role and the role of utility companies in it. In this final chapter, we show that by embracing SAP S/4HANA, utilities can make this transition and transform their futures by enabling real-time intelligence, integrated process management, advanced analytics, and ecosystem integration.

Energy Orchestrator Market Model

Platform-Based Energy Ecosystem with Distributed Physical Connections



- Energy prosumers
- Demand response
- Personalized services

- Private generation
- Energy independence
- Strategic partnerships

- Fleet electrification
- V2G interation
- Charging networks

- Distributed resources
- Flexibility services
- Virtual power plants

- Peer-to-peer trading
- Flexibility markets
- Blockchain settlements

Acronym key

Core functions:

CVO – Customer Value Orchestrator
DO – Data Orchestration Officer
DRI – Distributed Resource Integrator
EA – Ecosystem Architect
EMF – Energy Market Facilitator

Connections:

API – Application Programming Interface
DLT – Distributed Ledger Technology
IoT – Internet of Things

Other:

DC – Data Center
DER – Distributed Energy Resource
EV – Electric Vehicle
P2P – Peer-to-Peer
V2G – Vehicle-to-Grid
VPP – Virtual Power Plant

The Energy Orchestrator imperative

The energy landscape is experiencing unprecedented disruption. Tech giants like Google and Microsoft are becoming significant energy producers through investments in renewables and nuclear power. Distributed energy resources are proliferating across the grid edge, and data centers are driving electricity demand to record levels. Meanwhile, climate-driven weather events are testing infrastructure resilience like never before.

In this environment, utilities must evolve from network integrators focused primarily on reliable service delivery to become Energy Orchestrators that coordinate complex ecosystems of assets, participants, and services. This transformation requires a digital foundation that enables sophisticated data management, real-time decision making, and seamless ecosystem coordination—capabilities that SAP S/4HANA is uniquely positioned to provide.

SAP S/4HANA: The digital foundation for Energy Orchestration

SAP S/4HANA serves as the digital core that enables the Energy Orchestrator operating model through several critical capabilities:

Real-time intelligence

The in-memory architecture of SAP S/4HANA enables processing of massive data volumes at unprecedented speeds, providing utilities with real-time visibility across operations.[1] This capability is essential for the Energy Orchestrator, which must process continual data streams from grid assets, market operations, and ecosystem participants to maintain system balance and create value.

For example, when integrating tech company microgrids, the Energy Orchestrator must simultaneously analyze grid conditions, market prices, weather forecasts, and resource availability to optimize dispatch decisions in near real-time. SAP S/4HANA's processing capabilities are specifically designed to make this level of complex, multi-factor decision-making possible.

Integrated process management

SAP S/4HANA breaks down traditional data silos by providing a unified data model that spans all utility operations.[2] This integration is vital for the Energy Orchestrator, which requires seamless information flow across traditionally separated domains such as asset management, customer operations, and financial systems.

This integration enables new capabilities like end-to-end flexibility management, where demand response events trigger coordinated actions across customer engagement, grid operations, market settlements, and financial systems. And all of this is orchestrated through a single platform with consistent data.

Advanced analytics and AI

The Energy Orchestrator requires predictive intelligence to anticipate system needs, optimize resource utilization, and personalize customer interactions. SAP S/4HANA's embedded analytics and machine learning capabilities provide these advanced decision support functions directly within operational processes.[3]

For instance, predictive maintenance algorithms can continuously analyze sensor data from critical grid assets, identifying potential failures before they occur and optimizing maintenance scheduling to minimize both costs and outage risks. Similarly, customer engagement systems can leverage AI to create personalized energy management recommendations based on consumption patterns, preferences, and available grid services.

Flexible business models

The Energy Orchestrator must continuously evolve its business models as market conditions and opportunities change. SAP S/4HANA provides the flexibility to rapidly configure new products, services, and commercial arrangements without extensive customization or development efforts.[5]

This agility enables utilities to create specialized service offerings for tech company partners, implement innovative capacity sharing arrangements, and develop performance-based contracting models that align incentives across the ecosystem.

Ecosystem integration

As an Energy Orchestrator, utilities must connect with an expanding array of external partners, platforms, and services. SAP S/4HANA's API-first architecture and integration capabilities enable these connections, allowing utilities to create digital ecosystems that extend beyond traditional boundaries.[4]

The platform supports the orchestration of complex microgrids and virtual power plants by providing standardized integration interfaces for technical systems, commercial transactions, and operational coordination. These capabilities are essential when creating collaborative frameworks with tech companies and other third-party asset owners.

Key focus areas for implementation

While SAP S/4HANA provides powerful capabilities, successful implementation requires focused attention on several critical areas of the Energy Orchestrator operating model:

Asset lifecycle management

Modern utilities must manage increasingly diverse and distributed asset portfolios while maintaining reliability and optimizing costs. SAP S/4HANA transforms asset management through:

- Real-time condition monitoring and predictive analytics
- Risk-based investment planning integrated with financial processes
- Digital twins that enable sophisticated simulation and optimization
- End-to-end visibility from asset planning through retirement

These capabilities are essential for the Energy Orchestrator. They enable these businesses to coordinate maintenance activities across organizational boundaries, optimize resource allocation based on system-wide needs, and ensure resilience in the face of increasing extreme weather events.

Energy portfolio management

The Energy Orchestrator must balance diverse generation resources, storage assets, and flexibility options against variable demand patterns and market opportunities. SAP S/4HANA enables sophisticated portfolio management through:

- Integrated forecasting across demand, generation, and market conditions
- Real-time position management and risk analysis
- Automated trading execution with advanced decision support
- Settlement and reconciliation across complex market structures

These capabilities allow utilities to optimize resource utilization across the ecosystem, including tech-owned generation assets, while managing financial risks and maximizing value creation opportunities.

Customer experience transformation

Energy customers are evolving from passive consumers to active participants in the energy ecosystem. SAP S/4HANA supports this evolution through:

- 360-degree customer profiles that span all interactions and services
- Personalized engagement based on preferences and opportunities
- Seamless integration between customer systems and grid operations
- Flexible billing for complex rate structures and service bundles

By transforming customer experience, utilities can create new value streams through demand response, energy services, and prosumer programs while strengthening relationships with tech company partners through specialized service models.

Workforce enablement

The Energy Orchestrator operating model requires new skills, capabilities, and ways of working. SAP S/4HANA supports workforce transformation through:

- Mobile-enabled workflows that bring intelligence to the field
- Knowledge management and collaboration tools
- Skill-based resource allocation and performance analytics
- Learning and development integration

These capabilities help utilities build the cross-functional teams and specialized roles needed for the energy orchestrator model, including ecosystem architects, data orchestration officers, and energy market facilitators.

Cultural transformation: The human element of becoming an Energy Orchestrator

The shift to Energy Orchestrator requires more than technological and process changes—it demands a fundamental cultural transformation that touches every aspect of a utility's organization. This cultural evolution is often the most challenging aspect of the transformation journey, yet it is essential for success.

From risk aversion to calculated innovation

Traditional utility culture prioritizes stability, reliability, and risk minimization—values that have served the industry well for decades. However, the Energy Orchestrator model requires a cultural shift toward calculated innovation, where:

- Experimentation is encouraged within defined guardrails
- Failure is recognized as a valuable source of learning
- Speed of action is balanced with thoughtful risk management
- Innovation metrics are incorporated into performance evaluation

This cultural evolution must be carefully managed to preserve the core reliability and values that remain essential while fostering the agility and creativity needed for ecosystem orchestration.

From functional silos to ecosystem thinking

Utilities have historically operated in functional silos, with clear boundaries between departments like generation, transmission, distribution, and customer service. The Energy Orchestrator model requires breaking down these silos and developing ecosystem thinking, where:

- Cross-functional collaboration becomes the norm rather than the exception
- Success is measured by system-wide outcomes rather than departmental metrics
- Information flows freely across organizational boundaries
- Decision-making considers impacts across the entire energy ecosystem

This shift requires utilities to reimagine organizational structures, performance metrics, and collaboration models to support an ecosystem-oriented mindset.

From command-and-control to distributed leadership

Traditional utility leadership models often follow hierarchical, command-and-control approaches that prioritize stability and predictability. The Energy Orchestrator requires a shift toward distributed leadership models where:

- Decision authority is pushed to the edges of the organization
- Frontline employees are empowered to solve problems creatively
- Leaders focus on creating enabling conditions rather than directing actions
- Adaptive capacity is valued alongside operational excellence

This evolution requires significant investment in leadership development, decision frameworks, and governance models that balance autonomy with alignment.

From technology resistance to digital fluency

Many utility workforces have developed skepticism toward digital transformation initiatives based on past experiences with complex implementations that failed to deliver promised benefits. The Energy Orchestrator model requires building digital fluency across the organization, where:

- Employees at all levels understand how technology enables new value creation
- Digital tools are embraced as enhancers rather than replacements for human judgment
- Continuous learning becomes embedded in everyday work
- Technology adoption is driven by value rather than compliance

This shift requires targeted capability building, change reinforcement, and visible demonstration of how digital tools enhance rather than threaten employee contributions.

Change management: Orchestrating the people journey

Given the depth and breadth of transformation required, utilities need comprehensive change management approaches to enable the shift to Energy Orchestrator. A business integrator like KPMG can bring critical capabilities to support this journey:

Strategic change leadership

The transformation to Energy Orchestrator must begin with a compelling vision and strong leadership alignment. Effective change leadership requires:

- Developing a clear and inspiring narrative for the transformation
- Building a coalition of leaders across functions who embody the change
- Establishing transformation governance that balances speed with inclusion
- Creating visible leadership behaviors that model the desired culture

Change leadership must extend beyond the executive suite to include middle managers and informal influencers who shape the day-to-day employee experience.

Stakeholder-centric change design

The Energy Orchestrator transformation impacts diverse stakeholder groups in different ways, requiring targeted change approaches. Stakeholder-centric change design includes:

- Mapping detailed stakeholder impacts across organizational roles
- Segmenting stakeholders based on change readiness and influence
- Designing role-specific learning journeys and transition support
- Creating feedback mechanisms to continually refine change approaches

This tailored approach ensures that change interventions address the specific needs and concerns of each stakeholder group, increasing adoption and reducing resistance.

Capability building and workforce transition

The Energy Orchestrator requires new capabilities that may not exist in traditional utility organizations. Comprehensive capability building includes:

- Assessing current capabilities against future requirements
- Designing learning programs that blend formal training with experiential learning
- Creating communities of practice to accelerate knowledge sharing
- Developing career pathways that align with the Energy Orchestrator model

For some utilities, this transition may also involve workforce restructuring, requiring sensitive handling of role changes, retirements, and recruitment of new talent with digital and ecosystem orchestration skills.

Cultural activation and engagement

Culture change requires active engagement at all levels of the organization. Cultural activation approaches include:

- Immersive experiences that bring the Energy Orchestrator vision to life
- Networks of change champions that extend influence across the organization
- Digital collaboration platforms that enable new ways of working
- Crowdsourced innovation initiatives that demonstrate the value of ecosystem thinking

These engagement strategies help employees move from passive recipients of change to active participants in shaping the organization's future.

Change reinforcement and sustainability

Sustainable transformation requires reinforcing mechanisms that embed new ways of working into the organizational fabric. Effective reinforcement includes:

- Aligning performance metrics and rewards with Energy Orchestrator behaviors
- Redesigning organizational structures to support ecosystem coordination
- Implementing continuous improvement processes that sustain momentum
- Celebrating and communicating transformation successes

Without these reinforcement mechanisms, organizations risk sliding back into familiar patterns after the initial transformation push.

SAP S/4HANA and SAP Joule: Empowering the Energy Orchestrator model through AI

The evolution to Energy Orchestrator requires intelligent systems capable of autonomous decision-making, predictive insights, and natural human/machine collaboration. SAP S/4HANA, enhanced by SAP Joule, provides utilities with a comprehensive AI ecosystem that combines generative, agentic, and traditional AI capabilities to enable this evolution across key dimensions of the energy ecosystem. Leading utilities are already demonstrating the transformative potential of these technologies.

AI Types and their applications in the Energy Orchestrator model

SAP's approach to AI for utilities integrates multiple forms of artificial intelligence, each with specific applications in the Energy Orchestrator transformation:

GenAI applications

GenAI capabilities within the SAP ecosystem are optimized for creating new content, handling unstructured data, and facilitating natural language interactions. For Energy Orchestrators, GenAI is particularly valuable for:

- Natural language interfaces that allow non-technical personnel to interact with complex systems
- Automated report and documentation generation for regulatory compliance
- Content personalization for customer communications and marketing
- Knowledge extraction from unstructured documents like contracts and technical specifications

Agentic AI applications

Agentic AI represents the next evolution beyond GenAI, focusing on autonomous execution of complex tasks and processes. Within the SAP ecosystem, agentic AI is deployed to:

- Orchestrate multi-step workflows across organizational boundaries
- Monitor and respond to changing conditions without human intervention
- Coordinate distributed energy resources and market operations
- Optimize asset maintenance and deployment based on real-time conditions

Real-world example: Vibrant Energy

Vibrant Energy has implemented SAP S/4HANA Cloud Private Edition to accelerate growth across their renewable energy operations.[6] Field technicians now use voice commands to access maintenance records, update asset status, and schedule activities while on-site at solar installations. This implementation demonstrates how GenAI interfaces can empower field workers with direct access to critical systems through natural language, reducing administrative overhead and improving response times.

Real-world example: ENGIE

ENGIE, a global leader in sustainable energy with 150,000 employees across 70 countries, has implemented SAP S/4HANA on AWS to transform their financial processes.[7] According to their implementation assessment, "As we continue to focus on digitalization and driving insights through data, we feel it is an enormous advantage to be running S/4HANA on AWS." The platform's autonomous agents now handle routine financial tasks, allowing ENGIE's finance teams to focus on strategic initiatives supporting their transition to low-carbon energy solutions.

Intelligent automation through AI convergence

The Energy Orchestrator must manage exponentially increasing complexity while maintaining operational efficiency. The convergence of generative, agentic, and traditional AI within the SAP ecosystem transforms how utilities interact with and leverage their enterprise systems.

Conversational process execution

SAP Joule enables natural language interactions with SAP S/4HANA, allowing utility personnel to execute complex processes through simple conversational prompts. This capability democratizes access to system functionality, empowering workers across the organization to leverage advanced capabilities without specialized technical knowledge.[8]

Utility companies participating in the Early Adopter Care program for SAP Joule have reported significant productivity gains.[9] Participants found particular value in Joule's ability to provide contextual insights through natural language and accelerate routine processes. Utility personnel can now perform tasks like checking purchase order status or analyzing sales performance through simple conversational interactions rather than navigating complex system interfaces.

Intelligent document processing

As Energy Orchestrators coordinate across diverse stakeholders, document processing becomes increasingly complex. SAP Joule's document grounding capability provides comprehensive responses by drawing from business documents located in SAP and third-party repositories such as Microsoft SharePoint.

For utilities managing complex regulatory filings, interconnection agreements, and technical specifications, this capability significantly reduces manual processing while improving data accuracy and accessibility, enabling comprehensive situational awareness across the ecosystem.

Cognitive process automation

Beyond traditional rule-based automation, SAP Joule enables cognitive process automation that adapts to changing conditions and learns from experience. This capability requires the integration of GenAI for understanding context, agentic AI for autonomous execution, and traditional AI for pattern recognition and process optimization.[10]

By combining SAP S/4HANA's process management capabilities with SAP Joule's multi-layered AI architecture, utilities can create self-optimizing operational workflows that continuously improve performance while reducing human intervention requirements. This allows for more effective management of dynamic operations such as demand response event orchestration and adaptive customer engagement workflows.

Predictive intelligence for system optimization

The Energy Orchestrator must anticipate system needs and optimize resources across spatial and temporal dimensions. SAP S/4HANA and SAP Joule provide the following sophisticated predictive capabilities.

Multi-horizon forecasting

Energy Orchestrators require integrated forecasting across diverse time horizons, from real-time operations to long-term planning. This capability primarily leverages traditional AI techniques enhanced by GenAI's ability to incorporate unstructured data sources like weather reports and market analyses.

The self-learning, adaptability, and calculation capabilities of these combined AI approaches have significant potential to address the intermittent nature of renewable energy,[11] helping utilities balance production and consumption loads—a critical capability demonstrated in Shell's implementation of SAP S/4HANA.

Scenario simulation and digital twins

Effective energy orchestration requires the ability to simulate complex scenarios and understand system impacts before implementation. This capability combines traditional AI for physics-based modeling, GenAI for creating diverse scenario narratives, and agentic AI for testing response strategies.

These simulation capabilities allow utilities to test orchestration strategies in virtual environments, identifying risks and optimizing approaches before real-world implementation. As energy systems become more distributed, utilities can use generative AI to support business transformation, creating business requirements and value charts with minimal human intervention.[12]

Prescriptive decision support

Beyond prediction, Energy Orchestrators require guidance on optimal actions across complex decision spaces. SAP Joule's prescriptive analytics capabilities provide actionable recommendations by evaluating multiple decision paths against diverse objectives.

GenAI plays a crucial role in making these complex recommendations understandable to human decision-makers through natural language explanations. Joule accelerates data-driven decision-making by giving every employee immediate, context-rich insights grounded in business data,[13] enabling more informed decisions across operational, commercial, and strategic dimensions.

Ecosystem intelligence and coordination

As ecosystem coordinators, utilities must manage complex networks of partners, assets, and services. SAP S/4HANA and SAP Joule can provide the following advanced capabilities for ecosystem intelligence and coordination.

Partner network analytics

Energy Orchestrators must understand and optimize complex networks of relationships. This capability combines traditional AI for network analysis, GenAI for relationship context, and agentic AI for proactive relationship management.

These capabilities help utilities visualize, understand, and optimize their position within evolving energy ecosystems, strengthening relationships with tech companies and other strategic partners. SAP Joule equips teams with AI agents that understand business context and collaborate across all functions—connecting departments, accelerating decisions, and streamlining processes.[14]

Intelligent contract management

The Energy Orchestrator manages diverse contractual arrangements across ecosystem participants, leveraging GenAI for contract analysis and creation, traditional AI for compliance verification, and agentic AI for contract execution monitoring.

SAP Knowledge Graph provides a semantic access layer consisting of business knowledge assets that grows in a flexible and iterative manner over time.[15] This enables more sophisticated contract analysis and management across complex energy partnerships.

Cross-boundary process orchestration

Energy Orchestrators must coordinate processes that span organizational boundaries. This capability requires agentic AI for autonomous coordination, traditional AI for process optimization, and GenAI for stakeholder communication.

Joule activates teams of AI agents across the business to execute complex workflows with precision, grounded by SAP Knowledge Graph and SAP Business Data Cloud,[16] allowing utilities to create seamless coordination across complex networks of partners, assets, and services—a core requirement for effective energy orchestration.

KPMG's AI-enhanced implementation approach

Successful Energy Orchestrator transformation requires more than technology—it demands comprehensive business integration. KPMG brings specialized AI capabilities that accelerate this journey:

KPMG Powered Enterprise for utilities

The KPMG Powered Enterprise methodology provides a comprehensive approach to SAP S/4HANA implementation for utilities.[17] This framework includes pre-configured industry solutions and AI-driven implementation accelerators that analyze existing systems and generate transformation roadmaps tailored to utility-specific requirements. In one documented case, a utility achieved annual benefits of approximately 1 percent of revenue through this approach, demonstrating tangible returns on transformation investments.

KPMG SAP Joule for energy consultants

KPMG leads the SAP Joule for Consultants early access program, applying these capabilities specifically to energy and utility transformations.[18] By combining generative AI with industry expertise, KPMG consultants can scale complex transformation projects while maintaining consistent quality. This application demonstrates how implementation partners can enhance their delivery capabilities through AI-powered knowledge management, providing energy clients with more efficient transformation services.

The intelligent foundation for energy orchestration

The combination of generative, agentic, and traditional AI capabilities within SAP S/4HANA and SAP Joule provides utilities with the intelligent foundation needed for the Energy Orchestrator transformation. Real-world implementations by companies like Vibrant Energy, ENGIE, and Shell demonstrate that these technologies are not theoretical possibilities but practical solutions already delivering value.

By leveraging these complementary AI technologies in collaboration with experienced business integrators like KPMG, utilities can accelerate their evolution to Energy Orchestrators while managing associated risks and maximizing value creation opportunities. As these early adopters are showing, the Energy Orchestrator model is not a distant future state but an emerging reality that is reshaping the utility industry today.

The value proposition of SAP S/4HANA for utilities

The implementation of SAP S/4HANA can deliver substantial value for utilities evolving into Energy Orchestrators:

Operational excellence

15-25% reduction in maintenance costs through predictive analytics and optimized scheduling[19]

20-30% improvement in workforce productivity through streamlined processes and mobile enablement[20]

30-40% reduction in outage duration through improved situational awareness and resource coordination[21]

Ecosystem orchestration

- Enablement of complex multi-party transactions across organizational boundaries
- Creation of new revenue streams through platform-based services and marketplace offerings
- Enhanced collaboration with tech company partners through standardized integration frameworks

Business agility

50-70% faster development of new products and services through flexible configuration[22]

40-60% reduction in time-to-market for innovative offerings[23]

30-45% improvement in change management effectiveness[24]

Financial performance

3-5% improvement in gross margin through optimized portfolio management[25]

10-15% reduction in IT operating costs through simplified architecture[26]

Why utilities need a business integrator like KPMG

While SAP S/4HANA provides powerful capabilities, the transformation to Energy Orchestrator requires more than technology implementation. Business integrators like KPMG bring critical value to this journey through:

Transformation strategy

The evolution to Energy Orchestrator requires a comprehensive transformation strategy that aligns technology, people, processes, and business models. KPMG's industry expertise helps utilities:

- Define the target operating model specific to their market context
- Develop phased transformation roadmaps that balance quick wins with long-term goals
- Create the business case and value realization framework
- Align leadership across functional boundaries on the transformation vision

Change enablement

The Energy Orchestrator transformation touches every aspect of utility operations and requires significant cultural evolution. KPMG's change management expertise helps utilities:

- Assess organizational readiness and identify barriers to change
- Develop targeted change strategies for different stakeholder groups
- Create training and enablement programs for new roles and skills
- Establish governance mechanisms to sustain the transformation

Business process innovation

SAP S/4HANA implementations frequently fail to deliver full value when they simply digitize existing processes rather than reimagining them for the future. KPMG brings process innovation capabilities that help utilities:

- Reimagine core processes based on leading practices and future requirements
- Design new processes for emerging capabilities like flexibility management
- Develop governance frameworks for ecosystem orchestration
- Create process performance metrics aligned with the Energy Orchestrator model

Technology architecture

While SAP S/4HANA provides the digital core, the Energy Orchestrator model requires an extended technology ecosystem. KPMG's technology architecture capabilities help utilities:

- Design the end-to-end architecture including SAP and non-SAP components
- Develop data governance frameworks for ecosystem integration
- Create API and integration strategies for third-party systems
- Define cloud and infrastructure approaches that balance performance and flexibility

AI Integration and Orchestration

The Energy Orchestrator model requires sophisticated AI capabilities to optimize operations and create new value streams. KPMG AI integration expertise helps utilities:

- Define clear AI strategy aligned with business objectives and use cases
- Implement governance frameworks that ensure ethical and responsible AI deployment
- Develop data integration approaches that maximize AI effectiveness across systems
- Create AI-enabled processes that balance automation with human expertise
- Design change management-programs specific to AI-transformed roles and skills
- Establish AI value measurement frameworks to track and optimize outcomes
- This AI integration capability is particularly valuable as utilities navigate the complexities of implementing enterprise-wide AI solutions that must connect seamlessly with core SAP S/4HANA functions while extending into the broader ecosystem

Value realization

The investment in SAP S/4HANA must deliver tangible business outcomes. KPMG's value realization approach helps utilities:

- Define clear value targets with measurable KPIs
- Implement value tracking mechanisms and dashboards
- Identify and mitigate value leakage risks
- Optimize continuous improvement processes to sustain and enhance value

Cultural transformation

The shift to Energy Orchestrator requires fundamental cultural evolution. KPMG's cultural transformation capabilities help utilities:

- Assess current cultural attributes against future requirements
- Design culture activation programs that drive behavioral change
- Develop leadership capabilities that foster the desired culture
- Create reinforcement mechanisms that sustain cultural evolution

This cultural transformation expertise is particularly valuable given the deep roots of traditional utility culture and the significant mindset shifts required for successful ecosystem orchestration.

The transformation to Energy Orchestrator represents both a necessity and an opportunity for utilities navigating the rapidly evolving energy landscape. SAP S/4HANA provides the digital foundation needed to enable this transformation, offering the real-time intelligence, integration capabilities, and flexibility required to orchestrate complex energy ecosystems.

However, technology alone is insufficient. Successful transformation requires a comprehensive approach that addresses operating model design, process innovation, organizational change, and cultural evolution. The human element of this transformation is often the most challenging yet critical component—requiring targeted change management and cultural activation to align mindsets and behaviors with the Energy Orchestrator vision.

By partnering with business integrators like KPMG, utilities can accelerate their journey, minimize implementation risks, and maximize the value created through the Energy Orchestrator model. This partnership can bring not only technological expertise, but also the deep change management capabilities needed to guide organizations through fundamental cultural transformation.

As tech companies continue to invest in private energy generation, climate challenges intensify, and customer expectations evolve, the imperative for transformation grows ever stronger. Utilities that embrace the Energy Orchestrator model, powered by SAP S/4HANA and enabled by experienced business integrators, will be well-positioned to thrive in this new energy landscape – creating value not just for themselves but for all participants in the energy ecosystem.

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References

[1] "130+ Best Digital Transformation Statistics for 2024 and Beyond," Templeton Recruitment, November 9, 2022.

[2] "SAP S/4HANA Utilities: How the transformation works," Natuvion, 2024

[3] Ibid.

[4] Ibid.

[5] Ibid.

[6] "HYPERLINK "https://community.sap.com/"SAP Community, HYPERLINK "https://pages.community.sap.com/topics"Topics, Utilities," SAP Community, 2025 Utilities | SAP Community. Retrieved from https://pages.community.sap.com/topics/utilities

[7] "ENGIE Seeks to Digitally Transform and Streamline Financial Processes Using SAP S/4HANA on AWS," AWS, 2025

[8] "Joule: The AI copilot, infused with agents, that amplifies employees' expertise and impact," SAP, 2025

[9] "Joule, SAP AI-copilot Available for SAP S/4HANA Cloud Public Edition in Early Adopter Care," SAP Community, 2024

[10] "Joule, the AI Copilot for SAP," SAP Community, 2025

[11] "The smart grid: How AI is powering today's energy technologies," SAP, July 24,

[12] "What generative AI can do for utilities," SAP, March 4, 2024

[13] "Joule: The AI copilot, infused with agents, that amplifies employees' expertise and impact," SAP, 2025

[14] Ibid.

[15] "SAP Knowledge Graph," IgniteSAP, October 24, 2024

[16] "Joule: The AI copilot, infused with agents, that amplifies employees' expertise and impact," SAP, 2025

[17] "Unleashing the power of SAP S/4HANA," KPMG, 2024

[18] "Joule, the AI Copilot for SAP," SAP Community, 2025

[19] "AI-Driven Digital Transformation Reshaping the Energy Sector: KPMG Report," Energetica India, March 4, 2025

[20] Ibid.

[21] "KPMG global tech report 2023: Energy sector insights," KPMG, January 2024

[22] "SAP S/4HANA Utilities: How the transformation works," Natuvion, 2024

[23] "130+ Best Digital Transformation Statistics for 2024 and Beyond," Templeton Recruitment, November 9, 2022

[24] "KPMG global tech report 2023: Energy sector insights," KPMG, January 2024

[25] "AI-Driven Digital Transformation Reshaping the Energy Sector: KPMG Report," Energetica India, March 4, 2025

[26] "130+ Best Digital Transformation Statistics for 2024 and Beyond," Templeton Recruitment, November 9, 2022

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