Utilities and ERP in the Experience Economy
Key Business Drivers in Utilities

68% of customers are willing to pay more for better service

90% of industry growth captured by companies that offer engaging experiences

>50% of organizations will rely on AI to drive supply chain transformation

**STRATEGIC PRIORITIES**

- **Smart Grid and Meters**
  - Management of asset health
  - Smart use of usage data
  - Efficient fulfillment

- **New Business Models**
  - Innovating with digital professional consumers and outcome-based offerings to create new value.

- **Agility**
  - Utility companies need agility by leveraging automation, artificial intelligence, machine learning, and connected ecosystems to create scale – without sacrificing efficiencies.

“Quickly adapting to change – foreseen and otherwise – is the critical, central capability for every organization.

**Systems and technology must be an enabler to this change, not an impediment.**

Simon Ellis, Program Vice President, IDC
Utilities Drive New Levels of Service and New Business Models

Utilities have greater insights across their infrastructure through smart sensors and meters. This has lead to the emergence of new business models and new billing relationships. They now take advantage of technology, artificial intelligence to manage fluctuations in demand and increase uninterrupted delivery assurance.

From ...

- Selling utility service
- Fluctuating demand managed by utility
- Reactive asset management
- Limited analytical capabilities

To ...

- Delivering outcomes
- Demand usage managed by consumer based on price
- Intelligent asset management based on usage
- Real- and full-time analytics
Traditional Processes Are No Longer Good Enough
Example: Predictive Maintenance and Service
Inspection report filed in batches / end of day, service tasks assigned based on asset engineering plan or individual inspector knowledge.

Delays in mitigating critical risks identified.

Inspection

Time-based scheduling, manual condition inspection required, unknown real-time risk profile.

Manually assign inspection resource to physically review asset, disconnected finance, asset management, and HR systems.

Inspection report filed in batches / end of day, service tasks assigned based on asset engineering plan or individual inspector knowledge.

Manual resource assignment, multiple documentation sources per asset, no optimization of cost, risk, and performance.

Perform maintenance

Challenges

Outcomes

Declining asset performance

Difficulty executing inspections on time

Delays in mitigating critical risks identified

Higher cost and risk, lower performing assets

Plan maintenance schedule

Assign inspection resources

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Enabling Better Customer Experiences in Utilities
Example: Intelligent Predictive Maintenance and Service
Key capabilities delivered

**Asset health monitoring**
- Real-time monitoring of sensor data
- Predictive analysis from SAP® Predictive Maintenance and Service
- Failure prediction and impact simulation

**Maintenance scheduling**
- Just-in-time triggering of maintenance orders
- Intelligent resource identification and assignment
- Real-time analysis of asset health

**Maintenance execution**
- Frequent MRP runs throughout the day quickly identify material shortages
- Demand-driven replenishment
- Intelligent material exception reporting
- Stock-in-transit arrival and delay prediction

Intelligent technology outcomes

Real-time monitoring and prediction reduces unplanned downtime

Just-in-time scheduling increases resource utilization

Integrated maintenance planning and execution reduces costs and optimizes asset performance

SAP S/4HANA® customers achieve

**44%** reduction in unplanned downtime

**28%** higher return on assets

**25%** increase in first-time fix rates
What Industry Leaders Are Doing Today

Examples
What Industry Leaders Are Doing Today
AES Corporation

Challenges
• Large number of distributed businesses located in various countries, all running their own ERP systems
• Need to improve the maintenance and support offering while reducing total cost of ownership (TCO)
• Desire to move forward with the latest technology trends, including machine learning

SAP S/4HANA Innovations
AES implemented SAP S/4HANA to enhance its ability to scale systems quickly and cope with increasing demand and user concurrency.

Benefits
• Reduced TCO
• Increased infrastructural performance
• Enhanced agility and opportunity to scale based on long-term demand trends

Utilities 10,500

Alejandro Reyes, Project Director IT, AES Corporation
Challenges
VINCI Energies provides intelligent solutions to the energy sector. Massive growth driven by acquisitions resulted in a wide variety of ERP systems. To sustain profitable growth, the company needed to unify its processes and data on a single digital core.

SAP S/4HANA Innovations
VINCI Energies migrated to SAP software solutions centered around SAP S/4HANA, drawing on a simplified data model using a single table and delivering in-memory performance. The company also created intuitive apps using SAP Cloud Platform and the SAP Fiori® user experience. Supported by a single digital core, the company is in great shape for further expansions.

Benefits
• 60x faster quarterly reporting
• Harmonized core business processes on a global scale, making them more reliable and improving visibility
• 660 companies with 1,800 business units integrated across 13 countries
• Increased operational efficiency

“We want to harness digitalization to run our business without limits and to be future-ready.”
Chief Information Officer, VINCI Energies
Energy provider giant Enel is one of the most technologically diversified companies operating in the global renewables sector. So when it came time to energize its financial closing operations, Enel turned to SAP S/4HANA running on SAP HANA® Enterprise Cloud. Now, processes that previously took days to finish are accomplished in a matter of hours.

**Challenges**
- Distributed ERP and data warehousing systems supporting 450 companies
- Inefficient reporting tools producing many unneeded reports
- Redundant manual checks
- Lack of transparency

**SAP S/4HANA Innovations**
Enel SpA implemented SAP S/4HANA to integrate and simplify processes and to harmonize data from several different systems and do so in a secure and flexible cloud environment.

**Benefits**
- Faster closing process
- 1 source system, down from 19
- 5 workdays for the closing process, down from 16
- Improved reconciliation process
- Harmonization of higher-quality data across regions and company departments
- Lower total cost of ownership through a simplified landscape

“In this fast-changing world, you have to innovate and digitalize or you can’t survive. We needed to do that for our closing process and reporting model, and that’s why we chose SAP S/4HANA for central finance foundation.”

Pasquale de Pascalis, Global Central Finance Project Manager, Enel SpA