

Digital Transformation in Utilities

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New Emerging Trends

Where to focus

- Smart Grid
- Smart Homes
- Connected Buildings
- Distributed Generation
- Energy Services
- Preventive Maintenance
- Digital Billing
- Digital Commerce

Where We Are

Challenges:

- The need to transform the way how energy is supplied is not yet a front-of-mind issue. [1]
- The costs to communicate and educate consumers, regulators and policymakers when undertaking capital projects will be significant and must be factored in. [1]
- The transformation of utilities to digital business requires CIOs to adopt an ambidextrous business posture, managing what *is* while embracing what's *new* through bimodal delivery. [2]

[1] Smart Grid Key Initiative Overview, Gartner

[2] Transforming Into a Digital Utility Primer, Gartner

Creating The Future

Scope of Work:

- Continue meeting societal obligations to deliver reliable energy, while addressing disruption driven by innovations at the edge of the grid.
- Adopt bimodal IT practices to expand the use of innovative technologies that enable digital business.
- Provide technologies that can help mitigate the disruptive consequences of distributed energy resources, especially consumer-owned renewable generation.
- Leverage digital engagement channels to exceed customer expectations and integrate prosumers in multisided markets.
- Prepare for new business models, such as a peer-to-peer energy exchange.

~ Transforming Into a Digital Utility Primer, Gartner



Architecting the
Utility of the Future



Technologies for Smart
Grid Transformation



Engaging Prosumers
With Digital Channels

Systems of
Innovation

Mode 2

Systems of
Differentiation



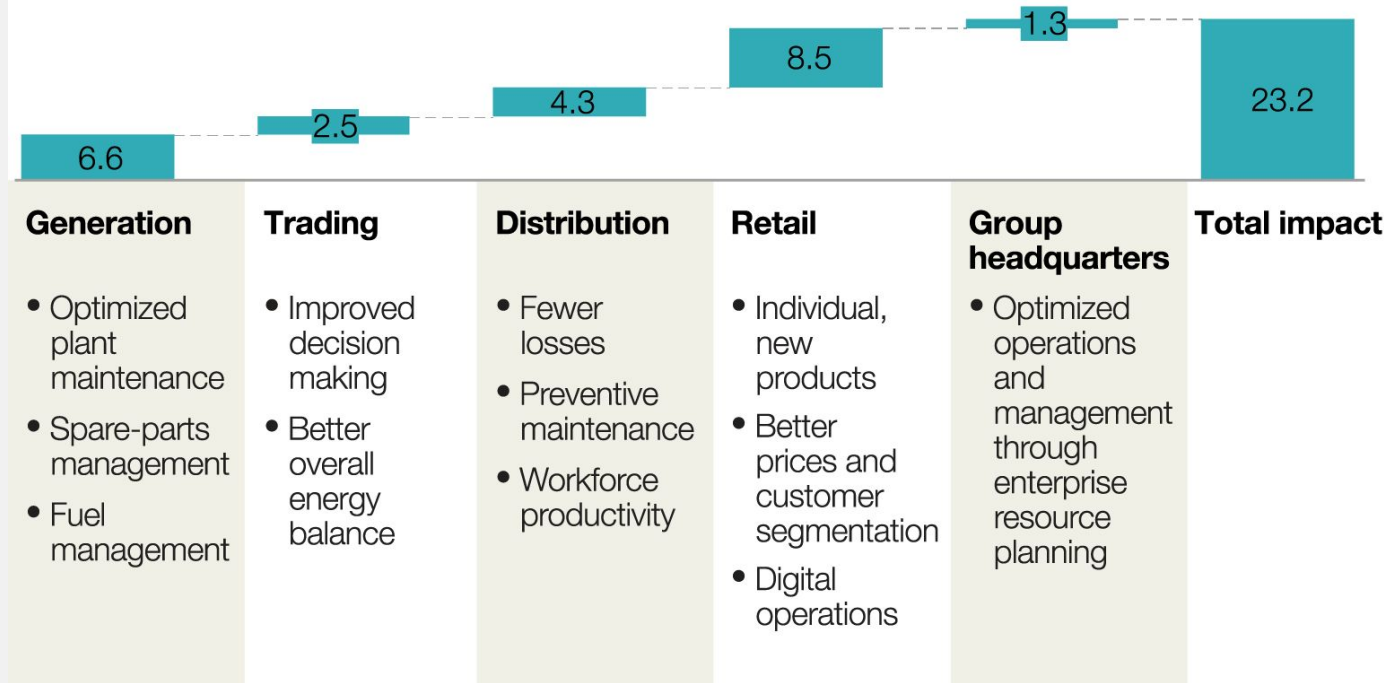
Systems of
Record

McKinsey

Where to focus

Digitization has demonstrable impact on utility earnings.

Improvement areas, case study, EBIT,¹ %



¹Earnings before interest and taxes.

TRANSFORMATIONAL INITIATIVES



DIGITAL ASSET MANAGEMENT

Optimize asset planning and investment functions; more effective use of information leveraging cloud-enabled advanced analytics to evaluate conditions and investments.



DIGITAL FIELD WORKER

Improve planning and scheduling, logistics optimization, more effective management of work requirements and customer notifications, and more efficiency in back office enabled by mobile solutions powered with analytics.



COMMERCIAL OPTIMIZATION

Integrate and optimize energy trading and production, by leveraging advanced analytics and modelling.



INTERACTIVE DEMAND OPTIMIZATION

Optimize demand response by integrating consumer technology and grid management and cloud-based analytic tools, with linkages to social media to drive engagement. More rigorous meter and device management, with solutions to support AMI deployment and operations leveraging analytics.



INTELLIGENT GRID OPERATIONS

Improve fault isolation and outage management, optimize voltage and power, and more effectively integrate distributed energy sources; use cloud-based analytics for real-time network management with mobile technologies to direct field operations and capture data; use mobile and social media tools to improve communications with consumers and workers, combined with analytics for better fault location.



DIGITAL ENTERPRISE SERVICES

Develop digital services to change the way support services are provided and managed and digitize people management processes (i.e., recruiting and people logistics).



DIGITAL ENERGY PRODUCTS & SERVICES

Extend the utility value proposition; sell and deliver new digitally enabled products and services related to energy generation, energy management and related premise services.



DIGITAL CONSUMER INTERACTION

Transform the customer interaction model to enable digital interaction spanning traditional channels, Web, mobile, social and connected home including omni-channel solutions and embedded customer analytics.

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