Next-Gen AMI

Unlocking the service, efficiency and security opportunities of a next-generation advanced metering infrastructure

What is Next-Gen AMI?

Next-Gen AMI is an integrated system of smart meters, communications applications and data management technologies that drive value for utilities and their stakeholders by enabling new services and increasing efficiency, preparedness, reliability and security.

Over the past two decades, Advanced Metering Infrastructure (AMI) has changed the face of the utility industry, eliminating or reducing manual meter readings, improving interval data capabilities and enabling two-way communication between electricity companies and consumers.

While these capabilities were groundbreaking at the time of deployment, many first-generation components now lack the digital and technological maturity needed to adequately address the challenges of the current business landscape.

Capgemini's Next-Gen AMI is a new service offering that helps utilities design, build and integrate an advanced metering system enabling AMI refresh and initial deployments. The offering incorporates smart metering, smart analytics and smart grid capabilities to drive organizational efficiency, enable new services and address a wide range of complex regulatory, environmental and security challenges.

Unlocking the benefits of Next-Gen AMI

Next generation AMI builds upon the original promise of the metering infrastructure. It incorporates data, advanced analytics and intelligent automation applications to further improve operational efficiency, including reduced costs for metering and billing, faster responses to outages and improved safety. The business benefits of the initial deployments focused on improving customer experience while Next-Gen AMI unlocks utility operations benefits.

This second wave deployment of AMI also enables a variety of new and valuable customer and stakeholder services, such as smart home energy management, load control, budget billing, usage alerts, outage notifications, and time-varying pricing. Finally, it serves as the foundation for business transformation and sustainability initiatives, including smart grid enablement, distributed energy resources (DER) and electric vehicle (EV) charging stations.

At a glance: The value of Next-Gen AMI

Utility benefits		Consumer benefits	
New services ⬆	Distributed Intelligence ⬆	Electricity bills ⬇	
Operational efficiency ⬆	Safety ⬆	Consumption ⬇	
Smart grid enablement ⬆	Digital Reliability ⬆	Awareness ⬆	
Digital transformation ⬆	Grid Modernization ⬆		

AMI 1.0 | Stakeholder's benefits perspective

Utility	Customer	City, District, Facility Manager, Aggregator
• Low value work automated • Improved power quality intelligence (voltage, lightning, etc.) • Performance improvement • Non Technical Losses reduction	• Monthly billing on real consumption data • Detailed information on the load curve • Power quality improvement • Improved distribution performance	• New rates and tariffs • Energy efficiency • Customer engagement

Next-Gen AMI | Stakeholder's benefits perspective

	Utility	Customer	City, District, Facility Manager, Aggregator
AMI Refresh	• Asset management • Enterprise transformation project and workers elevation • Innovation reduces cost		
Reliability	• Operations performance (outage detection)	• Next level distribution performance • Safety	• Power quality improvement, better resilience (outage detection and healing)
Grid Modernization	• Communication network in place • Smart Grids, DER, EV Charging foundations • DNO to DSO shift	• Smart grid enablement, green energy, energy transition	
Customer and Community	• New business models enablement, new tariffs	• New business models (appliances, demand response, EV's, etc.) • Energy consumption reduction • Potential new tariffs • Seamless moving process	• New business models (appliances, demand response, EV's, etc.) • Energy consumption reduction • Potential new tariffs • Seamless moving process
Distributed Intelligence	• Data insights • Digital Operations		• Aggregated data available for a territory, a function • Utility as an extended partner for Smart City

The Capgemini Solution: Next-Gen AMI

Capgemini AMI: By the Numbers

18 years' experience as a world system integration leader in AMI

170M smart meters deployed globally

11M smart meters operated annually

7 in 10 largest North American AMI implementations

75+ smart energy clients worldwide

Next-Gen AMI combines Capgemini's experience as a world system integration leader in AMI, our expansive and impressive ecosystem of industry and technology partners and our organization's deep business transformation expertise to help utilities create an AMI foundation that is scalable, flexible and capable of delivering value to all parties.

"We help our clients think about AMI not as a technology implementation but a transformational investment—one that drives value across all business dimensions," explains Victor Jimenez, Digital Solutions and Strategy, Global Next-Gen AMI Capability Leader. "By focusing on outcomes and value creation, we dramatically surpass the traditional metering process, helping businesses enable new services while also increasing efficiency, preparedness, reliability and security."

Our industry-leading approach to AMI unites the entire organization and drives value across all business dimensions:

- Governance
- Regulatory / Business cases
- Innovation talent
- Ecosystem scan
- Board Immersion
- Horizon model
- Funding model
- Roadmap
- Modern ways of working
- AIE / ASE
- Modernization of architecture
- Integration

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Victor Jimenez
Utilities Digital Solutions and Strategy, Global Next-Gen AMI Capability Leader
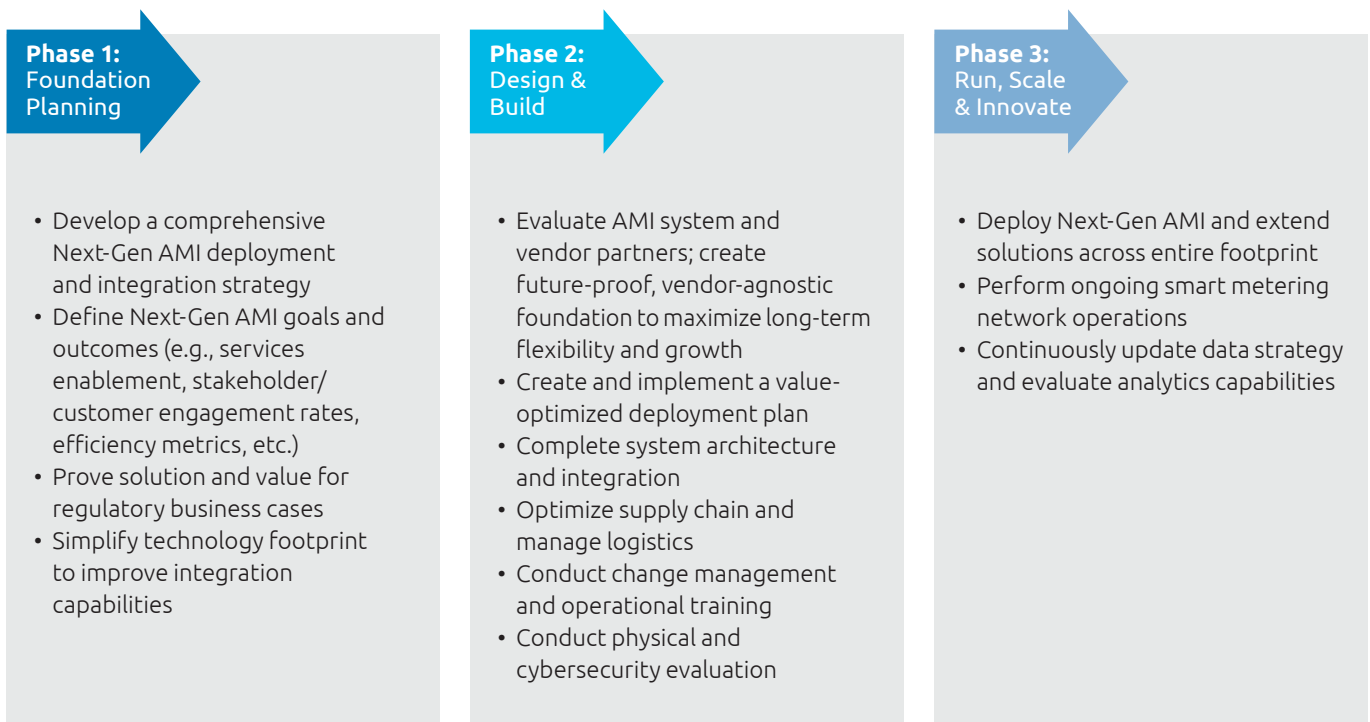
Our AMI Innovation Agenda: Powered by our Next-Gen Energy Services Platform

Capgemini's Next-Gen Energy Services Platform is a proven end-to-end integrated platform that manages the entire smart metering lifecycle—from program planning and meter rollout to material traceability, asset management and meter operations. Our Next-Gen Energy Services Platform combines the learning from deployment of millions of smart meters globally, capitalizing on nearly two decades of implementation experience.

Capgemini's AMI Services and Innovation Blueprint

We work with utilities at varying levels of maturity to deploy and operate a next generation AMI solution or migrate existing metering infrastructures to an advanced AMI framework. While every client's journey is unique, our multi-phase approach focuses on the following areas:

Phase 1:
Foundation Planning

- Develop a comprehensive Next-Gen AMI deployment and integration strategy
- Define Next-Gen AMI goals and outcomes (e.g., services enablement, stakeholder/customer engagement rates, efficiency metrics, etc.)
- Prove solution and value for regulatory business cases
- Simplify technology footprint to improve integration capabilities

Phase 2:
Design & Build

- Evaluate AMI system and vendor partners; create future-proof, vendor-agnostic foundation to maximize long-term flexibility and growth
- Create and implement a value-optimized deployment plan
- Complete system architecture and integration
- Optimize supply chain and manage logistics
- Conduct change management and operational training
- Conduct physical and cybersecurity evaluation

Phase 3:
Run, Scale & Innovate

- Deploy Next-Gen AMI and extend solutions across entire footprint
- Perform ongoing smart metering network operations
- Continuously update data strategy and evaluate analytics capabilities

Next-Gen AMI: The sustainable choice

Next-Gen AMI is one important component in utilities' transformation journey. A critical enabler of both the smart grid and renewable energy services, a next generation AMI helps energy organizations embrace new business models, transition to clean energy sources and otherwise improve the efficiency of the energy system. Further, in serving as a digital link between the utility and the consumer, this solution can help encourage people to lower their energy consumption, use service during off-peak hours and even shift to green energy sources.

Taken together, a next generation AMI helps create a more sustainable energy system—one that limits the environmental impact of energy consumption, increases the use of renewables, supports digital technology integration and encourages responsible behavior from consumers.

Ready to find out what Next-Gen AMI can do for your business?

Visit Capgemini.com to learn more about how your organization can take a value-driven approach to AMI.

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Capgemini is a global leader in consulting, digital transformation, technology and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. Today, it is a multicultural company of 270,000 team members in almost 50 countries. With Altran, the Group reported 2019 combined revenues of €17billion.

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People matter, results count.

Team Name_Date_Designer