
Positioning paper

Driving digital transformation for utilities

Trusted partner for your Digital Journey

Atos



Utilities at the crossroads

We live in what are both the most challenging and the most exciting times for utility companies.

Capital is at the root of the challenge. Even though utility companies continue to trade at a profit, the massive capital investment needed for major infrastructure projects can be hard to find. Reengineering existing environments for integration with new distributed models is both complex and costly and utilities also face a skills shortage as workers with heritage skills near retirement.

It's made even tougher in the face of threats from new entrants with aggressive customer engagement techniques - but without the historical burden of infrastructure ownership.

While utilities need to address this capital challenge, they also have the

opportunities presented by new commercial and operational models. Renewables have become central to new operating models, with the emergence of energy prosumers as a reality rather than a marketing construct.

New storage technologies are set to radically change an industry in which historically the product could generally only be consumed, but never stored.

These challenges and opportunities happen against a background of environmental awareness - pushed in part by a growing sense of responsibility and in part by regulation and global commitment at a governmental level.

As business technologists, we believe that your ability both to meet these challenges and seize the opportunities is inseparable from the process of digital transformation.

Digital transformation

Without a continual supply of electricity, gas and water, our world stops. But continuity and creativity must exist side-by-side. Just carry on as normal, and you inevitably face the erosion of both profit and profile: bold strategies are needed.

The need to balance continuity and innovation demands a "two-speed" or "multi-modal" approach. Every utility seeks to continually examine existing processes, boosting efficiency while reducing cost and risk. In parallel, the pressure is on to continually identify entirely new fields of business - to create new and differentiating value.

Think about digital transformation in utilities from four key perspectives...



Customer Experience

When customers typically spend less than ten minutes a year in contact with their service provider, how can enhanced online relationships change that?

New services must resonate with the way that your customers live, and that means being in tune with digital lifestyles. This becomes key to **sustainable customer engagement** for both consumer and commercial clients. As smart homes and workplaces become the norm, utilities will also strengthen relationships with third parties in pursuit of new business opportunities. You must be able to harvest customer data as the inspiration and raw material for new services and partnerships.



Business Reinvention

Water, gas and electricity are commodities. Can new partnerships, for example, with white goods and building technology specialists, raise your value?

You will form new partnerships with enterprises as diverse as white goods manufacturers and insurance companies. You will create new collaborative services which demand **new business models**. The ability to share data with customer consent and in compliance with regulation now becomes key to success.



Operational Excellence

How can you boost productivity and reduce costs across a widely distributed infrastructure and workforce without compromising standards?

Every utility company works continually to improve processes and resource organization for greater quality and reduced cost. As you create new services and adopt new models, distributed and real-time analytics become central in the drive for **operational optimization**.



Trust & Compliance

Not only is your utility part of society's essential infrastructure - you hold millions of privileged client records too. How do you ensure full physical and cyber security?

As you make data-driven customer services the foundation of new business initiatives, security and privacy become critical. A sustained focus on **trust and compliance** is a prerequisite of success in building new customer relationships and innovative business partnerships.

Value creation is data-driven

As you look at all four perspectives of your digital transformation - one common theme stands out. For a utility company to move beyond commodity supply, it needs to add value - and to become value-driven, it must become data-driven.

As providers of continual and essential services, utility companies have always relied on hard data. From electricity providers needing to measure and forecast demand and consumption to the water companies where treatment and purification require constant measurement.

What has changed?

It's the volume, the availability and the timeliness of data today which makes it the key to bold digital transformation. Utilities will

integrate data not only from previously siloed sources, but will increasingly need to combine internal and external third party, open and public domain data sources. Whether considering advances in leak-detection in water networks, in the immediacy and accuracy of usage information from smart meters, or in work scheduling for field service teams - data is flowing like never before.

This is good news for utilities. While the staggering cost of major infrastructure projects remains an enduring challenge, the

ability to create new business value and to drive operational efficiency through digital transformation is comparatively low cost - and certainly high return.

(In recent fraud detection trials using data analytics, for example, Atos has helped a utility company increase the hit rate of its fraud detection teams from 5% to 30%.)

Strategic partnerships for digital transformation

As business technologists with a special focus on utilities, Atos is involved in hundreds of projects, each requiring specialist industry and IT knowledge.

These are wide-ranging in scope, covering the entire value chain. They span areas as diverse as training simulators for nuclear control and power trading systems, to consumer energy education and control dashboards.

But for us to make the greatest contribution to your business success, it's time to think beyond the project. It's time to take a wider

strategic view of what digital transformation means for you both in terms of gaining the maximum efficiency in your current operations and in exploring entirely new areas of business opportunity.

As your partner in digital transformation, Atos will ensure that three things happen:

1. Digital strategy

Working with you to craft a comprehensive digital strategy, which establishes a framework for the years ahead and helps identify shorter-term tactical opportunities.

2. Actionable model

Ensuring that the proposed business and technology models are secure, practical and affordable. Specifically, we will design to avoid major capital expenditure.

3. Accelerated adoption

Utilities have traditionally operated on longer cycles than those in many other sectors. In digital transformation, this needs to change. In implementing your strategy, being first to market counts. At the same time, it is essential to sustain continuity through continued attention to heritage systems and processes.

Beyond Electricity

Although the focus of this paper is very much on electricity, Atos is equally involved in the delivery of digital transformation services in water and waste management, and in the domestic and industrial provision of gas services.

In water and waste, we are particularly interested in taking a fresh view of the combined water cycle, breaking down the operational

barriers that have traditionally existed between the provision of potable water and the corresponding treatment of waste.

Innovation through the Internet-of-Things is also radically refining automation in water treatment plants, reducing both the cost of purification and its environmental impact.



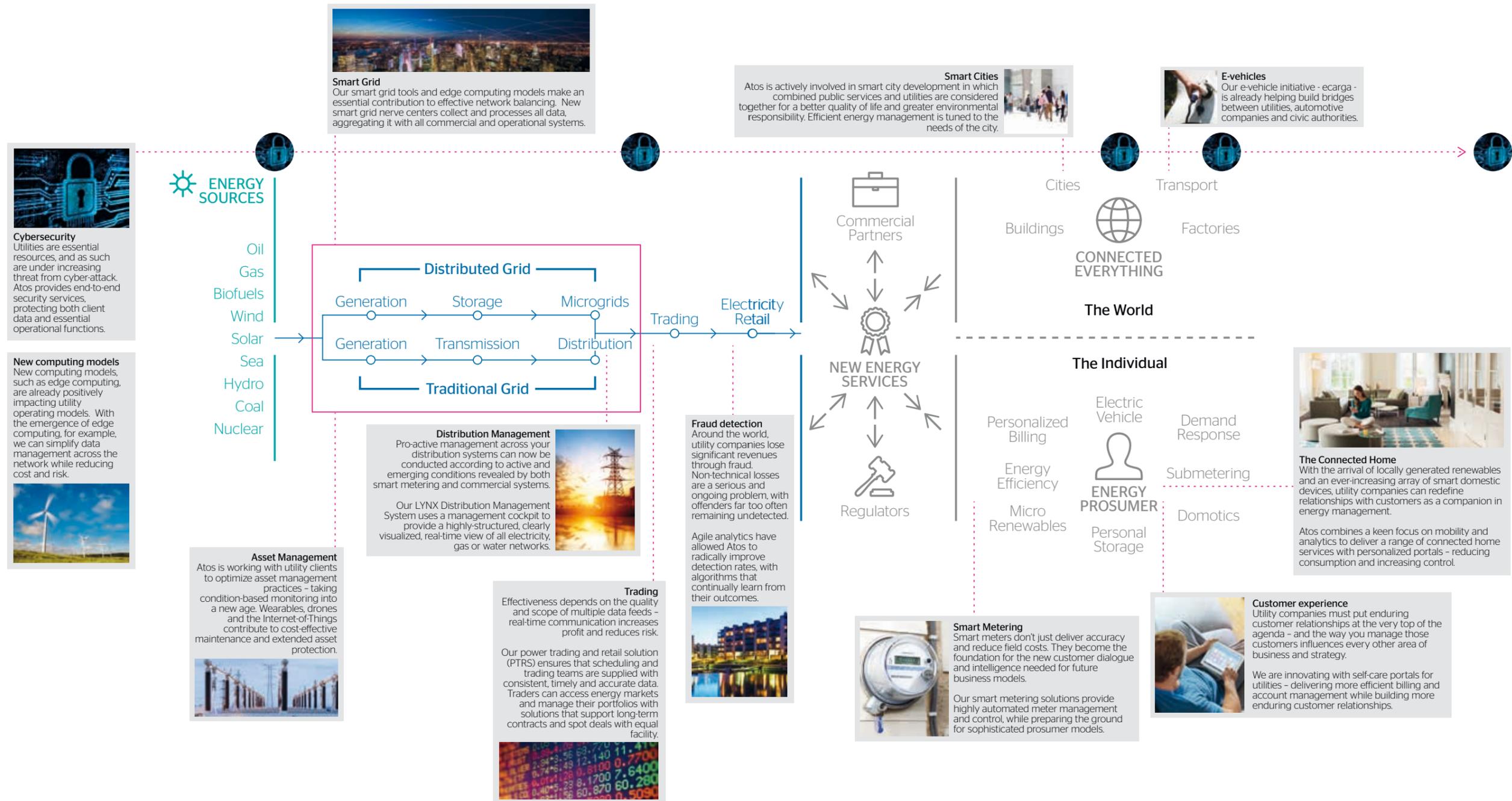
Spanning the value chain

As your partner in digital transformation, Atos builds on experience that spans the utility value chain as it evolves from the static centralized model of the past to the dynamic and decentralized model that shapes the industry today.

In this newly extended and decentralized value chain, utilities and their customers develop increasingly personalized relationships as the role of the energy prosumer emerges.

At an enterprise level, we also see relationships becoming more involved, more proactive and more focused on reciprocal benefit. This is true across all enterprise relationships, in manufacturing and retail, in transport and in civil contracts. In short, utilities now become active contributors in a world in which everything is connected.

The specialist Atos utility team is engaged in contracts and initiatives which span this newly extended value chain.



Innovation and continuity

New decentralized distribution models, revolutions in storage and increasingly sophisticated customers are radically changing the utility landscape. But that doesn't mean a radical break with heritage IT practices and systems.

Naturally and rightly risk-averse, all established utility companies are heavily reliant on existing business and operational systems. In every stage of the value chain, you depend on your networks, on your datacenters, on generic business and industry-specific applications.

The CIO team is under continual pressure to reduce cost and boost efficiency across the IT landscape without compromising on security, performance or availability.

Here too, there are serious opportunities for innovation. Improvements in core IT infrastructure and delivery do not make the industry headlines like connected home or electric vehicle initiatives - but they are just as important.

As cloud delivery models come to be accepted, for example, utility companies find not only that they can make savings of 30% and more in infrastructure costs. They are also gaining in unprecedented levels of agility and scalability.

The implications of new models for core IT service delivery go much further. Many of the business innovations you seek to introduce can only be delivered with new approaches to development and management.

Take, for example, application development. The traditional sequence by which new applications were commissioned, written, tested, reviewed and certified, rolled-out and managed no longer gives the required agility. In adopting DevOps, utilities can now condense this extended cycle, ensuring that extended integration testing and ongoing management are actively designed into the process.

Atos Codex - delivering business insight for utilities

Analytics are particularly closely linked to the search for new value in the utilities business. Whether you are working with a local consortium of community renewable producers, anticipating demand in the face of exceptional events, or developing new applications in partnership with third parties, analytics will play a central role.

Atos Codex provides a complete portfolio of analytics services and solutions - from consultancy through to analytics-as-a-service.

We have put business use cases at the core of Atos Codex, ensuring

that we can use every engagement as an opportunity to promote best practice and accelerate the delivery of business value.

Utility use cases already include fraud detection and the connected home with special focus on distributed analytics for water leakage analysis.

Atos data scientists will work with you to identify opportunity and create analytical algorithms. Through the Atos company Bull, we provide access to the high-performance computing platforms needed to generate rapid and actionable results.

Why Atos?

Atos has over 30 years' experience in serving the world's energy and utilities companies. Today, Atos has around 3,000 specialists in these sectors, working to ensure that our company skills remain focused and relevant to the specific operational and commercial demands of our clients.

We also have a dedicated solutions company, Atos Worldgrid, with some 1,600 specialists dedicated to solutions design and implementation for the energy and utilities sectors.

Many of the world's foremost energy and utility companies work with Atos.

We have an ecosystem of strong partnerships with leading technology and engineering companies. These include EMC, Microsoft, Oracle, SAP and VMware on the technology side and, most notably, Siemens on the engineering side.

In research and development, the Atos Scientific Community has a dedicated team of utility specialists, with a special focus on analytics and grid management.

Looking forwards

Electricity, gas and water companies have all too often been regarded as commodity service providers in the past.

This has already changed beyond recognition; in part because of deregulation; in part because of radical changes in renewables; and in part because of changes in customer behavior and expectation.

Growing governmental commitment to the global challenges of climate change also continue to influence attitude and behavior.

Atos is eager to work with you as an expert partner in the digital transformation that mirrors these operational, commercial, political and social changes.

We are particularly keen to explore and facilitate new partnerships. We believe that these are key to changing roles and responsibilities in the utility sectors. We are already working, for example, on smart city initiatives with teams composed of experts from utilities, civic authorities and technology companies.

We are not academics. We enjoy doing things rather than just talking about them, and we emphasize the value of working through proofs-of-concept and prototype.

Innovation workshops in one of our network of Business Technology Innovation Centers are a great place to start.

Make us the trusted partner for your Digital Journey.



About Atos

Atos SE (Societas Europaea) is a leader in digital services with pro forma annual revenue of circa € 12 billion and circa 100,000 employees in 72 countries. Serving a global client base, the Group provides Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Cyber-security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry. With its deep technology expertise and industry knowledge, the Group works with clients across different business sectors: Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and Transportation.

Atos Worldgrid, an international subsidiary of Atos, is a unique player in smart energy. With over 1,600 engineers and over 35 years' experience, Atos Worldgrid operates in more than 15 countries. It has in particular equipped 70 nuclear power units with its Supervision and Command & Control software in France, UK, Russia and China and delivered the world's largest smart metering system.

Find out more about us

atos.net

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Let's start a discussion together



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