

Enabling the Journey of Future Utilities

Towards *Energy*^{2.0}
Thought Paper Series: Future Utilities



Enabling Future Utilities

Precis

- > As the energy sector catches up with the digital revolution it will be increasingly disrupted by new technology and service innovation. The traditional sector is evolving to incorporate new technologies with a wide range of future value available to help customers in their use of energy
- > Future Utilities will create an enabling roadmap of value introduction that is simple, phased and abstracts all the complexity from the customer. Choices made today will enable future competition in *Energy^{2.0}* or leave energy suppliers vulnerable to disruption stuck in the dumb meter, unconnected market of *Energy^{1.0}*.
- > Compliance, competition and innovation will be combined to build scalable, agile service organisations leveraging best of breed integration capabilities that enable dynamic integrated customer and market competition.
- > From the smart metering Data Communications Company (DCC) through an expanding range of industry programmes the needs of compliance as a real-time, quality certified hub of cloud based operations is a new core required capability.
- > Orientating from today's capabilities towards those that are vital competitive enablers of the future utility is a key step to start now. New technology and services are competitive to each other and are ahead of standards to make them work together, so need to be integrated into the new service capabilities.
- > Integration of these separate new areas of value enables discovery of actionable intelligence, automated optimisation and the most efficient position for customers in their energy use.
- > New concepts such as 'Smart Cities', 'Smart Grids' and the 'Internet of Things' become real when energy is part of the connected world and focused to deliver trust, benefit and empowerment in energy over time. Utiligroup has created an open framework of process, capabilities, partners, integration and strategic roadmap that enables clients to evolve from the market today towards *Energy^{2.0}*.

Learn more about Utiligroup, its enablement of competitive growth at scale and the Towards *Energy^{2.0}* strategy...

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As the energy sector goes digital it creates a basis for continuous innovation disruption

Our world is changing quickly as the possibilities of wireless internet connectivity starts to enable new business models and disruptive innovation. There has also been a revolution in manufacturing that enables smaller, faster, ever cheaper communications that can be incorporated into both industrial and consumer devices. The energy industry has been one of the last to become connected but now the communications revolution is becoming part of all business, opening new opportunities and challenging traditional delivery models. From computers and phones we are onto the next phase of distributed renewable generation, LED lighting and smart meters. In competitive markets the companies who embrace the concept of disruption to create new consumer value create a customer relationship that is aligned with how we live today.

Once markets are digitally enabled they transform and are disrupted ever more quickly as new entrants and innovators are encouraged into the sector, they secure the first customers and make disruptive models 'a new normal'. We can observe this in the transformation of retail, particularly clothing where the normal now is to buy on the internet first or taxis where Uber is progressively rolling out. At first this disruption is small and receives scepticism from incumbents, but the new empowerment offered to the customer is compelling and other providers adopt their own version of the new value over time.

Central markets and government regulatory frameworks then have to catch-up and turn initial disruptive value into a competitive level playing field, interoperable markets and mainstream value all customers can trust. This is a constant iterative cycle, before even the first wave of innovation is adopted into the mainstream, the next waves are being introduced. In the energy sector we can see, that before smart meters are rolled out to everyone the possibility of smart homes, energy storage, electric vehicles are all being promoted and first stages of adoption are happening.



In the UK Utiligroup is helping to enable a better energy market delivering tangible benefits to customers and now delivers managed services, software and data analytics to more than thirty independent energy suppliers, their meter agents and best of breed delivery partners. The new entrant Suppliers are able to overcome the inherent complexity of a fully competitive energy market working collaboratively with Utiligroup and innovating in areas such as customer aligned offers, collective switching, community energy and Pay as You Go to take more than 15% of the market with rapid continued growth. In our previous thought leadership paper we entitled this change as part of a wider journey of sector transformation 'Towards *Energy^{2.0}*'. This is our strategic focus, to further enable those organisations providing services to end customers to innovate and extend their disruptive value to meet the needs of our society in its use of energy

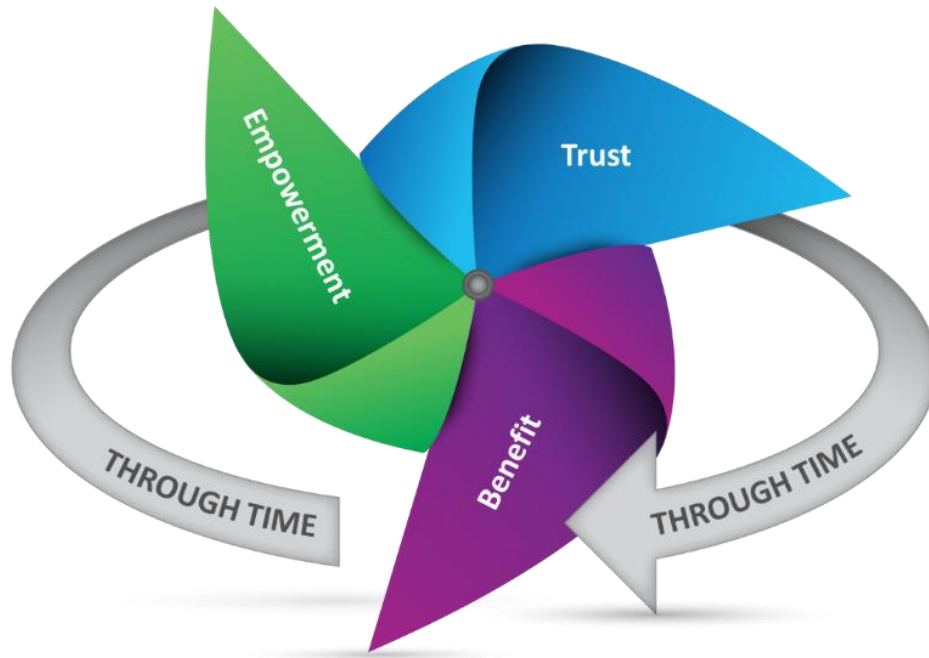


The next phase of innovation is to make the emerging disruptive technology and service potential simple for customers so that they can increasingly understand, choose, manage and evolve their energy use without complexity. In forming new capabilities, they must comply with the incrementally evolving, physical energy delivery world of Energy^{1.0} and marry this with the ongoing waves of innovation converted into resilient services that are emerging in Energy^{2.0}. In addition, delivering excellence for their customers today and meeting near term industry change needs, the balancing of evolving compliance, customer expectation and disruptive innovation into a new journey of customer value is the next competitive frontier. We have focused initially on our 6 for '16 programme of industry changes for project Nexus, smart metering DCC, smart customers, faster switching, half hourly settlement and water competition that provide the foundation value upon which next generation competition will be built. Each of these is profoundly important and has substantial compliance, quality, scale and market readiness requirements that will define the ability to compete in the new market.

Managing the customer effectively in the new market requires industry leading capabilities, compliance and best practice in all these key areas. Without these aspects in place energy Suppliers are effectively at a competitive dead end stuck in the old dumb, unconnected world of Energy^{1.0}, so confirming the right partners and solutions today creates the basis to build upon, integrate and analyse data to create automated actionable intelligence. If an energy Supplier is stuck or delayed in Energy^{1.0} without the right certified capabilities, industry compliance and data utilisation they are vulnerable to disruption by their peers or further new entrants. All competitive energy Suppliers are at risk to this vulnerability including those who entered the sector after the traditional large incumbents with a further wave of competitors either as Suppliers or Energy Service Companies (known as ESCos).

Proactively embracing disruption and innovation places the energy Supplier at the competitive edge, driving not responding to leadership in introducing new customer value. In the UK energy market, the switching of customers has grown to record high levels as they choose new suppliers, better prices, simpler engagement and services customised to fit their requirements. This is an encouraging start but no business wants to rely on short term annual switching to build long term customer focused value and so an evolution to customer retention on the basis of being useful now and in the future, will create what we call a 'future utility'. In our engagement with Supplier entrant customers, and through our research into customer behavior, we have identified four key components that enable the new journey of value to be of benefit to the customer when introduced in the right, simple and staged way.

We call the next wave of evolving value of future utilities **Customer^{4D}** which is the concept of securing and maintaining *Trust*, delivering tangible *Benefit* in a way that offers *Empowerment* that evolves over *Time* to reflect changes in society, expectation, the sector and technology.



Greater trust moves from a short term, price based relationship to one which a mandate for longer term value to be realised in partnership, where the customer becomes part of the service relationship. This starts with operating properly at scale today, providing excellence consistently, enabling understanding of energy and explaining its evolution to the benefit of the customer. Building benefit turns the trust into real return of value to the customer, starting with cost saving and evolving through loyalty bonus, rewards and new services. Empowerment deepens understanding of energy around efficiency, reduction and avoidance through the use of data in a simple and modern way for the customer. From there concepts such as Time of Use Tariffs, energy storage, load disaggregation to see consumption by appliance, embedded generation, flexible demand shifting, local energy sharing and others can be introduced over time to help the customer reduce their cost and work in partnership with their provider. New energy companies do not have the historical revenue dependency to protect elements that present a difficult conflict of interest and cultural transition, so have an opportunity to build a blended service business based on a commitment to customer best value from the earliest stages of their journey together.

Trust, Benefit and Empowerment evolving over time becomes a new set of criteria that the future utility can orientate towards, together with creating capabilities and a service culture that underpins this focus. Considering whether value offered to customers today and in future meets this criterion helps to ensure its usefulness to them. It also helps show when old service models no longer meet the criteria. The journey from today to deliver full long-term value in the future must be made simple, staged and without adding to the considerations of the customer. It is therefore vital to further evolve competitively and introduce new value, in a staged way to be differentiated, build retention and be customer aligned on an enduring basis.

[Digital connectivity enables dynamic market integration with a competitive need to optimise energy positions commercially across their sources, markets and customers](#)

There is a potentially complex energy service landscape emerging that leverages real-time connectivity and dynamic central services for Smart Metering, Faster Switching, Half Hourly Settlement and many more such as the important evolution of the Priority Services Register led by OFGEM to protect vulnerable consumers. Engagement in, and compliance with these programmes is pivotal so that they can be used to further extend competitive leadership. For example, through dynamic tariffs that respond to customer demands and available generation, offering rewards to customers for flexibility and being able to reconcile the customer value offered with the market financial settlement of the position.

In order to achieve the optimal cost point, secure the most revenue, share the benefit of this with customers and avoid exposure to volatile markets in a digitally connected world, the new future utility needs to optimise in real-time across their sources of energy, wholesale markets, settlement, central processes and services.



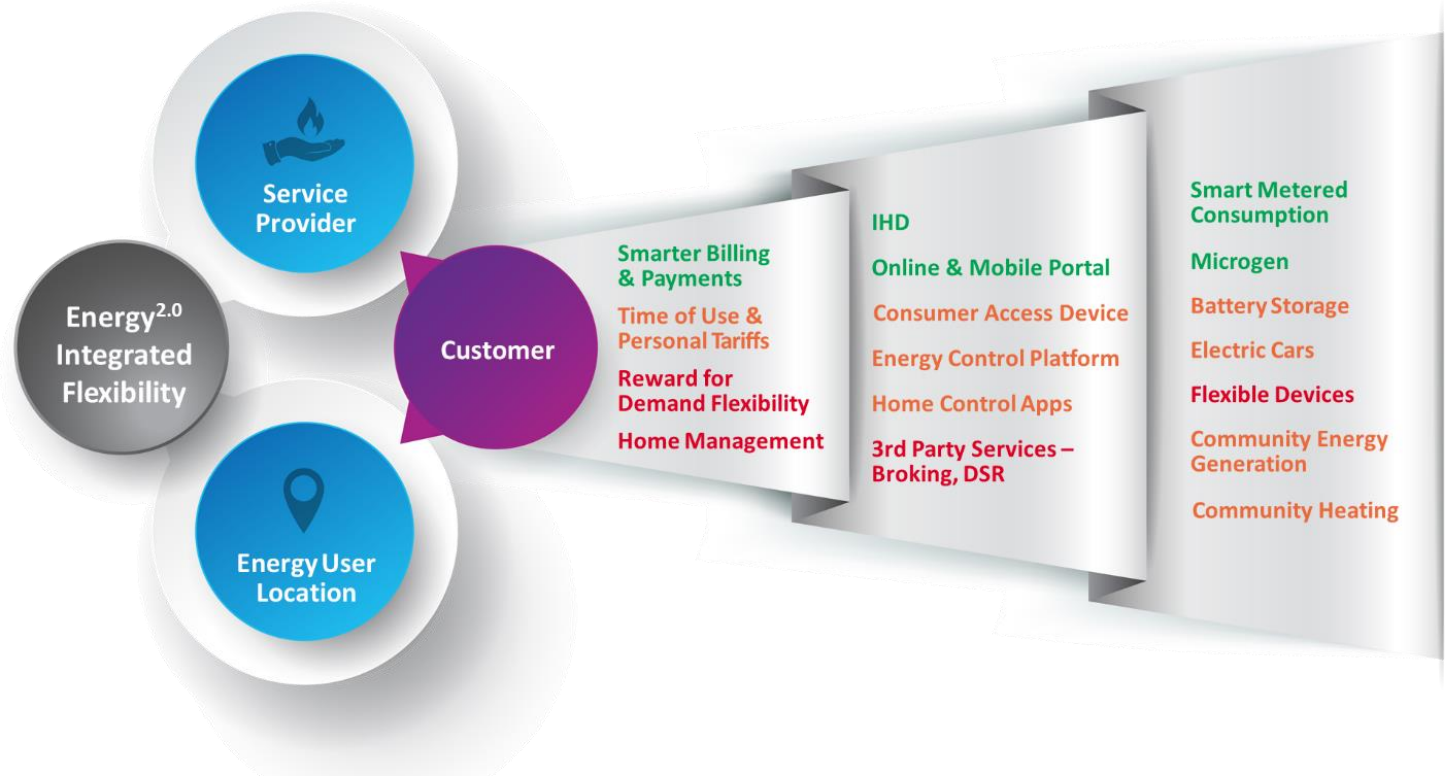
To be at the leading edge of competition, UK energy Suppliers will combine their customer focus with the ability to optimise their market positions and flexibility in real-time. Flexibility presents the ability to integrate the customer demand, the wholesale trading and production positions, both nationally and locally, to optimise the consumption that secures the lowest cost base that underpins customer competitive pricing. Flexibility enables both adaptation and risk mitigation to short term wholesale price spikes but also the ability to innovate on behalf of customers to help them reduce their own demand and minimise their need for supplied energy over time.

In an energy market where available generation is unlikely to have large surplus and a great mix of potentially intermittent renewables, such flexibility becomes of increasing importance. There are many global or UK new entrants and large companies engaging at the start of this dynamic market interaction that optimises on the basis of flexibility. As such while extensive preparation on this may not be needed yet, orientating towards it and ensuring agility of capability to mobilise and utilise data most effectively as these techniques become mainstream areas of leading competitive capability is key to a suppliers' future success. This is where 'Smart City' engagement in local energy eco-systems and the use of connected devices at home and work, to manage energy in the 'Internet of Things' becomes real as part of how we manage our energy and essential services in the future. As shown in the diagram above the future utility will be able to join up these activities most effectively and deliver real customer usefulness without them ever needing to get involved in the latest industry trends.

These industry facing competitive capabilities will be integrated with the customer facing value that is introduced to help deliver the trust, benefit and empowerment emerging over time. There are a range of overlapping potential areas of new value from multiple providers. These range from global corporates, new technology entrants in the UK to academic spin-outs and start-ups. Integrating the value over time into an organic roadmap of interoperable services is key to ensure customer simplicity and continued competitive agility.

Orientating to create simple customer value growth combined with market agility enables competitive evolution

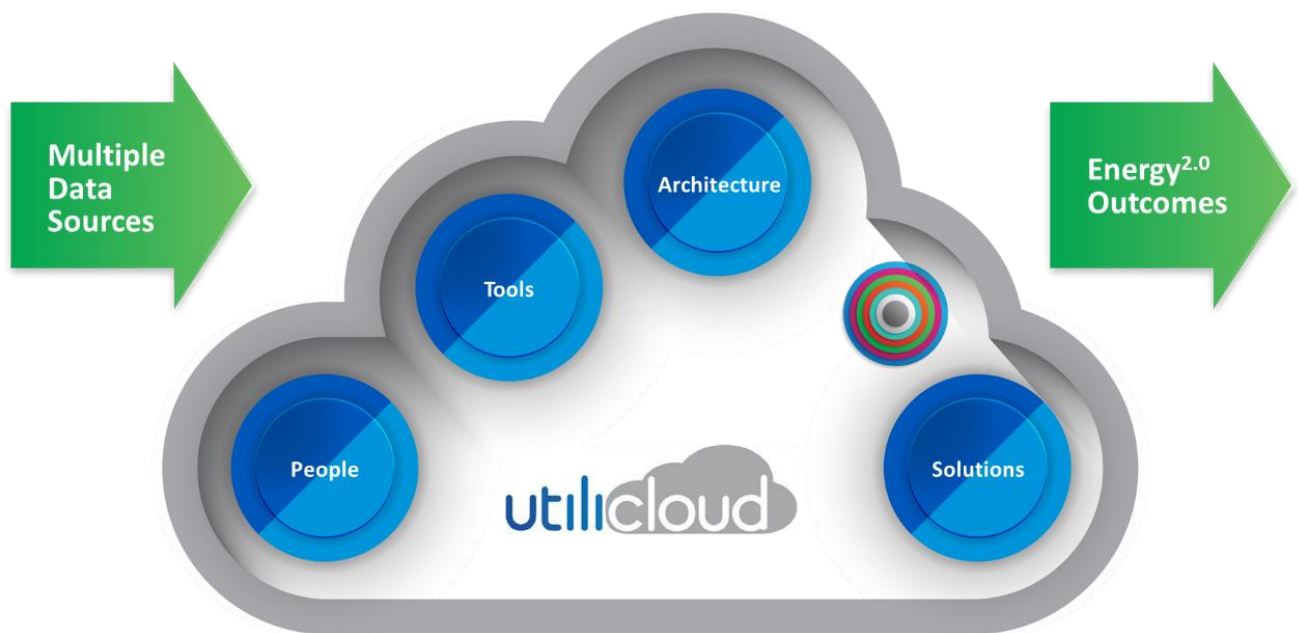
The new value mixes industry compliance with disruptive new technology emerging ahead of UK or global standards. The need then is to combine this on the basis of trust and to prevent making it hard for the customer to receive benefits and feel empowered. It is difficult for organisations focusing totally on customers, responding competitively to bring all these capabilities together, so next we set ourselves to facing the mission of considering how we can help enable the journey of services, capability and agile operations in the future energy market.



To enable customer service evolution and early disruptive innovation, combined into a customer journey of value growing over time requires a new service oriented incubation, integration and delivery approach. To help our growing client base continue to lead competitively and innovate confidently we have completed our integrated value framework first with multi-technology underpinned Data Analytics applied to today's Settlement, Revenue Assurance, customer and competitive sensitivity. We have created our new [LivingLab](#) and extended our [UtiliCloud](#) capabilities to incubate and integrate this value and build a 'Data as a Service' future delivered at scale, resiliently and interoperably.

Our [UtiliCloud](#) capabilities build upon our ISO9001 and ISO27001 certifications to provide the disciplines and confidence needed to deliver future services reflecting the requirements of data handling, quality, privacy and information security. [UtiliCloud](#) enables the benefits of shared private and secure infrastructure without upfront investment by clients balanced with a way of having their own competitive distinction and services. This enables shared efficiency in non-competitive areas of operational requirement and the use of data analytics and data services on a discrete competitive basis.

Through [UtiliCloud](#) we can abstract our innovative Supplier clients from the complexity and variability across multiple discrete technology, data and device platforms, enable secure interaction and use embedded Data Analytics with our clients to drive further customer insight, position optimisation, market competitiveness and proposition adoption. Utiligroup works collaboratively with its clients, academic bodies, wider smart energy value providers, traders and infrastructure providers to create the relationships, intelligence and agile delivery eco-systems that will further transform the energy market and its value for everyone as energy citizens.



As part of our new strategy we created a structured engagement process used to coordinate our collaborative work with innovative energy Suppliers, best of breed, scalable energy sector delivery partners and emerging new value providers. Together we are focusing on a shared mission to help enable future compliance, growth and competitiveness to expanding customer value across trust, benefit and empowerment in today's market and then onwards *Towards Energy^{2.0}*.

Commencing the journey to catalyse the next stage of change, deliver its customer benefits in energy and converging these benefits across their wider essential services

Our new Innovation area of the website and outreach programme across industry, partners, new value providers and social media provide a hub for this new solution focus. The race is on to secure the long term customer relationships and help them optimise their energy use over time, in a world of ever growing device usage and the always-on internet.

We are committed to ensure our clients are at the leading edge of competition, optimised across their whole value chain, leveraging expertise at the highest level in each area of their business and using the data in real-time to lead the next wave of competition. All of this matters because energy is the vital enabler of our lives, our society, community and relationships. It is profoundly important to help us live the life we aspire to, at a cost point that helps us realise the full potential each of us has. Waiting is not an option, the future is already here. Working together we can start to deliver *Energy^{2.0}* and create tomorrow's energy market today.



To learn more about Utiligroup's *Towards Energy^{2.0}* strategy, new capabilities and to explore working together collaborative please go to: <http://www.utiligroup.com/innovation/> or contact mark.coyle@utiligroup.com.



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