

# Modernising Energy Governance (Part 2)

---

Investing in the Future

## WITHIN THIS PAPER:

1. We place the 'consumer' at the heart of the energy market;
2. We explore the power of data, digitalisation and technology;
3. We set out a Target Operating Model (TOM) focusing on improved governance of the retail energy market;
4. We explore risk-based decision making under the TOM;
5. We consider how to build a new future;
6. We highlight the challenges and the next steps, with the Retail Energy Code acting as the catalyst for change.

This paper follows our first thought leadership paper in which we make the case for change, 'Modernising Energy Governance - A Golden Opportunity'<sup>1</sup>. In Part 3, we shall explore how we might transition to a new future.

Please get involved and let us have your thoughts. You can contact us at [strategy@gemserv.com](mailto:strategy@gemserv.com)

## INTRODUCTION: CHALLENGING THE STATUS QUO

Within Part 1 of our 'Modernising Energy Governance' thought leadership series, we highlighted the need to break free from the regulatory and governance straitjacket that is hampering energy market transformation. We posited that, unless there is fundamental regulatory and governance reform, we will continue to layer increasing regulation and governance on top of legacy market practices, simply to try and keep pace with the changes that are already underway. The growth of sandboxes to aid innovators and new businesses to challenge the existing rules, whilst welcome and helpful, simply serve to highlight the difficulties we face.

We suggested moving beyond simply asking what needs to change and why, to considering what would happen if the market was re-designed from scratch, free from the constraints of today.

In July 2018, Gemserv held its second 'Innovation Forum' breakfast meeting. Industry stakeholders joined us to explore a potential future energy governance model, providing valuable inputs. It was a lively session, with representatives commenting on:

- How best to balance investor and consumer needs;
- Whether our ideas are too retail focused;
- That current codes and panels are protectionist and create barriers; and
- When forging a new way, we should not be afraid to challenge the status quo.

Digitalisation has the potential to reshape the traditional boundaries between supply and demand, building new methods and practices within new architectures that connect energy systems. In Part 2 of our thought leadership series, we embrace a Digital, Artificial Intelligence (AI) future. Powered by data, a proposed Target Operating Model (TOM) provides a single gateway or portal to the energy market for all participants. In doing so we:

- Place the consumer at its heart;
- Support the needs of competition;
- Underpin market interoperability;
- Liberate the development of new products and services;
- Radically simplify governance exposure for new and existing businesses; and
- Ensure that key strategic issues such as market integrity and security of supply are not lost.

<sup>1</sup> Gemserv, July 2018, Modernising Energy Governance – A Golden Opportunity, <https://www.gemserv.com/modernising-energy-governance-a-golden-opportunity/>

## OUR IDEAS AT A GLANCE:

### CURRENT STATE

- Consumers lack empowerment
- Licence application / registration
- All businesses exposed to disproportionate rules
- Sign up to multiple energy codes
- Multiple market access points
- Licence and code risk assurance methods (largely tick box)
- Panels and / or sub groups make change decisions
- Analogue change management practices
- Fractionalised data access
- Innovation dealt with on a case-by-case basis (via rule changes)
- Multiple help desks

### FUTURE STATE (TOM)

- Consumer Hub & feedback loops
- Super Registration / self-service
- Proportionate, targeted rules based on market risk
- No signing or accession to codes
- Single market access point
- Market Risk Assurance Model
- No panels or sub-groups make decisions on change
- Digital change management practices
- Big Data principle, single gateway access
- Innovation route to market via dynamic rules
- Digital self-help services

## THE CONSUMER:

### A MATTER OF TRUST

Consumer complaints across the energy sector do not paint a healthy picture. Despite the overall number of complaints that end up with Ombudsmen decreasing within the last year, those for the energy sector increased, overtaking the number of complaints for the telecoms sector for the first time<sup>2</sup>. Consumer trust is also in short supply for energy, perhaps not surprisingly, given that energy is ranked as one of the weakest performing markets for service<sup>3</sup>.

**Nearly three in 10 (28%) consumers say they trust businesses less now than they did three years ago, with two thirds (62%) pointing to bad customer service as the cause.**

Ombudsman Services, March 2018, Consumer Action Monitor<sup>4</sup>

The matter of trust is key, particularly as consumers engage more extensively with a digital, connected economy, one that will hopefully create a wealth of new energy products and services. The challenge is ably expressed by the International Energy Agency (IEA) which reported that, by 2040, 1 billion households and 11 billion smart appliances worldwide could be actively participating in how consumers use electricity<sup>5</sup>.

So how do we deliver benefits to all consumers whether 'market engaged', 'market disengaged' or 'vulnerable'? We need to ask ourselves, what does it really mean to place the consumer at the heart of the energy market? Where should we look for insight and understanding?

<sup>2</sup> Ombudsmen Services, Consumer Action Monitor, March 2018, p.6, <https://www.ombudsman-services.org/for-consumers/consumer-action-monitor>

<sup>3</sup> Gemserv, July 2018, Modernising Energy Governance, A Golden Opportunity, Section 6, <https://www.gemserv.com/modernising-energy-governance-a-golden-opportunity/>

## PUTTING CONSUMERS IN CONTROL

A growing body of evidence suggests this is just the beginning of a new revolution, transforming how consumers interact with businesses and engage with new products and services. The dawn of the prosumer (producer + consumer<sup>6</sup>) and the development of cost effective renewable energy solutions means consumers can now generate their own power and, to a limited extent at this point, sell back their surplus energy to others. The rapid growth of electric vehicles, stimulated by the UK government's ban of the sale of diesel and petrol vehicles by 2040<sup>7</sup>, and the exponential growth of new technology, will reframe how consumers interact with their energy.

Under the government's Industrial Strategy, the aim is to put the UK at the forefront of the artificial intelligence and data revolution; and BEIS' green paper, 'Modernising Consumer Markets<sup>8</sup>' notes the potential for consumers and how they now have access to global markets at the click of a button via digital technologies. BEIS sets out three principles for a modern consumer market:

1. Competition should be central to our approach;
2. Consumers should benefit from new technology and new business models; and
3. Consumers should be able to get redress when things go wrong.

<sup>4</sup> Ombudsmen Services, Consumer Action Monitor, March 2018, p.11, <https://www.ombudsman-services.org/for-consumers/consumer-action-monitor>

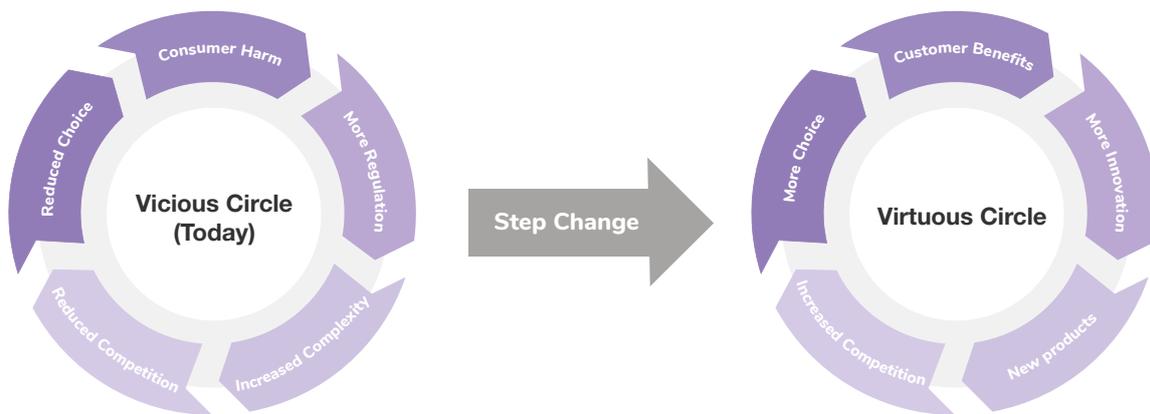
<sup>5</sup> IEA, 2017, Digitalization & Energy 2017, <http://www.iea.org/digital/>, accessed 14th August 2018

<sup>6</sup> Greenpeace, May 2016, Options for an EU Legal Framework post 2020, <https://www.documents.clientearth.org/wp-content/uploads/library/2016-05-01-prosumer-rights-options-for-an-eu-legal-framework-post-2020-ce-en.pdf>

<sup>7</sup> BEIS, July 2018, The Road to Zero, Policies at a glance, p.2, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/724391/road-to-zero.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/724391/road-to-zero.pdf)

<sup>8</sup> BEIS, April 2018, Modernising Consumer Markets: Consumer Green paper, <https://www.gov.uk/government/consultations/consumer-green-paper-modernising-consumer-markets>

These principles are a good place to start. However, for energy governance to embrace a digital transformation agenda, it also requires a step change to break the vicious circle (Diag. 1).



DIAG. 1: BREAKING THE VICIOUS CIRCLE

## THE NEED FOR FUNDAMENTAL REFORM

Ofgem has published a response to its call for evidence (July 2018): Future supply market arrangements<sup>9</sup>. We agree with Ofgem, now is a good time to take a step back and consider whether the regulatory framework is fit for purpose<sup>10</sup>.

We further agree with Ofgem that there is growing potential for consumers coming from innovation in technology and business models, and that data will be a key enabler.

However, Ofgem also notes the difficulties that the current market regulatory and governance arrangements entail:

- Most of the consumer protection framework is designed to manage risks posed by traditional 'supplier' business models;
- Fundamental reform of the supplier hub model needs to be explored; and
- Improvements with respect to retail code arrangements needs to accelerate.

<sup>9</sup> Ofgem, 31st July 2018, Future supply market arrangements – response to our call for evidence, <https://www.ofgem.gov.uk/publications-and-updates/future-supply-market-arrangements-response-our-call-evidence>

<sup>10</sup> Gemserv, 1st March 2018, [https://www.ofgem.gov.uk/system/files/docs/2018/07/gemserv\\_response.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/07/gemserv_response.pdf)

## CONSUMER EMPOWERMENT

We believe the key to unlocking energy market potential and establishing a 'new way' is to unpack what data and technology can offer for the energy market and particularly for the consumer.

The TOM we propose later in this paper is consistent with the government's ambition to put energy consumers in control of their data, empowering them to use their data so that they are better informed<sup>11</sup>. It is also consistent with Ofgem's thrust to significantly reform regulation and governance.

Within the proposed TOM, 'hubs' – within a Single Market Portal – provide tailored access routes, supporting different market actors by providing information and automated processes that are of value to each of them.

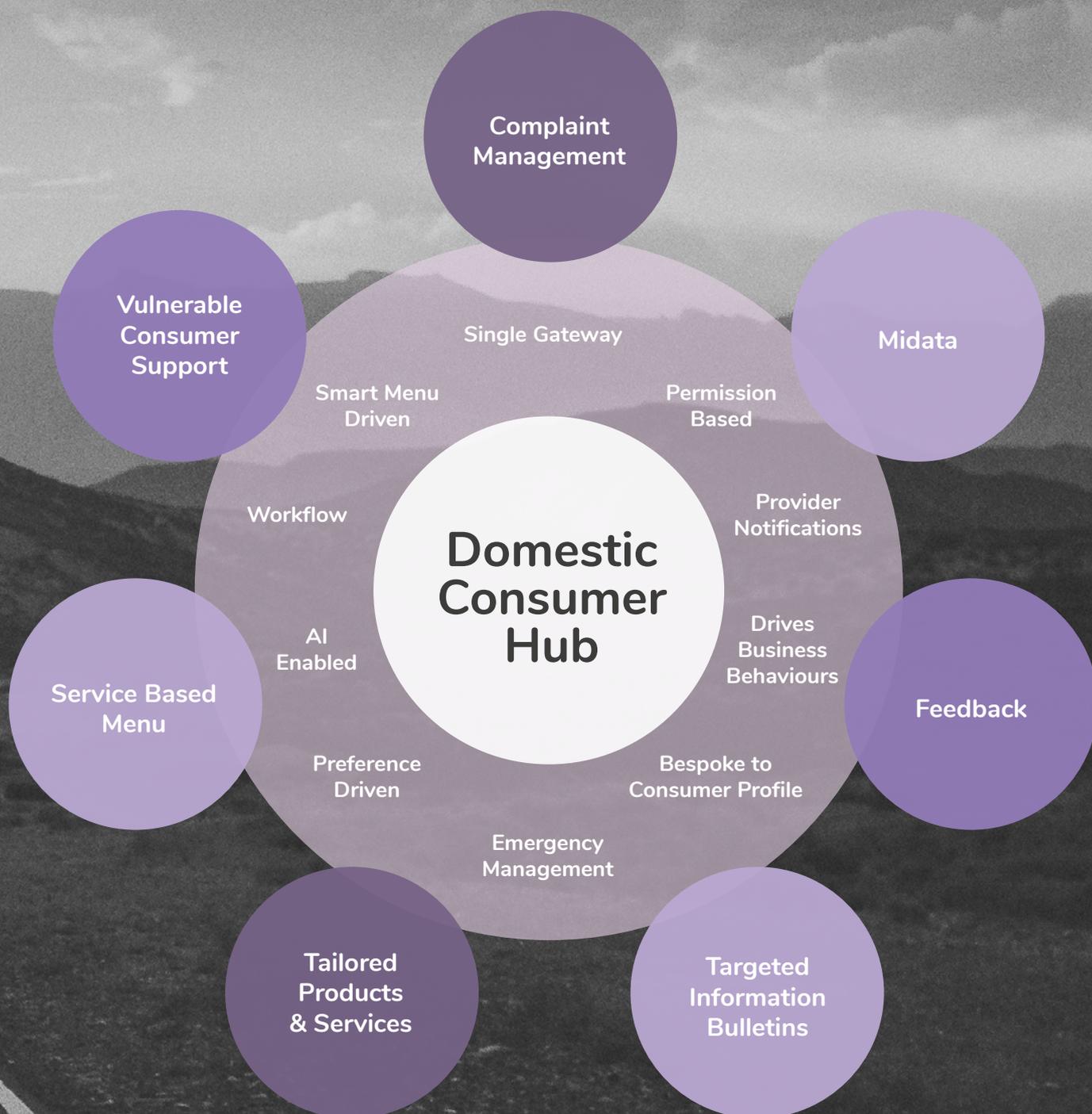
By way of example, within the domestic consumer hub (Diag. 2), a direct consumer feed facilitates feedback loops to inform on market and business performance, aids transparency and informs on new market assurance methods and practices under the TOM.

**It is also essential that businesses embrace new technologies and collaborate with stakeholders to understand a 360-degree customer view of the complaints process and identify 'pain points' for consumers, and work to address issues at the root".**

Ombudsman Services, March 2018, Consumer Action Monitor<sup>12</sup>

<sup>11</sup> BEIS, July 2018, Implementing MiDATA in the domestic energy sector, government response to the Call for Evidence, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/729908/midata-energy-sector-government-response.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729908/midata-energy-sector-government-response.pdf)

<sup>12</sup> Ombudsmen Services, Consumer Action Monitor, March 2018, p.3, <https://www.ombudsman-services.org/for-consumers/consumer-action-monitor>



DIAG. 2: THE DOMESTIC CONSUMER HUB

## THE POWER OF DATA, DIGITALISATION AND TECHNOLOGY

We are undergoing a huge digital transformation, driven largely by the government's smart metering roll out<sup>13</sup>. Companies are now bridging the gap between the smart energy system and smart home automation, connecting smart metering with the Internet of Things (IoT) such as thermostats, appliances, sensors and cameras<sup>14</sup>.

### THE DIGITALISATION AGENDA

The IEA notes that, 'as digitalisation advances, highly interconnected systems can emerge, blurring the distinction between traditional suppliers and consumers'<sup>15</sup> and highlights the accelerating rate of change in digital technologies<sup>16</sup>. Energy as an essential service could therefore transform the relationship between consumers and energy. Eventually, energy could increasingly be less about the relationship between a meter and a physical site / address, and more to do with the mobile products and services that the consumer demands.

Around 90% of the data in the world today was created over the past two years and the number of connected IoT devices is forecast to grow to over 20 billion by 2020<sup>17</sup>. A Big Data driven digital economy is expected to add £322 billion to the UK economy by 2020<sup>18</sup>.

The IEA acknowledges there is no simple roadmap. However, it does define 10 no-regret policy actions that governments can take. These include, for example, ensuring access to timely, robust and verifiable data, as well as providing a level playing field for a variety of companies to compete and serve consumers better<sup>19</sup>.

<sup>13</sup> Capgemini, <https://www.capgemini.com/gb-en/service/energy-companies-look-outside-of-the-industry-for-new-revenue-streams/>, accessed 6th August 2018

<sup>14</sup> Gemserv case study, <https://www.gemserv.com/prescience-connected-devices-case-study/>

<sup>15</sup> © OECD/IEA, 2017, Digitalisation & Energy, p.84, IEA Publishing. Licence: [www.iea.org/t&c](http://www.iea.org/t&c)

<sup>16</sup> For example, global investment in digital electricity infrastructure and software has been increasing by 20% annually, © OECD/IEA, 2017, Digitalisation & Energy, p.21, IEA Publishing. Licence: [www.iea.org/t&c](http://www.iea.org/t&c)

<sup>17</sup> Gartner, 2017, Leading the IoT, Gartner Insight on How to Lead in a Connected World [https://www.gartner.com/imagesrv/books/iot/iotEbook\\_digital.pdf](https://www.gartner.com/imagesrv/books/iot/iotEbook_digital.pdf), accessed 14 August 2018

The digital economy brings risks as well as benefits for all consumers and businesses. Consumer fears will understandably be heightened within a digital economy which is why new rights for consumers and strengthened controls were introduced under the UK's Data Protection Act 2018 and the General Data Protection Regulation (GDPR)<sup>20</sup> and why data protection will be central under a new governance model.

### INNOVATION

We have spoken with several innovative / challenger organisations embracing digitalisation and driving new solutions. For example, Verv<sup>21</sup> is developing innovative solutions that can now pinpoint which appliances are using energy via their unique energy signatures<sup>22</sup>. As such, consumers can see how much energy their appliances are using in real time. With the help of AI, consumers' specific energy profiles can be identified and monitored, providing a wealth of benefits. These include detecting appliances that have been left on inadvertently; monitoring appliance efficiency to detect when there are problems occurring (e.g. servicing needs); and even support for vulnerable consumers via home alert systems that trigger a relative's emergency response should their usage pattern become irregular (e.g. not using their kettle).

Peer-to-peer trading, still in its infancy, opens up new possibilities to create community energy exchange capabilities. These include Verv's live energy trading trial for social housing within Hackney, London, which brings cheaper energy to its residents who are unable to benefit directly from the solar panels on their roofs.

<sup>18</sup> Ofgem, 27 July 2018, Enabling Consumer Data in the Energy Sector, Open Letter, <https://www.ofgem.gov.uk/publications-and-updates/enabling-customer-data-energy-market>

<sup>19</sup> © OECD/IEA, 2017, Digitalisation & Energy, p.20, IEA Publishing. Licence: [www.iea.org/t&c](http://www.iea.org/t&c)

<sup>20</sup> For example, the strengthening of the Information Commissioner's powers, including significantly increased sanctions.

<sup>21</sup> Verv is a data science organisation, exploiting opportunities that can be accessed via digital technologies, deploying machine learning expertise across the energy sector. It is a participant within Gemserv's Innovation Forum.

<sup>22</sup> Verv Home Hub is a self-install product now being rolled out across the UK. It is an AI-based IoT device that samples a home's electricity consumption approximately five million times faster than a smart meter.

It may even enable energy offset initiatives to emerge, benefiting fuel poor households; for example, a consumer transferring energy tokens to energy charities<sup>23</sup> for a greater good.

ASE Consulting<sup>24</sup>, experts in digital technology, explained how their experience across a number of public and private sector organisations reinforces the view that the challenges facing the energy industry are not unique. As we concluded in Part 1 of this series, energy as an essential service is not a 'special case', and key learnings can be drawn from across a wider spectrum to help us solve our problems.

The intelligent use of data can help us understand the effectiveness of services. For example, if we 'design right', the supporting systems can tell us how they are performing, how users are interacting with it in real-time, using data generated from IoT devices and AI techniques. These are increasingly being used across many industries to provide insight and to streamline and improve services. The energy market has the same potential to provide a wealth of data through connected devices with the next generation of smart energy technology in the home. However, we also recognise that every internet connected device is a potential way into the consumer's home network. This presents data security challenges; indeed, ASE highlighted that robust cyber security measures are essential in order to resolve vulnerabilities that can expose the most innocuous of connected devices – even fish tanks<sup>25</sup>!

Other popular digital techniques – chatbots and robotic process automation (RPA) – have a part to play in the future of the energy market too.

These can provide interactions powered by AI and machine-to-machine learning, to identify problems and patterns based on IoT data, and to individualise responses without extensive user input. For example, linking of IoT devices via voice controlled smart speakers or even linking to the proposed TOM (set out in this paper).

## THE FOURTH INDUSTRIAL REVOLUTION

Embracing the Fourth Industrial Revolution (the fusion of technology) allows us to join up the digital and the energy worlds in a more meaningful way for consumers, by stimulating and protecting investment, driving innovation and delivering a step change in the delivery of new products and services. Given the advancement of data and digital technologies, it is a wonder that it is not more pervasive within the retail governance sector.

Bringing data together from multiple sources (syndication) could enable the power of digitalised data to be fully realised within the retail space. Doing so under a single optimal governance framework will ensure that data security and permission-based rights are appropriately, consistently and robustly managed.

We must take steps now to bring data together under one governance roof (e.g. retail data under a Retail Energy Code<sup>26</sup>) to harness its power in ways that support consumer outcomes, while ensuring the highest standards of data protection. By combining data and digital technology, we can drive efficiencies, reduce the frustrations and liberate innovation in products and services.

<sup>23</sup> Verv's VLUX token initiative via blockchain, potentially enables wider consumer communities to benefit from cheaper renewable energy, creating incentives around renewable uptake

<sup>24</sup> We spoke with Edward Williams of ASE Consulting, market experts in digital, AI and other emergent technologies. ASE specialise in shaping the technology strategy of many organisations[1], and in addition to recognising the opportunities, is active in raising awareness of cyber security dangers through its membership of organisations such as the IoT Security Foundation[2].

[1] <https://www.consultancy.uk/news/17466/the-best-consulting-firms-for-it-strategy-and-digital-transformation>

[2] <https://www.iotsecurityfoundation.org/>

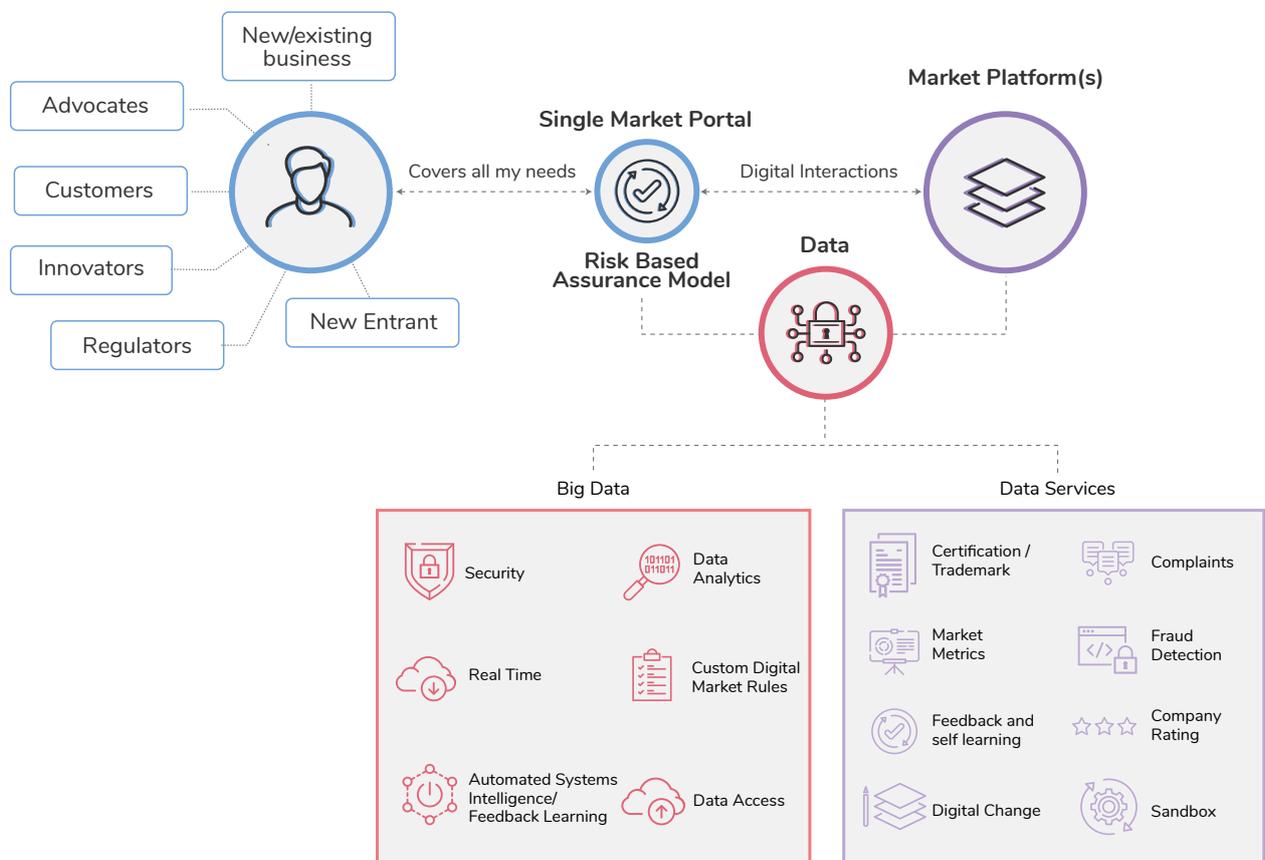
<sup>25</sup> <https://internetofbusiness.com/casino-aquarium-breach-iot-security-analogy/>

<sup>26</sup> Ofgem, 5th June 2018, Switching Programme Proposed modifications to regulation and governance, <https://www.ofgem.gov.uk/publications-and-updates/switching-programme-proposed-modifications-regulation-and-governance>

## A TARGET OPERATING MODEL (TOM)

The rapid advancements now being made in data, digitalisation and new technology mean that we are edging ever closer to delivering far greater automation. Companies are making significant advancements in data analytics, developing and delivering intelligent services and products. This is no longer the preserve of wishful thinking, but a new reality.

We have therefore brought together all the thinking, ideas and considerations into a single TOM (Diag. 3) enabled by digital technology and data. This has evolved during our analysis and discussions with stakeholders, the Gemserv Innovation Forum and others.



DIAG. 3: TARGET OPERATING MODEL

We have listened to the difficulties of new and existing participants regarding market complexity and other barriers to entry, and we recognise the not inconsiderable challenge they face to invigorate market engagement by all consumers.

Whilst there is a need to remove and reduce unnecessary regulatory and governance burdens, the energy market will remain complex. Importantly however, we do not need to expose this complexity to market participants or consumers.

## HOW IT COULD WORK

The TOM creates a single route into the market, with self-serve, intelligent interfaces (hubs) embedded as part of a Single Market Portal (Portal). An open standards framework enables third party service providers to 'play in' services that can support the market, such as making available off-the-shelf start-up market solutions. The Portal would allow market complexity to be largely hidden from view. The Portal would incorporate a new risk-based market assurance methodology within the heart of the TOM, applying proportionate and targeted rules at the different participants according to the risk that each one poses to the market (i.e. no longer a 'one size fits all' approach). Practitioners in risk management (Risk Brokers) would help oversee the integrity of a dynamic risk management practice. An intelligent, automated capability would help the market to manage rules, navigate risks and process outcomes.

Factors such as consumer complaints, regulatory investigations, credit rating and guarantees would help determine the level of risk a particular business model / service might pose to the market and therefore the burden of rules and compliance required by that business.

The consumer is at the heart of the proposed model, making use of services via a Consumer Hub. This would put them in full control of their data e.g. 'Midata'<sup>27</sup> capability, sourcing solutions to their problems, enabling a single engagement portal to drive outcomes such as managing complaints, and empowering them through feedback to drive future provider behaviours.

The key features of the TOM would include:

TABLE 1: TOM FEATURES & BENEFITS

Feature	Objective	Example Benefits
Single market view	Market wide perspective	Supports innovators and businesses to understand the market and grow; access to a comprehensive market-wide understanding of market data performance and monitoring
Single market access / portal	Simple to navigate with smart wizard procedures	Businesses access the rules via hubs that apply to them; open standards enable third parties to 'offer in' services to support businesses including to consumers e.g. energy management solutions
Super registration	All businesses register	No specific codes to 'sign up to'; drives a minimum set of non-negotiable and proportionate rules that apply to a given business, subject to the risks it presents to the market and consumers
New Market Assurance philosophy	Proportionate market risk approach	Assurance practices ratchet up and down, adjusting to behaviour and market risk; businesses are certified to operate under a market assurance framework, which can be: modified, suspended, restricted, or withdrawn to reflect business behaviour
Big Data	Single truth of market data	A data view that is relevant to a business with the ability to assess and model business implications, drawn from multiple sources
Digitalised, Artificial Intelligence enabled	Contains rules, practices and procedures	Reduces the need for manual intervention, enabling the market and regulator to focus on what is important for a healthy competitive market
Consumer energy data empowerment	Consumers control and manage their data	Hubs, powered by a single portal, support market actors and particularly consumers with all their energy needs. Feedback influences business behaviour and the evolution of new services; individual business performance is visible e.g. complaint levels, current regulatory investigations
Security	Single data security framework	No new databases; data accessed from source e.g. APIs; all data fully encrypted during transit before and after presentation to the user; data security standards are managed and enforced
Test Bed	Modelling of outcomes	Innovators and businesses can build / run model outcomes against 'whole of market' aggregated data sources
Technical Architecture	Flexible, open standards, accessible	Evolves with market developments, not big bang solutions. Open standards, transparent and accessible to third parties to 'offer in' services via the portal, e.g. start up modules.

<sup>27</sup> BEIS, July 2018, Implementing Midata in the Domestic Energy Sector, Government response to the Call for Evidence, <https://www.gov.uk/government/consultations/call-for-evidence-implementing-midata-in-the-energy-sector>

## SCENARIO 1 THE VULNERABLE CONSUMER

### THE PROBLEM

A recently bereaved 70 year old consumer is struggling to financially cope. Health now suffering, the consumer is taking medication for depression and has become overwhelmed following receipt of an energy bill showing a significant debt. The consumer struggles with technology and needs help.

### THE PROCESS

The consumer accesses the Single Market Portal via the Consumer Hub (or even their smart speaker). Aided by simple self-help prompts, the consumer is offered support from a range of consumer advocacy groups that provide help. The consumer makes a selection and the Portal triggers an urgent notification to the relevant advocacy group. The advocacy group makes contact with the consumer and, between them, enable an 'authorised nominee' access to the Consumer Hub.

The authorised nominee, guided by step-by-step smart wizard procedures, applies the registration and secure access request. All information is validated in real time, which aids the data analytics engine with tailoring the 'support package' that the consumer needs. Data and information are obtained from several data sources. The authorised nominee is presented with the details of all the relevant service providers, offering a range of outcomes to accept or reject.

The information is then networked to the relevant service providers to action. Progress is monitored with automatic / escalated reminders where service providers fail to respond.

### THE OUTCOME

- Special needs and requirements are lodged and made available to selected service providers and the consumer flagged as needing assistance (i.e. at risk)
- The consumer is placed on a safety tariff with one provider
- With another provider, consumer avails of a free connected devices security check
- The Electric Vehicle (EV) service provider arranges for the consumer's EV point to be accessible for public use for overnight charging (for which the consumer now receives an income)
- The Energy Performance Certification register has highlighted the home energy saving potential, offering actions that can be taken, including funding support
- All relevant parties are notified (subject to permissions criteria) e.g. local services have been automatically alerted following the consumer's needs assessment
- Selected businesses (consumer permission based) can now access important needs information in the event of an emergency.

# SCENARIO 2

## THE NEW BUSINESS

### THE PROBLEM

A 'New Business' proposition relies upon the delivery of a smart device for domestic consumers with a bundled energy offering. New Business is unclear how to proceed, concerned that consumers could get double charged if they plugged the device in at home where the energy is billed, or indirectly because of plugging into their EV (EV charged separately).

### THE PROCESS

New Business undertakes Super Registration (for a charge / fee) through the Single Market Portal via the Business Hub. It is then driven via a smart wizard process to answer key questions about the business proposition, target audience, key metrics etc. The Portal blends the information with a range of other business-related data sources and alerts the central market Risk Brokers. The Risk Brokers assess the risk based on a wide range of risk factors and respond back via the Portal with an initial assessment of the risks / rules and next steps to be followed. The Portal tracks and monitors New Business aided by Market Risk Assurance practices.

### THE OUTCOME

- A personalised business dashboard within the Business Hub enables New Business to modify its business proposition modelling assumptions e.g. device volumes, target audience
- New Business can avail of a range of supporting services, including a test bed area to scenario / model outcomes and access to third party application providers - third parties can apply and then offer a range of services to a business via the Portal for a fee
- New Business can access data to simulate market outcomes based on a rich data access capability from multiple data sources
- New Business is presented with the rules that apply to its business, including the non-negotiable rules for compliance purposes and the additional rules that are likely to apply given the risk to the market the proposition presents
- Annual fees / charges are presented e.g. cover for market insurance risk
- A range of quick start applications are presented from third party solution providers offering their services via the platform e.g. billing, customer services, finance, investment options
- Risk Brokers assess / are satisfied with New Business' approach and supporting services e.g. utilises tried and tested off-the-shelf market solutions
- The Business dashboard provides details on how to move forward to the next steps if minded to 'go live'
- New Business, via the dashboard, follows the steps and is certified to proceed
- New Business can now use the market assured logo

## DECISION MAKING

Innovative / challenger businesses are already seeking derogations to the existing market rules to secure changes so that new ideas can be put into practice. This is being facilitated by various ‘sandboxes’, designed to create a space for innovators and challenger businesses to road test their ideas. We are therefore already seeing a limited ‘rule shift’, i.e. where rules can apply to some but not necessarily to others. The customisation of these rules will become ever more prevalent as businesses increasingly seek new routes to market. However, this takes time to orchestrate and can delay the advancement of innovative solutions.

The alternative is a future where all rules become fully digitised and customised to reflect the risks that particular businesses present to the market. Rules that are better targeted and proportionate across the different businesses.

The interplay of rules and risk is key. A digital, Big Data approach could provide significant future support in the assessment of risk and decision making. The manual nature of managing risks and rule changes of today could shift to a truly digitised framework, transforming how the energy market interacts and becoming transformative in terms of how rules are managed.

## A TWO STATE MODEL

Within today’s energy retail market, the rules (and changes to those rules) might be best characterised by those that are largely commercial and those that are not. That being the case, future rules could be framed around just ‘two states’:

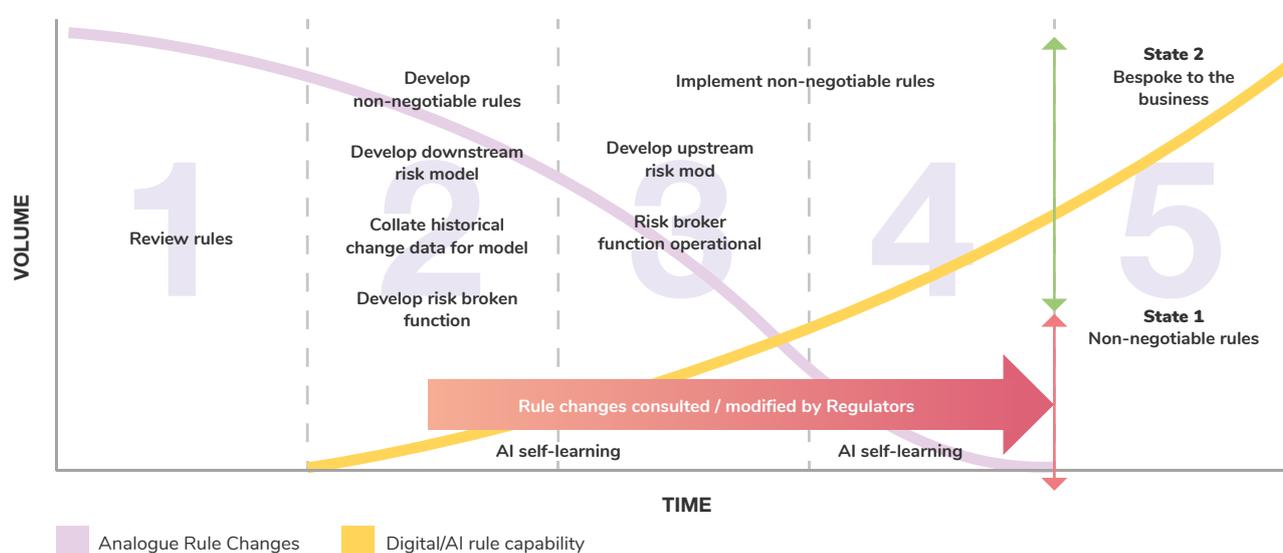
- **Non-negotiable:** a base set of rules, known as the ‘non-negotiable rules’. Rules that apply to all market participants, for example where interoperability, balancing or network integrity is key. These are rules<sup>28</sup> to be consulted upon, set and changed by the regulatory body; and
- **Bespoke:** commercial rules reflecting the specific individual risks in how businesses interact with the market. For these rules, there should be no need to raise rule changes in the traditional sense, i.e. to modify market-wide rules on a collective basis. The key features are:
  - A Market Risk Assurance framework oversees a business’ risk to the market
  - A base set of principled rules<sup>29</sup> would be agreed via market consultation, orchestrated by the Market Risk Assurance function and approved by the regulatory body
  - A Market Risk Assurance function would monitor and apply a proportionate response relevant to a business’ performance, taking action accordingly. For example, this could mean limiting or even suspending certification
  - Should a business step outside of its permitted certification, the regulatory body would be notified for regulatory compliance action / sanctions

<sup>28</sup> Acts and Statutory Instruments are excluded from the definition of ‘rules’ for the purposes of this paper

<sup>29</sup> Principle based rules could be assigned under the non-negotiable rule set, i.e. changed only subject to Ofgem agreement

Over time, the two-state approach (Diag. 4) would no longer need industry panels making decisions on 'change'. A shift to minimum, non-negotiable rules will reduce the regulatory burden for businesses and balance the needs of consumers.

Market-wide change will be minimised; businesses that are struggling today to engage with change and the complexity of codes will no longer be hampered or disadvantaged. However, all businesses will have it in their gift to minimise the bespoke rules-based intrusion through their behaviour and market reputation.



DIAG. 4: TWO STATE MODEL

Devising a dynamic market risk assurance framework is not without its challenges. Given the two-state approach for the energy sector may be too aggressive at this stage, transitional variants could be devised.

For example, a variant could entail:

- A Market Risk Assurance framework drawn up on the basis of 'business categories' or 'classes' rather than bespoke to individual businesses;
- Rule change procedures for each category or class driven by fully digitalised practices (including voting);
- A decision engine to facilitate decision making, drawing from a dynamic voting methodology, its role growing as it matures and as data increasingly helps to inform on change decisions; and
- Risk Brokers to ensure decision making is executed appropriately and to capture change and decisions that might fall outside of the norm.

## MANAGING RISK

Drawing from a principle-based set of rules, we envisage a new risk-based market assurance methodology, targeting proportionate rules at different businesses, dynamically adjusting to reflect the individual business risks that each pose to the market. We shall explore what this means in more detail within Part 3 of the thought leadership series.

What we are advocating for risk management is not novel. The Financial Conduct Authority (FCA)<sup>30</sup> concentrates its resources on the markets and firms most likely to create consumer harm, damage market integrity or weaken competition.

**“Sector Views provide an assessment of the developments, performance and risks of each financial services sector in the previous year... we have prioritised areas where we consider both that the risks of harm to consumers, market integrity or competition are greatest and where we assess our intervention will have the most impact. The aim of adding public value cuts across all our activities”.**

FCA, Business plan<sup>31</sup>

Consequently, the FCA applies greater scrutiny and focus to those firms that pose the greatest risk of harm to consumers and market integrity. For firms that pose less, but still significant risk of harm, there is a programme of targeted engagement which specifically focuses on the activities with the greatest risk of harm in their sector. It is therefore wholly credible to start a discussion on a new market risk-based philosophy for energy.

We introduce the concept of market Risk Brokers, i.e. experts in the field of risk analysis and assessment. They would oversee the computation and assessment of risk, ensuring that the underlying model and risk assessments are delivering the right outcomes for consumers, competition and market interoperability. As the automated systems and machine-to-machine learning increasingly shoulders the burden of managing the application of rules vs risk, the role and need for market Risk Brokers will reduce and shift more towards market assurance and data science management.

## OFGEM'S ROLE

Ofgem would no longer be bogged down with overseeing change, unless those changes concerned the market fundamentals, such as those defined by the non-negotiable rules. The regulator would be freed up to focus on the macro economic issues, such as security of supply and the health of competition across the energy market sector. However, the regulator is likely to play a fundamental role with respect to the non-negotiable rules and sanctions (including fines and other penalties such as denial of access to the market), where market behaviours / significant failures cannot be corrected under the retail Market Risk Assurance framework.

<sup>30</sup> The FCA is the conduct regulator for over 58,000 financial services firms in the UK and 145,000 approved persons. It is also the prudential supervisor for approximately 46,000 firms. For 18,000 of these firms, it has detailed standards that need to be met

<sup>31</sup> <https://www.fca.org.uk/publication/business-plans/business-plan-2018-19.pdf>

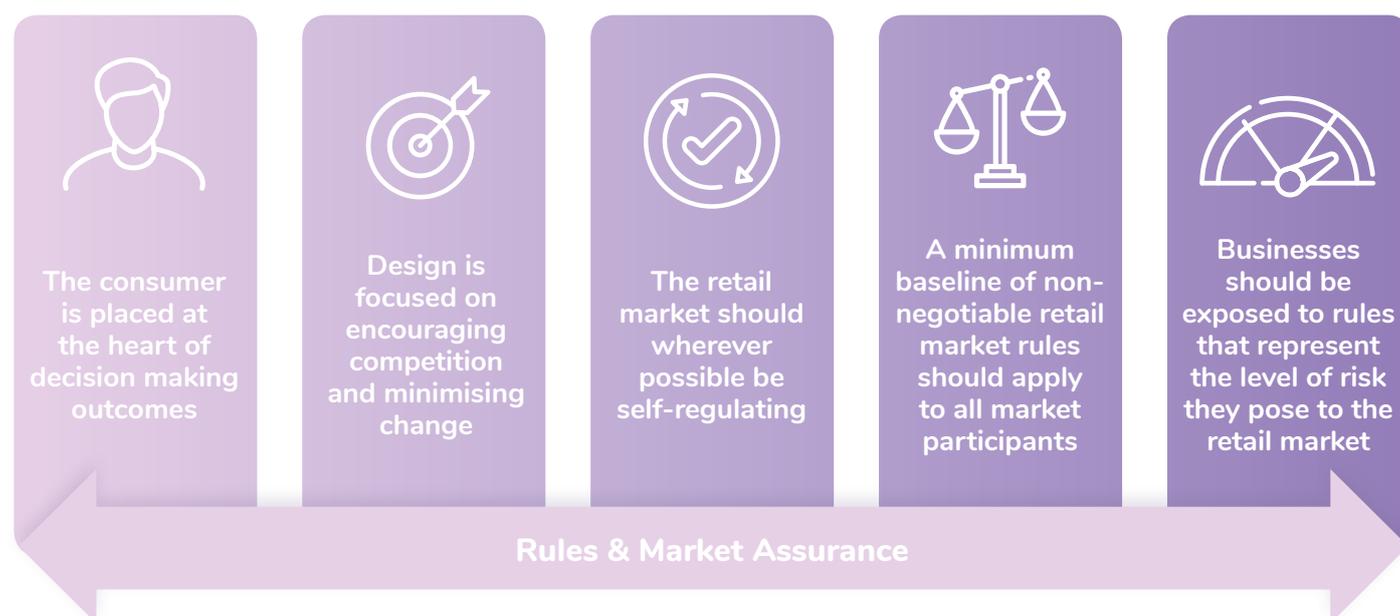
## BUILDING A NEW FUTURE

We do not underestimate the scale of the reform we are proposing. Nor do we pretend this can be done quickly. Nonetheless, as the energy sector heads towards seismic transformation, this should be matched with a clear drive to modernise the underpinning governance arrangements such that new products and services are not unduly constrained in their route to market.

Turning the TOM into a realistic proposition requires exploring the ‘building blocks’ upon which we might build a new future. Each block captures a market design feature that the energy retail sector might aspire towards.

These might include the commercial framework, the regulatory framework, market risk assurance, digital architecture and data strategy.

By way of example, a new rules methodology will need to be underpinned by an effective retail market risk assurance model, possibly framed by five key driving principles (Diag. 5).



DIAG. 5: FRAMING PRINCIPLES

In Part 3, we will expand on the analysis and thinking for the building blocks. Until then, we welcome ideas and thoughts on whether these principles are appropriate for a retail sector approach, and especially on what the building blocks might constitute.

We shall be exploring these in more detail at the third Innovation Forum being held on 30th October 2018, so please get in touch if you wish to either participate or engage on an individual basis via [strategy@gemserv.com](mailto:strategy@gemserv.com).

## THE CHALLENGE & NEXT STEPS

The present governance arrangements are unsustainable. As noted within Part 1 of this Modernising Energy Governance series<sup>32</sup>, it is unlikely to be able to support the future needs of a retail sector that is quickly gravitating to becoming more connected and data driven.

The ambition we set out is not insignificant, yet our ideas draw upon practices that exist in other markets and therefore we believe are entirely achievable if supported by market determination and purpose.

How we transition is the greatest challenge. However, breaking this down into individual features (building blocks) will help, and whilst some work can be done now, making a step change needs leadership and political and regulatory endeavour to help take this forward.

The IEA notes that, on the subject of digitalisation and energy:

‘Impending transformation in the way the electricity systems function will call for fundamental changes at technical, economic and institutional levels.’<sup>33</sup>

The Retail Energy Code (REC), bringing retail energy governance under one roof, could create the space to facilitate a significant step forward. The REC could be the platform from where we commence the journey to build a ‘new way’, catalysing broader market reform, embracing the power of data, digitalisation and technology.

Existing data architectures may not yet be ready for a digital future and therefore the REC could be at the forefront of governing and delivering architectures that are flexible and adaptable.

Ultimately, this will need policy and regulation to drive towards a new digitalised future and for the REC Manager to play a key role to help facilitate such reform.

In our next paper, we explain how to reach out to a new future, not in the form of a ‘road map’ leading to a fixed point, but what we might do now on a “no regrets” basis, delivering both incremental and transformative change.

<sup>32</sup> Gemserv, July 2018, Modernising Energy Governance, A Golden Opportunity, <https://www.gemserv.com/modernising-energy-governance-a-golden-opportunity/>

<sup>33</sup> © OECD/IEA, 2017, Digitalisation & Energy, p.87, IEA Publishing. Licence: [www.iea.org/t&c](http://www.iea.org/t&c)



## Author

**Tony Thornton**

Head of Strategy

© 2018 Gemserv

## Contact Us

To get in touch with us contact us at:

E: [strategy@gemserv.com](mailto:strategy@gemserv.com)

T: +44 (0)20 7090 1022

W: [www.gemserv.com](http://www.gemserv.com)

@gemserv

London Office

8 Fenchurch Place

London

EC3M 4AJ

Company Reg. No: 4419878

## Gemserv

We are an expert provider of professional services enabling the energy market transformation and data revolution. Our vision is to ensure that complex markets work for everyone's benefit.

