

**ofgem**

Making a positive difference  
for energy consumers

**THE  
#FUTURESUPPLY  
LAB**

Item	Time
Attendees arrive	9:00 – 9:30
Housekeeping and icebreaker	9:30 - 9:45
Opening comments	9:45 – 10:00
What we want for consumers	10:00 – 10:15
Market models	10:15 – 10:45
Morning tea break	10:45 – 11:00
Break out session on models	11:00 – 12:30
Lunch	12:30 – 13:15
Dr Jeff Hardy presentation	13:15 – 13:30
Break out session on models continues	13:30 – 14:45
Afternoon tea	14:45 – 15:00
Break out groups presentations	15:00 – 15:45
Closing remarks and next steps	15:45 – 16:00



**WHY ARE WE  
HERE TODAY**

# OUR FOCUS

- Continue building a common understanding of the fundamental issues blocking innovation and competition (building off call for evidence views)
- Generate ideas on how the market model could be reformed to enhance competition and innovation in a smarter, more flexible market
- Consumer outcomes, now and in the future



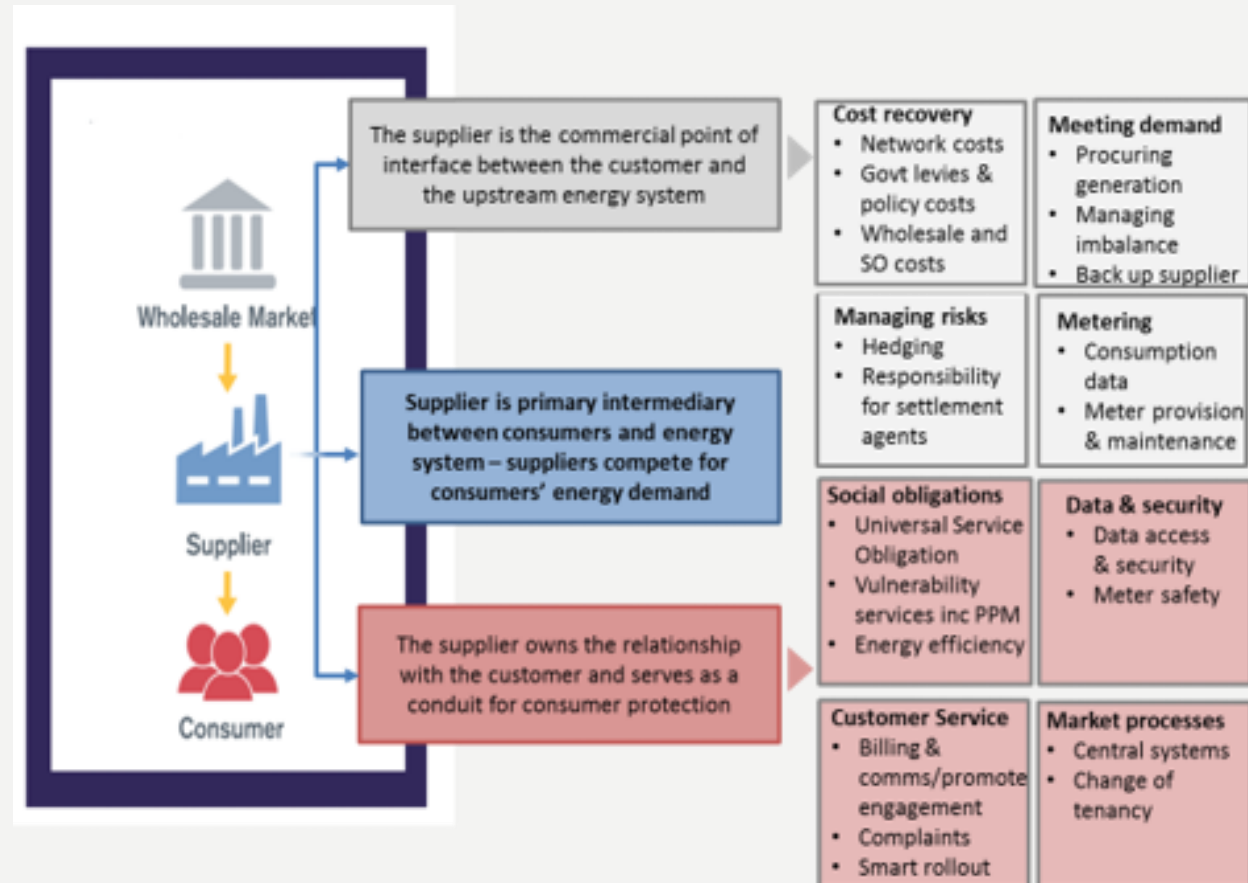
# 1998



# 2018



# DO ALL THESE THINGS NEED TO BE PROVIDED EXCLUSIVELY BY A TRADITIONAL SUPPLIER?



*We need a market model that **encourages new business models and propositions**, in a way that **protects consumers** while also providing for **better default arrangements** for the disengaged.*

**Big opportunity**

to enable and harness the energy transition to deliver better consumer outcomes.

**Need to address persistent problems**

for disengaged and vulnerable consumers.

**Stimulate productivity gains**

and support for broader UK macroeconomic performance, incl. security of supply.



## What we've heard on... barriers to innovation

- Key barriers are:
  - Complexity and volume of codes
  - Supply licences too complex
  - Access to data (eg Open Banking, centralised datasets)
  - Lack of transparency around cost allocations and risks
  - Unclear definition of supply and generation – eg how do prosumers fit in?
- Innovators hampered by generally having to become a supplier or partner with one
- Support for sandboxes, but want larger changes and for these to move more quickly

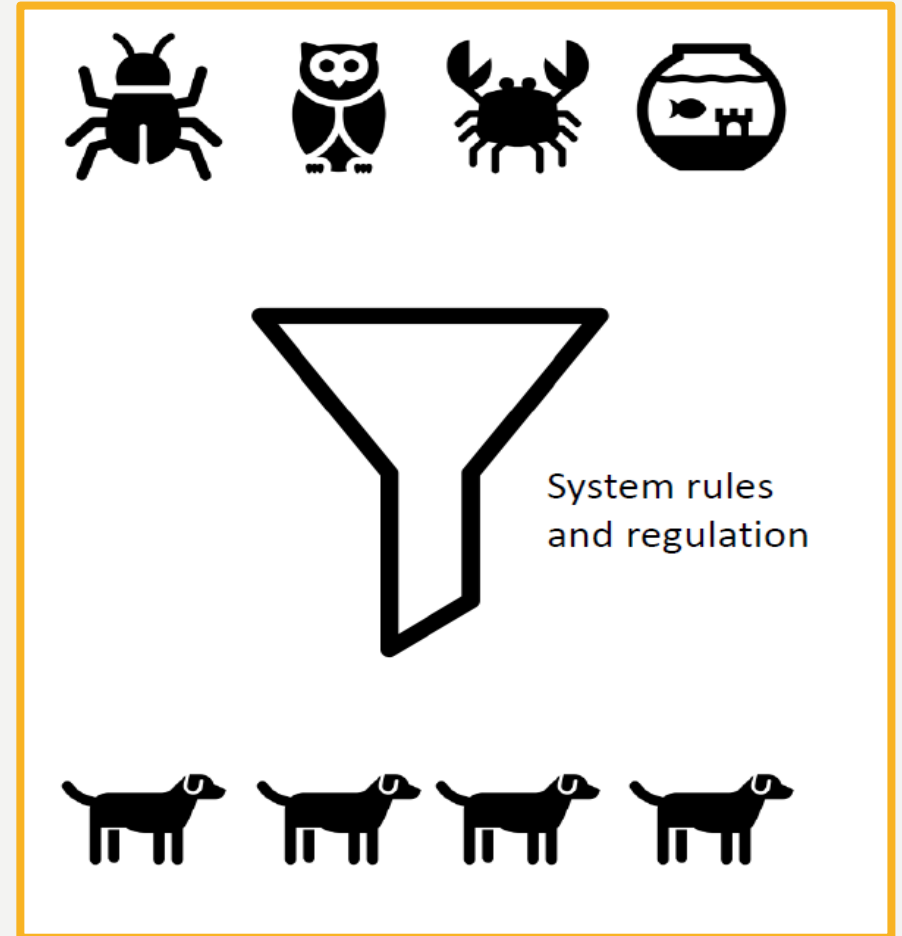


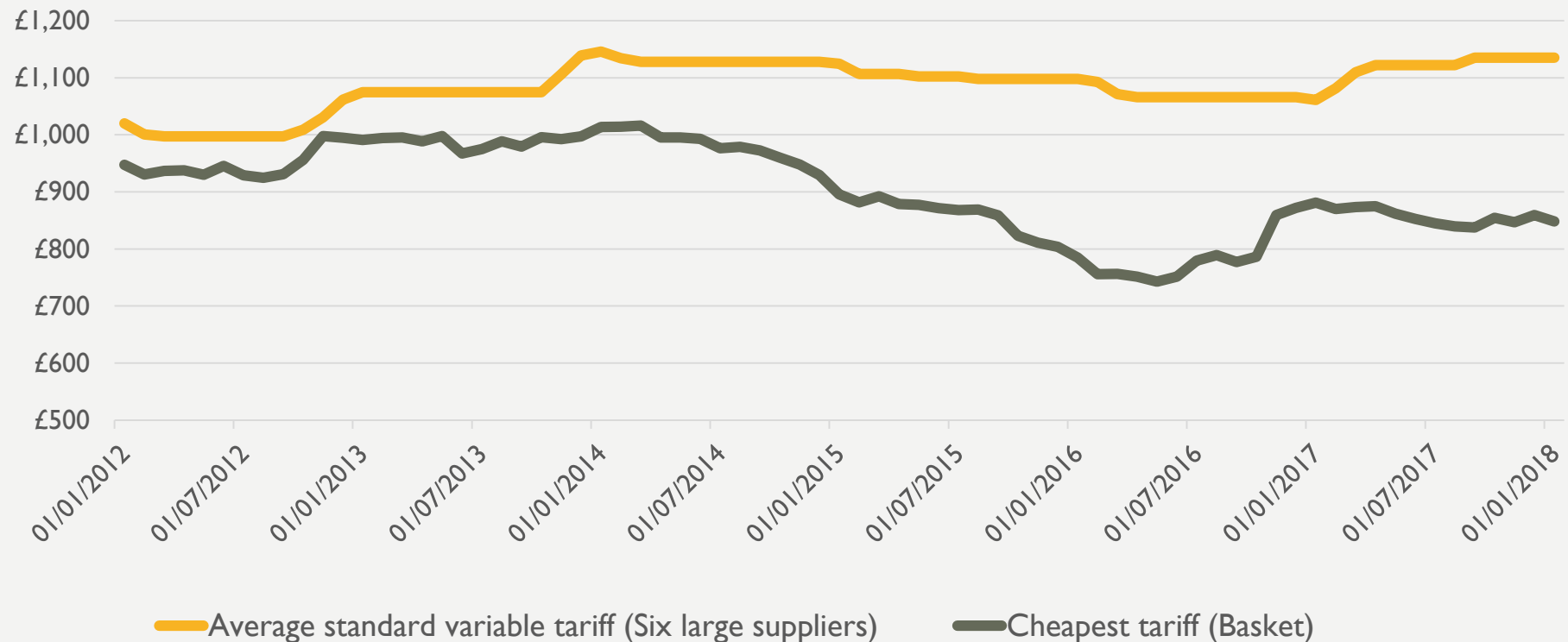
Image: Dr Jeff Hardy, Grantham Institute





## What we've heard on... default arrangements

- Ofgem should continue to focus on efforts to prompt greater engagement
- Limited support for opt-out collective switching at this time – too disruptive to consumers
- Strong views that consumers must always have access to supply and a 'default supplier' of some sort





## What we've heard on... regulating intermediaries

- Support from many quarters to consider what are proportionate regulatory arrangements for intermediaries, given that they have an increasingly prominent role with consumers
- View that regulation should focus more on outcomes and services provided (many references to principles-based regulation)
- Need to ensure consumers can easily engage with a more complex market (eg have a 1:1 relationship with 'supply')
- Support for alternative licencing models (eg licence lite)





# **WHAT WE WANT FOR CONSUMERS**


# Iterative guiding criteria for future arrangements

## Consumer outcomes

- **Consumers can access energy supply and energy services in a range of ways suitable to their needs and preferences**
- **All consumers are able to access a safe, reliable source of energy at an reasonable price with good standards of service**
- **Vulnerable consumers receive additional protections to ensure they are not penalised as a result of being less able to protect or represent their interests in the energy market**
- **Consumers have control of their data which is handled in line with data protection regulations**
- **All consumers receive sufficient clear and accessible information to enable an informed choice, including the risks and opportunities, about their options for energy supply and services**

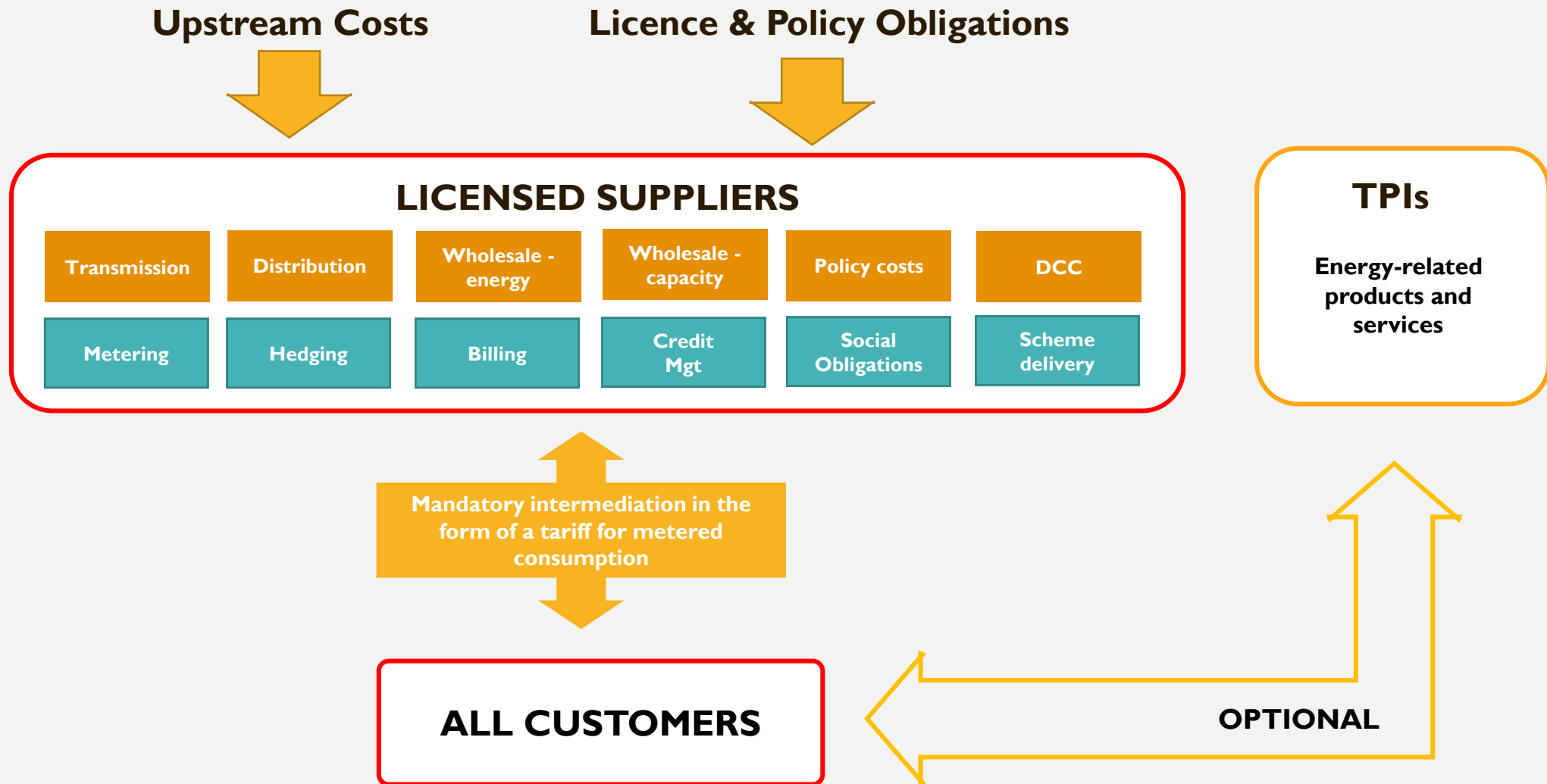
## Market operation

- All market participants offering services to consumers can compete on an equal basis.
- There are no undue barriers for consumers and wider market participants seeking to share access to their energy system data with other market participants.
- Costs of operating the energy system are transparent, can be recovered in a cost-reflective manner, and risks allocated and managed effectively.



# **AN EXAMPLE OF A STRAWMAN REFERENCE MODEL**

# RECAP – THE CURRENT MODEL



*For discussion purposes only*

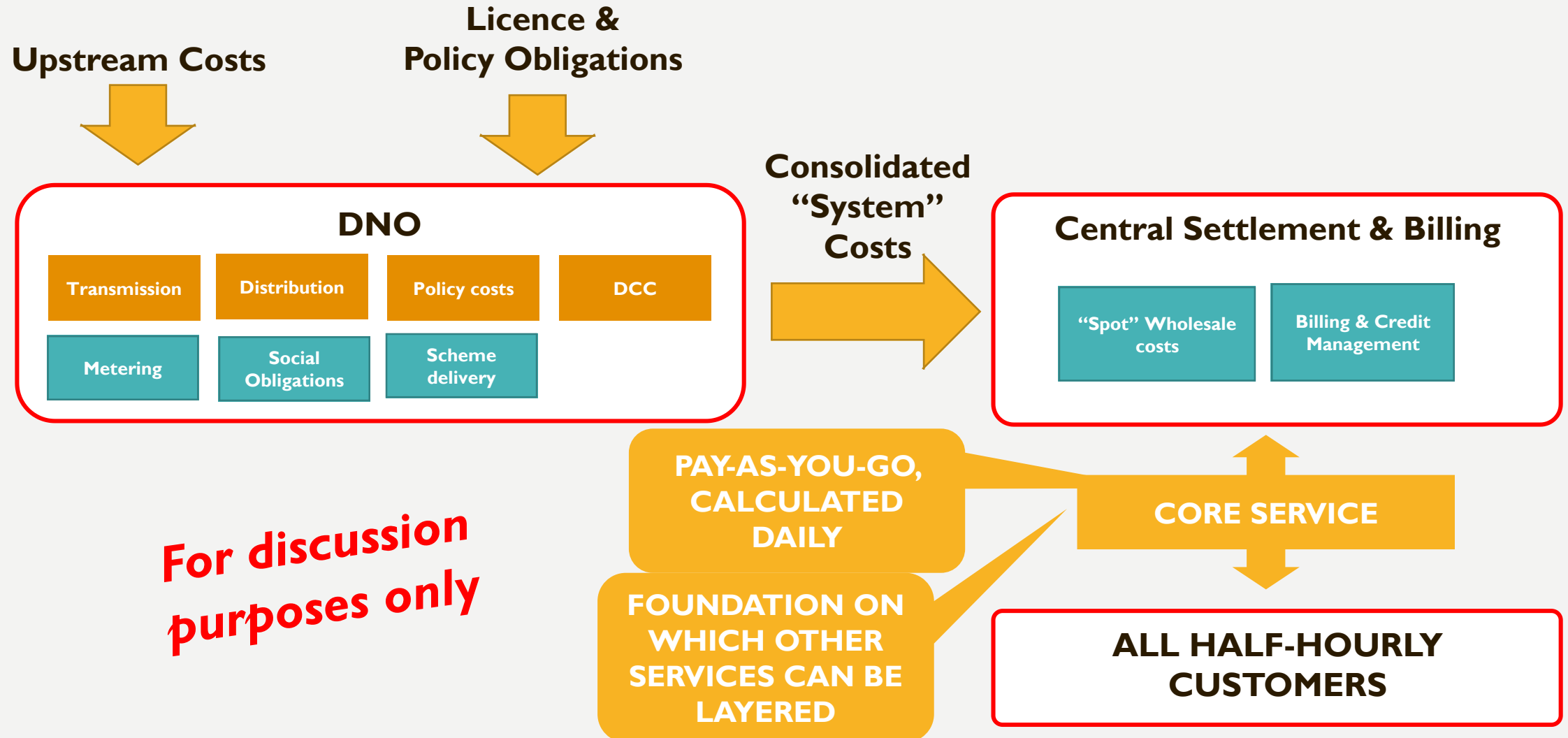
# ALTERNATIVE MARKET MODELS

## What do they need to do (better)?

1. Easier for engaged customer to secure good outcomes, and avoid poor outcomes
2. Easier for disengaged and/or vulnerable customers to secure good outcome and avoid poor outcomes
3. Easier to become a more engaged customer
4. New entrants and new business models able to compete without disadvantage
5. Easier for transactions which support a more co-optimised energy transition to occur

# AN ALTERNATIVE “REFERENCE” MODEL – EXAMPLE

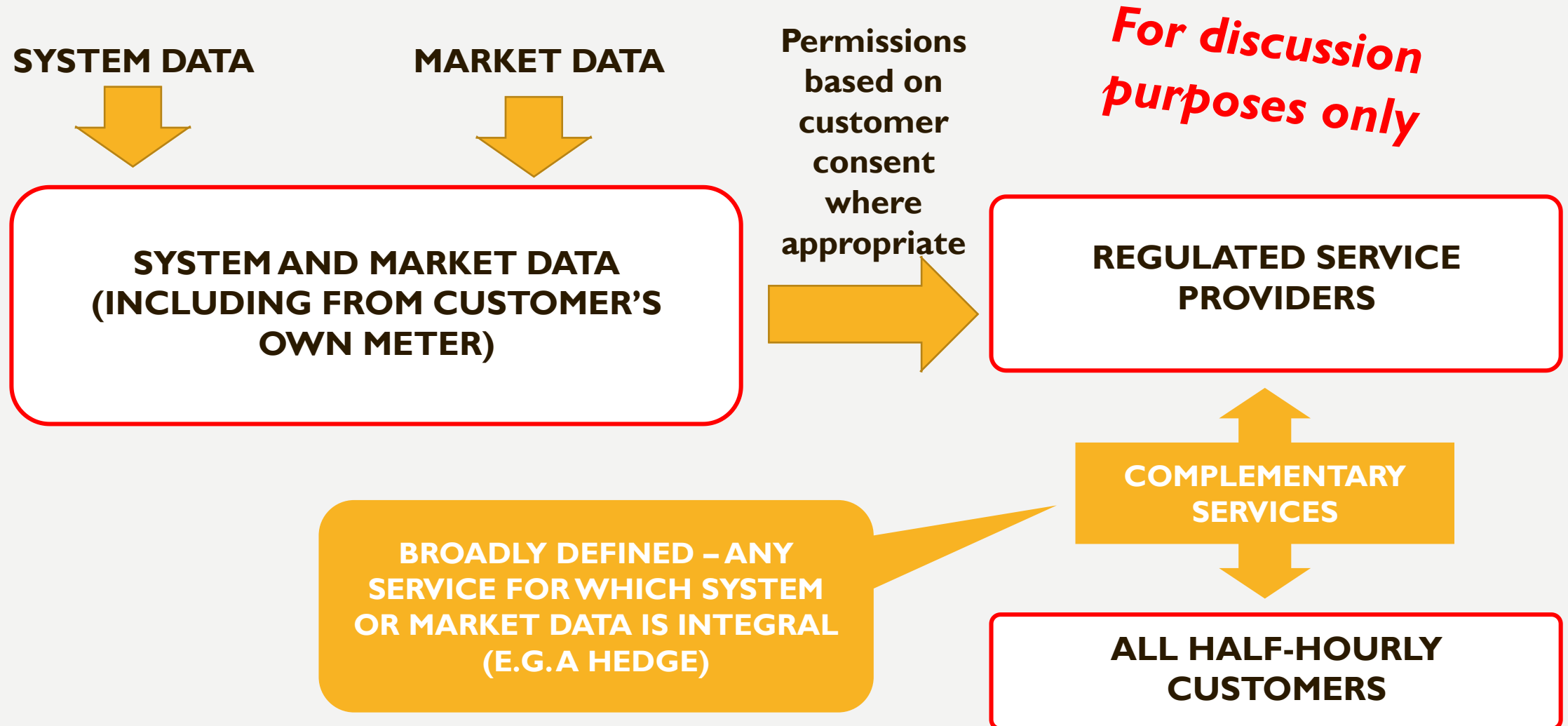
Step 1:- New more direct route to pass through “system”, policy and wholesale costs





# AN ALTERNATIVE “REFERENCE” MODEL - EXAMPLE

Step 2: - Competition in services to complement (or subsume) the core service



# ASSUMPTIONS AND OBSERVATIONS

1. Predicated on Rollout of smart meters and HH electricity settlement
2. Universal access to supply obligation is met – but in a different form
3. Providers of competitive services to customers have no “system” functions
4. Allocation of “system-side” functions can be done differently
5. Can be generalised to include gas
6. Parties accessing data to provide services are regulated – but framework for regulation is up for debate



# **MARKET MODEL BRAINSTORM**

# ASSUMPTIONS FOR BREAKOUT SESSION

1. For discussion purposes, focus is on electricity
2. Focus on the consumer persona (ideas on non-dom for bonus points!)
3. Model could be implemented in 5-10 years (ie technology would be mature)
4. Rollout of smart meters and HH electricity settlement completed
5. Everyone needs to be able to access electricity
6. Actual costs need to be shared fairly
7. All current roles of supplier can be transferred to other parties, or removed completely
8. Legislation can be changed
9. New roles, responsibilities and entities can be created
10. Any solution will be enabled by data

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# **GUEST PRESENTATION – DR JEFF HARDY**

*Please note this is a guest presentation – the following slides do not necessarily reflect the views of Ofgem.*

# Putting the customer at the heart of the energy system

**Dr Jeff Hardy**

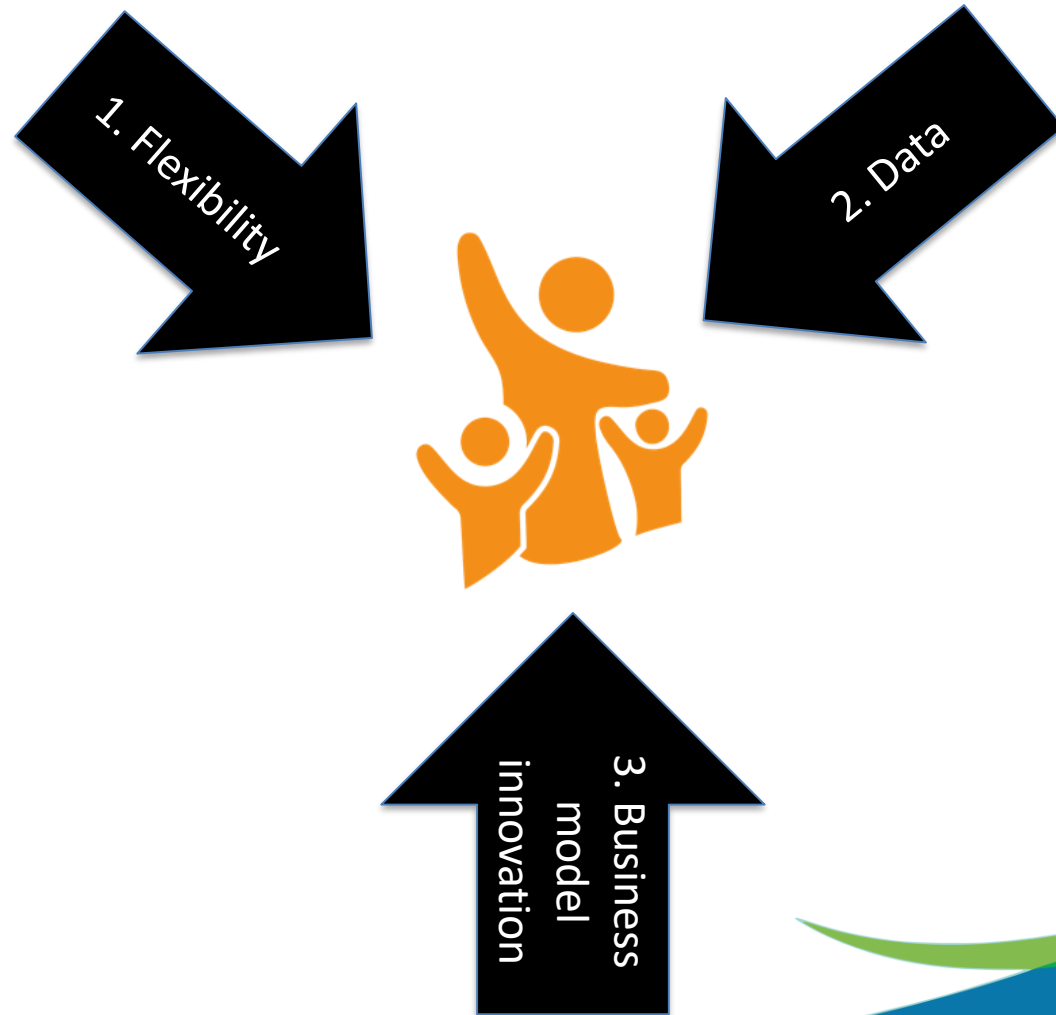
Senior Research Fellow

Grantham Institute - Climate Change and the Environment

Imperial College London

[jeff.hardy@imperial.ac.uk](mailto:jeff.hardy@imperial.ac.uk) | @jjeh102 | @Grantham\_IC

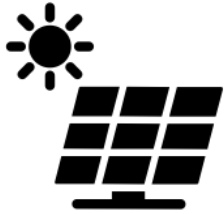
Consumers  
are  
increasingly at  
the heart of  
the energy  
system....



# 1. Flexibility



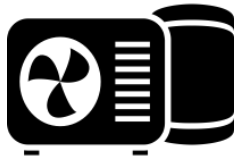
25% 2016



50% 2050



25 million 2050



15 million 2050



74 billion 2025



*“The UK could save £17-40 bn across the electricity system from now to 2050 by deploying flexibility technologies”*

## **Smart systems and flexibility plan**

*“The UK is uniquely placed to lead the world in a Smart Power Revolution. If we get this right we could save consumers up to £8bn a year”*

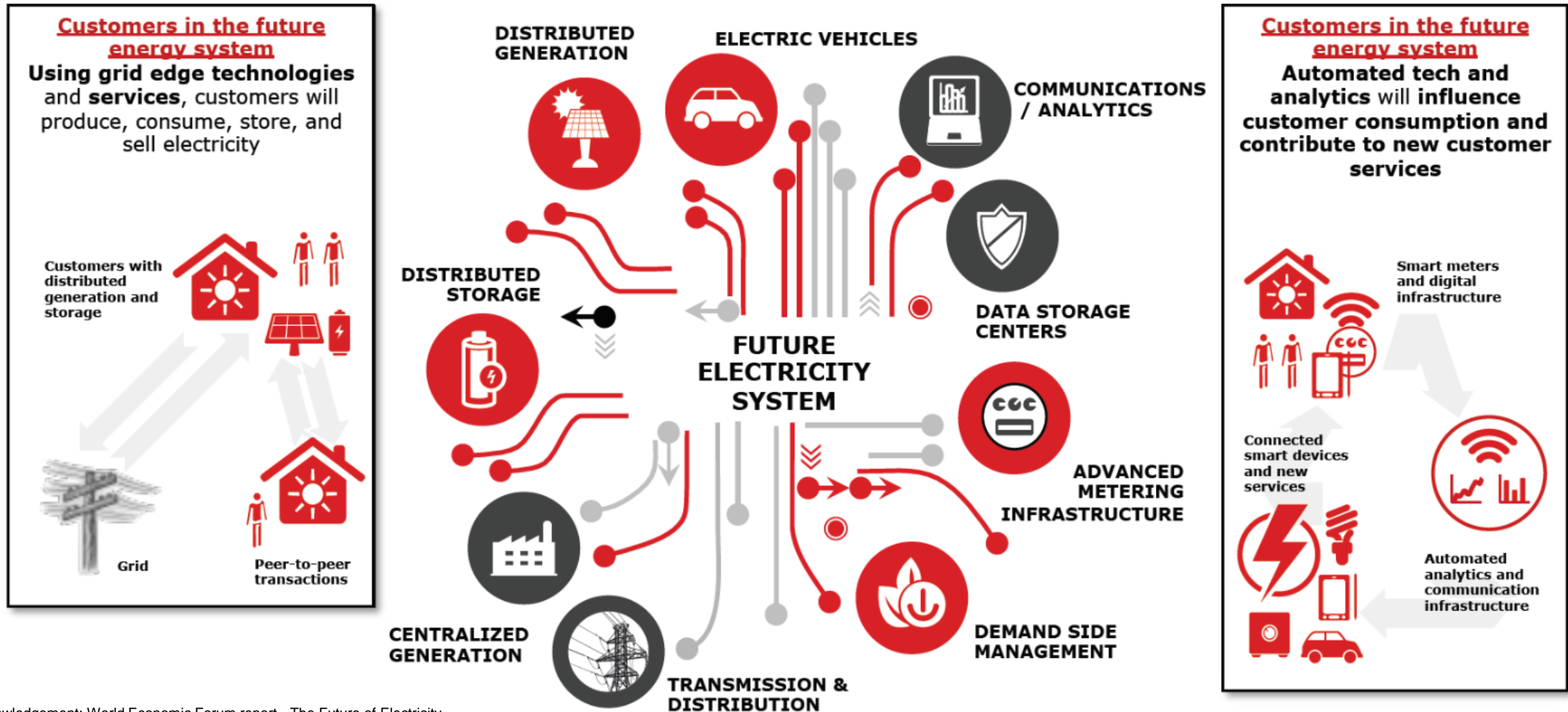
## **NIC Smart power report**

*This research suggests that by 2050 up to £21 billion per year of new financial value is available in the UK electricity system...*

## **Utility 2050 project**



## 2. Data



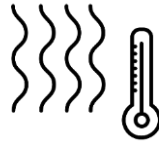
### 3. Business model innovation

#### New electrifier



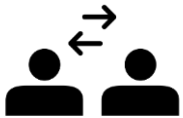
Traditional utility that is helping consumers switch to electric heat and mobility, including installing equipment and automating DSR

#### Energy as a Service



An ESCo delivers energy services to customers, such as comfort and illumination, rather than units of energy like a traditional supplier.

#### Peer-to-peer



P2P customers directly buy, sell or swap electricity with each other.

#### Lifestyle as a service



A third party, such as a price comparison website, takes decisions on consumers' behalf, like automatically switching energy supplier.

Everyone has an opinion on the energy business model of the future...



Smarter Britain

Imperial College  
London

How could we buy energy in the smart future?

Dr Jeffrey Hardy, Imperial College London

March 2017

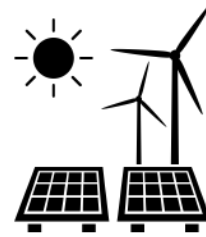
# Size of the prize for future utilities



Plant efficiency  
£75 – 1809 m



Service provision  
£5 – 9 bn



Local LC generation  
£42 – 4600 m

Up to £21bn of new value is available to electricity utilities per year by 2050



Large LC generation  
£0.61 – 8 bn

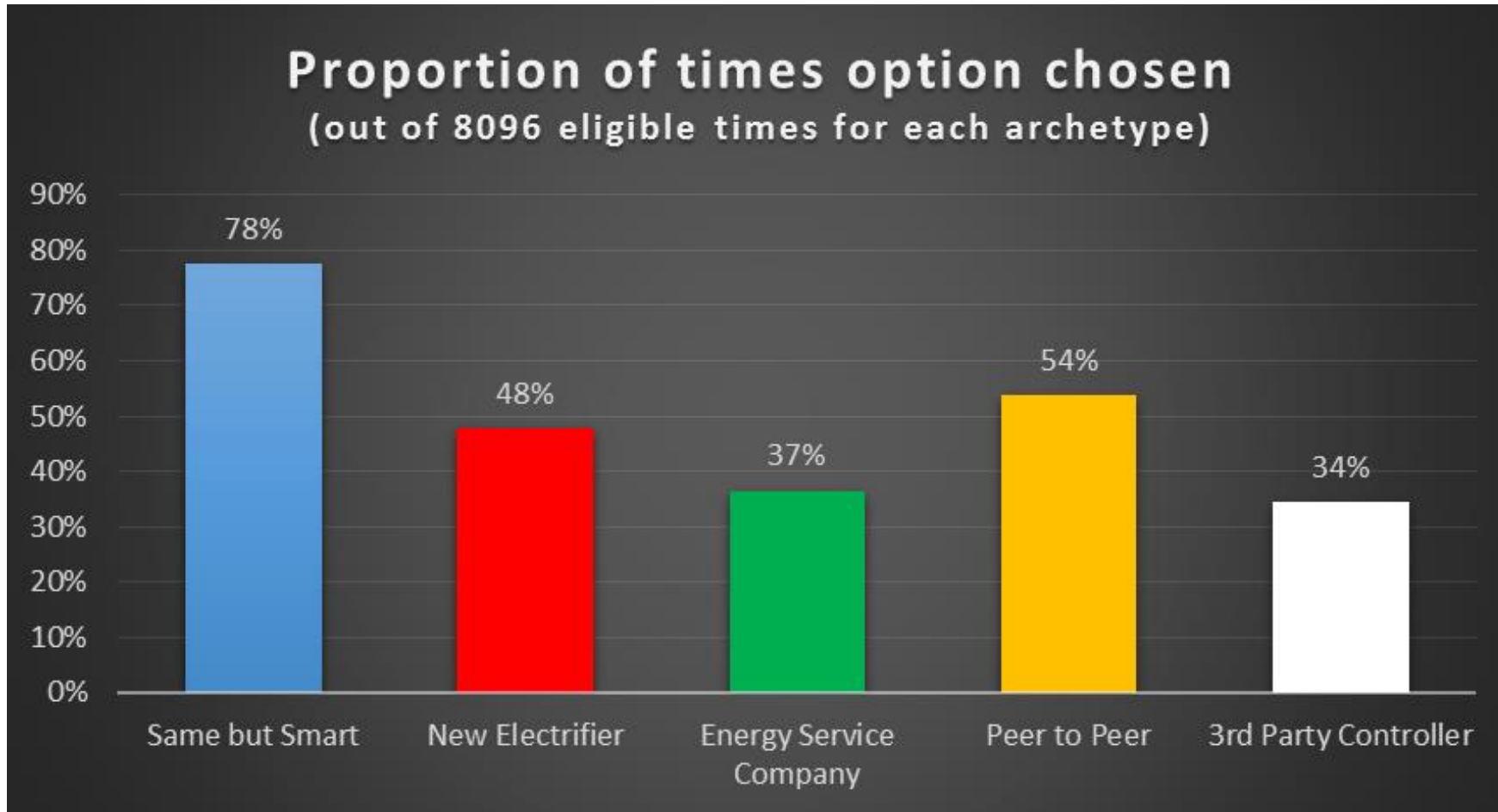


Flexibility optimisation  
£400 – 2000 m

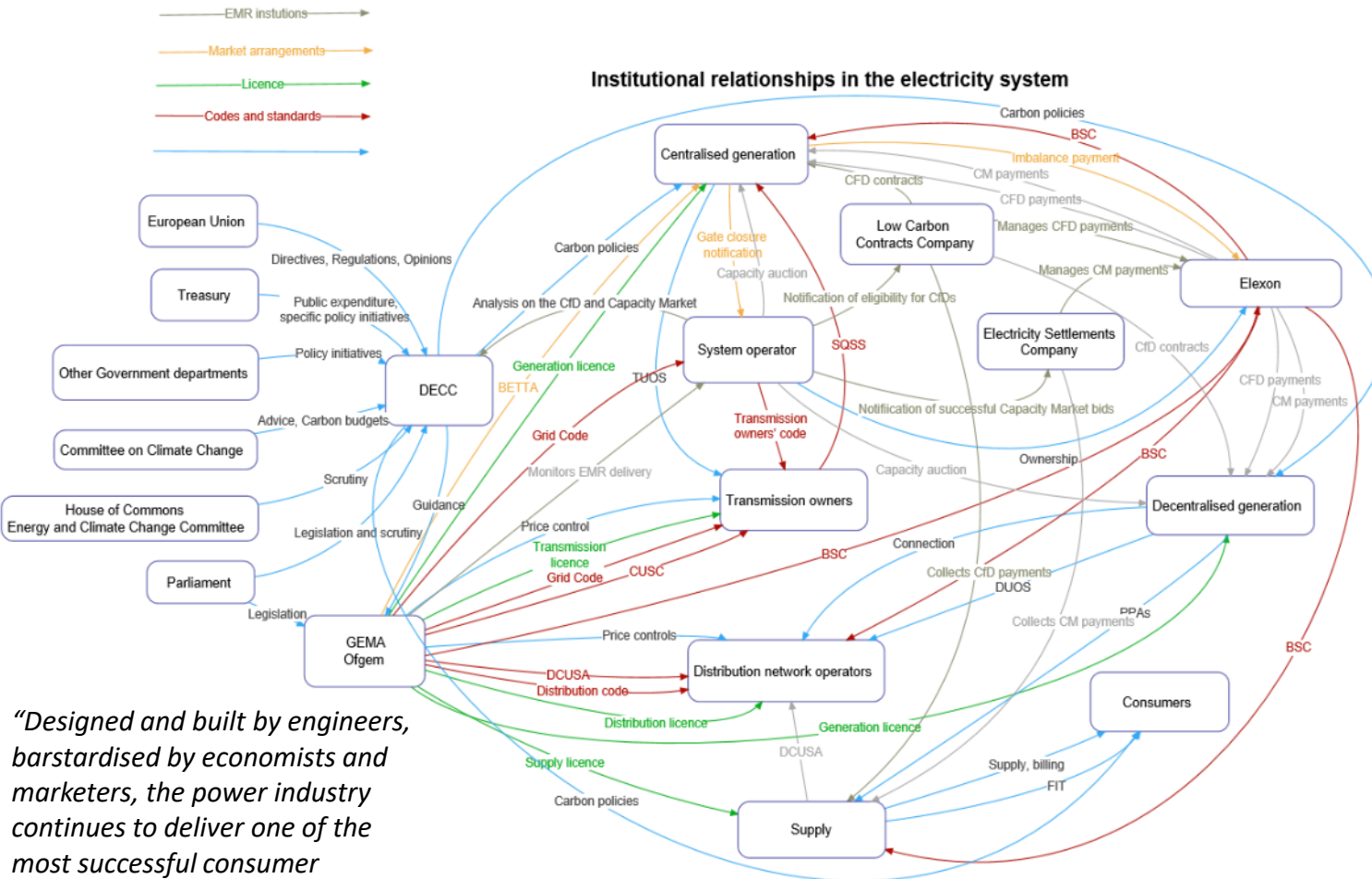


CCS  
£-0.14 – 1669 m

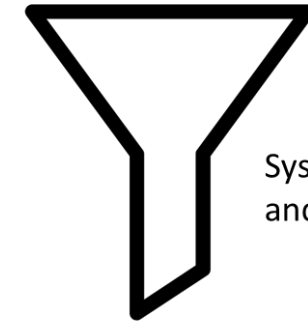
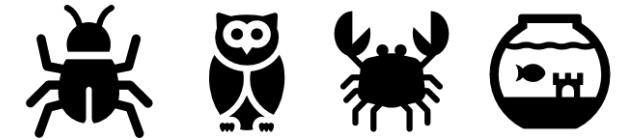
# Do consumers want new business models?



# Conditions for business model innovation



*“Designed and built by engineers, barstardised by economists and marketers, the power industry continues to deliver one of the most successful consumer confusion programmes of all time” Ari Sargent*

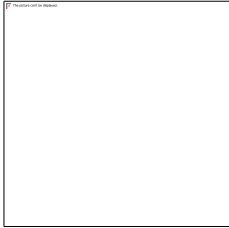


System rules and regulation





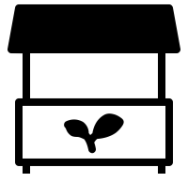
# Reshaping regulation



Regulate for how consumers consume not how businesses are organised



Regulate for system optimisation to deliver the most productive, efficient and affordable system



Regulate to promote transparent, cost-reflective and open markets



Regulate for where energy system security is truly at risk

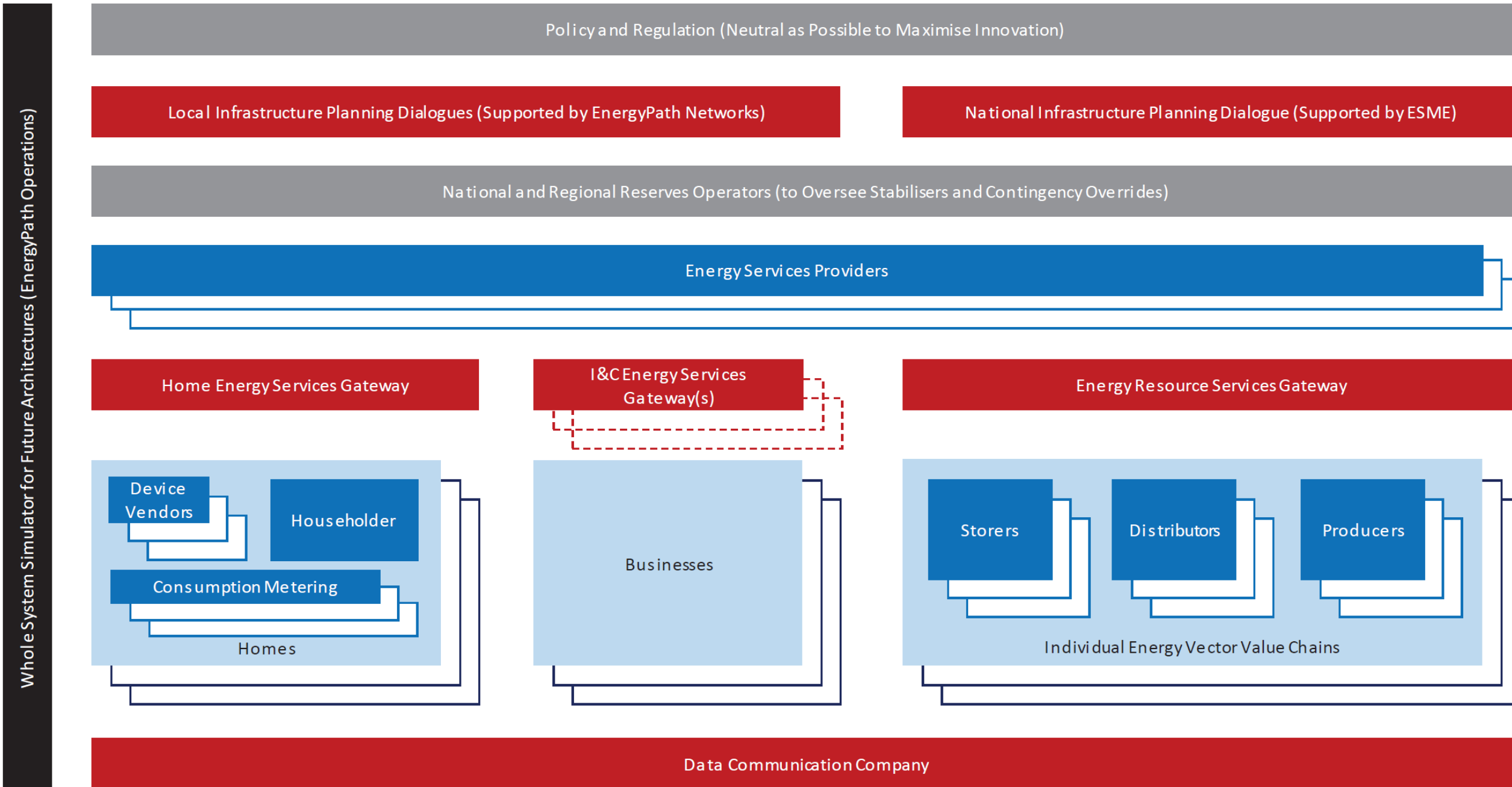
Reference: Reshaping Regulation 1<sup>st</sup> November 2017

<https://www.imperial.ac.uk/grantham/publications/reshaping-regulation-powering-from-the-future.php>



Figure 6 Level -1 overview of candidate 10 architecture

Credit: Energy Systems Catapult



**Consumers**

Offered greater choice, multiple suppliers, fair products, new preferences, at best cost

**Retailers**

Bundled /Embedded products / services  
Vanilla products  
B2B & B2C

**Distributors**

Local  
System Optimisation  
National Optimisation

**Energy Services**

Visibility, location & functionality  
Competing on price & capacity to meet distribution needs

**The Market**

Transparent  
Market Enhanced price discovery

Key Consumer comparable  
**Metrics**

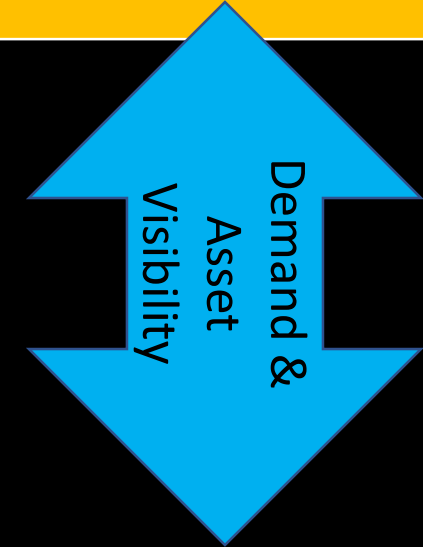
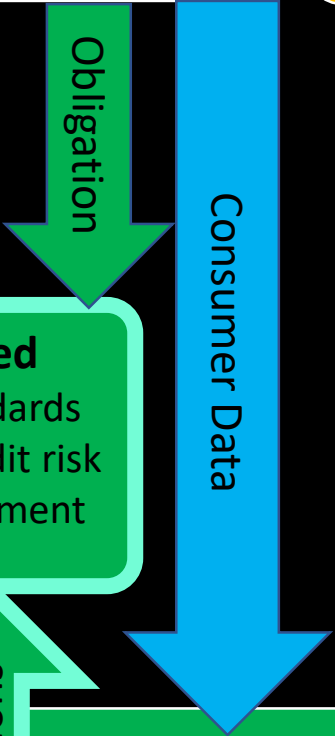
**Redress** Across  
Complex Products / Services

**Enforcement and Consequences**

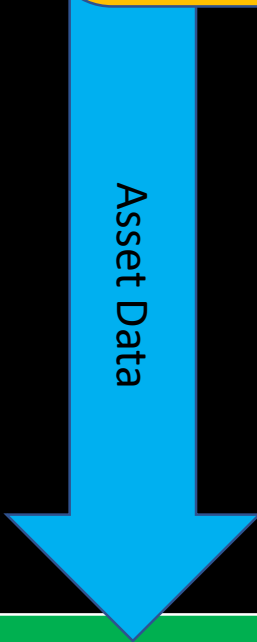
**Cross Regulatory**  
outcomes (Primary Authority Model)

**Market Assured**  
Compliance/ Standards  
Insured against credit risk  
Continual Improvement

Compliance data  
New Regulations



**System Operator**  
System Operation



**Enhanced Registration & Data Regulatory Body**

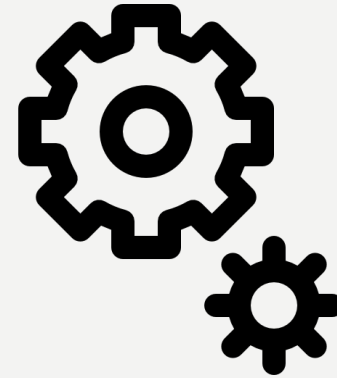
Encompassing Regulatory Risk and Surveillance  
Data access and automated Scheme & Settlement System  
A platform for system visibility for all players





# **CLOSING REMARKS AND NEXT STEPS**


# OVER THE COMING MONTHS



# TELL US WHAT YOU THINK



[futuresupply@ofgem.gov.uk](mailto:futuresupply@ofgem.gov.uk)

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# **ANNEX – ATTENDEE RESPONSES TO INTERACTIVE EXERCISES**

# *The consumer experience today is...*



***These are stakeholder views.***

# *The biggest barrier to innovation is...*



*These are stakeholder views.*

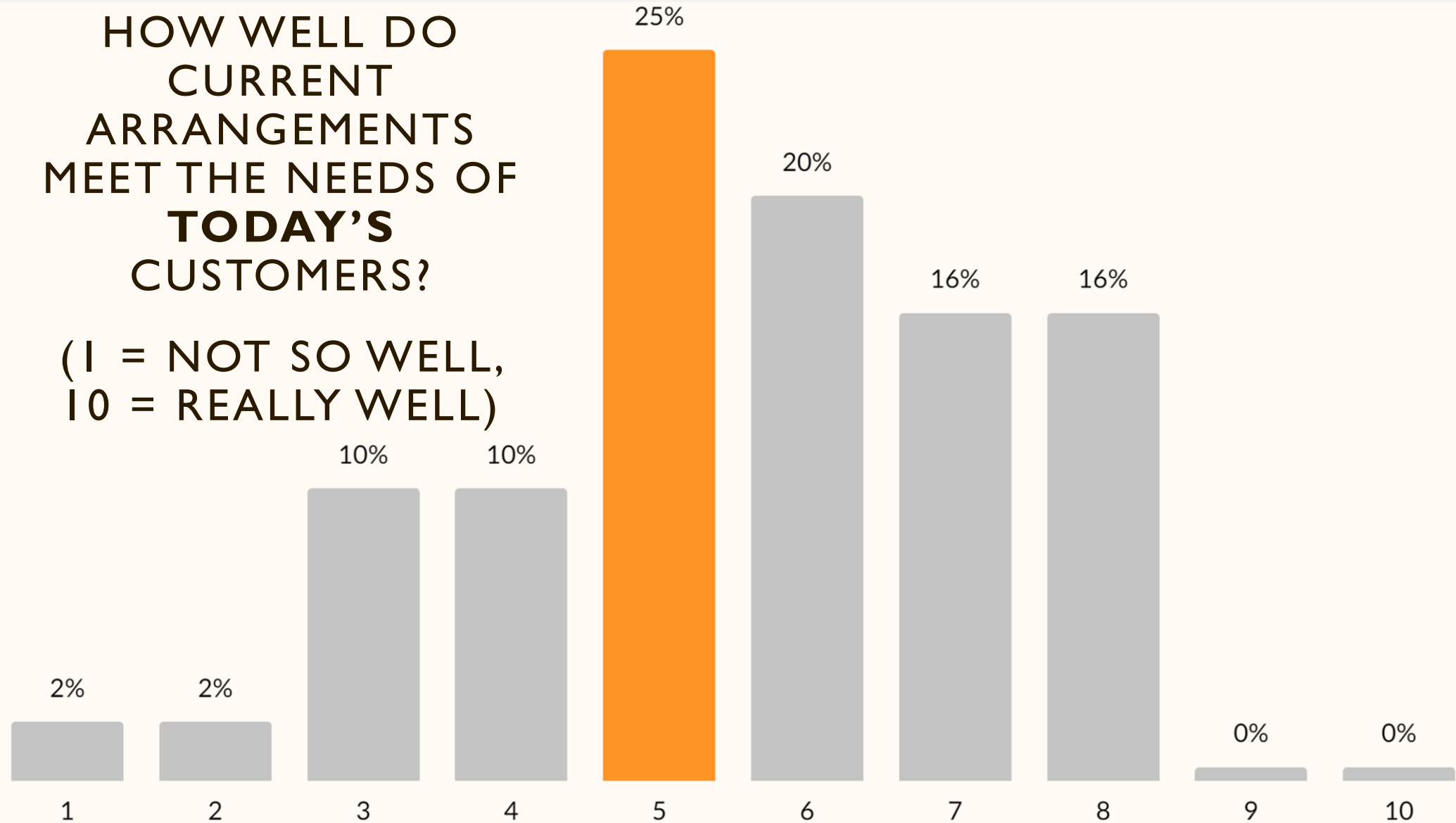
# *Our future regulatory framework should be...*



***These are stakeholder views.***

HOW WELL DO  
CURRENT  
ARRANGEMENTS  
MEET THE NEEDS OF  
**TODAY'S**  
CUSTOMERS?

(1 = NOT SO WELL,  
10 = REALLY WELL)

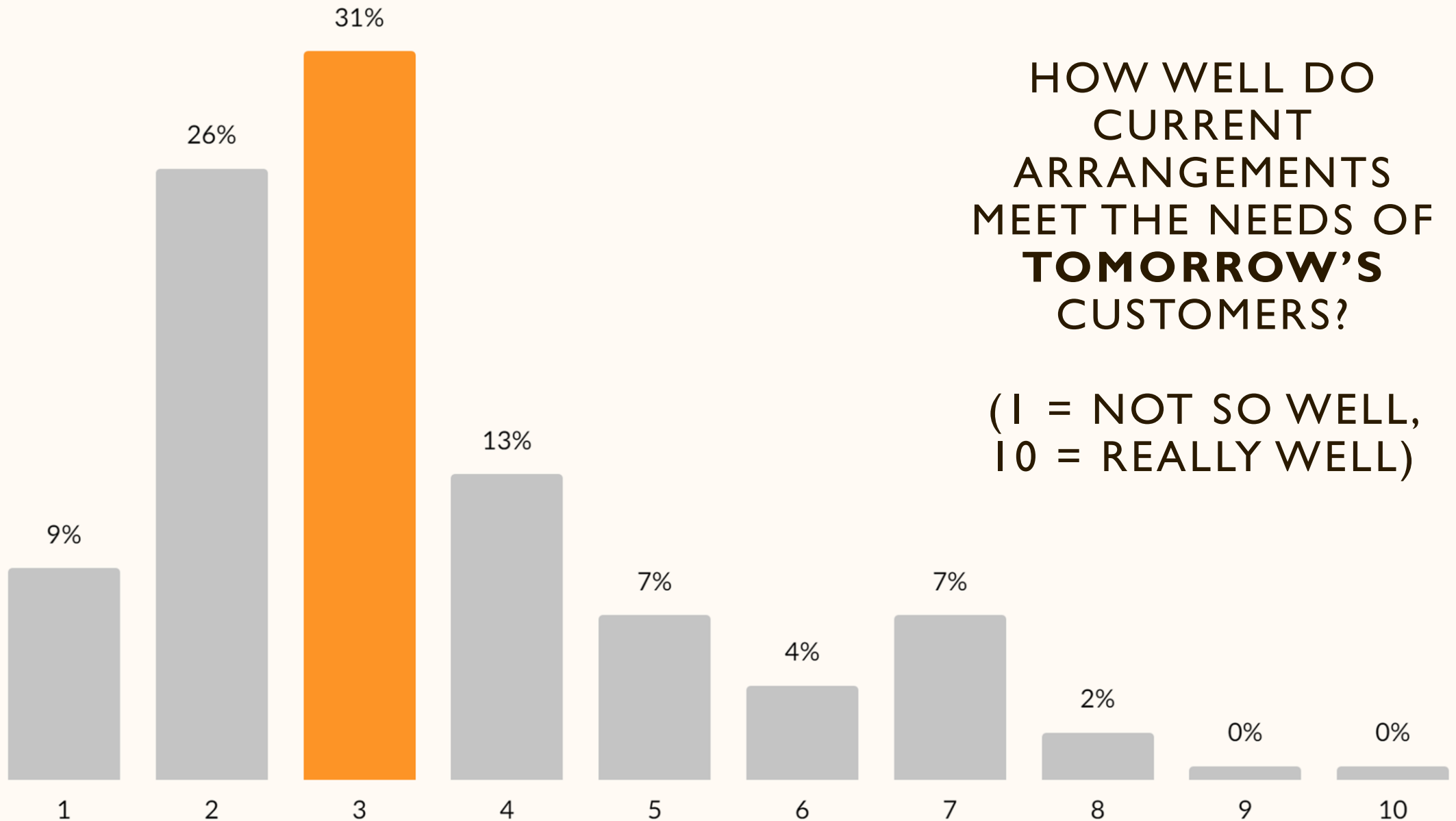


*These are stakeholder views.*



HOW WELL DO  
CURRENT  
ARRANGEMENTS  
MEET THE NEEDS OF  
**TOMORROW'S**  
CUSTOMERS?

(1 = NOT SO WELL,  
10 = REALLY WELL)



*These are stakeholder views.*