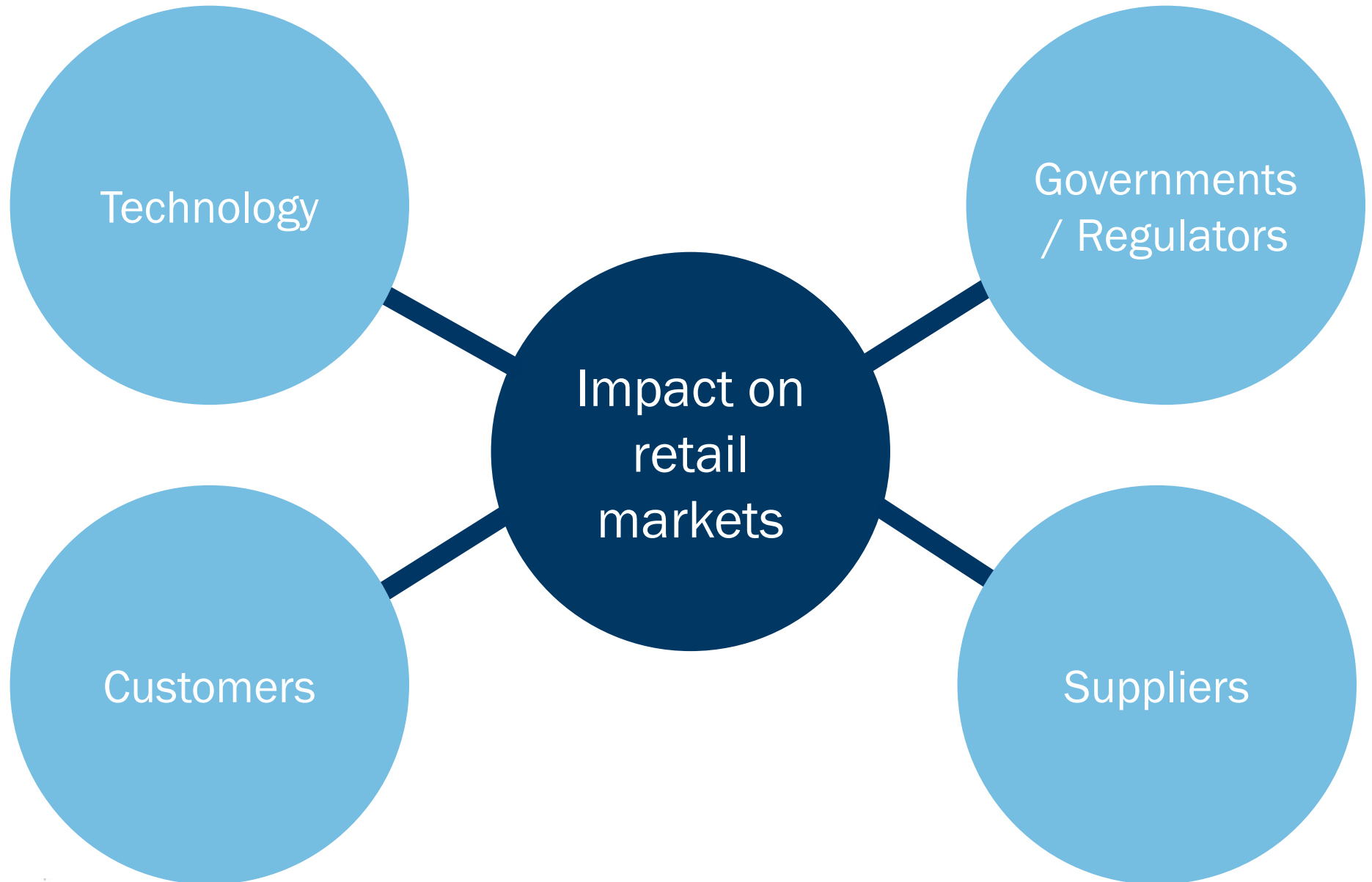


# The potential impact of smart meters on the retail market

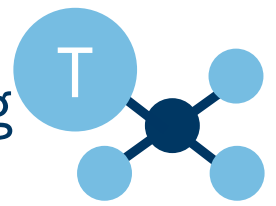
*EPRG Conference*

*May 16<sup>th</sup> 2014*

Let's look at the potential impact from some different perspectives.....



# 1. Technology: the 'smart meter' is really an evolving continuum of increasingly intelligent meters.....

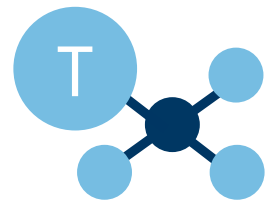


- Smart meters have been around for several decades
- Mainly for large Industrial & Commercial customers
- Basic design - one way communication - Automatic Meter Reading (AMR)



- Now being deployed into households & businesses
- Intelligence has evolved – two way communication – Advanced Metering Infrastructure (AMI)
- Both gas and electricity

# 1. Technology: ....but it's not about the meter, it's about what they can enable.....



Enabler of the 'smart grid'?

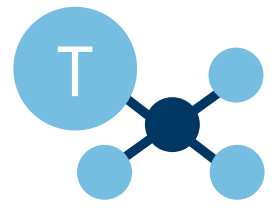


Enabler of the 'smart home'?



.....or both?

# 1. Technology: ....but in the world of retail, we need to walk before we can run, as utopia is not here yet



Accurate billing

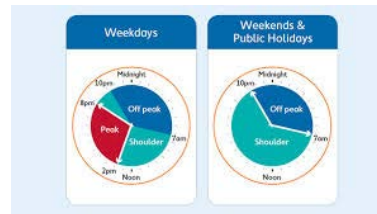
Consumption reduction

Integrated home generation

Time of use tariffs

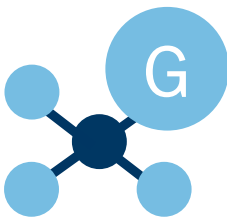
Automated home appliances







Automatic customer switching

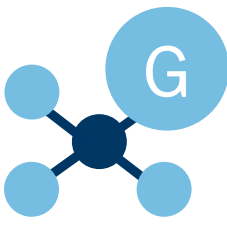


Getting these working at scale would be a good start

## 2. Governments / Regulators: different countries are rolling out smart meters for different reasons



Country	Responsible	Scope	Rationale	Progress
Italy 	Distributor	Electricity (gas started)	Support debt management & competition	31 million meters installed: 2001-11
Sweden 	Distributor	Electricity	Reduce electricity consumption	5 million meters installed: 2006-9
Netherlands 	Distributor	Electricity and gas	Address billing issues & facilitate switching	Mass roll-out halted due to privacy concerns
France 	Distributor	Electricity (planned for gas)	Network efficiency	Mass roll-out: 2014-2020
UK 	Supplier	Electricity and gas	Customer energy & carbon savings	Mass roll-out: 2015-2020
Germany 	Distributor	Electricity	Manage transition in electricity mix	Partial roll-out under consideration



## 2. Governments / Regulators: the UK programme is ambitious across a range of dimensions.....

2015

DCC 'go-live' and start of mass roll-out

2020

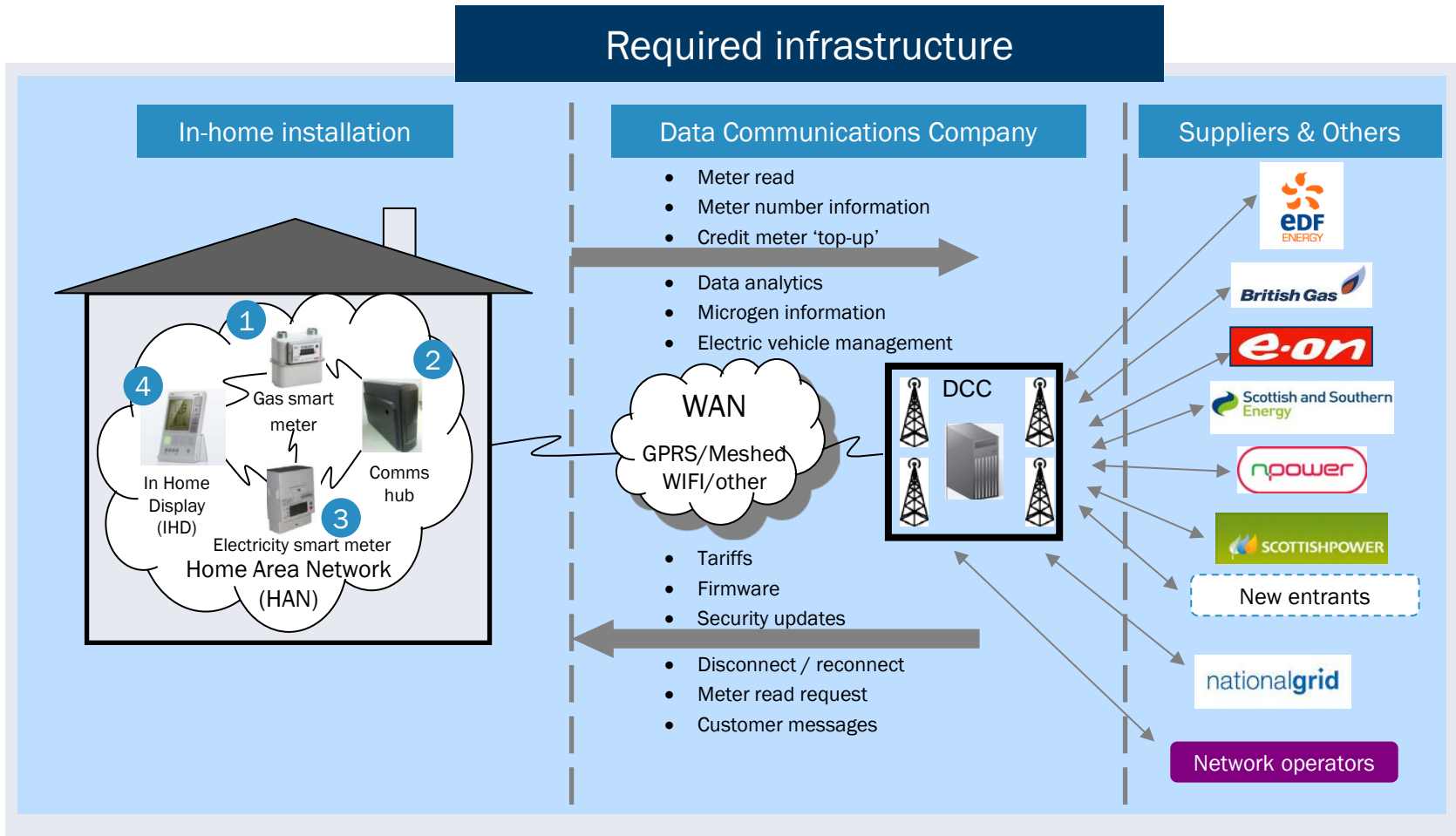
Suppliers required by law to roll out smart meters and in-home displays (IHDs) to all residential & SME customers

53 million

Number of gas and electricity meters to be replaced by energy suppliers

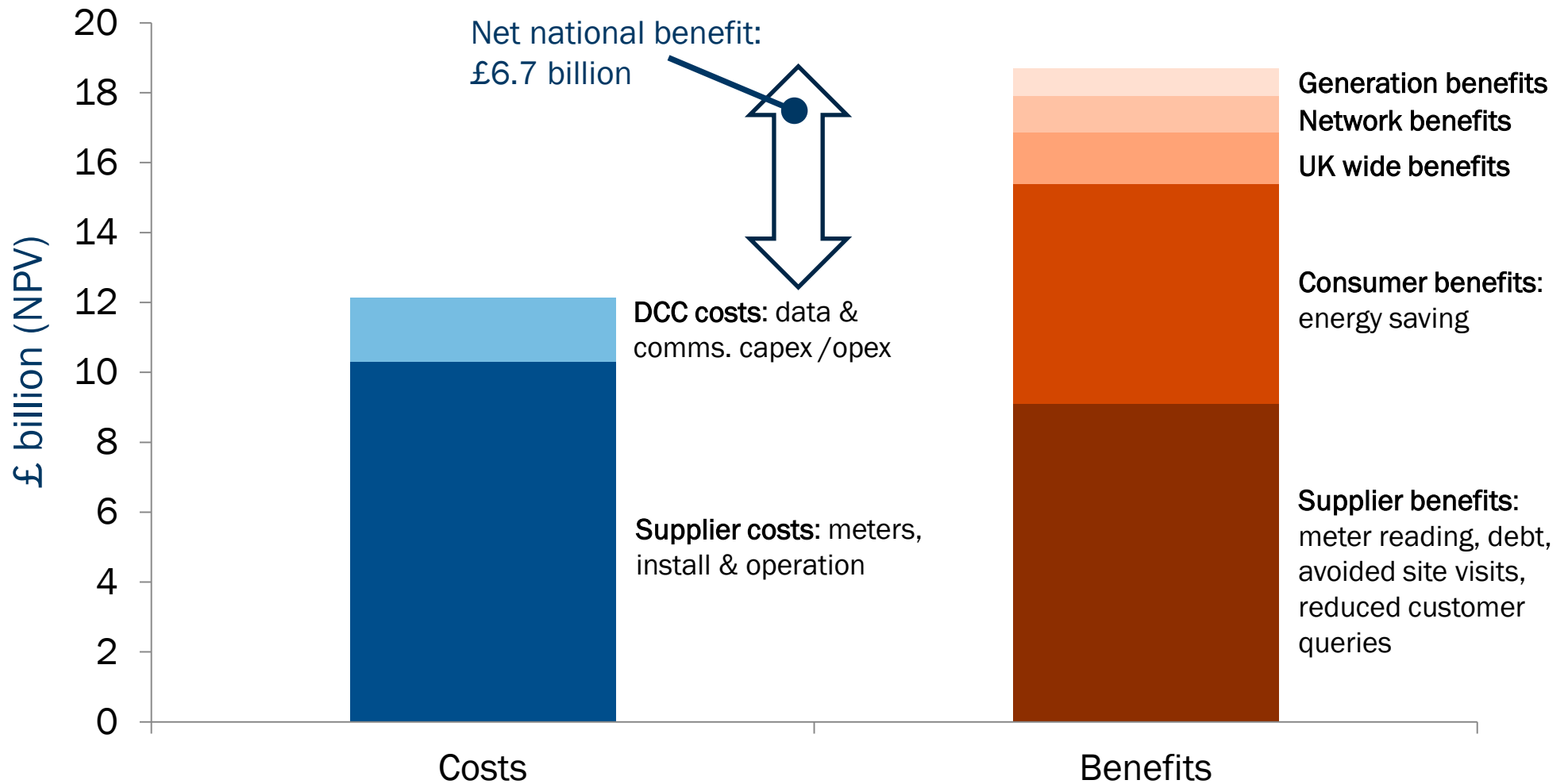
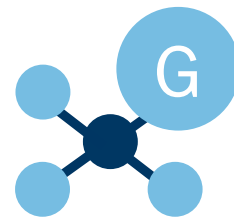
30 million

Number of homes and small businesses affected by the smart meter programme



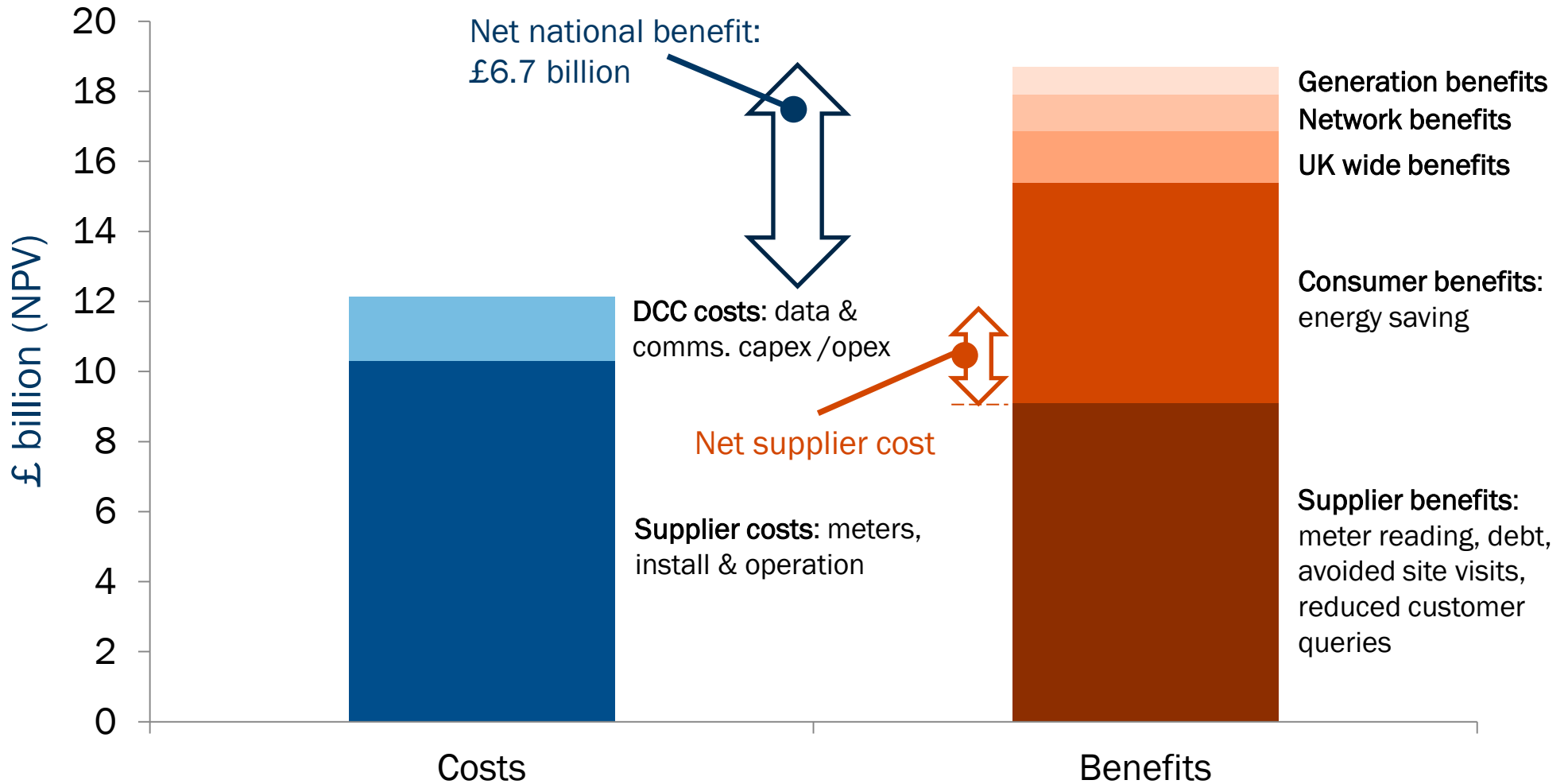
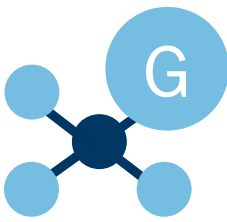


## 2. Governments / Regulators: .....and is predicated upon a positive national business case...

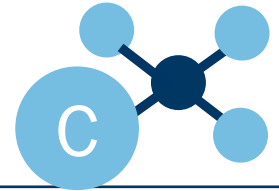




## 2. Governments / Regulators: .....although a net GB benefit does not translate to a net supplier benefit



### 3. Customers: needs are changing rapidly and smart meters could help meet many of them.....



Interactions with each other and companies

Connectivity



Use of data



Trust / influence



Individual needs and expectations

Tailoring



'Prosumer'



Reassurance



Perception of value

Convenience



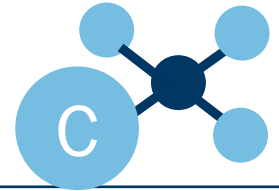
Sustainability / Ethical behaviour



Price consciousness



# 3. Customers: .....but the first challenge is to do no harm !



Interactions with each other and companies

Connectivity



Use of data



Trust / influence



Individual needs and expectations

Tailoring



'Prosumer'



Reassurance



Perception of value

Convenience



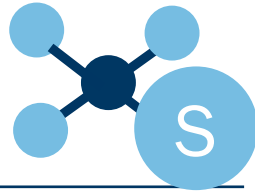
Sustainability / Ethical behaviour



Price consciousness



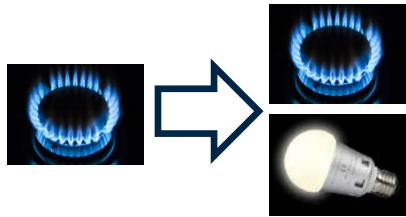
# 4. Suppliers: UK suppliers take different views on the balance of opportunity and risk



## Opportunities:



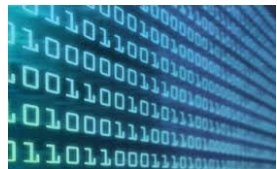
Enhance the customer relationship and build trust



Boost market share eg. through dual fuel 'upsell' and lower tariff uplift than competitors



Springboard into energy services



Exploring wider business value from data

## Risks:



Social licence to operate and trust may be further eroded through logistical and customer experience challenges



Costs are higher than expected and benefits do not materialise, impacting industry as a whole



The 'PR battle' is lost and customers refuse to participate



New business models are created which disintermediate the traditional utilities: '3G risk'



## Conclusions

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### Technology:

- It's not really about the meter, but what it can do
- More advanced 'smart' technology is overplayed and challenges of delivering less advanced functionality at scale are underplayed

### Governments / regulators:

- Smart meter roll-out rationale varies considerably by country
- UK national business case built upon keenly debated costs & benefits

### Customers:

- Get the basics right first – don't undermine trust further and limit tariff rises

### Suppliers:

- Some UK suppliers perceive net risks, but know data could be a game changer