



Promoting choice and value  
for all gas and electricity customers

# **Meter data management in a smart metering environment**

## **Great Britain case study**

# Overview

## **1. Market overview**

- Networks
- Retail
- Metering

## **2. Supplier hub principle**

## **3. The data management model**

## **4. Customers**

## **5. Rationale for our choice of data management model**

## Market overview

### Networks

#### Electricity

- Three onshore transmission owners, four (and counting) offshore
- One transmission system operator
- Fourteen distribution network operators, four independents

#### Gas

- One transmission network owner
- Eight distribution networks owners

Unbundling: certification process ongoing

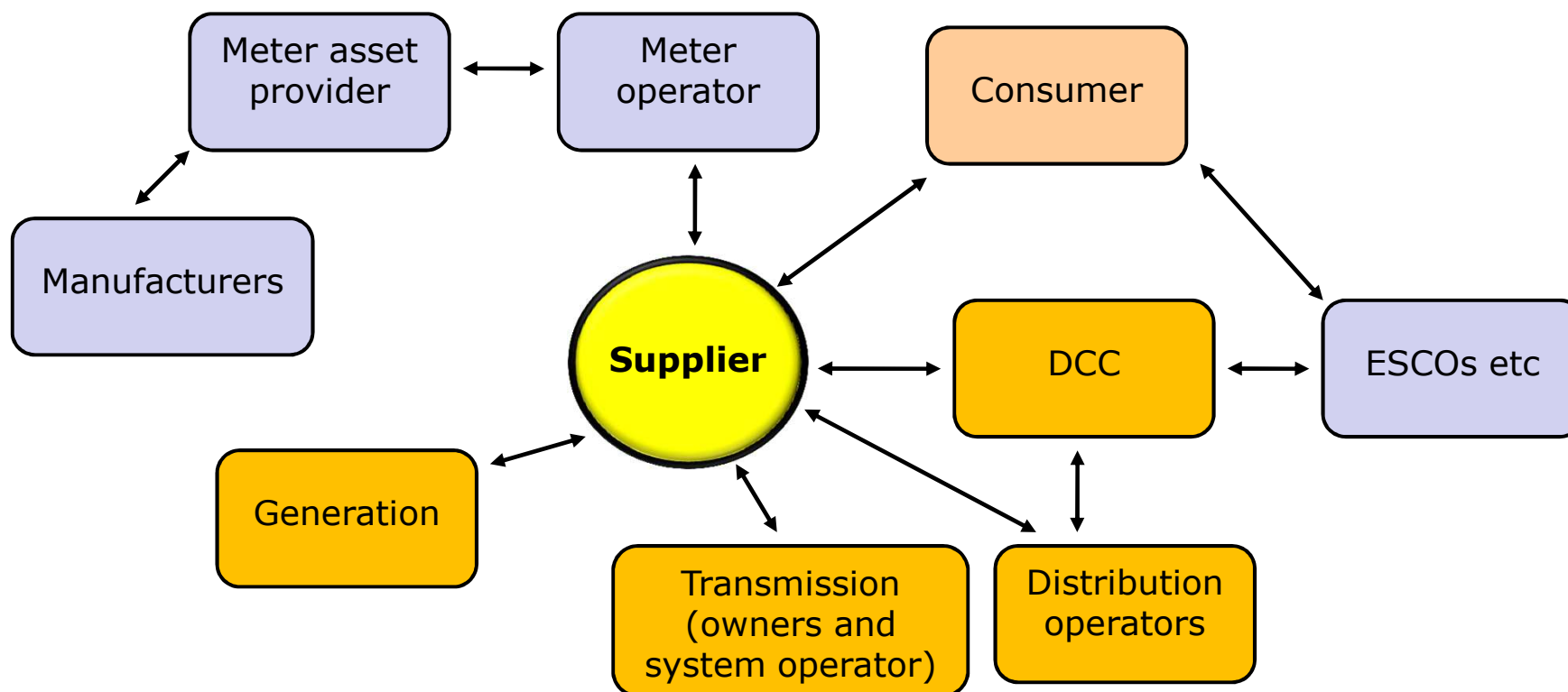
### Metering

- Liberalised market
- 'Supplier hub' principle: suppliers are now at centre of metering arrangements
- Networks have little contact with customer regarding metering
- Electricity: suppliers often contract out metering services
- Gas: price controls remain. Networks retain a large share of the metering stock

### Retail

- 30m+ households and businesses, 50m+ meters
- Fully open to competition
- Six large suppliers supply over 99% of GB domestic customers
- During 2010 15-17% of consumers switched supplier

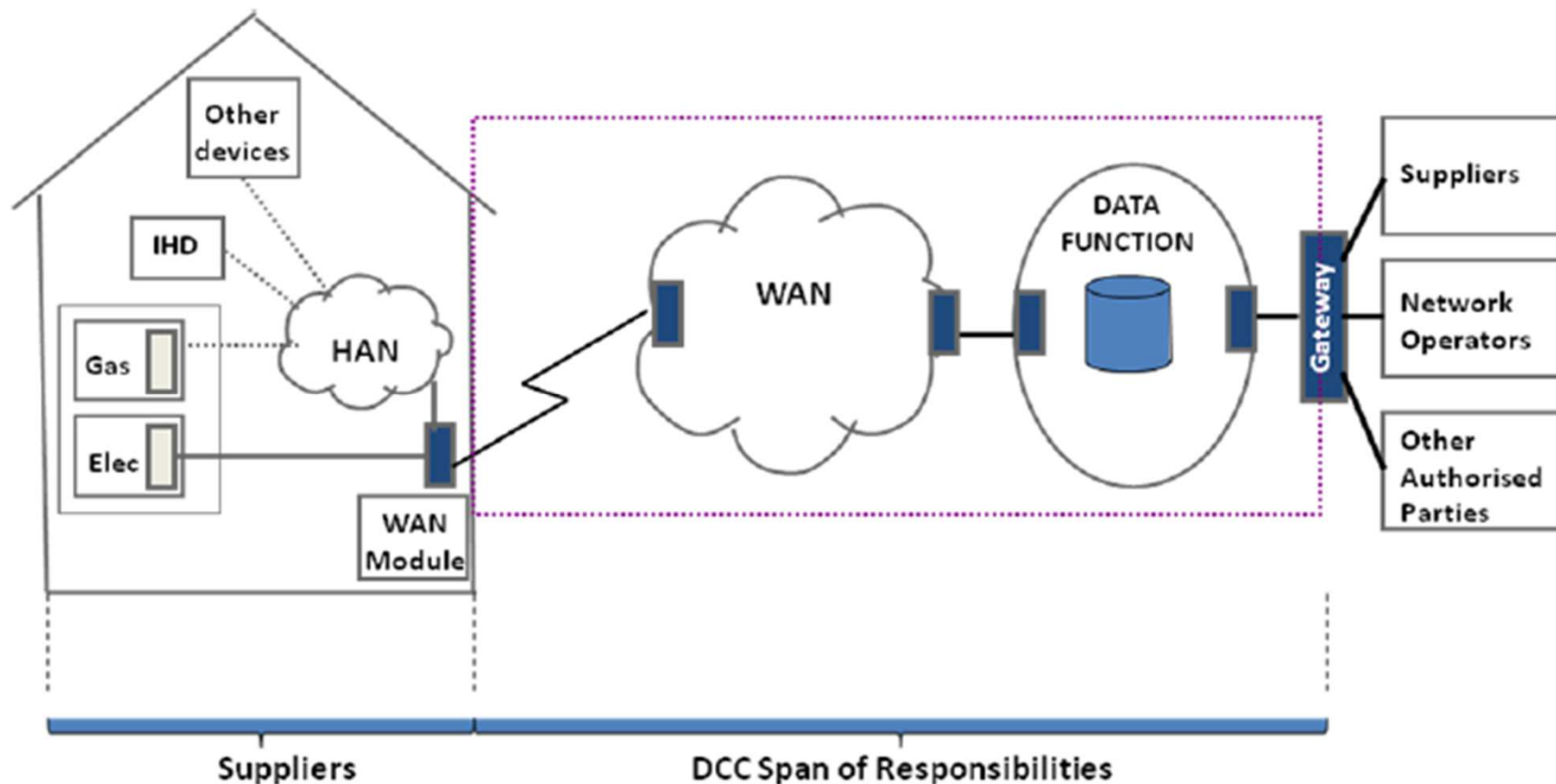
## Supplier hub principle (electricity)



**Similar principles apply in gas**

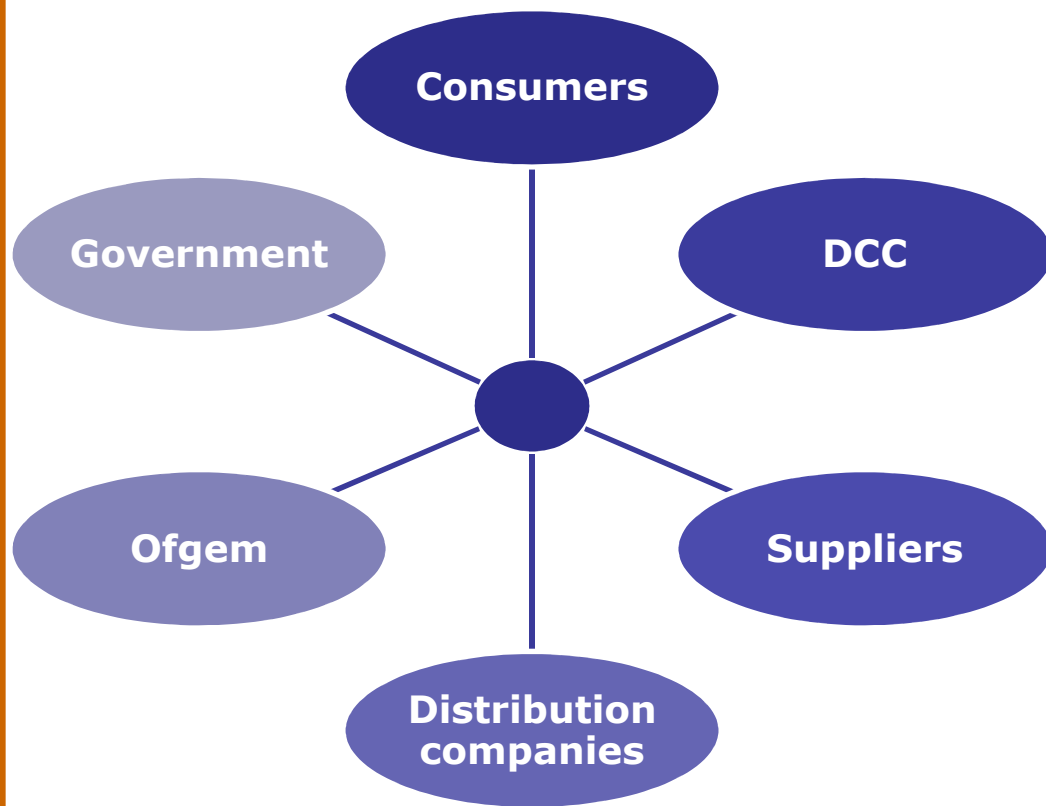
## The data management model: slide 1

High-level design of the end-to-end smart metering system



## The data management model: slide 2

### Key stakeholders



### Looking to the future

DCC may take on additional services over time, such as:

- Data aggregation
- Central registration

## Customers: slide 1

### Privacy and consumer consent

- The consumer will control who can access the consumption data and at what level of granularity
- In most instances, companies need some form of customer consent to access consumption data

#### Suppliers and data access rights

- **Monthly (or less granular)** data **without customer consent**, for billing and payment and to fulfil statutory requirements or licence obligations
- **Daily (or less granular)** data on **opt-out consent** basis for any purpose except marketing
- **More granular than daily** data or to use consumption data for the purposes of **marketing** on **opt-in consent** basis
- Exceptions include in relation to theft detection, approved trials and to resolve billing queries

## Customers: slide 2

### Privacy and consumer consent cont.

#### Distribution companies and data access rights

- They will be able to access data without consent, provided they can aggregate or make data anonymous
  - Must develop and get approval of detailed plans
- Prior to this, they can access data on the same basis as suppliers

#### Third parties and data access rights

- Includes energy service companies or suppliers that are not the registered supplier for a particular premises
- Would require opt-in consumer consent to access any data



## Customers: slide 3

### Consumer access to information

Consumer may be able to access energy consumption info:

- Through their IHD
- Over their HAN via a “bridging device”
- From their supplier (on request)
- By exercising rights under the Data Protection Act 1998

### Consumer benefits

- Government impact assessment:
  - Costs = £11.3 billion over 20y
  - Benefits = £18.6 billion over 20y
  - Net benefit of £7.3 billion
- Benefits derive largely from reductions in energy consumption and cost savings in industry processes
- An end to estimated bills
- Less need for manual meter reads

## Rational for using the DCC model

### Advantages

- Interoperability: important in a competitive market with multiple meter providers
- Cost efficiency: economies of scale
- Coverage of hard-to-reach premises
- Efficient industry processes: potential to streamline and improve industry processes
- Data security: easier to ensure comprehensive and consistent security arrangements
- Smart grids: greater ability to enable the development of smart grid services over time

### Challenges

- Creates a monopoly in an area where the market may have provided a comms solution. Potential negatives include:
  - Increased costs of providing comms services
  - Lack of competitive pressure to provide good services to users
  - Costs of establishing the regulatory framework
- Single source for hackers to target
- Delays in establishing DCC could cause uncertainty and delay smart meter roll out



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