Smart Energy

Neil Pennington, Director of Smart Innovation

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npower

“Standard” disclaimer

I will not …

> Provide a “party political broadcast on behalf of the npower party”!!
> Seek to score political points – all Suppliers and Industry colleagues are in this together.

I will …

> Provide an honest view from someone working with this day-in, day-out.
> Provide insight into the issues that are “front of mind” regarding delivery.
> Of course stay away from anything affecting commercial and competitive advantage for npower.

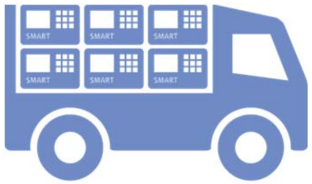
RWE Npower

- One of the Big Six Energy Retailers in GB
- Owned by RWE AG in Germany
- Over 5m customer accounts
- Completing enterprise systems replacement activity

Neil Pennington

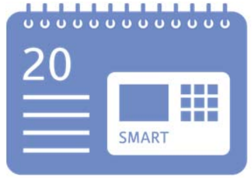
- Previously the Smart Programme Director for npower
- Now focusing on Smart Innovation opportunities to optimise on the unique disruptive moment smart meter deployment creates
- Partnership with Nest is just the first of many initiatives

GB Smart Meter Roll Out – Facts & Figures



53m
Smart meters to be deployed in Great Britain by 2020

£11bn
is the total projected cost of Great Britain's Smart roll out



£18.6bn
Expected UK benefits from Smart Meter deployment over next 20 years

5.5m
Total smart meters to be deployed by npower

70%
of current retail processes are impacted by Smart

££££££££

£1.6bn
Total npower cost impact
*10Y Period from 2013

1.1m
Smart meters to be deployed, annually, at peak by npower (compared to 0.25m today)

… Roll Out to be completed by the end of 2010

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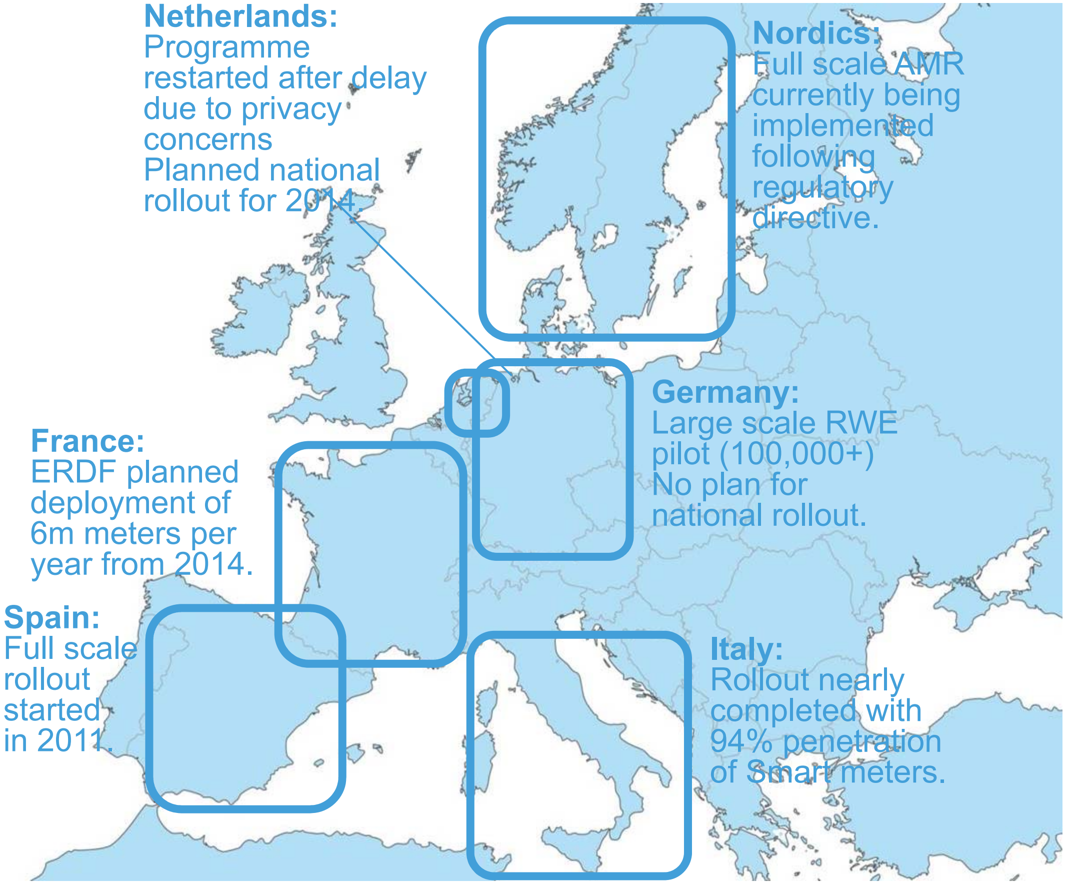
What’s happening in the rest of Europe

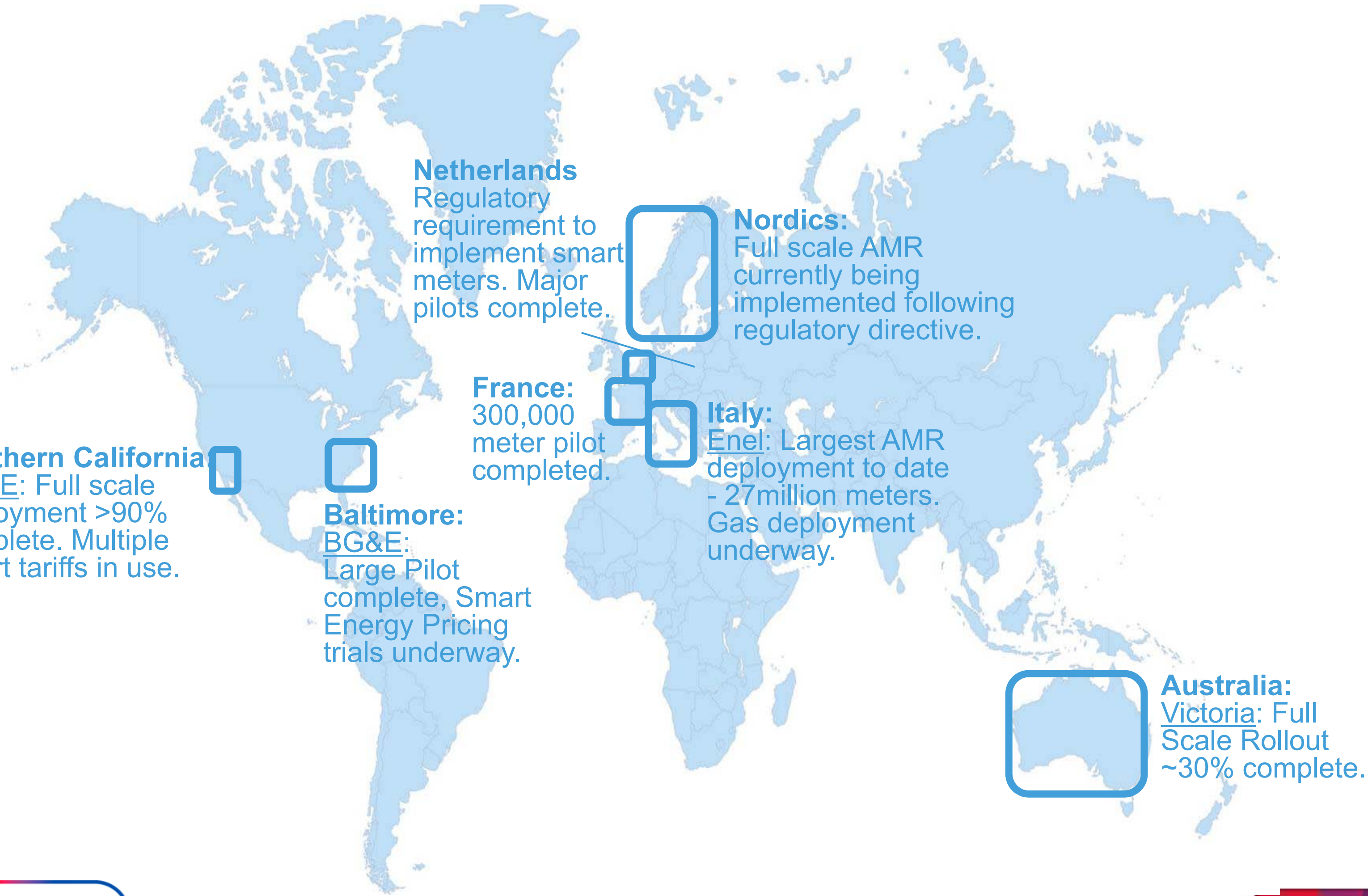
Europe presents a fragmented picture.



Country	Rollout Period	Customer s
Italy	2001 – 2011	36m
Sweden	2003 – 2009	5.2m
Finland	2009 – 2013	3.1m
Spain	2011 – 2018	28.4m
France	2012 – 2017	34m
Norway	2014 – 2017	2.6m
Ireland	2014 – 2018	2m
Netherland s	2014 – 2019	7.6m
United Kingdom	2014 – 2019	29.1m

What's happening across the world

Some of the deployments underway and complete, globally.

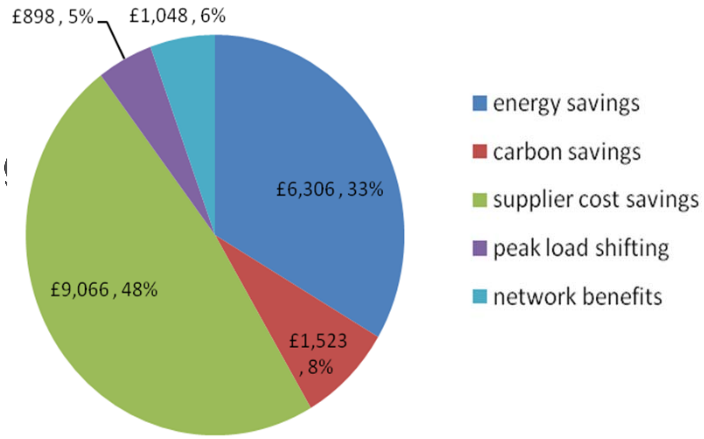


GB: The Government expects significant benefit from Smart

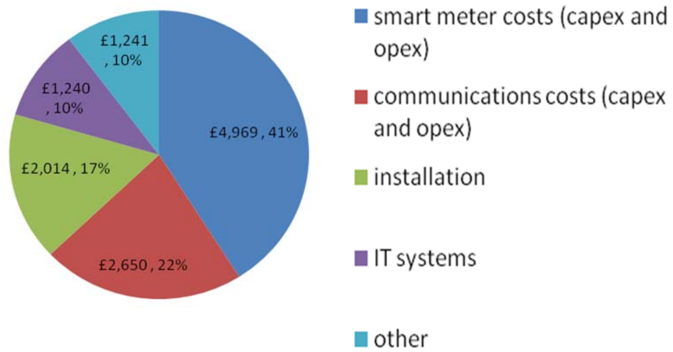
- Promotes energy & carbon savin
- Smooth electricity demand
- Promote Competition in Supply,
  - Metering, Energy Services &
  - Home Automation
- Improve Customer Service
- Deliver Customer Support
- Enable Smart Grid development
- Simplify industry processes
- Wider public policy dependencies
- Security and resilience
- Meet net economic benefits

(Source: Impact Assessment: 2013)

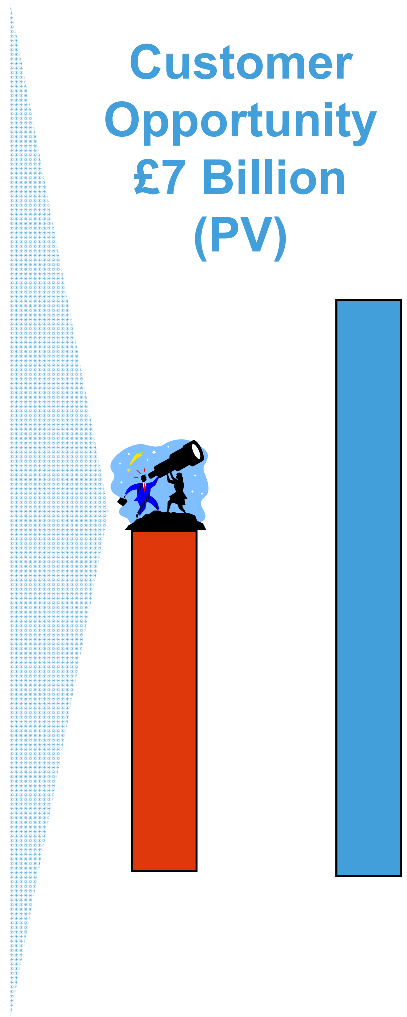
Total Benefits: £18.8 billion



Total Costs: £12.1 billion



Customer Opportunity £7 Billion (PV)



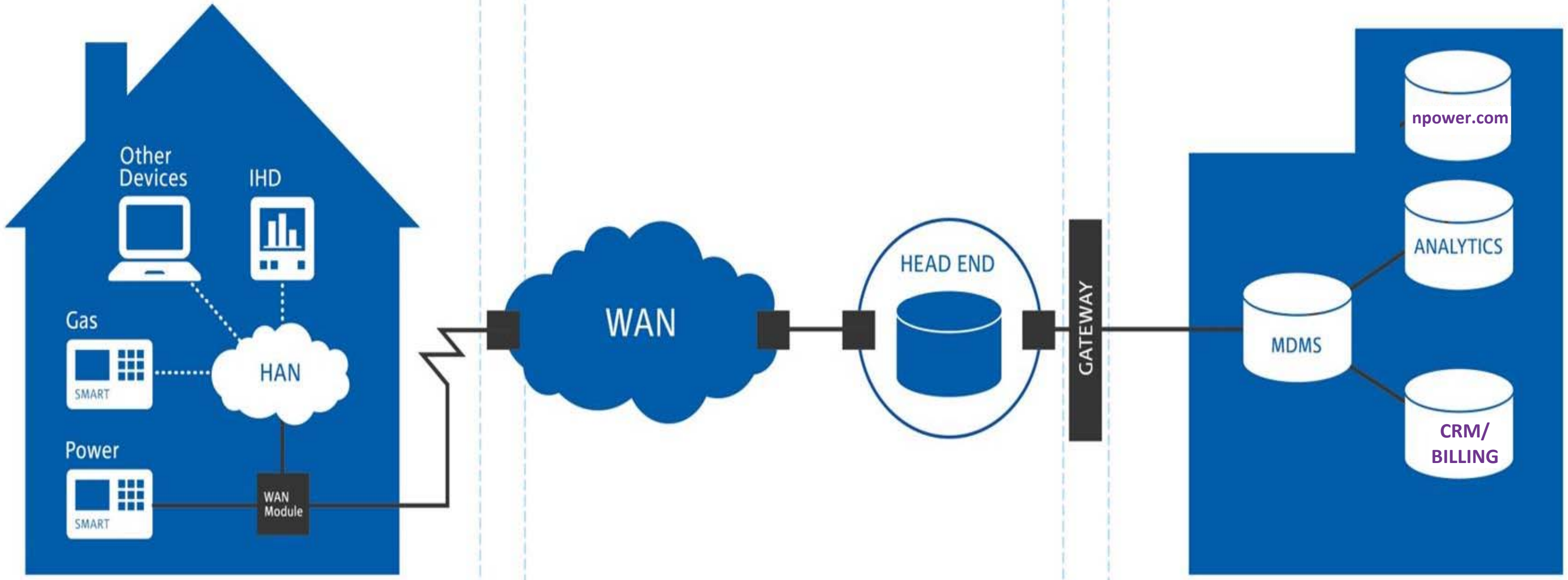
Consumer engagement is fundamental

Smart: a significantly new business infrastructure

INFRASTRUCTURE IN THE PREMISES

SECURE & INTEROPERABLE DATA TRANSFER

ACCESS AND CONVERSION OF CUSTOMER DATA



Supplier Responsibility

- Supplier rent or buy assets & capability
- Industry defined standards.

Supplier Responsibility

- "Interim comms" during Foundation,
- DCC responsibility during Mass Roll Out

Supplier Responsibility

- Run the Retail business using Smart data.
- Deliver Smart customer benefits.
- Monitor and report on progress.

Built on 3 Foundations:
1. Common Tech Specifications for Devices, 2. DCC working across GB, 3. Central Delivery Body engaging consumers effectively

Our Plan

During 2013

Build capability to operate Smart and engage with npower customers
- Pre Data Communications Company (DCC)

Early 2014

Prove we can get the basics right for npower customers at low volume
- Pre Data Communications Company (DCC)

Late 2014

Start to get the basics right for all customers in Great Britain at increasing volume
- and prepare for testing with the DCC

Late 2015 Onwards

Begin driving for Smart at scale as Roll Out Commences
- Via the DCC, all suppliers and new technology

This is a significant impact on the customer and our relationship

I'm taking time off, they better turn up, explain all the gadgets and not leave a mess!
How is this going to help me manage my bills?

Customer Expectations

> Convenience.
> Simplicity.
> Self service.
> Web & Smartphones.
> Transparency & Trust.
> Information access.
> Social Media.
> Rising bills.
> Health concerns.
> No disruption.
> Appointment time.
> Not my cost.

I'm a dual fuel smart installer, comms expert, IHD trainer, customer adviser & getting pressure from both customers and HQ.

I'm an energy advice provider, resolving complex queries, requiring up to date and accurate information at my fingertips.

How do we ensure the right customer experience, that the technology works providing high quality data, and we meet the business case?

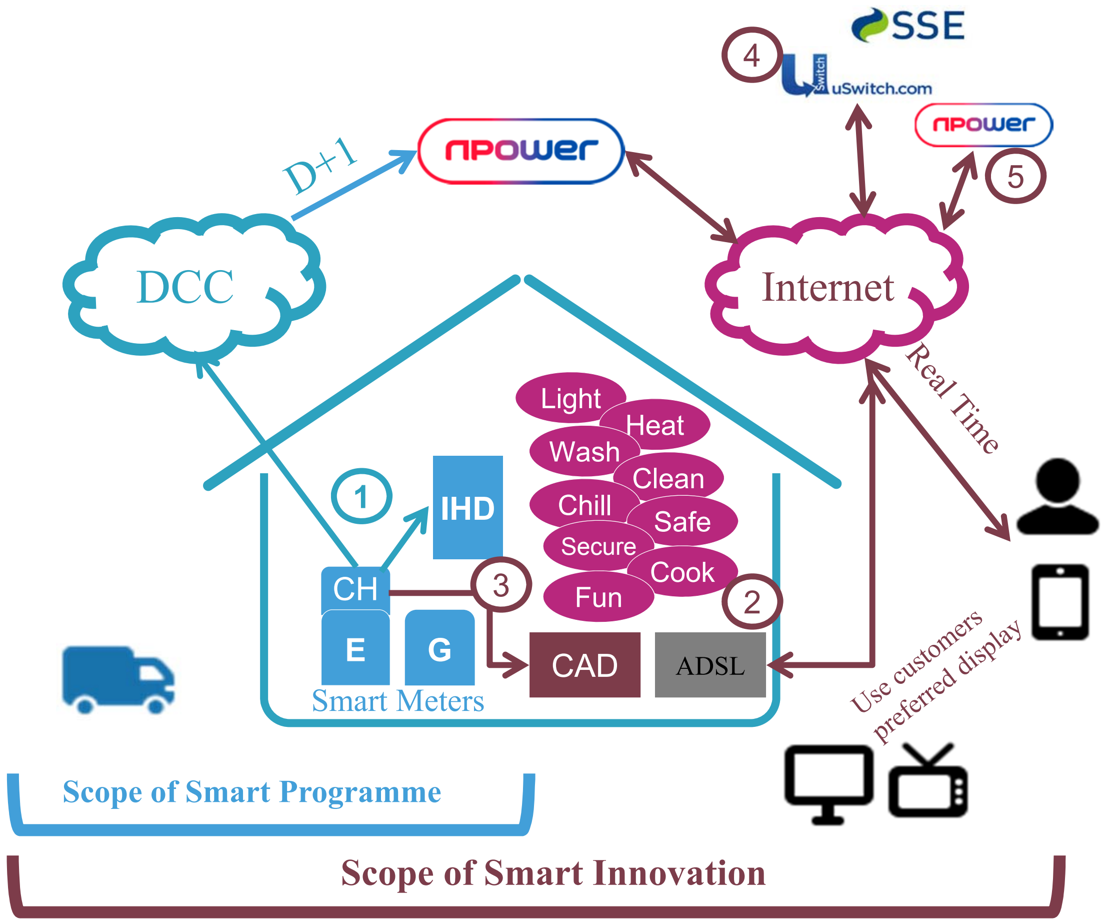
Scale of Transformation

> New systems.
> New meters.
> HAN/ WAN/ IHDs.
> Business Change.
> circa £1bn cost.
> £ Pass through.
> Regulatory deadlines.
> New data.
> Interoperability.
> Scale scheduling.
> Time in property.
> Load & CO_2 reduction.
> Flats, vulnerable customers.
> Consumer Groups.
> Whole new scale.

The Smart Programme is underpinned by a National campaign aimed at “getting Gaz and Leccy under control” ...

- Central Delivery Body: Smart Energy GB.
- c£100m campaign over 5 years.
- All media channels inc Radio and TV.
- High profile launch with Bob Geldof and Secretary of State for Energy.
- Marketing assets can be used by any party.

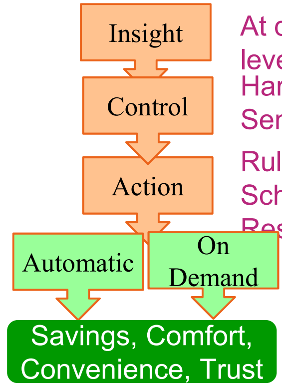
Connectivity: the critical element that creates "the Magic" for everything Smart



Products, Services and Partners to help customers understand and control their energy usage.

1 The mandated smart architecture provides customers with aggregated information on energy – in real time in the home and at D+1 or later via web or apps

2 New smart products will enable Customers to interact with their energy use in a new way



At device/circuit level

Hardware, Plugs, Sensors

Rules based - Binary, Scheduled, Responsive

Rules and actions applied to the controls

Outcomes for individuals

3 The link to smart metering is not mandatory, but is the unique opportunity for Energy Retailers to own this space.

4 Customers providing their data to 3rd party service providers

5 Opportunity for npower to provide product and services to non-energy customers

Smart Innovation: “Insight to Action”

<u>Through:</u> Analytics turning “big data” into relevance for customers and for npower to bring new services and propositions to the market.

<u>By:</u> Providing the means through which customers can exercise control and choice: Devices and Apps

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<u>By:</u> Providing propositions (eg bundled energy) that encourage action by customers, informed by insight and delivered through controls eg, connected ecosystem for heating, home protection, healthcare, home energy management.

<u>Securing:</u> Benefits to npower through retention, acquisition of valuable customers through energy bundles and technology, as well as Non Commodity revenue from new business models.

We need to take actionable steps, through partnerships, that allow us to prove/disprove the opportunity, build a business case and make the decision to scale or exit.

Our most recent innovation

- Game Changer bringing nest to UK Energy Market
- Deal done in 4 weeks
- UK Launch 2nd April
- Intelligent Fix launch 16th May
- Stand alone launch 28th May
- First Install 6th June

>…. And there is more to come

But there is a completely new ecosystem in place

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Thoughts on what this means for the supply chain

	Now	Soon
Skills	> Industry Specific > Manual > Routine	> Data & Comms > Technical > Customer relationship
Technology	> “Cheap, white plastic” > Closed system > Capital and subscription	> Desirable > Open > Connected
Partnerships	> Large > Tendered > UK / EU	> Fast moving new entrants > Global > Deep pockets

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