Embracing Industry 4.0:
Digital Catapult viewpoint

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Digital Technology for Manufacturing Innovation

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DIGITAL CATAPULT CENTRE

Digital Catapult: Who are we?

A national centre to rapidly advance the UK's best digital ideas – both Creative and ICT

Completely neutral …but "can do"

Not for profit, private limited company

Our mission

To unlock proprietary data in faster, better and more trusted ways

We are NOT a funder, incubator or accelerator

Our aim is to work with these organisations, not duplicate

Why Proprietary Data?

90%

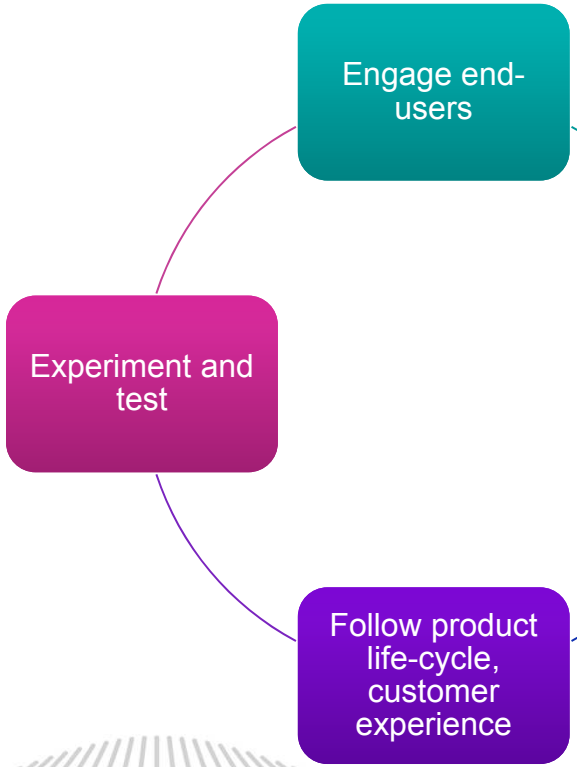
of data is closed
or personal

If data is the new oil, then personal and closed data is the new rocket fuel

Building platform enablers – for new ideas

Our focus is on the Data Value Chain

Industry 4.0: Catapult value



Open Innovation (Co-creation WS and Pit-stops)
- Identify the problem/work the solution
- Develop the ecosystem

Understand the value of existing data (Data Catalyser)
- From your domain
- Mixing within different domains

Trust Framework Initiative
- How the product is liked by customer?
- What personal information can be fed back to the supply chain

Connect products and factories
- 5G testbeds and demonstrators

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Open innovation

Co-creation workshops

Bring together relevant stakeholders to identify problems, better scope them, design solutions

Pit Stops

Highly focused open innovation activity designed to accelerate the growth of new ideas
It brings together large companies, experts and small high calibre, disruptive innovators in a secure and creative environment (2/3 days)

Pit-stops: The journey

- Digital Catapult and sponsors:
  - Define objectives
  - Identified required skills
- Digital catapult:
  - Leverage its network of innovators to recruit desired participants (SMEs, scale ups, individual innovators, academic experts, in-house experts)
- The format:
  - 10 to 15 innovators, 6 to 8 sponsor staff, 6 to 8 subject matters experts, 1 moderator
  - Presentations, breakout sessions and co-creation workshops
- The benefit:
  - For partners: develop and test new ideas; speed up open innovation with external resources
  - For participants: test and validate new ideas; reach new markets

Pit-stops: Facts and Figures

19	237	113	100s
Days	SMEs	Experts	of ideas

Convening Start / Scale-ups……

chirp.io BlueMaestro beacontent PROXIMITY MARKETING

Alongside industrial partner challenges

pwc THALES CISCO VISA

What people are saying:

> We were extremely impressed with the Pit Stop. The Digital Catapult team listened closely to our needs and interests, and picked them up in original, clever and flexible ways. Usually, events like this are driven by a business partnership rather than by a specific agenda.
>
> The Pit Stop, with its highly relevant agenda and flawless execution, allowed us to zoom in on a new area of business. It enabled co-creation and knowledge exchange in an inspiring environment with a group of innovative thinkers and doers. This is the first time for us that an engagement like this has delivered ideas that will move into Proofs of Concept and might actually be taken to market. The Pit Stop is a model that we can see ourselves using to engage all of our partnerships.
>
> — Hendrik Kleinsmiede, Innovation Partner, Visa Europe Collab

VISA CATAPULT Digital

9 new relationships
4 prototypes in business case

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Our Solution: The Data Catalyser

1. **Convene Data Providers**
2. **Provide project framework**
3. **Security is made available through a set of specific controls**
4. **A set of legal contracts defines the rules for all participants of the platform**
5. Access to best of breed Insight Producers through a selection process
6. Overall, a data science solution built on enterprise grade tech

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Data Catalyser: An example

- The problem (Nissan Social Media Challenge):
  - Monitor sentiment and identify trends and issues with Nissan luxury ‘Infiniti’ brand
- The challenge:
  - Mix closed organisational Quality Assurance data
  - Closed Sales data owned by third party
  - Social media data
- The goal:
  - Predict churn
  - Optimize supply chain
- How
  - Open Innovation through Hackathon (December 2nd, Digital Catapult NETV)

Personal Data: The value

Vertical = Limited use cases e.g fraud

Horizontal = Many use cases

- Better understanding of individual emotions combining economic situation, health and wellness data
- More detailed anonymous personas can be created combining spending habits, locations, etc

- As results:
  - Supply chain can adapt
  - Production adaptively increased, decreased or adjusted

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Breaking down the barriers

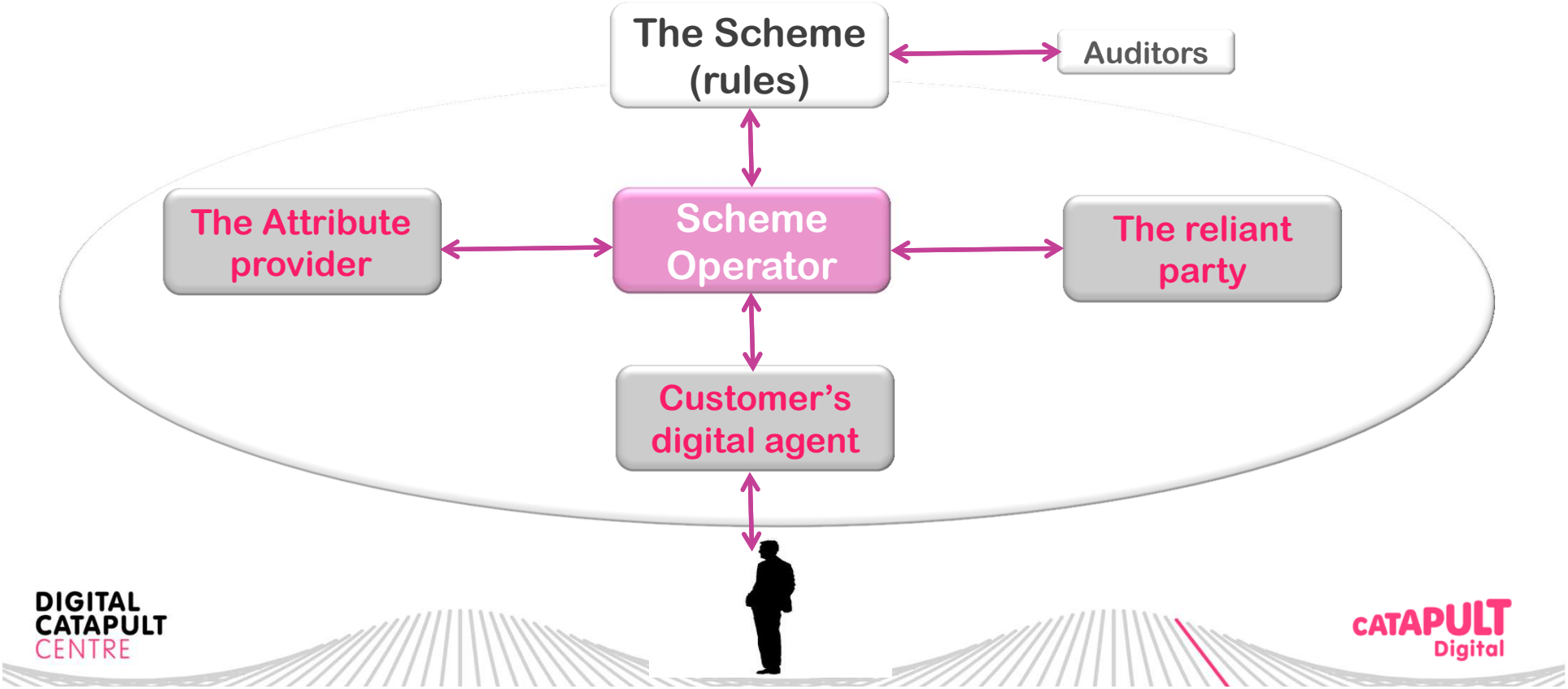
Building Trust: Need to empower the customer:

Ethics:	Recognise & respect the consumer's wishes
Control:	Give tools/dashboards to enable real control
Compliance:	Verify orgs are sticking to the rules
Communication:	Kitemark for those in the ethical sharing club

Removing Friction: Need to solve three sources of friction:

Technical:	How to define and physically transfer the data
Legal:	How to establish the users identity and assert permission within each siloed system
Commercial:	How to agree the price of access/transfer

Attribute Exchange and Trust Framework



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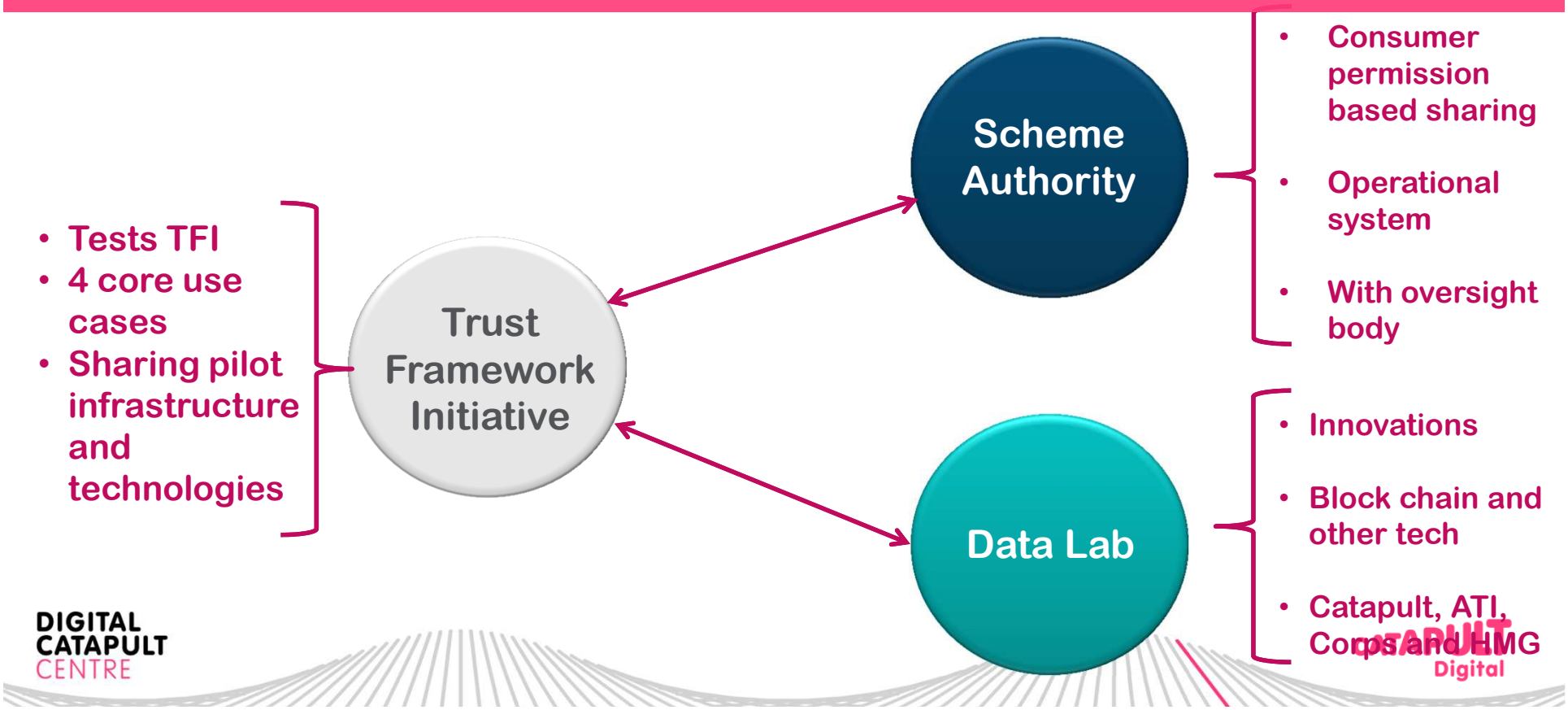
Operational Scheme and Lab



5G Innovation Promise

5G : Next Generation Mobile Networks

Speed 50x

Latency 1ms

Reliability 99.999%

Broadband access everywhere 50+ MBPS EVERYWHERE 	**Broadband access in dense areas** PERVASIVE VIDEO 	**Higher user mobility** HIGH SPEED TRAIN 	**Massive Internet of Things** SENSOR NETWORKS
Extreme real-time communications TACTILE INTERNET 	**Lifeline communications** NATURAL DISASTER 	**Ultra-reliable communications** E-HEALTH SERVICES 	**Broadcast-like services** BROADCAST SERVICES

M2M 10-100x

Coverage 100%

Energy <10x

NGMN 5G Vision Paper

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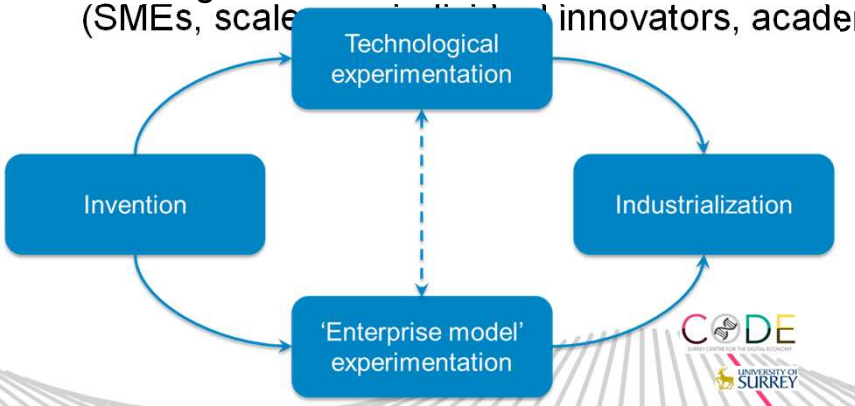
5G: Innovation through testbeds

- Digital economy is all about moving and using data
- Need to connect connectivity infrastructure vision with digital economy innovation
- Support for IoT, including Factories-of-the-Future, is a crucial driver for 5G design vision and proposals.

- 5G Innovation Centre and Innovation Gateway
  - 5GIC is delivering advanced 5G testbed, including improved IoT/M2M service support and device management
  - Open for collaboration, and has a strong SME Engagement focus.
- Digital catapult
  - Leverage its network of innovators to recruit desired participants (SMEs, scale[illegible] innovators, academic experts)



Thank you

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