

Digital Supply Chain Hub - Consortium Building

Get set for the future. **Now**

**MADE
SMARTER**
INNOVATION

DIGITAL SUPPLY
CHAIN HUB



Welcome and Introduction

Jasmin Kailath

Innovation Delivery Manager, Digital Catapult

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Agenda

1.00 pm - Welcome and Introduction

Jasmin Kailath, Innovation Delivery Manager - Digital Catapult

1.05 pm - Digital Supply Chain Hub Update & Big Picture of Open Call II

Tim Lawrence, Digital Supply Chain Hub Director - Digital Catapult

1.15 pm - Keynote: Testbeds for Demystifying Digital Transformation

Marc Funnell, Director of DETI - National Composites Centre

1.30 pm - Consortium Testbed Brief: WHAT? WHO? WHY?

Ben Ramsden, Partnerships Manager & Kingsley Harding, Solution Architect - Digital Catapult

2.10 pm - Break

2:20 pm - Roundtable discussion with Q&A (Zoom breakout rooms)

- New emerging supply chains
- Aftermarket and spares supply chains
- Automotive/battery supply chains
- FMCG or food supply chains

2:50 pm - Facilitators Feedback

3:20 pm - Next steps & Call for action

Jasmin Kailath, Innovation Delivery Manager - Digital Catapult

3:30 pm - End

About Digital Catapult

Our mission is to accelerate industry adoption of advanced technologies, driving growth in the UK economy.

We create new opportunities through collaboration and innovation.

Areas of focus and cross technology applications

Virtualisation & cyber-physical systems

Digital and resilient supply chains

Open and interoperable digital Infrastructure



Digital Catapult is the
UK authority on
advanced digital
technology

UK's Advanced technology performance is 3rd after the USA and China

The **total funding** for the UK **advanced digital technologies** market is an estimated:

£10.4_{BN}

4k+

UK HQ'd advanced digital technology companies

2nd

For # of AI, Immersive & DLT companies globally

3rd

For # of IoT companies globally

~4%

ADT companies focused on industrial sectors

16th

For underpinning Infrastructure

4.1%

UK ADT companies generating over \$10m+ revenue per annum



Digital Supply Chain Hub Update & Big Picture of Open Call II

Tim Lawrence
Digital Supply Chain Director, Digital Catapult

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Part of, and inspired by, the Made Smarter movement

Our **vision** is to transform UK manufacturing through digitally empowered supply chains that are more **efficient, resilient and sustainable**.



Supply chains made smarter, together

We will develop and empower a globally competitive, digital supply chain innovation ecosystem.

Working together to unlock the opportunities facing UK manufacturing.



Over 1000 people
developing **digital
skills**



100 **digital
technology solutions**
developed
Over 200 companies
involved



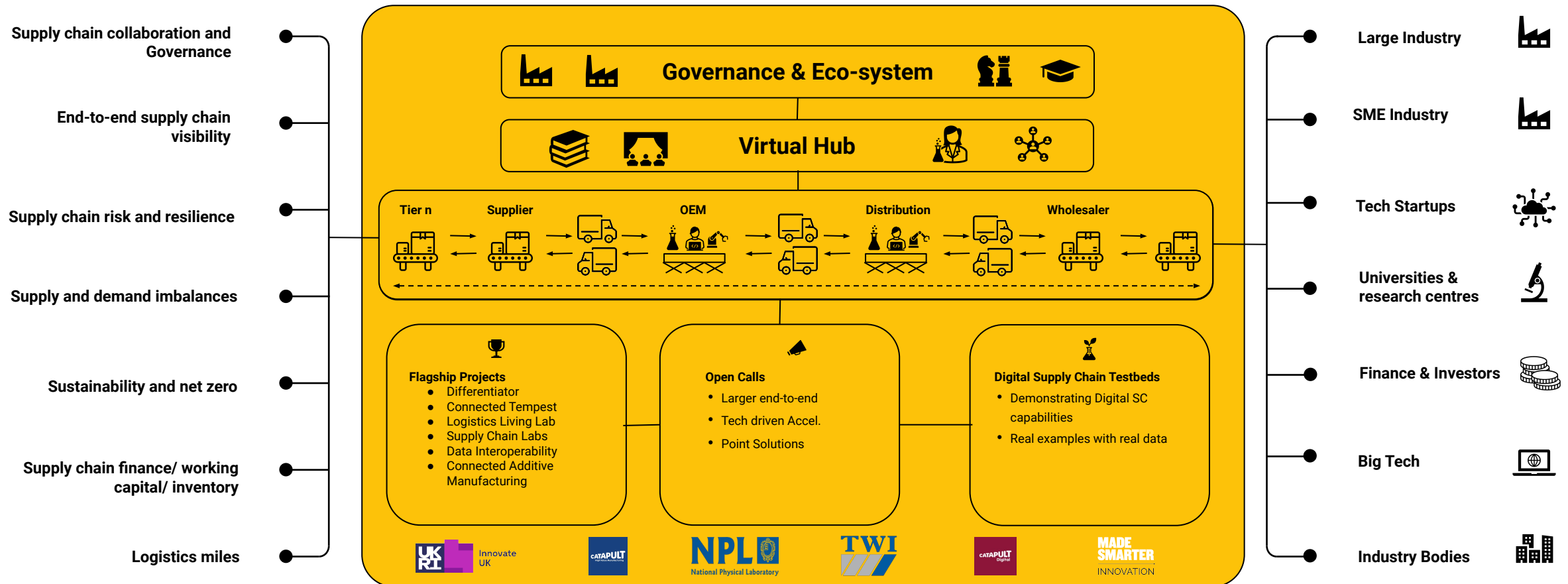
Increased visibility
leading to 20%
greater resilience
within supply chains.



10% **reduction**
in waste,
5% in **CO2**

Made Smarter Innovation: Digital Supply Chain Hub

£25M will be invested in creating a portfolio of digital capabilities to deliver smarter supply chains.



Moving the market towards resilient & sustainable supply chains

Across the UK, like the rest of the world, supply chains are under enormous pressure putting business as usual in jeopardy. New approaches need to be found for managing supply chains.

At the DSCH, we are launching a world first: National Digital Supply Chain Testbeds.

The National Testbeds will involve supply chain companies working with domain experts and technology providers to build an end to end Digital Supply Chain Testbed that delivers on their business goals with regards to productivity, sustainability and resilience.

The UK has one of the world's most dynamic and well funded technology communities, but falls behind when it comes to the availability and adoption of manufacturing and supply chain technology solutions. The National Digital Supply Chain Testbeds will play a significant role in changing that.



Keynote: Testbeds for Demystifying Digital Transformation

Marc Funnell

Director of DETI, National Composites Centre

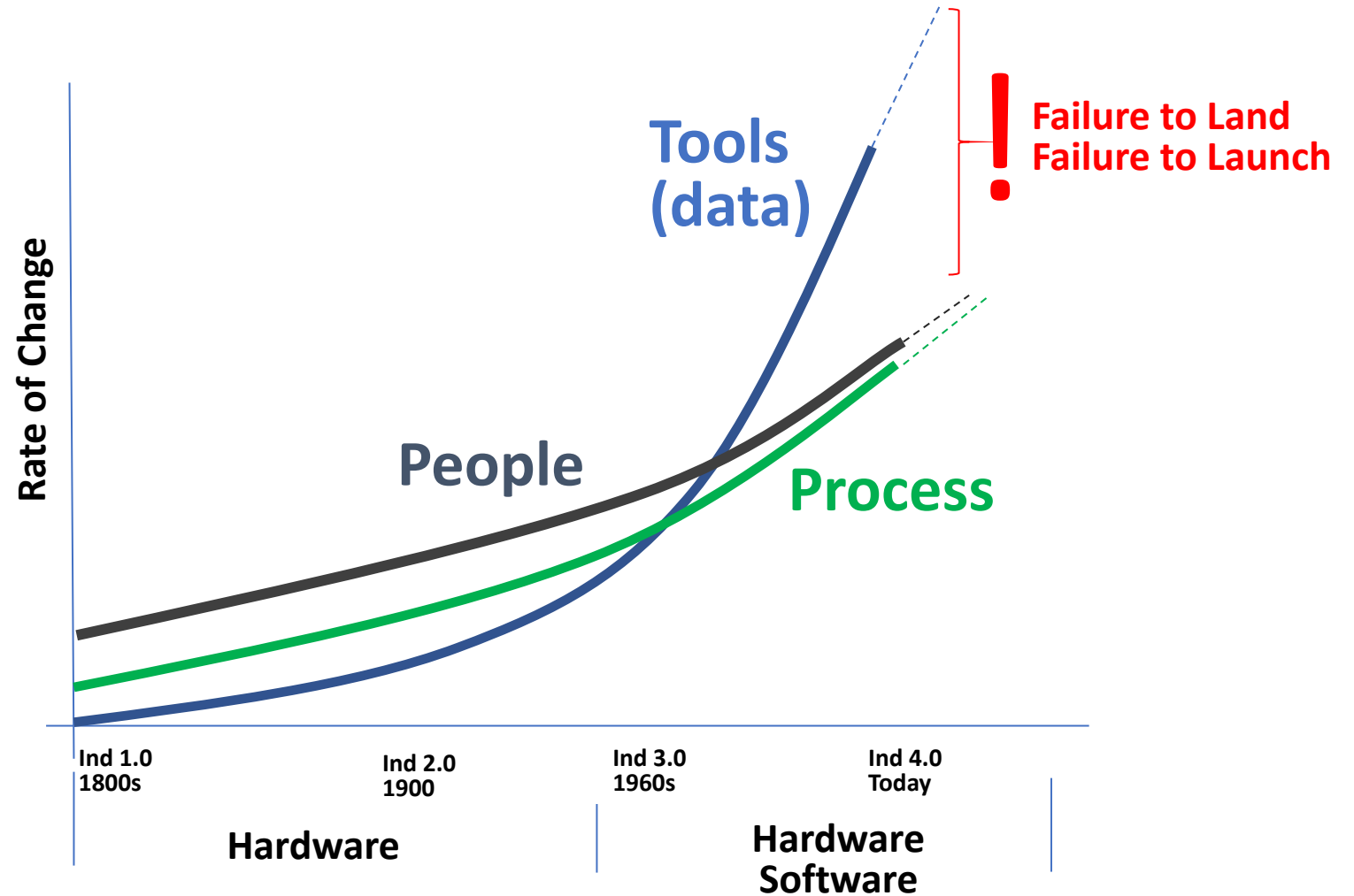
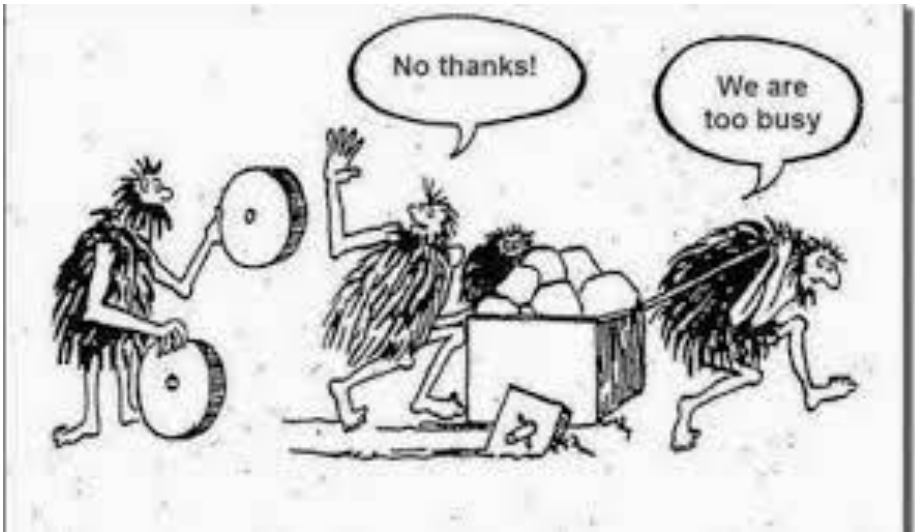
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Testbeds for Demystifying Digital Transformation

Marc Funnell, Head of Digital, Director of DETi, National Composites Centre (NCC)



DETI – How We Help

Explore, Test, Exploit

CATAPULT
Digital

CATAPULT
High Value Manufacturing

*Open access, Data-rich
Test Beds*



Demonstrate, Innovate, Accelerate



*Industrial Scale
Demonstrators*



Foresight, Upskill, Differentiate

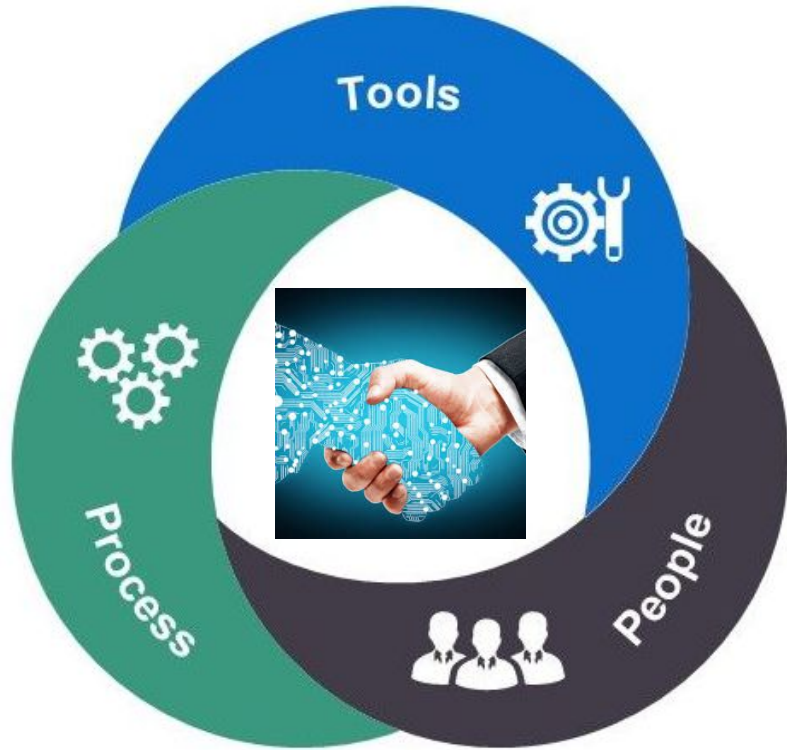
A Comprehensive Skills Programme



Transforming engineering for the future

Inspiring the next generation of engineers

www.deti.uk



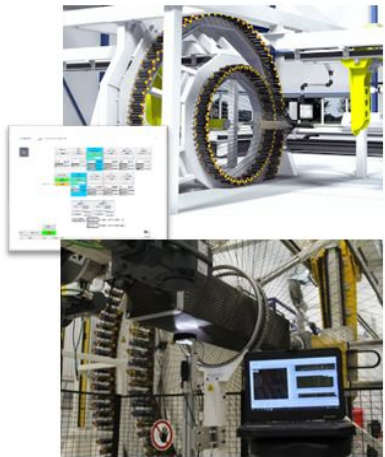
Test Bed Principles

- A secure (IP, Access, CyberSec) setting to collaborate and learn
- For end customers: To set challenges, explore the value proposition of digital transformation and technology without impacting production lines and critical business operations
 - Tailorable with Real or Relevant Data sets and Challenges
- For technology providers: To showcase, trial and develop digital products and virtual services in a relevant industrial setting
 - Accessible and Flexible – An open market place for all

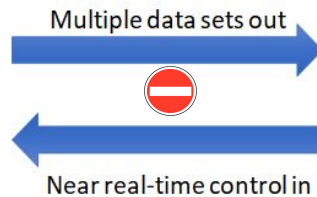
UK's first industrial deployment of a quantum-secure network

Manufacturing

On site @ NCC

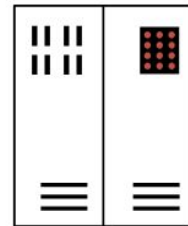


QKD Link
7KM



Decision Making

Offsite @ CFMS
HPC and storage solutions



Unlocking secure, near real-time communication to advanced and scalable computing infrastructure needed for big data analytics and closed loop control

Potential Exploitations

Connected Supply Chain
Distributed Manufacturing Hub
Smart Factory Innovation Hub



SIEMENS



NPL

BAE SYSTEMS

05 OCTOBER 2021

BT and Toshiba to build world's first commercial quantum-secured metro network across London



TOSHIBA



5G POV Test Bed for 3 Demonstrators

Technology - Push



- **£9m** Project funded partly by DCMS' "Industrial 5G Testbeds and Trial: Manufacturing and Logistics"
- Aims to develop **clear business cases and value propositions for 5G application** in manufacturing

In-factory and in-transit asset tracking



PLATAINE[®]
SIEMENS

Virtual Helper & 360 video training



Closed loop Liquid Resin Infusion (LRI)



SIEMENS

5G-encode



Connected Tempest Supply Chain Test Bed

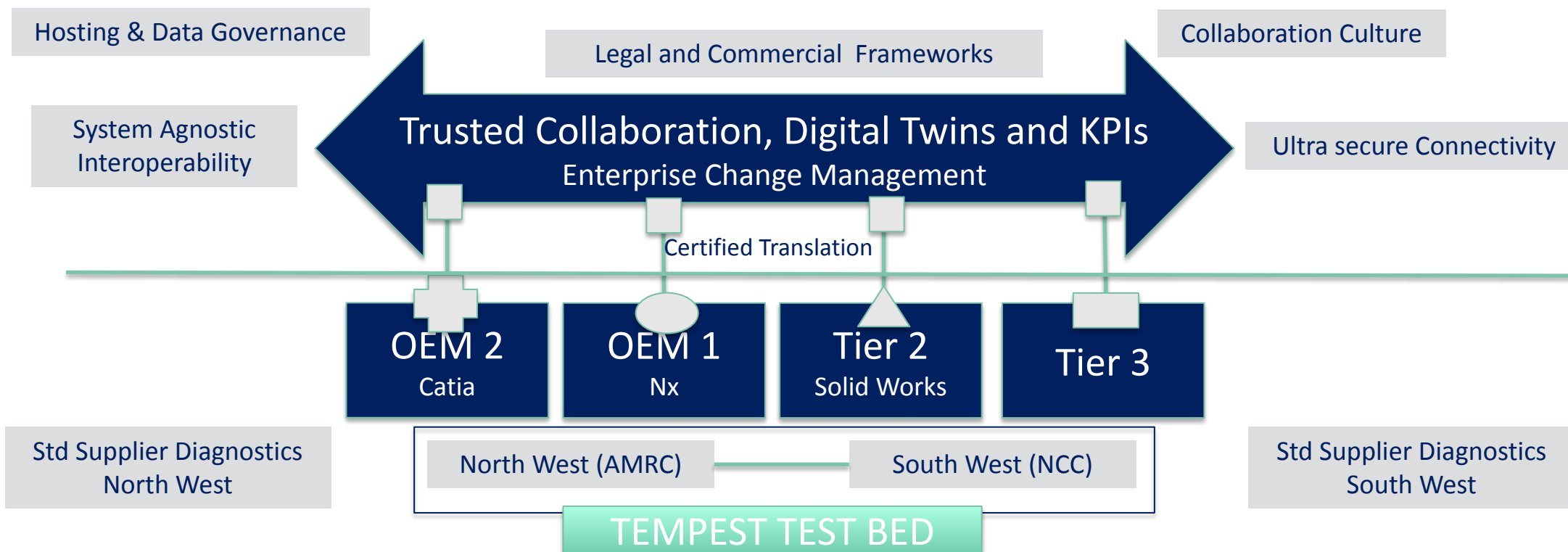
Challenge-Led

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Why: *The programme (lead-time and cost) and product (quality, cost, and delivery) demands from Future Defence require a step change in baseline performance.*

What: An agnostic, trusted and collaborative test bed to explore secure bidirectional engineering data transfer that maximises the innovation capabilities of multiple tiers of the supply chain network.



Thank You



Marc Funnell

Head Of Digital Engineering Technology, Director of DETi

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proudly delivering



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Email: enquiries@nccuk.com

www.nccuk.com

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Consortium Testbed Brief

- WHAT?
- WHO?
- WHEN?
- WHY?

Ben Ramsden

Partnerships Manager - Digital Catapult

Kingsley Harding

Solution Architect - Digital Catapult

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Building National Testbeds

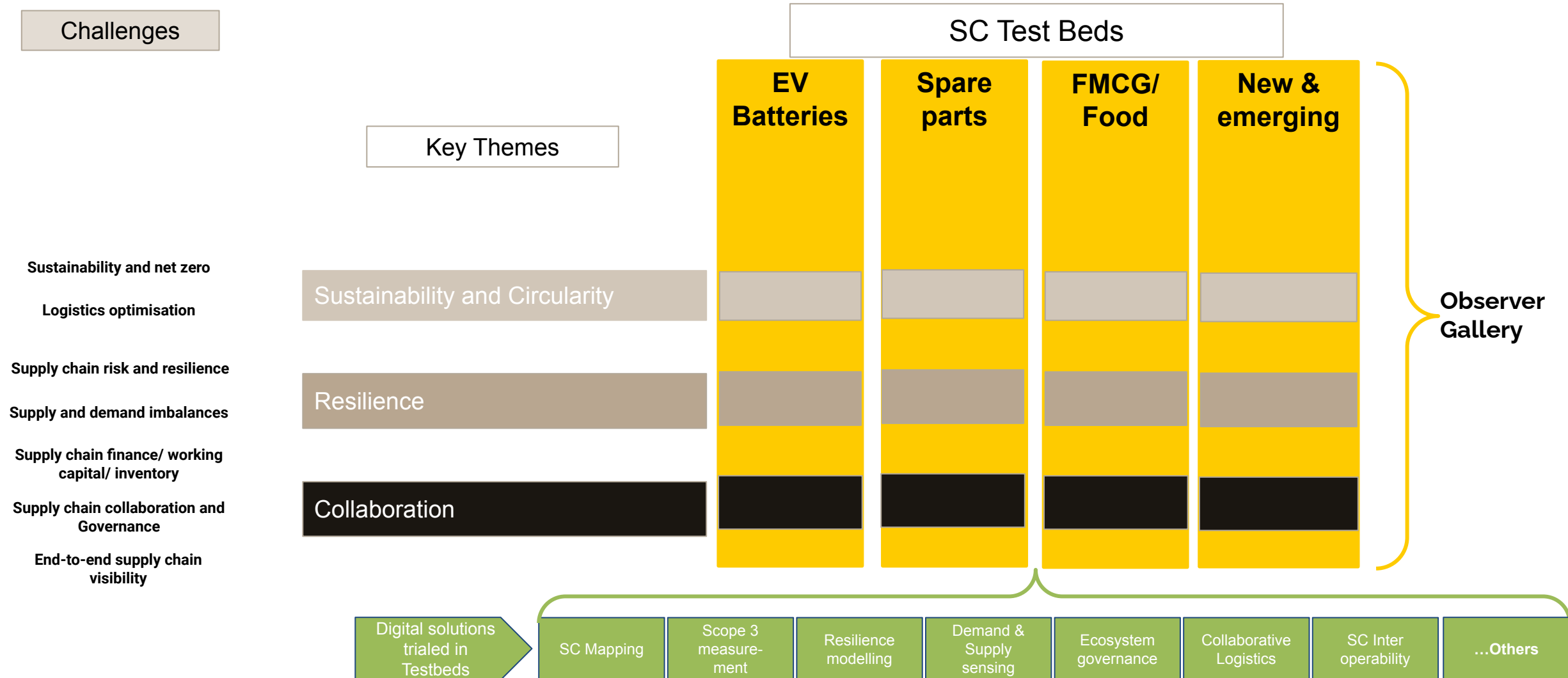
A Testbed is defined as **“An isolated, real world operational end to end supply chain environment where technologies that are ready to deliver value to users can be deployed and tested using real data but without risking business disruption.”**

Focus on supply chain sustainability, resilience and collaboration.

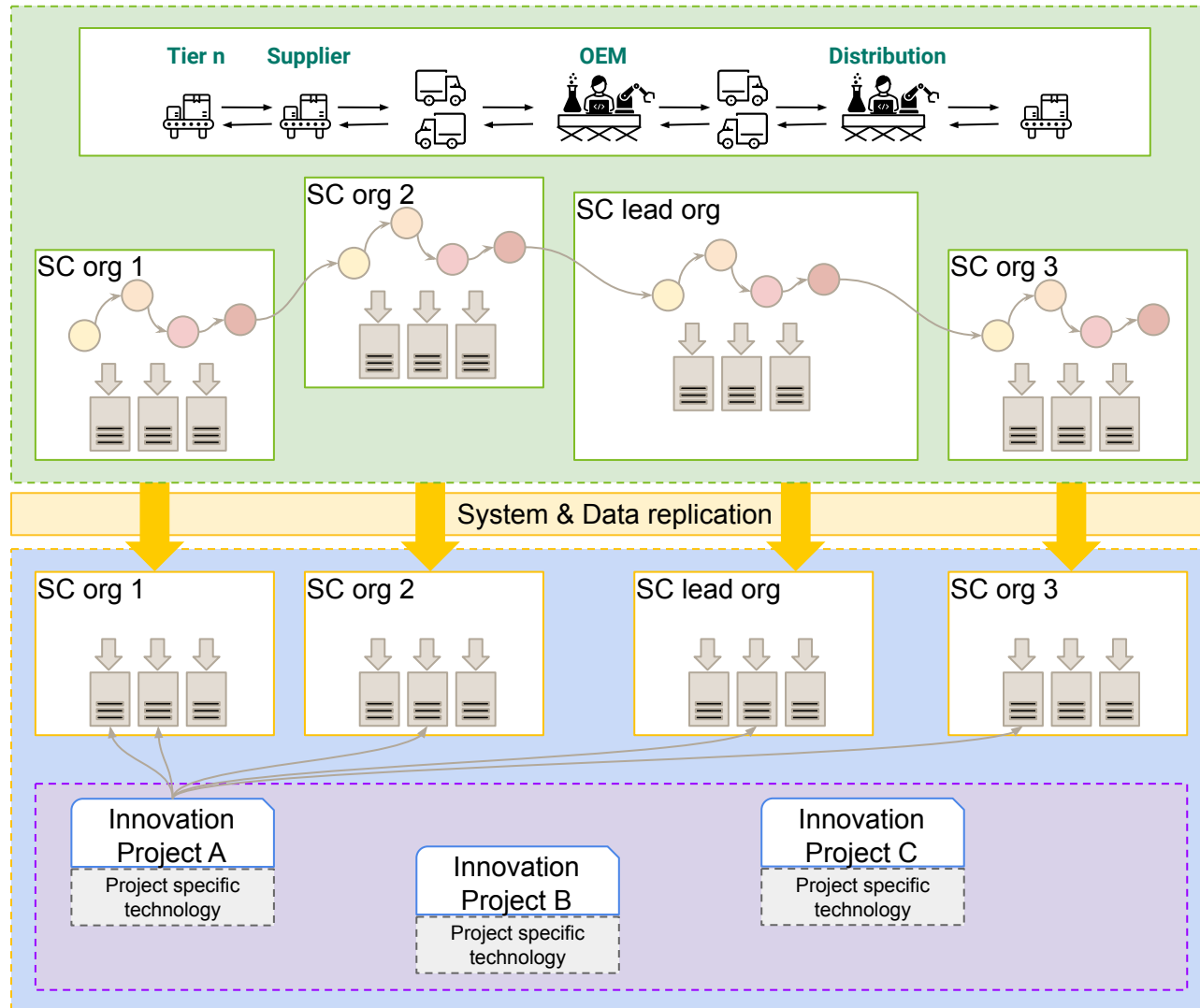
- Gather, create, communicate, and deliver new knowledge
- Validate existing products, services and processes
- Facilitate professional development
- Deliver business impact in real-life contexts

Digital Supply Chain Test Beds: Overview

-building real data environments to test digital supply chain solutions



Components of a Digital Supply Chain Testbed



Supply chain organisations

- Testbed supply chain participants across ≥ 3 tiers
- Domain expert across the industry
- A specific product will be identified and mapped across the Testbed supply chain

Systems sandbox

- Systems & data replicated into the Testbed sandbox
- Core infrastructure (compute, storage, networking)
- Application & data layer
- Representing a real world supply chain

Innovation projects

- The Digital Supply Chain Hub will invest in further projects to be proven in the Testbeds

Participants of a Digital Supply Chain Testbed

Supply chain members

- Coordinated by one lead partner
- Evidence of successful supply chain collaboration
- Justification as to why a Testbed will help further the supply chain's mutual business objectives

Examples:

Retailer, wholesalers, OEM's, Tier 1 suppliers, Tier 2 suppliers, logistics & distribution companies

Technology partners

- Ability to provide core infrastructure
- Ability to provide application & data layer
- Existing relationship with at least one of the Testbed supply chain members

Examples:

Systems Integrators, cloud providers, supply chain solution vendors

Domain expert

- A consulting organisation (or similar) in the relevant industry sector
- Specific industry knowledge and insight
- Proven experience in developing end-to-end supply chain programmes

Examples:

Supply chain consultancies, RTO's (research technology organisations), academic institutions

Observer gallery

- Any organisation that is not part of a Testbed consortium
- Will not actively contribute to or directly benefit from participation in a Testbed
- Will be 'first in line' to understand the solutions and impact generated from the Testbed

Examples:

Supply chain members, technology solution providers, domain experts

Envisaged activities and outcomes

Activities	Outcomes
As is baseline	Baseline of current infrastructure, storage, governance, analysis and usage of data (if available)
Future state business requirements	Alignment of all participants around common goals, strategy and activities to deliver value for the supply chain as a whole
Business modelling	Definition of a business model that enables the full participation of the supply chain members in the Testbed
Innovation Roadmap	A roadmap of potential digital technologies that can be used to transform the supply chain environment to be more resilient and sustainable. This will provide direction on future technology solutions developed by DSCH
Technology environment	Establishment of an environment that provides access to data, devices, systems, cloud instances and networking, across the supply chain supporting the deployment of proof of concept / proof of value technology project

Eligibility for the Testbed Open calls

The Test Bed Open call is open to all, so long as part of a consortium.

Ideally a consortium should be comprised of, as a minimum:

- **Supply chain companies across 3 tiers**
- **Technology company capable of creating testbed data environment**
- **Supply Chain Domain experts capable of designing the test bed** and technology roadmaps
- **Companies securely making data available** in the testbed in accordance to open innovation principles

What co-investment are we looking for?

We are providing £315,000 to each successful consortium to contribute towards what we envisage will be c. £1.5M total investment to set up and run the Testbed.

Labour & Overheads

Staff costs

20% of your costs as overhead.

This includes both direct and indirect overhead.

Materials & license fees

The costs of materials purchased from 3rd parties

Value of software licenses for solutions provided to the project

Subcontracting

Work that involves:

- expertise that does not exist in your team
- skills that are not practical to develop in-house

Travel & Subsistence

Costs must be necessary and incurred exclusively for the progression of your project.

Other Costs

Examples include:

- Asset utilisation
- Preparation of technical reports
- Licensing in new technologies

How value can be realised

There are 3 flows across supply chains:

- Products
- Money
- Information

Problem: Because information doesn't flow, products and money are wasted, leaving society and the environment to pick up the tab.

Opportunity: Through optimising information flow & utilisation, product and money flows can be optimised returning value back to companies, society and the environment.

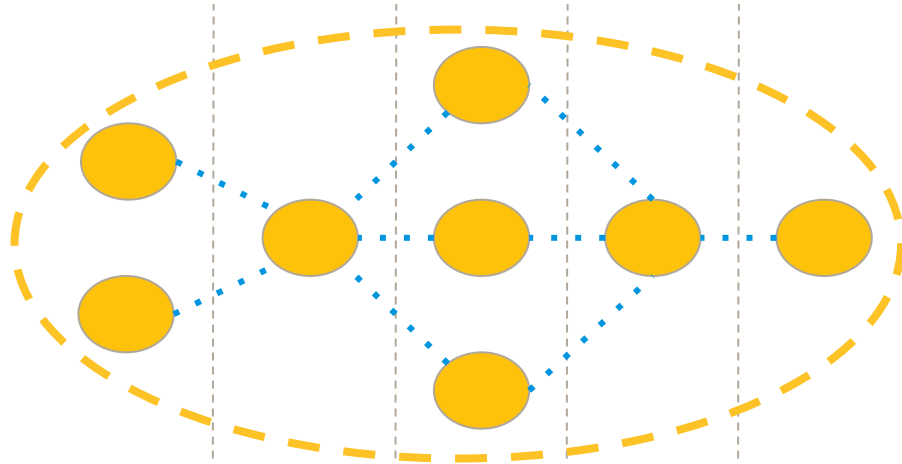


Benefits for participants

All participants will be celebrated as leaders in their fields and playing a crucial role for the country in achieving productivity, sustainability and resilience goals.

Participant	Showcase	Strengthen	Access	Accelerate
Supply Chain Company	Art of the possible for world class supply chain programmes	Existing & new supply chain and solution provider relationships	New, derisked, digital solutions	Key elements of your Supply chain strategy
Technology Companies	World class digital infrastructure and applications	Existing & new client relationships	Leading technology startups and supply chain approaches	New product & service development
Domain Experts	Capabilities in SC integration	existing & new business relationships	Network of partners to add value to your services	New capabilities

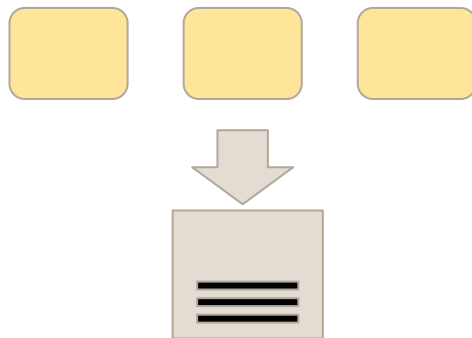
Types of Benefits



Node **<5%**

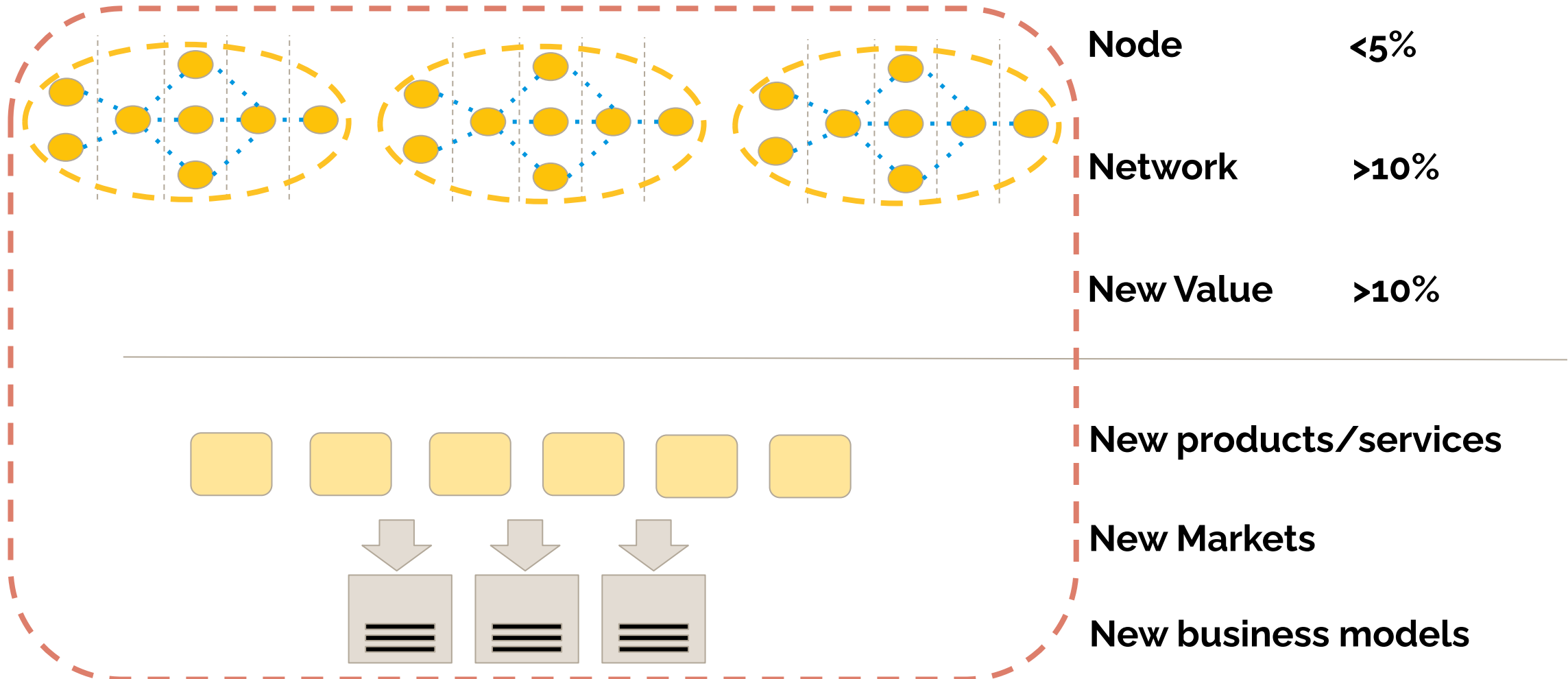
Network **>10%**

New Value **>10%**



New products/services

Types of Benefits



The time is now...

Let's get ahead of the headlines.

We need to deal with the problems,
before they spiral even more.

Together, we will move the market.





Break

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Roundtable discussion with Q&A

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Roundtable discussion with Q&A

Session in 4 breakout rooms with facilitators from Digital Catapult

- **New emerging supply chains**
Tim Lawrence, Digital Supply Chain Hub Director
- **Spares supply chains**
Kingsley Harding, Solution Architect
- **Electric vehicle battery supply chains**
Chetan Shrouti, Technology Programme Manager
- **Food or FMCG supply chains**
Ben Ramsden, Partnerships Manager

Agenda for roundtable

- 1. Introductions and areas of interest**
- 2. Definition of what good looks like**
- 3. Q&A**
- 4. Feedback on consortium:**
 - i. Current status
 - ii. Areas required for support



Facilitators Feedback

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Next steps & Call for action

Jasmin Kailath

Innovation Delivery Manager, Digital Catapult

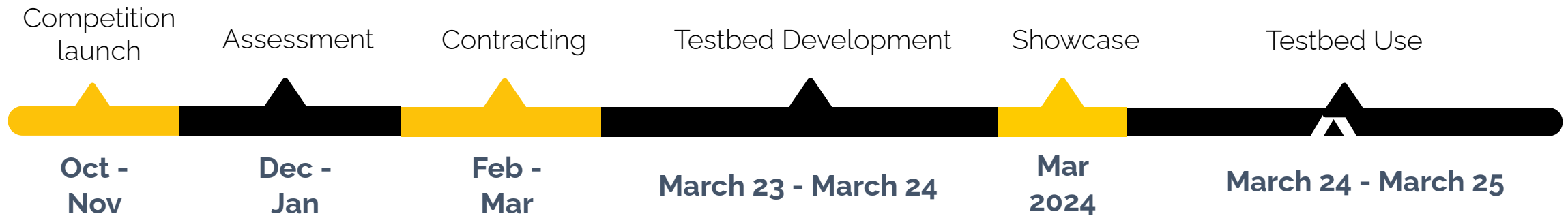
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Proposed timelines

Key dates:

Consortium building event:	5 October, 1-5pm	Testbed start date:	1 March 2023
Application deadline:	30 November, 11.59pm	Testbed Completed & Showcase:	March 2024
Presentation/Interviews:	09 - 13 January 2023	Testbed Operation:	March 2025



Next steps

Contact the team to book an appointment:

DSCHOpenCalls@digicatapult.org.uk

Apply NOW via:

<https://digitalsupplychainhub.uk/get-involved/national-digital-supply-chain-testbed/>

A hub for effective collaboration and innovation.

For more information:
digitalsupplychainhub.uk

IN PARTNERSHIP WITH:



FUNDED BY:



UK Research
and Innovation

Thank you!

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