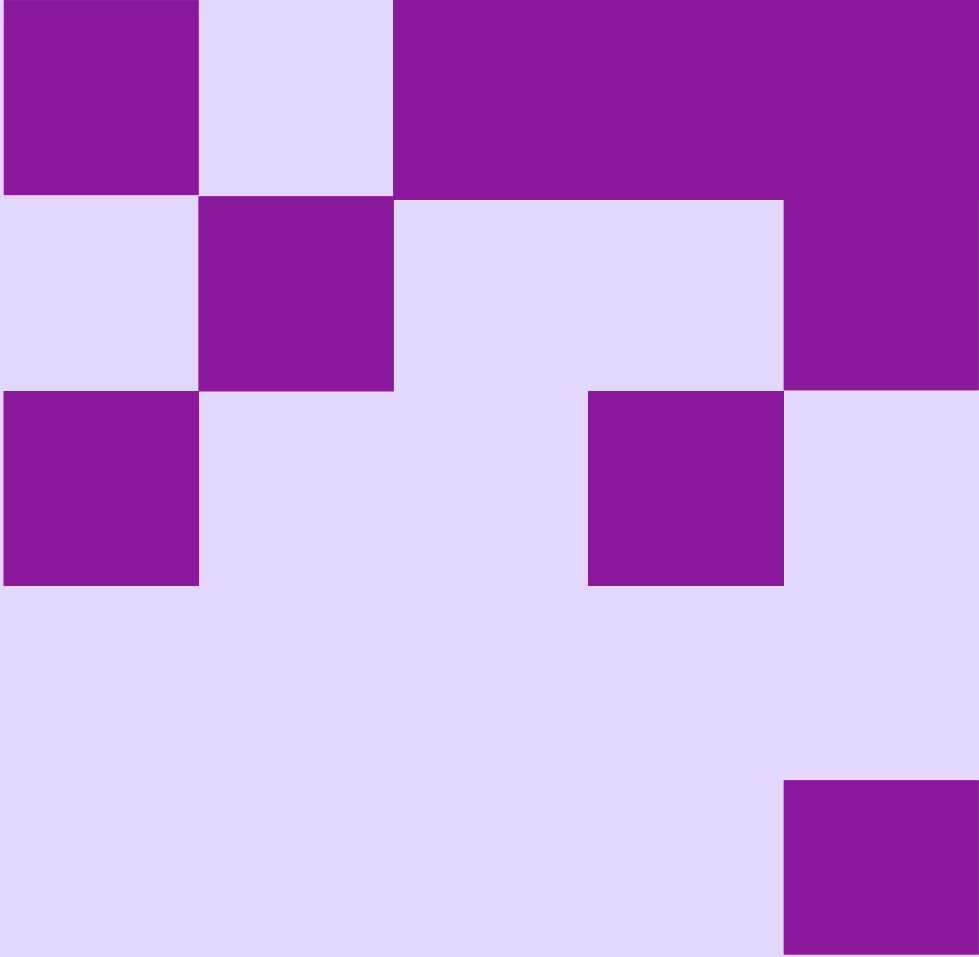




INNOVATE UK Talent & Skills Project Showcase

Day 1: City Campus, City of Glasgow College

Welcome

Debbie Johnson

Head of Innovation Talent & Skills
Innovate UK



AGENDA

1000		Registration & Networking
1030	Debbie Johnson	Welcome & Introductions
1045	Abi Stocker	Unlocking the Skills Behind Innovation
1100	Alastair McGhee	From Innovation to Integration: Transversal Skills for Talent Readiness – Embedding innovation across Glasgow City Region
1200	Lunch	
1300	Coral Grainger	Building Innovation Capability at Scale: Greater Manchester's Innovation Literacy Programme
1400	Nik Willoughby	Building RESILIENCE: The Future of Medicines Manufacturing Skills
1500	Break	
1530	Victoria Milne	Professionalising Innovation Practice: The Institute of Innovation Management
1630	Summary and close	

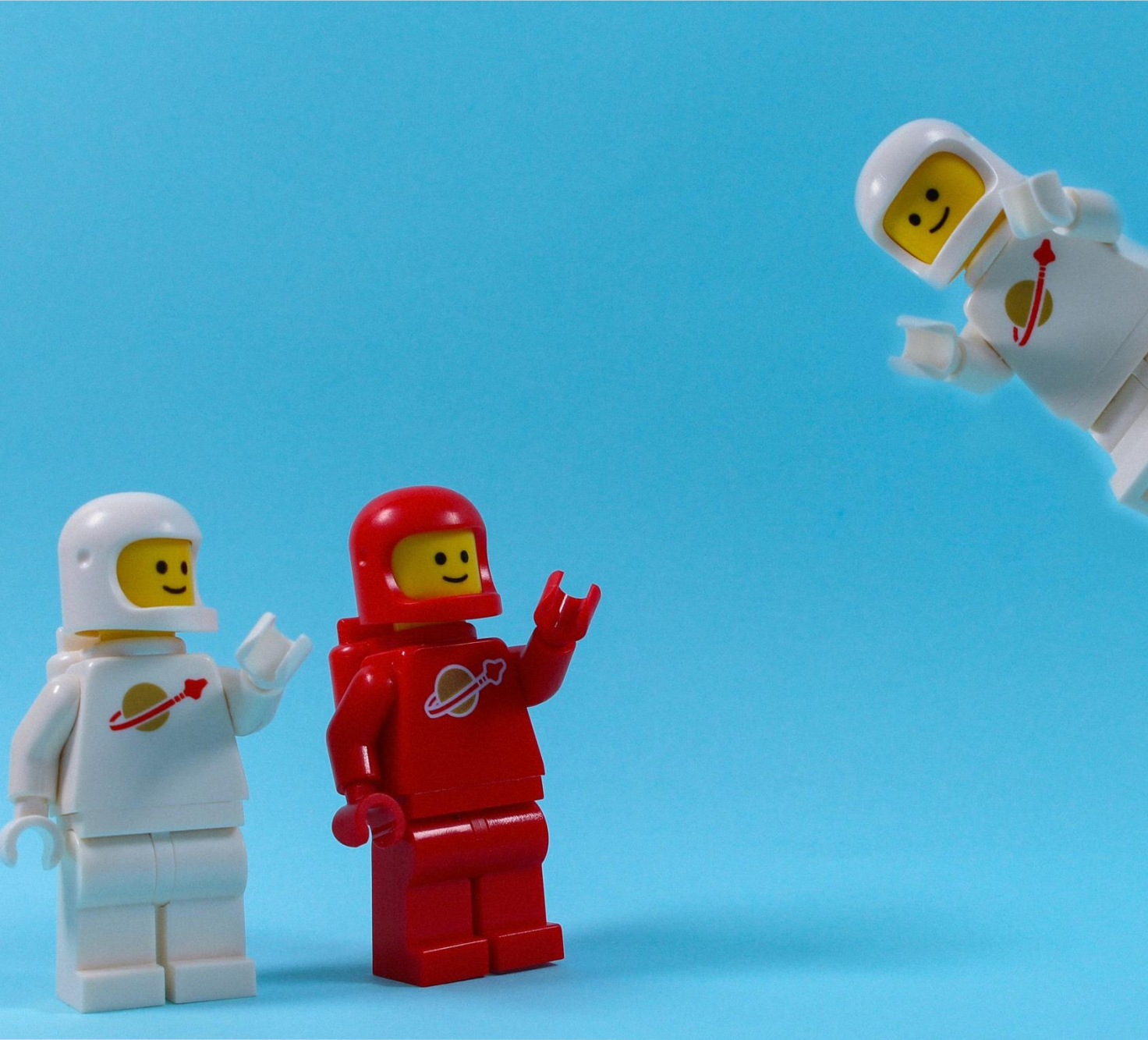
Unlocking the skills behind innovation

Abigail Stocker

Lead Specialist – Innovation Research,
Economics and Insights Team
Innovate UK



■ INNOVATE UK
■ Innovation Skills
■ Framework



ARE INNOVATORS BORN OR MADE?

- a) Many have innovation potential, but this is not always realised
- b) Barriers prevent people from reaching their potential, such as limited access to opportunities, cultural factors, personal circumstance, and the **absence of the necessary skills.**

INNOVATION NEEDS SKILLS, NOT JUST IDEAS

- But businesses struggle to access the skills they need
 - **40%** say that a 'lack of skills' is a major barrier to innovation activity (The State of Innovation, 2025)
- **What do we mean by 'innovation skills'?**
 - Depends on who you ask
 - Variation across sectors and industries
 - It gets messy!

WHAT IS A 'SKILL'?

'Personal capacities that can add value [...] and can be **acquired or enhanced** through **learning and development** and contribute to the **completion of [...] tasks.**'



BUILDING THE FIRST INNOVATION SKILLS FRAMEWORK

- Researchers conducted a **review of academic and grey literature** to identify activities, processes, tasks associated with innovation.
- Thematically grouped to derive **relevant tasks and related skills**.

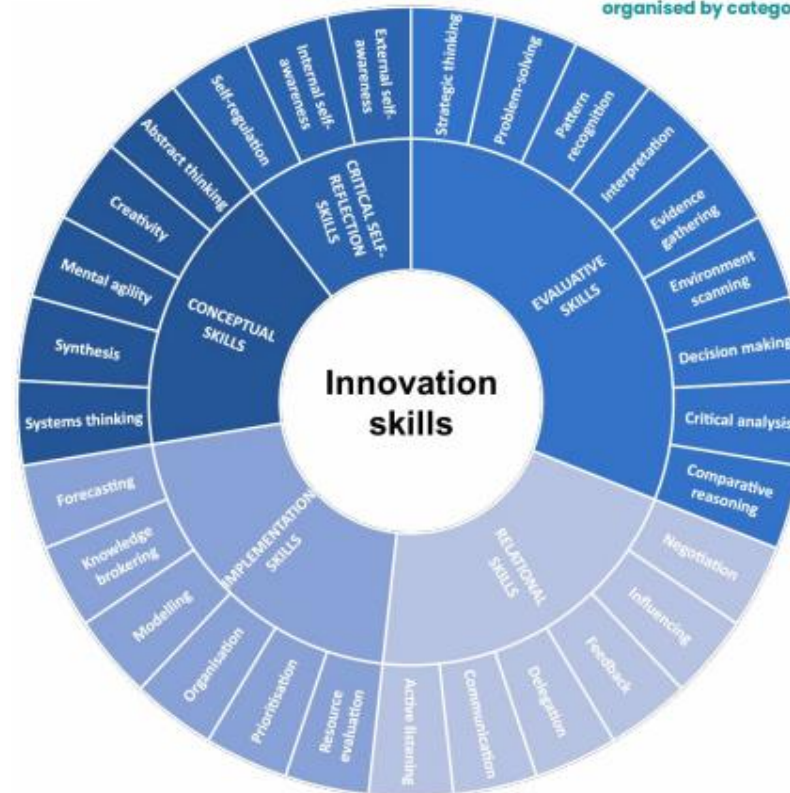


Figure 2: Innovation skills organised by category

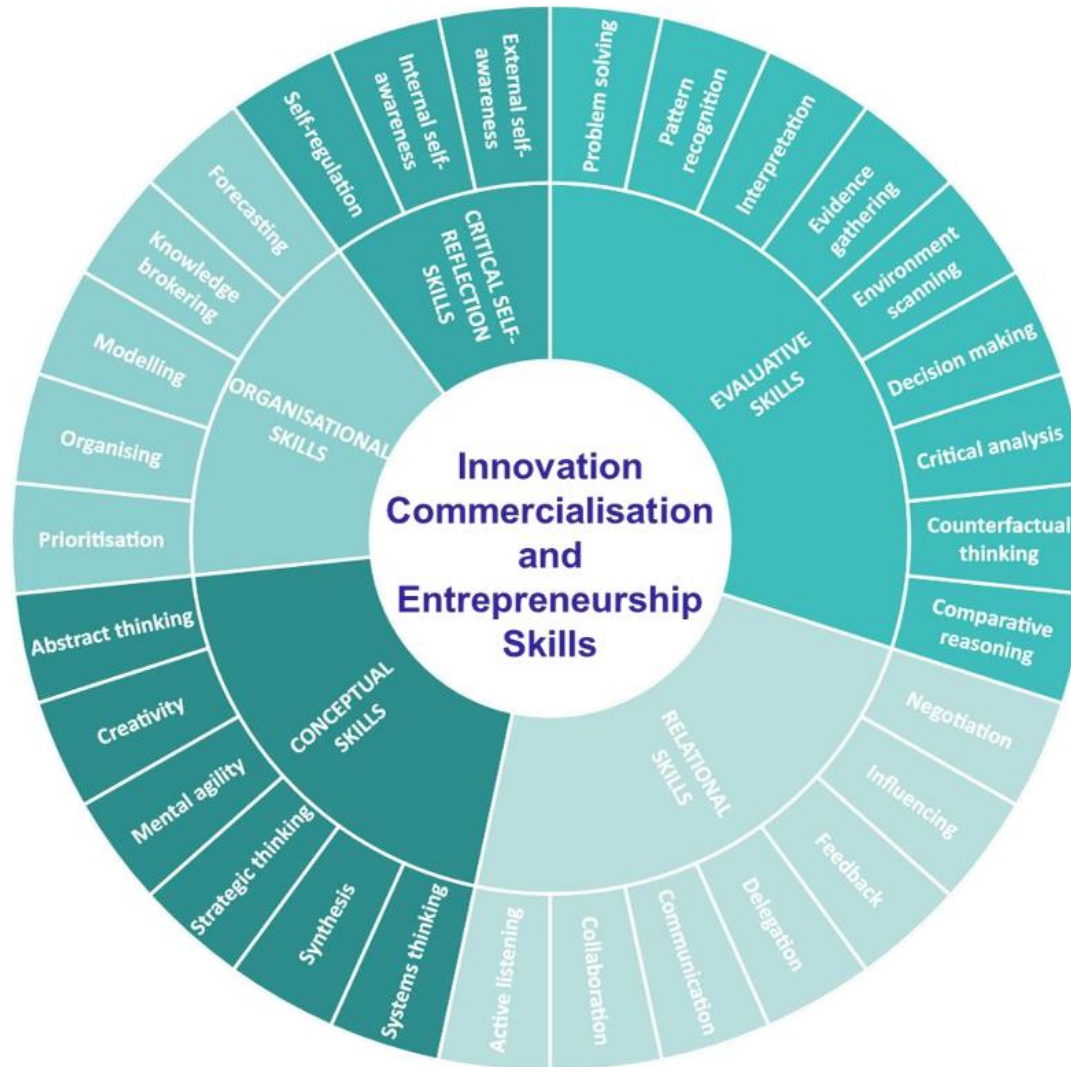
INNOVATION SKILLS ARE TEACHABLE & LEARNABLE

- This resonated strongly with actors across the innovation system
- First iteration of ISF embedded in the innovation strategy for IFATE (now Skills England)
- Ongoing engagement revealed **commercialisation and entrepreneurship** skills are equally vague.



INNOVATION SKILLS FRAMEWORK 2.0

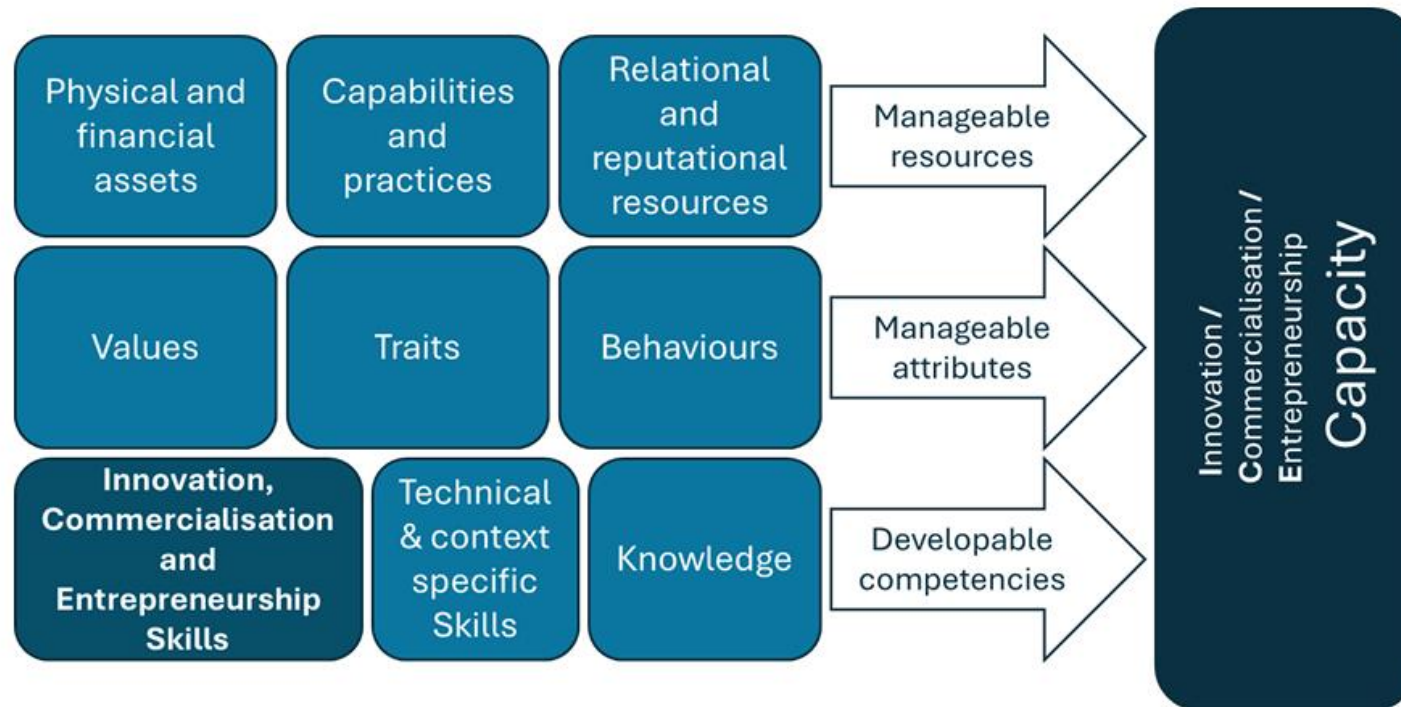
- IRC researchers expanded the framework using the same approach.
- An evolution, rather than a departure, from version 1.0.
- Associated tasks closely related to innovation.
- Additions to the framework include collaboration, counterfactual thinking and strategic thinking.



Scan to download
the full report

INNOVATION SKILLS FRAMEWORK 2.0

- Disclaimer! Innovation skills are not the only ingredient - need to be accompanied by **context-specific skills**, knowledge and enabling attitudes and resources.



Scan to download
the full report

MOVING BEYOND SILOS

- Unique approach which helps to view **skills in context** and avoid artificial silos
- Step towards creating a **shared language**
- Grounded in theory but **based in reality**.



HOW CAN THE FRAMEWORK BE USED?

DEPLOYING SKILLS

- Assess how well existing **skills align with the tasks and roles** involved in innovation.
- Identify gaps or **mismatches** to provide focus for learning and development.

DEVELOPING SKILLS

- **Map curricula** to identify where ICE skills are taught, and opportunities to introduce them.
- Align with professional and curriculum **standards with ICE skill**, helping training providers and skills bodies to develop training programmes.

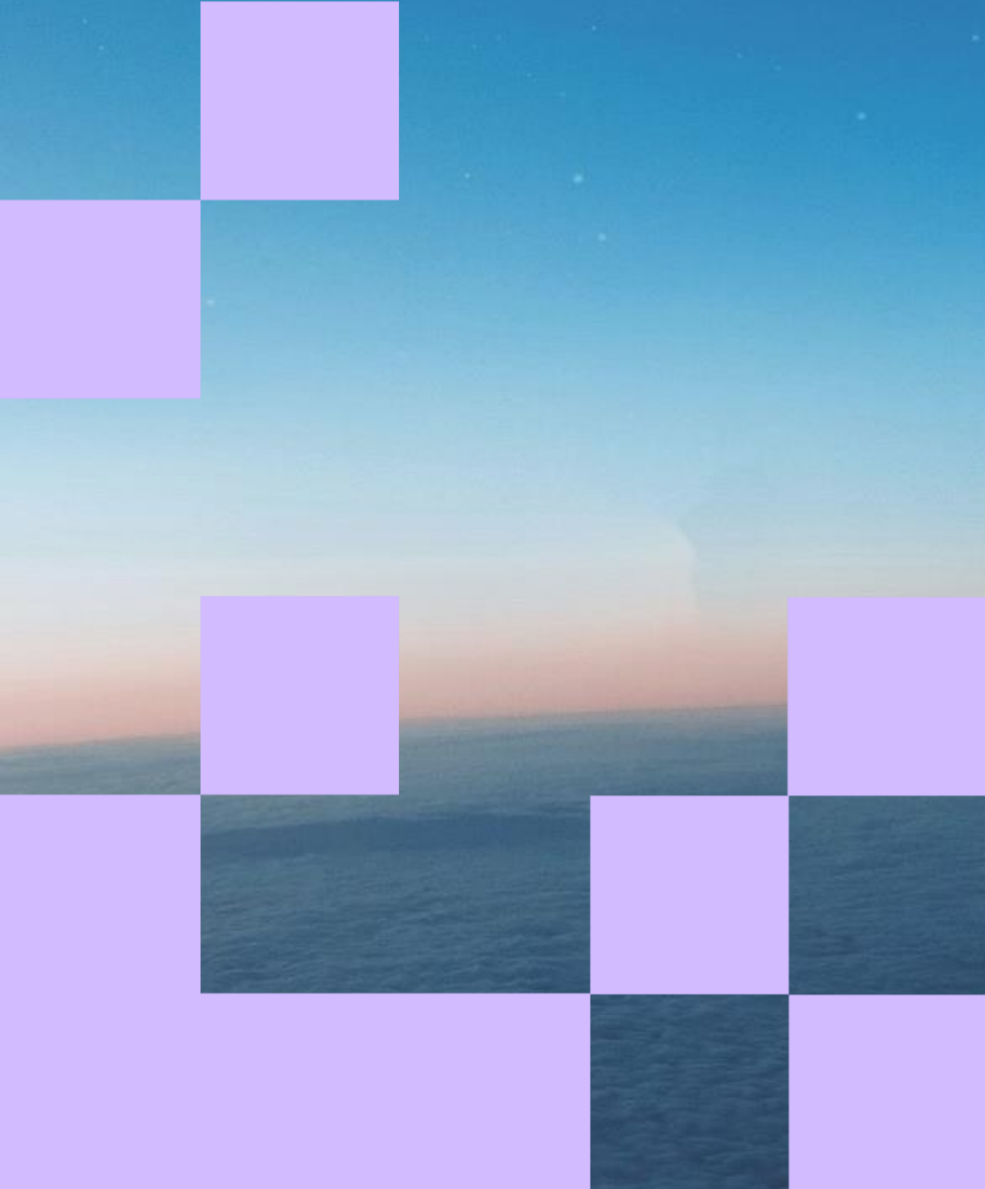
SOURCING SKILLS

- Inform **role descriptors** and **person specifications**.
- Design **recruitment and selection methods** to evaluate candidates' existing ICE skills or their potential to develop them.

UNDERSTANDING SKILLS FOR INNOVATION

- Innovation skills are **teachable and learnable**
- The ISF offers a way to **move beyond silos**, and establish **shared language**
- Examples of real-world applications of the ISF over the next two days.

■ **THANK YOU**
■ **Any questions?**



■ INNOVATE UK

**From innovation to
integration: Transversal
skills for talent readiness –
embedding innovation
across Glasgow city region**

Alastair McGhee

Director of Innovation –
Engagements & Partnerships
Glasgow Kelvin College



From Innovation to Integration: Transversal Skills for Talent Readiness – Embedding innovation across Glasgow City Region

Alastair McGhee

Director Innovation, Engagement and Partnerships

amcghee@glasgowkelvin.ac.uk

**NOWHERE
LIKE
KELVIN**

From Innovation to Integration Transversal Skills for Talent Readiness Embedding Innovation Across Glasgow City Region





What do we usually think innovation looks like?

- AI
- High Tech
- Robots
- University Labs
- PhD Students

Important... but incomplete.

Innovation is already happening...

 CARE

 SME and MICRO – ALL SECTORS

 COMMUNITY

 COLLEGE

 SERVICES

Innovation exists far beyond the traditional innovation ecosystem.

The Question has Changed

Old Question

How do we help organisations become innovative?



New Question

How do we recognise, develop and connect innovation capability?

Three Projects: One Emerging Story

CLIC

Organisations already innovate

Colleges connect organisations into innovation

Focus on enabling adoption

Build local innovation ecosystems

INSPIRE

Innovation capability already exists

Education develops innovation capability

Focus on translating capability

Create a shared language for innovation skills

Inclusive Innovation

Innovation exists beyond high-tech sectors

FE and HE have a wider innovation role

Focus on widening participation

Create more inclusive regional innovation

Common message

The challenge is no longer creating innovation.

The challenge is recognising it, connecting it and embedding it across the whole system.



Translation Gap: Capability Not Always Recognised

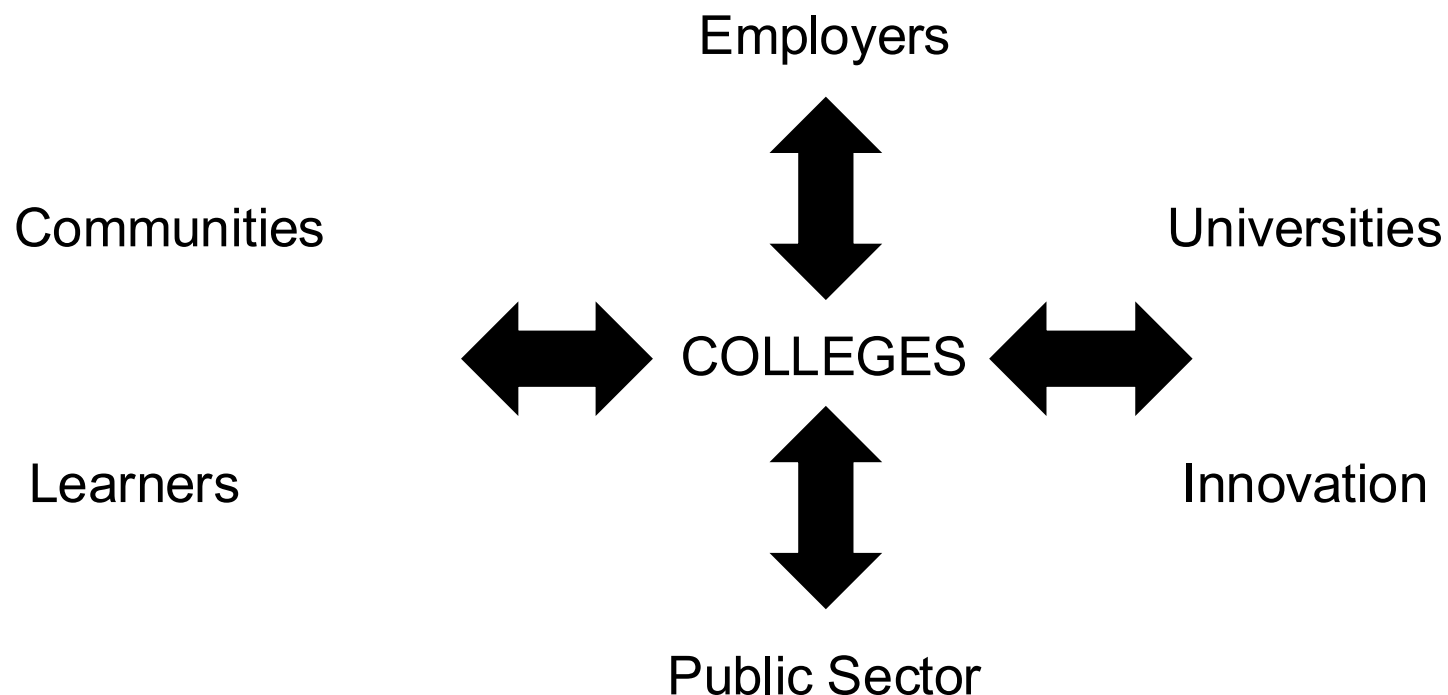
- Education develops innovation capability.
- Employers need innovation capability.
- But the system does not always translate one into the other.

Bottom line:

- We don't need to invent more innovation skills.
- We need to make existing capability visible, recognised and usable. Common language

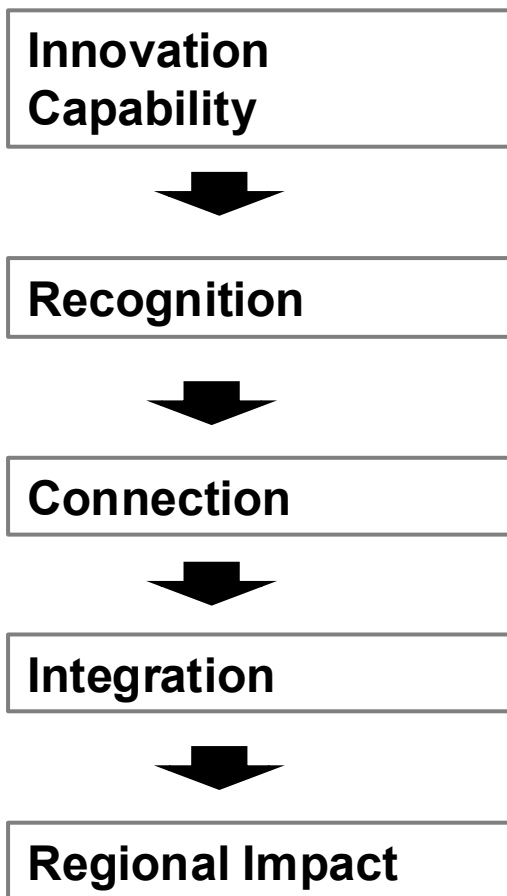
Direct alignment with the INSPIRE finding: Main challenge is translating existing capability into applied, recognised outcomes rather than simply creating more provision.

Colleges as Innovation Connectors



**Colleges don't simply produce skilled people.
They connect learners, employers, communities and innovation into one regional system.**

From Innovation to Integration



**Innovation already exists.
Our challenge is to recognise it, connect
it and embed it across the regional
system.**

From Innovation to Integration: Transversal Skills for Talent Readiness – Embedding innovation across Glasgow City Region

Alastair McGhee

Director Innovation, Engagement and Partnerships

amcghee@glasgowkelvin.ac.uk

**NOWHERE
LIKE
KELVIN**

Lunch

**Building innovation
capability at scale: Greater
Manchester's innovation
literacy programme**

Coral Grainger

Innovation Project Director
GM Colleges



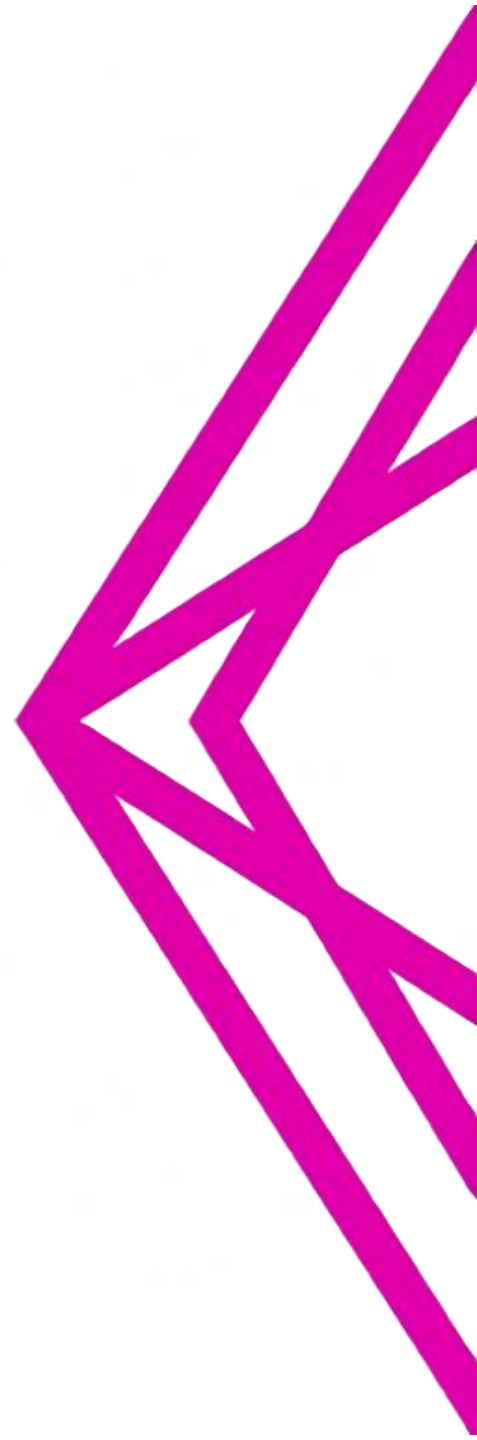
Building Innovation Capability at Scale

Greater Manchester's Innovation Literacy Programme

Coral Grainger, Innovation Project Director, GM Colleges

Leon Hey, West College Scotland

Innovate UK Talent & Skills Project Showcase – Glasgow



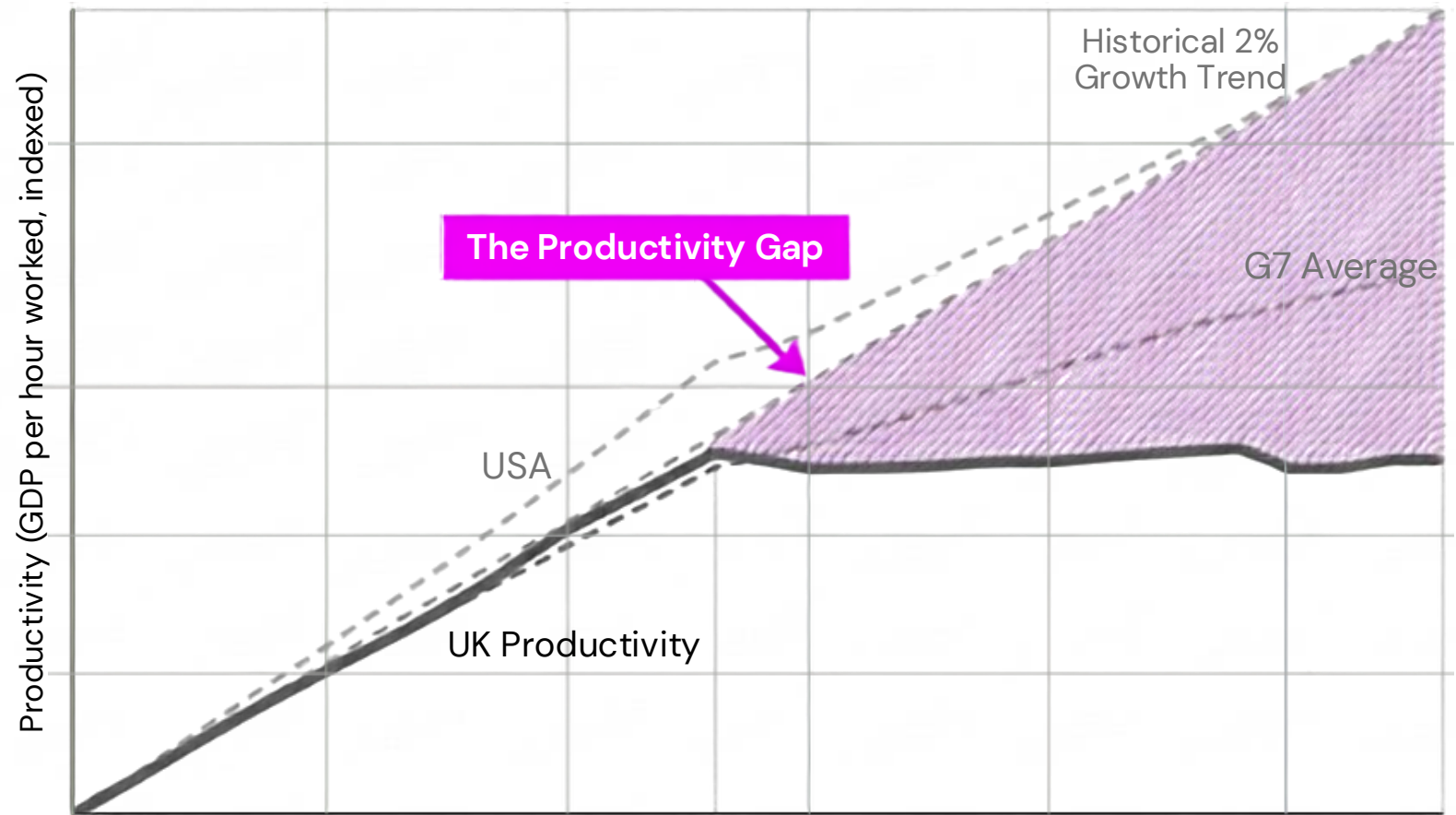
UK productivity growth has stalled.

Impacting growth, wages, living standards

Without productivity growth, there is no route to rising incomes.

Redistribution shifts the pie; productivity grows it.

Management practice and workforce skills are the proven, primary drivers of firm-level productivity.



Innovation policy must reach the businesses traditionally excluded from the ecosystem

How do we reach them?

The 1%

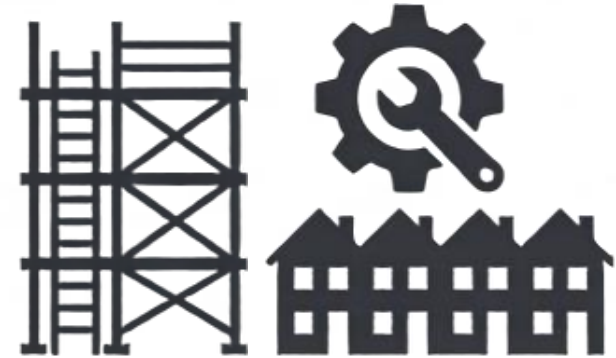


Traditional Innovation Hubs

High-growth tech, massive R&D, University spin-outs

**Democratising
Innovation**

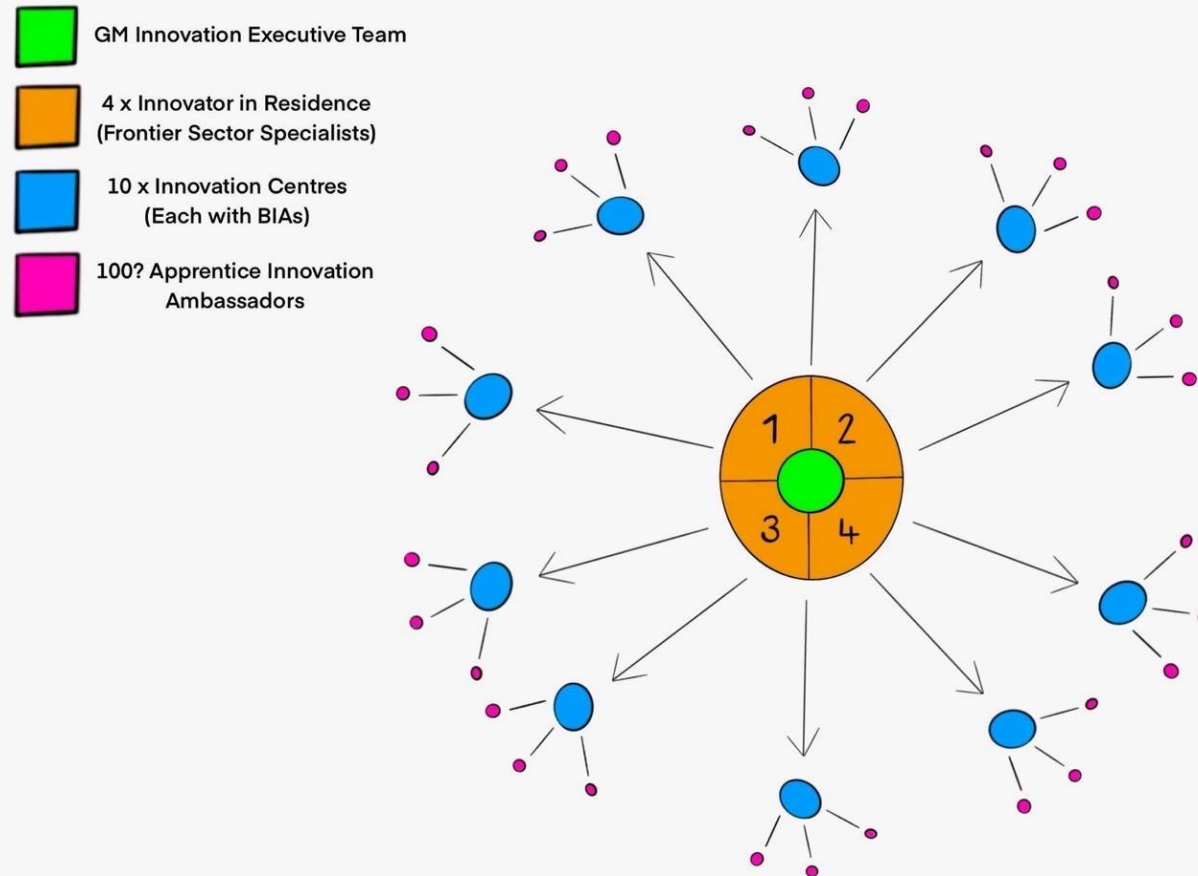
The 99%



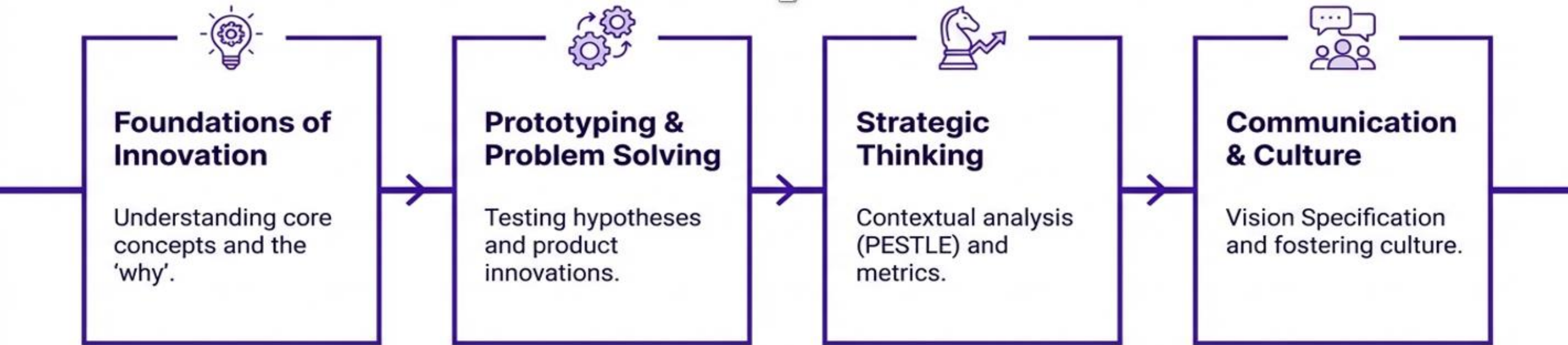
The Everyday Economy

Mechanics in Tameside, Council Officers in Salford, Scaffolding firms in Rochdale,

Radial Innovation Network Model



What is the Innovation Literacy Programme?



8 Sessions,
4 Modules,
2 days

V1: Grainger & Dyson
V2: Improved through
co-design

Delivered by Peripatetic
team led by Dave Murat

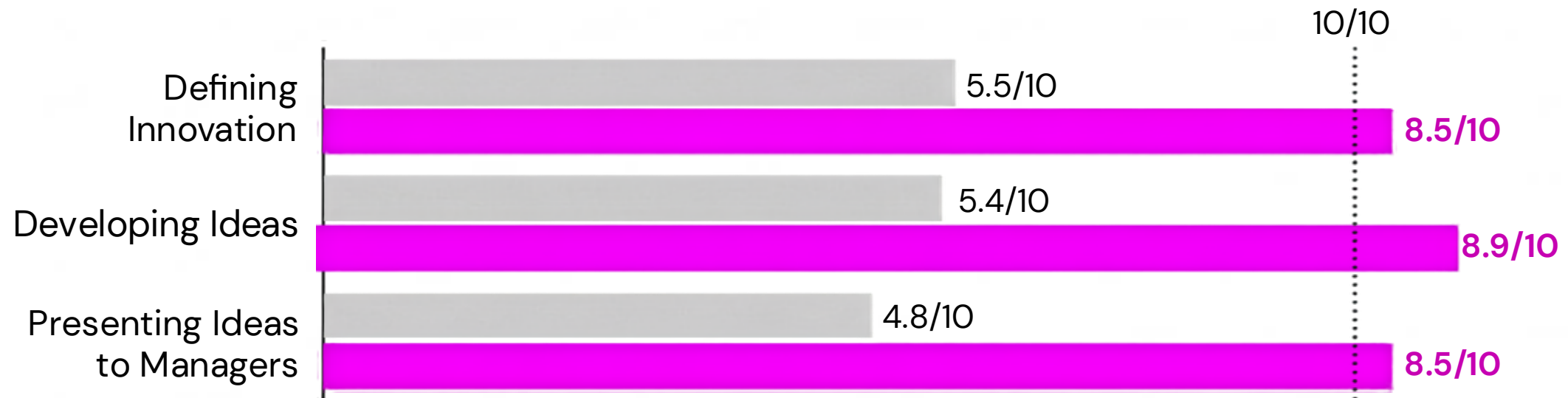
Fully accredited micro-
credentials by OCN
London

... delivering mixed apprenticeship levels, to mixed age groups, mixed sectors, mixed job roles



... but Level 3 and up works best, and theres potential for more tailoring to sectors

Driving a measurable shift in professional confidence, self-perception and capability



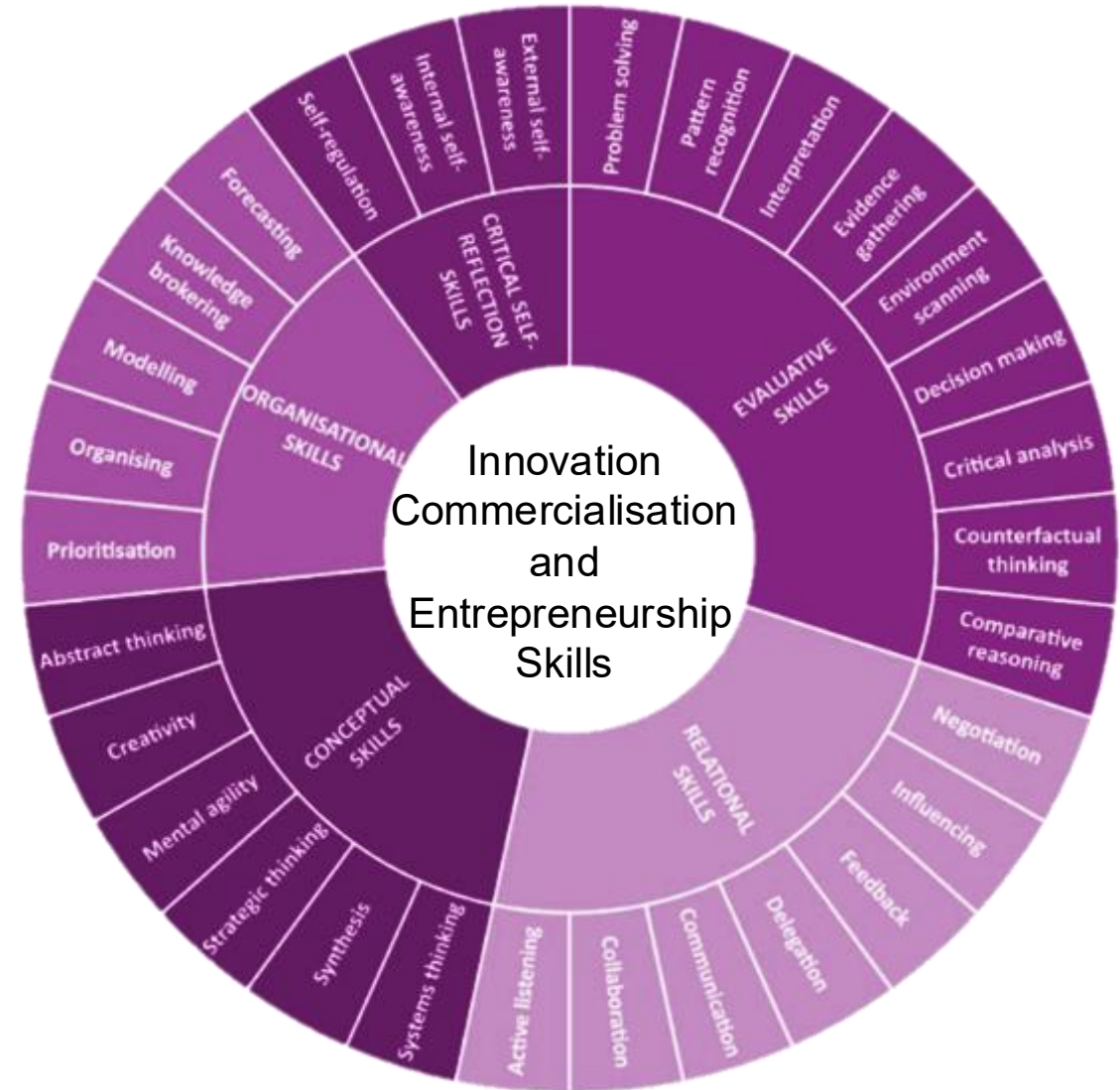
“ Before, I would notice problems and just put up with them. Now I think — this is annoying for a reason, so I should do something about it. ”

— Apprentice

Innovation Commercialisation and Entrepreneurship Skills:

We want you to focus on **thinking** about the overarching skills in your context

- **Conceptual skills** help you generate and connect ideas. It is about being strategic in how you think, act and do things
- **Organisational skills** help you plan, prioritise, and get things done.
- **Evaluative skills** guide how you find and use information to make good decisions.
- **Critical self-reflection skills** help you understand yourself, how you think, feel, and act, so you can keep learning and improving.
- **Relational skills** focus on how you communicate, collaborate, and influence others.



ICE skills covered in the Programme - We covered them all!

CRITICAL SELF-REFLECTION SKILLS	1	2	3	4	CONCEPTUAL SKILLS	1	2	3	4	EVALUATIVE SKILLS	1	2	3	4
External self awareness			✓	✓	Abstract thinking	✓	✓	✓		Critical analysis		✓	✓	✓
Internal self awareness	✓		✓	✓	Creativity	✓	✓		✓	Counterfactual thinking		✓	✓	✓
Self-regulation	✓	✓		✓	Mental agility	✓	✓		✓	Comparative reasoning		✓	✓	✓
					Strategic thinking		✓	✓		Decision making		✓	✓	
ORGANISATIONAL SKILLS	1	2	3	4	Synthesis		✓	✓	✓	Environment scanning	✓	✓	✓	✓
Forecasting		✓	✓		Systems thinking		✓	✓		Evidence gathering		✓	✓	
Knowledge brokering	✓	✓	✓	✓						Interpretation	✓	✓	✓	✓
Modelling		✓	✓	✓	RELATIONAL SKILLS	1	2	3	4	Pattern recognition		✓		✓
Organising		✓	✓	✓	Negotiation			✓	✓	Problem solving		✓		✓
Prioritisation		✓	✓		Influencing	✓	✓	✓	✓					
					Feedback		✓	✓	✓					
					Delegation	✓	✓	✓	✓					
					Communication	✓	✓	✓	✓					
					Collaboration	✓	✓		✓					
					Active listening	✓	✓		✓					

Aligning practical delivery with the ICE Skills Framework

ICE Category	Apprenticeship KSB Alignment	Bloom's Taxonomy Level
Critical Self-Reflection Skills	Self-awareness, continuous improvement	Evaluate (Level 5)
Organisational Skills	Planning, resource management	Apply (Level 3)
Conceptual Skills	Creativity, strategic thinking, synthesis	Create (Level 6)
Evaluative Skills	Analytical thinking, decision-making	Analyse/Evaluate (Level 4/5)
Relational Skills	Teamwork, collaboration	Apply (Level 3)

... and lifting them up through Blooms levels, often in mixed cohorts

IUK Launchpad Investment: Quality, Accessibility, Enabling Scale

Content Review

Entering the fifth revolution

We are now entering the fifth industrial revolution

We cannot predict the future as it is plural, but we predict a focus on collaboration between humans and advanced technologies; emphasis on human-centric innovation, sustainability, and ethical use of AI and robotics; shift from pure efficiency to creating value for people and the planet.



GREATER MANCHESTER COLLEGES

The Double Diamond

The challenges

Insight

Problem definition

Ideas + prototyping

Implement

Iterate + embed

"design the right thing"

DISCOVER
Understand the context; gain a deep understanding of your problem space

DEFINE
Use findings from research to identify the right problems to solve and ways to approach it

DEVELOP
Co-develop ideas for solving the problem and begin to tangibly test whether they work in real life

DELIVER
Test hypotheses and feed development of your ideas, change things to fit them.

"design the thing right."

Quick fire team time



What frustrates you at work?

Think about what frustrates you at work, write on a post it note and share in your teams.

We will revisit this

GREATER MANCHESTER COLLEGES



"I can accept failure; everyone fails at something. But I can't accept not trying."

Michael Jordan businessman and former basketball player



"Daring is not saying, 'I'm willing to risk failure' Daring is saying, 'I know I will eventually fail and I'm still all in'"

Brene Brown - researcher and storyteller



The Launchpad Multiplier: Cascading the model across the UK



**Greater
Manchester
Hub**

**29 FE staff trained as facilitators
across 3 training hubs
(Manchester, Birmingham, Bristol)**

**Expanded to 22 colleges (9 GM
+ 13 Launchpad) across
England, Wales, and Scotland**

**Engaged 300+ apprentices
spanning all 8 Industrial Strategy
growth sectors (+GM)**

Expanding Our Reach: Engaging Colleges Across the UK



Takeaway: The programme's scalable model is successfully empowering a growing network of apprentices nationwide.

Practitioner Insight: West College Scotland

Leeon Hey, Innovative Quality Lead



“Made me more confident in creating conditions encourage and facilitate innovation.”

Day Two

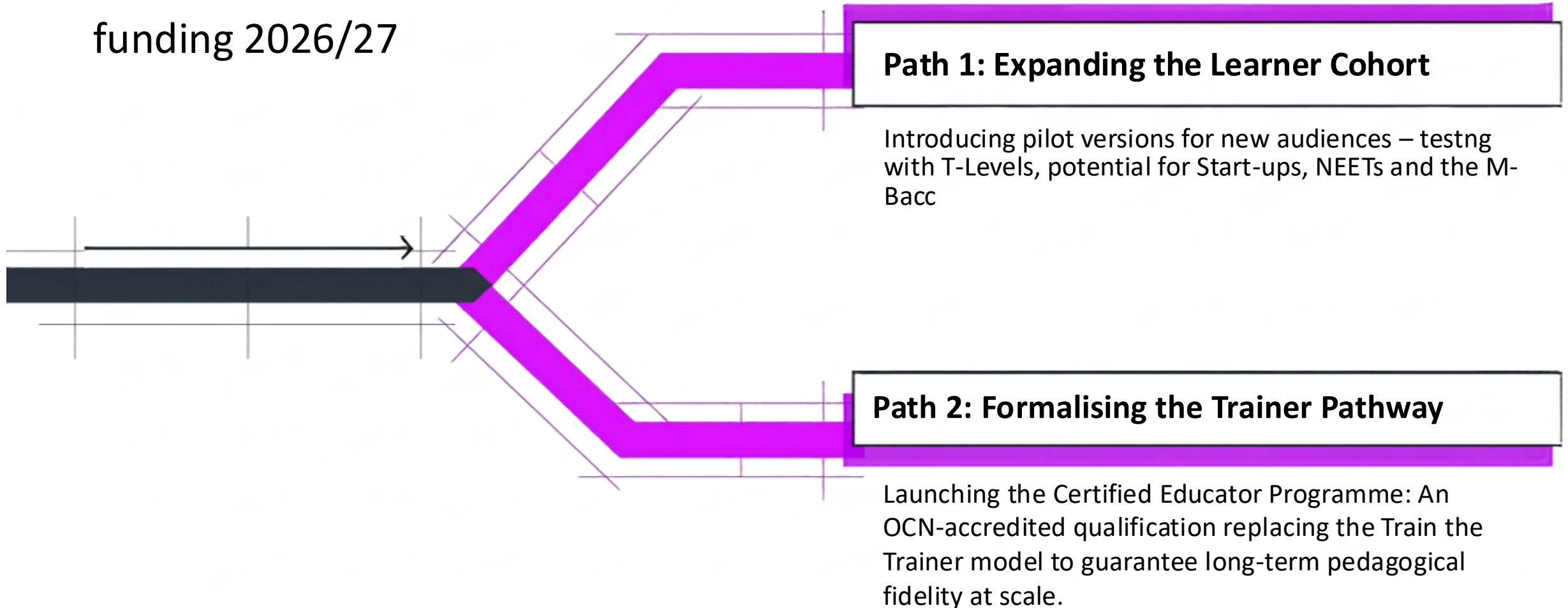
INNOVATION LAUNCHPAD

You Can Do It

MOTIVATION

Securing the Legacy: The roadmap for 2026/27

GMCA : £100k interim
funding 2026/27



Strategic Entry Points: Aligning the model to your ecosystem

Colleges, ILPs and employer L&D teams

Certified Educator Programme :

Embed Innovation Literacy into your existing Apprenticeship, skills & CPD provision.

CAs / LEPs, LSIPs & Sectors Bodies

Skills alignment.

Explore how this content complements the needs of Economy and Employers.

Skills England, Catapults, Foresight Hubs

Research on Impact

Test the impact on learners, employers, employees and places (& Govt?)

Have a conversation with us :



Dave Murat
Operations Manager



Coral Grainger
Project Director



Innovationliteracy@oldham.ac.uk
www.innovationliteracy.co.uk

Any questions for me, Dave, Leeon?

Some Questions for you:

How do we measure impact on learners?

How do we measure the impact on the business?

How do we apply for those without work experience?

How do we make it sustainable?

Thank you!

Building RESILIENCE: The future of medicines manufacturing skills

Prof. Nik Willoughby

Director

Institute of Biological Chemistry,
Biophysics & Bioengineering





RESILIENCE

UK Medicines Manufacturing
Skills Centre of Excellence

Building the Future Medicines Manufacturing Workforce: The **RESILIENCE** Approach

Concept, Core Activities & Engagement

Prof Nik Willoughby - Heriot-Watt University

Who is this?



Brian Pinker

The first person in the world to receive the Oxford-AstraZeneca COVID-19 vaccine in Jan 2021

Diverse Medicines Modalities Need Diverse Skills



Small Molecules

Statins
Paracetamol
Antihistamines



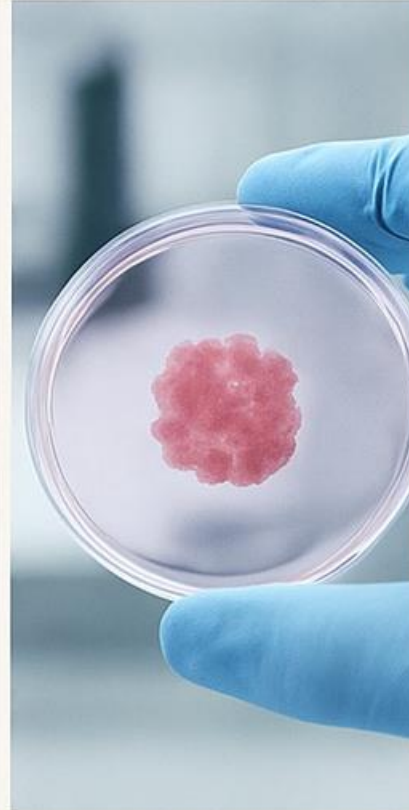
Biologics

Vaccines
Insulin
Antibodies



Conventional Biologically Derived

Antibiotics



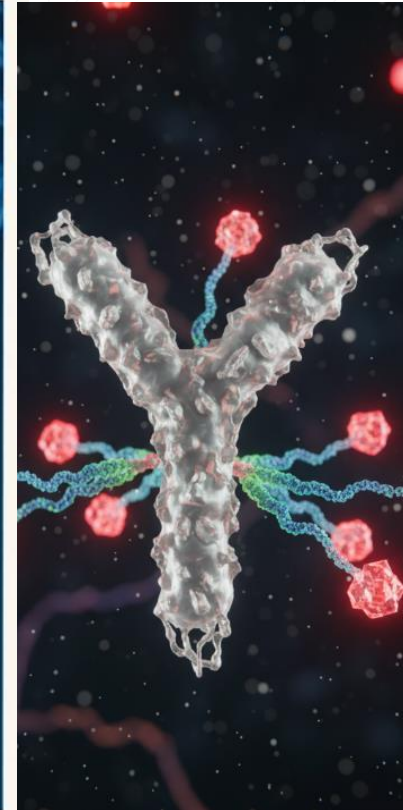
Advanced Cell Therapies

CAR T-cell Therapy
Casgevy



Nucleic acid-based

mRNA
Vaccines



Other modalities

Antibody-drug
conjugates

RESILIENCE - Partners

A national network with common core training for *Medicines Manufacturing Skills*



Office for
Life Sciences



Department for
Science, Innovation
& Technology



Innovate
UK

About RESILIENCE

RESILIENCE is the UK Medicines Manufacturing Skills Centre of Excellence



A front door for industry to access a national network of workforce development initiatives, ensuring companies and other stakeholder organisations can access the talent they need to thrive.

Outreach

Curriculum-aligned materials
Careers awareness events

Skills & Training

Courses for upskilling in industry
Courses for workplace readiness
Courses building future skills

Coaching

Career planning
Leadership training
Resilience building



Coordinates leading bioprocess training providers across the UK, to achieve **standardisation and quality benchmarking** in training approaches, enabling scalability

RESILIENT, AGILE, ADAPTIVE WORKFORCE

Strategic Collaborations

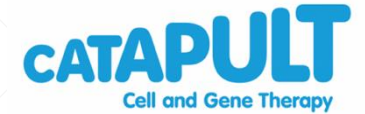
We work with other nationally funded initiatives to develop a scalable, UK-wide, network addressing all medicines modalities.

Strategic Collaborations with national funded initiatives

- **Industry Skills Accelerator** (CGT Catapult, CPI, Cogent)
 - Sharing and delivery of key training materials
 - Collaboration on apprenticeship activities e.g., ATAC
- **EPSRC / BBSRC Future Manufacturing Hubs**
- **MRC / LifeARC Gene Therapy Innovation Hubs**
- **HIRANI**

Memberships for talent pipeline development

- Companies
- Schools and further education colleges
- Universities



Why RESILIENCE – Addressing Sector Needs

Sector Evolution

- **New Therapeutics** (cell and gene therapies, RNA vaccines, novel format biologics)
- **Technology Innovation** (process technology, single batch, automation, PAT, formulation)



Acute Skills Shortage

- Technical Skills
- Digital, automation, and data driven manufacturing
- Graduates are not "workplace ready"
- Attract to STEM to increase the whole talent funnel

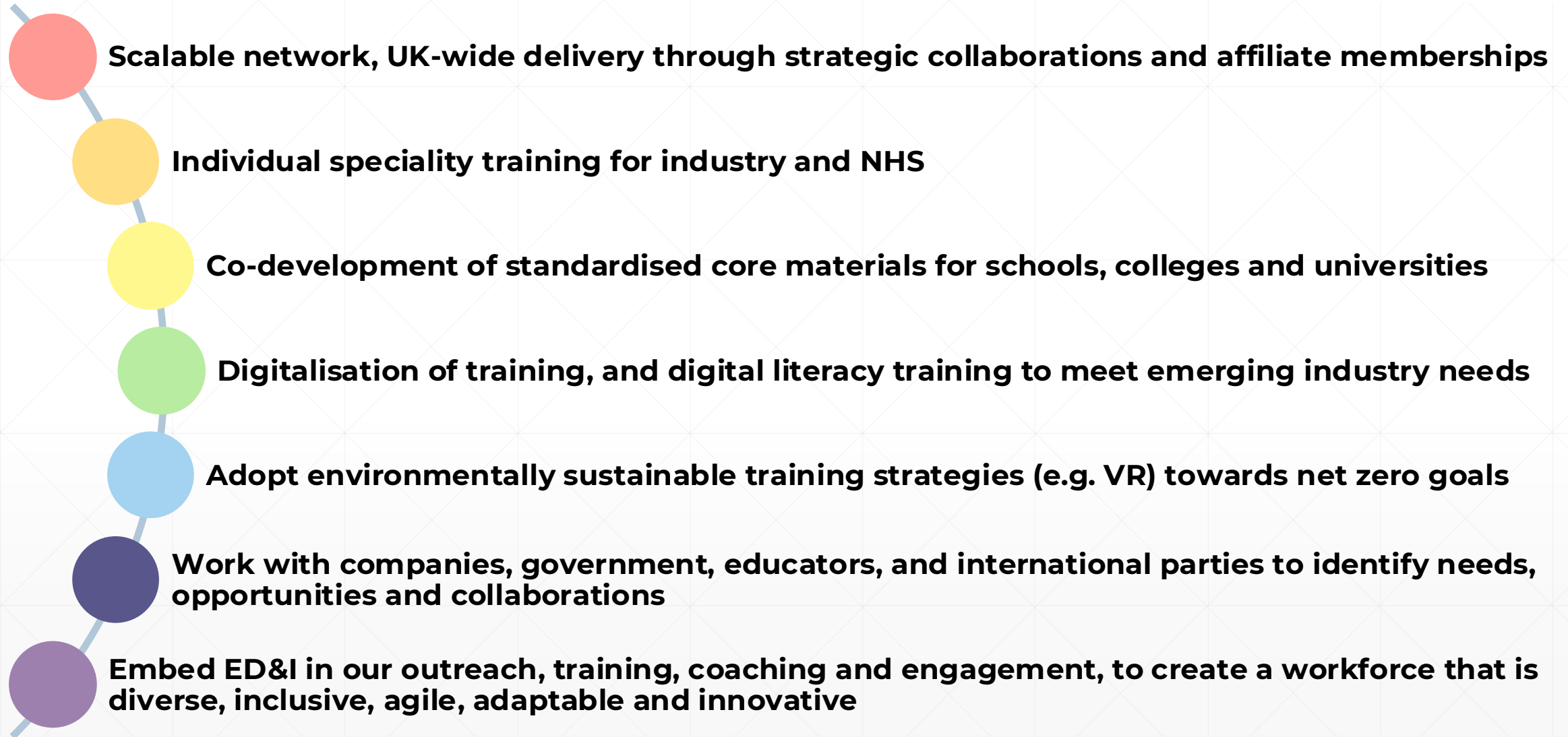


Government Priorities

- **Life Sciences Sector**
 - Over **£108 billion** turnover
 - Over **300,000** jobs nationwide
- **Life Sciences Vision 2021**



RESILIENCE - Approach



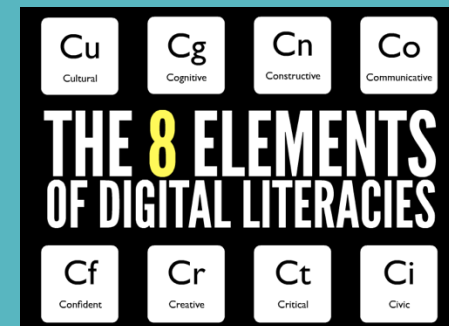
RESILIENCE - Core Activities



**Outreach
& Careers
Awareness**

**Education
& Training**

**Digital
Literacy**



STEM Festivals and Careers Fairs

UK-wide engagement

- ✓ > 14,000 young people
- ✓ 50% female, 30% BAME participants
- ✓ > 120 outreach events and STEM fairs
- ✓ XR Experiences + hands-on activities
- ✓ RESILIENCE-developed play activities
- ✓ Career awareness and entry routes chats



RESILIENCE Accelerators



**Post-16 &
Apprenticeships
Accelerator Materials**



**Undergraduate
Accelerator
Materials**



**Leadership
Accelerator course
for PhDs and ECRs**

RESILIENCE – Online Resources



Webinars and Podcasts

Careers Café podcast interviews, recorded lectures, industry webinars



Educational Materials

Lecture materials; Infographics; Workshops; Outreach materials



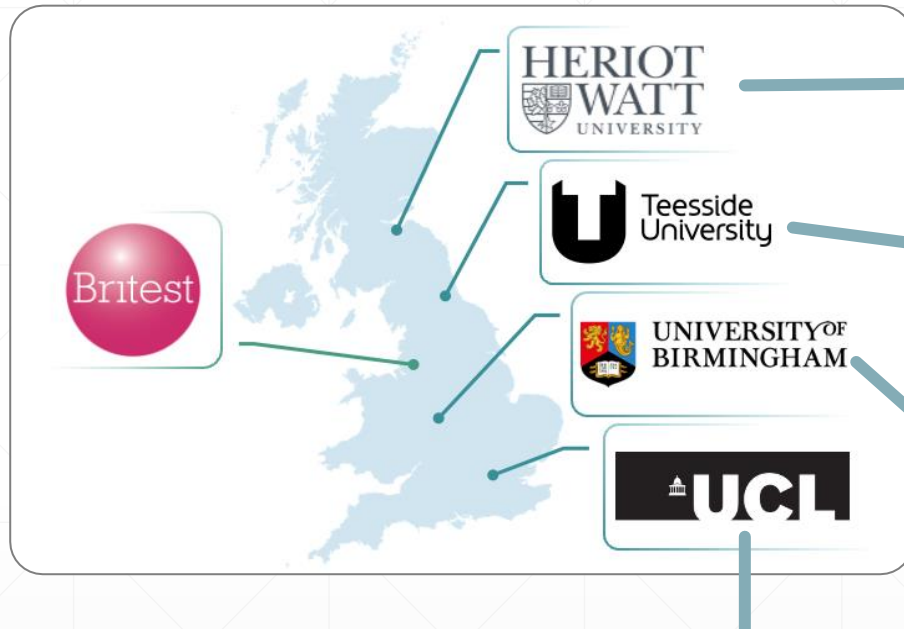
Careers sector guide:
Medicines Manufacturing

Career Resources

UNIFROG videos; Mentoring; Apprenticeships; Careers; Hub support

RESILIENCE training

A national network pioneering delivery of new, standardised and quality assured training materials for the **medicines manufacturing sector**



Heriot-Watt / IBiolC example courses:

- Mastering Protein Purification Using Chromatography Techniques
- Certificate of Upstream Bioprocessing
- BioProcess360: Integrated Upstream & Downstream Bioprocessing training

Teesside University example courses:

- Flow Cytometry for Advanced Therapies
- Process Automation, Big Data and PAT
- Practical Skills for Host Cell Protein Analysis

UoB example courses:

- Fundamentals of GMP and Quality
- Cleanrooms and GMP Behaviours
- GMP Equipment, Materials Handling and Processing
- Measuring and Documenting Quality, Risks and Failures in GMP

UCL example courses:

- Cell Culture and Analysis (Hands-on Course)
- Chromatography (Hands-on Course)
- Bioprocess Design and Economic Evaluation
- Quality by Design for Effective Bioprocess Characterisation and Validation

Collaboration with **Industry Skills Accelerator (ISA)**, providing further training and support to the sector:

VR as Training Tool - Software



Virtual Reality / Linear



ACCELERATE

GMP clean room core behaviours
(modular, interactive training)

Mixed Reality / Handtracked



ECLIPSE CREATOR

Customisable protocol training
tool for "hands on" lab training

Virtual Reality / Roleplay



BODYSWAPS

Real-world simulations with
personalised feedback, which
covers essential human skills
for education, workplace, and
healthcare settings



0.039

Select Collection

Select SOP



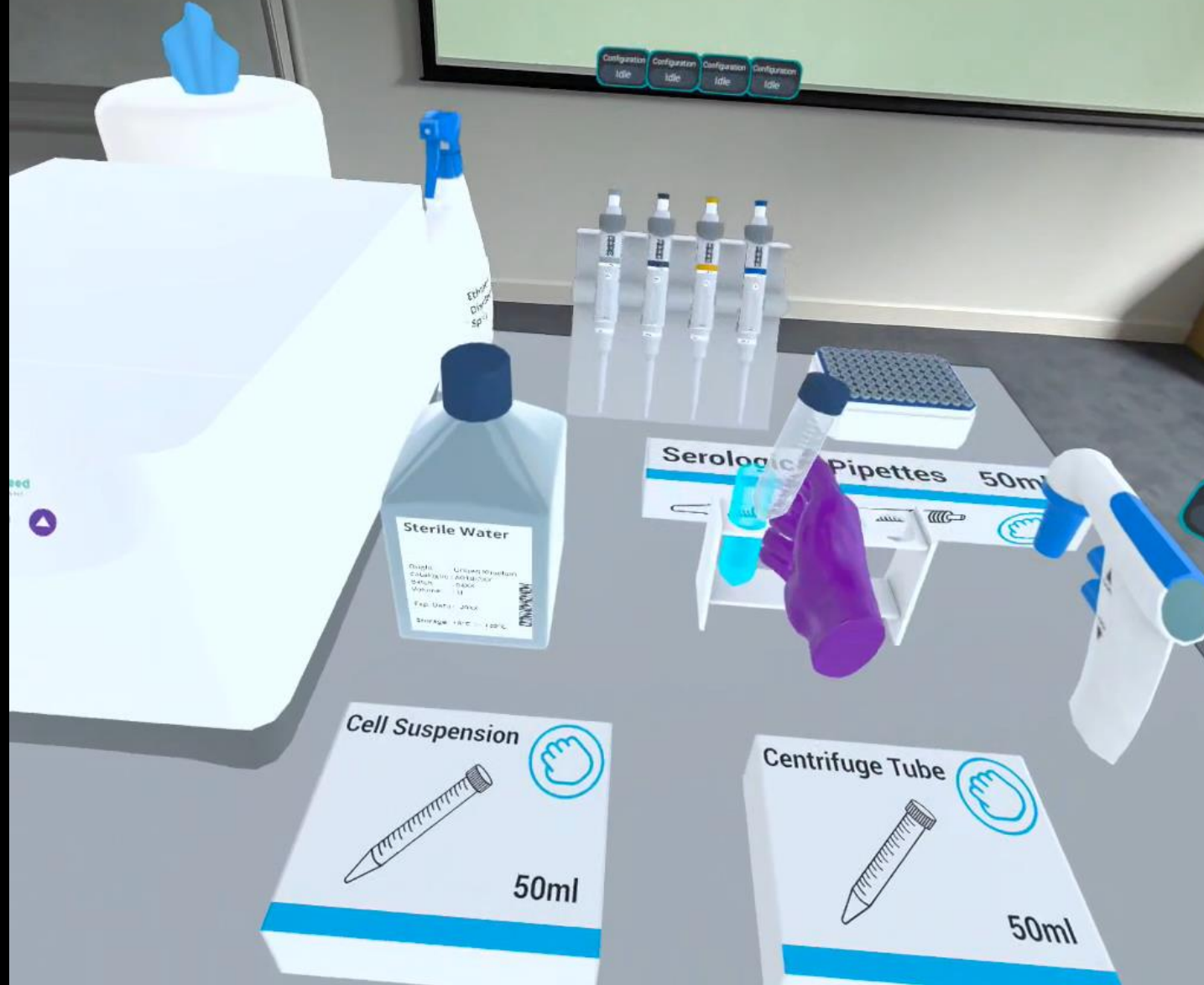
UK Medicines Manufact Skills Centre of Excellen

Configuration
Idle

Configuration
Idle

Configuration
Idle

Configuration
Idle





Use of VR/XR to accelerate and scale training

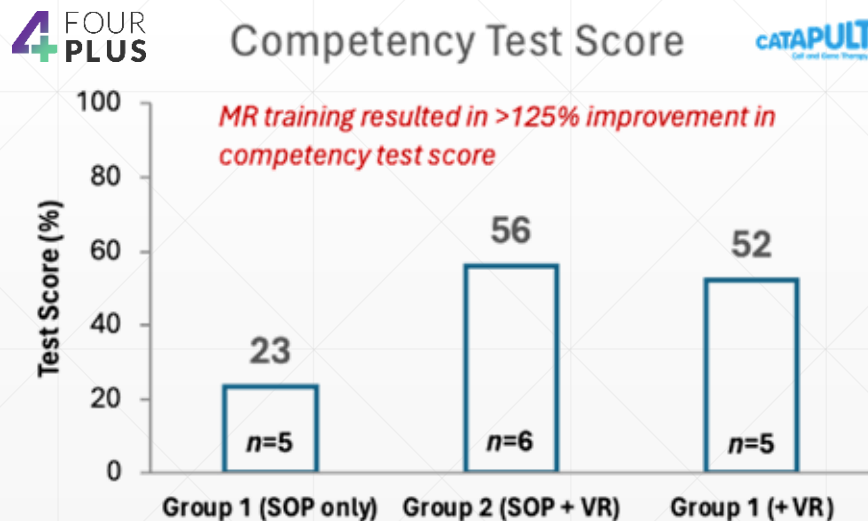


“You don't need to rely on the **availability** of a trainer or the laboratory”

“Greater **exposure** to devices but **lower risk** of injury or equipment damage

“There is **less pressure** to not make mistakes and you can **practice as many times** as you want to

“Allows **contextualisation** (and a **visual learning** environment) for new users



Case Study: NESCOL



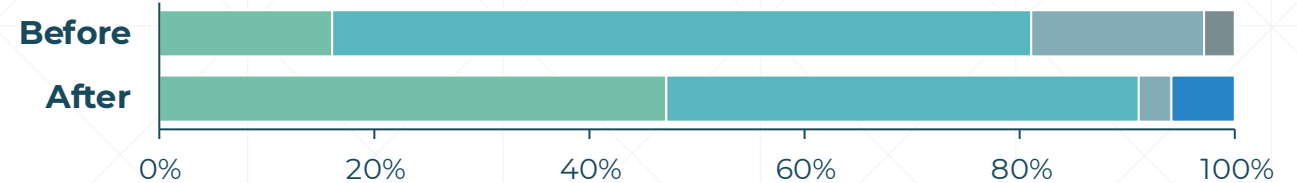
RESILIENCE WORKSHOP

- ✓ 5 groups of 8 – 10 students (45 min)
- ✓ Introduction to the medicine manufacturing process and career pathways in the sector
- ✓ Quizzes and informal chats about the industry
- ✓ **XR** – Bioreactor assembly (FourPlus)
- ✓ **VR** – Non-inclusive behaviour (Bodyswaps)
- ✓ Survey before and after the workshop

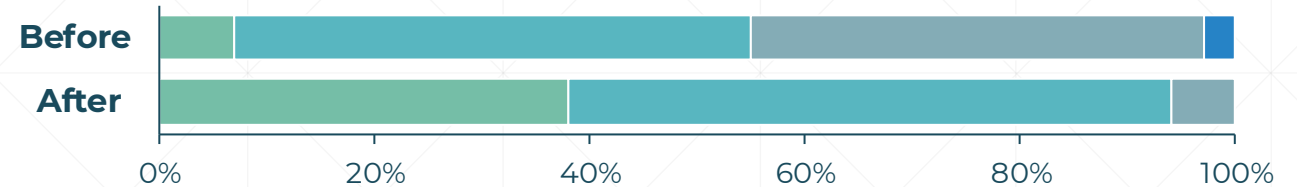
NESCOL Case Study: Impact



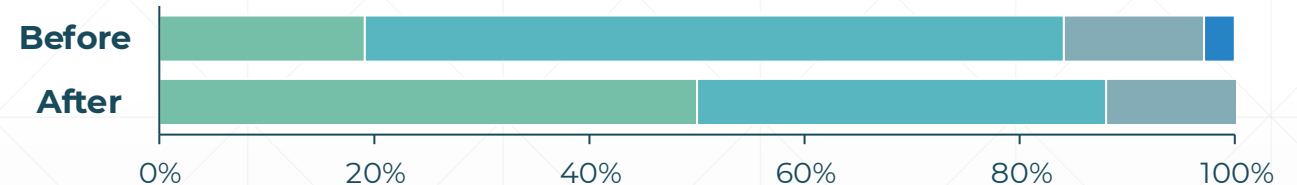
VR can enhance students' learning experience in STEM subjects



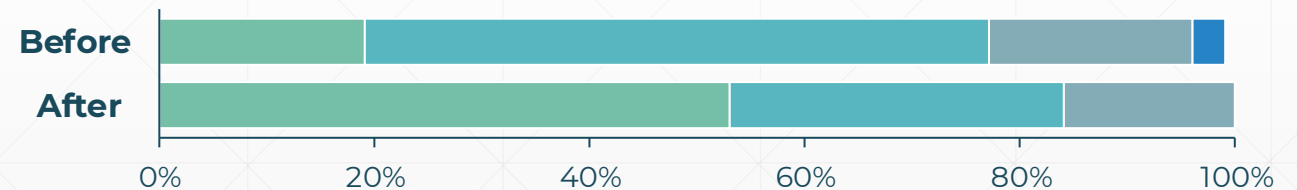
VR helps students retain information more easily, effectively and faster



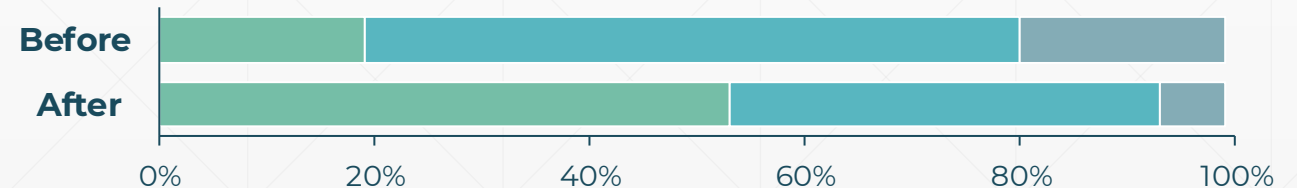
Using VR helps users develop digital skills



Students can develop practical and personal skills using VR simulations just as well as in real-life situations



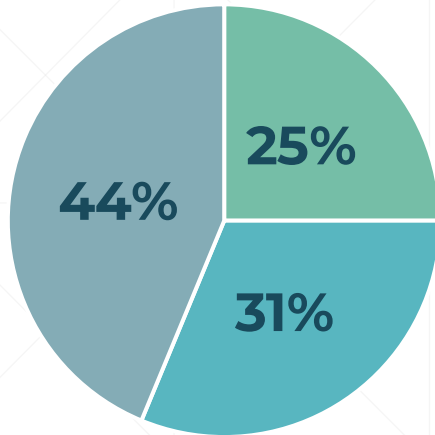
VR educational simulations offer students the opportunity to practice skills and gain practical experience, which are usually hard to access in real-life



NESCOL Case Study: Impact

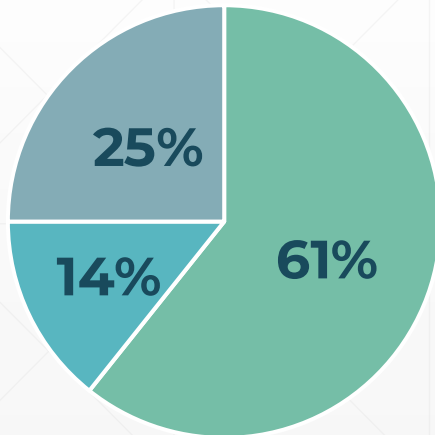
What do you think a bioreactor is or what do you think it is used for?

Pre-workshop



A controlled environment which involves organisms to produce an end product / Making medicines

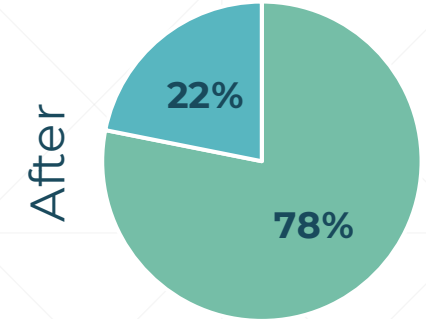
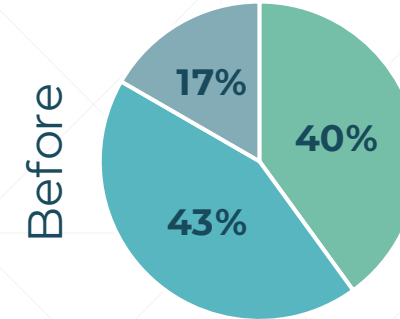
Post-workshop



Never heard of a bioreactor

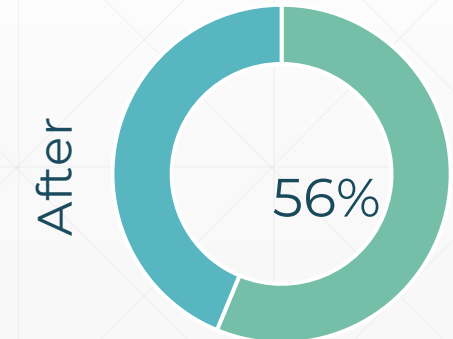
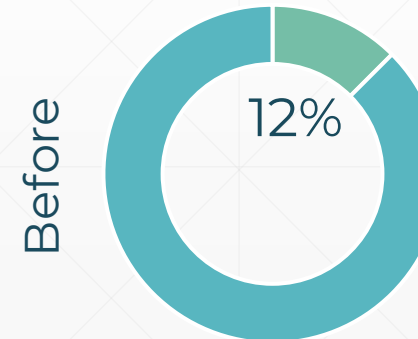
Other

Which of the following do you think are part of a bioreactor?



Correct Wrong I don't have a clue

Select all the job roles you think are relevant in the medicine manufacturing sector.



All of the ones listed Not all of the ones listed

NESCOL Case Study: Feedback



Laura Young - Curriculum Manager for Science at NESCOL

Case Study: XR Biomanufacturing Training

XR has unlocked inaccessible biomanufacturing training and GMP cleanrooms.

In 24 months:

25,000+

future talent have experienced
XR cleanroom and/or
manufacturing equipment



£405,000+
cost saving

in PPE cost for tour/orientation
in physical facility
(cost for 13,500+ to tour facility)

£7,180,000
cost saving

in training costs in setting up
bioreactors for 3,000+ trainees



10,000 kg
Single use plastic
consumables waste
prevented

30,000 kg
CO₂ emissions
saved in single use plastics
disposal

- **Digital transformation in training:** spatial learning for diverse learners
- **Close to net zero training:** zero waste that would be generated in physical lab training
- **Access to restricted facilities:** not usually accessible to learners in schools, colleges or universities.

Case Study – Liverpool UTC Workplace Accelerator

Enhancing learning with RESILIENCE

A case study with Liverpool Life Sciences UTC



Who are Liverpool Life Sciences UTC?

Liverpool Life Sciences University Technical College (UTC) are the first school in the UK to specialise in science and health care for students aged 14 to 19. They are co-located with The Studio School. The Studio School educates young people for success in a digital world, particularly for employment, entrepreneurship, a new business venture, or further study in the digital media and technology sectors. These are separate schools who share the same ethos, strong links with local employers and universities and a commitment to develop the technical and transferable skills of students for careers in focus areas linked to growth in the local economy.

Liverpool Life Sciences UTC combines outstanding academic education with specialist vocational qualifications and range of amazing facilities including lab spaces, a mock hospital suite, an engineering room, and many fantastic industry relevant learning spaces, to prepare their students for the world of work. Being part of the Northern Schools Trust, the UTC is recognised as a flagship and has strong employer links within the local community.

Our Experience of RESILIENCE

John Dyer, Project Based Learning and Innovation Lead, at Liverpool Life Sciences UTC, shares his experience of RESILIENCE and how he intends to use the benefits of enhanced membership to expand the UTC's education even further.

On becoming a member, the RESILIENCE team visited John on site and spent a day to demo the Virtual Reality (VR) options. John spent some time afterwards trialling this with year 10 to 13 students. The feedback from the students was phenomenal. John explained **"they loved it. They preferred the more complex modules which surprised me. They were even able to design and plan their own methods. It generated a lot of excitement, questions and learning!"**

Following the trial, John decided to introduce the VR modules into the UTC's curriculum noting that...

"it worked so well I decided to change our plans for years 10 to 11 from September this year. There are off the shelf modules and an option where you can design your own experience (using Fourplus Eclipse). Students now have the option to choose laboratory skills within their curriculum using the VR. I redesigned the plans in a way that they undertook practical lab skills using the UTC's facilities in week one and then completed lab skills within an immersive professional industry environment using the VR. It has opened up so many ways to bring the curriculum to life."





RESILIENCE CASE STUDY

We are delighted to share a newly released case study from **John Dyer**, Project Based Learning and Innovation Lead at **Liverpool Life Sciences UTC**. John shares his experience of **RESILIENCE** and how he intends to use the benefits of enhanced membership to expand the UTC's education even further.

Access the full case study at: <https://lnkd.in/eV4WxtrN>

Interested in enhanced membership? Email us at resilience-skills@contacts.bham.ac.uk to arrange an informal chat with a member of the team.

Gary Lye Jahafar Nazar Ivano Colao Bernice Wright Ivan Wall Stephanie J Smith Jonathan Maiden Dr Nav Gill Richard Todd Reshma Nazeer, Ph.D. Nik Willoughby Laura Porcza Nicole Barnes Neil Renault Prof Muhammad Safwan Akram Deirdre Boland Parmveer Singh, PhD Stacy Nicholson Kirk Malone Emma Maun **Laura Bennett (nee Unitt)** Dr. Kate Barclay MBE Tony Bradshaw



Resilience Skills RESILIENCE case study: Enhancing learning at Liverpool Life Sciences UTC

resilience-skills.com

Jahafar Nazar and 12 others



Like

Comment

Post performance

Targeted to: All followers

535
Impressions

10
Clicks

0
Comments

27
Engagements

1.87%
Click-through rate

4
Reposts

5.05%
Engagement rate

13
Reactions

Membership Models

Standard Member benefits (FREE)

For Educators:

- RESILIENCE hub advice, guidance and visits
- Access to free teaching materials for undergraduate and master's, GCSE, A-level & T-level, Scottish Highers
- Access to outreach materials and interactive resources

For Industry:

- RESILIENCE hub advice and guidance
- Identify suitable training courses from the RESILIENCE network (free and ££)
- Access to outreach materials and resources

Enhanced Member benefits (PAID)

For Educators and/or Industry

Standard Affiliate Member Benefits, plus:

- **Access to accelerator materials**
UG/apprenticeships, 16+, Leadership
- **Annual free loan of VR headsets**
Fully equipped packages with 5 x MetaQuest3
- **Single site license for FourPlus software**
Virtual lab training & GMP skills
- **Bodyswaps accounts (40/site)**
Soft skills training using VR scenarios
- Dedicated local RESILIENCE hub contact to scope and establish support
- Support with outreach
- Opportunities to take part in the RESILIENCE networking events

RESILIENCE all across the nation

RESILIENCE in England



RESILIENCE in Scotland



RESILIENCE in Wales



RESILIENCE in Northern Ireland



21,000+
People
Engaged



2,000+
Individuals
Trained



325+
UK Members



12,000+
Reached via
Unifrog

RESILIENCE 2025 Awards

Learning Technologies Awards 2025



learning
technologies

Awards 2025

Best learning
technologies
project - public
& non-profit
sector

Gold
Award

Global
AWARDS
WINNER
2025

IChemE

IChemE Global Awards 2025



RESILIENCE 2026 Awards



Learning Excellence Awards **Gold Winner 2026**

RESILIENCE Impact (24 Months)

RESILIENCE Training courses

2,275

Trained via
RESILIENCE courses

51%

Female

40%

BAME

RESILIENCE In-Person Engagement

25,111

Inspired and
Engaged

47%

Female

25%

BAME

RESILIENCE Membership Model

334

organisation
members

88,559

End users

SWAY PR Campaign

96

Pieces of offline,
online and social
coverage

3.4m

People exposed to
coverage

LinkedIn

2,261

Followers

170,203

Impressions
(last year)

4,586

Reactions
(last year)

Unifrog Digital Media Platform

12,500

Students viewed our
promotional content

10,000+

Students
favourited our
content

RESILIENCE as a training/skills model

- RESILIENCE was set up as an academic partnership but has transitioned into a not-for-profit limited company
- RESILIENCE was established to meet the needs of the medicines manufacturing industry but is equally relevant to a number of sectors, wherever
 - Lack of sector knowledge and understanding blocks the talent pipeline
 - Training and skills needs are not fully met by traditional learning routes
 - Training and skills acquisition via traditional methods is expensive, dangerous, logistically challenging or lacks sustainability
- The RESILIENCE team is already in discussion with other sectors including waste & recycling and nuclear around adaption of the RESILIENCE model



RESILIENCE

UK Medicines Manufacturing
Skills Centre of Excellence



www.resilience-skills.com



info@resilience-skills.com

@ Resilience-Skills

Break

Professional innovation practice

Victoria Milne

Founding Executive Director
The Institute of Innovation
Management





The Institute of Innovation Management

Talent & Skills Project Showcase



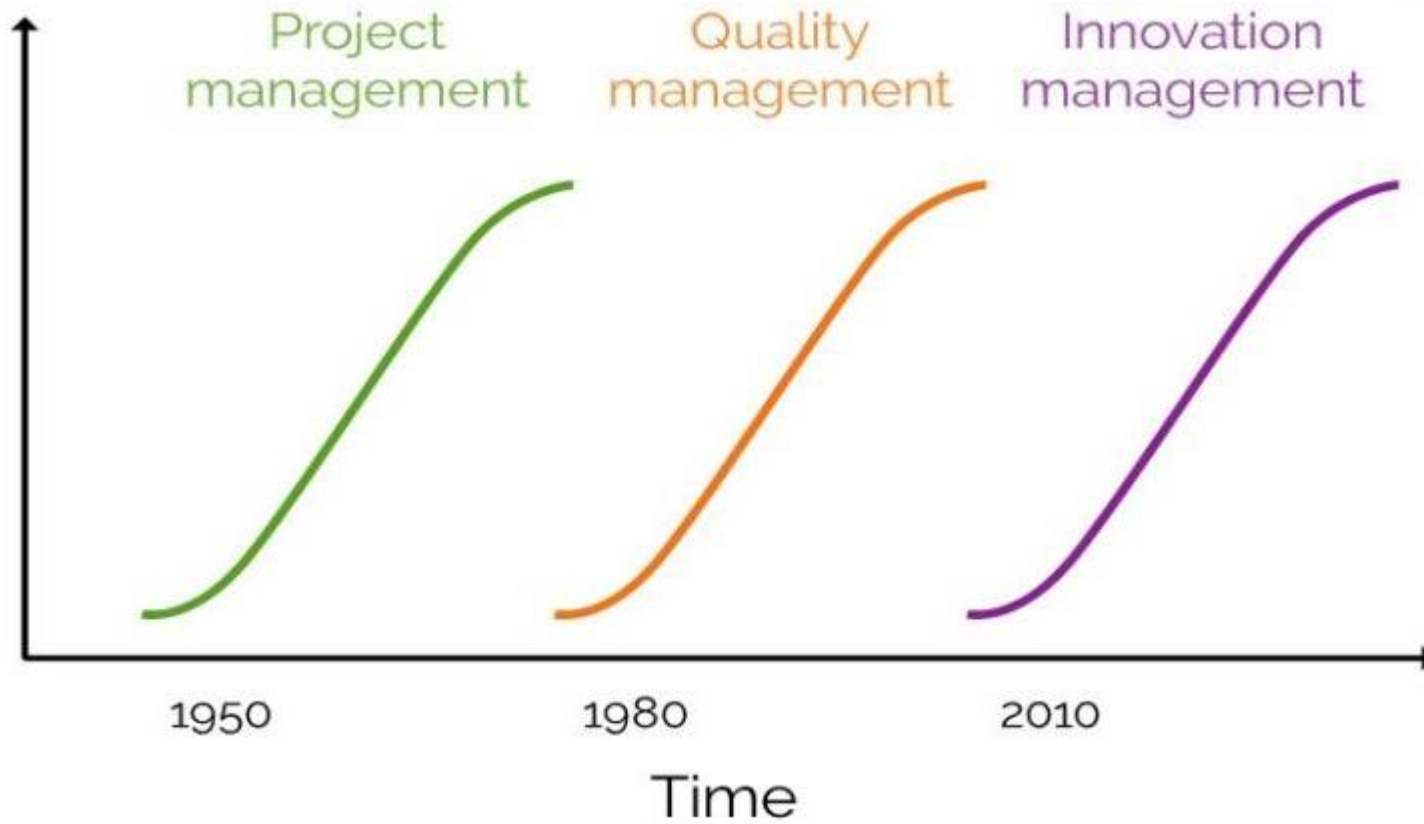
Why do we need an IIM?

Innovation = productivity and growth

- **Industrial Strategy**
- Future Skills requirements
- The **launch of ISO 56001** and innovation management systems standards – the first global auditable standard.
- **Professionalisation of Innovation Management** as a new market sector.



New profession is rising



Why do we need an IIM?

Innovation skills are fragmented

- **Innovation is often confused** with creativity, research and development, entrepreneurship, design, transformation or technology adoption.
- **lack a recognised professional pathway**
- **Innovation roles are inconsistent**
- **Job titles do not reliably describe capability**
- **Limited clarity on progression** from practitioner to leader to expert.
- Organisations lack a reliable way to assess **capability maturity**



Key take aways from market review

- We are behind key national equivalents in other markets
- Sector and innovation initiative **neutrality** is key unique proposition

- UK-Specific Focus
- Localised Professional Development
- Integration with UK Innovation Ecosystem
- Member Centric Approach



Evidence Base

- Innovation drives higher productivity and growth, but benefits depend on **diffusion and value realisation**.
- **Management capability** is a core productivity lever and determines whether **technology adoption** and **innovation investment** translate into results.
- The UK's constraint is often **not ideas or funding, but management quality, execution discipline, and organisational capability**.
- Evidence also points to a persistent “**confidence–action gap**” and a **long tail of firms that struggle to adopt proven practices**.
- These patterns support a **strategy focused on practice, peer learning, evidence, and diffusion, rather than innovation enthusiasm alone**.





Why – Professionalise Innovation Management –
improving innovation systems and management capability

What – A NFP professional members' association

How – Create a founding group of passionate individuals to help scope and design, build a community, and establish the organisation with industry support

So What –Improved quality of innovation, improved up take of new practices and new technologies, improved supply chains, long term improved prosperity for UK



Exercise

- What is innovation?
- What organisation capabilities and conditions are required?
- What knowledge, skills and behaviours are required?

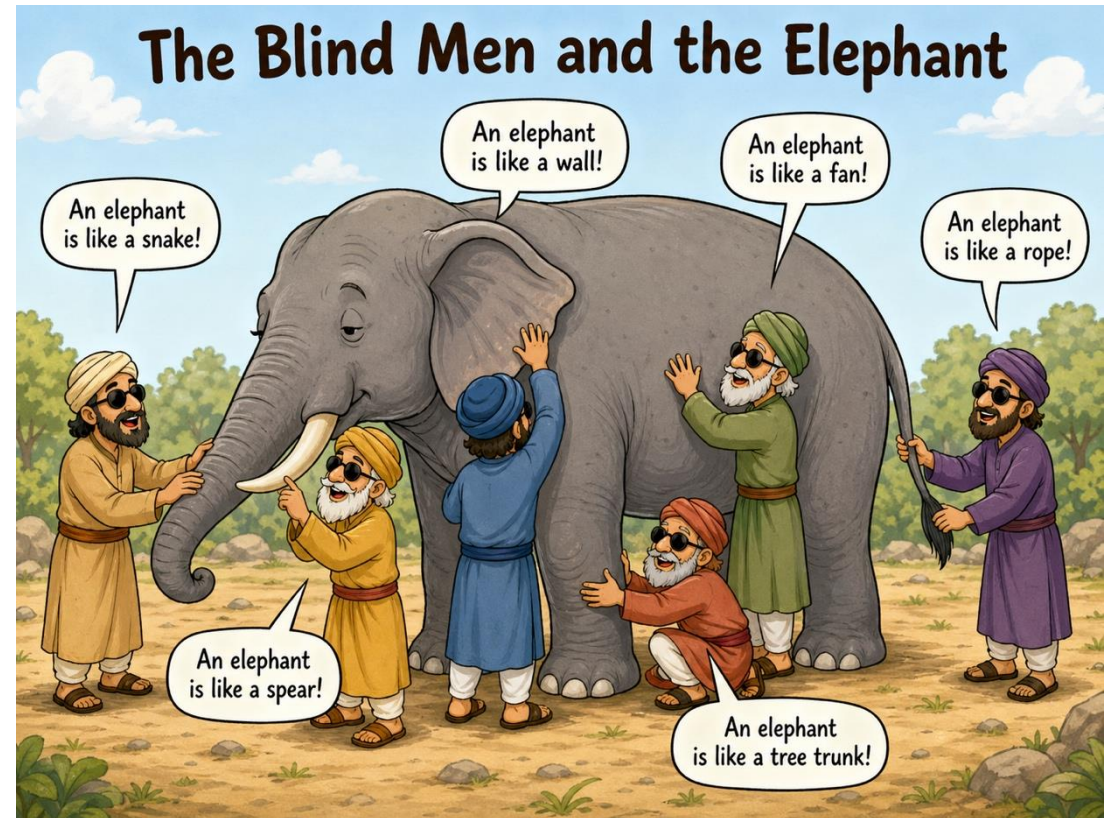


The parable of the blind men and an elephant

- Subjective experience can be true but is limited when it does not combine with others.
- The parable points to multiple truths, and the challenge of reaching a 'totality' of truth.
- It is used to explore relativism and the opaque or inexpressible nature of truth.
- It sheds light on experts working from contradictory theories.

It emphasizes deeper understanding and respect for different perspectives on the same object.

Reflection, collaborating and learning from others helps us to “see” the full elephant.

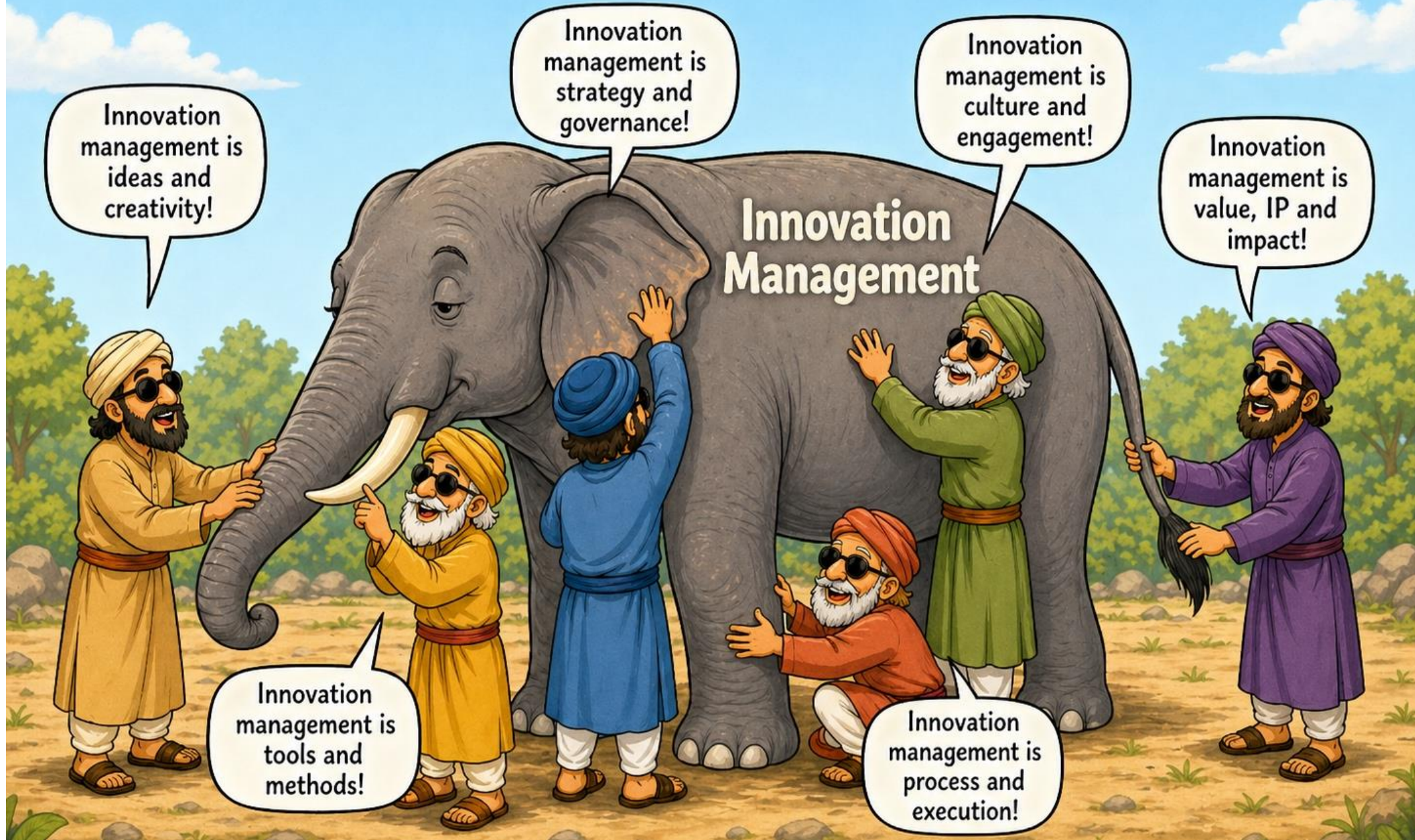


Tittha Sutta, Buddhist text – estimated 500 BCE

Source: Wikipedia



The Blind Men and Innovation Management





The IIM Purpose

To professionalise innovation management
as a recognised and respected discipline;
building expertise and systemic capability,
setting professional standards,
and championing responsible innovation outcomes
that deliver lasting value for people, planet and productivity.



Getting our approach right

- A systems approach - **positive effects on innovation capability, ambidexterity, and business performance.**
- Practitioner-led - **provide people, process, and assurance infrastructure that helps programmes and investments convert into outcomes more reliably and at lower adoption cost.**
- **Professional community, work-integrated learning, trusted certification, visible pathways, and clear capability signals to employers and learners.**
- **Embed operational stewardship and practical diffusion mechanisms to help the adoption of proven practice.**
- **Financial sustainability, management discipline, and enduring trust are conditions for impact.**

Enabling Agency – A Way of Being

Forming a profession: shared identity, confidence, capability

Body of Knowledge is living and developmental

Learning is multimodal (self, peer, action, mentoring, reflection, contribution)

Human-centred and AI-enabled

Designed for real human behaviour and variability

Certification is a legible trust signal, not the sole measure of value

DESIGN PRINCIPLES

1 Agency through practice



2 Belonging and mutual support



3 Living knowledge and contribution



4 Situational awareness and systems thinking



5 Human variability and graceful re-entry



6 Visible progression and layered recognition



7 AI enabled flow, human judgement and living evidence



8 Trust, stewardship and independence



9 Diffusion, narrative, stakeholder value and ecosystem usefulness



10 Viability, operational stewardship, improvement and equitable access

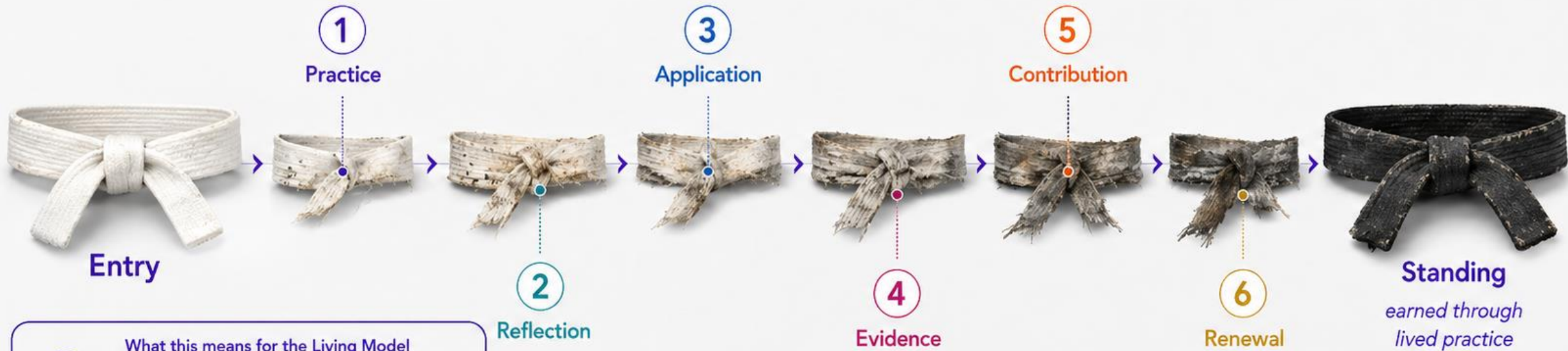


From Status to Standing

A useful metaphor for The IIM Living Practice Model



Whether or not the story is historically true, the metaphor is powerful: standing is not simply awarded; it is formed through disciplined practice, evidence, reflection and contribution.



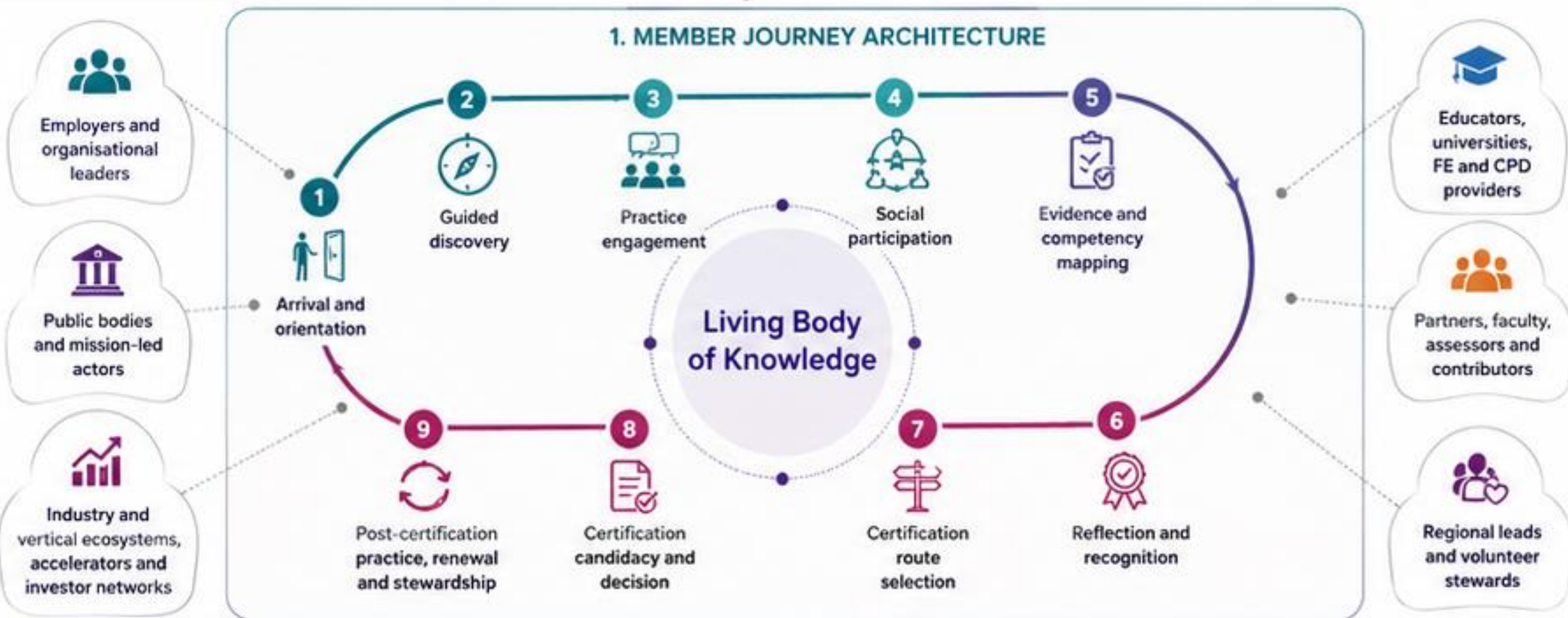
What this means for the Living Model

- Capability grows through use, not theory alone
- Evidence and contribution accumulate over time
- Certification signals trust; it does not create practice



The Living Model treats certification as a trust layer within a *wider living system*.

1. MEMBER JOURNEY ARCHITECTURE



2. CERTIFICATION TRUST LAYERS



Certification is a **trust layer** within the **wider living system**, not the whole experience.

Exercise

Go to
www.menti.com

Enter the code

4851 6435



Or use QR code

Why is innovation management important in Vocational education?

Be yourself, everyone else is already taken.

No one can make you feel inferior without your consent.

The greatest thing you will ever learn is just to love and be loved in return.

Do, or do not. There is no "try".

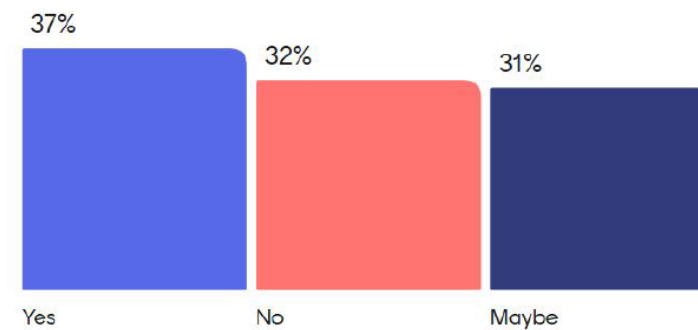
Be the change that you wish to see in the world.

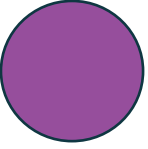
I have seen the best of you, and the worst of you, and I choose both.

How - Which features would be critical to support adoption/ deployment?



Making it happen - Would you consider collaborating with the IIM to incorporate innovation management into your vocational curriculum?





Why is innovation management important in Vocational education?

Equity Consistency Transparency

So that there is an ever evolving curriculum laid out for learners.

To give a framework for having and developing ideas that will help with skills development in a structured way.

To provide a repeatable and scalable system to create value.

Improve standards and impact.

Structured building blocks towards a future career, democratising innovation

1) Supply response to business demand. 2) Opportunity to get a higher quality job - better outcomes for individuals

Understanding and creating change



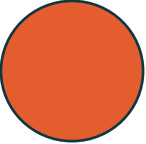
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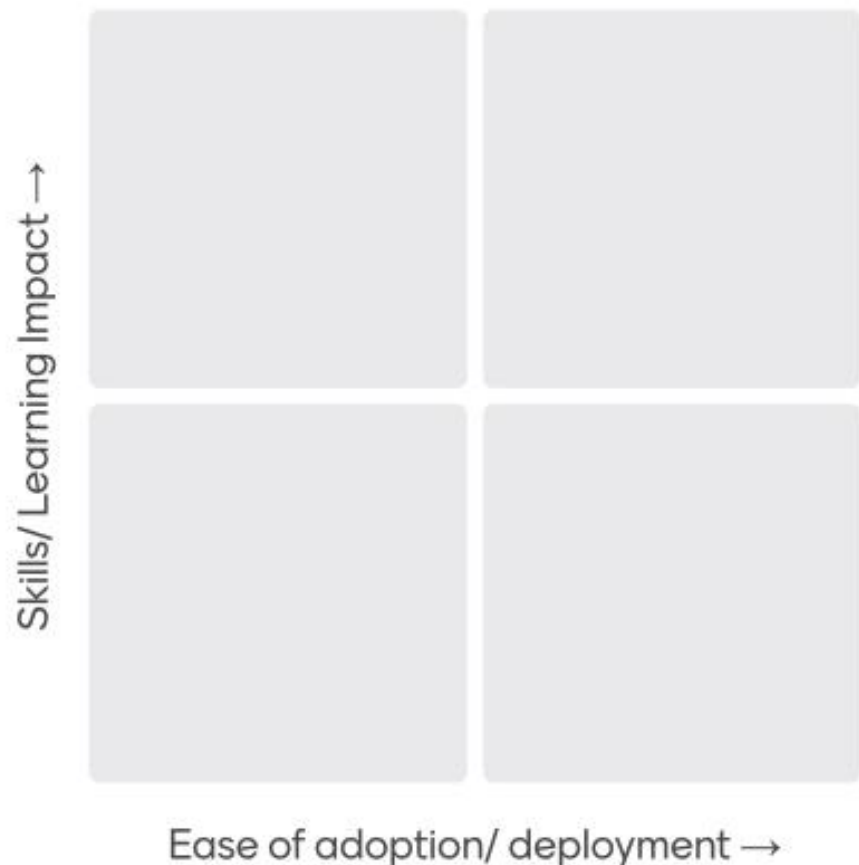


→ Start voting

Group responses



How - Which features would be critical to support adoption/ deployment?



- 1 Modular & bite-sized
- 2 Competency-based
- 3 Cross-sector adaptable
- 4 Customisable to subject
- 5 Progress tracking for educator
- 6 Low-resource demand
- 7 Ready-to-use
- 8 Practical methods
- 9 Real-world exercises
- 10 Links to professional progression

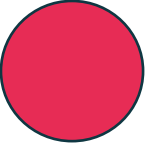
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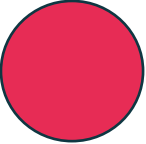
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We are keen to collaborate

For example:

- Mapping existing programmes to the IIM Body of Knowledge and competency framework.
- Recognising relevant CPD activity.
- Creating shared pathways for innovation practitioners.
- Developing communities of practice across regions and sectors.
- Supporting employers to define innovation roles and progression routes.
- Creating evidence informed standards for innovation practice.
- Contributing to the living model of innovation management.





Q&A

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www.theiim.org



Summary & close

Debbie Johnson

Head of Innovation Talent & Skills
Innovate UK

