

# Identifying and Mapping Threshold Concepts of Entrepreneurship Across University Entrepreneurship Education Programmes

Lucy Hatt (Newcastle University Business School)

Dave Jarman (University of Bristol, Centre for  
Innovation and Entrepreneurship)

EEUK November 2021



# EEUK EERPF Project

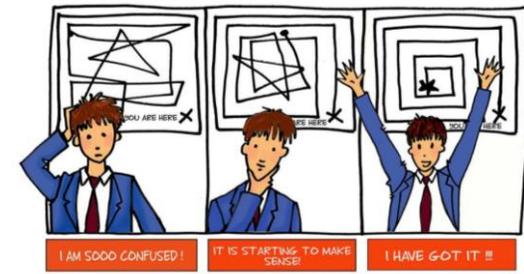
In summary:

- Applied and developed Dr Lucy Hatt's PhD research using the threshold concept framework to enhance entrepreneurship curricula in higher education.
- Using an adapted form of transactional curriculum inquiry (TCI) local threshold concepts in entrepreneurial thinking were developed with staff and stakeholders (external panel and students) of the University of Bristol's Centre for Innovation and Entrepreneurship (CfIE) as part of a programme review and an evaluation of student understanding.
- A toolkit was developed for EEUK members to develop and evaluate their own enterprise education curricula informed by the threshold concept framework, concept mapping and a TCI approach.
- The toolkits consists of
  - [Threshold Concepts in Entrepreneurial Thinking \(Overview of CfIE process and Outline of Three Approaches\)](#).
  - [Appendixes including: briefing documents, survey templates, guidance on language use, examples of threshold concepts, ethics approval forms, adoption guidance, and concept mapping processes.](#)
  - [A physical paper-based activity and a Mural online template for the same activity.](#)

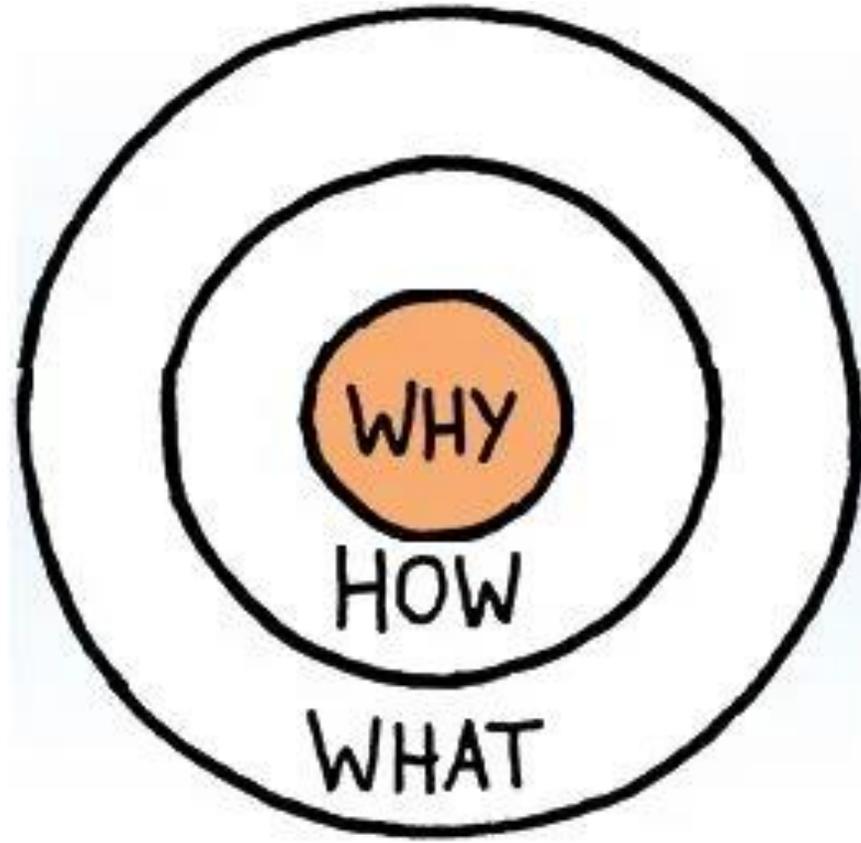


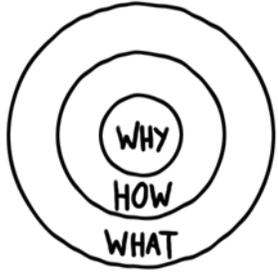
# Threshold Concept Framework (TCF)

- Threshold concepts form a basis for differentiating core learning outcomes that represent “seeing things in a new way” and those that do not (Meyer & Land, 2003)
- A threshold concept is likely to be
  - Transformative (epistemologically and ontologically)
  - Troublesome
  - Irreversible (unlikely to be forgotten)
  - Bounded (with terminal frontiers, possibly defining academic territories)
  - Integrative (exposes the previously hidden interrelatedness of something)
- Threshold concepts can constitute “ways of thinking and practising”, a way to understand what it means to think “like an entrepreneur”, defining what is distinctive about entrepreneurship
- Benefits to educators:
  - Conceptual approach offers a counter to threats of the skills agenda (conflation with employability agenda)
  - Bounded and integrative characteristics of threshold concepts could enable the development of distinctive curricula
  - Process of identification aligns and empowers teaching teams



Smith, Young, Raeside & Elliot (2015)

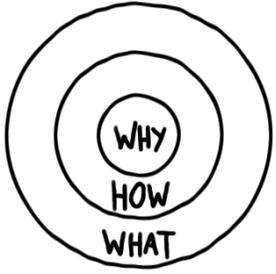




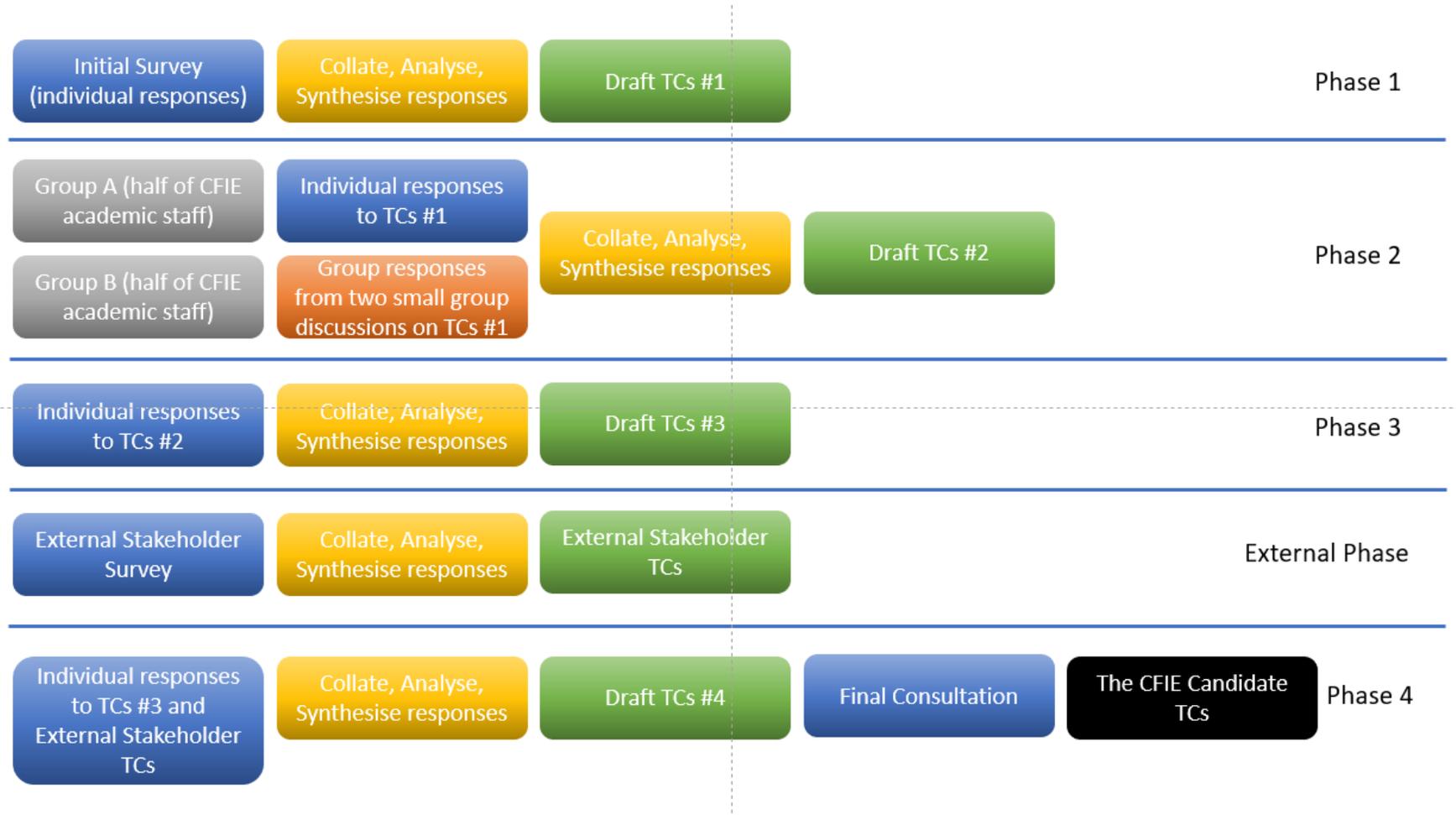
# Why do this at Bristol?

The Centre for Innovation and Entrepreneurship (CfIE) is an interdisciplinary teaching centre cutting across 14 UG disciplines:

- Consistency and coherency of staff lexicon and approach
- Practice-oriented curriculum – targeting a transformational education and graduate impacts through experiential learning
- Large-scale use of reflective learning
- Distinguishing ourselves from the more theoretical Management School through the development of a ‘signature pedagogy’ (Shulman, 2005)



# How did we do the research?





1

### Entrepreneurship is a Practice:

Practitioners understand that entrepreneurship is a practice that anyone can adopt in any context to create new value. It is a way of doing things, a way of thinking and practicing or a way of seeing the world, that manifests as creation of value in response to opportunities and challenges.

## CfIE Threshold Concepts in Entrepreneurial Thinking

5

### Recognises Their Agency:

Practitioners recognise that they always have some agency to create value, or that it is at least beneficial to assume that they do and should take ownership of their actions.

2

### Your Context is Your Opportunity to Create Value:

Practitioners habitually and constantly create and recognise opportunities within their own context to create value. Practitioners are habitually resourceful and make use of what they find to realise and exploit opportunities to create value.

6

### Taking Action:

Practitioners know that intention must be translated into action for value to be created. Intention PLUS will is all-important to create or exploit an opportunity for value.

3

### Value is Defined by Others:

Practitioners understand only other people can define the value of what they have created, and others demonstrate the value they place on what is being offered by being prepared to give something tangible or intangible in exchange for it (money, time, goodwill etc).

4

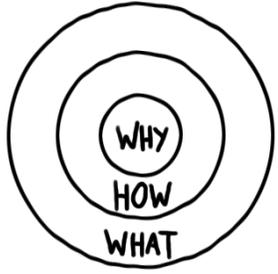
### Iterative Experimentation:

Embracing small failures as a means of maximising opportunities to learn from mistakes as well as success. Just as the process of scientific experimentation generates data whatever the outcome of the experiment, iterative experimentation in this context is less emotive and outcomes are not deemed necessarily to be “successes” or “failures”.

7

### Knowledge is Always Partial and Often Ambiguous:

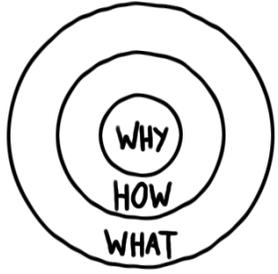
Practitioners understand that you can still act even if the situation is not perfect, ideal, or even favourable – but that the process of taking action is likely to lead to new situations, learnings, and ultimately opportunities.



# How: Lessons learned

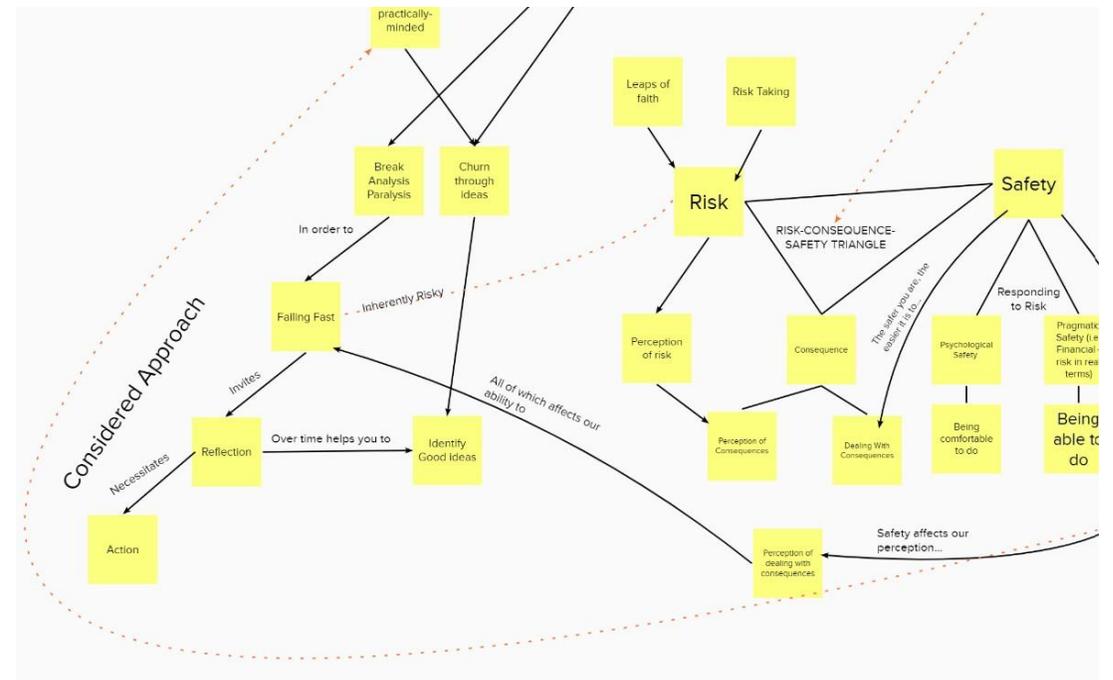
- Language is difficult but important; we moved from ‘entrepreneurship’ to ‘entrepreneurial thinking’
- Be clear about what you’re doing (and not doing); we had to be clear we were not setting CfIE strategy
- Pick an approach that works for your team (it will take longer than you assume)
- Manage expectations

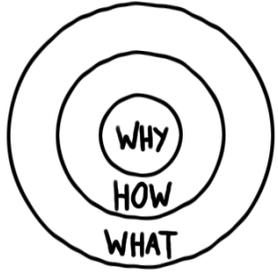
*“Morning... I’ve tried to complete your survey and I can’t do it. I don’t teach entrepreneurship and I have problems with the [word] ‘entrepreneur’ so I can’t give you anything valuable. I’m Sorry.”*



# How: Concept Mapping with students

- How could you measure if these threshold concepts were being learned by your students?
- We conducted a series of concept-mapping exercises with different year groups based on a similar exercise in Lucy's original research.
- Students who had had more exposure to our curriculum produced more sophisticated maps which recognised our candidate TCs.

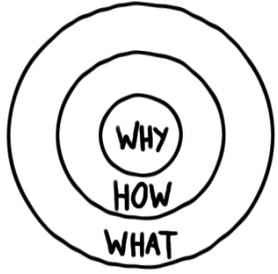




# How: Adopting the CfIE Threshold Concepts

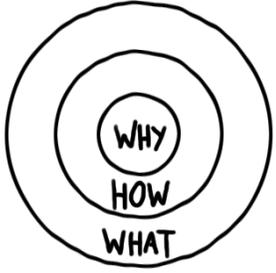
- *Informal adoption:* for use by Unit and Programme Directors alongside other useful benchmarks (e.g. QAA guidance, EntreComp, local Education Strategy) – sense-checking and stress-testing curriculum.
- *Formal adoption:* a required consideration when either:
  - Developing or redeveloping new programmes or units, or
  - On a regular calendar of existing programme and unit review.
- We also produced a short guide for colleagues with suggested advice for embedding each of the seven CfIE Threshold Concepts into their teaching and learning design.

# The Toolkit



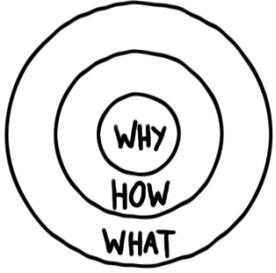
# What: The Toolkit

- Now available as part of the [ETC Toolkit!](#)
- Includes:
  - The complete report on our CfIE research process
  - 3 different approaches to run this activity for other educator teams
  - A guide to running Concept Mapping sessions with students
  - The CfIE Adoption Document with its recommendations on how to use the CfIE TCs
- Bonus material:
  - The CfIE TCs (with and without the theory explanation)
  - Our Ethics approval documents
  - Briefing document examples
  - Our collected surveys
  - Examples of early-stage concepts
  - Our student recruitment messaging
  - An example of some of the language messaging we developed to respond to colleagues' confusion
  - Cards for the card game



# What: The Three Approaches

- **Short:**
  - Use the CfIE threshold concepts to spark discussion about a review of your existing teaching, learning, and assessment.
  - Use the CfIE threshold concepts to conduct a review of your existing teaching, learning, and assessment.
- Use our list of *CfIE Threshold Concepts in Entrepreneurial Thinking*, either with academic theory (*CfIE TCs – In Theory, Appendix E*), or without (*CfIE TCs, Appendix F*), depending on your audience.



# What: The Three Approaches

- **Medium:**

- One or more physical (and cut up) copies of the Threshold Concepts in Entrepreneurial Thinking Card Game, ideally one per group of 2-4 participants, or access to the equivalent online Mural site.
- Some blank cards (at least 20 per group) and pens if using the physical version.
- A whiteboard or a further blank Mural board on which to collect the shortlisted candidate concepts.
- At least 60 minutes of your colleagues' collective time.
- The 'cut out and keep' paper version of the card game is provided amongst the Toolkit documents and the Mural Template for the exercise is linked from the toolkit:  
<https://app.mural.co/template/234e7ab1-0e39-4754-b0ac-ac4d9d2587b1/0d3aad0d-aab5-44e3-90eb-50b9a09358f4>

# Using this MURAL template

## INTRODUCTION

This MURAL template can be used by a group of entrepreneurship education providers to facilitate the development of a set of locally agreed threshold concepts by following the instructions provided.

PEOPLE: 1-4 per Mural  
 TIME: 60 minutes +  
 DIFFICULTY: Beginner

## MURAL USE TIPS

- Single-click on a note to link it up for editing.
- Hold **C** - click and drag to draw a connector.
- Click on the connector points to instantly add new connectors and shapes.
- Double-click anywhere to create a new note.
- Turn on connector points in the Shapes and connectors menu to create new diagrams faster.
- Right-click on a note to get the options to Duplicate it, or .

## HOW TO RUN THE ACTIVITY

### Stage 1

As a group make sure you're familiar with what is meant by a threshold concept.

Use the initial Concepts provided and start adding them to the three coloured **Flags** (Likely, Possibly, and Unlikely). These need not be definitive **thresholds** at this stage.

You can simply pick up and move the Initial Concepts - they're unlocked within the Mural canvas.

Add further **Yellow notes** to add whatever you think is missing.

This stage can be done quickly (40 minutes) and will be followed at least 20 minutes later to have a good discussion and to understand colleagues' differing perspectives.

### Stage 2

You are likely to already have your own number of notes in the allocation in Stage 1 where you wanted to add some nuance or make connections between the Initial Concepts.

In stage 2 we suggest you to reflect on your own observations:

- Do some **Yellow** notes only reach threshold status in certain circumstances? (i.e. collaboration is only a threshold concept in the **context** of exploring resources to mutual an opportunity?)
- Do some concepts only reach threshold status in connection with other concepts? (i.e. team being very different to mutual status, which contributed to self-learning and adopting no contacts?)
- Do some concepts need to be made more **interconnected** / **inter-related** which suggest a threshold status?

Use the **Blue** notes to add nuance, the **Pink** notes to name the connections you make, and the **White/Purple** notes to name emerging clusters.

The yellow sticky notes in the Add Nuances frame can be moved and duplicated.

Some concepts may move between the Likely, Possibly, and Unlikely frames at this stage or by virtue of becoming nuanced, connected, or

## What is a 'threshold concept'?

The threshold concept framework posits that in any academic discipline there are concepts that have a particularly transformative effect on student learning. We believe that entrepreneurial thinking is no different.

According to the scholarly community of those conducting research using the threshold concept framework (Flanagan, 2019):

**A threshold concept is likely to be characterised by its Transformative nature** and some or all of the other following features:

**Troublesome:** threshold concepts are likely to be uncomfortable and may be resisted by the learner.

**Irreversible:** given their transformative potential, threshold concepts are likely difficult to unlearn.

**Integrative:** once learned, threshold concepts are likely to bring together aspects of the subject previously perceived as unrelated.

**Necessitating a State of Liminality in the Learner:** the crossing of the threshold might be likened to a 'rite of passage'.

## Initial concepts to work with (drawn from CfIE first draft concept)

Being Active	Tolerating Ambiguity	Experiencing Change	Collaborating	Engaging in the Task	Hope	Having their Predictions	Profit Focus	Rational Thinking	World Purpose	Perseverance
Enjoying the Task	Evidence Focused	Curiosity	Failing	Mission Focus	Hidden Focus	Risk	Self Awareness	Customer Focus	Using their Experience	Adding Content
Organised	Hardworking	Opportunity Focus	Experimenting	Creativity	Resilience Thinking	Value Focus	Goal Oriented	Self-efficacy	Introversion	Resilience

## LIKELY TO BE A THRESHOLD CONCEPT

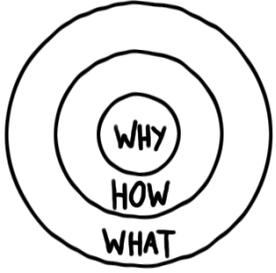
## POSSIBLY A THRESHOLD CONCEPT

## UNLIKELY TO BE A THRESHOLD CONCEPT

## ADD NUANCES

Nuance

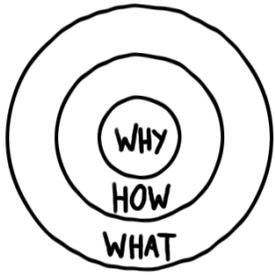
Use **Blue** notes to add nuance to concepts (i.e. in a certain context)



# What: The Three Approaches

- **Long:**
  - Follow and/or adapt the process used by CfIE over several months
- Use our examples of ethics approval, briefing documents, surveys, focus group guidance.
- We've also provided guidance on long-listing, short-listing, synthesis, and use of external panels.

WHAT  
NOW?



# What Now?

Our toolkit is for enterprise and entrepreneurship educators who:

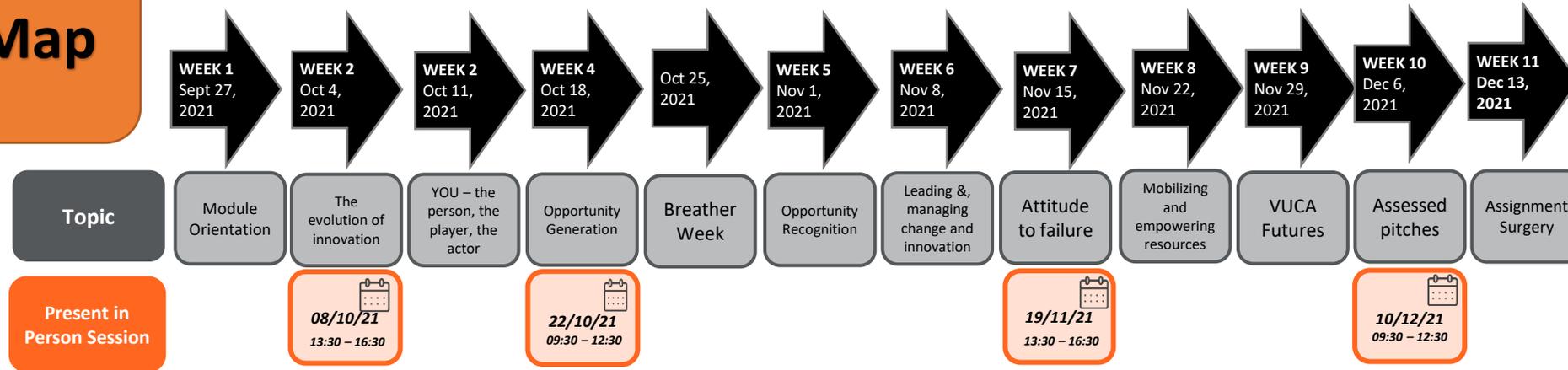
- Want to help their students develop a better understanding of entrepreneurial thinking.
- Want to engage colleagues and stakeholders in discussion about what is taught, learnt, and assessed, and why.
- Want to build both consensus within an educator team and differentiation from other disciplines or domains of practice by aligning, rationalising, and demarcating what is meant by entrepreneurial thinking.

Differentiates *important* concepts from *threshold* concepts

Enables integration of entrepreneurial thinking into \*any\* disciplinary area, whilst preserving its distinctive disciplinary identity (integrative and bounded)

Enables engagement and build credibility with students and external stakeholders through collaborative discussion around curriculum development

# Road Map



## Guided Online Learning

Each week you will engage in structured guided online learning activities, for example watching lectures and videos, case-studies, structured and directed research, reading and reflection which on average equates to 5.75 hours of learning each week. You will also find guided independent online learning activities to help you to develop and apply mastery in practice – personal, professional and workplace which you can work through in your own time, for example additional online discussions, suggested further reading, research and reflection.

## Scheduled Online Learning

01/10/21  
09:30 – 12:30

17/12/21  
10:00 – 11:00

## Work-based Learning

Each week you will engage in skills practice activities to relate your learning back into the workplace which equates to 1.5 hours of learning each week. You will also find reflective signposting each week which you can work through in your own time. Engaging in reflective practice and maintaining a reflective portfolio is fundamental to support your sense making of your learning and leadership development on the programme.

## Action Learning Set

04/11/21  
10:00 – 12:00

## ASSESSMENTS

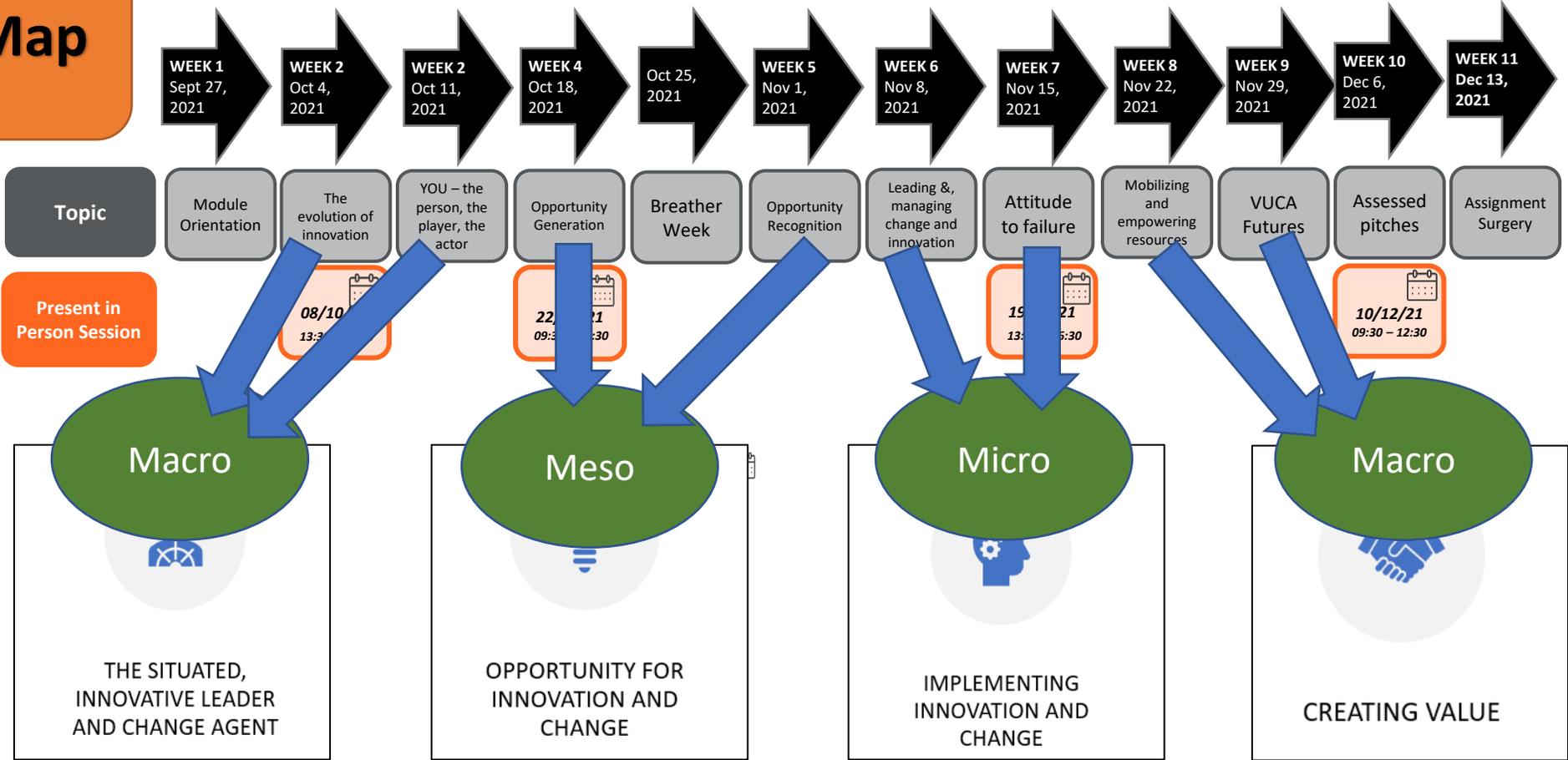
You will be given formative feedback throughout this module in your scheduled learning sessions as well as guided online learning. *There will also be an opportunity in this module to receive written formative feedback by submitting a written piece of work by 08/11/21. This will support the development of your academic skills to prepare you for the summative assessment.*

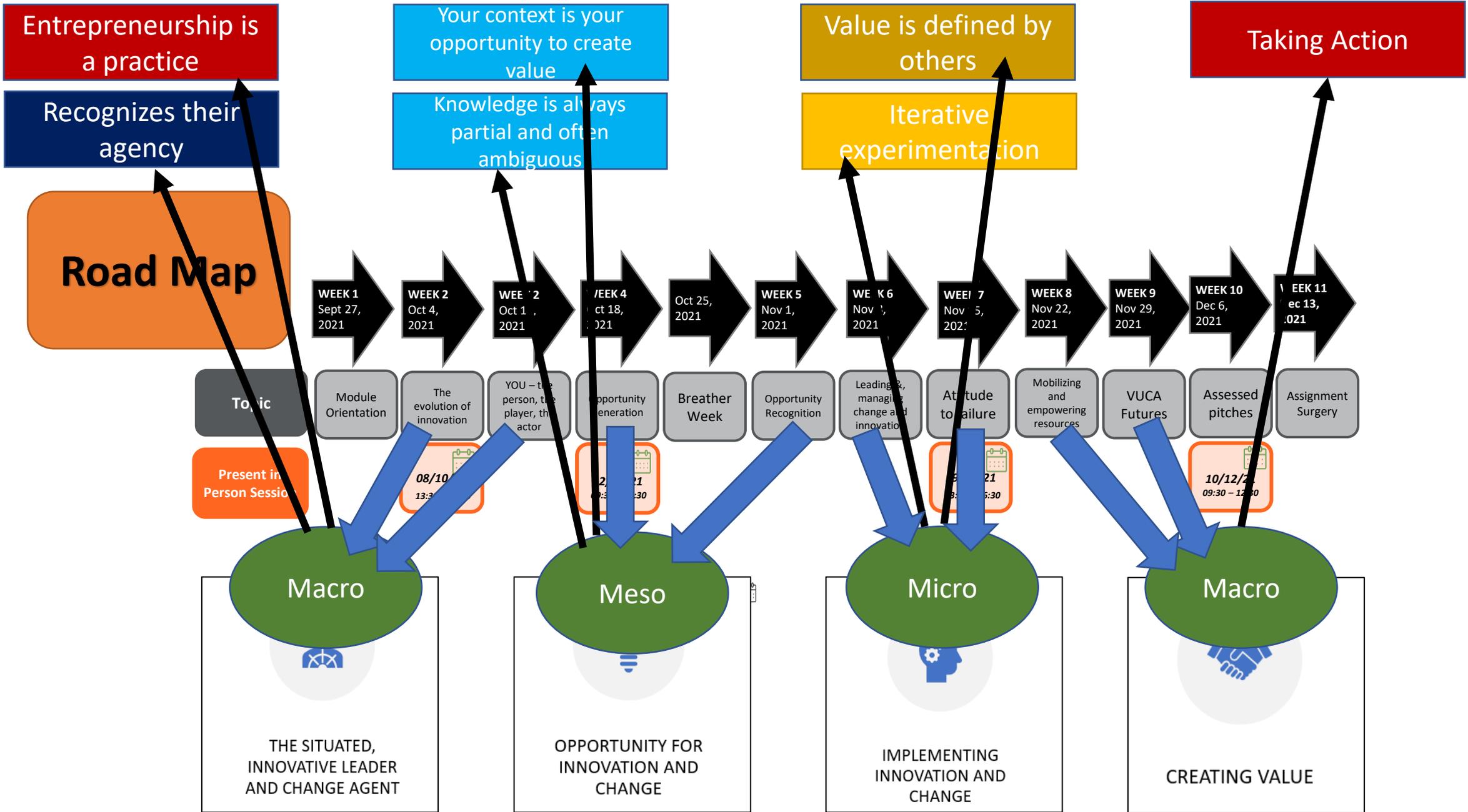
**Summative Assessment Report due 12:00 noon Monday 10<sup>th</sup> January 2022**

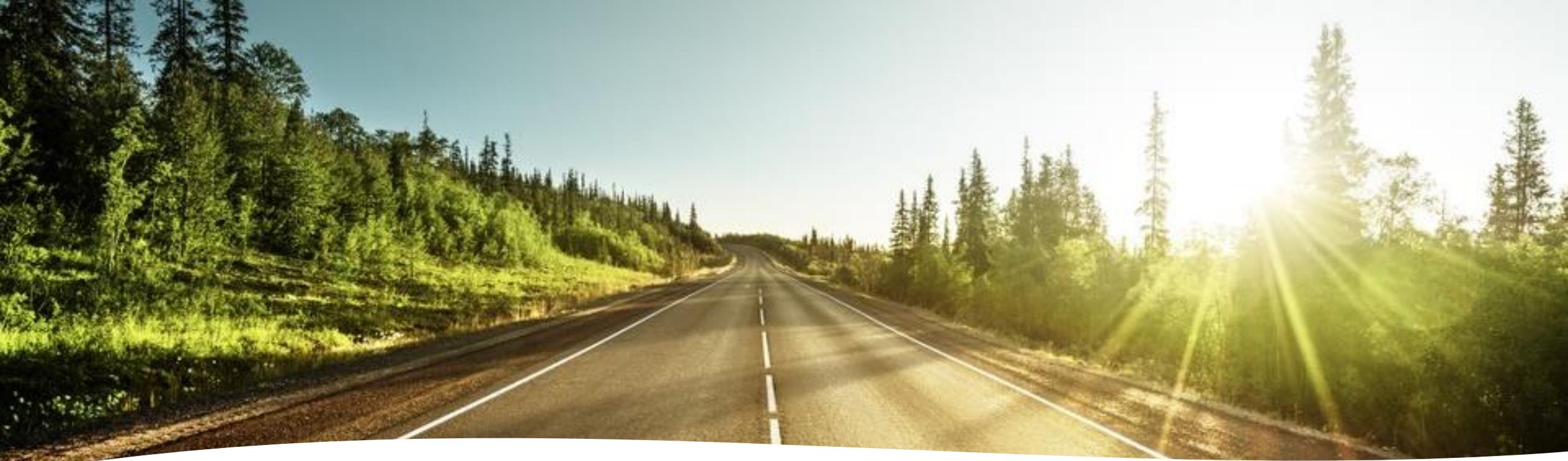
## SLMDA Apprenticeship Standard



# Road Map







## Other initiatives...

- Dissemination at IECC2021
- ETIC (Entrepreneurship Threshold Concepts International Collaboration Group)
- Creative Industries project (University of the West of England)
- Ongoing research project using TC's to assess impact – survey and recorded zoom peer interviews (Newcastle University, University of Malta...)
- Development of four new taught Masters' (University of Bristol)
- Could we apply the TCF approach to adjacent spaces: e.g. 'innovation' or 'design'? (University of Bristol)

**Try the toolkit!** Let us know how you get on!