LSE **Interdisciplinary Learning and Teaching Conference**

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Using Generative AI to facilitate interdisciplinary teamwork and development of interdisciplinary competence

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Project Aim

Trading Zone:

- Situations "in which there is tension caused by ***problems of translation*** between forms of life"
  - E.g. ***Wicked Problems***, such as SDGs
- Breaking down disciplinary barriers
- ***Continuous dialogical process***

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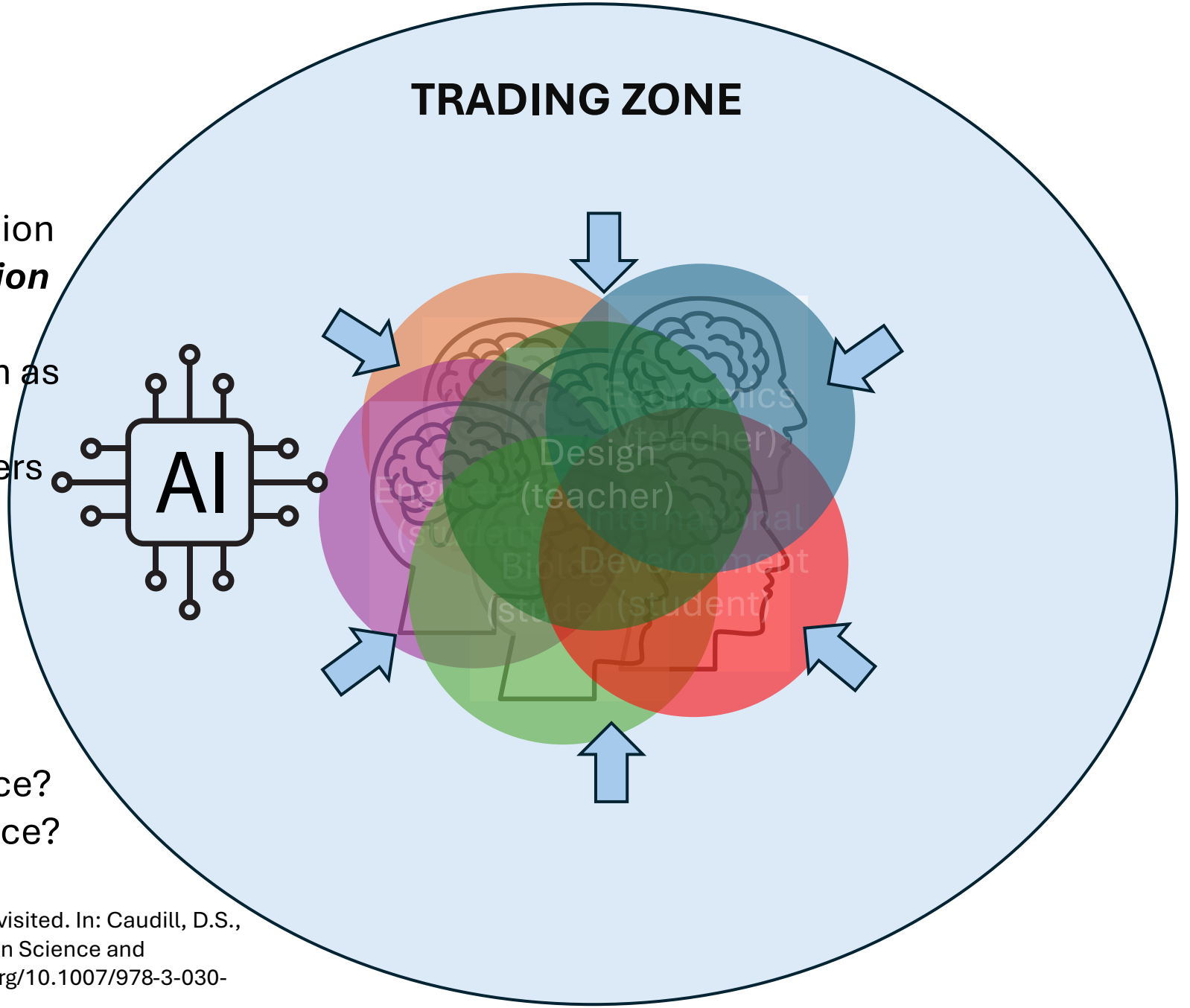
Can Generative AI help to

- facilitate the dialogical process?
- develop shared language and understanding?
- the emergence of a solution space?
- build interdisciplinary competence?



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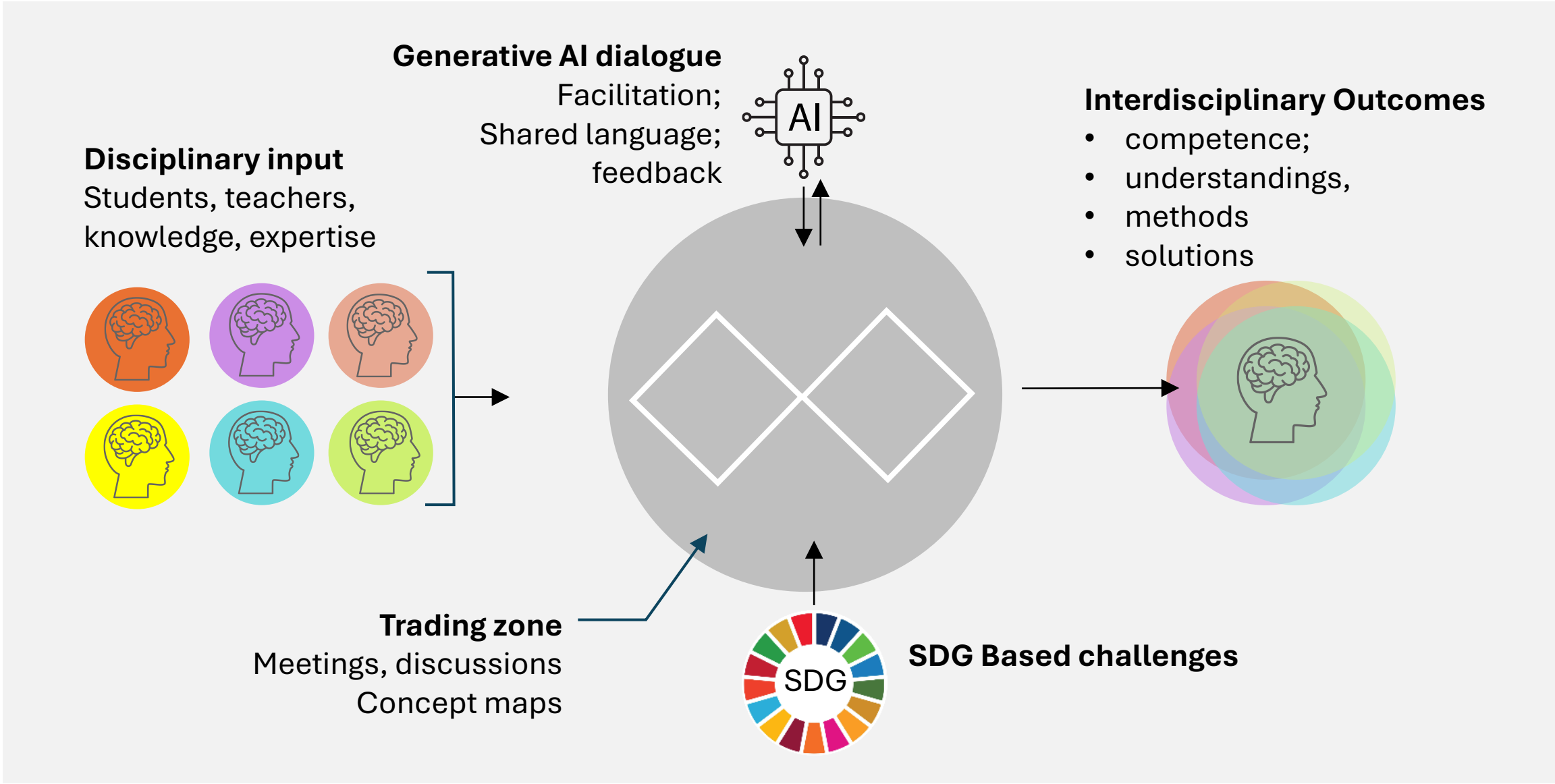
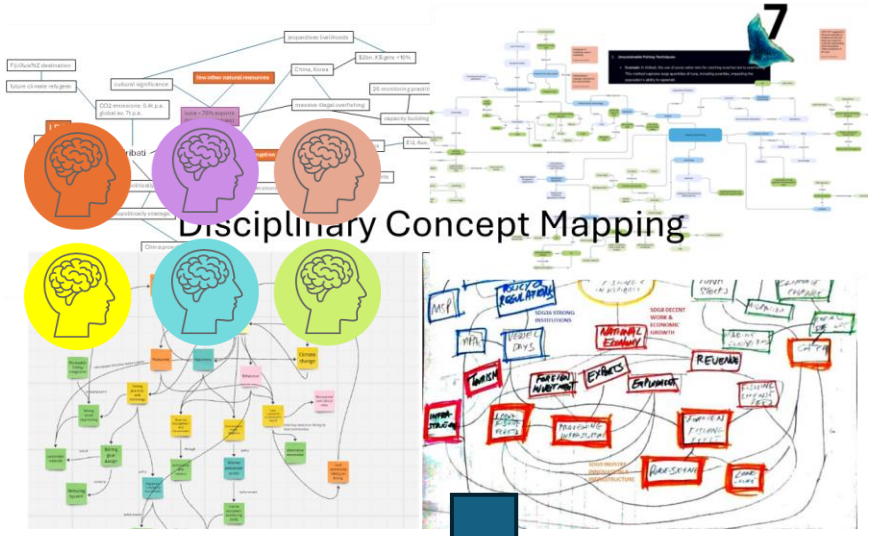
Project Concept

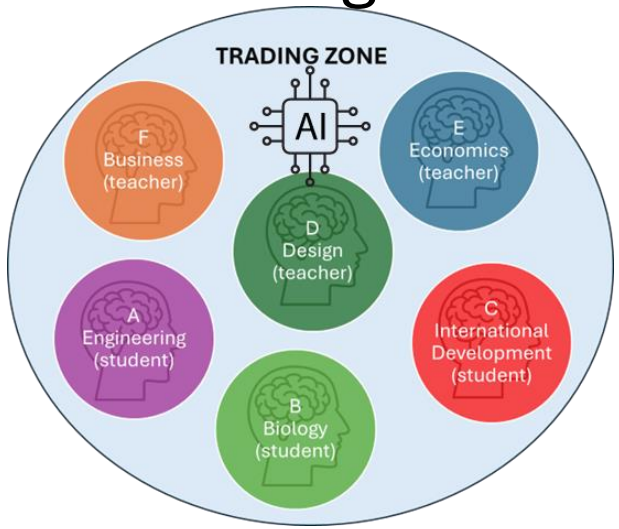


1. Identifying a problem

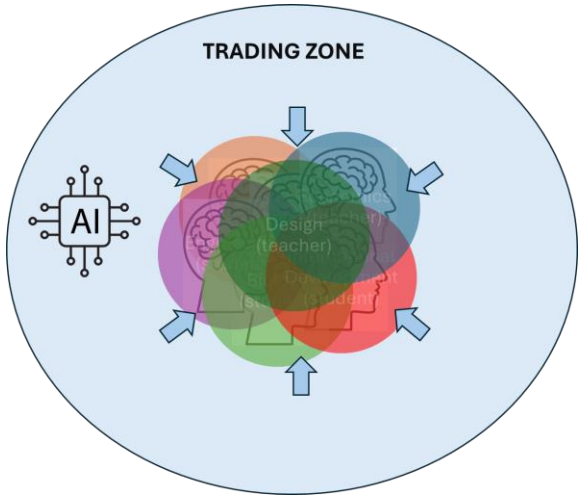
2. Disciplinary Conceptualisation



3. Understanding the Problem

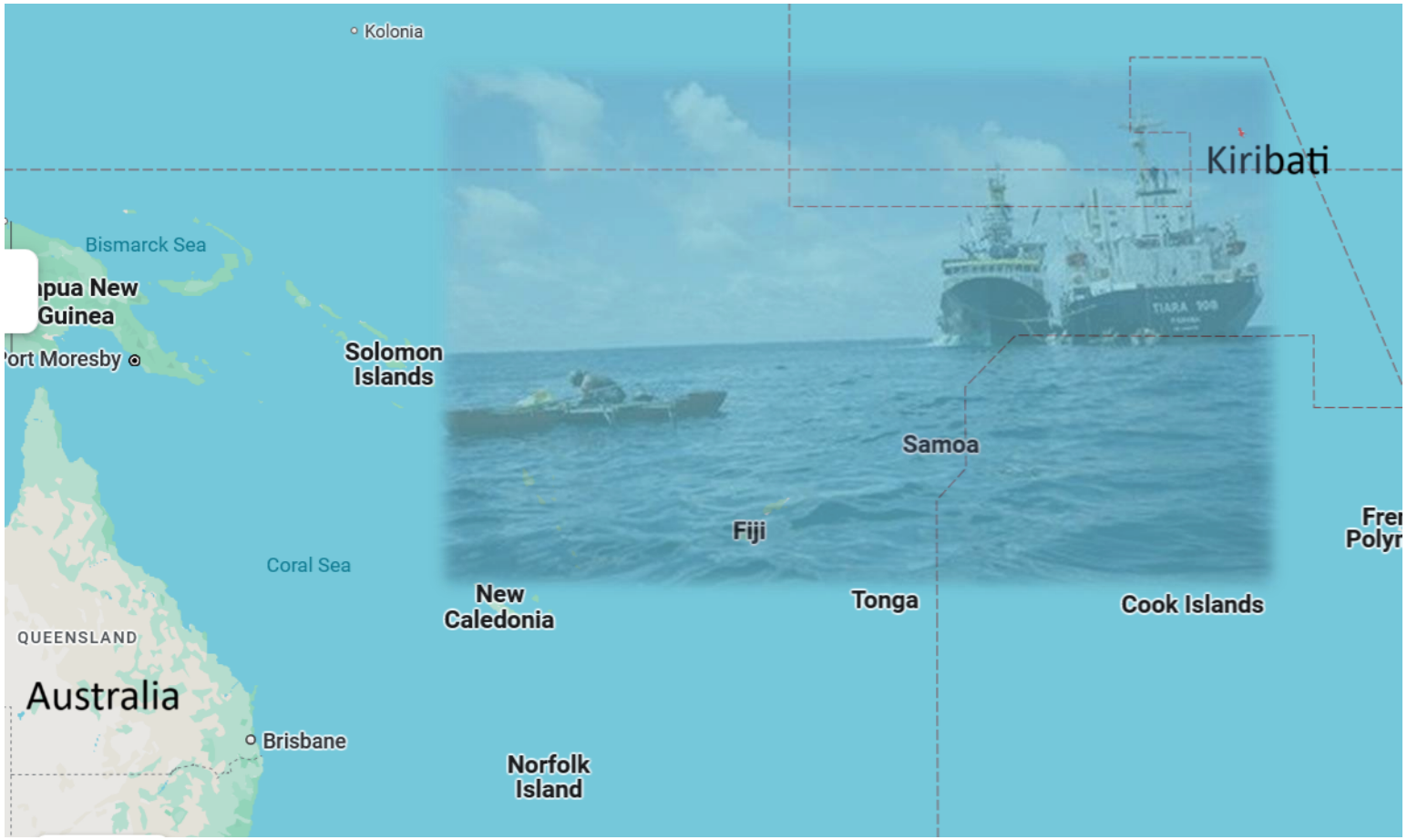


4. Synthesis & Solutions



Solution Space

- Becomes an Australian Protectorate
- Global Marine Sustainability Hub
- Green/Blue Special Economic Zone
- Community governance
- Climate adaptation and refugee centre



Evaluation

Phenomenographic Interviews

How did students perceive and engage with the problem topic when creating their concept map?

Pre and post ***questionnaire*** on interdisciplinary competence

Knowledge

Skills

Feelings

Results

1. Facilitate dialogical process?

- Synthesising – merging and thematising disciplinary input
- Coaching – Suggestions on how to proceed
- Passive role – needs active prompting – does not drive the process

2. Develop shared language and understanding?

- Information provider – asking for help with disciplinary language
- Highlight differences – explain how disciplines might see situation differently
- Identifying connections – identifying overlaps and nexus between disciplinary views
- Difficulty maintaining disciplinary boundaries

3. Emergence of solution space

- Brainstorming — rapid generation of wide-ranging ideas
- Generic, incremental solutions – lack detail, imagination, and transformational potential
- Reinforces disciplinary silos – persistently breaks solutions down by discipline

4. Interdisciplinary competence - Interviews

- Frequent need to clarify terms and expectations during initial phases
- Recognising and addressing disciplinary biases and assumptions
- Re-examination of one’s own disciplinary knowledge

Interdisciplinary Competence - Questionnaire

Knowledge	Skills	Feelings
• Disciplines (↑↑↑) • Interdisciplinary (o↑↑)	• Reflection (↑↓↑) • Interdisciplinarity • Communication • Collaboration	• Beliefs / Values • Confidence • Enjoyment (↓↑↑) • Identity (↓↓↑) • Open-mindedness • Trust • Motivation

Conclusions

- Useful, but passive tool for trading zone facilitation
- Helpful for comparison and synthesis, but not good at moving beyond disciplinary views
- Good for co-authoring ideas, but lacks creativity and radicality and reinforces disciplinary views
- Project participants marginally increased interdisciplinary competence

Thank You

Questions?