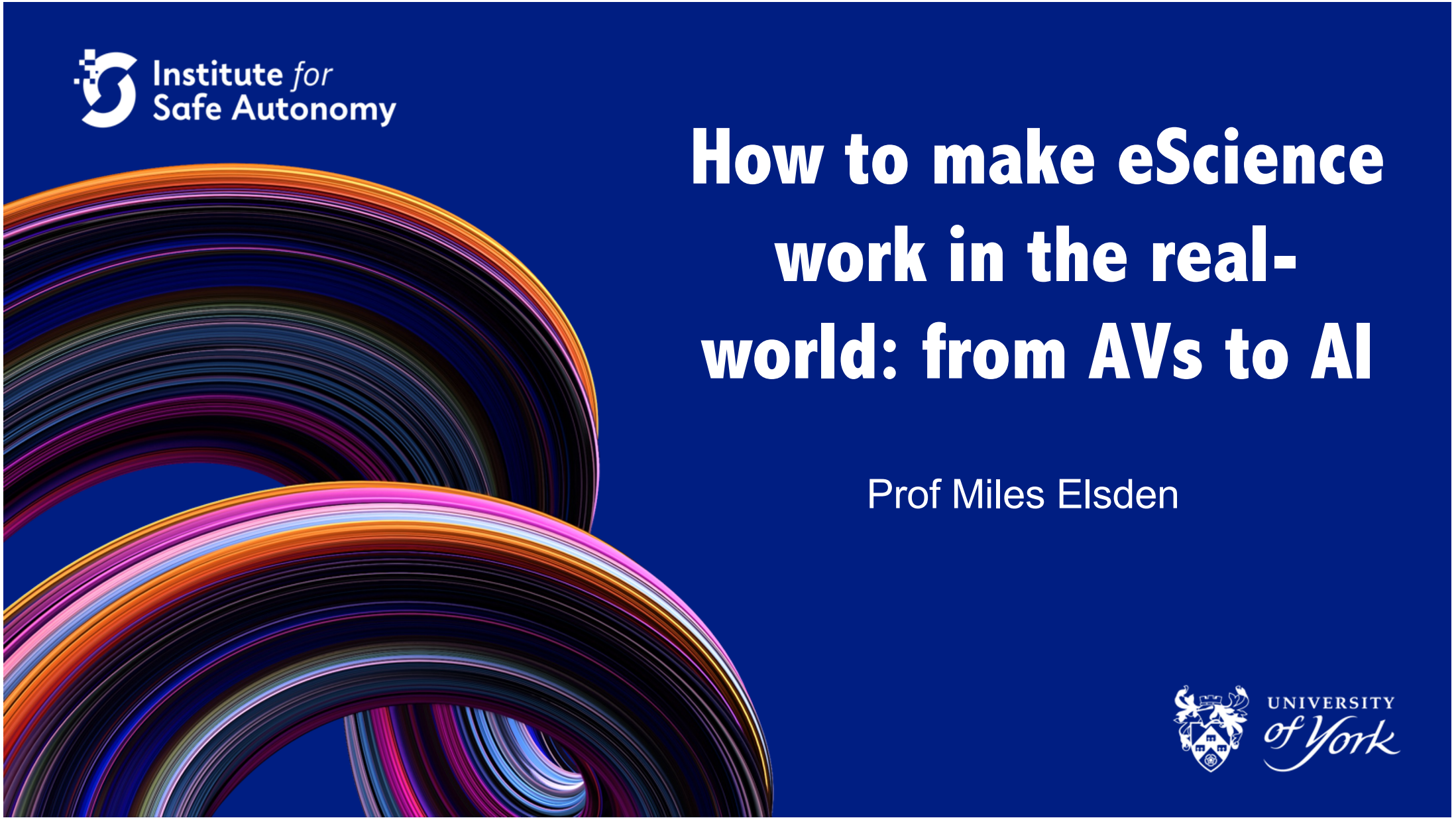
Institute for Safe Autonomy
How to make eScience work in the real-world: from AVs to AI
Prof Miles Elsden
UNIVERSITY of York

INTRODUCTION

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- My Background
- Examples – AVs to AI
- Common issues
- Potential Solutions
- What we're doing in York

MY BACKGROUND

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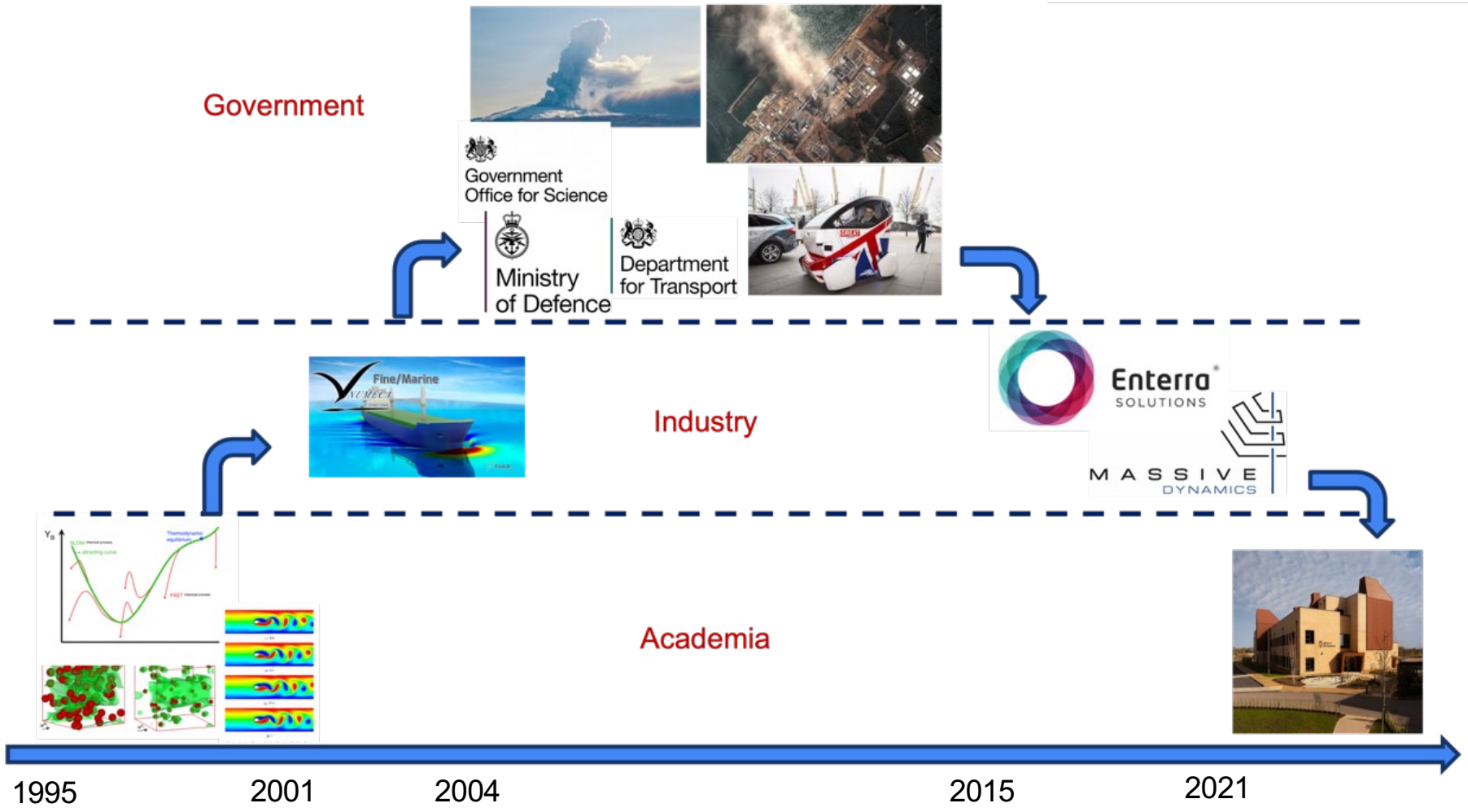

AUTONOMOUS VEHICLES

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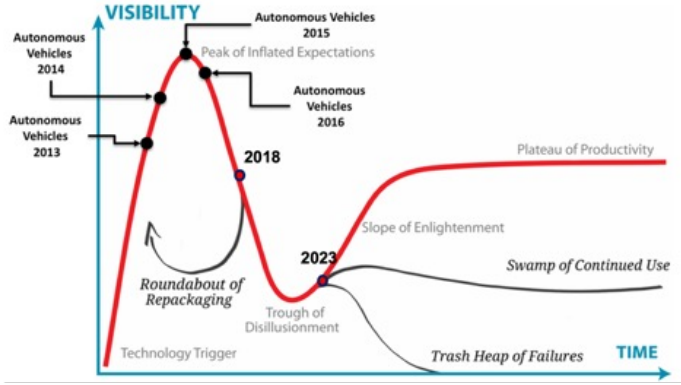
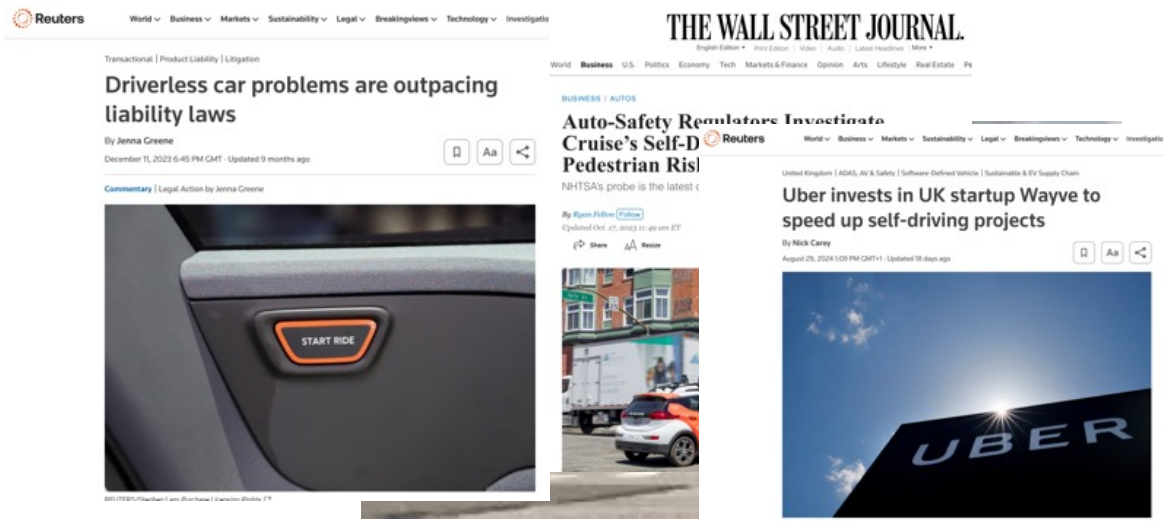
- Hype cycle
- UK AV act (May 2024)
  - UK Promising AVs on the road by 2026
  - Still contains phrases like '*as good as a reasonable human driver*'
- EU/US different at State level

- General use
  - Regulations, legislation, business models
  - Technology (sensors or algorithms)
  - Edge cases
  - User buy-in
- Narrow applications
  - Logistics
  - mining



Currie, Graham. (2018). Lies, Damned Lies, AVs, Shared Mobility, and Urban Transit Futures. Journal of Public Transportation. 21. 19-30. 10.5038/2375-0901.21.1.3.



AI

- Hype cycle
  - Following same pattern, earlier in the cycle
- UK AI safety summit (Nov 2023)
  - Focus on Frontier AI vs Narrow
- US Executive Order (Oct 2023)
- EU AI Act (Jul 2024)

- Questions
  - Is the model right?
    - Does scale -> new capability?
  - Legal challenges (data)
  - Hallucination
  - Deep fakes
  - Real-world take-up/value
  - Cost/business model
  - Sustainability

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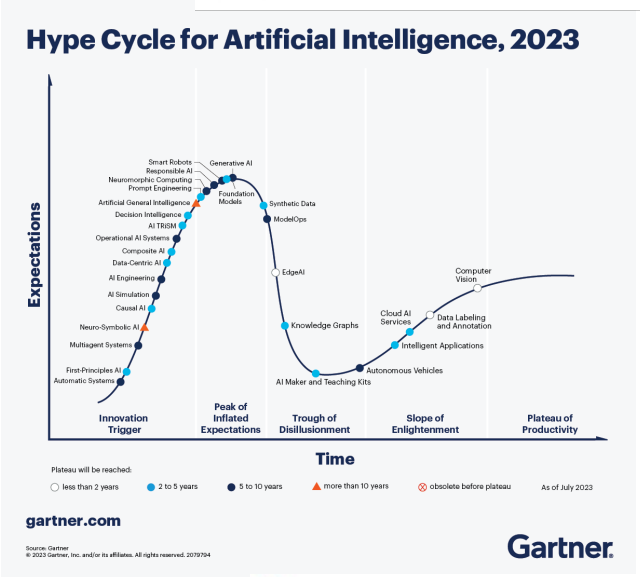

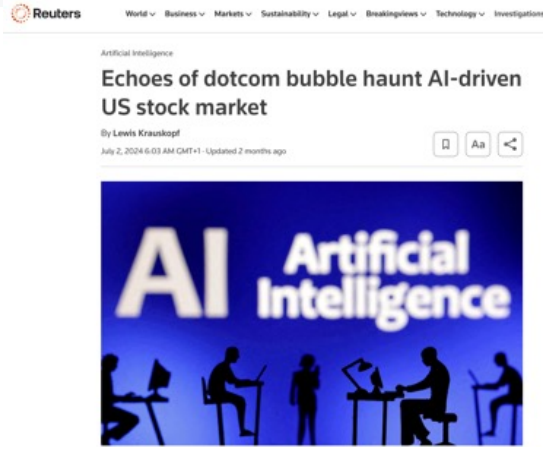

COMMONALITY

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- Hype driven, over promised, under delivered
  - Driven by lack of knowledge/understanding by decision makers (gov and industry)
- Timescales
  - Technology timescales vs policy timescales
  - Software vs hardware (and cost)
- Need a full systems approach
  - Early understanding
  - E.g. Quantum
- Complex system of stakeholders
- Lack of common goals/language

ChatGPT

vs

SOLUTIONS

- CRUISSE – Decision making under extreme uncertainty
- Need translators
  - Easier to come from the Expert side
- T Shaped people
  - Need to understand different languages
  - Need to understand different drivers
  - Need better career pathways
- Collocation
  - Industry, academia (and policy?)
  - Engineer serendipity (curated)
- Convening
  - Academia seen as independent
  - Need to show value to those involved
- Enabling co-design
  - Early engagement with all stakeholders
- New ideas
  - Start-up/spin-outs
  - Scale-up
  - Networks

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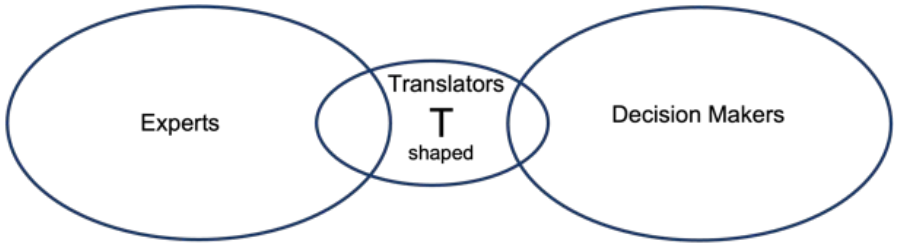

@York

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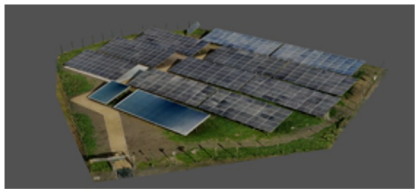
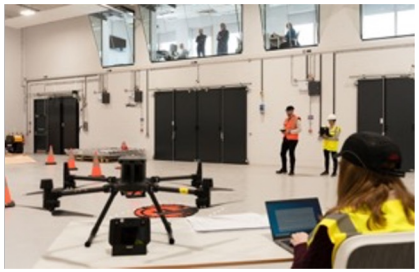
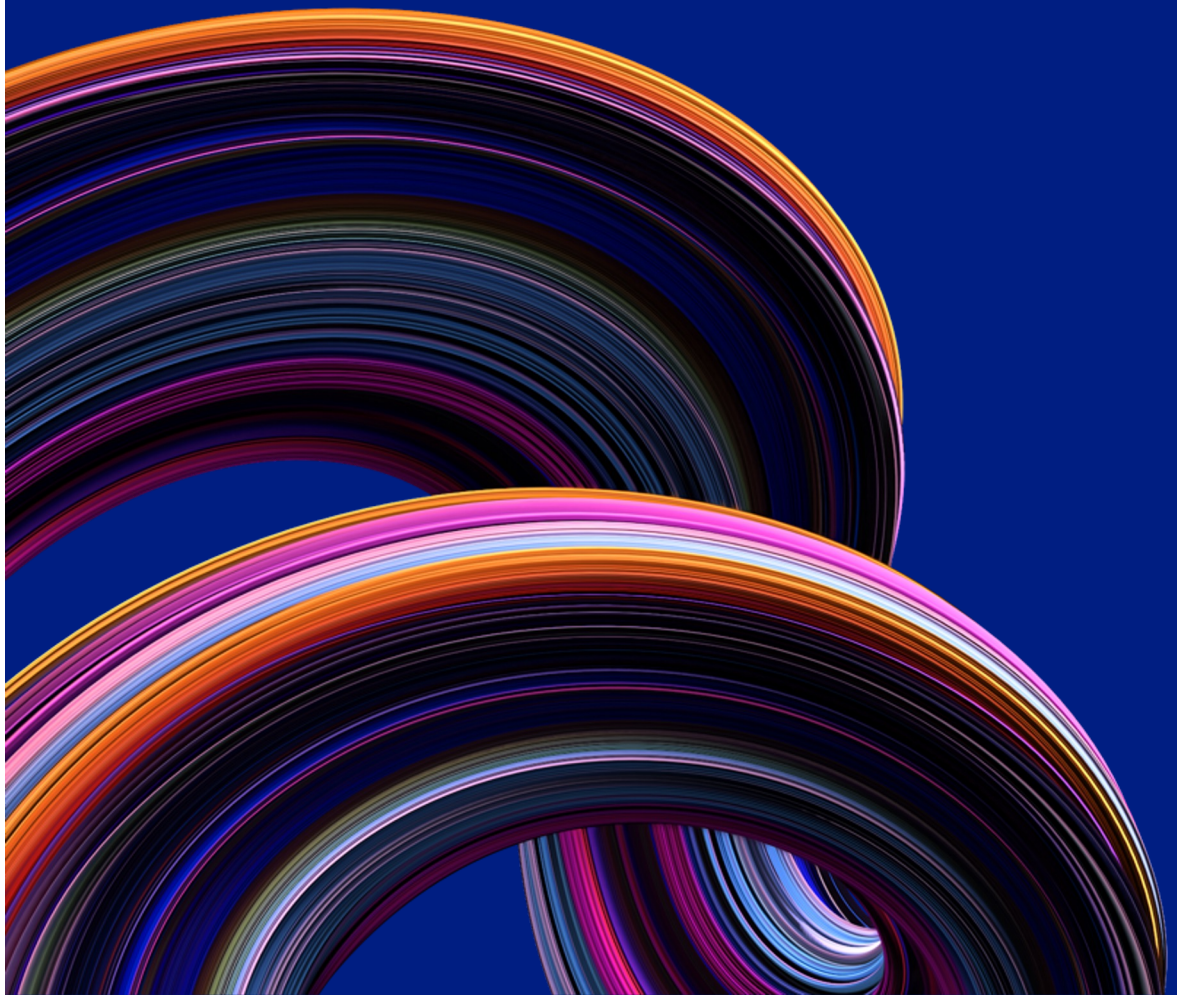
- ISA
  - Focussed on safety critical industries
  - Living lab
- Local sectors
  - Rail and York Central
  - Aligning drivers
- New Science Park
  - Looking at collocation
  - Campus vs City
  - Start-up -> scale-up
  - Skills
- Socio-technical-Economic perspective
  - Researcher from across the Uni
  - DAISY
  - Damp in Social Housing







QUESTIONS?

MILES ELSDEN
DIRECTOR

EMAIL: MILES.ELSDEN@YORK.AC.UK

TEL: +44 (0)1904 32 1806

WEB: WWW.YORK.AC.UK/SAFE-AUTONOMY/

LINKEDIN: WWW.LINKEDIN.COM/COMPANY/UOYISA/

UNIVERSITY of York