Embracing uncertainty:
Curriculum development for the 21C - future-proofing skills, knowledge and capabilities in a paradigm shift.

Dr Sam Grogan

Pro Vice Chancellor Student Experience, University of Salford

@SamGrogan

Disruption long term – the new abnormal

'We live in an era of disruption in which powerful global forces are changing how we work and live…
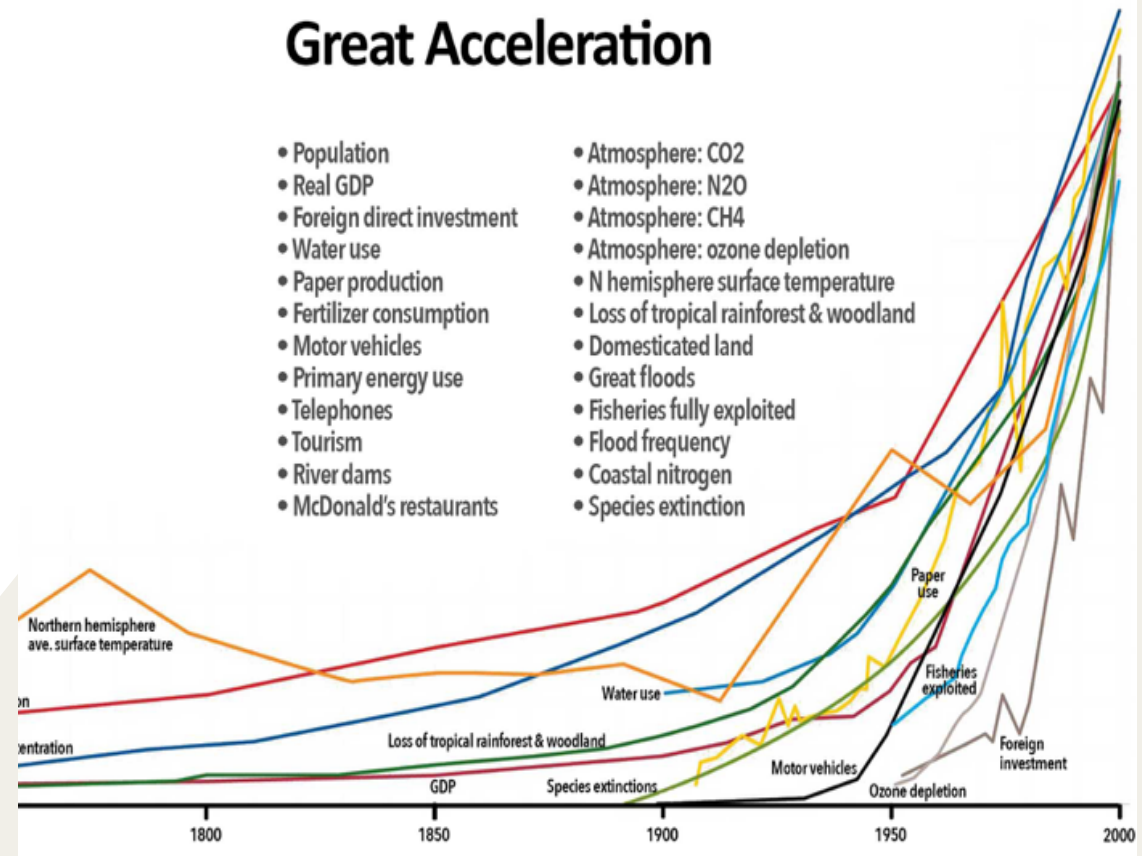
The rapid spread of digital technologies, growing challenges to globalisation and, in some countries the splintering of long-held social contracts are all roiling business, the economy and society….

The benefits for those in the forefront are larger than ever. At the same time, the downside for those who cannot keep up has also grown disproportionately…
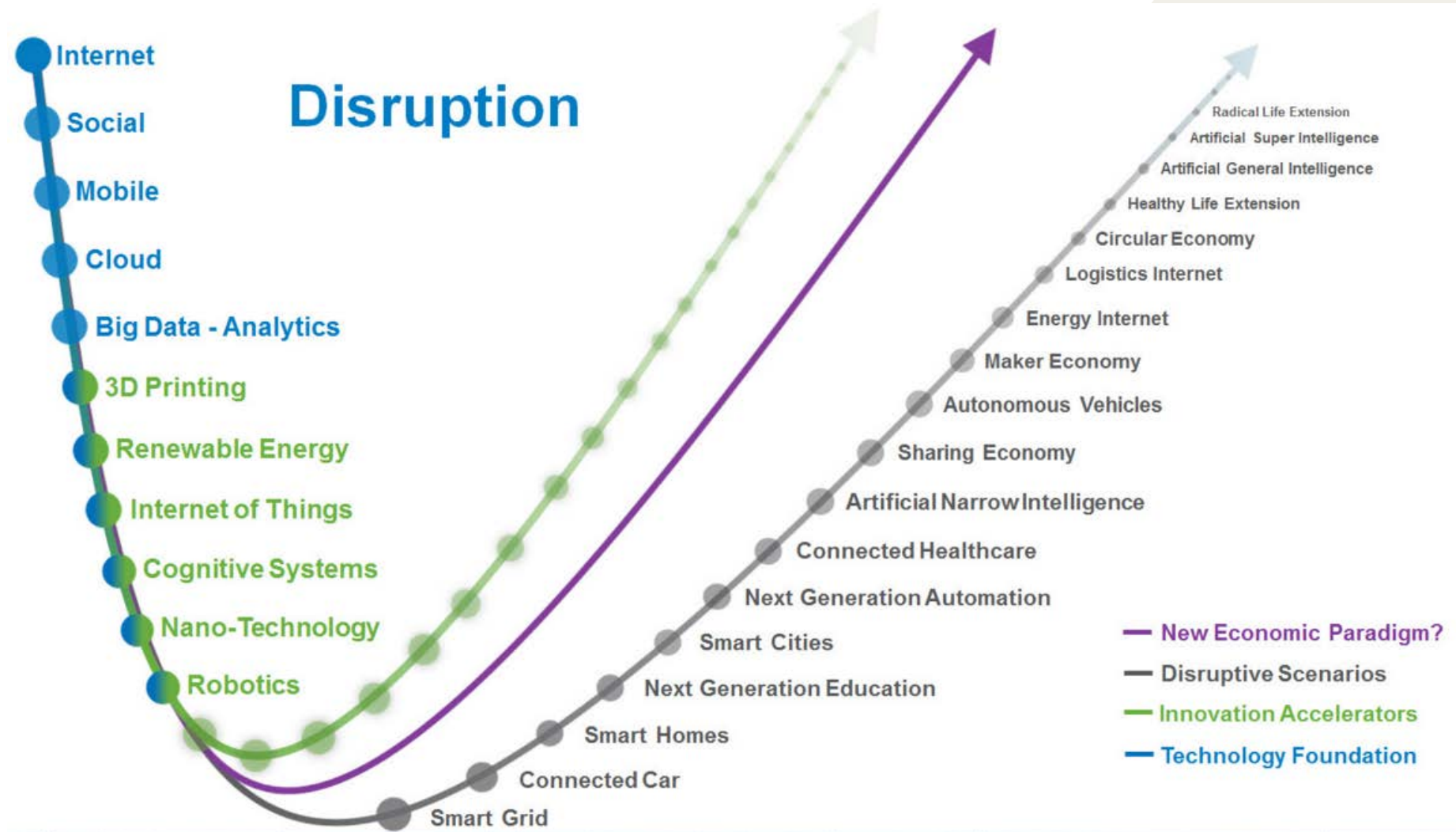
Figuring out how to navigate these skewed times may require some radical rethinking.'

McKinsey Global Institute: *Navigating a world of disruption.* Briefing note prepared for the World Economic Forum. January 2019
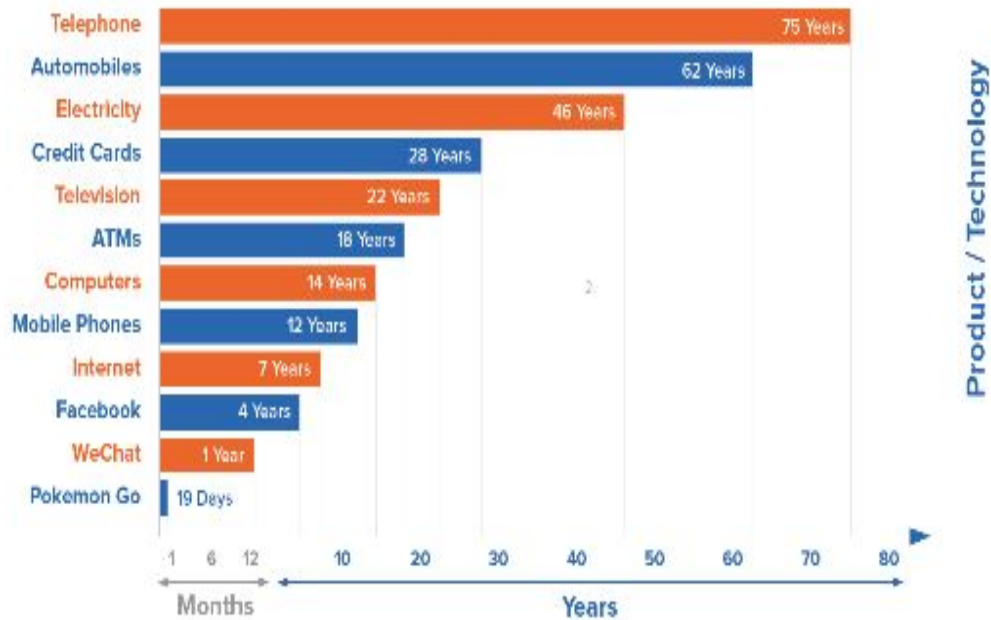

Great Acceleration

- Population
- Real GDP
- Foreign direct investment
- Water use
- Paper production
- Fertilizer consumption
- Motor vehicles
- Primary energy use
- Telephones
- Tourism
- River dams
- McDonald's restaurants

- Atmosphere: CO2
- Atmosphere: N2O
- Atmosphere: CH4
- Atmosphere: ozone depletion
- N hemisphere surface temperature
- Loss of tropical rainforest & woodland
- Domesticated land
- Great floods
- Fisheries fully exploited
- Flood frequency
- Coastal nitrogen
- Species extinction

Technological Disruption

https://frankdiana.net/2014/08/12/combinations-and-disruption/

Disruption – Exponential adoption towards ubiquity

TIME TO REACH **50 MILLION USERS**

Product / Technology	Years
Telephone	75 Years
Automobiles	62 Years
Electricity	46 Years
Credit Cards	28 Years
Television	22 Years
ATMs	18 Years
Computers	14 Years
Mobile Phones	12 Years
Internet	7 Years
Facebook	4 Years
WeChat	1 Year
Pokemon Go	19 Days

https://blogs.wsj.com/economics/2015/03/13/it-took-the-telephone-75-years-to-do-what-angry-birds-did-in-35-days-but-what-does-that-mean/
http://www.visualcapitalist.com/how-long-does-it-take-to-hit-50-million-users/

https://su.org/blog/exponential-technology-trends-defined-2019/

Ubiquities to come, impacting across sectors:

- AI
- AR/VR
- Robotics
- Autonomous vehicles
- Blockchain
- IoT
- 3D printing and digital fabrication

The strategic backdrop: Our Industry Collaboration Zones

- Placing mutually beneficial exceptional partnerships at the heart of everything we do.

- Engendering a culture and model of co-creation/ co-production with students, staff and industry.

- Providing inspiring infrastructure that enables staff, students and partners to learn and practice in environments that reflect industry standards.

"By pioneering exceptional industry partnerships we will lead the way in real world experiences preparing students for life"

The ICZs provide space for students, colleagues and industry partners to co-create, experiment and in so doing offers new and unique learning opportunities aimed at providing real world experiences and better preparing our students for life."
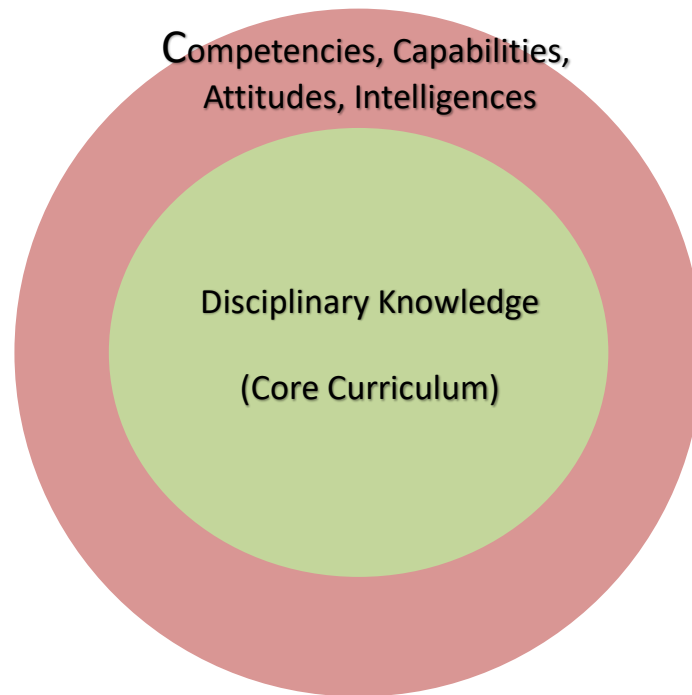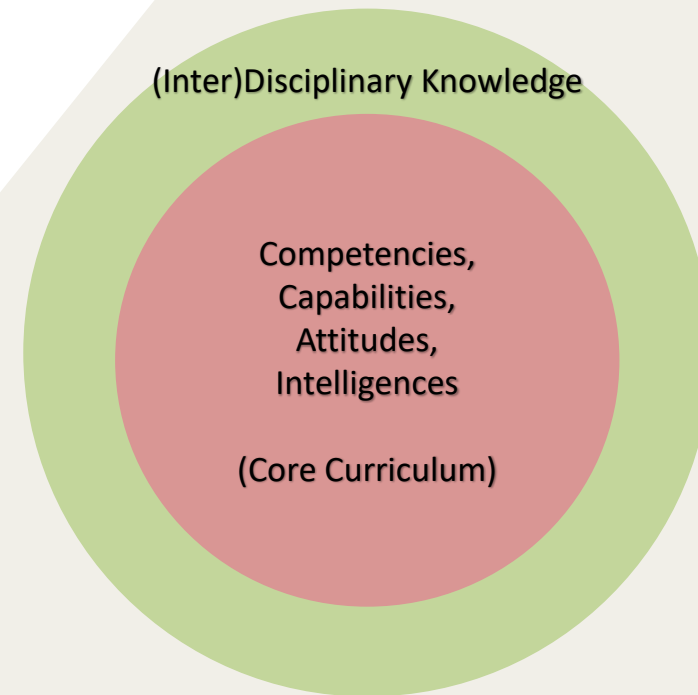
The strategic response: Salford Curriculum+

1. A principle-based philosophy for a holistic learning experience which brings the ICZs to life towards development of self/ purpose

2. Co-created and co-produced with industry, students and PS/ academic staff

3. Underpinned by eclectic, diverse sources

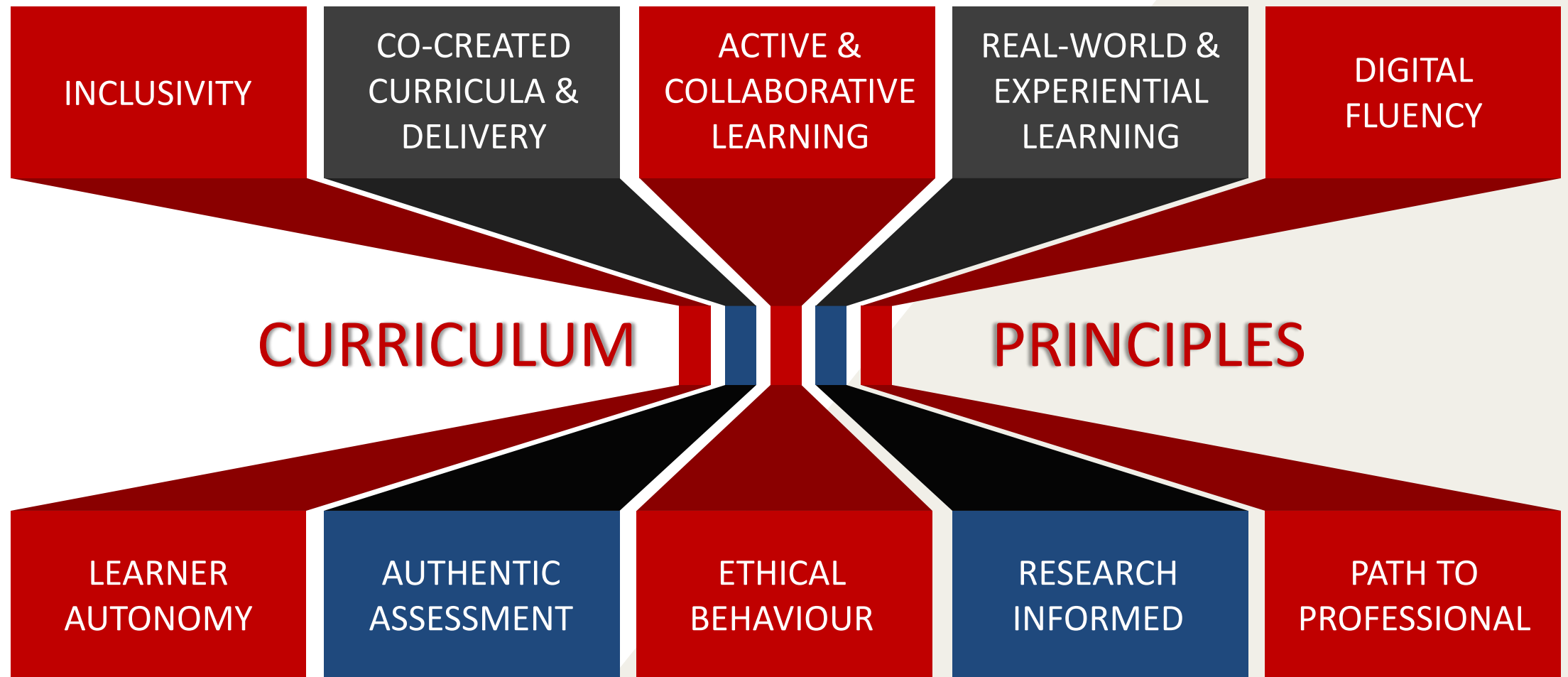4. A means of drawing together initiatives, projects and plans to ensure strategic alignment

INCLUSIVITY

CO-CREATED CURRICULA & DELIVERY

ACTIVE & COLLABORATIVE LEARNING

REAL-WORLD & EXPERIENTIAL LEARNING

DIGITAL FLUENCY

CURRICULUM

PRINCIPLES

LEARNER AUTONOMY

AUTHENTIC ASSESSMENT

ETHICAL BEHAVIOUR

RESEARCH INFORMED

PATH TO PROFESSIONAL

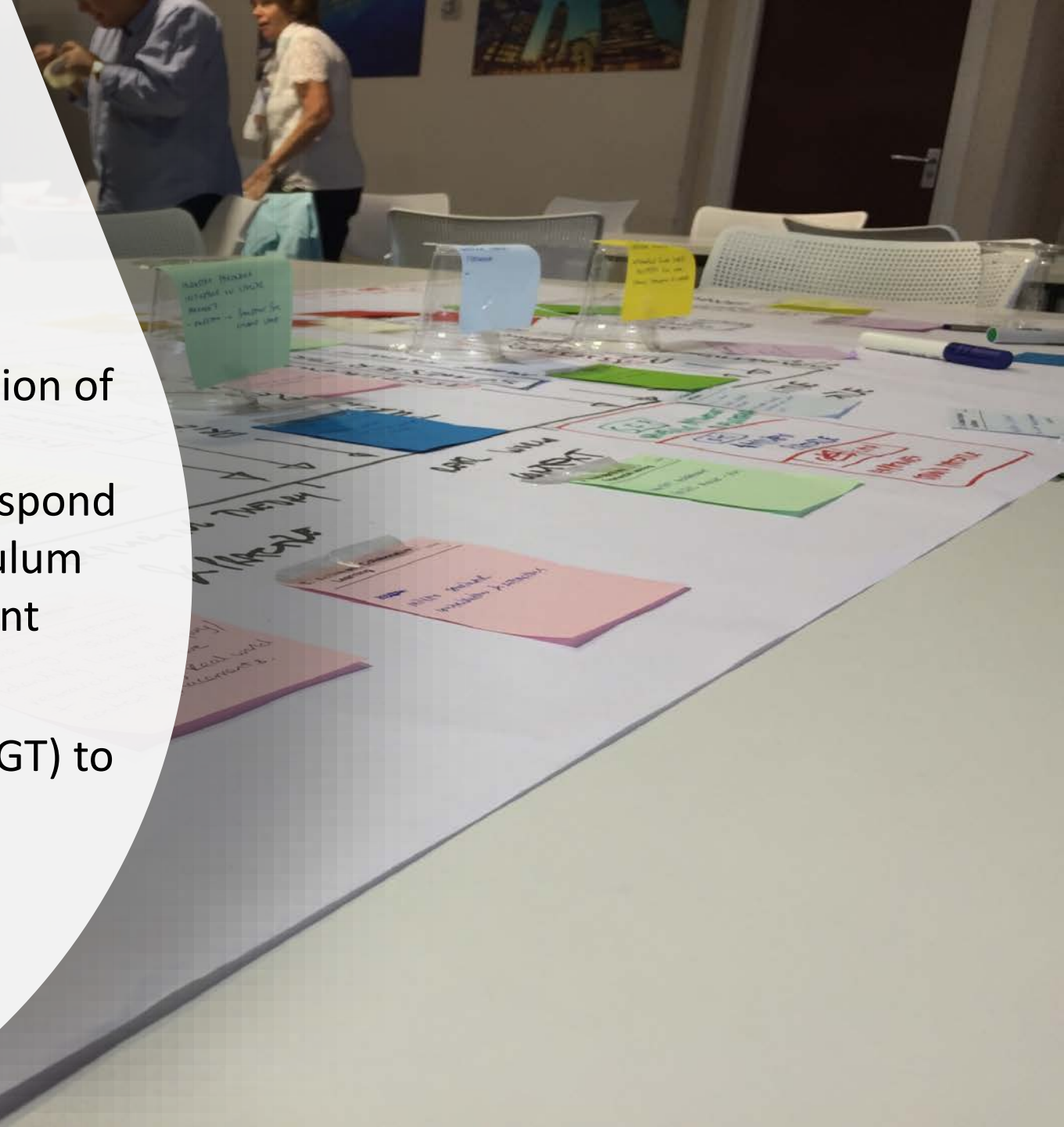https://www.salford.ac.uk/qeo/iczready

Embedding systematic change: Making our curriculum ICZ-ready

- Team-based workshop exploration of how learning, teaching and assessment could effectively respond to our ICZs using the ICZ curriculum design principles and the student learning journey.

- All University curricula (UG & PGT) to be 'ICZ Ready' by Sept 2018.

ICZ-ready Curriculum review process

1.0

SCHOOL PREPARATION
School reviewers meet to benchmark

2.0

REFLECTION
Programme leaders undertake reflective review

3.1

FURTHER SUPPORT
Share plans and development with critical friends/other teams.

3.0

STORYBOARDING WORKSHOP
Team workshop for all programmes. Map your curriculum against the principles.

SIGN OFF
School Associate Dean Academic confirms ICZ readiness from reflective form/workshop evidence.
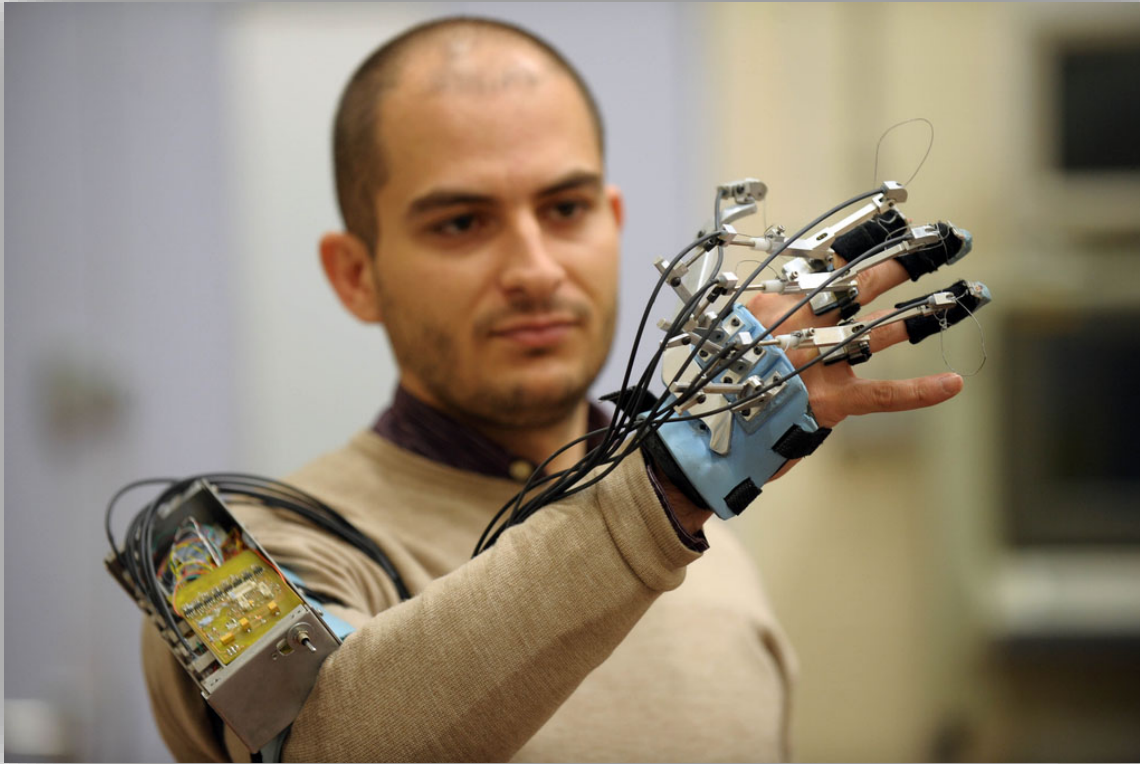
4.0

WORKSHOPS RUN

38

STAFF ATTENDED

632

PROGRAMME GROUPINGS SIGNED OFF

168

Outputs: 21C curriculum towards productivity

- Skills outputs and graduate knowledge shift from commoditisation of knowledge-as-endpoint, to acquisition of evolving self knowledge and applied capabilities driven through outward-facing, demand-led problem-based interdisciplinary learning.
- Quantifiable research-informed teaching
- (Applied) research focused on contribution to key areas of the Anthropocene.

'Automation and AI will significantly increase the need for technological as well as social and emotional skills'

Lessons learned in implementation (ongoing...)

- Co-create and co produce. You do not know best
- Huge project architecture/ governance is not always necessary
- Make formal/ informal continuous improvement BaU– make it our job to change our job
- Stop doing/ reduce non-value added BaU to create space to create – don't do *more*
- This is difficult work!
- If it feels comfortable, its probably not good enough
- Start with the end in mind – focus on output, outcome and productivity gain/ benefit realisation, rather than activity
- Just do it. 80% right is better than not at all.

In Summary…

Interdisciplinarity/ multi-disciplinarity and real world application of converging disciplines to external issues, alongside internal structural connectivity, adaptability, agility and resilience are essential components within a fit-for-future institutional curriculum.

This new running gear should enable institutional curriculum to add value and productivity in the operating context of a 'new abnormal'

This represents a fundamental and uncomfortable reshaping and repositioning of curriculum and is not a small task!

In Summary…

'The benefits for those in the forefront are larger than ever. At the same time, the downside for those who cannot keep up has also grown disproportionately…'

In Summary…

'The benefits for those in the forefront are larger than ever. At the same time, the downside for those who cannot keep up has also grown disproportionately…'

'Figuring out how to navigate these skewed times may require some radical rethinking.'

The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify... into every corner of our minds.'

John Maynard Keynes (1936)

Thank you and questions

@samgrogan

s.grogan@salford.ac.uk