

A LEADING INTERNATIONAL TECHNOLOGICAL UNIVERSITY

STRATHCLYDE

INNOVATION

CRP 2018

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Principal & Vice-Chancellor
University of Strathclyde

Some key facts.....

- Top 20 for research intensity in REF (THE ranking)
- Number 1 for Physics in REF (THE ranking)
- Turnover around £320M pa
- 15,000 Undergrads, 7,000 Postgrads, 4,000 staff
- ~1,700 PhDs, 800 Academics
- THE UK University of the Year 2012/13
- THE Entrepreneurial University of the Year 2013/14
- THE Business School of the Year 2016/17
- Host of first UK Fraunhofer Centre
- Strategic Partners in National Physical Laboratory (NPL)
- EPSRC Framework Partner
- 3 UK Catapults, 3 Scottish Innovation Centres, Fraunhofer UK and Centre based on campus
- Unique job family of “**Knowledge Exchange Staff**” with promotion criteria up to Prof of Practice

Engineering

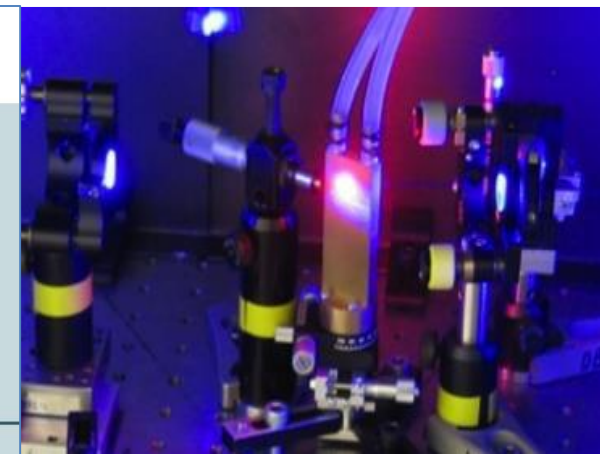
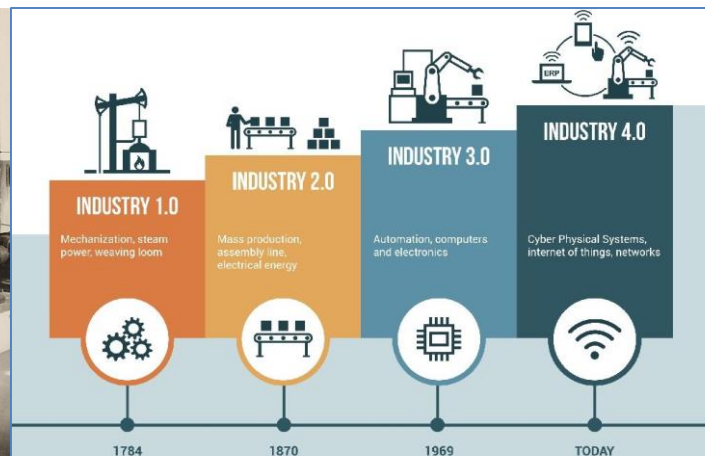
Business

Science

HaSS

Putting Industry / Academic Collaboration into the “driving seat” of Innovation

- Industry’s intimate engagement is key – open to challenge, prepared for technological disruption, need for talent and innovation;
- The route from an idea to a product or service needs to be **EASIER**, **MORE RAPID** and **AFFORDABLE**;
- Industry, Universities, and the Public Sector together can create new ways of working that deliver what industry needs;
- We have raised over £1Bn in 10 years;
- Currently, the Government is focussed on supporting industry



Understanding the challenge in the UK



2017/18 Lamy Report



World class
Universities;

World class science
and engineering;

World leading
companies;

Underperforming
Industrial growth.

Why?

Dowling Review: The challenge

Rank Top ten barriers for **business**

- 1 IP and other contract negotiations are difficult to complete, processes difficult to navigate, or take too long
- 2 Business find it difficult to identify academic partners or where academic capability lies
- 3 Business and academia operate to different timescales

Rank Top ten barriers for **universities**

- 1 University metrics, including the REF, prioritise the production of high-quality publications
- 2 IP and other contract negotiations are difficult to complete, processes difficult to navigate, or take too long
- 3 Other pressures on academic time (teaching and research)

Universities and Industry have different priorities, timeframes and objectives

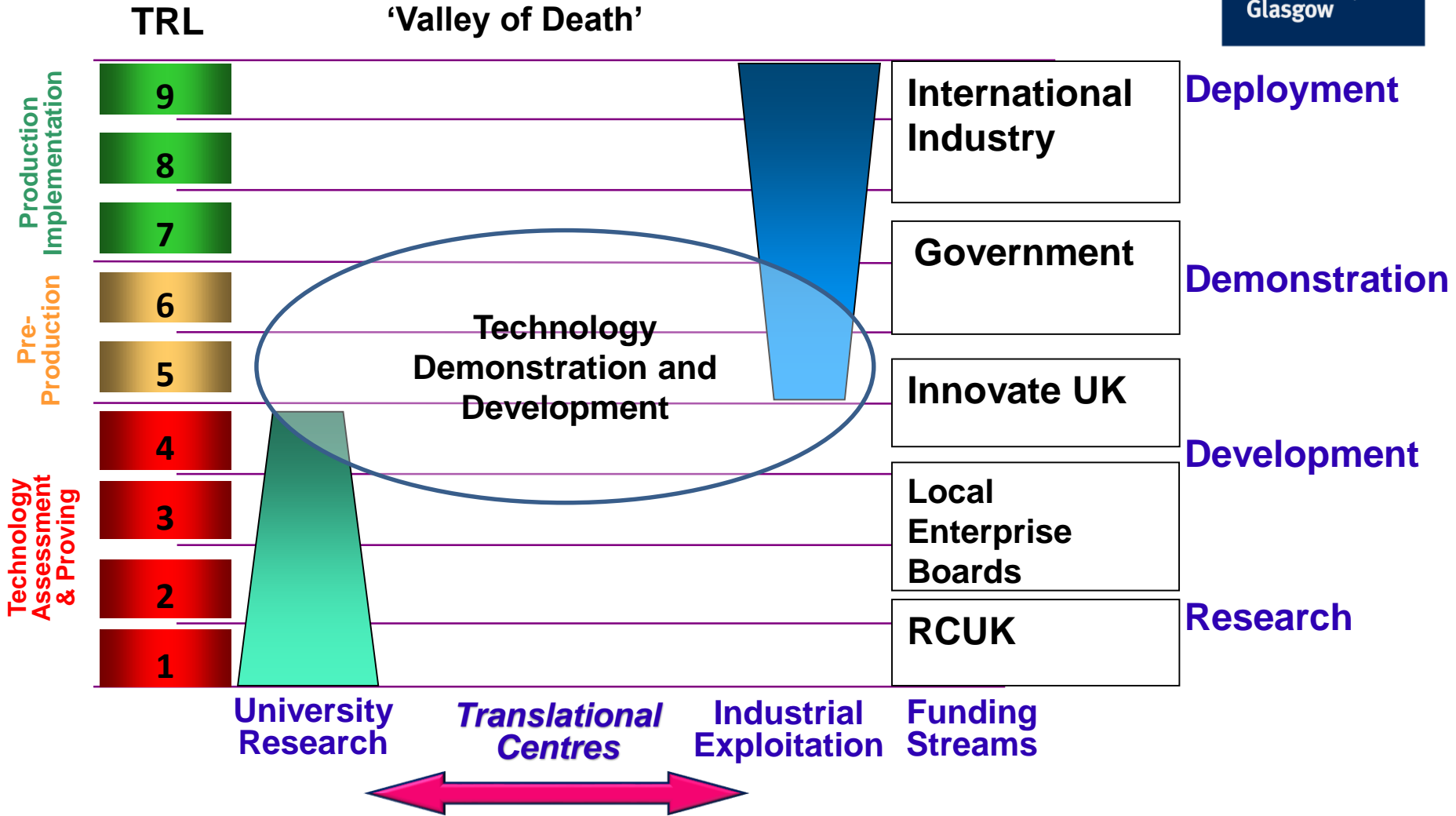
These make interactions challenging

However: There are models to address this

- =7 Other funding issues (for example, SME eligibility, subjects within scope)
- 9 Low overall levels of business investment in R&D, including a lack of absorptive capacity
- 10 Lack of understanding within business of potential benefits of working with universities

- =7 Tension between academic desire to publish work, and business concerns about competition
- 9 Lack of trust or mutual understanding
- 10 Low overall levels of business investment in R&D, including a lack of absorptive capacity

Innovation at Pace and Scale

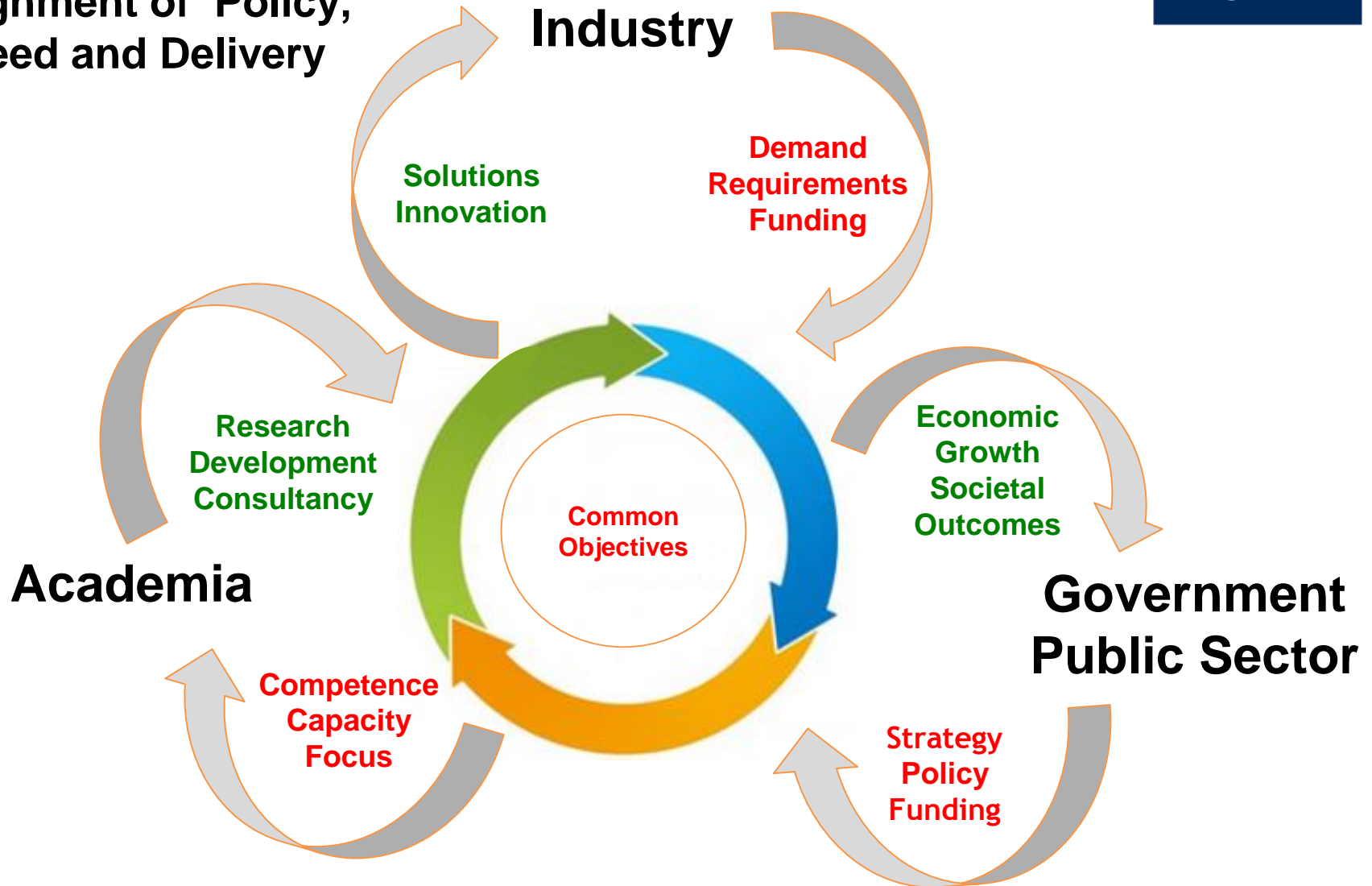


Working with Industry to understand market failure

Working with Industry and Public Sector to support Industry at pace and scale

Translational Centres: 'The Triple Helix'

**Alignment of Policy,
Need and Delivery**



£'s for investment: Now is the time (in the UK)



Theresa May

UK Government
£757bn



Greg Clarke

BEIS
£13.8bn



Prof Sir Mark Walport

UKRI
£6bn



Simon Edmonds

Innovate UK
£773m



Dick Elsey

HVMC
£73m (2016-17)



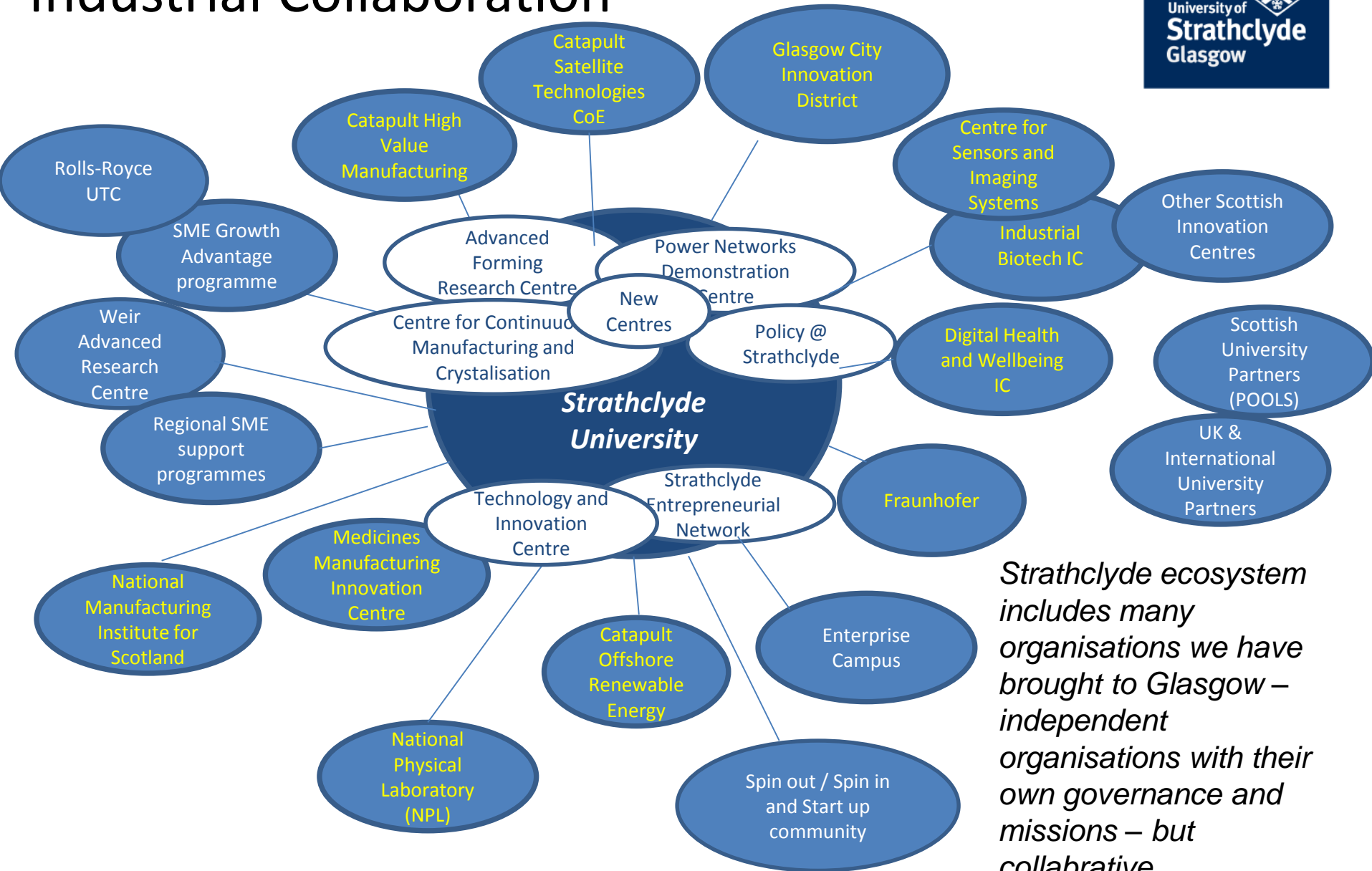
Nicola Sturgeon

Scottish Govt
£71bn (2016-17)

For the first time in a generation there is UK-wide recognition that technology, manufacturing and Industry needs better support to enable a prosperous country

Strathclyde *Innovation Eco-system*

Industrial Collaboration



Strathclyde ecosystem includes many organisations we have brought to Glasgow – independent organisations with their own governance and missions – but collaborative

Glasgow City Innovation District & TIC Zone



Glasgow City Innovation District & TIC Zone



Entrepreneurial Scotland...



TIC Zone Phase 2: The proposal

£150M University/Private/Public
Investment



Creating an
Innovation District
in the City Centre



Almost doubling
footprint of TIC and
Inovo to 62,600 m2

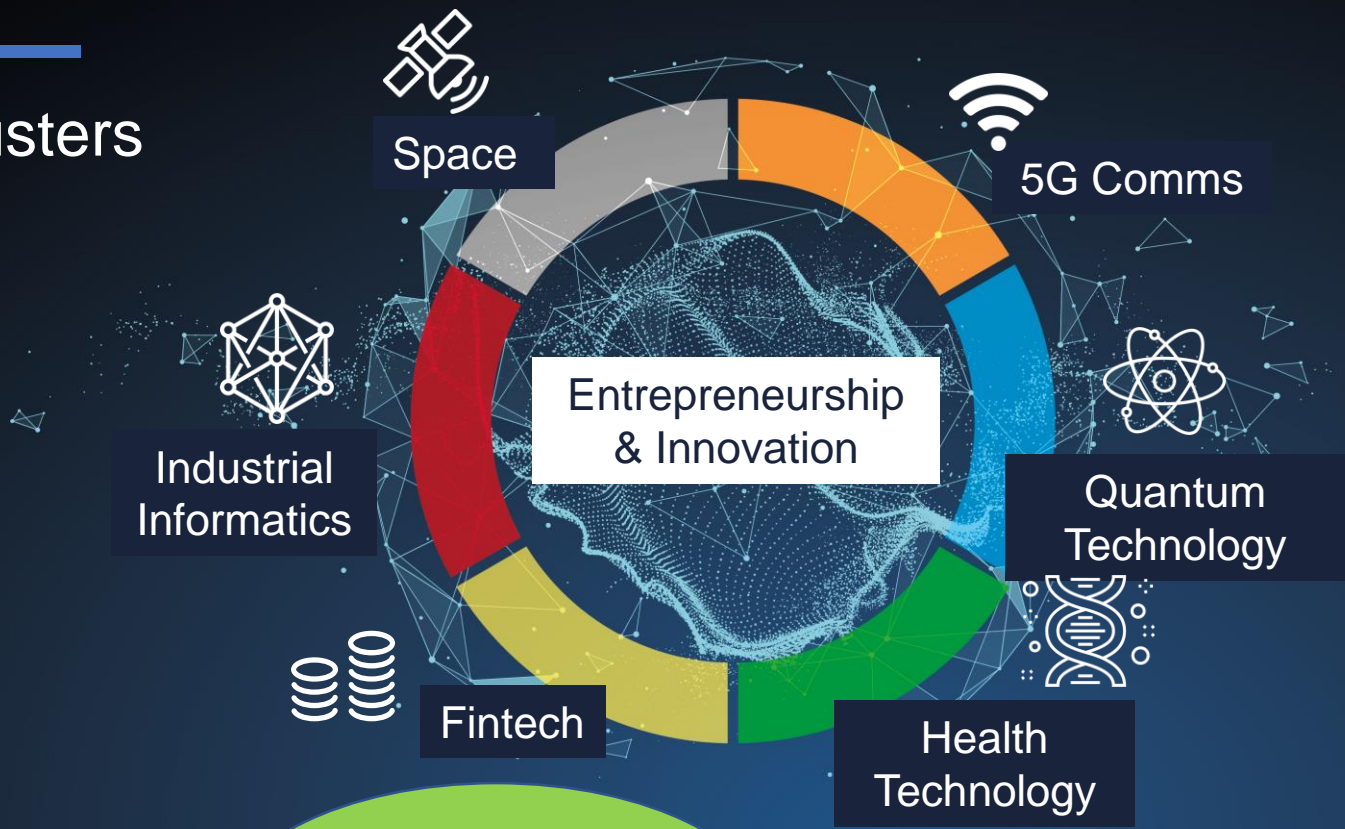


Attracting c170 high-growth
tech-based companies to
GCID in a decade



Up to 6,000 FTE jobs and
£1bn of net additional GVA
in first 10 years

Clusters



Oct'18 – New Hire Programme for 75 Academics

Glasgow City Innovation District & TIC Zone



Advanced Forming Research Centre (AFRC)



AFRC: Providing world class research at scale to deliver change

- Open to all industry
- 2008 to 2018 Concept to Demonstration

Vision: To transform manufacturing efficiency, effectiveness, costs and flexibility in forging and forming manufacturing.



Impact:

- £200M+ raised for industry projects;
- 10:1 gearing achieved for members;
- 35 Global members.
- 350 customers;
- 520 projects helping industry, eg reducing manufacturing times by 90%;
- Scale, pace, expertise;
- Part of UK Advanced Manufacturing Catapult;
- Largest forming research centre in Europe;
- Future Talent: 140+ staff, 60+ PhD/EngD & new MSc and CPD progs.





National Manufacturing Institute for Scotland





Vision



Globally recognised centre of manufacturing expertise

Leading centre for UK High Value Manufacturing Catapult

Industry-led partnership with academia and the public sector

Hub of new Manufacturing Innovation District (MID)

National project to spearhead Scotland's Manufacturing Action Plan

**Strathclyde is “anchor university”
and leading NMIS delivery**



NMIS



NMIS strategic purpose is to make Scotland a global leader in advanced manufacturing



Core facilities at Inchinnan (Glasgow International Airport) but national reach

Draws on strength and expertise of Universities, Colleges and Innovation Centres

Transform manufacturing skills, productivity and innovation

Beacon for inward investment and growth of academic base in Scotland



Funding



Source	£m
Scottish Govt	68.0
Lightweight Centre	8.9
University	8.0
City Deal	39.1
HVM Catapult	12.0
Total	136.0

NMIS funding will leverage £100M's of private sector investment



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