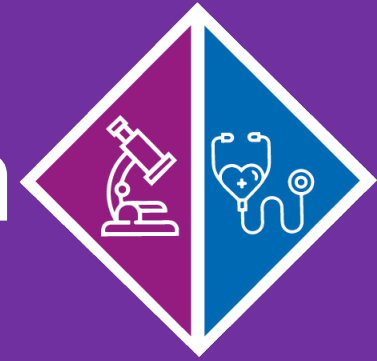


Translational Research

► Manchester 2023



Session Three

Benefits of working with industry to translate research

Chair:
Chris Hepworth



Scan for full
programme



@Translation_Mcr



#TranslationMCR23

MANCHESTER
1824

The University of Manchester

W
wellcome

TranslationalResearch



► Manchester 2023

SESSION 3	BENEFITS OF WORKING WITH INDUSTRY TO TRANSLATE RESEARCH Chair: Chris Hepworth, Business Engagement Manager
13:30 - 13.35	<i>Bridging the gap between academia and industry: how we can work together</i> Chris Hepworth , Business Engagement Manager
13:35 - 13.45	<i>An Academic view of working with industry</i> Dr Richard Unwin , Senior Lecturer in Mass Spectrometry and Proteomics
13:45 - 13.55	<i>Generating commercial impact from your research; the what, why and how</i> Prof Aline Miller , Professor of Biomolecular Engineering
13.55 – 14:00	Questions and Answers



Bridging the gap between academia and industry: how we can work together

Chris Hepworth
Business Engagement Manager, FBMH
The University of Manchester

PARTNER COLLABORATE INNOVATE

Manchester.

A city of firsts.

A city with a history of being at the forefront of technical and scientific innovation, coupled with social progress and ambition to shape the future.

Why The University of Manchester?



**Reputation for
innovation**



**Breadth and depth
of expertise**



Global impact



**Dedicated business
support**





CONNECTED HUB

 Direct connections to all major rail and Metrolink connections

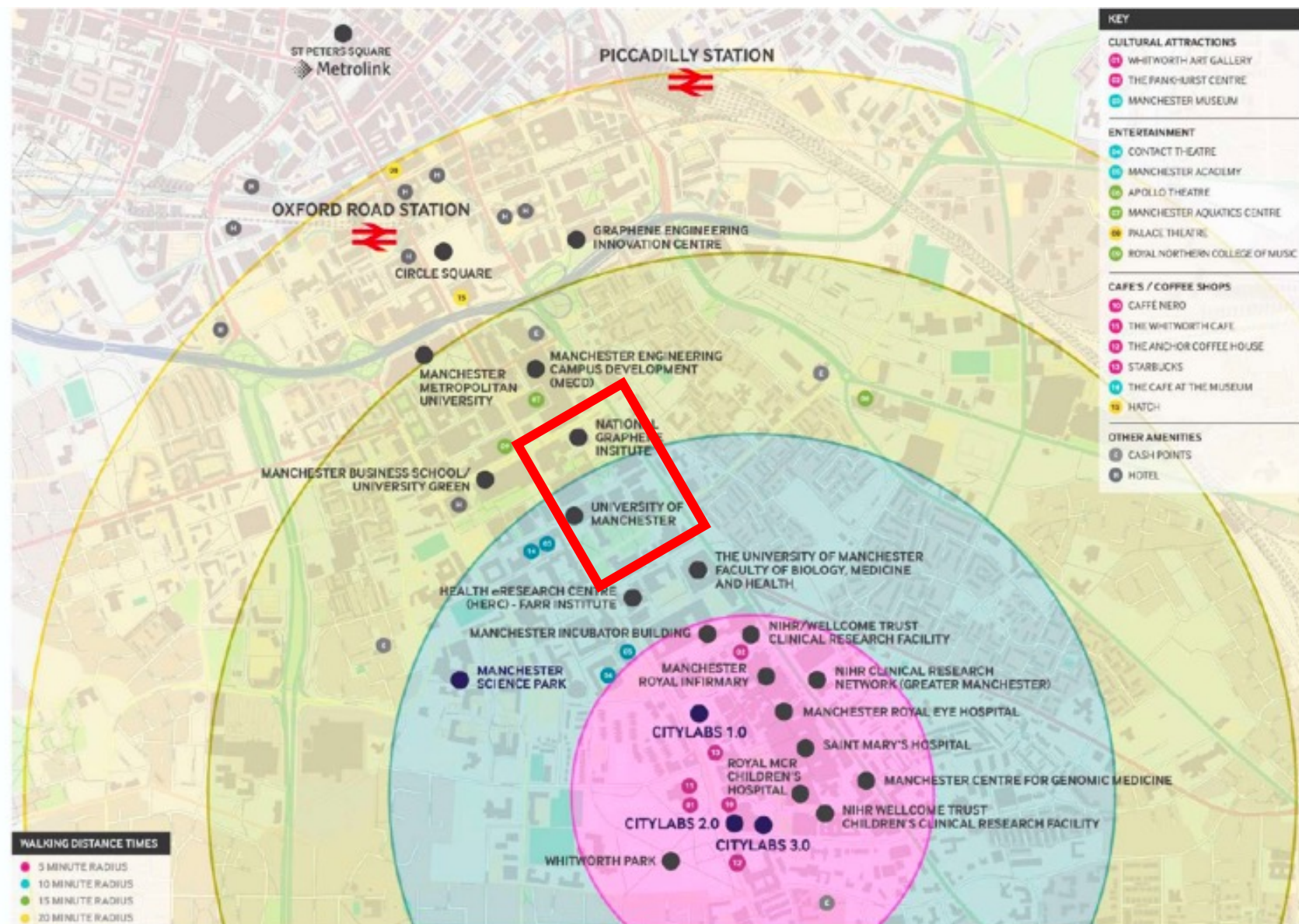
 2 hours by train to London

 20 minutes by car to Manchester Airport

Number of passengers per annum

Manchester Piccadilly
24.5 million passengers per year

Manchester Oxford Road
8 million passengers per year



Oxford Road Corridor: A top 5 European Innovation District

**LARGEST CLINICAL
ACADEMIC CAMPUS
IN EUROPE**

**£51
MILLION**
UK research funding in medical
and biological sciences 2015-18

**6,500
CLINICIANS**

£3.6BN GVA | £5.6BN BY 2025
20% Of Manchester's GVA

£6 BILLION
Devolved health and care system

Home to UK's only IoT city demonstrator project -

CITYVERVE

15,000+
Research participants across
635 research studies 2016-18

**HOME TO
50%**
of life sciences businesses
in Manchester

**13,000
JOBS** In hospitals, medical
and dental practices

**42,000
RESIDENTS**

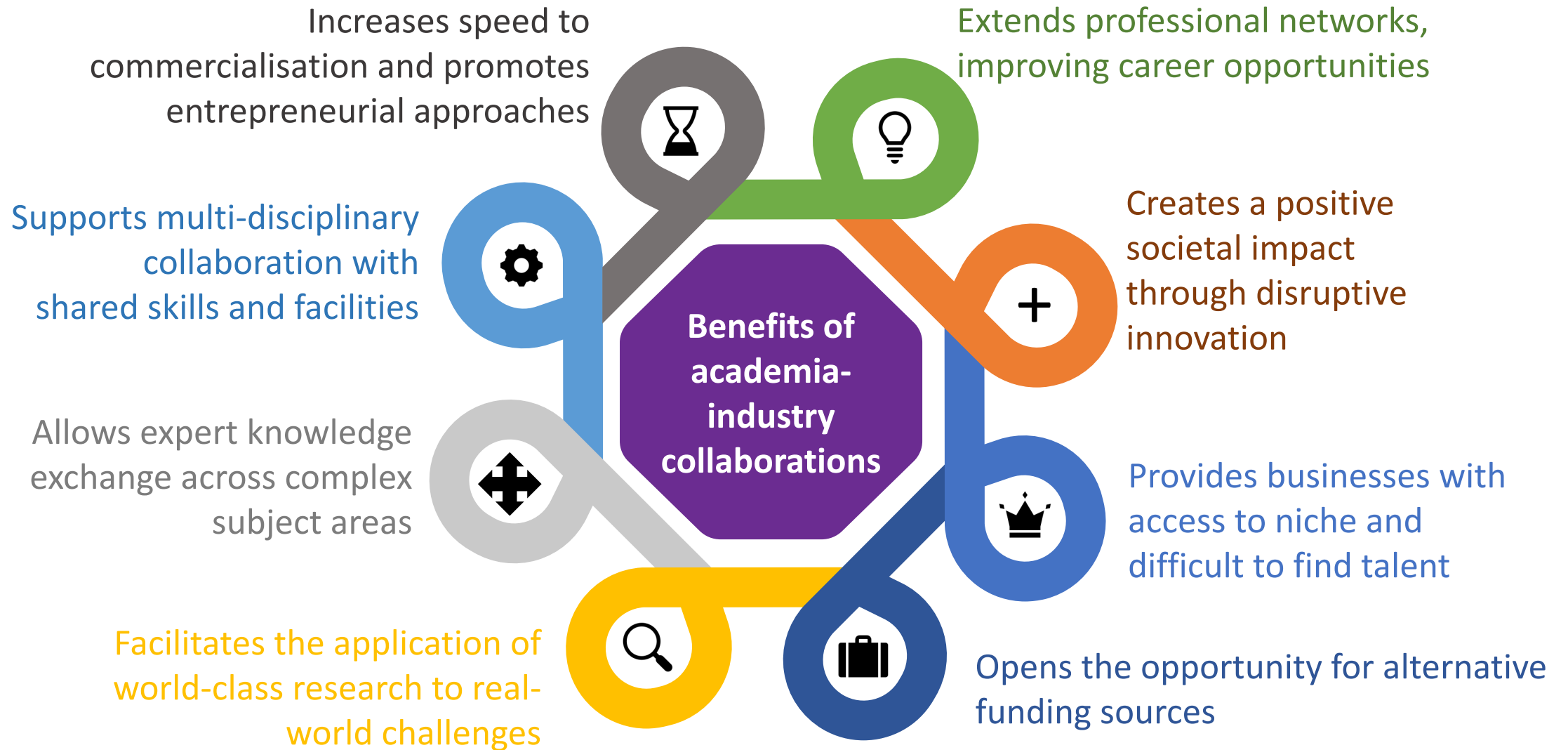
**74,000
STUDENTS**

MMU degree apprenticeship programme
has successfully delivered over
**1,100 APPRENTICESHIPS
WITH 220 EMPLOYER
PARTNERS**

**8,800
BUSINESSES**

**79,000
WORKERS**
104,000 FTE jobs by 2025

54%
of all apprenticeship placements in Manchester



Enhances the University and company's profile, reputation and research exposure

OUR ROLE

‘..to put researchers with great ideas in touch with organisations that can use them’.



Bridging the gap

The Business Engagement Team is the 'Front Door' for connecting in or out of university, offering advice, support & signposting for BE activity.

- Exploring different engagement mechanisms with increasing levels of commitment from both sides
- Building relationships & trust
- Understanding ways of working
- Identifying mutual needs

OPPORTUNITIES

TO ENGAGE WITH THE UNIVERSITY OF MANCHESTER

Engagement with the University can take many forms, with differing levels of commitment between partners and the University.

Our collaborative partners work with us across a range of different initiatives that benefit everyone.



Collaboration:

- collaborative research projects;
- knowledge exchange funding, such as knowledge transfer partnerships;
- jointly leveraged funding;
- PhD sponsorship;
- access to novel technology.



Consultancy and services

- technical expertise and specialist opinion;
- contract research;
- access to specialist facilities and equipment;
- contribution on advisory boards;
- expert witness services.



Training and skills

- recruitment services and internships;
- secondments, fellowships, and honorary appointments;
- sponsored academic appointments/ endowments;
- industrial input into teaching programmes;
- executive education, master's courses, and bespoke training.

What can you be thinking about?

For academia:

- Who are you already connected to? How good is your network?
- What might be interesting to industry from your research? What have you got which industry may need?
- Do you need to diversify your research income?
- Where do you need business input? How can business help you further your research? What have they got, what you need?
- What would a collaboration look like? Length, personnel, consumables. Is it truly collaborative?
- What background IP would you be adding to the project, and what possible foreground IP could be produced?
- **Give it a go!**

For industry:

- Understand where their knowledge and skills gap is?
- Where can academia add value?
- Understand and appreciate the vision and purpose of academia.
- Engage in a truly collaborative engagement.



The University of Manchester





The University of Manchester

**BUSINESS ENGAGEMENT
& KNOWLEDGE EXCHANGE**

The University of Manchester
Oxford Road
Manchester
M13 9PL
United Kingdom

www.manchester.ac.uk/collaborate/business-engagement

Email: collaborate@manchester.ac.uk



An Academic view of working with Industry

Richard Unwin

Senior Lecturer in Mass Spectrometry and Proteomics

Founder, Complement Therapeutics Inc.



The University of Manchester



In the beginning..... Building foundations Take Home #1

Training

- Minimum value product
- Value Inflection points
- Pathway to translation



Science

- Build the story
- Build the product – Proof of Concept



Confidence in Concept (x2),
Project Grant (RU),
Fellowship (SC)

Liaise with Innovation Factory:

- Write and submit patents
- Prepare for the next stage.....



Decision time.....

Grant Funding

- MRC DPFS, NIHR RfPB, CR-UK Therapeutic Catalyst
- Competitive
- Risky (~20% success)
- Retain full control
- 'Delays' getting industry involved?



License

- Commercial partner develops your IP
- 'Path of least resistance'
- What's the value of your IP?
- Potentially relinquish (some) control
- Finding an interested partner not easy
- Legals.....



Spin-out

- You develop your IP
- Whole new world for an academic
- Need to bring in LOTS of new skill sets (legal, finance, manufacturing, regulatory)
- Need to bring in ££££
- Retain (some) control (for a while).



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So you're setting up a spin-out...

- At this stage you're looking for value to your idea
- Make your pitches clear for the investor – this is
- Business plan – runway
- Be prepared to repeat this
- Most companies/investors



get you off the ground and

value and the opportunities

Take Home #2

identify CROs. CLARITY.



CTx Incorporated
March 2020



CTx 'virtual'

Asset Licenced 2019



CTx Incorporated
March 2020

1st Investment – €2m
March 2021

CTx 'virtual'
Asset Licenced 2019

Appoint CEO,
Project manager,
R&D Ops

BGV



EXPERIMENTICA
Scientific excellence in ocular models

CTx Incorporated
March 2020

1st Investment – €2m
March 2021

CTx 'virtual'
Asset Licenced 2019

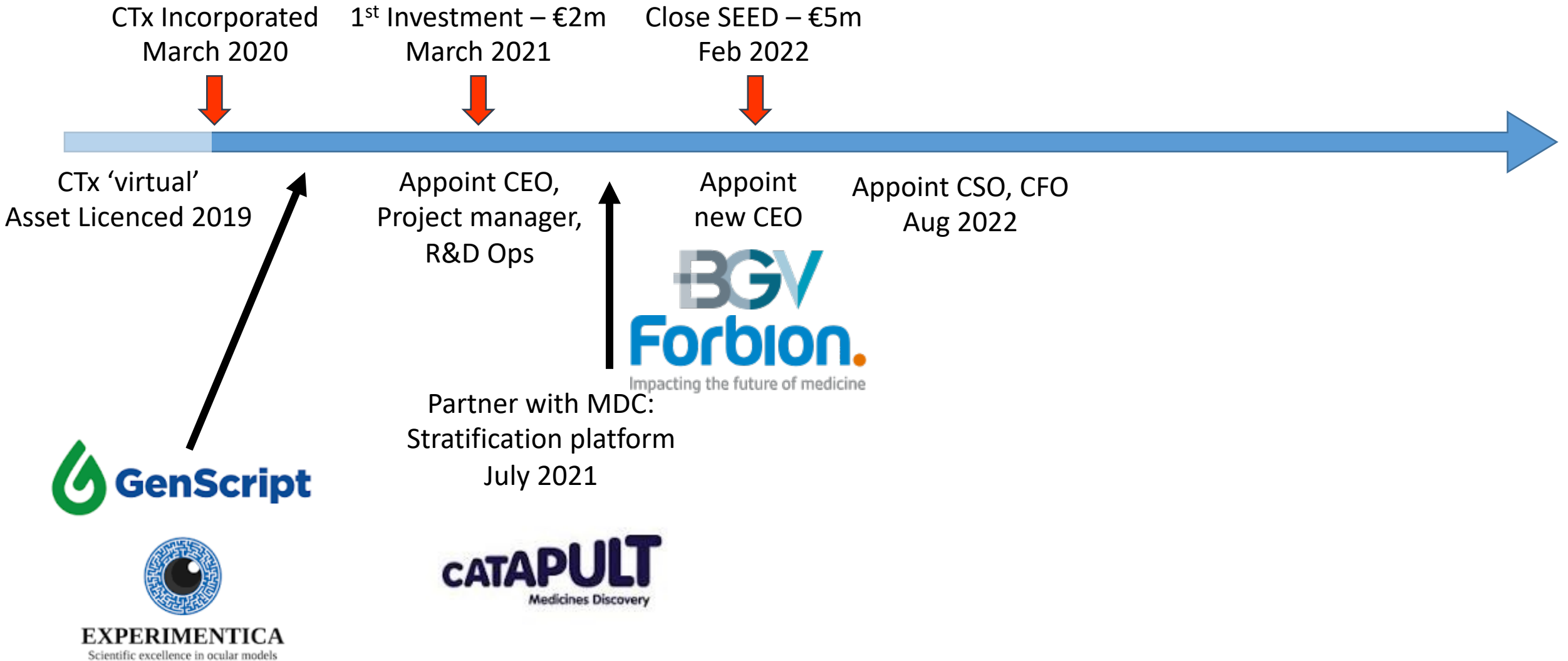
Appoint CEO,
Project manager,
R&D Ops

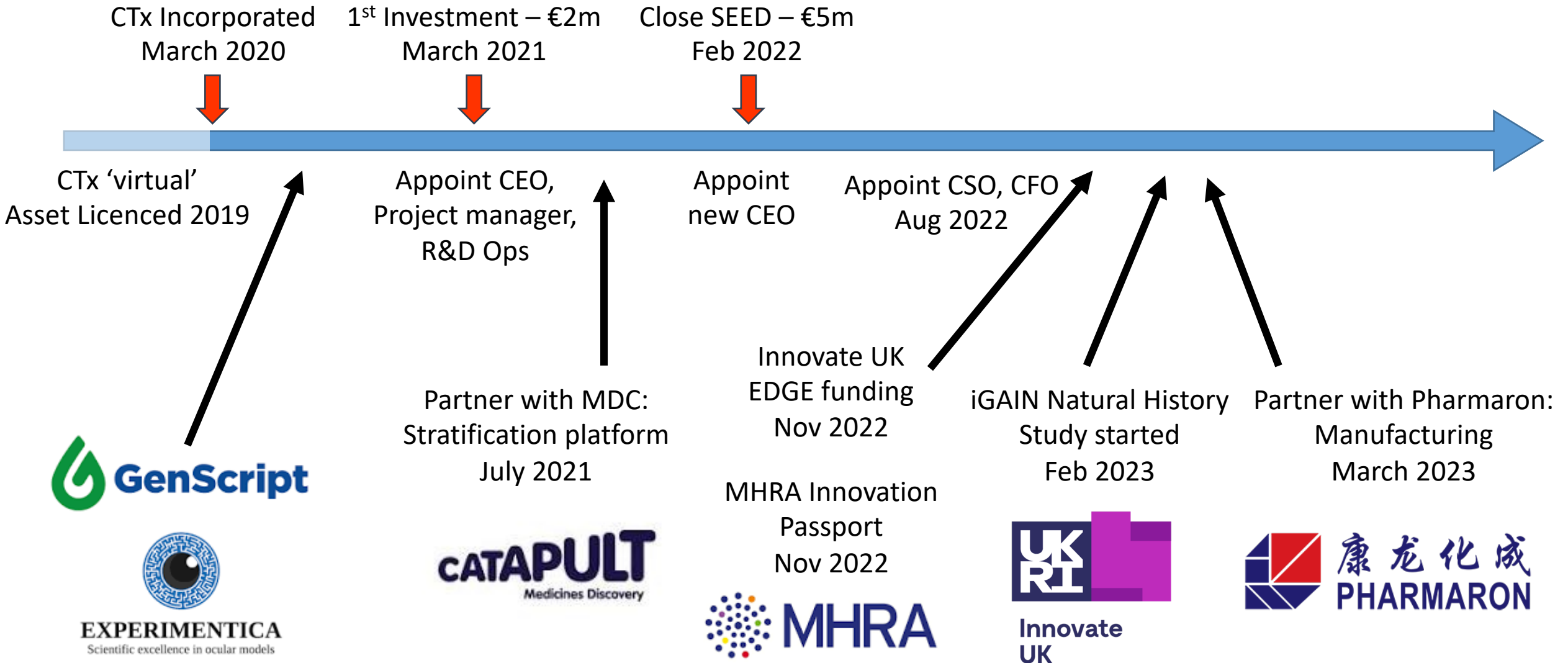
Partner with MDC:
Stratification platform
July 2021



EXPERIMENTICA
Scientific excellence in ocular models









CTx Incorporated
March 2020



1st Investment – €2m
March 2021



Close SEED – €5m
Feb 2022



Close Series A – €72m
Apr 2023



CTx 'virtual'

Asset Licenced 2019



CTx Incorporated
March 2020



1st Investment – €2m
March 2021



Close SEED – €5m
Feb 2022



Close Series A – €72m
Apr 2023



CTx 'virtual'
Asset Licenced 2019



Open Labs @
Stevenage
Staff increase to ~15

Why work with industry.....

Take Home #3

“For 20 years I thought my job was as a basic scientist. Publish papers and throw them over the wall for someone else to apply. I now realise that there's no one on the other side of the wall. Just a huge pile of papers that we've all thrown over.”

Prof. Duncan Watts, U Penn



Generating commercial impact from your research; the why, what and how

Aline Miller

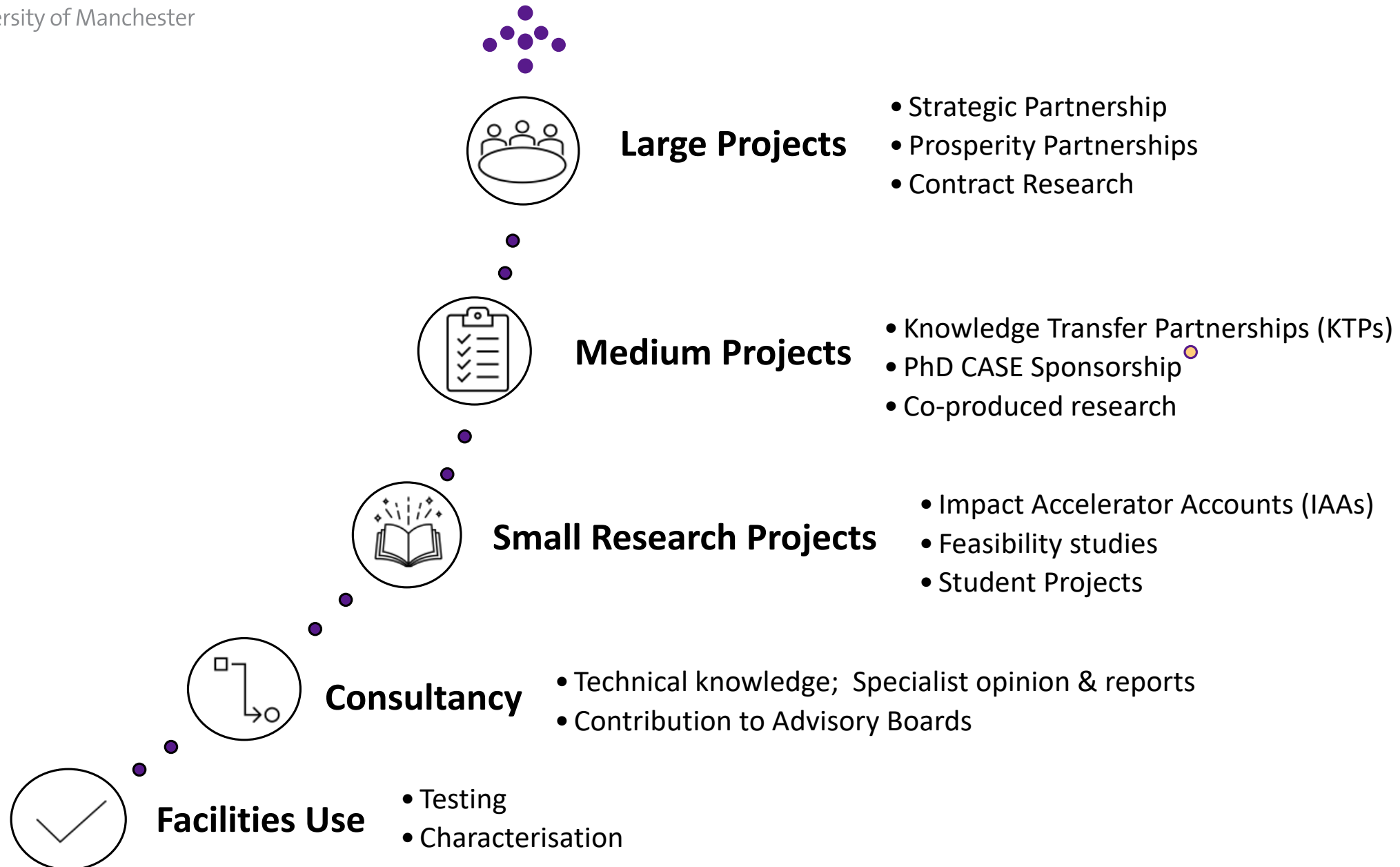
Professor of Biomolecular Engineering

Associate Dean for Business Engagement & Innovation FSE

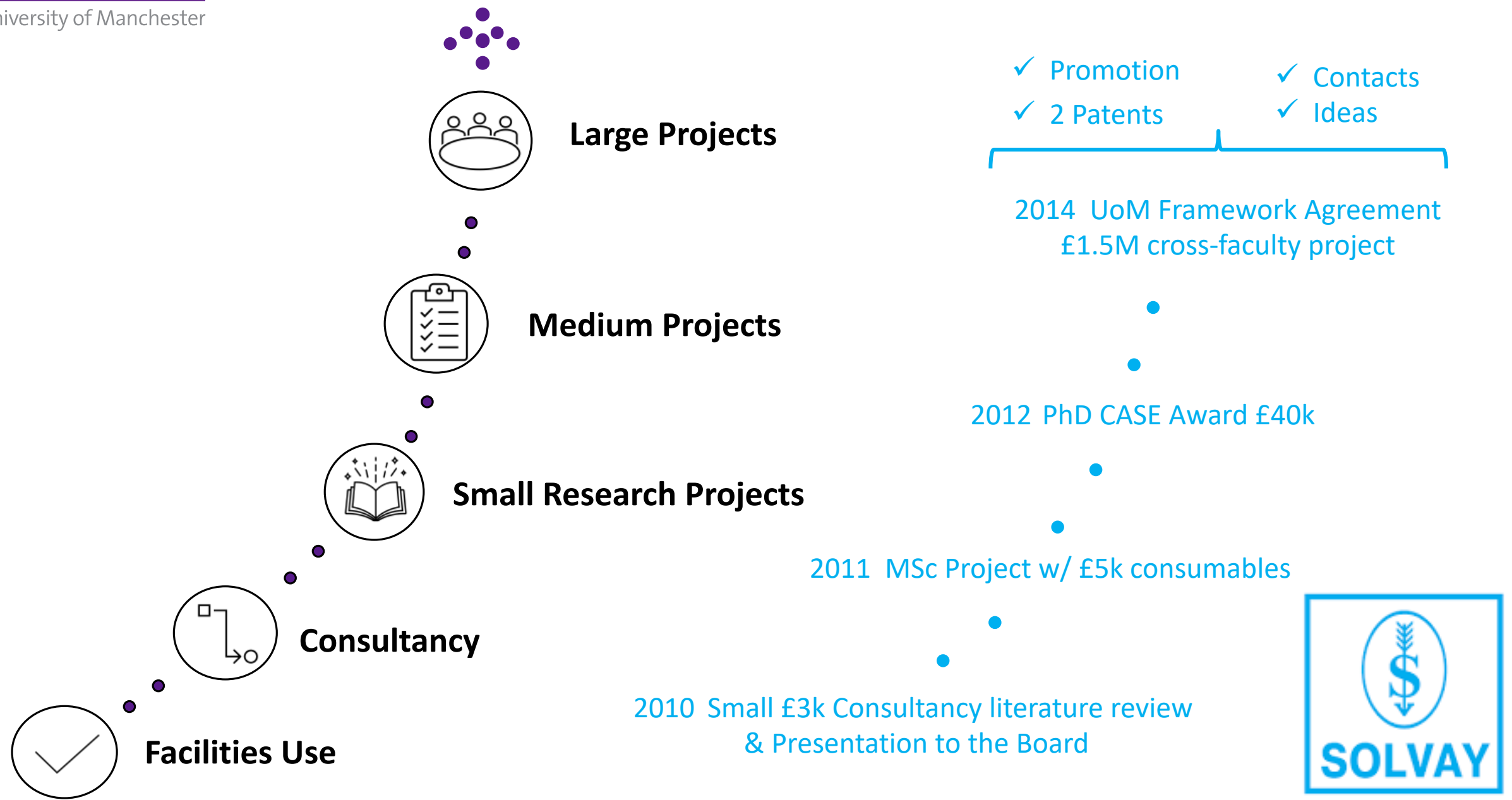
www.polymersandpeptides.com



Industry Collaboration Ladder



Aline's Collaboration Ladder

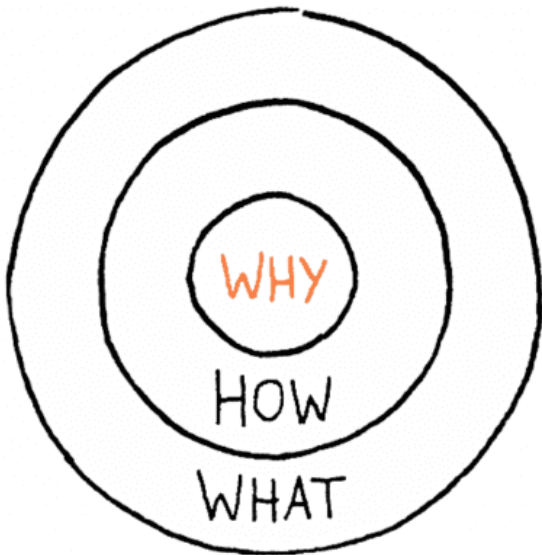


Commercialisation Reflections

- Motivations:

- Increasing requests from interested groups
- Promote wide use of the materials
- Personal development

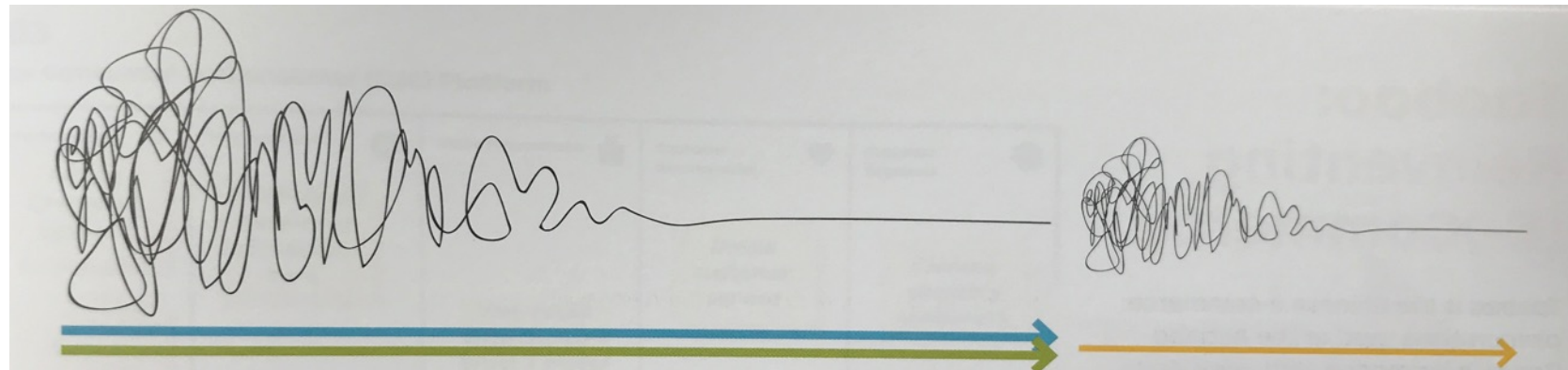
- The Ideal

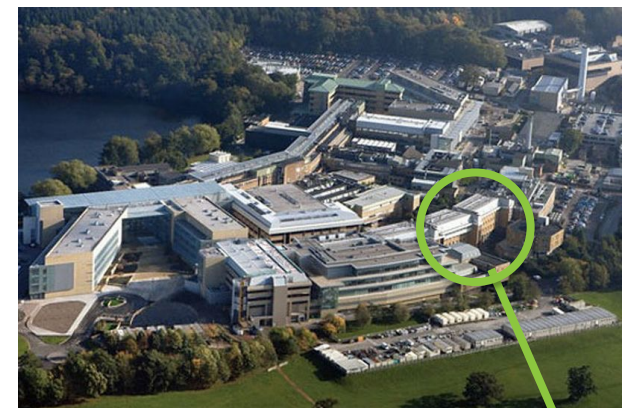


- Challenges

- Mindset shift from academia to business
- (Funding)
- Building the team

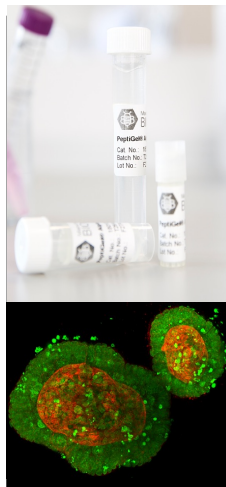
- The Reality !!!!





Alpha
PeptiGels®
launched

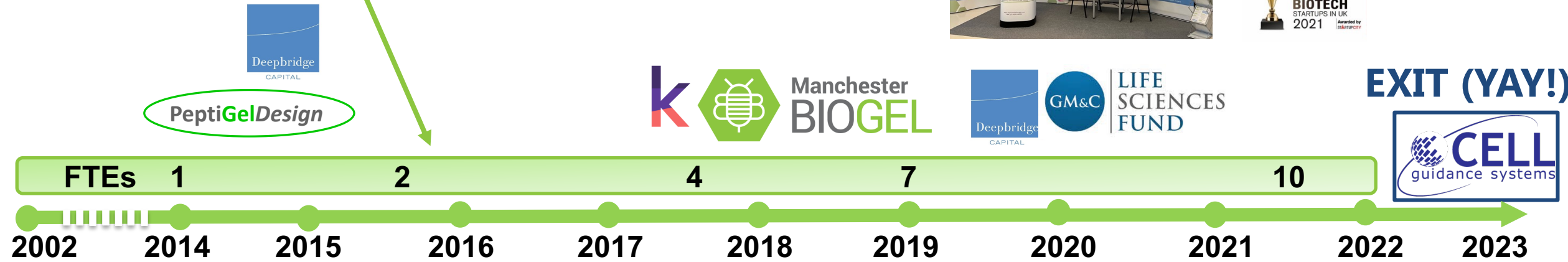
Open lab &
office
Alderley Park,
Cheshire.



Launch
Functionalise
d PeptiGels®
& Peptilinks®



EXIT (YAY!)



Materials platform technology developed

MANCHESTER
1824
The University of Manchester

IP & know-how licensed

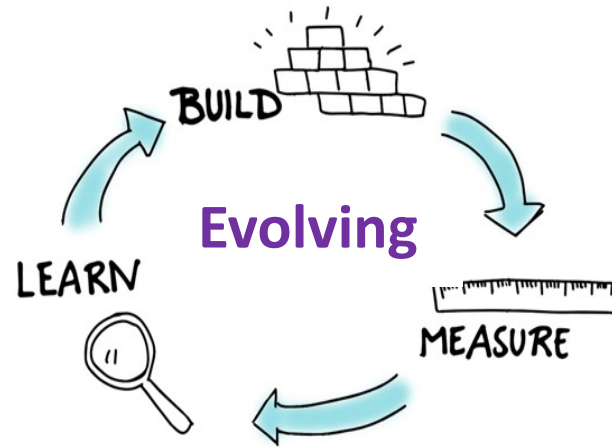
2 clinical projects

PDRA

10 PhD studentships

InnovateUK KTP &
other projects

- Reinvented myself:



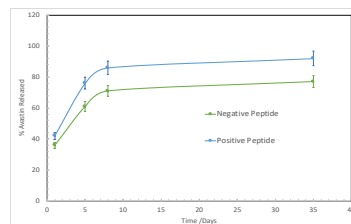
Commercialisation Reflections



- Opened up opportunities



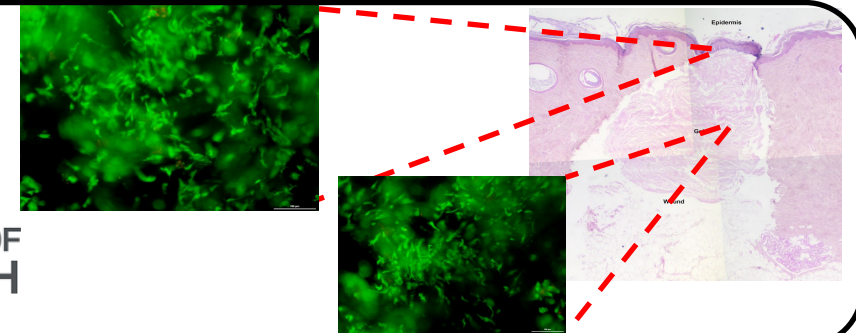
Ophthalmic Drug Delivery



Age-related macular degeneration to affect 77 million Europeans by 2050

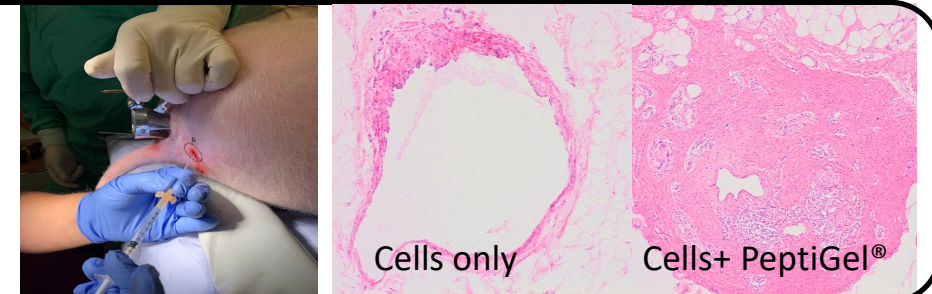
12th November 2019

Wound healing



Anal Fistula Regeneration

curileum
discovery



RESEARCHER **TO** INNOVATOR

Researcher to Innovator (R2I) Bootcamp

Enables research students, PDRAs and early career researchers to explore opportunities in commercialisation and equip them with strategies to take their ideas forward

- Semester 1: October 2023 - February 2024
- Semester 2: March 2024 - June 2024

SCAN THE QR
CODE FOR MORE
INFORMATION >

