



Health
Innovation
Manchester

GREATER MANCHESTER & EASTERN CHESHIRE

RESEARCH AND INNOVATION SHOWCASE 2018



European Union

European Regional
Development Fund

Housekeeping

- No alarm tests are scheduled. In case you hear an alarm please proceed to an Exit
- Please remember to switch your phones on to the silent mode
- Wi-Fi connection: Alderley Park CC
- #GMResearchShowcase
- Feedback is important

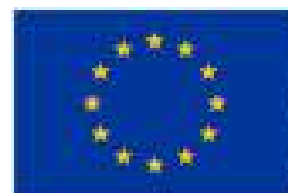
Aims

- ERDF NHS Business Support SME Engagement
- Foster NHS/Industry/Academic Collaborations
- Showcase GM & CE Assets

Next Business Support Events



Cheshire & Warrington



European Union

European Regional
Development Fund

2018 September	2018 October	2018 November	2018 December	2019 January	2019 February
NHS Procurement Business Breakfast 20 th Sept @ Northwich Memorial Court	Adoption and Spread of Innovation in the NHS 2 nd October @ Alderley Park	Patient Safety and Patient and Public Involvement (Date TBC) @ Alderley Park		Ask the NHS Buyer (TBC)	Greater Manchester Research and Innovation Assets (TBC)

[LINK](#)

[LINK](#)

Agenda (1)

13:00 - 13:05	Welcome – Aims and objectives of the event. Daniel Zamora, Commercial Programme Manager, Health Innovation Manchester
13:05 - 13:20	Health Innovation Manchester's role in fostering collaborations between the NHS, Academia, Industry and other sectors. Dr. Lloyd Gregory, Director of Strategy and Academic Partnerships, Health innovation Manchester
13:20 - 13:25	Alderley Park Site Regeneration Project Dr. Chris Doherty, Managing Director, Alderley Park

Agenda (2)

Showcasing Academic Assets

Chaired by Lloyd Gregory, Director of Strategy and Academic Partnerships, Health Innovation Manchester.

13:25 - 13:35	Our Key Research & Innovation Assets: Manchester Metropolitan University Professor Rebecca Lawthorn, Professor of Community Psychology, Manchester Metropolitan University.
13:35 - 13:45	Our Key Research & Innovation Assets: University of Manchester Professor Prof Paul A Townsend, Associate Dean of Business Engagement, co-Director of Manchester Centre for Cellular Metabolism, Theme lead for Personalised Therapy and Professor of Molecular Cell Biology, University of Manchester
13:45 - 13:55	Our Key Research & Innovation Assets: University of Salford Professor Ben Light, Professor of Digital Society, University of Salford.



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Agenda (3)

Showcasing Academic Assets

Chaired by Lloyd Gregory, Director of Strategy and Academic Partnerships, Health Innovation Manchester.

13:55- 14:05	Industry Engagement Services: University of Manchester. Saqab Rasul, SME & KE Manager
14:05 - 14:15	Industry Engagement Services: Manchester Metropolitan University Jane Jones, Enterprise Fellow, Manchester Metropolitan University
14:15 – 14:30	Panel Questions & Answers Session Chaired by Dr. Lloyd Gregory,



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Agenda (4)

NHS and Industry Engagement

Chaired by Dr. Richard Deed, Associate Director for Industry, Health Innovation Manchester.

14:40 - 14:50	Research and Innovation at Manchester University NHS Foundation Trust Alison Robinson, Divisional Research Manager, Manchester University NHS Foundation Trust
14:50 - 15:00	Research and Innovation at Northern Care Alliance NHS Group Natalie Garratt, R&D Lead, Northern Care Alliance NHS Group
15:00 - 15:10	Research and Innovation at Greater Manchester Mental Health NHS Foundation Trust Sarah Leo, Head of Research & Innovation Office, Greater Manchester Mental Health NHS Foundation Trust



European Union

European Regional
Development Fund

Agenda (5)

NHS and Industry Engagement

Chaired by Dr. Richard Deed, Associate Director for Industry, Health Innovation Manchester.

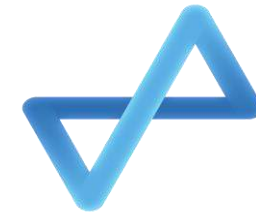
15:10 - 15:20	Research and Innovation at The Christie NHS Foundation Trust Elaine Blowers, Lead Cancer Research Nurse/Operational Director, the National Institute for Health Research Manchester Clinical Research Facility at The Christie NHS Foundation Trust
15:20 - 15:30	Opportunities for Collaboration, Medicines Discovery Catapult Nicola Heron, Head of Collaborative R&D, Medicines Discovery Catapult
15:30 - 15:40	SME Perspective on NHS/Industry/Academia collaborations Dr. Richard Deed, Associate Director for Industry, Health Innovation Manchester and Technology Director for TRUSTECH – NHS Innovation Service
15:40 - 15:55	Panel Questions & Answers Session Chaired by Dr. Richard Deed

Agenda (6)

15:55 - 16:00	Closing remarks Daniel Zamora
16:00 - 16:30	Networking in the Marketplace
16:30	Close

Health Innovation Manchester's role in fostering collaborations between the NHS, Academia, Industry and other sectors.

Dr. Lloyd Gregory
Director of Strategy and Academic Partnerships
Health innovation Manchester



Health
Innovation
Manchester

Health Innovation Manchester

Lloyd Gregory PhD



Discovering



Developing



Delivering

Our Academic Health Science and Innovation System

Rich Picture Animation



Discovering



Developing



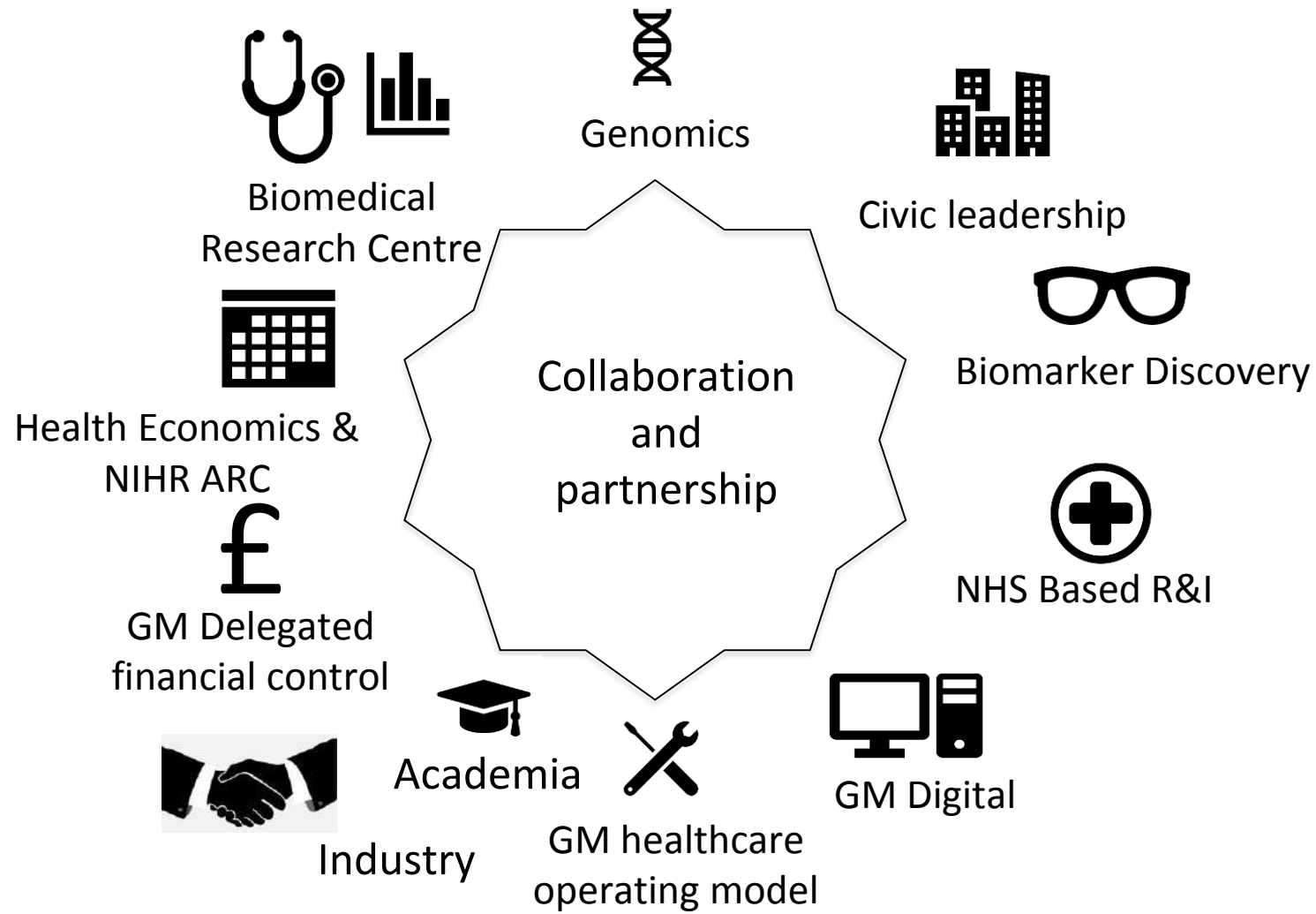
Delivering



Health
Innovation
Manchester



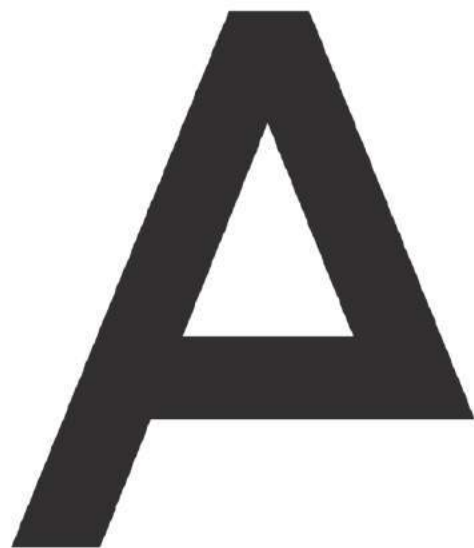
GM R&I Assets





Alderley Park Site Regeneration Project

Dr. Chris Doherty
Managing Director
Alderley Park



ALDERLEY PARK

53° 16' 46" N 002° 14' 12" W

SPORTS
PITCHES

NO.15 COMMERCIAL
OFFICE SPACE

RESIDENTIAL

RESTAURANT
& FARM SHOP

An MSP campus
MSP MANCHESTER
SCIENCE
PARTNERSHIPS
**MERESIDE
CAMPUS**

CONFERENCE
CENTRE

RESTAURANT

PARKLANDS

VILLAGE

CAFE

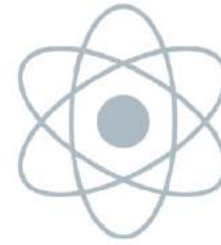
FARM

ALDERLEY PARK

53° 16' 46" N 002° 14' 12" W

Thriving ecosystem

1M
sq ft
of state-of-the-art
labs



National
Institutions

Approx
2000
staff

Unique
science
services

Business
Incubator

200
companies

2
venture
funds



International
collaboration

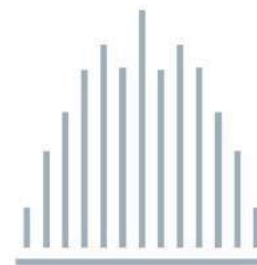
Networks



A Range of Science Services

HIGH FIELD NMR

- 700/500 MHz



WALK UP MASS SPEC

BIOBANKING *Facility*

OPEN ACCESS LAB

IMAGING & ONCOLOGY SERVICE



LAB SERVICES

*Fume hoods, tissue hoods, pure and ultrapure water,
critical process monitoring, waste management,
cold storage, logistics, sterilisations services*

Funding
STRATEGY
advice

Business
plan
SUPPORT

Business
WORKSHOPS

8 PERSON
dedicated
free-access
team

10 week
DEVELOP
programme

SCALING
programme

6 month
GROWTH
reviews

On site
VENTURE
Funds

2 DAY
boot camps
for
start ups

MENTOR
matching

CEO
NETWORKING

A dirt path winds through a lush green forest. Sunlight filters through the dense canopy of trees, creating dappled light on the path and the surrounding grass. The path is flanked by vibrant green grass and thick foliage. In the distance, a wooden fence is visible through the trees.

THANK YOU

Showcasing Academic Assets

Chaired by Dr. Lloyd Gregory

Our Key Research & Innovation Assets: Manchester Metropolitan University

Professor Rebecca Lawthorn
Professor of Community Psychology
Manchester Metropolitan University



Manchester Metropolitan University

Supporting your business

With research and innovation in Healthcare



Manchester Metropolitan University

We offer world-leading expertise, research and innovation

Preparing our workforce for today, future proofing for tomorrow

You can **access** our research and work with us through:

- Knowledge Transfer Partnerships
- Contract and collaborative research
- Consultancy



Academic Excellence

- No. 1 '**modern**' university for the power research in Allied Health (source: REF2014 data)
- **85% of the impact** of our research is rated world-leading and internationally excellent (source: REF2014 data)
- 2nd in the UK for the volume of **KTP Associates** (source: Innovate UK)
- **18th** for Education research (source: 2018 Complete University Guide)
- One of the **best young global** Universities (Times Higher World University Rankings 2017)



Collaborate, innovate, develop

We deliver **Research with impact**

From the highly skilled clinicians and practitioners who will carry our **health and social care system** forward to the country's brightest sporting stars, we are training the workforces making the **difference** to our world.

Apply the expertise of our newly developed **University Centres for Research and Knowledge Exchange** to your business

Much of our work is aligned with **UK's Industrial Strategy**, particularly around healthy ageing



Shaping our world

- Our current focus lies in **three** main areas
 - Bioscience
 - Health, Psychology and Communities
 - Musculoskeletal Science and Sports Medicine





Bioscience

Addressing three of the **greatest** burdens on UK health

Researchers in this discipline are tackling:

- Stroke and age-related decline
- Infectious disease
- Cardiovascular disease

mmu.ac.uk/bioscience





Health, Psychology and Communities

Our academics are producing **cutting-edge research** on :

- Applied Psychology and Behaviour Change
- Communication Disability
- Musculoskeletal Rehabilitation
- Developing Thriving Communities
- Ageing and Long-Term Conditions
- Substance Use and Addictive Behaviours





Quantitative Data Analysis

We provide **expertise** in quantitative data analysis, specifically:

- Psychometric assessment and evaluation
- Quantitative data analysis

We can **support you** as an SME to:

- Review the design of studies and experiments
- Recommend the use of statistics
- Provide advice on data visualisation and presentations
- Identify best practices for data management prior to the start of data collection
- Draw reliable and evidence based conclusions from data



Healthy Ageing and Sustainable Communities

- Our approach to promoting health behaviours focuses on **individualisation**
- Helping smokers to quit for good by **using facial ageing** software
- We are the **academic partner** for the Care England **Teaching Care Homes** project
- End of life care for people with **substance use** issues and addictions



Musculoskeletal Science and Sports Medicine

Academics are producing **world-leading research** to understand important mechanisms that control **human movement**.

Our researchers have specialisms in:

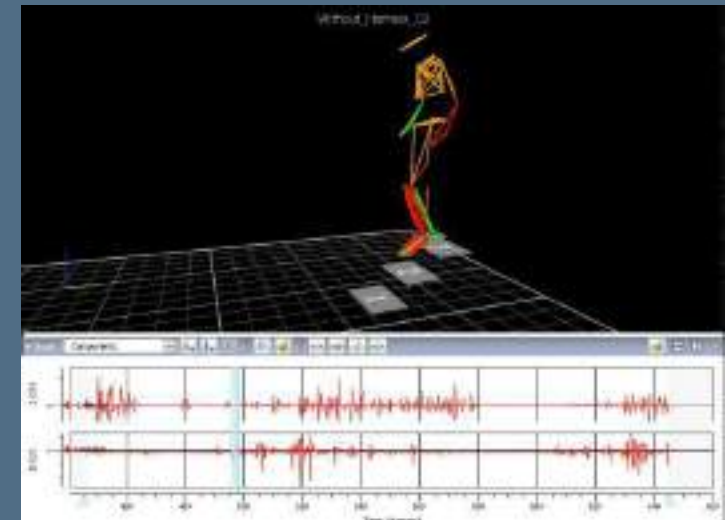
- Movement impairment
- Musculoskeletal function in health and ageing
- Sports medicine and elite performance





Movement Impairment

- Human Movement Analysis
 - Gait analysis in clinical populations
 - Ageing / Frailty
 - Diabetes / dystonia / osteoarthritis
 - Parkinsons / Stroke / Cerebral Palsy





Musculoskeletal Function in Health & Ageing

- Diabetes research
 - Unsteadiness & falls
 - Foot mechanics & pathology
 - Multi-disciplinary approach
 - Computer vision algorithms,
 - Supervised deep learning

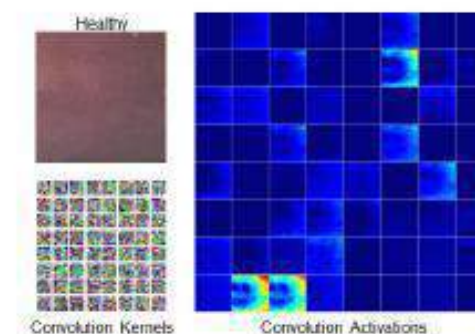
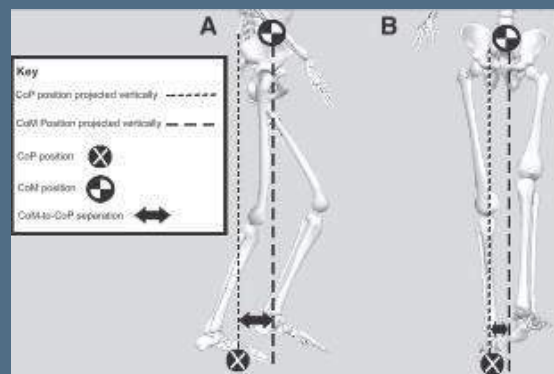


Fig. 8. The healthy skin raw input, convolution kernels and convolution activations of DFUNet.

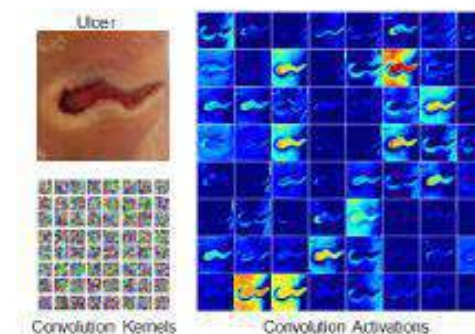
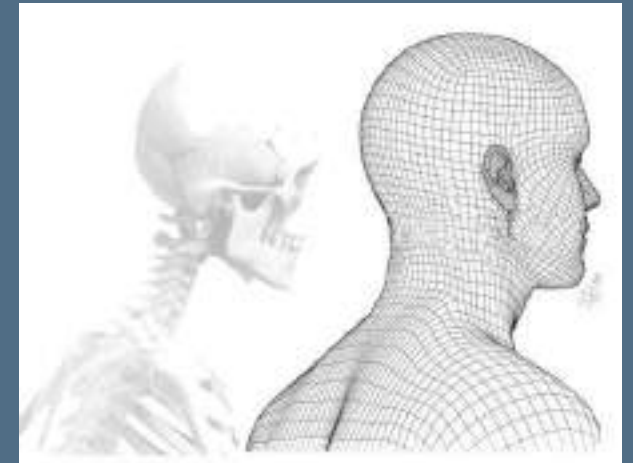


Fig. 9. The diabetic ulcer skin raw input, convolution kernels and convolution activations of DFUNet.



Sports Medicine and Elite Performance

- Musculoskeletal Imaging
- Appatella
- Diagnosing patellofemoral knee pain
- Preventing and predicting injury
- Myositis





PrintCity

3D · Innovate · Educate · Collaborate

PrintCity Medical Work

Using technology to save lives

Surgical planning – Maxillofacial surgical planning aids.



PrintCity Medical Work

Infant Prostheses

Growing reputation for creating unique prosthetic healthcare solutions

Printing components for children born without limbs to enable a more active and independent life.



PrintCity Medical Work

We also create bespoke devices and solutions to other clinical and lifestyle issues

Bespoke 3D printed shoes, orthotics

Specialist spinal beds, supporting after surgery and enabling rehabilitation

3D printed trachea and anatomical models



Professor Rebecca Lawthom | Professor of Community Psychology & Head of Health, Psychology and Communities Research Centre

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Clare O'Neill | Senior Business Development Manager

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Our Key Research & Innovation Assets: University of Manchester

Professor Paul A Townsend
Associate Dean for Business Engagement
Research and Innovation
University of Manchester

The University of Manchester Faculty of Biology, Medicine and Health

Professor Paul A. Townsend

Associate Dean for Business Engagement, Research and Innovation

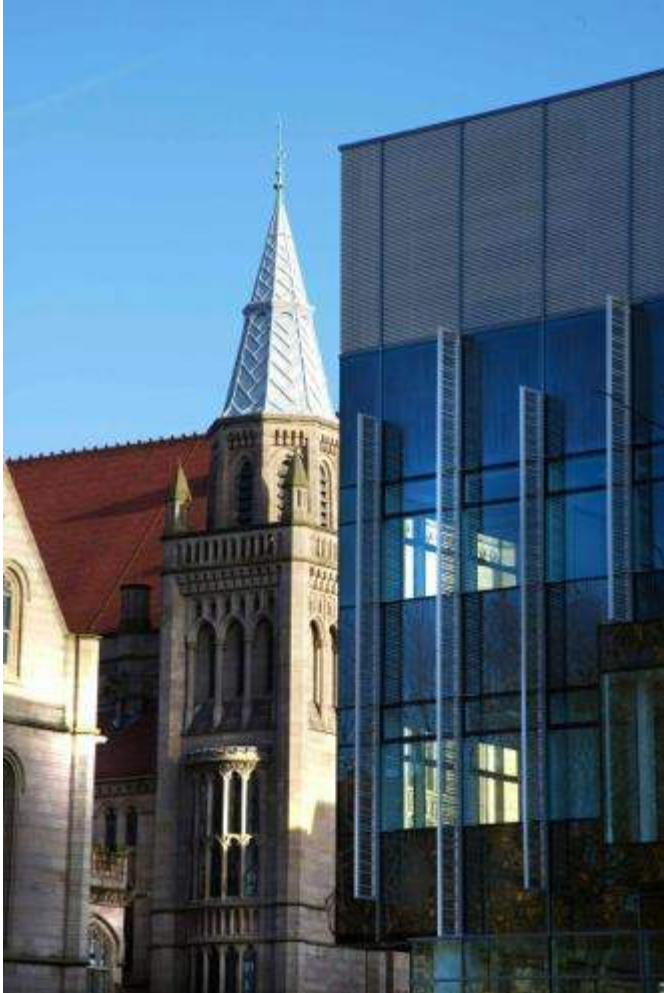


The University of Manchester

- Over 38,000 students, 12,000 international students
- Research and teaching in all major subjects
- Over 250,000 alumni world-wide
- >£845m income
- >£1bn campus investment
- Each year we welcome more international students than any other UK university
- Year on year elevation in global academic & esteem rankings



The University of Manchester



- Almost 6,000 research and academic staff in three Faculties:
 - Faculty of Biology, Medicine and Health
 - Faculty of Humanities
 - Faculty of Science and Engineering
- 5 research beacons: pioneering discoveries, interdisciplinary collaboration and cross-sector partnerships to address some of the global challenges:
 - Addressing global inequalities
 - Advanced Materials
 - Cancer
 - Energy
 - Industrial biotechnology

Faculty of Biology, Medicine and Health

- Created on 1 August 2016
- Merger of the Faculty of Life Sciences and the Faculty of Medical and Human Sciences
- More integrated structure
- Greater focus in key areas of research, teaching and learning
- Interdisciplinary working enabling us to learn from each other and share best practice
- Translational approach - from discovery science to clinical application and patient care

three schools

- School of Biological Sciences
- School of Medical Sciences
- School of Health Sciences

8 strategic
research
domains

>£300m
annual budget

£122m
annual research income

3,200 staff

11,000
students

34 undergraduate
taught
programmes

QS World University Rankings

University of Manchester 29th



Life Sciences & Medicine 35th

Subject	World ranking 2018	UK ranking 2018
Nursing	3	1
Dentistry	22	4
Anatomy & physiology	15	4
Pharmacy & pharmacology	16	6
Biological sciences	50	7
Medicine	41	9
Psychology	47	10

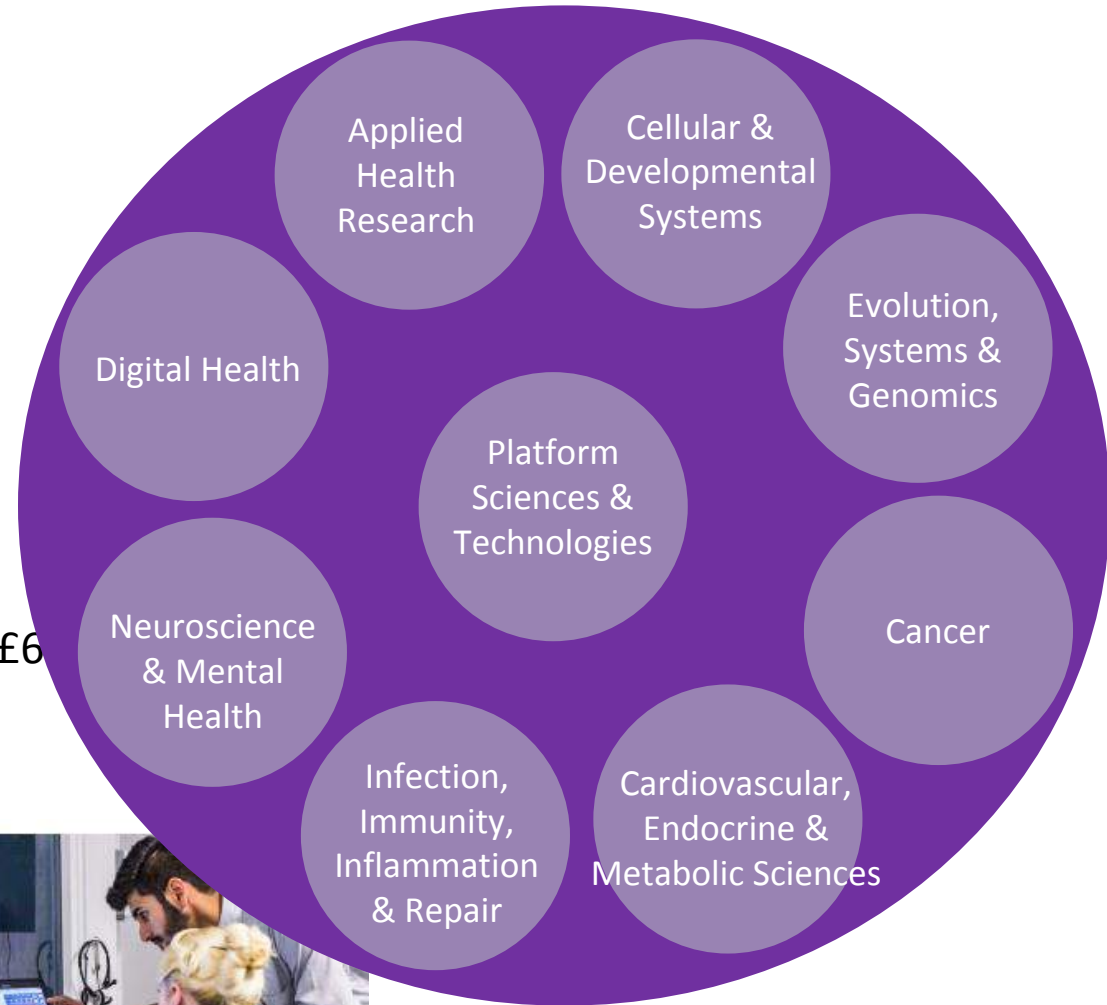
Our research vision

undertake world-class discovery science,
develop effective clinical translation,
facilitate implementation of advances in healthcare
for the benefit of society in Manchester, the UK and across the globe



Our strategic research domains

- Drive large-scale interdisciplinary research projects and collaborative working
- Support staff to deliver innovative, world-leading research
- Aligned closely to the strategic priorities of our partners
- Exploit opportunities presented by £6 billion devolved health and social care budget (DevoManc)



Cellular & Developmental Systems

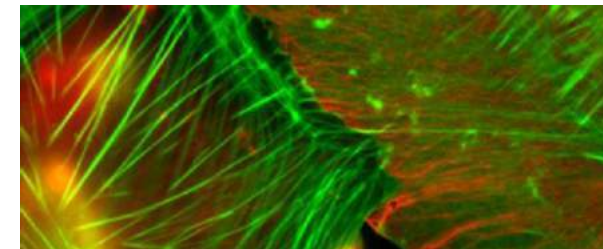
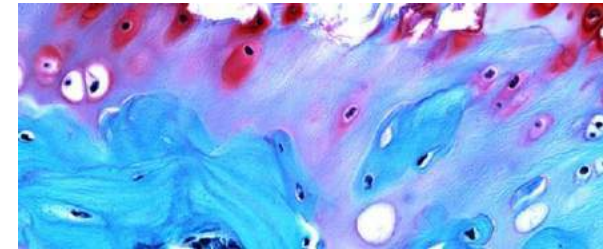
Wellcome Centre for Cell-Matrix Research

- Immuno matrix
- Mechano matrix
- Chrono matrix

- Biological timing
- Development & disease
- Gene expression, chromatin & signalling
- Cell dynamics
- Regenerative medicine

Opportunity

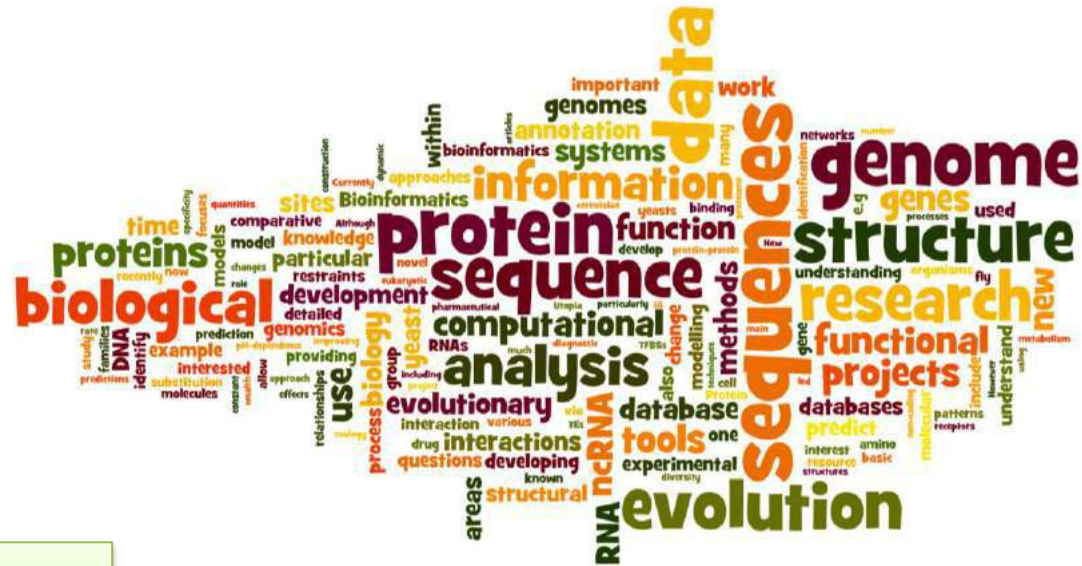
- Quantitative & dynamic biology



Evolution, Systems & Genomics

Manchester Centre for Genomic Medicine – 100,000 genomes project

- Antimicrobial resistance
- Bioinformatics
- Evolutionary biology
- Metagenomes
- Modelling
- Molecular epidemiology
- Organismal behaviour
- Protein structure evolution



Opportunities

- Computational biology
- Genomics

Cancer

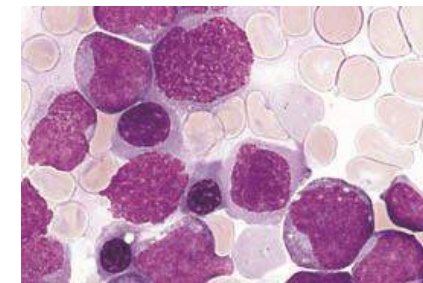
- Cancer Research UK (CRUK) Major Centre
- Christie Hospital
- Manchester Cancer Research Centre (MCRC)
- CRUK Lung Cancer Centre of Excellence
- Movember Centre of Excellence in Prostate Cancer



Biomedical Research Centre

- Cancer prevention & early detection
- Advanced radiotherapy (incl. proton beam therapy)
- Cancer precision medicine

- Lung
- Melanoma
- Prostate
- Ovarian
- Breast
- Haematological



Opportunities

- Cancer immunology - PED
- Neuro-oncology -

Cardiovascular, Endocrine & Metabolic Sciences

Cardiovascular medicine and science

- Hypertension
- Cardiac physiology
- Human genetics of cardiovascular disease

Endocrinology and metabolism

- Metabolic and endocrine disease
- Gut-brain interactions
- Genetic circuits involved in development

Opportunity

- Biological clocks



Infection, Immunity, Inflammation & Repair

- Manchester Collaborative Centre for Inflammation Research (MCCIR)
- Manchester Fungal Infection Group: global leaders on aspergillosis
- Arthritis Research UK centres: Genetics & Genomics, Epidemiology

Biomedical Research Centre

- Dermatology
- Musculoskeletal
- Respiratory medicine



- Chronic inflammatory diseases: musculoskeletal, dermatology, respiratory
- Explorative immunology across the life course
- Regenerative medicine, incl. matrix biology
- Infection: mycology, bacteriology & parasite immunology

Opportunities

- Precision medicine for immune-mediated inflammatory diseases
- Cancer immunology
- Chronic wounds

Neuroscience & Mental Health

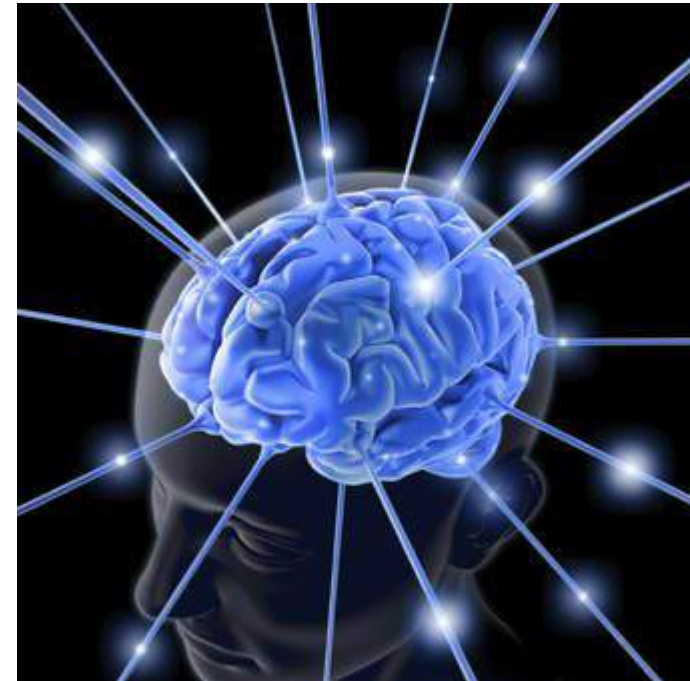
ESRC International Centre for Language and Communication Development

Biomedical Research Centre

- Hearing health
- Cognitive neuroscience
- Language
- Communication & hearing
- Mental health
- Neurodegeneration
- Stroke
- Systems & computational neuroscience
- Vision research

Opportunities

- Neuro oncology
- Neurovascular diseases



Digital health

- MRC Health e-Research Centre (HeRC)
- DoH Connected Health Cities

- risk prediction
- endophenotype discovery
- primary care databases
- remote monitoring
- text mining
- image analysis
- advanced analytics
- learning health systems

Opportunity
- Early detection



Applied Health Research

- NIHR Patient Safety Centre
- NIHR Clinical Research Facility
- Clinical Trials Unit
- NIHR Collaboration for Leadership in Applied Health Research (CLARHC)

Opportunity

- Minimising health inequalities

- Evidence synthesis
- Health economics research
- Patient & public involvement & engagement (PPIE)
- Clinical trials
- Epidemiology
- Biostatistics
- Qualitative



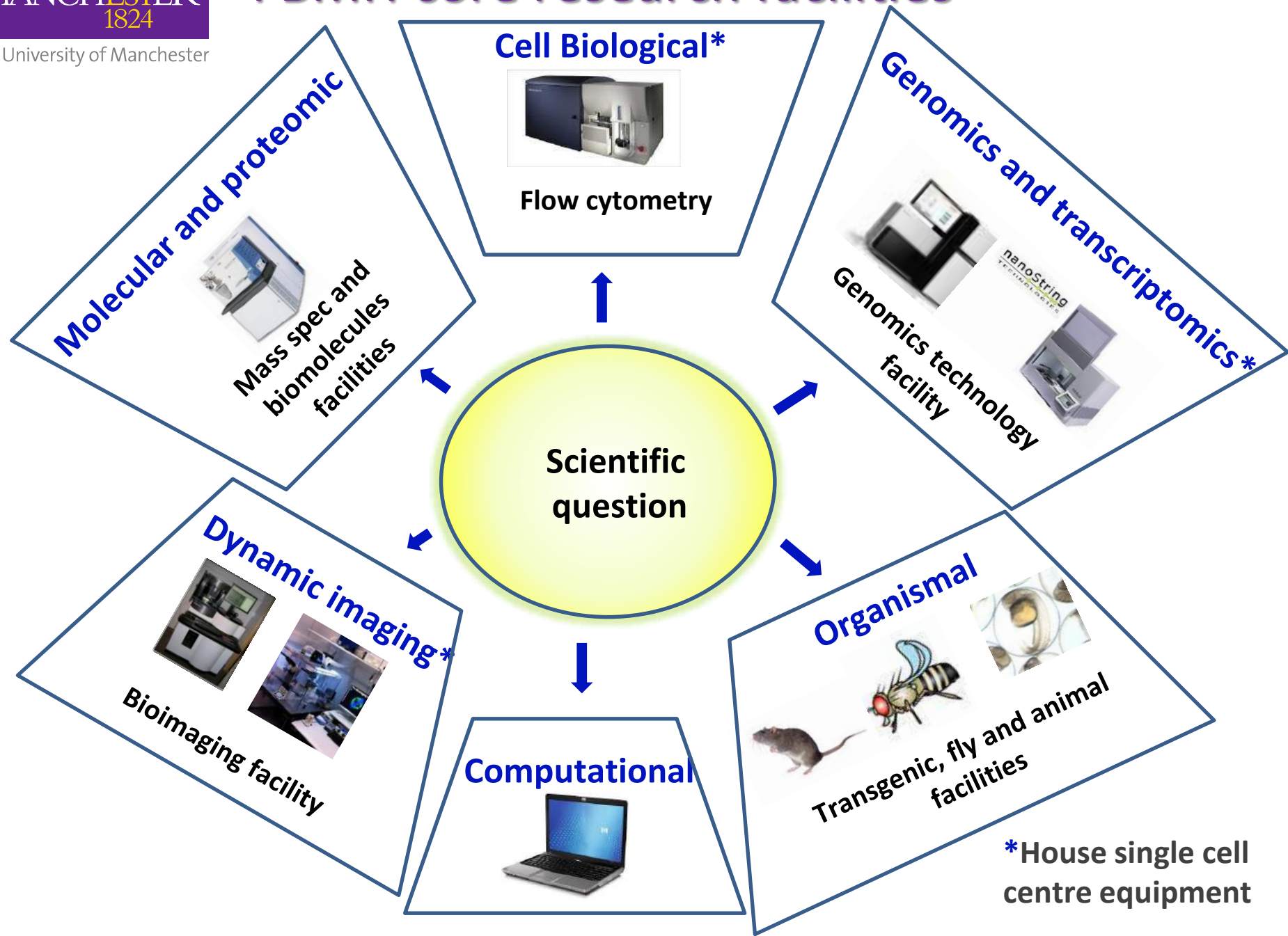
Platform Sciences & Technology - cross-cutting approaches

- **Advanced materials** – use of advanced materials (incl. graphene) and engineering for biomarkers, targeted delivery, medical devices, sensors, diagnostics, nanomedicines
- **Imaging technologies** – creating a link between bioimaging & medical imaging, imaging analysis linking with big data, imaging software development
- **Precision medicine** – integration of e-health- & bio-informatics data, systems medicine, biostatistics - translate clinical genomic & proteomic data into platforms for personalised medicine

- National Graphene Institute
- Graphene Engineering Innovation Centre
- Sir Henry Royce Institute for Advanced Materials



FBMH core research facilities



MANCHESTER
1824

The University of Manchester

Greater Manchester innovation ecosystem for translational medicine



**Population
Benefit**

**Wider
Economic Gain**

**Greater Manchester
Devolution**

**Health Innovation
Manchester**

**Manchester
Academic
Health Science
Centre**

**Manchester
Biomedical
Research
Centre**

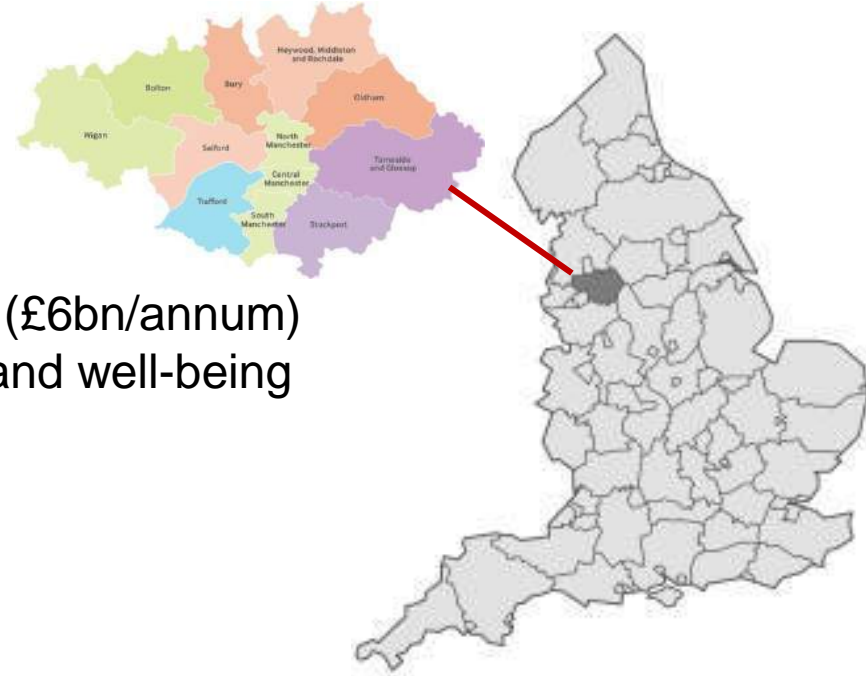
**Research
Power**

NHS
**Translational
Excellence**

Greater Manchester

A Devolved Health and Social Care System

- 2nd largest UK conurbation
 - 3m ethnically diverse population
 - High levels of social deprivation
 - Poor health outcomes
- Integrated Health and Social Care budget (£6bn/annum)
 - Deliver rapid improvements in health and well-being
- Trust / University Partnership
 - Federated with four other NHS Trusts
- Access to a defined population
 - Governance arrangements in place
- Drive innovations into healthcare at pace and scale
 - Exemplar for wider NHS
- An agile system
 - Influence NHS procurement



Thank you



Our Key Research & Innovation Assets: University of Salford

Professor Ben Light
Professor of Digital Society
University of Salford

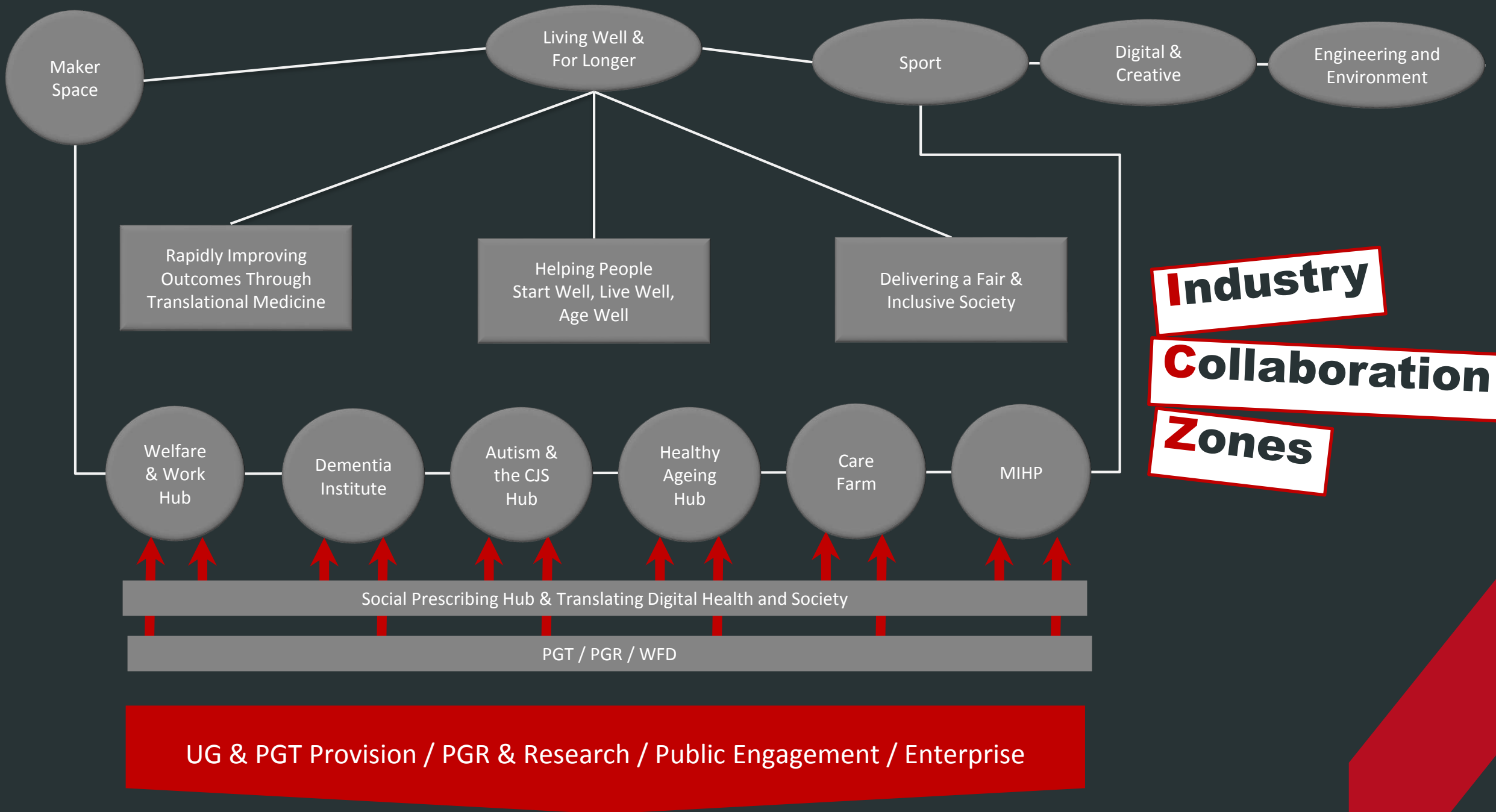


University of
Salford
MANCHESTER

Professor Ben Light **Associate Dean – Research**

School of Health and Society
@doggyb / b.light@salford.ac.uk







Translational Digital Health and Society

AI and Robotics /
Wearables and IoT /
Apps and Mobiles /
Big Data / Digital Public
Health / Digital Literacies



University of
Salford
MANCHESTER

Big Data, Digital Methods and Social Media Analytics Services
Clinical Gait Analysis Service
Counselling and Psychotherapy Suites
Digital Imaging Suite
Energy House
Exercise Physiology Testing Service
Human Performance Lab and Strength and Conditioning Suite
Immersion Simulation Room
Podiatry Clinic
Prosthetics and Orthotics Laboratory
Psychology Laboratories
Rehabilitation Flat
Running Performance Clinic
Simulation Suites with Sim Mannequins
Smart Flat
Sports Injury Clinic
Wellness Works



University of
Salford
MANCHESTER



University of
Salford
MANCHESTER

Professor Ben Light **Associate Dean – Research**

School of Health and Society
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Industry Engagement Services: University of Manchester

Saqab Rasul
SME & KE Manager
University of Manchester



The Univer



The University of Manchester



Working with Industry

Projects

- Contract research
- Collaborative/ interdisciplinary research
- Knowledge Exchange/ Jointly leveraged external funding
- PhD Sponsorship
- Post Doc

Facilities

- Service Provision
- Sharing of specialised kit & facilities
- Interactions with centres & institutes
- Innovation hubs & centres

Consultancy

- Specialist opinion
- Technical/ professional advice
- Expert witness services
- Scientific advisory boards

Training

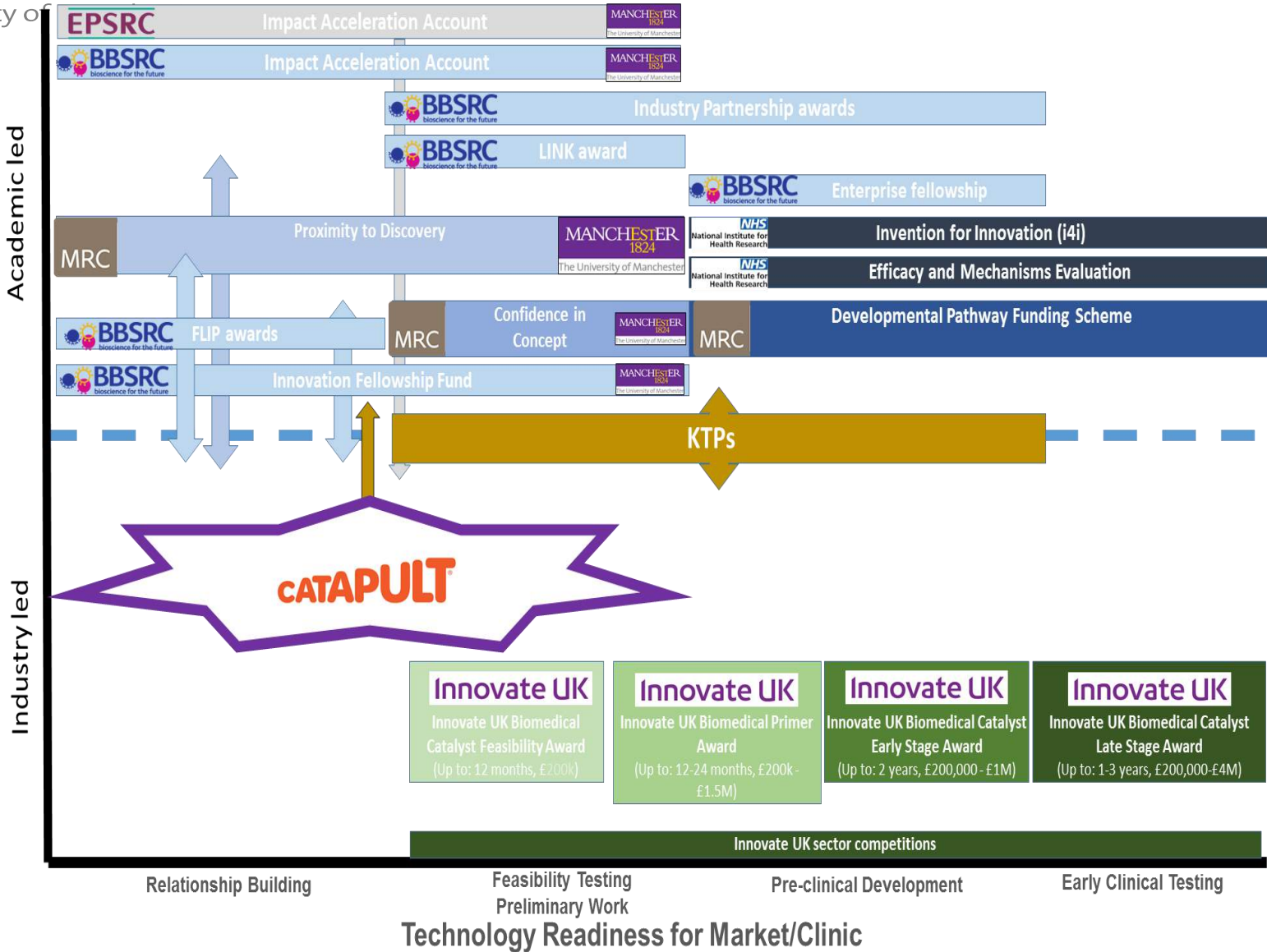
- Masters courses
- CPD
- Executive training
- Doctoral Training
- Tailored bespoke training courses

People

- Recruitment/ Student placements/ Internships
- Staff exchanges/ Secondments/ Industrial fellowships
- Joint appointments
- Sponsored appointments/ endowments
- Industrial input into teaching

Commercialisation & Incubation- UMI³

- IP sharing/ development
- Licensing
- Co-managed funds
- Spin outs
- Incubators



Succinctly.....

KTP is an opportunity for Businesses to access innovation from expertise in the UK Universities (the knowledge base) and to embed it in their business for long term benefit.

It is all about **transforming** businesses through the application of **knowledge**

KTP is Europe's leading programme helping businesses to improve their **competitiveness, productivity and performance** through the better use of knowledge, technology and skills that are available within the UK knowledge base.

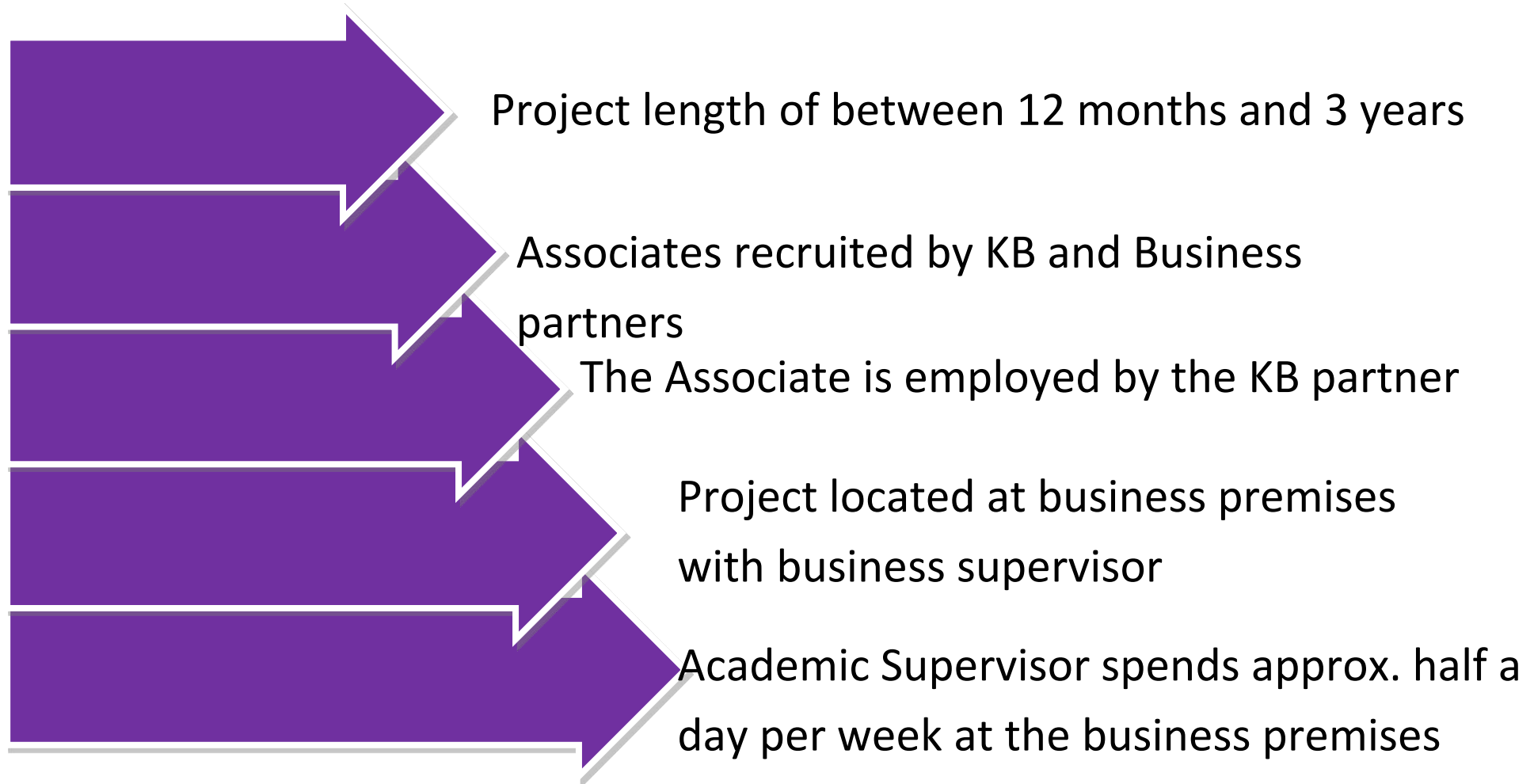
We are looking to fund **step changes in performance and capability** for companies with **vision**.

Step change...?



- Average business benefits per associate project
 - An increase of more than £1M in annual profits before tax
 - 3 new jobs created, in addition to associate
 - 31 additional staff trained
 - £265K invested in R&D
 - Increase in annual exports of £967k
- 67% grant funding for SME and 50% for large company – average costs £25k / year SMEs and £35k+ for large companies

Features of KTP – PARTNERSHIP



Partnership Benefits

Associate

Career development
Personal Development /Training
Enhanced employability

University

Enhanced knowledge
Publications/research
Teaching material
REF – Impact!

Business

New Knowledge/capability
Enhanced performance
and profitability



Example Projects

- Medical Devices – Silver technology to promote wound healing
- Nuclear Waste – Copper electroplating optimisation to meet high level specification
- Product Development – Use advanced engineering principles to improve understanding and improve product performance
- Allergy Testing – Develop, embed and exploit the next generation of soy allergen detection immunoassays
- Materials Capability – To create a capability for product development for wavy/frizzy hair

Ask questions today or contact us

Saq Rasul

SME & Knowledge Exchange Manager

Saqab.rasul@manchester.ac.uk

Dr Catherine Headley

Business Engagement Manager

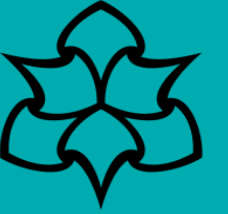
Catherine.headley@manchester.ac.uk

www.manchester.ac.uk/business/ke

<https://www.bmh.manchester.ac.uk/connect/business/>

Industry Engagement Services: Manchester Metropolitan University

Jane Jones
Enterprise Fellow Manchester
Metropolitan University



Greater Manchester and Eastern Cheshire Research
and Innovation Showcase

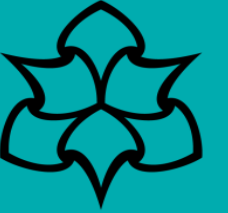
Industry Engagement Services

Jane Jones – Manchester Metropolitan University



What do you need?

- We want to grow our business but don't know how to start.
- We know our business needs to improve but we require the expertise to make it happen.
- We need to recruit excellent graduates to who are work ready.
- We want to upskill our talent with recognised qualifications.



We want to grow our business but don't know where to start

Fully funded business support in generic areas such as business growth and innovation.

Specialist support such as fuel cell innovation and cyber-security.

Combination of leading academics and people with industry experience.

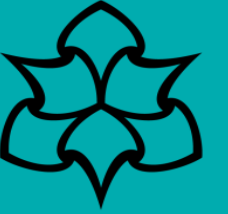


We know our business needs to improve but we require the expertise to make it happen

Practical application of theory - Knowledge Transfer Partnerships

Cutting-edge research - Sponsored PhD

Expert support in business critical areas – Consultancy and Contract Research

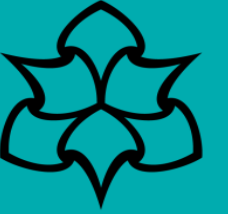


We need to recruit excellent graduates who are work ready

Grow your own talent – Degree Apprenticeships

Ensuring you know what you want before you recruit – Industry Placements

Help us help you – Mentoring, Presenting, Demonstrations etc



We want to upskill our talent with recognised qualifications

Part-time undergraduate and graduate programmes.

Online MBA (as well as full or part time).

Bespoke programmes using modular degree routes.

Embedded professional qualifications.



Panel Questions & Answers Session

BREAK

NHS and Industry Engagement

Chaired by Dr. Richard Deed

Research and Innovation at Manchester University NHS Foundation Trust

Alison Robinson
Divisional Research Manager
Manchester University NHS Foundation Trust

A pioneer in clinical research and innovation

Alison Robinson
Divisional Research Manager



Our vision

To improve the health and quality of life of our diverse population by building an organisation that:

- Excels in quality, safety, patient experience, research, innovation and teaching
- Attracts, develops and retains great people
- Is recognised internationally as a leading healthcare provider



Our Research and Innovation Division

**Our goal is to improve lives
by giving people the
opportunity to shape and
take part in clinical studies
and evaluations.**

**We provide clinical expertise at
every stage of healthcare
technology development.**

About MFT

One of the largest comprehensive healthcare campuses in Europe

UK's largest provider of healthcare*:

- Serving a population of 3 million patients
- The largest provider of specialist services in the UK
- >1.6bn Turnover



On 1 October 2017, Central Manchester University Hospitals NHS Foundation Trust (CMFT) and University Hospital of South Manchester NHS Foundation Trust are joined together under a new name, Manchester University NHS Foundation Trust

The University of Manchester

- Single largest-site university in the UK
- 35th globally and 5th in UK in worldwide academic ranking
- 29th in QS world rankings
- 5th in UK for research power
- Highest ranked university outside the South East
- Excellence in Materials Science
- Excellence in Cancer, Inflammatory disease, and Proteomics
- Faculty of Biology, Medicine & Health, largest of its kind in the UK covering all areas of biomedical and healthcare research
- Major role in UK health informatics and data science
- International leader in real world evidence trials
- 1st in the UK for total biomedical research income
- BBSRC/Innovate UK funding higher than any other centre

- Our main research partner
- Many staff hold joint contracts with the university



10 R&I principles

Our 10 principles govern how the Trust senior leadership set about shaping and empowering research and innovation (R&I).

The Trust:



Expects to be identifiable by national metrics as a leading healthcare provider that is driven by R&I with the goal of consistently **improving our rankings**.



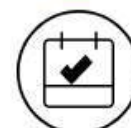
Wants to encourage wider, interdisciplinary working across Manchester and beyond that encourages research interactions with **the best not just the closest**.



Will encourage and facilitate R&I, and its growth **across the whole Trust**, mindful that activities in some specialties are more mature than others, both locally and nationally.



Expects to have **responsibility** for all phases of clinical trials involving patients on its campus, while not necessarily acting as sponsor.



Must operate within national **frameworks of governance** while making every effort to streamline processes to be as **efficient as possible**.



Will encourage **protected time** for research-active staff assessed by grant income and output metrics (scholarly or other). The Trust expects that commercial income and fully costed grant recovery are used as a major source to fund this research time.



Recognises the need for R&I infrastructure that facilitates **internationally** competitive activity (as measured by UK Research Council, Government and charity grant panels and by research output metrics).



Must be included in the **affiliation** address line for all outputs from Trust staff (substantive or honorary) for Trust support over research time and other awards.



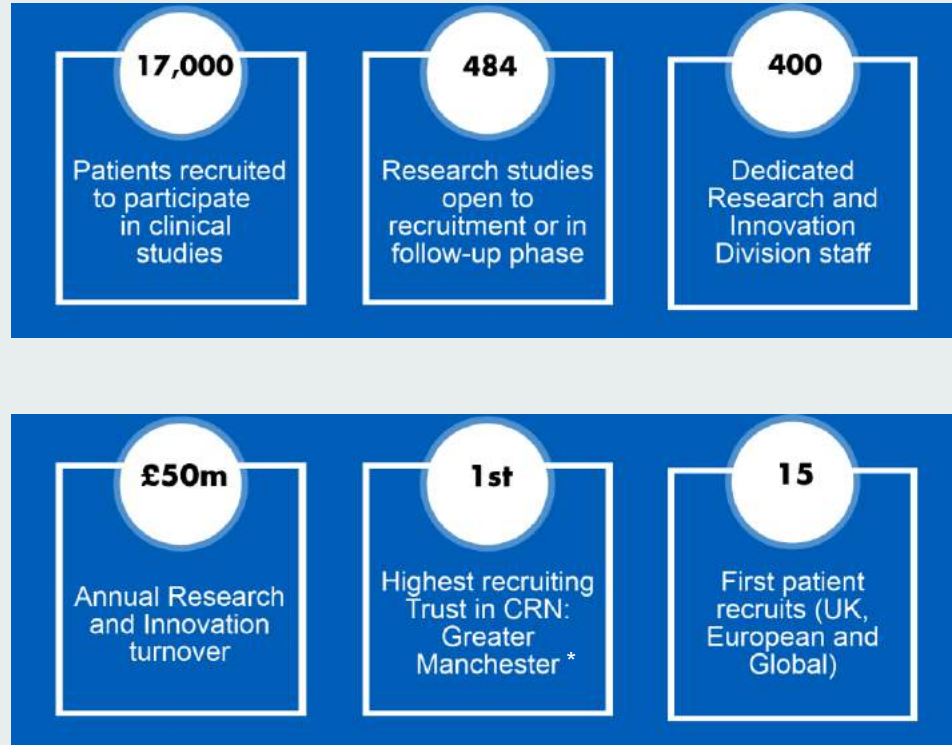
Wants to encourage **career development** of the next generation, especially on fully funded external fellowships, by close partnership with The University of Manchester.



Expects and welcomes its staff taking up positions of **national and international influence** in R&I, within the boundaries of being able to deliver appropriate clinical care.

This philosophy extends to other higher education bodies for relevant specialties (e.g. nursing, midwifery and allied health professionals) and to other Trusts where partnership working would be beneficial.

Impressive scale of operations



Initiation of studies



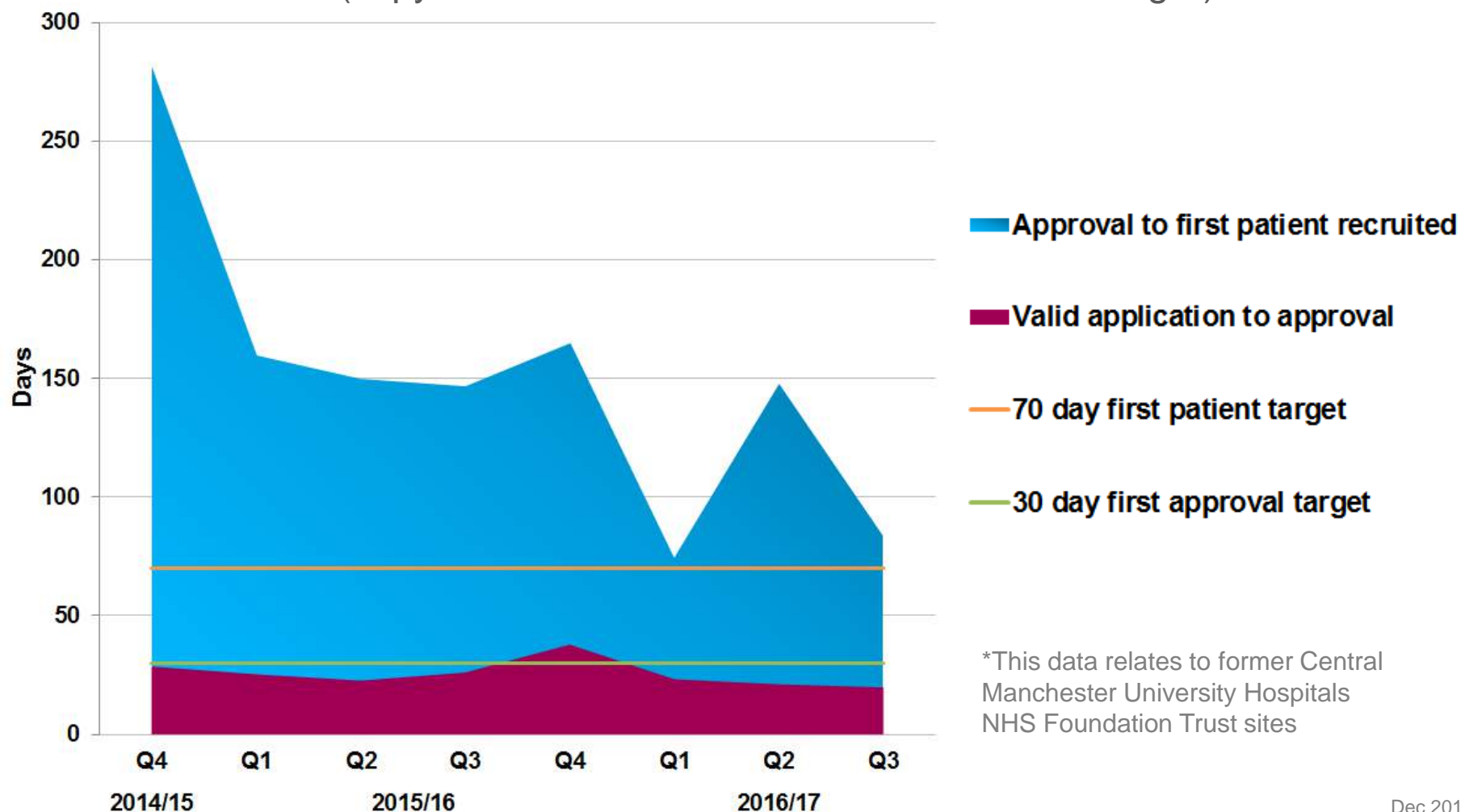
94%
Q4 2017/18

94% of our studies are consistently achieving the NHS benchmark of 70 days from a valid application to first patient recruited.

*Greater Manchester, including East Cheshire and East Lancashire
NIHR data 2017/18

Our commitment to you

Our study delivery* is efficient and we aim to return feasibility requests within 24 hours (copy in the relevant Divisional Research Manager)



Our hospitals

Manchester Royal Infirmary	Wythenshawe Hospital	Royal Manchester Children's Hospital	Manchester Royal Eye Hospital
Saint Mary's Hospital	University Dental Hospital of Manchester	Withington Community Hospital	Trafford General Hospital
Altrincham Hospital			



Diverse research interests

- We undertake research across most clinical specialities, from hospital to the home
- Greater Manchester is home to a stable and ethnically diverse patient population.



Our research is world leading

Specialities where Manchester is ranked within top 5 organisations for HCPs¹

NHS partner	The University of Manchester	
<ul style="list-style-type: none"> • Allergy • Andrology • Dentistry/oral surgery and medicine • Dermatology* • Oncology** • Ophthalmology • Otorhinolaryngology • Paediatrics • Reproductive biology • Respiratory system 	<ul style="list-style-type: none"> • Dentistry and oral surgery and medicine • Dermatology • Emergency medicine • Geriatrics and gerontology • Gerontology • Materials science, biomaterials • Nursing • Ophthalmology 	<ul style="list-style-type: none"> • Otorhinolaryngology • Physiology • Primary healthcare • Psychiatry • Psychology (clinical) • Psychology (multidisciplinary) • Psychology (psychoanalysis) • Rehabilitation • Respiratory system • Rheumatology • Social work

*Salford Royal NHS Foundation Trust; **The Christie NHS Foundation Trust

Open for business with industry

- We provide clinical expertise at every stage of healthcare technology development, inc. a robust test bed
- We understand how to adapt our approach to suit the full spectrum of industry partners from large internationals to SMEs



Opportunities to invest and collaborate in the development of innovative solutions with NHS Clinical Experts



Access to clinical trials expertise and facilities



Accommodation and support (Citylabs)

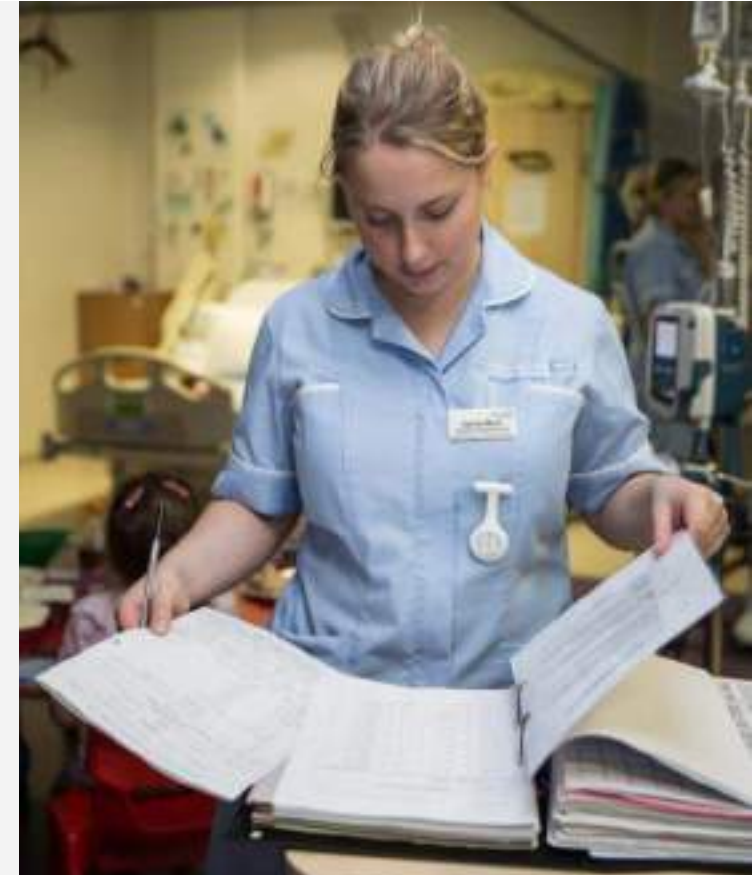


Test bed to accelerate the integration of new technologies into the NHS

From bench to bedside

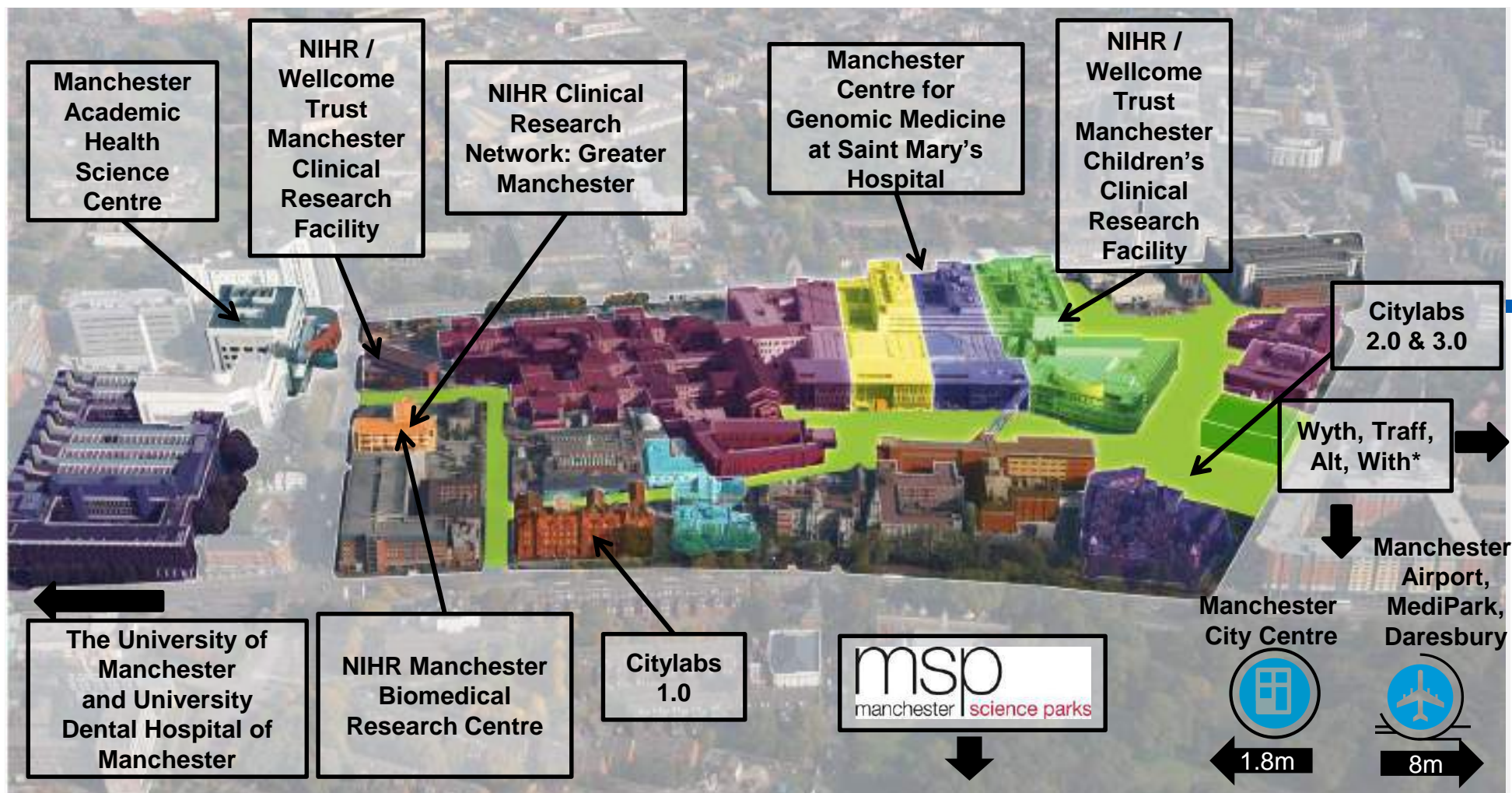
Manchester is an ideal environment for the research and development of new products

- Stable, engaged population of approx. 3 million for clinical evaluation
- Robust test bed
- Devolved health budget allowing accelerated access of new technologies into our local NHS Trusts
- Manchester offers unparalleled opportunities for industry partners



Our location

At the heart of the largest clinical-academic campus in Europe

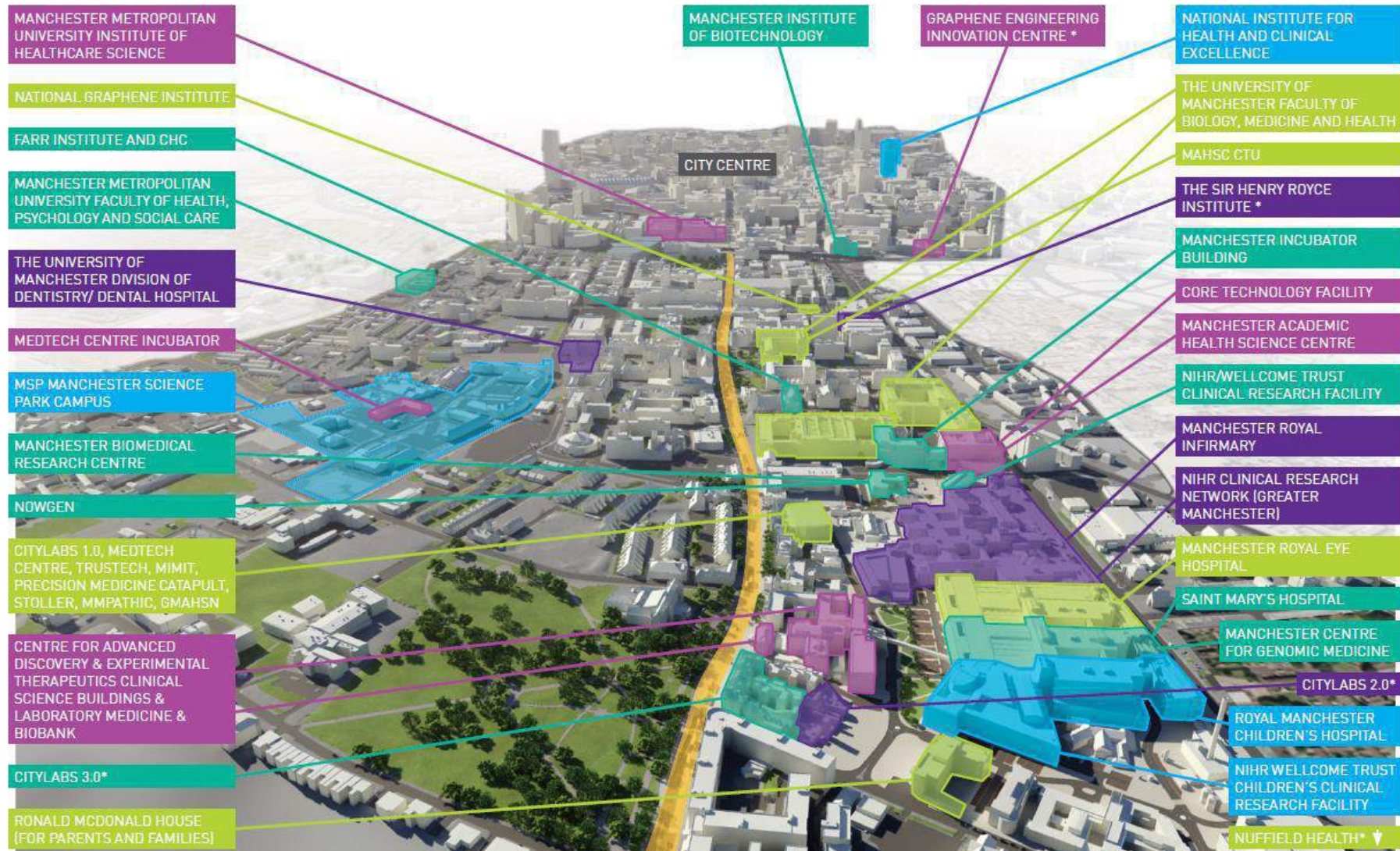


*Wythenshawe Hospital, Trafford Hospital, Altrincham Hospital and Withington Community Hospital

Health is our business: on The Corridor



Manchester University
NHS Foundation Trust



33,000 m2 innovation space



 **Citylabs**

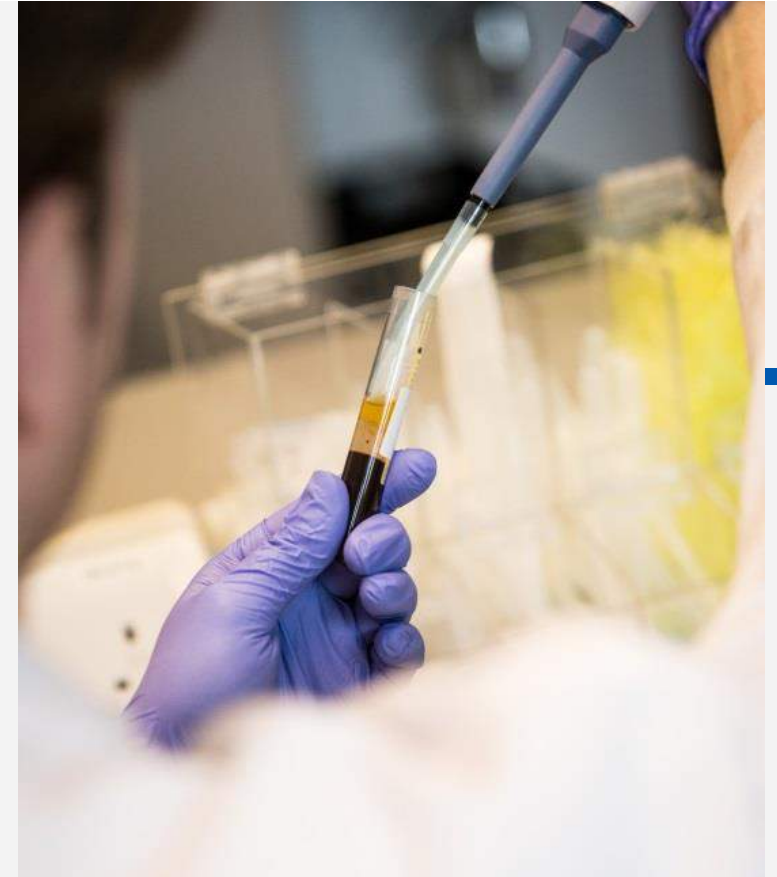
A development by
bruntwood 

For
 **MSP** MANCHESTER
SCIENCE
PARTNERSHIPS &
 **Manchester University**
NHS Foundation Trust



Reasons to work with us

- We offer expertise at every stage of healthcare technology development
- We understand how to work with larger pharma and SMEs, inc. medtech
- We have a large, diverse and stable population, coupled with world-leading research capability and infrastructure
- Our expertise covers a diverse range of clinical specialties, with impressive performance and quality standards
- Part of the largest clinical academic campus in Europe





Manchester University
NHS Foundation Trust

APPENDICES

Our research

- Cataract and refractive surgery
- Cornea
- Diabetes
- Electrophysiology
- Glaucoma
- Low vision/optometry
- Neuro-ophthalmology
- Ocularplastics
- Paediatrics
- Retinal research



Manchester Royal Infirmary

Our research



Royal Manchester Children's Hospital

- Allergy, Vaccines and Immunology
- Bone marrow transplantation
- Burns
- Child and adolescent mental health services (CAMHS)
- Cancer
- Cleft Lip and Palate
- Critical Care
- Endocrinology
- Ear Nose and Throat Surgery (ENT)
- Gastroenterology
- General Paediatrics
- General Surgery
- Haemophilia
- Nephrology
- Neurology
- Neurosurgery
- Respiratory Medicine
- Rheumatology
- Urology
- Metabolic disease

Our research



Manchester University
NHS Foundation Trust



Wythenshawe Hospitals

- Cancer
- Cardiovascular
- Gastroenterology
- Medicines Management
- Medical Education
- Respiratory and Allergy
- Allergy
- Wound Healing and Tissue Repair
- Burns and Plastics

Our research

- Cataract and refractive surgery
- Cornea
- Diabetes
- Electrophysiology
- Glaucoma
- Low vision/optometry
- Neuro-ophthalmology
- Ocularplastics
- Paediatrics
- Retinal research



Manchester Royal Eye Hospital

Our research

- Andrology
- Genetics
- Gynaecology and IVF
- Maternal & fetal health
- Newborn intensive care



Saint Mary's Hospital

Our research

- Caries and diagnostic
- Clinical craniofacial and craniofacial genetics (cleft-lip and palate)
- Oral & maxillofacial surgery and control of pain
- Oral implant
- Radiology and imaging



University Dental Hospital of Manchester

Our research

- Diabetes
- Oncology/haematology
- Orthopaedics
- Rheumatology
- Surgery



Trafford Hospitals

Our research

- Health and learning disabilities
- Rehabilitation



Community Services

Research and Innovation at Northern Care Alliance NHS Group

Natalie Garratt
R&D Lead
Northern Care Alliance NHS Group

Northern Care Alliance NHS Group



A pioneering NHS group with 5 hospital sites and community services, serving a population of over 1 million people.



Wide range of NHS Care

- Population of 1.4 million
- Five hospitals and a range of community services
- Major trauma centre and neurosciences
- Highly specialist national services
- District general services
- Paediatrics
- Integrated community services

Trust: Rank Commercial Studies Recruiting FY 2017/18

Trust	Studies recruiting	Recruitment
Oxford University Hospitals NHS Foundation Trust	113	1733
Northern Care Alliance	71	1659
Leeds Teaching Hospitals NHS Trust	103	1484
Heart of England NHS Foundation Trust	46	1429
Ipswich Hospital NHS Trust	18	1227
Ashford and St Peter's Hospitals NHS Foundation Trust	13	1179
Barts Health NHS Trust	159	1163
St George's University Hospitals NHS Foundation Trust	44	1021
Nottingham University Hospitals NHS Trust	87	837
University College London Hospitals NHS Foundation Trust	103	786

Researchers and Support Staff

- Joint research office, single point of access
- Over 400 Principal Investigators
- Large team of research nurses and other research staff
- Support for research management, governance, sponsorship, business development, statistics and IT.



Clinical Research Facilities



Salford Royal

- Phase I-IV trials
- On-site physician
- Seven private bays, including infusion room
- Experience in a variety of specialties



Fairfield (Bury)

- Phase II-IV trials
- On-site physician
- Capacity for 12 beds



Royal Oldham

- Dedicated paediatric facility and separate adult facility
- Phase II-IV trials



Research Infrastructure



State of the art lab facilities and large sample collections

- Manchester Brain Bank
- Sample preparation and storage
- Histology and cell function
- Molecular and genetic analysis



Dedicated pharmacy, imaging and pathology support

- Specialist clinical trials pharmacists and technicians; aseptic pharmacy.
- Access to a wide range of imaging modalities, both on site and at University of Manchester facilities
- Wide ranging pathology support for all studies



Medical Physics

- Expert medical physics and clinical engineering team
- Design, construct, repair and adapt devices for clinical research
- Provide expert advise on regulations

Digital

- Electronic patient record – established over 15 years ago.
- Global Digital Exemplar Status
- Digital and telemedicine research



In summary

- Pioneering NHS group supporting population of 1.4 million people
- Wide range of NHS services provided across community, acute and specialist services
- Large research infrastructure and dedicated team of research staff with single point of access
- Digital pioneer
- Committed to increasing our partnerships with SMEs and industry

Contact



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Research and Innovation at Greater Manchester Mental Health NHS Foundation Trust

Sarah Leo
Head of Research & Innovation Office
Greater Manchester Mental Health NHS
Foundation Trust



Greater Manchester
Mental Health
NHS Foundation Trust

Research & Innovation at Greater Manchester Mental Health NHS Foundation Trust

Sarah Leo

Head of Research & Innovation Office



Improving Lives

Our Trust

Greater Manchester Mental Health NHS Foundation Trust (GMMH)

provides inpatient and community-based mental health care for people in:

- **Bolton**
- **Manchester**
- **Salford**
- **Trafford**

As well as a wide range of specialist mental health and substance misuse services across Greater Manchester, the North West and beyond.

The Trust employs over 4,750 staff, who deliver services from more than 130 locations seeing around 53,000 service users annually.

The Trust is committed to providing the best possible service for our patients, friends, relatives and carers. By seeking their opinions, we can better understand their needs and tailor our services specifically to them.

We aim to involve our service users in **all** aspects of the Trust's operation and development from the Trust Board to individual teams and projects including all areas of research and innovation.



Improving Lives



Our Values



Improving Lives

R&I Strategic Aims



Participation in research so that the GMMH community gain the benefits from new developments

Relevant to service user & carer needs, and supporting Trust and NHS priorities

Opportunities for clinical services to engage in ground breaking research for service improvement

Maximising value for money by utilising the breadth and scope of financial income

Outstanding world-leading contributions to research through innovation & collaboration

Trusted outcomes of research so that GMMH is recognised as a place of quality

Emphasis on prevention as well as treatment for mental health conditions.



Research Units

The Trust has recently made a number of internal funding awards to support our strategic priorities. This has led to the creation of 5 Research alongside the existing **Psychosis Research Unit**.



Each Unit is monitored against 3 key areas:

- Income generation (NIHR grants and commercial income)
- Alignment with Clinical Services
- Service User involvement

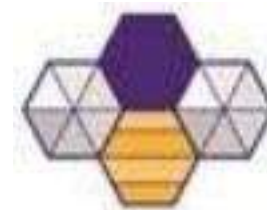
The new Units are:

Youth Mental Health Research Unit



PSRU

Patient Safety Research Unit



Greater Manchester
Dementia Research
Centre

Improving Lives

Infrastructure and Partnership working



Our infrastructure:

- **R&I Office** (feasibility and grants support, capacity and capability assessments, sponsorship and monitoring, archiving, events)
- **Research Delivery team** (research nurses, clinical studies officers supporting identification and recruitment of participants and delivery of clinical interventions)
- **Service user reference groups and service user researchers** (aligned with our 6 Research Units support the research pathway from idea to clinical impact)
- **Digital Strategy Committee** (identifying digital/IM&T opportunities, promoting and encouraging innovation across GMMH)

- **Clinical Trials Pharmacy** (dedicated facility based at Park House)
- **Clinical infrastructure** (includes a detoxification inpatient unit, National Centre for Mental Health and Deafness, young persons inpatient facilities, adult autism support teams, Health and Justice Services and many more....)

Our Partners:

- Health Innovation Manchester
- Manchester Clinical Research Facility
- Greater Manchester Clinical Research Network
- TRUSTECH
- Primary Care Networks

Current Activity

Since the creation of the GMMH R&I Office in January 2017 following the merger of 2 former Mental Health Trusts, our research activity has gone from strength to strength.

We currently have around **100** active studies ranging from student projects to large scale multi-centre trials across both mental health and dementia.

Our research portfolio includes qualitative research studies, trials of therapeutic interventions, clinical trials of investigational medicinal products and more.

In 2017/18 we recruited over **2200** participants across mental health and dementia studies and we are on target to recruit a similar number in 18/19.

We attracted over **£2.5million** in NIHR grant funding and commercial income during the same period (2017/18).



Improving Lives



Examples of our current and upcoming research



STRATA2

Study looking at the biological effects of antipsychotic treatment using the innovative approach of active symptom monitoring (ASM) via a smartphone application 'ClinTouch', developed and validated at the University of Manchester.

Actissist 2.0

Digital intervention for co-producing care in psychosis. This study uses a cognitive theory informed smartphone app (Actissist 2.0) to evaluate the benefits of this over routine symptom monitoring.

Generations1 (Novartis)

An RCT to investigate efficacy of 2 drug therapies for cognitively unimpaired individuals at genetic risk of Alzheimers Disease (prevention focus).

Talking with voices

A feasibility and acceptability study of the

Talking With Voices intervention (a new therapy involving a therapist 'talking' to the voice by asking it questions) amongst adults with psychosis.

Oxford Virtual Reality for Mental Health

Delivery of state of the art psychological therapy via VR with a virtual coach taking the participant through troubling simulations and practising techniques to overcome difficulties.

WORSHIP III

A pragmatic trial comparing the effects of Psychodynamic Interpersonal Therapy versus usual treatment on incidents of self-harm in women in prison.

P-TRD

Trial to evaluate the safety and efficacy of Psilocybin (the active component of magic mushrooms) in participants with treatment-resistant depression.

Improving Lives



Thank you

Please contact me with any questions:

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www.gmmh.nhs.uk



Research and Innovation at The Christie NHS Foundation Trust

Elaine Blowers
Lead Cancer Research Nurse/Operational Director
The National Institute for Health Research
Manchester Clinical Research Facility
The Christie NHS Foundation Trust



The Christie Research

Pioneering Research. Transforming lives.

Elaine Blowers

Lead Cancer Research Nurse/
Operational Director
The National Institute for Health Research Manchester Clinical Research Facility
At The Christie NHS Foundation Trust

Christie Research strategic ambition...

To work with academic and industry partners to develop a comprehensive research programme and infrastructure to enable it to be considered as one of the world's leading comprehensive cancer centres

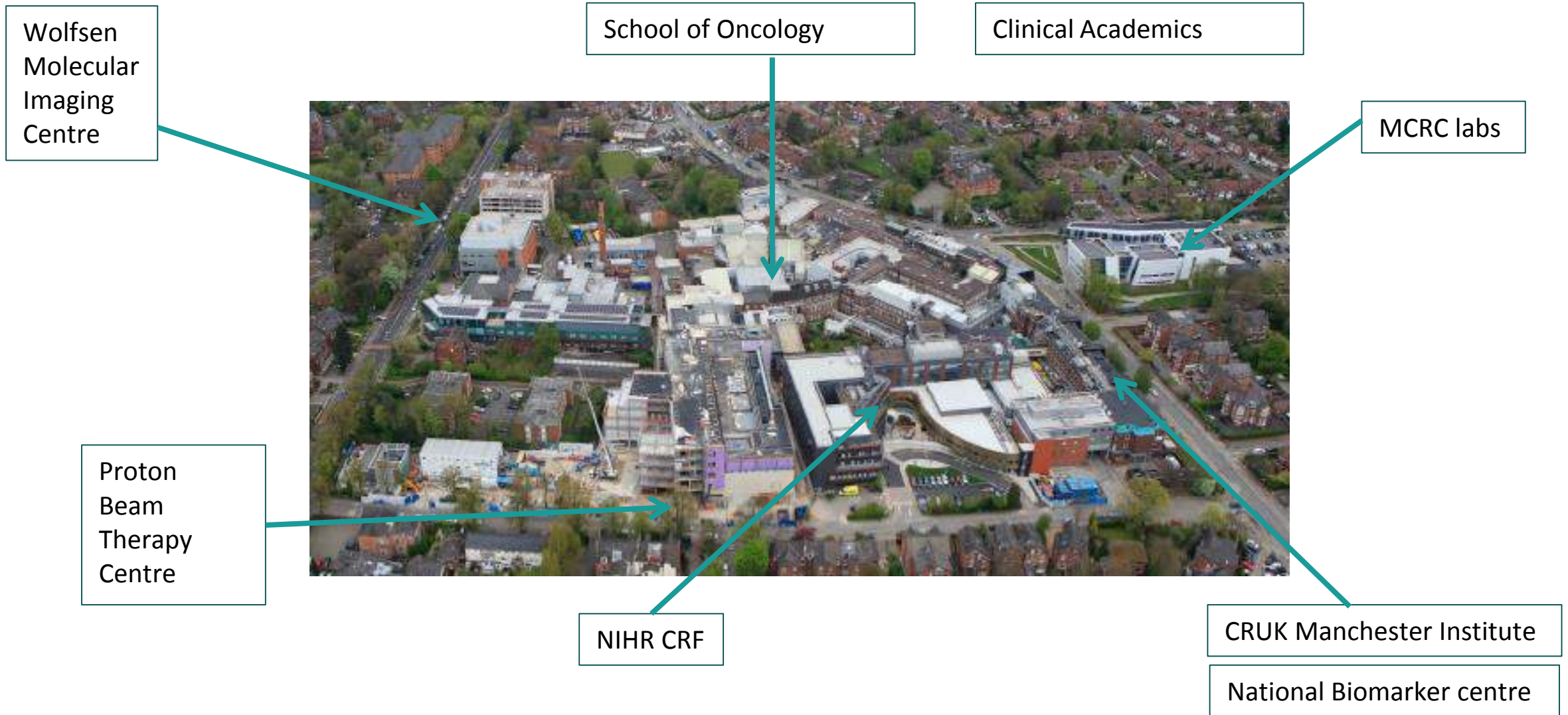
Infrastructure at The Christie

• Christie Research:



- Additional responsibilities include:**
- GM Division of Education (School of Oncology)
 - GM Medical Directors Office
 - MAHSC Cancer Domain Lead
 - Innovation lead

Largest Single-Site Cancer Centre in Europe



Christie achievements

The Christie's five-year strategic plan (2014-19), sets out the ambition to work with partners to become one of the world's leading comprehensive cancer centres. Objectives include becoming:



NIHR Biomedical
Research Centre (BRC)
for Cancer Research



Cancer Research UK
'major-centre'



One of the largest
commercial trials units
in the UK



One of the largest single
site early phase trials
units in Europe



Centres of Excellence

- CRUK Lung Cancer
- CRUK/EPSRC Cancer Imaging Centre
- Manchester Breast Centre
- Prostate Cancer UK Movember
- European Neuroendocrine Tumor Society (ENETS)



One of six high
performing Academic
Health Science Centres
in the country

Academic leadership

Combined investment commitment
of £35 million



Prof Silke Gillessen



Prof Rob Bristow



Prof Marcel van Herck



Dr Natalie
Cook



Dr Matt Krebs



Prof Peter
Hoskin



Prof Neil
Burnet



Prof Karen
Kirkby

Whole spectrum of research carried out at MCRC.

Unique partnership between The Christie and the University of Manchester and Cancer Research UK.

MANCHESTER
1824

The University of Manchester

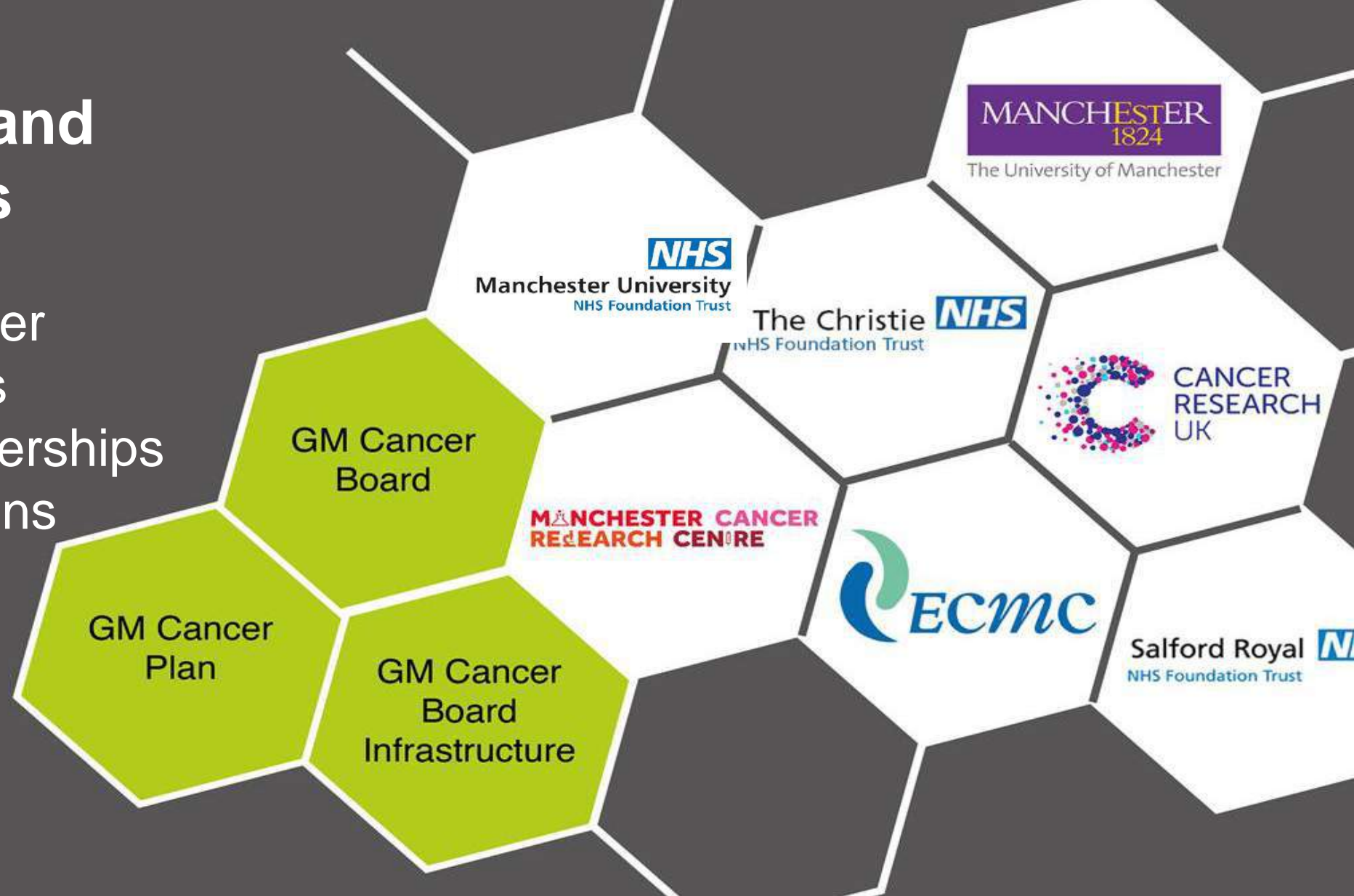
The Christie
Research



CANCER
RESEARCH
UK

Partnerships and collaborations

Manchester Cancer Research delivers through key partnerships and collaborations



Highlights of translational research

We perform strongly across our major research themes, delivering ground-breaking research to improve patient lives

TARGET study: (CI Krebs) The first step in enabling The Christie to establish a profiling capability and stratification to appropriate trials of targeted therapy where patients have been matched to relevant trials/treatments.

Patient and public involvement

The commitment to patient and public involvement (PPI) in our research work is firmly embedded within the culture/ethos of The Christie and MCRC.

- We hold monthly research café events in the MCRC. (The most recent raised the profile of genomic medicine.)
- Patient involvement study days in conjunction with scientists.
- As part of the National ECMC working group for PPI, Christie research nurses and our Manchester patient representative work on a national training programme for patients



Opportunities for Collaboration Medicines Discovery Catapult

Nicola Heron
Head of Collaborative R&D
Medicines Discovery Catapult

Medicines Discovery Catapult

- Accelerating innovative drug discovery
- Connecting the UK drug discovery community
- Transforming ideas into better medicines for patients, faster
- Open for collaboration

Nicola Heron

Head of Collaborative R&D
19th Sep 2018



Medicines Discovery Catapult

National facility connecting the UK community to accelerate innovative drug discovery

- Independent not-for-profit
- Part of the UK's Catapult network
- Helping to deliver the UK's Industrial Strategy
- Funded by Innovate UK, part of UK Research and Innovation, reporting to the Department for Business, Energy & Industrial Strategy



UK Research
and Innovation

Innovate UK



CATAPULT

We work with
Innovate UK

Traditional drug discovery is no longer fit for purpose

Drug discovery **must be** faster and cheaper without compromising patient safety

The industry **needs** new scientific approaches to influence and enable better decision making



1. Paul, S.M. et al. (2010) How to improve R&D productivity: The pharmaceutical industry's grand challenge. Nature Reviews Drug Discovery. 9(3), 203-214.

2. Deloitte (2017) A new future for R&D? Measuring the return from pharmaceutical innovation 2017.

The industry is increasingly reliant on SMEs to innovate

Pharma is facing unprecedented commercial pressure that force them to reduce risk in their R&D pipelines¹

SMEs are the agile risk-taking testers of new ideas, for innovation, discovery and validation of new drugs and technologies

In the UK:

SMEs account for more than 90% of our life sciences community²

But 42% of biotech SMEs have less than 5 employees³ and struggle to access:

Funding

Expertise

Technology

1. Deloitte (2017) A new future for R&D? Measuring the return from pharmaceutical innovation 2017.

2. HMG (2016) Strength and opportunity 2016: The landscape of the medical and biopharmaceutical sectors in the UK.

3. BIS (2015) Strength and opportunity 2015: The landscape of the medical technology and biopharmaceutical sectors in the UK.

Our aims

Address the challenges facing drug discovery and UK SMEs

Develop, validate and industrialise new ways of discovering medicines to change the shape of R&D

Promote key talent and expertise across sectors to connect a fragmented community

Support the UK life sciences industry, SMEs and innovators to deliver growth for the UK economy

Maintain the UK's heritage position as a global leader in drug discovery



Our vision

The medicines that we help to industrialise will feed the medicines pipeline and deliver new targeted high value medicines to patients, faster

We are focussed on enabling UK drug discovery

Providing unique
scientific capabilities

Acting as a gateway to UK
resources & expertise

By providing access to technologies and expertise not readily accessible we will support UK SMEs to drive the development and widespread use of new approaches for the discovery of new medicines

WHO – WHY – HOW – **WHAT** – WHERE – WORK WITH US

Our unique capabilities

Designed to address the needs of our UK drug discovery community and change the shape of R&D:



**DISCOVERY SCIENCE
& TECHNOLOGY**



INFORMATICS



SAMPLES & DATA



VIRTUAL R&D



**DISCOVERY
SYNDICATES**

BETTER DATA FASTER

ACCESS TO UK RESOURCES & EXPERTISE

Providing UK SMEs with access to technologies and expertise not readily accessible to them



It is vital that SMEs developing new drug candidates access:

- Robust, well-characterised, sophisticated human models for pre-clinical testing
- Complex bioanalytical technologies to appropriately interrogate and advance only the promising candidates faster

Discovery Science & Technology

Establishing patient-relevant testing models and new technologies to advance drug discovery

Our strategy is built around four interconnected focus areas, supported by innovative technology



WHO – WHY – HOW – **WHAT** – WHERE – WORK WITH US



Drug discovery generates a huge quantity of complex biological, chemical, clinical and safety information

To make the best decisions on which assets to further optimise or progress, and to create the best data assets, secure sharing and associated data analytics are critical

Informatics

Using data science to discover new diagnostics, biomarkers and drugs

Using our informatics skills, extensive proprietary databases and algorithms we can help validate and drive adoption of new data-driven approaches

***In silico* TARGET VALIDATION
USING REAL WORLD DATA**

DRUG REPURPOSING

DRUGGABILITY

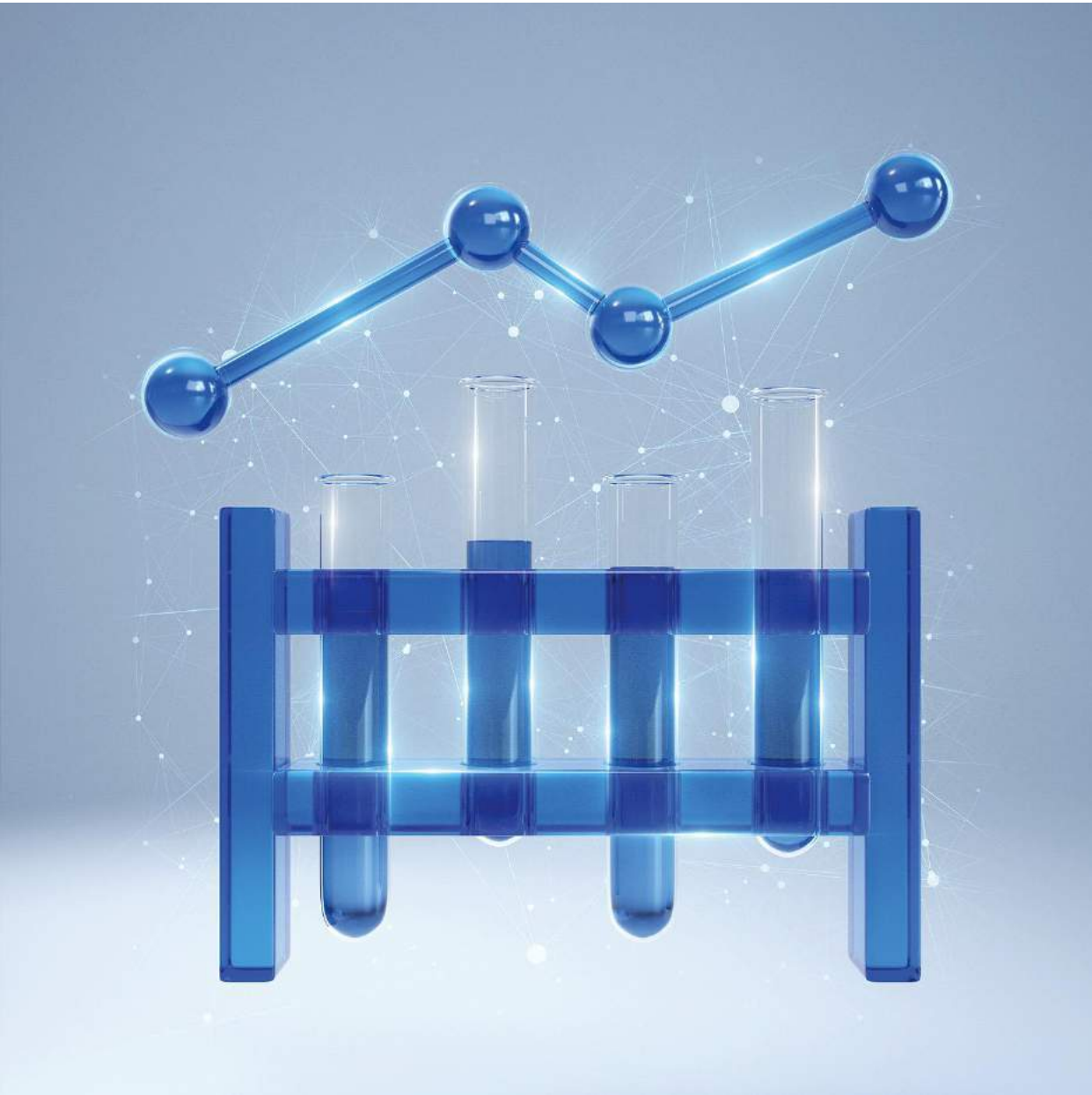
NOVEL DRUG COMBINATIONS

EFFICACY AND SAFETY ANALYSIS

**UNDERSTANDING
CHEMICAL SPACE**

We have deep expertise in scientific data analysis, information extraction, natural language processing and machine learning

We work with
Innovate UK



The UK has millions of samples and billions of data points collected from patients who have agreed their samples and data can be used for research

However, small UK medical research companies struggle to access them

“Over 90% of SMEs said that access to high quality clinical samples was important, however 80% found accessing samples unexpectedly difficult¹.”

Samples & Data

Brokering easier access to consented patient data and samples

We are working with key organisations to support the access of consented tissues & data:

DIRECTORIES

RESEARCH SERVICES



PROCUREMENT SERVICES



1. State of the Discovery Nation 2018.



The ecosystem surrounding medicines discovery is highly fragmented and complex

42% of biotech SMEs have less than 5 employees¹ and are unable to efficiently access the UK's rich resources in translational research

Virtual R&D

Leveraging the UK's renowned leadership in drug discovery – a modern approach to R&D

Our VR&D platform uses a unique national network of up-to-date industry-skilled consultants and service providers to deliver three essential elements

'Pop-up' Advisory teams

UK capability map

Virtual programme management

VR&D will deliver value to finance, biotech, academia and charities

1. BIS (2015) Strength and opportunity 2015: The landscape of the medical technology and biopharmaceutical sectors in the UK.



As only patients know what it's like to live with a disease, it's crucial they play a more central role in medical research

Talking to patients is often a better way to find out what medical products need to be developed, yet it doesn't always happen

Discovery Syndicates

Spearheading patient involvement in early drug discovery – a collective approach to R&D

Discovery Syndicates are a new, shared resource model

Disease focussed and anchored by the leading medical research charity

Putting the patient at the heart of drug discovery and ensuring the portfolio aligns with patients' needs and priorities

Coordinate, plan and deliver collaborative research

De-risk new promising assets

Identify key barriers to translation for a disease

Accelerate translation of research to the clinic

WHO – WHY – HOW – WHAT – **WHERE** – WORK WITH US

National facility and laboratory

Our office and laboratories are based at Alderley Park in Cheshire

Providing UK SMEs with access to the UK's second largest life sciences cluster and unrivalled opportunities



Opportunities for Collaboration

Signposting and connecting

We can help you find the right partner, collaborator, advisor or supplier who can deliver what you need

Shared risk and reward

We work in risk-share collaborations with partners who gain from our unique help and where we share in the value of the outcome

Joint grant applications for collaborative R&D funding

We also have a strong network of venture capital companies looking for new opportunities that we have helped to de-risk

Contracted fee-for-service projects

Where you need managed access to our skills and assets - and cannot get them commercially elsewhere - we can adopt a fee-for-access model

Get in touch now

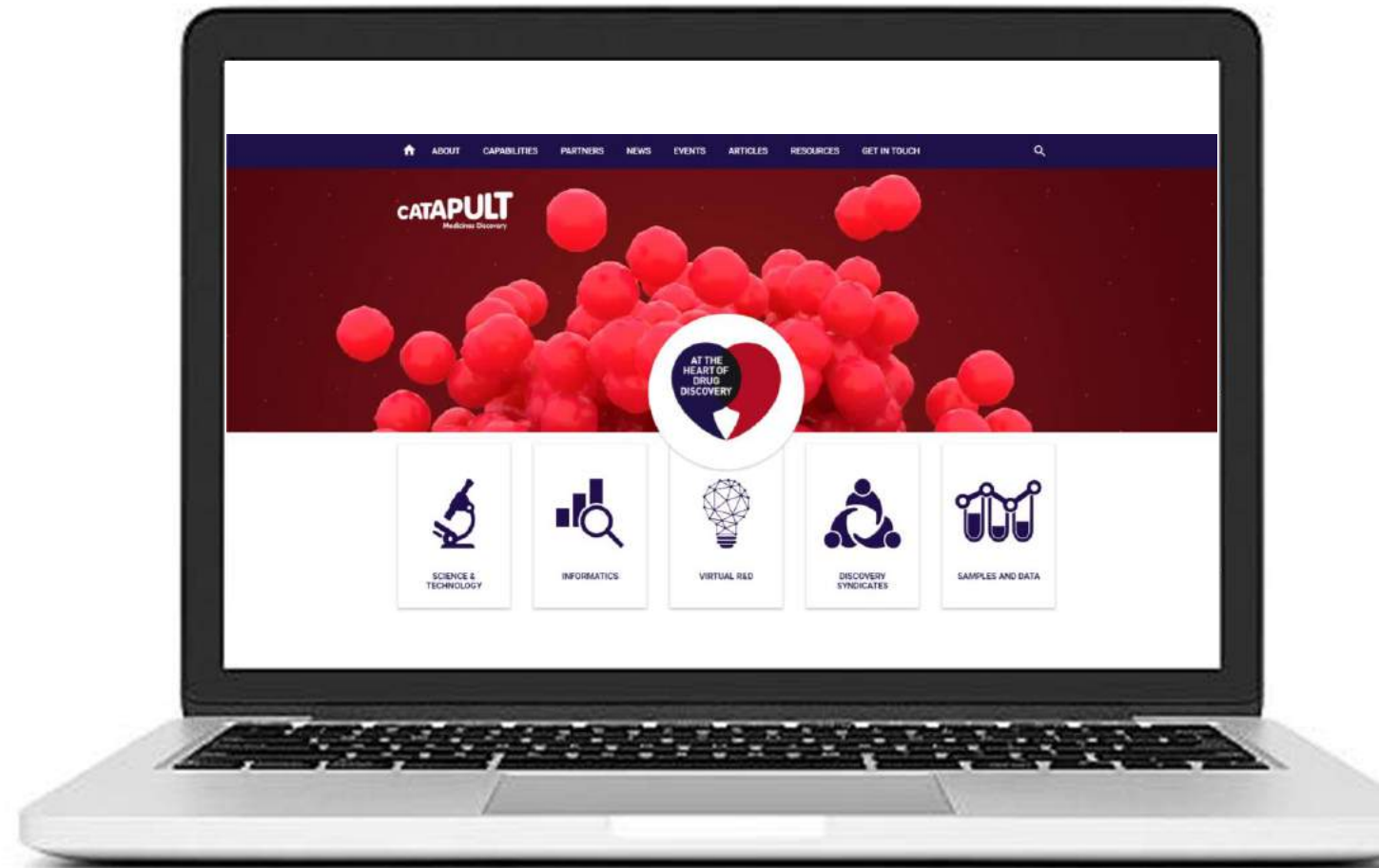
Visit our website for our latest partnerships and funding opportunities.

Get in touch for more information, expert guidance, strategic consultancy and access to our technology.

Or to discuss a potential project or service.

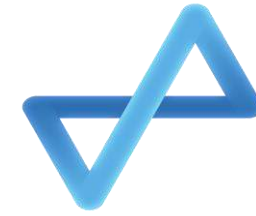
info@md.catapult.org.uk

partner@md.catapult.org.uk



SME Perspective on NHS/Industry/Academia collaborations

Dr. Richard Deed
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Health Innovation Manchester
Technology Director for TRUSTECH
NHS Innovation Service



Health
Innovation
Manchester

SME Perspective on NHS/Industry/Academia Collaborations

Richard Deed
Associate Director Industry
Health Innovation Manchester
Technology Director
TRUSTECH - NHS Innovation Service



Discovering



Developing

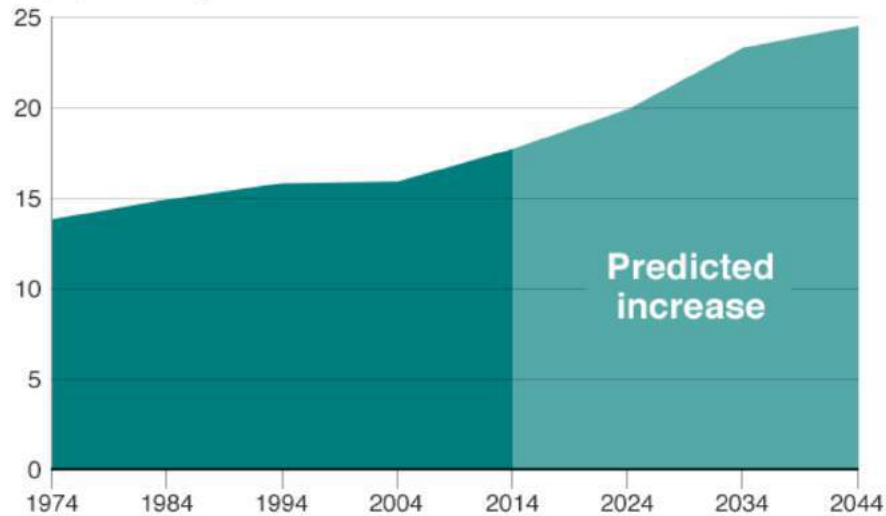


Delivering

Understand the situation in the NHS

The UK's ageing population

% population aged 65 and over



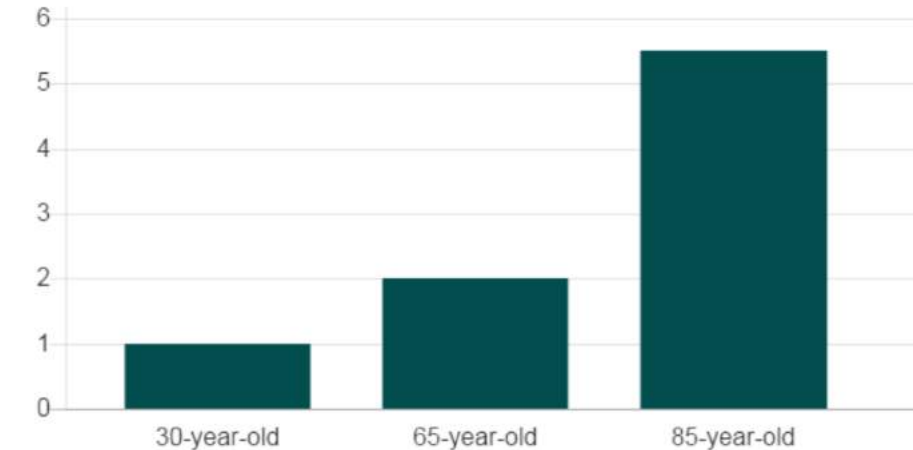
Source: ONS

BBC

Comparing NHS spending on people by age

Spending for patients increases as they get older

Relative cost in £



Source: IFS

BBC

Scarce resources = difficult decisions

Value Proposition?



A clear and credible set of claims capable of being evidenced that provides value to users/partners.

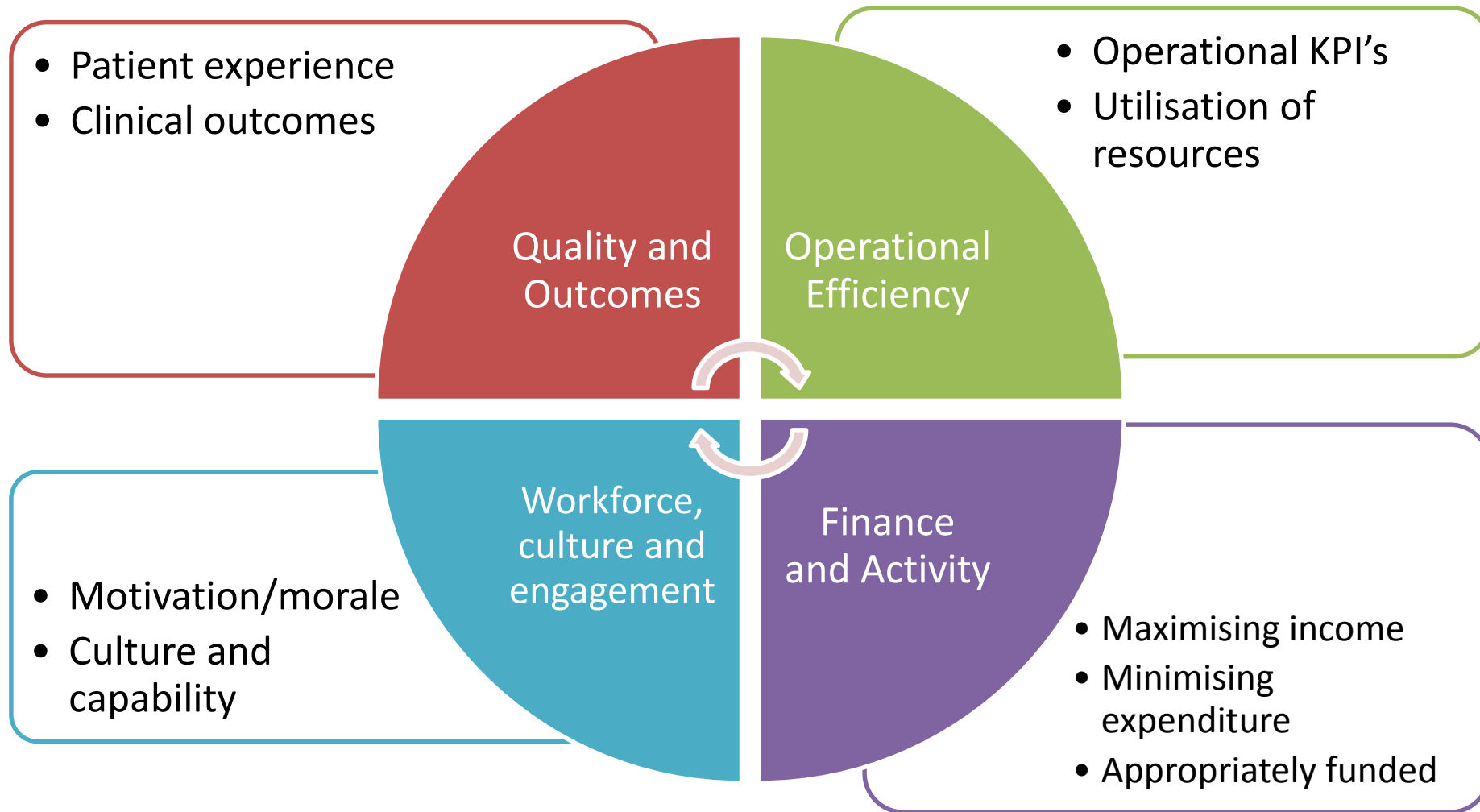
What makes a good value proposition?

- Think about who you approach
 - What do you want to do, what do you need?
 - How does it address what NHS/Academia want?
 - Is your VP actually helping them does it represent value to them - many competing interests
-
- A value proposition aimed at academics clinicians and commissioners will differ from that used for potential investors

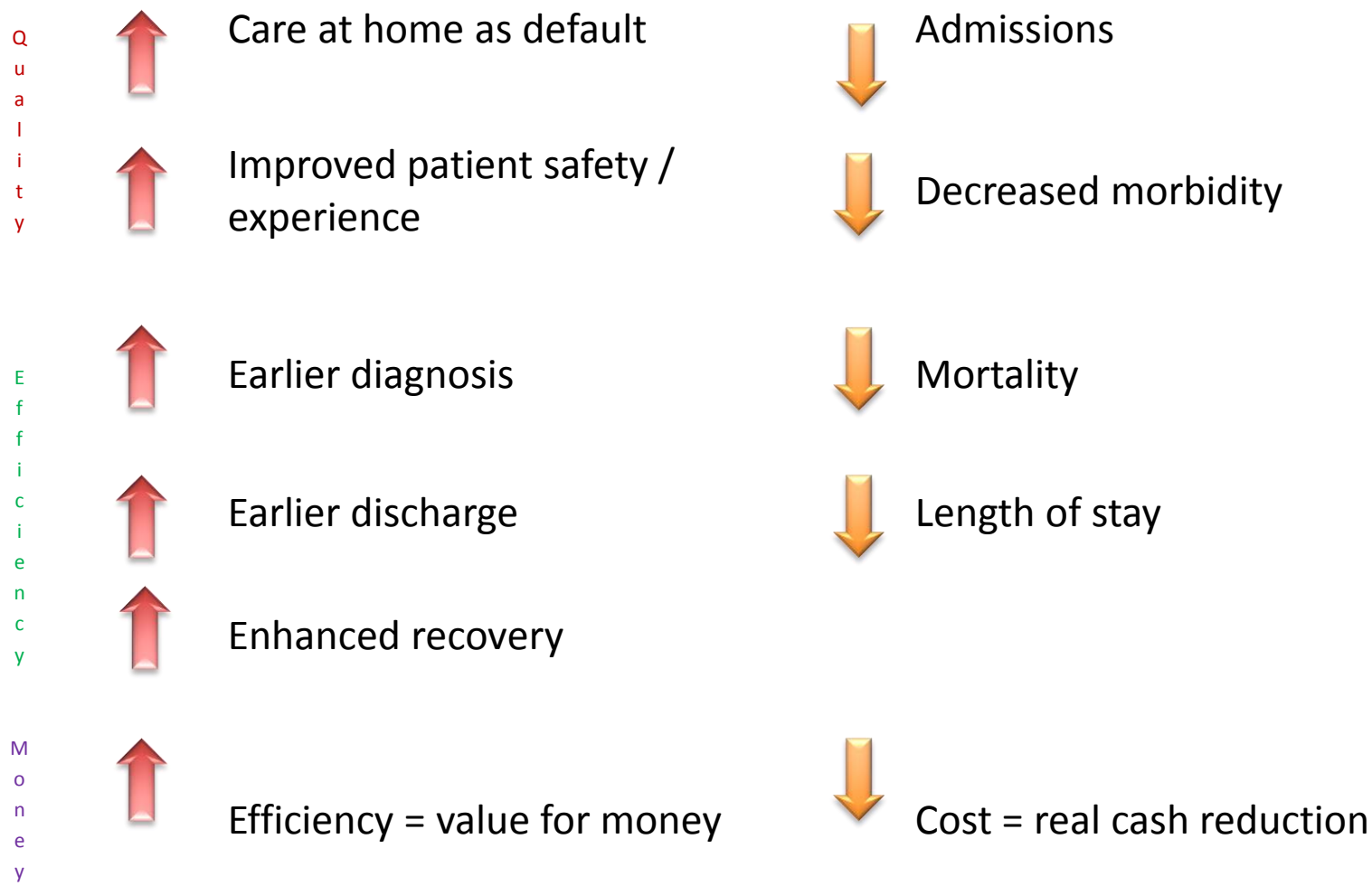
Key elements of value proposition development

1. Describe the issue being faced [in the NHS] in relation to this indication and current clinical practice.
2. Explain how the proposed product/service can provide a solution to this problem.
3. Detail the clinical benefits for patients delivered by the product over and above current clinical practice.
4. Detail the resource use and cost savings for the healthcare system delivered by the product over and above current clinical practice.
5. Remember the need for evidence to substantiate the claims.

Key Areas of Focus for NHS Provider



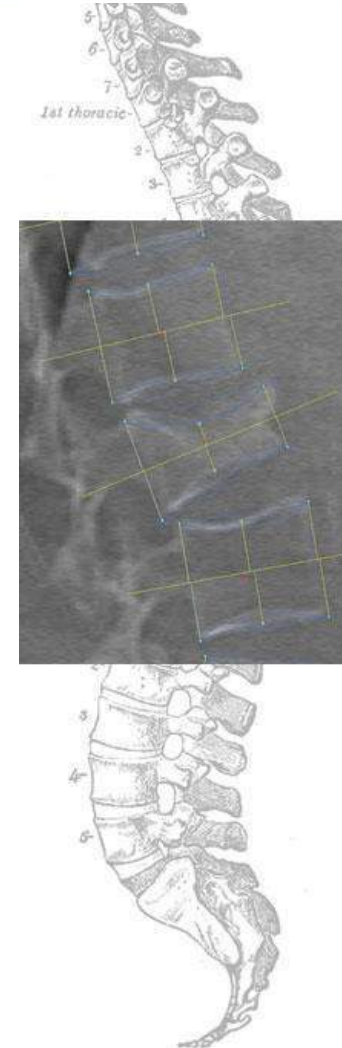
Powerful Drivers for Change



Case study - Optasia Medical



- Automated analysis of images for spinal fractures to diagnose Osteoporosis and reduce fracture rates
- Through funded support of HInM - retrospective analysis trial at GM based NHS Trust
- Results indicated that a typical trust could save up to £250k p.a.
- Identified a backlog of patients that required follow up/support = extra cost
- Successfully applied to local CCG innovation fund to implement the technology in original trust



Case study - Udrain

- Waste disposal device to reduce reliance on catheter bags for CAP Dialysis patients
- HInM funded evaluation in Salford via renal unit
- 100% patient satisfaction/reduced carbon footprint
- Additional cost to existing procurement framework
- Working to unbundle tariff framework but increasing sales via other routes and other applications

Case study - Corporation Pop - Xploro

- Digital tool to familiarise children with hospital
- Identified key clinical champion - saw need/benefit
- HInM/MFT co-funded £20k early stage scoping work
- £0.5mn leveraged for development and academic research evaluation
- Niche market in UK but global market significant

Case study -Humedics - Limax

- German SME with novel bed side breath test for colorectal surgery screening
- Need/benefit - to avoid scans, rapid 15 minute test
- SME were assisted to identify clinical champion
- HInM/MFT co-funding £100k evaluation with SME
- Event tonight in GM to promote it the evaluation and consider use for to other conditions

Top Tips

Time - when to approach, realistic in expectations - competing interests - teaching, clinics - very little scope for much else

Network - Use facilitators as they may have knowledge who is interested/track record

Funding - All engagement apart from initial meetings need to be paid for/backfilled

Opportunities - lots support SMEs e.g. local schemes, national funds- i4i, Innovate UK, SBRI, all act as catalysts to larger funds and VCs

Themes - Look out for e.g. cross sectoral work - now digital and Ai

Project management - very important, tendency to drift

Top Tips

Benefits - need to be realisable and relatively short term

National and local incentives - can assist

Understand procurement - frameworks/local plans

Be prepared to partner - existing provider/distributor or bundle offerings

Implementation issues are key - e.g. staff/patient acceptance

Summary

Clinical Case

Clinical effectiveness

Champion to lead/reference

Financial Case

Cost effectiveness

Implementation Case

Plan for use/disinvest

Consider safety

Wise Words

“When everything seems to be going against you
remember that
the airplane takes off against the wind not with it.”

Henry Ford

Closing Remarks

Daniel Zamora
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