

NHS-HE Forum
Manchester 24 November 2010

MAHSC
Manchester Academic Health Science Centre (MAHSC)



The Manchester Academic Health Science Centre

Chris Griffiths

MAHSC is a partnership between The University of Manchester, Central Manchester University Hospitals NHS Foundation Trust, Manchester Mental Health and Social Care Trust, NHS Salford (Salford Primary Care Trust), Salford Royal NHS Foundation Trust, The Christie NHS Foundation Trust, University Hospital of South Manchester NHS Foundation Trust

Company Registration
Number 7083059

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MANCHESTER
1824
The University of Manchester

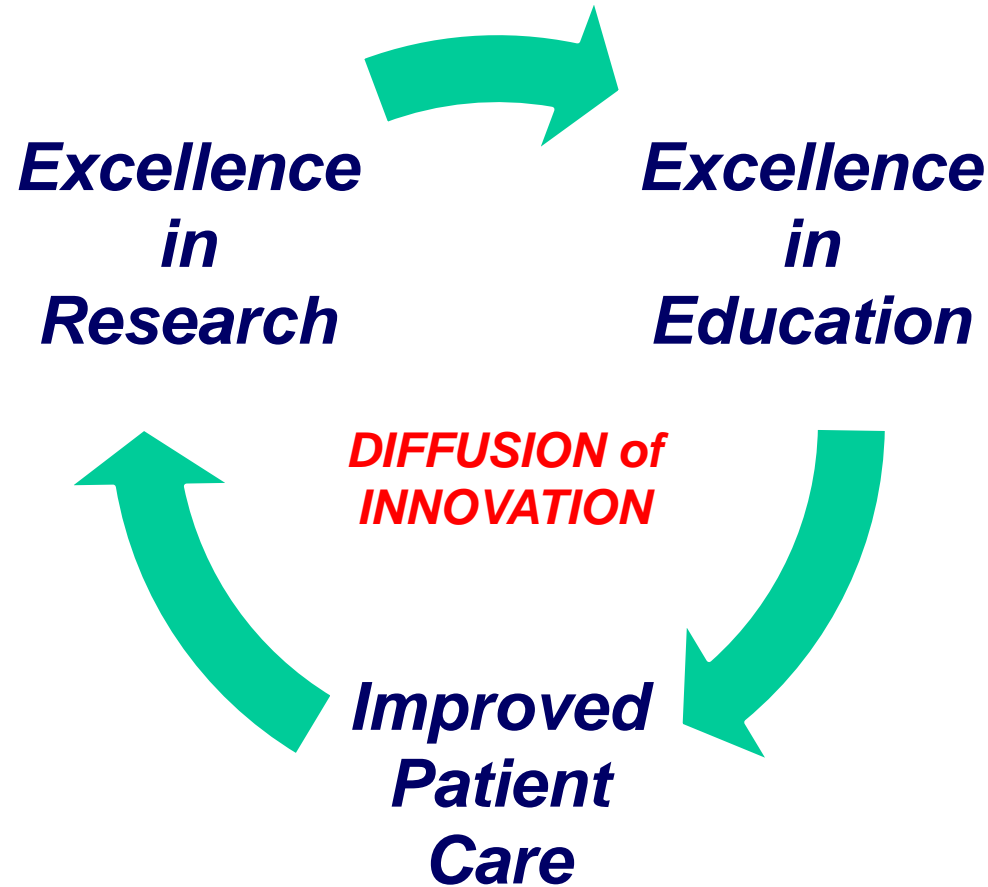
NHS

Manchester Academic Health Science Centre

- Academic Health Science Centres
- Why Manchester?
- Vision
- Structure
- Goals
- Achievements

Academic Health Science Centres

A Virtuous Circle





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The Birth of the NHS

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Aneurin Bevan
5 July 1948

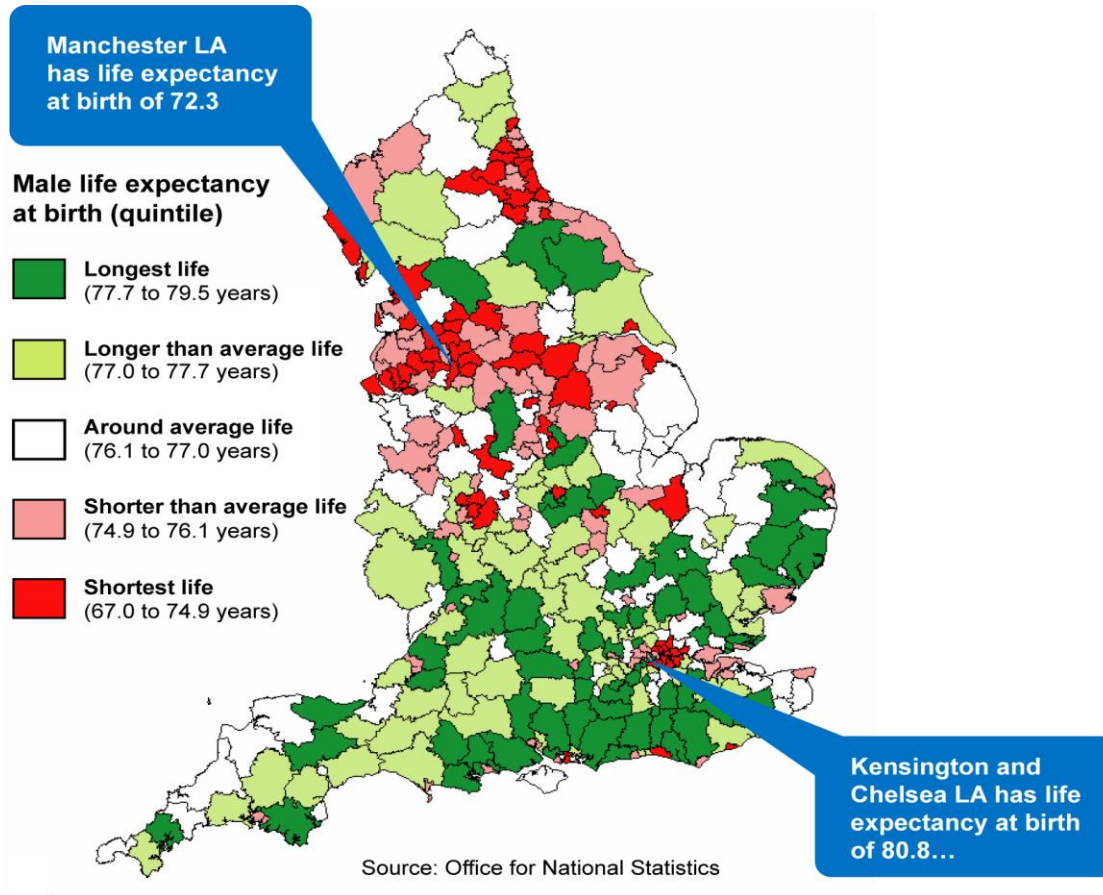
Park Hospital,
Trafford,
Manchester



Manchester Why Now?

Health inequalities

Adults' health and lifestyle	13 Adults who smoke *	n/a	33.8	24.1	40.9		13.7
	14 Binge drinking adults	n/a	28.4	18.0	28.9		9.7
	15 Healthy eating adults	n/a	21.5	26.3	14.2		45.8
	16 Physically active adults	n/a	10.9	11.6	7.5		17.2
	17 Obese adults	n/a	25.8	23.6	31.2		11.9
Disease and poor health	18 Under-15s 'not in good health'	1153	15.2	11.6	20.8		6.4
	19 Incapacity benefits for mental illness *	17370	56.2	27.5	68.6		8.4
	20 Hospital stays related to alcohol *	2336	576.3	260.3	741.1		87.6
	21 Drug misuse	6236	20.4	9.9	34.9		1.3
	22 People diagnosed with diabetes	18071	4.1	3.7	5.9		2.1
	23 Sexually transmitted infections						
	24 New cases of tuberculosis	154	34.0	15.0	102.0		0.0
25 Hip fracture in over-65s	307	463.6	479.8	699.8		219.0	
Life expectancy and causes of death	26 Life expectancy - male *	n/a	73.0	77.3	73.0		83.1
	27 Life expectancy - female *	n/a	78.6	81.6	78.3		87.2
	28 Infant deaths	46	6.7	5.0	10.3		0.0
	29 Deaths from smoking	811	353.8	225.4	355.0		139.4
	30 Early deaths: heart disease & stroke *	492	142.4	84.2	142.4		39.7
	31 Early deaths: cancer *	565	165.8	117.1	167.8		76.7
	32 Road injuries and deaths *	265	59.5	56.3	194.6		20.8



Manchester

Examples of our health impact

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NHS

- **Changed NHS practice in suicide prevention**
- **Changed policy in payment for general medical services**
- **Demonstrated that dental screening did not improve health**
- **Changed NHS practice with respect to prevention of falls in the elderly**
- **Influenced NICE guidelines in management of psychiatric illness, dentistry, stroke, psoriasis and rheumatic disease**



Translational Medicine in Manchester – why?



Excellent examples of research publications to ‘the world’

UK Leading Clinical Trials capability but how many lead to local change in clinical practice before anyone else?

Excellent examples of patient care & innovation adoption from ‘the world’

Clinical need unmet



Clinical need fulfilled

The dichotomy: we have some excellent research and patient care but some of the worst health indicators in England

Translational Medicine in Manchester – why?



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The dichotomy: we have some excellent research and patient care but some of the worst health indicators in England

Not enough translation of Manchester research findings to improve Manchester/NW health and healthcare

The Major Challenges



Integrating research and education with NHS service commitments

Avoiding duplication of effort and parochial decision-making

Making research infrastructure world-class and pan-Manchester

Reducing delay in the delivery of innovation

Bringing quality patient experience and outcome to the fore

Why Now?

- **2001: Wellcome Trust Clinical Research Facility**
- **2004: Greater Manchester Research Alliance**
- **2005: Manchester Cancer Research Centre**
- **2006: NHS partners External Review of Research Strengths**
- **2007: Greater Manchester Health Research project began**
- **2008: MAHSC created; Company Limited by Guarantee**

Darzi July 2008



East of England
East Midlands
London
North East
North West
South East Coast
South Central
South West
West Midlands
Yorkshire and the Humber

High Quality Care For All

NHS Next Stage Review Final Report



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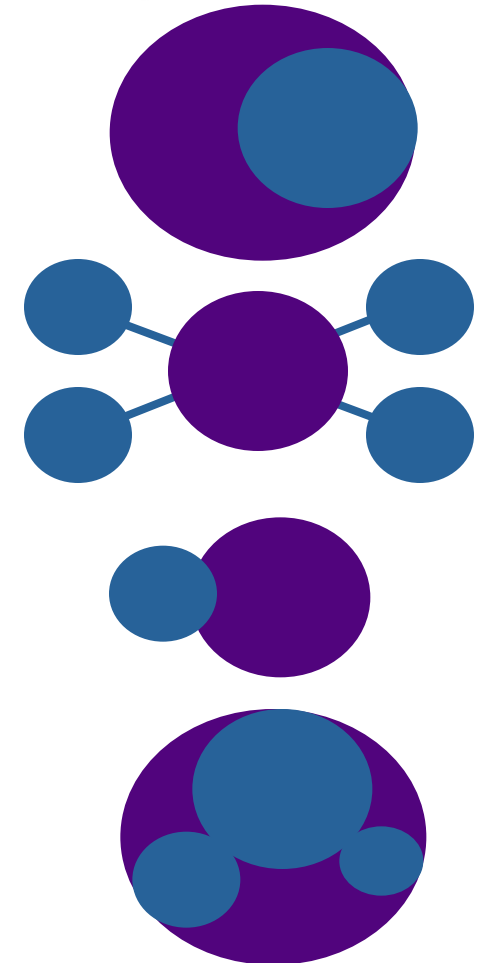


Governance arrangements vary in U.S.

- Fully integrated; e.g. Johns Hopkins, Duke
- Cluster models; e.g. Stanford, Harvard
- Looser alliances; e.g. Yale

Elsewhere

- Full integration is more usual; Singapore



5 Designated AHSCs March 2009



Cambridge University Health Partners

University of Cambridge
Cambridge University Hospitals NHS FT
Cambridgeshire and Peterborough NHS FT
Papworth Hospital NHS FT

King's Health Partners

King's College London
Guy's and Thomas's FT
King's College Hospital FT
Maudsley FT

Imperial College Academic Health Sciences Centre

Imperial College London
Imperial College Healthcare NHS Trust

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UCL Partners

University College London
University College London Hospital NHS FT
Great Ormond Street Hospital for Children NHS Trust
Moorfields Eye Hospital NHS FT
Royal Free Hampstead NHS Trust

Manchester Academic Health Science Centre



**7 Equal Partners
Diverse**

- **University of Manchester**
- **The Christie NHS FT**
- **Central Manchester University Hospitals NHS FT**
- **Mental Health & Social Care Trust**
- **Salford Royal NHS FT**
- **Salford Primary Care Trust**
- **University Hospital of South Manchester NHS FT**

- **£2.3 billion annual spend**
- **35,000 people employed**

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The University RAE 2008, Strengths in Health-related Subjects

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NHS

<i>Unit of Assessment</i>	<i>Quality Rank</i>
Cardiovascular medicine	4
Cancer studies	1
Primary care/community based clinical subjects	2
Dentistry	1
Nursing and midwifery	1
Pharmacy	2
Biological sciences	3
Pre-clinical and human biological sciences	3



Source: Research Fortnight

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The Trusts



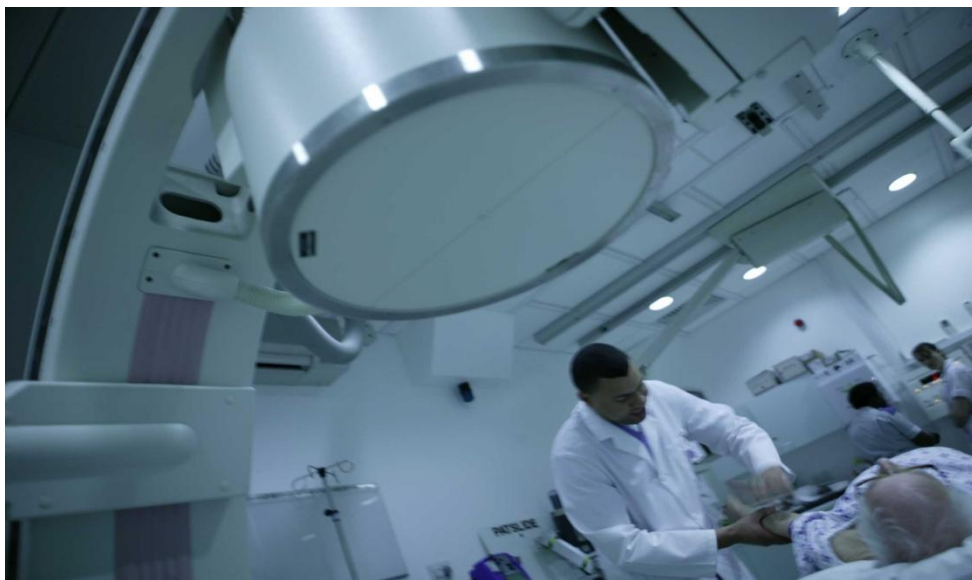
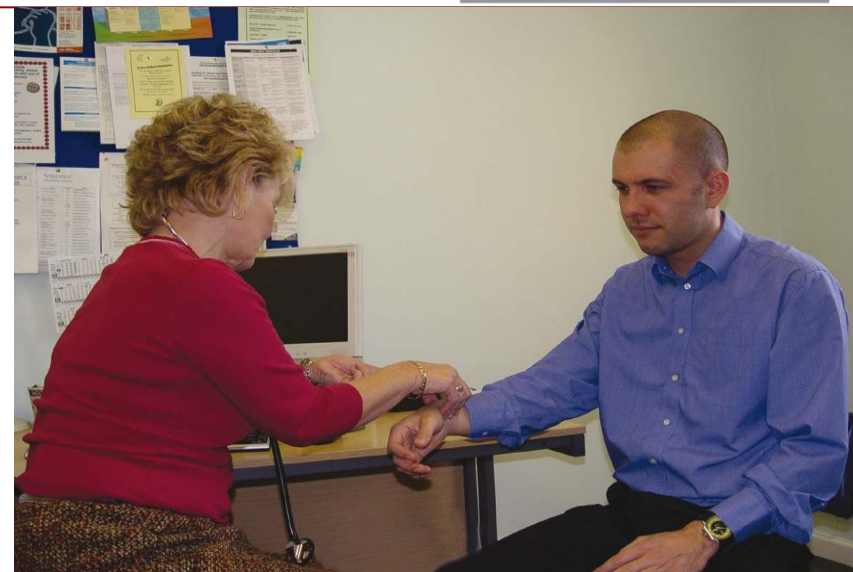
Central: Biomedical Research Centre
largest pregnancy research group in Europe
National Technology Adoption Centre
cardiovascular medicine



Christie: largest phase I/II cancer clinical trials unit; co-located PET, MR imaging; biomarkers; close industry partners

Mental Health: leads multi-site cohort studies in early adult psychosis; six NIHR programme grants; National Drug Evidence Centre; first memory clinic

Salford PCT: award-winning research active Primary Care Trust; lead for ten other Manchester PCTs; emphasis on implementation into clinical practice



Salford: expertise in linking electronic records to health outcomes; quality assessment; hub for stroke network; shares R&D division with PCT

South: Translational Research Facility in respiratory medicine; heart/lung transplantation; hosts CLRN; national aspergillosis centre

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Our Partners

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NHS

Strategic Health Authority

NICE

Industry

- U K Trade and Investment
- AstraZeneca
- GlaxoSmithKline
- ICON

AHSCs

- University of Pittsburgh
Medical Centre
- Nijmegen Medical centre



The Critical Path of Research



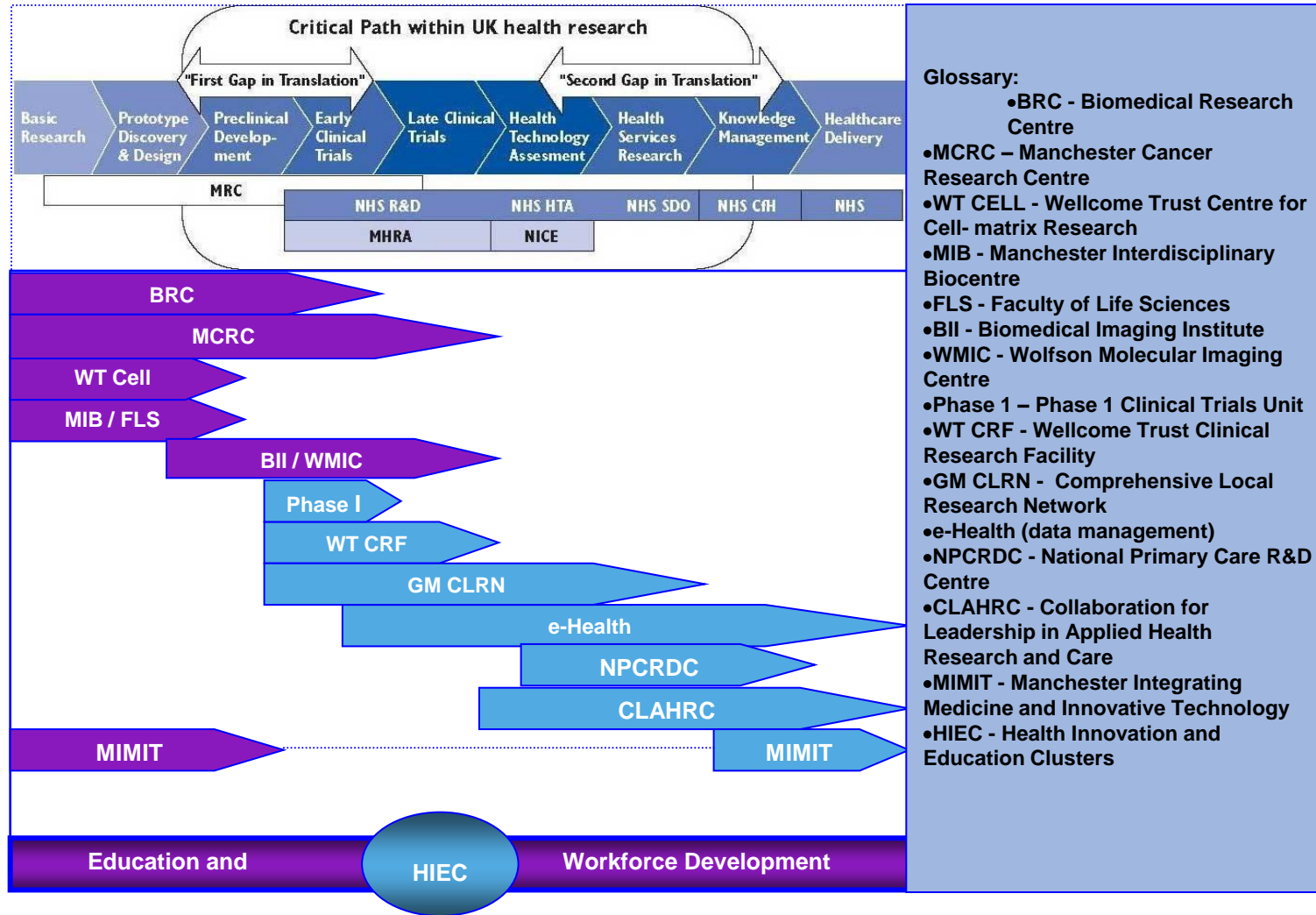
Figure 1: The critical path of research from basic science to healthcare delivery identifying the important gaps in translation. From *A Review of UK Health Research Funding*, Sir David Cooksey, December 2006.

Manchester Academic Health Science Centre Platforms



- **Biomedical Research Centre**
- **Manchester Cancer Research Centre**
- **Wellcome Trust Clinical Research Facility**
- **Biomedical Imaging Institute**
- **Phase I Trials Facilities**
- **NW E-Health**
- **GM Comprehensive Local Research Network**
- **Manchester Integrating Medicine with Innovative Technology**
- **Collaboration for Leadership in Applied Health Research and Care**

The Critical Path of Research



Goals



1. **Improve** the health and wellbeing of the population through the development and application of innovative healthcare and research
2. **Disseminate** innovation in technology and care nationally and internationally.
3. **Educate** effectively in all aspects of healthcare, healthcare management, and biomedicine in support of workforce development.
4. **Lead** on quality of care and public engagement.
5. **Partner** more widely and more beneficially with the commercial sector.
6. **Contribute** significantly to innovation, enterprise and economic development in the city region and the North West of England.
7. **Attract** the best national and international health researchers and healthcare workers.

Building Blocks

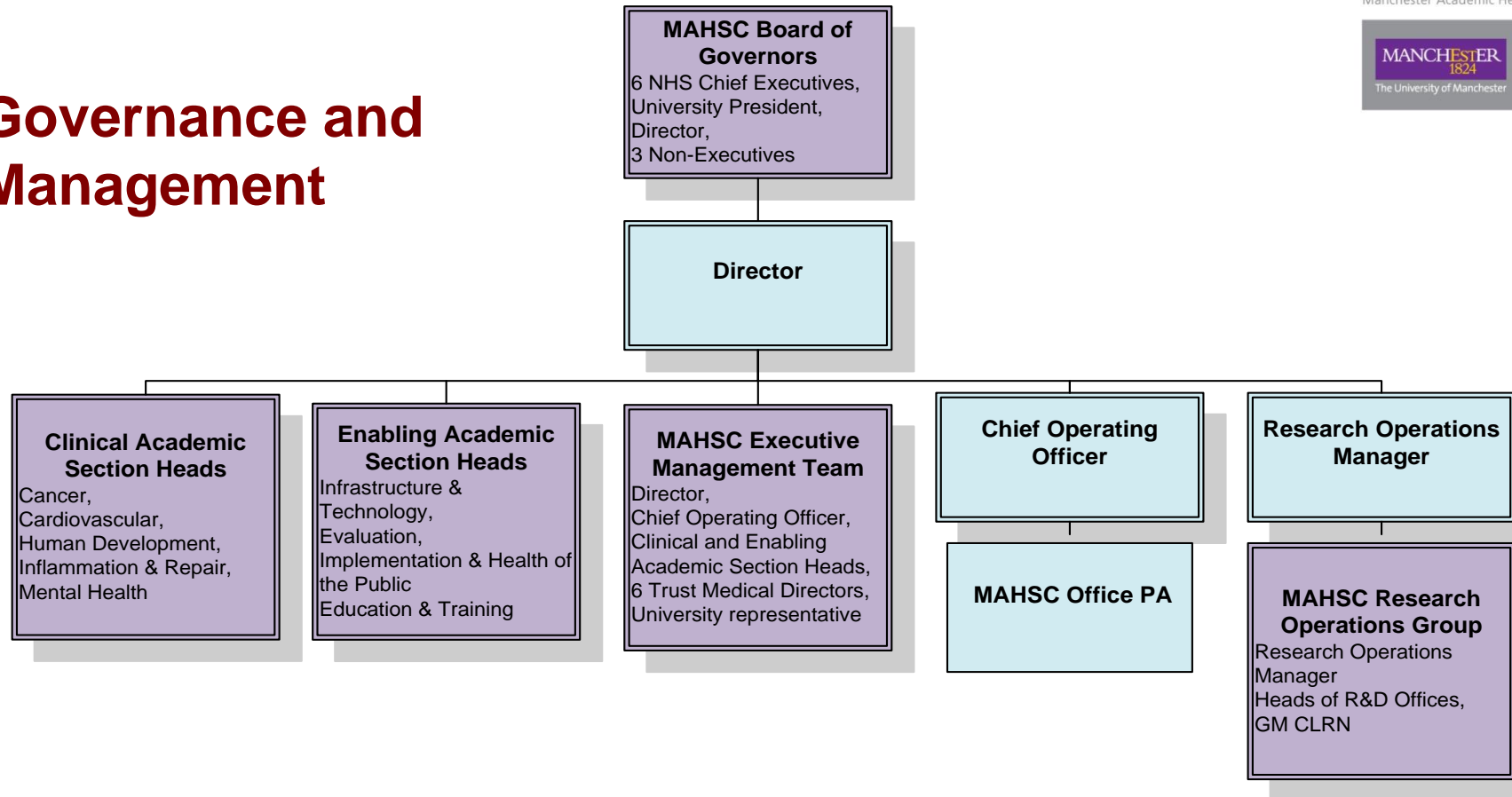


Governance, Organisation and Management: a federated approach with harmonisation of processes based on best practice

Clinical Themes: leading capabilities combined with strong communication and cross working across the translational medicine spectrum

Enabling Infrastructure: pan-MAHSC resource and alignment with national programmes supported by fully trained staff

Governance and Management



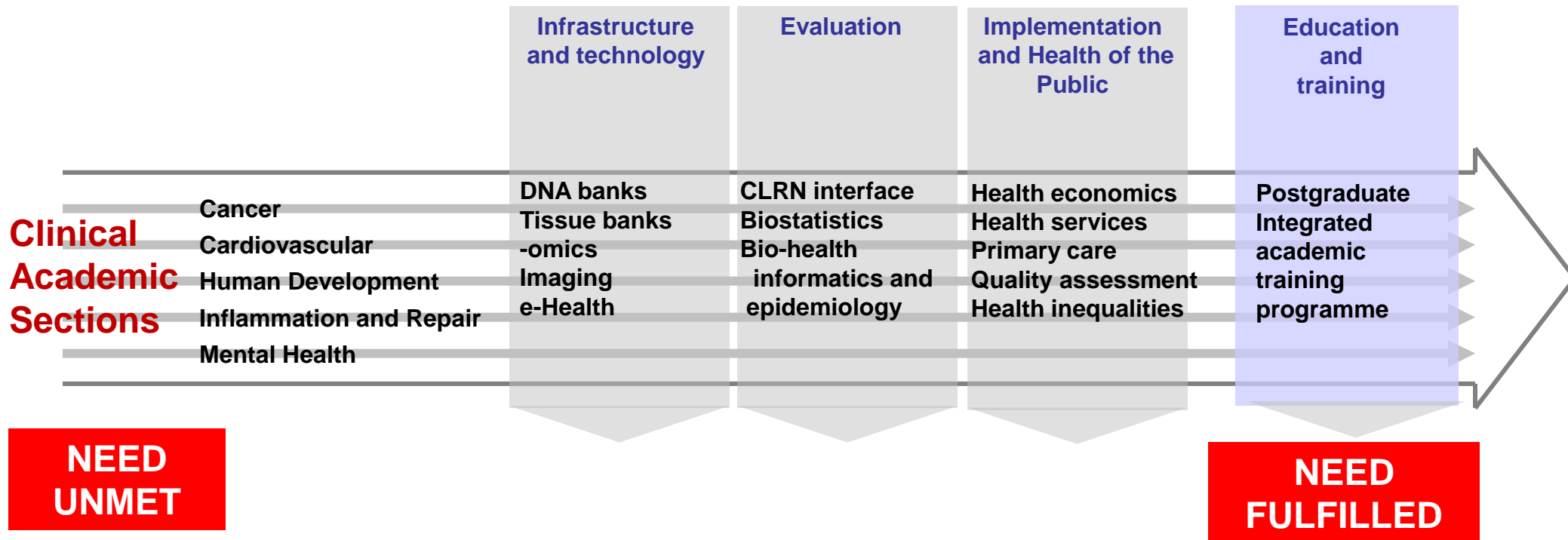
*Blue represents staff part or whole funded by MAHSC
Company Limited by Guarantee*

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Structured for Delivery



Enabling Academic Sections



Strategic plan: from our five year vision

E-health

- e-Lab infrastructure gives access to anonymised linked records from all aspects of NHS care for a population of 2.5 m

Clinical trials

- An integrated facility across the partners accessible via single portal enabling studies from biomarker and first-in-man to population level interventions

Implementation

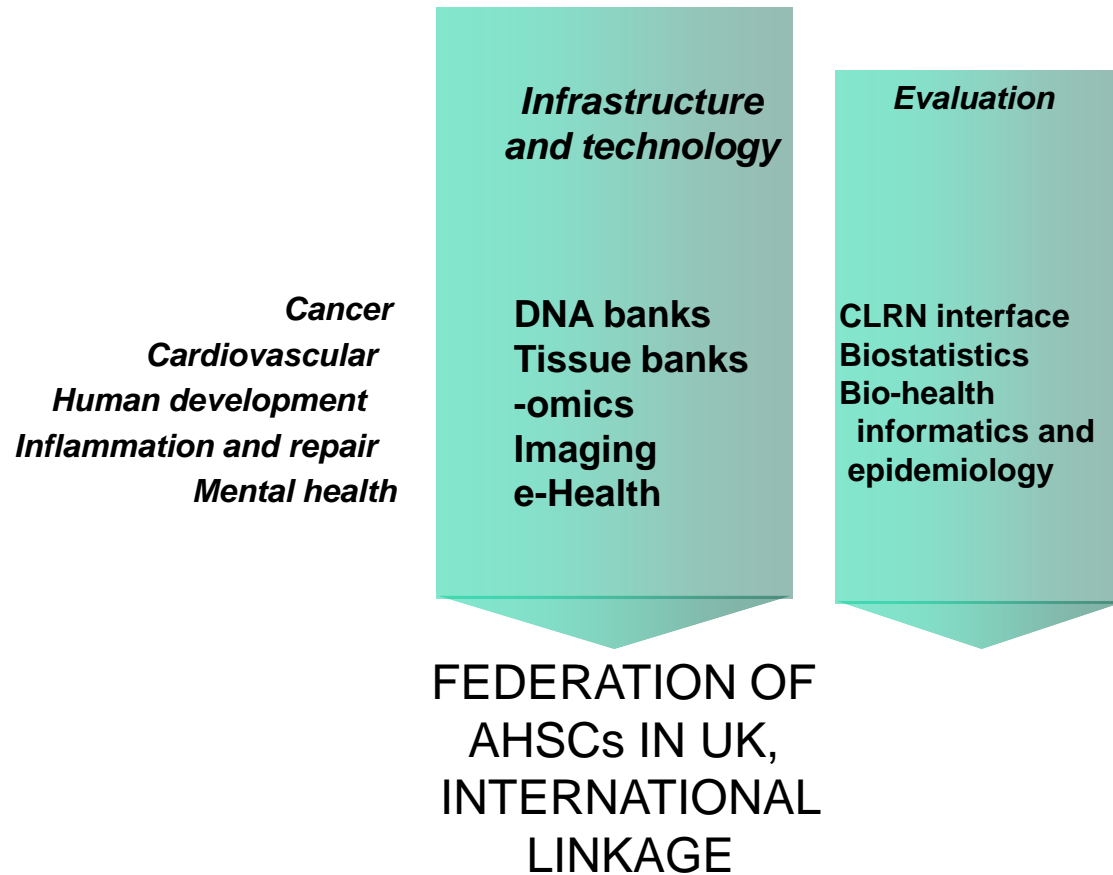
- Implementation embedded in the organisation through knowledge transfer agents

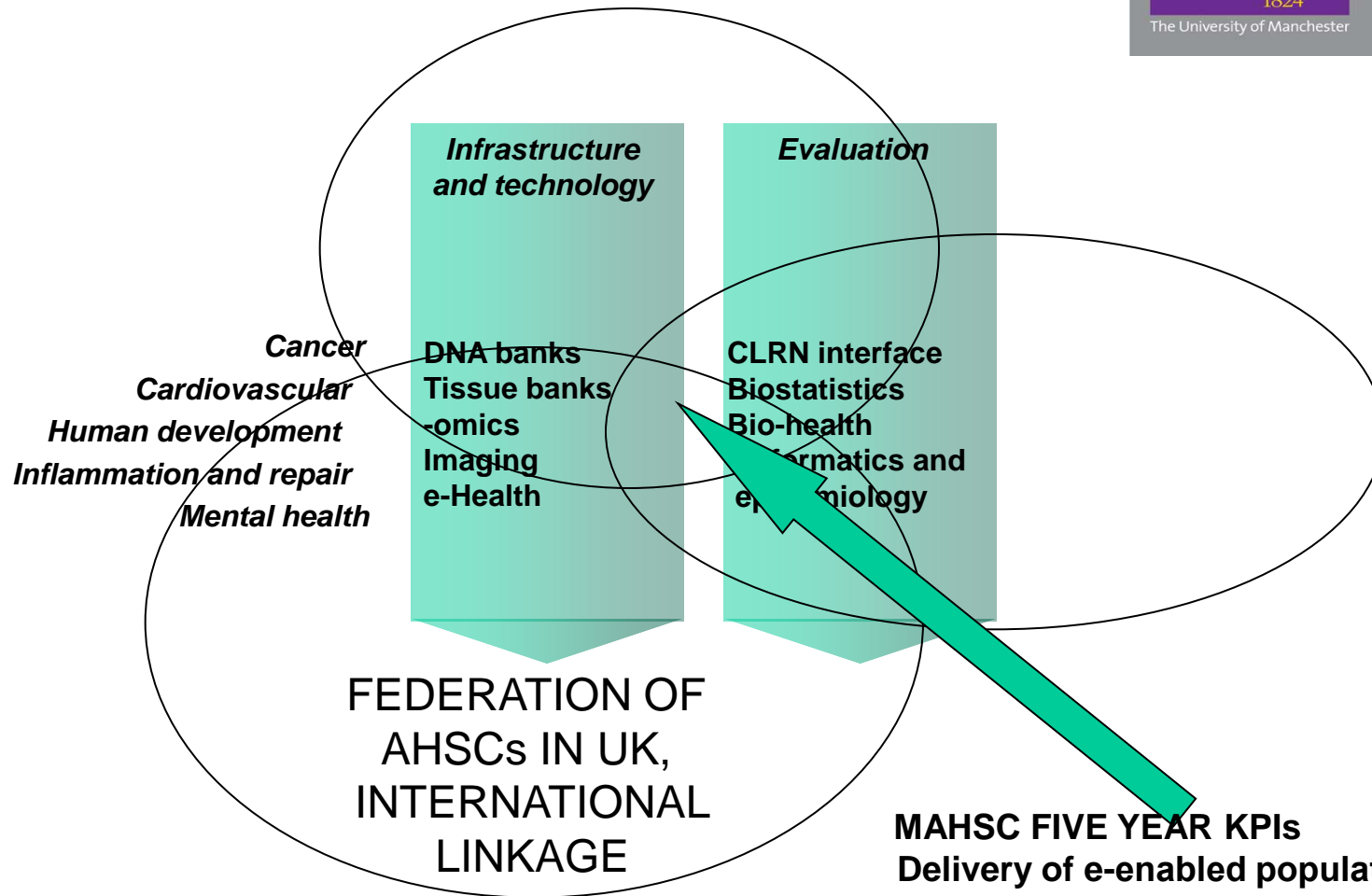
e-Enablement Assets



- **North West Institute for BioHealth Informatics (NIBHI) is lead asset.**
- **Current assets include :**
 - Salford and Wirral e-Lab Pilot Studies: e-care records linked across primary and secondary care in Salford (220K) and Wirral (330K)**
 - Obesity Epidemiology and Public Health Informatics/Obesity e-Lab: focus on research & new insights into obesity epidemic and public health measures to tackle it**
 - An MRC-funded project (IMPACT) fusing informatics, epidemiology and economics - scenario planning for health policy, initially cardiovascular**
 - e-Health+: research cluster/network to enable a more citizen-led approach to improving health**

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MAHSC FIVE YEAR KPIs
Delivery of e-enabled population database of $\geq 2.5M$ (anonymised linked records).
Delivery of a co-ordinated bio-repository across MAHSC members

Clinical Trials Approach

Project	Current Status	Required	MAHSC KPIs
Clinical Trials Coordination Unit (CTCU)	Proposal to the Board 22 July	Funding for enhancing resource to support an NIHR registered Christie CTCU to deliver Manchester wide service	28, 2, 3
Joint Research Office	Review for the Board 22 July	Process harmonisation, SOPs (ongoing), Co-location of University/NHS staff. A dedicated Clinical Trials Office working loosely with GMCLRN with the Research Office. Development of Detailed plan to be worked up by MAHSC R&D Directors Group.	25, 26, 15,16
Coordinated Clinical Trials Research Facilities	Working Group structure identified	Working Group initiation awaits outcome of strategic review on Wellcome Trust Clinical Research Facility by Steering Committee under new Chair, Dr John Stageman.	2.3, 15, 16
E-enabled trials feasibility and recruitment systems	GMCLRN working on FARSITE programme with NWeH	Pilot development utilising 5 GP practices in Salford underway. Approval for whole of Salford in place (~60 practices). Stage 2 will recruit further 29 Greater Manchester practices already aligned with GMCLRN [by end of stage 2 this will encompass total population of ~500 000]	3, 29

Research and Innovation Culture

- **1% clinicians leading research**
- **10% clinicians engaged in research**
- **100% clinicians supporting research**

Strategic plan: from our ten year vision



- **More than 10 demonstrable health benefits**
- **More than 100 new senior national/international health researchers**
- **More than 1,000 research-enabled healthcare workers trained**
- **Trebled commercial partnerships in drugs and devices**
- **Health-conscious population of "citizen scientists" created**

What have we done so far?



Pilot Projects

Citizen Scientists

Encourage, inspire and support the public, especially the local community, to engage in research activity in order to improve recruitment to trials in the first instance.

Development a cadre of citizen scientists who support the needs of clinical research.

MIMIT Industrial Liaison Programme (SMEs)

Access to industry partners to deliver developed technology in response to unmet need (highlighted by MIMIT partnered clinicians)

Source of potential partners for collaborative funding bids

Development of marketable technologies that deliver patient benefit

Co-Morbidity Biobanking

Work on data links, public engagement and access will address central aims of MAHSC communications and harmonisation.

Building of a regional hub and spoke structure to develop resource to test hypotheses in co-morbidity eg diabetes and cardiovascular disease

Demonstrator for European project

What have we done so far ?



Harmonisation

Research costing

Will enable accurate, consistent and transparent costing and inclusion of all party costs

Contracts

Will eliminate time wasted through negotiation of non-standard contracts

Reporting and Management Information

Will enable identification of cross-institutional projects and provide data against research KPIs.

Establishing R&D Office Key Performance Indicators (KPIs)

To ensure all R&D teams work to same standard and timescales

MAHSC Research Office

Approval for virtual co-located R&D Office

Successes

- **MRC Clinical Research Training Fellowship Programme in Clinical Pharmacology (with Liverpool)**
- **OLS Clusters: Inflammatory Respiratory Disease & Joint and Related Inflammation**
- **Proton Beam Therapy Centre with UCL Partners and Birmingham**
- **Modernising Scientific Careers Early Adopter site**



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Equity and excellence:

Liberating the NHS

