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NIHR Imperial Biomedical Research Centre (BRC)

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- Dr Paul Craven, Head of Clinical Research Operations

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Healthcare Translation Background: AHSC and AHSN

AHSC
Focuses on discovery science and early stage translation

AHSN
Larger-scale delivery of evidence based practice into healthcare

Discoveries arising from basic and applied research

Developing innovation and collaboration with industry

Foster research and participation

Innovate through adoption and diffusion

Enhance wealth creation and industry engagement

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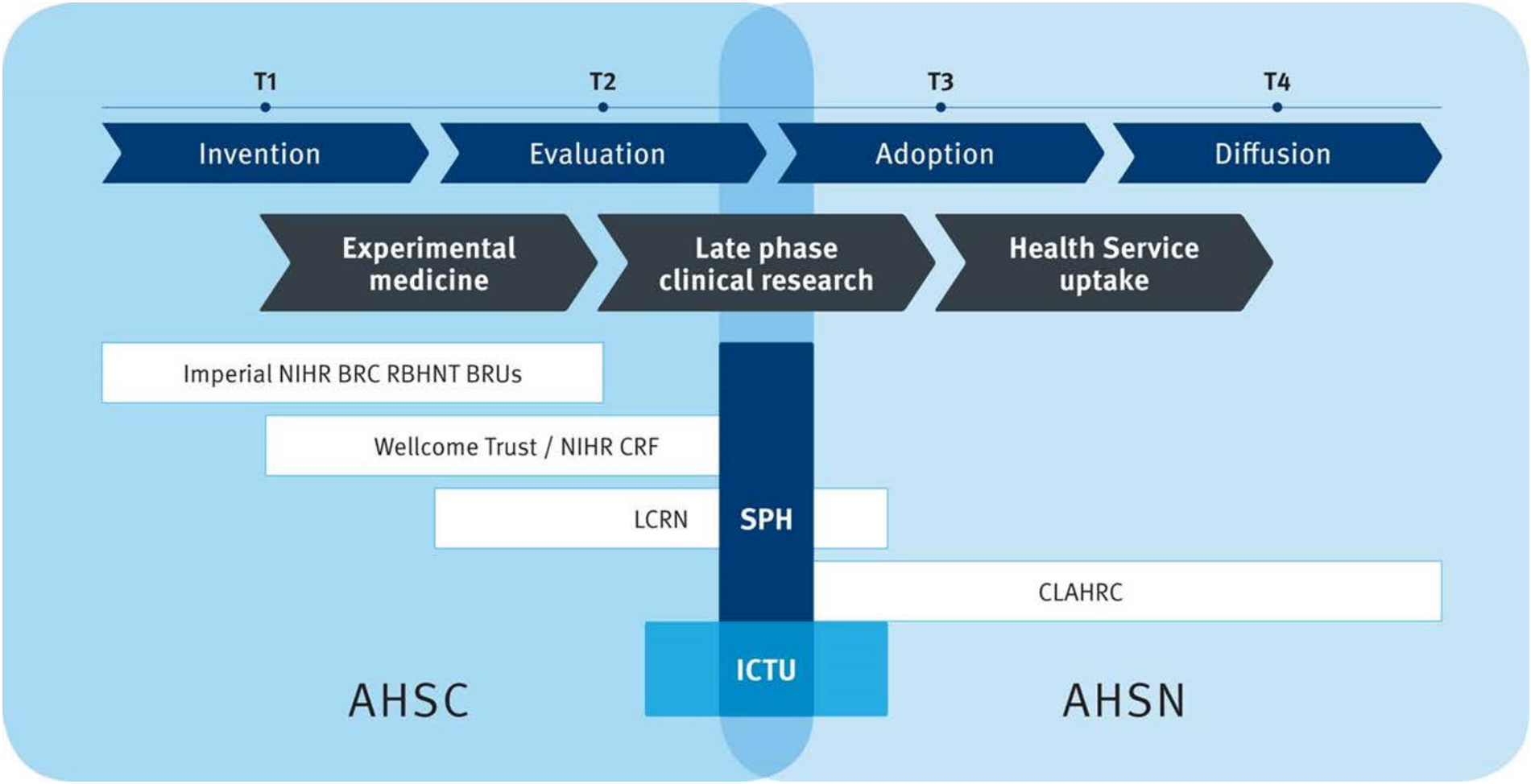
NIHR Infrastructure @ Imperial



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University – NHS Partnership

Faculty of Medicine advances clinical practice by ensuring the translation of our pioneering basic research.

Close collaboration with **Faculties of Engineering** and **Natural Sciences** and the **business school.**

Close collaboration with AHSC, transforming health outcomes utilizing research excellence from across faculties.

Support **multidisciplinary academic collaborations** and **industry partnerships** which deliver new tools, products and innovations.

Faculty of Engineering

Business School

Faculty of Medicine

Faculty of Natural Sciences

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University – NHS Partnership

WHY?

- Identifying and addressing unmet clinical needs
- Access to patient cohorts and the patient ‘voice’
- Link to clinical practice and pathways

HOW?

- AHSC – joint management & executive structures / aligned strategies
- Joint appointments / R&D Directorate
- ICHT Divisional research structures
- BRC Themes ‘map’ to ICHT Divisions

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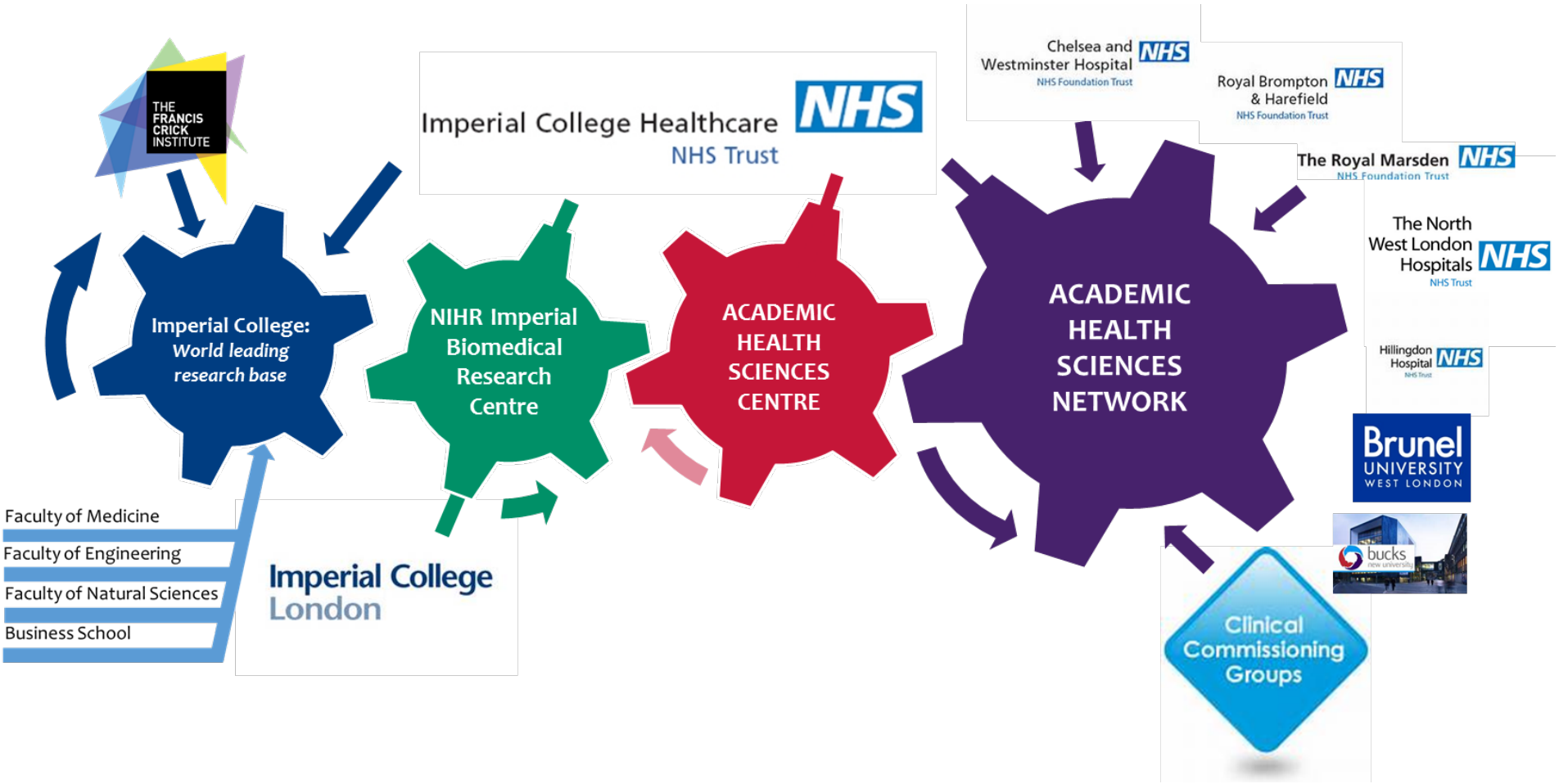
Fitting It All Together



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Intro to BRCs

- 2006/7: launch of NIHR & 1st round of BRCs (Culyer replacement)
- 2011/12: 2nd round (year 5) / 2017/18: 3rd round
- Infrastructure funding / 5-year biomedical research programmes
- Partnerships between NHS Trusts and universities (£800m DoH)
- Experimental medicine / first-in-human / proof-of-concept
- The aims of NIHR BRCs are to:
  - drive innovation in prevention, diagnosis and treatment of ill-health
  - translate advances in biomedical research into patients benefits
  - provide a key component of the NHS contribution to our nation's international competitiveness by making the best Centres even better

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NIHR Imperial BRC

- £113m over 5 years
- 8 Research Themes (Brain Sciences, Cancer, Cardiovascular, Immunology, Infection, Metabolic Medicine, Early Life Health, Surgery & Technology)
- 4 Cross-Cutting Themes (Imaging, Biobanking, Genomics, Molecular Phenomics)
- NHS Support
- Core Facilities & Services
    - Trials Unit
    - Tissue Bank

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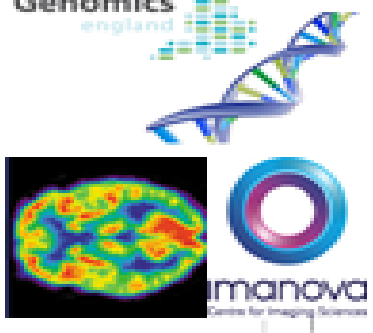
Overall Structure

NIHR Imperial Biomedical Research Centre
Translating research into patient benefits

Joint Translation Fund (pipeline / devolved funding streams / FoE / FoNS)

Institute for Translational Medicine & Therapeutics

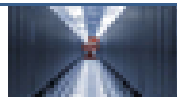
Genomics england



Imperial Clinical Research Facility

Health Informatics Collaborative

Imperial Clinical Trials Unit



Population Health & Bioresources

Patient Experience Research Centre

Clinical Academic Training Office

NHS Support Services

THEMES	PROGRAMMES (tbc)
Infection	• Infection • Anti-microbial resistance • Respiratory infection • Vaccines
Immunology	• Rheumatology • Renal medicine • Gastro – hepatology • Haematology (non-malig)
Brain Sciences	• Traumatic brain injury • Neurodegeneration • Stroke • Neuropsychopharmacology
Cancer	• Cancer • Haematology (malignant)
Cardiovascular	• Vascular sciences • Cardiac regeneration • Engineering & Comp Sci
Surgery & Technology	• Surgical robotics & allied technologies • Diagnostics & sensing • Innovation & service delivery
Metabolic Medicine	• Diabetes • Obesity • Endocrine • Nutrition
Early Life Health	• Paediatrics • Women's Health • Neonatal Medicine

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NIHR Imperial BRC: Nurturing a 'Pipeline'

- Use central budgets to support new projects
- Contribute to Imperial Confidence-in-Concept scheme
  - Encourage cross-Faculty proposals
  - Commercialisable potential
  - Unmet clinical need
  - Patients / volunteers
- ITMAT (Institute of Translation Medicine & Therapeutics)
  - Projects take advantage of BRC investment in technology platforms (cross-cutting Themes)
  - Hypothesis-driven / promising pilot data
- Training schemes (Chain-Florey fellowships)
- IMANOVA co-funding for PET imaging pilot projects

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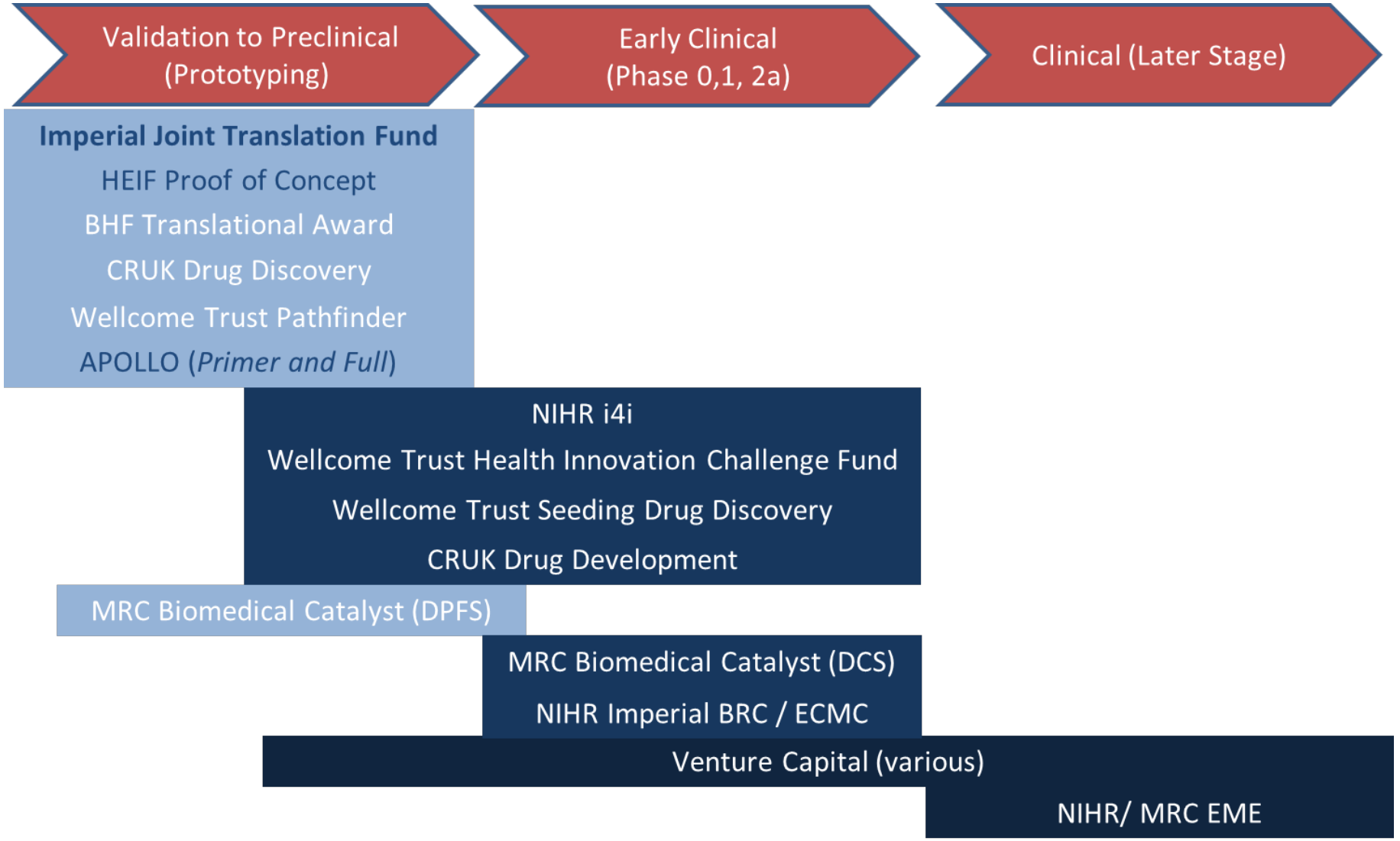
Translational Funding Schemes



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NIHR Imperial BRC: Translational Example

- The Intelligent Knife (i-Knife)