# **UK Biobanking Showcase**

Research Perspectives

Dr Penny Wilson, Innovate UK London, 16<sup>th</sup> November 2016

# Innovate UK

#### Innovate UK

#### The UK's Innovation Agency

- A non-departmental public body spun out of the DTI in 2007, sponsored by the Department of Business, Energy & Industrial Strategy
- Remit to grow the UK economy by stimulating innovation in science, technology and business
- Since 2007, the organisation has:
  - invested up to £1.8bn of public money in innovation, drawing on a similar investment from industry and partners
  - Supported ~ 7600 companies
  - Returned up to £13.1bn to the UK economy and created up to 55,000 jobs, translating to over 7 jobs per company we've worked with

#### Five point plan

- Working with the research community and across Government
- Accelerating UK economic growth
- Building on innovation excellence throughout the UK
- Developing Catapults within a national innovation network
- Evolving our funding models

#### **New sector structure**

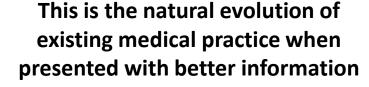
- Emerging & Enabling Technologies
- Health & Life Sciences
- Infrastructure Systems
- Manufacturing & Materials

#### Precision Medicine Programme

- Launched October 2010
- Aims to realise the potential of stratified medicine in the UK
  - Right patients treated
  - Right time
  - Right therapy

- Improved outcomes
- Fewer complications
- Better use of finite resources

Driven and enabled by



- •Better understanding of pathology
- •Ability to measure multiple markers faster and cheaper
- Development of more selective therapies
- People's expectations
- Advances in digital health
- Health economics

#### Precision Medicine Programme

- Key roadmap themes
  - Incentivising adoption
  - Increasing awareness
  - Patient recruitment consents and ethics
  - Clinical trials
  - Data collection, management and use
  - Regulation and standards
  - Intellectual property
  - Bio-banks and biomarkers
  - Increasing the impact of R&D investment
- 18 competitions run (including infectious disease platform). Supported 140 projects with an investment of £61.8m and an additional £31.2m from industry

# Converging technologies

- Biomarker discovery and validation
- Biosensors
- Novel chemistries
- The omics (proteomics, genomics)
- MEMS (including microfluidics)
- Engineering
- Sequencing technologies
- Nanotechnology
- Advanced materials
- Bioinformatics
- Information and communication technologies
- Data mining and fusion
- Big data
- High value manufacturing
- Social and behavioural science
- Design



# Converging technologies



What's the relevance?

What's the impact?

Results must lead to a decision



It's not all about the technology!

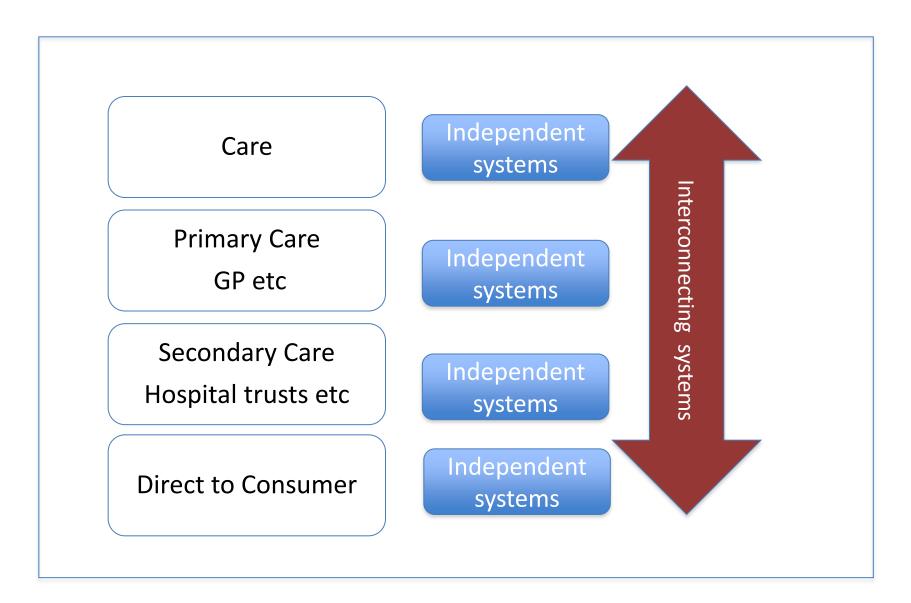


## Stratified Medicine – public dialogue



- Definition and communication
- Implications for patients and care
- Social issues and consequences
- Research, testing and data sharing

## Large requirement for interoperability and linkage



# We can't stop thinking about the future

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