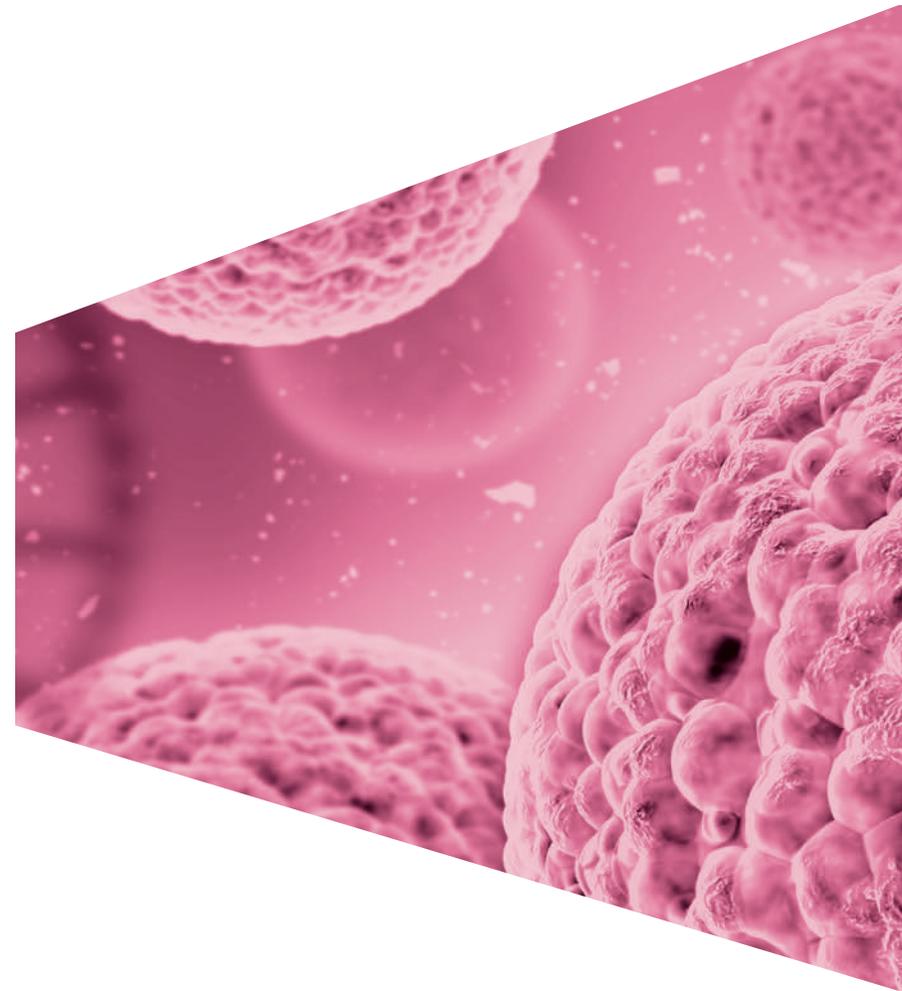**SEHTA 2021**

# Accelerating Adoption in the NHS

Friday 8th October 2021

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Consultant Respiratory Physician
Professor of Respiratory Medicine
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The NHS is good at innovation

The NHS is good at adopting innovation

The NHS is good at sustaining innovation

The NHS is good at maximising innovation

# The evidence: 70 years of Research and Innovation in the NHS

**1948–1958**    Lung cancer and smoking
The dangers of bed rest

**1959–1968**    Hip replacement, CPR, portable defibrillator, Ultrasound, Palliative care and the hospice movement

**1969–1978**    The Glasgow Coma Scale (GCS), first CT scanner
World's first IVF baby, first human MRI

**1979–1988**    Detecting osteoporosis using ultrasound, heart transplant, hepatitis B vaccine, β-blockers

**1989–1998**    Preventing recurrent miscarriage
Saving premature babies

**1999–2008**    New heart valves from stem cells, genome sequence

**2009–2018**    Personalized medicine (biologics), robotics, telemedicine

**2018–202..**    Digital, Data, AI, COVID – vaccines (malaria), genetics, public health, "research"

**34 Nobel Prizes in Medicine**

£50m     £1.2bn

Annual spending on research and development in the NHS, including through the National Institute for Health Research, 2014-15.

Approximate annual spending to support adoption and spread of innovation in the NHS through the AHSNs, 2013 to 2018.

**Source:** Department of Health 2016; NHS England 2017

# Innovation

"An idea, service or product, new to the NHS or applied in a way that is new to the NHS, which significantly improves the quality of health and care wherever it is applied."

…..the process of adoption (identify, deciding and implementing an innovation) is not straight forward

# The "carrots"

**Dec 2011**

**Innovation, Health and Wealth: Accelerating Adoption and Diffusion in the NHS (report published by Department of Health in December 2011)**

- Set out a delivery agenda for spreading innovation within the NHS

**2013**

**Small Business Research Initiative (SBRI)**

- Delivered by Innovate UK
- Provides small and medium-sized enterprises a route to market, bridging the seed funding gap experienced by many early stage companies

**2013**

**NICE Technology Appraisals in the NHS in England and Innovation Scorecard**

- Recommendations on the use of new and existing medicines and treatments in the NHS
- Based on reviews of clinical and economic evidence
- Innovation Scorecard published quarterly since January 2013 – used to monitor progress in implementing NICE technology appraisal recommendations

**2012 & 2015**

**Nursing Technology Fund**

- Two rounds of funding to support nurses and midwives make better use of digital technology in care settings

**2013**

**Academic Health Science Networks (AHSNs) established**

- Established by NHS England to support scale and spread of innovation
- 15 AHSNs covering defined geographical areas
- Aim is to connect NHS and academic organisations, local authorities, the third sector and industry

**Oct 2014**

**NHS Five Year Forward View**

- Included steps to accelerate innovation in new treatments, diagnostics and care pathways including a focus on 'combinatorial innovation'
- Describes numerous ways of doing this including the Test Beds, healthy 'new towns' and a focus on expanding operational research within the NHS

**2015**

**NHS Innovation Accelerator established**

- NHS England initiative delivered in partnership with 15 Academic Health Science Networks
- Aim is to accelerate the uptake of high-impact innovations and provide real-time practical insights on scale and spread
- A cohort of Fellows are supported each year with mentoring, peer learning, events and workshops as well as access to a bursary

**2016**

**Clinical Entrepreneur training programme launched**

- Designed to offer opportunities for clinical, NHS staff and wider healthcare professionals to develop entrepreneurial aspirations
- Programme includes events, education, placements and mentoring

**Jun 2016**

**Innovation and Technology Payment (June 2017 – this built on the previous Innovation and Technology Tariff June 2016)**

- Aims to support the NHS in adopting innovation by removing financial or procurement barriers to uptake of innovative products or technologies (particular response to FYFV)

**Oct 2016**

**Accelerated Access Review (final report published October 2016)**

- Set out recommendations to speed up access to innovative healthcare and technologies to improve efficiency and outcomes for NHS patients

**2016**

**Accelerated Access Collaborative**

- Formed in response to the publication of the Accelerated Access Review
- Brings together industry, government and the NHS to remove barriers to uptake of innovations – enables NHS patients to have faster access to innovations
- Support innovation across development pipeline from research to scale and spread

**2016**

**NHS Testbeds Program Wave 1 (2016) and Wave 2**

- Brings together NHS organisations and industry partners together to test combinations of digital technologies with pathway redesign in real-world settings

**2017**

**Life Sciences Industrial Strategy**

- Provides recommendations to government on long-term success of the life sciences sector – NHS collaboration is one of seven themes

**2018**

**Health Systems Support Framework (HSSF) – suppliers added from 2018**

- Developed to support ICSs/ STPs procure solutions to improve integrated care and population health (to support aims of FYFV)

**Oct 2018**

**The Future of Healthcare**

- Government's vision for digital, data and technology in health and care
- Aim is to create the right environment for digital to flourish while maintaining local flexibility
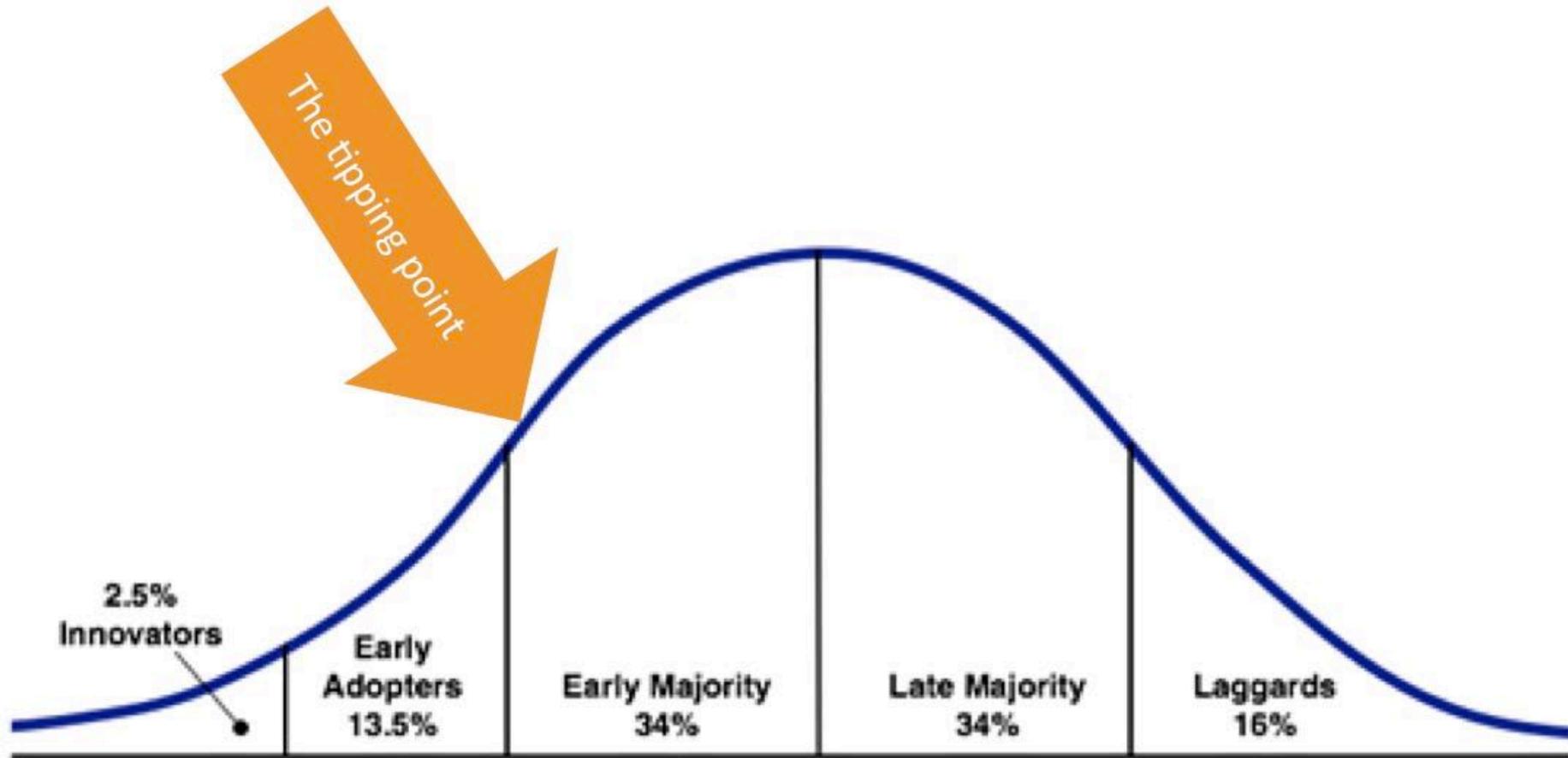
**Jan 2019**

**NHS Long-Term Plan**

- Contains commitments on digitisation for organisations, the workforce and patients
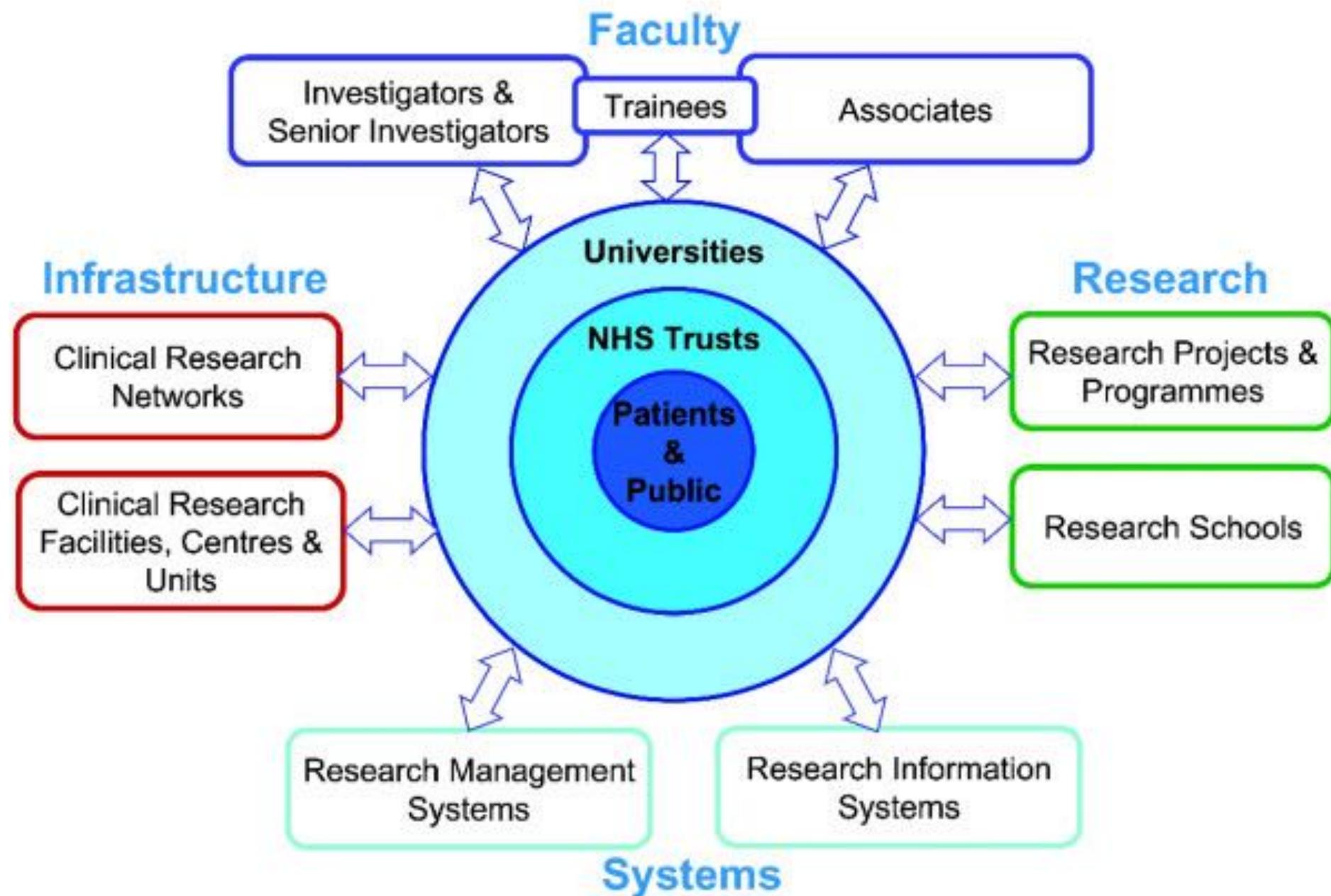- Key commitment for all secondary care providers to be 'fully' digitised by 2024

"The idea that the NHS is slow to adopt seemingly well-evidenced innovations is not new and for the most part is accepted as fact." Nuffield Trust, Falling short, December 2017

# The "sticks"

# The law of diffusion of innovation



The tipping point

2.5%
Innovators

Early
Adopters
13.5%

Early Majority
34%

Late Majority
34%

Laggards
16%

The National Institute for Health Research

# Characteristics of organisations that innovate, adopt and spread

Organisations will more readily identify and adopt innovations if:

- They are large and mature, and resources are available to support new projects

- There is good leadership, vision and managerial relationships

- There is a willingness to experiment and take risk; there are clear goals and priorities understood

- There are good internal and external networks for identifying and sharing knowledge about innovations

- It is divided into semi-autonomous departments (Divisions) and has effective decentralised decision making

- It has the skills and knowledge to assess and the impact an innovation would have

- There is a tension for change - 'we can't go on like this'

- It has tight systems and appropriate skills to monitor and evaluate the impact of the innovation

Ref. Diffusion of innovations in service organisations: systematic review and recommendations. Greenhalgh 1, et al. 2004

# Ambitions of Innovators and NHS determines approach to scale and spread

## NHS

- Impact on care, patient safety
- Deliver care at lower cost
- Happy and resilient workforce
- Improved patient experience
- Number of clinical trials
- Impact on NHS finances
- The perfect business case – no risk
- *Impact on lives saved*

## Innovators

- Positive trials and real-world results
- Visibility and prestige of Innovator role
- Word-of-mouth sales and visibility
- Strong reputation and external validation
- Address problems within the NHS
- Aligned their view of success with that of the NHS
- "Solution looking for a problem"
- Address multiple challenges or pathways
- Awards won

# Understanding the barriers helps to overcome them

Fundamental issues include:

- Innovation in trusts isn't embedded in routine processes.

- It's seen as a luxury, only to be attempted when everything else is going well, rather than as a core part of quality and efficiency

- It's not clear who is responsible for innovation

- It's not actively built into job descriptions

- Much depends on clinicians being able to think about innovation - but stretched services can mean that most don't have time

- A disproportionate effort and investment goes on development (invention) rather than adopting and implementing

Ref. Diffusion of innovations in service organisations: systematic review and recommendations. Greenhalgh 1, et al. 2004

# The spread challenge

How to support the successful uptake of innovations
and improvements in health care

Tim Horton, John Illingworth and Will Warburton

The Health Foundation

NHS England

**NHS Innovation Accelerator:**
Understanding how and why
the NHS adopts innovation
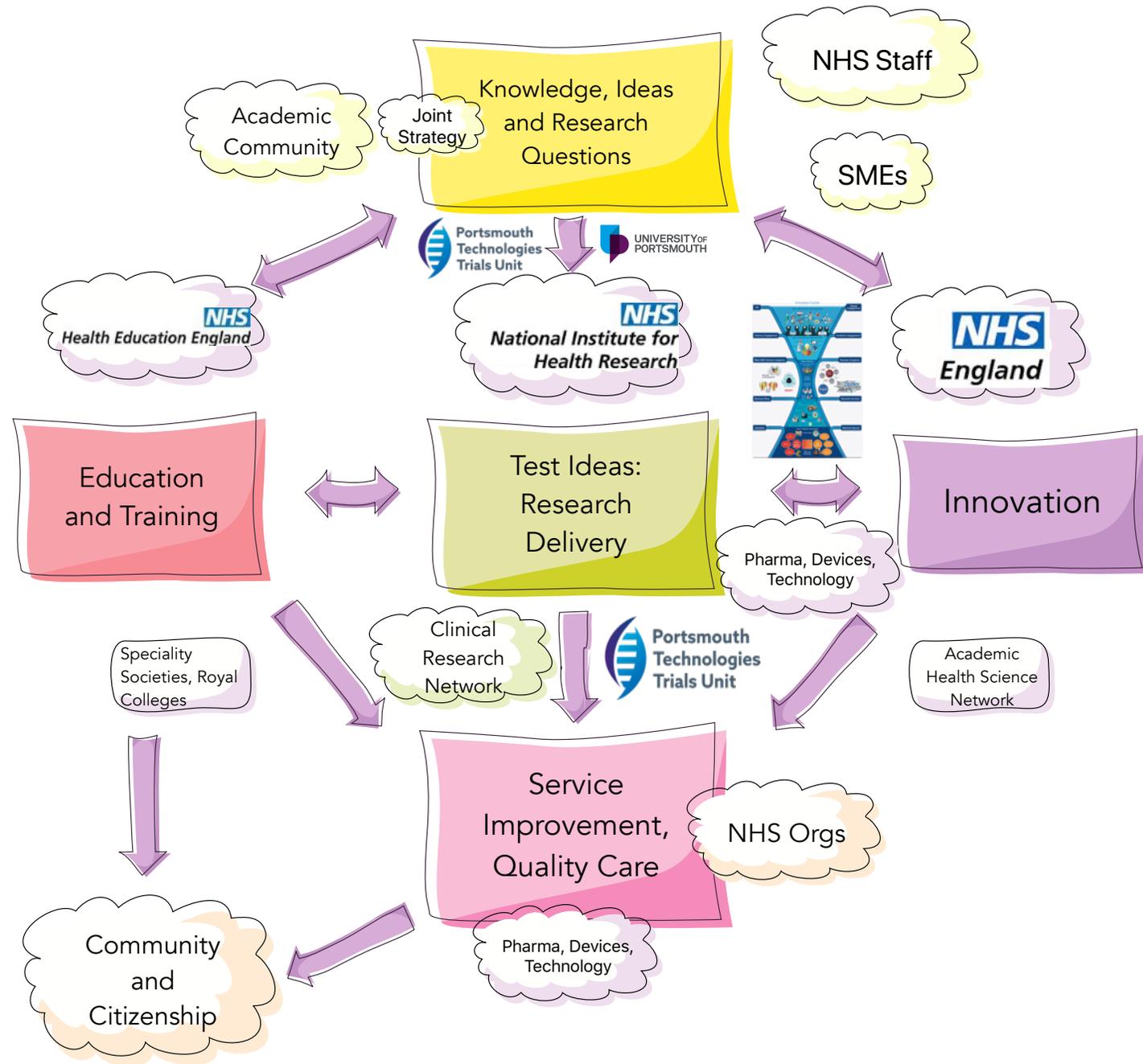
Research report March 2020

# Achieving scale and spread

Learning for innovators
and policy-makers

nuffieldtrust

Commissioned and
supported by

Nina Hemmings, Rachel Hutchings, Sophie Castle-Clarke
and Dr William Palmer

The AHSN Network  NHS England
NHS Innovation Accelerator

**Understanding the Context and Drivers for adoption**

# PHU Staff said ....

- Expect the majority of innovations to be identified bottom up by clinicians through their speciality and professional networks
- Taking time to explore innovation opportunities isn't a formal part of people's role and some feel isn't recognised for its contribution
- Organisations that encourage and invest in people to be outward looking adopt more innovations
- Organisations that have effective devolved decision making adopt more innovations
- No-one felt that there was a Trust level responsibility or process for identifying innovations.

# PHU Staff said ….

- Expect that the process of deciding whether to adopt an innovation would be led by Divisions
- People weren't always clear about when the Division and when the Executive should make the decision
- People weren't always sighted on the business case process
- The Trust could improve its review of innovations after they have been implemented to understand if they have delivered their benefits

# Wessex AHSN Adoption insight reviews: Success factors to date

| Stage | Key influence |
|---|---|
| **Identifying innovations** | • There are clinicians/ professionals who are '**outward looking**' and have the time to do this<br>• The **value of doing this is recognised and encouraged in the trust**, e.g. clinical scientist with half a day per week to research innovation<br>• The organisation is **receptive to new ideas** when people identify potential innovations<br>• At Trust level, there is a **person or process for holding the ring** and acting as a conduit to wider nationally prioritised innovations, e.g. the Medical Director<br>• Using the wider local health and care system to identify innovations |
| **Deciding whether to adopt** | • A clear **devolved decision-making structure**, e.g. Divisional Boards<br>• Clear **decision-making processes** appropriate to innovation e.g. business case guidance<br>• **Decision making structure and processes understood** and used consistently – not bypassed<br>• The health and care system is able to agree and decide to roll out innovations to deliver shared system benefits |
| **Implementing and sustaining innovations** | • **Capacity and capability** to implement change at specialty, divisional or trust level<br>• A **culture of completing change projects** and giving them time to deliver results/benefits<br>• A **review process** to understand whether the innovation was implemented as planned and delivered the benefits defined in the business case<br>• Teams implementing the innovation have information on the benefits they are delivering and are encouraged to network with other teams that have adopted it, and promote the benefits across their organisation/ network(s) |

# VitalPac

**Innovator of the Year** NHS Leadership Awards 2010 Awarded to Professor Gary Smith, one of the clinical team involved in the development of VitalPAC

**BUPA Foundation Patient Safety Award 2010**

**Nursing Times Product Awards 2010** Gold prize: Patient observation Silver prize: Infection prevention and control

**Patient Safety Awards 2010** Technology and IT to Improve Patient Safety award

**e-Government Awards 2010** Highly commended

**West Midlands ICT Excellence Awards 2009** Best Added Value Project
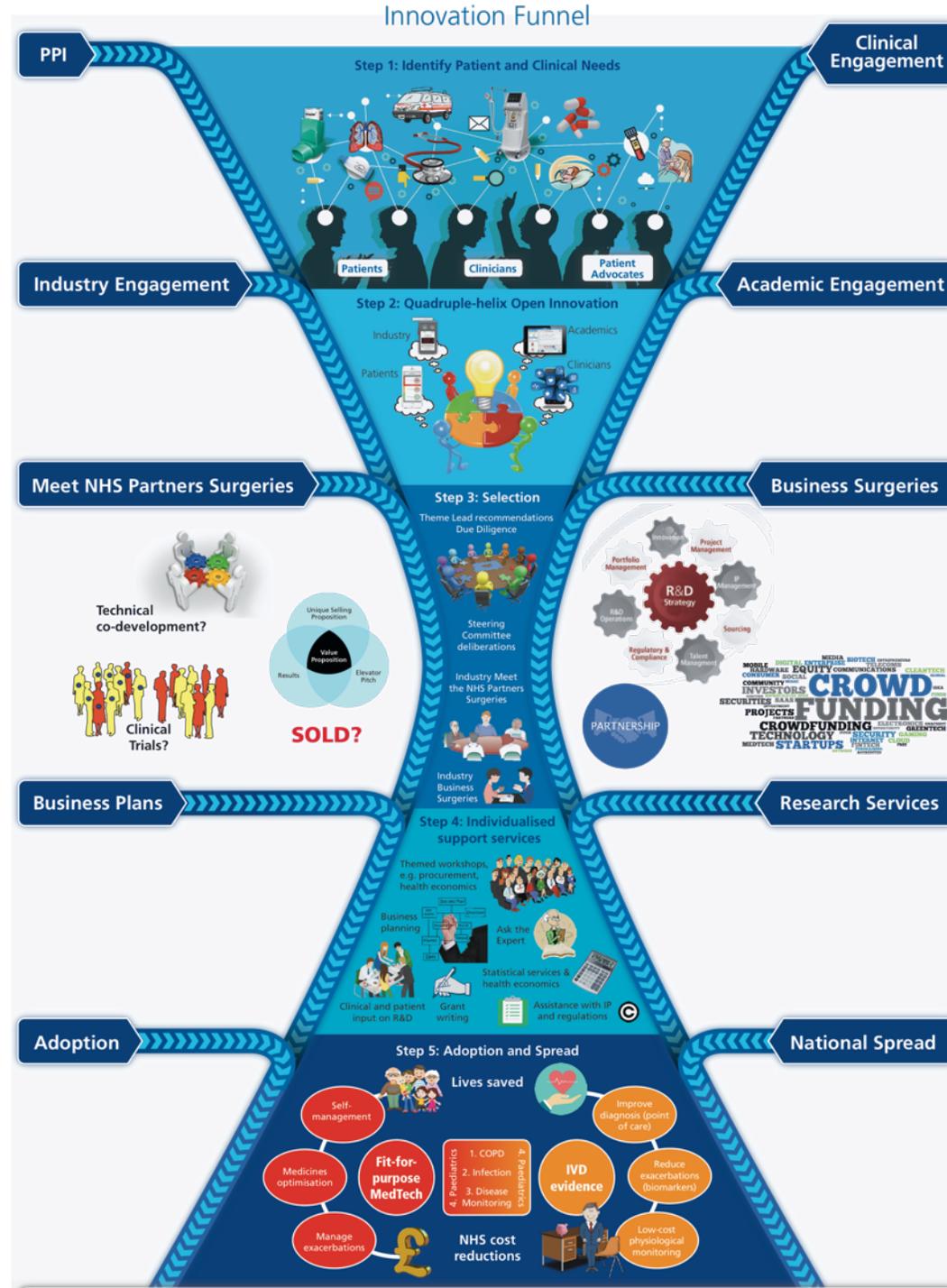
**Health Investor Awards 2009** IT Provider of the Year

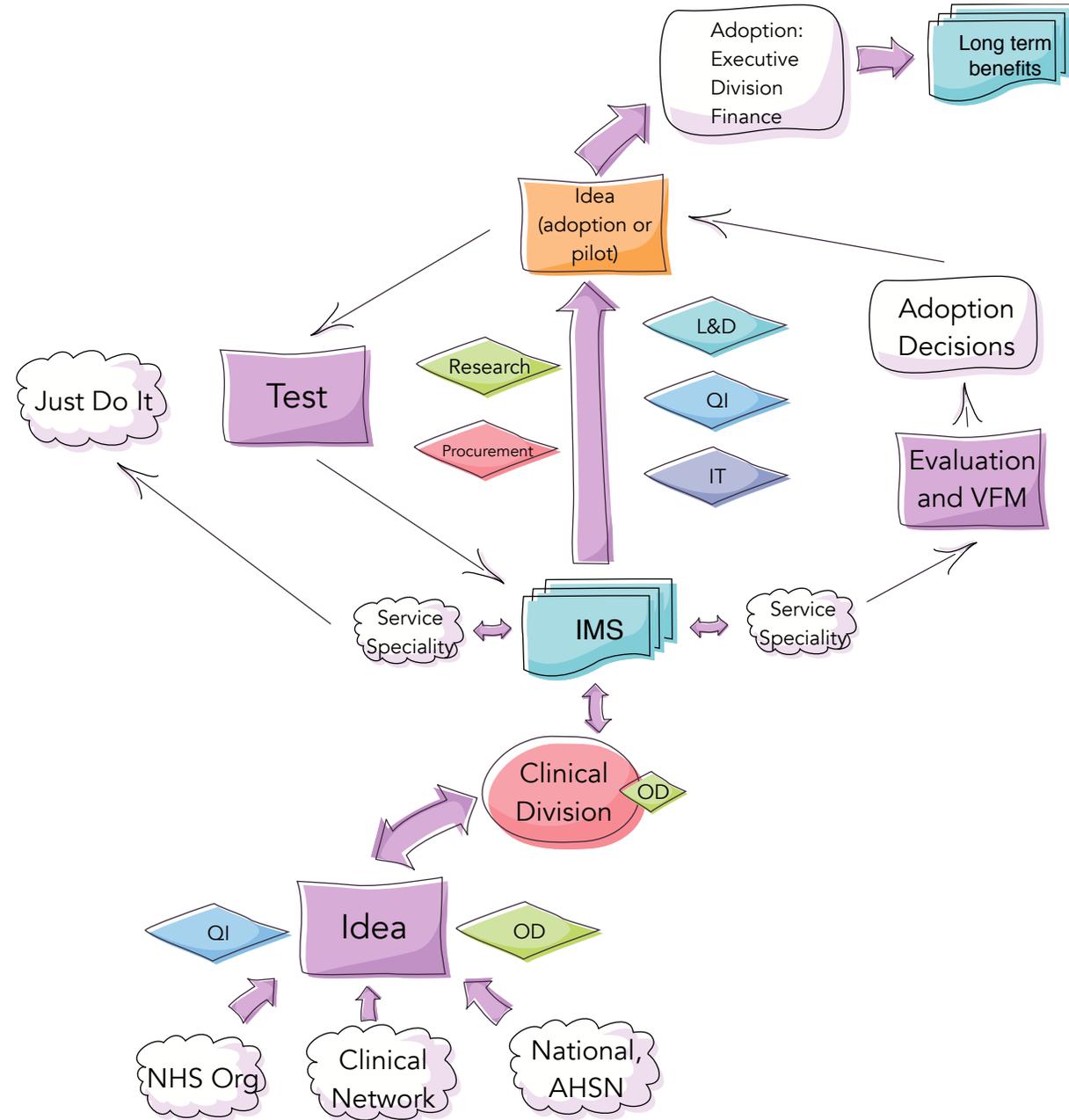**HCAI (Healthcare Association Infections) Technology Innovation Award 2009**

**Finalist in healthcare category of Microsoft's Ingenuity Point competition 2008**

Innovation opportunities with innovators and industry

**Handling innovation in an NHS Trust - possible Solutions**

# Summary

- Require significant investment from NHS to adopt and spread innovation

- Innovation adoption is part of continuous improvement

- Link innovation to business planning

- QI approach to delivery and evaluation

- The adoption process will be iterative, non-linear and uneven

- Develop the local business case and plan for sustainability from the outset