

The NHS Long term plan & People Plan for HCS in London

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Science in Healthcare: Delivering the NHS Long Term Plan

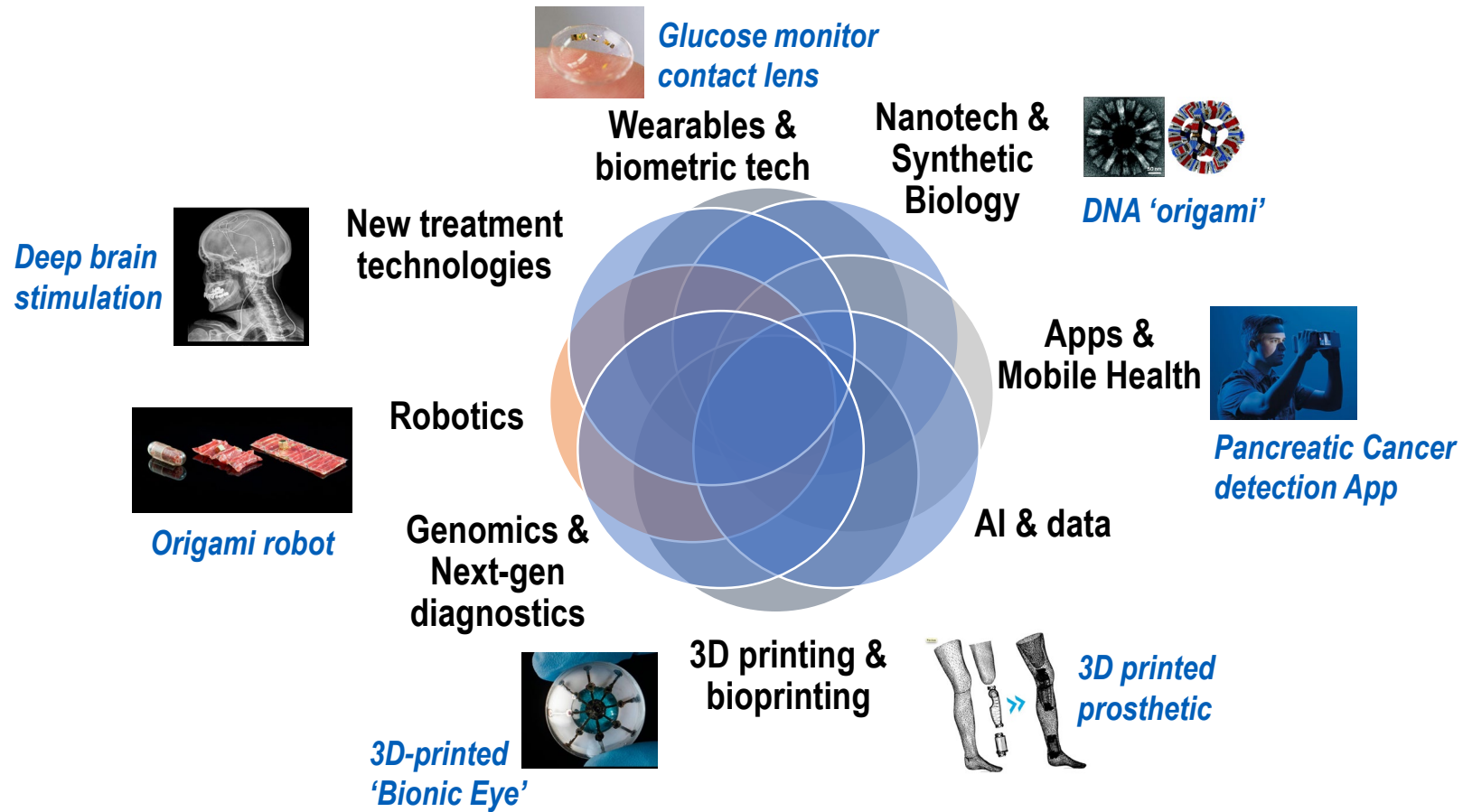
Prof Dame Sue Hill
Chief Scientific Officer for England



[@CSOSue](https://twitter.com/CSOSue)

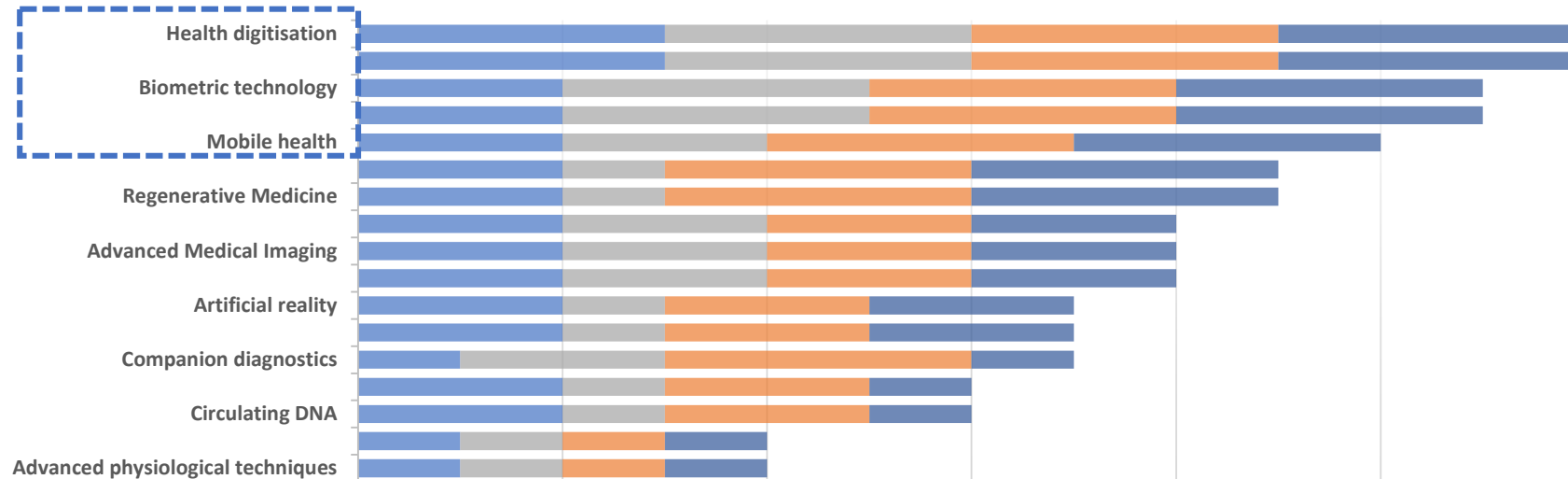
1 July 2019

Scientific advance transforming healthcare

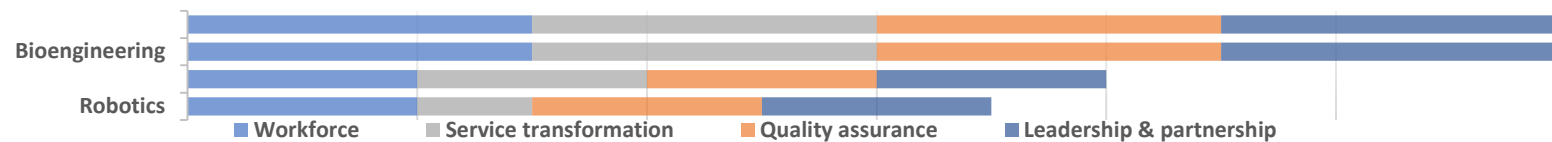


Evaluating the consequences of technological change

Clinical impact in next 10 years



Clinical impact in >10 years



Delivering advance now: HCS at the forefront of care

Healthcare Science has been at the centre of major service developments in 2018

First high energy proton beam patients treated in NHS facility



First children treated using personalised CAR-T immunotherapy for leukaemia



NHS Genomic Medicine Service launches – for consistent & equitable care for 55m population

INVENTION

EVALUATION

ADOPTION

DIFFUSION

The world of NHS change



A service looking to science & technology



Recognising the HCS impact across major health conditions

The Long Term Plan identifies a range of areas across major disease areas where healthcare science specialisms have an impact on improving outcomes

Cancer

- Rapid diagnostic centres
- Extended use of genomics & molecular diagnostics
- Personalised screening
- More imaging capacity
- Improved radiotherapy

Cardiovascular disease

- Early detection
- Targeted screening (inc FH testing)
- Multidisciplinary management in primary care (*inc increased Echo*)

Stroke care

- Further reconfiguration of services with cross-profession competencies
- New tech eg CT perfusion scans & AI interpretation of imaging

Respiratory disease

- Earlier diagnosis & detection
- Improved spirometry testing & interpretation
- Supporting pneumonia care

Diabetes

- New tech eg flash glucose monitors & continuous monitoring

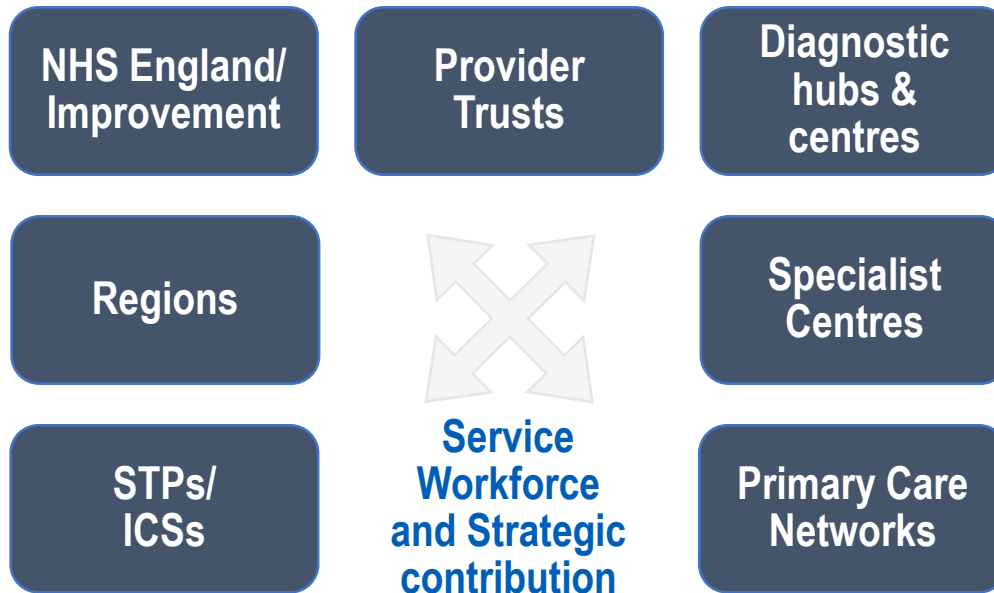
Maternity & children

- Preventing pre-term birth inc cardiotocography
- Improving critical care
- Whole genome sequencing for paediatric cancer
- Improving clinical trial participation
- Paediatric long term condition support

Adult Mental Health

- Support to diagnose & identify physical health conditions

Healthcare Science in new NHS structures

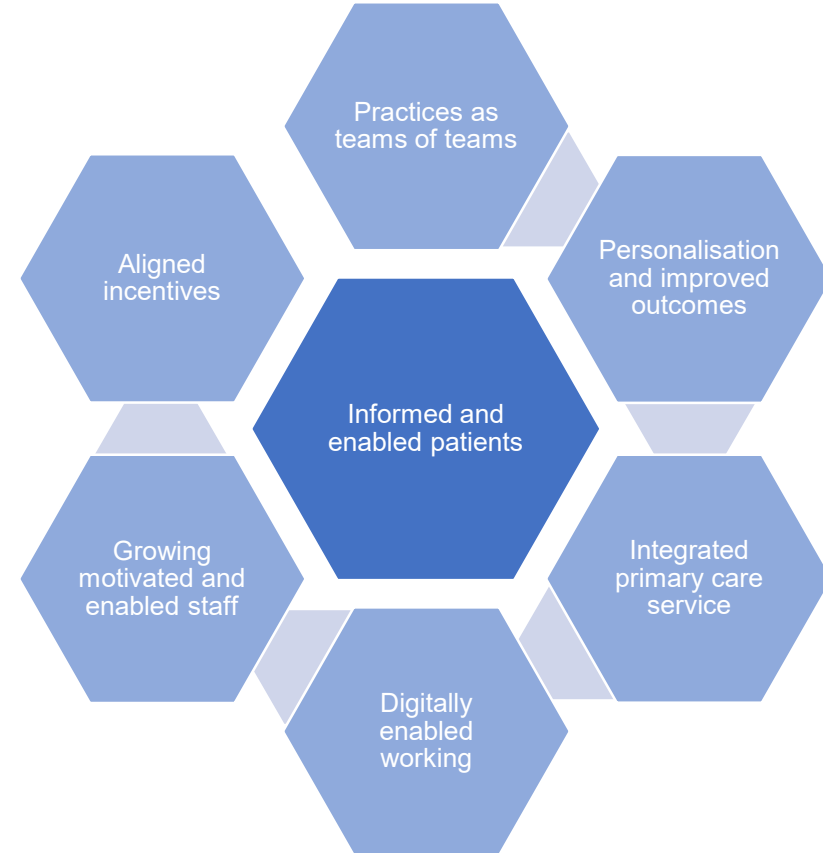


- Significant opportunities for **doing** things differently & **thinking** things differently - at all levels and locations of the new structures
- Science will have a key role to play at **every step across the care continuum** – from supporting self care through established providers to new specialist hubs

Key skills and attributes that healthcare science can contribute to the system: Expertise; Analysis; Advice; Leadership; Adoption; System thinking

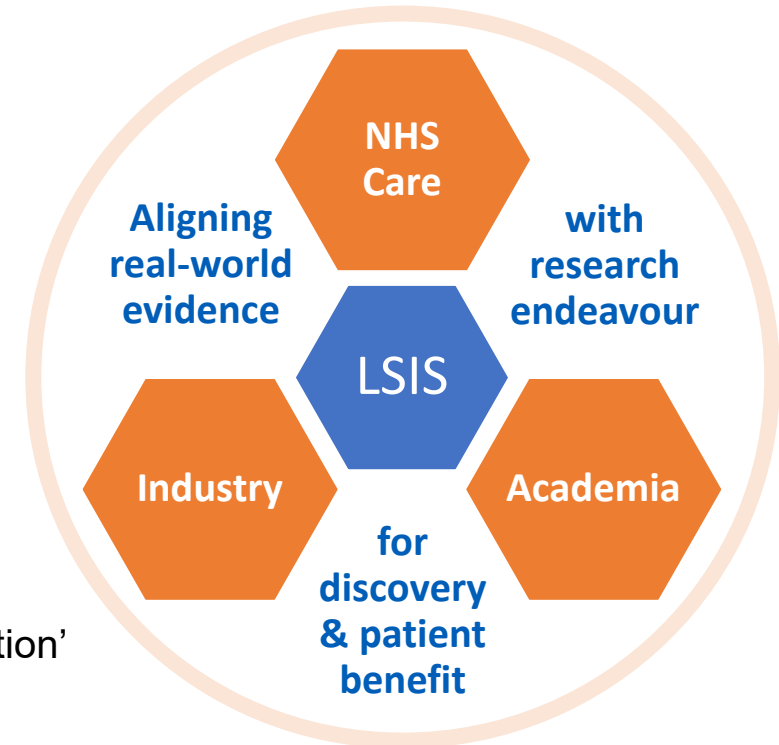
Primary care networks – key to the future

- Primary care networks are small enough to give a sense of **local ownership**, but big enough to have **impact** across a 30-50k population.
- They will comprise **multi-professional groupings of staff** who will be **sharing a vision** for how to improve the care of their population and will serve as **service delivery units** and a **unifying platform** across the country.
- Healthcare Science will play an increasingly important role, particularly given the **move of diagnostic services** nearer to patients and working with Test Beds to bring about change



LSIS: driving collaboration across NHS, academia & industry

- **Life Sciences Industrial Strategy:** more systematic and closer integration of research & clinical care to drive discovery for patient benefit whilst supporting development of the life sciences sector.
- Strategy & sector deal includes:
 - Investment in genomics (in NHS & beyond) including 1m WGS (NHS + UK Biobank)
 - Digital tech & data analytics – including HDR-UK Digital Innovation Hubs & Digital Pathology & Radiology Hubs – developing ‘digital diagnostics’
 - Accelerating the detection of disease inc early diagnosis
 - Speeding innovation, access & adoption of new advances
 - Cohort of healthy volunteers to develop ‘predictive prevention’
- Will require coordination of frontline workforce with NHS research infrastructure (AHSN/Cs & NIHR; clinical academic roles & research & industry partners) – **Creating a R&D Framework**



A track record of responding to the challenge

The Healthcare Science community, led by the CSO team, has a strong history of responding to major NHS policy initiatives from 2002's *Making the Change*



*In the future, the unique skills of the scientific workforce need to be **harnessed** to ensure that the NHS remains at the forefront of research and development, that complex technological advances are adopted and introduced effectively and that science and evidence sit at the core of healthcare.*

At the same time, as science and technology advance and greater clinical scientific expertise is required, they will take on broader roles, including in leadership, management and education.

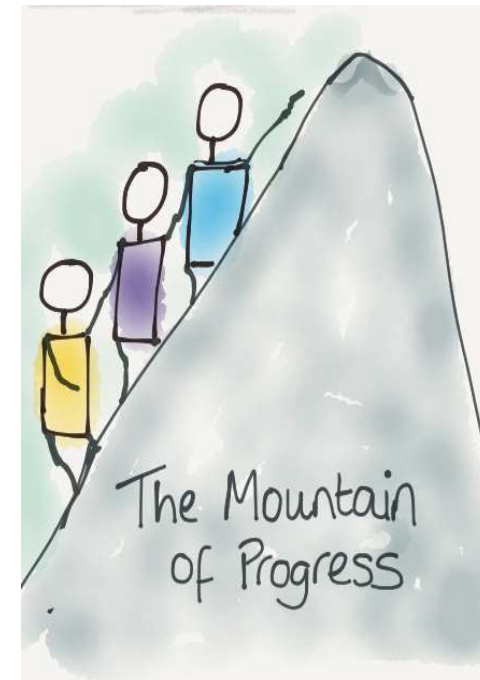
NHS Next Stage Review 2008

Healthcare Science Strategy: The vision

To deliver the HCS contribution to the NHS Long Term Plan, the CSO team have been developing a national **Healthcare Science Strategy 2020**, following a programme of engagement with the profession and system partners

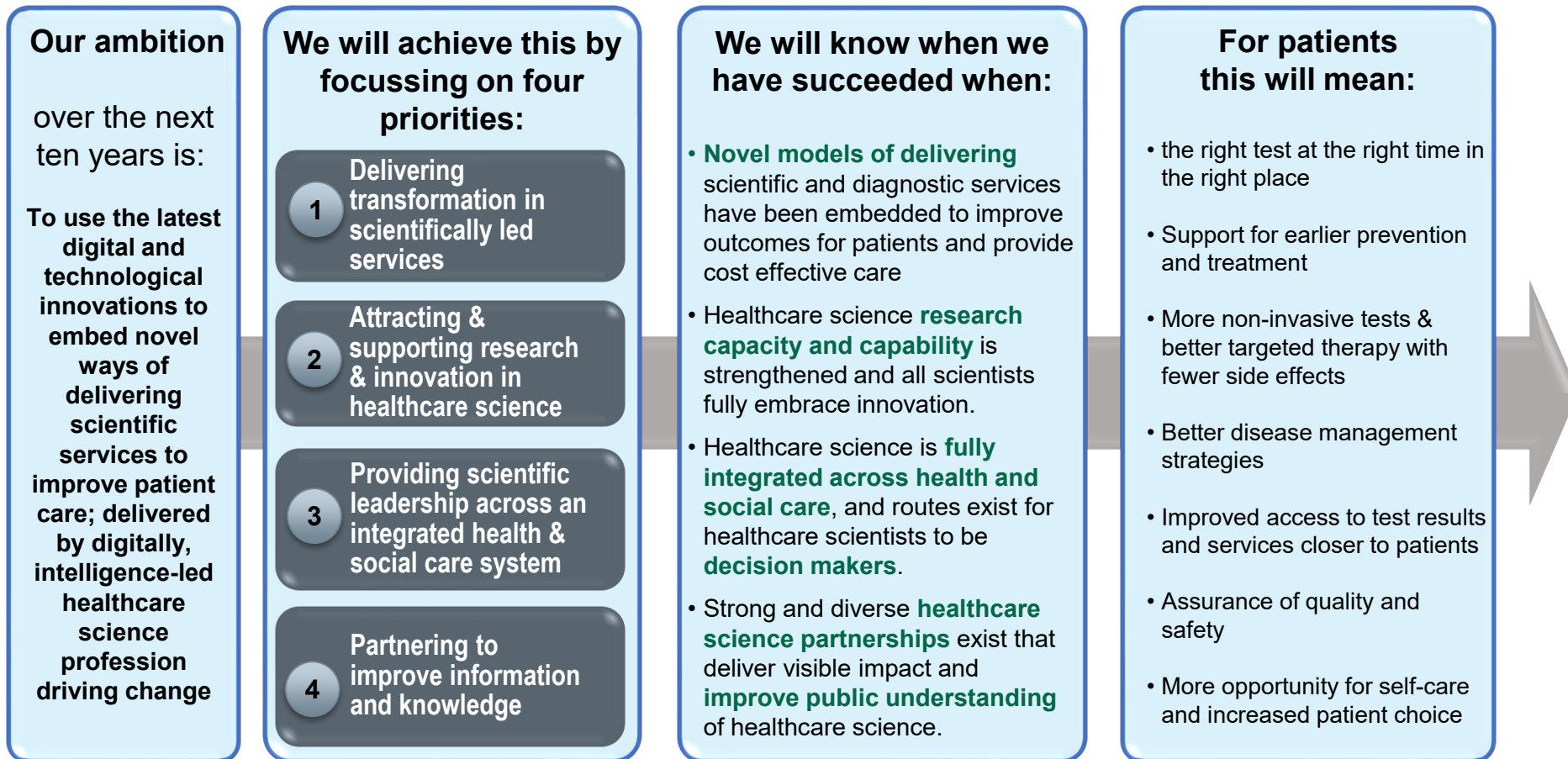
Our ambition:

To use the latest digital and technological innovations to embed novel ways of delivering scientific services to improve patient care; delivered by a digitally, intelligence-led healthcare science profession driving change



Further input to the strategy will come from ongoing engagement, especially on workforce elements, with the aim to publish later this year

The strategic approach in healthcare science...



The strategy: Delivering transformation



We will **deliver innovation in scientifically led services** by using technology to transform healthcare science service models across the care continuum

Develop new models of care

- Inc Genomic Medicine Service; Pathology/Imaging Networks; Same-day emergency care
- Specialist testing and screening in high-complexity services eg paed pathology & audiology

Increase diagnostics in primary & community settings

- Rapid diagnostic centres
- Analyse use of POCT and wearables to support remote monitoring
- Expand workforce roles in multidisciplinary hubs and closer to the community

Create digitally enabled services

- Work with NHSD & system partners to establish next steps for digitally-enabled scientific services, underpinned by robust data standards
- Work with LSIS funded Digital Innovation Hubs and Digital Pathology & imaging hubs to test AI solutions in real-world settings

Improve prevention & reduce inequalities

- Diagnostic stewardship in AMR
- Opportunities in cross-cutting areas such as smoking, obesity

The Strategy: Leadership for transformational change



We will **provide scientific leadership for transformational change** by developing, recognising and embedding leadership in healthcare science.

Increase strategic leadership across systems & ICS

- Establish a HCS leadership across ALBs and system partners, supported by regional scientific advisors & Lead HCS networks

Nurture leadership development

- Create talent management opportunities across the pipeline
- Maximise potential of social media for networks
- Integrate NHS Leadership code

Create capacity to evolve roles to meet system needs

- Provide futures intelligence on workforce & skill mix working with stakeholders
- Amend legislation to allow Clinical Scientists and BMS to administer medicines (*when appt*)

Increase professional diversity at executive levels

- Increase opportunities for routes to senior leadership, inc CCIO & CIO roles
- Work with NHS Improvement & Lead HCS to support Clinical Diversity in Leadership framework

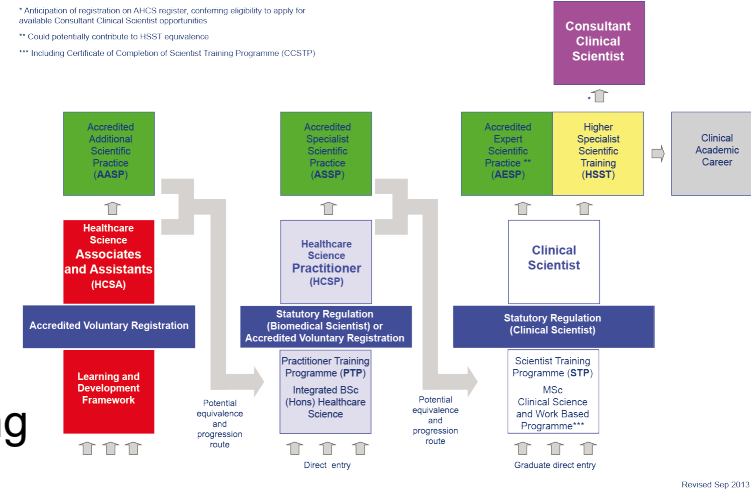
Anticipating the future: Modernising Scientific Careers

- The strategic foundation for the profession delivered through MSC has helped put healthcare science at the forefront of delivery of the LTP & LSIS

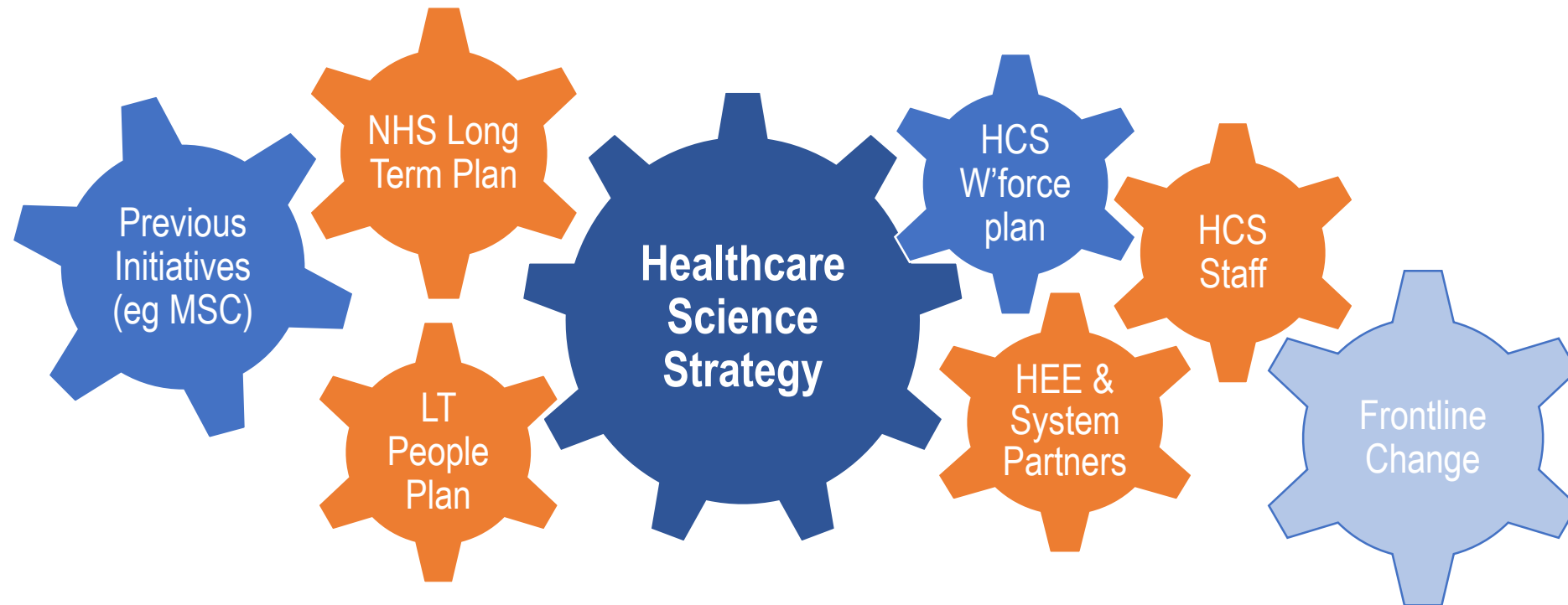
- This includes:

- A broad-based and modular approach, allowing flexibility and change as new technologies and delivery approaches emerge
- Flexibility in career framework to allow new specialisms to be integrated as need develops (*eg Genomic Counsellors, Bioinformatics*)
- Research and leadership elements to training – especially at more senior levels
- Accredited practice to provide targeted advances in key areas of need**

Modernising Scientific Careers: Career and Training Pathways

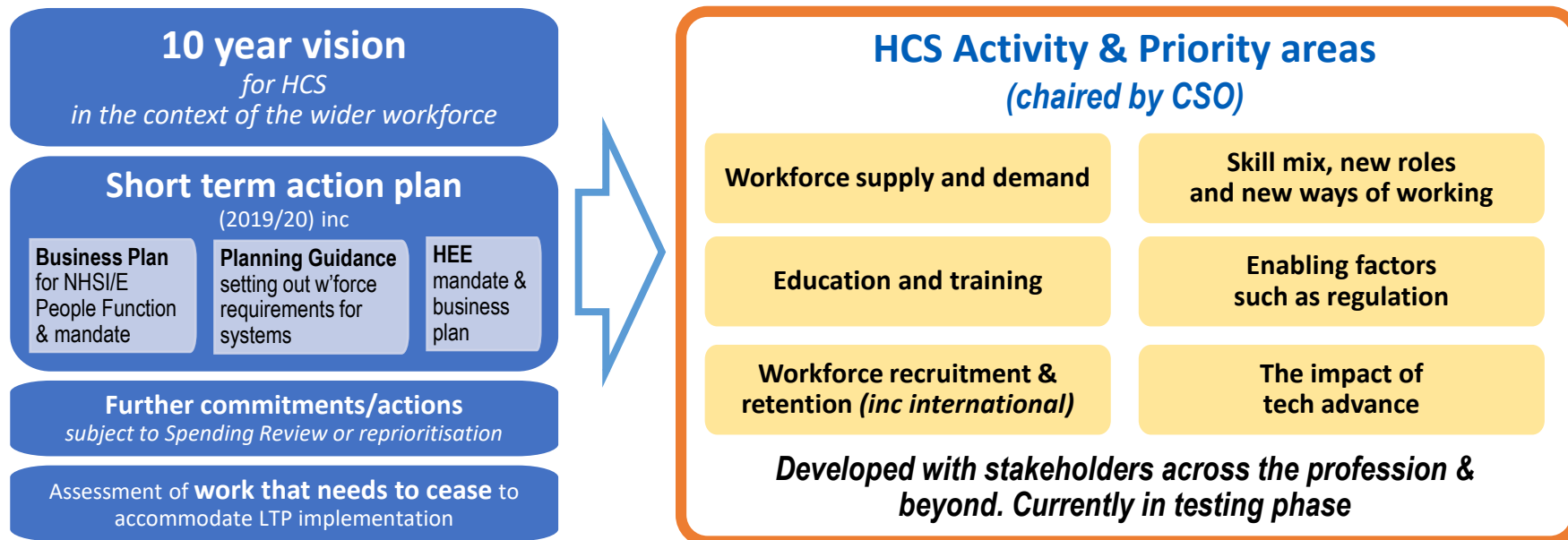


Coordinating the workforce to deliver front line change

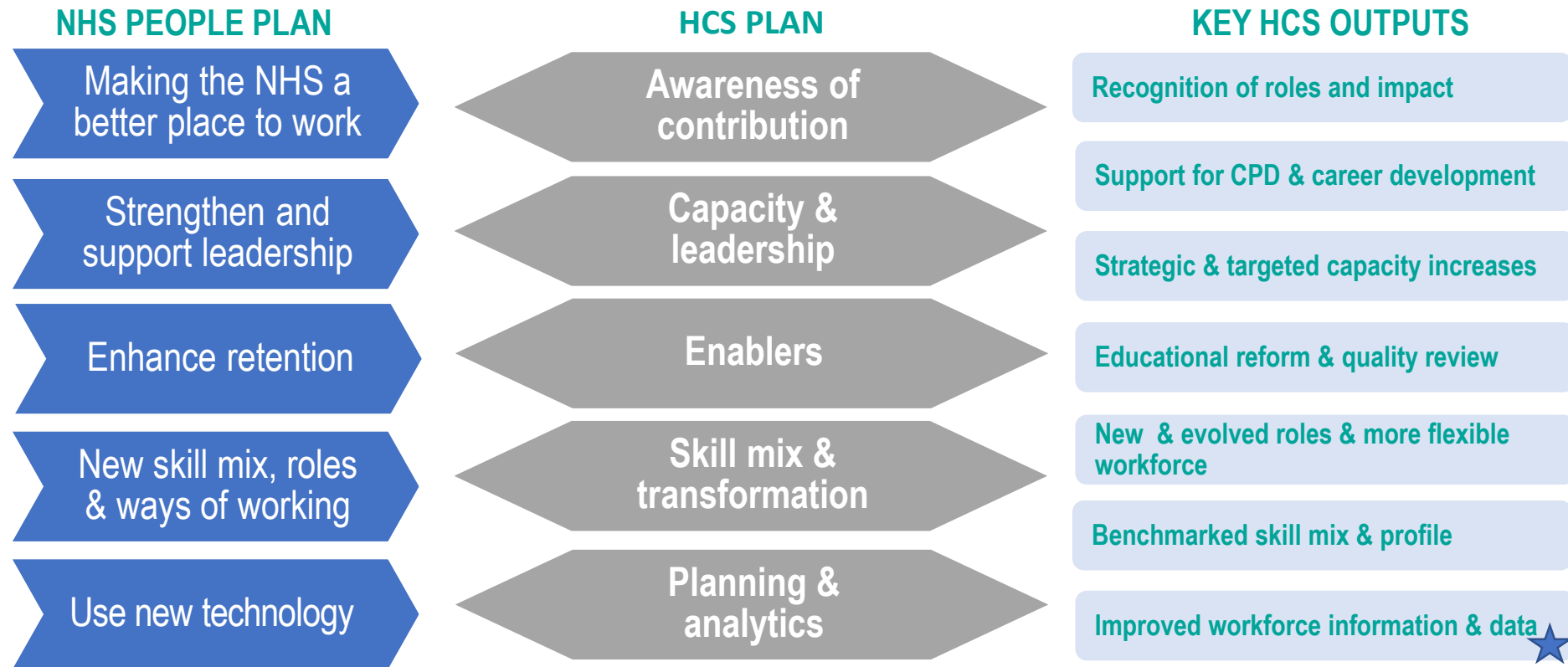


Delivering a workforce plan

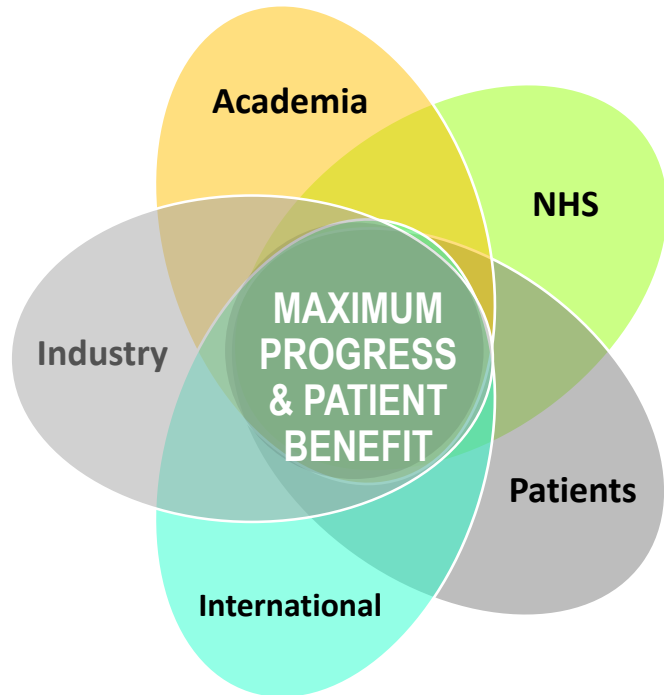
A LTP Workforce Implementation Plan (People Plan) is being developed to recognise the importance of workforce issues to the delivery of the Long Term Plan. **The NHS Interim People Plan was published in June 2019.** Workgroups are looking at the issues for the separate clinical professions & for cross-cutting themes.



Supporting the HCS workforce to deliver



The future will be co-created...



- beyond siloes
- beyond organisational & professional boundaries
- beyond hierarchies
- in a spirit of joint endeavour between equals
- with the overriding driving principle being clinical need and patient benefit

