



The jewel in the crown?

How a new industrial strategy can deliver for UK life sciences and patients



FUTURE
HEALTH

This report is sponsored by Novartis Pharmaceuticals UK Ltd and has been authored by Future Health. The views and conclusions in the report remain those of Future Health and should be attributed as such. Future Health takes full responsibility for the content of the report and associated publications.



CONTENTS

- 05 **Executive Summary**
- 08 **Life science strategies: Government policy in support of the jewel in the crown**
- 15 **What can be learnt from past life science strategies: analysis**
- 29 **Recommendations for Labour's life sciences plan**
- 32 **Policy Framework for a new UK life sciences plan**
- 33 **Conclusion**

ABOUT THE AUTHOR

Richard Sloggett is the Founder and Programme Director of Future Health. He was previously a Senior Fellow at Policy Exchange and from 2018-19 was Special Advisor to the Secretary of State for Health and Social Care. Richard is a regular commentator in the national media on health and social care and has been named as one of the top 100 people in UK healthcare policy by the Health Service Journal. During his time with the Secretary of State, Richard worked across Whitehall, the NHS and local government on major policy decisions including the NHS Long Term Plan and the Prevention Green Paper. Alongside his work at Future Health Richard is undertaking his doctoral thesis in preventative healthcare systems at the University of Liverpool.



ABOUT FUTURE HEALTH

Future Health is a public policy research centre focused on creating healthier, wealthier people, communities and nations. Future Health publishes regular research papers across its three policy research programmes of health prevention, health technology and the links between improvements in health and economic growth. This work is part of the health and economic growth programme.

EXECUTIVE SUMMARY

“The industry is changing, not just year by year but month by month. Now, there is pressure on healthcare budgets in the West and we’ve got our ageing populations. Meanwhile, we’ve got the emerging economies in the East and an explosion of knowledge. Now, I think that all these things together create a new paradigm for life sciences. And in this new paradigm, we must ensure that the UK stays ahead. Because yes, we’ve got a great leading science base. And yes, we’ve got four of the world’s top-ten universities. And yes, we have a National Health Service unlike any other.

But my argument today is this: these strengths alone are not enough, and that to keep pace with what’s happening we’ve got to change quite radically. We’ve got to change the way we innovate, the way that we collaborate, and the way that we open up the NHS.” (Prime Minister David Cameron, December 2011)¹

As he launched the UK’s first ever life sciences strategy in 2011, Prime Minister David Cameron labelled the sector the ‘jewel in the crown’ for the UK.

Nearly 13 years after Cameron’s speech, the UK remains a major player in global life sciences. Successive Governments have sought to champion the sector with Cameron’s strategy revised in 2017 as part of Theresa May’s Industrial Strategy, and then again following the pandemic, under Boris Johnson in 2021.

The new Labour Government has similarly identified the industry as critical to its mission to delivering the fastest growth in the G7, as well as in supporting reforms to the NHS and improvements in patient outcomes. The sector is one of eight prioritised in the Government’s industrial strategy green paper and the Government looks set to launch its own life sciences plan to deliver on its ambitions.²

Competition for life sciences investment globally is increasingly competitive. Whilst the UK had major successes during Covid, more widely our position in attracting commercial clinical trials – whilst now recovering – has fallen back.³ Countries across the developed world are putting life sciences as a strategic investment priority.⁴ The success of the new plan will be dependent on learning from what has worked effectively and less effectively in the recent past.

1 <https://www.gov.uk/government/speeches/pm-speech-on-life-sciences-and-opening-up-the-nhs>

2 <https://assets.publishing.service.gov.uk/media/670cde8692bb81fcdbe7b745/industrial-strategy-green-paper-final.pdf>

3 <https://www.gov.uk/government/publications/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review-final-report>

4 <https://www.futurehealth-research.com/site/wp-content/uploads/2022/02/LSIG-2022-220215.pdf>

This research finds that the past three strategies have been developed and built in very different ways, each having particular strengths and weaknesses as a result. The most recent *Life Sciences Vision* which Labour is committed to building from - is underpinned by a set of disease based missions, the progress on which has been mixed. More widely, past strategies have suffered from a lack of clear objectives, fragmentation and co-ordination across Government, piecemeal resources and limited clarity over delivery and accountability.

A new plan should seek to address this through adopting the following approach:

Promoting and maintaining a consistent long-term approach to an active industrial strategy. The new Government, led by the Prime Minister and Chancellor, should use the creation of a new life sciences plan to set-out ambitions for building a life science ecosystem that delivers, and co-ordinates action, so it brings both economic growth and improved health outcomes for the UK.

Ensuring senior co-ordinated Government leadership on life sciences is reflected across Number 10, Treasury, Department of Health and Social Care, Department for Science, Innovation and Technology and NHS England with aligned objectives and priorities. To support this the profile and resources of the OLS should be boosted and the Life Sciences Council refreshed into an effective co-ordinating body focused on the delivery of the plan, meeting more regularly, commissioning and undertaking deep-dives on specific policy challenges to unblock barriers and communicating publicly on progress and actions taken.

Evolving and anchoring the life science missions. The missions from the *Life Sciences Vision* should evolve to align with the forthcoming NHS ten year plan and the anticipated focus on prevention, early diagnosis and innovative treatment. Update the missions to include action on multi-morbidities.

Using problem statements to build mission partnerships and find solutions. The Government should work with the healthcare system to create problem statements that each mission needs to address (e.g. earlier cancer diagnosis). Use this approach to then (a) galvanise Government-NHS-industry partnerships; and (b) commission rapid policy reviews through expert 'task and finish groups' to help quickly identify and overcome barriers to progress.

Improving the co-ordination of delivery between Government and the NHS. The Government should use the problem statements of the evolved missions to help embed life sciences and innovation in NHS service planning and delivery. Appoint a new Life Sciences Director, with requisite experience, to the NHS England Board with accountability for progress. Embed progress targets and mission goals – including those relating to economic growth – in relevant performance management frameworks such as the Mandate and the ICB Oversight Framework.

Harmonising resources. Set longer term R&D budgets for life sciences and innovation at the Spending Review to provide greater certainty on chosen priorities. Make fewer, bigger R&D bets, invest in core system fundamentals, and harmonise and simplify initiatives (such as on health data). Ensure regulators and bodies involved in the life science ecosystem are suitably resourced to support the aims of a healthier and wealthier population as set out within the health and economic missions.

Deploying innovation at scale. Utilise the relicensing of AHSNs, into Health Innovation Networks (HINs) to reset expectations on the deployment of innovation within the NHS. Use the evolved missions and the new networks to identify larger geographic footprints to deploy mission based interventions at greater scale. To deliver on this HINs will need new capacity and a clear remit for driving forward innovation at scale within the NHS.

Enhancing transparency and accountability. Through reviewing and refreshing the Life Sciences Competitiveness Indicators to ensure they are up to date, enable effective international comparisons and line-up with the new life sciences plan's priorities. Develop a balanced set of metrics across the priorities of the plan including a focus on levels of spend relating to new medicines and their uptake within the NHS. Set clear targets for improvement across different domains and commit to publish an annual report in Parliament on progress in delivering the new plan and an online dashboard tracking performance. Where performance is behind set targets, commit to publish clear proposals for recovery, with associated transparent timelines.

The UK faces strong competition from around the world in building and attracting investment into its life sciences sector.

Getting this new plan right will see the jewel in the crown sparkle for a lot longer.

A photograph of a male scientist in a white lab coat, wearing a white hairnet and safety goggles. He is looking down at a small object in his hands, possibly a sample or a piece of equipment. The background is a laboratory setting with various pieces of equipment and glassware. The image has a warm, orange-red color cast. A white curved graphic element is overlaid on the bottom left, and the text is positioned within this area.

**LIFE SCIENCES STRATEGIES:
GOVERNMENT POLICY IN
SUPPORT OF THE JEWEL
IN THE CROWN**

The UK has a long and rich heritage in life sciences. UK researchers and institutions have won numerous Nobel prizes for innovation including the discovery of penicillin and the structure of DNA, along with advances in medical imaging, developments in stem cells and In vitro fertilization (IVF).⁵

Successive Governments over the last two decades have identified life sciences as a strategic economic and healthcare priority.

In 2005 the Government published *Best Research for Best Health*, the first national strategy for health research, which paved the way for the creation of the National Institute for Health Research (NIHR). The document was published as part of the New Labour Government's ten year investment framework for science and innovation which set an ambition for Britain:

*"to be the most attractive location in the world for science and innovation, we are setting a new and ambitious target of increasing UK R&D investment as a proportion of national income from its current level of 1.9 per cent to 2.5 per cent by 2014 over the next decade."*⁶

The publication of the science investment framework followed two Government reviews – one by Richard Lambert on business-university collaborations, and the Department for Trade and Industry's own innovation review, which called for a new innovation strategy to clearly define priorities for investment.⁷

The OLS was established in January 2009 focused on 'improving the UK operating environment for pharmaceutical, medical technology and medical biotechnology industries'.⁸ The OLS produced a blueprint within six months aimed at transforming the UK environment for life sciences companies and to ensure faster access to cutting-edge medicines and technologies.⁹ The blueprint included a commitment for the NHS Chief Executive to 'review system levers and incentives, including Payment by Results, to accelerate the uptake of medical technologies'.¹⁰

The Coalition Government built from this work. The first ever Government life sciences strategy was published in December 2011, alongside the NHS Chief Executive's Review *Innovation, Health and Wealth*.¹¹ Launching the strategy at an FT conference, Prime Minister David Cameron called life sciences the 'jewel in the crown' of the UK economy.¹²

5 <https://www.great.gov.uk/international/content/investment/sectors/healthcare-and-life-sciences/>

6 http://news.bbc.co.uk/1/hi/shared/bsp/hi/pdfs/science_innovation_120704.pdf

7 https://www.foundation.org.uk/getattachment/796cb2e8-453f-47da-8748-70cf983d566a/20031202_summary.pdf

8 <https://publications.parliament.uk/pa/cm200910/cmselect/cmsctech/220/22006.htm>

9 <https://www.wired-gov.net/wg/wg-news-1.nsf/0/A1F58A602B63B5EA802575F30039E211?OpenDocument>

10 <https://www.wired-gov.net/wg/wg-news-1.nsf/0/A1F58A602B63B5EA802575F30039E211?OpenDocument>

11 <https://www.gov.uk/government/news/accelerating-adoption-of-innovation-in-the-nhs>

12 <https://www.gov.uk/government/speeches/pm-speech-on-life-sciences-and-opening-up-the-nhs>

The Strategy included a new Early Access Scheme to increase the speed and efficiency of routes to market for innovative breakthrough therapies, and the launch of a new clinical trials gateway through NIHR.¹³ *Innovation Health and Wealth* was published alongside the Government strategy and contained four sets of recommendations covering:

- Reducing variation and improving compliance – this included a NICE compliance regime to reduce variation and drive up compliance with NICE Technology Appraisals
- Metrics and information – this included an Innovation Scorecard to track compliance with NICE Technology Appraisals
- A system of delivery for innovation – this established regional Academic Health Science Networks
- Incentives and investment – aligning the financial, operational and performance incentives to support the adoption and diffusion of innovation

George Freeman was subsequently appointed as the first Life Sciences Minister in 2014 to take forward the agenda. The Government commissioned a Review chaired by Sir Hugh Taylor looking at how to accelerate access to innovative drugs, devices, diagnostics and digital products.¹⁴ The *Accelerated Access Review*, led to the establishment of the Accelerated Access Collaborative and a set of national priorities for diffusing and adopting innovation.¹⁵

The Conservative party 2017 election manifesto subsequently set out plans to develop a modern industrial strategy with life sciences a priority sector.¹⁶

The development of the strategy was led externally from Government by life sciences champion, Professor Sir John Bell, working with industry. It aimed to address a series of challenges grouped into five areas:

1. Science: Continued support for the science base, maintaining strength and international competitiveness
2. Growth: An environment that encourages companies to start and grow, building on strengths across the UK, including expansion of manufacturing in the sector
3. NHS: NHS and industry collaboration, facilitating better care for patients through better adoption of innovative treatments and technologies
4. Data: Making the best use of data and digital tools to support research and better patient care
5. Skills: Ensuring that the sector has access to a pool of talented people to support its aims through a strong skills strategy¹⁷

13 <https://assets.publishing.service.gov.uk/media/5a79762fe5274a2acd18d0b7/11-1429-strategy-for-uk-life-sciences.pdf>

14 https://assets.publishing.service.gov.uk/media/5a7f3ca440f0b6230268e470/AAR_final.pdf

15 <https://www.gov.uk/government/publications/accelerated-access-review-final-report>

16 <https://ucrel.lancs.ac.uk/wmatrix/ukmanifestos2017/localpdf/Conservatives.pdf>

17 https://assets.publishing.service.gov.uk/media/5a74aeaced915d7ab83b5b0b/LifeSciencesIndustrialStrategy_acc2.pdf

The strategy was followed by two ‘sector deals’ that set out industry-Government commitments and partnership for delivery. These included new investments for an expansion of genomics research and the development of digital innovation hubs, providing expert clinical research data services, data analysis and sharing capabilities.¹⁸

Shortly after the 2019 general election, the Government published a brief update on progress with the 2017 Strategy. *The Life Sciences Industrial Strategy Update* captured the achievements noting that “a substantial majority of the objectives’ had been met. The document was used to call for a higher level of ambition including the potential to ‘transform our healthcare system to one that identifies disease earlier using risk and stratification to implement a broad strategy for public health.’¹⁹

The pandemic arrived shortly after the publication of the *Life Sciences Industrial Strategy Update*. The pandemic – and in particular the discovery and development of a coronavirus vaccine – galvanised Government to seek to learn the lessons and apply them in other critical healthcare areas.

The 2021 *Life Sciences Vision* crystallised this thinking and action, setting out plans for the UK to tackle other diseases based on the pandemic learnings, build from the UK’s strengths in genomics and healthcare data, support the spread and uptake of innovation, and establish a business environment conducive to industry expansion. The healthcare missions covered action in cancer, dementia, mental health, respiratory disease, cardiovascular disease and ageing.²⁰

18 <https://www.gov.uk/government/publications/life-sciences-sector-deal/life-sciences-sector-deal>;
<https://www.gov.uk/government/publications/life-sciences-sector-deal/life-sciences-sector-deal-2-2018>

19 https://assets.publishing.service.gov.uk/media/5e1c4bbaed915d3b11e79054/Life_sciences_industrial_strategy_update.pdf

20 <https://assets.publishing.service.gov.uk/media/612763b4e90e0705437230c3/life-sciences-vision-2021.pdf>

LABOUR POLICY – THE IMPORTANCE OF LIFE SCIENCES TO MISSION BASED GOVERNMENT

*“Labour’s defining economic mission is to achieve the highest sustained growth in the G7, with good jobs and productivity growth in every part of the country. Alongside that sits the objective to make Britain the best place to start and grow a business. If we are to achieve these ambitious goals – if Britain is to truly lead the world – then we must back the industries in which we are already world leaders. Life sciences is one of those and it has a huge role to play in Britain’s economic future.”²¹ **Rachel Reeves, Chancellor, A prescription for growth, Labour’s plan for life sciences***

Labour has placed life sciences at the heart of its mission based approach to Government. In early 2024 the party published *A prescription for growth* setting out its plan for life sciences, highlighting the sector as a core priority for the industrial strategy and wider economic mission.^{22,23} The document identified a series of levers for driving forward the life sciences agenda including:

- Bolstering the Life Sciences Council and Office for Life Sciences
- Taking a longer term approach to R&D funding
- Harnessing data to improve services to patients and deliver cutting edge medical research
- Increasing access to finance
- Improving the business environment
- Modernising and unblocking the regulatory system
- Reforming the planning system
- Investing in skills
- Ensuring the NHS is supporting innovation
- Minimising trade barriers

21 <https://www.abhi.org.uk/resource-hub/file/17522>

22 <https://www.abhi.org.uk/resource-hub/file/17522>

23 <https://labour.org.uk/wp-content/uploads/2023/09/Mission-Economy.pdf>

Labour's health mission places life sciences at the centre of efforts to shift care from treatment to prevention and earlier diagnosis; and in delivering innovation to patients faster. The mission commits to an innovation and adoption strategy aligned to the *Life Sciences Vision* that includes:

- A plan for procurement, adoption and spread of new technologies
- A better mechanism for accountability of commissioners
- An approach to identify unnecessary bureaucracy and reduce it
- Reform to the incentives structure for adoption of technology
- Work with the Care Quality Commission (CQC) to ensure regulation involves speedy adoption of new technology
- Better horizon scanning²⁴

²⁴ <https://www.abhi.org.uk/resource-hub/file/17522>

A woman with her hair in a bun, wearing glasses and a lab coat, is shown in profile from the side, writing on a whiteboard. The scene is dimly lit with a strong blue color cast. The whiteboard contains a faint diagram of a biological structure, possibly a cell or a molecular model. A large, light blue curved graphic element is overlaid on the image, framing the text.

**WHAT CAN BE LEARNT
FROM PAST LIFE SCIENCES
STRATEGIES?**

As figure 1 sets out below, three strategies and visions have been published on life sciences since 2010.

Figure 1: Government life sciences strategies since 2010



Previous research has highlighted their mixed implementation.

A 2016 study by RAND Europe and the University of Manchester found variable progress towards the eight *Innovation, Health and Wealth* themes.²⁵ A review by the Medical Technology Group using Freedom of Information requests found patchy implementation of new technologies prioritised in the review by Clinical Commissioning Groups (CCGs).²⁶ The strategy appeared to have run its course by 2014. Whilst the importance of spreading useful health innovation was noted in NHS England's 2014 *Five Year Forward View*, there were no direct references to *Innovation, Health and Wealth* within it.²⁷

A House of Lords Science and Technology Committee inquiry into life sciences in 2017-18 argued that there was ambiguity about the status of the 2017 *Life Sciences Industrial Strategy*, given it was not an official Government document. The Committee's report, *Who's driving the bus?*, called for a detailed implementation plan for the strategy to avoid 'the failings of the 2011 Life Sciences Strategy'.²⁸

Previous research from Future Health found mixed early progress on the four priority areas set out within the *Life Sciences Vision*. Whilst there has been some subsequent progress on five of the seven missions in the Vision, it has taken time to identify the necessary resource for them, appoint leads and agree the scopes of work.²⁹ Instability of Government Ministers and changing priorities have undermined progress.

With Labour committed to developing a new life sciences plan, this research seeks to understand what can be learnt from those strategies of the past.

25 https://www.rand.org/pubs/research_reports/RR1143.html

26 <https://mtg.org.uk/wp-content/uploads/2016/07/IHW.pdf>

27 <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf>

28 <https://publications.parliament.uk/pa/ld201719/ldselect/ldsctech/115/11503.htm>

29 <https://www.gov.uk/government/publications/life-sciences-vision-missions>

This research does not seek to do this through an audit of commitments made, but rather by looking at the strengths and limitations of the policy development process.

In particular how strategies were built, designed and structured. In undertaking this analysis we reviewed the three most recent life science strategies (see figure 1 above). This review enabled us to build a set of core components for the strategies which would then enable a comparative analysis to be undertaken.

Having reviewed each of the strategies, the following were identified as the core components for comparison:

- Political sponsorship and ownership
- The process for strategy development
- Priorities and objectives
- How NHS commitments were included/positioned
- The governance process for accountability and delivery
- Metrics and timelines
- Resourcing

These components were then built into an assessment matrix which was used to analyse and compare each of the strategies. The following provides the analysis for each document.

ASSESSMENT MATRIX FOR PAST LIFE SCIENCE STRATEGIES

Document title(s)	Life Science Strategy & Innovation, Health and Wealth ³⁰	Life Sciences: industrial strategy & Sector Deals	Life Sciences Vision & Missions
Date	2011	2017	2021
Political sponsor	Document joint branded as Department for Business, Innovation & Skills and Office for Life Sciences. Foreword from Secretary of State for Health & Minister of State for Universities and Science.	A report to the Government from the life sciences sector, led by Government Life Sciences Champion Professor Sir John Bell. Followed by two Sector Deals in 2017 and 2018 signed by the Secretaries of State for Health and the Department for Business, Energy and Industrial Strategy (BEIS).	Document branded as HM Government. Lead department for enquiries BEIS. Foreword from the Prime Minister. Separate joint Foreword also from Life Sciences Champion, Professor Sir John Bell; Health and Social Care Secretary, Rt Hon Sajid Javid MP; Business Secretary, Rt Hon Kwasi Kwarteng MP; Chair of NHS England, Lord David Prior; and Chair of GSK, Sir Jonathan Symonds.
Strategic goals/priorities	<p>Strategy was designed on three principles:</p> <ul style="list-style-type: none"> • Building a life science ecosystem - between universities, the wider research base, businesses and the NHS to establish a cohesive system of integration • Attracting, developing and rewarding the best talent - nurture highly skilled researchers, clinicians and technicians and assist them to work collaboratively across traditional boundaries to create value throughout the ecosystem • Overcoming barriers and creating incentives for the promotion of health care innovation - create the right environment to translate discovery into real benefits for patients and nurture innovation through the translational funding gap, whilst at the same time reducing regulatory bureaucracy to provide a route for early adoption and diffusion in the NHS. 	<p>Strategy sought to tackle five challenges:</p> <ul style="list-style-type: none"> • Science: Continued support for the science base, maintaining strength and international competitiveness • Growth: An environment that encourages companies to start and grow, building on strengths across the UK, including expansion of manufacturing in the sector • NHS: NHS and industry collaboration, facilitating better care for patients through better adoption of innovative treatments and technologies • Data: Making the best use of data and digital tools to support research and better patient care • Skills: Ensuring that the sector has access to a pool of talented people to support its aims through a strong skills strategy <p>Pharmaceutical pricing was actively excluded from the report. The development of sector deals clearly positioned life sciences as part of the Government's wider industrial strategy.</p>	<p>Document set out plans to 'build on the scientific successes and ways of working from COVID-19 to tackle future disease challenges – silent pandemics – including cancer, obesity, dementia, ageing; securing jobs and investment and becoming the leading global hub for Life Sciences.'</p> <p>Four enablers for success were identified:</p> <ul style="list-style-type: none"> • NHS collaboration • Governance and oversight of health data • Investment in science and research • Access to finance <p>Seven disease based missions were announced: cancer, dementia, vaccines, mental health, ageing, respiratory and cardiovascular disease (focused on obesity).</p>

³⁰ <https://assets.publishing.service.gov.uk/media/5a79762fe5274a2acd18d0b7/11-1429-strategy-for-uk-life-sciences.pdf>

Document title(s)	Life Science Strategy & Innovation, Health and Wealth ³⁰	Life Sciences: industrial strategy & Sector Deals	Life Sciences Vision & Missions
NHS commitments	Separate NHS innovation review led by the NHS CEO published in 2011. Areas covered included reducing variation, metrics and information, system for delivery, incentives and investment, procurement, workforce, leadership and high impact innovations. Review introduced Academic Health Science Networks (AHSNs), Innovation Scorecard and committed to Board level responsibility for innovation throughout the NHS. These main actions were re-produced in the Life Science Strategy.	Support for adoption of the Accelerated Access Review recommendations. Strategic goals for the NHS to engage in 50 late stage clinical trial projects in five years and to be in the top quartile of comparator countries, both for the speed of adoption and the overall uptake of innovative, cost effective products, to the benefit of all UK patients by the end of 2023. Sector Deal 1 committed to 'establish an Accelerated Access Collaborative (AAC) to develop a streamlined pathway to bring breakthrough products to market and then to patients'.	Committed to a range of actions including: increasing NHS England commercial capacity, building collaboration between NICE, MHRA, NHSE and NIHR, bolstering the AAC, delivering an ambitious NICE Method Review, a framework for digital therapeutic reimbursement and strengthening NHS innovation metrics to tackle variation in access to medicines.
Governance	Strategy notes that 'accountability for the implementation of these actions lies with: Rt Hon David Willetts MP, Minister of State for Universities and Science, and Rt Hon Andrew Lansley CBE MP, Secretary of State for Health'. The strategy notes that the NHS Chief Executive will be accountable for the NHS related commitments.	The Strategy noted that a joint programme of delivery between industry, NHS and Government to monitor and oversee implementation will be agreed through a Life Sciences Sector Deal. Sector Deal 1 noted 'oversight of the implementation of the Sector Deal will be led by an Implementation Board, which will review progress against objectives at each of its quarterly meetings'. Sector Deal 2 noted that the Life Sciences Council was now the most senior strategic partnership between government and the sector and it would meet quarterly to review progress.	Set out plans to utilise and evolve the structures that have been developed since the publication of the Life Science Industrial Strategy in 2017 to oversee the relationship between Government and the Sector, and appropriate Governance of individual programmes. Committed to refresh the membership and terms of reference for the Life Sciences Implementation Board, which sits under the Life Sciences Council, to collectively develop implementation plans, in partnership with sector representatives and champions. Noted that every programme will need accountable leaders pointing to the Vaccines Taskforce as a model of success.
Implementation/metrics	Table of actions listed; No set timeline for the strategy, with different actions having different timelines (up to 5 years).	Strategy noted that it needed to be viewed as covering at least a five year period. Sector Deal 1 set out four high level actions for the Board between January-December 2018. It added that an 'early role for the Implementation Board will be to agree implementation plans for each section of the Deal, including agreed success metrics. Once Sector Deals enter the implementation phase post-launch, they will report on progress bi-annually to BEIS ministers responsible for Sector Deals. The Implementation Board will be subject to challenge sessions from government ministers on an annual basis as part of the overall Sector Deals programme.' Sector Deal 2 noted that the Life Sciences Council would meet quarterly to review progress.	Every programme or project taken forward under this Vision must have clear SMART objectives that set out in granular detail what will be delivered by when, with wider statistics on the UK's competitiveness provided annually via the Life Science Competitiveness Indicators. The strategy was pitched as seeking to deliver progress over a decade.

Document title(s)	Life Science Strategy & Innovation, Health and Wealth ³⁰	Life Sciences: industrial strategy & Sector Deals	Life Sciences Vision & Missions
Funding priorities	£310m to support the discovery, development and commercialisation of research. Smaller high risk company tax benefits and new R&D tax credits.	Establishment of a Health Advanced Research Programme and £210m from the Industrial Strategy Challenge Fund to enhance the power of health data and technology.	Launched 'the £200m Life Sciences Investment Programme (LSIP) in Summer 2021 which will deliver around £600m long-term capital to unlock the potential of the UK's best health and Life Science innovations'. ³¹

31 <https://www.britishpatientcapital.co.uk/what-we-do/life-sciences-investment-programme#:~:text=The%20Life%20Sciences%20Investment%20Programme,potential%20UK%20life%20sciences%20companies>

SUMMARY OF STRATEGIES

Each of the last three life sciences has adopted slightly different approaches to sponsorship, development, prioritisation, governance, implementation and resourcing.

Political sponsorship of the strategies has primarily sat between the health and business departments, with the business department mostly in the lead development role. The most recent *Life Sciences Vision* includes a Foreword from the Prime Minister, (reflecting the priority of life sciences after the pandemic) and a co-signed foreword from DHSC, BEIS, industry and NHS England. The 2017 strategy adopted an 'outside-in' model with the document developed externally to Government, co-ordinated by Life Sciences Champion Professor, Sir John Bell, who wrote the Foreword to the document, which the Government subsequently responded to through two sector deals.

Engagement in developing past strategies has been fairly extensive and wide ranging. 2011 used a core policy expert group, supported by an external review group which included industry representation. 2017 used the Life Sciences Industrial Strategy Board. The *Life Sciences Vision* in 2021 lists over 100 organisations who were engaged with the content development.

Core priorities of the strategies have been fairly consistent over time. Increasing levels of inward investment, developing the UK's science research base, building skills and attracting talent and improving NHS collaboration and uptake of innovation straddle each of the three documents. 2021 introduced the concept of grand challenges (now referred to as missions), in particular disease areas, as a mechanism to prioritise a set of conditions where innovation could be used to improve patient outcomes.

Driving the adoption of innovation through the NHS has been a recurring theme of past strategies. The approaches to building this have varied. In 2011 a separate NHS Chief Executive review of innovation was published, and then aligned to the wider Strategy. In 2017 and 2021 commitments broadly aligned with existing policy.

In 2017 the strategy supported the recommendations of the *Accelerated Access Review*, published in 2016.³² Discussions on medicines pricing were out of scope. The strategy did go further in calling for the UK to be in the 'top quartile of comparator countries, both for the speed of adoption and the overall uptake of innovative, cost effective products, to the benefit of all UK patients by the end of 2023.'³³

32 <https://www.gov.uk/government/publications/accelerated-access-review-final-report>

33 <https://www.gov.uk/government/publications/life-sciences-industrial-strategy>

In 2021 the commitments aligned with the 2019 industry/Government Value Pricing and Access Scheme (VPAG).³⁴

Oversight of the strategies has been formalised over time into the Life Sciences Council. The Life Science Competitiveness Indicators are published annually to track progress on a range of different aspects of the UK's life science ecosystem. Though the indicators do not lineup directly with commitments in the Vision.

Funding in support of the strategies has been relatively targeted and piecemeal aimed at particular initiatives or via discreet innovation pots. There has been some use of fiscal incentives to underpin the delivery of the wider goals within the strategies.

³⁴ <https://assets.publishing.service.gov.uk/media/5c07b29ded915d747c45af76/voluntary-scheme-for-branded-medicines-pricing-and-access-chapters-and-glossary.pdf>

ANALYSIS

To understand the strengths and limitations of past approaches to life sciences strategies Future Health undertook a series of semi-structured interviews with those involved in their development and implementation.

Interviewees included those from right across Government and the NHS (number 10, HMT, DHSC, BEIS, OLS, NHS England) and included former Ministers, Advisers and Officials.

In total, 15 semi structured interviews were held. All interviewees spoke on a non-attributable basis. Questions were organised into four domains:

- The strategy development process
- How policy commitments are built and prioritised
- Delivery frameworks and accountability
- The allocation of resources

The following provides a summary of interview responses in each of the four areas, with some specific quotes highlighted.

STRATEGY DEVELOPMENT PROCESS

The changing political context – For many respondents the UK's approach to industrial strategy has been highly variable in the last 10-15 years (for example whether to take a regional or a sector focus), impacting the development and execution of past life sciences strategies. Some interviewees argued that Brexit cannot be ignored and that the UK can feel increasingly like a 'troublesome island' for industry.

"We cannot ignore Brexit in all this. The UK is on its own now, and this frankly means it needs to work harder to be attractive to international life sciences companies. The UK needs this next strategy to deliver and shed its reputation as something of a 'troublesome island' for driving forward with innovation."

Unclear objectives – For some interviewees it was not clear what the main objective has been behind the strategies. Is it for example to galvanise the whole Government? Push the NHS to do more on innovation? Attract inward investment (through primarily a process of packaging what is already taking place)? All of these? Some commented that there was a danger that in pursuing a wide-ranging all-encompassing strategy, that the UK has found itself over-promising and under-delivering.

"It is not always clear what the main objective of past life sciences strategy has been. Is it to galvanise the whole of Government to deliver on life sciences? Push the NHS to do more on innovation? A sales for international inward investment? There is a danger that by being so wide-ranging past strategies have ended up over-promising and under-delivering."

Difficulties in connecting the Government machine – Many commented about the strengths of the OLS and how its work through BEIS (in the past) means that it has good insights into Treasury thinking. However at the same time it was seen as quite distant from the NHS. Others noted it was not always clear how engaged DHSC was in driving forward strategy commitments, beyond Ministers. Many identified the Treasury as critical to success, but those who had worked up closely noted that the Treasury team focus on growing the life sciences sector is relatively small, with most policy development delegated to DHSC/Department for Science, Innovation and Technology (DSIT) and the OLS."

"I have never been completely sure about the role DHSC plays in the delivery of past strategies, and have felt that they have been steered more from the Business Department side of things through the OLS. This new strategy needs to address that and DHSC along with the NHS needs to be a fully signed up partner to delivering it."

NHS buy-in and partnership – Interviewees involved in 2011 noted that the strategy had clear NHS buy-in - while the relevant NHS leadership of the time was in place - but that the roll-out of the Lansley reforms and change of personnel saw momentum shift. While in 2011 there was a clear agenda on accelerating adoption, in 2017 the NHS was seen by some to have been very distant. The 2021 Vision was deemed by interviewees to have some NHS buy-in, but respondents noted that this was at Chair rather than Executive Board level, resulting in more limited buy-in at system level.

"I think past strategies have sought to push innovation at the NHS with limited impact. This time we have a ten year reform plan being built; any life sciences plan needs to be bound tightly into this otherwise we'll see similar failings to those in the past."

Clarifying the audience – For some it was unclear who the audience was for the strategies and whether the purpose was to appeal to an international rather than domestic audience. Some saw the strategies used more as a platform for an external UK sales pitch at major conferences (such as JP Morgan) rather than as a domestic vehicle for driving a coherent approach to policy implementation. A number of respondents noted that ambitions for a joined-up strategy were not reflected in Government, with the Treasury in particular sceptical of the link between access to medicines and inward investment. Some noted that this disconnect will continue to hamper efforts at developing a cohesive and joined-up strategy moving forward. Others added that the VPAG agreement could be a platform to co-ordinate economic and health policy for the industry more closely.

BUILDING POLICY COMMITMENTS

Support for the missions based approach but frustration at execution and roll-out – Many spoke in favour of the missions-based approach in the 2021 Vision. Drawn from the Global Burden of Disease, it was felt that they had helped structure conversations between industry, Government and NHS. It was felt that at the macro level they allow Ministers to set goals and then enable Government and industry to mobilise resources to meet them. It was felt that where missions have had strong champions/entrepreneurs, they are more likely to move forward quickly. Similarly if the NHS (and all parties) can identify a shared agenda (e.g. vaccines) then action is likely to be accelerated. It was noted that there were good examples of policy read across such as the NHS Long Term Plan commitment on improved rates of earlier cancer diagnosis leading to the GRAIL commitment in the Life Sciences Vision.³⁵

"I think the Missions are a great idea for setting priorities, but it's not clear what the problem is they are trying to solve and critically how this relates back to the health service. The Covid vaccines mission was really clear about the goal. I think the missions in the Life Science Vision need a tighter clearer focus."

Challenges with delivering the Missions – Three interviewees noted that the missions had been developed outside the NHS which meant that they had to then be mapped back to the NHS operating framework, with associated challenges in how to 'dock' them in. This it was felt, made the missions feel very disconnected with the NHS reform/operational agenda. One interviewee noted that it is not clear how they map closely to ambitions for a more preventative system. Another respondent noted a tension in the disease based missions with the previous Government's Major Conditions Strategy which had pivoted towards multi-morbidity.³⁶

Mapping solutions to problems – Related to the above a number of interviewees noted that it was not always clear what problems the missions/life science strategy goals are trying to solve and then what policies and actions are needed to fill the gap. It was felt that some recent examples where things have been clearer included the *Accelerated Access Review* (to tackle issues of adoption) and the O'Shaughnessy review of clinical trials (to tackle the UK's falling competitiveness in attracting clinical trials).^{37,38}

35 <https://www.nhs-galleri.org/>

36 <https://www.gov.uk/government/publications/major-conditions-strategy-case-for-change-and-our-strategic-framework/major-conditions-strategy-case-for-change-and-our-strategic-framework--2>

37 <https://www.gov.uk/government/publications/accelerated-access-review-final-report>

38 <https://www.gov.uk/government/publications/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review-final-report>

“If you look at O’Shaughnessy and clinical trials, that is a good model for developing policy solutions. A clear problem – falling commercial clinical trials in the UK – an expert led review, clear recommendations and timelines. It is already having an impact.”

The importance of early and embedded joint-working – Interviewees involved in the 2011 strategy noted that one of the positives was a real and early commitment to NHS-industry partnership, working in the development of the strategy and its roll out – particularly catalysed by secondments from industry into the NHS Innovation Health and Wealth team. It was felt that this had helped share knowledge and build realistic policies that could then be implemented. Those involved in the recent strategy noted that resourcing the strategy across key bodies like the OLS, NICE, and MHRA was a challenge, particularly given the high levels, and range of ambitions set in the strategy.

DELIVERY FRAMEWORKS AND ACCOUNTABILITY

Governance and accountability – Respondents had mixed views on the Life Sciences Council. Some argued it was a helpful strategic forum for discussion, identifying high level areas of collaboration as well as opportunities to voice disagreement. Ministerial attendance was felt to be good and there was support for the new Government’s move to put the Industrial Strategy Council onto a statutory footing. However others saw the Life Sciences Council as meeting too infrequently and being too performative to be effective at delivering the Life Sciences Vision. Whilst working groups had been set-up to investigate specific and more detailed issues, some noted that the effectiveness of these was variable.

“I think the Life Sciences Council is a really helpful forum. It provides an opportunity for Government-industry-NHS collaboration but also where disagreements can be openly discussed and debated.”

“The Life Sciences Council is the right forum for taking forward the new plan, but needs reform. It needs to line-up with the objectives in the missions and have a greater focus on delivery and follow through. It should meet more frequently and be action oriented. Once a year there should be a global life sciences summit sitting on top of it all.”

Priority setting – The approach of missions in the *Life Sciences Vision* was viewed as helpful for setting priorities for industry about what Government was most interested in. However it was widely felt that this was not ‘demand signaling’ from the health system in the purest long-form sense. Many noted that realistically NHS England is looking at pipeline products in a ‘sweet spot’ of two years from launch which aligns some certainty over product use case, with enough time and resource to plan service changes. More widely many interviewees noted that innovation and life sciences is not a priority issue for NHS England, adding that it was mostly absent in how they are held to account by the DHSC.

“The NHS is never going to make life sciences a priority if it doesn’t help with its core agenda – improving access to high quality care. Creating a shared Government-industry-health system focus for the new plan is critical for delivery.”

Aligning and updating metrics – Over half of interviewees argued that there was a need for clear metrics and oversight of progress. It was felt that metrics needed to be clear, specific, up to date and aligned with the agendas and goals set. The Life Sciences Competitiveness Indicators were seen mostly by respondents as helpful for understanding the state of UK life sciences but many argued that they needed to be more aligned with the priorities in the Vision, and to include more recent data. Within the NHS, tracking life science goals was viewed as not straightforward. One respondent highlighted that ICBs have been tasked with growing their economies (objective 4 of their mandate) but that NHS England does not hold them to account on this, or link it back to the *Life Sciences Vision*.³⁹

“Any Government backed plan needs really clear timelines and metrics to ensure it delivers. The political turmoil of recent years certainly hasn’t helped. A new Government looking ahead at least five years creates an opportunity to set public, ambitious but realistic targets for what it wants to achieve on life sciences.”

Variable policy roll-out and implementation – One respondent argued that one of the lessons from 2011 was that it had often been the smaller targeted programmes (such as the NICE Implementation Collaborative and NHS Clinical Entrepreneur programme) that have continued to run successfully long afterwards. It was felt by many interviewees that Academic Health Science Networks (AHSNs) have struggled with the innovation adoption part of their role. Some interviewees argued that they should be brought more closely into ICBs to make innovation a core business for systems.

³⁹ <https://www.england.nhs.uk/integratedcare/what-is-integrated-care/>

ALLOCATING RESOURCES

Funding uncertainty – Almost all respondents noted that the recent cycle of one year spending reviews had hampered longer term planning. Many noted that Spending Review bids on innovation funding in the NHS have not often mapped back to life science strategy priorities. Although progress on genomics and genomic testing was noted as an exception to this.

Managing risk and placing bigger bets – A number of respondents noted that it would be better for Government to make fewer bigger bets on what to invest in and prioritise, rather than lots of small bets. Those involved in Whitehall noted that this would require a change of risk profiling in how Government operates – with the lessons from the approach to vaccines during COVID not having translated through.

“In certain policy areas – such as health data – there are far too many initiatives. Many of these overlap and create clutter and confusion. Any new plan needs to be really clear about the long-term investment priorities that Government should be making that can underpin the plan’s ambitions. Proper investment in health data infrastructure really is needed.”

Effective resourcing – A number of respondents noted that in some areas such as healthcare data, there are lots of initiatives that overlap and are duplicative. Allocating resources has often been through small and discreet pots of funding which have not been sufficient or long term enough to make an impact. Many noted that there was a need to harmonise resources to line-up with strategic priorities, with one respondent noting that this was ‘long overdue.’ Many noted that there was a need to underpin innovation programmes with investment in the fundamentals and enablers of change within the health service – such as core data infrastructure and cyber-security.

A woman in a white lab coat is working in a laboratory. She is looking at a computer monitor and pointing at it with her right hand. Her left hand is on a keyboard. The background is a blurred laboratory with various pieces of equipment and shelves. The lighting is warm and focused on the scientist.

**RECOMMENDATIONS FOR
LABOUR'S LIFE SCIENCES PLAN**

Labour's determination to prioritise life sciences now it is in Government is highly welcome. But to successfully build and deliver a new life sciences plan will require these lessons from history to be heeded.

To do so the new Government should construct the following policy framework for its new life sciences plan.

Long term leadership and a consistent approach – Co-ordinate, promote and maintain a consistent long-term approach to an active industrial strategy. The new Government, led by the Prime Minister and Chancellor, should use the creation of a new life sciences plan to set-out ambitions for building a life science ecosystem that delivers, and co-ordinates action, so it brings both economic growth and improved health outcomes for the UK. This should be underpinned by clear metrics and targets for delivery.

Co-ordinating activity – Ensure senior co-ordinated Government leadership on life sciences is reflected across Number 10, HMT, DHSC, DSIT, DBT and NHS England with aligned objectives and priorities. Boost the profile and resources of the OLS across Government by prioritising investment at the Spending Review from both DHSC and DSIT in particular and elevating the OLS lead to become a Director-General. Evolve the Life Sciences Council as an effective co-ordinating body focused on the delivery of the plan, meeting more regularly, commissioning and undertaking deep-dives on specific policy challenges to unblock barriers and communicating publicly on progress and actions taken.

Evolve and anchor the life science missions – The missions from the *Life Sciences Vision* need to evolve to align with the forthcoming NHS ten year plan and the anticipated focus on prevention, early diagnosis and innovative treatment. Update the missions to include action on multi-morbidities. This evolved approach will help create a shared cross-cutting agenda right through to ICBs and localities.

Use problem statements to build mission partnerships and find solutions – Work with the healthcare system to create problem statements that each mission needs to address (e.g. earlier cancer diagnosis). Use this approach to then (a) galvanise Government-NHS-industry partnerships; and (b) commission rapid policy reviews through expert 'task and finish groups' to help quickly identify and overcome barriers to progress.

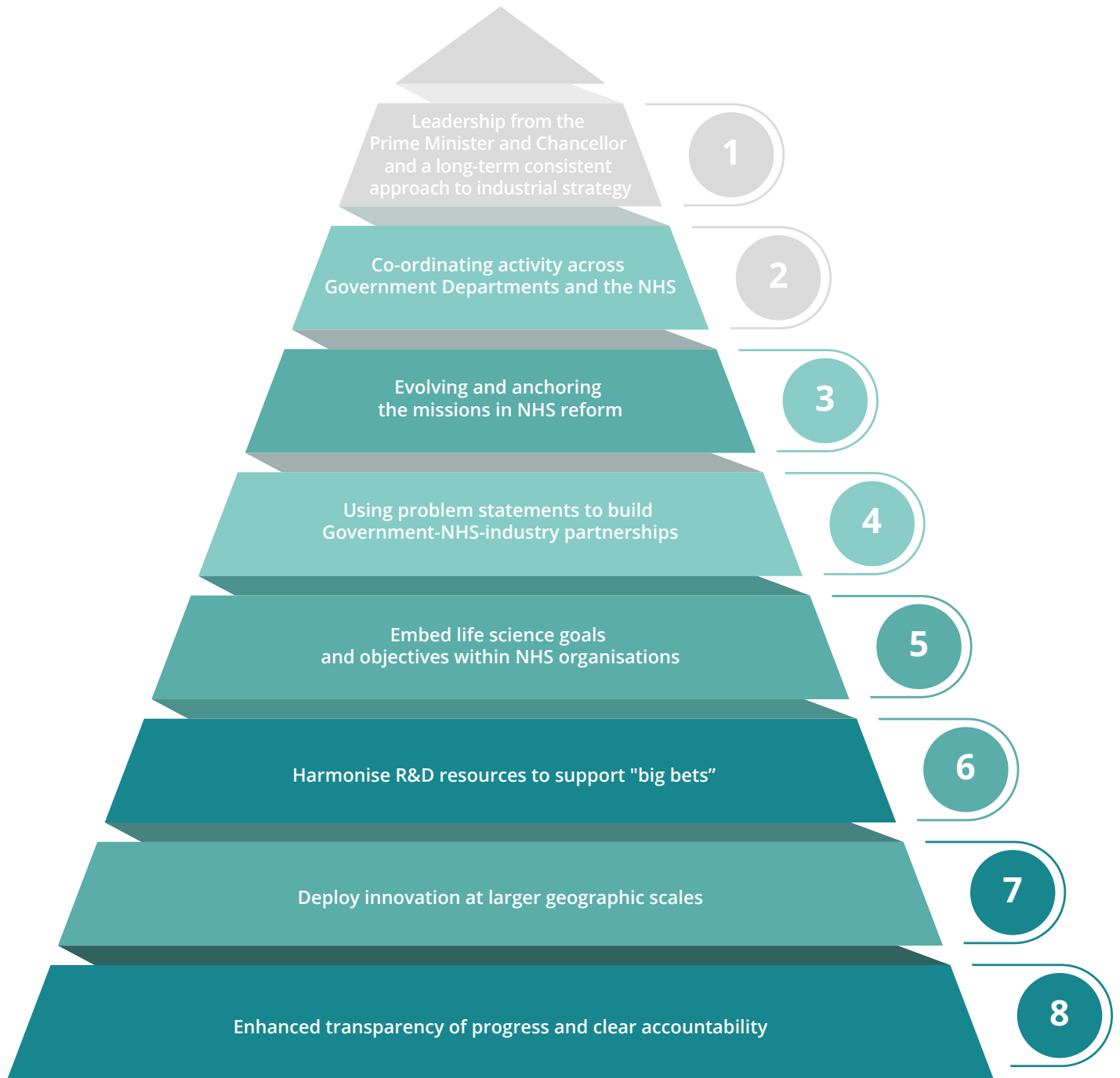
Improve the co-ordination of delivery between Government and the NHS – Use the problem statements of the evolved missions to help embed life sciences and innovation in NHS service planning and delivery. It will be important that innovation and life sciences are not siloed or side-lined in the NHS ten year plan as has happened in recent NHS plans (see 2014 and 2019). Appoint a new Life Sciences Director, with requisite experience, to the NHS England Board with accountability for progress. Embed progress targets and mission goals – including those relating to economic growth -in relevant performance management frameworks such as the Mandate and the ICB Oversight Framework.

Harmonise resources – Use the Spending Review to set longer term R&D budgets for life sciences and innovation to provide greater certainty on chosen priorities. Make fewer, bigger R&D bets, invest in core system fundamentals, and harmonise and simplify initiatives (such as on health data). Ensure regulators and bodies involved in the life science ecosystem are suitably resourced to support the aims of a healthier and wealthier population as set out within the health and economic missions.

Deploy innovation at scale – Utilise the relicensing of AHSNs, into Health Innovation Networks (HINs) to reset expectations on the deployment of innovation within the NHS. Use the evolved missions and the new networks to identify larger geographic footprints to deploy mission based interventions at greater scale. To deliver on this HINs will need new capacity and a clear remit for driving forward innovation at scale within the NHS.

Enhanced transparency and accountability – Review and refresh the Life Sciences Competitiveness Indicators to ensure they are up to date, enable effective international comparisons and line-up with the new life sciences plan's priorities. Develop a balanced set of metrics across the priorities of the plan including a focus on levels of spend relating to new medicines and their uptake within the NHS. Set clear targets for improvement across different domains and commit to publish an annual report in Parliament on progress in delivering the new plan and an online dashboard tracking performance. Where performance is behind set targets, commit to publish clear proposals for recovery, with associated transparent timelines.

POLICY FRAMEWORK FOR A NEW UK LIFE SCIENCES PLAN



CONCLUSION

“The UK will become the global hub for life sciences in the future, providing an unrivalled ecosystem that brings together business, researchers, clinicians and patients to translate discovery into clinical use for medical innovation within the NHS.”⁴⁰ (Strategy for UK Life Sciences, 2011)

“The collective ambition of the Government and the Sector is for the UK to build on the scientific successes and ways of working from COVID-19 to tackle future disease challenges – silent pandemics – including cancer, obesity, dementia, ageing; securing jobs and investment and becoming the leading global hub for Life Sciences.”⁴¹ (Life Sciences Vision, 2021)

Over the last two decades the UK has identified life sciences as a strategic economic and health priority. The UK’s successes during the pandemic including the development of the COVID vaccine, discovery of new treatments and rapid regulation were all based on this platform.

However as we now move forwards, the UK faces increasing competition from other countries for life sciences investment and innovation. Problems with political short-termism, fragmentation across Whitehall and the NHS, insufficient resources, and a lack of follow through on ambitions, all risk holding the UK back.

To remain the jewel in the crown will require the new Government to learn the lessons from the past; both what has worked well and less well. As it approaches this task, the Government will need to ensure it builds a shared and co-ordinated operational agenda between Government, the health service and industry.

This agenda will need to work on shared problems, through co-ordinated structures, with harmonised resources that deploy innovation at scale, in an environment with greater transparency and accountability. This will require senior Government leadership and co-ordinated action through a refreshed Life Sciences Council, evolved missions that dock into NHS reform priorities with an identified NHS Board member overseeing delivery against clear metrics and targets.

If Labour’s plan can do that, it has a high chance of succeeding.

40 <https://assets.publishing.service.gov.uk/media/5a79762fe5274a2acd18d0b7/11-1429-strategy-for-uk-life-sciences.pdf>

41 <https://assets.publishing.service.gov.uk/media/612763b4e90e0705437230c3/life-sciences-vision-2021.pdf>



FUTURE
HEALTH

www.futurehealth-research.com