

NSW Health

NSW Health Research and Innovation Strategy

2025–2030



Acknowledgement of Country

NSW Health acknowledges Aboriginal people as the traditional custodians of the lands and waters of NSW and pays respect to Elders past, present and future.

In this publication, Aboriginal and Torres Strait Islander people are referred to as Aboriginal people in recognition that Aboriginal people are the original inhabitants of NSW.

We have embedded consideration of Aboriginal people and communities throughout this strategy. We are committed to working in genuine partnership with Aboriginal people and communities to progress research and innovation in NSW.



'Building strong relationships for Aboriginal health research and innovation in NSW'

Artist: Carissa Paglino

Relationships and connections are fundamental to any collaboration within Aboriginal and Torres Strait Islander communities. The interwoven lines in this artwork portray these relationships and connections and show the importance of learning from and listening to Aboriginal and Torres Strait Islander people in order to produce research and innovation that generates better healthcare for all people.

The artwork was created by Carissa Paglino, a descendant of the Wanaruah people, living and working on Awabakal Country, in the City of Newcastle, as a freelance Graphic Artist. Carissa draws inspiration from traditional Aboriginal art and culture, combining old ways with modern digital art, to create bold, eye-catching artworks with vibrant colours and a unique style.

Contents

Foreword	4
Our vision	6
Strategic framework for NSW	7
Health research and innovation in NSW	8
The unique value proposition of NSW	10
Our guiding principles and cross-cutting themes	11
Our strategic outcomes	
■ Strategic outcome 1: A thriving ecosystem	12
■ Strategic outcome 2: Strategic investment	14
■ Strategic outcome 3: An open assets philosophy	16
■ Strategic outcome 4: A place-based foundation	18
■ Strategic outcome 5: A pipeline approach	20
■ Strategic outcome 6: Research and innovation for all	22
Implementing the strategy	24
Appendix 1: Our approach to developing the strategy	26
Appendix 2: The future in the 4 domains of research and innovation	27
Appendix 3: Levers and roles in implementation	29

Foreword

A message from the Minister for Health and Minister for Regional Health

The Hon Ryan Park MP

Advances in research and innovation provide patients with better treatments and improve the delivery of health care. By investing in promising research and innovation, we can position NSW to effectively navigate the health challenges of tomorrow.

The NSW Health Research and Innovation Strategy builds on the existing strengths in our system, while charting a new path forward and setting a bold vision for where we want to be in 2035.

The strategy harnesses the potential of our world-class health system to drive groundbreaking discoveries and the development of solutions that create impact and transform care. It fosters collaboration across disciplines, sectors, regions, and Governments to create synergies that will ultimately benefit the people of NSW.

As the Minister for Health and Minister for Regional Health, I am committed to supporting delivery of this strategy. I invite you to embrace the path forward and help shape the future of research and innovation in NSW.

A message from the Minister for Medical Research

The Hon David Harris MP

Research is the key that unlocks innovation and transformation in health care. It holds the significant potential to enhance our health system, improve the delivery of care, reduce health and social inequities, and contribute substantial economic benefits to NSW.

A renewed strategic approach is required to enable our state to realise this potential. Under successive governments, NSW has made significant investments in health and medical research. The NSW Government continues that investment through the *NSW Health Research and Innovation Strategy*, which lays a 10-year foundation for further growth and a new vision for research and innovation.

Collaboration is at the heart of the strategy. This means fostering multidisciplinary partnerships that bring together clinical, academic and industry stakeholders; and partnering in order to Close the Gap in Aboriginal health and ensure that women's health is a priority in medical research.

As the Minister for Medical Research, I am proud to champion this strategy and be the custodian of this important portfolio. It is my hope that we can work across the aisle to deliver on the 10-year vision for the future of research and innovation in NSW. Tomorrow's breakthrough will be the result of a well-connected and supported research sector, and I look forward to exploring new frontiers together that will benefit the people of NSW and beyond.

Foreword

A message from the Secretary, NSW Health

Susan Pearce AM

Our health system is high performing and committed to delivering outcomes that matter most to the people of NSW. A vibrant research and innovation ecosystem that is embedded within our health system ensures we continue to improve the experience of delivering and receiving care, system efficiency and sustainability, and equity in health access and outcomes.

The *NSW Health Research and Innovation Strategy* maps a path toward this future. It builds on and complements *Future Health* and shapes an ambitious, forward-looking plan for research and innovation in NSW.

At the core of our plan is a role for all in research and innovation. From the development of novel therapies, to the use of evidence-based guidance in clinical decision-making, and the involvement of consumers, community, and patients in research, NSW Health is seeking to foster a culture of research and innovation.

I look forward to working together to deliver the strategy – harnessing the strengths of our people and remarkable health system for research and innovation that benefits our patients and the community.

A message from the Deputy Secretary, Clinical Innovation and Research and Chief Executive, Agency for Clinical Innovation

Dr Jean-Frédéric Levesque MD PhD FRCPC

I am proud to lead the Clinical Innovation and Research Division, and to have shaped our new strategic approach for research and innovation in NSW.

In developing the *NSW Health Research and Innovation Strategy*, we heard from over 400 stakeholders across the sector. Their counsel was clear – we need new ways of thinking to enable the ecosystem to reach its full potential.

Our plan was developed through this lens. It focuses on what we can do in NSW Health to drive research and innovation that improves the experience of delivering and receiving care, system efficiency and sustainability, and equity in health access and outcomes. It resonates with the *Agency for Clinical Innovation Strategy 2023–2026*, but takes a broader view that bridges the connection between research and innovation.

While the Clinical Innovation and Research Division will play a central role in delivering the strategy, we cannot achieve our vision for NSW alone. I encourage everyone to work with us as we seek to foster a vibrant research and innovation ecosystem in NSW.

Our vision

A vibrant research and innovation ecosystem that improves the experience of delivering and receiving care; system efficiency and sustainability; and equity in access and health outcomes

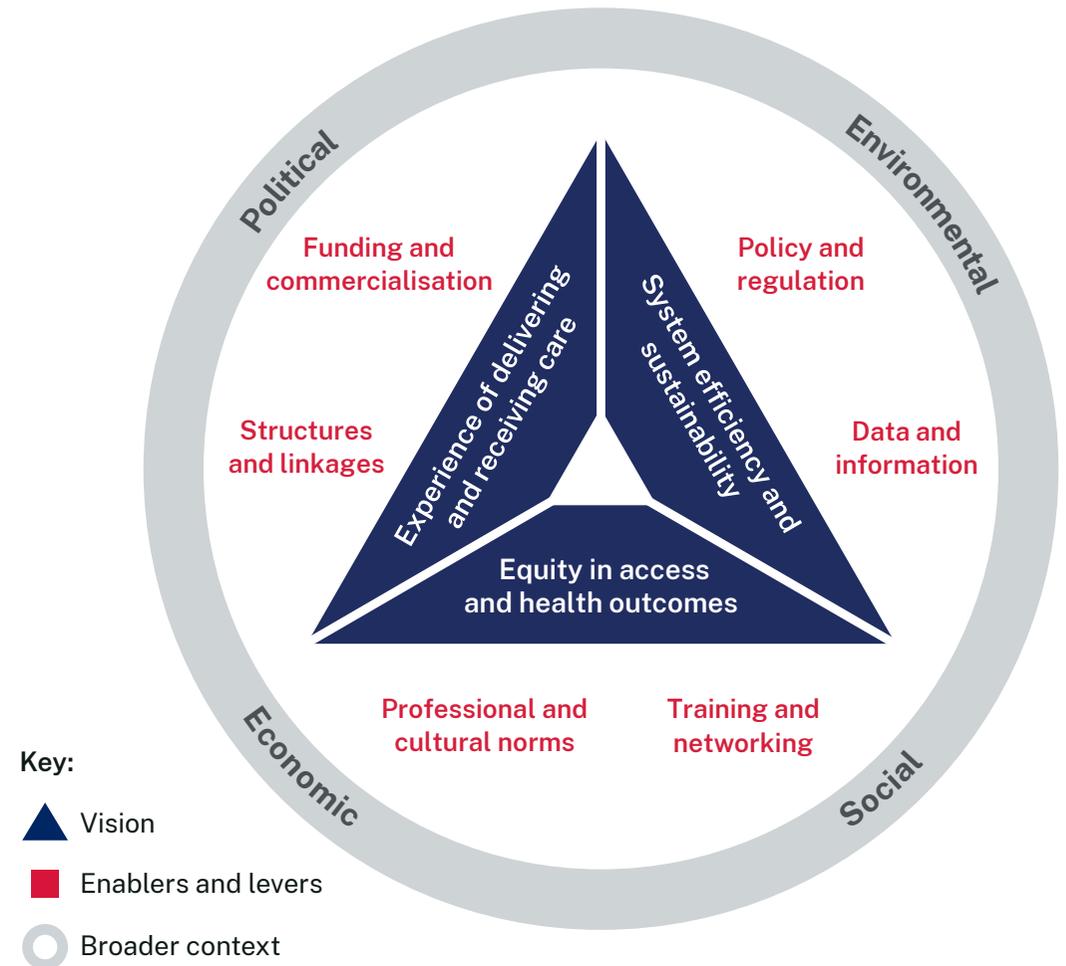
The vision sets our direction for the next 10 years and is the desired future state for the health research and innovation ecosystem in NSW. It speaks to the unique role NSW Health can play in driving research and innovation for health impact.

The *NSW Health Research and Innovation Strategy* outlines how we will move towards this over the next 5 years. The strategy will guide all research and innovation activities across NSW Health, including those led by the Ministry of Health, local health districts and specialty health networks, pillars, statewide health services and shared services.

Implementation and operationalisation will be driven by a series of action plans, to enable clarity of deliverables and adaptability in a complex and dynamic environment. These action plans will be published to foster transparency and accountability.

NSW Health will work collaboratively across the system and NSW Government to drive implementation and support research and innovation for economic, social and environmental impact.

Figure 1: The vision sets our direction for the next 10 years and is the desired future state for the health research and innovation ecosystem



Strategic framework for NSW

Brilliant research. Impactful innovations. Excellent health and care for all.

Our vision – the desired future state for NSW

A vibrant research and innovation ecosystem that improves the experience of delivering and receiving care; system efficiency and sustainability; and equity in access and health outcomes

Our guiding principles

Person-centred | Clinically led | Evidence-based | Value-driven

Our cross-cutting themes

Equity and diversity
Consumer, community and patient involvement
A culture of research and innovation

Our core strengths and existing assets

Workforce | Data | Funding | System governance and policy
Laboratory and clinical infrastructure | Public health expertise
Networked organisations | Diverse community and geography

Our strategic outcomes

1. **A thriving ecosystem** – adopting a coordinated, collaborative and inclusive approach to research and innovation
2. **Strategic investment** – building a portfolio of investment to target areas where NSW is well positioned to harness current and future opportunities
3. **An open assets philosophy** – developing and mobilising assets to accelerate research and fully harness emerging innovations
4. **A place-based foundation** – driving synergies and integration through a statewide network of precincts and place-based initiatives
5. **A pipeline approach** – generating value from our research investments by addressing real system problems and progressing innovation to scale
6. **Research and innovation for all** – supporting better use, translation and creation of research and innovation across healthcare settings to improve outcomes, equity of access and system efficiency

Our foundations – Our people. Our partners. Our place.

Health research and innovation in NSW

Research and innovation are complementary scientific processes that deliver outcomes for the people of NSW

Research and innovation drive improvement in health outcomes and system goals. They are terms sometimes used interchangeably or imprecisely. The strategy defines research to be the systematic investigation processes that discover new facts or information, and innovation focused on the application and use of knowledge in a creative way.

A vibrant research and innovation sector is at the heart of a high-performing health system and strong population health.

Over the past decade, NSW Health has made significant investments in research and innovation. While these investments have laid strong foundations and supported NSW to grow in capacity and capability, there are many emerging challenges and opportunities facing the sector. Challenges include an ageing population, increased healthcare needs, significant health disparities, increasing complexity of emerging technologies, and a critical need for environmental sustainability. At the same time, delivering value for money remains important.

These challenges demand a renewed approach to enhance the research and innovation ecosystem, and present an opportunity for NSW to realise its potential as an international leader in research and innovation. The *NSW Health Research and Innovation Strategy* leverages this opportunity.

The strategy has been developed to align with, and support delivery of other key initiatives, including *Future Health*, the *NSW Regional Health Strategic Plan 2022–2032*, the *NSW Health Workforce Plan 2022–2032*, and the *NSW Aboriginal Health Plan 2024–2034*.



Foundations

- NSW researchers achieve scientific excellence, knowledge translation and commercial success.
- Research ethics and governance approaches are proportionate and well managed.
- The state's population boasts great diversity in both culture and genetics.
- NSW investments in physical infrastructure support research and innovation endeavours.



Opportunities for growth

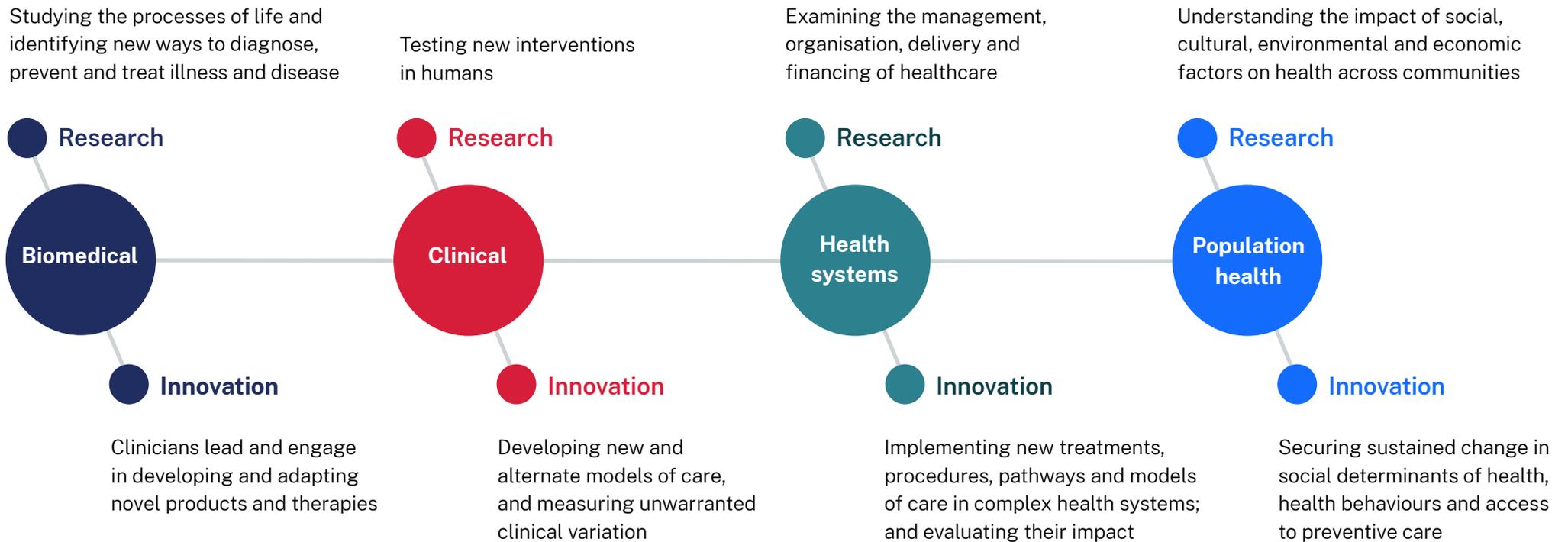
- Clarify roles and responsibilities to facilitate prioritisation and coordination toward common goals.
- Meaningful collaboration with priority populations to drive better health outcomes.
- Build workforce capacity and capability for the future.
- Bridge gaps in commercialisation and scaling of research and innovation.

Health research and innovation in NSW

Research and innovation span biomedical research and the basic sciences, clinical research and trials, health systems research and implementation science, and population health and preventive care. NSW Health will adopt an evidence-based, portfolio approach that balances and integrates investment across these 4 domains to maximise potential for impact.

Future programs of work will be guided by the NSW Health Research and Innovation Council, horizon scanning and consultation processes. Initiatives will be led by stakeholders across the system – from Ministry of Health divisions (including Population and Public Health) to NSW Health local health districts and specialty health networks, pillars, statewide health services and shared services, precincts and partner organisations.

Figure 2: Research and innovation across key health domains



The unique value proposition of NSW

NSW offers a distinctive value proposition in research and innovation, underpinned by its unique context, health system and infrastructure, and the strategic outcomes and commitments outlined in this strategy.

One of NSW's defining strengths is its multifaceted public health system, with access to patients and clinicians across the state. This provides a unique opportunity to drive equity and improve care across NSW. The diverse settings and expertise support evidence-based system improvements and foster partnerships within, and beyond, the system.

The state is also uniquely situated to leverage substantial infrastructure investments made by the NSW Government in manufacturing. The generic manufacturing capabilities that have been built – and are currently under construction – are highly adaptable, agnostic to specific product lines and leverage local expertise.

Future-proofing NSW: Our unique value proposition driven through the *NSW Health Research and Innovation Strategy*

- Multidisciplinary collaboration with stakeholders across the sector will be the norm.
- We will balance investment in high risk, high reward research and innovation, with lower risk investments.
- Our infrastructure will function as generic platforms to support a breadth of research, underpinned by supportive academic environments.
- We have multiple, world-class precincts that will be highly networked and centrally connected through our health system.
- We will translate and implement research and innovation at scale.
- NSW Health's full system reach will enable every clinician and patient to be involved in research and innovation.

Our guiding principles and cross-cutting themes

Our guiding principles

The strategy strives to deliver research and innovation that is:

- **person-centred** – placing people at the heart of research and innovation
- **clinically led** – harnessing the expertise of clinicians and supporting clinical engagement to drive research and innovation
- **evidence-based** – using data and evidence to drive our investments and support system improvement
- **value-driven** – delivering better, fairer and more sustainable healthcare through research and innovation.

Our cross-cutting themes

Key themes are embedded throughout the strategy, including:

- **equity and diversity** – ensuring research and innovation addresses disparity and unmet need, and promotes equity and inclusion in our focus populations
- **consumer, community and patient involvement** – engaging and partnering in research and innovation to inform prioritisation and improve translation of evidence into practice
- **a culture of research and innovation** – celebrating the benefits of research and innovation for health outcomes.

Our focus populations include:

- **women and people with diverse genders and sexual orientations** – addressing gaps relating to historic underrepresentation in health and medical research
- **Aboriginal people and communities** – ensuring research is meaningful, ethical and culturally appropriate to minimise harm, mitigate risks and contribute to Closing the Gap
- **rural, regional and remote communities** – improving access to research and innovation across NSW
- **people with rare diseases** – focusing on rare, historically understudied diseases.

Other populations have a disproportionate gap in health outcomes and participation in research and innovation, including:

- culturally and linguistically diverse communities
- people from lower socioeconomic backgrounds
- older people
- people with a mental health condition.

Inequity and disadvantage can vary in relative impact across population groups, prompting the inclusion of focus populations that will be systematically reviewed over time.

Strategic outcome 1: A thriving ecosystem

Adopting a coordinated, collaborative and inclusive approach to research and innovation

Collaboration, coordination, integration, specialisation and interdependency are required for a strong future in research and innovation. Without them, cost barriers for new infrastructure become insurmountable; existing capability and capacity remain underutilised; opportunities are missed for ambitious multidisciplinary programs; and the critical mass required for significant global contribution to science and health system knowledge is unachievable.

Fostering a collaborative environment will reduce duplication and create powerful synergies. It will allow us to attract additional funding; optimise the rewards of existing capital investments; support forward planning for research and innovation in NSW; and foster alignment with health system need.

The research and innovation ecosystem is large and complex, often operating in silos. Breaking down barriers across NSW and Australia is a critical step in fostering meaningful collaboration. Embracing a model where collaboration and competition can coexist will support ambitious research and create a stronger foothold in competitive international markets. By doing this, we can propel NSW – and Australia – to the forefront of research and innovation on the global stage.

Key objectives

- 1.1. Establish a NSW Health Research and Innovation Council to guide collective implementation and dynamic adaptation of the strategy – informed by independent expert advisory groups, including in Aboriginal health.
- 1.2. Create networks and communities of practice for collaboration, both in NSW and at national and international levels.
- 1.3. Embed meaningful collaboration with consumers and communities to co-design research, policies and programs.
- 1.4. Scan the ecosystem to foster and broker partnerships.
- 1.5. Partner in the development of platforms for research and innovation, including for clinical trials.
- 1.6. Build Aboriginal research capacity and capability for the entire system to engage with Aboriginal research.
- 1.7. Foster partnerships that support the unique needs of people living in rural, regional and remote NSW.
- 1.8. Provide incentives in NSW Health funding programs for collaboration, including partnerships with consumers and communities.

Strategic outcome 1: A thriving ecosystem

Figure 3: We collaborate with a diverse range of stakeholders across the ecosystem to support high-quality research and drive innovation



“The NSW ecosystem will be highly collaborative, with integrated partnerships that drive high-quality research and innovation for impact.”

Strategic outcome 2: Strategic investment

Building a portfolio of investment to target areas where NSW is well positioned to harness current and future opportunities

Research and innovation offer infinite opportunities for investment of effort and resources. To be impactful, we must adopt a portfolio approach that diversifies and balances our investments. From picking ‘winners’ and supporting emerging talent, to supporting both fundamental and applied science, and investing in high- and low-risk ventures – NSW Health will have a balanced portfolio that maximises potential for impact.

Our portfolio approach will be supported by the systematic prioritisation of investment opportunities and cases for disinvestment. This will consider healthcare needs; existing strengths, assets and capabilities; capacity within NSW for significant growth; attractiveness to target industries; and our competitive strengths with investing in relevant markets. Critically, prioritisation must align with our vision for the NSW research and innovation ecosystem, and consider the impact on our focus populations.

To maximise impact, our investments must be focused on contributions only central agencies can make. They should deliver a return on investment and create lasting impact and value, with funding and support from NSW Health functioning to prime the ecosystem to become self-sustainable into the future.

Key objectives

- 2.1. Undertake a future-oriented approach to planning, with horizon scanning to identify emerging areas, capabilities and pressing health challenges.
- 2.2. Apply a systematic approach to prioritising focus areas for investment. Collaborate to identify emerging research areas and partner with Aboriginal communities and stakeholders to identify research needs and priorities.
- 2.3. Adopt a portfolio approach to support a balance of projects and programs of varying complexity and scope across the 4 domains of research and innovation – incorporating options for acceleration, hiatus and de-implementation.
- 2.4. Measure and report impact to promote transparency and support the evaluation of funding programs, with the aim of repurposing recurrent funding that is not delivering sufficient value.
- 2.5. Identify and attract funding from sources outside NSW Health to complement our investments.
- 2.6. Accelerate research that addresses inequalities in focus populations, particularly Aboriginal people; women and people with diverse genders; rural, regional and remote communities; and people with rare diseases.

Strategic outcome 2: Strategic investment

Figure 4: Research and innovation prioritisation matrix

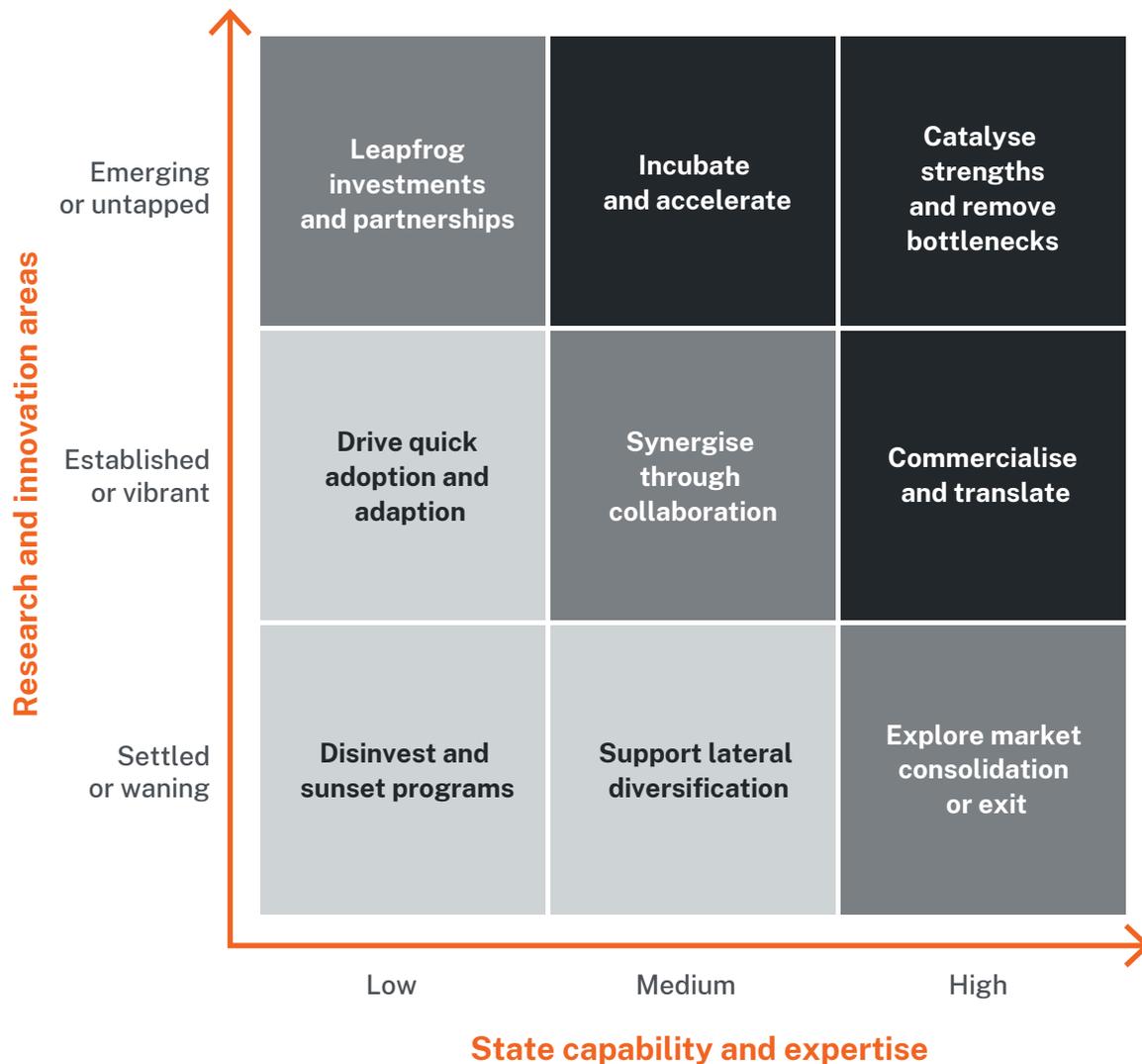


Figure 4 defines a systematic approach to prioritising research and innovation investment, support and activity. It couples an assessment of the current nature or stage of research and innovation areas (vertical axis) with consideration of local capability and expertise (horizontal axis).

The approach supports strategic investment and will be used by the NSW Health Research and Innovation Council to regularly deliberate and decide on investment directions. The categories are not precisely defined and expert judgement is required to assess current positioning; any 'gaps' to be overcome; and the relative investments required.

“Investments will be strategically driven by the need to capture emerging areas and increase capability and expertise.”

Strategic outcome 3: An open assets philosophy

Developing and mobilising assets to accelerate research and fully harness emerging innovations

NSW Health has an array of world-class research and innovation assets. These include the state's data repositories and systems; advanced laboratory and physical infrastructure; a highly trained workforce; statewide organisations and networks; and the unique genomic diversity and geographic distribution of our population. Less obvious – but no less important – are our organisational assets, such as our policy levers, governance structures and processes, interconnected networks of expertise, and our future and emerging research assets, such as the Single Digital Patient Record, which has significant potential, including in the generation of real-world data.

A statewide approach founded on collaboration and cooperation is required to fully leverage the potential of these assets and ensure financial sustainability.

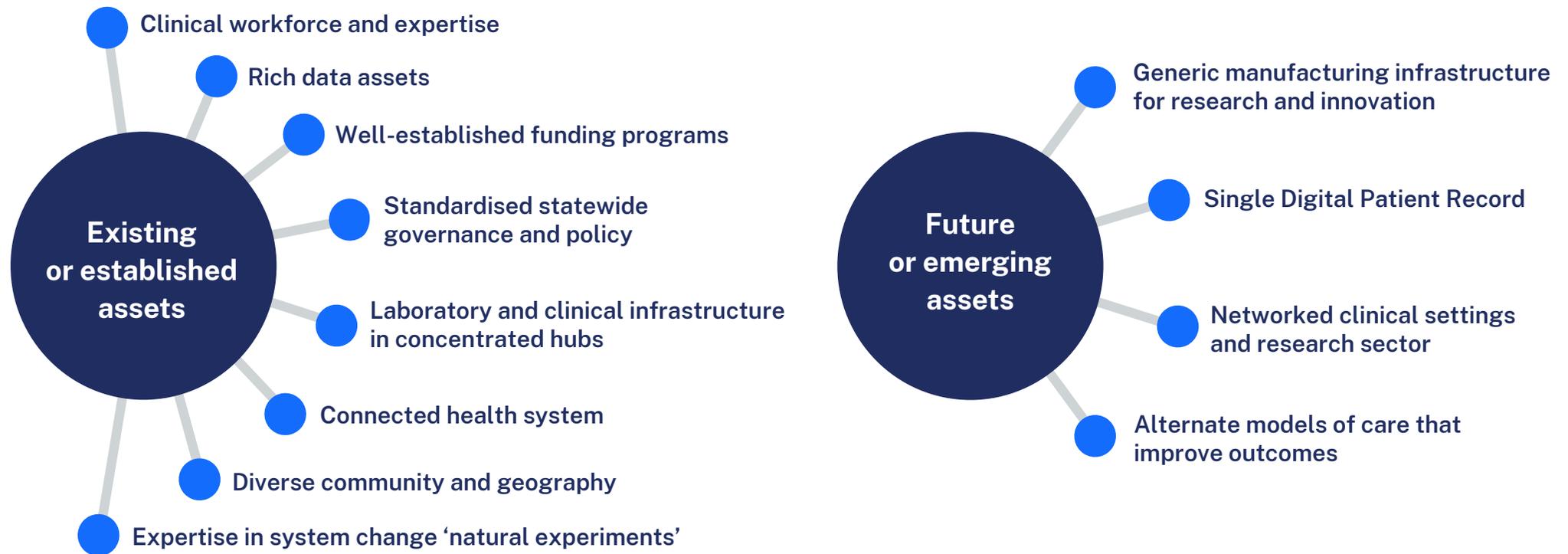
Sharing infrastructure and assets – with appropriate governance and considering the policy environment – is key. This will enable us to build research capacity, achieve critical mass and harness economies of scale, while reducing the indirect costs of research and duplication in the system. Equity will also be a key consideration to ensure improved access to assets in rural, regional and remote areas; and support cultural safety and empower Aboriginal governance.

Key objectives

- 3.1. Ensure our existing assets are fit-for-purpose to support research and innovation, and harness new opportunities.
- 3.2. Streamline access to existing data and infrastructure.
- 3.3. Build workforce capacity and capability for the future, including in rural, regional and remote areas.
- 3.4. Bring assets together to achieve economies of scale, while acknowledging that 'diseconomies of scale' may be required to build research capacity and capability in rural and remote areas.
- 3.5. Collaborate to support consideration of future research needs in capital planning.
- 3.6. Invest in strategic infrastructure gaps, with dedicated funding for research and innovation assets, such as biobanking.
- 3.7. Mobilise and monetise assets to support commercialisation and manufacturing.
- 3.8. Partner with Aboriginal communities to co-design solutions, including to support data sovereignty and empower Aboriginal governance.
- 3.9. Target existing grant programs to focus areas and populations.

Strategic outcome 3: An open assets philosophy

Figure 5: Existing and emerging assets that support NSW Health research and innovation



"The sector will be able to leverage the richness and versatility of NSW's assets to drive research and innovation."

Strategic outcome 4: A place-based foundation

Driving synergies and integration through a statewide network of precincts and place-based initiatives

The ‘power of place’ is a concept used in a range of contexts – acknowledging how context, people and history coalesce in impactful ways. In health, place-based initiatives have enormous potential to catalyse, synergise and capitalise on research and innovation. In NSW, place-based initiatives span precincts, districts, research hubs, medical research institutes, Research Translation Centres and community-based innovation centres.

The diversity and large number of place-based initiatives in NSW is one of our unique assets. A statewide network of place-based initiatives has the potential to achieve greater collective impact. Together, these initiatives combine diverse skills, specialisation and complementary strengths. This synergy can be a powerful advantage in attracting investment and industry to the state.

A network of place-based initiatives involves collaboration across multiple places with a shared vision. It leverages the unique contribution of each place to drive synergy and integration, and is complemented by existing networks that harness expertise and assets across the system.

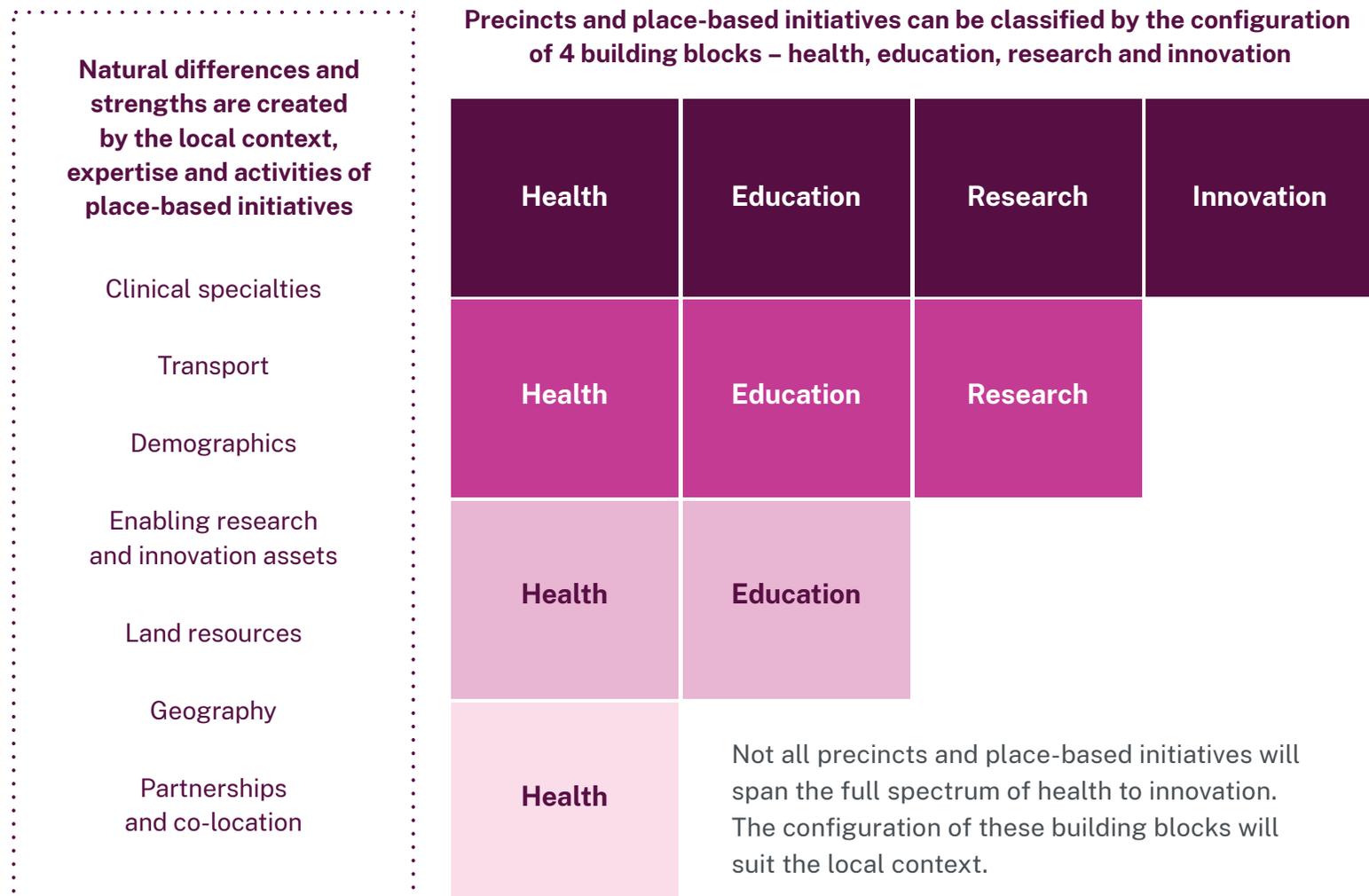
“NSW will have a vibrant network of precincts and other place-based initiatives that will collaborate to create landing pads for research and innovation in the state.”

Key objectives

- 4.1. Support the specialisation of place-based initiatives to harness research potential aligned with existing strengths.
- 4.2. Clarify the role of entities at various levels of Government and system delivery organisations.
- 4.3. Establish and consolidate central coordination functions, including governance, policy enablers, generic capabilities, navigation and concierge services to broker partnerships.
- 4.4. Enhance networking, partnerships and complementarity across place-based initiatives to create a full system offer to industry.
- 4.5. Promote the sharing of functions and assets across place-based initiatives to reduce the indirect costs of research.
- 4.6. Work across Government to plan and support coordinated investment opportunities.
- 4.7. Harness the potential of research translation expertise to activate precincts, and establish evaluation mechanisms to guide continued support.
- 4.8. Foster place-based approaches that reflect the needs and priorities of local communities.

Strategic outcome 4: A place-based foundation

Figure 6: The typology of precincts and natural differences and strengths of place-based initiatives will drive a unique offering and role within the network



Strategic outcome 5: A pipeline approach

Generating value from our research investments by addressing real system problems and progressing innovation to scale

Transforming a bright idea into better health outcomes is a long and multifaceted journey. With a clear pathway and strategic use of appropriate levers, novel research and transformative innovations can be successfully implemented and commercialised at scale.

A pipeline approach leverages well-known research and innovation pathways to support the progression of ideas, ensuring those with high potential are tested, spread, scaled and implemented into business as usual, where possible. It enables the integration of research from all sources, including industry-driven and Aboriginal-led research, to ensure good ideas are translated for impact.

Managing research and innovation through a pipeline approach supports decision making by enabling the use of gateway criteria and identifying roadblocks to progression. NSW Health can use its significant levers to reduce the impact of these roadblocks, while also maintaining necessary safeguards. Good ideas will not go to waste and government resources will be directed to ideas with demonstrated impact and significant potential.

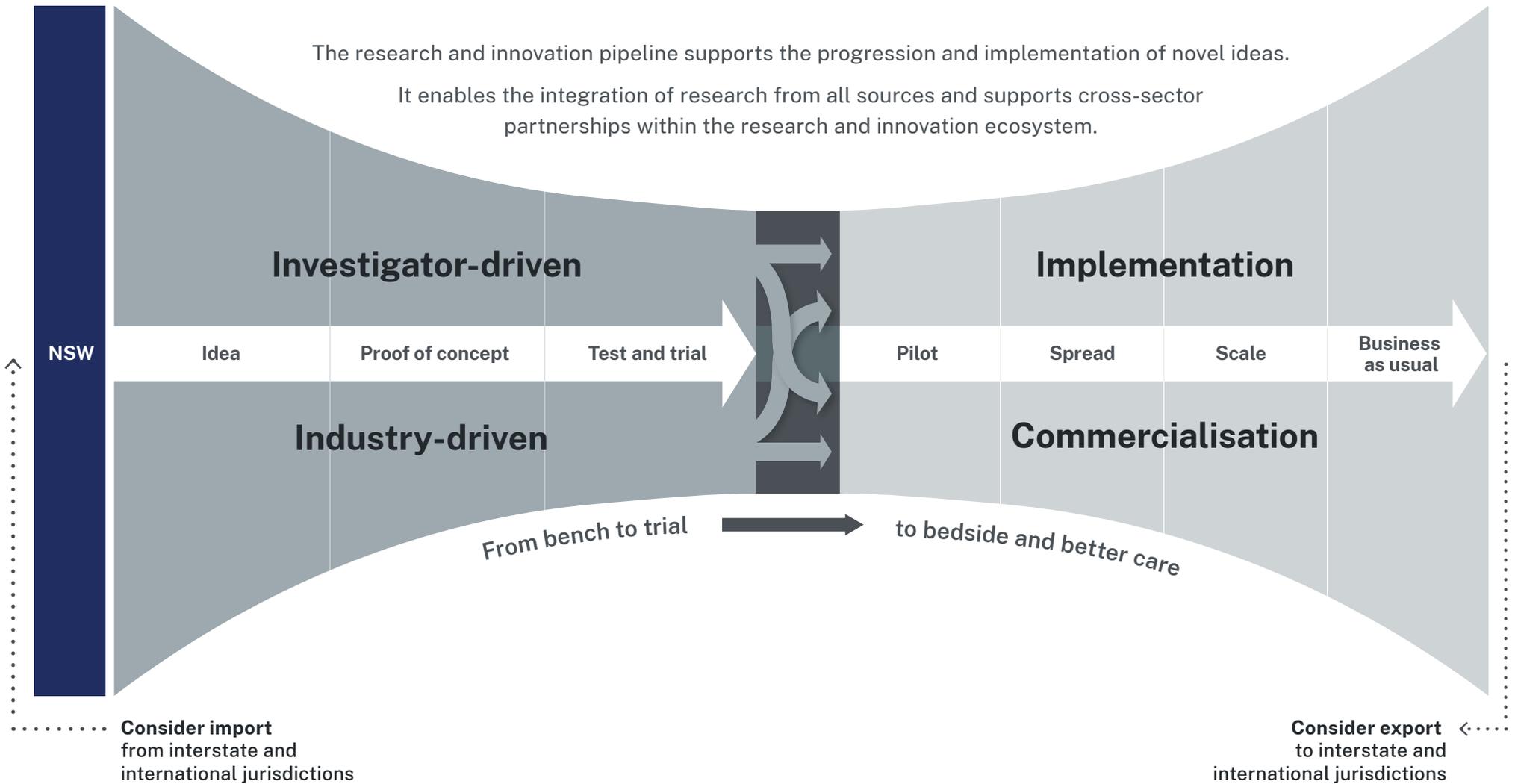
Key objectives

- 5.1. Undertake local and global horizon scanning to identify high potential projects and emerging opportunities.
- 5.2. Identify bottlenecks and support progression of promising innovations through the pipeline.
- 5.3. Establish clear gateway criteria and evaluation processes that leverage real-world evidence to guide progression – or discontinuation – along the pipeline.
- 5.4. Ensure proportionate levels of support are provided, depending on the scale of transformation envisaged.
- 5.5. Feedback experience from the pipeline into the research and innovation ecosystem.
- 5.6. Support implementation within NSW Health settings, including by developing innovative procurement policies.
- 5.7. Provide commercialisation and intellectual property support to facilitate progression through the pipeline.

“The pipeline will function to ensure that in NSW research translates into change, and innovation is informed by evidence.”

Strategic outcome 5: A pipeline approach

Figure 7: NSW Health research and innovation pipeline



Strategic outcome 6: Research and innovation for all

Supporting better use, translation and creation of research and innovation across healthcare settings to improve outcomes, equity of access and system efficiency

Research and innovation bring benefits to all patients and staff. NSW Health has a central role to play in maximising these benefits and creating a culture where the value of research and innovation is recognised and celebrated within our health system.

A key consideration for our workforce is operational demand – by encouraging and enabling diverse and proportionate roles in research and innovation, we can integrate these activities into clinical and operational practice, while ensuring staff can continue to deliver high quality care. This will enable us to attract and retain talent across diverse clinical and geographical settings, improve our health system and patient outcomes.

Women are underrepresented in the health and medical research sector, despite being involved in research and leadership positions. The strategy will build on recent gains to address gender inequities across the sector, to better reflect the participation of women in the NSW Health workforce.

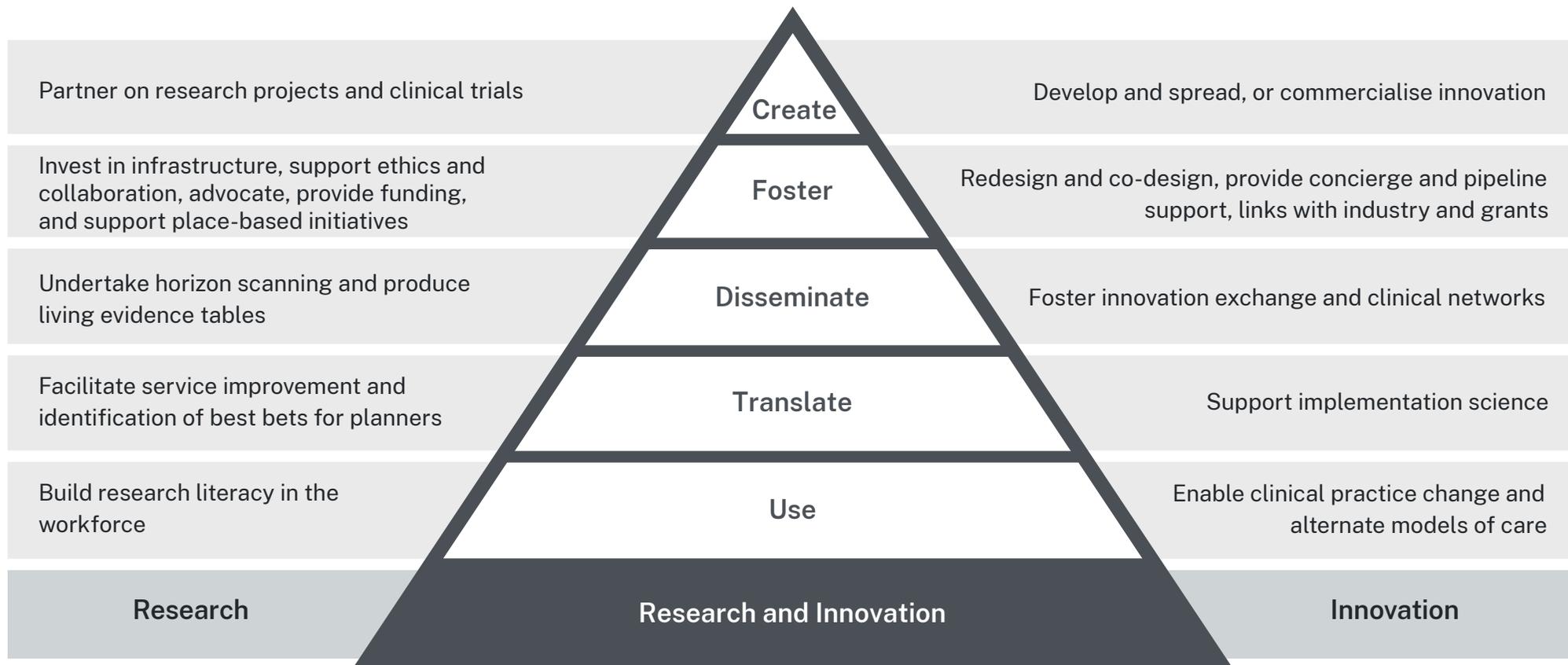
Research and innovation, and its outcomes, must also be accessible for patients and used in care across NSW. Driving meaningful improvements in health outcomes requires a commitment to equity and diversity, including for our focus populations.

Key objectives

- 6.1. Use a collaborative approach to drive initiatives that build research literacy, social licence, trust, cultural safety and capability for staff, consumers and community to be aware of, and involved in, research and innovation.
- 6.2. Communicate about opportunities for engagement with research.
- 6.3. Engage frontline clinical staff in translational research.
- 6.4. Celebrate successes and achievements in the health research and innovation ecosystem.
- 6.5. Collaborate to identify system challenges that require a research mission approach to be addressed.
- 6.6. Support research and initiatives that promote equity, including access to clinical trials for people in rural, regional and remote areas.
- 6.7. Partner with Aboriginal communities and stakeholders to build capacity for Aboriginal people to participate in, and lead, research.
- 6.8. Drive implementation of a Learning Health System across NSW Health.
- 6.9. Develop and deliver targeted support and training in clinical settings.
- 6.10. Reduce unwarranted clinical variation through alternate models of care.

Strategic outcome 6: Research and innovation for all

Figure 8: There is a role for everyone in research and innovation in NSW



“The full system reach of NSW Health will enable us to drive a Learning Health System – with diverse roles for our workforce – to mobilise research and innovation for the people of NSW.”

Implementing the strategy

Achieving our vision for the NSW research and innovation ecosystem over 3 horizons

The *Future Health* Steering Committee with responsibility for research and innovation will oversee delivery of this strategy. This will ensure continued alignment with *Future Health* and other NSW Health strategies and priorities. It will also support mobilisation of the strategy across NSW Health organisations and services involved in its delivery.

Input and advice will be sought through the NSW Health Research and Innovation Council, which will bring together stakeholders across the ecosystem to guide collective implementation of the strategy.

The Steering Committee and Council will reflect on the current context and ongoing evaluation of investments to assess where adaptation is required in strategy implementation.

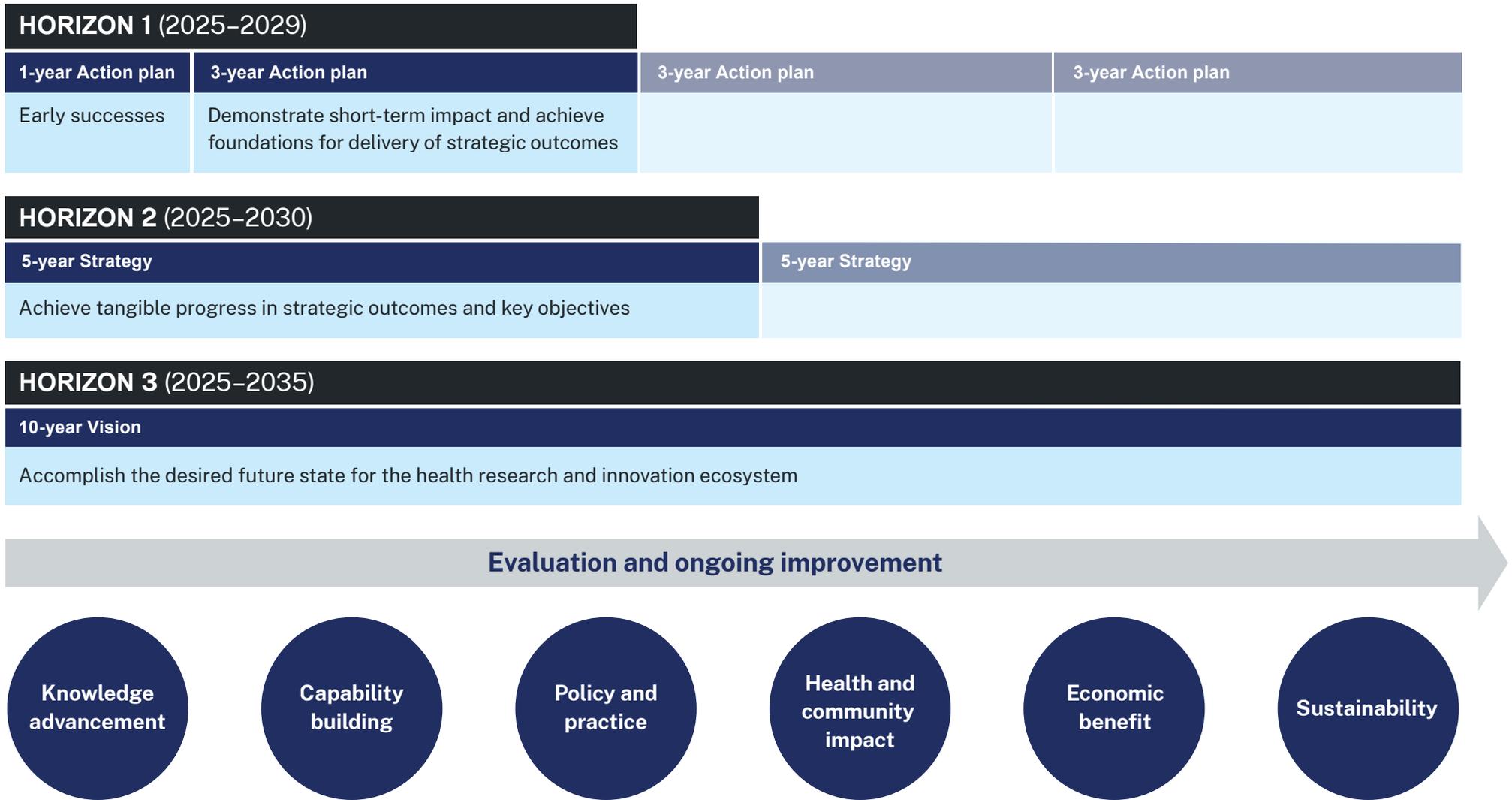
Evaluation and ongoing improvement

Evaluating the impact of NSW Health's investment in research and innovation is crucial to ensuring key learnings are used to inform future decision-making and investment, and to demonstrate social, environmental, and economic impacts and value.

Evaluation of the strategy will consider impacts across a broad range of measures to assess knowledge advancement, capability building, policy and practice impact, health and community impact, economic benefits and sustainability.

A mix of evaluation methods, such as formal program evaluations, monitoring and reporting of project metrics, rapid program and project evaluations to allow for responsive course correction, expert councils, and case studies will be used to monitor and assess performance of the strategy.

Figure 9: Operationalisation of the strategy and progression toward our vision for NSW will be managed over 3 horizons



Appendix 1: Our approach to developing the strategy

We adopted a multi-method approach to developing the *NSW Health Research and Innovation Strategy* – spanning desktop review, survey, quantitative data analysis, capability gap analysis and consultation.

Through targeted engagement with key internal and external partners, and broad engagement across the ecosystem, we had input from more than 400 stakeholders. Our consultations spanned from those working within NSW Health and the NSW Government, to consumers and our partners in universities, medical research institutes, Research Translation Centres, industry, peak bodies and venture capital.

We sought to put local perspectives in a national and international context, aiming to position NSW as a globally competitive hub of research and innovation into the future.

Development of the strategy was overseen by a Steering Committee, with expert advice provided by the *NSW Health Research and Innovation Strategy* Think Tank – a group of eminent experts convened to ensure the strategy would be ambitious and competitive.

Balancing perspectives

At times, the diversity of views captured presented conflicting perspectives. We identified the following key areas of tension:

- Balancing further investment in areas of research strength with bolstering current gaps in the system.
- Navigating the challenge of promoting ‘research for all’ within NSW Health, while avoiding the perception of research being disconnected from frontline healthcare needs.
- Removing the barriers to research and innovation, while maintaining safeguards to ensure safe, ethical and efficient research practices.
- Striving to position NSW as an international leader in research and innovation, while fostering collaborative efforts to build capacity, capability and shared assets, and achieve common goals.
- Whether a short-, medium- or long-term strategy would be best suited to drive an ambitious, forward-looking plan for research and innovation in NSW.

Phase I consultations

Phase II consultations

Dec 2023 Jan 2024 Feb 2024 Mar 2024 Apr 2024 May 2024 Jun 2024 Jul 2024 Aug 2024 Sep 2024 Oct 2024 Nov 2024 Dec 2024

Initiation and planning

Strategy development and review

Appendix 2: The future in the 4 domains of research and innovation

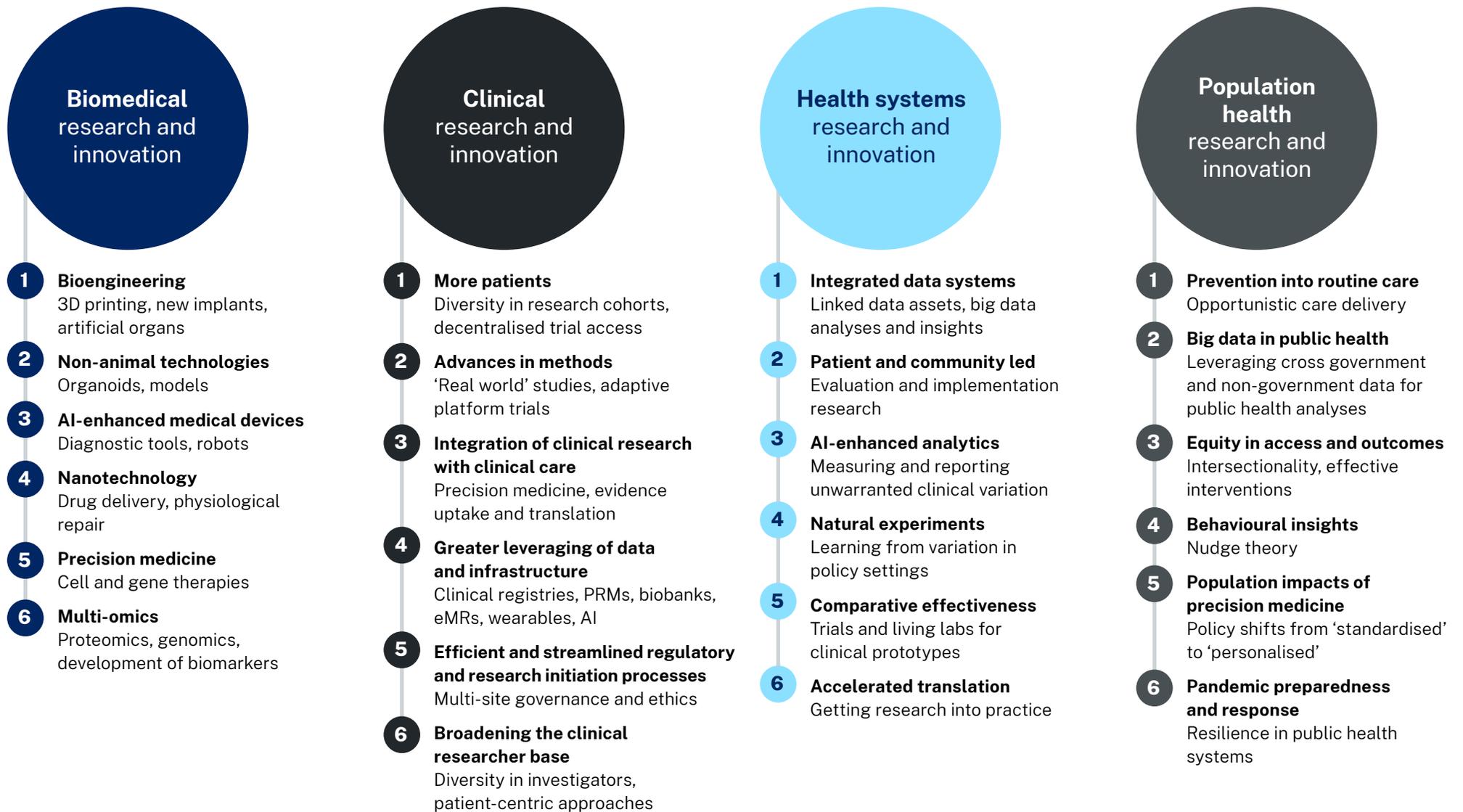
Horizon scanning highlights dynamic areas of research to consider

Horizon scanning processes and the prioritisation matrix support a mission-oriented approach in research and innovation, allowing a focus on solving specific, impactful health challenges that require system-wide transformation.

Example mission areas emerge across the 4 domains of health research and innovation. These missions require multidisciplinary partnerships across the ecosystem – between health, academia, community, private, and public sectors, and across the 4 domains of research and innovation. By building a reputation for adaptive problem solving, more opportunities for funding, partnerships and business investment will follow for the NSW research and innovation ecosystem.

Appendix 2: The future in the 4 domains of research and innovation

Figure 10: Example mission areas across the 4 domains of research and innovation



Appendix 3: Levers and roles in implementation

The *NSW Health Research and Innovation Strategy* will have implications across the system, and all of NSW Health has a role to play in implementation. There are multiple levers across NSW Health that will bring the strategy to life – we must work collaboratively in leveraging these to realise the full potential of NSW in research and innovation.

<p>Workforce</p> <p>Each day, staff strive to make things better for patients. Across biomedical, clinical, organisational and population health domains, research and innovation are crucial to patient care and community health. However, staff are not fully equipped to face emerging challenges – such as AI and precision medicine – and we need to build and empower our workforce.</p>	
<p>NSW Health activities</p>	<p>Take an integrated approach to managing and sustaining a health workforce that undertakes, and is involved in research</p> <ul style="list-style-type: none"> • Establish career pathways for clinician-researchers. • Sustain support for local innovation functions, while creating statewide efficiencies in research, business planning and commercialisation. • Make roles more attractive by promoting engagement in research for clinical staff, including in rural and remote areas.
<p>Shared goals</p>	<p>Build strategic partnerships to develop internal and external workforce capability</p> <ul style="list-style-type: none"> • Work with partners, including Aboriginal communities and consumers, to develop and implement targeted capability-building programs. • Build academic partnerships in implementation science. • Support appointments with universities to enable clinicians to have dedicated time for research.
<p>External influence</p>	<p>Influence the ecosystem to build workforce capability in new and emerging areas</p> <ul style="list-style-type: none"> • Advocate to universities and colleges to upskill the future workforce in new and innovative models of care. • Communicate emerging local needs to national partners.

Appendix 3: Levers and roles in implementation

Data

It is critical that we support initiatives that enable greater data access with close consumer, community and patient collaboration. We recognise the importance of long-term engagement to build trust and social license, and will work toward a future state where consumers, community and patients champion the use of their data for research, innovation and – ultimately – better outcomes.

NSW Health is concurrently developing a *NSW Health Data and Analytics Strategy*, which recognises data as a key enabler of research and innovation.

<p>NSW Health activities</p>	<p>Design and implement initiatives to allow data exploration and discovery, and support a coordinated data and analytics workforce</p> <ul style="list-style-type: none"> • Implement tiered data access, including a secure access environment for research and innovation. • Coordinate current and emerging data roles and reduce duplication of effort in analytics. • Use data analytics to proactively drive clinical research.
<p>Shared goals</p>	<p>Establish strategic partnerships to harness new methods and enable streamlined and safe access to data</p> <ul style="list-style-type: none"> • Partner with academic institutions to build modern data infrastructure and develop techniques that are aligned with emerging fields, such as personalised medicine. • Create an enterprise-wide request and access system for data assets, dashboards and reports that is integrated with data governance tools.
<p>External influence</p>	<p>Build social license with consumers, community and patients for the use of data</p> <ul style="list-style-type: none"> • Engage with the people of NSW to understand their attitudes toward the use of data. • Build social license for initiatives that increase the availability of data. • Progress Aboriginal Data Sovereignty and Governance.

Appendix 3: Levers and roles in implementation

Funding Innovative funding models are required—both to leverage existing funding and to attract financial contributors to support the strategy.	
NSW Health activities	<p>Coordinate and reduce duplication of funding across the research and innovation pipeline</p> <ul style="list-style-type: none"> • Pool funding for research and innovation. • Evaluate and repurpose recurrent funding to ensure investments are aligned for impact.
Shared goals	<p>Explore co-funding models with stakeholders</p> <ul style="list-style-type: none"> • Partner with organisations across the NSW ecosystem, such as universities, Research Translation Centres, venture and private capital, and philanthropy. • Partner with stakeholders at a national level.
External influence	<p>Attract more funding to NSW</p> <ul style="list-style-type: none"> • Influence funding programs at a national level. • Proactively engage with philanthropy, and venture and private capital to attract funding.

Appendix 3: Levers and roles in implementation

System governance and policy The judicious and strategic use of policy levers and governing structures can influence activity across the health system, and beyond, to support delivery of the strategy and enable the progression of research through the pipeline.	
NSW Health activities	Align policy and governance functions across NSW Health <ul style="list-style-type: none"> • Ensure alignment and definition of roles in the operating and governing environment for research and innovation. • Establish a NSW Health Research and Innovation Council. • Evaluate current governance processes and policies to ensure they are fit-for-purpose to support implementation of the strategy.
Shared goals	Proactively engage partners to maximise the impact of strategic initiatives <ul style="list-style-type: none"> • Collaborate across government to develop whole-of-NSW-government policies to support research and innovation. • Work in partnership across the NSW ecosystem to leverage the full strength of all levers.
External influence	Foster strategic alignment across the ecosystem <ul style="list-style-type: none"> • Advocate and engage with organisations across the NSW and Australian ecosystem to foster alignment with research and innovation strategies and policies, and shape the broader policy and system context.

Appendix 3: Levers and roles in implementation

<p>Laboratory and clinical infrastructure</p> <p>The diverse array of infrastructure in NSW can be leveraged to support research and innovation across the state, enabling researchers across NSW to benefit from their world-class capabilities, and for research and innovation to be translated for the benefit of patients in NSW.</p>	
<p>NSW Health activities</p>	<p>Streamline coordination and access to infrastructure</p> <ul style="list-style-type: none"> • Streamline the interface between laboratory and clinical services to enable research. • Explore centralising operational functions and processes that will drive efficiencies, including shared HR models. • Centralise coordinating functions for platform trials to improve participation in clinical trials.
<p>Shared goals</p>	<p>Enhance access to infrastructure for research and innovation across NSW</p> <ul style="list-style-type: none"> • Partner with stakeholders across NSW to identify opportunities for co-location and sharing of assets, where appropriate. • Build infrastructure capacity and workforce capability to enable clinical trials.
<p>External influence</p>	<p>Promote sharing of assets across Australia</p> <ul style="list-style-type: none"> • Advocate for shared access to laboratory and clinical infrastructure across jurisdictions, where appropriate. • Explore opportunities for co-investment in infrastructure that will support research and innovation.

Appendix 3: Levers and roles in implementation

Networked organisations There is a diversity of strong, collaborative networks across NSW. The creation and consolidation of connections across these networks can be a powerful tool to foster meaningful collaboration across the state.	
NSW Health activities	Establish and consolidate centralised coordination functions for precincts and other place-based initiatives <ul style="list-style-type: none"> • Establish a centralised precinct governance structure and navigator service. • Consolidate and refine concierge functions to broker partnerships across the ecosystem.
Shared goals	Establish and support research and innovation networks across NSW, and beyond <ul style="list-style-type: none"> • Engage with partners across the ecosystem to build research and innovation networks in areas of high priority. • Broker industry partnerships that will drive research and innovation in NSW.
External influence	Foster collaboration in research and innovation <ul style="list-style-type: none"> • Advocate for support and incentives for multidisciplinary and networked collaboration. • Engage with partners across government, including in other jurisdictions, to promote collaboration.

Appendix 3: Levers and roles in implementation

<p>Diverse community and geography</p> <p>A large and diverse population is one of NSW's strongest research assets, supporting the collection of demographic data and attracting international clinical trials. Harnessing this potential will support quality research and enable translation for equitable health outcomes.</p>	
<p>NSW Health activities</p>	<p>Improve access to clinical trials across NSW</p> <ul style="list-style-type: none"> • Support initiatives that will deliver increased and more equitable access to clinical trials across the state, with a particular emphasis on Aboriginal people and other priority populations, including those in rural, regional and remote areas, and culturally and linguistically diverse populations.
<p>Shared goals</p>	<p>Build partnerships to support equity and diversity</p> <ul style="list-style-type: none"> • Partner with Aboriginal communities and stakeholders to identify and address research needs and priorities, acknowledging the complex history with ethics and research for many Aboriginal people. • Work with partners to build workforce capability for engaging consumers, community and patients, including priority populations in research.
<p>External influence</p>	<p>Build social license with consumers, community and patients for participation in research</p> <ul style="list-style-type: none"> • Develop and implement initiatives that build research literacy in NSW. • Build social license for initiatives that increase participation in research.

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© NSW Ministry of Health 2025
SHPN (ODS) 241134
ISBN 978-1-76023-811-7

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May 2025

