PROPERTY COUNCIL of Australia

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The Hon Angus Taylor MP
Minister for Energy and Emissions Reduction
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

Dear Minister,

Re: Property Council of Australia response to the Technology Investment Roadmap discussion paper

The Property Council of Australia welcomes the opportunity to provide input in response to the timely Technology Investment Roadmap discussion paper. Strong, immediate action is required across all economic sectors to set Australia on a path to a low-carbon future.

In particular, the built environment accounts for almost a quarter of emissions in Australia and has significant potential for emissions reductions.[1] Deploying more advanced technologies can deliver both cost savings to building owners and carbon abatement.

The Property Council is the leading advocate for the property industry. Our members are the largest owners of and investors in Australia's property industry.

They are committed to Ecologically Sustainable Development and have been increasingly recognised as international leaders in sustainability.

They have consistently topped international sustainability indices such as the Global Real Estate Sustainability Benchmark and the Dow Jones Sustainability Index.

Australia has committed to reducing its emissions by 26-28 percent on 2005 levels by 2030 and net zero emissions around 2050 under the Paris Agreement. Decarbonising all sectors of the economy, including buildings should be an urgent priority.

To support this objective, the government should establish a long-term target for net zero emissions across all sectors of the economy. The UK has a similarly developed economy that has used targets to successfully reduce emissions by 29 percent in the decade starting in 2010. Their economy grew by 20 percent over the same period.[2]

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[1] Low Carbon Living CRC, Best Practice Policy and Regulation for Low Carbon Outcomes in the Built Environment, 2017

[2] 2019 UK greenhouse gas emissions: provisional figures statistical release. https://www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2019 accessed June 2020.

Emissions reductions opportunities in the built environment remain largely untapped at this time and should be a focus for Australian governments going forward. The high-performers in our market are world-leaders but our minimum standards remain underdeveloped.

Government has begun to reduce this gap by endorsing the *Trajectory for Low Energy Buildings* in early 2019 and this work has been complemented by industry-led initiatives such as the *Every Building Counts* policy platform which sets out exactly what is needed next.

The Property Council recommends that the Commonwealth Government should:

1. ensure that market-rigour is applied to its investments in emissions reductions technologies to ensure they deliver the best cost-to-abatement ratio.
2. apply the 'energy efficiency first' principle to delivering carbon abatements within the property sector.
3. prioritise the deployment at scale of existing low emissions technologies from similarly developed economies.
4. prioritise technologies that facilitate electrification of new and existing buildings over further investment in gas network infrastructure. The leading Australian property companies are transitioning to all electric buildings over the next decade to hit ambitious decarbonisation targets.
5. complement direct investment in technologies with a suite of planning policies, incentives and market mechanisms as outlined in *Every Building Counts* to engage the private sector and encourage further innovation.

If you would like to discuss this submission in more detail, please don't hesitate to reach out to Tim Wheeler, our Policy Manager at twheeler@propertycouncil.com.au or +614 9173 1496.

Sincerely,

Mike Zorbas
Group Executive, Policy
Property Council of Australia

Response to the terms of reference

a) The challenges, global trends and competitive advantages that should be considered in setting Australia' s technology priorities.

Setting the narrative

The parameters that will encourage the development and deployment of carbon abatement technologies should be set in close consultation with the private sector who will ultimately be responsible for leading the uptake of technologies across the economy.

Government leadership is needed to promote private investment, encourage the establishment of market mechanisms and demonstrate the business case for ongoing improvement.

The National Australian Built Environment Rating System (NABERS) is an example of a successful government/industry collaboration that has established a clear business case for sustainable buildings.

It has become a certification for buildings that delivers recognition and a competitive advantage for building owners and tenants. Additionally, NABERS-rated buildings deliver financial benefits, such as reduced operating costs, increased value, increased rental income and reduced vacancy rates. This program has been so successful in Australia that it is considered world leading and now being adapted to overseas markets with licenses deployed in New Zealand and the UK and pilot programs undertaken in India, Hong Kong and Indonesia.

By establishing a similar narrative for low emissions technologies, the government can "kick-start" a culture that will encourage greater investment and uptake of clean technologies and position the Australian building industry as a world leader.

Fossil fuel use in the Australian property industry

Members of the Property Council have made clear commitments objectives to achieve net zero emissions and even carbon positive models in the near future. Mirvac has released a strategy to become carbon positive by 2030. They will achieve this by implementing energy efficiency measures, establishing Mirvac Energy and installing 1.1MW of renewable energy and developing new high-performance buildings.[3] GPT plans to certify the GPT Wholesale Office Fund as carbon neutral by the end of 2020 and all GPT assets by 2030.[4] Lendlease is targeting net zero by 2030 across its funds and portfolios.[5]

Ultimately, these commitments should see Australia extend our world leadership in sustainable buildings by achieving energy efficient buildings running on renewable energy. A standing element in the strategy for reducing emissions is the transition away from fossil fuels including natural gas. The property industry is currently dependent on natural gas for heating and hot water purposes, however in order to meet ambitious net zero targets over the next decade, a zero emissions replacement for natural gas is required. Given the lead time for development, there is a concerted effort across industry leaders to transition towards full electrification for new buildings, and to look at options for electrifying existing buildings or other alternatives to the ongoing use of natural gas. Support for development of biomethane or other forms of 'green gas' is qualified by the need to ensure these projects can be considered truly sustainable in the long term.

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[3] Planet Positive, Mirvac's plan to reach net positive carbon by 2030, June 2019.
[4] https://www.gpt.com.au/sustainability/environment/climate-change-energy
[5] https://www.lendlease.com/au/better-places/australia-funds-to-go-carbon-neutral/

A move away from fossil fuels is possible without the need for natural gas as a "transition fuel". The Green Building Council of Australia's *Carbon Positive Roadmap*[6] outlines a path towards a carbon positive built environment. This is achieved in part by encouraging the uptake of renewable energy and adopting a "fossil-fuel free" mindset.

The design of buildings today will have consequences decades from now as we lock in material choices and technology that will stay in place for many years. For the built environment to achieve net zero emissions by 2050, new buildings will need to be net zero by around 2030 and the design choices for those buildings are being made today.

Energy efficiency first principle

The benefits of energy efficiency are significant and wide-ranging. Major global economies have successfully used energy efficiency to reduce energy bills, ensure energy security, reduce emissions, create jobs and increase resilience and comfort.[7] It has been described by the International Energy Agency as the world's "first fuel" as every unit of energy saved is a unit of energy that does not need to be generated.

Australia has barely begun to tap the potential of energy efficiency. The small efforts that we have made in residential and commercial buildings are delivering significant advantages but there remains much to be done. A 2018 survey of the measures of major economies to implement energy efficiency measures ranked Australia as the worst developed country for both energy efficiency policy and performance.[8]There is significant demand in the Australian market for more investment in energy efficiency. A survey by the Property Council, ACOSS and the Energy Efficiency Council found that 88 percent of respondents believed the government should invest more in energy efficiency.[9]

With the right policies and incentives in place, energy efficiency could deliver Australian residents and business over $7.7 billion annual through reduced energy bills and create over 120,000 job hours of employment.[10] It could also deliver half of the abatement required under Australia's Paris Agreement targets.[11]

The Technology Investment Roadmap should focus first on reducing demand for energy through the implementation of energy efficiency measures. These should be complemented with other carbon abatement technologies as secondary measures.

b) The shortlist of technologies that Australia could prioritise for achieving scale in deployment through its technology investments.

Shortlist of technologies

The Property Council is broadly supportive of the list of technologies featured on the discussion paper's shortlist. Selecting the right technologies for government investment is a significant decision that will have ramifications for decades to come. A successful delivery of innovative technologies will lock in emissions reductions for new and existing buildings into the future. The government should work closely with the private sector to ensure that investments are made in the technologies that align with the energy efficiency first principle and are most likely to deliver the greatest abatement to cost ratio.

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[6] A Carbon Positive Roadmap for the built environment, for buildings and fitouts. September 2019.
[7] The World's First Fuel, How energy efficiency is reshaping global energy systems, June 2019 Energy Efficiency Council.
[8] Castro-Alvarez, F., Vaidyanathan, S., Bastian, H. & King, J. 2018, The 2018 International Energy Efficiency Scorecard, American Council for an Energy Efficient Economy, Washington DC.
[9] Energy bills and energy efficiency, April 208 ACOSS, EEC, Property Council
[10] Green Energy Markets 2018, Energy Efficiency Employment in Australia, Green Energy Markets, Melbourne
[11] ClimateWorks Australia and WWF 2015, A prosperous, net-zero pollution Australia starts today, Melbourne.

To achieve this, the government should ensure that good policies, together with market mechanisms, engage the private sector and encourage their investment in low carbon technologies. The government should then ensure that its contributions mirror and enhance private sector investment. We caution against unilaterally "picking winners" at this early stage as it could distort the market by backing technologies with a higher abatement to cost ratios that would likely not be commercially successful once they go to market.

Making use of existing low emissions technologies.

Australia currently rates poorly in its energy efficiency policy and practices. We are trailing most similar economies due to a very low regulatory stringency and the lack of adoption of proven technologies from overseas (Figure 1).

There are significant benefits to be drawn from adopting well-established practices and technologies from overseas.

It is estimated that Australian families and businesses can save $7.7 billion annually through lower energy bills and create 120,000 job-years of employment. [12] These figures demonstrate that the market incentives already exist but other barriers to adoption must be overcome in order for successful technologies to be adopted from overseas. These include raising minimum standards to capture low performers, helping developers identify and invest in opportunities to adopt low emissions technologies, and overcoming cultural barriers.

As well as investing in the development of new technologies, the Federal Government should prioritise efforts to import and mainstream proven technologies from overseas.

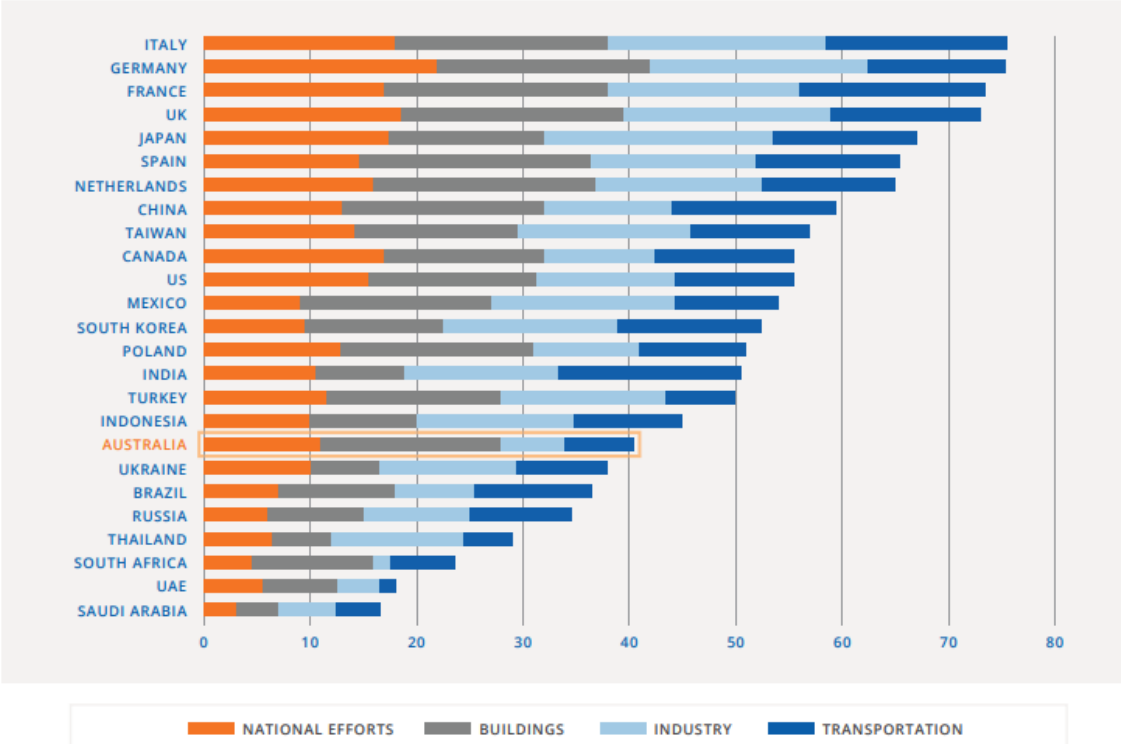

Figure 1 - Energy efficiency policy and practice ratings for the world's largest energy users

[12] Green Energy Markets 2018, Energy Efficiency Employment in Australia, Green Energy Markets, Melbourne

Taking a systems approach to technology

The government should consider the potential links and interactions between the technologies it is seeking to develop. There could be unforeseen consequences in outcomes if technologies are considered individually rather than through a systems approach.

An example of this co-dependence could occur between Waste to Energy (WtE) and the circular economy. The circular economy is recognised as an imperative measure for reducing our waste and environmental impacts while delivering valuable resources and creating jobs. It is developing rapidly through programs such as the NSW Government's *Too Good to Waste* policy and the Better Building Partnership's *Operational Waste Guidelines*.

The circular economy seeks to divert waste from linear pathways whereby a product is made, used and discarded towards a circular pathway whereby products are recycled and reused. This objective could lead to a diversion of waste away from WtE and towards a higher use in the built environment, thereby leaving WtE systems without the necessary fuel. While there is likely space for WtE implementation it should be considered as a final option at the end of the ladder of circularity (Figure 2).

The government should review its shortlist of technologies for consistency and to avoid developing incompatible narratives for products in the built environment.

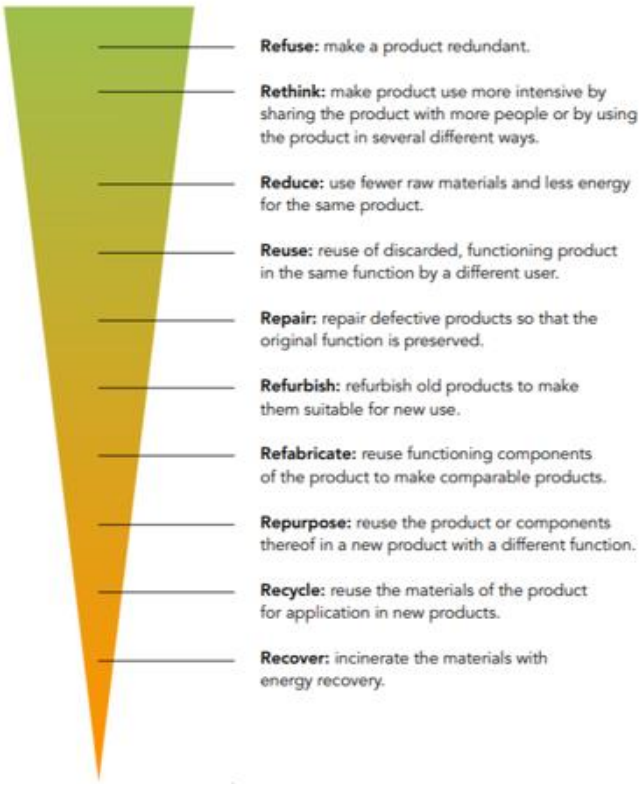

Figure 2 - Ladder of circularity

Over-reliance on Australia's water reserves for energy generation

While Australia has many natural advantages that should be leveraged throughout this roadmap, water reserves are a natural weakness that should be accounted for in the choice of technologies. Below-average rainfalls, increased abstractions and streamflow conditions in the east of Australia have led to a steady decline in our public water reserves.[13]

Several of the energy generation strategies put forward in the discussion paper strengthen the undesirable link between electricity generation and water. Hydro, Hydrogen, Nuclear and continued thermal coal generation are dependent on available water reserves and only intensify the critical vulnerability between generation and water accessibility. As climate change intensifies with projected longer periods of drought, any water dependent generation technologies will be vulnerable to curtailment.

Further, the discussion paper mentions desalinisation as a potential solution for additional water resources. Any water dependent energy generation that relies on desalinisation technology must ensure that the cost of desalinisation is incorporated into the business case.

[13] Australian Government, Bureau of Meteorology, Water in Australia 2017-18.

c) Goals for leveraging private investment.

Delivering commercial rigor to government investments through the CEFC

The Clean Energy Finance Corporation (CEFC) is one of the Commonwealth's most successful endeavours in accelerating Australia's transition to a low emissions future. As the CEFC applies commercial rigour to its investments and generates income for the Commonwealth, its role is central to achieving a long-term target of net zero emissions by mid-century.

The CEFC is actively working with the built environment sector to catalyse increased investment in energy efficiency and renewable energy in new and existing buildings, helping reduce energy costs and emissions.

The Property Council is strongly supportive of its mandate and efforts to date and we see potential for further investment in energy efficiency and new low carbon technologies across various sub sectors including commercial office buildings, community housing and aged care and student accommodation.

The government should leverage the structure and delivery-model currently available through the CEFC to encourage further private sector investment.

Expanding the mandate of ARENA for energy and emissions management

ARENA's current innovation model is well suited to areas of existing activity: renewable energy and grid stabilisation.

However to address the needs of key economic sectors, ARENA needs to shift from a R&D innovation model focused primarily on the supply of low carbon energy, to one that helps drive energy productivity in particular sectors of the economy, and the 'enabling ecosystem' of energy management products and services that sits around those sectors.

To do this, ARENA should be empowered to address both of the following:

- Demand-side barriers: The role of demand-side measures is more crucial than ever. ARENA should be enabled to contribute to the development of energy efficiency, demand management and demand response technologies and programs.
- Mature technology barriers: There has been very limited deployment of some relatively mature energy management practices or technologies in particular sectors, even if they are commonly deployed overseas. Further, highly efficient technology is often unavailable or expensive in Australia due to a historic lack of demand. This means the capability of service providers is often low, and supply chains can be limited or non-existent.

ARENA is currently constrained by how it can engage with the issues listed above and its mandate should be expanded to deliver on these important measures and unlock further carbon abatement throughout the built environment.

d) What broader issues, including infrastructure, skills, regulation or, planning, need to be worked through to enable priority technologies to be adopted at scale in Australia.

The need for strengthened minimum standards and a trajectory of improvement over time

The adoption of low carbon technologies throughout the property sector has been slow to date. Overall energy intensity only improved by two to five per cent in the decade in between 2005 and 2015.

This is despite market leaders driving world-class innovation in low-energy buildings, suggesting a widening gap between industry leaders and laggards. Minimum energy requirements for new buildings and fitouts, with a forward trajectory for strengthened requirements over time, can play a role in closing this gap.

The government should lead the development of a national trajectory for future upgrades to minimum energy performance requirements in the National Construction Code, starting with a step change for residential buildings in 2022. This trajectory for energy performance targets in buildings will also provide a strong regulatory signal to consumers and industry, thereby encouraging innovation, investment and the widescale uptake of new technologies.

The need for a rigorous cost benefit analysis comparing electrification and deploying gas infrastructure

The government should lead an in-depth consultation and rigorous cost benefit analysis to ensure that future investment in technologies for buildings and associated network infrastructure is cost effective and consistent with achieving net zero emissions by 2050.

There is a risk that any over-investment in natural gas infrastructure servicing commercial and residential buildings may not get the uptake to justify the expenditure and could result in significantly stranded assets.

Australia has committed to decarbonisation by mid-century to mitigate the effects of climate change. While using natural gas instead of more polluting fossil fuels can be considered part of that transition, it is nonetheless the source of significant greenhouse gas emissions that will need to be offset. Any roadmap to reinforce the role of natural gas in the Australian economy should be accompanied by an exit strategy in alignment with our international commitments.

Mandatory disclosure of the energy performance of homes

Australian homeowners and renters value sustainability but lack a credible and widely accepted benchmark to easily assess the sustainability of homes. A single rating scheme consistently applied across the country would make it easier to compare the efficiency of homes and create an incentive for the deployment of new and existing low carbon technologies.

The government should develop a single, coherent national rating scheme to facilitate disclosure of performance in residential buildings, that includes:

- Providing benchmarks for market comparison of best practice sustainability performance; and
- A best practice governance model based on NABERS that brings the Commonwealth, state and territory governments together to collectively manage benchmarks for new homes.

Planning incentives for high performance

At a State and Territory level, the provision of incentives to homebuyers and builders that commit to best practice is an important mechanism that has largely been overlooked in the national policy mix.

Planning incentives would support the accelerated deployment of high performing technologies in all building types. Priority should be placed on:

- Green door policies, which would provide expedited or prioritised review and approval of development applications associated with more sustainable and higher performing buildings.
- Density bonuses, which offer developers an increase in the permitted density of residential projects in exchange for more sustainable and higher performing buildings.

Accelerate the shift to high performance buildings with targeted financial incentives.

Notwithstanding the progress made by market leaders, energy efficiency investment for most stakeholders in the built environment remains a low priority. This is due to barriers such as the perceived difficulty of energy upgrades, high upfront costs and long payback periods. Financial incentives can drive accelerated uptake of energy efficiency and distributed technologies in new and existing buildings, by helping to reduce the gap between energy efficiency outlays and returns, and motivating action by building owners and tenants.

The Federal Government should work with state, territory and local governments to deliver financial incentives that encourage the built environment towards better sustainability practice and reduced emissions.

Priority should be placed on:

- Modernising the 10 per cent green building withholding tax regime by:
    - expanding the regime to all buildings held for rental purposes (regime is currently limited to offices, hotels and shopping centres)
    - applying the rate to buildings that have been refurbished to achieve the necessary Green Star ratings (regime is currently limited to newly constructed buildings)
    - applying the test on an asset by asset basis (regime currently requires all of the MIT's assets to satisfy the Green Star rating requirements)
- Extending the instant asset write-off scheme to include energy efficiency upgrades of buildings up to $100k.
- Green depreciation, which would see the deferment of taxable income in early years in exchange for bringing forward investment in large upgrades that exceed the instant asset write-off threshold.
- Rates and charges relief for buildings that satisfy a performance standard, for instance stamp duty and land tax concessions for high performing buildings.

Expanding the remit of technology investment

To ensure the effective uptake of new technologies, the areas addressed by innovation investment must also expand beyond physical technologies.

Energy innovation investments in the 2020s should include investment in R&D and demonstration of new technologies. However, Australia also needs to make strategic investments that support businesses to get across and integrate new technology into their operations at the pace necessary for them to adapt and thrive as the energy landscape transforms around them. That means innovation research should not just focus on technology, but also research into business models for technology deployment, software that integrates disparate technologies into a business solution, and how businesses can rapidly build the internal skills and external network to take new technology up.

e) Where Australia is well-placed to take advantage of future demand for low emissions technologies, and support global emissions reductions by helping to deepen trade, markets and global supply chains.

Attracting investment in sustainable portfolios

More and more institutional investors are recognising environmental, social, and governance factors as drivers of value (ESG). Over 25 percent of assets under management globally are now being invested using the principle that ESG factors can affect a company's performance and market value.[14]

Over the past decade, Australian companies have consistently topped global sustainability indices such as the Global Real Estate Sustainability Benchmark and the Dow Jones Sustainability Index. This provides high performers within the Australian market with a material advantage when seeking investment from overseas.

[14] From 'why' to 'why not': Sustainable investing as the new normal, Sara Bernow, Bryce Klempner, Clarisse Magnin, 2017 McKinsey & Company.

The government should leverage this advantage and bolster it with preferential trade arrangements to encourage sustainable investment in Australia.

Exporting Australian ingenuity

Resolving the immediate energy challenges faced in key industry sectors and Australia's energy system opens a broader opportunity for Australia. The trend towards low carbon, intermittent generation is one that is occurring around the world and needs to be carefully managed. Globally, key economic sectors are grappling with how they can thrive in a carbon constrained world.

Continuing efforts on energy innovation positions Australia to develop the technology, services and expertise needed to effectively manage a distributed energy system, transition industries, and export both these solutions and clean energy-intensive products to the world.

Sustainable Cities

Sustainable, resilient and well-planned cities can deliver significantly more carbon abatement than individual technologies within the built environment. The narrow focus on technologies should be expanded to larger elements of the built environment to create a more integrated approach to carbon abatement.

While sustainably planned cities are in their infancy world-wide, there are some examples such as Copenhagen in Denmark where this objective is significantly more advanced. Copenhagen aims to be the world's first carbon neutral city by the year 2025. They are achieving this through advanced energy management measures complemented with investment in renewable energy generation and local carbon offsetting.

Australia has the potential to develop and export this knowledge if the government supports a broader innovation agenda and R&D at a greater scale than individual technologies.