



**NET-ZERO  
INDUSTRIES**  
MISSION

# Action Plan for the **Net-Zero Industries** **Mission**

2nd edition  
March 2026



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# Members

The Mission is driven by our 8 members from around the globe and co-led by the governments of Australia and Austria.

## CO-LEADS

### **Australia**

Department of Climate Change, Energy, the Environment and Water

### **Austria**

Federal Ministry for Innovation, Mobility and Infrastructure

## CORE MISSION MEMBERS

### **Canada**

Natural Resources Canada

### **Republic of Korea**

Ministry of Climate, Energy and Environment

### **China**

Ministry of Science and Technology

### **United Kingdom**

Department for Energy Security & Net Zero

### **European Commission**

DG Research and Innovation

### **Finland**

Ministry of Economic Affairs and Employment

## MISSION SPONSORS & PARTNERS

The Alliance for Industry Decarbonisation (AFID)

A.SPIRE

Australian Renewable Energy Agency (ARENA)

Austrian Institute of Technology (AIT)

Clean Energy Ministerial – Industrial Deep Decarbonisation Initiative (IDDI)

The CETPartnership (CETP)

European Investment Bank (EIB)

Global Cement & Concrete Association (GCCA)

Heavy Industry Low-carbon Transition Cooperative Research Centre (HILT CRC)

The International Energy Agency (IEA)

Technology Collaboration Programme on Industrial Energy-related Technologies and Systems (IEA IETS)

The International Renewable Energy Agency (IRENA)

Klima-und Energiefonds (KLIEN)

The Leadership Group for Industry Transition (LeadIT)

LinkedIn

Mission Possible Partnership (MPP)

NEFI-New Energy for Industry

United Nations Industrial Development Organization (UNIDO)

World Economic Forum (WEF)

World Steel Association (Worldsteel)

Worley

## About the Mission

From our launch in 2022, the Net-Zero Industries Mission (NIM) has developed into a practical collaboration between international governments, non-governmental organisations and industry. Decarbonisation of iron & steel-making, production of lime and cement, chemicals & refining, and alumina and aluminium will require multiple technical solutions to meet 2030 and 2050 international targets. NIM is catalysing a decade of action and investment in research, development, and demonstration to drive and accelerate the adoption of decarbonisation technologies in these hard-to-abate and energy intensive industries.

Read more: <https://net-zero-industries-mission.net/>

## Ministerial Statements

For Austria, industrial decarbonisation is a strategic investment in long term prosperity, building on our strong industrial base, skilled workforce and leadership in innovation. Through the Net-Zero Industries Mission, we are reinforcing international cooperation, to advance clean technologies and strengthen Austria's position as an innovative and resilient industrial location.

**Peter Hanke | Federal Minister of Innovation, Mobility, and Infrastructure | Austria**

Innovation enables hard-to-decarbonize industrial sectors to lower emissions, which is crucial for achieving global climate goals and building competitive, sustainable economies. Canada proudly participates in the NIM, working alongside a dynamic, ambitious, and delivery-focused alliance of governments, corporations, investors, and research institutes – an example of the multilateral approach our government is proud to stand behind.

**Tim Hodgson | Minister of Energy and Natural Resources | Canada**

Finnish industries are strongly committed to moving towards a climate-neutral society. Our aim is to be a super power in clean electrification and decarbonization solutions for industries worldwide.

**Sari Multala | Minister of Climate and the Environment | Finland**

## Executive Summary

Following the Mission Roadmap<sup>1</sup> and initial NIM Action Plan<sup>2</sup>, this update to our Action Plan details the current actions planned and required by both member countries and sponsors and partners to reach our shared NIM goals.

The three major phases for NIM are described in Figure 1, across the initial, immediate, and primary focus stages of the Mission action execution. The primary value is three-fold – pillar & program management, stakeholder management, and knowledge management. This Action Plan is a living document, with member countries conducting regular reviews and refinement to make sure it meets NIM's emerging needs and incorporates new opportunities as markets and technologies evolve.

This first update of our Action Plan focuses on 2026 to 2028, highlighting critical actions and resource commitments to accelerate the development, demonstration, and adoption of cost competitive solutions for the efficient decarbonisation of hard-to-abate energy intensive industries by 2030.

Activities in this Action Plan were identified through extensive engagement with our member countries, but, critically, also with collaboration and support from our peer sponsors and partners to address the diverse and interdependent challenges faced with decarbonising heavy industry.

Our internal, mission-directed actions are heavily focused on the generation and transfer of knowledge in the stakeholder groups. These actions will bring accelerated levels of confidence in further investment and uptake of the decarbonisation technology pathways required by our industry stakeholders. Our support of external projects, including demonstrations, is focused on the generation of this knowledge for our stakeholder groups.

External actions identified were focused on providing the greatest value for members and industry stakeholders in their validation and investment across major decarbonisation technology pathways. Priority actions focus on solidifying the foundations for demonstrations and wider deployment established in the initial phase of the NIM.

However, not all the actions within this Action Plan are well-suited for the scope and resources of the NIM team. For example, while new policy and regulations are required to decarbonise industry, NIM can only contribute to the definition of

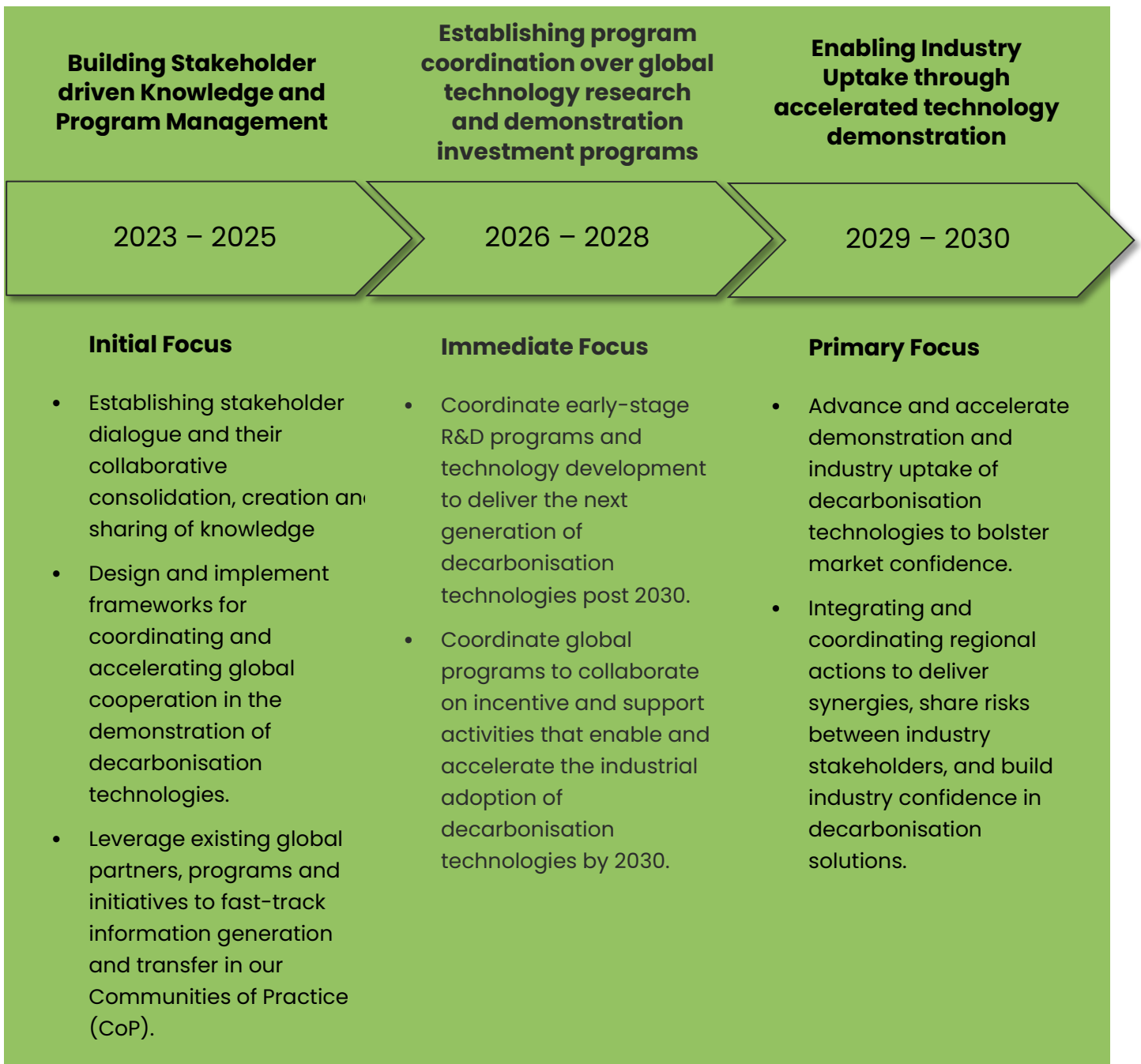
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<sup>1</sup> [https://explore.mission-innovation.net/wp-content/uploads/2022/09/NZIM\\_Roadmap\\_final.pdf](https://explore.mission-innovation.net/wp-content/uploads/2022/09/NZIM_Roadmap_final.pdf)

<sup>2</sup> [https://net-zero-industries-mission.net/wp-content/uploads/Action-Plan-Net-Zero-Industries-Mission\\_finaldraft2.pdf](https://net-zero-industries-mission.net/wp-content/uploads/Action-Plan-Net-Zero-Industries-Mission_finaldraft2.pdf)

such policies. NIM is not the primary source of funding to assist in the demonstration and deployment of industrial decarbonisation technologies.

This Action Plan should be viewed as a call to action for acceleration of decarbonisation efforts across hard-to-abate and energy intensive industries. For each action, a suggested target stakeholder group is identified, however all actions must be delivered through collaboration across all stakeholder groups. In these actions, the Mission's role will be to inform and encourage their development and progression.



**Figure 1:** Mission focus on actions between now and our 2030 target

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# The Net-Zero Industries Mission

## **NIM GOAL**

To catalyse the development and demonstration of cost competitive solutions for the efficient decarbonisation of hard-to-abate energy intensive industries worldwide by 2030.

### **Targets to achieve the NIM goal:**

- **Spotlight** at least three large-scale demonstration projects or leading innovators for each of the Mission's key innovation fields and sectors each year through the Net-Zero Industries Awards
- **Promote** the development of new and radical breakthrough low emission technologies (to TRL 8) and processes across the Mission's scope through at least three industry and government webinars per year
- **Highlight** key industry and government developments to reduce and remove key barriers and challenges for low emission innovative technologies, such as high capital expenditure for demonstration projects, through biennial country report updates

**Figure 2:** Mission goal and targets

## Introduction

Energy intensive industries are responsible for around 25% of global greenhouse gas emissions. Research, development and deployment (RD&D) over the next decade will be critical to develop and validate innovative industrial processes and technologies that enable radical emission cuts beyond 2030 at lowest costs.

The Net-Zero Industries Mission (NIM) aims to accelerate demonstration of the required technologies for decarbonising energy intensive industries. Current investment from industry is falling behind the rate of change required to meet global emission targets for 2030, making 2050 harder to achieve. Industry understanding, confidence and additional investment in decarbonisation technologies will require time and successful demonstration projects. Action is needed now if we are to make a positive change in time for 2030.

Building global industry confidence in the feasibility and demonstrated costs and benefits of decarbonisation technologies requires a collaborative approach. This

approach needs to maximise the shared lessons, opportunities, and investment initiatives of our core member nations. It is most efficient to connect and align both national and multinational RD&D efforts into a challenge driven initiative to showcase net-zero emission industry model solutions.

## Mission Scope

In response to this need, NIM is pursuing decarbonisation pathways for hard-to-abate and energy intensive industries. NIM will work to share information on key technical solutions to enable an effective and efficient global decarbonisation of energy intensive industries by 2050.

To reach our goals, NIM member states and associations developed a joint mission statement and a joint roadmap.<sup>3</sup> From these documents, the most promising RD&D themes and technology pathways within specific sectors and cross-sectorial areas were identified, along with specific technologies for investigation (see **Table 1**).

NIM focuses on the key hard-to-abate and energy intensive sectors:

- iron and steel
- cement and lime
- chemicals and refining
- high-intensity industries, such as aluminium and alumina
- plus other cross-sectoral technologies, process, and solutions.

This Action Plan identifies the timeline and pathways, investment scale, and framework conditions and measures to enable the development and deployment of those technologies.

NIM member participation in the actions and activities is voluntary and prioritised based on member and industry needs. NIM progress will be monitored by a set of defined key performance indicators (KPIs), which are reviewed annually by the Mission Innovation Technical Advisory Group (TAG) to ensure both relevance and effective progress.

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<sup>3</sup> [https://net-zero-industries-mission.net/wp-content/uploads/Net-Zero-Industries-Mission\\_Joint-Mission-Statement.pdf](https://net-zero-industries-mission.net/wp-content/uploads/Net-Zero-Industries-Mission_Joint-Mission-Statement.pdf) and [https://net-zero-industries-mission.net/wp-content/uploads/NIM\\_Roadmap\\_final.pdf](https://net-zero-industries-mission.net/wp-content/uploads/NIM_Roadmap_final.pdf)

**Table 1:** Mission scope, potential demonstrations across industry sectors and technology pathways

Technology Pathways	Industrial Sectors			
	Iron & Steel	Cement & Lime	Chemicals & Refining	Other Energy Intensive & Hard To Abate
<b>Fuel switching</b>				
<b>Alternative fuels and feedstocks</b>	Use of alternative fuels (bioenergy & waste)	Alternative fuels (incl. biomass)	Biomass, H <sub>2</sub> , Ammonia & plastic waste as alternative feedstock	Alternative fuels (incl. biomass)
<b>Low-carbon hydrogen</b>	Direct reduction using H <sub>2</sub>	Integrated H <sub>2</sub> production for CCU	Integrated production of H <sub>2</sub>	Replacing NG with H <sub>2</sub>
<b>Electrification of production and processes</b>	Direct reduction using electricity, adaptation of electric arc furnaces	Electrification of sintering and calcination processes. Electrochemical formation of calcium hydroxide	Electrification of crackers and chemical processes	Steam electrification and furnace/kiln/calcliner conversion
<b>Digitalisation &amp; flexibilisation</b>	Process control and automation, digital twins and simulation, temperature upgrade of excess heat, smart management of variable energy resources such as PV and wind power, hybridisation of different sources, excess heat to power or cold, flexibility in power generation/utilisation including bottleneck management and redispatch			
<b>Carbon capture &amp; storage / utilisation</b>	Direct capture and separation, and adsorption/absorption of CO <sub>2</sub> process and combustion emissions and its storage The capture, purification, and valorisation of CO <sub>2</sub> into chemicals, polymers synthetic/alternative fuels and raw materials, and also the use of CO <sub>2</sub> exhaust gases in other processes			
<b>Alternative materials and more efficient processes</b>	Improved thermal efficiency, waste heat recovery, regenerative burners, process efficiency, alternative binding materials in cements and alternatives to carbon-based feedstocks such as coking coal			
<b>Materials efficiency &amp; industrial symbiosis</b>	Harnessing by-products from one industry as alternative inputs to another industry and technical upgrading of by-products, industrial symbiosis, carbonation of mineral residues			

## NIM Pillars

NIM's actions are organized into three pillars, each playing a pivotal role in the Mission goals for 2030.

### Pillar 1: Technology Demonstrations

The aim of this pillar is to collect, analyse, and disseminate knowledge from demonstration projects and set-up a data exchange and learning platform for stakeholders. The activities will facilitate a dialogue between stakeholders and joint learning across countries, sectors and technology pathways.

Sharing information on the results of technology projects is essential. These project disclosures may come from enhanced knowledge sharing requirements linked to government-led joint funding calls on technology demonstration projects, or from progressive and collaborative industry partners working to improve and show leadership in their industry. They may also come from other means, including international competitions such as the Net-Zero Industries Award established in our initial Action Plan phase, or the technology commercialisation efforts of technology developers themselves. The Action Plan prioritises the collection, validation and dissemination of this technology demonstration knowledge to meet the specialist needs of the entire industry stakeholder community.

NIM knowledge sharing from this pillar is prioritised to provide industry stakeholders with the confidence needed to make technology selection and investment in decarbonisation solutions as soon as practical. This will leverage the global collaboration and alignment of efforts to ensure we act collectively in the most expeditious path in decarbonising the global heavy industries.

### Pillar 2: Underpinning R&D

This pillar will include R&D projects on new and radical breakthrough technologies which can be demonstrated and implemented beyond 2030. These R&D projects are intended to enable alternative and more affordable routes to decarbonise industry.

Where possible, joint bilateral and multilateral R&D projects should be co-funded from public sources and target early development stages. Ideally, they should be TRL5 and above and develop the engineering deliverables and knowledge needed to lower the risk for technologies higher than TRL 5.

Expanding on the actions delivered in the initial Action Plan, NIM will lead a global network of aligned research organisations, representing both member countries, EMDEs<sup>4</sup>, and the wider global community. This action will better coordinate and identify synergies and gaps and drive greater collaboration and knowledge sharing in the international research community in order to improve and accelerate progress towards our goals.

This pillar will also be on call to support targeted high-priority R&D activities that attempt to resolve new technical challenges and risks discovered in the Demonstrating Technologies Pillar projects, in order to help accelerate their management and mitigation, removing barriers for the critical demonstrations.

### **Pillar 3: Enabling Conditions**

In addition to supporting our R&D and Demonstration Pillars, activities that address business, organisational and policy issues, and challenges in decarbonising industry are relevant. The aim is to collect, analyse and disseminate non-technical information related to the decarbonisation of industry and to identify common barriers and enablers that can be acted upon.

Actions include conducting joint studies, sharing best practices in RD&D policies, designing the regulatory framework, and creating market incentives. The lack of policy and regions coordination could be a major barrier to global implementation of technologies in global industrial value chains. These measures can reduce the large uncertainties surrounding the development and implementation of technologies to decarbonise industry. As with the other two pillars, promoting the exchange of know-how and knowledge transfer between the various stakeholders from science, industry and politics at the global level is of key importance and is supported by NIM.

### **Pillar Support: Stakeholder & Knowledge Management**

The three Pillars are interconnected and managed in a systematic way, using state-of-the-art knowledge management tools and clear strategy implementation processes.

Communication between the different stakeholders (e.g. government, researchers, industry, technology & service providers, commercialisation partners, etc) is coordinated effectively throughout the innovation process. A critical element of achieving this knowledge management is the focus on the

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<sup>4</sup> EMDE – Emerging Markets and Developing Economies

stakeholders who will best identify, capture, control and disseminate the knowledge in their respective communities of practice. These critical communities and the knowledge they generate, hold and communicate to each stakeholder group is potentially the greatest value deliverable of NIM and key to achieving every one of our goals past 2030.

Each period of the Action Plan is presented in the following sections for each Pillar and for the supporting stakeholder and knowledge management frameworks and systems.

## NIM's role in driving change

As NIM continues to deliver on its ambitions and goals for 2030, our action plan will not radically change, but will expand and build on the success and impact already delivered. NIM's progress and impact has not been delivered in isolation, but is a result of the continuing expansion of collaboration with our external partners, and an increase in the communications and engagement with our key stakeholders.

Our collaboration will continue to evolve and improve our contributions across. NIM will also support further multinational collaboration, funding of research and demonstration projects, and expand industrial cooperation on sharing, accelerating the adoption of decarbonisation technologies.

Our actions are focused on adding value to the projects currently planned and potentially delivered in the decarbonisation of the hard-to-abate and energy intensive industries. As NIM continues to mature, this scope will expand to influencing and steering both member and industry investment in filling technology and knowledge gaps required to deliver on the overall mission goals of accelerating industry uptake of decarbonisation technologies.

NIM will continue to accelerate and enable research and demonstration, coordinate knowledge sharing and support dialogues across policy and industry stakeholders to enable activity, inform and collaboratively close the gaps. However, not all the actions within this Action Plan are well-suited for the scope and resources of the NIM team. For example, while new policy and regulations are required to decarbonise industry, NIM can only contribute to the definition of such policies. NIM is not the primary source of funding to assist in the demonstration and deployment of industrial decarbonisation technologies.

The actions listed in this Action Plan require collaboration with other entities outside of NIM members. NIM does not act in a vacuum, and stakeholder categories have been used to show where other agents of change are necessary to meet both the Mission goals and international targets for 2050.

Each of these stakeholder groups has an important role to play in NIM goals and it is a NIM priority to continue to build strong collaborative relationships with representatives from each community of stakeholders (see **Figure 3**). These stakeholders be both the natural beneficiaries of the knowledge management processes of NIM and embody the enduring legacy in how this knowledge becomes the influential trust in the industry uptake of decarbonisation technologies past 2030.



**Figure 3:** Mission stakeholders

## NIM impacts to date

With almost three years of operation completed, NIM has compiled a diverse and impactful résumé of achievements against its goals and KPI. Driving collaboration, stakeholder engagement, and prioritising the sharing of knowledge to build trust in both specific technology developments and improved pathways to accelerating the adoption of decarbonisation technologies in our target industries has been a priority.



**Figure 4:** Summary of NIM achievements

A sample of the most significant achievements included in Figure 4 and communicated in more detail below.

### The Net-Zero Industries Award Program

Established in 2023, the Award program provided a means to promote the mission, identify key and influential protagonists in the international stakeholder community, and harvest greater levels of knowledge to share on lighthouse technological developments for our Global Knowledge Exchange database, that would align with our target technology pathways to decarbonise our industrial sectors.

### **The NIM Website**

Establishment of a bespoke website delivered a communications platform for wider stakeholder engagement, publication of key events and thought leadership, in addition to a hosting location of our Global Knowledge Exchange database.

### **The Industry Insights Webinar Program**

Delivered six world class webinars in collaboration with our international stakeholder community, bridging government, industry and finance expertise across topics from our enabling conditions, research and technology demonstration pillars.

### **Technical Advisory Group (TAG) and MISEC Collaboration**

NIM has been proactive in supporting innovations and improvement across missions and the secretariate, collaborating on our successful programs such as webinars and stakeholder engagement, knowledge management and risk management and mitigation in mission delivery.

### **NIM Whitepapers**

Published five thought leadership whitepapers across the enabling conditions and knowledge sharing pillars, encompassing policy for accelerating technology investment and adoptions, intellectual property as an enabling strategy, and

### **Global Knowledge Exchange**

Established a new gold standard database to demonstrate the potential depth of disclosures for lighthouse technology demonstration projects required by industry (initially sourced from the NIM Awards program).

### **The Australia–Austria Joint Call**

The Australia–Austria Industrial Decarbonisation Demonstration Partnerships Program provides funding for joint Australian and Austrian decarbonisation projects. It supports the development of innovative technologies, processes or solutions to decarbonise hard-to-abate energy-intensive industries.

### **Mutual Learning Exercises (MLEs)**

NIM facilitates three international MLEs across enabling conditions, bringing together government and supporting agency stakeholders on topics including accelerating knowledge transfer to emerging markets and developing economies and the challenge of intellectual property rights as an enabler of knowledge sharing.

### **Inaugural Country Report**

Published the inaugural baseline report on member country policies, investments, development strategies and key actions that support the decarbonisation of our target industrial sectors.

### **The LinkedIn AdGrant Bursary**

Between July 2024 and June 2025, NIM was awarded US\$175,000 in funding from a LinkedIn grant. The grant helped NIM to promote and engage with our global stakeholder community, enabling greater outreach and impact, and widescale publication of the work program, event and publications of the mission at a previously unimaginable scale.

During the grant period, on LinkedIn, NIM:

- ran 74 campaigns
- received 47 million impressions
- received 155,000 clicks on links
- had 21 million video views.

## NIM Actions

In September 2022, NIM published a Roadmap to Net-Zero Industries<sup>5</sup>, which identified over 100 barriers and enablers to be addressed to meet NIM's goals. The relevant technology maturity in each industry sector is mapped out, with key indications of potential technology demonstrations from member countries.

The technology related barriers and enablers are grouped by seven technology pathways, and four industry sectors. These technology groupings and industry sectors span the TRL range from 1 to 8, and both the Underpinning R&D and Technology Demonstration Pillars.

The initial Action Plan described the formative steps required in the first years to establish a foundation structure able to reach NIM's goals and address some of the high-priority barriers and enablers identified in the Roadmap.

This updated Action Plan highlights the continued focus for NIM for its central three-year execution strategy, in order to build upon its initial achievements and increase its effectiveness in assisting industry to deliver on its ambitions decarbonisation goals.

### NIM Targets:

- 1) Spotlight** at least three large-scale demonstration projects or leading innovators for each of the Mission's key innovation fields and sectors each year through the Net-Zero Industries Awards
- 2) Promote** the development of new and radical breakthrough low emission technologies (to TRL 8) and processes across the Mission's scope through at least three industry and government webinars per year
- 3) Highlight** key industry and government developments to reduce and remove key barriers and challenges for low emission innovative technologies, such as high capital expenditure for demonstration projects, through biennial country report updates

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<sup>5</sup> [https://net-zero-industries-mission.net/wp-content/uploads/Net-Zero-Industries-Mission\\_Joint-Mission-Statement.pdf](https://net-zero-industries-mission.net/wp-content/uploads/Net-Zero-Industries-Mission_Joint-Mission-Statement.pdf) and [https://net-zero-industries-mission.net/wp-content/uploads/NIM\\_Roadmap\\_final.pdf](https://net-zero-industries-mission.net/wp-content/uploads/NIM_Roadmap_final.pdf)

## Pillar 1: Technology demonstrations

Purpose	Supports NIM Targets
<ul style="list-style-type: none"> <li>➤ To show, at industry-relevant scale, the operation and cost benefit of high TRL decarbonisation technologies in the energy intensive and hard-to-abate industries.</li> <li>➤ Promote pathways for lower capital and operating costs from these technologies and build up levels of information and confidence that can be shared with the industry across our member nations to accelerate industrial uptake of decarbonisation mitigations in each of our technology pathways.</li> </ul>	1, 3
<b>Key outputs</b>	<ul style="list-style-type: none"> <li>➤ Knowledge exchange and learning between existing demonstration projects in relation to different pathways and sectors</li> <li>➤ Country reports highlighting new and upcoming demonstration projects</li> <li>➤ Industry engagement in the Net-Zero Industries Awards</li> </ul>
<b>NIM KPIs – NIM Actions to support targets</b> <i>(refer to Table 2 for more information)</i>	<ol style="list-style-type: none"> <li>4) Incentivise industry engagement in NIM through the Net-Zero Industry Awards</li> <li>5) Continuous review of knowledge management activities and approaches from Co-Leads, member countries, and supporting partners to ensure best practice</li> <li>6) Incentivise and recognise key contributions to the mission goals</li> <li>7) Increase industry engagement in NIM to promote and share project knowledge</li> <li>9) Investigate options to consolidate NIM-aligned projects into a database, such as through AI</li> <li>10) Highlight and promote NIM and NIM-aligned projects through Mission Innovation, the Breakthrough Agenda, the International Energy Agency and other key multilateral fora</li> </ol>

	11) Highlight and promote NIM-aligned projects to key stakeholders and industry partners through LinkedIn
<b>NIM member country and global targets</b> <i>(targets outside of NIM's direct ability to achieve but will be reported and highlighted by NIM)</i>	<ul style="list-style-type: none"> <li>➤ Global, member country and industry <b>reductions in greenhouse gas emissions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>investment in demonstration projects</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> </ul>

## Pillar 2: Underpinning R&D

Purpose	Supports NIM Targets
<ul style="list-style-type: none"> <li>➤ The Pillar aims to build a pipeline of next generation technologies for the decarbonisation of our target industry applications and pathways, leveraging public and private investment collaboration to develop and assess early-stage technologies (up to TRL 4-5) against industry needs.</li> <li>➤ This assessed pipeline of next generation technologies will form the starting point of future generational demonstration programs as we progress the Mission past 2030 towards 2050 targets in the energy intensive and hard-to-abate industries.</li> </ul>	2, 3
<b>Key outputs</b>	<ul style="list-style-type: none"> <li>➤ New bilateral and multilateral R&amp;D projects which become possible due to aligned NIM activities.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Generation of scientific and technological knowledge for signification decarbonisation innovations up to TRL 6.</li> <li>➤ Feasibility studies.</li> </ul>
<p><b>NIM KPIs – NIM Actions to support targets</b> <i>(refer to Table 2 for more information)</i></p>	<ul style="list-style-type: none"> <li>9) Investigate options to consolidate NIM-aligned projects into a database, such as through AI</li> <li>10) Highlight and promote NIM and NIM-aligned projects through Mission Innovation, the Breakthrough Agenda, the International Energy Agency and other key multilateral fora</li> <li>12) Showcase NIM member country and industry partner investment in NIM-aligned projects, research and innovation</li> <li>13) Through a webinar series, showcase essential industrial decarbonisation technologies at various TRL levels</li> <li>14) Develop options to highlight key findings from global RD&amp;D programs to inform NIM’s project and RD&amp;D communications</li> <li>15) Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for green metals</li> <li>16) Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for cements and chemicals</li> <li>17) Investigate options to collaborate with industry partners and member countries to develop a policy toolbox for industrial decarbonisation (with a region by region focus), including technical enablers and conditions for policy implementation</li> </ul>

	<p>18) Investigate options to collaborate with industry partners and member countries to develop a policy toolbox for industrial decarbonisation (with a region by region focus), including technical enablers and conditions for policy implementation</p>
<p><b>NIM member country and global targets</b></p> <p><i>(targets outside of NIM's direct ability to achieve but will be reported and highlighted by NIM)</i></p>	<ul style="list-style-type: none"> <li>➤ Global, member country and industry <b>investment in research or demonstration projects</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>investment in innovative technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>technological advances or application of innovative technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>increases in capacity or production for innovative or enabling technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> </ul>

### Pillar 3: Enabling conditions

Purpose	Supports NIM Targets
<ul style="list-style-type: none"> <li>➤ To deliver activities that address business, organisational and policy issues and challenges in decarbonising industry are relevant. The aim is to collect, analyse and disseminate non-technical information related to the decarbonisation of industry.</li> <li>➤ To maximise the acceleration of industry uptake of decarbonisation technologies by the efficient use of stakeholder funds and efforts in removing barriers and risks faced by industry and the wider stakeholder community and undertaking activities which set up the Demonstration pillar for immediate action.</li> </ul>	2, 3
<b>Key outputs</b>	<ul style="list-style-type: none"> <li>➤ Contributions to policy development on the international level aiming to remove barriers for the development, demonstration and diffusion of decarbonisation technologies</li> <li>➤ Knowledge sharing activities in relation to organisational, institutional, education, and policy related topics.</li> </ul>
<b>NIM KPIs – NIM Actions to support targets</b> <i>(refer to Table 2 for more information)</i>	15) Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for green metals 16) Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for cements and chemicals 17) Investigate options to collaborate with industry partners and member countries to develop a policy toolbox for industrial decarbonisation (with a region by region focus), including technical enablers and conditions for policy implementation

	18) Work with industry partners and member countries to outline an industrial decarbonisation skills and education roadmap (with a region by region focus)
<p><b>NIM member country and global targets</b> <i>(targets outside of NIM's direct ability to achieve but will be reported and highlighted by NIM)</i></p>	<ul style="list-style-type: none"> <li>➤ Global, member country and industry <b>technological advances or application of innovative technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>increases in capacity or production for innovative or enabling technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> </ul>

## Pillar Support: Stakeholder & Knowledge Management

Purpose	Supports NIM Targets
<ul style="list-style-type: none"> <li>➤ To coordinate key stakeholder actions that enable the effective capture and dissemination of knowledge to all key stakeholder communities of practice, in order to build industry wide confidence in adoption of decarbonisation technologies in the energy intensive and hard- to-abate industries.</li> <li>➤ Manage and support the systems and processes to underpin the stakeholder needs in knowledge management (from capture through to learning and development) in the stakeholder Communities of Practice.</li> </ul>	1, 2, 3
<b>Key outputs</b>	<ul style="list-style-type: none"> <li>➤ Established key Communities of Practice</li> <li>➤ Established Knowledge Management Systems</li> <li>➤ Effective Management of Stakeholder management of Project knowledge</li> </ul>
<b>NIM KPIs – NIM Actions to support targets</b> <i>(refer to Table 2 for more information)</i>	<ul style="list-style-type: none"> <li>4) Incentivise industry engagement in NIM through the Net-Zero Industry Awards</li> <li>5) Continuous review of knowledge management activities and approaches from Co-Leads, member countries, and supporting partners to ensure best practice</li> <li>6) Increase industry engagement in NIM to promote and share project knowledge</li> <li>9) Investigate options to consolidate NIM-aligned projects into a database, such as through AI</li> <li>10) Highlight and promote NIM and NIM-aligned projects through Mission Innovation, the Breakthrough Agenda, the International Energy Agency and other key multilateral fora</li> </ul>

	<p>11) Highlight and promote NIM-aligned projects to key stakeholders and industry partners through LinkedIn</p> <p>12) Showcase NIM member country and industry partner investment in NIM-aligned projects, research and innovation</p>
<p><b>NIM member country and global targets</b></p> <p><i>(targets outside of NIM's direct ability to achieve but will be reported and highlighted by NIM)</i></p>	<ul style="list-style-type: none"> <li>➤ Global, member country and industry <b>investment in research or demonstration projects</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> <li>➤ Global, member country and industry <b>investment in innovative technologies and solutions</b> within NIM's scope over time. Reported by NIM through biennial country report updates.</li> </ul>

## NIM Actions 2025–2030

**Table 2:** NIM Actions 2025–2030, country or partner lead and timescale (Note: actions either directly support NIM targets or establish the framework for NIM to operate and deliver on the action plan)

Pillar	ID	Action	NIM country or partner lead	Sectors	Timescale		
					2023–2025	2025–2027	2027–2030
Knowledge Management	1	Design and establish a Knowledge Management (KM) framework to support delivery of the NIM Action Plan	AUS AUT	all	✓		
Knowledge Management	2	Establish Stakeholder Community of Practice and continually engage on knowledge needs	AUS CAN	all	✓		
Knowledge Management	3	Establish key knowledge management engagement strategies, such as webinar and white paper series, including around topics such as strategies for the barriers of IPR and commercial in confidence issues	AUS AUT	all	✓		
Knowledge Management	4	Incentivise industry engagement in NIM through the Net Zero Industry Awards (NZIA)	AUS AUT	all	✓	✓	
Knowledge Management	5	Continuous review of knowledge management activities and approaches from Co-Leads, member countries, and supporting partners to ensure best practice	all	all	✓	✓	✓
Knowledge Management	6	Incentivise and recognise key contributions to the mission goals	AUS AUT	all	✓	✓	✓
Demonstrations	7	Increase industry engagement in NIM to promote and share project knowledge	all	all		✓	✓
Demonstrations	8	Develop and implement bilateral or multilateral funding calls to accelerate NIM-aligned projects	AUS AUT	all	✓	✓	✓
Demonstrations	9	Investigate options to consolidate NIM-aligned projects into a database, such as through AI	AUS AUT	all		✓	

Pillar	ID	Action	NIM country or partner lead	Sectors	Timescale		
					2023–2025	2025–2027	2027–2030
Demonstrations	10	Highlight and promote NIM and NIM-aligned projects through Mission Innovation, the Breakthrough Agenda, the International Energy Agency and other key multilateral fora	all	All		✓	✓
Demonstrations	11	Highlight and promote NIM-aligned projects to key stakeholders and industry partners through LinkedIn	AUS AUT	all		✓	✓
Underpinning RD&D	12	Showcase NIM member country and industry partner investment in NIM-aligned projects, research and innovation	all	all		✓	✓
Underpinning RD&D	13	Through a webinar series, showcase essential industrial decarbonisation technologies at various TRL levels	all	all		✓	
Underpinning RD&D	14	Develop options to highlight key findings from global RD&D programs to inform NIM's project and RD&D communications	TBC	all		✓	
Enabling conditions	15	Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for green metals	TBC	Steel Aluminium		✓	✓
Enabling conditions	16	Work with industry partners and member countries to develop a series of white papers on key decarbonisation pathways for cements and chemicals	TBC	Cement Chemicals		✓	✓
Enabling conditions	17	Investigate options to collaborate with industry partners and member countries to develop a policy toolbox for industrial decarbonisation (with a region by region focus), including technical enablers and conditions for policy implementation	all	all		✓	✓
Enabling conditions	18	Work with industry partners and member countries to outline an industrial decarbonisation skills and education roadmap (with a region by region focus)	all	all		✓	✓

## Intended Project Focus Examples

Entering our central operational period, NIM has created distinct opportunities and concrete projects to continue their work in accelerating uptake of industrial decarbonisation technologies. Examples of ongoing and potential future actions are included here, not to limit scope and participation, to inspire involvement and innovation amongst our members and partners in expanding upon the achievements made in this next critical phase of our overall action plan.

### **Increased Partner Collaborations**

NIM is championing an action agenda for collaboration among our members and partners. A Stakeholder Assembly interactive collaboration environment has been established. Its purpose is to uncover synergies with existing partner actions and opportunities to enhance impact and efficiency in delivery across all our programs of work. Part matchmaking forum, part progress reporting and celebration, part collaboration opportunity recognition, the Assembly structure identifies projects and assigns working groups to actively progress collaborative projects to meet NIM, COP, Breakthrough Agenda and global decarbonisation goals.

### **Increased R&D Collaboration and Productivity**

Through its leadership in the formation of the Global R&D Network, global research organisations will come together to collaborate, reduce duplication efforts, share resources and increase knowledge sharing on industrial decarbonisation solutions and technologies for the hard-to-abate sectors.

### **Encouraging Bilateral and Multilateral R&D and Demonstration Funding**

Increasing visibility of opportunities and encouraging increased relationships between existing funding programs and calls, to find opportunities for shared risk and investment to accelerate concrete action across the RDD&D journey for industrial decarbonisation.

### **Enhancing Knowledge Sharing on Decarbonisation Demonstration Projects**

NIM will actively target partnerships and investment to expand already successful programs across the critical elements of identification, capture and dissemination of key learnings and information related to decarbonisation technology demonstrations. This will include opportunities to expand and extend the NIM Award program that has been fundamental in identifying and defining a new high-bar for quality of knowledge shared on technology demonstrations,

and seeking investment to expand the successful demonstration to employ a bespoke AI solution to collate and enhance the various leading global databases dedicated to knowledge sharing of aspects of the overall knowledge stakeholders require in building trust in technology adoption.

### **Expanding Outreach and Stakeholder Engagement**

NIM will continue to deliver on communications and engagement programs to share findings, thought leadership and knowledge sharing on technologies and achievements of our members and partners. A continuation of our existing programs in webinars, whitepapers and social media communications, along with investigations of new and impactful means to both engage and communicate with our stakeholders to most effectively deliver against our mission goals.

# Conclusions and Outlook

## Summary of the Initial Action Plan

The first two years of NIM have been foundational, with a heavy focus on the establishment of both the human and informational networks required to enable our mission purpose.

NIM has and will continue to deliver on key internal actions to strengthen our operating support frameworks. This will fast track capabilities and project findings that facilitate and accelerate the required actions and interactions between our key stakeholder groups.

Meanwhile, global action and our key stakeholders are not sitting still. Existing and emerging initiatives will provide valuable knowledge, relationships, roadmaps and technical innovations. NIM will continue to build relationships to incorporate this wealth of experience and knowledge into the collective value proposition of our purpose and deliverables. This continuous engagement and incorporation of new actions and projects will be updated through our respective communications channels and website.

## Outlook

Moving forward into a delivery and expansion mode will show the true value and power of our established networks. The Communities of Practice (CoP) in each of our key stakeholder groups will be supported as they operate to share knowledge and experience with their peers. This will help control the flow, quality and dissemination of knowledge further to help our goal, building the confidence and trust of industry to accelerate the investment and adoption of decarbonisation technologies in our focus sectors.

Through greater commitment of action between our members and partners, NIM will continue to expand its outreach, engagement and impact against its goals for a decarbonised industry. Through each of its structural pillars, NIM will enable and encourage collaboration to help deliver an accelerated path for industrial decarbonisation solution adoption.

- Through our Global Research Network, underpinning R&D will achieve step gains through enhanced global collaboration of skills and facilities, and greater alignment and reduced duplication of research and development efforts.

- Through our Stakeholder Assembly program, we will continue to support the action agendas of both COP and Breakthrough Agenda initiatives with a working group focus and increased action-based engagement on partner alignment and collaboration opportunities.
- Through our Net-Zero Industries Award and communications and engagement programs, we will increase visibility and awareness of the achievements of the mission and our stakeholders. This will build knowledge and acceptance in both enabling and supporting strategies, and the performance and applicability of lighthouse technology solutions. Together this will increase the trust and confidence levels required for industry to invest and adopt solutions to decarbonise against our common goals.
- Through our enhanced collaboration with existing international funding platforms, NIM will help make better use of existing funding schemes by getting more and more relevant industry participation in funding calls.

The NIM will continue to regularly communicate the expansion of our activities across both the networks of stakeholders and projects we include in our coordination.

The next update of this action plan is expected for release in 2028.

## **Imprint**

### **Publisher**

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# Action Plan