UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Progress by innovation

Accelerate-to-Demonstrate (A2D) Facility

YEAR 1 ANNUAL REPORT

APRIL 2023 - MARCH 2024

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO´s A2D Facility I Year 1 Annual Report

FOREWORD BY THE DIRECTOR GENERAL

The first year of UNIDO’s new first-of-a-kind Accelerate-to-Demonstrate (A2D) Facility is a strong step forward in our shared goal of advancing sustainable economic and industrial development worldwide and offering solutions to the urgent challenge of climate change, which hits the poorest the hardest. UNIDO is proud to be a leader here, and we are working hard to help build fair and sustainable supply chains, mitigate climate change, and create a world without hunger.

The A2D Facility’s focus on critical minerals, clean hydrogen, smart energy and industrial decarbonization is a great example of our commitment to using cutting-edge technologies and innovation for inclusive and sustainable industrial development. With the support of the UK Department for Energy Security and Net Zero (UK DESNZ) as the initial donor, we are very glad to be making a strong start on this contribution to the global energy transition. Through pioneering pilot demonstration projects, knowledge dissemination, and strategic collaborations, UNIDO’s A2D Facility is fast-emerging as a flagship initiative in advancing cleantech innovation for economic growth. The A2D Facility is supporting developing countries in their clean energy transitions and actively contributing to the achievement of the 2030 Agenda and the Sustainable Development Goals.

As we look to the next year, I am confident that the A2D Facility will continue to play a critical role in accelerating clean energy transitions in developing countries. I give my great thanks to all those who have contributed to establishing the A2D Facility during its first year, and I invite you to join us in our ongoing efforts to accelerate clean energy innovation in developing countries.

Gerd Müller

Director General of UNIDO

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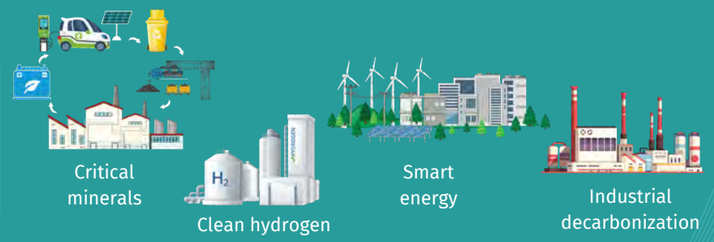

COMPONENTS

- Grant funding for pilot demonstration projects
- Knowledge dissemination

IMPACT

- Accelerating the commercialization of innovative clean energy technologies in developing countries

Contributing towards SDGs:

13 CLIMATE ACTION

1 NO POVERTY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

KEY FACTS:

Duration: April 2023 - March 2029

Geographical coverage: ODA Recipient countries

A2DFacility@unido.org

Accelerate to Demonstrate (A2D) Facility

A2D Facility's Year 1 Key Milestones

1

INITIAL ANNOUNCEMENT

7 November 2022

Initial announcement of the new clean energy innovation facility at COP 27

PUBLIC ENGAGEMENT

2

ADMINISTRATION ARRANGEMENT

16 January 2023

Administration Arrangement signed by UNIDO and UK Government

ADMINISTRATION

3

OFFICIAL LAUNCH

15 May 2023

Official launch of the A2D Facility by UNIDO's DG and UK Ambassador

PUBLIC ENGAGEMENT

4

COMPLETION OF RECRUITMENT

7 Sep. - 27 Nov. 2023

A2D Facility team starts in role

RECRUITMENT

5

FIRST STEERING COMMITTEE MEETING

3 November 2023

Steering committee meeting between UK Government and UNIDO

GOVERNANCE

6

ANALYSIS PROJECTS

14 November 2023

Initiation of X3 Market Assessment Projects

PROJECT DEVELOPMENT

7

INTERNAL APPROVAL OF PROGRAMME

14 December 2023

Internal approval of the A2D Facility within UNIDO

ADMINISTRATION

8

SECOND STEERING COMMITTEE MEETING

9 February 2024

Second steering committee meeting between UK Government and UNIDO

GOVERNANCE

9

COMMUNICATIONS PACKAGE PROJECT

16 February 2024

Initiation of website development and programme image

PROJECT DEVELOPMENT

10

ANNUAL REPORT

30 March 2024

First draft of A2D Facility Year 1 Annual Report finalized

MONITORING AND REPORTING

11

LOGICAL FRAMEWORK

30 March 2024

Draft of A2D Facility Logical Framework agreed between UK Government and UNIDO

MONITORING AND REPORTING

1

Introduction

The United Nations Industrial Development Organization (UNIDO) is a specialized agency of the United Nations with a unique mandate to promote, dynamize and accelerate industrial development.

The United Nations Industrial Development Organization (UNIDO) is a specialized agency of the United Nations with a unique mandate to promote, dynamize and accelerate industrial development.

Our mandate is reflected in Sustainable Development Goal (SDG) 9: “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”, but UNIDO’s activities contribute to all the SDGs.

UNIDO’s vision is a world without poverty and hunger, where industry drives low-emission economies, improves living standards, and preserves the livable environment for present and future generations, leaving no one behind.

UNIDO provides support to its 172 Member States through four mandated functions: technical cooperation; action-oriented research and policy-advisory services; normative standards-related activities; and fostering partnerships for knowledge and technology transfer.

UNIDO´s work is concentrated on three focus areas: ending hunger by helping businesses from farm to fork; stopping climate breakdown by using renewable energy and energy efficiency to reduce industrial greenhouse gas emissions; and supporting sustainable supply chains so that developing country producers get a fair deal and scarce resources are preserved.

The Annual Report of the Accelerate to Demonstrate (A2D) Facility covers the first year (1 April 2023 to 31 March 2024) of the A2D Facility and has the following objectives, which are primarily focused on setting-up and establishing the new Facility.

Monitoring: providing progress updates on the programme’s performance against key milestones during its first year.

Dissemination: the Annual Report aims to enhance the visibility and awareness of the A2D Facility amongst stakeholders.

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Overview of the A2D Facility

The A2D Facility focuses on accelerating the commercialization of innovative clean energy solutions in developing countries.

Accelerating clean energy innovation is increasingly recognized as vital in the global effort to combat climate change. As highlighted by the International Energy Agency (IEA), almost half of the emissions reductions necessary for achieving a global net-zero scenario by 2050 will come from technologies that are still in the demonstration or prototype phase.[1] This underscores the importance of accelerating the commercialization of innovative clean energy technologies.

The A2D Facility is a new, large-scale programme implemented by UNIDO. It focuses on accelerating the commercialization of innovative clean energy solutions in developing countries. It supports the implementation of catalytic pilot demonstration projects, particularly in critical minerals, clean hydrogen, industrial decarbonization and smart energy.

The A2D Facility plays an important role in filling a key gap in the international climate funds landscape, as it focuses on the later-stage phase of the innovation cycle with a particular emphasis on the implementation and operation of demonstration projects in developing countries, and projects that have a "lighthouse" effect (projects with high scalability potential that have the potential to have transformational impacts in supported countries). This strategic focus serves to bridge the gap between existing initiatives that support smaller, earlier-stage projects and larger, commercial-scale projects. Through its projects, the programme also contributes towards supporting the integration of pilot demonstration projects within a broader enabling environment, fostering comprehensive progress in the supported countries.

1) Net Zero by 2050. A roadmap for the Global Energy Sector. IEA, 2021

3

Thematic Areas

The current four thematic areas of focus — critical minerals, clean hydrogen, smart energy and industrial decarbonization — are key areas for clean energy transitions in developing countries.

The four initial thematic areas-of-focus (critical minerals, clean hydrogen, smart energy and industrial decarbonisation) are key areas for clean energy transitions in developing countries where innovation support is most needed and where grant funding is limited. For example, the critical minerals component of the A2D Facility is a first-of-a-kind in supporting innovative solutions through pilot demonstration projects to decarbonise critical minerals across the value chain, particularly decarbonising the processing, re-purposing and recycling of minerals needed for clean energy transitions across sectors in developing countries.

3.1 CRITICAL MINERALS

According to IEA (2023),[2] the rapid expansion of clean energy technologies, such as solar photovoltaic (PV) and batteries, has sparked a surge in demand for critical minerals with electric car sales and energy storage systems experiencing substantial growth. This heightened demand has essentially led to a doubling of the market size for key energy transition minerals to USD 320 billion by 2022. This surge not only presents new revenue streams and job opportunities but also underscores the pivotal role of reliable mineral supplies in ensuring the affordability and expediency of clean energy transitions in developing countries. This emphasizes the important role that pilot demonstration projects can play in accelerating the commercialization of innovative clean energy solutions in critical minerals in developing countries.

2) Critical Minerals Market Review 2023. IEA, 2023

The A2D Facility is committed to supporting pilot demonstration projects that focus on decarbonizing critical minerals across various sectors in developing countries. Supported activities include, but are not limited to, innovative solutions for decarbonizing the recycling and recovery of critical minerals from waste streams, processing, refining and re-purposing of minerals and supply chain optimization. These projects are important for advancing clean energy transitions, reducing greenhouse gas (GHG) emissions and contributing to sustainable industrial development in developing countries.

3.2 CLEAN HYDROGEN

The current primary use of clean hydrogen is within the refining and chemicals sectors, which have experienced a surge in demand since 1975.[3] According to IRENA (2020)[4], clean hydrogen is anticipated to play a significant role across diverse sectors, particularly in the hard-to-abate industries, such as steel, chemicals and cement, as well as in transportation, such as trucks, aviation and shipping, power generation, energy storage, and domestic heating. Pilot demonstration projects have an important role to play in accelerating the commercialization of clean hydrogen applications.

The A2D Facility supports pilot demonstration projects across the clean hydrogen value chain. Supported activities include, but are not limited to, innovative solutions for decarbonizing electrolysis, catalyst development, system design, and integration and optimization technologies. These projects are important for advancing clean hydrogen production, storage and transportation, addressing key challenges in the clean hydrogen value chain, and contributing to the decarbonization of important industries.

3) The Future of Hydrogen. Seizing today's opportunities. IEA, 2019

4) Green Hydrogen: A guide to policy making. IRENA, 2020

3.3 SMART ENERGY

Smart energy is defined as the increased use of innovative information, communication and digital infrastructure, such as, but not limited to, smart energy technologies, blockchain, Internet of Things (IoT), Artificial Intelligence (AI), underlying enabling data infrastructure and other related solutions integrated within broader systems, such as energy storage, smart grids and electric mobility. It plays an important role in facilitating the decarbonizing of key clean energy sectors in developing countries, including transport, power, industry and buildings. Smart technologies contribute to enhanced efficiency, cost reductions and improved sustainability, and pilot demonstration projects help to facilitate the testing and validation of these technologies, leading to their potential commercialization and scalability.

The A2D Facility supports pilot demonstration projects, which include, but are not limited to, activities, such as renewables adoption through digital transformations, smart grids and smart micro-grids, digital solutions for electric mobility, smart storage systems and other related sectors and applications. By demonstrating the effectiveness of these technologies, the A2D Facility aims to accelerate the transition to clean energy systems, contributing to climate mitigation efforts and fostering sustainable industrial development.

3.4 INDUSTRIAL DECARBONIZATION

Industry accounts for approximately a quarter of energy-related carbon dioxide emissions with heavy industry sectors, such as steel, cement and chemicals contributing around 70% of industrial emissions.[5] Achieving net zero emissions requires significant reductions in emissions from heavy industries, particularly as industrial emissions are projected to rise in developing countries due to rapid urbanization and economic growth.

The A2D Facility supports demonstration projects of innovative solutions to decarbonize heavy industries, such as, but not limited to, fuel-switching, process optimization, carbon capture, usage and storage (CCUS), electrification and other related solutions. These projects are important for advancing clean energy transitions, reducing greenhouse gas emissions and contributing to sustainable industrial development in developing countries.

5) Tracking Clean Energy Progress 2023. IEA, 2023

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Key Milestones in Year 1

The milestones of the A2D Facility in year 1 were focused on the designing and operationalization of the programme.

The overall aim of the first year of the A2D Facility was to set-up, design and establish the new programme.

The A2D Facility met its milestones for the first year of the programme, which are summarized below. The milestones are focused on the establishment of the team, the operational structures and the initiation of the first analytical projects that would contribute to shaping the programme.

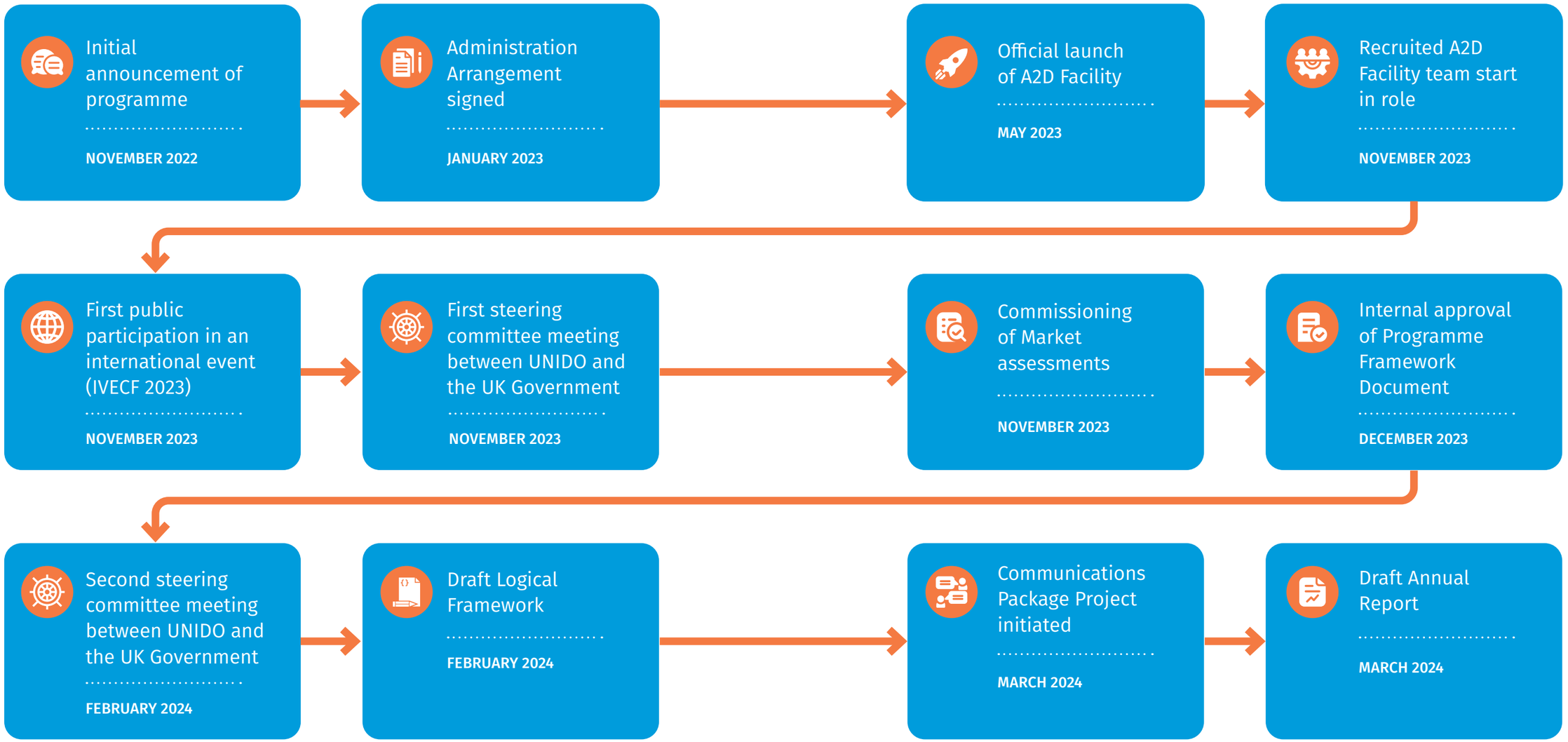
To facilitate comprehension, the information has been labelled delineating the categories of the milestones, namely: Administration, Governance, Project Development, Public Engagement, Recruitment, and Monitoring and Reporting. A summary of key milestones is presented in the table below and presented chronologically.

TABLE 1: Summary of key milestones for year 1

Date	Milestone	Description	Category	Status
November 2022	**Initial announcement**	On 7 November 2022, the new clean energy innovation facility was announced at COP27.	Public engagement	Completed
January 2023	**Administration Arrangement signed**	On 16 January 2023, UNIDO and the UK Government signed the Administration Arrangement, which outlined the aims, objectives and expectations of the programme.	Administration	Completed
May 2023	**Official launch of A2D Facility**	On 15 May 2023, UNIDO's Director General and the UK Ambassador to Austria and UK Permanent Representative to the United Nations in Vienna, H.E. Lindsay Skoll, officially launched the A2D Facility. This event underscored the collaborative partnership between UNIDO and the UK Government in driving clean energy innovation and sustainable industrial development in developing countries	Public engagement	Completed
November 2023	**Recruitment of A2D Facility team**	Between 7 September 2023 and 27 November 2023, all UNIDO A2D Facility team members had started in role following the completion of the recruitment process. On 12 December 2023, UNIDO´s Director General Gerd Müller officially introduced the A2D Facility team to H.E. Lindsay Skoll, the UK's Ambassador to Austria and UK Permanent Representative to the United Nations in Vienna. The meeting signified another important step towards strengthening the cooperation between UNIDO and the UK Government	Recruitment	Completed
November 2023	**First public participation in an international event**	The UNIDO A2D Facility team participated in the International Vienna Energy and Climate Forum (IVECF) from 2 to 3 November 2023, introducing the A2D Facility objectives and its thematic areas publicly for the first time to key stakeholders	Public engagement	Completed
November 2023	**First steering committee meeting between UNIDO and the UK Government**	The first steering committee meeting between UNIDO and the UK Government's Department for Energy Security & Net Zero (DESNZ) was held on 3 November 2023 to agree the overall vision, focus and principles for the A2D Facility.	Governance	Completed
November 2023	**Commissioning of Market assessments**	On 11 November 2023, the Terms of Reference (ToRs) for x3 Market Assessments (cross-cutting, clean hydrogen and critical minerals) were finalized and tendered. Kick-off meetings for the Market Assessments were held on 11 March 2024 (cross-cutting), on 12 March 2024 (clean hydrogen) and 8 May 2024 (critical minerals – delayed due to needing to re-tender).	Project development	Completed
December 2023	**Internal approval of Programme Framework Document**	On 14 December 2023, UNIDO obtained necessary approvals for the operationalization of the A2D Facility.	Administration	Completed
February 2024	**Second steering committee meeting between UNIDO and the UK Government**	The second steering committee meeting between UNIDO and the UK Government's Department for Energy Security & Net Zero (DESNZ) took place on 9 February 2024 to discuss the A2D Facility's progress and to outline the plans for CY 2024.	Governance	Completed
February 2024	**Draft Logical Framework**	UNIDO and UK DESNZ collaboratively drafted and discussed the Logframe for the A2D Facility during the second steering committee meeting on 9 February 2024.	Monitoring and reporting	Completed
March 2024	**Communications Package Project**	UNIDO established and tendered for a communications package project to design and implement the A2D Facility's website and branding.	Project development	Completed
March 2024	**Draft Annual Report**	UNIDO drafted the A2D Facility's first Annual Report, which provides an overview of progress in establishing the new programme.	Monitoring and reporting	Completed

In summary, the A2D Facility made strong progress during its first year with key achievements including: launching the programme, recruiting a well-skilled and expert team, developing the operational structures and publicly launching the programme, getting internal approvals on the design framework, and initiating key projects (x3 market assessments and a communications package project).

TABLE 2: Summary of Year 1 milestones



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Finances

The A2D Facility's initial donor funding comes from the UK Government, which committed an initial GBP 65 million (~USD 80 million).

The A2D Facility's initial donor funding comes from the UK Government's Department for Energy Security & Net Zero (DESNZ), which committed an initial GBP 65 million (~USD 80 million) at COP27 in November 2022. The UK Government's funding is part of its international climate finance (Official Development Assistance (ODA)) commitment.

TABLE 3: Annual financial overview

Description	Value
Total value of programme	~USD 80 million
Funds received from UK DESNZ between 1 April 2023 and 31 March 2024.	~USD 2.67 million
Expenditures by UNIDO between 1 April 2023 and 31 March 2024	~USD 0.60 million

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Forward look for Year 2

The second year of the A2D Facility will move from the inception (design) phase of the programme to its early implementation phase.

During the A2D Facility's second year (1 April 2024 to 31 March 2025), the programme will focus on the following key areas:

- **Calls-for-proposals:** UNIDO will launch the first two funding calls-for-proposals to support "lighthouse" pilot demonstration projects in critical minerals, clean hydrogen, smart energy and industrial decarbonization in developing countries. UNIDO will raise the visibility of the opportunities in workshops, webinars and potential side events at international fora (such as the Asia Clean Energy Forum, LAC Energy Week and COP29). The first supported pilot demonstration projects will be selected and will begin implementation.
- **Communications, monitoring and knowledge management:** UNIDO will launch the A2D Facility's logo, website, social media and other communications tools to ensure that stakeholders can keep up-to-date on the latest information on the programme's opportunities, publications and activities. For example, UNIDO will publish and disseminate the results of 3 market assessments, complete the communications package project and commission a Gender Equality and Social Inclusion, and Environmental and Social Safeguards (GESI-ESS) project. Furthermore, the Logframe for the A2D Facility will be finalized and UNIDO will publish its second year Annual Report, including the first reporting against the Logframe indicators.

In summary, the second year of the A2D Facility will move from the inception (design) phase of the programme to its early implementation phase. A summary of some of the key activities for the second year of the programme are summarized below.

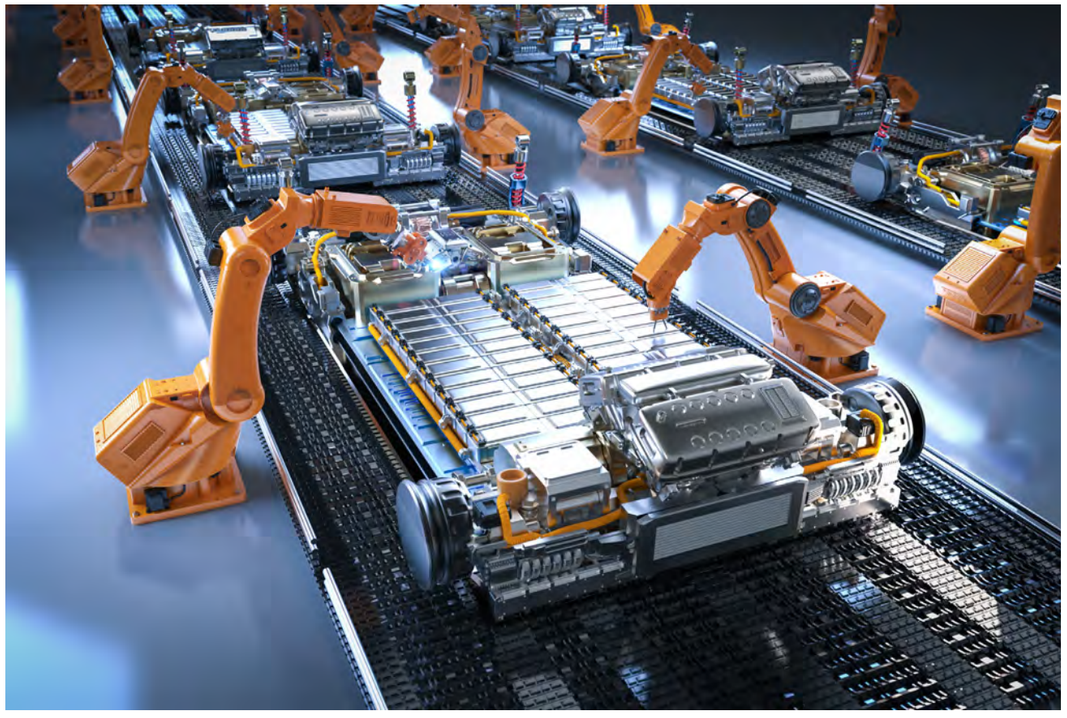
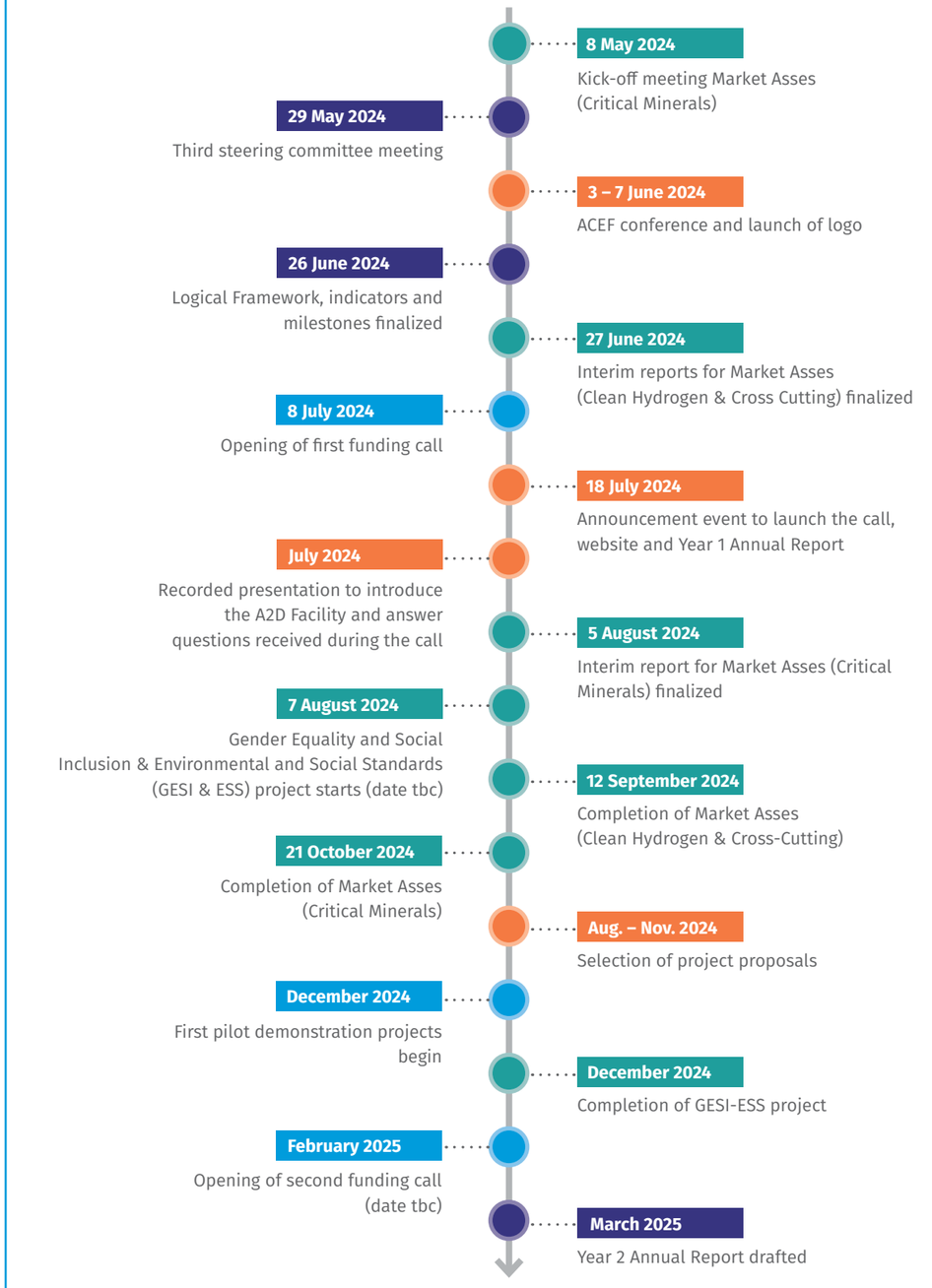


TABLE 4: Year 2 Forward Look



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