From Ideas to Impact:

The Guidebook for Accelerating ASEAN Climate Technology in the Energy Sector

Scaling Climate Technology Through Innovation and Collaboration in the Energy Sector

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Disclaimer

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Foreword

Climate change continues to intensively reshape the ASEAN region with its adverse impacts, such as rising sea levels, extreme weather events, and prolonged droughts, translating into profound ecosystem, economic, and social disruptions. These effects are compounded by rapid industrialisation and urbanisation, which continue to drive up energy demand across ASEAN Member States (AMS). Meeting the rising energy demand while addressing the impact of climate action has made the transition to clean energy systems not just a policy goal but a development imperative.

Energy efficiency, renewable energy, and climate technologies are central pillars in ASEAN's pathway toward a low-carbon and resilient future. The region must accelerate efforts to reduce energy intensity and enhance energy system sustainability while ensuring energy security and affordability. These efforts align with the ASEAN Plan of Action for Energy Cooperation (APAEC) Phase II: 2021–2025, which calls for innovation and cooperation to accelerate the clean energy transition and build energy resilience.

Startups and Micro, Small, and Medium Enterprises (MSMEs) are uniquely positioned to drive the transformation towards a sustainable and low-carbon economy. With their agility and deep understanding of local contexts, MSMEs can rapidly innovate and deliver tailored climate solutions in the energy sector. In the ASEAN region, MSMEs represent over 99% of all firms and employ approximately 85% of the workforce, with 70 million MSMEs playing a central role in the economy. This substantial presence underscores their critical contribution to inclusive economic growth and highlights their pivotal role in advancing technological innovation and facilitating the green economy transition (*SME Policy Index: ASEAN 2024 – Enabling Sustainable Growth and Digitalisation, 2024*). Moreover, MSMEs contribute an average of 44.8% to the region's GDP and are projected to exceed 50% of GDP in the future (*ASEAN Strategic Action Plan for SME Development 2016 – 2025: 2020 KPI Monitoring Report*, 2021). As critical drivers of economic growth and employment, their role in decarbonising ASEAN's energy landscape cannot be overstated. Yet many face barriers such as limited access to finance, technical support, and market linkages—impeding progress toward national and global climate commitments.

This accelerator programme supports the objectives of APAEC Phase II, particularly under the Energy Efficiency and Conservation Programme Area, through Outcome-Based Strategy 2, which aims to strengthen private sector and financial institution participation—including Energy Service Companies (ESCOs) and business clusters. By catalysing innovation and entrepreneurship in the climate technology ecosystem, the programme also advances

outcomes under the APAEC's Programme Area of Renewable Energy, as well as the Regional Energy Policy and Planning.

This guidebook responds to these needs by presenting accelerator-driven strategies and a practical framework to equip startups with the skills, networks, and tools to scale across the region. Its target audience extends beyond accelerator professionals to include ecosystem stakeholders, investors, and policymakers, thereby fostering a shared foundation for regional innovation in the energy sector.

Building strategically on its ongoing successful global innovation acceleration programme, the United Nations Industrial Development Organization (UNIDO), through its Division of Climate Innovation and Montreal Protocol, has strengthened and tailored the initiative to the ASEAN context, offering technical expertise, tools, and methodologies that facilitate ecosystem mapping, stakeholder engagement, and collaboration across climate innovation networks in AMS. The ASEAN Centre for Energy (ACE), as the implementing agency, promotes regional cooperation and knowledge exchange on climate and clean energy technologies. The Japan-ASEAN Integration Fund (JAIF) supports the overall ASEAN Climate Tech Accelerator programme, reinforcing ASEAN's strategic partnership with Japan.

Together, these efforts form the foundation of this guidebook, which serves as a catalyst for scaling climate solutions and strengthening entrepreneurial ecosystems across AMS.

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Executive Summary

The ASEAN Climate Tech Accelerator Guidebook is a practical resource aimed at fostering innovation, entrepreneurship, and ecosystem connectivity for climate technology startups and MSMEs across AMS. Developed in collaboration with UNIDO, ACE, and supported by JAIF, the guidebook introduces a structured methodology to operationalise accelerator programmes tailored to the region's clean energy and climate resilience needs.

As ASEAN nations face rising climate risks and increased energy demands, startups and MSMEs play a critical role in offering localised, innovative solutions. However, startups in the region often struggle with challenges that hinder the development and commercialisation of their ideas. Many face the "*valley of death*," a critical period in which startups have launched but remain pre-revenue, encountering severe obstacles to accessing capital, refining technology, and entering markets.

To address these systemic gaps, the guidebook introduces a three-phase accelerator approach—Pre-Accelerator, Accelerator, and Advanced Accelerator. Each phase provides tailored interventions, including mentorship models, gender inclusion strategies, and business matchmaking opportunities.

Chapter 1 introduces the project's goals and partners, and explains how the initiative aligns with climate strategies of ASEAN. Building on this foundation, Chapter 2 focuses on pre-acceleration as early-stage startup development, through activities such as bootcamps, hackathons, and ideathons. Progressing to the next phase, Chapter 3 outlines the core Accelerator programme, detailing the selection process, evaluation criteria, mentoring approaches and final pitching event. As startups advance further, Chapter 4 supports their efforts to scale through targeted investment and cross-border collaboration. To ensure sustained impact, Chapter 5 concludes with long-term ecosystem-building strategies, including gender-inclusive practices, localisation of tools, and the development of sustainable accelerator models.

The guidebook serves multiple audiences: accelerator implementers, regional policymakers, ecosystem partners, and entrepreneurs. It provides actionable templates, case-driven strategies, and tools to scale clean energy innovations—particularly in renewable energy, energy efficiency, and other climate technologies. By contextualising global best practices within ASEAN's climate tech landscape, this guidebook seeks to empower early-stage ventures, strengthen regional collaboration, and drive climate-resilient economic transformation in Southeast Asia.

Introduction

1.1. Project Overview

Project Scope and Objectives

The "Enhancement of Clean Energy Technology Ecosystem and Connectivity in ASEAN" project aims to scale transformative energy-climate solutions by fostering investments and business growth within the climate technology innovation and entrepreneurship ecosystem (CIEE) across ASEAN Member States (AMS). This initiative contributes to the AMS goals of achieving energy security, accessibility, affordability, and sustainability while advancing global climate targets and the **Sustainable Development Goals (SDG) 7: Affordable and Clean Energy** and **SDG 13: Climate Action**.

By promoting the development and commercial expansion of climate technology businesses, the project further contributes to the implementation of the **ASEAN Economic Community Blueprint 2025**. The project will especially aim to also support climate tech solutions with potential to contribute to climate change adaptation and resilience in the region.

This project is strongly aligned with the **ASEAN Plan of Action for Energy Cooperation (APAEC) Phase II: 2016-2025**, particularly the Energy Efficiency and Conservation (EE&C) Programme Area Outcome-Based Strategy (OBS) 2 which focuses on enhancing the participation of Private Sector and Financial Institutions including Energy Service Companies (ESCOs) and Clusters for EE&C promotion. By fostering innovation and entrepreneurship within the clean energy technology ecosystem, the project directly supports the development and adoption of energy-efficient solutions across ASEAN. While the project's primary alignment is with the EE&C Programme Area, it also contributes to the Renewable Energy and Regional Energy Policy and Planning Programme Areas.

The project also contributes to advancing AMS actions towards **ASEAN Outlook on the Indo-Pacific (AOIP)**. It aligns with its objectives of implementing existing and exploring other ASEAN priority areas of cooperation, particularly in advancing actions towards achieving the SDGs 7 and 13 and strengthening economic resilience while implementing project activities per the AOIP`s principles of inclusivity and mutual benefits across the AMS. Figure 1 below outlines how this project aligns with various climate initiatives across ASEAN region and beyond.

Figure 1: *Project Alignment with ASEAN Climate Initiatives*

Timeline of ASEAN Climate Tech Accelerator

The timeline below in Figure 2 outlines the proposed timeline for the ASEAN Climate Tech Accelerator, spanning pre-accelerator, accelerator, and advanced accelerator phases. While this timeline provides a structured overview of key activities and milestones, the exact dates and durations may be subject to change based on operational adjustments, stakeholder availability, or project priorities.

Overall Timeline

PRE-ACCELERATOR   **ACCELERATOR**   **ADVANCED ACCELERATOR**

| Online Workshops (2 months) | Training and Certifications of Experts (2 months) | Webinar Training and Mentoring Sessions (2-3 months) | Final Pitching and Judging (one-day) | Business Matchmaking Event (one-day) |

Figure 2: *Overall Timeline of the ASEAN Climate Tech Accelerator*

Key Partners and Roles

The accelerator engages key partners in a collaborative network, linking governments, enterprises, and accelerators across AMS and Japan to strengthen the climate technology innovation ecosystem.

Institutional Expert – Accelerator

An accelerator organisation, will support the establishment and operationalisation of the ASEAN Climate Technology Accelerator, ensuring alignment with the ASEAN climate technology ecosystem while integrating United Nations Industrial Development Organization (UNIDO)'s expertise in climate technology innovation.

The institutional expert accelerator is responsible for organising and managing the pre-accelerator, accelerator and advanced accelerator activities. Their strategic roles include providing technical guidance, overseeing training and certification programmes, managing the final judging event, and designing the business matchmaking event. The institutional expert will also oversee event promotion and dissemination, which involves developing and implementing promotional strategies, publishing press releases and startup booklets, and enhancing regional visibility through networking and outreach efforts.

Ecosystem Partners in ASEAN

It is crucial to establish strong relationships with ecosystem partners that provide entrepreneurial support services at both regional and local levels across the ASEAN region. These partners may include urban-focused accelerators, regional accelerators, government-supported incubation programmes, university-based support programmes, and other international organisations. To facilitate this, an accelerator community hub for climate technology Micro, Small & Medium Enterprises (MSMEs) and startups in the energy sector across Southeast Asia will be established. This hub will serve as a platform to foster local, national, and global information exchange and collaboration.

In addition, climate technology startups and MSMEs participating in the ASEAN Climate Tech Accelerator Programme, along with investors and Japanese stakeholders, will be invited during business matchmaking events to create networks and connectivity among AMS in operationalising the accelerator.

United Nations Industrial Development Organization (UNIDO)

UNIDO launched its Global Cleantech Innovation Programme (GCIP) in 2013, funded by the Global Environment Facility. Currently, the programme is in its second phase, covering approximately 15 countries, including AMS countries such as Cambodia, Indonesia, and Vietnam. Building on its expertise and experience gained through GCIP and other climate technology innovation programmes, including The Private Financing Advisory Network (PFAN) and Programme for Innovation in Climate Adaptation and Resilience Building Solutions (PARS), UNIDO will partner with the ASEAN Centre for Energy (ACE) to provide technical support to build, strengthen and connect climate technology ecosystems in AMS.

As part of its technical support in this accelerator programme, UNIDO will identify, engage with, and integrate the existing ecosystem, fostering synergies among stakeholders in climate tech innovation and entrepreneurial ecosystems (CIEEs) in AMS. This includes collaboration with both the public and private sectors. By sharing tools, methodologies, guidebooks, and other materials, UNIDO will provide support in the design and operationalisation of the accelerator and foster linkages between stakeholders in the region.

1.2. ASEAN Climate Technology Ecosystem Overview

Importance of Climate Technology Innovation

In the AMS, the impact of climate change has already been seen in the shift of its climatic patterns, including the level of extreme weather events and natural disasters contributing to increased vulnerability. The ASEAN region faces escalating climate hazards, including extreme heat, floods, droughts, and intensifying typhoons, leading to significant economic and social challenges. In the Philippines, a series of powerful typhoons in 2024 affected over 13 million people and caused an estimated $500 million in damages (World Weather Attribution, 2024). Similarly, in Vietnam, Typhoon NORU and subsequent flooding from Storm SONCA in late 2022 affected over 436,000 people, damaging nearly 100,000 houses and devastating thousands of hectares of farmland, causing severe economic losses—the worst climate-related disaster since 2007 (International Federation of Red Cross and Red Crescent Societies [IFRC], 2023). These escalating climate events threaten livelihoods, infrastructure, and food security across the region, underscoring the urgent need for innovative climate technologies to enhance resilience and promote sustainable development.

On the other hand, AMS face a growing carbon emissions profile with the expectation of population and economic growth. While AMS submitted Nationally Determined Contributions (NDCs) in making efforts to tackle climate change, there are still gaps in taking pathways towards the global SDGs, and AMS need to develop innovative solutions in the field of climate technology. This is particularly crucial for vulnerable communities severely affected by climate change and related challenges, including the rising cost of fossil fuels. Furthermore, AMS are evaluated to be a vulnerable region to climate change, suggesting there is a need to foster climate adaptation solutions in parallel. According to the Notre Dame Global Adaptation Initiative (ND-GAIN) Index 2023, several ASEAN countries rank among the most vulnerable globally. Myanmar (Index score: 34.5), Cambodia (39.2), and the Philippines (42.3) are among the lowest scoring in terms of readiness and highest in vulnerability, indicating significant exposure to climate risks with limited capacity to respond. As the urgency to adapt to and mitigate climate risks grows, the transition to climate technologies emerges as a crucial strategy for enhancing resilience for AMS.

Climate Technology Innovation Landscape & Market Potential for Climate Technology Startups in the Region

Despite the growing demand for climate technology innovation, many AMS rank relatively low on the Global Innovation Index (GII) 2022 and the Global Competitiveness Index (GCI) 2019, as shown in the Table 1 below. The GII, published by the World Intellectual Property Organization (WIPO), assesses countries' innovation capabilities and performance based on factors such as research, infrastructure, and business sophistication. The Global Competitiveness Index, released by the World Economic Forum (WEF), evaluates the ability of economies to provide high levels of prosperity, considering factors like infrastructure, macroeconomic stability, and business dynamism.

Table 1: Global Innovation and Competitiveness Index of AMS

AMS	Global Innovation Index (Total: 132)	Global Competitiveness Index (Total: 141)
Brunei Darussalam	87	56
Cambodia	101	106
Indonesia	61	50
Lao PDR	110	113
Malaysia	36	27
Myanmar	N/A	N/A
Philippines	56	64
Singapore	5	1
Thailand	43	40
Vietnam	46	67

Note. This table is adapted from *Global Innovation Index 2022 and Global Competitiveness Index 2019*.

Aside from Singapore, which is placed within the top ten countries for GII and GCI, other AMS continue to face challenges in creating a favourable environment for innovation and entrepreneurship.

Nevertheless, the ASEAN climate technology startup ecosystem holds immense growth potential, particularly in the **clean energy technology sector**. According to the 8th ASEAN Energy Outlook, AMS is among the fastest-growing economic regions, with energy demand projected to increase approximately 2.6-fold by 2050 compared to 2022 levels[1]. This surge in demand, driven by rapid population growth, urbanisation, and industrialisation, highlights the urgent need to accelerate the adoption of energy efficiency solutions, renewable energy installation, and other clean energy technologies.

Startups and MSMEs have a unique advantage over larger corporations in addressing the needs of vulnerable communities. Their agility, adaptability, and deep integration into local economies enable them to respond quickly to changing circumstances and provide innovative climate technologies, products, and services—including in remote areas. As key drivers of innovation, employment, and economic growth, startups and MSMEs play a crucial role in ASEAN's economy. In this context, accelerating climate technology innovation and fostering entrepreneurship are essential to bridging the existing gaps and developing sustainable energy systems that address multi-faceted regional challenges.

Barriers & Accelerator-Driven Solutions

Although startups and MSMEs are seen as source of innovations, their potential has not been exploited within the context of sustainable industrialisation due to multiple constraints, such as limited access to finance, knowledge, and technologies. The challenges faced by climate tech MSMEs include:

- **Limited Access to Early-Stage Capital**: Climate tech solutions often require substantial upfront investments to prototype, test, and market their solutions, but accessing affordable capital can be challenging due to limited patient capital, few relevant investors, and a lack of innovative financing mechanisms.
- **Insufficient Technical and Operational Expertise**: Climate tech MSMEs in the ASEAN region often struggle to develop and implement effective climate tech solutions due to limited access to specialised knowledge. This includes a deep understanding of users' needs and vulnerabilities to physical climate change impacts, as well as the

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[1] ASEAN Centre for Energy, 2024, *The 8th ASEAN Energy Outlook*,
https://aseanenergy.org/publications/the-8th-asean-energy-outlook/

technical know-how required to design appropriate product features and delivery channels for climate-affected communities.

- **Weak Ecosystem Networks and Limited Knowledge Exchange**: Startups and stakeholders around the world are valiantly building a range of climate tech solutions while understanding of climate change and its impacts continues to evolve. Yet ASEAN's climate tech MSMEs often struggle to build collaborative networks and scale their climate solutions effectively.

To address these challenges, **accelerator-driven solutions** can empower startups with the knowledge, skills, and resources needed to scale their climate technology businesses effectively. Key support mechanisms include:

- **Investment Facilitation**
  Helping startups secure funding by connecting them with investors, venture capitalists, and financial institutions. This includes organising pitch events and providing financial literacy training to navigate investment opportunities. Tailored advisory services can also guide startups in structuring their business models to attract long-term investment. To support these efforts, strategies to effectively engage investors are crucial for both startups and accelerators. As an example, accelerators should proactively identify sector-relevant investors who align with the startup's stage and funding needs to help them find the right investors. Startups, on the other hand, can actively network and build relationships with potential investors by leveraging digital platforms like LinkedIn and Facebook to showcase their business and engage with investors beyond traditional events.

- **Capacity Building & Technical Knowledge Assistance**
  Providing targeted online training, workshops, and mentorship programmes to equip climate tech startups with essential business and technical expertise. These initiatives help startups better understand user needs, climate vulnerabilities, and practical implementation strategies. Access to ongoing expert guidance can also support product development, operational efficiency, and market readiness.

- **Network and Partnership Development**
  Creating platforms for business matchmaking and targeted networking to connect startups with potential partners such as industry leaders, institutions, and enterprises.

Facilitating knowledge exchange around effective solutions, local market suitability, and scalability strategies can drive innovation and accelerate impact across the climate tech ecosystem.

By leveraging these targeted solutions, accelerators can bridge existing gaps in the climate technology ecosystem and drive sustainable business growth in the ASEAN region.

1.3. About this Guidebook

Purpose

This guidebook serves as a comprehensive resource designed to equip stakeholders with proven methodologies, tools, and operational frameworks for effectively implementing the ASEAN Climate Tech Accelerator. At the same time, it emphasises the importance of adapting these tools to local contexts, ensuring that programmes remain responsive to the unique needs of AMS.

Recognising that the needs of startups vary significantly depending on their stage of maturity, it outlines a structured approach to acceleration, covering pre-acceleration, acceleration, and advanced acceleration phases, ensuring that acceleration programmes are both scalable and tailored to the unique needs of startups in the region. This guidebook brings UNIDO's climate technology innovation frameworks into the ASEAN context to better adapt global best practices to the ASEAN context, ensuring relevance and impact in the region.

By establishing a common operational baseline, it fosters consistency and scalability across acceleration services while allowing flexibility for customisation to address local priorities. Ultimately, this resource aims to strengthen the ecosystem for climate technology innovation, empowering startups to drive sustainable development and energy transition in the region.

Target Audience

The direct beneficiaries of this accelerator will be climate technology startups from all the AMS in the Accelerator programme, working on both climate change mitigation and adaptation solutions, with a focus on clean energy technology sector.

The accelerator's primary beneficiaries are **MSMEs** across AMS, aiming to engage 40% women-led businesses to help bridge gender gaps. MSMEs and startups are central to ASEAN's economy, serving as innovation drivers; however, they face constraints, such as limited access to finance, knowledge, and technology. Therefore, accelerating climate technology innovation and entrepreneurship is essential to address these challenges and foster sustainable energy solutions in ASEAN.

Policymakers and institutions working on climate change in the AMS also benefit from this project through regional networking/partnership events. Overall, the ASEAN region benefits from the ASEAN Climate Tech Accelerator through identification of innovative climate technologies and business models that drive climate tech penetration towards the achievement of national and regional targets.

Lastly, the **general public** also benefits from new solutions for climate action that can help increase their resilience to climate change impacts. The accelerator fosters the adoption of clean energy and energy-efficient solutions, promotes green jobs and creates opportunities in sustainable industries, and empowers communities to transition toward a more sustainable and climate-resilient future. By publishing publicly available reports and knowledge materials, the accelerator also disseminates insights to policymakers, businesses, and communities on innovative climate technology solutions, best practices, and emerging opportunities in climate technology innovation and entrepreneurship.

1.4. Programme Structure

Programme Structure (Pre-Accelerator and Accelerator) and Duration

The overall Accelerator programme is designed to support early-stage startups through a structured, phased approach. The **pre-accelerator phase** focuses on developing initial concepts, recruiting and training mentors, and conducting calls for applications to identify promising startups. **The accelerator phase**, spanning approximately **2 to 3 months**, includes startup screening, intensive mentoring and training, judging and selection of finalists, and awarding winners. Additionally, the programme provides business growth and commercialisation support, including access to finance to help startups scale their solutions.

Startup Commitments and Support Mechanisms

The overall outline of the accelerator programme consists of a series of activities, including:

1) Developing initial concepts targeting early-stage startups

2) Recruitment and training of mentors

3) Conducting calls for applications

4) Screening to select startups

5) Providing mentoring and training support, including on business growth, commercialisation and investment facilitation

6) Judging, selecting and awarding winners

The accelerator will also place special emphasis on engaging youth and women in the climate tech sector. It aims to achieve 40% startups from women-led businesses through targeted outreach strategies, including partnerships with women-focused business networks, incubators, and industry associations. Additionally, tailored mentorship and capacity-building programmes will be provided to support women entrepreneurs in scaling their climate tech solutions.

To drive youth participation, the accelerator will engage platforms with strong youth presence, such as universities, community centers, and regional university incubator programmes, through targeted campaigns using direct email communication, tagging on social media and newsletters to attract quality applications. The programme will actively collaborate with university incubators throughout the region to tap into innovative student-led ventures, enhancing youth participation. This strategy will not only secure strong candidates for the

programme but also help identify potential mentors among youth participants. By fostering entrepreneurship in AMS, the initiative will cultivate a pipeline of innovative climate tech solutions and demonstrate their viability as profitable business models.

Gender Equality and the Empowerment of Women Principles

The ASEAN Climate Tech Accelerator Programme is committed to integrating Gender Equality and the Empowerment of Women (GEEW) principles into all aspects of its design and implementation. Recognising the critical role of gender inclusivity in fostering sustainable development, the accelerator ensures that both women and men have equal opportunities to access, participate in, and benefit from the programme. This commitment is reflected in the adoption of a gender-sensitive approach across all activities, from recruitment to decision-making, capacity-building, and awareness-raising.

In the execution of the accelerator, all activities are conducted through the **gender lens** as follows:

- **Gender-sensitive recruitment:** The accelerator will prioritise gender-sensitive recruitment at all levels, especially in the selection of accelerator staff.
- **Gender-responsive Terms of Reference (ToRs):** To mainstream gender considerations, ToRs for consultants and experts will incorporate gender-responsive provisions.
- **Encouraging gender-sensitive hiring practices:** In cases where the project does not have direct influence over recruitment, it will advocate for gender-sensitive hiring among partners and stakeholders.
- **Capacity-building on gender:** Existing staff will receive training and awareness enhancement on gender issues whenever possible.
- **Gender-inclusive decision-making:** Gender considerations will be integrated into all decision-making processes, including efforts to achieve gender balance and representation.
- **Collection of sex-disaggregated data:** The accelerator will collect and analyse sex-disaggregated data whenever feasible to track gender-related progress and impact.
- **Engagement with women's networks:** Relevant women's associations, gender focal points, and experts will be consulted and involved in all accelerator activities. For example, collaborating with investor networks that specifically support women entrepreneurs in energy efficiency, renewable energy, and other clean energy technology fields can help tap into existing pipelines of high-potential women founders.

- **Gender-responsive capacity-building:** The differentiated needs and roles of women and men will be identified and addressed in the accelerator's capacity-building interventions. Women's groups, gender experts, and other relevant stakeholders will be consulted to ensure inclusive programme development.
- **Development of gender-responsive tools and guides:** Resources developed under the accelerator will integrate gender considerations to support inclusive participation in the climate tech sector.
- **Raising awareness on gender:** The accelerator will actively promote gender awareness and disseminate information on gender dimensions and mainstreaming in the climate tech sector.

Building on these gender lens strategies, implementing targeted outreach initiatives will also be instrumental in achieving the goal of at least 40% women-led enterprises in the accelerator cohort. This can include developing specialised marketing campaigns through women's business networks and digital platforms, clearly communicating the unique value proposition and support systems available to female founders. Particular emphasis should be placed on outreach to climate tech communities with high potential for women entrepreneurs as well, while addressing common barriers through programme design. The accelerator's framework must incorporate inclusive structural elements—such as flexible session timing—to effectively accommodate women balancing entrepreneurial ambitions with caregiving roles or other societal constraints.

Sustainability Strategy

The accelerator integrates sustainability into its design and implementation to ensure that its outcomes remain impactful beyond the accelerator lifecycle. The sustainability of this accelerator will be ensured by involving various ecosystem stakeholders including public and private sector stakeholders and building their capacities. These stakeholders, including experts such as mentors and judges, will gain the skills and tools necessary to manage and sustain climate technology innovation ecosystems within the AMS and ensure the accelerator objectives are embedded within long-term policy priorities of the AMS.

To enhance financial sustainability, the accelerator focuses on investment facilitation and partnerships. Demonstrating the market potential of climate technology innovations will incentivise continued investment in the ecosystem. By linking stakeholders across the ecosystem in the AMS and beyond, the accelerator will create a conducive business environment and incentives for climate technology MSMEs and startups, policymakers, and private sector to promote and support climate technology innovation. Knowledge products, including the accelerator guidebook, training materials, and methodologies, will serve as

enduring resources for stakeholders. The Accelerator Hub, a web-based platform hosted by ACE, can serve as a dynamic platform for knowledge exchange, collaboration, and market linkages, aiming to facilitate the sustainability of the networks between startups and investors.

Pre-Accelerator

2.1. Key Objectives

For many early-stage startups, transitioning from an idea to a scalable business requires structured support and guidance. Pre-acceleration programmes play a key role in this process, ensuring that startups have the momentum and foundational elements needed to fully benefit from acceleration. It provides early-stage startups with the training, tools, mentorship, and network to prepare them for the next level. They will gain access to specific resources designed to help prepare them for the next big step with their early-stage startup. Instead of being a required step for all ASEAN Climate Tech Accelerator applicants, pre-acceleration should be viewed as an optional but strategic tool to strengthen the overall applicant pool.

The main purpose of pre-acceleration is to develop initial concepts and formation of early-stage startups. To this aim, the pre-acceleration ensures that startups overcome key challenges that may otherwise prevent them from successfully entering the accelerator. These challenges often include the absence of a vague business model, a lack of clear innovation, or insufficient market research. By addressing these issues, pre-acceleration helps startups refine their ideas and develop new climate technology products and services.

Additionally, pre-acceleration efforts should aim to increase the participation of underrepresented groups, industries, and regions through targeted outreach and tailored support programmes. Through this stage, startups will not only learn from the best but also actively build and test their ventures, developing the resilience and creativity they will need for long-term success.

"A pre-accelerator is like a gym for startups, a place where they can build their muscles and get ready for the real competition." - Carlos Eduardo Espinal, Partner at Seedcamp (2015)

2.2. Eligibility Criteria

Eligibility for the pre-accelerator programme is extended to **early-stage startups** who require structured training before applying to the ASEAN Climate Tech Accelerator. The programme supports teams working on business concept development, assumption validation, and project documentation. It is best suited for those who lack a formalised business model, a defined market strategy, initial financial projections, or a clear product pitch.

While we accept most early-stage founders onto the pre-accelerator programme, we will prioritise applications which meet the following criteria:

- **Stage**

  Applicants are expected to be at the <u>ideation stage</u> where they are ready to build a minimum viable product (MVP), which is a basic version of a product or service that allows a startup to quickly get feedback from customers and validate their idea. This is especially true as pre-accelerators are ideal for startups that have a solid business idea but require support in refining their business model or product. Validating their assumptions and receiving feedback from industry experts, resources and support can help grow their businesses more effectively.

- **Market**

  The ASEAN Pre-Accelerator is designed to support founders in the <u>energy efficiency, renewable energy, and other clean energy technology sectors</u>, helping them accelerate their business ideas. Whether the startup follows a Business-to-Business (B2B) or Business-to-Consumer (B2C) model, the key requirement is that the application demonstrates a clear focus on energy efficiency, renewable energy, and other clean energy technology products. Through this market-driven approach, the programme supports the development of new and innovative climate technology products and services, incorporating both business model and technological innovation.

- **Location**

  Applicants must be <u>based exclusively in the ASEAN region</u>, with operations or headquarters in one of the AMS: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, or Vietnam. This requirement ensures that the programme directly supports the development of the ASEAN clean energy ecosystem, fostering local innovation and addressing region-specific challenges. By focusing on ASEAN-based startups, the programme aims to strengthen regional collaboration, promote sustainable growth, and create impactful solutions tailored to the unique needs of the ASEAN market.

- **Technology Readiness Levels (TRL) and Business Readiness Levels (BRL)**

  TRL and BRL serve as effective screening tools to assess the maturity of startups applying for the pre-accelerator programme. TRL measures the technological development stage, ranging from basic research (TRL 1) to a fully commercialised product (TRL 9), while BRL evaluates the business maturity, from an initial idea (BRL 1) to a validated and scalable business model (BRL 9). By integrating TRL and BRL into the application and selection process, pre-accelerators can ensure that

participating startups receive the <u>right level of support</u> tailored to their specific needs. Figure 3 below summarises the key indicators for TRL and BRL.
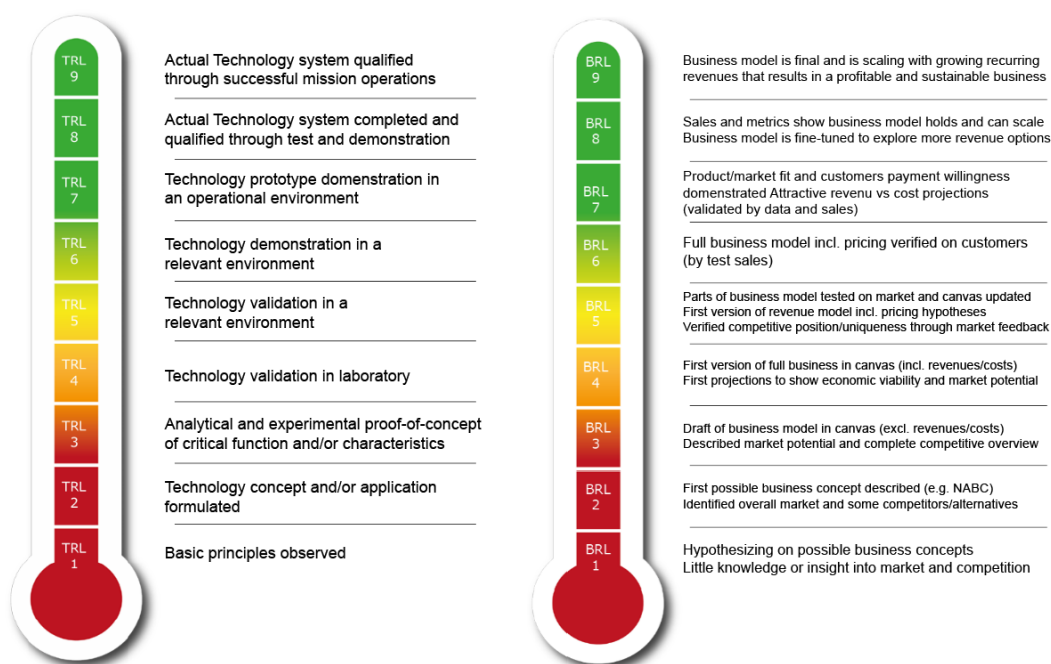
Figure 3: *Summary of Key Indicators for Technology Readiness Levels (TRL) and Business Readiness Levels (BRL)*

Note. The data is adapted from *Technology Readiness Level* and *Business Readiness Level*, by KTH Innovation, 2018.

Step 1: TRL & BRL in the Context of the ASEAN Climate Technology Startup Ecosystem

The ASEAN region has a growing pool of climate innovators, particularly from universities, research centres, government-supported incubation, and early-stage startups. However, many of these innovations remain in the proof-of-concept or prototype stage and require business model development, regulatory guidance, and market validation before becoming investment-ready. To support these climate tech startups, it is essential to provide tailored assistance that fosters ideation, business validation, and early-stage technology refinement.

Step 2: Pre-Accelerator Eligibility Criteria: TRL & BRL

The pre-accelerator programme is best suited for startups in the early development stage, where structured support is crucial for advancing both technological and business readiness. Incorporating TRL and BRL into the screening process ensures that startups receive stage-appropriate support, fostering stronger climate technology innovations and sustainable business growth in ASEAN. The recommended TRL and BRL range for eligibility to the pre-accelerator is TRL 1–3 and BRL 1–3 respectively as in the Figure 4 below:

Technology Readiness Level 1-3

- **Basic Principles**
- **Experimental Proof of Concept**

Startups at TRL 1–3 have initiated basic research and are exploring potential technological concepts.

Yet, validation and proof is limited or preliminary at this stage.

Business Readiness Level 1-3

- **Concept Development**
- **Early Market Validation**

Startups at BRL 1-3 are still defining their business model, market potential, and customer relationships.

These startups require structured training in business validation, fundraising strategies, and regulatory framework to advance their commercial readiness.

Figure 4: *Pre-Accelerator Eligibility Criteria Based on TRL & BRL*

Note. The descriptions are adapted from Technology Readiness Level and Business Readiness Level, by KTH Innovation, 2018.

Step 3: Connect Eligible Pre-Accelerator Graduates to the Accelerator Programme

By structuring the pre-accelerator programme around TRL 1–3 and BRL 1–3, startups receive targeted support to refine both their technology and business models, making them stronger candidates for the ASEAN Climate Tech Accelerator Programme. The pre-accelerator helps startups validate prototypes, establish problem-solution fit, and conduct early market research, ensuring they are investment-ready and well-positioned for the next stage.

Using TRL and BRL as assessment tools is especially valuable, as they not only measure a startup's growth trajectory but also serve as benchmarks for progress beyond the early stage. This allows pre-accelerator graduates to effectively demonstrate their readiness and competitiveness, increasing their chances of being eligible to benefit from the ASEAN Climate Tech Accelerator Programme.

Additionally, active participation of underrepresented groups, emerging technology sectors, and diverse regions is strongly encouraged. For example, targeted pre-acceleration activities in collaboration with universities and research centres can help increase the involvement of young entrepreneurs and early-stage startups. These initiatives can help young founders build a strong team, refine their business concept, develop a compelling elevator pitch, and better

navigate the ASEAN Climate Tech Accelerator application process, ensuring they are well-prepared for the next stage of growth.

Lastly, startups should also keep in mind that in order to facilitate a seamless transition, they should ideally be given **a minimum of two weeks** following the pre-accelerator to complete their ASEAN Climate Tech Accelerator applications before the deadline.

2.3. Application & Screening Process

Building on the eligibility criteria outlined in the previous section, the application and screening process ensures that early-stage entrepreneurs and startups selected for the pre-accelerator programme receive the right level of support to refine their business concepts and validate their market potential.

Application Submission

Startups interested in the pre-accelerator programme must complete an online application detailing their business concept, technology focus, market potential, and team composition. The application should also indicate the startup's TRL and BRL to ensure proper placement in the programme.

Applicants will be required to provide:

- A summary of their business idea, including the problem they aim to solve and their proposed solution.
- Information on TRL and BRL to assess their stage of development: examples of acceptable traction, such as letters of intent (LOIs) or pilot agreements.
- A basic financial outlook and market validation efforts undertaken so far.
- Team details, including relevant skills and experience.

To encourage early submissions and improve the quality of applications, applicants may receive additional support, such as access to pre-application information webinars and/or networking events. These resources can help refine their business ideas and enhance their eligibility before final submission.

Screening Process

Once applications are submitted, a screening committee comprising representatives from ACE, UNIDO, and the Institutional Expert Accelerator (including their industry specialists) will review them to ensure they meet the minimum eligibility requirements. The screening process consists of:

- **Preliminary Review (Eligibility Check)**:

  The Project Management Unit (PMU) and screening committee conduct an initial assessment to verify eligibility requirements, including sector alignment (energy efficiency, renewable energy, and other clean energy technology sectors), TRL/BRL, and operational presence within AMS. Incomplete or ineligible applications are notified promptly, giving applicants a chance to revise and resubmit before the deadline.

- **Business and Technology Evaluation**:

  Applications that pass the preliminary review undergo further assessment by experts from the climate technology industry, entrepreneurship networks, and investment communities. The evaluation focuses on:

  - The feasibility and scalability of the proposed technology.
  - The clarity of the business model and market strategy.
  - The problem-solution fit and potential environmental, social, and economic impact.

Selection for ASEAN Pre-Accelerator

Applicants for ASEAN Pre-Accelerator will be selected based on their submitted applications, with a focus on assessing their commitment, growth potential, and alignment with the programme's objectives. This initial screening ensures that participating startups are well-positioned to benefit from the structured training, mentorship, and business validation support offered in the pre-accelerator phase.

Participation in the pre-accelerator does not require an interview at this stage. Startups that demonstrate significant progress during pre-acceleration will then undergo a more rigorous evaluation for advancement to the ASEAN Climate Tech Accelerator Programme. At this stage, interviews may be conducted to assess founders' coachability, ability to articulate their vision, and readiness for scaling—ensuring only the most promising ventures progress to the next phase of development.

2.4. Pre-Accelerator Activities

Online Workshops

Objective

The pre-acceleration online workshop serves as a foundational step in supporting early-stage concepts by providing climate tech startups with the tools and guidance needed to refine their ideas and build a strong foundation for growth. This interactive and strategic workshop

engages key players—such as mentors and industry experts—to foster collaboration and knowledge-sharing within the climate tech ecosystem.

Equipping startups with the necessary knowledge, skills, and connections ensures that they are better positioned to succeed in the more intensive phases of the accelerator. This preparation not only enhances the quality of the startups but also increases the likelihood of their long-term success. This ASEAN Pre-Accelerator will follow a Startup Bootcamp Competition format over four days, featuring a three-day bootcamp focused on workshops, prototype and business model development, and mentorship, culminating in a final pitching day. This structure offers participating startups a comprehensive platform to strengthen their early-stage products and business strategies.

While the competition model is used in this ASEAN Pre-Accelerator online workshop, three additional flexible formats—Hackathon, Startup Bootcamp, and Mini Competitions (Ideathon)—are also available for future programme needs. These formats can be implemented individually or combined with one another, depending on specific programme goals. These three activities will be further explained in this section.

Timeline

2 months including preparation. The pre-acceleration workshops will be conducted online over three to five days in total to approximately 40 startups.

It is recommended that the pre-accelerator workshops conclude at least two weeks before the accelerator application deadline to ensure that as many pre-accelerator startups as possible may complete and submit applications for the accelerator. Figure 5 below outlines the overall timeline for the pre-acceleration online workshop.

- Workshop Design
- Stakeholder Engagement
- Application & Screening

1st Month   **2nd Month**

- Workshop Execution
- Post-Workshop Promotion
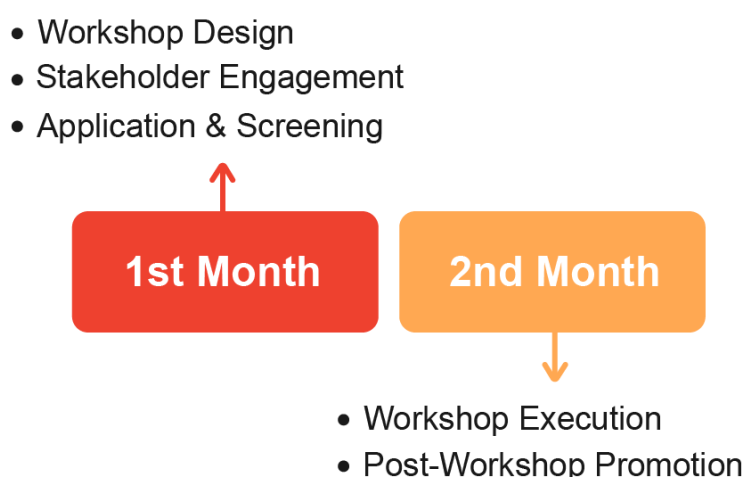
Figure 5: *Timeline of ASEAN Pre-Accelerator*

Key Activities

1. **Workshop Design & Agenda Development**
   Structure the concept and agenda of the workshop to include interactive formats such as hackathon, startup bootcamp and mini competitions, ensuring gender-responsive strategies.

2. **Stakeholder Engagement & Outreach**
   Identify and invite various stakeholders, such as entrepreneurs, government, institutions, and accelerator alumni. If held in the format of a Hackathon or Ideathon, aim to engage approximately 80 individuals. For a Startup Bootcamp, target around 40 startup teams instead. Identify at least 120 startups in energy efficiency, renewable energy, and other clean energy technology sectors, and then categorise their products to align with the objectives of the accelerator programme.

3. **Workshop Execution**
   In order to maximise visibility and engagement for both the pre-acceleration and accelerator programme, the pre-acceleration online workshop shall be organised with

all necessary materials, including virtual spaces, tools for hackathons, and an online registration website for startups. Additionally, rehearsals will be conducted to ensure all components function smoothly on the day of the event.

Through targeted activities in the online hackathon and startup bootcamp, early-stage startups in the pre-accelerator programme are equipped to advance from TRL 1–3 to TRL 3–6 and from BRL 1–3 to BRL 3–6. The hackathon facilitates hands-on problem-solving, initial experimentation, and prototyping, helping teams validate core technologies and demonstrate proof of concept, laying the groundwork for technology scaling (advancing from TRL 1–3 to TRL 3–6). Meanwhile, the bootcamp deepens business readiness by guiding startups through customer discovery, MVP validation, and investor pitch development (progressing from BRL 1–3 to BRL 3–6), supported by expert mentorship and one-on-one business clinics. Together, these activities build both technical and commercial capacity, enabling startups to meet eligibility for the main accelerator.

4. **Promotion**

Following the pre-acceleration event and the final judging of the accelerator programme, press releases will be developed, which covers a summary of key discussions and outcomes, an analysis of the startup demographics, insights and testimonials from speakers, mentors, and startups, significant achievements and future implications of the programme, along with other relevant content.

1) Hackathon

Introduction

An on-site hackathon is an intensive event where individuals or teams collaborate to develop a functional product prototype within a short timeframe, often spanning a weekend or even a single day. The constrained timeline, combined with the availability of peers for collaboration, accelerates the transformation of ideas into initial prototypes. Traditionally, many hackathons have focused on mobile and web technologies, culminating in a demo showcase and awards ceremony.

Similarly, virtual hackathons replicate the benefits of in-person events but occur entirely online. While in-person hackathons typically last 24 to 48 hours, online hackathons are extended to accommodate startups across different regions and provide flexibility for asynchronous collaboration. Both formats share the goal of fostering innovation within a set period, but virtual hackathons enable teams to communicate and submit projects remotely using online tools like chat rooms, code-sharing systems, and project management platforms. This unique feature enhances accessibility, allowing broader participation across the ASEAN region and enabling entrepreneurs and startups from diverse backgrounds to collaborate and contribute innovative solutions.

The ASEAN Pre-Accelerator Hackathon, held entirely online, leverages this format to maximise effectiveness. It supports the formation or development of teams creating initial prototypes in ASEAN Climate Tech Accelerator technology categories, particularly energy efficiency, renewable energy, and other clean energy technology sectors. It accelerates the region's clean energy transition, supports carbon neutrality objectives, strengthens economic resilience, and advances global climate commitments, aligning with global and regional initiatives.

The event is a three-day online programme where startups address real climate technology challenges in ASEAN, transform ideas into business solutions through ideation workshops, prototype their solutions, and pitch to judges for prizes and early support toward accelerator programmes.

Timeline

The programme spans **3 days**, including a one-day preparatory workshop and a final pitch.

WORKSHOP
• DAY 1

Individual participants receive guidance on ideation.

01

HACKATHON
• DAY 2

Teams develop an initial prototype in a given timeframe.

02

PITCH
• DAY 3

Each team pitches solutions, receive judge feedback, and winners are announced.

03
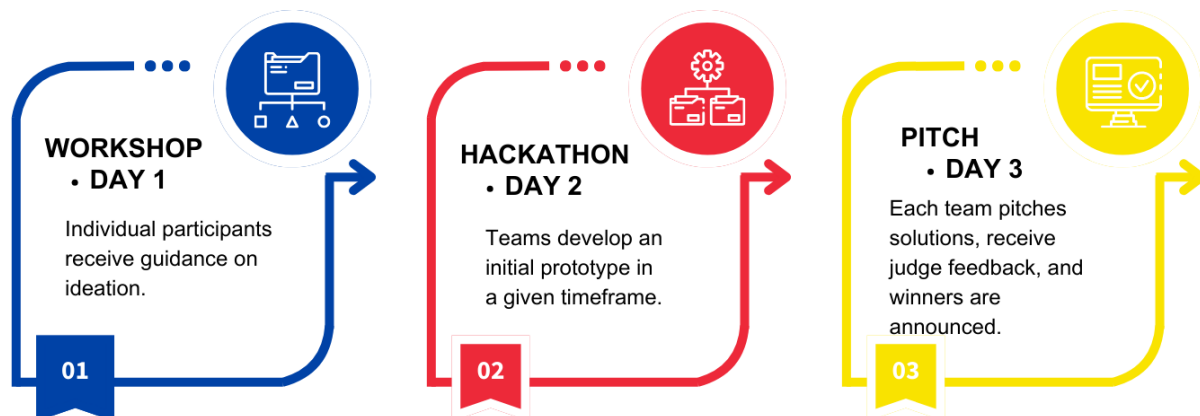
Figure 6: *ASEAN Pre-Accelerator Hackathon Timeline*

As shown in the Figure 6, the three-day ASEAN Pre-Accelerator Hackathon is structured into three key phases: **Workshop, the Hackathon, and the Pitch**. Startups begin with a one-day virtual workshop for initial preparation, incorporating key elements from the Startup Bootcamp. This is followed by the main hackathon event on Day 2. The programme concludes with a final day dedicated to pitching and demonstration, where teams present their solutions.

1 Month before the event

- Define the focus area and scope for the Hackathon.
- Identify the target audience and desired outcomes.
- Develop an event registration webpage and launch promotional campaigns with partner support.
- Select a virtual platform that supports remote collaboration, communication, project submission, and evaluation.

3 Weeks before the event

- Share detailed information about the hackathon's focus with registered startups.
- Recruit mentors and judges to participate in the event.
- Finalise prizes and awards for top-performing pitches and demonstrations.

2 Weeks before the event

- Provide mentors and judges with written guidance on their roles.
- Share clear rules and policies with startups to streamline ideation, execution, and presentation phases, ensuring efficient judging.
- Continue promoting the event online and through partners, encouraging attendees to share their participation on social media.

1 Week before the event

- Reconfirm the participation of all mentors and judges.

1 Day before the event

- Set up the virtual space ready for the Hackathon.
- Conduct a rehearsal by granting teams early access to the software, testing its functionality, and ensuring smooth operations.

Key Roles

The ASEAN Pre-Accelerator Hackathon involves several key roles that are crucial for its success, each contributing to different aspects of the event.

- **Demo Judges**

  The role of a judge during the hackathon's pitch stage is to evaluate the teams' presentations and prototypes. At the conclusion of the event, all teams will demonstrate their prototypes and, if time allows, deliver a brief pitch outlining their solution and its potential impact. Judges will carefully assess each team's pitch and demonstration, providing constructive feedback to highlight strengths and areas for improvement. They will evaluate the teams based on the quality of their solutions, creativity, and overall impact. Following feedback from the judges and voting by the crowd of startups, the judges will collaborate to determine one or more winners, who will be announced and celebrated as the overall hackathon champions.

- **Mentors**

  Since the goal of the hackathon is to develop a functional prototype, it is essential to have mentors who can offer technical support and market-related expertise. Their assistance may range from providing guidance on specific programming tools or virtual prototyping platforms to sharing insights on each team's sector focus within energy efficiency, renewable energy, and other clean energy technology.

- **Chair**

  Tasked with overseeing the comprehensive coordination of the event, which involves collaborating with event partners.

- **Participation & Promotion Lead (Accelerator)**

  This role is responsible for managing the participation of startups and promotion of the event to ensure strong engagement. Responsibilities include overseeing online registration, facilitating smooth check-ins, and maintaining accurate attendance records.

  In parallel, the role involves developing and implementing promotional strategies to enhance visibility—this includes designing key messages, identifying target audiences, creating high-quality promotional materials, and executing multi-channel outreach campaigns. Additionally, the lead will engage with media and key industry players, and coordinate the creation of a post-event press release summarising major discussions, participant insights, and future implications of the programme.

Activity

1. **Workshop Sessions**

   During the workshop sessions on the first day, startups receive essential information and guidance to refine their ideas. They attend online technical and business workshops to help shape their concepts, understand customer needs, and develop business models. These sessions equip startups with the tools to create prototypes and prepare for the hackathon. Startups also brainstorm multiple ideas for products, apps, or services. They evaluate and select the most promising idea to develop into a prototype, considering the limited timeframe. Teams may invite additional collaborators to join and outline the key features and design elements of their chosen solution.

2. **Prototype**

   Each team is given dedicated time and support to work on their solutions and develop functional prototypes. This phase focuses on turning ideas into tangible, innovative solutions. Then, the initial prototype is tested with target customers online. The feedback is used to validate or invalidate the key assumptions and initial prototype.

3. **Consultation and Validation**

   Following the earlier target customer feedback, dedicated consultation sessions with industry expert mentors are conducted. This enables startups to effectively validate their solutions and receive targeted guidance. Mentors provide feedback on the prototypes, suggest improvements, and help refine the business models based on real-world insights. Startups use this expert input to make strategic refinements before the final presentations.

4. **Pitch**

   Each team gives short pitches outlining their solution, which is then followed by an online demonstration of the prototype.

5. **Judge**

   After teams pitch their ideas to a panel of judges, judges will provide constructive feedback. Following feedback from judges and voting by the startups participating in the hackathon, the overall hackathon winner (or winners) is announced and celebrated, marking the culmination of their efforts and innovation.

2) Startup Bootcamp

Introduction

Startup Bootcamps are training sessions that help early-stage startups communicate the key problem they are solving, identify their customers, and convey their unique solution and value. The sessions consist of **seven interactive workshop modules** which culminate in **elevator pitches from each startup**. Importantly, it aims to support the applicants with accelerator application process by strengthening the eligibility of applicants. These sessions can also be an elective mechanism to test a potential mentor or judge for the main accelerator.

In this ASEAN Pre-Accelerator, the Startup Bootcamp will not be conducted as a standalone activity. Instead, its core components are integrated into a simplified, one-day preparatory workshop aimed at enhancing startup readiness before the main Hackathon. This flexible structure allows the selection of pre-acceleration elements based on specific programme needs. As outlined earlier in the Hackathon section, this part provides a general overview of the Startup Bootcamp, which typically spans a longer duration and covers a broader scope than what is delivered in this ASEAN Pre-Accelerator.

Timeline

One to two weeks - consisting of seven sessions of approximately 90 minutes each. However, the duration of this bootcamp may be shortened or omitted, depending on the structure and timeline of the pre-accelerator programme.

Activity

Step 1: Training

The training phase consists of **five interactive workshop sessions**, each approximately 90 minutes long, held over one to two weeks as part of a seven-module programme. During these sessions, startups gain essential knowledge and skills through focused inputs on topics such as business model development and market potential analysis. These sessions equip startups with the foundational tools needed to refine their ideas and prepare for the next stages of the programme. Key business concepts introduced include:

- MVP and the process of validation.
- Technology validation, benchmarking, and prototype development.
- Market analysis frameworks, including Total Addressable Market (TAM), Serviceable Available Market (SAM), and Serviceable Obtainable Market (SOM).

Step 2: Application Business Clinic

Following the teaching sessions, startups move to the Application Business Clinic, which includes **up to two sessions** designed to help finalise their accelerator programme applications. During this stage, mentors provide tailored guidance to early-stage startups, addressing business gaps identified during or before the screening process. The business clinics are confidential one-on-one sessions, lasting 20 to 45 minutes, depending on mentor availability. Startups may be invited to attend one or multiple sessions based on their specific needs.

Key Roles in the Process

The following two roles are essential for facilitating a smooth and effective application business clinic.

- **Applicant Coordinator**: Matches startups with suitable mentors and schedules clinic sessions.
- **Applicant Mentors**: Business experts who provide guidance on critical topics relevant to accelerator screening and judging, such as market potential, intellectual property (IP), and business model refinement. They also assist startups in completing the Accelerator application form through virtual consultations via platforms like Zoom or email.

Areas of Guidance

Startups can seek advice in the following areas:

- Startup Summary: Defining their startup's mission, problem, and solution.
- Capital Estimation: Estimating the external capital required for commercialisation.
- Market & Impact Definition: Identifying target customers and assessing environmental, social, and economic benefits.

Step 3: Pitch and Feedback

After completing all the seven training sessions, startups move on to the pitch presentation stage, where they develop and refine **a two-minute verbal pitch**. This session integrates key learnings from previous modules, helping startups' structure and deliver an effective elevator pitch.

Each startup will present their pitch both verbally and in writing before a panel of four to five volunteer judges. Judges will evaluate the presentations using a standardised score sheet and feedback guidelines, providing insights on areas for improvement. To enhance their pitch effectiveness, startups are encouraged to follow the '**AIDA**' framework (Attention, Interest, Desire, and Action), which is a proven method for crafting compelling pitches, treating the presentation as a concise yet impactful "commercial".

Based on the final pitches and judge feedback, startups will be assessed for readiness to apply for the Accelerator. Startups deemed ready will be connected with an Applicant Mentor for further guidance on completing the Accelerator application form. Those needing additional preparation will receive a personalised summary of key areas for improvement and will continue working with mentors to refine their business concepts.

3) Mini Competitions (Ideathon)

Introduction

Mini competitions, which can also be referred to as Ideathons in this ASEAN Pre-Accelerator activities, are open brainstorming sessions aimed at generating new climate technology solutions. The primary objective of this pre-accelerator event is to facilitate detailed discussions on the best solutions while fostering connections among startups, which could lead to the formation of new teams.

While Ideathons often cover a broad scope, it is recommended that the mini competitions of ASEAN Pre-Accelerator (hereafter Ideathon) focus on specific technology categories or sub-categories within energy efficiency, renewable energy, and other clean energy technology sectors. This targeted approach, combined with guidance from local experts on sector-specific needs and challenges, encourages startups to generate a wide range of ideas addressing a particular market need.

This focused structure offers several benefits: startups gain a stronger grasp of key climate technology areas, such as energy efficiency, renewable energy, and other clean energy technology sectors, which are central to the ASEAN Climate Tech Accelerator, equipping them with the skills needed to scale their business ideas effectively. They also have the opportunity to interact with sector experts, gaining valuable insights and networking opportunities that could spark the development of new business ideas or founding teams. Additionally, the inclusion of prizes and connections to industry partners serves as extra motivation.

While Ideathons may seem similar to hackathons, they are distinct in several ways: Ideathons centre solely on idea generation, whereas hackathons extend to prototype development based on those ideas, and Ideathons are typically shorter, often completed in one day, while hackathons can last up to five days, allowing more time for technical execution.

Timeline

The programme spans **one day** and includes five sessions, with a total duration of four to six hours. However, depending on the pre-accelerator's schedule and structure, the Ideathon could be strategically incorporated—either as a standalone segment or integrated into the Hackathon's pre-workshop—to maximise startup engagement while optimising time and resources.

Activity

An Ideathon is a collaborative brainstorming session, ideally lasting four to six hours but adjustable from two hours to a full day depending on the scope and desired outcomes. To facilitate smooth operation and focused discussions, startups will be divided into breakout rooms starting from Step 2. The Ideathon activities follow a structured five-step process as illustrated in Figure 7.
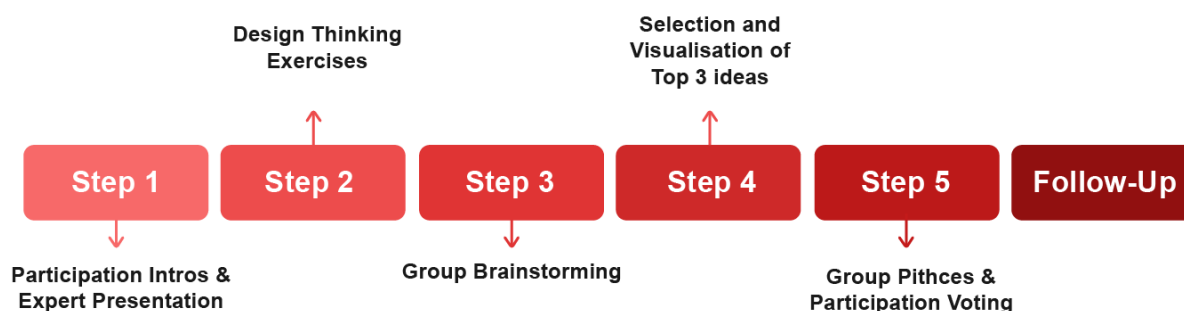
Figure 7: *ASEAN Pre-Accelerator Ideathon Timeline*

1. **Introductions and Context Setting (30 minutes)**:
   The session begins with brief introductions from all participants, followed by a presentation from sector experts. The sector experts will outline the critical climate-related challenges faced by a specific industry or community, with a particular focus on the energy and climate technology sector. This presentation will provide essential context and lay the groundwork for the discussions and activities throughout the workshop.

2. **Ideation Exercises (1 hour)**:
   Before diving into idea generation, the facilitator guides startups through simple 'design thinking' exercises to stimulate creative thinking and encourage collaboration.

   Design thinking is a human-centred problem-solving approach that focuses on developing innovative solutions rather than just defining problems. It uses various models and tools to explore challenges from multiple perspectives, fostering creativity and practical problem-solving.

3. **Idea Generation (2 hours)**:
   Startups will work in small breakout groups to brainstorm as many ideas as they can within a limited time frame (e.g., 20 minutes). The emphasis is on creativity and

generating a wide range of ideas, without focusing on filtering or prioritising them at this stage.

4. **Pre-Selection of Three Best Ideas (30 minutes)**:
Each group narrows down their ideas to the top three most promising concepts and prepares a single slide or diagram to visually represent each idea.

5. **Pitch and Judge (30 minutes)**:
The Ideathon will wrap up with each group presenting their top three ideas to the larger group, with each pitch limited to a maximum of one minute. After all pitches, startups vote on categories such as most promising, most innovative, most impactful, and most unexpected ideas. The focus is on celebrating the diversity of ideas and fostering a spirit of innovation rather than criticising individual concepts.

As a post-Ideathon follow-up, a summary of all ideas generated during the Ideathon should be made available online. Startups are then invited to indicate which ideas they would like to pursue further and how they can contribute to their development. This follow-up ensures that the momentum from the Ideathon translates into actionable next steps.

Key Roles

The Ideathon is a dynamic and collaborative event designed to generate innovative climate technology solutions, and its success depends on the seamless coordination of several key roles. Each role plays a distinct part in ensuring that the event is engaging, productive, and aligned with its goals of fostering creativity, collaboration, and actionable outcomes.

- **Sector Experts**
Sector experts with deep knowledge of energy efficiency, renewable energy, and clean energy markets, as well as technologies can offer valuable insights into the specific challenges and needs within the field. Their role is to provide context and background information that stimulates idea generation among startups, ensuring they avoid pre-judging or restricting potential suggestions.

- **Facilitator**
A skilled facilitator is essential for guiding the session. This individual should have experience in design thinking, ideation exercises, and fostering collaboration to ensure the workshop runs smoothly and effectively.

- **Participant & Promotion Lead (Accelerator)**

  This role involves overseeing the online promotion of the event, collaborating with event partners, and encouraging registered attendees to share their participation on their personal social media channels to amplify outreach.

  Additionally, the accelerator is responsible for managing the online registration process for all attendees. On the event day, they verify attendee registrations and monitor participation to ensure accurate tracking of who has joined the event.

2.5. Resources & Support Materials

Format: AIDA

The AIDA Model is a step-by-step framework that explains how audiences are guided through decision-making, from initial awareness to final action. Originally developed for marketing and sales, the AIDA Framework is also a powerful tool for startups participating in ASEAN Climate Tech Accelerator to craft compelling business pitches and create impactful presentations. By treating the pitch as a focused and persuasive "commercial," entrepreneurs can effectively attract attention, build interest, spark desire, and motivate action from investors, stakeholders, or the general public. This structured approach helps ensure clarity, engagement, and resonance in high-stakes presentations. Startups can structure their pitch as follows:

- **Attention**: Start with a striking statement, question, or statistic to immediately engage the audience.
- **Interest**: Highlight the problem your solution addresses and why it matters, building curiosity.
- **Desire**: Showcase the unique value and benefits of your idea, emphasising its impact.
- **Action**: Clearly state the next step, such as investment, collaboration, or further discussion, to drive the audience toward a decision.

Related material on AIDA can be found below:

Reference

- [AIDA Model: A Step-by-Step Guide - The Marketing Breakdown](#)
- [AIDA for Business Results](#)
- [AIDA: Make Your Words Sell](#)

Total Addressable Market (TAM), Serviceable Available Market (SAM) and the Serviceable Obtainable Market (SOM)

As part of the ASEAN Business Elements, the TAM, SAM, and SOM frameworks provide early-stage climate technology ventures with a structured approach to validating their business models. During pre-acceleration training sessions, startups will learn to estimate their TAM, SAM, and SOM, including an initial breakdown of customer sub-segments within their SOM, to effectively apply these frameworks. Incorporating this methodology enables startups to quantify market opportunities more realistically, focus on attainable targets, and communicate their growth potential more clearly to investors. By understanding the realistic scope of their obtainable market, entrepreneurs can also avoid overestimating demand and instead focus on achievable, data-driven milestones aligned with actual market dynamics.

Reference

- [Understanding TAM, SAM, and SOM: A Crucial Framework for Startups and SaaS Offerings | LinkedIn](#)

Design Thinking

Design thinking is a problem-solving approach that prioritises human-centred solutions, using various models and tools to explore challenges from multiple perspectives. Since gaining recognition in publications like Harvard Business Review (HBR) nearly 15 years ago, design thinking has become a core strategy for many leading businesses seeking to drive innovation and user-focused development.

This method can be adopted during the pre-accelerator phase and introduced by the facilitator to the startups to spur creative thinking and collaboration. Through guided exercises like timed brainstorming and rapid prototyping, teams generate diverse solutions while maintaining a user-centered focus. The process culminates in peer feedback and iterative refinement, ensuring ideas are both innovative and actionable.

Reference

- [What Is Design Thinking & Why Is It Important? | HBS Online](#)

Accelerator

3.1. Key Objectives

Scaling a business requires more than just a great idea or a working prototype—it demands market validation, strategic partnerships, access to funding, and operational efficiency. Accelerators play a critical role in this process by offering structured support programmes that provide startups with mentorship, training, industry connections, and investment opportunities. By guiding businesses through key growth challenges, accelerators help startups and MSMEs refine their business models, attract investors, and establish a strong market presence.

This need for acceleration is especially crucial for MSMEs and startups in the ASEAN region, where rapid economic growth, increasing energy demands, and environmental challenges create both opportunities and obstacles for climate technology ventures. Many startups in ASEAN face limited access to funding, fragmented regulatory landscapes, and a lack of mentorship networks, making it difficult for them to transition from early-stage development to commercial success. The ASEAN Climate Tech Accelerator addresses these gaps by fostering regional collaboration, enhancing business support systems, and promoting climate technology innovation as a driver of sustainable economic growth. It is designed to enhance the scalability and impact of climate technology MSMEs and startups in the energy sector by providing capacity building and technical knowledge development.

A key objective is to equip startups with the skills, resources, and networks necessary to successfully de-risk and scale their ventures, ensuring that innovative solutions addressing challenges in energy, environmental sustainability, and social impact receive the support and recognition they deserve. Another important goal of the programme is to strengthen the capacity of local stakeholders to foster a sustainable climate technology innovation ecosystem. By empowering investors, policymakers, and business enablers, the accelerator programme contributes to the long-term growth and success of local climate technology enterprises. The ASEAN Climate Tech Accelerator aims to support 20 to 30 MSMEs and startups across the ASEAN region, with 40% being woman-led, in commercialising their climate technology solutions. Additionally, it targets around 60 participants, with at least 40% women, to engage in a business matchmaking event following the accelerator.

To achieve these objectives, this accelerator guidebook serves as a practical tool for the effective operation of the ASEAN Climate Tech Accelerator, providing a standardised platform and methodologies that can be adapted across AMS. By facilitating collaboration and knowledge transfer among participating ventures, the programme supports business expansion within and beyond ASEAN, enabling climate technology MSMEs and startups to scale successfully.

3.2. Eligibility Criteria

Eligibility criteria act as fundamental prerequisites that startups must meet to qualify for the **selection process of the accelerator** programme. These criteria help streamline the applicant pool by disqualifying those who do not meet the necessary standards. Only applications that pass this initial eligibility screening should be forwarded; this step is also important to ensure that the workload remains manageable for volunteer judges.

The screening process serves as an initial review to ensure applicants meet all eligibility requirements. To streamline the process, screening should commence on a rolling basis as soon as applications are submitted, rather than waiting until the application deadline. This rolling approach allows applicants to address any issues, revise their submissions, and resubmit if necessary. To facilitate this, a screening committee must be established and fully operational before the accelerator application period begins. To facilitate this, a screening committee—comprising a balanced mix of technical, business, and gender-inclusivity experts—must be established and fully operational before the accelerator application period begins, to ensure balanced evaluations. The eligibility requirements are outlined as follows:

Eligibility Criteria for the ASEAN Climate Tech Accelerator (Initial Screening)

1. Technology Category

Applicants must operate within the energy efficiency, renewable energy, and other climate technology sectors. Focusing on these sectors ensures alignment with ASEAN's goals of accelerating the clean energy transition, reducing energy demand, enhancing energy security, and addressing pressing environmental challenges in the region. To further encourage innovation, applicants are also welcome to propose cross-sector solutions that intersect with clean energy, such as circular economy approaches that reduce waste and improve energy efficiency. These synergies can help amplify impact and align with broader sustainability goals across the region. Each country may further prioritise specific sub-sectors based on national priorities and market conditions. For example, this could include e-bikes within the transportation sector or off-grid energy access under renewable energy solutions to address local energy needs effectively. The references of climate tech products are outlined in the Annex.

Additionally, the technology stage should range from proof of concept to pre-commercialisation/early commercialisation to ensure that proposed solutions have undergone initial validation and possess a clear pathway toward practical implementation. A proof of concept typically demonstrates the core functionality of a solution in a controlled environment—such as a lab-scale prototype, pilot simulation, or feasibility study—and confirms that the underlying innovation is technically viable. This criterion helps ensure that the technologies are sufficiently developed to benefit from industry engagement and market access opportunities while still requiring support to optimise deployment and scale effectively.

2. Stage of Development

To ensure startups receive appropriate support, it is essential to assess their stage of development during the application process. The TRLs and BRLs framework are widely used for this purpose and serves as a key screening tool for both the pre-accelerator and accelerator programmes. The chosen readiness criteria in ASEAN Climate Tech Accelerator are designed to be flexible and inclusive, allowing a broader range of early-stage startups—especially those still navigating early development hurdles—to participate and benefit from the accelerator. Figure 8 below outlines the required TRL and BRL criteria for the ASEAN Climate Tech Accelerator.

Figure 8: *Accelerator Eligibility Criteria Based on TRL & BRL*

Note. The descriptions are adapted from *Technology Readiness Level* and *Business Readiness Level*, by KTH Innovation, 2018.

For technology readiness, startups eligible for the accelerator should have progressed beyond basic research and concept formulation (below TRL 3), and achieved at least proof of concept (TRL 3), where the technology's core functionality has been demonstrated in a controlled setting. They should not have advanced beyond a validated prototype in a relevant environment (TRL 6). This range ensures inclusiveness while enabling the accelerator to deliver support focused on technical validation, product refinement, and commercialisation strategies.

Regarding business readiness, eligible startups should have moved beyond idea validation (BRL 1–2) and reached early market validation (minimum BRL 3), where they have begun interacting with real customers and testing their solution in the market. They should not yet have achieved full commercial rollout (beyond BRL 6). This stage indicates the startup is exploring a scalable model, has some initial traction, and is ready to benefit from structured support—but does not require a fully operational business. The chosen range lowers the entry barrier while focusing the programme on helping early ventures strengthen their market readiness.

To demonstrate the readiness levels above, applicants are encouraged to provide examples of market traction. This may include pilot agreements, which indicate engagement with prospective customers or partners and early market interest. Additional supporting materials may include client or customer referrals and video demonstrations. Letters of Intent (LOIs) may also be submitted on an optional basis.

3. Location of Startups and Operations

Applicants must have a physical presence in AMS, meaning key business activities such as sales, marketing, research & development, and administration should be based in that country. Remote teams may be considered eligible if the core team includes citizens or residents of an AMS and key operations are demonstrably anchored in the region. Additionally, teams are not allowed to participate in multiple ASEAN accelerator programmes within the same time.

4. Team and Related Issues

To apply, startups must have a team of at least two members, as individuals are not eligible. The majority of team members (50% +1) must be citizens of AMS, and at least one member must be a resident, citizen, or legal alien of the country where the application is submitted. While teams are welcome to apply, any prize money or in-kind services awarded must be received by a registered legal entity (e.g., a limited corporation) rather than an individual. This prevents potential conflicts, such as a team member leaving and claiming sole ownership of the award. Additionally, applicants must not have any conflicts of interest related to IP ownership, business partnerships, or ties to the accelerator's organising body. If a conflict arises—such as disputes over IP rights or direct affiliations with programme staff—it will be reviewed by a committee of stakeholders and legal experts. If the issue cannot be resolved, the application may be rejected.

5. Intellectual Property (IP)

Since the accelerator programme promotes climate technology innovation and entrepreneurship in ASEAN, applicants must demonstrate exclusive ownership or secured access to the IP relevant to their venture — this includes patents, trademarks, copyrights, and trade secrets. To further support participants, additional guidance on IP ownership may be provided after the programme in partnership with external IP advisors.

If a certain IP is not yet available, applicants must demonstrate the potential to generate an original IP rather than rely on replicating existing ideas. Many startups often struggle to effectively communicate that they have patentable innovations either in development or already in place. To address this, it is essential to provide applicants with the opportunity to clarify their IP status, ensuring they are not disqualified solely due to concerns about their IP.

6. Gender-Inclusivity

To advance gender-inclusivity within the accelerator cohort and participating startups, the programme encourages participation from women-led businesses and aims to ensure that at least 40% of accelerator startups are women-led enterprises. Applicants are encouraged to demonstrate efforts to integrate gender considerations into their team composition, leadership roles, and business operations. Startups should highlight how their products or services support or empower women, either as end-users, employees, or community beneficiaries. Applicants are also encouraged to present metrics for gender-responsive solutions, such as products that serve women entrepreneurs or contribute to reducing gendered energy poverty. This focus aligns with ASEAN's broader commitment to gender equality and inclusive growth in the energy transition. Gender inclusivity will be considered as a contributing factor during both screening and judging stages, though it is not a disqualifying requirement.

Additionally, applicants who do not pass the initial screening should be offered pre-acceleration support in the next accelerator cycle. This ensures that all startups can benefit from the resources and guidance provided by the accelerator, even if they are not yet ready for the full programme. By integrating pre-accelerator with the main accelerator programme, the initiative can more effectively address the diverse needs and priorities of entrepreneurs, fostering their growth and increasing their chances of future success.

3.3. Application & Screening Process

Pre-Screening Preparations

Before the screening process begins, key preparations must be made to ensure a fair and efficient evaluation of applicants. This includes **operational preparation** as well as **finalising documentation** related to eligibility and selection criteria. At least two months are needed to allow sufficient time for outreach, recruitment, and finalising key documents.

1) Operational Preparation

Recruitment of Screening & Judging Teams

The recruitment process for screening and judging teams ensures qualified, unbiased, and constructive evaluation of accelerator applicants. The following sections outline the specific roles and criteria for these teams, detailing their responsibilities and the qualifications required for effective participation.

- The screening team comprises PMU staff (including representatives from ACE), partners, and volunteers, who conduct due diligence to verify that all applicants meet both national and global programme requirements.
- The judging panel is responsible for scoring applications, providing feedback, and selecting startups for the accelerator. Ideally, each application should be reviewed by at least three to four judges. Criteria for recruiting judges can be summarised as follows:
  - Business & Industry Expertise
    Judges should have strong knowledge of business development, team evaluation, technology assessment, product viability, and market potential within the industry.
  - Commitment to Fair & Constructive Evaluation
    Judges must provide detailed written feedback alongside numerical scores to help applicants identify areas for improvement.
  - Independence & Unbiased Judgment
    To maintain fairness, round one judges should not participate in later rounds, preventing familiarity with applicants that could lead to bias or inconsistencies in scoring.
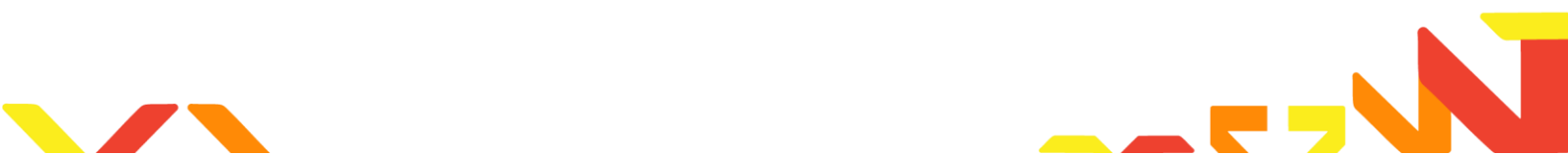
Briefing Sessions for Round One Judges

Once round one judges are confirmed, they should engage in a series of online briefing sessions, which can be conducted as live virtual webinars or through pre-recorded videos. These sessions provide a comprehensive overview of the accelerator timeline, technology categories, eligibility criteria, selection process, and judging procedures. To facilitate seamless execution, essential materials such as judging instructions, selection criteria, and the judging rubric should be made available online in advance of the briefing sessions.

Marketing & Outreach Plan

A strong marketing and outreach strategy is essential for attracting high-quality applicants and ensuring broad visibility for the accelerator programme. This includes targeted promotional activities such as webinars, online campaigns, and collaborations with ecosystem partners to engage startups, entrepreneurs, and industry stakeholders across ASEAN. Additionally, leveraging social media through regular updates and strategic content on local platforms like Facebook and LinkedIn groups can ensure sustained awareness and participation. Creating networks of universities, research institutes, and industry associations can also further expand outreach and help attract quality applicants.

2) Finalising Documentation & Legal Agreements

Documentation of Key Criteria

All necessary documents related to eligibility, selection criteria, and judging guidelines must be finalised before screening begins. This involves completing all eligibility and selection criteria documentation, finalising legal agreements for participating startups, mentors, and judges (including conduct guidelines, confidentiality agreements, and media release clauses), and ensuring clear descriptions of the technology categories for the ASEAN Climate Tech Accelerator. This programme includes specific gender-inclusivity priorities, aiming that 40% of startups are women-led businesses. The checklist of required documents is as follows:

- Clear descriptions of technology categories for the ASEAN Climate Tech Accelerator.
- Judging score sheets and comprehensive eligibility criteria.
- Example interview questions for screening shortlisted applicants.
- Draft acceptance and rejection letters/emails to be sent by PMU.

- Legal agreements for participating startups, mentors, and judges, covering code of conduct, non-disclosure of confidential information, and media release clauses.

3) Benefits for Early Applicants

Additionally, it is recommended that immediate benefits be offered to early applicants to encourage early submissions and improve the overall quality of applications. Incentivising early applications not only helps startups avoid last-minute rushes but also reduces the workload for the PMU staff and screening committee. **Benefits for early applicants** may include:

- Extended Support: Opportunities to resolve issues and resubmit applications with improved quality.

- Early Exposure & Networking: Featured spot in promotional materials (website, social media, newsletters) and access to a private online networking group (e.g. WhatsApp, LinkedIn) to connect with fellow startups or other applicants.
- Advance Notification Advantage: Regular updates on application status for innovations that meet eligibility criteria, enabling better preparation for next steps.

4) Screening Committee

The screening committee, formed by the PMU and comprising its members, stakeholders, or mentors, will assess whether applications meet the basic eligibility criteria. Each application will be reviewed by at least two committee members, with a third member stepping in if there is disagreement about an applicant's suitability.

If any part of the application is incomplete, the applicant will be contacted and requested to provide the missing information. PMU staff (or volunteers) will oversee this process, ensuring all required documents and details are complete. For applicants who fall significantly below the eligibility criteria or have substantial flaws that cannot be resolved within the given timeframe, they will be directed to pre-acceleration support for further development.

Above all, it is crucial to promptly address any inquiries startups may have about the application process. To achieve this, PMU staff play a vital role in providing timely responses to applicants' questions. A dedicated phone number, email address, and social media contacts should be made available and accessible to all PMU members. Additionally, developing a comprehensive Frequently Asked Questions (FAQ) section can help streamline the process

by reducing repetitive requests and improving overall efficiency. The FAQ will be accessible online via the Accelerator website or social media and regularly updated. Furthermore, promptly acknowledging applications and notifying applicants as early as possible, when necessary, will help prevent potential disqualifications due to unmet criteria.

Once these preparations are finalised, the screening process, which consists of three main stages, can officially commence. The templates and examples of the aforementioned documents are available throughout this guidebook.

Application Screening

Round One Judging

After eligible applicants are identified through the initial screening, as explained in the earlier section (3.2 Accelerator Criteria), they proceed to Round One Judging for further evaluation. This round plays a crucial role in assessing the overall readiness and potential of the startups, during which their submitted applications are reviewed and scored based on predefined evaluation metrics. To ensure that selection criteria are as transparent as possible, the criteria must be openly available to applicants throughout the entire screening process.

Judging Criteria

The key judging criteria in round one to screen applicants is focused on four key areas: team, technology, product and market. These criteria ensure a balanced evaluation of both the solution and the team's capacity to deliver it.

1. **Team Credibility and Commitment**
   This assesses whether the team has the expertise and dedication to successfully develop and scale the project.
   - Do they have the necessary skills in product development and customer engagement, particularly for ASEAN markets?
   - Are there at least two members who can commit the equivalent of one full-time founder's effort to ensure sustained progress?

2. **Innovation and Technology**

This focuses on how original and applicable the proposed technology is, particularly in the ASEAN context.

- Is the technology either entirely new or applied in a unique way that addresses ASEAN-specific challenges?
- Does the team have the rights and freedom to use and commercialise the technology within ASEAN countries?
- Do they own IP that can be protected in ASEAN jurisdictions? If not, do they have a clear plan to acquire and commercialise it?

Note for Judges:

- Avoid rejecting applicants solely based on IP concerns without giving them a chance to clarify. Many startups in ASEAN may have additional innovations in development but may not explain them clearly in their applications.

3. **Product Impact**

This considers how effectively the product solves critical problems and contributes to sustainable development.

- Does it solve a significant national or regional challenge in ASEAN, especially within energy efficiency, renewable energy, and clean energy technology sectors?
- Does it have the potential to reduce greenhouse gas emissions or deliver other environmental benefits, such as improving air or water quality?
- Does it align with and contribute to at least one of the United Nations SDGs?

4. **Market Potential and Scalability**

This evaluates the economic growth potential of the venture and its ability to scale across markets.

- Does it have the potential to contribute meaningfully to the gross domestic product (GDP) of ASEAN countries?
- Can it create a substantial number of jobs, particularly in underserved or rural areas?
- Can it provide detailed projections and a clear path to revenue generation and profitability, demonstrating potential for scalable growth relevant to ASEAN economies?
- Does it have the potential to expand into global markets, leveraging ASEAN as a strategic base?

Scoring Methodology

Based on the criteria above, judges will be asked to score each applicant on a 5-point Likert Scale of 1 (lowest) to 5 (highest) for each criterion. In addition to the numerical score for each criterion, judges are asked to provide detailed feedback as to specifically where and how they think the team needs to improve. The feedback can be provided to express what they like about their application, as well as the areas for improvement. This hybrid evaluation system, ensuring both objective scoring and subjective feedback, can ensure a more comprehensive assessment.

Numerical Score (1-5)	Descriptive Score
5 - Maintain Strong Performance	e.g. Keep up your current efforts and focus on other areas for improvement
4 - Nearing Excellence	e.g. Enhancements in specific areas could further strengthen performance
3 - Balanced Progress	e.g. Key areas for improvement include [.....]. Addressing these will boost overall effectiveness.
2 - Needs Improvement	e.g.. Additional effort is required in this area. Prioritise [.....] to enhance performance.
1 - Significant Enhancements Required	e.g. Significant Enhancements Required (Major work is needed, particularly in [.....], to meet expected standards.

Figure 9: *Scoring Criteria for the Screening Process*

Using the scoring criteria outlined in Figure 9 above, the round one Judging Committee will conduct a thorough evaluation and assign scores to each application. Applicants will receive detailed feedback, their scores, and rankings through formal judging score sheets. Following this process, the highest-ranked applicants will be selected for the accelerator cohort, and selected startups will be asked to confirm their participation and time commitment via the acceptance email. In total, 20 to 30 startups will be selected through this comprehensive process to join the ASEAN Climate Tech Accelerator cohort.

3.4. Key Evaluation Criteria

The eligibility requirements and judging criteria outlined in the previous sections of the application and screening process will serve as the foundation for the key evaluation criteria in this section. Integrating these criteria ensures a holistic assessment of startups, aligning their innovation, business viability, scalability, and team strength with the accelerator's objectives. This comprehensive approach helps identify ventures with the highest potential for impact, market success, and long-term sustainability.

Innovation & Climate Impact/SDG Alignment

Startups must demonstrate strong technological innovation with a unique value proposition and clear differentiation from competitors, including intellectual property or other unfair advantages. Solutions should align with **SDG 7** and **SDG 13**, generating measurable environmental and social benefits such as enhanced energy access, reduced CO_2 emissions, and improved water efficiency.

Evaluation will consider the net impact of the solution compared to existing alternatives, the scalability of benefits over time, and how effectively it addresses key SDGs. Startups should also estimate the social impact of their venture, such as job creation and livelihood improvements, and quantify environmental impacts across their product development, manufacturing, and distribution where possible.

Business Viability & Market Potential

Startups should present **a well-validated business model** with clear revenue streams, strong customer demand, and a proven market fit. They must demonstrate market attractiveness, including an understanding of market size, growth potential, barriers to entry, and expansion opportunities in local, regional, or global markets.

Key factors include the stage of product development, such as the presence of a MVP, prototype, early adopters, or other forms of validation.

Scalability

Startups must have a replicable and scalable business model with the potential for significant expansion. This includes readiness to:

- Enter new markets

  A scalable startup should have a clear strategy for expanding into new markets, whether within ASEAN or globally. This includes understanding market dynamics, regulatory requirements, cultural differences, and customer preferences in target regions. Startups should demonstrate a well-defined market entry strategy, considering factors such as local partnerships, distribution channels, pricing models, and competitive positioning. The ability to adapt the solution to different market conditions while maintaining its core value proposition is crucial for sustainable growth.

- Strategic partnerships

  Collaboration with industry players, governments, investors, and technology providers can significantly accelerate a startup's growth. Startups should demonstrate a strong network and the ability to form strategic alliances that enhance their value chain, from product development and manufacturing to distribution and market adoption. Partnerships can also facilitate technology integration, knowledge sharing, and access to new customer segments. Special emphasis will be placed on collaborations that enable sustainable growth.

- Secure long-term investment

  For sustained scalability, startups must have a clear financial strategy to attract and secure long-term investment. This includes a well-articulated funding roadmap, showcasing past fundraising success (if any), potential investor interest, and a defined plan for utilising investment capital effectively. Startups should highlight key financial metrics, such as revenue projections, customer acquisition costs, and profit margins, demonstrating their ability to achieve financial sustainability.

The evaluation will also assess whether the business has a well-defined supply chain, distribution channels, marketing strategy, and customer relationship framework to support sustainable scaling.

Founding Team & Expertise

A strong, experienced team with the technical knowledge, business acumen, and leadership capabilities necessary to execute the startup's growth strategy. The following are the key areas of expertise required for a successful founding team:

- Team Composition and Industry Experience

  A well-rounded founding team with diverse skill sets increases the likelihood of success. This includes technical expertise in product development, business knowledge for scaling operations, and market insights to navigate competitive landscapes. The team's industry experience and prior entrepreneurial background will be assessed to determine their ability to anticipate challenges, seize opportunities, and drive long-term growth.

- Strategic Agility & Growth Management

  Founders must adapt to market shifts, regulatory changes, and customer needs while maintaining a clear vision. They should pivot strategies when needed, attract investors, and demonstrate strong financial management. As the startup scales, the team must build and manage larger teams, optimise processes, and ensure sustainable growth.

- Quality of the Pitch
  A startup's ability to effectively communicate its vision, business model, and market potential is a key indicator of its success. Founders should demonstrate strong presentation skills, the ability to answer critical business and financial questions, and a compelling narrative that inspires confidence in their ability to execute their plan. A well-prepared pitch indicates not only the team's preparedness but also their strategic thinking and investor readiness.

3.5. Accelerator Activities

Timeline

Figure 10 below outlines the proposed timeline for the ASEAN Climate Tech Accelerator. The exact dates and durations may be subject to change based on operational adjustments, stakeholder availability, or project priorities.
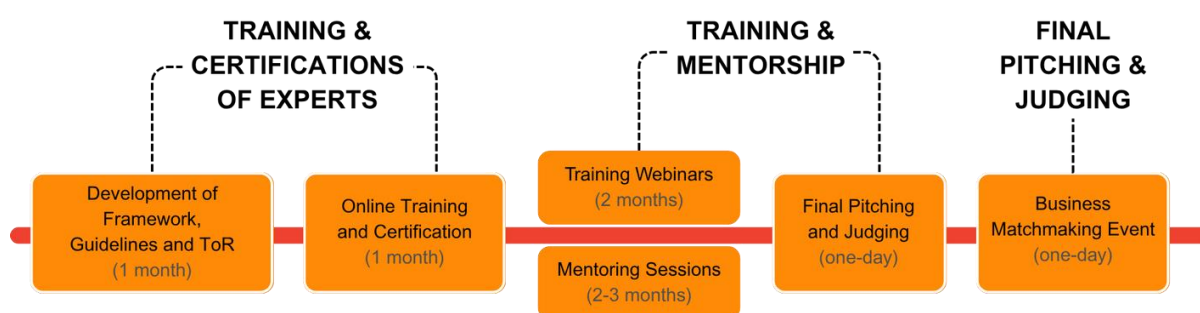
Figure 10: *Timeline of Accelerator Activities*

Training and Certifications of Experts - Trainers, Mentors and Judges

Objective

This initiative aims to strengthen the expertise of trainers, mentors, and judges in climate technology innovation and entrepreneurship by providing a structured online training and certification programme. To achieve this, online training and certification will be provided for a group of 20 climate technology innovation and entrepreneurship experts (trainers, mentors, and judges) to support the AMS Accelerator Programme. This initiative will contribute to capacity building and technical knowledge development, helping MSMEs and startups scale their climate technology businesses more effectively. Additionally, the programme prioritises gender inclusivity, ensuring that at least 40% of certified experts are women.

Timeline

The process will take **up to two months**, including framework design, material preparation, and a series of one- to two-hour online training and certification sessions.

Overview

The Training and Certification process is structured into **four key stages** as follows:

1. **Development of Training and Certification Framework**
   - Design a detailed syllabus for training and certification of climate technology innovation and entrepreneurship experts (trainers, mentors, judges)
   - Develop gender-responsive training and certification materials, including:
     – Course introduction and objectives
     – Training outlines and slides
     – Worksheets/templates, course notes, and exercises

2. **Establishing Assessment and Certification Guidelines**
   - Define selection criteria for trainers
   - Document assessment criteria for certifying and qualifying trainers
   - Design certification templates

3. **Terms of Requirements (TOR) for Climate Technology Innovation and Entrepreneurship Experts**
   Recruit 5 trainers, 10 mentors, and 5 judges, ensuring at least 40% women experts.

4. **Implementation of Online Training and Certification**
   - Trainers: Conduct a minimum of 1-hour online training and certification session
   - Mentors: Conduct a minimum of 1-hour online training and certification session
   - Judges: Conduct two 1-hour online training and certification sessions
     – One training session before competition round one
     – Another session before round two

Activities

1. **Mentor Selection Criteria for the ASEAN Climate Tech Accelerator Programme**

    Selecting the right mentors is a crucial step in ensuring the success of the ASEAN Climate Tech Accelerator Programme. Mentors play a key role in guiding and supporting early-stage startups, helping them refine their business models, develop market strategies, and navigate the challenges of scaling a climate technology startup. To maintain a high standard of mentorship, all mentors must meet the following selection criteria before participating in the programme:

    *   **Proven Expertise**: Does the mentor have demonstrated expertise in their respective field, with a strong track record in climate technology, entrepreneurship, investment, or corporate leadership?

    *   **Entrepreneurial & Business Success**: Have they succeeded as a serial entrepreneur, investor, or corporate executive, bringing valuable industry insights and experience?

    *   **Experience in Mentorship**: Have they previously mentored early-stage startups, showing an ability to effectively guide and support startup founders?

    *   **Understanding of the ASEAN Climate Tech Accelerator**: Do they comprehend the ASEAN Climate Tech Accelerator framework and recognise how mentoring in this programme may differ from other mentorship initiatives they have participated in?

    *   **Commitment to the Accelerator Methodology**: Are they open to learning about the ASEAN Climate Tech Accelerator's process, methodologies, and mentorship best practices, or do they prefer to operate independently, following their own approach?

    *   **Conflict of Interest Consideration**: Are they free from potential conflicts of interest that could affect their ability to provide unbiased guidance to startups?

    *   **Recommendations & Network Endorsements**: Have they been nominated or recommended by a current mentor, judge, accelerator alumnus, partner, or stakeholder within the ASEAN Climate Tech Accelerator ecosystem?

    *   **Commitment to Ethnic and Gender Diversity:** Does the mentor community reflect the diversity of accelerator participants? Ensuring a balanced mix of mentors from different backgrounds strengthens networking, inclusivity, and role modelling for underrepresented startups.

2. **Training Manuals for Climate Technology Experts**

The online training for mentors will be conducted in two distinct sections, each designed to maximise the effectiveness of the training: a presentation session and an interactive group training. The presentation session serves as an introduction, providing an overview of the accelerator programme, including details about partners, staff, timelines, key deliverables, and mentor roles and expectations. The interactive group training, on the other hand, encourages active participation from both mentors and accelerator staff. During these sessions, mentors have the opportunity to learn from experienced mentors, seek advice, and engage in open question and answer (Q&A) to address any questions about the mentoring programme.

3. **Certification for Climate Technology Experts**

To ensure consistency and expertise, trainers, mentors and judges must undergo specific certification processes, which are outlined as follows:

- Trainers and mentors are required to complete <u>a minimum of one 1-hour online training and certification session</u>.
- Judges must complete <u>two separate 1-hour training and certification sessions</u> to ensure alignment with the programme's standards.

Webinars and Training

Introduction

Climate technology startups are given a series of online webinars that cover various elements of their business. A balanced mix of presentations and interactive formats is planned to encourage deeper engagement with more emphasis on interactive sessions—such as workshops, group discussions, and peer learning—to complement the core presentations and enhance participant collaboration. As they cover core topics for startups from all the ASEAN countries, all training sessions are held in English.

Teams that are unable to join a webinar can access a video recording of the session online usually within 24 hours of the session concluding. Detailed deliverables of the online training webinars are summarised in Figure 11.

Week	Presentation (Lecture Sessions)	Interactive Sessions
Week 1 : Business Validation & Market Entry and Expansion	• Business Model Innovation & Validation • Product/Market Fit • Product/Technology Validation • Target Markets & Entry Strategies • Global Expansion	• Interactive Workshop: Business Model Canvas Development • Quiz: Product/Market Fit Scenarios • Customer Discovery & Development Review • Role-Play: Market Entry Simulation • Group Project: Entry Strategy Pitch
Week 2 : Funding & Investment	• Finance and Funding Overview (General Finance & Legal Issues) • Private Investment Options (Angel Investment & Venture Capital) • Alternative Funding Strategies (Crowd Funding & Project Finance)	• Peer Feedback Session: Funding Pitch Practice • Pitching Activity: Elevator Pitch for Funding Types
Week 3 : Partnerships & Governance	• Government Relations, Regulations, and Funding • The Team & The Board	• Corporate Partnership Workshop: Stakeholder Mapping Exercise • Quiz: ASEAN Regulatory Challenges
Week 4 : Sustainability & Impact	• Sustainability: An Introduction • Tracking and Monetising Impact	• Group Discussion: Measuring Social Impact • Group Project: Sustainability Impact Plan
Week 5 : Intellectual Property & Strategy	• IP Protection & The Strategy	• Case Study Analysis: IP Challenges in ASEAN
Week 6 : Pitching & Communication	• Executive Summary & Investor Presentation	• Investor Pitch • Mock Pitch Competition with Peer Reviews • Pitching Activity: Rapid-Fire Idea Pitches

Figure 11: *Overview of Online Training Webinars*

Timeline

2 months

The webinars are held for all countries of ASEAN over a period of approximately 2 months. The webinars take place 2 to 3 times per week depending on national holidays and the preferences of the participating countries and each session lasts approximately one hour. The exact number of webinar sessions will be determined based on the specific needs of each startup, mentor availability, and other relevant factors.

Activity

The topics outlined below are intended for inclusion in the training webinars; however, coverage may vary depending on the accelerator's schedule and operational priorities.

Week 1: Business Strategy & Validation, Market Expansion & Entry

- Business Model Innovation & Validation
- Product/Market Fit
- Product/Technology Validation
- Target Markets & Entry Strategies
- Global Expansion
- Interactive Workshop: Business Model Canvas Development *Interactive session
- Quiz: Product/Market Fit Scenarios *Interactive session
- Customer Discovery & Development Review *Interactive session
- Role-Play: Market Entry Simulation *Interactive session
- Group Project: Entry Strategy Pitch *Interactive session

Week 2: Funding & Investment

- Finance and Funding Overview (General Finance & Legal Issues)
- Private Investment Options (Angel Investment & Venture Capital)
- Alternative Funding Strategies (Crowd Funding & Project Finance)
- Peer Feedback Session: Funding Pitch Practice *Interactive session
- Pitching Activity: Elevator Pitch for Funding Types *Interactive session

Week 3: Partnerships & Governance

- Government Relations, Regulations and Funding

- The Team & The Board

- Corporate Partnership Workshop: Stakeholder Mapping Exercise *Interactive session

- Quiz: ASEAN Regulatory Challenges *Interactive session

Week 4: Sustainability & Impact

- Sustainability: An Introduction

- Tracking and Monetising Impact

- Group Discussion: Measuring Social Impact *Interactive session

- Group Project: Sustainability Impact Plan *Interactive session

Week 5: IP & Strategy (Optional)

- IP Protection & The Strategy

- Case Study Analysis: IP Challenges in ASEAN *Interactive session

- Please note that participation in this session is optional, as the urgency of IP protection may vary for different participating startups.

Week 6: Pitching & Communication

- Executive Summary & Investor Presentation

- Investor Pitch *Interactive Session

- Mock Pitch Competition with Peer Reviews *Interactive Session

- Pitching Activity: Rapid-Fire Idea Pitches *Interactive Session

Mentorship

Objective

Mentoring is a critical component of the accelerator programme, providing startups with expert guidance, industry insights, and strategic advice to help them overcome challenges and refine their business models. Through mentorship, startups gain access to experienced professionals who can offer tailored support, networking opportunities, and actionable recommendations to accelerate their growth. Mentorship fosters collaboration, learning, and problem-solving, equipping startups with the knowledge and confidence to scale their ventures effectively.

The main objective of mentorship is to provide inputs and guidance for accelerator startups. At least **three mentorship sessions** will be organised, where mentors will work closely with startups to assess their business strategies, market positioning, and investment readiness. The accelerator will provide a range of online mentoring formats to support startups, including one-on-one virtual sessions for tailored guidance, and group mentoring where startups with similar focus areas can learn collaboratively. The syllabus of the three mentorship sessions is as follows:

	Mentorship Session	Description
Session 1	Problem-Solution Fit	• Customer Discovery • Product Validation & Solution Development • Problem-Solution Fit Frameworks
Session 2	Pulse Check & Progress Review	• Identifying any Roadblocks • Analysing Key Metrics and Performance Indicator • Developing Strategies for Optimisation
Session 3	Pitching & Matchmaking Preparation	• Pitch Deck Review for a Compelling Deck and Narrative • Preparation for Investor Q&A

Figure 12: *Syllabus of Mentorship Sessions*

Live Expert Q&A sessions with industry leaders will also give startups the opportunity to receive targeted advice and insights in real time. These sessions will be structured to address specific challenges, provide constructive feedback, and ensure that startups are well-prepared to engage with investors and strategic partners. Specific topics covered in each session will be aligned with the evolving needs and challenges of participating startups to ensure relevance and impact.

Timeline

Mentoring sessions will be conducted over a period of up to **three months**. Prior to the sessions, a preparatory phase of at least one month is required, which includes activities such as mentor recruitment, development of training resources, and other necessary preparations.

ASEAN Mentoring Methodology

The ASEAN Mentoring Methodology focuses on creating an effective and inclusive mentoring environment through several key strategies, which include:

- **Incentive**:
  To recognise the valuable contributions of mentors, it is highly recommendable to offer incentives aligned with their motivations, including:
  - Exclusive networking events at regional and national levels
  - Regular training sessions, workshops, and webinars on mentoring best practices, industry trends, and technological advancements
  - Access to facilitated connections and introductions within the mentor alumni network

- **Recognition**:
  Recognition can serve as a powerful incentive for mentors, helping to ensure their ongoing engagement and reducing the resource burden of recruiting and training new mentors annually. Key recognition strategies include:
  - Certificates of appreciation or thank you letters from ACE and/or UNIDO
  - Peer recognition and positive feedback from mentees
  - Media coverage highlighting their contributions
  - Honorarium provided to mentors, where feasible, as a token of appreciation for their time and expertise

- **Gender/Ethnic Diversity**:
  Ensuring diversity among mentors is just as critical as fostering diversity among startups. Prioritising gender and ethnic diversity within the mentor pool enriches perspectives, promotes inclusivity, and strengthens the overall impact of the programme.

Mentor Recruitment

To build a strong mentor pool, leverage diverse channels and partnerships. Alumni networks and referrals are particularly effective, as they often yield candidates with proven mentoring experience and expertise in their fields. While recruiting startups may involve broad outreach (e.g., social media), focusing on referrals from universities, incubators, venture competitions, and other accelerators can save time and ensure high-quality mentors.

Additionally, it is important to leverage the mentors already identified for the accelerator during pre-acceleration activities, where possible. This approach ensures efficiency by eliminating the need to identify separate mentors for pre-acceleration and accelerator activities, thereby seamlessly integrating the two phases.

Mentor Roles/Types

Each team is paired with generalist mentors and has access to a network of specialist mentors. Generalist mentors are seasoned professionals with success in climate technology industries or innovation-driven startups, while specialist mentors offer deep expertise in specific functional areas. Ideally, each startup is supported by two generalist mentors and one specialist mentor.

- Generalist mentors
  - Dedicate at least one hour per week to provide guidance and feedback on all aspects of the business.
  - Participate in education and training events alongside the team to offer ongoing support.
  - Act as a taskmaster to ensure teams meet key deadlines and milestones.
  - Collaborate with specialist Mentors to deliver targeted coaching tailored to each team's needs.
- Specialist mentor
  - Provides expert feedback during Business Clinics, where teams present specific functional aspects of their businesses.
  - Offers expertise in critical areas, including:
    - o Finance: Financial modelling, Profit & Loss development, and performance benchmarking.
    - o Marketing: Positioning, pricing, value proposition development, product launch, and strategic partnerships.
    - o Engineering: Product development, architecture, innovative design, and design for manufacturability.
    - o Fundraising: Strategies for securing venture capital and other funding.
  - Works closely with generalist mentors to deliver functional coaching as required by the teams.

Mentor Training

To ensure the quality and effectiveness of mentorship, new mentors should only be accepted into the accelerator after completing a mandatory training webinar. This training can be supplemented with follow-up sessions after their active participation in regular mentoring activities. Additionally, periodic reviews with their assigned mentees and the PMU can encourage mentors to engage responsibly and enhance their skills as capable and committed mentors.

Rules and Guidelines

For a successful mentorship programme, it is essential that both mentors and mentees understand and comply with the established guidelines. Specific rules and guidelines are as follows:

- **Mentor Rules and Guidelines**
  - You are neither managing nor employed by the mentee's startup.
  - Do not sign Non-Disclosure Agreements (NDAs) on behalf of the organisation.
  - Maintain confidentiality: Do not share sensitive information or personal opinions about your mentee with third parties, including other mentors.
  - Avoid acquiring any commercial interest in your mentee's team.
  - Generalist mentors may not guide more than one team within the same category.
  - Provide advice and guidance, but do not complete worksheets or write investor pitches for your mentees.

- **Mentee Rules and Guidelines**
  - Respect the time, expertise, and effort your mentor dedicates to you. Always prepare thoroughly before meetings or communications.
  - During the competition, refrain from contacting or asking your mentor to contact any competition judges.

Final Pitching and Judging

Main Objective

From the accelerator cohort of 20 to 30 startups, the 20 highest-ranked startups will be selected to join the final pitching event (Round Two Judging). The judging and selection of finalists will take place during a major regional climate-focused event, where winners will also be announced and awarded.

Timeline

Final Pitching will be conducted shortly after the completion of webinars and mentorship sessions, as a one-day event. It begins with a preparation phase to review necessary materials, followed by final pitching and the judging procedure.

Roles

Effective collaboration among different roles is essential for a successful final pitching, as detailed in the following roles:

- **Judges**
  Judges will evaluate each pitch using a standardised score sheet and feedback guidelines, offering insights for improvement. Finalists will be selected based on scores and joint deliberation among the judges.
- **Moderator**
  A moderator plays a crucial role in facilitating the judging session by ensuring a smooth flow of presentations and time management. They are responsible for coordinating the pitch sequence, introducing each startup, and maintaining engagement between judges and startups throughout the session.
- **Scribe**
  Records key discussion points and decisions during deliberations, providing clarity and reference if needed.
- **Timekeeper**
  Manages the timing of presentations and Q&A sessions, ensuring fairness and adherence to the schedule using countdown tools.

- **Other (videographers, etc.)**

  Responsible for checking at the beginning of each session that the camera is recording. Additionally, it is recommended that an additional two to three individuals are assigned to assist with participant management on the day of the event.

Judging Procedure

3 sessions (10 minutes pitch /10 minutes Q&A / Scoring and Feedback).

- **Presentation**

  Each semi-finalist team has up to 10 minutes to present their climate tech product, and the timekeeper should give them a warning when they have three minutes and one minute left. To promote fairness, the pitching sessions may be divided into two separate time slots—morning and afternoon—to better accommodate startups at different stages of maturity.

- **Q&A**

  The presentation is followed by a further 10 minutes for questions from the judges–and possibly a little more, if the team used less than their full 10-minute presentation time.

- **Scoring and Feedback**

  This final session consists of verbal and written feedback, along with scoring. After all pitching presentations, judges will be given dedicated time to reflect and coordinate before providing final scores and written feedback. During the verbal feedback session, more time will be allocated, allowing two to three judges to each provide concise feedback to ensure diverse perspectives are shared. The moderator should identify appropriate judges to speak, ideally those with relevant expertise, who will summarise main questions raised/points made by the other judges plus responses from the team and give his/her view of how the materials and presentation came across.

  In the 5 minutes of scoring and feedback notes by judges, each judge captures notes for each startup on each of the judging criteria. Also, considering the limited timeframe, they should use the time between teams, including time while the next team is setting up, to assign a numerical score and to record feedback against each of the judging criteria.

  After all teams have presented, and once all judging is finished for all teams, each judge must hand to the scribe the single sheet that shows his/her rank order of the

teams he/she has evaluated; the scribe will enter all judges rankings into a spreadsheet in order to identify the average rank for each team and the rank order of all teams that have presented.

To further enrich the evaluation process and reflect broader impressions, the audience will also be invited to provide scores. Audience members will use a simple digital tool (e.g., a mobile-friendly scoring link or app) to rate each team based on a selected set of criteria. These criteria may include: overall impression, clarity of the pitch, innovation potential, perceived market need, and presenter delivery. This allows audience members—who may represent potential users, customers, or the general public—to share valuable first impressions and insights. Audience scores will be collected in real time and aggregated at the end of all presentations.

Important Note: While audience scores offer valuable insights from potential users, customers, or the public, they will not influence the official rankings determined by the panel of judges. Instead, these scores will be used exclusively to determine a "Favourite Innovation" award, celebrating the team that resonates most with the audience. Recommended platforms for audience scoring include tools like Google Forms (customised with rating scales), Slido, Mentimeter, or Kahoot. These platforms are user-friendly, require no installation, and allow real-time voting with mobile devices via a simple QR code or short link displayed on the screen.

3.6. Resources & Support Materials

Example Judging Score Sheet

This sheet is formatted for easy viewing in this guidebook. A score sheet is normally printed A4 or A3 horizontally to enable sufficient space for feedback for the startup.

You should record your score for each startup on each criterion on the following scale. Note that your feedback comments that follow the dots represent the most important aspect of your role:

5 – Keep doing what you're doing. Focus on other areas

4 – Almost there. Could be better if [……]

3 – Mixed. Key areas for improvement include [……]

2 – Work needed in this area. You should focus on [……]

1 – Significant work needed here, particularly [……]

Overall Feedback for the Startup:

ROOM _____ JUDGE NAME

_____ TEAM NAME _____

CATEGORY _____

ASEAN Climate Tech Accelerator – Application Form

1. General Information

Please provide the main contact details for your team.

- **Full Name** (Lead Contact Person)
- **Email Address**
- **Phone Number** (Include country code)
- **Startup Name**
- **Startup Website** (If applicable)

2. Team Profile

Provide a brief overview of your team members, including their roles and backgrounds.

Please include: **Name / Role in the Startup / Age / Education / Relevant Work Experience**

3. Business Proposal

Briefly describe your business concept in 500 words or less.

4. Climate Relevance of Your Solution

Help us understand how your solution contributes to climate action and brings environmental benefits. (Max 200 words)

You may consider answering the following:

• How does your solution contribute to climate change mitigation and/or adaptation?

• What specific climate-related problem are you addressing?

• What are the potential environmental or social impacts in the ASEAN context?

5. Applicant Agreement

By submitting this application, all team members acknowledge and agree to the terms outlined below.

I confirm that I have read and understood the ASEAN Climate Tech Accelerator Eligibility and Rules.

I confirm that either (i) I am at least 18 years old, or (ii) at least one member of my team is 18 years or older. I attest that all information provided is accurate to the best of my knowledge. I understand that failure to meet eligibility requirements may result in disqualification from the programme. I agree that submission of this proposal constitutes acceptance of these terms and participation requirements.

Judging Criteria Checklist (Round One)

Startup Name: _____

Name of Judge: _____

Date: _____

Criteria	Key Questions	Score (1-5)	Notes
1. Team Credibility & Commitment	• Team demonstrates relevant skills in product development and customer engagement, especially for ASEAN markets. • At least two members are available to commit the equivalent of one full-time founder. • Team shows strong commitment and potential to deliver the project successfully.	☐ ☐ ☐ ☐ ☐	
2. Innovation & Technology	• Technology is original or applied in a unique way that fits ASEAN-specific needs. • Team has legal rights or clear plans to use and commercialise the technology. • There is potential for IP protection or a strategy to secure it.	☐ ☐ ☐ ☐ ☐	
3. Product Impact	• Product addresses a significant national or regional challenge (e.g. clean energy, water, agriculture). • Demonstrates potential to reduce emissions or improve environmental quality. • Aligns with at least one United Nations SDGs.	☐ ☐ ☐ ☐ ☐	
4. Market Potential & Scalability	• Business model shows potential to contribute to ASEAN's economic growth. • Can create meaningful employment, especially in underserved areas. • Has potential to reach $10M+ revenue within five years. • Strong potential to expand regionally or globally using ASEAN as a base.	☐ ☐ ☐ ☐ ☐	

Total Score: _____ / 20

Recommendation: ☐ Advance ☐ Reject ☐ Needs Review

Judge's Comments:

Judging Criteria Checklist (Round Two)

Startup Name: _____

Name of Judge: _____

Date: _____

Criteria	Key Questions	Score (1-5)	Notes
1. Business Model Clarity	• Does the startup clearly understand the core operational and functional activities necessary to deliver its business solution? • Is there a coherent and well-articulated strategy for how the business will operate and grow within the ASEAN context?	☐ ☐ ☐ ☐ ☐	
2. Customer Validation	• Has the team identified and validated a key market need through interviews, pilots, or early customer engagement, particularly within a clearly defined beachhead segment? • Is there early evidence of market traction, including pilot partners, revenue potential, or pathways to reach adjacent markets?	☐ ☐ ☐ ☐ ☐	
3. Product & Technology Readiness	• Has the technology been proven, either through internal testing or third-party validation, and does it offer a clear advantage over existing alternatives? • Is there a clear development roadmap, including plans for prototyping, commercialisation, and scalable, cost-effective production?	☐ ☐ ☐ ☐ ☐	

4. Go-To-Market Tactics	• Does the startup have a realistic, customer-informed sales strategy to scale from pilots to wider market adoption within ASEAN? • Are there identified or existing channels, strategic partners, or ecosystem collaborators that support entry into adjacent or regional markets?	☐ ☐ ☐ ☐ ☐
5. Financial Strategy and Fundraising	• Are revenue and cost projections realistic and grounded in sound assumptions, with clear paths to financial sustainability? • Does the team present a credible plan for how funds will be sourced and used to support the next stages of growth?	☐ ☐ ☐ ☐ ☐
6. Legal and Intellectual Property (IP)	• Does the startup have rights to its IP, or a clear strategy to secure and protect it within ASEAN jurisdictions? • Is the company's legal and ownership structure sound and free from conflicts that could hinder progress?	☐ ☐ ☐ ☐ ☐
7. Team Strength and Execution Capacity	• Does the team demonstrate relevant expertise, credibility, and commitment to meet key milestones over the next 18 months? • Are any skill or capacity gaps acknowledged, with a plan to address them as the startup grows?	☐ ☐ ☐ ☐ ☐

8. Sustainability and Impact	• How well does the solution contribute to environmental, social, and economic outcomes, such as reduced emissions, improved resource use, or job creation? • Does the venture align with and meaningfully support relevant SDGs, while offering scalable impact in the ASEAN region?	☐ ☐ ☐ ☐ ☐

Total Score: _____ / 20

Recommendation: ☐ Advance ☐ Reject ☐ Needs Review

Judge's Comments:

Acceptance Email (Draft)

Subject: Congratulations! You've Been Selected for the ASEAN Climate Tech Accelerator

Dear [Applicant Name],

We are pleased to inform you that your application to the ASEAN Climate Tech Accelerator has been successful. Congratulations on being selected as one of the top startups to join our [Year] cohort!

Your innovative solution stood out among many impressive applications, and we are excited to support your journey as you work to scale your climate technology solution within the ASEAN region.

As part of the programme, you will receive tailored mentorship, capacity-building workshops, and access to a regional network of industry leaders, policy makers, and potential investors. The accelerator is designed to help startups like yours strengthen your business model, sharpen your go-to-market strategy, and create real impact.

Further information, including orientation details and the full accelerator schedule, will be shared with you shortly. Should you have any questions in the meantime, please don't hesitate to reach out.

We look forward to working with you and witnessing your progress throughout the programme.

Warm regards,

ASEAN Climate Tech Accelerator Team

(ASEAN Centre for Energy x UNIDO)

Rejection Email (Draft)

Subject: ASEAN Climate Tech Accelerator Application Outcome

Dear [Applicant Name],

Thank you for taking the time to apply to the ASEAN Climate Tech Accelerator. We appreciate your interest in advancing climate technology in the ASEAN region and commend the passion and innovation reflected in your submission.

After careful consideration, we regret to inform you that your application was not selected for this year's cohort. The selection process was highly competitive, and while your proposal showed potential, we were limited in the number of startups we could accept.

We encourage you to stay connected with us and consider applying for future cohorts or other regional opportunities that support climate innovation and entrepreneurship.

Thank you again for your time and dedication to climate action. We wish you the very best in your continued efforts to drive meaningful impact.

Warm regards,

ASEAN Climate Tech Accelerator Team

(ASEAN Centre for Energy x UNIDO

Advanced Accelerator

4.1. Key Objectives

The advanced accelerator programme is designed to help growth-stage climate technology startups transition from validation and early market entry to scalability, commercialisation, and investment readiness. While the pre-accelerator supports ideation stage startups and the accelerator refines business models and market fit, the advanced accelerator focuses on **expansion, scaling strategies, and capital investment**. By equipping startups with the tools to navigate complex regulatory environments, corporate partnerships, and investor engagement, this programme ensures that participating ventures are prepared for long-term success in ASEAN and global markets.

The main objective of advanced accelerator programme is to support climate technology startups in scaling their solutions and securing strategic investment. Startups will gain exposure to investors, corporate partners, and government stakeholders to explore funding, joint ventures, and cross-border expansion opportunities. Additionally, startups will receive tailored mentorship, financial structuring guidance, and market-entry strategies to refine their growth roadmap and maximise their impact.

By participating in the advanced-accelerator, startups will be positioned as high-potential ventures capable of attracting major investments, forming corporate partnerships, and expanding into regional and international markets. This stage ensures that the most promising startups from the ASEAN Climate Tech Accelerator Programme can successfully transition from early validation to full-scale commercialisation.

4.2. Eligibility Criteria

The advanced accelerator is designed for growth-stage climate technology startups that have successfully completed the Accelerator Programme or have demonstrated high potential for scalability. Eligibility is based on the following criteria:

- **Stage**
  Startups must have progressed beyond market validation and be actively generating revenue or demonstrating significant market demand. They should be at the stage where they require capital investment, market expansion strategies, and operational scaling.

- **Market**
  Eligible startups must operate in the energy efficiency, renewable energy, and other clean energy technology sectors, with proven market traction. This programme prioritises ventures with a clear path to commercialisation, scalable business models, and potential for cross-border expansion.

- **Location**
  As part of the ASEAN Climate Tech Accelerator Programme, applicants must have headquarters or significant operations within the AMS. This ensures that the programme supports regional growth and ecosystem development.

- **TRL and BRL**
  To ensure alignment with the programme's objectives, applicants should have a TRL of 6–9, indicating that their technology has been validated in real-world conditions and is nearing full commercialisation. Similarly, startups should have a BRL of 5–9, demonstrating a well-defined market strategy, investment readiness, and scalable business operations. Figure 13 below compares the TRL and BRL criteria for the pre-accelerator and accelerator phases, enabling startups to evaluate their readiness for the advanced accelerator by understanding the required levels at each stage.

	Pre-Accelerator	Accelerator
Technology Readiness Level	**1-3** • **Basic Principles** • **Experimental Proof of Concept**	**3-6** • **Beyond Basic Research** • **Proof of Concept**
Business Readiness Level	**1-3** • **Concept Development** • **Early Market Validation**	**3-6** • **Early Market Validation** • **Draft of Business Model**

Figure 13: *TRL & BRL Criteria Comparison for Pre-Accelerator and Accelerator*

Note. The descriptions are adapted from *Technology Readiness Level* and *Business Readiness Level*, by KTH Innovation, 2018.

4.3. Key Evaluation Criteria

To select the most investment-ready and scalable startups for the advanced accelerator, the following evaluation criteria will be applied:

- **Financial Readiness & Investment Potential** – Startups should demonstrate financial stability, a clear investment strategy, and well-defined funding requirements. Investors will assess profitability potential, funding history, and capital utilisation plans to determine investment readiness.
- **Strategic Partnerships & Ecosystem Engagement** – As an additional evaluation criterion, startups will be assessed based on their ability to build partnerships with corporations, government agencies, and ecosystem players. A track record of successful collaborations, pilot projects, or corporate engagements will be highly valued.

By applying these key evaluation criteria, the advanced accelerator ensures that only the most scalable, investment-ready, and impactful climate technology startups are selected, further strengthening the ASEAN climate technology ecosystem and driving sustainable innovation.

4.4. Advanced Accelerator Activities

Business Matchmaking Event

As a key component of the advanced accelerator programme, the business matchmaking event plays a crucial role in helping climate technology startups and MSMEs transition from early-stage development to commercial success. This event builds on the foundations established in the pre-accelerator and accelerator phases, providing startups with direct access to investors, industry leaders, corporate partners, and policymakers.

This event serves as the culmination of accelerator support, allowing startups to validate their solutions, showcase investment potential, and explore commercialisation opportunities. A structured process—registration, profile building, matchmaking, and scheduled meetings—ensures efficient and meaningful connections. In addition to selecting startups from the final pitching participants, promising ASEAN climate tech startups will be proactively scouted and curated for direct invitation to the business matchmaking event. Interactive sessions, keynote presentations, and roundtables further enhance collaboration and knowledge exchange. By integrating business matchmaking activities into the accelerator journey, climate technology startups gain the exposure, credibility, and support needed to scale effectively.

The event is expected to host around 60 participants, with at least 40% being women entrepreneurs. Among the attendees, 14 will include 10 to 15 representatives from climate tech startups/MSMEs, 3 investors, 2 members of the Project Steering Committee, and 2 representatives from ACE. Other participants will comprise government representatives, climate technology startups, investors, and institutions from within and beyond the AMS, especially Japan.

Timeline

The business matchmaking event will be organised as a **one-day event** following the pre-accelerator and accelerator phases.

Objective

The ASEAN Business Matchmaking Event aims to empower climate technology startups and MSMEs by creating customised opportunities for market expansion, strategic partnerships, and investment growth. Support will be tailored to the specific needs of each startup, whether

it involves entering their first overseas market, closing a partnership, securing investment agreements, or raising venture capital and corporate funding.

This will be facilitated through a dynamic one-day event featuring structured pitch sessions where selected startups present to investors, panel discussions with sector experts sharing industry insights, and open networking opportunities for collaborative exchanges. Additionally, one-on-one meetings will ensure that each startup receives personalised guidance from investors, industry experts, and business leaders. Following the event, a comprehensive follow-up will be conducted, including published highlights and success stories to sustain engagement and showcase outcomes to broader stakeholders. Beyond funding, this event serves as a platform for knowledge exchange, helping startups refine their strategies and gain valuable market insights. By fostering connections between government agencies, enterprises, institutions, and accelerator alumni within and beyond AMS countries, this initiative plays a crucial role in strengthening regional linkages, networks, and partnerships.

Activities

The activities surrounding the event are designed to foster engagement, networking, and collaboration among participants, and can be categorised into two main phases: before and during the event, as outlined below.

1. Before the Event: **Preparation & Outreach**
   - Call for Applications:
     A public announcement will be published on the website to invite participants such as investors, sector experts, and key stakeholders.
   - Event Materials & Branding:
     Backdrops, banners, and handouts will be designed and prepared to ensure professional event presentation and effective communication of key messages.

2. During the Event: **Engagement & Networking**

   Figure 14 below provides an overview of the business matchmaking event's tentative agenda, structured around intensive networking components including pitch sessions, panel discussions, one-on-one meetings, and open networking opportunities between startups and investors.

09:00	**Opening Keynote** e.g. "Trends in Climate Tech Investing"
10:00	**Panel Discussion** e.g. "What Investors Look for Today"
12:00	**Lunch & Open Networking**
13:00	**Pitch Sessions** Selected startups present to investors
14:00	**One-on-One Meetings** Pre-scheduled; 3 rounds x 25 minutes
17:00	**Wrap-up Session** Key takeaways & Next steps
18:00	**Dinner & Open Networking**

Figure 14: *Example Agenda of Business Matchmaking Event*

- **Pitch Sessions**

  Selected startups will present their business ideas to investors and industry leaders, highlighting their value proposition, market potential, and investment needs.

- **Panel Discussion**

  Experts from the climate technology sector will share insights on industry trends, investment strategies, and scaling opportunities.

- **One-on-One Meetings**

  A structured matchmaking process will facilitate targeted business meetings between startups and potential investors or partners. The tentative agenda for these one-on-one meetings is as follows:

1) Preparation and Greeting (First 3-5 minutes)

   Each startup will be pre-matched with relevant investors based on shared interests, funding needs, and sector focus. Startups are assigned a table or meeting booth, while investors rotate according to their scheduled meetings.

   Startups briefly introduce their startup, problem statements, and unique value proposition to matched investors.

   Startups present their business model, market potential, and funding requirements, while investors assess scalability, financial viability, and possible collaboration opportunities.

2) Investor's Questions & Due Diligence (5-10 minutes)

- Investors ask key questions about revenue models, competitive advantages, and exit strategies, while startups explore funding terms and strategic support.

- Example: An investor may ask, "What is your customer acquisition cost versus lifetime value?" or "How do you differentiate from competitors?"

3) Exploring Collaboration & Investment Potential (10-15 minutes)

- Investors discuss their investment philosophy, past investments and potential deal terms.

- Startups inquire about the investor's experience in similar sectors and industry connections.

4) Next Steps & Follow-Up Actions (Final 2-3 minutes)

- Both parties outline follow-up actions, such as additional due diligence, or investment negotiations, fostering meaningful connections beyond the event.

- Example: "I'll connect you with my team for a due diligence call next week."

- **Open Networking**

  Startups will have dedicated time for informal networking with investors over lunch and dinner, allowing them to explore potential collaborations, partnerships, and investment prospects freely.

- **Wrap-Up Session**

3. After the Event: **Follow-Up & Press Release**

- **Press Release**
  A summary of key event highlights, outcomes, and success stories will be published on the Implementing Agency's website, ensuring broader visibility and continued engagement with stakeholders.

Chapter V

Building a Supportive Ecosystem for Climate Technology Innovation

5.1. Why Long-Term Impact Matters

For an accelerator programme to create a lasting impact, it must go beyond the immediate duration of the programme and integrate strategies that ensure continued growth, learning, and collaboration among startups, ecosystem players, and industry partners. The ultimate goal is to foster a self-sustaining ecosystem where climate technology startups can thrive, innovate, and scale their solutions to address pressing environmental challenges in the ASEAN region.

Climate technology startups face unique challenges, including high capital requirements, long development cycles, and the need for deep technical expertise. While accelerator programmes provide critical support during their formative stages, the true measure of success lies in the ability of these startups to sustain their momentum and scale their impact over time. Ensuring long-term impact is essential for several reasons:

- **Addressing Persistent Climate Challenges**: Climate change is a long-term crisis that requires sustained innovation and collaboration. Startups need ongoing support to refine their technologies, adapt to market changes, and contribute meaningfully to regional and global climate goals.
- **Maximising Investment Returns**: Accelerator programmes often involve significant investments of time, resources, and funding. A long-term focus ensures that these investments yield measurable and enduring outcomes, benefiting not only the startups but also the broader ecosystem.
- **Strengthening the ASEAN Ecosystem**: By fostering a culture of continuous learning and collaboration—and by building strategic partnerships and networks with accelerator programmes across Southeast Asia and beyond—these initiatives can amplify the region's capacity for climate innovation. Such networks enable knowledge exchange, resource sharing, and collective problem-solving, positioning ASEAN as a global leader in climate technology innovation.

5.2. Best Practices for Climate Technology Accelerator Programmes

1) Mentorship and Peer Learning

Strengthening Mentorship Support for Long-Term Growth

A well-structured mentorship framework is critical to guiding startups beyond the accelerator phase, ensuring they receive continued support in navigating business challenges, scaling operations, and securing investments. Establishing a diverse network of experienced mentors—including industry leaders, successful startups, and climate tech experts—can help startups develop market-ready solutions and sustainable business strategies. To ensure continued support beyond the accelerator phase, startups should have access to mid-programme and post-programme advisory sessions, where they receive one-on-one mentorship and group coaching from seasoned startups and industry leaders. These structured feedback sessions provide startups with personalised guidance on funding, business development, and market expansion, helping them refine their strategies and navigate challenges as they scale up their business.

Peer Learning and Alumni Networks for Continued Engagement

In addition to formal mentorship, structured peer learning initiatives create an environment where startups can exchange experiences, collaborate, and co-develop solutions. This is further reinforced by a strong alumni network, supported by ACE's Accelerator Hub, which connects graduates of the ASEAN Accelerator Programme to enable long-term knowledge sharing, collaboration, and business growth. Key Initiatives for strengthening the alumni network include:

- Regular Alumni Meetups and Learning Exchanges: Organising periodic virtual gatherings for alumni to reconnect, exchange ideas, and explore potential collaborations. Sessions can focus on specific topics such as emerging climate policies in ASEAN, access to green financing, or lessons in scaling businesses internationally.

- Alumni-Led Engagement & Investor Networking: Encouraging alumni to take leadership roles in organising workshops, hackathons, and innovation challenges, fostering a sense of ownership and community-driven growth. Additionally, alumni-led demo days can serve as key networking events where graduates showcase their

business progress and post-accelerator achievements, attracting investors, corporate partners, and potential customers.

- Peer-Led Industry Roundtables: Hosting thematic peer-led roundtable discussions, where alumni share insights on market trends, policy shifts, and funding opportunities relevant to climate tech startups. These discussions allow for regional and cross-border knowledge exchange, strengthening ASEAN-wide collaboration.

2) Industry Engagement and Corporate Partnerships

Strong engagement with industry stakeholders and long-term corporate partnerships are essential for ensuring the sustainability and scalability of climate technology startups. By fostering collaborations between startups, corporations, government agencies, and research institutions, accelerator programmes can maximise synergies, enhance knowledge exchange, and drive innovation in climate technology. These partnerships not only contribute to climate change mitigation efforts but also open avenues for increased productivity, economic growth, and wealth generation. Developing long-term relationships with corporations and industry leaders enables startups to access funding, pilot projects, mentorship, and market distribution channels, significantly enhancing their chances of success.

Facilitating Industry-Led Pilot Projects

Collaborating with industry partners allows startups to test and validate their climate solutions in real-world settings, bridging the gap between innovation and market deployment. Corporations, government agencies, and research institutions can offer access to pilot projects where startups can refine their technologies, gain industry credibility, and explore commercialisation opportunities. Additionally, forming corporate partnerships helps connect accelerator alumni with other climate tech startups, fostering cross-border joint ventures, co-innovation opportunities, and market expansion. For example, the GCIP has successfully linked its alumni with industry players to facilitate technology adoption and business growth across multiple regions. A relevant case within ASEAN comes from Malaysia, where the GCIP has effectively implemented structured mentorship programmes that connect startups with experienced industry leaders. These efforts have helped facilitate peer-to-peer knowledge exchange, enhanced business development skills, and guided startups beyond the acceleration phase. GCIP also established long-term partnerships with corporate stakeholders, enabling startups to pilot and scale their climate technologies in real-world settings. Integrating such best practices into the ASEAN Climate Tech Accelerator could further strengthen the regional innovation ecosystem by fostering deeper industry collaboration, continuous mentorship, and inclusive scaling opportunities.

Strengthening Institutional Partnerships

To sustain the impact of the ASEAN Climate Tech Accelerator, integrating accelerator strategies into broader regional policies—such as the APAEC 2026-2035—can provide long-term structural support. The accelerator can serve as a critical knowledge hub, feeding insights into ASEAN's energy and climate action plans. Additionally, partnerships with universities and research institutions can provide startups with access to cutting-edge research, laboratory facilities, and technical expertise, helping them enhance their technological capabilities and market readiness.

Expanding Opportunities for Underrepresented Groups

Ensuring that industry partnerships are inclusive is key to fostering diverse and equitable innovation in the climate technology sector. Special attention should be given to women entrepreneurs, youth startups, and other underrepresented groups, who often face barriers to accessing funding, mentorship, and market opportunities. The accelerator can play a crucial role in addressing these gaps by establishing targeted corporate engagement initiatives that connect underrepresented startups with mentorship networks, funding sources, and industry-specific training programmes.

Additionally, developing partnerships with organisations that support women and youth in entrepreneurship—such as women-focused business incubators, impact investors, and universities with youth innovation hubs—can create more opportunities for these groups. Furthermore, encouraging corporations and industry leaders to actively support gender- and youth-inclusive innovation programmes ensures equal opportunities for leadership, investment, and business growth.

By prioritising diversity and inclusion in corporate partnerships, the ASEAN Climate Tech Accelerator can create a more resilient, innovative, and sustainable entrepreneurial ecosystem—one where startups from all backgrounds can thrive, scale their solutions, and contribute to the region's sustainable development goals long after the programme concludes.

5.3. Localisation of Mentor Guidelines, Training Materials, and Supporting Information

To enhance the inclusiveness and accessibility of the ASEAN Climate Tech Accelerator, it is essential to localise key accelerator-related materials—including mentor guidelines, training content, and supporting information—according to the specific context of each ASEAN Member State. By aligning the language, cultural references, business practices, and regulatory environments to local norms, these materials become more actionable and relatable for startups, mentors, and partners from diverse backgrounds.

Localisation efforts can significantly lower entry barriers for early-stage climate tech entrepreneurs, especially those from underrepresented or non-English speaking communities. For example, mentor guidelines that incorporate country-specific policy references or industry standards can improve relevance and effectiveness. Similarly, training materials translated into national languages or tailored to local climate challenges (such as coastal resilience in the Philippines or agricultural decarbonisation in Vietnam) increase engagement and applicability.

This approach not only supports greater participation across the region but also encourages local stakeholders—including universities, government bodies, and corporations—to more actively engage with and support accelerator cohorts. In the long term, localised content will build stronger national innovation pipelines and contribute to a more balanced and resilient ASEAN-wide climate tech ecosystem.

5.4. Additional Resources

As part of the localisation of accelerator-relevant materials, promoting the accelerator programme in the local language through a locally hosted website in each ASEAN member country can be an effective strategy to attract a broader and more diverse pool of applicants. For example, the Techo Startup Center, the executing partner of the GCIP Cambodia programme, regularly shares updates and announcements about the accelerator's activities in Khmer via its local platforms. Figure 15 shows a social media post announcing the GCIP Cambodia accelerator call for applicants. This example demonstrates how localisation can enhance the dissemination of programme information and support the visual and cultural promotion of climate innovation in a way that is both relevant and accessible to local communities.

Figure 15: *GCIP Cambodia*

Note. Adapted from GCIP Cambodia is Coming Soon, by GCIP Cambodia, n.d.

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Appendix A

The following are references of startups/MSMEs products in energy efficiency, renewable energy, and clean energy technologies, but startups are not limited to these examples:

1. Building's energy efficiency management
2. Energy efficiency measures for industry, including energy audit system
3. Clean cooking technologies
4. Innovation in energy-efficient appliances, such as air conditioners, lighting, refrigerators, motors, transformers, etc
5. Energy efficient heating system
6. Solar thermal systems, such as solar water heaters
7. Residential and commercial battery storage
8. Batteries for electric vehicles
9. Thermal energy storage
10. Vehicle-to-Grid (V2G) technology
11. Smart meters and demand response systems
12. Smart building management system, including the utilisation of Internet of Things (IoT)
13. Distributed energy resource management systems (microgrid, rooftop solar+ battery, etc)
14. Building Integrated Photovoltaics (BIPV)
15. Solar photovoltaics
16. Rooftop wind turbines

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