

OECD Studies on SMEs and Entrepreneurship

Incubation in Entrepreneurial Ecosystems

Hatching Growth



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Foreword

Startups and scaleups are key to economic growth and competitiveness. They turn ideas, knowledge and research into new products, services and processes, increasing productivity, employment, competition and choice and generating positive spillovers for the economy. Policymakers seek to release these benefits by addressing market and institutional failures affecting startups and scaleups in domains including innovation, skills, financing, and networks. Incubation policy is one of the most direct ways through which governments support startups and scaleups. Incubators scout for high-potential entrepreneurs and startups, select and prepare ventures for incubation, offer them direct services such as advice, lab space, and equity investment, and connect them to other actors in the entrepreneurial ecosystem like universities, legal experts, mentors, and clients.

Incubator practices are evolving rapidly and governments need to be abreast of these changes and encourage the diffusion of best practices. Short-term acceleration for cohorts of scaleups is increasing, incubators are offering more online services and serving wider catchment areas, soft landing and internationalisation supports are on the rise and specialised incubators are emerging aimed at sectors like health tech and AI.

This report reviews incubation trends and policies and recommends future directions for incubation policies. The first part proposes a definition for business incubation and sets out the main activities this entails, the rationale for policy support, and the latest trends in incubation models. The second part explores the main services that incubators provide to startups and scaleups, including coaching, support in bridging financing gaps, assistance in penetrating international markets, training to develop entrepreneurship skills, and specialised supports tailored to the needs of specific types of companies. Part 3 examines the role of government policy in supporting incubation systems. It presents an OECD-wide policy mapping of incubator support policies and discusses key policy choices for governments in developing incubation policy, such as which activities to fund, which entities to select to deliver programmes, and how to build the capacity of incubators and embed them within entrepreneurial ecosystems. It offers policy recommendations and inspiring international policy practices. The final part of the report offers country case studies of incubation policy systems in Estonia, France, Ireland, Korea, Portugal, Singapore, Sweden and the United Kingdom, identifying potential lessons for other countries.

Examples of good practice policy cases and incubation initiatives can be found throughout the report, including Sweden's National Incubator Programme, Canada's performance measurement framework for incubators, the ETH Zürich Pioneer Fellowship Deep-Tech Incubation Programme, the French Tech initiative, Station F in France, Korea's K-Startup Centres, and the United Kingdom's Catapult programme.

The overall aim is to take stock of the major trends that have reshaped incubation in recent years and offer analysis, inspiration and recommendations for effective government policies that can strengthen incubation systems for greater startup and scaleup success.

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Executive summary

Incubators, including accelerators, are business support entities specialised in unlocking the potential of young or developing companies, often with a strong innovative component. Many of the best and most successful startups and scaleups pass through business incubators. When they do, they benefit from a range of supports, often including a physical space to work, coaching and mentoring, technical assistance, networking and peer learning, access to testing facilities, and, in some cases, direct funding in the form of grants, loans or equity investment. Incubators are increasingly also emerging as entrepreneurial ecosystem hubs, plugging their ventures into the surrounding ecosystem and connecting them with investors, coaches, universities, clients and suppliers, and public support programmes.

The number of incubators has grown rapidly internationally in the last two decades, although they vary substantially in terms of their support offer, business models, target companies, and delivery approaches. The growth in incubation is accompanied by other trends including increased specialisation of incubators, greater use of virtual delivery models, greater offerings of internationalisation support, the creation of shorter acceleration programmes, and more emphasis on the formation of partnerships with other ecosystem actors. The extent to which incubators are ahead or behind in these trends depends on the specific incubators and the country-level incubator systems they are part of.

Significant sums of public money are allocated to incubators for boosting startups and scaleups – a task vital for enhancing competitiveness, innovation, productivity and employment. To maximise the effectiveness of these supports, policymakers need to consider several challenging policy questions, including:

- Which incubation activities should be promoted more strongly?
- How much funding to provide, to which organisations, and under what conditions?
- How to monitor performance?
- How to incentivise or enable good practices in support delivery?
- Should policy support focus on particular types of companies, sectors or regions?

This publication is intended as a guide for policymakers to navigate these types of policy decisions.

Part 1 proposes a working definition for business incubation and sets out what incubation programmes typically involve, the rationale for public involvement, and the major trends that are reshaping incubation. Part 2 examines the main types of services provided by incubators, with dedicated chapters on coaching, internationalisation assistance, financing, entrepreneurship training, and specialised incubation. Part 3 turns to government policy, presenting the results of a comprehensive mapping of policies for incubation in OECD countries and a discussion of policy issues. Part 4 presents eight country incubation policy case studies – Estonia, France, Ireland, Korea, Portugal, Singapore, Sweden, and the United Kingdom – offering information on their incubation systems, major incubation policies and lessons for other countries.

This leads to three key messages for governments:

1. **Policy should support incubator evolution towards entrepreneurial ecosystem hubs.** In the past, the key role of incubators was often to provide space and services direct to startups. However, many leading incubators today are taking additional roles as hubs in entrepreneurial ecosystems. They not only provide support to the promising startups they onboard but also connect them to a wide array of actors, contacts and resources in the ecosystem as well as providing ecosystem visibility and leadership. The networks and connections of incubators are now a core part of their value proposition for startups and scaleups and they also help other entrepreneurial ecosystem actors to access these firms. Policy can reinforce this new reality by channelling support to incubators that are deeply embedded in their entrepreneurial ecosystems, creating networks for incubators, encouraging strategic partnership formation, and providing quality assurance to help incubators build credibility in their ecosystems.
2. **Incubation is more effective when personalised.** The defining task for incubators is to provide support that meaningfully addresses their clients' evolving needs. Entrepreneurs face intense time pressures. Policy supports that do not match their needs deter engagement and can be counterproductive. Personalisation is key. One-to-one coaching, specialised programmes, smaller and more targeted trainings, and bespoke matchmaking are some of the ways incubators are ensuring their startups and scaleups receive an individualised experience that delivers real value. Coaching is an essential aspect of incubation that is often delivered either in too small volumes or at too low a standard. Where this is the case, policy can incentivise and support incubators in upgrading their coaching offer. There is also scope to help the emergence of more specialised incubators, for example by sector or target population, where there are distinct support needs and sufficient take up.
3. **Policy can be an important lever for raising incubation standards and keeping pace with trends and best practices.** Across the world, leading incubators are constantly adapting, introducing new services and embracing new delivery approaches that provide a blueprint for others to emulate. Policy plays a vital role here. As a trusted player and important funding source, the public sector can help incubators to expand their capacity and improve their approaches to align with emerging best practices. Public funding support has been instrumental in building the base of incubators in recent years, but going forwards, the policy focus needs to pivot towards lifting incubation standards. The most direct policy lever is in setting the selection criteria and funding conditions for incubator support programmes, which should earmark funding for specific activities where there are support gaps, set and potentially adjust funding amounts depending on incubator performance, and design selection processes that channel funding to incubators with the greatest potential to deliver impact. Most countries can also do more to boost incubation standards through non-financial assistance. Creating incubator networks is a powerful way of fostering peer learning, resource sharing and collaboration within the system, while training schemes and guidelines for incubator personnel can also be impactful.

1 Takeaways for governments

This chapter is a synthesis of the main findings and policy lessons for governments from the report in the design and implementation of public supports for incubation.

Encourage incubators to act as entrepreneurial ecosystem hubs and connectors

In addition to the traditional role of incubators in offering working space and business advisory services to startups and scaleups, they are beginning to emerge as hubs and connectors in their entrepreneurial ecosystems, connecting their clients with investors, mentors, public supports, customers, suppliers, researchers, and other partners and offering gateways for other ecosystem actors to access promising firms. Government policy should encourage incubators in this critical ecosystem connector role.

The success of incubators as hubs and connectors is often underpinned by well-connected and energised personnel who are pro-active in building links between their clients and other entrepreneurial ecosystem actors. An example is the proliferation of “demo days”, which are often the climax of acceleration programmes, where startups make pitches to attending investors or customers. It is also common for representatives from public agencies to have desks or office hours within incubators where they can showcase relevant public programmes and respond to queries from entrepreneurs. Another example is the nurturing of ecosystem connections when incubators bring delegations of their entrepreneurs and startups to high-profile and well-attended networking events within the local or national ecosystem.

To support this development, governments can:

- Prioritise funding to incubators with high embeddedness in the entrepreneurial ecosystem and strong internal competencies for networking and ecosystem building.
- Give preference to funding applications submitted by consortia to jointly deliver incubation programmes.
- Apply matching funding requirements for public grants for incubators to ensure supported incubators have links with others in the ecosystem.
- Provide quality assurance (e.g. through certifications or quality stamps) for incubators to strengthen their credibility with investors and other entrepreneurial ecosystem actors.

Promote individualised services, including coaching and mentoring

Incubators have changed significantly in the past 10-15 years as they adapt their service offering to the evolving needs of startups and scaleups. One of the trends is an increased offer of customised and individualised services to client firms, including more personalised coaching and mentoring.

Coaching and mentoring is one of the most important aspects of business incubation. Its one-to-one nature ensures that the advice and connections provided are highly customised to the specific needs of individual entrepreneurs. However, coaching and mentoring is an area where the quality of support provided by incubators varies quite widely. Quality can be inhibited by a lack of sufficient funding, which limits incubators’ ability to recruit and retain top-tier coaches and mentors with the necessary blend of technical expertise, entrepreneurial experience, and interpersonal skills. Even putting aside the issue of funding, it can often be difficult for incubators to find the right profile of coaches and mentors, particularly when searching for individuals with more specialised expertise. Another challenge is ensuring that the quality of advice provided by coaches and mentors is of a high standard, which requires robust recruitment, matching, training and monitoring procedures that incubators do not always have in place.

Sometimes the provision of more specialised and bespoke services requires more collaboration among incubators, for example putting together their pools of mentors or advisors or approaching investors together as consortia.

Ways for policymakers to facilitate more bespoke and individualised services within incubators are to:

- Earmark funding for the recruitment or payment of high-quality coaches and mentors through dedicated coaching and mentoring streams within public funding programmes for incubators.

- Establish coaching and mentoring guidelines for incubators to follow as a condition for public funding, including training and monitoring procedures.
- Enable greater resource sharing and collaboration between incubators. This can be promoted through the formation of incubator networks or designing public programmes to allow entrepreneurs to receive support from multiple incubators simultaneously.

Increase the number of specialised incubators

One of the trends of the last 10-15 years has been the emergence of more specialised incubators. This may involve specialisation in sectors like life sciences, marine technologies, or creative industries, targeting entrepreneurs from specific population groups, or focusing on companies at particular development stages. Specialisation has strong potential to improve the quality of support provided to startups and scaleups by enabling incubators to align their services more closely with the specific needs of their clients, for example through tailored coaching or investor connections and more productive peer learning. Another benefit of specialisation is that it enables incubators to build deeper networks and expertise in the areas of concern to their clients. However, there are some risks and drawbacks associated with specialisation, including greater exposure to sectoral downswings, potential competition among entrepreneurs within a cohort, and a loss of diversity within programmes. Furthermore, the success of specialised incubators depends on local contextual factors such as the nearby presence of skills, businesses, knowledge institutions or investors with expertise in the relevant sector. Overall, it is important for incubation systems to maintain a mix of generic and specialised incubators.

- Governments should support specialised incubators where there are distinct needs and sufficient local demand and capabilities.

Encourage internationalisation

Incubators are also providing more support to help their clients enter foreign markets, which can be a main driver of scaleup. Enabling the early globalisation of startups is particularly critical in countries with smaller domestic markets, although “born global” startups are also prevalent in larger economies. Incubators are one of the main channels through which governments can support startups’ entry into markets abroad. Some of the leading incubators offer immersive soft-landing programmes, where cohorts of startups spend time in an incubator abroad to enable companies to build networks and relationships internationally. Three areas of policy action that can help are to:

- Steer incubation systems to greater focus on internationalisation support by making incubators’ competence in this area a criterion for receipt of public funding.
- Fund dedicated programmes for startup globalisation, including immersive soft-landing schemes with placements of company staff and operations abroad.
- Incentivise incubators to form partnerships and networks with incubators and other ecosystem actors abroad.

Use funding systems and capacity building support to upgrade quality

Public funding underpinned the early development of many incubation systems and remains an important part of the funding mix of incubators today, alongside other sources of revenue including service fees, rents, and equity stakes in client companies. An OECD policy mapping confirms that incubation policy has entered the mainstream, with 31 out of 38 OECD countries having an active incubation policy as of 2025.

In total, the mapping found 70 incubation policies at national level, which exist alongside numerous initiatives delivered by subnational governments. Incubation policies principally promote incubation by providing grant funding to incubators. However, there is considerable scope for policy to be more intentional in lifting incubation outcomes through more stringent performance management across the incubation system and more support for capacity building and professional development in incubators.

Key opportunities are to:

- Tie funding amounts to agreed deliverables and performance through systematic monitoring of the activities and outcomes of incubators, with possibilities to scale down or withdraw funding in cases of underperformance.
- Incorporate non-financial assistance for incubator personnel such as training, peer learning schemes and support guidelines.
- Create networks of incubators to foster peer learning.

To operate effectively, incubators also need time and resources to build contacts and become recognised by startups and scaleups and other actors in the entrepreneurial ecosystem. A lack of programme continuity is a common weakness for incubation systems, which is due in part to the short-term nature of many incubation support policies and programmes. Short-term funding periods can inhibit incubators' ability to plan strategically and result in more time being spent by incubator personnel on applying for funding rather than delivering programmes. In some countries there is also an issue of resources being spread too thinly or too uniformly across very large numbers of incubators, with insufficient selectivity in allocating funding amounts.

Governments can also support quality upgrading in incubator systems by:

- Providing longer-term financial horizons for incubators, e.g. offering support for at least a three-year period.
- Being more selective in some incubator systems where resources are spread thinly and quality varies by incubator, prioritising deeper support for a smaller number of incubators with the greatest potential to generate impact.

Part I What is business incubation and why it matters for policy

2 What is business incubation?

This chapter proposes a working definition for business incubation and describes the main types of supports and services that incubators are typically involved in delivering to startups and scaleups. It also sets out the different types of incubation programmes that are commonly found in OECD countries.

This chapter examines the meaning of business incubation and the activities that are undertaken by incubators and how they are evolving. Internationally, incubator systems are strongly supported by public policy, which often funds certain groups of incubators or particular incubator activities that it is in the public interest to offer. It is important for policymakers to be aware of the key services and trends and update public support where appropriate, working in partnership with other ecosystem players.

Defining business incubation

Business incubators are very diverse. While they generally share the objective of aiding the development of young companies (Bergek and Norrman, 2008^[1]) – often, but not always, with a strong innovative component – incubators differ considerably in terms of their business model, support offer, target companies, and delivery methods. Furthermore, business incubators can be dedicated organisations whose sole activity is the delivery of incubation programmes, or they can be subsidiaries or offshoots of parent organisations, such as universities, large corporates or investment entities. It is also common for public entities to deliver incubation programmes.

This heterogeneity in the population of business incubators creates a challenge in defining business incubation, and there is not a consensus definition of either a business incubator or business incubation that is applied internationally. As a result, incubation and related concepts are sometimes taken to mean different things in different contexts. An example of this is the blurred distinction between business incubation and acceleration. Some use the two terms almost interchangeably, while others treat incubation and acceleration as distinctly separate concepts. This means that one organisation might identify as an incubator while another with very similar programmes could self-identify as an accelerator.

Despite these complexities, the process of incubation is widely agreed to involve the following broad elements:

- The provision of a range of different supports and services to client enterprises.
- The targeting of early-stage or developing companies.
- The delivery of support through multiple actions over an extended time period.

These characteristics are distilled in the following proposed working definition for business incubation:

“Business incubation entails the provision of a package of supports and services to early-stage or developing companies over an extended time period by a distinct organisational entity (a business incubator).”

This definition classifies the many different types of organisations that are involved in delivering holistic and extended support offers to young or developing companies as business incubation providers. This includes both entities that identify as incubators, as well as entities that might sometimes be referred to as “accelerators”, “pre-accelerators”, or, in some cases, “co-working spaces”. This approach recognises the core similarities that such business incubation entities share despite important and significant differences in their support programmes or approaches.

Table 2.1 summarises the key features and characteristics of different types of business incubation entities, which are collectively referred to as “incubators” in this publication.

Table 2.1. Taxonomy of business incubation entities

	Description
Incubator	Incubators tend to focus on earlier stage ventures and offer physical space, advice, technical support, networking and other services for entrepreneurs. They do not tend to have a cohort structure and specific time horizon.
Accelerator	Accelerators tend to focus on more developed startups and assist them in reaching an investment stage

	through cohort-based and time-bound programmes that typically last from one to 12 months (Cohen, Bingham and Hallen, 2019 ^[2] ; Centre for Entrepreneurs, 2022 ^[3]). It is also common for accelerators to invest equity into their clients. The earliest example is the Y-Combinator formed in the United States in 2005.
Pre-accelerator	Pre-accelerators will generally target very early-stage entrepreneurial ventures that often do not have a complete team or a developed product or business model. Pre-acceleration programmes are often delivered as preparation for subsequent accelerator programmes.
Science park	Science parks (or equivalently research parks, technology parks, or innovation centres) are physical centres that aim to foster research commercialisation and the growth of technology-intensive businesses. Science parks are often affiliated with universities and commonly provide incubation programmes and other business support services.
Co-working space	Co-working spaces provide shared office space and facilities. Co-working spaces can be considered as business incubation entities where they target early-stage or developing companies and supplement the provision of physical space with other business supports and services.

Note: Venture studios are not considered to fall under the definition of a business incubation entity since these studios do not generally admit external entrepreneurs or startup companies.

Incubation activities

The Batavia Industrial Centre – formed in New York in 1959 – is seen as the first example of a business incubator, with the owners of the disused industrial site opting to rent office space and provide shared services to multiple separate businesses having failed to find a company who could rent the whole space individually. The business incubation model gradually spread across the world in subsequent decades. While the first generation of incubators focused their activities on the provision of physical space to companies, incubators began to add coaching, training, networking, and commercialisation support to their service offering. More recently, incubators are moving towards providing greater access to external technological, professional, and financial resources.

The remainder of this section briefly discusses the main types of supports and services offered by business incubators today, which together provide practical solutions to some of the major frictions that startups and scaleups encounter during their development and growth.

Physical spaces and facilities

The physical workspace provided by incubators is often a central component of the support they offer to startups. These spaces often come equipped with essential office infrastructure, such as hot-desking areas, private offices, meeting and conference rooms, high-speed internet, and printing services, which can significantly reduce operational costs for fledgling companies and provide them with a high-quality professional environment in which to work, network and collaborate without the distraction of managing logistics. Many incubators also offer 24/7 access to these spaces, allowing founders to work on projects at their own pace – a particularly helpful feature for startups in intensive growth phases or with international teams or partners.

Incubators that cater to specific industries, such as biotech or healthcare, may also provide access to specialised equipment, such as wet labs, prototyping facilities, or other technical resources. Wet lab incubators, for instance, provide life sciences startups with access to advanced scientific equipment that would otherwise be prohibitively expensive, sometimes in exchange for a fee. This significantly lowers the barrier for startups needing occasional access to high-end technologies in order to develop or test their products and services.

Incubators have increasingly been introducing virtual programmes with a reduced emphasis on the provision of physical spaces and facilities – a trend accelerated by the COVID-19 pandemic. However,

some incubators that went remote during the pandemic are now reinstating in-person components of their programmes in order to encourage collaboration and networking in a shared space.

Coaching

Coaching (often also referred to as “mentoring”) is one of the most impactful aspects of incubation programmes, providing startup founders with expert guidance and advice to help them to navigate complex business challenges. These insights at the early stages of a company’s development can make the difference between a startup’s success or failure.

Incubators connect founders with coaches, who are generally seasoned entrepreneurs, investors, industry leaders, or specialists in areas like product development, marketing, or legal matters. These coaches take a hands-on approach, acting like business “doctors” who diagnose specific problems and recommend solutions. The relationship tends to be dynamic, with coaches adapting their advice as the startup progresses. Topics covered include finding product-market fit, team building, and scaling and investment strategies.

A key aspect of coaching is the tailoring of advice to the unique needs of specific entrepreneurs and startups. Incubators often have large networks of coaches and mentors with expertise covering a broad spectrum of areas, which helps to ensure that their clients can be matched with a coach with knowledge and experience that is relevant to their particular needs. Entrepreneurs can often be assigned multiple coaches, as is the case, for example, in Techstars’ programmes.

Some incubators provide coaching through their internal staff, others leverage external experts and some deploy a combination of the two. Many incubators also facilitate less formal or structured coaching by enabling startups to connect with alumni, advisors, or external professionals at events and through online platforms.

Training and classes

Incubators offer training programmes to help founders to develop the skills they need to grow their companies. This training can be delivered in individual or classroom settings. Some incubators also provide online learning platforms with recorded modules, allowing participants to revisit important concepts at their own pace. Incubators’ training programmes often focus on building practical business skills, such as in fundraising, sales and marketing, human resources management, and business strategy and product development. One of the most common types of training is pitch training, where participants refine their ability to present their startups to investors and other potential partners in a compelling way. Incubators that are affiliated with universities will also often offer specialised training in areas such as intellectual property management or scientific research methods, particularly for science-based startups.

Networking

Facilitating networking among startup and scaleup entrepreneurs and other ecosystem actors is a core activity for business incubators. Peer networking within incubators is often facilitated through a campus structure, where entrepreneurs work alongside each other on a daily basis. This proximity encourages spontaneous interaction, the sharing of ideas, and the provision of mutual support. Similar effects can also be achieved through cohort-based programmes, where admitted firms start a programme at the same time, resulting in a built-in peer group that progresses through the programme stages together. This setting naturally encourages regular interaction and group-based problem-solving, as founders are exposed to similar challenges and milestones.

Incubators also offer structured networking events, such as workshops or seminars on critical topics like business development, fundraising, and marketing. These events not only feature successful alumni as

speakers but also provide a space for founders to connect with potential partners in informal settings. In addition, many incubators provide matchmaking services, setting up curated meetings between startups and potential partners in their network. There are also structured problem-solving sessions, where startup founders present challenges faced and receive feedback and suggestions from peers. Regular social events, such as happy hours, informal dinners and off-site retreats, further facilitate relationship-building in a relaxed environment between the participants of incubation programmes, as well as with mentors and incubator staff.

In addition to facilitating in-person interactions, incubators often provide online platforms where participants can share documents, pose questions, and collaborate with peers and experts. These digital spaces can be accessible to founders, alumni, and experts, and can also include matching services to identify and connect with potential co-founders or partners. Such platforms enhance connectivity and provide a continuous support system that can be accessed long after the programme ends.

Investor connections

Related to networking, one of the main advantages of joining an incubator from the perspective of a startup is the access to investors that it provides. Building relationships with venture capitalists, angel investors, and institutional investors is crucial for startups looking to secure funding. Many incubators excel at connecting founders with potential investors. Acceleration programmes often have extensive networks of venture capital firms and business angels who regularly attend events such as demo days, which are high-profile events where startups pitch their business to a room (or virtual audience) of investors. In addition to demo days, incubators organise smaller networking events or one-to-one meetings between their clients and potential investors. Some programmes also offer digital platforms where investors can browse startups' profiles and connect directly with the founders.

Incubators also help startups to gain exposure in the media, which can facilitate investor connections. Often, these activities leverage online tools. As an example, Y combinator uses internal websites such as Product Hunt and Hacker News to provide media exposure to emerging ventures, while at the same time, preparing founders to interact with journalists.

Direct funding

In addition to the various services offered to their clients, some incubators also provide their startups with direct funding. One model is to provide non-dilutive funding such as grants, which allow the startups to retain full ownership of their business. Non-dilutive funding amounts are generally relatively small. For example, the Bravo Innovation Hub in Italy offers EUR 20 000 grants to startups admitted to its programme, while Enterprise Ireland's New Frontiers programme provides EUR 15 000 allowances to selected founders.

For larger investment sums, incubators often offer equity-based funding. For example, StartUp Bootcamp invests USD 15 000 in each startup in exchange for a 6% equity stake. Y Combinator offers a more complex funding structure, investing a total of USD 500 000 in each startup, comprising a USD 125 000 investment in return for 7% equity and an additional USD 375 000 investment in the form of a SAFE (Simple Agreement for Future Equity), which converts into equity when the startup raises more capital. Some incubators deduct participation fees from their investment, requiring startups to use part of the cash received to pay for the programme. Others do not require equity participation upfront but may invest in startups later through in-house venture capital funds. With all of these approaches, the incubator's investment serves to both alleviate financing gaps for their clients and provide a source of revenue for the incubator itself.

Legal, technical and administrative advice

Legal and administrative challenges can be daunting for early-stage startups. To help them to navigate these complex areas, incubators provide resources and services such as advice on intellectual property protection, incorporation assistance, accountancy support, support in contract drafting, and guidance on tax compliance and hiring practices, among other things. Many incubators also provide assistance to help their clients establish their operations overseas. Startups within incubators will often have access to a network of external lawyers, accountants, and other experts that are affiliated with the incubator. These professionals can be available for one-to-one consultations, ensuring that startups have access to the right expertise when they need it.

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3

Why does policy support incubation?

Governments are important funders of business incubation. Indeed, many incubators are either run by public entities or rely upon public funding as a primary source of funding for their operations. This chapter explores the rationale behind public support for business incubation by setting out the mechanisms through which incubators stimulate startup and scaleup activity, the available evaluation evidence on their effectiveness, as well as the different market failures that result in a sub-optimal supply of incubation supports in the absence of policy intervention.

How incubators facilitate startup and scaleup development – transmission channels

It is well-documented in the academic literature that newly created ventures suffer from a so-called “liability of newness”, which refers to the acute challenges that startups face in obtaining the external resources, information, and connections needed to develop and grow (Stinchcombe, 1965^[1]). The result is that most new business ventures fail and exit the market (Aldrich and Martinez, 2003^[2]).

Business incubators provide a range of supports and services to young companies, in effect acting as “sponsors” for these organisations. Incubators aid the development of startup companies via two key channels (Amezcuca et al., 2013^[3]):

- **Buffering:** In order to develop a nascent business, particularly at the pre-revenue stage, founders require the financial capital to fund their businesses’ operations as well as the knowledge and entrepreneurship skills needed to plan and execute them effectively. For example, entrepreneurs need to have a good understanding of relevant markets and regulations (Vincent and Zakkariya, 2021^[4]), as well as an ability to seize market opportunities (Bingham, Eisenhardt and Furr, 2007^[5]), build a strong reputation and credibility (Zott and Huy, 2007^[6]), and develop and maintain networks (Stegbauer, 2019^[7]). Few startups are endowed with these resources internally from their inception, which means they have to be acquired externally – something that many early-stage ventures are not yet capable of doing. As a result, a lack of financial capital, entrepreneurship skills, and knowledge constrain the development of startups and scaleups and cause many to close down.

By providing subsidised access to physical facilities, training, support services and peer learning opportunities (Gonzalez-Urbe and Leatherbee, 2018^[8]), incubators reduce startups’ early dependence on external resources and enable them to develop their internal knowledge and skills. This serves the function of “buffering” young companies from dependencies on external resources that they are not capable of acquiring independently (Amezcuca et al., 2013^[3]).

- **Bridging:** Incubators act as a “bridge” between new ventures and the wider entrepreneurial ecosystem, providing access to external resources, social capital, and legitimacy by connecting their clients with actors such as investors, research institutions and large corporates (Woolley and MacGregor, 2022^[9]). This “bridging” role is performed by organising events and through active introductions and matchmaking, among other things (van Rijnsoever, 2020^[10]).

In this way, incubators simultaneously work to reduce their clients’ initial dependence on external resources while also building their capacity to eventually acquire them.

Evaluation evidence on incubator impacts

The previous section presents the theoretical transmission channels through which business incubators can support the development of startups and scaleups. This section turns to the available evaluation evidence on the impacts of incubation to explore whether the theoretical benefits of incubation are borne out in practice. This is particularly important to ascertain given the significant sums of public money that go into funding incubation (Part 3 of this publication delves more deeply into this topic) and the consequent need to demonstrate value for public money (OECD, 2023^[11]).

Despite the growth of incubation as a model for supporting young companies, the evidence base on the impact and efficiency of these programmes is still somewhat underdeveloped. This is partly a reflection of the relatively recent emergence of some incubation models (Cohen and Hochberg, 2014^[12]) and partly a reflection of the numerous challenges associated with conducting reliable evaluations on incubators’ impacts (OECD, 2023^[13]; Pompa, 2013^[14]). These include difficulties monitoring the performance of firms once they leave the incubators, identifying suitable control groups of comparable firms outside of the

incubation programme, and a lack of clearly defined programme objectives, which complicates the identification of success metrics. The highly specific nature of incubation programmes and contexts also mean that evaluation studies can have limited external validity.

With that being said, the literature is expanding, and there are a growing number of reliable evaluation studies that have sought to determine the impacts of business incubators, both at the firm-level and the ecosystem-level. Most show that participation in incubation programmes improves startups' growth performance with respect to employment and revenues (Lasrado et al., 2016^[15]; Bone et al., 2019^[16]), though these growth increases are often found to fade in the longer-term (Amezcu, 2010^[17]; ISED, 2024^[18]).

Other studies explore how participating in incubation programmes can help with bridging startups' financial capital constraints. For example, a study focusing on nanotechnology firms in the United States finds that participation in private incubators improved the likelihood of companies obtaining a government grant or venture capital funding (Woolley and MacGregor, 2022^[9]). By comparing firms participating in acceleration programmes with similar firms that were close to being accepted in the same programmes, (Hallen, Cohen and Bingham, 2020^[19]) find that companies in accelerators experience better long-term outcomes with respect to funding, as well as other metrics such as employment growth and web traffic. (Hoffman and Radojevich-Kelley, 2012^[20]) also find that mentorship-driven acceleration programmes increase startup success rates by providing access to angel investors and venture capital.

The evaluation evidence paints a mixed picture on the impact of incubators on the survival rates of their clients. Some studies find that incubator participation reduces the chances of firms' closing (Woolley and MacGregor, 2022^[9]), while the finding of (Barrows, 2018^[21]) that receipt of a competition prize increases the probability of startups' survival by 64% sheds light on the potential effects of the direct funding provided by some incubators. However, other studies conclude that firms in incubators have lower survival rates or exit earlier than non-incubated companies (Amezcu, 2010^[17]; Schwartz, 2013^[22]; Yua, 2020^[23]). A likely reason for why firms in incubators might exit more quickly than other startups is that, through the access to the mentors, investors, and testing facilities that incubators provide, founders more quickly obtain the information necessary to determine whether to continue with or step away from a business venture (Yua, 2020^[23]; Amezcu, 2010^[17]).

Evaluation evidence underscores the importance of incubation programme design and delivery choices in determining impacts. In a study of 117 accelerators, (Chan, Patel and Phan, 2020^[24]) find that between 11% and 14% of the variation in startup performance can be attributed to differences between programmes. Interestingly, differences between countries or industries had only a minor effect on startup outcomes, highlighting the primary importance of programme design. The existing evaluation evidence base provides some useful insights on types of programme approaches that can deliver the greatest benefits. (Gonzalez-Urbe and Leatherbee, 2018^[8]) find a positive effect of support programmes only when they include an entrepreneurship training component. They estimate that participating in a programme that includes entrepreneurship schooling increases the probability of securing additional financing by 21%. This effect does not hold in programmes that only provide cash or coworking space without any other support. These results can be interpreted as evidence that incubators are effective when they contribute to building founders' managerial capital through entrepreneurship training. Similarly, (Hallen, Cohen and Bingham, 2020^[19]) conclude that learning is the key mechanism through which incubators can stimulate improved firm outcomes. The research highlights the importance of broad and intensive consultation with third parties, which prevents entrepreneurs from exploring opportunities with a low likelihood of bearing fruit. (Hallen, Cohen and Bingham, 2020^[19]) also find some evidence of a "Hawthorne effect" whereby founders work harder when they are on accelerator programmes, with an increased share of founders within accelerators working full-time on their enterprise.

The measured impacts of incubation programmes also could be attributable in part to signalling effects that reduce uncertainty surrounding new ventures, rather than solely the effects of the concrete supports

and services provided by the incubators. Admission onto prestigious incubator programmes can be interpreted as a badge of a quality for the startup, facilitating greater engagement from other potential partners, including investors (Kim and Wagman, 2012^[25]). However, the evidence on the strength of signalling effects is mixed and there is not a consensus on this issue. (Howell, 2020^[26]) finds that winning a new venture competition increases the chances of a startup receiving external financing by approximately 35%, which provides an indication of how positive signalling can address the information asymmetries that so often constrain startups' access to financial capital. However, (Hallen, Cohen and Bingham, 2020^[19]) find that the level of knowledge on the history of entrepreneurs participating in acceleration programmes does not have an attenuating effect on the accelerators' impact.

Beyond delivering direct benefits to their client firms, incubators also contribute to the broader entrepreneurial ecosystem. As noted, incubators play an important role in reducing information asymmetries on new startups and providing a form of quality assurance for other actors in the entrepreneurial ecosystem. (Goswami, Mitchell and Bhagavatula, 2018^[27]) also find that incubators strengthen ecosystem actors' commitment to the regional ecosystem and in accelerating the failure of low potential ventures. Meanwhile, (Fehder and Hochberg, 2014^[28]) show that the presence of accelerators in a region increases the supply of venture capital both for firms inside and outside of the accelerators. A mechanism for this could be that increased investment activity around accelerators may also increase the exposure to investors for non-accelerated companies in the area.

To summarise, evaluating the impact of incubation programmes remains a complex task, complicated by the variability in programme objectives, methodologies, and contexts. The evidence suggests that the success of incubation programmes is heavily influenced by factors such as programme design, the quality of mentorship, and the characteristics of the participating firms. There is also some evidence of positive spillovers from programmes on the ecosystem as a whole, meaning that impacts spread beyond the individual firms supported. Further evaluation will be crucial in developing a clearer understanding of the impact of incubation programmes and the mechanisms behind this.

Market failures affecting the supply of incubation

There is a strong rationale for public support to incubation programmes to fill gaps where the private sector is not active. Public policy can help address barriers to startup and scaleup development by intervening where there is an insufficient offer of incubation and acceleration services and by upgrading its own publicly supported services in line with recent trends. While private entities can and do deliver effective incubation programmes to certain types of startups and scaleups, public support is often needed to help “weak but promising ventures” (Tavoletti, 2013^[29]; OECD, 2022^[30]). Public support is essential especially for incubation outside the main global innovation hubs, where the private sector is less likely to operate.

The rationale for policy support for business incubators is underpinned by a number of market failures, which, in the absence of policy intervention, could result in an undersupply of incubation supports and services. These are outlined below:

- *Underinvestment in innovation.* Business incubators support the development and commercialisation of innovative new technologies, products and services. These types of innovation activities often create positive spillovers for other entities beyond those making the initial investment (Martin and Scott, 2000^[31]), resulting in underinvestment by the private sector due to the difficulties associated with fully internalising the returns. Public support for incubation systems is one way of helping to drive up levels of investment in innovation towards socially optimal levels.
- *Underinvestment in new companies.* Startup companies based on the development and deployment of novel technologies often pass through an extended pre-revenue stage where they

face high capital requirements (McAdam and Marlow, 2011^[32]). Information asymmetries between investors and investees surrounding the strength of an investment opportunity result in funding gaps, both in debt and equity markets, whereby the amounts of risk capital invested are below the levels that would exist in a context of competitive markets and no information asymmetries (Lerner, 2002^[33]; Wilson, Wright and Kacer, 2018^[34]).¹ These funding gaps are particularly acute for innovative, young companies without an established track record, limited collateral, and for whom the potential returns on investment are highly uncertain given the relatively unproven nature of their products, services or business models. Even venture capital investors that specialise in funding early-stage companies suffer from significant information gaps (Howell, 2020^[26]). Recently this issue has become more serious as technology has lowered barriers for entrepreneurial entry, increasing the level of uncertainty about startup and scaleup quality (Ewens, Nanda and Rhodes-Kropf, 2018^[35]). In innovative entrepreneurship, the founders themselves often do not know the intrinsic quality of their venture, how the market is going to react to the marketed innovation, and the expected revenue flow. Information about the probability of success of a startup therefore has economic value for both founders and investors (Arora and Fosfuri, 2005^[36]).

Incubators address the information gaps that result in underinvestment in new companies by testing a business idea rapidly and informing founders and investors about its feasibility and probability of success (Yua, 2020^[37]). Business incubators can also alleviate financing gaps for early-stage ventures directly through the provision of grants, loans or equity investment, as well as through supports to build the investment readiness of their clients (see Chapter 7).

- *Underinvestment in business support services.* Startups and scaleups face imperfect information surrounding the potential benefits of business support services, resulting in some not seeking assistance even where the benefits outweigh the costs (OECD, 2022^[30]). Business support services are a core feature of incubators' value offering, and by subsidising incubation, governments can address the imperfect information-induced market failure that results in a less-than-ideal number of startups and scaleups accessing vital supports. Incubators can also help their clients to become more aware of their knowledge and skills gaps and connect them with experts who can address these.
- *Ecosystem spillovers.* As well as supporting their clients' development, the actions of incubators also generate positive spillovers for other actors in the entrepreneurial ecosystem, creating a rationale for public intervention. For example, incubators play a role in extracting information about the quality of ventures (Barrows, 2018^[21]), in accelerating the failure of low potential ventures (Goswami, Mitchell and Bhagavatula, 2018^[27]), and in attracting private investors to the ecosystem (Fehder and Hochberg, 2014^[38]). Incubators also serve a critical networking function within entrepreneurial ecosystems. Deep and well-functioning networks of investors, research institutions, talent, corporations and startups have been integral to the emergence of some of the world's leading entrepreneurial ecosystems, the most famous example being Silicon Valley in the United States. While a confluence of serendipitous factors can trigger the organic development of such networks in some contexts, network failures in other contexts can result in the non-appearance of what would be profitable and productive networks (Schrack and Whitford, 2011^[39]). Incubators' role as ecosystem bridges and connectors can therefore help to overcome network failures and thus boost the overall functioning of the entrepreneurial ecosystems in which they are situated.

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Note

¹ The venture capital business model seeks to overcome these informational asymmetries through close monitoring and careful selection. However, venture capital markets in many countries remain relatively underdeveloped. Even where venture capital markets are more sophisticated, they can still fail to finance investment-worthy businesses due to a variety of factors such as rational herding or the relatively higher transaction costs associated with smaller scale investments in early stage ventures (Devenow and Welch, 1996^[40]; Jaki and Molnar, 2021^[41]; Harding and Cowling, 2006^[42]).

4 Trends in business incubation

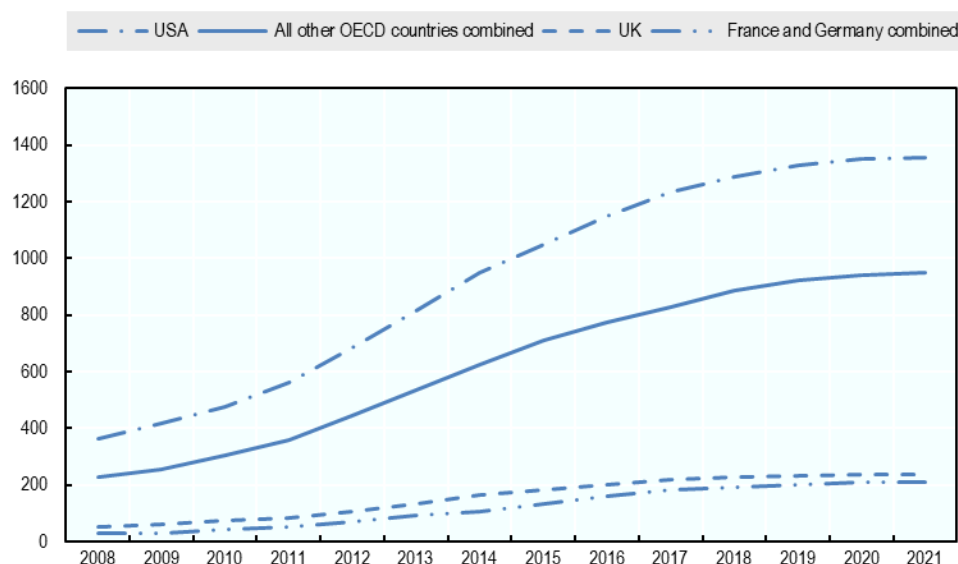
There have been a number of evolutions in incubation activities in recent years. Changes in technologies, market demand and other factors have reshaped how startups can develop and who can succeed. Incubators develop accordingly and adjust their programmes, operations and services in response to evolving startup needs. The most important trends in incubation observed in recent decades are presented and discussed in this chapter.

The popularity of business incubators as a tool for stimulating entrepreneurship, innovation, and economic development has risen dramatically. Estimates of the total number of incubation programmes globally range from between 4 000 to 14 000 depending on the source.¹ A recent international review estimated that approximately half of the incubators active in 2020 were less than six years old (Aljalalma and Slof, 2022^[1]), while the number of incubators recorded in the Crunchbase dataset quadrupled between 2008 and 2021. A range of country-level studies display a similar surge in the incubator population, as shown in Figure 4.1 (Centre for Entrepreneurs, 2022^[2]; Drori and Wright, 2018^[3]; Mian, 2021^[4]; Hathaway, 2016^[5]). For example, it has been estimated that there were approximately 12 business incubators in the United States in the early 1980s compared to 1 400 in 2020. (Davidson, 2021^[6]).

The increase in the incubator population reflects a rising demand for the services provided by incubators, in line with the growth in the number of startups based on innovative technologies, products and services. As an important funder of incubators in many OECD countries, governments have also been a key driver of the spread of incubation as a tool for stimulating startup and scaleup development in recent decades.

Figure 4.1. The rapid evolution of incubation supply

Cumulative count of incubators in selected countries



Note: Total cumulative count of incubators, accelerators and other startup support programmes

Source: Crunchbase, data as of February 2021

As the population of incubators has grown, there has been a concurrent trend towards greater specialisation. Many incubation programmes now focus on supporting startups and scaleups in specific industries or technology areas. This sector-specialisation allows for a more tailored support offer, for example by providing access to industry-specific mentors, tools, and investment networks. Health or biotech-focused incubators might focus on providing access to specialised lab equipment that can otherwise be cost-prohibitive for individual startups, while incubators focused on artificial intelligence might offer support in accessing cutting-edge computing resources or algorithms. Specialisation not only enhances the quality of the support offered but also makes the incubator more attractive to investors, as they become hubs for innovation within a particular field.

The increased specialisation of incubation systems potentially reflects a competitive pressure for incubators to establish a niche in an increasingly crowded market. Governments are also contributing to

this trend by funding sector-specialised incubation and acceleration programmes, often with the goal of fostering innovation in strategic areas deemed critical for future competitiveness. Large corporations have also established their own incubators to foster innovation within their sectors. These corporate incubation programmes – such as Google’s Launchpad and Microsoft’s ScaleUp programme – often focus on startups that align with the company’s strategic goals, enabling the integration of relevant innovations into the larger corporate structure.

Another significant trend is incubators’ growing focus on supporting the internationalisation of their clients. Today, incubators place a strong emphasis on generating “born global” companies by encouraging entrepreneurs to broaden their horizons and supporting them in serving international as well as local markets, for example by providing access to global networks, training on exporting, and information and advice on foreign markets and regulations. An important development has been the emergence of “soft-landing” programmes, where cohorts of startups are placed in an incubator or innovation hub overseas in order to help them to establish a presence in key markets.

Chapter 9 of this publication provides a further discussion on the specialisation of incubators and the implications for policy, while Chapter 6 reviews the role of incubators in stimulating the internationalisation of startups.

Delivery models for incubation have also evolved considerably with the advent of digital platforms that allow companies to access support from incubators remotely through virtual programmes. Virtual delivery models have become increasingly popular, particularly since the COVID-19 pandemic. As an illustration, nearly half (44%) of the companies supported by certified incubators in Portugal’s National Network of Incubators in 2024 participated in virtual rather than physical programmes. Virtual incubators tend to focus on delivering services like mentorship, skills training, and access to investor networks online, expanding access to incubation services to new types of startups, particularly those from emerging markets or rural areas with a limited offering of physical incubation programmes. Hybrid models combining physical office space with virtual support are also becoming more attractive to entrepreneurs who need some physical infrastructure but value the flexibility of remote services.

The advancement of digital platforms and tools has had a profound effect on how incubation programmes are run. From virtual mentorship to automated resource allocation, technology has made programmes more efficient and scalable. Tech-enabled incubation models are democratising access by reducing geographic and economic barriers, pointing to greater inclusivity and reach, albeit with potential implications for peer learning and community dynamics. Digital tools like machine learning algorithms are also being used to match startups with the right mentors, funding opportunities, and market insights. Moreover, digital tools allow for better tracking of the progress and performance of incubators’ clients, helping to improve incubation outcomes.

A parallel trend is the rise of sustainability and social impact driven incubators that specialise in stimulating new ventures that offer innovative products and services in response to environmental or social challenges. Chapter 9 of this publication provides a fuller discussion of the characteristics of social incubators and sustainability-focused incubators.

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Note

¹ See, for example: [F6S](#), [Startup Blink](#), and [Crunchbase](#).

Part II What are the main services provided?

5

Coaching

Coaching – whereby experienced advisors help entrepreneurs to meet their potential through structured, goal-oriented interactions – is a central component of business incubation. It can have a transformative impact on the development and trajectory of new companies by fostering personal growth, enhancing workplace performance, and supporting entrepreneurial success. This chapter examines the main methods and tools of coaching and how these are applied in the context of business incubation, with analysis of coaching approaches in Sweden and other OECD countries and discussion on the implications for policy.

What is coaching?

Coaching and mentoring are about helping individuals to discover and realise their potential through supportive, goal-oriented interactions (Klofsten and Öberg, 2011^[1]; Kuratko, Neubert and Marvel, 2021^[2]). This broad view encompasses various approaches where an experienced advisor – referred to here as a coach – assists an individual or, in this context, an entrepreneur in effectively managing professional or personal challenges. The aim is to leverage focused conversation and reflection so that entrepreneurs learn to act more effectively on their own behalf (Clutterbuck, 2008^[3]). Compared to purely directive instruction, coaching emphasises partnership and shared accountability, while also allowing space for reflection and growth. Stemming from fields such as counselling, adult education, and organisational development, coaching has adopted a variety of techniques supportive of transforming entrepreneurs' thinking, self-awareness, and performance (Kuratko, Neubert and Marvel, 2021^[2]).

Crucially, coaching involves crafting a structured relationship that fosters trust and enhances dialogue. Whether supporting university-based entrepreneurs in technology ventures or executives in leadership development, coaches collaborate with entrepreneurs to articulate aspirations, clarify objectives, and identify suitable courses of action (Bryan, Tilcsik and Zhu, 2017^[4]). This dynamic is often described as unlocking potential, with the conviction that the individual being coached already holds inherent capabilities waiting to be fully activated (Devins and Gold, 2003^[5]). Developmental coaches strive to support the learner in discovering their own answers, intervening with targeted advice only when the entrepreneur's experience or insights might be lacking (Klofsten and Öberg, 2011^[1]). Across diverse cultures and organisational contexts, the term coaching captures a relationship that can be short-term or long-term, directive or non-directive, and performance or career-focused, all while prioritising a sense of purpose and mutual commitment to learning. Hence, the concept of coaching unifies many forms of supportive guidance, serving as a cornerstone of leadership development, venture success, and personal growth in many different environments (Burdett, 1998^[6]).

How is coaching conducted?

Coaching is conducted through structured interactions that empower entrepreneurs to reflect, set goals, and take purposeful action toward their development, typically under the guidance of an experienced professional (Klofsten and Öberg, 2011^[1]). These interactions may occur one-to-one or in small groups and vary in terms of the time horizon and meeting frequency and duration. Incubator programmes often emphasise short, targeted sessions where entrepreneurs present emerging challenges and receive immediate feedback and action-oriented tips. Coaching and mentoring can also take place over longer cycles, facilitating deeper relationships that address career transitions, leadership growth, or personal development (Ciuchta et al., 2018^[7]). In most coaching contexts, the process involves establishing rapport and defining a joint purpose, then regularly revisiting goals to keep discussions focused.

Coaches often use open-ended questions to guide entrepreneurs in exploring their assumptions, identifying resources, and generating solutions. The coach supports the entrepreneur by facilitating clarity on objectives, reviewing the current situation, brainstorming possibilities, and committing to specific next steps (Clutterbuck, 2008^[3]; Kuratko, Neubert and Marvel, 2021^[2]). Throughout these dialogues, effective coaches maintain an atmosphere of trust and encourage constructive self-critique. By “holding up a mirror”, the coach challenges entrepreneurs to confront gaps between their intentions and actions. Furthermore, coaching is frequently reinforced through structured follow-up. Individuals may use action logs, accountability check-ins, or reflective journaling to integrate insights gained during sessions into real-world activities (Klofsten and Öberg, 2011^[1]). Whether the focus is business incubation, career progression, or personal growth, the essence of coaching remains consistent: it is a practice of forging a trusting and

growth-oriented relationship in which the coach's questions, observations, and supportive challenges catalyse intentional change in the entrepreneur (Bryan, Tilcsik and Zhu, 2017^[4]).

What tools are used in coaching?

Coaches and mentors draw on numerous tools and frameworks to support a productive coaching relationship, tailoring their methods to the specific needs and goals of the entrepreneur (Klofsten and Öberg, 2011^[1]). This prompts a focused yet flexible conversation where individuals define their aspirations, analyse the current situation, propose potential approaches, and commit to specific actions (Kuratko, Neubert and Marvel, 2021^[2]). Important aspects of coaching are active listening, thought-provoking questions, and reflective summaries – techniques that ensure the entrepreneurs feel heard and are systematically guided through a process of self-discovery. Many coaches also employ checklists or diagnostic tools to capture progress and identify potential blind spots. For example, in entrepreneurship training programmes, a standardised checklist might facilitate consistent reviews of an entrepreneur's marketing, finance, and operational milestones (Devins and Gold, 2003^[5]). In certain workplace or organisational contexts, formal assessments such as 360-degree feedback or personality inventories can be integrated into coaching to provide objective data about strengths, weaknesses, and perceptions from peers or supervisors (Clutterbuck, 2008^[3]). These instruments help the entrepreneur align personal insights with objective indicators.

Visualisation and scenario planning are also frequently used to stimulate creative thinking and plan alternate outcomes, especially among startup founders facing uncertain markets (Kuratko, Neubert and Marvel, 2021^[2]). Reflective journals may be encouraged between sessions, giving entrepreneurs a structured opportunity to record accomplishments, challenges, and lessons they have gleaned daily or weekly. Moreover, digital collaboration tools such as shared documents can be used to facilitate continuous communication, ensure accountability, and track results.

Regardless of the precise mix of techniques, coaches increasingly incorporate methods gleaned from psychology, organisational behaviour, and project management to help entrepreneurs transform abstract goals into concrete steps and measurable achievements (Burdett, 1998^[6]). In this way, the right combination of tools not only enriches coaching sessions but also bridges the gap between insight and the achievement of tangible progress.

Can any effects of coaching be observed?

A growing body of evidence indicates that coaching has observable positive effects across a variety of metrics relating to personal growth, workplace performance, and new venture success (Klofsten and Öberg, 2011^[1]). Individuals often report improvements in self-awareness and confidence as they engage in structured reflection and receive tailored feedback from coaches (Burdett, 1998^[6]). In workplace contexts, coaching correlates with higher productivity and job satisfaction. For instance, in a study of public agency employees, participants who received executive coaching demonstrated notable gains in efficiency, translating directly into measurable productivity increases (Ciuchta et al., 2018^[7]). Similar trends have been observed among technology entrepreneurs who, through coaching engagements, refine their business models and enhance their ability to identify and leverage new market opportunities (Hunt and Weintraub, 2020^[8]; Kuratko, Neubert and Marvel, 2021^[2]; Nicholls-Nixon and Maxheimer, 2022^[9]).

Coaching outcomes are also manifested in more qualitative dimensions. For example, research highlights enhanced thinking quality among entrepreneurs that receive coaching, enabling more strategic decision making and more effective problem-solving (Devins and Gold, 2003^[5]). This deepened insight can reduce costly missteps and fosters innovative approaches to addressing challenges. Moreover, professionally

coached entrepreneurs exhibit an increased likelihood of securing investor interest since they demonstrate willingness to adapt and learn (Kuratko, Neubert and Marvel, 2021^[2]). Meanwhile, employees in organisational settings who experience well-structured coaching have reported improvements in career progression, leadership capacity, and stress management (Bryan, Tilcsik and Zhu, 2017^[4]).

An additional aspect that should be considered is the broader organisational or ecosystem impacts of coaching. When coaching initiatives permeate a culture, teams often develop greater trust, better communication, and higher engagement. Feedback loops become more robust, guiding employees and entrepreneurs toward continuous improvement (Kuratko, Neubert and Marvel, 2021^[2]). Studies also indicate a positive correlation between coaching relationships and social networks, allowing participants to gain timely access to critical resources or knowledge (Ciuchta et al., 2018^[7]). Hence, benefits do not solely accrue to the individuals being coached; they also extend to the people and institutions around them, reinforcing the value of coaching as a driver of both personal development and collective performance.

Coaching within business incubators

Coaching and mentoring is a central component of the business incubation process. Nearly all incubators offer coaching either themselves directly or via third parties (Centre for Entrepreneurs, 2022^[10]). The knowhow, experience and contacts that coaches can provide are critical assets for new entrepreneurs, helping them to navigate the many uncertainties and resource constraints they face as they seek to develop and implement their business idea. Coaching is often cited among the most impactful forms of assistance that entrepreneurs receive during the business incubation process.

In Sweden, Vinnova (the national innovation agency) has sought to standardise coaching practices across the incubation system by establishing a coaching framework, based on best practices from successful incubators. This framework is summarised in Table 5.1 below. As a core condition for funding through the National Incubator Program (NIP), incubators are required to adopt this framework and submit detailed information on their coaching structures and processes, including the tools and methods used. Compliance is monitored through periodic assessments to ensure incubators adhere to the prescribed coaching structure. Access to NIP funding is in this way made contingent on alignment with the principles of the coaching framework, making it a prerequisite for selection for support through the programme. The aim is to ensure consistent, high-quality support for startups through regular interactions, expert guidance, and milestone-based progress tracking, among other things.

Table 5.1. Key required elements in the incubator coaching approach within Sweden's NIP

Category	Requirement
Incubator coaching approach	Tailored support includes evaluations, regular meetings, expert guidance, networking, and milestone tracking to help ventures achieve their goals.
Recruitment of coaches	Thorough screening ensures selected candidates have the expertise and interpersonal skills needed for effective venture support.
Background and expertise	Professionals with diverse experience in business development and leadership offer comprehensive guidance from ideation to scaling.
Professional development	Training programmes, workshops, and feedback opportunities help refine skills and prepare coaches to meet ventures' needs.
Collaborative coaching model	A collaborative model assigns lead and backup coaches, combining internal and external expertise for tailored and strategic venture support.
Focus areas and tools	Structured tools like the Business Model Canvas and IRL are embedded in the process to align coaching with venture progress and market readiness.
Ethical and transparent practices	Adherence to ethical guidelines ensures transparency, confidentiality, accountability, and the avoidance of conflicts of interest.
Monitoring and evaluation	Regular updates, milestone reviews, and evaluations align strategies with ventures' goals and enable continuous improvement.

Incubators' coaching approaches

Coaches and mentors in incubators play a central role in supporting client companies by providing structured and personalised advice and support. They typically begin with an initial evaluation of the business' idea, market potential, and team dynamics to create a tailored action plan. In Sweden, NIP-funded incubators adopt a structured yet flexible coaching approach to support venture development. Regular meetings – including weekly check-ins and monthly reviews – ensure that coaching remains adaptable to each business' evolving needs. Coaches provide guidance on business modelling, strategy development, and operational improvements, offering expert insights and constructive feedback. Additionally, they facilitate connections with relevant networks and advisors, enabling their clients to access valuable external resources. Progress is systematically tracked through milestone monitoring, ensuring that the companies stay aligned with their objectives and continue to develop effectively.

Coaches in incubators utilise a range of tools to guide companies through different stages of development and ensure alignment with market demands. These include the “Business Model Canvas”, the “Need, Approach, Benefit, Competition” model, and customer interaction frameworks. In Sweden, the progress of companies is closely monitored by coaches using the “Innovation Readiness Levels” (IRL) tool. In addition to these tools, coaches assist with financial planning, milestone tracking, and performance monitoring. This structured, measurable approach helps ensure that startups receive the support they need at every stage of development.

Coaching formats vary based on the target audience, stage of development, and the goals of the coaching process. A widely used approach is the one-to-one coaching model, where a dedicated coach works with a venture's leadership team, providing bespoke advice and feedback tailored to the specific challenges and needs of the company. Additionally, group coaching sessions are often organised, where entrepreneurs can benefit from the collective wisdom of a cohort of peers by sharing experiences and learning collaboratively. These sessions foster peer-to-peer support by enabling ventures to share experiences, solutions, and strategies with one another. Incubators also offer expert workshops and seminars where coaches with specialised knowledge provide targeted advice on key business areas such as financial management, marketing strategies, and leadership development. Another common method is networked coaching, where incubators facilitate connections between their businesses and a wider network of industry experts, mentors, and investors. These connections provide valuable insights and open doors for collaboration, funding, and partnership opportunities.

The mentorship network model involves incubators assigning multiple coaches with different areas of expertise to support different aspects of businesses' development, such as finance, marketing, or product development. Similarly, the collaborative coaching model combines internal and external expertise, assigning lead coaches and backup coaches to ensure a diverse set of perspectives. For example, the incubation programmes of the French Tech initiative and the “Start it @ KBC” accelerator in Belgium each have coaches from various fields – such as technology, finance and business – working together to provide comprehensive support to companies across different aspects of startup development such as strategy, marketing, and international expansion. Similarly, at the Oxford Foundry incubator and Cambridge University's Innovation Centre in the United Kingdom, collaborative coaching models encourage synergies between researchers, entrepreneurs, and business experts, ensuring that startups successfully transition from research to market-ready products. Collaborative coaching should involve both internal and external experts to provide a broad spectrum of perspectives and expertise. In Sweden, the collaborative coaching model is supported through a network of coaches and external advisors that fosters co-ordination and knowledge sharing. Coaches regularly meet in networking events and peer learning sessions, where they exchange insights, discuss challenges, and refine their approaches. These events facilitate collaboration among coaches as well as industry experts. Incubators such as “LEAD” in Linköping also promote collaborative coaching by pairing startups with lead and backup coaches. External advisors with sector-specific expertise further enrich the coaching experience, helping ventures navigate sector-specific

challenges. This networked approach ensures that all coaches remain aligned and informed, ultimately enhancing the quality and impact of the support offered to startups.

Recruiting coaches

The recruitment of high-quality coaches is key to the effectiveness of support provided. Incubators aim to select coaches whose expertise aligns with the specific needs of the ventures they support. Coaches are drawn from both the public and private sectors, bringing diverse perspectives and specialised knowledge to the table. The recruitment process should be thorough, focusing on experience, expertise, and the ability to build strong relationships. Framework agreements can define the roles of coaches, while task-specific agreements can be used to clarify their responsibilities. It is essential that coaches maintain independence, disclose any conflicts of interest, and avoid commercial ties with ventures to preserve the integrity of the coaching process. Careful selection therefore ensures that coaches can offer relevant and effective support, combining technical expertise with strong interpersonal skills.

In terms of their background, incubator coaches are often chosen for their experience and competencies in business development and networking, positioning them to provide valuable guidance on market needs and business models and strategies. They often possess a blend of practical experience, academic qualifications, and industry knowledge, allowing them to address a broad range of critical areas such as product development, market strategy, financial management, and leadership. Additional expertise is provided by independent consultants and external experts, ensuring that ventures receive comprehensive support as they progress from ideation to scaling.

Recruitment practices for coaches vary depending on the specific goals of incubation programmes. For instance, the MaRS Discovery District in Canada may recruit coaches with international business development experience to support startups in scaling globally, while incubators focusing on local or national goals might focus on recruiting coaches with deep knowledge of the local economic and technological landscape. Some incubators prioritise the recruitment of coaches with a blend of scientific research knowledge and entrepreneurial experience and with expertise in research commercialisation and academic entrepreneurship, particularly those that aim to bridge the gap between scientific research and market-ready products, such as the Incubateur HEC Paris or the Oxford Foundry in the United Kingdom.

Training coaches

Professional development for coaches and mentors is also critical. By offering training programmes, workshops, and peer learning sessions, incubators can ensure that their coaches refine their skills and stay updated on industry trends. Regular evaluations and feedback from ventures also allow incubators and coaches to assess the effectiveness of the coaching and make necessary adjustments. Coaches can also attend industry conferences and interact with thought leaders, which helps them remain at the forefront of innovation and continue providing effective guidance.

Many incubators provide continuous training opportunities for coaches. Good practice examples include:

- In Malmö in Sweden, the Minc Incubator prioritises coach development through access to an accelerator programme that encourages collaboration with external experts in areas like lean startup methodology, business modelling, and scaling strategies. This ensures that the coaches remain at the forefront of industry best practices. Coaches also benefit from ongoing training in business strategy, innovation management, and coaching techniques through expert-led workshops. The effectiveness of their support is continuously assessed through regular feedback from the startups, ensuring that the coaching approaches are always aligned with real-world challenges and changing market needs.

- The “Sting” incubator in Stockholm adopts a tailored approach to coach development by offering industry-specific workshops in areas such as fintech, life sciences, and digital health. These workshops, led by industry experts, provide coaches with a deep understanding of sector-specific challenges, equipping them to offer specialised advice to startups. The incubator also fosters a culture of peer learning, where coaches meet regularly to discuss challenges and share insights. This environment encourages continuous improvement in coaching techniques and provides a platform for senior coaches to mentor newer ones, ensuring all coaches are well-equipped to guide startups effectively. This combination of industry-specific expertise and peer collaboration enables the incubator’s coaches to offer strategic, informed support.

Elsewhere, IMEC.start in Belgium offers workshops and networking events that expose coaches to emerging global markets and the latest technological advancements. Similarly, the DMZ incubator at Ryerson University in Canada provides specialised training for coaches focused on the needs of startups in the digital and tech sectors.

Transparency and ethics

Ethical and transparent practices are fundamental to the coaching process. To ensure that coaches provide honest and constructive feedback that prioritises the long-term success of the company, coaches in Sweden are prohibited from having financial interests in the ventures they mentor, thus avoiding any potential conflicts of interest. Framework agreements and customer relationship management (CRM) systems also help to ensure consistency, accountability, and equal treatment during coaching sessions. Transparency should also be maintained in any funding decisions and selection criteria for coaches and startups. Another important aspect is safeguarding confidentiality, which fosters a trusting relationship between coaches and ventures.

Monitoring

Monitoring the progress and performance of startups provides valuable insights on both the coaching needs of the startups and the effectiveness of current supports. For this reason, incubators and coaches often deploy data-driven approaches that leverage performance metrics and continuous feedback loops in order to adjust coaching strategies. This is essential in enabling coaches to adapt and refine their approach to meet the evolving challenges and unique needs of their clients as they progress through different stages of maturity and development.

Incubators use a variety of methods to track the progress and performance of their startups and coaches. This includes qualitative feedback from businesses on the coaching they receive, gathered through surveys, interviews, or focus groups. This helps assess whether coaching is addressing the strategic direction of the business, solving key challenges, and improving decision making confidence. They also frequently track startup milestones and performance metrics such as product launches, fundraising, sales, and social media engagement.

Coaches track different metrics depending on the venture’s business maturity. At the early idea development stage, coaches might focus on metrics like the number of product iterations or customer validation sessions conducted, to provide a gauge of how well the business idea is evolving. As the venture enters the market and begins to grow, coaches start to track indicators like revenue, partnerships, and customer acquisition costs. At the scaling stage, metrics like organisational growth, leadership development, and market expansion, become relevant in order to assess whether the business is ready to scale effectively. Coaches also use self-assessment tools to evaluate their approach and adjust their coaching techniques accordingly. Digital platforms can enhance the coaching process within incubators by enabling coaches and startups to stay connected and track progress more efficiently. As an example,

the DMZ incubator at Ryerson University in Canada employs data analytics to monitor startup performance in real time, allowing coaches to swiftly adjust their guidance as needed.

Conclusions and policy lessons

Coaching and mentoring play a crucial role in business incubation. It delivers a host of important benefits to entrepreneurs and startups, including improved decision making, progress monitoring, and resilience, as well as enhanced leadership and management capabilities. Coaches also serve a networking function by linking their clients to resources, mentors, investors and experts, facilitating access to capital and business opportunities that can significantly accelerate companies' development. In this way, coaches help startups to overcome obstacles such as limited resources, market competition, and complex business dynamics.

Delivering effective coaching through incubators requires a tailored, data-driven approach that continuously adapts to the needs of startups. One key to successful coaching is recruiting qualified coaches who possess both the technical expertise and interpersonal skills necessary to foster trust, collaboration, and growth. Coaches should have extensive experience in business development, leadership, and industry-specific knowledge to provide relevant and actionable advice. Another critical factor is the use of coaching tools and frameworks that help ventures track progress, set milestones, and assess their market readiness. Monitoring and evaluation are also essential to ensuring that coaching strategies are working effectively, with regular check-ins, milestone reviews, and iterative adjustments to coaching plans being key to successful coaching.

Incubators face several barriers that can hinder the effectiveness of the coaching supports provided to their clients. One is a lack of sufficient funding, which can limit incubators' ability to bring in top-tier coaches. Another is limited access to relevant expertise on specific topics. For example, incubators may lack coaches with deep industry-specific knowledge or the ability to guide ventures through highly technical or niche business challenges. Scalability challenges also arise when incubators expand their services to more ventures without increasing the coaching capacity. This can result in inadequate support, overburdened coaches, and inconsistent advice. Furthermore, incubators may face organisational silos that limit collaboration between different coaching teams, reducing the diversity of perspectives available to ventures. Finally, cultural and language barriers can impact communication, trust-building, and the overall coaching experience, especially when supporting international ventures or entrepreneurs from diverse backgrounds.

Policymakers can support incubators in overcoming these challenges and support more effective coaching within the context of incubation by:

- Providing public funding to help incubators to bring in high-quality coaches. Incubators should also be encouraged to have a diverse range of funding sources, including through the formation of strategic partnerships with industry stakeholders.
- Establishing clear guidelines for coaching and requiring incubators to provide information on their coaching process when applying for public funding. A well-defined policy structure will permit incubators to fine-tune and improve their coaching models, ensuring they provide the right support at the right stages of venture development.
- Encouraging the adoption of diverse coaching models within incubators, including one-to-one coaching, group coaching, mentorship networks and collaborative coaching. Structured coaching programmes that combine individual sessions with group interactions offer a balanced approach that supports both personalised guidance and peer learning.

- Prioritising the recruitment of qualified coaches with both technical expertise and strong interpersonal skills within incubators. In addition, policies should support ongoing professional development programmes for coaches.
- Encouraging incubators to track the progress of ventures, assess outcomes, and refine coaching strategies through continuous feedback. This allows incubators to make necessary adjustments and ensure that coaching interventions are effective.
- Requiring incubators to implement clear guidelines regarding confidentiality, fairness, and transparency in coaching relationships. This builds trust, encourages open communication, and fosters a productive coaching environment.

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6 Internationalisation assistance

Stimulating global startups with strong international growth prospects has become an important priority for incubation programmes and policies. Incubators can support startups to internationalise rapidly in various ways, including through advice and mentoring on handling cultural, market, and regulatory differences between countries, providing access to international networks, and developing soft landing facilities abroad. This chapter describes the role of incubators in supporting “born global firms” and examines how governments can facilitate this.

The emergence of “born global firms”

The increased integration of the global economy since the 1980s has strengthened linkages between entities in different countries and reduced tariff and non-tariff barriers to international trade. It has also contributed to a homogenisation of consumer preferences, making it easier for businesses to cater to the tastes of overseas customers. These factors, together with rapid advances in information and communications technologies, have led to the emergence of a breed of startups that internationalise at a very early stage of their development – so-called “born global firms” (BGFs) (Cavusgil and Knight, 2015^[1]).

The internationalisation journey is unique for each startup, although the literature does identify some common features of the startup globalisation process. The Uppsala internationalisation process model posits that firms generally globalise gradually, with an initial focus on markets that are closer to their domestic market from a geographical and cultural perspective (Johanson and Vahlne, 2009^[2]; Van Der Krogt and Neubert, 2017^[3]). At the earlier stages of internationalisation, startups often seek out lower risk modes of market entry such as licensing or exporting. Global startups also tend to occupy a relatively small global niche (Van Der Krogt and Neubert, 2017^[3]). As firms’ knowledge of operating overseas increases, they will gradually extend their operations to more distant markets and become more deeply integrated in international markets through, for example, the formation of international subsidiaries.

While BGFs are more likely to originate from small and open markets, international startups are also prevalent in larger economies (Van Der Krogt and Neubert, 2017^[3]). Internationalisation offers many benefits to startups, including a larger and more diverse revenue base and access to new technologies and partners. The more intense competition and shorter windows of opportunity associated with global markets can also result in more rapid growth among startups that internationalise (Burgel et al., 2005^[4]).

Although the increased integration of the global economy and the spread of new technologies have significantly lowered the costs of internationalising, startups today nonetheless face important barriers to internationalisation. Geographic, cultural, economic and administrative differences inevitably exist between markets, which can place foreign companies at a comparative disadvantage to domestic companies (Johanson and Vahlne, 2009^[2]). This is sometimes referred to as the “liability of foreignness” (Hymer, 1976^[5]) (Zaheer, 1995^[6]). Foreign companies also have more limited contacts and partners in overseas markets than their local counterparts (Johanson and Vahlne, 2009^[2]). These challenges compound the various age and size-related barriers (“liabilities of size” and “liabilities of newness”) that startups frequently encounter, such as having less extensive networks (Stinchcombe, 1965^[7]) and more limited access to skills and finance (OECD, 2019^[8]), as described in Table 6.1 below.

Table 6.1. Obstacles faced, by company profile

	Liability of size	Liability of newness	Liability of foreignness
Established large companies (domestically focused)	✗	✗	✗
Established SMEs (domestically focused)	✓	✗	✗
Domestic startups	✓	✓	✗
Global startups	✓	✓	✓

To overcome these challenges and establish a competitive edge over local companies, successful BGFs often need unique and high-quality products adapted to the demands of local customers and with sufficient differentiation from local alternatives (Knight and Cavusgil, 2004^[9]), (Johanson and Vahlne, 2009^[2]). Innovative capabilities are key to achieving this. Another driver of success for internationalising startups is the formation of strong ties with foreign distributors. These partnerships help global startups to overcome

their “liability of foreignness” (Knight and Cavusgil, 2004^[9]) (Johanson and Vahlne, 2009^[2]). The internal attributes and capabilities of startup founders and teams are also instrumental.

The role of incubators in supporting startup globalisation

A primary aim of many incubators is to stimulate the growth of young companies. Since expanding overseas is an important channel through which startups can achieve scale, supporting internationalisation is often a core focus of incubation programmes. As would be expected, incubators in countries with a small domestic market place a strong emphasis on startup globalisation, given the importance of exports as a growth channel for young and scaling firms in these countries. Interestingly, however, incubators’ focus on internationalisation also extends to many larger economies.

One of the primary advantages of incubators lies in their capacity to provide tailored support specifically designed for startups eyeing the international market. This can include targeted training and advice to equip entrepreneurs with the knowledge and skills necessary to develop international business strategies and navigate the complexities of international trade and regulations (Carayannis and Von Zedtwitz, 2005^[10]). Research also shows that internationalising firms employ a combination of causation and effectuation processes (Harms and Schiele, 2012^[11]; Sarasvathy, 2022^[12]).¹ The mentoring, coaching and peer learning opportunities available in incubators can support startups in developing and implementing these different strategies for their internationalisation. Through incubation programmes, entrepreneurs may also gain exposure to diverse global markets, enabling them to fine-tune their products or services according to the preferences and needs of international consumers.

The evidence also suggests that knowledge-intensive businesses benefit from faster and more focused internationalisation (Schwens et al., 2018^[13]), something that incubation and acceleration programmes are well-placed to facilitate given their rapid and intensive delivery of support, guidance and connections. Furthermore, businesses that pursue innovation and internationalisation strategies tend also to benefit more from immersion in knowledge-rich environments (Estrin, Korosteleva and Mickiewicz, 2013^[14]), which incubators can either provide themselves directly or facilitate access to.

The bridging function of incubators is also key. Internationalisation for export-oriented entrepreneurs is inherently a dynamic learning process, characterised by experiential knowledge acquisition and collaborative engagements with network partners (Lee, Jiménez and Devinney, 2020^[15]). Additionally, (Freeman, Edwards and Schroder, 2006^[16]) emphasise the value of collaboration, suggesting that high-performing, born-global firms tend to engage more frequently with their networks. These networks often evolve into formal business linkages in new markets, serving as instrumental relationships that facilitate further internationalisation efforts (Freeman et al., 2010^[17]). In practice, born-global firms often leverage the collective experience of their founding teams and nurture external domestic and international network relationships to acquire essential resources (Laanti, Gabrielsson and Gabrielsson, 2007^[18]). Incubators can be key in helping startups to expand their networks internationally. This assistance in establishing links to international markets may be particularly beneficial for inexperienced entrepreneurs (Wright, Westhead and Ucbasaran, 2007^[19]).

Fostering the creation and growth of international startups supports progress towards many government objectives in areas such as exports, innovation, productivity, job creation and economic growth. As such, stimulating startup globalisation has become an important policy priority. The remainder of this chapter examines how governments can use incubation programmes as a tool for supporting startup globalisation.

Dedicated incubation programmes for startup globalisation

Many governments in OECD countries have launched incubation programmes that are dedicated to supporting the internationalisation of startups. These programmes deliver many forms of internationalisation assistance, including:

- Networking with potential partners, investors and customers in the target market. This can take place virtually as well as in-person through short study visits or demo days in the target markets. For example, the European Innovation Council's business acceleration services include the Overseas Trade Fair Programme, which allows selected innovative companies to showcase their products in strategic markets and make contacts with new partners. A similar initiative is Korea's Global Conference Support programme, which funds startups to participate in global expositions such as the CES in the United States, Switch in Singapore, Slush in Finland and Viva Tech in France. The French Tech Capitals also send startups in their regions to international trade fairs.
- Individualised coaching and mentoring, which can include assistance in developing an internationalisation plan or assessing product-market fit. Often this support is delivered by local experts with strong experience and connections in the target market.
- Training and workshops on topics relating to international market insights, processes and opportunities.

Often, government-run incubation programmes are based on partnerships with overseas incubators. These are immersive programmes through which startups spend time overseas to learn about local customs, procedures and markets and build relationships with local partners, investors and customers. Such initiatives are commonly referred to as "soft-landing" schemes.

Box 6.1 describes the approach of the Korean Ministry of SMEs and Startups' K-Startup Centers programme, which is a leading soft-landing initiative, while Box 6.2 presents the case of the German Accelerator programme – a major public programme focused on supporting the internationalisation of startups.

Some other examples of incubation programmes in OECD countries that focus specifically on the promotion of startup globalisation include:

- The Canadian Technology Accelerators programme, which provides coaching, mentoring and networking services to help Canadian businesses to establish themselves in 12 international locations (5 in the United States, 5 in Asia and 2 in Europe).
- The Global Incubator Programme in the UK, which provides opportunities for small cohorts of 6-8 innovative SMEs to spend 4-6 months in overseas incubators, with the UK's innovation agency covering the travel, training and incubation costs.
- Beyond Beta's internationalisation programme, which aims to help Danish startups to develop a structured approach to expanding overseas and select the most appropriate target markets to target, embedding internationalisation within their strategy from an early stage.
- The Netherlands' ScaleNL Accelerator programme, which delivers 3-months of coaching and mentoring to cohorts of 10 founders, culminating in a networking trip to the United States.
- The Austrian Ministry for Labour and Economy's Global Incubator Network Austria (GIN), which seeks to connect Austrian incubators with their counterparts in select countries. Austrian and international incubators within the network participate in the GIN Startup Exchange, which provides the incubators with opportunities to receive promising startups from abroad and to send their own startups to partner incubators overseas.

Box 6.1. K-Startup Centers, Korea

Objectives and rationale

The K-Startup Centers (KSC) initiative is a public acceleration programme that hosts Korean startups in global innovation hubs in other countries. The aim is to help Korean startups to internationalise through the provision of physical bases, training and networking opportunities.

Description

The KSC programme receives financial support from the Korea SMEs and Startups Agency (KOSME) and is jointly operated by KOSME and the Korea Institute of Startup and Entrepreneurship Development (KISED). The programme began in 2019 with the inaugural centre in Seattle, the United States. As of 2024, there are four hub-type other centres in Paris (France), Hanoi (Vietnam), Singapore and Tokyo (Japan). The selection of destination countries is based on the foreign governments' commitment to supporting Korean startups along with the host country's ecosystem and policy direction, reflecting market characteristics by region and policy agenda. KSCs may be established through a Memorandum of Understanding (MOU) or a similar form of non-binding agreement, which is often signed during official visits by high-ranking officials such as the President or Prime Minister.

The KSCs serve as a physical base for the selected Korean startups in global innovation hubs, providing access to working spaces and office services. By facilitating their settlement in foreign markets, the KSCs provide networking opportunities that enable startups to connect with relevant parties, including investors and established businesses. The startups also participate in an acceleration programme that provides various forms of assistance including capacity building, mentoring, networking, and funding. Consulting services in areas such as tax, business establishment or the local legal or regulatory systems are also available. However, support is primarily on-demand, considering the diverse needs of startups.

The KSCs target startups at a relatively advanced stage of internationalisation. Startups can submit applications to the KSCs. Subsequently, it undergoes an evaluation by the Korean governing bodies (KOSME and KISED). The evaluation criteria include the originality, uniqueness, and competitiveness of the product or service, the feasibility of the overseas startup plan, and investment or export performance, as well as the founder's expertise and readiness for global expansion.

Success factors

The KSC operates by specialising in promising industrial sectors specific to each region. For instance, the Seattle center focuses on fields such as Big Data/AI, Robotics, Quantum Technology, Aerospace/Maritime, and Eco-friendly Energy, while the Singapore center prioritises sectors including AI, Semiconductors, Service Platforms, Precision Medicine, and FoodTech. For each of these areas of focus, the KSC establishes one or multiple local partners that are active in the field. This sector-specific approach enables a more tailored support network to be developed. The admission of startups operating within similar areas facilitates synergies through collaborative efforts and peer learning. Simultaneously, for the centre lead, managing the relevant network, expertise, and services provided to startups becomes more efficient and effective.

KSCs also act as platforms for local investors exploring investment opportunities, providing rich opportunities for the startups to showcase themselves to centre visitors. In addition, the fact that the startups operate within the centres provides a geographical proximity that strengthens mentor-mentee relationships with investors.

A distinctive aspect of the Korean startup ecosystem lies in leveraging the infrastructural resources of conglomerates. In keeping with this ethos, the KSCs seek to harness the resources and infrastructures of large firms in foreign countries. Several leading Korean firms possess sales channels and physical offices abroad. Exploiting this advantage, Korea established the KSC Vietnam centre within L-Camp Vietnam, operated by Lotte Ventures. This collaborative approach with the private sector facilitates open innovation with local subsidiaries and provide judges for funding and Investor Relations (IR) networking opportunities.

Challenges

Each KSC is built upon partnerships with local experts or entrepreneurial ecosystem actors (“KSC partners”). The KSC partners are essential in building connections to the local market and also in selecting Korean startups with business models that are aligned with the local market and its demands. Establishing these partnerships is therefore a key challenge that defines the success of a particular KSC. KSC partners are primarily local accelerators, meticulously chosen through a competitive process. However, it is important to note that these partnerships are subject to change based on the partners’ performance and feedback received from participating startups.

Conclusions and takeaways

The KSCs are an innovative policy initiative that has shown itself to be effective in stimulating the internationalisation of promising Korean startups. As of 2023, the KSCs had supported 185 Korean startups, many whom have since been very successful in setting up, growing revenues, and building partnerships overseas. Given the specific focus on supporting the globalisation of startups that are already fairly well-developed domestically, the KSCs focus less on the capacity building and training aspects of incubation and more on the relational aspects that help the startups to build connections in their target market. Key to achieving this is the formation of partnerships with local experts and entrepreneurial ecosystem stakeholders (“KSC partners”), who provide the key to unlocking these relationships with relevant actors in the target country.

Box 6.2. The German Accelerator programme

Objectives and rationale

The German Accelerator programme was established in 2012 as part of a package of measures within the Ministry for Economic Affairs and Climate Action’s (BMWK) flagship innovation policy (the “From the idea to market success: Programmes for an innovative SME sector” initiative). The German Accelerator helps startups to expand into international markets. It is financed by the BMWK and run by the Start2 Group. The federal government’s 2022 startup strategy set out that, as part of its mission to put more focus on startups, the Federal Government will continue to invest in the expansion of the German Accelerator programme to further promote international networking of the startup ecosystem.

Description

The German Accelerator was launched in 2012 with a first office in Silicon Valley and has since been expanded systematically to the now ten offices in locations across North America, South America and Asia. The programme has so far received approximately EUR 100 million in funding. The BMWK’s last

call for tenders for the management of the German Accelerator (awarded to the Start2Group) was sized at EUR 55 million for the funding period from 1 January 2021 to 31 December 2024.

The German Accelerator runs three types of programme that are tailored to startups at different stages of the internationalisation process: i). programmes preparing startups for internationalisation (“Academy”), ii). programmes for market exploration (“Market Discovery”), and iii). programmes for market entry (“Market Access”). Throughout these programmes, the German Accelerator offers access to a global network of potential partners, customers, investors, and an engaged community of other programme participants and alumni. Individual support and customised mentoring are offered both virtually and on-site by the programme teams and a network of experienced industry mentors, who provide their expertise and networks for product and business model validation in the respective target countries. In addition, free office space is provided to startups in all locations of the German Accelerator. Another benefit for the startups is discounted access to various products, services, and tools from a variety of partners, as well as a range of free resources, ranging from market awareness checklists to regional reports.

For startups to be admitted onto the programme, the German Accelerator requires that core team functions have been established, that there is a proven problem-solution fit, and that there is founder or C-level commitment to the programme. Startups must also be incorporated in Germany and be under the limit of the EU De-minimis aid regulation. For those meeting these requirements, the selection process is based on quality criteria including scalability, founding team quality (including members’ international orientation and mindset), proof of customer interest and generation of revenue on the domestic market, and relevance of the product in the potential target market.

Success factors

The German Accelerator has supported over 850 startups, which have raised more than USD 15.6 billion (approximately EUR 14.4 billion) in funding, with around three quarters active in the Americas. In 2017 and 2019, the BMWK commissioned Ramboll Management Consulting GmbH to undertake evaluations of the German Accelerator. The 2019 study concluded that the programmes offered by the German Accelerator are designed in a target-oriented way and implemented professionally. The identified outcomes for startups include increased visibility, business model development and adaptation to the target market, as well as the acquisition of new partners and customers.

The German Accelerator’s mentoring offer is key to the success of the programme. Mentors are recruited via local employees and teams at the regional hubs, who know the local conditions and are well connected. The major recruitment channels include network referrals and recommendations, for example from partner incubators or investors from the local market. The delivery organisation’s (Start2 Group) integration within the German and international innovation ecosystems is key to facilitating this. A key distinguishing feature of the German Accelerator’s network of more than 1 000 mentors is the presence of many mentors with German citizenship who on the one hand have knowledge of the German entrepreneurial system and on the other hand have experience in the host country and knowledge of local framework conditions. Another important feature is the mentors’ many years of business and financing experience and their very good contacts with decision makers and investors.

To ensure the quality of the mentoring offer for the startups, the German Accelerator has in place a structured matching process to connect startups with relevant mentors. There is also a monitoring and evaluation system for the mentor network, which aims to continuously improve mentoring quality through feedback mechanisms. Mentors are removed from the programme where they do not meet expectations or are not sufficiently involved. Opportunities for mentor exchange and get-togethers are also organised regularly. Finally, the BMWK has fostered an environment in which the mentors and programme managers can thrive, by affording them a sense of autonomy and flexibility to experiment

with the programme design, management, and delivery. This results in a high level of commitment on the part of the programme management and mentoring team.

Challenges

Building the mentor network was a defining challenge for the German Accelerator, and one that it has addressed successfully over a period of years, including through the development of a mentor recruitment strategy that takes a proactive approach to accessing high quality mentors by leveraging community partners. There have also been challenges surrounding the tender preparation and planning process. For the last call for tenders for the funding period 2021-2024, the tender preparation and planning took place over more than 18 months. Here, the difficulty lay in developing a call for tenders that was precise but at the same time provided enough flexibility for the delivery organisation.

Conclusions and takeaways

The German Accelerator is a successful example of how a national programme can help startups to scale globally by providing them with access to mentoring, networks, and resources in leading innovation hubs. A key learning that can be derived from the case of the German Accelerator is its strategy of investing considerable efforts into building an exceptional mentor network in its target regions. The case also highlights the benefits from having a professional delivery organisation (Start2Group) that has a strong background in supporting startups and is embedded within the innovation ecosystems of the targeted markets. Indeed, the localisation of the German Accelerator's programmes through local offices, teams and networks is a key source of value for the startups, and one of the most important tasks for the programme team is therefore to find trusted partners abroad.

From a logistical standpoint, there are benefits to integrating an internationalisation-focused accelerator programme within a suitable ministry department with existing expertise in startup financing, internationalisation, and expansion. The German Accelerator programme is integrated at the BMWK department VIIC4 ("Guarantee Banks, KfW Subsidiaries, Innovative Startups, Commercial Credit Insurance"). This department also oversees the "EXIST" support programme, which helps university graduates, students and scientists in developing knowledge-based and technology-oriented startups. As a result, the department has good access to a large network of high-tech startups which it can draw on to create synergy effects in the further development of the German Accelerator programme.

Selecting and supporting companies with internationalisation potential

There are numerous examples of public incubation programmes that are designed specifically to support startups in entering international markets. However, there are many more examples of programmes without an explicit internationalisation-focus that nonetheless play an important role in promoting startup globalisation by offering more generic supports to young companies with high internationalisation potential. Internationalisation potential is often a key selection criterion for admission onto public incubation programmes. For example:

- Startup Lisboa's incubation programme requires admitted startups to have products or services that are scalable and with global potential.
- Denmark's national accelerator programme (Beyond Beta) lists "have a scalable business model and address a growing international market" as one of the four basic criteria for admission onto the programme.
- The German Accelerator's stated mission is to empower German startups to scale globally.
- Japan's Global Startup Acceleration programme is principally focused on supporting domestic startups to expand their business operations overseas.

- Business Sweden's Leap Accelerator lists multiple internationalisation-related criteria among the basic entry requirements for startups.

Since startups admitted onto these programmes are selected based on their potential to scale internationally, the provision of generic supports such as mentoring and coaching will inevitably help to drive the internationalisation process.

The targeting of firms with internationalisation-potential for incubation programmes raises the important question of how to identify such companies. The literature offers some insights on this. Entrepreneurs' growth intentions relate positively to subsequent firm growth (Douglas, 2013^[20]; Knockaert, Foo and Erikson, 2011^[21]) and the evidence suggests that those who do not have growth ambitions will not grow (Davidsson, 1989^[22]; Davidsson, 1991^[23]). Founders and managers in born-global firms also possess an international orientation and mindset (Mcdougall, Oviatt and Shrader, 2003^[24]). This implies that for incubators to be effective in promoting global startups, they must first be able to identify and target ambitious entrepreneurs with a vision for international expansion. This targeting can be a considerable challenge, as the ambition or international outlook of entrepreneurs is not easily observable. However, the literature has identified some more observable characteristics that are also associated with entrepreneurs having a strong internationalisation potential:

- Many born global firms (Knight and Cavusgil, 2004^[9]) are founded by individuals who have personal international experience or have worked in multinational corporations (Acedo and Jones, 2007^[25]).²
- Growth-oriented entrepreneurs are more likely to be highly educated and to be part of a team (Levie, 2015^[26]).
- Companies with foreign professional experience or international education are more likely to internationalise early (Reuber and Fischer, 1997^[27]). An explanation for this is that prior knowledge reduces managerial risk and uncertainty in internationalisation and speeds up decision making (Knight and Liesch, 2016^[28]).
- (Levie and Hart, 2011^[29]) find that UK-born regional in-migrants and immigrants are more likely to be entrepreneurs with high-growth expectations than lifelong residents.
- (Estrin, Korosteleva and Mickiewicz, 2022^[30]) argue that the knowledge spillover theory of entrepreneurship (Audretsch and Keilbach, 2007^[31]) leads to a relationship between the knowledge intensity of a business and the growth aspirations of the entrepreneur.

By strategically identifying and supporting entrepreneurs with a strong inclination towards export, incubators can contribute to stimulating the creation and growth of global startups. The case for this type of targeting is supplemented by evidence that firms that are more internationalisation and growth-oriented benefit more from training than other firms (Kotha et al., 2023^[32]) and are more likely to survive (Del Sarto et al., 2021^[33]).

Leveraging public facilities overseas to enrich internationalisation supports for startups

The facilities and contacts of overseas embassies, consulates and enterprise agency branches are a valuable resource for supporting the globalisation of startups. The incubator scheme of the Trade Council of the Ministry of Foreign Affairs of Denmark provides an illustration of how a country's diplomatic mission facilities can be utilised to offer incubation support to internationalising companies. The scheme provides Danish companies with physical or virtual office space in 15 countries. The physical spaces are situated in Denmark's embassies, consulates and trade commissions, enabling businesses to begin overseas operations more smoothly. These spaces can be provided for up to two years, with host businesses benefitting from access to office space and meeting rooms as well as bespoke advice. Meanwhile, the

virtual office space provides a solution for internationalising companies that need only a physical address so as to receive telephone calls and mail. This in turn can boost local sales and streamline administrative processes. This provision of virtual office space is one example of how digitalisation has opened up avenues for incubators to support larger numbers of startups in a cost-effective manner.

Similarly, France's diplomatic posts and the economic departments of its embassies and consulates in other countries play a role in promoting the internationalisation of French startups through their support for the 67 French Tech Communities abroad. As one example, the third edition of "French Tech Capital Days" in Miami in 2024 was organised by French Tech Miami and the French-American Chamber of Commerce in Miami, with the support of the local committee of the Advisors for French Foreign Trade and the French consulate. Over the course of two days, 25 French startups (particularly from the Aix Marseille and Sophia Antipolis regions) developing innovative technologies across a range of fields competed in front of juries composed of French and American investors and entrepreneurs. Meetings were then held between startups and investors and local companies ready to support them in their development.

Conclusions and policy lessons

Governments in many countries are introducing policies and programmes that aim to foster the creation and growth of global startups. This reflects the strong potential for these companies to innovate, create jobs and support exports, productivity and growth. Business incubators are a key channel through which governments can support startup internationalisation, given the focus of these organisations on enabling the rapid growth and internationalisation of promising young companies.

Incubators support startup globalisation through the provision of dedicated training, information and advice on international market opportunities and processes, through immersive soft-landing programmes in target markets, and through networking and matchmaking between startups and international partners. To enhance the role of incubators in stimulating global startups, governments can:

- *Target born globals:* Admission criteria and funding conditions for public support programmes for incubators is a powerful policy lever for governments to promote startup globalisation. Governments can include the capabilities of incubators to support the internationalisation of their clients as a key criterion for admission onto public funding programmes. This approach can steer the incubation system towards placing a greater focus on internationalisation support.
- *Create dedicated programmes:* Although incubation programmes often promote the internationalisation of promising young companies through generic supports such as mentoring and networking, governments can take the further and more direct step of launching dedicated programmes that place a primary focus on supporting startup internationalisation, including immersive soft-landing initiatives. Key to the success of such programmes is building partnerships with incubators and other entrepreneurial ecosystem actors in the target markets and ensuring the internationalisation-readiness of the participating startups.
- *Incentivise foreign partnerships:* Business incubators should be incentivised to build up networks and linkages with incubators and ecosystem actors in other countries, including investors, large corporates, mentors and researchers. These international networks can significantly enrich the value offer incubators provide to clients looking to expand to overseas markets by facilitating introductions and targeted matchmaking.
- *Build a base:* Access to resources, facilities and contacts in target markets is integral to supporting the internationalisation of startups and scaleups. For priority markets, governments can develop networks of entrepreneurs, investors, researchers, industry professionals and other relevant individuals with a connection to the home ecosystem and a knowledge of the foreign market. These

partners and networks provide a valuable extra resource for startups and scaleups that complements those provided by incubators.

- *Leverage existing assets:* There is potential for the assets, knowledge and contacts of diplomatic missions abroad to be leveraged more by incubators in order to support startups in establishing themselves in other countries. Opportunities should be created for startups and scaleups to access the resources of diplomatic missions in priority markets. Steps should also be taken to involve diplomatic missions in activities to support the internationalisation of startups, for example through the hosting of networking events or study missions.
- *Engage the ecosystem:* Governments can engage large, established companies in the delivery of incubation programmes. This can significantly enhance the value to startups and help them to internationalise, for example by providing them with greater access to international networks and enhanced opportunities to integrate within global supply chains.

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Notes

¹ Causation is a strategy used by entrepreneurs to plan and execute a predefined goal by predicting future market conditions and customer behaviours through extensive research and analysis. Effectuation is based on the principle of affordable loss, where entrepreneurs experiment with different possibilities and taking affordable risks. Effectuation is highly flexible and adaptive, iteratively adjusting goals based on emerging opportunities and constraints. It emphasises the leveraging of available means to create successful outcomes, while causation focuses on prediction and control.

² Not all early internationalising founders, however, have international experience, with many global founders lacking international business experience (Knight and Liesch, 2016^[28]) (Freeman et al., 2010^[17]).

7

Financing

Access to finance is one of the main development bottlenecks for innovative startups and scaleups. This chapter examines how incubators support their clients in overcoming financing gaps. This is achieved both through the direct provision of funding and subsidised services and facilities, as well as through helping their clients to tap into external financing opportunities by building investment readiness. The chapter concludes with recommendations for governments on how to enhance the role of incubators in alleviating startups and scaleups' financing gaps.

The startup and scaleup finance gap

Creating a new business, particularly one based on the development and deployment of novel technologies, is generally a capital-intensive endeavour. Innovative startups must often pass through a protracted pre-revenue stage where they face high capital requirements to develop new products, services or technologies that cannot be met internally (McAdam and Marlow, 2011^[1]). As a result, they quickly reach a point where they need external financing in order to continue to develop and grow (Oranburg, 2020^[2]).

Across the OECD, one of the major development bottlenecks for highly innovative and impactful new companies is a limited access to external finance. This stems from market failures inherent to the nature of innovative startups and financial markets. There are informational asymmetries in the relationship between an entrepreneur and investor, with the former possessing much more detailed knowledge on their business than the latter (Akerlof, 1970^[3]). It can be challenging for investors to accurately assess the risk and potential returns of investing in new companies, particularly where these companies are based on innovative or disruptive technologies and lack an established track record. In addition, innovative startups generate positive externalities by producing knowledge and technologies that can eventually be utilised throughout the economy (Martin and Scott, 2000^[4]). This leads to a mismatch between the private and social returns of investment. There is also the challenge that some countries and regions do not have investors large enough to provide the substantial sums of scaling finance often required by more advanced startups and scaleups. Investors specialised in particular technology areas or sectors are also absent in many countries, depriving innovative companies of the supplementary benefits that come from working with such investors such as specialised expertise and contacts. The consequence of these factors is that startups and scaleups – particularly those that are innovative and based on new technologies – commonly experience acute financing gaps.

How incubators bridge financing gaps

In recent decades, there has been a growth in the number of high-tech, knowledge-intensive startups for whom access to finance is a critical development need (Grimaldi and Grandi, 2005^[5]). Incubators have adapted to this need by funding their clients directly and by intensifying support to help their clients access external sources of finance. This financing assistance is a core part of incubators' value offer and is potentially an area where incubators could do even more – in a survey of business incubator clients in the United States, “funds, capital and investment” was identified as the most inadequate aspect of the programmes' supports (Lange and Johnston, 2020^[6]).

Direct funding by incubators to startups

Many incubators provide direct funding to their clients. This funding can take many different forms. For some business incubators, making investments into client enterprises represents the core of their business model, and as such these organisations serve jointly as investors and business support providers. (Allen and Mccluskey, 1991^[7]) denote these incubators as “for-profit seed capital” incubators within their typology of different incubator types, which originate from fund managers' desire to co-locate their portfolio firms in a single location to increase visibility. Incubators' equity investment deals can be structured in different ways, as described in Table 7.1 below.

Table 7.1. Equity investment models for incubators

Name	Description
Fixed cash to equity ratio	Incubators provide a fixed sum of cash to incubated startups in exchange for a fixed equity participation. For example, Startup Bootcamp, invests USD 15 000 to each startup that it admits in return for a fixed 6% equity participation, while the European Seedcamp invests EUR 200 000 for a 7% equity stake.
Simple Agreements for Future Equity (SAFE)	SAFEs are convertible equity instruments that give investors the right to purchase shares in the company at a future funding round, typically at an agreed discount. An example of this approach can be found in Y-Combinator, which invests USD 500 000 in each admitted startup. USD 125 000 of this investment is in return for a fixed 7% equity participation and USD 375 000 is in the form of a “Most Favoured Nation” (MFN) Simple Agreement for Future Equity (SAFE). The MFN clause gives Y-Combinator the right to participate on the same terms as future SAFE investors in the event that the later investors obtain a more favourable agreement.
Convertible notes	Convertible notes are similar to SAFEs in the sense that finance is provided in exchange for participation in a future funding round. However, they differ in the sense that convertible notes have an interest rate (payable in equity at the future funding round) and a maturity date at which point the investor can extend the note or request repayment. Techstars’ accelerators, for example, invest USD 120 000 in each of its startups, out of which USD 20 000 of investment is in return for the right to 6% in common shares and USD 100 000 is in the form of a convertible note.
Discretionary or ad-hoc investments	There are business incubators who make equity investments into their client startups on a more discretionary basis, either during or after their participation in the incubation programme. For example, the Plug and Play Tech Center does not require startups to cede equity as a condition for participating in its accelerator programme but it does have a venture team that invests into the programme’s startups.

Business models based on providing equity to clients are typically associated with private incubators. With that being said, public incubators may still provide direct financial assistance to their clients, though this is more likely to be in the form of smaller grants and loans rather than equity investments. Examples include the EUR 15 000 tax free allowance awarded to participants of Enterprise Ireland’s New Frontiers programme, the grant support directed to startups via incubators supported through Israel’s Technological Incubators Programme, and the EUR 20 000 grants offered by the Bravo Innovation Hub in Italy. University-based incubators can also provide grant support to their startups, often leveraging the universities’ financial resources.

Building investment readiness

In very mature and well-developed entrepreneurial ecosystems with a strong pipeline of investible startups, it is more viable for business incubators to make equity investing a core element of their business model. However, a core function of an incubator is to support “weak but promising ventures” that may not yet make for a viable investment. Furthermore, incubators often operate in areas or sectors with less advanced entrepreneurial ecosystems and therefore a weaker pipeline of investible companies. In addition, many incubators operate with public funding support, which may be relatively limited and have tight controls in terms of the types of expenditure permitted. In these contexts, it might not be viable for incubators to channel large amounts of direct funding support to their clients. This does not, however, mean that the incubators cannot still support their companies in bridging financing gaps.

Though an important source of assistance for firms at the early-stage, direct funding from incubators can only go so far in supporting startup companies as they develop and grow. Alongside finding customers, securing external finance is a defining challenge for innovative young companies. Incubators can be seen in a sense as “startup clearing houses” for venture capital and institutional investors, since these entities are often the exit partners of their graduate companies (Carayannis and Von Zedtwitz, 2005^[8]). A central task for business incubators is therefore to give their clients the knowledge, characteristics, competencies and connections necessary for them to be “investment ready”, defined by (Douglas and Shepherd, 2002^[9]) as “the ability to attract significant external investor funding from business angels and/or venture capital funds”. Incubators’ strategies tend to focus on equity investors rather than external debt providers such as traditional banks. Although the cost of external debt is generally lower than external equity, equity investors provide an array of additional benefits that make them a preferred option for startups, including networking

opportunities, mentorship, and marketing, managerial or technical advice (Vaznyte and Andries, 2019^[10]; Oranburg, 2020^[2]).

Investment readiness is a multifaceted concept that captures the broad set of criteria that investors consider when making investment decisions. This includes factors relating to the startup's product and business model, such as the technological readiness level, product-market fit and sales track record (Douglas and Shepherd, 2002^[9]; Westerik, 2014^[11]). However, while the nature of the product is of primary importance for investors, difficulties in assessing the commercial potential of often complex technologies means that investors may turn to more easily-interpretable signals such as the characteristics, experience and management competencies of the entrepreneurs and leadership teams behind the startups (McAdam and Marlow, 2011^[1]; Westerik, 2014^[11]; Douglas and Shepherd, 2002^[9]). Attracting investment requires startups to have a clear understanding of investors' investment criteria and how they stack up against these (Douglas and Shepherd, 2002^[9]; Queen, 2002^[12]). (Mason and Kwok, 2010^[13]) extend the concept of investment readiness to take into account not only the underlying attributes of the entrepreneurs and their companies but also the entrepreneurs' awareness and perceptions of different financing options and their ability to communicate information effectively to investors. On the former point, reluctance to surrender control of a business or a lack of investor connections are common obstacles for companies in securing equity investment. There can also be situations where entrepreneurs fail to secure financing even when their underlying business proposition is viable due to a poorly constructed or presented business plan (Mason and Kwok, 2010^[13]; Clark, 2008^[14]; Queen, 2002^[12]). Investors can interpret such presentational failings as a signal of a broader gap in sales or communication skills (Clark, 2008^[14]). It is also important for funding applications to be submitted in the correct format given the high volume of applications received by investors, with concise executive summaries being a crucial element (McAdam and Marlow, 2011^[1]).

Building firms' investment readiness involves several components (Mason and Kwok, 2010^[13]; Mason and Harrison, 2001^[15]):

- Initiatives to raise awareness of equity financing opportunities and their benefits.
- Diagnostic assessments of startups' investment readiness in order to identify current issues or weaknesses.
- Programmes to build investment readiness and address issues identified through diagnostic assessments. These should include support in developing robust business plans with credible information (Zana and Barnard, 2019^[16]). Other important topics include market validation, financial planning and future product development. Incubators should also support their clients in understanding the criteria that investors consider when making investment decisions and how to meet these. Furthermore, incubators can direct their clients to other forms of business support as a means of bolstering investment readiness, such as innovation grants.
- Support in preparing investment pitches and presentations that effectively convey the competences of both the entrepreneur and the company. Coaches can assist businesses in understanding what investors are looking for and the concerns they might have. A key challenge to be addressed at this stage is how to package complex, technology-based information into a format digestible to outside investors (McAdam and Marlow, 2011^[1]).
- Networking to connect startups to potential investors. In their review of critical factors and performance measurement for business incubators, (Pattanasak et al., 2022^[17]) recommend that incubators focus on facilitating relationships with external parties as a means of helping startups to access resources and attract investment. Here the ecosystem embeddedness of the incubator is key in ensuring that it can provide its clients with relevant investor connections. Incubators should also be proactive in the organisation of demo days and other matchmaking events, taking care to facilitate curated connections between specific startups and investors where the investment opportunity matches the investors' expertise and interest.

Table 7.2 summarises the main ways in which incubators support startups in accessing external finance by building their investment readiness.

Table 7.2. Incubators’ strategies for building clients’ investment readiness

Support type	Description
Coaching	The provision of individualised advice, delivered through coaches or mentors, is a core component of many incubation programmes (see Chapter 5). These advisors often work with entrepreneurs to support them in developing credible business plans and funding applications that are appealing to investors (McAdam and Marlow, 2011 ^[11]). In this way, the advisors act as “sense makers” between equity investors and entrepreneurs, helping entrepreneurs to communicate their business proposition to investors in a convincing way by drawing on their knowledge of investors’ requirements and preferences (McAdam and Marlow, 2011 ^[11]). Facilitating external financing is often seen as a core objective of coaching within business incubators, and startups’ funding metrics and milestones are commonly used to gauge the progress of the startups and the effectiveness of coaching approaches.
Investor linkages	Incubators play a crucial role in connecting startups to other actors and resources in the entrepreneurial ecosystem, including private and public investors. Incubators facilitate these connections through networking and matchmaking events that bring together major investors and promising startups. Often, these events take the form of high-profile “demo days” at the culmination of an incubation or acceleration programme. For example, at Y Combinator, the latest batch of startups present their businesses in front of large groups of investors, with each startup having one minute to pitch its business and breaks throughout the day. Investors are often provided with startups’ contact information by the incubator and can then approach founders directly. Some incubators also follow up with investors after the demo day to understand their investment intentions, and support startups who have been approached by investors to negotiate fundraising deals. Investor-linkages can also be fostered by incubators through smaller networking sessions that offer more regular and targeted opportunities for startups to interact with groups of investors. As an example, the TechFounder accelerator in Germany organises two “pitch nights” with potential clients and investors at the mid-point of the programme. These sessions provide an opportunity for the startups to engage with investors and act as a rehearsal for the larger demo day at the end of the programme. In Portugal, many incubators are part of Portugal Ventures’ – the public venture capital fund – network of “Ignition Partners”, providing opportunities for their clients to interact with this major startup investor. Incubators also leverage digital platforms to link investors and startups, often creating large databases of investors and startups with user-friendly interfaces and matchmaking functions. On these platforms, investors can submit information on the types of investment opportunities they are interested in exploring and are provided with curated lists of startups that meet these criteria. Incubators’ clients can also benefit from curated introductions to relevant investors that are initiated by their coaches or mentors (McAdam and Marlow, 2011^[11]).
Signalling	Participation in incubation programmes can provide a quality-stamp for startups by virtue of the due diligence undertaken by incubators in granting entry onto what are usually quite competitive programmes (McAdam and Marlow, 2011 ^[11]). This can help to offset the information asymmetries between startups and investors that can make it difficult for companies without a sales track record and an unclear profitability potential to obtain financing (Zana and Barnard, 2019 ^[16]).
Training	Incubation programmes often include training courses where a key topic is building investor-readiness. Many incubators offer training focusing on the skills founders need to develop their startup and interact with investors. For instance, the German accelerator Xplore offers a structured curriculum which includes multiple pitch training sessions and personal coaching sessions on other relevant topics. Some of these modules are available on the accelerator’s online learning platform. Similarly, the Estonian accelerator StartUp Wise guys offers masterclass training courses in four focus areas, one of which is fundraising and pitching. The British accelerator Founders Factory’s training also includes a focus on fundraising alongside other key aspects such as strategy and product development and marketing.

Signposting to public funding programmes

Incubators also play an important role in signposting startups and scaleups to relevant funding supports from public entities. Indeed, research on the UK’s Help to Grow: Digital programme found that trusted third parties can be among the most effective vessels for raising awareness of public support programmes

(Department for Business, Energy and Industrial Strategy, 2023^[18]). Public agencies can strengthen the signposting function of incubators by holding regular office hours or installing contacts from relevant government departments at incubator premises. A prominent example of this can be found in Station F in France, where multiple public agencies have a local contact point that can provide tailored information to startups on the range of public supports available and how these can be accessed. Similarly, the French Tech Central programme enables entrepreneurs to meet with representatives of various government departments at their local “French Tech Capital”.

Subsidised facilities and services

Business incubators offer their clients access to subsidised facilities and services, such as office infrastructures, testing facilities, and coaching and training. These supports help startups to conduct their operations and product development without having to make substantial expenditures themselves, thus reducing requirements for external financing and enabling internal resources to go further (Tripathi and Oivo, 2020^[19]; Kehinde Feranmi Awonuga et al., 2024^[20]).¹ Training on financial literacy and management can also help to improve cash flow and reduce or delay the need for startups to seek external finance. In these ways, the subsidised facilities and services offered by incubators free up entrepreneurs’ internal resources for use on other development activities – for example hiring or marketing. This can potentially extend the window of time that startups have before they need to pursue external financing. (Lange and Johnston, 2020^[6]) find that reduced expenses are the top-ranked improvement in business outcomes reported by users of business incubators.

Conclusions and policy lessons

Helping startups and scaleups to meet their financing needs is one of the most important ways in which incubators support their clients. The direct funding and subsidised facilities offered by incubators are often essential in enabling entrepreneurs to pursue the development of their companies during the incubation period. For example, access to testing facilities within incubators can allow entrepreneurs to refine their products in a way that would not have been affordable outside of the incubator, while the allocation of grants can enable entrepreneurs to recruit a small team around them or invest in customer acquisition or product development. However, this assistance amounts to little if firms graduate from the incubators without a source of revenue or external funding. The evidence from the literature points to the need for incubators to supplement any direct funding provided to startups with non-financial supports in order to be most effective. For example, (Gonzalez-Urbe and Leatherbee, 2018^[21]) show that business acceleration schemes only affect ventures’ performance when the basic provision of funding and co-working space is topped up with access to entrepreneurship training. Meanwhile, (Lange and Johnston, 2020^[6]) find that the networks and connections facilitated by incubators are the most valuable aspect of incubation programmes from the perspectives of the users. Similarly, (Bone et al., 2019^[22]) find that networking opportunities and mentoring have a clearer impact on startup performance than direct funding.

The provision of direct funding in isolation is not enough to address the financing gaps of incubators’ client companies. Where incubators can have an even greater impact in boosting the longer-term financial sustainability of their clients is through initiatives to build investment readiness, for example by providing training in pitch development, raising awareness of funding opportunities, and establishing investor connections. This involves deploying the broad spectrum of non-financial support measures commonly found in incubation programmes – including coaching, training and networking – and making sure that the advice, guidance and contacts that startups access through these channels contribute towards building their investment readiness to make them more viable investment propositions for investors.

Perhaps the most important way that incubators can facilitate access to external financing is by opening doors for startups to meet and pitch to potential investors. The embeddedness of incubators within

entrepreneurial ecosystems and, in particular, the strength of their linkages with investors, define their ability to provide this type of investor networking and matchmaking support. It is essential for governments to take these factors into account when determining which incubators to fund, including through the design of selection criteria for competitive public funding programmes. The provision of investment readiness support can also be made a condition for incubators' receipt of public funding. Coaching is another important aspect of building investment readiness, and it is important for policymakers to apply firm criteria and frameworks that govern the quality of coaching being delivered via publicly-funded incubators, as discussed in more detail in Chapter 5.

Another lever for governments is to enhance connections between public investment entities and business incubators. In many countries, some of the largest venture capital funds have a strong public component, which creates an opportunity to integrate them more deeply within the incubation system. For example, public investment funds can be encouraged to create networks of incubators as a means of improving their deal flow and at the same time providing startups in the incubation system with enhanced access to potential investment opportunities.

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Notes

¹ A significant portion of the costs of external finance are linked to the information asymmetries that exist between startup and investor (Akerlof, 1970^[3]). As a result, funding activities through internal resources – for example entrepreneurs' personal savings – is considerably cheaper than acquiring external finance, making it the first port of call for new startup companies as per the “Pecking Order Theory” of company financing (Oranburg, 2020^[2]; MYERS, 1984^[23]).

8

Entrepreneurship skills training

This chapter examines how incubators develop the entrepreneurship skills of their clients. It reviews the key skills needed by the founders and leaders of startups and scaleups at different stages of development and presents the different training models that incubators pursue to meet these skills needs. The topics commonly covered and less commonly covered in incubators' training programmes are discussed, with recommendations presented on how governments can support incubation systems in delivering more holistic training packages for startups and scaleups.

What skills are needed for startup and scaleup development?

The entrepreneurship skills, competencies and capabilities needed to successfully create and grow a business are well studied in the literature (Prüfer and Prüfer, 2020^[1]; Mayanja et al., 2021^[2]). A widely applied framework is the EU Entrepreneurship Competence Framework, which defines 15 competencies across three areas (Bacigalupo et al., 2016^[3]):

- Generating ideas and identifying opportunities (e.g. creativity, vision).
- Managing and leveraging resources (e.g. fundraising, financial literacy).
- Converting opportunities into action (e.g. taking initiative, planning).

Several studies have identified particular soft skills and traits that affect entrepreneurship competence, including communication skills, self-motivation, independence, planning, organisation, collaboration, conflict management, problem-solving, inquisitiveness, critical thinking, risk taking, and self-actualisation (Prüfer and Prüfer, 2020^[1]; Kerr, Kerr and Xu, 2018^[4]; Tem, Kuroda and Tang, 2020^[5]; Shabbir and Kassim, 2019^[6]). Leadership is another essential competence for entrepreneurs (Ahmed and Harrison, 2022^[7]; Prommer, Tiberius and Kraus, 2020^[8]), with soft skills such as empathy, teamwork abilities, compassion, and confidence all key to successful leadership. Certain styles of leadership, such as “transactional” leadership (based on positive reinforcement linkages between the leader and their team) and “transformational” leadership (based on actions to inspire the team and express the value and purpose behind the goals) are often considered essential in the business creation process (Klein, 2023^[9]; Malik et al., 2020^[10]; Frese and Gielnik, 2014^[11]). In order to succeed in entrepreneurship, entrepreneurs must balance these “softer” skills with “harder” skills related to more technical aspects of management and business (Stuetzer, Obschonka and Schmitt-Rodermund, 2013^[12]; Lazear, 2004^[13]).

The skills needed to develop an entrepreneurial venture depend on the nature of the activity being pursued – those required for necessity-based entrepreneurship are quite different from those needed for entrepreneurship oriented towards innovation opportunities (Schoar, 2009^[14]). Innovative startups operate in fast-changing and unpredictable business and technological environments (Ghezzi and Cavallo, 2020^[15]). For example, startups based on highly disruptive or radical technological innovations face uncertainty surrounding consumers’ demand for certain types of products or services that have not previously existed on the market (Mehta, 2019^[16]; Felin et al., 2020^[17]). In this context, an important trait for entrepreneurs is an ability to adopt an “effectuation” approach based on designing and implementing rapid product or business model experiments at affordable losses (Sarasvathy, 2022^[18]). Other important skills for innovative startups relate to the recruitment of talented staff and effective management of time pressures.

The required skills also change depending on the development stage of the company. At the early stages, startups have fewer structures and routines meaning that, while knowledge of business and management is helpful, it needs to be supplemented and leveraged by entrepreneurial soft skills (Tem, Kuroda and Tang, 2020^[5]; Prüfer and Prüfer, 2020^[1]). In particular, relational soft skills to establish effective linkages with the surrounding community and entrepreneurial ecosystem are crucial (de Bruin et al., 2023^[19]). Scaling highly innovative companies requires a different set of entrepreneurial abilities to those needed at the early stage of company formation (Cooney, 2012^[20]; Busch and Barkema, 2021^[21]). In order to scale up, companies need to develop a strategy to exploit network effects and obtain access to capital resources (Kamm et al., 1990^[22]). They must also be able to acquire new customers at low marginal cost, while fine tuning the business model and developing economies of scale and scope (Rayport, Sola and Kupp, 2023^[23]; Crnogaj and Rus, 2023^[24]). Leadership and management skills also become even more essential at the scaleup phase, as entrepreneur-leaders are required to, for example, impose structure to the organisation by explicitly assigning responsibilities and delegating decision making, plan operations in more detail, and engage in specialised marketing, sales, and capital raising. In addition, accessing

international markets often requires learning how to navigate diverse legal and regulatory environments (Tippmann et al., 2023^[25]).

Entrepreneurship skills training in business incubators

The importance of formal educational institutions in the development of entrepreneurship skills across different education levels has been widely recognised (Fayolle, 2013^[26]; OECD/EU, 2018^[27]). However, entrepreneurship skills training can also come from outside the formal education system, for example where it is delivered by industrial associations, non-governmental organisations, and business incubators. Incubators serve not just as venues for different kinds of events and activities that contribute to entrepreneurial learning; they can also provide training offers that directly seek to develop entrepreneurship skills among their clients (NESTA, 2011^[28]; Alpenidze, Pauceanu and Sanyal, 2019^[29]; Bergman and McMullen, 2022^[30]). While there is limited evaluation evidence on the impacts of training delivered by incubators specifically, studies on entrepreneurship training programmes in other contexts show that they have a positive effect on motivations for starting a business and on business survival rates (McKenzie and Woodruff, 2017^[31]; van Vuuren and Botha, 2010^[32]; Mano et al., 2014^[33]). Incubators' position outside of formal education and training institutions enables them to deliver training that accommodates a wide range of participants, for example by tailoring support to women, youth or seniors (European Commission / OECD, 2019^[34]). Incubators also offer training in highly specialised fields and can structure their training according to the different stages of startup development.

Incubators' training can be delivered in many different formats, including talks, workshops, networking events, and specialised training activities on specific management topics. Bootcamps are also a widely practiced training model. These are short, intensive programmes, which, over a period of a few days, seek to increase participants' entrepreneurial motivation, skills and knowledge. Coaching and mentoring activities can also take place throughout the incubation period. It is useful here to distinguish between the format of "classroom training", where theoretical and practical issues are addressed through lectures, talks or workshops, and the one-to-one training format, which includes the coaching and mentoring supports examined in detail in Chapter 5 of this publication. Classroom training may include the so called "flipped classroom method", where the theoretical part is learned outside the classroom, and the practical part is learned in class, through workshops. Despite being delivered in a one-to-many format, classroom training actions may still be organised as experiential learning journeys, with limited expository lectures and a large component of learning by doing and experimenting, supported by the use of work assignments. A good example of this type of learning within the context of business incubation is the well-known "Mass Challenge" accelerator. Relative to other formats, classroom training approaches can be more cost-effective because of the low marginal cost for training providers delivering training to a large number of participants (OECD, 2022^[35]). The duration of training courses can also vary considerably. While longer courses enable more content to be taught, they are more costly and require entrepreneurs to be away from their startup project for longer periods of time. An important development affecting the delivery of training activities within incubators is the possibility of online training programmes and virtual learning environments (Chen, Ifenthaler and Yau, 2021^[36]). Asynchronous online training has the advantage of enabling "self-pace" or "self-determined" learning, where the learner decides when and how to learn. However, it also comes with the risk of diminishing peer learning opportunities.

Incubators' training programmes are often based upon business model design and validation, deploying frameworks such as the Business Model Canvas (Johnson, 2012^[37]). This is the case for many well-known accelerators such as TechStars, Y Combinator and the Sting Stockholm incubator. Incubators' training programmes could also integrate the wider range of soft skills – including managerial and leadership skills – that are needed to create, operate and grow a new business. However, training programmes specifically targeting the development of soft skills and leadership skills for entrepreneurship appear to be more common in formal educational institutions than in business incubators (Tem, Kuroda and Tang, 2020^[5];

Campos et al., 2017^[38]). The case of the ETH Zürich Pioneer Fellowship Deep-Tech Incubation programme in Switzerland (see Box 8.1) provides an excellent example of how incubators can tap into the programmes of surrounding educational institutions in order to provide a richer training offer for the incubator clients. Other examples include the SciencePo incubator's provision of training on communication, product marketing and negotiation, as well as the Massachusetts Institute of Technology's Dual Use Ventures incubator, which provides training on understanding stakeholder needs and how to approach potential sponsors.

Box 8.1. The ETH Zürich Pioneer Fellowship Deep-Tech Incubation programme

Objectives and rationale

The ETH Zürich Pioneer Fellowship Deep-Tech Incubation programme aims to empower entrepreneurs from the ETH domain (comprising two Federal Institutes of Technology and the four research institutes) to create scalable world-class spin-offs. It has the objective of bridging the public-private funding gap, enabling deep-tech entrepreneurs to further develop their technologies and businesses to reach market and investment readiness. The underlying rationale is to commercialise technology which has been invested into with public money and to do this through business startups.

Description

The programme supports 10 to 12 ventures annually. Each venture is attached to a “Chair”, which is a unit overseen by an ETH Zürich professor. The key supports provided are:

- A CHF 150 000 (approximately EUR 159 000) stipend, which is disbursed into an account administered by the Chair. This approach means that the Chair can leverage the grant to pursue funding from other government programmes in order to support the venture.
- Business trajectory coaching, which typically takes place at least once a month. External mentors, who do not receive financial compensation, are also available upon request. The incubator team has established, over a period of almost ten years, a network of approximately 70 mentors who are alumni or industry experts willing to offer specialised advice.
- Access to laboratory infrastructure, equipment, and material. The ventures are permitted to remain within the laboratory facilities for up to three years following the legal establishment of their companies. The ventures also benefit from the engagement and support of students.
- Participation in a mandatory entrepreneurship training programme, which culminates in the award of a Certificate of Advanced Studies. This provides opportunities to network with others in the training cohort, both from the incubation programme and the wider ecosystem.
- Participation in an annual Deep-tech Investor Summit, which invites the programme participants to showcase their ventures to early-stage investors.

The programme budget comes from a range of sources. The stipend is supported by the ETH Foundation – a separate legal entity governed by ETH Zürich responsible for fundraising in the form of gifts, primarily from private donors. The management of the incubator and coaching services are financed through the basic funding of the ETH domain, which is expected to support spin-offs and commercialisation. Meanwhile, the physical incubation of ventures is financed through the core funding allocated to each Chair. Spin-off creation is one of professors' expected deliverables and the professors are also permitted to acquire equity in startups originating from their labs, which serves as a significant incentive. Finally, the CAS education programme receives co-financing from external participants who pay full tuition fees, thereby sponsoring the deep-tech incubator fee, while InnoSuisse (Switzerland's innovation grant institution) grants follow-up “bridge financing” on an ad hoc basis.

Success factors

The Pioneer Fellowship Deep-Tech Incubation programme is closely embedded within the extensive scientific infrastructure established by the Swiss Government through the ETH-domain. The utilisation of physical incubation facilities within the distinct 'Chairs' of professors ensures access to both physical resources and human expertise derived from this infrastructure, thus conferring invaluable benefits. The international renown of the professors leading the Chairs also means they are able to attract foreign students, providing a pool of highly skilled and ambitious individuals capable of supporting the deep-tech entrepreneurs and their teams.

Another success factor is the availability of non-dilutive funding. Many of the ventures in the programme can sustain their operations for three or more years without turning to dilutive funding, supporting teams of up to ten individuals working on their projects. This capability stems from the unique structure of the programme through which the entrepreneurs can retain their status as employees of ETH for an extended period within the professor's Chair. This arrangement enables access to non-dilutive funding sources that are typically unavailable under state aid programmes for startups. It is also important to note that, upon establishment, programme participants are given an official spin-off label by ETH Zürich. This label signifies a benchmark of quality highly valued within the investor community, serving as a gateway for investor engagement.

Challenges

The process of selecting candidates for the programme has posed a challenge. Traditional criteria employed by accelerators, such as assessments of entrepreneurial experience, customer traction or team characteristics are not applicable, since the candidates are mostly PhD students and researchers with primarily technical expertise and limited exposure to the entrepreneurial ecosystem. Furthermore, the formation of startup teams has typically not yet taken place at the time of applications. To address this challenge, the incubator programme has developed a threefold selection process to evaluate project proposals from multiple perspectives, ensuring a thorough assessment of each applicant's potential. This involves i). technical experts assessing factors such as the technology readiness level and proof of concept, ii). a tech transfer team evaluating the IP situation, and iii). a selection committee reviewing recorded videos, evaluating a problem-solution statement, and conducting a panel interview.

The programme previously faced difficulties providing support beyond coaching and financing, with workshops poorly attended as entrepreneurs prioritised their research. The approach of mandating enrolment in a formal training programme has emerged as an effective solution and a valuable platform for networking and community building. An ongoing challenge is also ensuring that mentors and coaches focus on supporting the entrepreneurs rather than scoping out investment opportunities. The programme is developing a code of conduct setting out rules on acceptable behaviour, with the principle that investments should only be permitted where support is provided for free.

Conclusions and takeaways

An overarching lesson from the programme is that the effectiveness of incubation and acceleration policies hinges on having a well-funded and meticulously developed science and technology infrastructure. This serves as the bedrock for technology-driven discoveries and solutions. Incubators that operate somewhat independently of the existing science and technology infrastructure and ecosystem may struggle to finance and assemble the processes, facilities, supports, expertise, and personnel needed to develop a successful programme for early-stage deep-tech startups.

The programme also illustrates the benefits that can be realised by affording scientists and engineers working in the parent organisations sufficient autonomy and funding. A certain degree of flexibility is necessary to nurture creativity and foster the development of spin-off ventures, which requires some

degree of surplus funds and the ability to allocate personnel to ambitious projects and ventures. A final takeaway is that there is not always an immediate need for founders to be commercially or business-oriented, with deep-tech entrepreneurs often developing business skills themselves over time. This is due partly to the iterative nature of deep-tech ventures, where progress and setbacks are common.

Although dedicated training courses focused on the development of entrepreneurs' soft skills and leadership skills are relatively rare within incubators, that is not to say that the development of these capabilities does not take place in the context of incubation. Indeed, an important component of the learning environment during incubation is the peer learning that results from entrepreneurs' interactions with one another, not just in the context of classroom training but also through the sharing of incubation premises and facilities (Kiradoo, 2018^[39]). Mentoring and coaching provided through incubators also address the soft skills needed by entrepreneurs, including through the sharing of personal entrepreneurial experiences and lessons learned (St-Jean, 2012^[40]). Thus, while entrepreneurship skills are very much developed within the context of incubation, this predominantly comes via peer learning and coaching and to a lesser extent from dedicated training courses.

Conclusions and policy lessons

Although there are many different types of business incubator, their training approaches often share similarities in terms of format and content. The most common approach is to focus training programmes on business model design and validation with an emphasis on providing the skills and knowledge entrepreneurs need to discover and act upon business opportunities (O'Connor et al., 2011^[41]). This type of training based on "opportunities exploration" is critical. However, executing a business idea also requires knowledge related to management. It is therefore important to distinguish and consider the balance between training focused on the identification of business opportunities and training focused on the exploitation of business opportunities. The former should build entrepreneurs' abilities to develop quality business ideas with a reasonable chance of success. The latter should develop an ability to deal with the management of a business, including how to implement the many changes and refinements to the initial business idea that are often necessary for the successful development of the venture.

Leadership training is another fundamental component of developing successful startup ventures, helping to avoid disconnect between entrepreneur leaders and their teams (Wiedeler and Kammerlander, 2021^[42]; Kempster and Cope, 2010^[43]). While management training is oriented towards models and techniques, leadership training is principally about behaviours. The most effective models for training leadership might include experiential learning methods, such as action learning, developmental job assignments, as well as one-to-one coaching (see also Chapter 5) (Prommer, Tiberius and Kraus, 2020^[8]).

Where incubators lack capacity or capabilities to deliver training programmes on certain topics, for example the development of leadership skills, there are still opportunities to provide incubators' clients with these types of support through partnerships with universities and other trainings providers. This is another illustration of how incubators' embeddedness within the entrepreneurial ecosystem and their linkages with other partners are critical determinants of their effectiveness in delivering a holistic package of support to their clients. Policy should encourage incubators to form these ties and channel funding to those that are highly integrated within innovation systems and entrepreneurial ecosystems. Better connected incubators are also more able to recruit high quality coaches to support their startups and can more easily attract speakers and other entrepreneurial ecosystem actors to training and networking events.

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9

Specialised incubation

Incubators have become more specialised as they have grown in number in recent years. There are now more incubators specialised in serving startups and scaleups in particular sectors as well as more incubators focused on companies at a particular stage of development or on entrepreneurs from specific backgrounds. This chapter examines specialisation within incubation systems, exploring the drivers, trends, and types of specialisation, the benefits and potential drawbacks for incubators' clients, and the policy implications.

Introduction

In recent years, the landscape of business incubation has evolved significantly, with a growing number of incubators moving away from generalist models and adopting specialised approaches tailored to particular sectors, technologies, social goals, or target groups. This shift towards greater incubator specialisation reflects broader changes in entrepreneurial ecosystems, where the demand for tailored support, sectoral expertise, and mission-driven innovation has intensified. Specialised incubators now play a critical role in supporting startups not only with physical infrastructure and generic services but with domain-specific knowledge, resources, and networks aligned with their development needs.

This chapter examines the growing trend of incubator specialisation and unpacks its implications for startups, incubator performance, and policy design. It explores the key drivers of specialisation and discusses the benefits and drawbacks of sector-focused versus generalist incubation strategies. The chapter also considers the types of specialisation that have emerged internationally. It concludes with recommendations for policymakers and ecosystem stakeholders.

Table 9.1 below outlines the main types of incubator specialisation that will be analysed in more detail in the sections that follow.

Table 9.1. Main types of incubator specialisation

Specialisation	Description	Selected international examples
Sector/industry	Incubators focus on startups within a specific sector (e.g. fintech, healthtech, agri-tech etc.), offering tailored infrastructure, mentorship, and funding.	The GreenUP Accelerator in Denmark (green tech specialisation); DigitalHealth.London in the United Kingdom (Healthtech specialisation); StartLife in the Netherlands (agri-foodtech specialisation), Plug and Play Fintech (fintech specialisation).
Technology-based firms	Target firms with R&D-intensive or cutting-edge technologies, such as deep tech, biotech, or AI, supporting commercialisation and intellectual property transfer.	Umeå Biotech Incubator (Sweden); ETH Zürich Pioneer Fellowship DeepTech Incubation programme (Switzerland, see Box 8.1 for further information); CEBINA (Austria); Entrepreneurs First (UK).
Sustainability	Support startups with products or services addressing environmental challenges...	Katapult Accelerator in Norway (climate and ocean specialisation); ProVeg Incubator in Germany (Specialised in plant-based innovation); Paris Biotech Santé in France (specialised in health with a sustainability angle).
Social Impact	Incubators prioritise ventures addressing societal needs and delivering measurable social value.	Social Impact Labs in Germany; Alter'Incub in France; Impact Hub King's Cross in the UK; NESsT Romania (focused on civil society enterprise development).
Target Group	Designed to support specific groups such as women, youth, immigrants, or people with disabilities.	MeWe360 in the UK (focused on Black, Asian and Minority Ethnic (BAME) creatives); Digitalundivided in the United States (focused on black and Latina women); Startup Refugees in Finland (focused on refugees); 2Gether-International in the US (focused on disabled entrepreneurs).
Client Development Stage	Tailored to specific phases of venture development, for example ideation, startup, and scaleup, offering stage-appropriate support models.	IncubAlliance in France; the National Digital Research Centre in Ireland (focused on scaling tech ventures); New Frontiers in Ireland (offers phased support); the Korean Tech Incubator Programme for Startups programme.

Benefits and drawbacks of specialised incubation on incubator clients

One of the main advantages of specialised incubators is the ability to provide access to sector-specific resources, infrastructure, and expertise. As (Schwartz and Hornych, 2008^[1]) notes, incubators with a specific sectoral orientation – for example in biotech – can offer tailored physical infrastructure, technical facilities, and services that would be difficult to sustain in a generalist incubator. These include laboratories, specialised equipment, or domain-specific regulatory support that are directly relevant supports for the incubated ventures (Leitão, Pereira and Gonçalves, 2022^[2]). Furthermore, increased alignment between the incubator's internal expertise and the needs of incubated firms may lead to better support in areas such as business model development, regulatory compliance, and market positioning, particularly in complex, knowledge-intensive sectors. In this way, specialised incubators can provide startups with greater chances of survival and growth (Stokan, Thompson and Mahu, 2015^[3]).

Specialisation can also foster stronger synergies among startups within the incubator. When ventures operate in similar or complementary areas, the opportunity for collaboration, co-development, and knowledge sharing is amplified. This can result in innovation spillovers and co-operative behaviours that might be less likely in a more generalist setting. Thus, clustering startups from the same sector can enhance intra-incubator dynamics and knowledge exchange among tenants (Schwartz and Hornych, 2010^[4]; Hansen et al., 2000^[5]; Chan and Lau, 2005^[6]), which is often cited as one of the key benefits of incubators adopting a sectoral focus (Leitão, Pereira and Gonçalves, 2022^[2]).

Specialisation can also result in improved efficiency. (Chan and Lau, 2005^[6]) argue that shared use of technical resources and support services yields higher value when tenants operate in the same or closely related sectors. The commonality of needs across firms allows for more targeted and cost-effective deployment of incubator assets, ranging from business development services to networking events (Leitão, Pereira and Gonçalves, 2022^[2]).

Finally, specialised incubators may benefit from a stronger identity and market positioning within their focus industry. By cultivating a clear niche and establishing a reputation for excellence in a particular sector, these incubators can attract higher-quality applicants and partners, including startups, investors, and researchers with aligned interests. This reputational capital can reinforce the incubator's ecosystem role and foster deeper engagement with external stakeholders such as universities and corporate partners, thereby enhancing the incubator's legitimacy and strategic value for startups and scaleups (Leitão, Pereira and Gonçalves, 2022^[2]).

It is important to note that the empirical evidence on the benefits of incubator specialisation is relatively limited at present and needs further development. There are also potential drawbacks, risks, and challenges associated with incubator specialisation:

- Having a high concentration of startups from the same industry can potentially weaken peer learning, knowledge exchange and collaboration within programmes due to perceptions of competition among startups within incubator cohorts and perceived risks of leakage of competitive information (Cao et al., 2024^[7]; Stokan, Thompson and Mahu, 2015^[3]).
- Specialisation makes incubators more vulnerable to sectoral shocks. If the industry that an incubator specialises in faces disruption or decline, both the incubator and its resident startups could face more serious consequences than would be the case if the incubator had a more general focus (Leitão, Pereira and Gonçalves, 2022^[2]).
- The ability of specialised incubators to be effective is highly contingent on external environmental conditions. In ecosystems lacking the critical mass of sector-specific resources and actors, an incubator's specialisation becomes a liability rather than a strength.

- It is difficult to provide sector-specific knowledge and business support for a multitude of different sectors with the same quality, meaning that specialised incubators may struggle to support startups that blend technologies or span multiple sectors.

Drivers of specialisation for incubators

Alignment with regional and economic priorities

Incubator specialisation is often influenced by policy incentives and funding opportunities that align with broader economic and social objectives. Policymakers use incubators as tools to steer technological progress, regional development, and environmental objectives (Klofsten et al., 2020^[8]). For example, some governments and funding agencies have targeted funding to social entrepreneurship or firms using innovation to address environmental priorities. Many public support programmes are also regionally focused, offering funding to incubators that prioritise local economic growth and strengthen local entrepreneurial ecosystems (Zedtwitz and Grimaldi, 2006^[9]; M'Chirgui et al., 2018^[10]).

Enhancing the startup support offer

Strategic positioning is essential for incubators to sustain a competitive advantage. (Porter, 1980^[11]) argues that organisations must define their competitive scope, including whether they cater to a niche market or serve a broader audience. Incubators can opt to specialise in a specific industry or a group of related industries to build deeper expertise, develop competencies, and create synergies (Grimaldi and Grandi, 2005^[12]). This focused approach helps incubators to better support tenants via improved technical capabilities, networks and strategic insights, developed through continuous experiential learning (Zedtwitz and Grimaldi, 2006^[9]). For example, a health tech-focused incubator may connect startups with specialised investors, relevant policymakers and regulators, and other potential partners like hospitals or pharmaceutical companies, creating synergies that would be harder to achieve in a more diversified incubator. Industry-specific incubators also create synergies by clustering startups that share technological expertise and market needs, which can improve knowledge exchange, resource sharing, and access to specialised infrastructure (Schwartz and Hornych, 2012^[13]). In the context of business incubators, specialisation in a particular industry can be seen as a focused strategy that helps attract startups operating within the same technological or sectoral domain (Grimaldi and Grandi, 2005^[12]).

Main features of specialised incubators, by type

Specialisation by sector

Partly as a response to growing competition for high-potential startups, many incubators have adopted a narrower sectoral focus, concentrating their efforts on a particular industry or a small group of related sectors (Aerts, Matthyssens and Vandenbempt, 2007^[14]). In the United Kingdom, for example, 75% of accelerators launched since 2019 are sector-specialised, compared to just 29% prior to 2015 (Centre for Entrepreneurs, 2022^[15]). These incubators aim to enhance the value offer to their clients by providing more targeted and relevant expertise, infrastructure, advice, networking, and other resources, enabling startups to navigate specific market challenges more effectively (Schwartz and Hornych, 2008^[1]; Gonçalves et al., 2020^[16]). They generally will admit only those startups that align with their niche. This allows them to offer deep industry expertise, specialised facilities, and more relevant mentors and investor connections, albeit at the possible expense of cross-disciplinary collaboration and innovation.

Across countries, incubators specialise in a broad range of different sectors, some illustrative examples of which are described below:

- **Fintech.** Fintech startups often rely on specialised incubators to navigate early-stage challenges, with numerous studies demonstrating the benefits of these dedicated programmes on both the performance of fintech startups and the health of the overall fintech ecosystem (Kowalewski and Pisany, 2023^[17]; Harris, 2021^[18]; Kaur et al., 2024^[19]). Examples of incubators dedicated to the fintech sector are Copenhagen Fintech in Denmark, the Elevator Lab focusing on scalable fintech startups in central and eastern Europe, and Tenity, which operates across a variety of countries. In addition, many larger incubators have fintech specific incubation programmes, such as Plug and Play Fintech, Startup Bootcamp Fintech, and the TechQuarter's Digital Finance Accelerator in Frankfurt, Germany. These programmes provide specialised support to fintech startups across a range of topics including regulations, sustainable finance, data security, retail and payments, and blockchain.
- **Health and biotech.** Many incubators specialise in supporting startups and scaleups in the health and biotechnology sectors. These programmes often provide access to the high-end laboratories and facilities needed to develop and test innovative health products and services, as well as specialised mentoring and in-house expertise on topics such as drug discovery and preclinical development. They also provide access to relevant partners, including clinicians and healthcare leaders that can serve as potential customers or collaborators. Some health-focused incubators also provide placements for startups within hospital settings, such as Paris Biotech Santé in France. Other good examples of health and biotech specialised incubators include DigitalHealth.London, which is part-funded by the UK Government, the Umeå Biotech Incubator in northern Sweden, the Central European Biotech Incubator and Accelerator based in Vienna, and Belgium's VIB Bio-Incubator in Ghent.

Public funding initiatives for incubators have varying degrees of sector agnosticism. Most national funding programmes tend to be relatively agnostic in terms of the sector-specialisation (if any) of the incubators being supported. In these cases, the distribution of public funding de facto aligns with the characteristics of the existing incubation system. There are, however, some public programmes that explicitly target incubators in specific sectors. Box 9.1 presents the case of the United Kingdom's Catapult programme, which funds highly specialised centres that support businesses in their research and development and commercialisation activities.

Box 9.1. The United Kingdom's Catapult programme

Objectives and rationale

The United Kingdom's (UK) Catapult Centres are highly specialised, physical centres with cutting-edge R&D infrastructures and in-house technical expertise. The UK's nine Catapults are spread across 50 locations throughout the country. Although the catapults are not strictly incubators or accelerators, they serve a closely related function in the UK's innovation system by supporting businesses in their R&D and commercialisation activities. The Catapults were formed in 2011 as a response to a 2010 report commissioned by the UK government on technical innovation. It recommended the establishment of a number of technology and innovation centres to bridge the gap between fundamental research and commercialisation. The report identified a series of target areas of likely global future advancement where the UK had existing international research strengths and activity.

The Catapults are part funded and overseen by Innovate UK (IUK) – the UK's innovation agency. IUK has set the following objectives for the Catapults:

- To deliver transformative change and enhanced competitiveness in the relevant sectors, including by stimulating additional private sector funding into R&D.
- To enable UK businesses to access expertise, skills, facilities, and equipment needed for them to grow and scale in the UK and internationally through innovation.
- To provide opportunities for innovative UK businesses to collaborate, contribute to addressing global challenges and attract inward investment.
- To stimulate and facilitate innovation collaboration and partnerships across the UK ecosystem, including between the research base and businesses.
- To work with industry to commercialise and diffuse innovation.
- To drive skills foresighting and development to enable inclusive innovation and promote diversity in the businesses they support.

Description

The four main supports the Catapults provide to SMEs are i). access to equipment and facilities, ii). expert advice, iii). training and advice on workforce development, for example in upskilling companies and providing apprenticeships geared to improving innovation performance, and iv). signposting and support in partnering leading to participation in collaborative projects, often with international partners. In addition, some, such as the Energy Catapult, help facilitate innovating companies by offering opportunities for innovators to engage with potential corporate customers and investors and provide links to international opportunities. Some also offer specific incubation and acceleration programmes, such as the Offshore Renewable Energy Catapult's national Launch Academy.

The Catapults operate with three main types of funding:

- Core grant funding from IUK to deliver against agreed outputs and outcomes. The funding helps build capacity, provide state-of-the-art equipment, and improve business innovation and growth, providing support which is not available on the open market due to market failure or commercial risk.
- Collaborative R&D funding from the public sector, which is allocated competitively via grant applications. Funding pots are aligned with government strategy to advance the development of a research base or to address a market failure. The projects usually involve collaborative work between at least two organisations, although sometimes SMEs can apply on their own.
- Commercial funding, which entails the Catapults generating income on commercial terms to meet a business need and commercialisation opportunity.

Local authorities and devolved administration governments also invest in local Catapult facilities.

Success factors

The Catapult network is based on bolstering innovation in existing and emerging areas of research expertise, with an emphasis on “helping the good get better”. This approach requires periodic updating of the focus areas, in line with changes in research, policy and commercial priorities. When a new Catapult is being considered, Innovate UK has a robust process for determining whether it would be appropriate, taking into account i). the global market opportunity, ii) the research and capabilities of the UK in this area, iii). the timeliness of investing in this area, iv). the additionality of government support, and v). the extent of the need for co-located expertise and equipment. If there is clear and robust evidence for a new Catapult to be established, IUK will assess the options for supporting such investment and develop the appropriate business case.

Another success factor is the level of integration that the Catapults have established within their respective sectors. This has been achieved by forming relationships with academia, SMEs, government

and industry, as well as by generating commercial and collaborative R&D funding streams. Also important to the success of the Catapults is the quality of the internal management teams, with some Catapults having seen positive progress associated with changes to executive teams. In addition, the Catapult Network as a whole has been subject to numerous in-depth and data driven reviews on behalf of and by Government departments. These studies have helped to establish the impacts of the Catapults and ensure they are meeting their objectives.

Challenges

Despite the positive impact overall of the Catapults, the programme has encountered challenges (Ernst & Young, 2017^[20]) report that there is limited evidence that Catapults have had effective performance management in place, and Catapults have not all achieved their funding model expectations as per their envisioned operating models. They consequently remain overwhelmingly reliant on public funding. Governance has not always been sufficiently robust, particularly around financial and performance management, with limited evidence of timely intervention when Catapults' performance targets and wider objectives have not been met. One reported limitation is that IUK cannot sit on the Catapult Boards or recommend appointments. There are also challenges surrounding linkages with other regions and a lack of synergies with other Catapults, although steps are being taken to address this. For example, the Catapults Network hosts events to bring together Catapult Centres and other actors from the entrepreneurial ecosystem, while IUK is fostering the creation of partnerships within the Catapult Network through the launch or expansion of collaborative initiatives.

Conclusions and takeaways

The Catapults programme illustrates how a network of research nodes and their satellites can contribute successfully to an innovation system. It also shows how independent not-for-profit technology and innovation centres can act as co-ordinators for the co-creation of innovation between public and private sectors. The Catapults Network is based on supporting innovation in existing and emerging areas of research expertise. There are parallels for choosing the sectors in which support for incubators and accelerators might be prioritised. Some important takeaways from the UK's approach are the periodic updating of the focus areas and the use of a robust framework and process to determine the appropriateness of introducing a new Catapult in a particular field.

Technology business incubators

Technology business incubators (TBI) are a type of incubator focused on supporting innovation and technology-oriented entrepreneurship, with the primary objective of facilitating technology transfer and the diffusion of innovation products (European Union, 2010^[21]).¹ TBIs support high-tech startups that typically rely on proprietary technologies and advanced R&D. By connecting R&D resources to entrepreneurial ventures and fostering university-industry partnerships, TBIs facilitate the commercialisation of research – often developed within universities or public institutions – into market-ready products or services. This positions them as essential catalysts for local business development and regional innovation and competitiveness (Etzkowitz and Klofsten, 2005^[22]; Phillips, 2002^[23]). Another important function of TBIs is to increase alignment more generally between university and industry by facilitating experiential learning and university-industry collaboration in a way that helps to institutionalise entrepreneurship within academic environments (Lamine et al., 2018^[24]). TBIs thus function as bridges that connect technology, know-how, entrepreneurial skills, and capital (Smilor and Gill, 1986^[25]).

Originating from standalone science parks that provided research space but with little structured support, TBIs began to emerge in the 1980s and 1990s, offering more holistic packages of support to early-stage businesses, with an emphasis on mentorship, networking, and research commercialisation support (Mian, Lamine and Fayolle, 2016^[26]). In this way, TBIs do not only provide infrastructure; they also shape the

operational capabilities and strategic trajectories of technology-intensive startups, contributing significantly to performance outcomes (Momaya, 2014^[27]). TBIs are often established through public-private collaborations involving universities, industries, and government institutions (Etzkowitz, 2002^[28]) and are deeply embedded actors within regional entrepreneurial ecosystems (Mian, Lamine and Fayolle, 2016^[26]). The strength of these triple-helix linkages with universities, investors and research labs enables TBIs to act as conduits for developing entrepreneurial capital and commercialising research (Audretsch, 2007^[29]). Regional characteristics – including industrial legacies, mobility patterns, knowledge assets, and entrepreneurial culture – play a key role in the structure and effectiveness of TBIs, meaning that a diversity of different incubation models and approaches are applied to fit the local context and objectives (Pauwels et al., 2016^[30]; Mian, Lamine and Fayolle, 2016^[26]; Tang et al., 2021^[31]).

Many incubators have emerged in recent years with a specific focus on promoting deeptech startups and scaleups.² These can cover numerous sectors such as artificial intelligence, cleantech, novel materials, medtech, robotics, and construction technologies. For example, the ETH Zürich Pioneer Fellowship Deep-Tech Incubation Program supports students and researchers to develop their research-based technologies into marketable products and services, with the aim of creating successful spin-off companies. The participants receive funding as well as coaching, entrepreneurial training, support from a host professor, and access to ETH infrastructure. This programme is discussed in more detail in Box 8.1 in Chapter 8 of this publication.

Specialisation by target population

Ensuring that all individuals have opportunities to participate in entrepreneurship is an important policy priority for many countries. However, mainstream incubators can struggle to reach individuals from certain groups, such as women, young people, immigrants, or people with disabilities if they do not have good connections to these communities, are seen by potential clients as not being relevant to them, or do not offer supports adapted to specific challenges faced by the group (OECD/European Commission, 2023^[32]; O'Brien, M. Cooney and Blenker, 2019^[33]) (Yusuf, 2014^[34]). For example:

- Internationally, rates of women's entrepreneurship remain consistently lower than those of men (OECD/European Commission, 2023^[32]; Global Entrepreneurship Monitor, 2023^[35]). One barrier is linked to self-confidence and perceptions, with women more likely to report that they lack the necessary skills to start a business and cite fear of failure as a reason for not pursuing an entrepreneurial opportunity (Global Entrepreneurship Monitor, 2023^[35]). Women entrepreneurs also often struggle with more limited access to financing opportunities, underdeveloped entrepreneurial networks, and sociocultural norms that may discourage entrepreneurial activity (European Commission and OECD, 2018^[36]). Women founders may also place a greater emphasis on achieving a better work-life balance or circumventing structural barriers in the workplace (OECD/European Union, 2017^[37]).
- Immigrant entrepreneurs face particular challenges concerning more limited access to finance or information, discrimination, constrained social networks, and language or administrative hurdles (O'Brien, M. Cooney and Blenker, 2019^[33]; Martinelli, Serpente and Bolzani, 2024^[38]; Tengeh and Nkem, 2017^[39]).
- Similarly, entrepreneurs with disabilities often face systemic challenges that hinder their ability to create and operate businesses (Shaheen, 2016^[40]). The dual demands of managing both personal care needs and business operations can constrain the growth potential of enterprises led by individuals with disabilities. Other barriers are concerns over the loss of disability-related benefits, a lack of access to financing, lower educational attainment, and limited social capital.

Many policies provide targeted support to better mobilise the entrepreneurial potential of individuals from all population groups, taking into account their varying entrepreneurship motivations, needs, barriers, goals, and experiences (European Commission and OECD, 2018^[36]; Yusuf, 2014^[34]). Incubators are one

of the key actors in delivery of programmes dedicated to supporting entrepreneurs from groups facing particularly high barriers to business creation (European Commission / OECD, 2019^[41]; Baskaran, Chandran and Ng, 2019^[42]; Pilková, Jančovičová and Kovačičová, 2016^[43]). They offer incubation supports such as training, mentorship, and financing assistance that is tailored to the needs of the relevant group.

Examples are plentiful across OECD countries. In the United States, the Silicon Valley Accelerator for Women's Tech Startups works with women tech founders through immersive programmes and connections to global investor networks, while EY's Entrepreneurial Winning Women supports high-potential women entrepreneurs through strategic growth guidance. Other examples include the online Women Entrepreneurs for Good programme and Australia's SheStarts initiative. Meanwhile, 2Gether-International is an international accelerator targeting entrepreneurs with disabilities through cohort-based programmes that offer intensive pitch coaching, business development support, and access to the entrepreneurial community. Box 9.2 presents in more detail the case of the WomenEntrepreneurs4Good programme, which is an online incubation programme available to women entrepreneurs around the world.

Box 9.2. The WomenEntrepreneurs4Good Accelerator Programme

Objectives and rationale

The WomenEntrepreneurs4Good (WE4G) programme was launched in 2021 by the Women's Forum for the Economy & Society in partnership with the HEC Paris Innovation & Entrepreneurship Center, and with support from a financial institution. WE4G promotes access to entrepreneurial resources, networks, and visibility for women-led startups.

Description

The key supports provided through the six-month programme are:

- Access to a three-day Startup Sprint, which includes intensive coaching on customer research, market validation, and business model development. Over 100 women entrepreneurs participate, with the top ventures progressing to the incubation phase.
- Business coaching and technical support delivered over a three-month online incubation period for the 10 finalists. Participants benefit from guidance by more than 600 HEC Paris experts, including faculty staff, industry professionals, and startup advisors.
- Pitch training and investor exposure, including an opportunity to pitch in front of an international Grand Jury of entrepreneurship experts and stakeholders. Finalists are also invited to present their ventures at the Women's Forum Global Meeting, enhancing visibility to investors and policymakers.
- Networking and ecosystem integration, with direct access to an international community of entrepreneurs, philanthropists, and corporate partners.

The programme is open to ventures that address a clear social or environmental challenge and have at least two women co-founders and less than EUR 20 000 in annual revenue. The programme is financed through a multi-stakeholder model. Core support and co-ordination are provided by HEC Paris and the Women's Forum, while operational delivery is backed by a financial institution. Additional exposure and resources are provided through partnerships with global institutions.

Results achieved

Since its inception in 2021, the WE4G programme has demonstrated tangible impact. Over past editions, it has supported more than 200 women entrepreneurs from 46 countries, offering them access to coaching, international exposure, and a global support network. Many of these have gone to achieve

notable success, with some examples being *My Medic Eye* from Spain, *Revolty* from France, which won the Jury Prize for solar battery innovation in 2023, and *Mino Care* from Canada. The success of the programme's participants reflects in part its growing recognition and influence as a platform for supporting women-led ventures.

Specialisation by client development stage

The development needs and bottlenecks of entrepreneurial ventures evolve continuously as the business progresses through different stages of maturity. (Lindelöf and Hellberg, 2023^[44]) propose a life cycle model of business development that comprises three incubation stages, which each differ in terms of the needs of the ventures, the nature of available resources, and the level of interaction with other actors in the entrepreneurial ecosystem:

- *Enabling firm creation.* At this stage, incubation is primarily about fostering the conditions necessary for new entrepreneurial ideas to emerge and transform into viable ventures. It emphasises the formation of innovative ideas and their initial development, where institutional backing and capability building are crucial for the transition from concept to early-stage firm (Clarysse, Wright and Van de Velde, 2011^[45]; Lockett and Wright, 2005^[46]; Mustar et al., 2006^[47]).
- *Supporting operations.* In the second stage, the focus of incubation shifts from creation to the operational development of new firms. Here, incubators act as platforms that help startups to develop and grow by providing operational support and access to critical resources. This includes managerial guidance, financial support, infrastructure, formal networks, and tailored services that correspond with the evolving needs of the venture. At this stage, startups are still vulnerable but have moved beyond the conceptual phase into actual business operations. The incubator's role is therefore to support the venture's survival by mitigating operational challenges, assisting with capability development, and fostering strategic growth pathways. The support is often more structured and formalised than in the initial phase and reflects a deeper engagement with the firm's business model and market readiness. This stage is where the incubator helps the startup to refine its identity, establish legitimacy in the marketplace, and become self-sustaining (McAdam and McAdam, 2008^[48]; Yusubova, Andries and Clarysse, 2019^[49]; Bruneel et al., 2012^[50]).
- *Catalysing growth.* The third stage presents the incubator as a catalyst for continuous development, where the primary objective is to accelerate growth and prepare firms for sustainable success in competitive environments. At this point, the ventures are typically established and looking to scale. Incubators support this by offering strategic resources such as access to investor networks, advanced mentorship, export guidance, and market expansion opportunities. The process becomes more selective, fast-paced, and outcome-driven, focusing on helping firms rapidly grow or pivot efficiently. The emphasis here is on extracting and maximising value from accumulated knowledge and capabilities. Unlike in the earlier stages, where formal institutional support is central, this phase relies more upon informal networks, ecosystem embeddedness, and community-driven collaboration. Firms are expected to engage actively with entrepreneurial ecosystems, drawing on their external environments for co-creation, joint learning, and innovation diffusion. This marks the culmination of the incubation process, transitioning the firm from dependence on support structures to self-sustained competitive performance (Del Sarto, Isabelle and Di Minin, 2020^[51]; Lindelöf and Löfsten, 2006^[52]; Heaton, Siegel and Teece, 2019^[53]).

In practice, incubators demonstrate clear patterns of specialisation based on the maturity level of their client ventures, allowing for more effective resource allocation and increasing the relevance and impact of the support services provided. Incubators can either focus exclusively on supporting ventures at a particular stage of development, or they can develop phased programmes that cater to firms at different maturity levels.

The phased programming approach often involves the delivery of “pre-incubation” programmes, which target entrepreneurs at the ideation phase and aim to help them in turning their ideas into viable business projects by offering assistance in areas such as business planning and team building. An example of such a pre-incubation scheme is the first phase of Enterprise Ireland’s New Frontiers programme, which lasts 8-10 weeks part-time and helps founders test market potential, evaluate ideas, and define their value proposition. Similarly, the Tech Incubator Programme for Startups (TIPS) in Korea, the Slovak Republic’s National Business Center and France’s IncubAlliance each deliver pre-incubation programmes to early-stage entrepreneurial ventures. In selecting clients, pre-incubation programmes tend to consider the innovativeness of ideas, team composition, and market potential (Gerlach and Brem, 2015^[54]), as well as applicant characteristics such as learning capacity and adaptability that signal their internal readiness to excel in the programme (Lindelöf and Hellberg, 2023^[44]).

Entrepreneurs that successfully pass through pre-incubation programmes will often have the opportunity to progress to a larger incubation programme. These generally provide more intensive support than at the pre-incubation phase, often with a financial component. For example, the second phase of the New Frontier’s programme in Ireland provides a EUR 15 000 tax free stipend to the entrepreneurs, in addition to mentoring and workshops. To be admitted onto these main incubation programmes, startups are often required to demonstrate more concrete signs of potential than at the pre-incubation phases, such as validated business models, customer sales, or ownership of proprietary technologies.

Many incubators also deliver programmes dedicated to more developed companies in the scaling or internationalisation phase. These programmes are often described as “acceleration” programmes and tend to emphasise mentorship, investor access, and fast-tracked development within a condensed timeframe. The TIPS programme in Korea, for example, has dedicated support schemes for startups targeting international markets. There are also incubation initiatives that focus exclusively on scaling or internationalising companies, such as the German Accelerator or the Korean K-Startup Centers. Support at this phase is often centered on building networks and market penetration.

Post-incubation support is another important aspect of what incubators do (Gerlach and Brem, 2015^[55]). This involves the provision networking opportunities and alumni services for the graduates of incubation programmes. The extent to which incubators provide post-incubation assistance often hinges on the strategic value of maintaining long-term relationships with alumni firms. For example, programme graduates that go on to have success in their entrepreneurial venture can go on to become mentors or investors for future incubator clients.

Sustainability-focused incubators

Delivering support for startups and scaleups that can deliver innovative solutions to environmental challenges has become an important new area of specialisation for incubators (Fichter and Schabel, 2018^[56]). This is in part a market-driven response to the emergence of more promising commercial opportunities in fields such as energy and the circular economy. There has also been a significant rise in government initiatives and funding programs that promote such innovations (Fichter and Hurrelmann, 2021^[57]; OECD, 2022^[58]; OECD, 2013^[59]). Sustainability-focused incubators can leverage these policy trends by accessing relevant grants, subsidies, and investment opportunities (European Commission, 2014^[60]). It can also help to future-proof their operations by increasing their alignment with emerging market demands and regulatory changes (Klofsten, Bank and Bienkowska, 2016^[61]).

Incubators are increasingly taking into account environmental factors in the selection of clients, with many prioritising companies whose business model is based on sustainable products or services (Klofsten, Bank and Bienkowska, 2016^[61]). While generic incubators can incorporate sustainability within the advisory services offered to clients, entrepreneurs may prefer incubators that specialise in sustainability to benefit from sector-specific expertise, access to specialised investors, and connections with relevant organisations working in environmental innovation (Fichter and Tiemann, 2018^[62]). An example of an incubator with an

explicit sustainability orientation is the GreenUP Accelerator, hosted by DTU Science Park in Denmark. GreenUP helps startups to scale innovations that reduce carbon dioxide emissions through highly targeted and tailored support. Unlike sector-specific incubators that focus on a single industry, sustainability incubators can support startups across various industries, as long as they prioritise environmental responsibility. This flexibility in tenant recruitment can help incubators increase their occupancy rates and overall size, as they are not restricted to a single sector (Potts, 2010^[63]; Fonseca and Chiappetta Jabbour, 2012^[64]).

Social incubators

Social incubators have emerged as a new type of incubator driven by achieving a combination of both social and economic outcomes (Nicolopoulou et al., 2017^[65]). They have grown in number steadily and have played an important role in nurturing social entrepreneurship, contributing to the growth and visibility of social enterprises (Nicholls, 2010^[66]; Mustar et al., 2006^[47]; Dey and Lehner, 2017^[67]). Social incubators focus on supporting ventures involved in the development of innovative products and services that address social challenges, or so-called “social innovations”. Social innovations can create efficiencies and value that accrues to society more generally (Phills, Deiglmeier and Miller, 2008^[68]). As a result, they have attracted increasing academic and political attention.

The link between social innovation and incubation is based on the view that the development of social innovations can be managed, supported and encouraged (Murray, Caulier-Grice and Mulgan, 2012^[69]), and that this process requires experimentation, creativity and a combination of ideas from different fields (Mulgan, 2006^[70]). The prominent role of social incubators stems from their unique position within the early stages of social innovation (Miller and Stacey, 2014^[71]). Social incubators are often described as “social laboratories” (Nicolopoulou et al., 2017^[65]), offering a structured environment for experimentation that enables the transformation of early-stage ideas at the intersection of different sectors into fully operational organisations – most commonly, social enterprises.

Social incubators differ from other types of incubators not only in the type of startups they support but in the services they prioritise (Sansone et al., 2020^[72]). Compared to other types of incubators, social incubators place greater importance on social impact measurement, business ethics, and corporate social responsibility (CSR) consulting, highlighting their mission-driven orientation. They also offer core support in the form of training, networking (Nicolopoulou et al., 2017^[65]), and access to finance (Steiner and Teasdale, 2016^[73]). This helps social entrepreneurs gain legitimacy and overcome early-stage challenges such as a lack of contacts or resources (Messeghem and Sammut, 2011^[74]; Chabaud, Messeghem and Sammut, 2011^[75]). Beyond providing practical support, incubators also shape public perceptions of social entrepreneurship to position it as an appealing and viable career path (Dey, 2013^[76]).

There is some research on the effectiveness of social incubators. For example, (Sansone et al., 2020^[72]) find that social incubators are just as efficient as traditional business or mixed incubators in promoting tenants’ growth, indicating that the pursuit of social impact does not necessarily compromise economic viability. However, few studies have focused on social incubators’ internal strategies and how they establish their role within the broader social entrepreneurship ecosystem (Messeghem et al., 2018^[77]; Theodoraki and Messeghem, 2017^[78]).

Prominent examples of social incubators from OECD countries include:

- *Alter’Incub Montpellier (France)*: Established in 2007 in Montpellier, Alter’Incub emerged from a partnership led by the Languedoc-Roussillon Regional Association of Cooperative Enterprises (URSCOP). This collaboration brought together stakeholders from the public sector, including the Regional Council and the Caisse des Dépôts (the French public development bank), as well as actors from the social economy. At the time, Alter’Incub was the first social innovation incubator in

France, created with the objective of contributing to regional development (Richez-Battesti and Emin, 2009^[79]). It operates as a non-profit organisation, hosted and staffed by URSCOP.

- *Social Impact Lab Berlin (Germany)*: Founded in 2011 in Berlin, Social Impact operates as a non-profit company and currently oversees a national network of nine incubators under the name Social Impact Labs (SIL). The initiative was launched by a German social entrepreneur. Its first incubation programme, *Social Impact Start*, was developed in partnership with the Federal Ministry of Brandenburg, the German Federal Ministry for Families, Seniors, Women and Youth, and a corporate partner specialising in business software solutions.
- *Impact Hub (United Kingdom)*: Initially launched as “The Hub” in 2005 in London, this incubator was created by a group of young entrepreneurs who wanted to provide a collaborative physical space for a community of socially minded individuals. The Hub became the “Impact Hub” in 2013, which now has more than 100 locations across the world. Impact Hub combines elements of a business incubator, a learning environment, and a professional membership community (Bachmann, 2014^[80]). Impact Hub King's Cross, founded in 2008, was among the first in the UK and was certified as a B-Corp in 2016. Of the four London-based Hubs, it is the most focused on supporting social entrepreneurs through dedicated incubation programmes such as the Impact Hub Fellowship, which combines a startup award with a year-long incubation phase.

Conclusions and policy lessons

The landscape of business incubation is undergoing a shift toward greater specialisation. There are now more sector-specialised incubators, more incubators targeting entrepreneurs from specific groups or companies at particular development stages, and an increased number of programmes that focus on specific social, market and government priorities. These developments are not only market-driven but also policy-enabled, with governments recognising incubators as vehicles for advancing agendas across a range of different areas.

Specialisation can improve the quality, relevance, and impact of support offered to startups and scaleups by enabling incubators to align their services more closely with the specific needs of different types of ventures, for example through tailored coaching or investor connections. Specialisation also enables incubators to build more useful networks and develop deeper expertise on topics that are relevant to their clients. However, specialisation can also bring challenges such as increased vulnerability to sectoral shocks, limited cross-sector knowledge exchange and collaboration.

Creating or funding specialised incubation programmes is a good way for governments to support startups and scaleups in a more strategic and targeted way that aligns with national or regional innovation and entrepreneurship strategies, as well as with wider government objectives. However, a careful and strategic approach is needed in developing supports for specialised incubation. In particular, governments should:

- Ensure that public supports for specialised incubation programmes are coherent with broader strategies, policies and priorities regarding the promotion of startups and scaleups, for example in terms of the sectors, objectives, or types of companies or entrepreneurs targeted.
- Take into account local contextual factors when deciding which types of specialised incubators should be funded and where they should be based. Sector-specialised incubators situated in a context without a wider network of resources and supporting entrepreneurial ecosystem actors can only have limited effectiveness. This means that local industrial strengths, workforce characteristics and research capabilities are key determinants of whether or not a specialised incubation programme in a particular area has a good chance of success.
- Foster cross-sector synergies and knowledge spillovers by encouraging collaboration across incubators. Programmes that connect incubators focused on different industries or demographics

can break down silos and promote interdisciplinary innovation. Such initiatives enhance knowledge exchange, enable co-development of solutions, and create richer support networks for startups navigating complex market, multi-sector environments.

- Monitor and evaluate the impacts of specialised incubation programmes. This is particularly important given the limited evidence base on specialised incubators. Funding new specialised programmes is also a relatively costly policy intervention compared to offering smaller grants to existing incubators, meaning that it is important to demonstrate value for public money and identify policy refinements that could improve future effectiveness.

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Notes

¹ TBIs are also sometimes referred to as innovation or technology centres, science, research or technology parks, or indeed simply as business incubators or accelerators (Mian, Lamine and Fayolle, 2016^[26]).

² Deeptech is defined in the literature as technology which is emerging, enabling, and embedded (Rotolo, Hicks and Martin, 2015^[81]; Kapoor and Teece, 2021^[82]). Emerging technologies are 'discontinuous technologies that have the potential to create a new industry or transform an existing one', with examples including biotherapeutics, micro-robotics, or quantum dots (see also (Schoemaker, Gunther and Day, 2000^[83])). Enabling is a characteristic that builds upon the narrower definition of a General-Purpose Technology (GPT) (Bresnahan and Trajtenberg, 1995^[84]). GPTs are i). economy-wide in terms of impact, ii). capable of ongoing technical improvement, and iii). enable complementary innovations in applications sectors. Embedded implies that an emerging technology needs complementary technologies to be commercialised.

Part III How do governments support business incubators?

10 Mapping of incubation support policies in OECD countries

The OECD has undertaken a mapping of the policies and programmes delivered by public entities at the national level in support of business incubators across the OECD's 38 countries. A total of 70 policy initiatives have been identified and mapped. For each of the policies, structured information has been collected on a range of factors regarding the policies' design and implementation arrangements. This chapter presents key findings and takeaways from the mapping exercise, shedding light on the general types of policy approaches that governments are pursuing to support their incubation systems.

Introduction

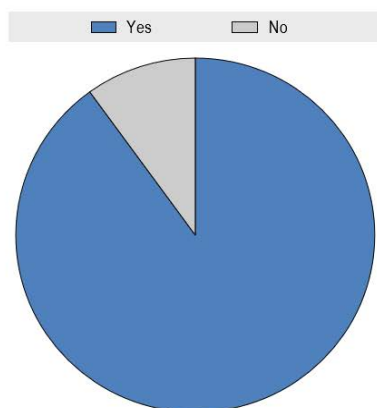
The OECD has undertaken a mapping of incubation support policies in the 38 OECD countries in order to give a comprehensive and high-level view on the broad types of policy support that governments are pursuing in order to support business incubators. This provides a context for the more in-depth policy examples and analysis presented in the rest of this publication (see Chapter 11 for more detailed discussion and recommendations on different policy approaches for supporting business incubators).

Structured information on the design features and implementation arrangements of each of the mapped policies has been collected following a standardised questionnaire template. This information has been gathered primarily through desk research from official sources, drawing also from the OECD's international network and its ongoing work in this policy area. It is important to note that the scope of the mapping exercise is limited to national level initiatives or federal initiatives in countries with a federal system of government. Moreover, only policies that were active as of early 2025 have been mapped. The remainder of this chapter presents key findings emerging from the policy mapping data.

Results

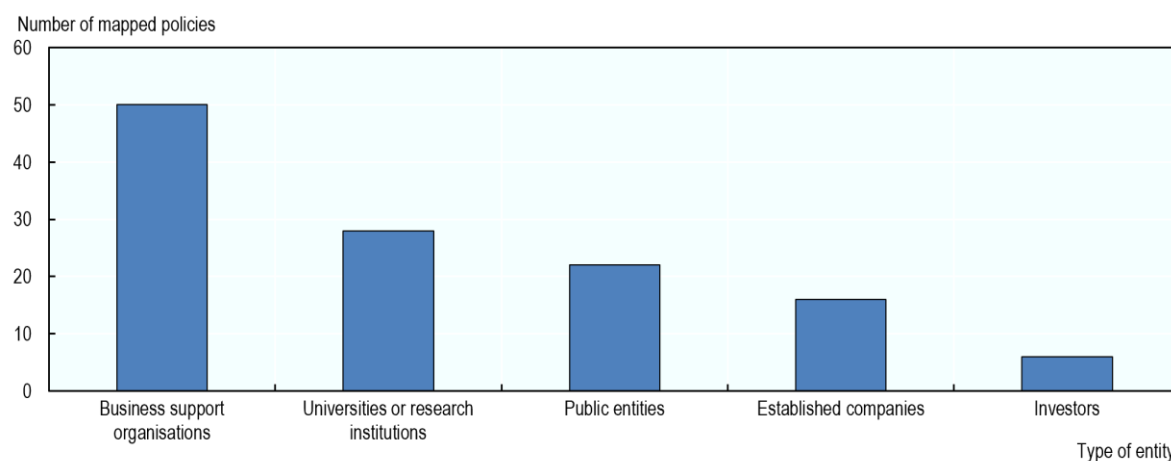
The policy mapping exercise identified 70 active incubation policies administered at the national level across the 38 OECD countries. The vast majority (63) of these form part of a broader strategic action plan or umbrella initiative (see Figure 10.1).

Figure 10.1. Incubation policies in OECD countries that form part of a broader strategic action plan



Source: OECD analysis

Many different types of entities can operate business incubators, including dedicated business support organisations as well as by entities such as universities, financial institutions, or corporations for whom incubation is just a part of their overall operational activities. Incubators can also be run by public entities themselves. Most incubation policies (50 out of the 70 policies mapped) provide assistance to dedicated business support organisations, although a significant number also support universities, public entities and established companies in the delivery of incubation programmes and services (see Figure 10.2). A smaller number of incubation policies target investors.

Figure 10.2. Type of entities operating the incubators supported by the policy

Source: OECD analysis

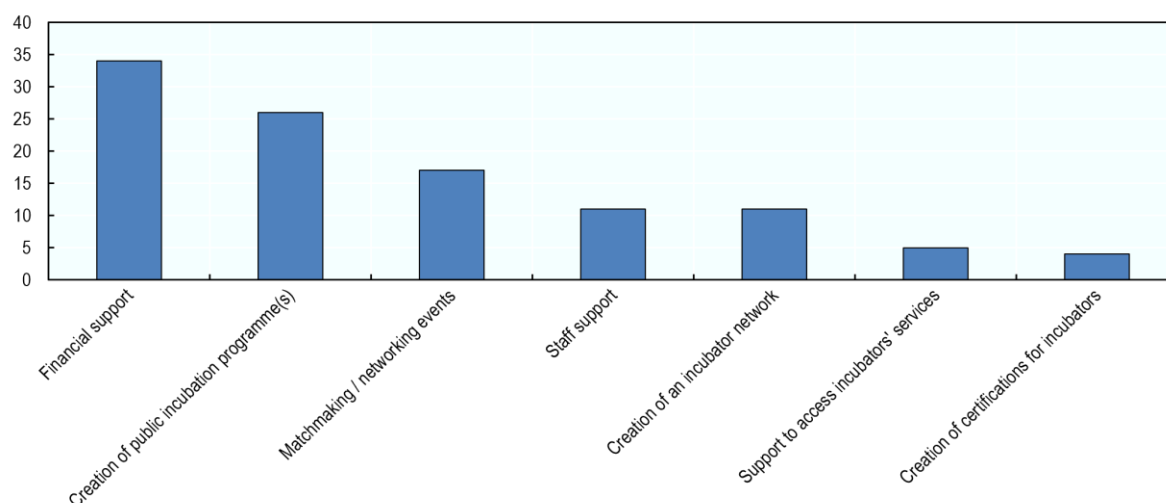
Government policies can support incubators in various ways. The most common policy approach is to provide financial assistance to support selected incubators in developing and delivering incubation programmes and services (see Figure 10.3). Indeed, 34 out of the 70 mapped policies include the provision of financial support to incubators. Chapter 11 of this publication provides detailed discussion on the key policy choices that governments face in designing these funding supports for incubators. Another approach is for public entities to create and operate their own incubation programmes, with 26 cases of this type of policy identified in the mapping across OECD countries.

In addition to funding or operating incubator programmes, policies can also support incubators through the organisation of matchmaking or networking activities (17 policies) and the provision of assistance to raise the capacity of incubator staff (11 policies). Each of these types of policy measures hold strong potential to boost the capacity and performance of business incubators, either as standalone support instruments or as a complement to public funding initiatives.

11 of the incubation policies involve the creation of an incubator network. Such networks can provide important assistance to incubators. In nine cases, the networks provide peer learning activities to their members, while the facilitation of connections with investors (8 policies) and universities (6 policies) is also frequent. It is relatively less common for the incubator networks to provide training or funding to their members, although this does occur for some of the policies identified in the mapping.

Policy can also support incubators indirectly by supporting startups' in accessing incubators' services. This is the case for five of the policies identified in the mapping. These policies often bolster demand for incubators' services through the provision of vouchers that are to be used in exchange for incubation supports or through the issuance of special visas for international entrepreneurs to enable them to participate in incubation programmes in a certain country. Governments in some countries also create certifications and standards for incubators that help them to establish credibility in the entrepreneurial ecosystem and attract clients and partners.

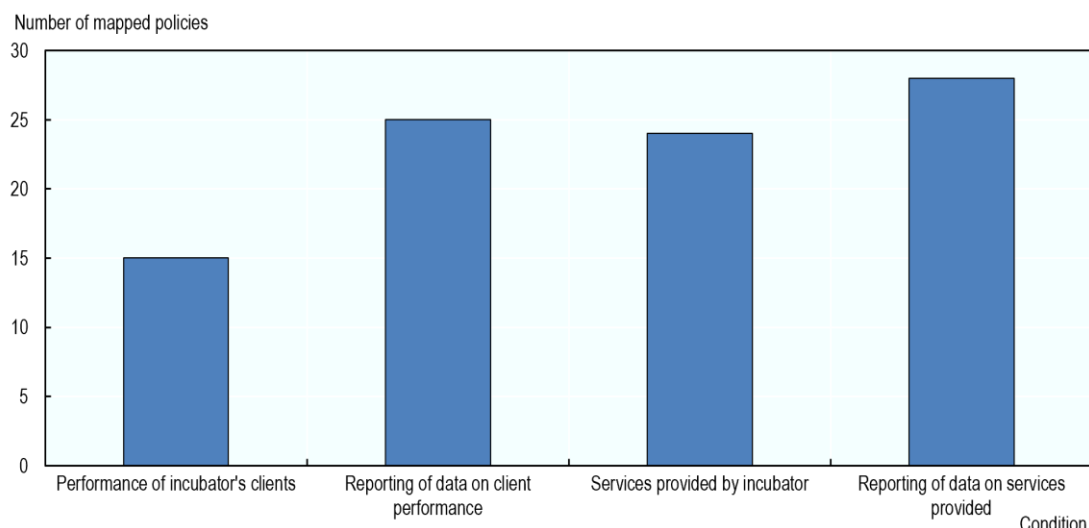
Figure 10.3. Nature of support provided by the policy to the incubators



Source: OECD analysis

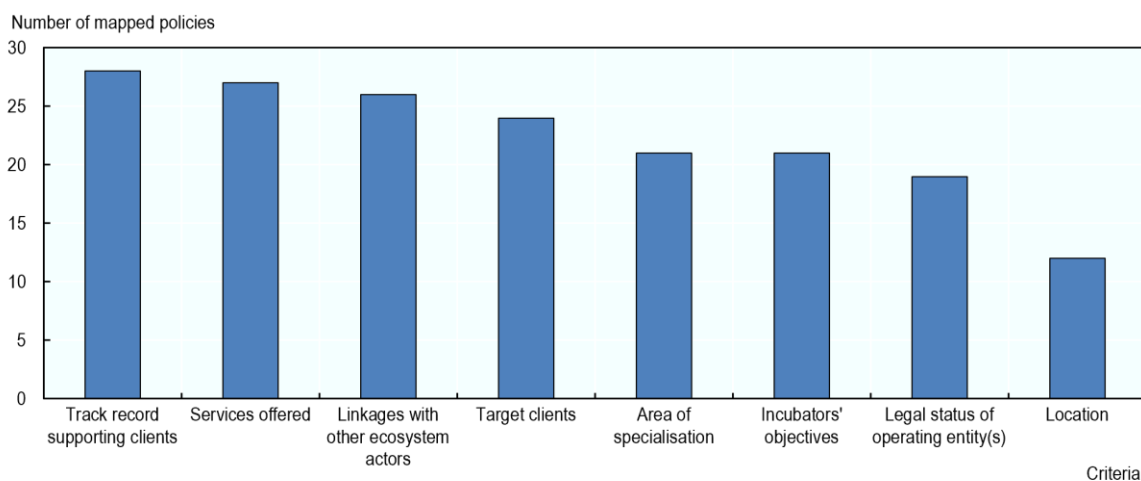
Financial support policies for incubators can broadly be divided into two categories: i). the allocation of funding to selected incubators in order to support them in developing and delivering their programmes and services (20 policies) and ii). the contracting of third-party entities to deliver a defined incubation programme, often through public tenders (14 policies). An example of the former is Sweden's National Incubator Programme (NIP), described in detail in Box 11.1 of this publication, while an example of the latter is the German Accelerator programme operated by the Start2Group, described in detail in Box 6.2 of this publication.

Incubator funding policies often impose conditions for the receipt of funding. 25 out of the 34 identified policies that provide financial support to business incubators require that the incubators report data on their clients' performance, while 28 require the reporting of data on the services provided by the incubator (see Figure 10.4). For some policies, receipt of funding is also conditional on the actual performance of the incubators' clients (15 policies), or the services delivered by the incubator (24 policies).

Figure 10.4. Conditions for receipt of funding

Source: OECD analysis

Track record is the most important selection criterion for incubator support policies, with 28 of the mapped funding programmes taking this factor into account when deciding which incubators to fund (see Figure 10.5). Service offering, ecosystem embeddedness, and the types of clients targeted are also key considerations. Some policies specifically target incubators that are specialised in a certain area, while others select incubators based on their objectives, legal status, or geographical location. The approaches governments take to select incubators for public support and the key policy considerations are discussed in detail in Chapter 11 of this publication.

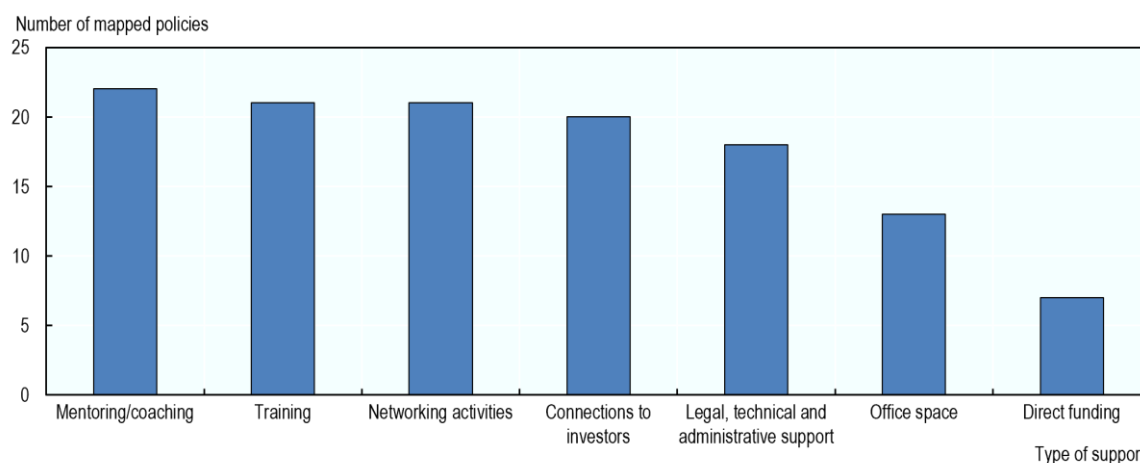
Figure 10.5. Criteria for selecting incubators for support

Source: OECD analysis

Figure 10.6 shows that, where incubator policies stipulate which supports and services the funded incubators are to provide to their client startups, the most common requirements are for incubators to

deliver mentoring or coaching (a stated requirement in 22 of 27 applicable policies), training (21 policies), networking activities (21 policies), and investor connections (20 policies). A less common requirement is for the incubators to provide direct funding to their clients.

Figure 10.6. Services incubators are required to offer their clients in order to qualify for support through the programme



Source: OECD analysis

Conclusions

The key message emerging from the policy mapping is that almost all OECD countries are embracing incubation policies as an important tool for supporting the development of startups and scaleups. Indeed, 31 OECD countries had an active incubation policy at the national level as of early 2025. These mostly form part of a broader strategic action plan or umbrella initiative, indicating that incubation policies are generally well integrated within wider government strategies for entrepreneurship development and innovation. It is important to note that, in addition to the 70 policies mapped at the national level, there are also many local initiatives that public entities are undertaking in order to bolster their incubation systems and programmes.

The most commonly deployed policy lever to support incubation is the provision of funding for third-party incubators, either through the provision of funding allocations to selected incubators or by contracting incubators to deliver pre-defined programmes. These programmes typically select incubators based on their track record of supporting startups, their ecosystem embeddedness and their service offering, among other things. Many public entities also set up and operate their own incubation programmes where they see particular opportunities or support gaps. The policy mapping shows public funding for incubators often comes with strings attached, with most policies requiring funded incubators to submit data on the performance of their clients and/or the services they deliver as a condition for funding. A smaller number of policies also make funding conditional on the actual performance of incubators' clients.

In addition to providing financial assistance, policies can also support incubators in a variety of other ways, including through the creation of networks for incubators or the provision of training for incubator staff. In nine OECD countries, governments have created incubator networks that will typically organise peer learning activities and facilitate connections with investors, universities, and other relevant entities. Policy can also support incubators indirectly by boosting demand for their programmes and services, often through the provision of vouchers for startups or visas for entrepreneurs.

Overall, the policy mapping provides a high-level view on the different types of policies and approaches that governments are taking to support business incubators. Beneath the broad policy categories presented in this chapter are numerous, more detailed policy design and implementation decisions that governments must take in order to ensure the effectiveness of their interventions. These policy choices in the design and implementation of incubation policies are the focus of the next chapter of this publication, which includes a range of inspiring international practices as well as practical recommendations for policymakers.

11 Key policy choices in supporting business incubation

Governments are important funders of incubation, with many incubators reliant upon funding from public entities to finance some or all of their activities. The design of incubation funding programmes can vary widely, with large cross-country differences in selection criteria, eligible expenditures, and funding amounts and time horizons. This chapter reviews the key policy questions that governments face when designing and implementing funding programmes for incubators, including which organisations and incubation activities to fund, how to fund them, and how to monitor their performance and impacts. It also considers how governments can strengthen the performance of incubators beyond the provision of financial assistance, for example through the creation of networks or the provision of training for incubator staff.

Which incubation activities to fund?

In most OECD countries, governments play an important role in funding incubators. This creates opportunities through the design of funding conditions and criteria to steer incubation systems towards providing more of certain types of incubation activities. The types of incubation activity that governments should encourage and fund depend on a variety of contextual factors, such as:

- What are the most acute gaps or weaknesses in incubation support?
- What are startups' emerging development needs and bottlenecks?
- Where are there untapped opportunities?
- Which types of incubation activities are most impactful?
- What are the government's wider priorities and objectives?

While there is not a one-size fits all approach that can be applied universally to decide which incubation activities are prioritised by public programmes, there are some broad principles that governments can apply when designing programme funding programmes for incubators.

Keeping pace with incubation trends

It is important that policies keep pace with developing trends in incubation – both nationally and international – in order to ensure that the incubation activities funded by governments are aligned with best practices and remain relevant to the ever-evolving needs of startups and scaleups. These include:

- **Internationalisation assistance:** Penetrating global markets is fundamental to the growth of innovative startups, particularly those originating from smaller countries. While some incubators have ramped up support for startup globalisation in recent years, for example through immersive “soft-landing” programmes, such supports tend to be expensive and are only accessible to relatively small numbers of firms at present. Governments can steer incubators towards promoting startup globalisation by incorporating internationalisation support capabilities within the selection criteria for public funding programmes. For example, capacity to support the internationalisation of startups was referenced within three of the five intended outcomes for the New and Existing Incubators funding stream of Australia's Incubator Support programme (see Box 11.7), which resulted in most incubators citing support for internationalisation in their applications. Similarly, incubators within Norway's incubator funding programme (see Box 11.5) are assessed partly on their capacity to support their clients in exporting, while allocated funding amounts provided through Sweden's National Incubator Program (see Box 11.1) depend on the number of startups in the incubators' portfolios that have a “scalable business model with international potential”. Another approach is for governments to themselves create new incubation programmes with a strong focus on startup internationalisation. Examples of this include the German Accelerator (see Box 6.2), Korea's K-Startup Centres (see Box 6.1), and Enterprise Singapore's Global Innovation Alliance initiative (see Chapter 17).
- **Specialised programming:** One of the major trends in incubation internationally has been the shift towards greater specialisation (Schwartz and Hornyh, 2012^[1]). However, the emergence of specialised incubators has tended to concentrate in more advanced incubation systems. Many incubation systems, particularly those that are less mature, would benefit from more sector-specialised support programmes. Most public funding programmes for incubators tend to be relatively sector agnostic. This does not mean that they do not support specialised incubators, only that without a sectoral steer, the distribution of public funding de facto aligns with the existing sectoral focus of the incubation system. Sector-specialised incubation activities can be promoted

more directly through public tenders and support for programmes focused on specific sectors, such as the case with Enterprise Ireland's Innovators' Initiative or the Estonian-government backed Health Founders Estonia. Public funding programmes can also introduce eligibility criteria based on the sectoral focus of the funded incubators.

Addressing specific incubation support gaps

Incubation policies should also address specific gaps in incubation support, which, if resolved, can enhance the support provided to startups and scaleups. Again, while different incubation systems face their own issues, there are certain recurrent areas that often come up as gaps in support or challenges for incubation systems that policy can play a role in alleviating:

- **Coaching:** Coaching is often seen as one of the most impactful aspects of incubators' support offer for startups and scaleups, and the quality of coaching available is a key factor that distinguishes highly performant incubators from less effective ones (see Chapter 5 for further discussion). The provision of minimum standards of coaching to startups should be a condition for funding through public support programmes for business incubators. This is the case, for example, with Sweden's National Incubator Program, where incubators are required to adopt the coaching framework specified by Vinnova. In settings where incubators might struggle to find high quality coaches and mentors, government programmes can also earmark support specifically for the recruitment of coaches from elsewhere. As an example, Australia's Incubator Support Programme included a funding stream for incubators to recruit "Experts in Residence" from other countries.
- **Building investment readiness:** Obtaining external investment is a core focus for early-stage ventures. While some incubators excel at developing "investment ready" companies that can credibly seek private investment upon graduating from the programme, many other incubators are falling short in this regard. Policy can be designed to incentivise incubators to establish strong ties with local and international investors and deliver activities such as investor readiness training, demo days, and matchmaking.
- **Training on entrepreneurship skills:** Training is a central component of many incubation programmes. Incubators' training offers typically focus on business-related topics such as business model development, establishing product-market fit, and developing compelling investor pitches. Less common are training initiatives to build the entrepreneurship skills of the founders themselves, for example in the areas of leadership and management (see Chapter 8 for further discussion). This can be boosted either through the development of in-house training programmes on entrepreneurship skills or, where incubators face knowledge or capacity constraints, through partnerships with formal educational institutions with pre-existing programmes on this topic. The ETH Zürich Pioneer Fellowship Deep-Tech Incubation programme in Switzerland (see Box 8.1) provides an example of how the latter model can be pursued.

Funding incubation, not incubators

Many countries have historically provided extensive public support – both from national and regional government level – for the establishment of new incubation entities to build up their incubation system. Today, however, most public funding programmes for incubators stipulate that funding received must be used to finance an expansion of supports for client firms or the introduction of new supports. These are sometimes referred to as "incremental" activities, meaning activities that would not have been carried out in the absence of the public funding. The eligible expenditures within such programmes are those that contribute directly to the project or activity articulated in the incubator's funding application. Such costs may include the salaries of employees employed directly in delivering the project, travel expenditures associated with the project, or the costs of contracting third parties to deliver or contribute to aspects of the project. In Sweden's National Incubator Programme, the incubators' clients are in fact considered the

recipients of the state support, rather than the incubator itself. Accordingly, the incubators can only reimburse costs associated with the delivery of services to their clients, such as business coaching, participation in trade fairs, or accessing laboratories or testing infrastructure. More general operational costs associated with the day-to-day running of the incubator or accelerator are generally not eligible. This reduces the risks that come with funding incubator's operational costs, such as an overreliance on public funding, reduced efficiency, and excessive time spent by incubator staff in seeking funding (OECD, 2003^[2]).

Verifying the eligibility of incubators' claimed expenditures for funding under a particular programme can, however, be a challenge. For example, stakeholders involved in the Canada Accelerator and Incubator Program found the process of verifying that activities are indeed "incremental" to be very time-consuming. This is a particular challenge when funding smaller incubators that may only have one or two staff members who work on all aspects of the incubators' operations. In these cases, it is less straightforward to identify an individual as working exclusively on a particular project, which would make their salary an eligible expenditure under a government grant programme.

Selecting delivery organisations

Once it is established which incubation activities governments would like to support, the next key policy question is which organisations are selected to deliver the activities. The selection of incubators for public funding programmes is typically made by experts or panels, which assess incubators' applications against a set of pre-defined criteria. While these criteria vary depending on the objectives and context of the programme, they can generally be categorised into:

- A base set of binary criteria that articulate which types of organisations are eligible for support under the programme. These criteria often relate to:
 - The type of organisational entity.
 - Area of specialisation.
 - Geographical location.
- A set of more open or subjective criteria that are used to determine which of the eligible incubators should be funded. In general, the assessment seeks primarily to determine the applicants' capacity to support startups and scaleups and deliver an impact. Often, this involves looking at:
 - The incubator's level of connectedness with other entrepreneurial ecosystem actors.
 - The internal capability of the incubator.
 - The track record of the incubator in supporting startups and scaleups.

The remainder of this section discusses the different criteria that governments apply when selecting incubators for support through public funding programmes, building insights and lessons from international policy experiences and the academic literature.

Organisation type(s)

Many different types of organisations run incubation programmes, including national and regional public entities, universities, corporations, investors, and standalone business support entities. The core objectives, activities and competencies of an incubator are often linked to those of the parent organisation. Thus, when determining which types of organisations are supported by incubator funding programmes, it is important to ensure that the organisations' objectives and orientation are aligned with those of the policy.

Whether to fund for-profit incubators

A key choice for policymakers is whether to support the activities of for-profit incubators. Approaches vary between countries. Sweden's National Incubator Program only accepts incubators that are publicly owned or affiliated, while Norway's programme permits incubators that are privately owned but prohibits the paying out of dividends. Meanwhile, Australia and Canada's (now discontinued) incubator funding programmes provided grants to both not-for-profit and for-profit initiatives. At the other end of the spectrum, Israel's Technological Incubators programme seeks to attract consortia of private venture capital funds and large corporations.

The choice surrounding which types of organisations to support through public funding programmes should ultimately be determined by the nature of support different types of entity are likely to provide to their clients, and whether these are aligned with the goals of the policy. Private, for-profit incubators may have a greater incentive and capability to select clients that can pay higher rates or are better able to attract investors at their current stage of development, though this comes at the risk of excluding the "weak but promising ventures" that are often the target of government policy (Tavoletti, 2013^[3]). (Peters, Rice and Sundararajan, 2004^[4]) note that non-profit incubators may have better access to government and university resources and networks and can take more time to support their clients due to them facing less commercial pressures to lease out space. They may also provide startups with a greater degree of autonomy in developing and testing their ideas, products and services (Nam, 2000^[5]). These are particularly important considerations in the context of supporting knowledge-intensive deeptech startups and scaleups. On the other hand, there are some concerns that, where incubators are very heavily reliant upon public support, they may devote excessive resources towards making applications for public funding at the expense of supporting their client companies.

Funding consortia

It is common for incubator funding programmes to invite applications from consortia comprising multiple organisations. For example, the 2023 edition of the United States Small Business Administration's (SBA) Growth Accelerator Fund Competition adopted a multi-stage structure that brought together ecosystem actors to create Growth Accelerator Partnerships that deliver incubation and acceleration services to high potential startups. In the first stage of the competition, grants of USD 50 000 were awarded to organisations ("catalysts") to finance ecosystem building activities and the formation of the Growth Accelerator Partnerships. In the second stage, the catalyst organisations established their Growth Accelerator Partnerships and submitted proposals for an accelerator model. A similar approach can be found in the Israel Innovation Authority's (IIA) Technological Incubators Program, which invites consortia to submit proposals for establishing and operating new incubators in areas specified by the IIA. The successful consortia are awarded a franchise to run the incubator for five years, with the option of extending by an additional three years. The IIA funds 50% of the R&D infrastructure investments needed to establish the incubators, up to a maximum amount of NIS 2 million (approximately EUR 0.6 million). Ireland has also adopted the approach of contracting consortia to deliver incubation and acceleration programmes, with the award of a 5-year, EUR 17 million contract in 2020 to four organisations to operate the National Digital Research Centre.

A notable difference between the programme in Israel and the programmes in Ireland and the US lies in the composition of the consortia that operate the incubators. In the case of Ireland and the US, the consortia are generally formed of research institutions, network organisations, and incubators. In Israel, the consortia comprise more private venture capital funds and large companies. Also, through its involvement in selecting and funding the startups that participate in the incubators, the IIA has a more hands-on role in the operation of the incubators than is the case with the SBA's programme, for example.

Specialisation

One of the major trends internationally in the incubation field is the increasing sector-specialisation of incubators (Schwartz and Hornych, 2012^[1]). A benefit of specialisation is the ability to provide tailored facilities and supports to client firms (Klofsten et al., 2020^[6]; Schwartz and Hornych, 2008^[7]). Furthermore, staff and management within specialised incubators have a greater opportunity to build up sector-specific expertise over time on how to support firms in a particular sector (Klofsten et al., 2020^[6]). Chapter 9 of this publication discusses this trend in more detail. While most national funding programmes for incubators tend to be relatively sector-agnostic, there are some schemes that explicitly target organisations that are active in specific sectors, such as the United Kingdom’s Catapult programme (see Box 9.1 in Chapter 9) or the Israel Innovation Authority’s Deep Tech Incubation Fund, which provides grants of up to NIS 40 million (approximately EUR 9.8 million) for private corporations and investors to operate new technology incubators.

Geographical location

The physical location of an incubator is key to its ability to effectively support startups and scaleups. In order to be good hosts for a technology-oriented incubator, regions must have a sufficiently large population and economy in order to achieve agglomeration effects, as well as a strong university or research institution (Tamásy, 2007^[8]; Tavoletti, 2013^[3]). Incubators based in peripheral regions may experience challenges relating to the size and geographic location of the region, as well as an outflow of talent or lack of an entrepreneurship tradition (Klofsten et al., 2020^[6]). It is important that publicly funded incubators are located in places where they can access the clients, resources, and other entrepreneurial ecosystem actors they need in order to be impactful and effective.

Most national funding programmes do not apply explicit quotas or requirements for the share or number of supported incubators that are based in certain regions, although some programmes do include geographical reach among the criteria for selecting the incubators. There are, however, many local policy initiatives where the geographical location of the incubators is a central criterion for support. This is the case, for example, with incubators that are created or funded by local authorities or municipalities.

Connectedness

Incubators are central players within an entrepreneurial ecosystem (Lamine et al., 2018^[9]). One of their core functions is to act as a “bridge” between new businesses and other resources and actors in the entrepreneurial ecosystem (Amezcuca et al. 2013). There is good evidence that an incubator’s level of embeddedness within an ecosystem is key to its success in supporting startups and scaleups, especially for incubators targeting highly promising ventures at a later stage of development where networking supports are of particular benefit (Chan and Lau, 2005^[10]; Grimaldi and Grandi, 2005^[11]). For example, (Hallen, Cohen and Bingham, 2020^[12]) show that regular and intense consultation with a broad range of stakeholders outside of an accelerator intensifies the learning experienced by client companies. Linkages between incubators and investors can also help to professionalise client firms (Hellmann and Puri, 2000^[13]; Breivik-Meyer, Arntzen-Nordqvist and Alsos, 2020^[14]). Meanwhile, close linkages with universities help to promote the flow of intellectual capital between researchers and startups (Mian, 1994^[15]). The legitimacy and credibility that well-connected incubators have within an entrepreneurial ecosystem can also deliver reputational benefits for the startups and scaleups within the incubator (Autio and Rannikko, 2016^[16]). In addition, greater ecosystem embeddedness can help incubators to attract high quality entrepreneurs, creating a virtuous cycle for the incubator and its clients (Cánovas-Saiz, March-Chordà and Yagüe-Perales, 2020^[17]).

These factors mean that connectedness with other ecosystem actors is a key consideration for policy in determining which incubators to support (Hansen et al., 2000^[18]; Grimaldi and Grandi, 2005^[11]). This is the

case, for example, in Norway's national incubator programme, where incubators are required to be situated in an innovation environment and have national and international partnerships. In other programmes, applications from consortia of multiple organisations are also encouraged or required.

Internal capability

The effectiveness of incubators in supporting their clients links to their internal capabilities. Having high quality management is a critical success factor (Grimaldi and Grandi, 2005^[11]; Alpenidze, Pauceanu and Sanyal, 2019^[19]; Clarysse and Yusubova, 2014^[20]). Incubator managers play an important role in balancing learning approaches to support the future growth of their clients and provide them with a competitive advantage (Patton and Marlow, 2011^[21]; Woolley and MacGregor, 2022^[22]). Their decisions regarding programme design, mentorship, resource allocation, and performance management shape the effectiveness of incubation programmes. Some important attributes for incubator leaders are having a business background, strong entrepreneurship skills, and being well networked in the entrepreneurial ecosystem (Alpenidze, Pauceanu and Sanyal, 2019^[19]). In science-based incubators, (Fukugawa, 2013^[23]) find that the technological skills of the incubator managers are also highly relevant. Competent managers with relevant experience and expertise are also key to attracting the best startups (Clarysse and Yusubova, 2014^[20]). As well as the personnel, internal capabilities are also shaped by the processes and resources that exist within the incubator. Public funding programmes for incubators often seek to assess the quality an incubator's processes, services and management when making decisions on where to allocate funding. Funding decisions are based not only on the initial level of internal capabilities demonstrated by an incubator, but also on the extent to which the funding support could facilitate an improvement in service provision.

Track record

Track record is often the clearest and most readily observable signal of an incubator's ability to support startups and scaleups. Thus, the past performance of an incubator is often a central consideration for policy in deciding which incubators to fund. The Canada Accelerator and Incubator Program initially set out to support both "outstanding" incubators that have already demonstrated success and "high potential" incubators that were less established. Ultimately, however, the 16 selected incubators fell into the former category, which is now considered one of the success factors of the programme. Applicants for New York State's economic development arm's Innovation Hot Spots and Certified Incubators Program are also required to show a track record of supporting startup companies. Similarly, many funding programmes for the establishment of new incubation or acceleration entities – for example, the Growth Accelerator Fund in the United States, the Technological Incubators programme in Israel, and Norway's national incubation programme – take into account applicant organisations' track record and experience in supporting startups and scaleups. Another approach is to provide different tiers of funding depending on the maturity of the applicant. For example, Sweden's National Incubator Program provides a base level of funding to incubators that meet Vinnova's minimum requirements, while Australia's Incubator Support Programme provided smaller grant volumes to new incubators. This approach offers the benefit of providing some initial funding opportunities to help new incubators to get off the ground while limiting the amounts allocated to new entities for which the risk of failure is inevitably higher.

Incubator funding programmes that select based on track record are indirectly conditioning receipt of funding on the age of the incubation entity. The evidence is mixed when it comes to the relationship between the age of an incubator and its effectiveness. In a study of 149 graduate firms from five technology-oriented business incubators in Germany, (Schwartz, 2012^[24]) finds a negative relationship between the age of an incubator and its clients' survival prospects. Potential factors driving this result include a declining share of incubator managers' time being devoted to the coaching of clients or an ever diminishing pool of high-quality client firms that incubators in a particular area or sector can tap into over

time (Schwartz, 2012^[24]). On the other hand, (Link and Scott, 2017^[25]) find that the age of science parks in the United States is positively linked to patenting activity and the attraction of leading academics. Similarly, (Allen and Mccluskey, 1991^[26]) find that the age of incubator facilities is positively correlated with the number of jobs created.

Method of funding

At the national level, there are two main ways in which governments finance incubators:

- National funding programmes that award small to medium amounts of funding to a select number of incubators or accelerators through an application process that is generally open to all organisations that meet certain eligibility criteria. Applicants are typically required to submit a proposal for a particular project or initiative that they would use the programme funding to deliver.
- The issuance of tenders where applicants can apply to be the operator of a particular incubation programme that is defined in the tender.

Generally speaking, national funding programmes have the core objective of building the overall capacity of the incubation system in the relevant country. The issuance of tenders is more geared towards addressing specific gaps, weaknesses, needs or opportunities in the entrepreneurial ecosystem.

Funding amounts

The amount of funding awarded to individual incubators via national funding programmes varies widely between programmes. In the countries examined in this report, the amount of funding provided to each incubator within national funding programmes ranges from less than EUR 100 000 per year to more than EUR 400 000 per year.¹ The amounts awarded through tenders to deliver defined programmes can be substantially larger. For example, a publicly-funded consortium of four private incubators was awarded a EUR 17.5 million contract by the Irish government in 2020 to operate the National Digital Research Centre (NDRC) – Ireland’s national accelerator programme – for a period of five years. Similarly, in 2024, the Israel Innovation Authority issued tenders that would award grants of up to NIS 40 million (approximately EUR 11.8 million) for the establishment of three new incubators in three deep tech fields.

Countries also take different approaches with respect to the uniformity of grant sizes within programmes. In some programmes, differentiated grants sizes are applied, with incubators receiving an amount dependent on certain criteria, characteristics or performance. The incubation programme of the Industrial Development Corporation of Norway, for example, enables grant sizes to be adjusted over time (or phased out altogether) depending on the performance of the incubators against the objectives specified in their funding agreement. This helps to ensure that funds are allocated to the programme operators that are most effective in creating value. In Sweden, funding volumes under the National Incubator Program are tied to the number of qualifying startups that are housed within the incubator. The objectives, structure and lessons from this Swedish programme are set out in more detail in Box 11.1 below.

Box 11.1. The National Incubator Programme, Sweden

Objectives and rationale

Sweden's National Incubator Programme (NIP) co-ordinates and develops Sweden's incubation system, building structural capital in the form of infrastructure that increases the country's ability to support and develop early-stage companies. Additionally, the programme acts as a co-ordinating node for collaboration between incubators and contributes to national and international networking.

The NIP began as a pilot operation at Vinnova – Sweden's innovation agency – in 2003. The current iteration builds on the government assignment that Vinnova received in 2014, in which the objectives were to i). increase the number of new and knowledge-intensive growth companies in Sweden and ii). to direct efforts towards incubators that demonstrate high quality and performance in their ability to successfully support the development of business ideas with unique knowledge advantages and potential to grow on international markets. To achieve these objectives, Vinnova has designed the NIP according to the following two basic principles:

- Promoting company development through incubators.
- Developing national incubation capacity by supporting peer-learning between incubators, as well as support for the development of new tools and methods for incubation.

Vinnova's rationale for supporting startups' development via quality-assured incubators is that it is more cost-effective to ensure the quality of several incubators with national coverage than it is to quality-assure the operations of every company that needs incubation support.

Description

For the 2021-2024 iteration of the programme, the NIP provides financial support to selected incubators of up to SEK 5 million (approximately EUR 430 000) annually for the four-year period. The total budget for the programme during this period is SEK 350 million (approximately EUR 30.3 million). The programme will also be extended for a new four-year period between 2025 and 2029. The NIP requires that participating incubators have a public mandate for incubation and refrain from distributing profits to their owners, effectively discouraging private incubators from seeking participation. Most of the incubators are co-owned by the local university and municipality.

From 2020, the size of each incubator's funding has been determined in two stages:

1. Incubators' processes are evaluated to verify that they meet Vinnova's quality requirements. The incubators meeting these requirements are awarded a basic amount to deliver incubation services.
2. Incubators then submit the profiles of 15 startup firms from their portfolio. The amount of funding awarded is determined based on the number of "strong" startups in the portfolio. To obtain full funding, incubators must demonstrate sound operational practices in step one and a portfolio of at least 15 scalable companies.

This evaluation model has the advantage of ensuring that incubators are not competing against each other, since it is the number of approved target group companies in the company portfolio that determines the amount of funding.

In addition to receiving funding, the incubators supported by the NIP receive an array of non-financial supports in addition to the grants issued under the programme. These are principally delivered by Swedish Incubators and Science Parks (SISP), which is Sweden's non-profit industry association for

incubators and science parks and co-ordinates the NIP. SISP runs three activities for the incubators on behalf of Vinnova:

- Peer reviews, which are transparent and comprehensive reviews with peers taking place every three years.
- Shared learning activities, involving incubator personnel and clients. There are two physical meetings yearly and 12 online meetings. As part of the shared learning, international travels and a yearly conference is organised. The activities of the shared learning aim to foster trust, community, openness, and willingness to co-operate.
- Joint development projects, which are funded by Vinnova. To be supported, at least three incubators must develop a collaboration together.

Success factors

A characteristic feature of the support system for incubators and accelerators in Sweden is the systemic approach and long-term perspective that is applied by Vinnova and other actors in the innovation system. Over time, through sustained commitment and support, Vinnova has established a high degree of credibility within and around the incubation and acceleration system. The perceived competence and credibility of the NIP's central organisation (Vinnova) is a key driver of the programme's success.

Another success factor is the close networking between the various actors in the innovation ecosystem regionally and nationally. This is facilitated and promoted by the peer learning and shared learning experiences of the NIP. The NIP's emphasis on collaboration and networking applies domestically and internationally, enhances connectivity and knowledge sharing among the incubators. Also key is the provision of relatively long-term funding to the incubators, which enhances the sustainability and prospects of both the incubators and their startups and scaleups.

Challenges

The NIP lacks an explicit regional dimension, which has resulted in most of the supported incubators being located in larger cities with good research universities. There are thus some concerns of neglecting the need for incubation support in more peripheral regions, which is of the challenges that Vinnova is aiming to address in the future development of the NIP. In terms of the design and implementation of the NIP, some stakeholders have also noted that the time and resources needed to develop the application and comply with the reporting requirements are too high, particularly for smaller incubators with a very lean administration. Stakeholders have also expressed that it would be beneficial for the NIP in its peer learning and training initiatives to place a greater emphasis on more practical topics such as determining the viability of startups.

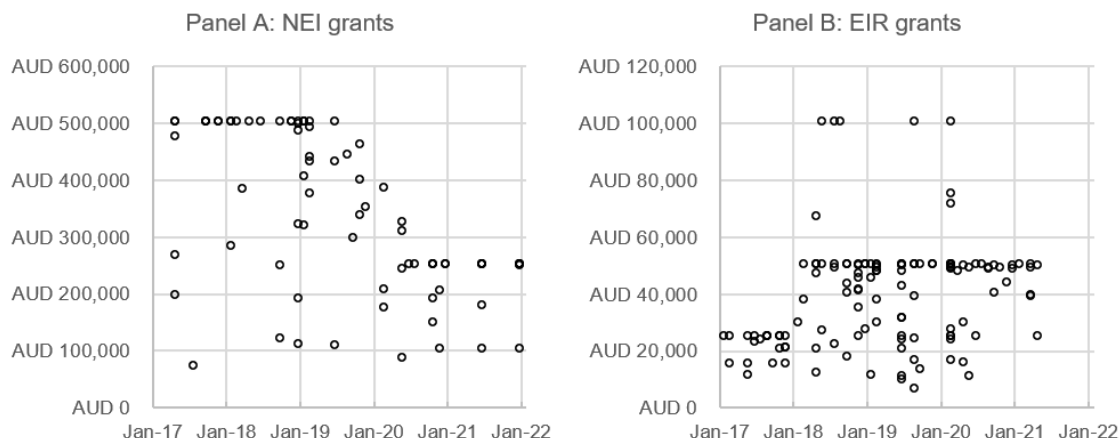
Conclusions and takeaways

The scope of the NIP extends beyond that of a straightforward funding programme. In addition to providing relatively long-term funding, the NIP places a notable emphasis on strengthening collaborations and partnerships. More broadly, Sweden's approach illustrates the importance of seeing new business creation in the context of an entrepreneurial ecosystem. Through Vinnova's role as the co-ordinator of all entrepreneurship and innovation policy in the country, Sweden has been able to exploit synergy effects and ensure that incubators and accelerators are aligned with other ecosystem actors. This role has also helped Vinnova to establish the credibility among relevant actors which has proven key in unlocking the reputational benefits that NIP-incubators derive.

Often, incubators have the option to apply for a certain size of grant. This is the case, for example with Australia's Incubator Support Programme or Portugal's (EU-funded) Vouchers for Incubators and Accelerators scheme. However, what is often seen in practice – particularly where the maximum grant size

is relatively low as is the case with Australia and Portugal's programmes – is a clustering of grant sizes around the value of the programme cap. In the first iteration of Portugal's Vouchers for Incubators and Accelerators scheme, 63 applicants were awarded a total of EUR 9.1 million, implying that the vast majority of awardees received amounts equal to or very close to the programme limit of EUR 150 000. Similarly, in Australia's Incubator Support programme, the modal amount awarded was AUD 500 000 during the initial years of the programme, which corresponded to the programme limit. When this limit was reduced to AUD 250 000, the modal amount shifted to this lower level, as shown in Figure 11.1.

Figure 11.1. Grants issued through the New and Existing Incubators (NEI) stream and Experts in Residence (EIR) stream of Australia's Incubator Support programme



Matching funding requirements

Another point of distinction between incubator funding programmes are the requirements surrounding matching funding. In some national funding programmes, the awarded grants would only cover a proportion of the cost of the applicants' projects. The remaining funds can come from other public or private sources. An advantage of requiring matching funding is that it creates an incentive for organisations to form strategic partnerships with other entrepreneurial ecosystem actors in order to deliver their programmes, which in turn can enhance their effectiveness and impact. It is important to note, however, that matching funding requirements can create a bias towards certain types of organisations, such as large corporations, venture capital funds, or organisations based in major urban centres. Australia's Incubator Support Programme addressed this issue by lowering the matching funding requirement for regional incubators, which is a good example of how greater flexibility or nuance can be introduced to selection criteria to ensure programmes are accessible to different types of incubators.

Funding period

The standard practice for large public tenders to deliver a particular incubation programme is to provide multi-annual contracts to the chosen operators. Examples of this include the 4-year contract awarded to the Start2Group by the German Federal Ministry for Economic Affairs and Climate Action to deliver the German Accelerator programme, the 5-year contract awarded by the Irish government to operate the National Digital Research Centre (NDRC), and the 8-year franchise periods offered to the selected incubators within the Israel Innovation Authority's Technological Innovation Incubators Programme. There is a more mixed picture when it comes to national funding programmes for incubators, with funding periods ranging from less than two years for some programmes to five years in the case of the (now discontinued)

Canada Accelerator and Incubator Programme and the incubation programme of the Industrial Development Corporation of Norway.²

The provision of multi-annual funding for incubators is beneficial for several reasons. Firstly, it provides a greater degree of funding security to the incubators, enabling them to adopt a more long-term and strategic approach. Secondly, it affords them the time to build relationships and become established in the entrepreneurial ecosystem. This is key to enabling incubators to perform their core “bridging” function of connecting their clients to other actors and resources in the entrepreneurial ecosystem. Thirdly, multi-annual contracts reduce the amounts of time that incubator personnel spend on funding applications, allowing more time to be spent supporting their clients.

Integrating non-financial assistance

Training and capacity building

The provision of training and capacity building activities to staff working in incubators can enhance the ability of these organisations to support startups and scaleups. Such training can be embedded within funding programmes for incubators. For example, in Norway’s national incubation programme (see Box 11.5), incubator personnel benefit from a range of competence building activities, including webinars, seminars, subject gatherings, development conversations with programme operators, best practice dissemination, tools and templates, and a digital sharing platform. In addition, the incubators in the programme receive regular feedback through an annual customer satisfaction survey, differentiation analyses every two years, and annual quality assurance and assessments of their performance and activities.

Quality stamps

The development of quality stamps, standards or certifications can help incubators to improve their practices and establish the credibility needed to attract startups, investors and other partners. This signalling can also deliver knock-on reputational benefits for incubators’ clients. Establishing credibility within the entrepreneurial ecosystem can represent a significant challenge in a context where there are not widely adopted performance metrics for incubators. Providing ways for incubators to signal their credibility or quality can therefore help to negate the “winner takes all” dynamics that can emerge in an incubation system where activities and resources are persistently concentrated within a small number of the most established programmes due to strong and sticky reputation effects. Quality stamps can be either implicit or explicit, but either way are underpinned by the credibility of the issuing entity.

Quality certifications and labels can be incorporated within public funding schemes for incubators. As an example, the incubators participating in Sweden’s National Incubator Program benefit from a quality assurance stamp issued by Vinnova. This helps them to obtain funding from other sources (OECD, 2022^[27]). The credibility of the programme and that of the government entity operating it is key to ensuring that the “quality stamp” delivers a tangible benefit. Korea has also established clear criteria for qualifying as a registered accelerator, which are set out in the Act on the Promotion of Venture Investment. Similarly, the European Commissions’ Business Innovation Centres (BICs) are accredited based on meeting certain minimum qualifying criteria. In Portugal, incubators must satisfy a clear set of criteria in order to become certified incubators within the national incubator network. These criteria cover a range of factors, from the services offered to the events they host or the resources they have access to. The plan in Portugal is to incrementally tighten the eligibility criteria over time to gradually raise the performance and standardisation of the certified incubators in the national network.

Performance monitoring

Performance monitoring is an important aspect of implementing an incubation support programme. Across countries, it is common to find incubators that are un-professionalised with relatively low capacity to effectively stimulate startup and scaleup development. Where incubators are reliant on public funding, as is the case in most countries at least to some extent, performance monitoring can be used to inform funding choices and incentivise incubators to improve their practices and/or align their activities with the government's strategic priorities (Asiaei et al., 2022^[28]). For example, in Norway's and Sweden's incubator funding programmes, funding volumes are tied to the performance of the incubators along pre-defined metrics. Transparent and comparable metrics also enable entrepreneurs to make more informed decisions on where they should seek support and make it easier for incubators themselves to identify their strengths, weaknesses and areas for improvement. Furthermore, the use of clear performance metrics can help newer incubators to become more established within the ecosystem, which in turn can help them to attract, for example, better mentors and founders.

Performance monitoring systems require a co-ordinated approach where incubators report on consistent metrics (Azadnia et al., 2022^[29]). Setting appropriate performance metrics is also key. Incubator performance is multi-dimensional and metrics should accordingly cover different dimensions of enterprise development, such as the time taken to develop products or services or the management practices of the supported enterprises (OECD, 2003^[2]). When designing performance metrics, it is also important to distinguish between incubation outputs (e.g. the facilities or services provided) and outcomes (e.g. the performance of the supported businesses). Another important consideration is that some incubation effects only become visible after the firm has graduated from the programme. For example, employment growth often takes place some time after a firm has left an incubation programme, which implies that it is not always appropriate to assess incubators' performance based solely on the job creation of businesses during the incubation period (OECD, 2003^[2]). A more suitable metric may be job creation after graduation, although there are challenges with collecting data on businesses post-incubation. An alternative is to consider indicators that capture factors that can be observed over a shorter time horizon, such as product development times, fundraising outcomes, or the technological readiness levels of client companies.

(Messegghem et al., 2017^[30]) emphasise the value of considering all relevant stakeholders in designing performance metrics, adopting a so-called "balanced scorecard" approach. In the case of incubation systems, the key stakeholders are the client companies, the incubators, and the government entities supporting them. Based on this, (Messegghem et al., 2017^[30]) propose a performance measurement framework for incubators that includes metrics on economic and social development, entrepreneurs' perceptions and performance, the business support process, and learning.

Box 11.2 presents three examples of performance monitoring systems for incubators and that have been developed by Innovation, Science and Economic Development Canada, Vinnova (Sweden's innovation agency), and the European Commission.

Box 11.2. Performance monitoring systems for incubators and accelerators – selected international cases

Canada

Canada has put the “balanced scorecard” approach into practice with the launch of a new performance measurement framework for business incubators and accelerators, which was created by Innovation, Science and Economic Development (ISED) Canada in consultation with business incubators. The framework comprises an annual survey that is voluntarily completed by incubators. The aims are threefold:

- To enable business incubators and accelerators to benchmark their performance.
- To help companies to choose their best options for support, and.
- To assist governments in increasing the effectiveness of their public investments.

The survey is divided into two components. The first component is completed by the incubator or accelerator, with questions on programme structure, the types of support provided, the target group, and delivery models. The second component is completed by the client companies, covering indicators such as job creation, revenue, capital raised and use of government services.

The data gathered from the first four years of the performance measurement framework, alongside merged tax filings data from Statistics Canada, has been leveraged by ISED to conduct an impact evaluation on the effect of business incubators on their clients’ performance (ISED, 2024^[31]). This illustrates how performance monitoring systems can be used to strengthen the evidence base on business incubation.

The European Commission

Meanwhile, in its 2002 benchmarking of business incubators, the European Commission proposed that the performance of incubators should be judged principally in terms of the results achieved i.e. the impact they have on businesses and on wider economic development and other priorities (European Commission, 2002^[32]). The performance measurement should also focus on long term measures of performance such as the employment growth of graduate companies rather than short term metrics such as incubator occupancy rates or failure rates. The chosen indicators were spread across three categories (i). setting up and operating incubators, ii). incubator functions, management and promotion, and iii). evaluation of services and impact), with data collected through surveys to incubators and clients as well as through a schedule of interviews.

Sweden

The National Incubator Programme of Sweden provides a more recent good practice example of managing a performance monitoring system for incubators and accelerators. Since 2007, comparable data have been collected on a range of variables relating to the performance of incubators and the businesses they support. This has provided the programme managers with a time series database to monitor trends, identify best practice approaches, and inform decisions surrounding the allocation of funding support.

A key challenge in managing performance monitoring systems is ensuring that enough incubators provide the necessary data. In some countries, performance reporting is a criterion for public funding. However, excessively demanding reporting requirements can deter incubators from engaging in the programmes altogether. This is particularly the case for smaller incubators with less internal capacity to manage the data collection and reporting process. Client businesses may also be reluctant to disclose certain data on

their activities or performance, which can be a barrier to implementing performance monitoring systems. Box 11.3 presents the case of the Canada Accelerator and Incubator Program, an incubator funding programme that also provides useful lessons on implementing performance measurement frameworks and adapting these to ensure they meet the needs of different stakeholders.

Box 11.3. The Canada Accelerator and Incubator Programme

Objectives and rationale

The Canada Accelerator and Incubator Programme (CAIP) was an initiative of the Government of Canada's Venture Capital Action Plan and was conceptualised and designed by Finance Canada. Running from 2014 to 2019, the CAIP supported selected incubators and accelerators with the objective of establishing a critical mass of outstanding incubators and accelerators that can develop innovative, high-growth Canadian SMEs. The four expected outcomes set out by the government were i). Incubators and accelerators should expand their range of programme and services, ii). Early-stage firms will become investment ready, iii). Early-stage firms benefit from innovation support resources such as expertise and networks, and iv). Wealth creation in Canada.

Description

The CAIP had a budget of CAD 100 million (approximately EUR 67 million) to be distributed over five years. The recipients were selected through a one-time Request For Proposals (RFP) that was launched on 23 September 2013 with a proposal submission deadline of 30 October 2013. According to the RFP, recipients were to be market-driven, led by the private sector, and contributing to a sustainable venture capital system. Approximately 100 proposals were received, which were first assessed based on the defined eligibility and selection criteria. Applications were judged on how the funding would contribute to the four expected outcomes for the CAIP. The proposals that met the programme criteria were then presented to the independent Canadian Venture Capital Expert Panel (a five-member panel selected by Finance Canada with experience in the venture capital asset class and the business and finance sectors). In total, 16 incubators and accelerators were selected to receive funding. The allocation of funding ranged from less than CAD 1 million (approximately EUR 668 000) to over CAD 11 million (approximately EUR 7.4 million) over the five-year programme period. All recipients had to demonstrate matching contributions on at least a 1:1 basis during the funding period.

The reporting of key performance data was among the obligations included within the selected incubators and accelerators' contribution agreements. The government established 11 indicators to assess the performance of the supported incubators and accelerators:

1. Incremental programmes and services offered by the incubators and accelerators
2. Number of incremental expertise providers (mentors)
3. Number of early-stage firms which receive investment
4. Average investment received by early-stage firms
5. Number of early-stage firms supported
6. Number of staff at early-stage firms
7. Percentage of early-stage firms satisfied with program and services
8. Average satisfaction rating on benefits to firms from innovation networks
9. Number of incremental jobs created
10. Percentage of early-stage firms which generate or increase their revenue
11. Early-stage firm survival rate

Success factors

The CAIP was successful in fostering the development and economic contribution of startups in Canada, with the CAIP-supported incubators expanding their portfolios of client companies considerably between 2014 and 2017 and the majority of client firms with available data experiencing growth over at least one year (National Research Council Canada, 2018^[33]). A key success factor was the rigorous upfront selection of the incubators and accelerators, with only those with established track records and strong ecosystem embeddedness eventually selected. Indeed, a notable feature of the CAIP incubators and accelerators is also their strong connections with universities and the private sector. Also important to the success of the initiative was the CAIP's non-intrusive approach, which afforded the incubators the flexibility to adapt their activities and business model to their unique regional and industrial context.

Challenges

The introduction of a standardised national performance measurement framework facilitated more consistent and reliable data collection, improving the assessment of economic impact and programme effectiveness. However, the implementation of this framework was not without challenges. A mid-term evaluation of the CAIP identified concerns relating to the administrative burden on the incubators and their clients, as well as to concerns surrounding data privacy and security. The programme operator (National Research Council of Canada Industrial Research Assistance Program) effectively addressed these challenges by aligning reporting requirements across funding partners and implementing a more efficient data entry system. In addition, clearer guidelines and support tools were developed to reassure client firms about the confidentiality and secure handling of their data. This was facilitated by extensive consultation with the CAIP incubators and other stakeholders. Changes were also made to ensure that the performance measurement framework was adaptable to various regional and sectoral contexts.

The substantial contribution amounts made the CAIP's due diligence and negotiation processes particularly lengthy, requiring a considerable time and effort investment from the incubators. The programme operator encountered further complications surrounding the handling of contracts involving multiple parties – a byproduct of the partnerships encouraged by the CAIP. Limiting the CAIP's support to activities that are incremental also brought verification challenges.

Conclusions and takeaways

The CAIP was a complex programme to execute, but evaluations revealed that it had several positive outcomes. The CAIP highlights how a robust performance measurement framework can be used to benchmark performance, drive improvement and verify cost-effectiveness. However, the programme experience also illustrates the need to clearly define reporting requirements within funding agreements and to allocate sufficient time for the detailed planning and development of administrative processes before the launch of new programmes. Another lesson is that, for programmes like the CAIP, where beneficiaries engage through intermediaries, it is crucial to collaborate with other innovation and capacity support programmes to create a unified approach to collecting performance data.

The CAIP encouraged and sometimes required co-operation between different incubators and accelerators. Moreover, the matching funding requirement motivated the incubators and accelerators to establish strategic partnerships with other ecosystem actors. These factors meant that the CAIP's funding spread throughout the incubation and acceleration system to smaller entities, usually through partnerships with a large incubator or accelerator that was receiving funding from the CAIP. There was also close collaboration among the funded incubators and accelerators. Indeed, after the CAIP's launch, the participants formed an ad hoc working group, illustrating how an incubator funding programme can be a catalyst for increased cohesion and peer learning with an incubation and acceleration system.

The collection of consistent and reliable data on incubators' performance, as well as that of their client businesses, also creates an opportunity to improve monitoring and evaluation practices. This can help to address the persistent knowledge gaps that currently exist regarding the types of incubation activities that are most effective in promoting startups and scaleups. It is important to have measures of impact that can be compared against other policy measures. The OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes 2023 recommends that all evaluations cover the core metrics of employment growth, sales growth and survival, in part to facilitate these cross-policy comparisons of effectiveness and cost-effectiveness (OECD, 2023^[34]).

Strengthening linkages between incubators

Across countries, the size and diversity of the incubator population has increased significantly over the past 10-15 years. Despite wide differences in objectives, areas of specialisation, funding sources and support delivery models, individual incubators are highly interdependent and affected by common factors such as the quality of the pipeline of entrepreneurs that can go on to become clients, the availability of key resources such as mentors or testing facilities, and the conduciveness of the financing landscape for startups and scaleups. Given these interdependencies, it is important to view incubators as forming part of a system. Strengthening linkages between incubators can significantly increase the system's overall capacity to support startups and scaleups, for example through greater opportunities for peer-learning or resource sharing among incubators. Well-organised incubation systems are also easier to navigate for startups and scaleups, enabling them to identify the most appropriate programmes.

This section reviews some of the main actions that governments can pursue in order to strengthen linkages between incubators and create more cohesive incubation systems with high amounts of collaboration, synergies and mutual learning.

Supporting networks

Governments in a small number of countries have taken the important step of establishing a national network of incubators as a means of creating a more organised and cohesive incubation system. It is also not uncommon for incubators to take the initiative of creating their own small networks or groups, often with other incubators that operate in a similar sector or region. For example, in Sweden, incubators supported by Vinnova's National Incubator Program often grant startups housed in other incubators access to their own facilities.

Members of incubator networks are often provided with free or subsidised access to bespoke training courses for incubator managers and staff to help them to build their internal capabilities. In addition, incubators within a network can play a signposting role by referring entrepreneurs to other organisations in the network. Perhaps most importantly, networking initiatives that strengthen linkages between incubators create rich opportunities for peer learning, which can be an effective vessel for raising the overall competencies within the system by shining a light on best practices and identifying solutions to common challenges. Peer learning can be facilitated formally through dedicated events and programmes, as well as through informal interactions between members of the network.

An important policy question for governments when forming national incubator networks is which types of entities should be included and which should be excluded. As discussed in Chapter 2, there is not a fixed definition of incubation that is applied internationally, meaning that a range of different organisations may refer to themselves as incubators, even where their activities do not align with those that governments intend to support through incubation programmes and initiatives. The increasing provision of public funding for incubators can create an incentive for organisations to label themselves as incubators where, perhaps, this label is not appropriate. Equally, some organisations whose activities align with a government's

understanding of incubation may themselves not self-identify as an incubator. Ultimately, the decision on where to draw the line should reflect the priorities and aims of the particular incubator network.

Box 11.4 describes the approach of Portugal's National Network of Incubators, which is operated by Startup Portugal and is one of the few examples of a comprehensive national network of incubators.

Box 11.4. The National Network of Incubators, Portugal

Objectives and rationale

Portugal's National Network of Incubators (RNI) is operated by Startup Portugal – a non-profit organisation that was formed in order to support the government in the creation and implementation of the National Strategy for Entrepreneurship, monitor the design and implementation of public policies to support entrepreneurship, promote entrepreneurship and Portuguese startups in Portugal and abroad, and administer European funds designed to boost entrepreneurship. Portugal's incubation and acceleration system is less mature than in some other countries, having mostly developed over the past 10-15 years. The RNI seeks to support the professionalisation and continued development of the incubation and acceleration system.

Description

As of January 2024, there were 138 certified incubators within the RNI, which were supporting a total of 4 983 businesses. The population of certified incubators is concentrated in the North, Lisbon and Centre regions, specifically in the cities of Lisboa, Porto, Aveiro, Braga and Coimbra where the most developed entrepreneurial ecosystems are located. The RNI has introduced a range of activities to facilitate networking and build capacity within the Portuguese incubation and acceleration system. For example, it has partnered with the Founder Institute to offer a training course specifically developed to assist incubator and accelerator managers in the design and implementation of startup support programmes. Peer learning is also fostered through an annual networking event for incubators and accelerators in the RNI, as well as through a monthly blog series that profiles the practices and experiences of different incubators and accelerators.

Success factors

The long-term vision of the RNI is to strengthen the national incubation and acceleration system by encouraging and incentivising Portuguese incubators and accelerators to become more professionalised and adept in supporting startups and scaleups. To achieve this, the criteria for participation in the RNI will be gradually tightened, creating an incentive for the members to professionalise and boost their competencies. In addition, RNI membership must be renewed on an annual basis to ensure that members remain up to standard. Key to the success of the initiative will be ensuring that the RNI continues to provide its members with the training and peer learning opportunities needed to become more professionalised and impactful in supporting startups and scaleups.

Challenges

A key challenge for the RNI is to raise the capacity and internal competencies of incubators and accelerators from across the network, particularly those in low-density or rural areas that currently have a limited capacity to support high impact startups and scaleups. Capacity building and training activities are being implemented by the network in order to address this challenge. There is scope to introduce further capacity building activities for the incubators and accelerators within the RNI. For example, formal peer learning programmes would provide opportunities for less professionalised incubators in

low density regions to learn from and build relationships with more developed incubators and acceleration in the country.

Conclusions and takeaways

The National Network of Incubators in Portugal is a leading example of a public initiative to raise the standards and competencies of incubators and accelerators throughout the national system. The approach of providing both an incentive (through tightening criteria for membership) and the means (through the offer of training programmes) to professionalise is an innovative one with useful lessons for other countries.

Enabling resource sharing

In order to be effective in stimulating the creation and growth of impactful new companies, incubators need to be situated in a context where there is a sufficient quantity and quality of relevant entrepreneurs, mentors, investors, facilities and research outputs. For incubators in remote regions, or those that are less established or are highly specialised, accessing these key resources can represent a sizeable challenge. Creating opportunities for incubators to share and pool their resources is one way in which access to resources can be made feasible even for smaller incubators that could not attract or afford these resources on their own. Public funding programmes for incubators often connect the funded incubators through networking events or access to shared resources. An example of this approach can be found in Norway, where, at any one time, startups and scaleups can access the resources and supports of multiple incubators within the national incubation programme. Box 11.5 describes this programme in further detail.

Box 11.5. The incubator programme of the Industrial Development Corporation of Norway

Objectives and rationale

The national incubation programme of the Industrial Development Corporation of Norway (SIVA) seeks to contribute to the transition of the Norwegian economy away from natural resource extraction and towards high technology sectors. It does so by supporting the development of a national infrastructure of “innovation companies” that can help new and existing businesses with the ability and inclination to grow. The programme is therefore an indirect policy tool that targets both innovation environments and innovative ideas and companies with high growth potential. As of the 1 April 2026, the responsibility of the incubation programme was moved from SIVA to Innovation Norway.

Description

For the 10-year programme period from 2023-2032, the total budget for the incubation programme is estimated at NOK 2.69 billion (approximately USD 290 million). The actual budget available is decided annually through Norway’s national budget. Participating incubators receive the following supports:

1. Financial support through the provision of grants, which vary in size.
2. Competence building activities, including seminars, subject gatherings, peer learning, best practice dissemination, advice, tools and templates, and a digital sharing platform. In addition, the incubators in the programme receive regular feedback through the annual customer satisfaction survey, differentiation analyses every two years, and annual quality assurance and assessments of their performance and activities.
3. Networking supports, including participation in a national network comprising other incubators, industry parks and catapult centres, an annual partner gathering, an annual trade meeting,

study visits, networking activities with other actors in the entrepreneurial ecosystem, and various co-operation agreements.

In order to be admitted or retained on the programme, the incubators must be located in the context of an innovation environment and satisfy the following criteria:

- Be organised as a limited liability company.
- Not pay out dividends.
- Have core competence in business development.
- Work with companies with high potential for scaling and internationalisation.
- Have broad and relevant ownership, private/public.
- Have good regional roots, and clear drivers.
- Have a clear role in regional and national ecosystems.
- Have national and international partnerships and networks.
- Have expertise and a focus on sustainability.

Incubators that meet these basic criteria are then assessed based on a range of factors including their ability to support their clients in the green and digital transitions, their support for scaling and exporting, and their connections with other relevant actors and resources, in particular those in research and development environments.

Successful applicants are initially granted a programme period of five years, which can possibly be extended by another five years depending on performance. Grant sizes incubators are determined through a differentiated grant model based on achieved results and potential. In the event of non-delivery of agreed deliverables, the incubator may receive a lower grant level or be removed from the programme, which can take place within the initial five-year period.

Success factors

A hallmark of the incubation programme is the emphasis on collaboration between the incubators and accelerators in the system. The programme ethos is that the incubated companies must receive the best specialist expertise, regardless of who can offer this and where they are located geographically. This means that startups can be supported by several incubators at the same time, provided that the different incubators offer support in distinct areas. This approach requires effective interaction and co-operation between the different incubators in the incubation programme, which is a prioritised national objective in Norway. Indeed, it is expected that incubators within the incubation programme establish close relationships and facilitate the flow of companies to ensure that the startups have access to the most relevant supports. Collaboration between incubators in Norway also takes the form of sharing best practices, methodologies and tools, which is aided by the range of networking events that form part of the incubation programme.

In addition, the competitive nature of the national incubation programme and the application of the differentiated grant model has helped to strengthen the incubators with the greatest untapped potential while adjusted down or ending support for incubators that are less performant. Another success factor is that, through the design of the programme's admission criteria, the supported incubators have strong regional roots and work with the business community in their region.

Challenges

A challenge in Norway is that some regional business environments are small and poorly connected to larger regions, meaning that promising young companies might lack the resources, networks and credibility needed to fulfil their potential and grow. The government is addressing this challenge through

the promotion of a cohesive and collaborative incubation and acceleration system in which incubated companies can receive innovation support from several incubators simultaneously from across the country. Key challenges and priorities for the incubation programme going forwards are ensuring that the incubators can provide relevant supports and expertise to their clients in the areas of digitalisation and internationalisation.

Conclusions and takeaways

Policy actors in Norway have recognised that incubation is a dynamic and evolutionary process. Through its national incubation programme, Norway has been able to achieve economies of scale in its efforts to address system or co-ordination failures that result in sub-optimal innovative activity in certain areas. These economies of scale stem from the implementation expertise of the programme managers, the joint systems for measuring results, agreed routines for registering companies, joint learning, and transfer of experience. Strong national programmes can also reduce political risks at the local level that are associated with a decentralised system such as Norway's, which, for example, could see less emphasis placed on support for incubation and acceleration.

Two distinguishing features of Norway's incubation programme are i). the collaborative ethos between the incubators and ii). the dynamic nature of the support provided. Indeed, the portfolio of incubators is not fixed, with the possibility of removing incubators or admitting others based on results and potential. To achieve such a system, application procedures and assessment criteria must be clear and transparent.

Fostering peer learning

Peer learning is another powerful mechanism that governments can tap into. In Sweden, peer reviews of incubators take place every three-years. These reviews, which are co-ordinated by Swedish Incubators and Science Parks (SISP) on behalf of Vinnova, include the management, team, and board of the incubators, and are tailored to the work of the incubator based on the European Quality Management Framework. The outcome is an analysis of the aggregated strengths and weaknesses of the reviewed incubators. The SISP also organises shared learning activities for incubators via two physical meetings and 12 online meetings each year. These activities are based on input from the peer reviews and on SISP members' initiatives, with the aim of fostering trust, community, openness, and willingness to co-operate.

Embedding incubators within entrepreneurial ecosystems

A core function of an incubator is to connect its clients with other actors and resources in the entrepreneurial ecosystem, such as investors, mentors, researchers, large corporations and other startups. There are several measures that governments can take to strengthen the linkages between incubators and these other entrepreneurial ecosystem actors.

Creating entrepreneurial ecosystem hubs

Entrepreneurial ecosystem hubs bring together various actors in the entrepreneurial ecosystem. By helping to achieve a critical mass of startups, incubators, investors, mentors, researchers, public entities and other actors in close proximity, they unlock networking and agglomeration effects that strengthen the ability of incubators to support their clients, for example through facilitation of more and better connections, peer learning and knowledge exchange.

Entrepreneurial ecosystem hubs can take different forms, their defining characteristic being their ability to attract and accommodate high numbers of startups, mentors, investors, corporates, public agencies, and support programmes. Some prominent examples from OECD countries include:

- *Station F, France.* Station F is housed in the 34 000 square metre hall of a former railway station in Paris. It was launched in 2017 and now houses more than 1 000 startups. Station F is a collection of more than 30 incubators based in a single location, mainly run by universities, large companies, or consortia. Station F also has its own incubation programmes. Much of Station F's success stems from its success in attracting the active engagement of players and services from across the entrepreneurial ecosystem. Companies such as Apple, AWS, Qonto and Google have dedicated teams in offices on the Station F campus, which answer questions and meet with entrepreneurs. Station F has also created an investor community of more than 300 funds. Some venture capital funds have offices at Station F, and others visit regularly in spaces reserved for them. In addition, Station F hosts public services linked to the French Tech Central programme, through which experts from 40 public services are available directly on campus to meet entrepreneurs and help them solve administrative problems. Although Station F is a private initiative, the Paris City Council has consistently supported the initiative, notably through its early and public endorsement and through using its right of pre-emption to purchase the Station F site and sell it to the private developer.
- *MaRS Discovery District, Canada.* MaRS is North America's largest urban innovation hub, with nearly 140 000 square metres of office, lab, meeting and event space across four buildings in downtown Toronto. It is a non-profit organisation funded mainly through a combination of rent, service fees, public support, and corporate and philanthropic donations. MaRS currently houses more than 120 startups and established companies. In addition to delivering numerous incubation programmes, MaRS is a convener of the innovation ecosystem. It has partnerships with a large number of corporate, academic, venture capital, public, and philanthropic institutions. MaRS' location is central to its support offer to startups, with its proximity to federal offices, universities and financial institutions considered a key asset. This asset is exploited through the organisation of around 2 000 events each year, which facilitates interactions between different entrepreneurial ecosystem actors. Another success factor is its network of more than 100 volunteer experts with specialised and niche expertise.
- *Unicorn Factory Lisboa, Portugal.* Unicorn Factor was launched by Startup Lisboa – a non-profit incubator founded in 2012 with support from the city council – in 2022. The site is the “Beato Creative Hub” building that opened in 2017. This is one of the largest spaces for entrepreneurship and innovation in Europe, with around 50 000 square meters of space distributed over 18 buildings and a capacity to host more than 3 000 people. It serves as a hub and meeting point for the entrepreneurial ecosystem, with a wide range of catering, leisure and cultural services and facilities available.

The entrepreneurial ecosystem hubs described above are each centred around a large, physical startup campus, often with a national pull. Governments can also create networking or co-ordinating entities that coalesce ecosystem actors at the local level. France has embraced this decentralised model through the creation of more than 100 “French Tech Communities”, which bring together the key players in their respective local entrepreneurial ecosystems (see Box 11.6 for more information on the French Tech programme). Similarly, New York State's economic development agency has established an innovation hotspot in each of the state's 10 economic development regions through the Innovation Hotspots & Certified Incubators programme.

Another approach is to establish entities that work to co-ordinate ecosystems at the sectoral level. For example, Denmark has established cluster organisations for its 13 “sector strongholds”. These cluster organisations are involved in organising the incubation support system within their sector. In addition to

this, they put incubators into closer and more regular contact with other sectoral actors, such as large corporations, investors, or startups.

Box 11.6. The French Tech programme

Objectives and rationale

French Tech was created in 2013 by the French government to bring together all the players in the France's entrepreneurial ecosystem under a single name and logo. The stated aims are fourfold:

- To improve the visibility and international influence of the French startup ecosystem and thus increase its ability to attract investment and talent to France.
- To develop a local dynamic around startups by drawing on the initiatives of the players on the French entrepreneurial scene themselves to highlight what already exists and create a snowball effect.
- To encourage the emergence of world technology leaders in France by supporting them through various programmes.
- To strengthen the coherence of public actions in support of startups.

The overarching goal is to give French startups and the actors in the ecosystem a strong common identity and to encourage exchanges within it.

Description

The French Tech programme is run by a small team of 30 people (the "French Tech Mission"), which is attached to the Ministry of Economy and Finance. One of the main activities of the French Tech Mission is the labelling and co-ordination of the French Tech Capitals and Communities. The French Tech Capitals and Communities are typically private associations of players who are active in their local entrepreneurial ecosystem in their area and work to promote entrepreneurship and innovation. These associations may include local incubators as well as groups of local entrepreneurs. They gain the French Tech label by demonstrating their willingness and ability to contribute to the objectives of the French Tech Mission. In addition to benefitting from the French Tech label, the Capitals and Communities can also apply for project funding from the French Tech Mission. Other sources of funding for the Capitals and Communities are membership fees, private sponsorship, and local authorities.

There are 116 French Tech Capitals and Communities across France, which bring together approximately 1 400 volunteers (around 70% of whom are entrepreneurs) and 6 000 startups. Members of the French Tech Capital and Communities often act as mentors for entrepreneurs in their area, helping them to develop their skills, recruit workers, and identify funding opportunities, as well as directing them to local incubators and accelerators.

Among the French Tech Communities are 67 international communities, spread across 52 countries. These are groups of French or Francophile entrepreneurs who support the actions of the French Tech Mission abroad and help to support the development of French startups in their geographical area. These Communities are supported by diplomatic posts and the economic departments of French embassies and consulates, by Business France, by French Chambers of Commerce and Industry abroad and by French Foreign Trade Advisors (who are volunteers, often belonging to large companies). The Communities abroad receive financial support from the International Community Fund of the French Tech Mission, although they must often find additional funding, which can take the form of sponsorship from a major company or support from Chambers of Commerce or Embassies.

Success factors

The French Tech initiative has adopted an effectual approach that leverages existing resources, players and initiatives within France's local entrepreneurial ecosystems. Key to the success of the initiative is the mobilisation of a multitude of local players. This collective mobilisation began with the labelling process for the French Tech Capitals and Communities, which required the applicants to map their local entrepreneurial ecosystems and take stock of existing initiatives and actors. By involving the individuals and organisations running the French Tech Capitals and Communities in the design of new initiatives for their local ecosystems, the French Tech Mission was also able to secure the active engagement and commitment of a range of players.

The strength of the French Tech initiative is also linked to a marketing choice – the decision to create a brand (French Tech) and a logo (the red origami rooster). This logo has since spread to communities in every region of the world, supported by French delegations and stands at international trade fairs. Forming the French Tech brand thus resulted in a banner behind which entrepreneurs and other ecosystem actors can rally.

Challenges

One of the main challenges of the French Tech initiative has been to move from France's historic top-down approach of supporting entrepreneurship through subsidies and public aid to an approach based on the self-construction of an ecosystem. To achieve this, the French Tech Mission needed to involve the private sector and local authorities, both as local ecosystem actors and as sources of financial or operational support for the activities of their respective French Tech Capitals and Communities.

To succeed in building a broad movement to mobilise French startups, it was also necessary to reach out beyond Paris and offer a balanced representation of the very varied ecosystems across France. This required a great deal of work on the ground in the regions, including meetings with local entrepreneurs, incubators, and investors. To succeed, the French Tech Mission has found entrepreneurs in the cities and regions who are committed to mobilising local players in the ecosystems and encouraging them to work together. French Tech's success is due in large part to the voluntary involvement of these local anchors.

Conclusions and takeaways

The French Tech programme is an innovative policy initiative that has been successful in creating more cohesive and dynamic entrepreneurial ecosystems at a local level. In order for a city or community to obtain the French Tech Label, the promoters must mobilise a multitude of local players and demonstrate that these players are working collaboratively to foster the entrepreneurial ecosystem. Thus, the French Tech programme illustrates how policies that compel and encourage ecosystem actors to act in collaboration and co-ordination with one another can help to ensure that the activities of all actors – including incubators and accelerators – are well aligned.

Another key lesson from the French Tech programme is that, by empowering local entrepreneurs and ecosystem actors to become the creators and drivers – as opposed to merely the recipients – of new initiatives, policymakers can secure the active engagement of these different players. This in turn can the overall pool of resources available within local entrepreneurial ecosystems. For example, 1 400 volunteers within the French Tech Communities and Capitals, often provide mentorship to startups and entrepreneurs in their area.

Strengthening investor linkages

A core objective for many incubators is to help their clients in securing private investment, with incubation programmes often culminating in demo days and investor pitches. It is critical for the investor community to be aware of and actively engaged with startups and scaleups within the incubation system. The public sector is often involved in supporting the financial institutions that invest in startups and scaleups, which provides opportunities to anchor these institutions more closely within the incubation system. Public investment funds can also create platforms for regular engagement with incubators. As an example, Portugal Ventures' Ignition Partners Network includes more than 50 incubators, providing incubated startups with opportunities for regular exposure to investors.

Integration with research and innovation systems

A critical resource for many early-stage startups, particularly those in deeptech sectors, is access to testing facilities. The cost of setting up and operating these facilities is generally prohibitively high for individual incubators. Incubators must therefore instead tap into existing research infrastructures, which are often attached to universities. Ensuring a close proximity between the university system and the incubation system can help to strengthen the pipeline of innovative startups and scaleups. The public sector generally plays a significant role in funding and supporting universities, which provides greater leverage to integrate these institutions more closely within the incubation system. For example, research commercialisation and technology transfer (so-called "third mission activities") can be integrated into researchers' and universities' performance assessment criteria. This increases interest in incubation within the university sector, encouraging universities to create their own incubators or engage in partnerships with external incubators.

Co-ordinating with wider support policies for innovation and entrepreneurship

Embedding incubation support policies within broader strategies

The entrepreneurial ecosystems within which incubators operate are dynamic, interactive and complex entities. Government policies targeting particular aspects of an entrepreneurial ecosystem will have ripple effects throughout the ecosystem and thus cannot be viewed in isolation. There are benefits to ensuring that all policies which aim to support the creation and growth of new companies and strengthen entrepreneurial ecosystems are aligned and complementary to one another.

Choices on the design of incubator support policies should be informed by other government policies and strategies regarding the promotion of startups and scaleups, which might provide a steer on, for example the regions or sectors that should be prioritised or the types of startups that should be targeted. Similarly, entrepreneurship initiatives not relating directly to incubation should take into account the direction, objectives and priorities of incubator support policies. This approach helps to ensure that incubator support policies are in harmony with the overall government agenda on startup and scaleup promotion. Incubation policies that are designed in a silo bear the risk of "pushing on a string", whereby supported incubators cannot meet their objectives due to an absence of the necessary resources in the surrounding entrepreneurial ecosystem. For example, establishing a publicly funded incubator in a sector or technology area that is not prioritised in the national innovation and research system is unlikely to have a strong impact due to a shortage of relevant ideas, expertise and facilities for the incubator to tap into.

In some countries, flagship incubator support policies explicitly form part of a wider innovation or entrepreneurship policy or strategy. For example, Australia's Incubator Support Programme (ISP) (see Box 11.7 for further information) was one of 24 policies introduced as part of the 2015 National Innovation and Science Agenda (NISA). Systems thinking was at the heart of the NISA, reflecting the need for a co-ordinated policy approach to effectively manage the interconnected elements of the "grand challenges" or

“wicked problems” that the NISA sought to address (Mazzucato, 2018^[35]). Prior to launch, the NISA underwent numerous revisions, based on proactive consultation through hackathons, a discussion paper, research and global benchmarking, roadshows, and direct feedback from ministers and key ecosystems stakeholders. This process revealed the complexity of policies affecting innovation and enabled the government to develop a co-ordinated and systems-based approach. Within the NISA were many policies that were complementary to the ISP, such as the formation of “landing pads” in key overseas markets. Even beyond the NISA, there were a range of other complementary policy actions implemented around the same time as the ISP, such as an allocation of AUD 20 million (approximately EUR 12.1 million) for the national science and research institute’s (CSIRO) science-based accelerator as well as many state-level initiatives.

There are similar lessons to be drawn from the German Accelerator (see Box 6.1 for further information), which was established in 2012 as just one component of the Ministry for Economic Affairs and Climate Action’s (BMWK) broader innovation policy, which comprised four key pillars:

1. “Business startups”
2. “Competence”
3. “Precompetitive”
4. “Closeness to the market”

The German Accelerator programme falls within the “Competence” pillar but there are nonetheless strong synergies with programmes in other pillars. For example, the German Accelerator is integrated within the same BMWK department (“Guarantee Banks, KfW Subsidiaries, Innovative Startups, Commercial Credit Insurance”) as the EXIST programme, which forms part of the “Business startups” pillar. This enables the German Accelerator programme to tap into the large network of university graduates, students and scientists that the EXIST programme works with. The department also has expertise in startup financing, which have been leveraged to support the delivery of the German Accelerator programme.

Box 11.7. The Incubator Support Programme of Australia’s National Innovation and Science Agenda

Objectives and rationale

Australia’s Incubator Support Programme (ISP) was one of the 24 policies within the National Innovation and Science Agenda (NISA). Launched in September 2016, the objective of the ISP was to increase the quality and quantity of support services for startups by expanding incubators into regions or industry sectors where none or few existed, and expanding the services offered by existing incubators. The programme included two streams:

1. The New and Existing incubators (NEI) stream, with the objectives to i). deliver high quality services to startups to improve their chances of commercial success in international markets, ii). partner with first-generation migrant and refugee support organisations to assist migrant and refugee founders to establish their business both nationally and internationally, and iii). Assist startups with a regional focus to expand and scale their business.
2. The Expert-in-Residence (EIR) stream, with the objective to increase incubators’ capabilities and improve the chance of commercial success for startups in international markets by organising and providing access to top quality research, managerial and technical talent through incoming and outgoing secondments of national or international experts.

Description

For the first four years, the ISP had AUD 23 million (approximately EUR 13.9 million) in funding available. The ISP was then extended for a further four years, with a reduced budget of AUD 5 million (approximately EUR 3.0 million) and an emphasis on first-generation migrant and refugee founders. The ISP provided funding support to incubators through two streams: New and Existing Incubators (NEI) and Experts-in-Residence (EIR). At the time of the programme's launch in 2016, the NEI stream provided up to AUD 500 000 (approximately EUR 302 000) over a two year period. In 2020, this was revised down to a maximum of AUD 250 000 (approximately EUR 151 000), also over a two year period. The EIR stream provided funding of up to AUD 25 000 (approximately EUR 15 000) when the programme was launched, which increased to AUD 100 000 (approximately EUR 60 000) in 2017. This stream was designed to give startups in incubators access to top-quality research, as well as technical and managerial expertise through secondments of national and international experts, helping them to address internal capacity constraints. Both the NEI and EIR funding streams required matched funding from applicants, with the ISP covering up to 65% of eligible project expenditures in regional areas or up to 50% in major cities.

Applications for grants under the NEI stream were evaluated against three core criteria:

1. Management and business capability: This required the incubators to demonstrate their ability to assist Australian startups to develop the capabilities required to succeed in international markets, taking into account their personnel, track record, linkages with others in the innovation ecosystem, and services provided.
2. Benefit to the incubator, startups and ecosystem: This required the incubators to set out their distinct value proposition and outline the gap in the market they will address and how they will do this.
3. Impact of the grant funding: This takes into account the likelihood the project would not proceed without the grant, the positive impact the grant will have on the size, scale or timing of the project, and the total additional investment the grant will leverage.

In 2020, a fourth criterion was introduced on how the project would support first-generation migrant and refugee founders to expand internationally. The first criterion relates to the incubator's current experience and capabilities while the second refers to the potential to boost its capabilities through grant support. If an incubator needed a capability uplift, it could separately apply for an EIR grant.

Grant applicants received advice as part of a two-stage process of applying for ISP funding. Incubators first submitted an expression of interest, which was reviewed by a Regional Incubator Facilitator (RIF). For eligible applications, the RIF then worked with the applicant to develop a full application, thereby helping to increase the quality of proposals and sharing lessons learned across applications. Additionally, the RIFs provided feedback on draft applications and to unsuccessful applicants. Among the appointed RIFs were individuals with experience in launching startups, consulting, the corporate sector, and designing various startup support programmes.

Success factors

A key success factor in the ISP's approach was the early and comprehensive engagement with the startup sector leading into the launch of the NISA. An independent review of the global evidence about incubators and accelerators was also commissioned, which fed into the design of the ISP. This review revealed the critical role of management capabilities as well as access to mentors and the broader ecosystem. The ISP's engagement of the RIFs to support with the grant applications was also wise move given incubators and accelerators' lack of prior experience in participating in similar programmes.

Challenges

The Australian ISP funding for incubators was up to two years. This is a very short amount of time compared to that needed for new incubators to become sustainable or established. Moreover, there were concerns surrounding whether the second round of the ISP, with its reduced budget, would provide enough financial support to the incubators and have a material impact on the ecosystem. Another reported issue with the ISP is that the beneficiaries are typically treated separately, with a tendency for the incubators to compete rather than collaborate. Recent national gatherings of innovation district professionals and incubator managers consistently revealed a desire for there to be a forum or stronger incentives for collaboration. The ISP appears therefore to have missed an opportunity to foster collaboration and peer learning within the incubation and acceleration system.

Conclusions and takeaways

The approach of the ISP, and the NISA more broadly, is defined by a high degree of stakeholder consultation and adaptability. Indeed, from initial inception to launch, the programme underwent a number of revisions, based on research, consultations and stakeholder discussions. This process helped to inform the introduction of the Expert-in-Residence funding stream to address identified gaps in skills, competences, and knowhow among incubator managers and staff. Even after its launch, the programme underwent a number of revisions based on changing objectives and other developments.

As with similar programmes in other countries, applicants to the ISP struggled in preparing their applications. Indeed, the process of completing an application was rated as being ‘very high’, with the application process taking a median time of 25 days. Recruiting the four Regional Incubator facilitators to provide support in this area represents an innovation approach to address this problem that proved effective in the Australian context.

The high level of co-ordination that takes place among local, state, and national-level actors, both from the public and private sectors, is also a factor that stands out in New York State’s approach to incubation policy. The Empire State Development’s (ESD) flagship Innovation Hotspots and Certified Incubators programme assigns one hotspot to each of the state’s 10 economic development regions, ensuring that startup support services are available across the State. In addition to the base funding provided by NYSTAR to the designated Innovation Hotspots, public agencies – at both the state and national level – fund many of the specific incubation programmes offered by the Innovation Hotspots. The Innovation Hotspots also work closely with local universities and businesses, as well as with other state-sponsored entities such as the Centers of Advanced Technology and Centers of Excellence.

Another factor in New York that has facilitated the development of policies and programmes that are aligned with the interests and needs of stakeholders is the presence of the New York State business incubation and acceleration professional’s trade association (BIANYS). BIANYS has played a significant role in advocating policy at the state and federal levels to strengthen New York State’s incubation system, as described in Box 11.8 below.

Box 11.8. The Business Incubator Association of New York State

The Business Incubator Association of New York State’s (BIANYS) mission is to support business incubation and acceleration programmes throughout the state, and it is governed by a 9-member board of directors elected by the general membership. This professional membership organisation brings together a community of engaged programme leaders of incubators, accelerators and co-working

spaces from across NYS. This network of leaders works to foster a dynamic and successful startup ecosystem. BIANYS strengthens the NYS incubation and acceleration system by:

- Advocating for policies that support business incubation activities. This includes lobbying for government funding, influencing economic development policies, and ensuring that regulations are conducive to startup growth and innovation.
- Facilitating networking among incubators, providing a platform where incubation professionals can share best practices, collaborate on projects, and learn from each other's successes and challenges. This networking helps to strengthen the overall effectiveness of incubation services across the state.
- Providing training and educational resources to incubator managers and staff is another important function of BIANYS. This may include workshops, seminars, and conferences that address the latest trends in incubation management, technology commercialisation, and startup support.
- Helping to establish and promote standards and best practices for incubation programmes. This includes providing guidelines on operations, management, and services that incubators should offer to startups to enhance their chances of success.
- Facilitating resource sharing among its members, such as access to funding opportunities, partnerships with universities and government agencies, and connections to potential investors or industry experts.
- Representing a wide network of incubators, BIANYS helps to raise the profile and visibility of business incubation as a part of the state's economic development strategy. This can attract more attention and resources from both public and private sectors.

Connecting incubation systems to other public supports

It is important to ensure that incubators can tap into a variety of different funding sources, including public programmes that are not specifically focused on incubation. For example, participants in Switzerland's Pioneer Fellowship Deep-Tech Incubation Programme (see Box 8.1 for further information) could supplement the CHF 150 000 (approximately EUR 159 000) programme grant with non-dilutive funding through other government programmes that are set up to stimulate industry-science co-operation, such as Innosuisse's Bridge funding opportunities. Participants also benefit from substantial in-kind public contributions in the form of access to the cutting-edge research infrastructure and expertise available within the publicly funded ETH-domain, which comprises multiple Federal Institutes of Technology and research institutes. Similarly, the United Kingdom's Catapult Centres have opportunities to apply for other sources of public funding beyond their core grant from Innovate UK on a competitive basis. The Canada Accelerator and Incubator Program (CAIP) permitted applicants to use public funding from other government programmes to contribute towards meeting their matching funding requirements for support under the CAIP. This was also permitted to some extent in Australia's ISP, providing an impetus for incubators and accelerators to explore and engage with other public funding opportunities.

Incubators also play an important role in signposting startups and scaleups to relevant government supports. Public agencies can strengthen this signposting function by holding regular office hours or installing contacts from relevant government departments at the premises of incubators. A prominent example of this can be found in Station F in France, where multiple public agencies have a local contact point that can provide tailored information to startups on the range of public supports available and how these can be accessed. Similarly, the French Tech Central programme enables entrepreneurs to meet with representatives of various government departments at their local "French Tech Capital".

Conclusions and policy lessons

Public support programmes for incubators are common internationally and are an important tool for raising the capacity of incubators and strengthening the supports they provide to startups and scaleups. Public financial supports for incubators are sometimes complemented by the provision of capacity building assistance to raise the internal competencies of incubators and promote best practices. Different countries have taken different approaches in deciding which organisations to fund and how, based on the particular bottlenecks and challenges in their country as well as wider political priorities. This diversity of policy approaches has yielded a number of general lessons for policymakers to consider when designing public supports for incubation:

- *Go long:* Incubators need time to build contacts and a reputation within their entrepreneurial ecosystem, which are crucial factors shaping their effectiveness in supporting the development of startups and scaleups. It is generally advisable for public funding programmes for incubators to provide financial support for at least a three-year period to enable the assisted organisations to plan strategically and become established in the ecosystem. Long-term funding brings the added benefit of reducing the time and expense associated with applying for funding in the case of incubators or assessing applications in the case of programme operators.
- *Be selective:* Funding incubators will not necessarily deliver an impact if the beneficiaries lack the core competencies, experience, or connections needed to effectively support startups and scaleups. Given the heterogeneity that exists within incubation systems, national funding programmes can generate stronger impacts by prioritising applicants with a track record of supporting startups and scaleups, high embeddedness in the entrepreneurial ecosystem and strong internal competencies. This can be supplemented by smaller scale national funding, as well as non-financial support and assistance from regional authorities, to build the capacity and professionalisation of less performant incubators.
- *Know the objective:* Incubation systems contain a diverse range of organisations that deliver different activities and supports. This means that the effects of funding the system are highly dependent on which organisations are funded and the conditions attached to the funding. National funding programmes for incubators need clearly specified objectives so that selection criteria and performance conditions can be set accordingly.
- *Know the system:* Each incubation system faces its own bottlenecks, shortcomings and development priorities. This means there is not a one-size-fits-all funding policy for incubators. Public funding programmes should seek to understand and address the specific challenges that exist within the incubation system, for example by earmarking funding for specific activities such as coaching, or by allocating resources to sector-specialised programmes or programmes to support the internationalisation of startups.
- *Encourage co-operation, not competition:* Most incubation systems would benefit from more collaboration among incubators and between incubators and other entrepreneurial ecosystem actors. Public funding programmes can incentivise this by rewarding joint-applications or applications from consortia of multiple organisations. Grant allocation systems can also be designed in a way that avoids the perception of incubators competing over a finite pool of funding.
- *Supplement funding with non-financial assistance:* The most successful support programmes for incubators will generally go beyond the provision of funding to selected incubators; they also incorporate non-financial assistance such as training, peer learning schemes and support guidelines to raise the effectiveness of the incubators in the programme.
- *Measure performance:* A common challenge for incubation systems is a lack of reliable and comparable data on the activities, performance and impact of different incubators. From a policy perspective, this makes it difficult to identify gaps in service provision, make funding decisions, and

establish the impact of public support programmes. From the perspective of startups and scaleups, this makes it difficult to identify the most suitable programmes. Governments should implement performance measurement frameworks for incubators that include metrics on the activities of incubators and the performance and perspectives of their client companies. The periodic provision of necessary data should be a condition for incubators' participation in national networks and support programmes. To avoid excessive reporting burdens, frameworks should focus on a relatively small number of core metrics.

- *Align and steer:* It is important for public funding programmes for incubators to be coherent with related programmes in other policy areas. When setting the objectives and admission criteria for public funding programmes, policymakers should consider whether these are coherent with the entrepreneurial ecosystem and consistent with wider government priorities.
- *Co-ordinate:* Structures that bring incubators together are key to fostering collaboration, information and resource sharing, and peer learning within incubation systems. They can also help to align efforts towards strategic priorities and can be a platform for the delivery of capacity building supports and matchmaking with other entrepreneurial ecosystem actors, including investors and large corporations. Governments should establish networks of incubators, with defined criteria for joining the network and periodic events and activities to bring together their members.
- *Set standards:* Governments can play an important role in providing quality assurance for incubators, to help them and their clients to establish credibility among investors, customers and other actors. Participation in national networks or public support programmes can serve as a quality label (either implicit or explicit) for incubators, depending on the profile and credibility of the issuing entity within the entrepreneurial ecosystem.
- *Create focal points:* To raise the profile of an incubation system, governments can promote the creation of visible focal points or hubs that co-locate a high number of startups, support programmes and other ecosystem actors. These hubs can also facilitate the sharing of resources and facilities between incubators and provide greater opportunities for networking and collaboration.

It is also important to note that a healthy and dynamic surrounding entrepreneurial ecosystem is another important prerequisite for an effective incubation system. The task of supporting the incubation system cannot be separated from the wider task of fostering a productive entrepreneurial ecosystem. Measures that can be taken to strengthen entrepreneurial ecosystems include, among other things, steps to strengthen the availability of risk capital – for example through co-investment funds – and initiatives to create a more entrepreneurial culture, for example through changes to school curricula, the promotion of startup competitions, or the introduction entrepreneurship programmes or modules within universities (OECD, 2025^[36]).

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Notes

¹ Grant sizes within a programme often evolve over time, as can be seen, for example, in the case of Australia’s Incubator Support programme (see Box 11.7Box 11.7). This is often a function of changes in the total budget allocated to the programme.

² In Norway’s programme, grants are extendible for up to an additional five years, depending on performance and subject to review.

Part IV International country cases

12

Estonia

While Estonia does not have a flagship incubation support programme at the national level, it is nonetheless home to an impressive number of incubators and accelerators given its size, which often benefit from national, local or EU funding. A standout feature of Estonia's incubation system and overall entrepreneurial ecosystem is its international orientation, with policy excelling both in attracting incubators, investors, startups and talent from other countries and also in enabling Estonian startups to go global.

Overview of incubation system

According to Startup Estonia's ecosystem dashboard, there were 23 active incubators and accelerators in Estonia as of May 2024.¹ This is a relatively high number for a country of 1.3 million people. Among them are large international operators – such as the Creative Destruction Lab and Tenity – as well as smaller, home-grown incubators, such as Startup Wiseguys. In some cases, these home-grown initiatives have gone on to become international.

Most incubators are located in Estonia's two largest cities – the capital city Tallinn and Tartu. The incubators that are based around these two cities benefit from the presence of education, training, and research and development facilities and a critical mass of financial and business capabilities. Few towns in other parts of Estonia have sufficient scale for generating tech-based entrepreneurship.

The larger and internationally active accelerators in Estonia generally offer different programmes at different stages of startup development, as well as sector-specialised programmes. Smaller, regional incubators tend to provide more basic programmes.

Most of the incubators and accelerators operating in Estonia are multi-sector but a number do focus on specific technologies or sectors and there is a trend towards launching thematic accelerator initiatives. One example is the Health Founders accelerator, which is one of the first specialised health technology accelerators in the Baltics. Recognising the limited scope of the national market, incubators and, in particular, accelerators in Estonia have a strong international dimension, often considering potential connections with other countries, including neighbouring Baltic and Nordic markets.

The Estonian incubation system is complemented by several venture capital firms and equity investors. Along with capital, they often also provide startup and scaleup support and mentoring services. Startup Wise Guys, Changing Ventures, SuperAngel, and Tera Ventures offer investment vehicles mainly focused on early stage (seed), while BaltCap and Ambient Sound Investments are more focused respectively on buyout and later-stage venture capital. Business angels are also important actors in the ecosystem, offering support services alongside early-stage capital.

Major policies for incubation

Estonia's incubation policy began over 20 years ago, before Estonia's accession to the EU, when the Ministry of the Economic Affairs and Communications requested a study on the status of incubation in the country. Some incubators and accelerators already existed at that time, but a national policy had yet to be formalised.² The policy developed over the past two decades has taken a broad approach, aiming at enabling general conditions for tech-based entrepreneurship rather than focusing on funding specific incubators or accelerators. The main policy objective in this space is to encourage and attract startup entrepreneurs and international incubators and accelerators to operate in the country and work with national players to make Estonia increasingly appealing to national and foreign investors.

A central public entity in this space is the Estonian Business and Innovation Agency (EAS), which is the main national agency dedicated to developing Estonian enterprises and to increasing export capacity, tourism, and foreign investment attraction. Its two main operational subsidiaries supporting the startup ecosystem are Startup Estonia and SmartCap:

- Startup Estonia was launched in 2016 and is the country's main ecosystem orchestrator. It plays a key role in fostering collaboration and connections between ecosystem stakeholders and has built a positive reputation within Estonia's entrepreneurial ecosystem. Startup Estonia also provides startups with access to information and visibility, for example through its startup database. In addition, it publishes model templates to facilitate the startup process, for example template founders' agreements or IP agreements.

- SmartCap funds Estonian-based venture capital funds and makes co-investments with private investors. SmartCap's commitment for an investment can range between EUR 500 000 and 5 000 000.

In parallel, important reforms have improved the regulatory landscape for entrepreneurship in the country. In 2014, the ground-breaking e-residency scheme opened up the relatively small Estonian ecosystem to international startups. With the support of the ERDF, investments in private research and development competence centres and other innovation support measures were also enhanced.

While the EAS does not have a dedicated programme to support incubators. Incubators can receive financial resources for capital and operational expenditure through national funding, grants and ERDF funding. However, access to these resources is subject to eligibility criteria. Accelerators are mainly supported through public calls for tenders, and to a lesser extent through grants and direct funding. For example, in 2024, the Enterprise and Innovation Foundation and Startup Estonia launched a tender for the development of an incubator in the field of health technology and services, whose task is to give impetus to health care innovation and lead the development of the field over the next four years.

Although SmartCap's main activity is managing an investment portfolio, it also offers support to accelerator initiatives, usually in partnership with Startup Estonia. The delivery often happens through public tenders, an example being a EUR 700 000 public procurement for a science accelerator in 2022. In addition, SmartCap commissions studies which can guide the development of Estonia's incubation system and policies, such as its 2024 research on deeptech business accelerators and its 2020 survey of Estonian startups' investment needs.

Conclusions and lessons for other countries

The Estonian incubation system has developed significantly over the last two decades with the twin aims of promoting startups based on Estonian research and innovation potential and attracting ventures to Estonia. Other small, open economies can draw inspiration from Estonia's success in creating global scaleups and unicorns and fostering the development a dynamic entrepreneurial ecosystem over a relatively short period of time. Policy lessons from Estonia pertain not only to its but also its wider startup globalisation policy. The main takeaways include:

- Efforts to co-ordinate policy support and create a cohesive incubation and acceleration system have been key to maximising efficiency and synergies. The creation of Startup Estonia with a specific co-ordination mandate has played an important role in improving national policy co-ordination. Although relatively small, the agency has established co-operation lines with other players, creating a sense of coherence and inclusion in the system. It has also steered the emergence of new incubator and accelerator initiatives towards specialisation in targeted fields.
- The Estonian system is not designed around a single 'ideal' incubator or accelerator. Private-sector accelerators co-exist with public or quasi-public entities, such as science and technology parks and universities. This allows for a diversity of support options for startups and scaleups and enables new approaches to be tested.
- Estonian policymakers have paid particular attention to building a network of experienced mentors, including individuals who developed or invested in Estonian unicorns. There is also a mechanism for matching startups with the mentor with the most relevant and specific expertise.
- Estonia simultaneously aims to support local companies in internationalising and to attract foreign players into the Estonian entrepreneurial ecosystem. The policy mix for internationalisation thus encompasses talent attraction, the creation of an ecosystem attractive to foreign founders, accelerators and investors, and the provision of support for the international expansion of Estonian startups.

- Startup Estonia is developing an ambitious data monitoring system to track the performance of the country's startups, in partnership with DealRoom. More complete and reliable data on startup activities can strongly assist the performance monitoring of incubators and accelerators. This approach also reduces the reporting burden of performance monitoring systems on the incubators, accelerators and startups.

Notes

¹ <https://ecosystem.startupestonia.ee>

² Business incubation: review of current situation and guidelines for government intervention in Estonia. January 2003. Innovation Studies 3, Ministry of Economic Affairs and Communications of the Republic of Estonia. DOI: 10.13140/RG.2.2.36588.16009.

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13

France

A hallmark of France's incubation system is the close integration with the research system, reflecting the ethos that innovation is key to the global competitiveness of French startups. There are large amounts of public support for incubators in France, complemented by a high level of engagement and investment from private actors including large corporates, universities and investors. The French incubation system also benefits from the cohesive and well-connected nature of the wider entrepreneurial ecosystem, supported by umbrella initiatives like French Tech as well as by major ecosystem hubs, most notably Station F.

Overview of incubation system

France has gradually developed support structures to facilitate entrepreneurship (Ministry of Economy and Finance, 2021^[1]). In 2019, there were more than 400 incubators, accelerators, and startup studios in the country, with half of the active startups at that time having passed through an incubator or accelerator since their inception.

The main categories of incubator in France are:

- Public incubators, which often give startups access to the skills and facilities of public research centres in order to develop and test their product or service.
- Incubators run by local authorities, which are attached to a region or town to help develop the attractiveness of their area.
- Private incubators, often set up by entrepreneurs, investors or large technology companies. Well-known examples include "The Family", "Le Camping", and "Grand Lieu".
- Incubators run by the grandes écoles and universities designed to host projects by their students or former students.
- Corporate incubators within large companies to enable them to surround themselves with agile structures capable of rapid innovation.

The first incubators in France were established in the late 1990s and the number of private incubators has been growing since 2010. Initiators of these incubators and support structures include associations, major corporations, investment funds, educational institutions, and universities. For example, 54% of companies in the CAC 40 (France's benchmark stock market index) have established startup incubation structures, some examples of which include i-Lab (the Air Liquide Group's innovation laboratory), the EDF Pulse, and the Orange Lab¹. This trend also extends to higher education institutions, with 56% of scientific preparatory French schools ("Classes Préparatoires aux Grandes Écoles") funding incubation or acceleration programmes in 2018. These programmes target their students and individuals with specialised or unique profiles pursuing entrepreneurial projects. There are also international hardware incubators, either backed by venture capital funds, such as Hax, or by manufacturers, such as Highway¹. These incubators offer an integrated model, combining the commercial and strategic dimensions of traditional incubation programmes, with equity investment and support in product development and piloting.

There are also many incubation and acceleration programmes run by public entities. For example, Bpifrance operates a Startup accelerator targeting French startups with a team of at least 15 people that have already received some funding, as well as an SME accelerator for growth-oriented SMEs with annual revenues between EUR 10 and 50 million. In January 2019, French Tech launched the "French Tech Tremplin" programme, which provides innovative startups with financial assistance to support their R&D and entry onto an incubation programme delivered by selected incubators awarded the French Tech Tremplin label. Meanwhile, Paris&Co is the economic innovation agency of Paris and the Metropolitan area and a key player in the local incubation system, with four physical locations across Paris and the surrounding area that host startups and ecosystem events. There are currently eight specialised incubation programmes in the fields of sustainable food, sustainable cities, tourism and culture, sport, health, the future of organisations, urban experimentation and social innovation, with each providing a range of supports and services including coaching, non-dilutive funding opportunities, corporate and investor matchmaking, and access to sector experts. A standout feature of Paris&Co's support for startups is the depth and quality of its network of corporates, experts, mentors, and investors, which is leveraged through the approximately 800 meetings that Paris&Co sets up each year for its startups. Another success factor is the highly individualised support offer delivered to startups, with each client having opportunities to access Paris&Co's resources on a flexible and needs-based basis, guided by their assigned advisor.

Another relevant group in this space are the Technology Transfer Acceleration Companies (SATTs). The 13 SATTs were created as part of the Investing in the Future programme and work to support the technological development of innovations through a EUR 856 million investment fund. SATTs are local and trusted structures with access to the skills and inventions of researchers in their territory. They detect, evaluate, protect and bring these inventions to market by entrusting them to an existing company or a future startup. SATTs have complementary missions and activities to those of incubators, providing upstream project detection and post-incubation support. Some SATTs now include incubators, such as PULSALYS, the SATT for Lyon & Saint-Etienne, which integrated the activities of the CREALYS incubator in June 2014.

Major policies for incubation

Government support for incubators is contained within “Programme 172: Multidisciplinary scientific and technological research”, which is administered by Ministry of Higher Education and Research. Action 6 of the programme (“Support for Innovation”) includes a focus on incubators, with EUR 4.4 million directed towards support for incubators as part of this action in 2022. There are currently 19 incubators supported by Programme 172 throughout France. The government contributes only 20% of the operating budget of these incubators, which are mostly financed by regional and European funds. The supported incubators take in startups on an open-ended basis and provide them with premises, advice and expertise. In theory, startups hosted by these incubators must have an innovative project and strong potential to contribute to economic development. Initially intended exclusively for projects based on public research results, the eligibility criteria have been extended to cover business startup projects linked to collaboration with public research and then to companies that have won the national i-Lab competition or are less than six months old. The supported incubators will eventually be taken over by the technology transfer acceleration companies (SATT) or the regional innovation agencies (ARI). This will take place gradually, since their integration involves complex financial and legal arrangements.

The General Inspectorate of the Administration for National Education and Research evaluated this incubator support scheme in 2014. Between 2004 and 2013, the supported incubators contributed to creating 2 616 businesses, of which only 122, or 4.3%, exceeded the 20 full time equivalent employment threshold. Of the estimated 16 000 jobs that incubators helped to create over the period, expenditure per job created ranged from EUR 5 000 to EUR 30 000, with an average of EUR 17 200. The study did raise concerns, however, regarding a stagnation in the number of projects originating from or linking to public research.

In addition to Programme 172’s incubator support scheme, there are other significant sources of public support for the incubation system in France, often at the local level. For example, Paris and the Ile-de-France region support the various “Paris&Co” incubators. National public entities – such as BpiFrance – and initiatives – such as the French Tech programme – also fund an array of incubation programmes, as describes previously. Moreover, there are private incubators attached to the grandes écoles (Polytechnique, HEC, Sciences Po, etc.), which benefit indirectly from public support.

Another very important policy initiative is the French Tech, which was launched by the French government in 2013 with the overarching aim of providing startups and other actors in France’s entrepreneurial ecosystems with a common identity and to foster more interaction and collaboration within these ecosystems. As well as certifying and co-ordinating the French Tech Capitals and Communities, French Tech has also launched incubation programmes, such as French Tech Tremplin.

Conclusions and lessons for other countries

In recent years, France has strategically positioned itself as a hub for startups through a combination of innovative policies and a supportive ecosystem. The French government's initiatives, such as the French Tech Visa and Station F, have attracted global talent and provided a conducive environment for entrepreneurship. Additionally, favourable tax incentives and funding opportunities have encouraged risk-taking and investment in cutting-edge technologies. The emphasis on fostering collaboration between startups, established companies, and research institutions has created a dynamic network that facilitates knowledge exchange and accelerates growth. Indeed, the country has emerged as a fertile ground for startups, witnessing a growing number of unicorns in sectors such as technology, healthcare, and fintech.

France's robust business incubation system is an important contributor to the success of the startup ecosystem. Supported by substantial funding and extensive assistance, this system plays a pivotal role in fostering the growth of technological enterprises. The combination of financial aid, mentorship, and guidance creates an optimal environment for startups to flourish, actively contributing to the ever-evolving technological landscape. French incubators are increasingly embracing a global perspective, signifying a significant shift towards internationalisation. This proactive engagement underscores a crucial acknowledgment: fostering international collaborations is indispensable for the sustained growth and resilience of tech enterprises.

France's strategic vision is based on the conviction that innovation is the primary catalyst for international success. Stimulating innovation lies at the heart of France's policy support for the incubation system. This reflects the view that enabling and encouraging startups to be innovative is a crucial first step in facilitating the emergence of companies that are competitive on a global stage. The prioritisation of creating and strengthening innovative startups helps to propel French startups to the forefront of technology and position them as pivotal players in the global market.

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Note

¹ <https://321founded.com/news/les-initiatives-des-entreprises-du-cac40-pour-accelerer-leur-digitalisation>

14

Ireland

Public sector entities – in particular Enterprise Ireland – are closely involved in Ireland’s incubation system, as operators and funders of some of the countries’ major incubation programmes. Promoting internationalisation is deeply embedded in the startup support system, with programmes explicitly targeting startups with high internationalisation potential and providing dedicated supports to help them to realise this potential. While most Irish incubators are sector agnostic, Bioinnovate at the University of Galway provides an excellent example of how specialised incubators can flourish by tapping into local advantages.

Overview of incubation system

As of 2022, there were an estimated 69 incubators and accelerators in Ireland, employing an estimated 642 people (Social Innovation Monitor, 2022^[1]). The total number appears to have grown substantially in recent years, with the majority (58%) having been created after 2013. The majority of Ireland's incubators are situated in Dublin, the South West and the West of Ireland (Social Innovation Monitor, 2022^[1]). The high number of incubators and accelerators in the South West region can be attributed to the multiple incubators and accelerators in Cork, while the West's strong coverage can be attributed to the influence of Galway.

Enterprise Ireland is the main government agency responsible for promoting startups in Ireland and is directly involved in many incubation initiatives. For example, Enterprise Ireland's New Frontiers Programme, which is based in 18 technical universities, aims to support fairly nascent entrepreneurs in developing their business ideas through three programme phases.

Another set of important actors are Dogpatch Labs, Republic of Work, RDI Hub and Portershed. As a publicly-funded consortium, these four private incubators operate the National Digital Research Centre (NDRC) – Ireland's national accelerator programme. The incubators in the consortium also provide a range of other incubation and acceleration supports.

A large amount of incubation also takes place at universities. The university-based incubators are better able to connect with research and technology than other incubators, and thus play an important role in generating Ireland's pipeline of high impact startups and scaleups. These incubators support the creation and growth of knowledge-intensive businesses by providing key business development supports including mentorship as well as access to the host institution's academic and technological expertise.

Ireland's four Business Innovation Centres (BICs) – Furthr, AxisBIC (Cork), South East BIC, and WestBIC – also provide a range of incubation supports to Irish startups, including through delivering Enterprise Ireland's Prep4Seed Investor Readiness programme, which is a 12-week intensive programme supporting cohorts of around 13 startups and culminating in a pitch to angel and venture capital investors.

Overall, Irish incubators place a strong focus on providing mentoring, entrepreneurship training, and management training. This is evidenced by the expansive mentor networks boasted by some of the leading entities involved in the incubation system, such as Enterprise Ireland and Dogpatch Labs. The major incubation programmes are often relatively sector agnostic. For example, Launchbox at Trinity College Dublin, Dogpatch Labs and the NDRC each welcome startups from a broad range of different sectors. There are, however, some notable examples of sector-specialised programmes in Ireland, such as BioInnovate at the University of Galway.

Ireland's incubation system is characterised by its bottom-up approach and "no wrong door" ethos, whereby entrepreneurs and startups are encouraged to move freely across the system to find appropriate supports. Among the different organisations operating incubation programmes, there is generally a collaborative ethos and a willingness to share resources and experiences. Networking and peer learning generally take place on an informal basis. For example, staff from Enterprise Ireland or leading incubators may visit other organisations in the ecosystem to provide advice or training on an ad-hoc basis.

Major policies for incubation

- The government supports the incubation system through five main channels:
- *Creating publicly operated incubation programmes.* The most prominent example of this is Enterprise Ireland's New Frontiers Programme.

- *Funding non-governmental entities to operate incubation programmes.* The major example of this is the EUR 17.5 million, 5-year contract awarded to the consortium of Dogpatch Labs, PorterShed, Republic of Work and the RDI Hub in December 2020 to operate the National Digital Research Centre (NDRC). Meanwhile, Enterprise Ireland provides funding to numerous incubation entities, including EUR 2 million in funding in 2022 to Ireland's four Business Innovation Centres (BICs).
- *Facilitating access to wider incubation supports.* Enterprise Ireland supports Irish startups in making applications for international accelerators, namely the European Innovation Council (EIC) Accelerator.
- *Incubation in publicly-supported universities.* While the government does not specifically fund university-based incubators themselves, it does fund and support the overall university system through which the incubation programmes are delivered, including through public programmes to support research commercialisation that can build the pipeline of clients for university incubators.
- *Signposting to government supports.* Enterprise Ireland holds office hours within incubators, whereby a representative advises companies on potential challenges they are facing and relevant supports that are available.

Ireland's incubation system is closely tied to Enterprise Ireland's high potential startups (HPSU) support programme, which targets businesses with the potential to develop innovative products or services for sale on international markets and the potential to create 10 jobs and EUR 1 million in sales within 3 years of starting up. The HPSU support itself, while not strictly an incubation programme, provides many of the types of supports that would be found in an incubator, such as mentoring, matchmaking, networking and funding opportunities.

Also involved in the startup system are the Local Enterprise Offices (LEOs), which are regionally balanced across the country and act as a first point of call for those who want to start a business. While, the LEOs' mission is to support development of all startups, regardless of their internationalisation, growth or innovation potential, some businesses are signposted from the LEOs towards Enterprise Ireland, such that the LEOs themselves feed the HPSU system. Enterprise Ireland has also developed a series of programmes to help to increase the number of academic spinouts that become HPSU clients, including the Commercialisation Fund, the Business Partners programmes, and the KT Boost programme.

Conclusions and lessons for other countries

Public entities such as Enterprise Ireland provide substantial support across the incubation system. This, coupled with a high degree of political buy-in towards the agenda of stimulating the creation and growth of high potential startups and scaleups in Ireland, has resulted in numerous successful incubation initiatives across the country. While challenges and complexities exist within the system, there is a willingness within government to adapt and innovate, which has supported the design and implementation of more effective policies for incubation and acceleration. Among the different players in the incubation system, there is also a highly collaborative ethos and a willingness to share resources and experiences. Informal networking and peer learning takes place regularly, with for example, staff from Enterprise Ireland or leading incubators visiting other organisations in the ecosystem to provide advice or training on an ad-hoc basis.

The relatively small size of Ireland's domestic market means that there is a high degree of overlap between the concepts of scaling and internationalisation: few startups will scale without internationalising, and equally few startups will internationalise without scaling. The result is that internationalisation considerations are mainstreamed across many of the supports offered to startups by incubators and accelerators in Ireland. As an example, traditional networking and mentoring supports often take on an international angle in the context of Irish incubation and acceleration programmes. In addition, many incubators and accelerators include internationalisation potential within the core criteria for admission onto

their programmes, resulting in a funnelling of support towards startups with global potential. This mainstreaming of internationalisation supports provides lessons for other countries on how to steer an incubation and acceleration system towards strategic goals.

The success of the BioInnovate programme in Galway is also an excellent illustration of how sector-specialised programmes can boost the pipeline of startups and scaleups in the sector. Crucially, however, the success of such programmes is conditional on them being situated in a wider entrepreneurial ecosystem that provides the entrepreneurial experience, pool of mentors, and other enabling resources needed for a specialised incubator or accelerator to flourish. In the case of BioInnovate, this was provided by Galway's thriving medtech ecosystem, which includes many serial entrepreneurs and multinational companies in the sector.

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[1]

15 Korea

Korea is a pioneer of the “soft-landing” incubation approach of sending startups to incubators or accelerators in overseas markets in order to build knowledge of the markets and establish local contacts, most notably through the K-Start Centers. Unlike most countries, the Korean government does not provide grants to incubators, but instead supports the incubation system by certifying private accelerators and contracting them to deliver flagship programmes such as the Tech Incubator Programme for Startups (TIPS). The result is a private-sector led incubation system that harnesses the resources and expertise of large corporates and investors to select and support high potential startups and scaleups.

Overview of incubation system

Korea is actively developing its incubation system and entrepreneurial ecosystem in order to enhance its economic resilience and reduce its economic reliance on major conglomerates (World Economic Forum, 2022^[1]). As of 2023, there were 461 registered accelerators in Korea, up from 56 in 2017. These can be business support organisations, large corporates, and investment entities, as well as other types of organisation. To become a registered accelerator, entities must meet specific criteria outlined in the Act on Promotion of Venture Investment. This includes having a minimum of two experts and capital of at least KRW 100 million (approximately EUR 62 000). Accelerators distinguish themselves from traditional investors by actively engaging in incubation and hands-on support, allocating 40% of their funds to startups less than three years old.

Seoul is the main hub for Korea's incubation system, with the city hosting 252 out of the country's 461 registered accelerators. Startup and investment activity in Korea is also highly concentrated in the capital city. When accelerators are registered in Korea, they must indicate their area of expertise. Out of the 461 accelerators in 2023, 15% and 31% indicated their expertise was in the information and communication technology (ICT) and bio/medical sectors, respectively.

Korea's accelerators adopt a hands-on approach, investing in and incubating startups directly. The cumulative investment by registered accelerators into startups up to 2023 amounts to KRW 1.5 trillion (approximately EUR 1 billion) across 6 240 projects, with the majority dedicated to startups less than three years old. Korean accelerators strategically focus their investments on three sectors – ICT services, distribution/services and bio/medical fields. Collectively, these sectors account for 76.4% of all accelerator investments, underlining their strategic importance in Korea's startup landscape.

A notable feature of Korea's incubation system is the integration of other government support mechanisms. Registered accelerators function as intermediaries between the government and startups. The government does not provide direct support to accelerators, but instead leverages accelerators' expertise to identify promising startups and distribute public funding efficiently.

The economic landscape in Korea, characterised by a well-established manufacturing infrastructure, uniquely positions startups for success by facilitating rapid prototyping and scalable operations. "In-house ventures" within Korean conglomerates (often referred to as "chaebols") inject an additional layer of dynamism into the startup environment and the incubation system. These in-house ventures are startup-like teams within the conglomerates that are incubated internally to develop technologies or services aligned with the companies' strategic needs. Some of these eventually spin off to become independent startups, while others remain internal.

Major policies for incubation

The Tech Incubator Programme for Startups (TIPS) is a programme designed to identify and nurture the most promising startups with innovative ideas and groundbreaking technologies (Tech Incubator Program for Startups, 2023^[2]). The government strategically selects exceptional registered accelerators to be "TIPS operators", who are responsible for selecting and supporting the startups. The TIPS targets startups in areas with technological innovation that have the potential to contribute to the wider economy and society, such as information technology, biotechnology, and clean energy. The TIPS operators offer a range of supports to startups including investor networking, mentoring, professional support and matching R&D funds. The TIPS operators also invest directly in promising startups, with the government matching this investment in the form of R&D funding in exchange for royalty payments where ventures go on to become successful. Another aspect of the scheme is "TIPS TOWN", which is a dedicated space where startups can work and collaborate with other startups, investors, and support organisations. For firms that are less

than 10 years old, the TIPS programme provides a gateway to various forms of funding, which can reach a cumulative maximum of approximately KRW 3.5 billion. This funding consists of at least KRW 100 million in seed investment, up to KRW 2.3 billion in R&D funds, and a maximum of KRW 1 billion in commercialisation funds. Since its inception in 2013, the TIPS programme has supported 4 454 startups. TIPS operators have invested KRW 1 trillion (approximately USD 663 million) as of May 2026 into these companies, helping to catalyse a total of KRW 20 trillion KRW (approximately USD 13.3 billion) in investment in subsequent funding rounds.

The globalisation of startups has become a policy priority for Korea, with incubators and accelerators playing a critical role in this area. Several programmes have been devised to facilitate the globalisation of startups and the number of firms provided with dedicated internationalisation supports increased from 94 in 2020 to 443 in 2021.

The major programmes to promote the globalisation of Korean startups through incubation are:

- The Global Acceleration programme matches startups with accelerators in other countries, with a focus on the early-stage of internationalisation where startups are assessing their potential for going global. This allows startups to test the viability of their products in overseas markets prior to making significant investments in entering the market. The programme has a budget of approximately KRW 13.7 billion, which is utilised to support local business activities, including market entry initiatives and participation in local acceleration programmes. The firms also receive training to prepare for expanding to the overseas market.
- The K-Startup Centers (KSCs) initiative is a programme targeting startups at a more advanced stage of internationalisation that are fully committed to internationalising. The KSCs host Korean startups in global innovation hubs in other countries, in partnership with local experts and accelerators. The aim is to help Korean startups to internationalise through the provision of physical bases, training and networking opportunities. The KSCs are initiated through government partnerships between Korea and the recipient countries. The selection of destination countries is based on the foreign governments' commitment to supporting Korean startups along with the host country's ecosystem and policy direction.
- The Global Corporate Collaboration programme was launched to link startups to leading global firms in their respective field of expertise, providing the startups with potential first customers and access to infrastructures and the host firms with access to innovation. The programme provides funding of up to KRW 200 million (approximately USD 133 000) for new content development, improvement in services, new employment as well as fees that may be incurred during administrative processes such as patenting processes.
- The Global Startup Academy, which was initiated in 2020, aims to foster born-global startups through collaboration with international firms and accelerators. The programme has a budget of KRW 10.8 billion (approximately EUR 6.7 million) and provides assistance to 60 startups. It comprises three components: global education, global incubation and global networking. The global education is conducted by leading international firms such as AWS, Google, Nvidia and Microsoft, who pass on their knowhow and provide customised support for the startups. The global incubation component is conducted by international accelerators such as Techstars, 500 Global, SOSV, Plug&Play and Startup bootcamp. This is supplemented with workshops and networking sessions with investors Global Startup Academy alumni.

The Korean government also operates incubation policies designed to attract high-potential overseas startups. For example, the K-Startup Grand Challenge supports foreigners who want to create a business in Korea. The 40 selected teams will be provided with office space in Korea and receive comprehensive support, including on business partner matching, investment, visa acquisition, and corporate incorporation. The government will also award the top 20 teams at the final Demo Day a total of KRW 380 million

(approximately USD 252 000) in prize money, alongside intensive acceleration support to ensure their stable growth in the Korean market.

Conclusions and lessons for other countries

Korea has implemented many innovative and well-funded policies and programmes to support the creation of global startups, with incubation and acceleration initiatives representing an important part of the policy mix in this area. In particular, Korea has been a pioneer in the development of immersive “soft-landing” schemes, where startups have opportunities to learn about and build contacts in target markets, often in partnership with overseas incubators or accelerators.

Unlike in many countries, the government does not provide grants to incubators or accelerators in Korea, instead opting to support them through other channels such as tax incentives and opportunities to execute government-funded projects. Strict selection processes are in place for accelerators to execute landmark support policies such as the TIPS (Tech Incubator Programme for Startups). In addition, there are clear criteria for qualifying as an accelerator that is set out in the Act on Promotion of Venture Investment. This enables the Korean government to strategically leverage the expertise of accelerators to select and support startups with a higher likelihood of success.

Partnerships are a key aspect of Korea’s incubation and acceleration system. In Korea, there are many examples of public-private partnerships that collaboratively operate programmes. This approach leverages the high number of large conglomerates and well-established manufacturing infrastructure that exists in Korea. Tapping into the networks and resources of private partners provides greater research and testing opportunities for Korean startups and helps them to overcome some of the major constraints that can stymie the development of new businesses.

The overall theme that underpins the policy direction in recent years is a shift from government-centric aids to private sector-orientated investment opportunities, especially for scaling up and global expansion. With the increased awareness and a settled pipeline of startups, the government is increasingly relying on the private sector’s expertise while maintaining a strong yet indirect supportive role. To illustrate this point, two of Korea’s major startup support initiatives – TIPS and the Fund of Funds – are both actively managed by the private sector for selecting and screening for startups with high potential. This approach extends to globalisation, where primarily local accelerators or partners of the Korean government programmes select and support Korean startups for their global expansion. While the government continues to both financially and non-financially support to the emergence of new starts, more quality support is directed towards a selected subset through private assistance.

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16 Portugal

Portugal's incubation system is still relatively nascent, with much of its growth having taken place since 2010. The country is now home to a number of highly performant incubators that are contributing to a growing pipeline of innovative, high growth startups and scaleups. A priority is now to raise the professionalisation of the incubation system and its capacity to generate investment-ready startups, with the National Network of Incubators playing a central role in driving this change.

Overview of incubation system

The Portuguese business incubation system has grown considerably since the late 1980s, when there were only two incubators (AITEC in Lisbon and NET in Oporto). This growth was initially fuelled by the National Association of Young Entrepreneurs (ANJE) and the National Employment Institute (IEFP), which created their own network of incubation centres in 1990s. Access to European Union (EU) Structural and Investment Funds then stimulated universities and municipalities to create and support business incubators. The economic recession and rising unemployment that started in 2008 led to growing interest in incubators and entrepreneurship. From 2011 onwards, new incubators founded in inner-city areas, such as “Startup Lisboa”, were able to rapidly capitalise on the development of large local startup communities.

As of January 2024, there were 138 certified incubators within Startup Portugal’s National Network of Incubators (RNI), which collectively supporting a total of 4 983 businesses, 1 869 of which are classed as having an innovative or scalable business model. The population of certified incubators is concentrated in the North, Lisbon and Centre regions, specifically in the cities of Lisboa, Porto, Aveiro, Braga and Coimbra. In all regions, the dominant incubator type is the “Regional Business” incubator, which are created or sponsored by municipalities. It is important to distinguish between regional business incubators located in low density areas that generally focus on supporting local development and employment, and those situated in large cities with a greater capacity to form international partnerships and generate a pipeline of innovative, investment-ready, and scalable startups. An example of the latter type of regional business incubator is Startup Lisboa, which was founded in 2012 with strong support from the city council and serves as a hub for the Lisbon startup community. In 2022 Startup Lisboa launched the “Unicorn Factory Lisboa”, which includes a new focus on scaleups and internationalisation. The site for the Unicorn Factory Lisboa – the “Beato Creative Hub” building – is one of the largest spaces for entrepreneurship and innovation in Europe, with around 50 000 square meters of space distributed over 18 buildings and a capacity to host more than 3 000 people. In 2023, the Portuguese Agency for Competitiveness and Innovation (IAPMEI) and Startup Portugal launched two calls for proposals aimed at supporting projects to develop incubation and/or acceleration services in the fields of entrepreneurship and innovation, which are essential for the launch and growth of startups. These measures established a support amount between EUR 30 000 and EUR 150 000. The approved entities are in the final phase of implementation as of May 2026.

Many of Portugal’s most effective incubators are also attached to universities. Examples include UPTEC at the University of Porto, IPN at the University of Coimbra, UAIncubator at the University of Aveiro, and TecLabs at the Faculty of Sciences of the University of Lisboa.

92% of business incubators in Portugal offered services to support the development of business models, while 88% reported providing services to support in obtaining funding and for networking. Communication and marketing supports are other important components of the Portuguese incubators’ service offering. A large proportion of incubators do not appear to have a specialised focus, although there are some examples of specialised incubators in Portugal, such as Fintech House, Sanjotec (in S .João da Madeira), the Start-to-Table accelerator (promoted by Startup Lisboa), and BLC3, which is located at Alfândega da Fé and Ourique and is the only BIA identified that specialises in the bio and circular economy.

Major policies for incubation

The introduction of the National Network of Incubators (RNI) is a very important development for Portugal’s incubation and acceleration system. The RNI is operated by Startup Portugal – a non-profit organisation that was formed in order to support the government in the creation and implementation of the National Strategy for Entrepreneurship. The long-term vision of the RNI is to strengthen the national incubation and acceleration system by encouraging and incentivising Portuguese incubators to become more professionalised and adept in supporting startups and scaleups. To achieve this, the criteria for

participation in the RNI will be gradually tightened, creating an incentive for the members to professionalise and boost their competencies. In addition, RNI membership must be renewed on an annual basis to ensure that members remain up to standard. A key task for the RNI is to raise the capacity and internal competencies of incubators from across the network, particularly those in low-density or rural areas that currently have a limited capacity to support high impact startups and scaleups. This is being achieved through capacity building and training activities. Peer learning is also fostered through an annual networking event for incubators in the RNI.

Public funding is important in Portugal's incubation system. Regional business incubators located in low density areas typically rely on public funding sources, usually from the EU funds and municipalities. University-based incubators also tap into funding from EU sources. The EU-funded "Vouchers for Incubation and Acceleration" initiative provides grants ranging in value from EUR 30 000 and EUR 150 000 to incubators, with a total allocation of EUR 20 million. To receive financial support through the programme, the incubators must be located in Portugal, have a proven track record of support startups, and be developing new services to support startups. The programme has a total allocation of EUR 20 million. The awarded grants can go towards eligible expenditures such as the costs of technical personnel, the acquisition of specialised external services or the protection of intellectual property rights. The funded projects have a maximum duration of 18 months.

Other funding instruments also exist, such as the Empreende XXI¹ programme launched in 2023. In this programme, incubators that offer mentorship and support to startups in producing financial viability reports are funded proportionally to the number of reports produced and the amount of mentorship provided.

Portugal also has initiatives in place to support startups' access to mentors. These include IAPMEI's National Network of Mentors and the Startup Voucher programme. However, these initiatives are not directly integrated within the incubation system. Another relevant measure is an RRP-funded initiative that aims to reinforce physical infrastructures and equipment and enhance testbed services for SMEs and startups. Meanwhile, the "investment meetups" organised by Startup Portugal ("SIM - Startups & Investment Matching") are helping to address gaps in support in building startups' investment-readiness.

Conclusions and lessons for other countries

The rapid development of Portugal's incubation and acceleration system over the past 10 years has been fuelled by the sustained provision of public support at the municipal level combined with a conducive national policy framework that includes a range of financial and non-financial supports for incubators and accelerators. This has resulted in a strong coverage of incubation and acceleration support across the different parts of the country, including several highly performant incubators and accelerators concentrated in entrepreneurial or innovation hubs with a strong track record in stimulating the creation and growth of innovative startups and scaleups. These types of incubators and accelerators are currently transitioning towards more sector-specialised approaches, an example being the recent launch of the Gaming Hub within the Unicorn Factory Lisboa.

Startup Portugal's National Network of Incubators (RNI) stands out internationally as a leading example of how a national co-ordinating entity can help to create a more cohesive and effective incubation and acceleration system. While the RNI is still relatively young, it has so far proved an effective orchestrator for the system, providing a variety of training and networking opportunities to its members. These include a dedicated training programme for incubator and accelerator managers – which is to be delivered by the "Founder Institute" – as well as periodic online and in-person network events, which are providing opportunities for peer learning and collaboration. The RNI also collects data on the activities of its incubators and accelerators, which is an important source of information on the performance and characteristics of the national incubation and acceleration system.

Another aspect of Portugal's policy approach that offers lessons for other countries is how different public entities that are active in the wider entrepreneurial ecosystem are engaging with incubators and accelerators. For example, Portugal Ventures – the public venture capital fund – has an extensive country wide network of incubators that function as its “ignition partners”, providing Portugal Ventures with opportunities to identify promising investment opportunities and incubators’ clients with enhanced access to funding opportunities.

Despite the positive developments in recent years, further progress is needed to raise the capacity of incubators in low density areas. Initiatives such as the “Vouchers for Incubation and Acceleration” scheme are helping to do this by providing financial support to a broad base of incubators and accelerators across the country. This is important in helping these entities to expand and improve the supports they offer to startups and scaleups.

Note

¹ <https://empreendexxi.pt/>

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Singapore

Singapore has a sophisticated incubation system, benefiting from strong government support, a dynamic business environment, and active participation from large corporates, investors, and research institutions. The incubation system is deeply embedded in Singapore's wider entrepreneurial ecosystem, with Enterprise Singapore playing a key role in this through its engagement with ecosystem partners, the identification of mentors, and the creation of the Startup SG network. The Global Innovation Alliance's acceleration programmes also offer valuable lessons for other countries in implementing soft-landing supports for internationalising startups.

Overall incubation system

Singapore has developed into one of the top entrepreneurial ecosystems in the Asia-Pacific region owing to strong government support and a dynamic business environment. Startup SG – established by Enterprise Singapore (then SPRING Singapore) in 2017 as a one-stop shop to showcase Singapore's entrepreneurial ecosystem and make existing policy programmes more easily discoverable – indicates there are 220 incubators and accelerators active in Singapore. Services offered differ by type of incubator or accelerator, the sector and development stage, but typically include funding, mentorship and networking opportunities.

There are many different types of incubators in Singapore, including government-linked incubators, corporate incubators, and independent accelerators. The research system also plays a key role in the incubation system by contributing to the development of entrepreneurial talents, providing incubation programmes and partnering with corporates for the commercialisation of research (Prof. Wong Poh Kam et al., 2022^[11]). These include leading Singaporean universities such as the National University of Singapore (NUS) and the Nanyang Technological University (NTU) but also research institutes in the Agency for Science, Technology and Research.

While incubators in Singapore are mostly sector agnostic, many prioritise technology-based startups in line with the government's strategic priorities and the preferences of investors. According to Startup SG data, the most common sectoral focus areas for incubators are fintech, artificial intelligence and the internet of things. An example of a sector-specialised initiative is the accelerator programme provided by the cybersecurity hub launched by Singapore's Cyber Security Agency (CSA), the Infocomm Media Development Authority (IMDA), VC Singtel Innov8 and NUS Enterprise.

Major policies for incubation

Government support for startups is structured using an ecosystem approach, simultaneously targeting startups and startup facilitators. In 2022, Enterprise Singapore supported 2 700 startups with access funding, incubation and mentorship programmes through Startup SG programmes and assistance from partners (Enterprise Singapore, 2023^[21]). This is more than double the figure in 2018.

Enterprise Singapore has various programmes targeting incubators to help them to enhance their support offer to startups and scaleups. The Startup SG Accelerator programme provides accelerators with grant funding that partially covers their operating expenses and the cost of developing programmes. There is no specific cap on the grant size, and this support can also be extended to foreign incubators, accelerators and venture builders wishing to establish themselves in Singapore (STARTUP SG, 2023^[31]). Another relevant initiative is the Startup SG Founder programme, which provides selected entrepreneurs with up to SGD 50 000 (approximately EUR 34 000) in matching grant funding alongside mentoring and potential additional funding from "Accredited Mentor Partners" (ACE, 2023^[41]; NUS, 2023^[51]). These partners are selected by Enterprise Singapore based on their incubation capabilities including their access to markets and funding (Enterprise Singapore, 2023^[61]).

Another important actor is the Action Community for Entrepreneurship (ACE.SG), which is a trade association representing the interests of Singapore-based startups and the wider tech sector. Initially established under the Ministry of Trade and Industry (MTI) in 2003, ACE.SG was relaunched in 2014 as a national private sector led organisation. Each year, ACE.SG delivers 4-5 one-week immersive acceleration programmes to soft-land participant startups into targeted markets. During the week, the startups are provided with co-working spaces, networking with local investors, research agencies and incubators, and administrative support, include advice on local tax incentives and regulations. In addition ACE.SG offers incubation services for startups at an earlier stage of development. ACE.SG benefits from funding from

the MTI, and also co-operates closely with Enterprise Singapore and other government agencies under the MTI.

Supporting the internationalisation of startups is an important priority in Singapore. The flagship schemes targeting startup globalisation are implemented within the scope of the Global Innovation Alliance (GIA), which promotes business growth through its global innovation networks and acceleration programmes across 21 cities (Enterprise Singapore, 2023^[7]). The acceleration programmes support Singapore-based startups scaling abroad by connecting them with an accelerator in the local market, which are selected based on the strength of their local networks, their ability to facilitate strategic partnerships, and their track record in incubating startups. The application process is carried out in partnership with the selected accelerator in the partner country to ensure the startup, target market and partner accelerator are a right fit. Enterprise Singapore only partially subsidises the cost of the acceleration programmes for the selected startups, with the aim of ensuring the active engagement of participants. The acceleration programmes include business advice, mentoring, and connections to in-market partners. Support is also provided in navigating the regulations of the target market. The programmes are often structured in two phases, the first determining whether the targeted market is a right fit for the startup and the second focusing on the development of a market access strategy. Also falling under the scope of the GIA, the co-innovation programmes run by Enterprise Singapore share synergies with the acceleration programmes, often feeding into the pipeline of startups that go on to apply to the GIA's acceleration programmes. The GIA co-innovation partners are also strategically distributed, aligning with the acceleration programmes' regions.

Incubators also have a role in attracting foreign talent to Singapore. Indeed, one of the eligibility criteria for individuals to apply for the EntrePass work visa is being a client of an existing Singapore-based and government recognised incubator or accelerator. These include incubators or accelerators in the Startup SG Accelerator Programme or Accredited Mentor Partners under the Startup SG Founder programme (Ministry of Manpower, 2023^[8]). It should also be noted that the Startup SG Network is a valuable resource to connect ecosystem stakeholders and enhance the visibility of incubators. The Startup SG Network includes information about 4 500 tech startups, 510 investors and 220 incubators, allowing startups to explore potential partners efficiently and fostering collaboration between ecosystem players.

Conclusions and lessons for other countries

Singapore has become a thriving hub for startups, both local and foreign, with more than 4 500 startups and 31 unicorns as of 2023. The rapid growth of the Singaporean entrepreneurial ecosystem has been aided by robust government supports for innovation and entrepreneurship, a favourable business environment, and an abundant investor pool. Incubation is also a key part of the story, with the 220 active incubators and accelerators across the country playing a critical role in supporting the development of startups and scaleups. Particular strengths of Singapore's startup support system include the ample opportunities to access mentorship and funding, as well as the availability of government-backed loans for startups. Strong collaboration between government agencies also favours a cohesive approach to policymaking, making public support programmes more easily accessible for startups and scaleups.

Incubators are integral components of Singapore's entrepreneurial ecosystem. The Startup SG Network has proven instrumental in promoting the incubation system by raising the profile and visibility of different incubators and creating opportunities for collaboration among startups, incubators and other entrepreneurial ecosystem actors. Incubators and accelerators also have funding opportunities through Enterprise Singapore programmes. Another important actor is the Action Community for Entrepreneurship, which delivers various incubation programmes and strengthens the connection between startups, policymakers and other entrepreneurial ecosystem actors, in close co-operation with Enterprise Singapore.

Supporting startup internationalisation is a major policy focus for Singapore, with incubation representing a key part of the government's strategy for promoting global startups. The government facilitates outbound internationalisation with targeted programmes, particularly through the Global Innovation Alliance's (GIA) acceleration and co-innovation programmes. With an extensive network of 21 nodes, GIA facilitates connections between local startups and international accelerators or research partners. The positive reputation and government backing that come with participation in these programmes provide startups with a distinct edge when entering new markets.

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Sweden

The case of Sweden is a leading example of a centralised policy approach to supporting and managing a national incubation system. Over many years, the National Incubator Programme has been effective in funding, steering and raising the capacity of Sweden's incubators. This is achieved by supplementing grant funding with a range of capacity building and networking supports for incubators, as well as through the careful monitoring of processes and performance that ensures efficacy while maintaining incubators' operational independence.

Overview of incubation system

Knowledge-based entrepreneurship has been a key driver of Swedish economic growth for decades, with incubators having played an important role in this over the past 20 years. There are approximately 40 business incubators in Sweden, most of which are sponsored by the longstanding National Incubation Programme (NIP) of Vinnova (the Swedish innovation agency). Swedish Incubators and Science Parks (SISP) is Sweden's non-profit industry association for incubators and science parks and co-ordinates the NIP. SISP represents the NIP-supported incubators as well as 31 science parks. Together, these entities host over 5 000 companies with more than 70 000 employees.

While at least some incubators and accelerators are present in almost every region in Sweden, the overall regional distribution of incubators and accelerators is highly influenced by the presence of universities, and most of the startups in the pipelines stem from universities. Hence incubators tend to concentrate in larger cities, close to or within innovation hubs, taking advantage of agglomeration effects.

Sweden's incubation system is highly specialised, and a majority of the activities in the country's incubators and science parks are concentrated on supporting startups and scaleup firms in the ICT, digital, life sciences and health sectors, which are the industrial strongholds of the Swedish economy.

The services and facilities offered by incubators in Sweden typically include mentorship, coaching, funding, internationalisation assistance, and connections with ecosystem stakeholders. Over the past decade, Swedish incubators have evolved significantly. Services have increasingly been offered digitally, expanding their geographical reach. Startup internationalisation support has also been increased. Moreover, incubators are placing a growing focus on supporting ventures that embrace environmental responsibility or are led by women or other groups that are underrepresented in entrepreneurship.

Collaboration among incubators and between incubators and other actors in the entrepreneurial ecosystem has also increased. This has enabled more knowledge and resource sharing among incubators in Sweden. It has also allowed incubators to more effectively perform their "bridging" function of connecting their clients to other actors and resources in the entrepreneurial ecosystem, such as investors and research institutions.

Major policies for incubation

The National Incubator Programme (NIP) is the cornerstone of Sweden's policy for supporting incubators. The aims are to: i). promote firm development through incubators and ii). support the development of national incubation capabilities. The programme was introduced in 2003 as a pilot initiative and became formally established in 2005. Vinnova – Sweden's national innovation agency – took oversight of the programme in 2015, implementing a new approach that focused on startups with high growth and internationalisation potential. More recently the NIP has placed an emphasis on enhancing entrepreneurship access for all groups), as well as AI-assisted entrepreneurship, and entrepreneurship which helps achieve environmental objectives.

Every four years, Vinnova launches a call for funding with specific eligibility criteria. The application process is designed to allocate resources primarily to incubators who can demonstrate an ability to attract and support the most promising startups. Since 2020, the allocation of funding for each incubator has occurred in two stages:

- In stage 1, applicant incubators are evaluated in terms of their processes throughout the incubation process. Incubators are evaluated on how they attract and select new potential entrepreneurs and startups, how they design and execute formation courses, how they monitor startups, and how they evaluate and improve their internal processes. Moreover, incubators are measured against their capacity to support team development, encourage entrepreneurship, provide guidance in idea and

business development, support the creation of commercialisation strategies, and provide access to customers, capital, and competence. The capacity to produce data and documentation that demonstrate the existence and application of well-defined processes is crucial. Insufficient documentation, however, does not automatically exclude an incubator, which can be put on a “conditional approval subject to revaluation” list.

- Incubators that meet Vinnova’s procedural standards are admitted to the national incubators network, receive Vinnova’s quality certification, and progress to stage 2 of the application process, where funding amounts are determined. During stage 2, incubators submit information on 15 startups from their portfolio. To obtain full funding (EUR 500 000 for four years), incubators must have a portfolio of at least 15 scalable companies. Below this level, funds are reduced proportionally, down to a minimum of EUR 30 000. The NIP prioritises knowledge-intensive startups with high scalability and innovation potential that are eligible for state aid and are operated and owned by highly committed founders. Among NIP-backed incubators, about half currently receive full NIP funding.

The NIP funding can only be used to finance services that directly benefit incubators’ startups. Incubators’ operational costs can be covered through other sources such as funds from regional or municipal authorities as well as applications to Vinnova’s smaller programme (open to both NIP and non-NIP incubators), which aims to finance collaborative initiatives among incubators on topics such as promoting women’s entrepreneurship or developing tools for AI-assisted entrepreneurship.

In addition to receiving funding, the incubators supported by the NIP receive an array of non-financial supports. These are principally delivered by Swedish Incubators and Science Parks (SISP), which is Sweden’s non-profit industry association for incubators and science parks. The organisation promotes collaboration between its members and Sweden’s leading universities, private sector actors, public organisations, and customers. It also constitutes a national hub for several programmes that support incubators, including innovation grants and various training initiatives. The NIP’s close collaboration with SISP helps the NIP to reach its target audience, thus bolstering its engagement efforts.

SISP runs activities in support of incubators on behalf of Vinnova, including:

- Peer reviews, which take place every three years and involve the management of the incubator under review as well as other incubators. The reviews are based on the European Quality Management Framework and result in an identification of strengths and weaknesses.
- Shared learning activities, involving CEOs, business developers and communication managers of the incubators and their client firms. Each year, there are two in-person and 12 online meetings.
- Joint development projects, which must involve at least three incubators.

The NIP has also created a network of Swedish and international ecosystem stakeholders in order to foster connections between Swedish and foreign incubators. Incubators can use this network to find additional funding (outside the NIP’s resources), engage in staff exchanges and collaborate with other international incubators. For instance, incubators can obtain educational scholarships to fund extended staff visits at the Nordic Innovation House in Silicon Valley.

Since its inception, the total budget allocated to the NIP is more than USD 200 million, with the programme having supported over 6 000 startups. Among these are a number of notable companies that have gone on to achieve considerable success internationally, including Apsis International, Klarna, Phoniro Systems, Smartshake, and Storytel.

Conclusions and lessons for other countries

Sweden's policies in support of incubators provide a number of potential transferable lessons for policymakers internationally. The major support policy for the incubation system is the NIP, which provides grant funding that is complemented by a multi-faceted suite of other supports for incubators. The NIP is a public-driven, centralised approach to incubation, but with clear governance structures. Swedish incubators are thus public funded but managed independently from the central government. They can take different management approaches and continue obtaining public funding as long as they demonstrate high-quality processes and generate high-growth startups. The relatively long-term nature of the NIP-funding provides the incubators with a greater degree of funding security that in turn enables them to operate more strategically and effectively.

As noted, the scope of the NIP extends beyond that of a straightforward grant programme. The NIP places an emphasis on strengthening collaborations and partnerships among regional, national and international actors in the incubation system through peer reviews, shared learning activities, and joint development projects. The policy experience with the NIP also shows how the systematic documentation of processes and their implementation, as well as the measurement of results, is essential to maintaining high incubation standards, identifying areas for improvement and promoting results-based allocation of public funds.

Having Vinnova as the co-ordinator of all entrepreneurship and innovation policy helps to foster alignment between incubators and other actors in the entrepreneurial ecosystem. Indeed, the credibility of Vinnova within the wider entrepreneurial ecosystem is key to unlocking the quality-assurance and reputational benefits that incubators can derive from participation in the NIP. SISP's (the member organisation of incubators and science parks in Sweden) role as the co-ordinator of the NIP also helps to ensure that the programme is aligned and integrated with the wider system.

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United Kingdom

The UK government is an important funder of the incubation system. However, there is not an overarching national policy for supporting incubation, with public support delivered through a range of funds and programmes at both the national and local level. The result is a diversity of different incubation approaches on display across the country. The UK has also been successful in leveraging public funding for incubation to catalyse private investment into the system.

Overview of incubation system

It is estimated that the United Kingdom is home to more than 400 incubators and 300 accelerators, supporting in excess of 19 600 startups (Centre for Entrepreneurs, 2022^[1]). This number is about twice the amount estimated by NESTA in 2017, pointing to significant growth in the incubator population. London has historically held a central position in the UK's incubation system, reflecting the city's status as a leading international startup hub. Notably, London's Knowledge Quarter – a partnership of over 100 academic, cultural, research, scientific and media organisations within a one-mile radius – provides a series of interconnected, co-located incubators, accelerators and research organisations that collectively function as one very large incubation site. Oxfordshire also stands out as a national hotspot for incubation in terms of the number of incubators per business population, driven by the presence of numerous facilities around the Harwell Science & Innovation Campus and Oxford University. Elsewhere in the country, there is at least one incubator present in every Local Enterprise Partnership region (LEP) in England and every region in Scotland, Wales, and Northern Ireland. Hence, although the distribution of support is concentrated in London, at least some opportunities are available almost everywhere in the country (Centre for Entrepreneurs, 2022^[1]).

Private sector involvement in incubation varies significantly across regions. In London, a large share of activity is delivered by private entities, whereas in other areas, incubators and accelerators are primarily publicly funded, often with a focus on economic regeneration. Universities also play a particularly important role in the UK's incubation system. By 2011, over half of all UK Universities had established an on-campus university incubator (Hewitt-Dundas and Burns, 2016^[2]) with a pipeline sourcing from either academic spin-offs or students' ideas.

Recently in the UK, incubators and, in particular, accelerators, have become more specialised, mirroring the international trend. Before 2015, specialised incubators accounted for just 29% of all new incubators in the UK, with this share rising to 75% between 2019 and 2022 (Beahurst, 2018^[3]; Centre for Entrepreneurs, 2022^[1]). A wide range of sectors are now supported by specialised incubation and programmes. Incubators are also increasingly supporting startups with a social and environmental dimension.

A survey of UK incubators and accelerators found that organisations that identify as accelerators emphasise mentoring, building investment-readiness, skills training, business model development, and investor networking, while self-identified incubators focus more on the provision of physical space and peer networking. The majority of the UK's accelerators offer direct funding to startups, mostly in the form of equity participation, while some offer other funding instruments such as grants, debt, or convertible notes (Bone et al., 2019^[4]).

Major policies for incubation

In the UK, the national strategy for supporting incubators follows a multi-channel support model. The main entities involved are UK Research and Innovation (UKRI) – a non-departmental public body funded by the Department of Science, Innovation and Technology – Innovate UK, which is the government's innovation agency, the government's Venture Capital Unit, the British Business Bank and its Enterprise Capital Funds, as well as the Department for Energy Security and Net Zero, which operates the Energy Entrepreneurs Fund.

Across UK, EU and quasi-governmental funding via universities, it is estimated that public expenditures on incubation supports amount to GBP 20 to 30 million (Bone et al., 2019^[4]). Public funding constitutes around one third of incubators' budgets and is often used to cover their operating costs. In addition, most

incubators are at least partially self-funded through membership fees or rent charged to customers (Bone et al., 2019^[4]; Beauhurst, 2018^[3]).

Among the central government institutions, Innovate UK is particularly active in providing financial support to incubators. It offers a variety of financial support instruments including UK Innovation loans, Innovate UK investor Partnerships, as well as grant funding for R&D. Innovate UK also funds pre-acceleration programmes for university researchers and technicians. Moreover, Innovate UK sponsors ICURe, a pre-acceleration programme launched in 2013 for university researchers, technicians and PhD students focused on early-stage commercialisation. By 2024, more than spinout companies had been created through the programme, with 2 100 participants, 650 jobs created, and 2 750 market experiments conducted. A recent evaluation has estimated ICURe's benefit to cost ratio to range between GBP 3.43 to GBP 3.84 per each GBP 1 of expenditure (Ipsos MORI, 2020^[5]).

Innovate UK also runs the Global Incubator Programme, which supports cohorts of up to 8 companies to work with world-leading incubators abroad to accelerate their global growth. Eligible firms are UK-based SMEs with the ambition and commitment to scale globally. The programme currently operates in four countries (the United States, Canada, Singapore, and Australia), and encompasses three-stages:

- “Prepare”, a two-day preparation workshop delivered to the entire cohort of startups in the UK.
- “Pursue”, a 4 to 6 month programme where startups work with a foreign incubator.
- “Exploit”, a period in which firms work with innovation and growth specialists to continue expanding their internationalisation capabilities, building on the connections, knowledge, and expertise gained.

Another initiative that favours the internationalisation of UK startups is events that the government's Venture Capital Unit organises regularly. These invitation-only, sector-specific showcase events allow international VC funds to connect with UK scaleup firms and offer an opportunity to access international funding. The objective is to obtain international investments into knowledge-intensive, high-growth sectors. The Unit collaborates with incubators in order to identify companies to participate in the events.

Through the City Deal programme, the Growth Funds, and the Getting Building Fund, national resources are distributed to Local Enterprise Partnerships (LEPs), which can be used in part to support local incubators. For example, the West Yorkshire Combined Authority, in partnership with the local LEP, has invested GBP 2.9 million of Leeds City Region Growth Deal funding into the Huddersfield Incubation & Innovation Programme at the University of Huddersfield. Meanwhile, the Oxfordshire LEP has used national funding from the City Deal, Growth Funds and Getting Building Fund, as well as ERDF funding, to finance a number of incubation initiatives including the Begbroke Innovation Accelerator at the Oxford University Science Park and the Energy Systems Accelerator Pilot. The Scottish Funding Council also provides important support for the incubation system in Scotland, including by investing in four sector specialised innovation centres. These examples demonstrate the importance of national funding for sustaining local activities in the UK. This is particularly the case given that many EU funding initiatives are no longer available. In 2018, the European Regional Development Fund (ERDF) was the most frequent sponsor of acceleration programmes in the UK (Beauhurst, 2018^[3]).

The UK also delivers support for social impact incubators through the National Lottery Community Fund. Since 2014, the fund has financed the “Impact Incubator”, which is a partnership between six leading UK philanthropic foundations and Social Finance that aims to develop innovative solutions to social issues and improve the lives of vulnerable people in the UK.

Conclusions and lessons for other countries

The UK has adopted a relatively decentralised approach to supporting the incubation system, with support delivered through a multi-channel mix of regional and national public policies rather than one centralised funding system. This approach has facilitated the provision of tailored support across sectors and regions and enabled multiple delivery methods to be explored. Indeed, experimentation through pilot programmes and research has opened the way for gradual improvement of incubators' practices, reducing displacement effects and increasing the long-run impact of the programmes. Public funding has also been instrumental in catalysing private resources.

There are also valuable lessons in the UK's approach to data sharing and performance measurement. Data sharing is compulsory for incubators receiving public funding. This has contributed not only to improved performance and the sharing of good practices. Another distinctive feature of the UK's policy approach is the commitment to supporting entrepreneurs from all different groups, which is often

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Incubation in Entrepreneurial Ecosystems

Hatching Growth

Business incubators are vital players within entrepreneurial ecosystems. They specialise in identifying the most promising start-up and scale-up companies and aiding their development through holistic support packages and making connections to the wider ecosystem. Substantial public and private investments have driven major growth in the incubator population in recent decades, accompanied by other trends including increased specialisation, more virtual delivery models, and more internationalisation support.

Government support has been key to this growth in incubation and policy retains an important role. However, policymakers face questions surrounding which incubation activities to promote, which organisations to fund, whether and where to specialise, and how to incentivise good practices in support delivery. This publication is a guide for policymakers for navigating these decisions.

Part 1 sets out what incubation involves, the rationale for public involvement, and major trends. Part 2 examines the main types of incubation services provided, with chapters on coaching, internationalisation, financing, training, and specialised incubation. Part 3 discusses policy choices in developing public supports for incubators, with recommendations and inspiring practices. Finally, Part 4 presents eight country profiles (Estonia, France, Ireland, Korea, Portugal, Singapore, Sweden, and the United Kingdom) with information and lessons from each country's incubation systems and policies.



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