

Arctic Investment Platform

.....
Feasibility Study



REGIONAL COUNCIL
OF LAPLAND



European Union
European Regional
Development Fund

Leverage from
the EU
2014–2020



Arctic Investment Platform



Feasibility Study



Report authors

Dr. Pierre Padilla, N-ABLE
Dr. Vincent Duchêne, IDEA Consult
Daniela Kretz, IDEA Consult



Coordination & editing

Janne Uusivirta, Senior Advisor,
East & North Finland EU Office
Johannes Lith, Project Manager – AIP,
Regional Council of Lapland



Graphic design & illustration

Lasse Paldanius

Contents

.....

5	.....	Executive summary
6	.....	1. Introduction
6	.....	1.1. Rationale and objectives
7	.....	1.2. Key assumptions and guidelines
10	.....	1.3. Process followed
12	.....	2. Delineation of the investigation area from an “investment gap” viewpoint
12	.....	2.1. Finding the common ground: NSPA Regions and their Priorities
13	.....	2.2. Challenges
14	.....	3. Scanning Investment Gaps
14	.....	3.1. Assessment of investment needs and potential within the three thematic areas across Circular Economy, Energy and Tourism
17	.....	3.2. Synergetic use of financial instruments to support the creation of investment projects
20	.....	3.3. AIP model and support system – first signals on possible features
23	.....	4. Conclusion
23	.....	4.1. Results from the Scanning Exercise
26	.....	4.2. Way forward: a fully-fledged quantitative feasibility analysis

Executive summary

The Northern Sparsely Populated Areas (NSPA) of Finland, Sweden and Norway face common challenges and share similar opportunities, providing a solid foundation for fruitful cross-border cooperation.

Investment gaps and barriers are major challenges for the NSPA economy. To address these challenges more effectively, a better coordinated funding cooperation among the NSPA regions is needed, as acknowledged by the European Commission and OECD. The precise format, characteristics and expected Return on Investment of such a 'funding cooperation mechanism' remain to be defined.

Thus, a feasibility study for creating such a mechanism, an **Arctic Investment Platform (AIP)**, was commissioned. The goal was to develop a suggested structure for a support system, specific to the NSPA. Circular economy, sustainable energy and tourism were chosen as the thematic areas to start the assessment of investment gaps on. The AIP, however, will not be developed in a sector specific manner.

NSPA economies consist largely of SMEs and in that group many micro-companies. They suffer

from a sub-optimal capacity and a low access to finance and expertise to support their ambition to scale up and grow internationally. Early focus finding workshops, to narrow down the scope of the feasibility study, set **scale-up companies** as the focus for the AIP.

The study was conducted during the second half of 2018. It builds upon desk research, semi-structured interviews and case studies ("showcases") developed to illustrate investment gaps faced by small "scale-up" companies across the NSPA. All NSPA regions contributed through e.g. participation in common workshops as well as providing showcases.

Four main types of investment gaps were identified:

1. Expansion financing (lack of equity and debt finance for scale-up companies)
2. From Piloting to Demonstration Support (Piloting 100k€-300k€ and demonstration 1m€-5m€)
3. Large-Scale Demonstration (7-10m€)
4. Cross-Regional Tourism Platform (3m€-7m€, with individual projects of 30k€-50k€)

Despite the lack of exhaustive view on the funding and financing instruments available across the 14 regions, the interviews demonstrated that asymmetries can be observed from a region to another – some having a strong policy mix already in place while others only rely on limited structural funds for instance.

No alignment can therefore be foreseen "off the shelf" and a common entity (whether in the form of agreement, special purpose vehicle, or legal entity) will most likely be required to organise the combination of funding streams and ensure the best possible level of simplicity, efficiency and reliability. There could be multiple ways to organise the Arctic Investment Platform. Some key features however appear to be necessary, such as the networking function.

1. Introduction

1.1. Rationale and objectives

Investment gaps and barriers are major challenges for the economy of the Northern Sparsely Populated Areas (NSPA). The 14 Norwegian, Swedish and Finnish regions constituting the NSPA have common challenges in this regard such as the relatively weak access to capital, lack of critical mass in deal flows (and, subsequently, high risks associated), information asymmetries aggravated by the peculiar geographical conditions (long distances, limited accessibility) etc. However, the scope and nature of these challenges still need to be carefully assessed in order to define what should be the optimal policy response. A better coordinated funding cooperation among the NSPA regions is needed, as acknowledged by the European Commission¹ and OECD². But the precise format, characteristics and expected Return on Investment (ROI) of such a ‘funding cooperation mechanism’ remain to be defined. Consequently, the NSPA regions decided that it was necessary to conduct a feasibility study; at this stage the ‘funding cooperation mechanism’ was defined as the “Arctic Investment Platform” (AIP).

The purpose of this feasibility study is to:

- **Analyse the potential of launching an Arctic Investment Platform** consisting of a suggestion for a roadmap to initiate the AIP. This will include assisting the concerned regions in a detailed analysis of their investment needs and gaps, including the identification of bottlenecks and way forward to address these.
- **Develop a suggested structure for a support system specific to the NSPA region**, identifying possible collaboration and funding opportunities on a regional level. In the feasibility study the potential of the circular economy, tourism and sustainable energy solutions are initially explored as a foundation of the AIP, however the AIP will not be developed in a sector specific manner.

Geographical scope of cooperating regions

Geographical scope of cooperating regions. The NSPA Regions represent the regional governments of the northernmost counties of Sweden (Norrbotten, Västerbotten, Jämtland Härjedalen, Västernorrland), the seven northernmost and eastern regions of Finland (Lapland, Northern Ostrobothnia, Central Ostrobothnia, Kainuu, North Karelia, Pohjois-Savo and South Savo) as well as North Norway (Finnmark, Troms and Nordland)³.

1 See European Commission Joint Research Centre (2015), Implementing Smart Specialisation in Sparsely Populated Areas, JRC Technical Reports – S3 Working Papers Series No. 10/2015 by Jukka Teräs, Alexandre Dubois, Jens Sörvik and Martina Pertoldi

2 See OECD (2017), OECD Territorial Reviews: Northern Sparsely Populated Areas, OECD Publishing, Paris. <https://dx.doi.org/10.1787/9789264268234-en>

3 For more information, see <http://www.nspa-network.eu/>

1.2. Key assumptions and guidelines

Starting from a first analysis of challenges and investment needs (desk-research⁴, workshops of Storhogna, Sweden, 2-3 May 2018 and Umeå, Sweden, 20 August 2018), we designed -and agreed upon- a first set of key characteristics for the “Arctic Investment Platform” and for the investment projects that it should finance. This first set of characteristics can be considered as the key guidelines steering the whole feasibility study. **According to these, an “Arctic Investment Platform should:**

- **Facilitate place-based domestic growth in the NSPA regions**, enhance regional competitiveness and, possibly, allow domestic companies to perform better on the global marketplace. ‘Domestic growth’ and ‘domestic companies’ refer to the location of the economic activities, not necessarily to ownership’s structure;

- **Support investment projects by combining assets and competencies** between regions, and delivering impacts across regions, in domains where cross-regional collaboration is needed. In other words, the platform should reflect the ‘Arctic Added Value’ by supporting investment projects that go beyond the means of a single region.

- **Not be thematically limited, but it should meet investment needs in the common core areas** identified for the whole NSPA, e.g. Circular Economy, Sustainable Tourism and Energy;

- **Focus on scale-up companies.** Micro-, small and medium companies with a clear and demonstrated ambition and strategy to grow and internationalise;

- **Be able to bundle investment projects & financing streams** (eventually by better exploiting synergies between financing instruments wherever possible and cost-effective). By bundling projects, the platform would seek for critical mass in investments’ pipelines and possibly for attracting complementary private investments.

⁴ Contact points in all NSPA regions were asked to send all relevant reports from the last 5 years.

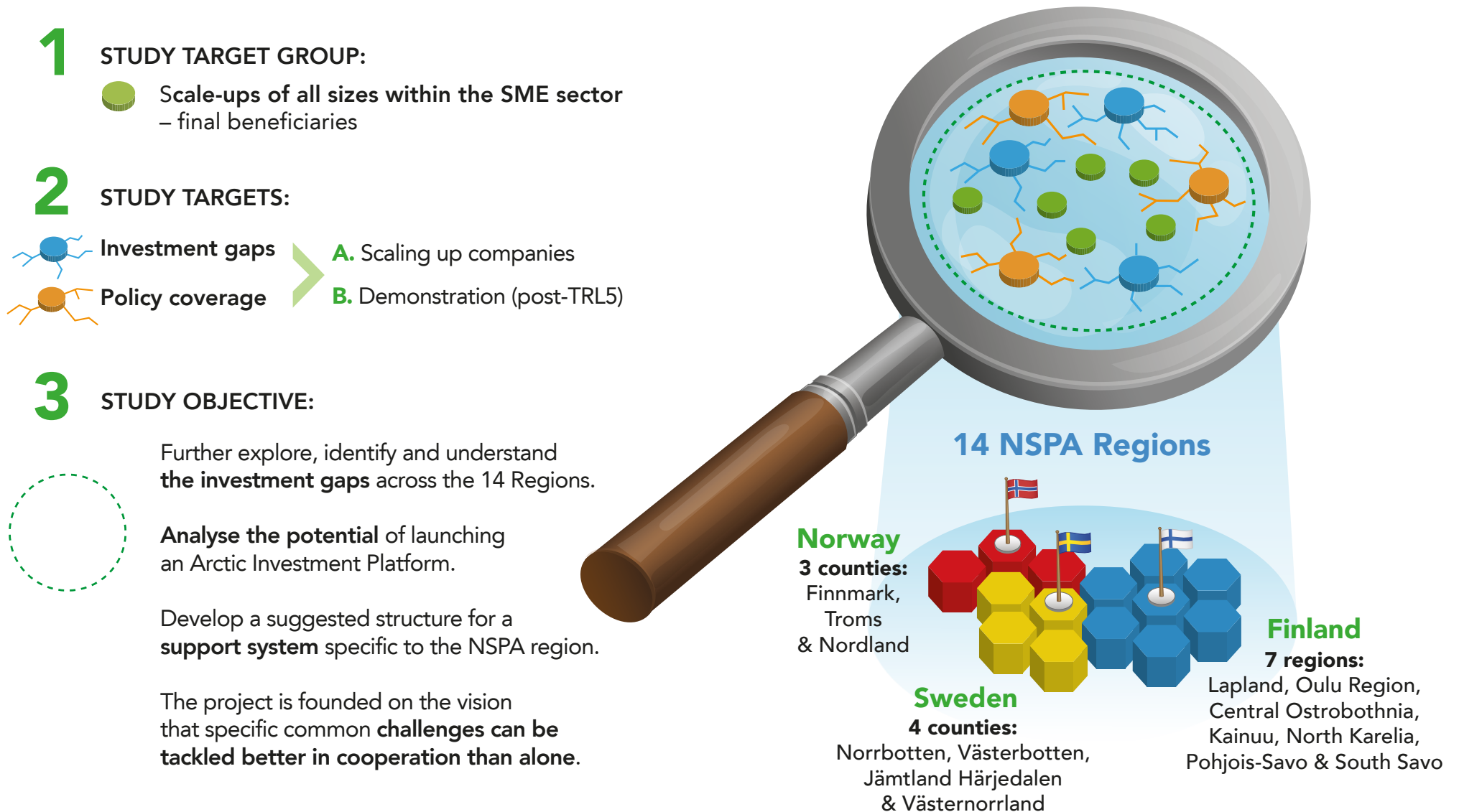


Figure 1: Focus of the Arctic Investment Platform feasibility study

Likewise, some key characteristics of investment projects targeted can be derived, i.e. investment projects should:

- **Be of a cross-regional nature**, i.e. it should answer to common needs shared by actors from different NSPA regions

- **Be innovative but close to market deployment.** Investment projects could target market expansion and/or technological deployment and commercialisation. In other words: the platform does not necessarily seek to support joint-R&D projects. It should be able to support projects where there is still some technology risk/uncertainty on top of market uncertainty and where a market failure persists. In concrete terms: the investment project supported would involve technology deployment at least beyond TRL5⁵ (post-prototyping) where scale up activities are still needed before market launch (e.g. testing, validating, certifying new products, processes or services before a full commercialisation can be achieved).

- **Contain -or support- a clearly demonstrated profitable business case**, preferably with private co-investment or clear commitment to do so in subsequent stages.

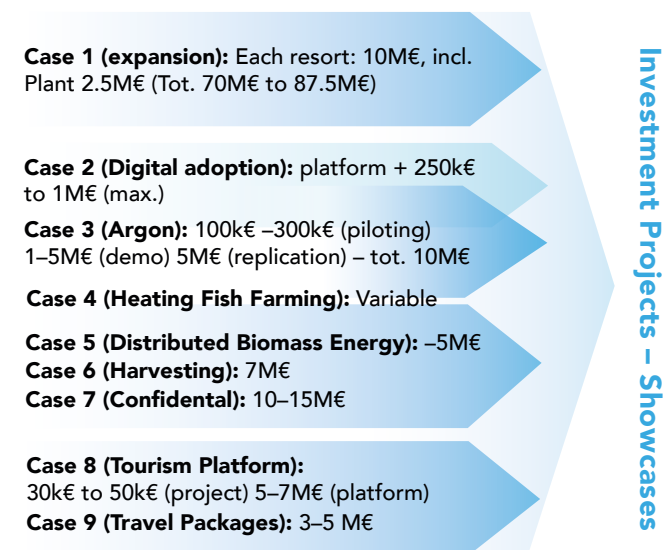
- **Have a scale and expected impact** beyond the limit of a single NSPA region – with no obligation to cut across all NSPA regions.

- **Involve either individual business investment cases or group(s) of businesses** having common needs for investments. Bundling investment projects in a meaningful way may increase critical mass, dilute risk and make them bankable.

- **Could be initiated by the public sector** (e.g. as public procurement initiative) and/or where the public sector has a role to play, whether through an incentive and/or support function.

All characteristics were investigated in the context of this research effort. *Figure 2* below illustrates the list of investment projects showcased as a result of the study. Each of the showcases followed the guiding principles depicted above – from the focus on relevant target groups to the demonstration of the value added by cross-regional collaboration.

Figure 2: List of investment projects showcased in this study. Source: the authors, 2018



⁵ The Technology Readiness Level (TRL) scale accounts for technology maturity and spans across 9 stages depicted at https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf. The TRL5 stage marks the entry of a prototype into the piloting and demonstration stages needed to get from a concrete idea to a marketable product, service, etc.

1.3. Process followed

The study was conducted during the second half of 2018 (prior to that we already participated in a workshop in early May 2018 in Storhogna, Sweden). It was organised along four distinctive phases:

PHASE 1: Defining the starting conditions May and August – September 2018

- A. Objective:** Definition of the boundaries of the Arctic Investment Platform and its key underlying assumptions
- B. Method:** Desk-research and two workshops (May -Storhogna, Sweden- and August -Umeå, Sweden- 2018)
- C. Outcome:**
 - 1. Identification of the key functions of the AIP and the key characteristics of targeted projects
 - 2. Delineation of the subsequent steps for the analysis
 - 3. Identification of public and private organisations to be invited for interviews.

PHASE 2: Showcases and Investment needs September – October 2018

- A. Objective:** identification of relevant investment cases (based on the definition of investment projects previously agreed upon under Phase 1) + identification / characterisation of their specific investment needs;
- B. Method:** interviews with 'thematic experts' from different NSPA regions. 'Thematic experts' are experts in one of the three fields covered (Circular Economy, Sustainable Tourism, Energy) with strong expertise in the field and a good knowledge of the company population in their regions and of their investment needs (usually cluster managers). Interviews were conducted with 12 experts and 9 relevant investment cases were identified and developed in that context.
- C. Outcome:** first series of investment cases identified including a clear assessment of their investment needs and a first identification of the investment gaps.



PHASE 3: Investment Gaps and potential solutions

October – November 2018

A. Objective: identification of investment gaps, i.e. the extent at which (part of) the investment needs are not met by existing financing instruments (public or private funding) + identification of first potential solutions to fill in the gaps;

B. Method:

1. 5 Interviews with financial experts from either investment organisations (VC companies, banking sector, funding programmes);
2. Focus group discussion in Oulu, Finland in mid-October 2018 with representatives of VC Companies (e.g. Butterfly Ventures Oy), Business Finland, ELY Centre and FINNVERA;
3. Workshop in Tromsø, Norway, on 19/11/2018 with representatives of all NSPA regions, cluster managers and financial managers.

C. Outcome: discussion and validation of the main investment gaps identified; discussion of potential solutions. Identification of additional interviewees.

PHASE 4: Synthesis and Conclusions

Mid-November – December 2018

Two additional interviews to complement some information gaps. Drafting of the final report, submitted on 6/12/2018.

2. Delineation of the investigation area from an “investment gap” viewpoint



2.1. Finding the common ground: NSPA Regions and their Priorities

Throughout the research process, it was confirmed that a framework would be required to develop an Arctic Investment Platform. The variety of investment showcases analysed in the context of this report highlights the different requirements such as finding the common ground for collaboration or ensuring that the AIP would be challenge-driven and business-oriented. The range of common challenges however remains large in scope, requiring a definition of “investment” and the delineation of exclusive factors to delineate its scope (should NSPA regions consider infrastructural investment? Would a joint investment in a new hospital be relevant? Etc.).

The process carried out in 2018 confirmed that the key ground for developing a clear and usable list of investment priorities should be the Smart Specialisation Strategies of the 14 Regions involved. The diversity of themes and value chains targeted by these strategies will, in that sense,

force the exploration of the issue of investment in a different way, which will be less classical compared to usual regional investment strategies. Thematic specificities should, however, be taken into account as the characteristics of investment needs will greatly vary from areas such as digital technologies (with short innovation cycles, lower amounts if app-focused, etc.) and bio-based technologies (higher amounts being involved in very sequential demonstration steps, for a timeline that is crucially longer than the former example).

Setting up a cross-regional investment platform across NSPA regions requires the identification of a common denominator. Such common denominator lies in the very nature of the NSPA, which is made of 14 sub-populated regional areas characterised by long distances as well as other parameters identified in this report – difficult access to risk capital, high proportion of small businesses, etc.



How to define “investment” in an NSPA context?

The very notion of investment is usually associated to the one of Return on Investment (RoI). The NSPA network however federates public policy entities (mainly regional authorities) and their stakeholders to address socio-economic issues requiring public intervention. In that context, the definition of “investment” was therefore extended to **any provision of resources (mainly but not only in the form of finance and/or funding) to support organisations and/or actions that are expected to lead to economic but also societal spill-overs benefitting the regional ecosystems involved**. The notion of RoI is therefore observed at the regional level where sustainable growth should result from supporting scale-up businesses.

2.2. Challenges

NSPA regions gather a large proportion of Small and Medium Enterprises (SMEs) and in that group many micro-companies. All are suffering from a **sub-optimal capacity** and a low access to finance and expertise to support their ambition to scale up and grow internationally. The ambition set along the first pre-feasibility workshops had to **focus on scale-up companies**.

The investment challenges were therefore listed from that very angle. **Common investment challenges** were mainly associated to the lack (or sub-optimal number) of investors and risk capital. Investors active in NSPA regions are not known to all players and might not even know each other. Other challenges were spotted such as long exit strategies or the fact that investment companies (venture capitalists and others) are mainly located in the “city hubs” (which are also the ones draining talents and entrepreneurs from the NSPA regions).

The **challenges and obstacles were confirmed** along the investigation – including during the interviews and workshop sessions held with relevant experts. Although sectorial specificities could be identified, the cross-cutting view on the lack of access to risk capital and underlying causes points toward the relevance of assessing a joint action across regions that have limited financial capabilities, common challenges, but also complementary profiles.

From an investment perspective, a number of more specific obstacles were identified, which are listed below:

- 1.** The amount of **private equity available appears to be sub-optimal**. While a lot of investment lines target real estate and “stone-related” areas, little has been done so far as to promote industrial growth in the NSPA regions.
- 2.** **Long exit strategies** lower the amount of liquidity available on the market over time, which in turn limits flows of possible investments and resulting returns.
- 3.** **The lack of early-stage (seed/pre-seed/early venture) and SME risk capital and supporting financial options** is critical and hampers the development of new businesses but also the growth of smaller players. Scale-ups are concerned by this obstacle and although one could think that this is a challenge for all countries across Europe, NSPA Regions are impacted in a stronger fashion.
- 4.** There is a need to involve private venture capitalists and engage them into regional ecosystems as they are a vector of **missing assets**, which include not only finance, but also expertise (human resources; internationalisation expertise; Research, Development and Innovation capabilities, etc.).
- 5.** **Information asymmetries** (including the hidden value of inland but also coastal companies to be demonstrated to investors) are a critical weakness of NSPA Regions. Companies do not have the knowledge of all available sources and many information gaps can be identified in all spheres of the NSPA ecosystem.

- 6.** This is combined with a sub-optimal critical mass in terms of the visible (investment/project) **pipeline** available to investors who need to develop trust in the ability of NSPA regions to provide a perspective for returns on investment.
- 7.** The same applies to cross-regional **deal flows**, which are not visible and reduce the ability of policy makers and actors to understand the effective investment capabilities they could build upon in the NSPA area.
- 8.** Access to regular **market-conform loans** is also difficult for smaller organisations subject to a financial track record that does not meet the expectations of the banks.
- 9.** The absence of investment capacity can even hamper the involvement of players in larger international projects, as suggested during the discussion where a project highly relevant for a region required a co-investment was impossible to build. The sub-optimal investment capacity of NSPA regions can therefore lead to a **vicious circle**.

Who are NSPA scale-up companies?

The study highlighted the diversity of SME profiles across the three main thematic areas (Circular Economy, Energy and Tourism). One of the key challenges was related to the quantification of this profile possibly based on the turnover or number of employees. While some interviewees proposed a range, most agreed that quantification was not a relevant angle. All interviewees agreed on **defining scale-up companies as small firms with a clear and demonstrated ambition and strategy to grow and internationalise**.

3. Scanning Investment Gaps

This section explores the scale-up investment gaps identified across the three main areas targeted by the AIP: Circular Economy, Energy and Tourism. It builds upon a desk research, semi-structured interviews and case studies (“showcases”) developed to illustrate investment gaps faced by small “scale-up” companies across the NSPA. This section first summarises the investment gaps according to 4 main categories and then presents the set of possible options developed in the context of the showcases (top picks of cross-regional investments) to address these gaps through a possible AIP.

3.1. Assessment of investment needs and potential within the three thematic areas across Circular Economy, Energy and Tourism

4 main types of investment gaps were identified and are summarized below in Figure 2 which illustrates each gap and associated amounts. These gaps were derived from a cross-case analysis that was focused on the relevance of cross-regional investment only. This means that other gaps that can be addressed in a regional system or do not justify joint regional action were not taken into account. One should note that while Category 2 emphasises a clear gap for piloting and demonstration activities, Category 3 mainly highlights the financial range associated to the gap for large-scale demonstration activities (which varies and can rise up to €15.000.000,00).

These 4 gaps thus match the need for cross-regional intervention. They result from a clustering effort of the gaps presented in the showcases in annex*.

* <https://arcticsmartness.eu/AIP-annexes>

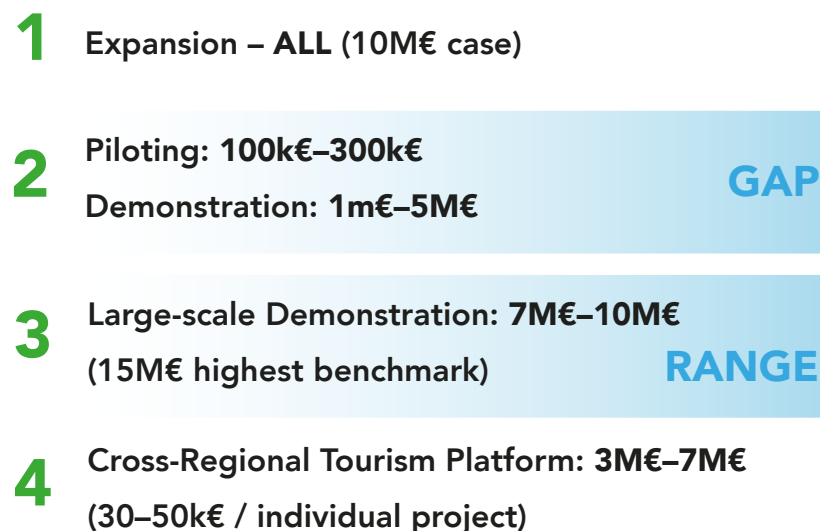
- 
- 1** Expansion – ALL (10M€ case)
 - 2** Piloting: 100k€–300k€
Demonstration: 1m€–5M€ **GAP**
 - 3** Large-scale Demonstration: 7M€–10M€
(15M€ highest benchmark) **RANGE**
 - 4** Cross-Regional Tourism Platform: 3M€–7M€
(30–50k€ / individual project)

Figure 2: Overview of investment gaps. Source: the authors, 2018

4 main types of investment gaps:

1 Expansion Financing. The first gap is the one of expansion financing. It consists of the lack of equity and debt finance for scale-up companies with a financial track record that does not allow them to access lending in an easy way. This gap is not quantified as it can range from a few tens of thousand Euros to tens of million Euros depending on the size of the business and the targeted investment size. While this category was derived from a showcase mixing tourism and energy, it can apply to a wide range of sectors.

An important fact is in this context the fact that the role of the public sector would be to foster the de-risking of the investments “outside the comfort zone” of private investors. The rationale of joint action in that respect would therefore be to widen the scope of growth and internationalisation finance through a guarantee and/or topping-up offered by the public sector.

Supporting the expansion of a resort village throughout the NSPA

The showcase that led to the identification of this category consists of a resort village willing to expand across NSPA regions and building upon collaborations with local companies (construction, entertainment, restaurants, etc.) to set up new villages entirely featuring local features – from the construction of wooden houses to local tours and food experiences. The SME in that very case wishes to grow but misses partners and a financial track record that could facilitate the obtention of a loan. Public investment would allow de-risking such loan and organising the expansion with economic but also environmental spill-overs generated in each regional destination.



⁶ In line with the TRL scale which positions piloting and demonstration activities at the stages 6 and 7; see also http://www.earto.eu/fileadmin/content/03_Publications/The_TRL_Scale_as_a_R_I_Policy_Tool_-_EARTO_Recommendations_-_Final.pdf

⁷ As suggested by the showcase, it could even be complemented by a new peer investment model where in-kind investments would be facilitated through the platform across relevant sectors and regions.

2 From Piloting to Demonstration Support. The second gap is two-fold: it highlights the lack of piloting and demonstration⁶ support which can be provided in the form of a grant (piloting stage) and a mix of grant and financial (debt/[quasi]-equity) support to a company reaching a demonstration phase and willing to deploy a new product or service to the market. The activities to be supported are innovation activities aimed to bring a prototype to the market, bridging the last Technology Readiness Levels^{**} separating the service or product from its commercialisation. The showcases that supported the identification of this gap were mainly associated to the area of Circular economy but also Tourism – subject to smaller investment amounts when related to the digitisation of tourism scale-ups for instance.

One of the showcases that fell under the former theme (circular economy) consisted for instance in the demonstration of the use of argon gas (a side stream of the pulp industry) in the steel making process through decoupling techniques. It requires connecting capabilities from the wood (pulp) and steel-making industries to implement an industrial symbiosis. In order to demonstrate the technical and economic viability of its model (which should benefit both waste providers and buyers), the company is missing between €100.000,00 and €300.000,00 for piloting activities and €1.000.000,00 to €5.000.000,00 for the demonstration phase. No appropriate financial option is available for the company to undertake these late-stage operations and possibly engage into the replication of such model to other sectors (such as mining, etc.).

Digital solution testing and adoption by adventure service SMEs

Among the list of showcases one aims to digitize micro- and small companies in the touristic “adventure” sector through 1) a strategic and operational matchmaking network and 2) support to innovation activities with a first pilot on the digitisation of small “adventure” businesses in the tourism sector. The acceleration of the diffusion of digital technologies (virtual reality, gamification, etc.) to these SMEs would require connecting value chains (digital/tourism) and addressing an investment gap between €250.000,00 and €1.000.000,00 for SME testing of new digital technologies⁷.



Read more about the cases^{*} and Technology Readiness Levels (TRL)^{**}:
<https://arcticsmartness.eu/AIP-annexes>

3 Large-Scale Demonstration. In line with the second category, this investment gap relates to large-scale post-prototyping activities often associated to energy and circular economy. The main difference with the previous category relates to the investment range (which involves amounts higher than €5.000.000,00). It mainly relates to demonstration where a certain scale should be reached or where complex processes should be technically and economically demonstrated. The showcases mainly emphasized the number of organisations to be involved to connect capabilities and reach the targeted scale. While a real (anonymous) industrial case amounted up to €15.000.000,00, lower amounts can correspond to large-scale demonstration. One of the cases consisted for instance in the demonstration (Technology Readiness Levels 7-8) of a young tree harvesting system, involving the entire pulp value chain down to the very end users such as energy producers. Currently available in a prototyping form, this machine is meant to harvest young trees and create a bundle – a big log that can be transported from the forest to the end-user through various transportation modes (rail, road, barks, etc.) in a standardised way. It makes use of two different cranes (to harvest and automatically create a bundle) and would require large-scale and multi-environment testing for a total demonstration cost of €7.000.000,00.

Demonstrating Distributed Energy Production using Biomass Locally

This case consists of a cross-regional demonstration project (technology readiness levels – TRL – 6 and 7) on distributive energy production using biomass that is produced locally. Any bio-waste could fall under its scope (sludge for biogas production is an example; the project could also build upon side streams from mines and pulp mills). For less than €5.000.000,00€ (maximum budget), the project would encompass testing and demonstration activities for a model to be further brought to the North of the Arctic area, in order to demonstrate the ability of the technology to be used in harsh conditions (-30°) for multiple purposes with an emphasis on transportation. The ambition would be to replicate such approach to the entire NSPA, leading to the multiplication of such plants across regions.



4 Structural Investment Project(s). The last category concerns stand-alone investment projects. The showcases supporting that category touched upon the setting up of a platform/network where an initial coordination cost would be covered by a grant to facilitate the collaboration across regional entities (businesses, etc.). This category was supported by tourism cases which pointed to the same direction – aiming to set up a platform that would facilitate cross-regional travel packages

An important feature of such structural investment project is that it can be complemented by other support actions to incentivise collaboration, innovation and growth (channelling for instance financing toward scale-up SMEs).

Creating a one-stop-shop platform for Arctic Tourism

Two cases supported the idea of overcoming regional obstacles to efficient and value-adding tourism by setting up a one-stop-shop. The two main options can be summarised as follows:

1. The first would be a one-stop-shop for marketing, transportation, ticketing, and VAT management in the area of tourism. It would take the form of an online tourism platform to offer safe, quality and sustainable tourism packages as to harmonise the user experience, connect value chain segments and reduce the costs for all actors involved. The two main development axes would concern cross-border traffic and sustainable low-season tourism development. The platform could be set up both online and offline thanks to a sole public intervention of €5.000.000,00 to €7.000.000,00. This public intervention would allow for the setting up and initial run of the platform, entailing the design of a proper revenue generation model to ensure its sustainability.
2. The other would be a modular and adaptive platform to set up cross-regional travel packages. It would allow end consumers to set up tailor-made and dynamic travel packages (integrating tourism services, entertainment, transportation, etc.). Combining both “back-end” and front-end functions such as communication activities, international distribution channels and access to multiple commercial (distribution) points, it would allow to set up investment cases and would require a sole public intervention of €3.000.000,00 to €5.000.000,00. Very much like the previous case, a sole public intervention would allow for covering the initial stages of the one-stop-shop (setting up and initial run of the system) but would require a sustainable revenue-generation model to sustain its activities.



★ Read more about the cases: <https://arcticsmartness.eu/AIP-annexes>

3.2. Synergetic use of financial instruments to support the creation of investment projects

The analysis of the showcases presented in Annex of this report led to the conclusion that multiple options were available depending on the investment gap(s). Figure 3 below illustrates the proposals made by interviewees in the process of developing each case.

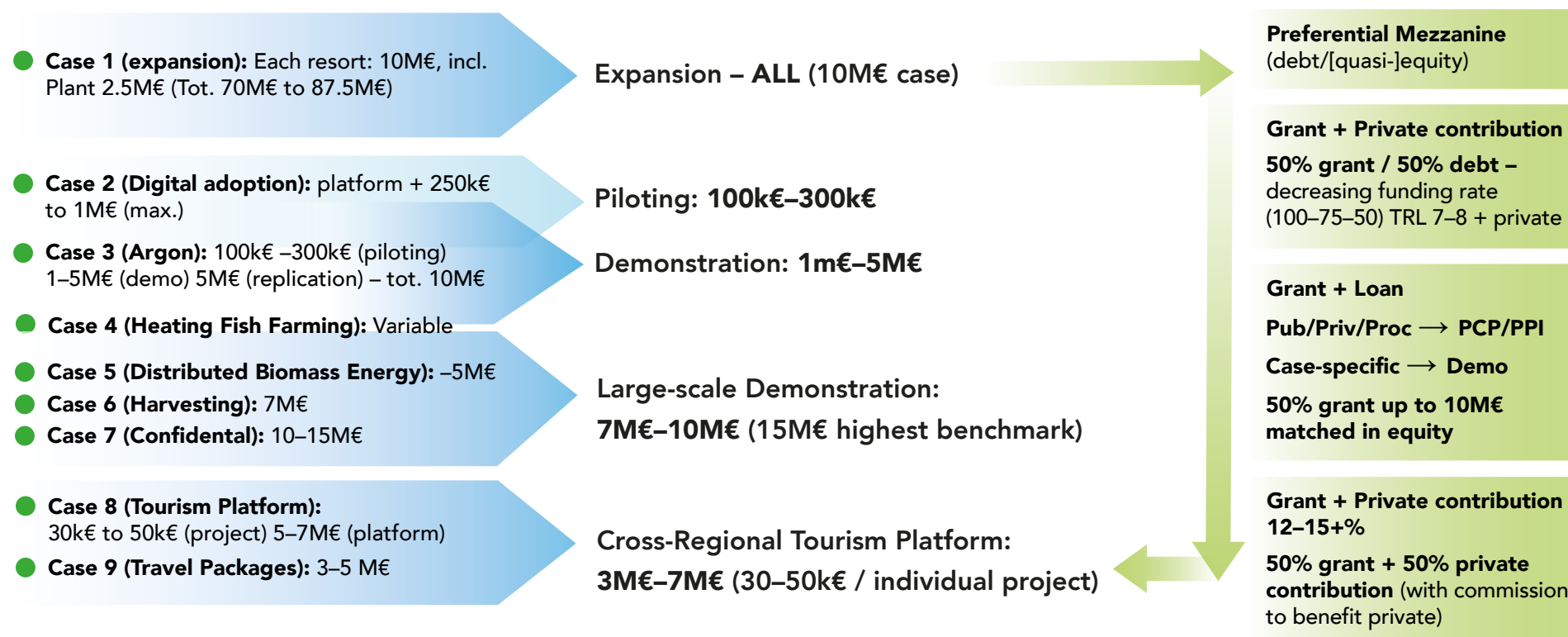


Figure 3: Linking investment gaps to possible funding and financing approaches. Source: the authors, 2018

The proposed public intervention modalities vary from one case to another. The development process of the showcases however tended to highlight the following possible solutions:

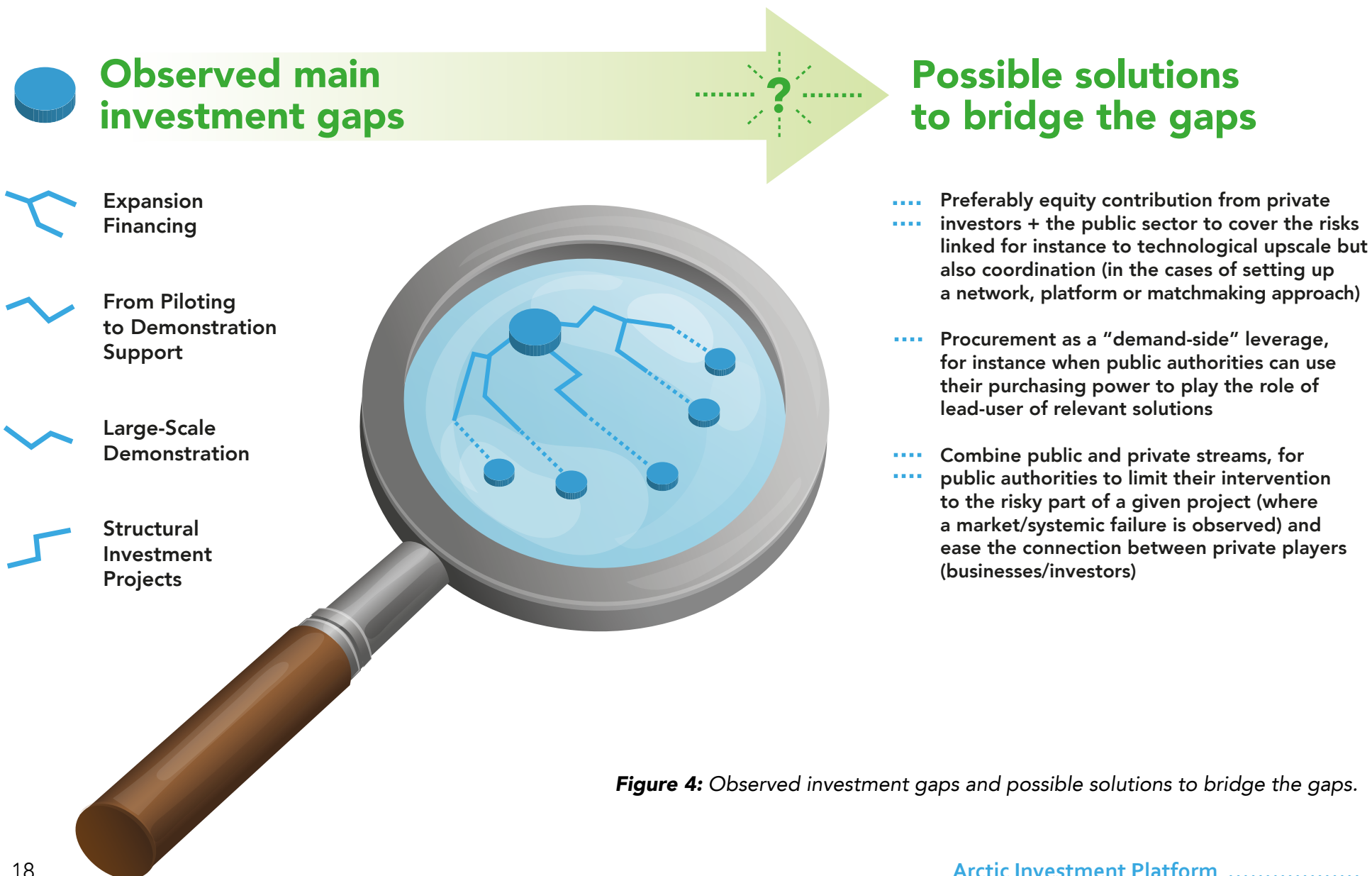


Figure 4: Observed investment gaps and possible solutions to bridge the gaps.

One should indeed note that the financial streams discussed in this report are not exclusive as illustrated in *Figure 5*. The figure illustrates the example in which debt and equity finance could possibly be combined with the setting up of a cross-regional travel package platform (first arrow linking Category 1 and Category 4). The same goes for the combination of debt and equity investment in the latest phase of technological demonstration to be supported under the second and third types (Other 2 arrows linking Category 1 to Categories 2 and 3).

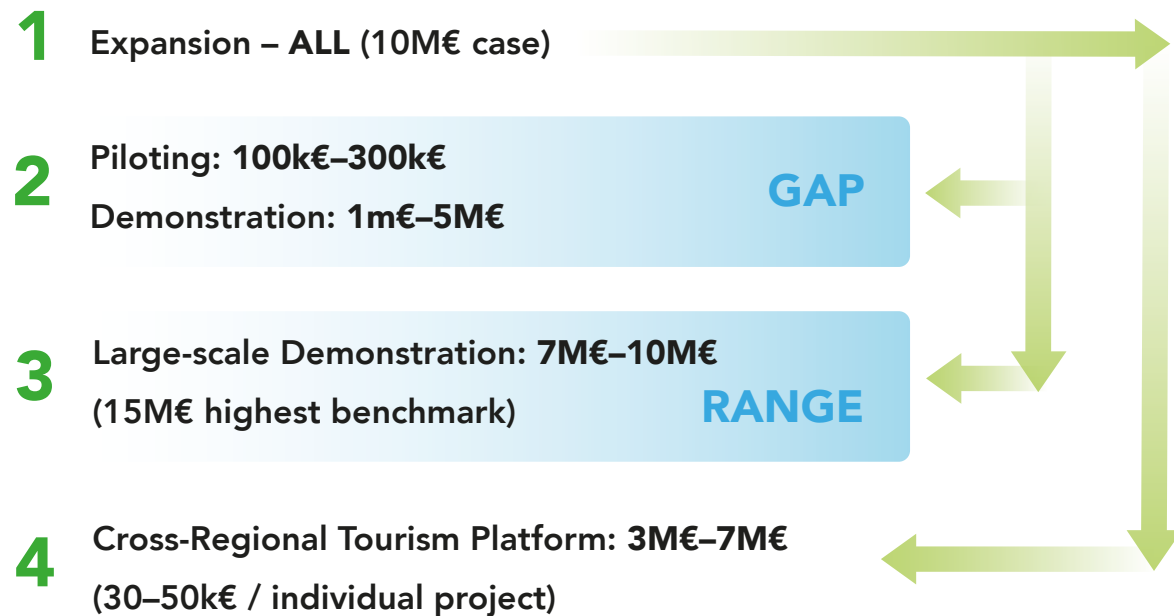


Figure 5: Illustration of the connection between expansion financing and the financing of other gaps. Source: the authors, 2018



An early-stage investment gap?

While it was not highlighted during the development of the showcases, signals pointed at the lack of pre-seed and seed funding. In such phase, start-up companies willing to keep the control of their board face a difficult access to finance. One should note that pre-seed and seed funding corresponds to some extent to the piloting gap identified under the second category.

3.3. AIP model and support system – first signals on possible features

The interviews and showcases led to the identification of various options. The AIP could become an “Arctic Investment Bank”, a “Fund of Fund” but also a “Platform”, a “Mezzanine Fund” or a “Network”. Any of these options would entail different modalities and a particular business model. While a grant investment would generate economic spill-overs and returns to public entities through taxation schemes, a fund of fund would allow for directly drawing benefits out of investment projects. The format of the AIP should be derived from its key functions and focus in the second phase (fully-fledged feasibility study).

The delivery of cross-regional investments will indeed vary depending on the adopted scope. Based on two of the showcases presented in Annex, Figure 6 below presents two examples of approach to cross-regional investment that could prove relevant in an NSPA context. These are indicative and should be amended and/or validated during the follow-up feasibility study.

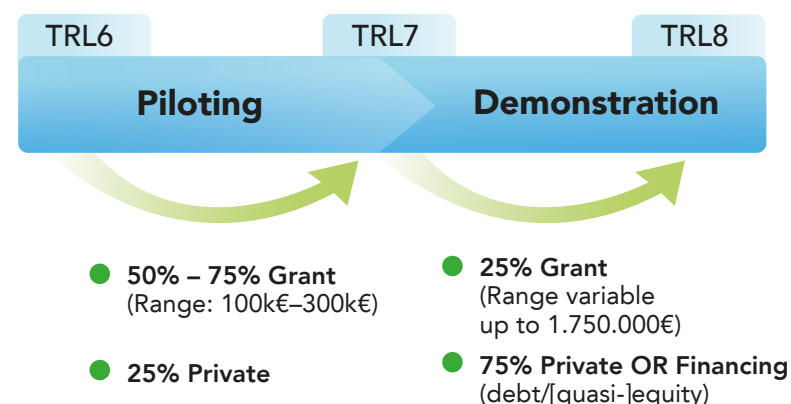
The first (Degressive combined funding) aims to support piloting and demonstration

activities while the second (cross-regional tourism platform) aims to set up a one-stop shop for cross-regional tourism packages.

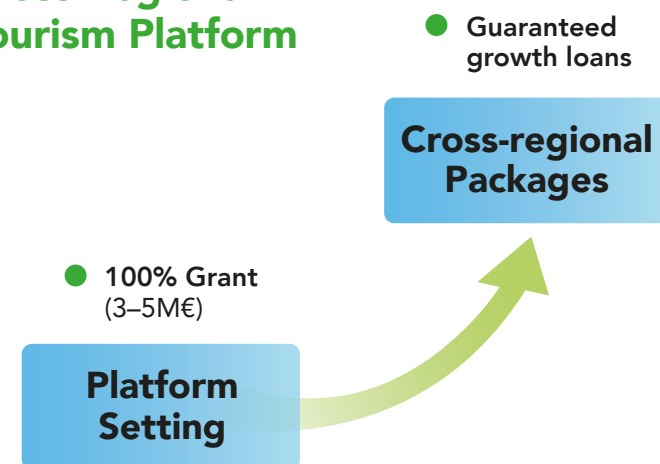
In Figure 6 one can observe that the feature common to the two models is the one of blending funding (grant) and risk finance (debt/equity). While the first model – above – emphasizes the risk linked to research-intensive activities undertaken during the demonstration phase of an innovation project, the second model highlights the risk linked to the coordination or stakeholders in a specific sector. Both however position financing as a way to support commercially viable activities while direct funding is allocated to risks associated to a market and/or systemic failure. Options remain open regarding the practical way of organising such support.

Figure 6:
Illustration of two distinct support systems.
Source: the authors, 2018

Degressive Combined Funding



Cross-Regional Tourism Platform



Despite the availability of multiple options, 10 key pre-conditions were identified during the research process which should characterise the AIP. They can be depicted as follows:

1. The AIP should **address small companies which have an ambition to grow and internationalise**.

2. The investment gap(s) to be addressed by the AIP should be realistic and **build upon the financial amounts regions can mobilise from both public authorities and private entities** willing to invest in the area – taking into account coordination costs related to the Platform.

3. Support should be based on a **mixed use of public funding and private investment**. While grants are used to cover risk in the boundaries of the European State Aid Framework for Research and Development, private finance can support the close-to-market or market-related investment.

4. Any investment should be based on the **value added by cross-regional action**, setting a baseline for any possible AIP investment.

5. Cross-regional collaboration should be aimed at addressing inefficiencies and build a critical mass of connected capabilities. The AIP should therefore not be limited to a pure investment role and should be a **network or platform to connect** experts, companies, investors and other entities to build an NSPA ecosystem – and even set up initiatives for which leverage is needed (e.g. European projects, etc.).

6. In straight connection to its investment role, one of the key functions of the AIP should be **“Branding”** – of NSPA as an area, of NSPA SMEs and their potential, etc.

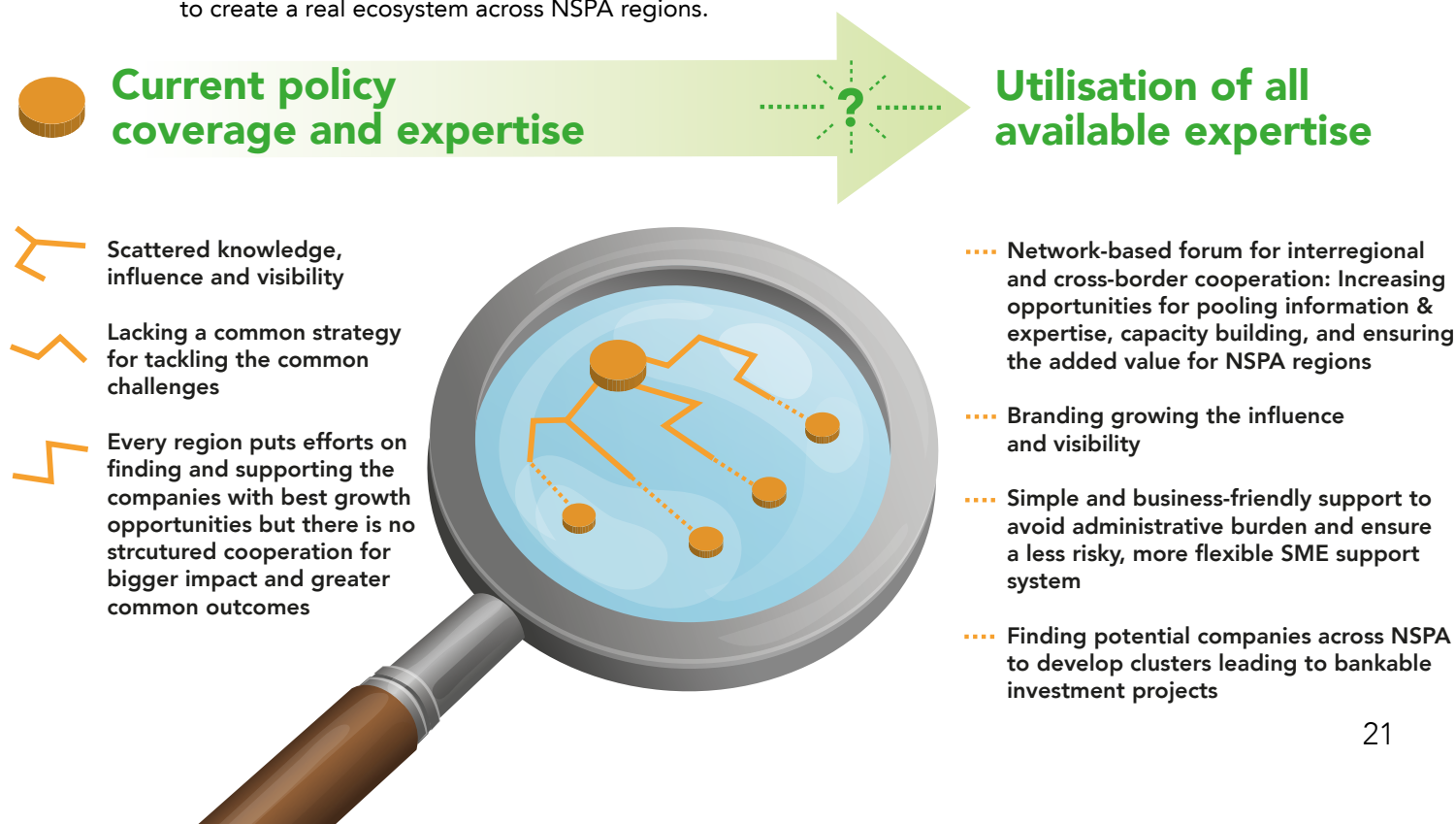
7. Support should be made simple and **business-friendly** to avoid administrative burden and ensure a less risky, more flexible SME support system;

8. **Capacity building** will be necessary to ensure that the connection to small companies is effective. Awareness raising, training (which can take many forms) and scouting are important to strengthen the entrepreneurial capabilities, create channels and generate a sustainable pipeline of projects but also to create a real ecosystem across NSPA regions.

9. The AIP should remain **generic** and address investment opportunities in a broad range of sectors, so as not to limit the already sub-optimal deal flow.

10. A **Roll-out mechanism** should be designed as to make sure that a first pilot could progressively grow from a targeted area to a broader set of investment areas. See *Figure 8, on next page*.

Figure 7:
Current policy coverage and ways to utilise all available expertise.



The roll-out mechanism

- 1** Matchmaking & brokerage events, interregional demonstration competitions, pooling of information & expertise etc.
- 2** Scoping and mapping that is already done by regional business incubators, chambers of commerce etc.
- 3** Ensure added value for NSPA by using all available expertise in the NSPA and by following common shared agreements between regions.
- 4** Attracting all available funding streams and providing a flexible funding mix based on needs.

Network-based,
interregional
/ cross-border cooperation
and non-financial support

Management team led
financial support

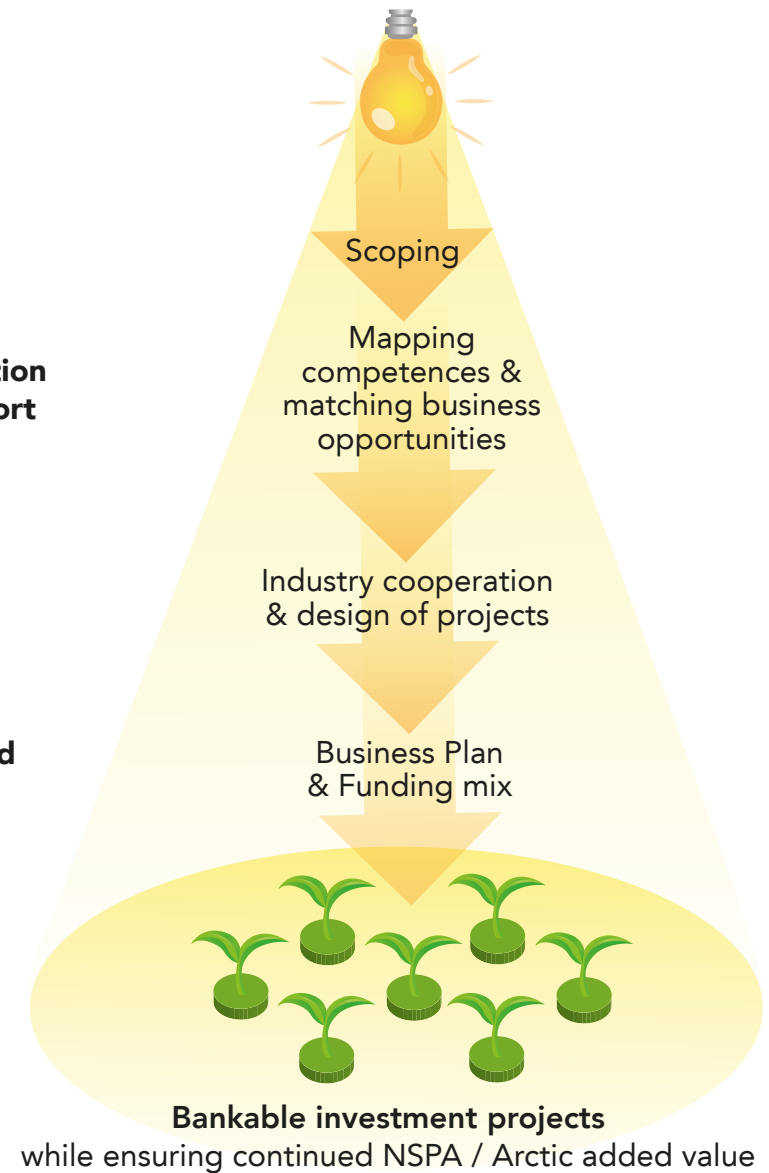


Figure 8:
Suggestion for roll-out mechanism

4. Conclusion

4.1. Results from the Scanning Exercise

The main results of this pre-feasibility analysis can be summarised in **5 key messages**:

1 Cross-regional investment opportunities confirmed. The existence of investment gaps has been confirmed and highlights key investment opportunities. This first scanning exercise showed that the assumptions derived from the initial 2 workshops were confirmed: late-stage innovation and business expansion were the two main streams where cross-regional investment opportunities are found. The opportunities identified in each showcase are valid for all NSPA Regions and are pointing toward small companies (including micro-companies).

2 Arctic Added Value identified. The value added by joint investment across NSPA regions was demonstrated by the 9 cases. They illustrate the main forms of value added resulting from joint investment: **1)** Connecting complementary capabilities and avoiding duplication; **2)** Building a critical mass of players, (bio⁸-)resources, investment, brand power and visibility; and **3)** Bringing individual regions and stakeholders to a level-playing field through clear synergies.

3 An additional layer is needed. Despite the lack of exhaustive view on the funding and financing instruments available across the 14 regions, the interviews demonstrated that asymmetries can be observed from a region to another – some having a strong policy mix already in place while others only rely on limited structural funds for instance. No alignment can therefore be foreseen “off the shelf” and a common entity (whether in the form of agreement, special purpose vehicle, or legal entity) will most likely be required to organise the combination of funding streams and ensure the best possible level of simplicity, efficiency and reliability.

4 Three main themes should be put at the core of the discussion between NSPA Regions in view of this pre-feasibility study. The authors recommend the following:

- 1)** Support to late-stage (collaborative innovation projects to demonstrate and diffuse new technologies and solutions);
- 2)** De-risking of debt and equity investments in SME expansion projects;
- 3)** Investing into a tourism platform to support the harmonisation.

5 A cost breakdown should be operated. The setting up of a common structure (whether in the form of a network or platform) appears to be the ideal scenario where three main types of investment lines could be combined, including:

- 1)** Initial platform and coordination costs to organise the ecosystem (including match-making) as well as the investment structure;
- 2)** Public support through public funding in the form of grant-like support to cover pre-commercial risks in line with the State Aid regulation;
- 3)** Public and/or private finance in the form of debt and/or (quasi-)equity to support commercially-oriented activities (commercialisation and expansion).

⁸ Such as biomass – wood, organic products, etc.

First signals led to conclude that there could be multiple ways to organise the Arctic Investment Platform. Some key features however appear to be necessary, such as the networking function that was supported in all showcases. The combination of key functions can be illustrated in the example below provided to illustrate how basic functions could be organised in the AIP (see Figure 9).

One could distinguish between the platform and investment functions, bringing together the assets of private investors and public authorities to invest in complementary targets. A final model should however be anchored into the quantified feasibility analysis for such investment platform.

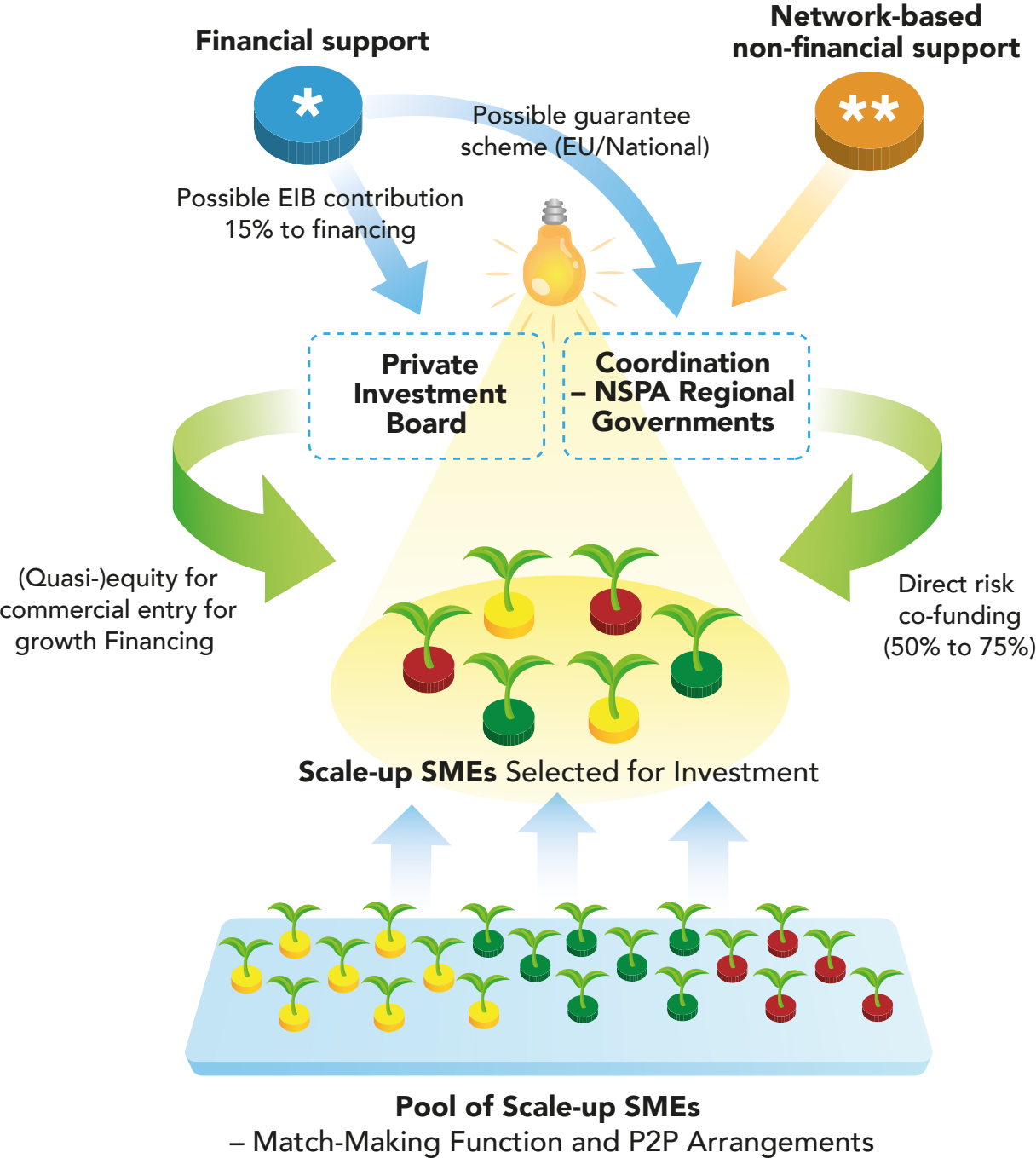
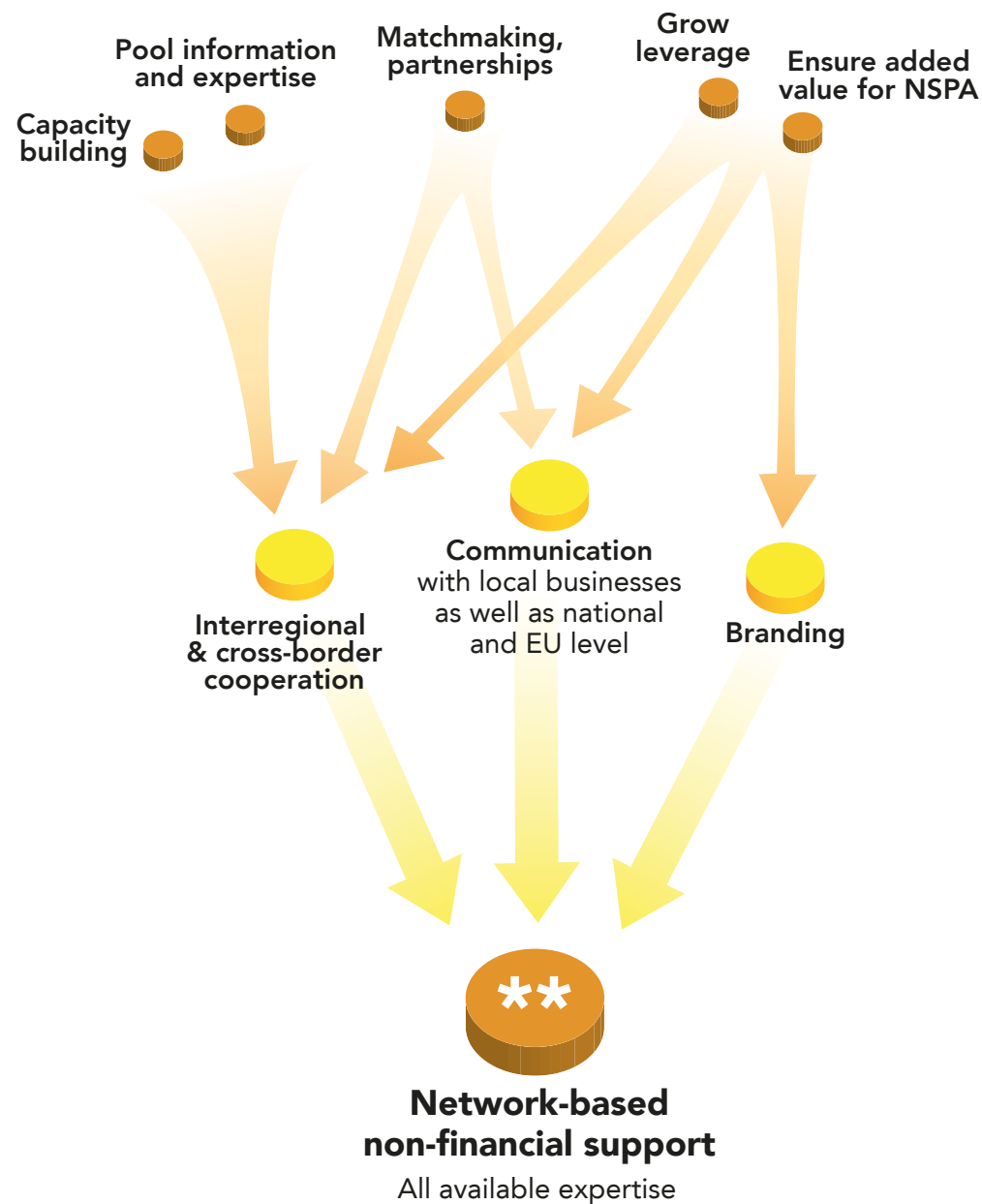
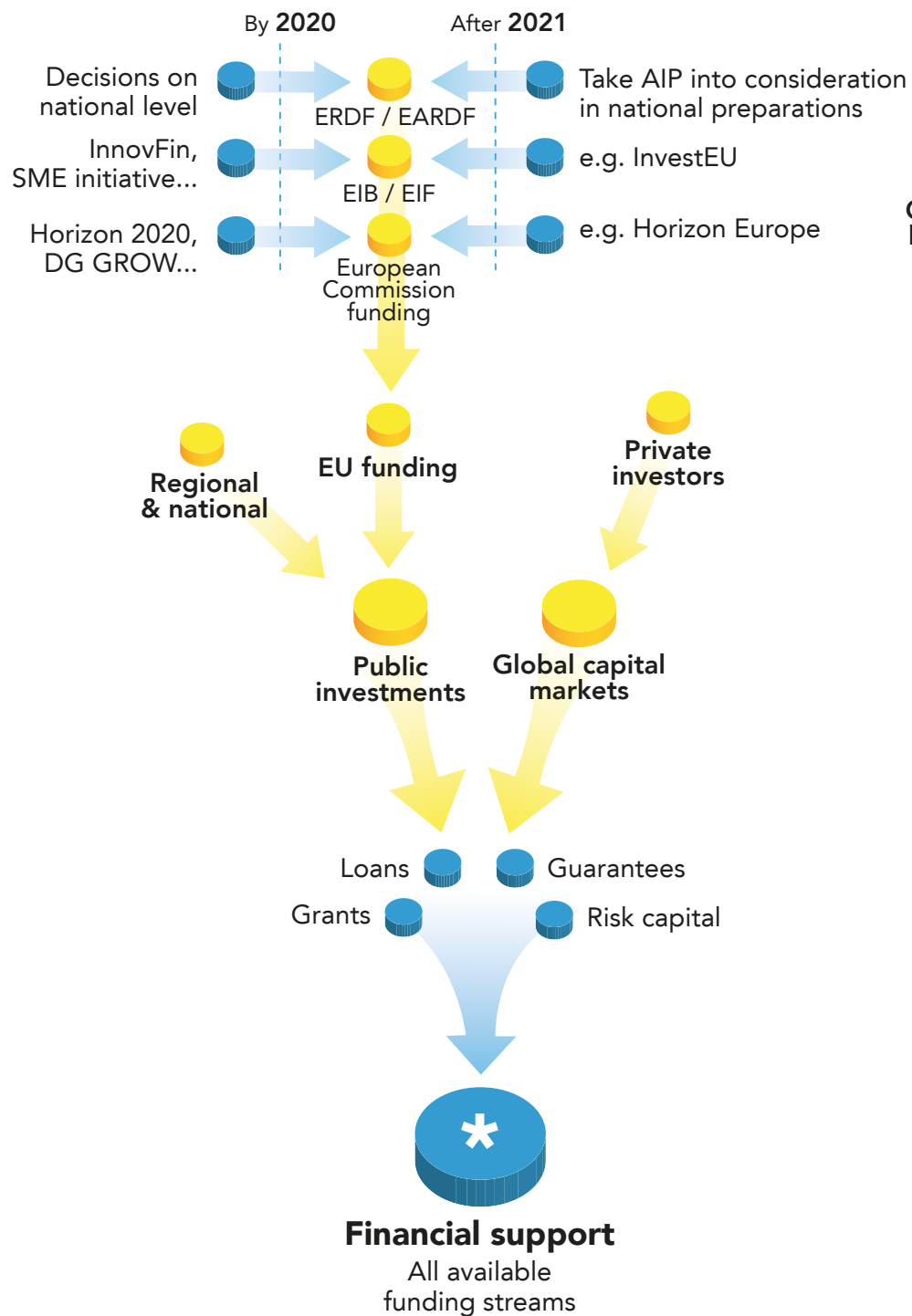


Figure 9:
Example of a possible organisation
of AIP building blocks



4.2. Way forward: a fully-fledged quantitative feasibility analysis

The next phase will consist of a fully-fledged and quantified feasibility analysis. Before undertaking such a study, decisions should however be made by the NSPA Regions. In terms of the immediate next steps, a meeting should be organised to:

1 Based on the present scanning exercise, select the most relevant investment gap(s) to be further addressed by the feasibility study;

2 Validate the requirements of the feasibility study and organisational modalities for the process to go on (for instance, setting up a private investor mirror group).

Sub-subsequent steps will include:

3 Finalise the technical specifications and resources for the feasibility analysis;

4 Organise a mapping of private investors;

5 Set up the process and organisational modalities for the study – including the establishment of contacts with the European Investment Fund and European Investment Bank Advisory Hub.



arcticsmartness.eu/AIP-annexes

This QR code and website address brings you directly to all the identified relevant investment cases quoted in this report.

