



Empowering
innovation intermediaries
to generate sustainable
initiatives to incentivise
and accelerate
the commercialisation
of space innovation

D4.3: InnORBIT Capacity Building Programme - Interim version



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement no 101004212.



Grant Agreement 101004212

Empowering innovation intermediaries to generate sustainable initiatives to incentivise and accelerate the commercialisation of space innovation

COORDINATION AND SUPPORT ACTION

D4.3: InnORBIT Capacity Building Programme - Interim version

Issued by:	SpaceTec Capital GmbH
Issue date:	01/09/2022
Due date:	31/08/2022
Work Package Leader:	TechTour Global (TTG)

Start date of project: 01 January 2021

Duration: 30 months

DOCUMENT HISTORY		
Version	Date	Changes
0.1	05/08/2022	First version
0.2	09/08/2022	First version for quality feedback
0.9	29/08/2022	Final version after consortium review
1	01/09/2022	Final version for submission

DISSEMINATION LEVEL		
PU	Public	X
PP	Restricted to other programme participants (including the EC Services)	
RE	Restricted to a group specified by the consortium (including the EC Services)	
CO	Confidential, only for members of the consortium (including the EC)	



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement no 101004212.

MAIN AUTHORS

Name	Organisation
Thomas Tanghe, Emilio Crespo	STP

QUALITY REVIEWERS

Name	Organisation
Milena Garthley, Teresa Barber	TTG
Cristina Stancu	ROS
George Malliopoulos, Apostolos C. Tsolakis	QPL

LEGAL NOTICE

The information and views set out in this report are those of the authors and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

© InnORBIT Consortium, 2022

Reproduction is authorised provided the source is acknowledged.



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement no 101004212.

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
1 INTRODUCTION.....	4
2 THE RATIONALE OF THE INNORBIT CAPACITY BUILDING PROGRAMME	6
2.1 The landscape of the programmes	6
2.2 The programmes under the project workflow perspective	7
2.3 Earliest steps towards the definition of the programmes.....	8
3 FINE-TUNING OF THE PROGRAMME – FROM THE INITIAL TO THE INTERIM VERSION.....	11
3.1 Common findings during the deployment of the CBP and BSP	11
3.2 Specific changes and adjustments from the previous version of the CBP	12
4 THE CAPACITY BUILDING PROGRAMME (CBP).....	13
4.2 Programme conception.....	13
4.2.1 <i>Overview of the CBP</i>	13
4.2.2 <i>The CBP relation to the service and initiatives</i>	14
4.3 CBP deployment	15
4.3.1 <i>Delivery method</i>	15
4.3.2 <i>Curriculum</i>	16
4.3.3 <i>Deployment stages</i>	17
4.3.4 <i>CBP waypoints</i>	18
4.4 Programme Initiatives offered to the intermediaries	20
4.4.1 <i>Space training for intermediaries</i>	20
4.4.2 <i>Space café</i>	21
4.4.3 <i>Space hackathons</i>	22
4.4.4 <i>Space sprints, incubators and accelerators</i>	23
5 CONCLUSIONS AND NEXT STEPS.....	24
ANNEXES.....	25
Annex I - Initiatives by Intermediaries.....	25
Annex II – Initiatives by InnORBIT	29
Annex III - InnORBIT’s training syllabus	31

LIST OF FIGURES

Figure 1: Rationale of InnORBIT programmes	4
Figure 2: Inputs on InnORBIT programmes (CBP & BSP)	7
Figure 3: Outputs of InnORBIT programmes (CBP & BSP)	7
Figure 4: InnORBIT stages for the design of the CBP and BSP programmes	8
Figure 5: InnORBIT mapping of actions as shown during the InfoDay	11
Figure 6: Intermediaries' range of initiatives to deploy after the CBP	13
Figure 7: InnORBIT delivery process flow	14
Figure 8: Overview of the services, initiatives, programmes and tools.....	14
Figure 9: stages of the CBP and BSP programmes deployment	15
Figure 10: CBP training for intermediaries	16
Figure 11: 1 st pilot deployment scheme	17
Figure 12: 2 nd pilot deployment scheme	18
Figure 13: 1 st and 2 nd pilot deployment timeline.....	18
Figure 14: Space training for intermediaries' contents.....	20
Figure 15: Overview of the timeline for a space café.....	21
Figure 16: Overview of the timeline for a space hackathon	22
Figure 17: Overview of the timeline of space sprints, incubators and accelerator	23
Figure 18: InnORBIT's training syllabus for the CBP and BSP	31

LIST OF TABLES

Table 1: Outcomes of the co-creation activity and InnORBIT programmes' services.....	10
Table 2: Space training for intermediaries' fact sheet	25
Table 3: Space café fact sheet.....	26
Table 4: Space hackathons fact sheet	27
Table 5: Space sprints, incubators, and accelerators fact sheet.....	28
Table 6: Space entrepreneur's instruction fact sheet	29
Table 7: Knowledge Hub	30

Executive summary

The Capacity Building Programme (CBP) is the programme that trains and supports intermediaries to further support their own innovation ecosystems, allowing them to step into the space sector. Hence, to establish successful and sustainable space innovation initiatives across Eastern Europe. The programme achieves these objectives through training in a space-related topic, so as to raise a minimum of knowledge, together with the transmission of best practices in the organisation of initiatives to support innovators. These initiatives comprise hackathons, sprints, incubators, cafés and accelerators, under the space segment. The knowledge is transmitted from InnORBIT to the intermediaries, first in the consortium, -during the 1st pilot- and later to external innovation intermediaries across Eastern Europe – during the 2nd pilot-. This document details the actions and initiatives set out by InnORBIT and describes the design of the CBP. The methodology is justified by the previous work during tasks 1.1, 1.2 and 1.3, as well as the objectives of the Description of Action for this project and task.

In brief, all Capacity Building Programme actions are crystallised in the Initiative Deployment Plans (IDP), meaning that the training of intermediaries will be captured in the plans that they will implement, detailed in the IDPs the innovation intermediaries elaborate. Thus, the CBP will support conceptualising the IDP which is in fact a detailed plan for the BSP. These plans are the documents that each intermediary develops, with the support of InnORBIT, and which describe in detail the actions for each initiative to be executed during the BSP. Hence, the logic of the Capacity Building Programme is to be the master plan that will guide the intermediaries in the planning of their initiatives (IDP) that will be launched in the periods known as the Business Support Programme (BSP). It is important to understand that IDPs are highly detailed during the first pilot and not so much during the second, due to the allocated resources in each stage.

This document is the interim version of the Capacity Building Programme, the second issue, after the successful implementation of the 1st pilot and in the middle of the 2nd and will be updated once more in the final version.

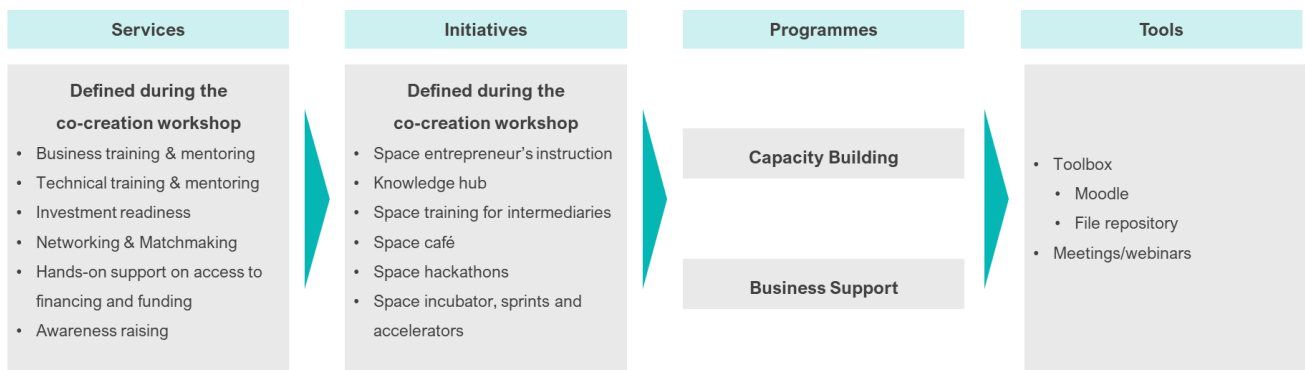
1 Introduction

The Capacity Building Programme (CBP) is InnORBIT's response to the need to increase the level of supporting capacity of Eastern European innovation intermediaries regarding the possibilities that exist in the space sector for their innovators, meaning start-ups, scale-ups and Small and Medium Enterprises (SMEs). The CBP represents a stream of direct support to these intermediaries to improve their exploitation of the gaps in the space sector compared to Western Europe, where the space innovation ecosystem is more mature.

The ultimate goal of InnORBIT is **to generate sustainable local initiatives to foster and support space innovation in Eastern Europe (EE)**. This is achieved through a chain of programmes and actions, starting with the CBP, followed by the Initiative Deployment Plan (IDP) which is implemented during the Business Support Programme (BSP). Therefore, the CBP will assist innovation intermediaries to organise initiatives for supporting their niches of start-ups, scale-ups and entrepreneurs, in particular in the exploitation of the European Space Programmes Galileo, EGNOS and Copernicus. The CBP consists of a roadmap of support and training, which will further allow innovation intermediaries to set up and run initiatives that provide business support services - *such as foreseen in the Business Support Programme* - with the assistance of their entrepreneurs, start-ups and scale-ups. Moreover, InnORBIT's local initiatives target to be sustainably established when being run by innovation intermediaries (e.g., clusters, innovation hubs, etc.) during the project.

InnORBIT initiatives are offered within the programmes designed in this deliverable and D1.5 - Business Support Programme (BSP), fine-tuned in the interim version. In addition, monitoring and support plans are established for the implementation stage¹. The initiatives will satisfy a series of services ideally desired by intermediaries, identified during the co-creation workshop last June 2021. Hence, the InnORBIT programmes, Capacity Building Programme (CBP) and the Business Support Programme (BSP) enable intermediaries to set up initiatives through which they will deliver business support services to innovators, assisted by the InnORBIT with its tools. Graphically this is summarised as follows:

Figure 1: Rationale of InnORBIT programmes



There is a strong relationship between the CBP and BSP programmes, having overlapping boundaries and one is the continuation of the other. **InnORBIT helps and builds the capacity of intermediaries to launch successful innovation initiatives (CBP) and self-sustain them.** However, InnORBIT will not be the one to run them. In supporting local start-ups, InnORBIT will deliver material directly to start-ups in the ecosystem

¹ D4.1 InnORBIT framework for monitoring and evaluation & D4.2 Evaluation and validation results - First round

through its Toolbox but channelled through local intermediaries so as not to detract from their role and not to place InnORBIT as a competitor of the intermediaries by entering into their business of coaching start-ups.

Therefore, the nomenclature used:

- **Programmes** are a set of initiatives aimed at innovation intermediaries or start-ups, scale-ups and entrepreneurs. InnORBIT programmes are the Capacity Building Programme (CBP) and the Business Support Programme (BSP)
- **Initiatives** are an individual set of services, events, modules, support and guidance to be offered to intermediaries encouraging them to assimilate and deploy within their network. They are described in the Initiative Deployment Plan (IDP).
- **Services**, the elements composing the local space initiatives, are to be provided by the intermediaries which may include a number of the initiatives through the BSP. The services were firstly defined during the co-creation workshop as required characteristics or items to be deployed to innovators.
- **Tools**, the components of InnORBIT's digital toolbox (i.e. platforms, methods, programs) aiming to facilitate the delivery or to deploy the BSP and CBP to end-users
- **Modules** or **courses**, a set of lectures, for the core training and mentoring services
- **Lectures**, meaning individual units of training about 20 to 60 minutes. They may include guides, books, further readings, and other training or educational material

Both programmes are underpinned by the project findings identified in:

- The European space support landscape: Insights from Central Eastern and South-eastern Europe (D1.1)
- Needs and challenges of innovation ecosystems and intermediaries for taking up activity in the EU space sector (D1.2)
- Co-design of capacity building and business support programmes (D1.3)

As a reminder, both programmes build on the needs identified in the work outlined earlier. The first need is the lack of space-related networks, which penalises space start-ups that could thrive in Eastern Europe. **The space sector is highly international and Eastern European countries are affected by the small size of their space ecosystem.** The second aspect is the lack of funding for space research. While this is shared by other innovation sectors, space requires huge capital with long payback periods, making it impossible for new entrants to access funding. On the other hand, training and mentoring are core modules and services in the BSP, in an attempt to close the technical and business knowledge gap. This connects with the lack of knowledge of the space sector, another factor that has strongly influenced the design of the InnORBIT programmes.

Subsequently, the co-creation workshop aimed to engage experts from the business, investment, and the space sector to co-design, together with the consortium partners, InnORBIT's Capacity Building and Business Support programmes. Many initiatives and services were proposed during the workshop and reduced to the six most prominent services: mentoring sessions, investment readiness training, networking, awareness raising activities, matchmaking, and support for public and private funding. Based on these, the training needs of the innovation intermediaries were assessed, and they are being offered as a tailor-made Business Support Programme for the subsequent delivery of the InnORBIT services to the entrepreneurial ecosystems.

2 The rationale of the InnORBIT Capacity Building Programme

2.1 The landscape of the programmes

InnORBIT will address the need for sustainable initiatives in Eastern Europe for supporting start-ups, scale-ups, and entrepreneurs in the space industry. These needs stem from those identified in the scope of the InnORBIT project and during the preliminary study phases. The latter was the study of the European space support landscape¹ together with the needs and challenges of innovation ecosystems and intermediaries² and the co-design of the programmes³. The co-design of capacity-building and business support programmes was based on the information obtained during the co-creation workshop, where more than thirty participants, including regional entities and innovation intermediaries, pointed out the most critical aspects and needs of their innovation ecosystems.

The space sector is divided into two main segments according to their different applications: upstream and downstream. It is usual to find a midstream category for the operators that are involved in upstream and downstream. The upstream segment includes all businesses dealing with spacecraft manufacturing and launchers, while the second segment comprises applications that work with the data or signals obtained by the upstream segment and apply to services & products of everyday life. Logically, **there is a strong barrier to entry in terms of knowledge, cost, and experience to perform tasks in the upstream segment. In contrast, downstream applications have a low barrier to entry, with the doors open to new competitors and ideas.** Recent years have seen a growth of companies in what is known as NewSpace, or the community of relative new space companies working independently of governments and their major customers, providing cheaper and faster solutions that enable easier access to space. This new landscape of opportunities, together with the European Union's space programmes: Galileo, EGNOS and Copernicus open up possibilities to leverage Eastern Europe as a niche for space entrepreneurship, especially in its downstream applications in combination with NewSpace, reducing the distance with the upstream products and services.

The **lack of knowledge and space expertise in Eastern Europe creates a strong need for the implementation of a sound training and mentoring programme** in this field. It could be used for any of the new entrepreneurs or start-ups from both space and non-space sectors, in the domains such as transport, logistics, agriculture or energy, healthcare, maritime, environment, etc. More specifically, InnORBIT CBP and BSP will seek to extend bridges to Copernicus and its wide dissemination networks, such as the Copernicus Academy and its downstream applications, through specific training, including access to data and Copernicus DIAS, enabling the development of entrepreneurs at a seed stage idea. Correspondingly, the CBP and BSP will strive to meet the identified training needs, but instead of creating content from scratch, one of the objectives of this project is to leverage the large amount of content previously created by the Space Hubs programmes. In other words, bridges shall be built between InnORBIT and other EU initiatives for the synergistic exploitation of the entrepreneurial innovation ecosystem. Up to the date of the creation of this deliverable, InnORBIT has achieved partnerships and collaboration schemes with Copernicus Accelerator, Point.IoT, GALACTICA, Fabspace, EBAN, Copernicus MOOC, Go2SpaceHubs, SpaceUp and Space Hubs Network. These consist of raising awareness of both projects, the use of cross-dissemination networks and the exploitation of training material that could fit in InnORBIT framework. Synergies with other European initiatives will continue to be explored in the course of the project as outlined in Task 3.4.

¹ D1.1 The European space support landscape: Insights from Central Eastern and South Eastern Europe

² D1.2: Needs and challenges of innovation ecosystems and intermediaries for taking up activity in the EU space sector

³ D1.3: Co-design of capacity building and business support programmes

2.2 The programmes under the project workflow perspective

InnORBIT's CBP is built on the insights gained during the co-creation workshop¹, the survey campaign² and the study phase of the local ecosystems in Greece, Romania, Slovenia and Croatia³. The plan, presented in chapter 4, addresses the objectives set on the previous tasks 1.1, 1.2 & 1.3, setting the path for task 1.4 with this deliverable. Also, future tasks 3.1, 3.2, 3.3, and 3.4 are preliminarily framed in these plans:

- Task 3.1 → implementation of the CBP, 1st pilot, on consortium partners and 2nd pilot on external intermediaries
- Task 3.2 → implementation of the BSP, 1st pilot, by consortium partners
- Task 3.3 → implementation of the BSP, 2nd pilot, by external intermediaries
- Task 3.4 → establishing synergies with complementary EU initiatives

Figure 2: Inputs on InnORBIT programmes (CBP & BSP)

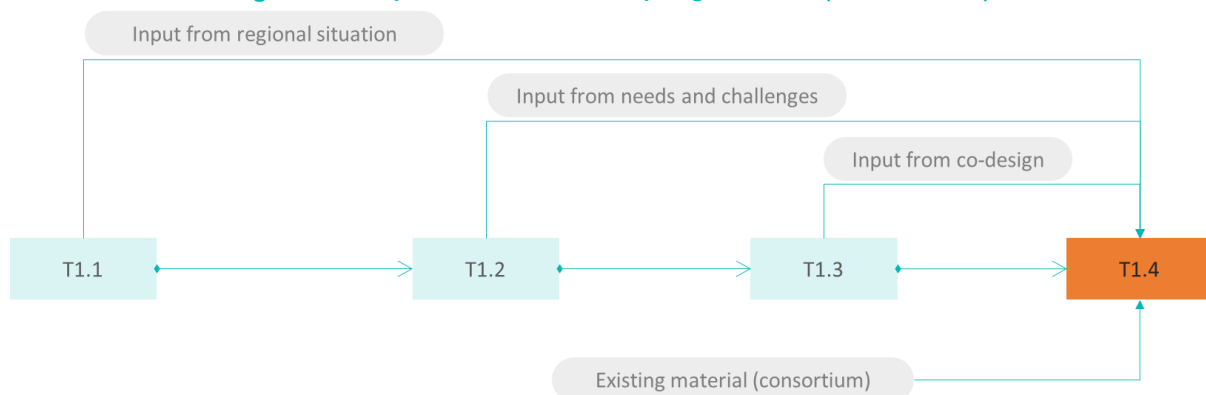
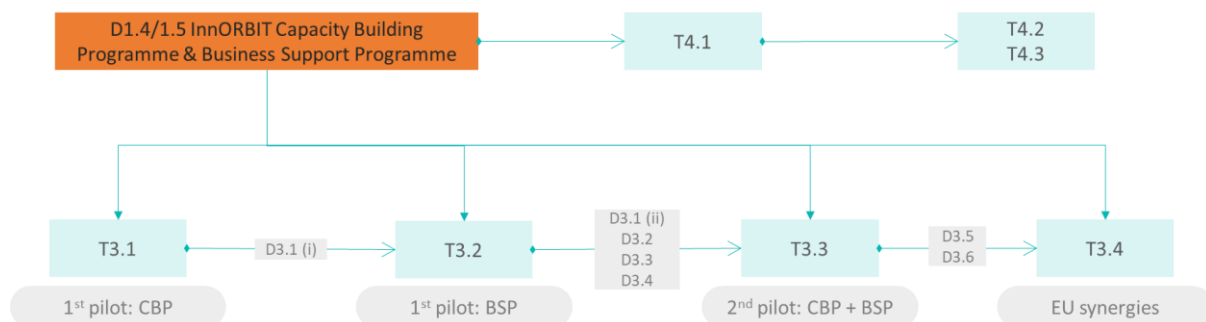


Figure 3: Outputs of InnORBIT programmes (CBP & BSP)



The deployment of InnORBIT programmes is divided into 2 pilots, which refer to:

- Deployment over consortium intermediaries, as the 1st pilot
- Deployment over external intermediaries, during the 2nd pilot

¹ D1.3: Co-design of capacity building and business support programmes

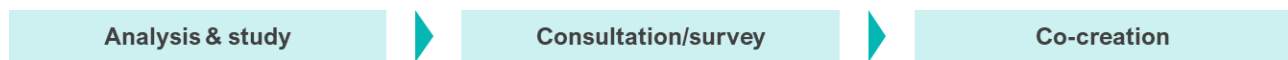
² D1.2: Needs and challenges of innovation ecosystems and intermediaries for taking up activity in the EU space sector

³ D1.1 The European space support landscape: Insights from Central Eastern and South Eastern Europe

2.3 Earliest steps towards the definition of the programmes

InnORBIT strives to achieve the empowerment of innovation intermediaries in the space sector, to ultimately foster Eastern Europe's space innovation ecosystem. To be effective in this task, InnORBIT followed a 3-stage design process to conclude the design of the programmes.

Figure 4: InnORBIT stages for the design of the CBP and BSP programmes



First, the analysis and study stage¹ carried out was based on desk research, expert interviews and validation of the results by our local intermediaries included in the consortium. The aim was to map the innovation ecosystem of 4 representative countries: Croatia, Greece, Romania, and Slovenia, thus getting a first reading of what is happening with space innovation in the region. Deep dives were obtained as results of the research, per country and several variables, as well as macroeconomic pictures, and a stream of spatial innovation activities. The **findings revealed that there is a lack of space-related networks**. This is particularly sensitive in the space sector, where funding linked to this activity requires a large amount of capital and frequently, consortia building. International cooperation and developed networks help to remove part of the uncertainty associated with long-term payback periods. This is **aggravated by limited research and development spending in Eastern Europe (EE)**, which is significantly **below the EU27 average**. The upstream space segment is, therefore, weaker as it is sustained by public funding, due to the higher time-to-maturity products which characterise this industry.

The space industry, which has a strong link to public funding, **is not very well understood**. Therefore, an outsider positioning of EE is pushing them away from the NewSpace rush market. NewSpace refers to the commercialisation and the new opportunities arising from leveraging the space industry into commercial or private companies. Business downstream models are sometimes not different from IT companies. Lastly, the **inexistence of related industries established in Eastern Europe** impedes the possibility of *lateral* growth in the sector. These companies, although not entirely dedicated to the sector, due to their proximity, frequently appear in complementary areas that help growing auxiliary industries and therefore encourage innovation. The negative funding landscape is reinforced by the lack of early-stage funding from banks and the private sector, which is often attempted to be alleviated by institutional funding, such as ESA and Horizon 2020 grants, or EU cohesion funds.

Secondly, the consultation campaign² was executed using a survey providing more granular information on the missing skills of the innovation intermediaries. These actions sought to detect mismatches by comparing the self-perceived skills of the intermediaries against the skills perceived by their local innovators. The survey also asked about the unserved needs of the innovators, covering available skills, missing skills and innovator needs. As for highlights of Eastern Europe's innovation intermediaries, **it was found that they are strong in training, mentoring** and coaching, as well in supporting the improvement of pitching skills. They are **used to deliver training and enhance soft skills in their support networks**. However, some aspects are **missing largely related to the knowledge of the space industry about regulation, market, business, and practices in the space industry. Funding schemes and opportunities**, together with intellectual protection are commonly flagged as an improvement point. This aligns with the innovators' needs, where there is a demand

¹ D1.1 The European space support landscape: Insights from Central Eastern and South Eastern Europe

² D1.2: Needs and challenges of innovation ecosystems and intermediaries for taking up activity in the EU space sector

to get to know the technologies and applications currently trending in the space industry. It can be asserted that there is a general lack of knowledge of the space sector.

Third, the co-creation workshop¹ was a collaborative effort between experts in business, investment and space markets from all across Europe. A significant presence of innovation intermediaries also attended, in an effort to reveal the vectors that the CBP and the BSP should follow. The session, which had a dynamic format to encourage brainstorming and funnelling of ideas, **collectively helped to identify missing resources, networks, knowledge and skills, from the innovators' intermediary perspective**. Starting by acknowledging the major needs of entrepreneurs, the most adequate services in covering those needs were flagged out. Later, brainstormed services were funnelled to select the most important. The process continued by identifying the missing resources, networks, knowledge, and skills associated with those services. In the end, a debate was held on the target audience, desired results, specific tools needed and regional customisations for each local ecosystem. The outcomes of the services and related conditions are summarised in 4.4.

From the previous activities and the co-design of the programmes, it has been determined that there is a **strong need for training on the space market**, its programmes, applications, market, and success stories to guide both intermediaries and innovators. The intermediaries will be implementing the BSP and therefore they will need to master their expertise in the space sector; the market, the funding schemes and opportunities for their start-ups. General support in access to funding and investment readiness, which is a cross-cutting issue for any start-up or entrepreneurial adventure, cannot be forgotten. This should be covered with training on the opportunities that exist as well as regular updates with calls and announcements that may occur during the deployment of the pilots.

Finally, a prior effort has been made to contact all Space Hubs and related initiatives through our network and the databases on CORDIS, ESA and EUSPA to get a picture of the available and previously created material on space innovation and training. This resource investigation has narrowed down the curriculum and training topics and condensed them into the main modules or courses in the syllabus of Figure 18: InnORBIT's training syllabus for the CBP and BSP. This activity has allowed the understanding of what material was and wasn't available to be reused by InnORBIT, allowing to establish a roadmap of material to be created ad hoc.

On the other hand, InnORBIT is not an entity with evaluation authority, nor does it make a monetary offer to intermediaries, so the support and content to be delivered must be sufficiently attractive and effective for intermediaries to implement them pro bono, in order to strengthen their networks and increase the growth possibilities for their ecosystem. Established innovation intermediaries already know how to do their job and know their ecosystem very well. InnORBIT tries to open its activities to the space sector, bridging the gaps that exist, but it is not the aim of the project to train the trainers in their daily routines. Although slight deficiencies were detected between the cross-evaluations of trainees (start-ups) and trainers (mentors), InnORBIT can only make recommendations in these fields. It is the technical knowledge of the space sector that has the biggest gap for non-space entrepreneurs with the exception of Copernicus, which has a large amount of open training, the other European space programmes do not have this backup and **InnORBIT would be the first European initiative to contribute in creating this repository**, as the research and contacting with other European initiatives has shown. Also, it has been observed that it is very common for space-savvy start-ups to fail in their business knowledge. This is a transversal problem for any technical entrepreneur, so training and mentoring will not be disregarded as an important part of the syllabus of the training programme.

¹ D1.3: Co-design of capacity building and business support programmes

Table 1: Outcomes of the co-creation activity and InnORBIT programmes' services

InnORBIT Capacity Building programme			InnORBIT Business Support programme		
Service	Identified entrepreneurs' needs & innovation intermediaries missing skills	Potential training topics	Target audience	Service elements and tools used	Expected outcomes
Mentoring and training (technical and business)	<p>Improve business skills when start-ups scale-up</p> <p>Improve on building new business models and understanding value propositions</p> <p>Effectively manage IP and innovations</p> <p>Knowledge of regulations and technology domains in the local ecosystems</p> <p>Guidance from a very early stage</p> <p>Support to different stages of development</p>	<p>Business modelling and planning</p> <p>IPR management</p> <p>Legal aspects, regulations, and technology standards in the InnORBIT ecosystems</p> <p>Understanding of space technologies – Space 101 for mentors and trainers</p> <p>Space market economics</p>	<p>Innovators at the product validation stage</p> <p>Innovators at the idea validation stage</p> <p>Innovators with developed prototypes</p>	<p>Structured mentorship programmes with action plans, milestones and follow-up sessions</p> <p>High-level guidance from mentors</p> <p>Business plan template</p> <p>NDA, contract, IPR & licensing templates</p>	<p>Go-to-market strategy development</p> <p>Understanding of the market and competition</p> <p>Access to foreign markets</p> <p>Financial planning, pricing and investment strategy development</p>
Investment readiness support	<p>Prepare innovators for accessing private finance</p> <p>Assess the investment readiness level of an innovator</p>	<p>How to assess the investment readiness of a space innovator</p> <p>Practical techniques to entrepreneurs for approaching investors</p> <p>Access to market data</p>	<p>Innovators seeking pre-seed funding</p> <p>Innovators seeking seed funding</p> <p>Innovators seeking Series A funding</p>	<p>Training and use of a self-assessment tool</p> <p>Training and use of a Technology Rating Platform</p> <p>One-to-one sessions on specific topics</p> <p>Investment teaser, Pitch deck, technical plan and business plan templates</p>	<p>Awareness and use of the investment readiness concept</p> <p>Understanding of funding needs and appropriate forms for all development stages</p> <p>Ability to present the vision to potential investors</p> <p>Access to Business Angels and VCs</p>
Networking and matchmaking with industry players and investors	<p>Info on space to non-space sectors' opportunities (how to utilize their expertise in space)</p> <p>Access to the space market (how to reach the right customers, at right time)</p>	<p>Knowing better the key space players in the local ecosystems of InnORBIT</p> <p>New markets and applications of space technologies</p> <p>Designing the right event for impact</p>	<p>Innovators (start-ups, scale-ups, SMEs etc.)</p> <p>Private investors (VCs, private equity firms etc.)</p> <p>Policymakers</p> <p>Innovation intermediaries (clusters etc.)</p>	<p>TRL assessment</p> <p>Pitch training</p> <p>Roundtable discussions</p> <p>Online questionnaires</p>	<p>Establish contact with potential partners (space innovators)</p> <p>Establish contact with potential suppliers</p> <p>Development of trustworthy networks</p> <p>Develop an ability to pivot</p>
Hands-on support on access to financing and funding	<p>Access to public and private funding sources</p> <p>Identify and assist innovators at suitable sources of public and private finance</p>	<p>Space programmes: Copernicus, Galileo / EGNOS, SatCom and their applications</p> <p>Knowing better the European and national public funding opportunities for space innovators</p> <p>Available financing opportunities in the local ecosystems from private investors (business angels, private equities, etc.)</p>	<p>Innovators (start-ups, SMEs, scale-ups, etc.)</p> <p>Researchers</p> <p>Innovation intermediaries</p>	<p>Matchmaking sessions</p> <p>One-to-one sessions with experts</p> <p>Training on private and public funding</p> <p>Online tool gathering relevant info on funding opportunities</p>	<p>A better understanding of the funding landscape</p> <p>Access to funding in line with A business plan of innovators</p> <p>Knowledge and support for ESA funding application</p> <p>Create a network of private investors</p>
Awareness raising on space initiatives	<p>Identify new sectors for business expansion</p> <p>Identify opportunities in non-space related sectors</p> <p>Communicate success stories in space innovation</p>	<p>Bringing together the right ecosystem players</p> <p>Outreach to a general audience and specific stakeholders</p> <p>The entrepreneurial journey by space entrepreneurs (success stories)</p>	<p>Innovators</p> <p>Research organisations</p> <p>Universities</p> <p>Policymakers</p> <p>Technology developers</p>	<p>Curated matchmakings</p> <p>Info days</p> <p>Meetups and conferences</p>	<p>Connect competent ecosystem players to each other</p> <p>Outreach to general and targeted audiences</p> <p>Open channels to policymakers and authorities</p> <p>Spur discussions about the space sector among stakeholders</p>

3 Fine-tuning of the programme – from the initial to the interim version

3.1 Common findings during the deployment of the CBP and BSP

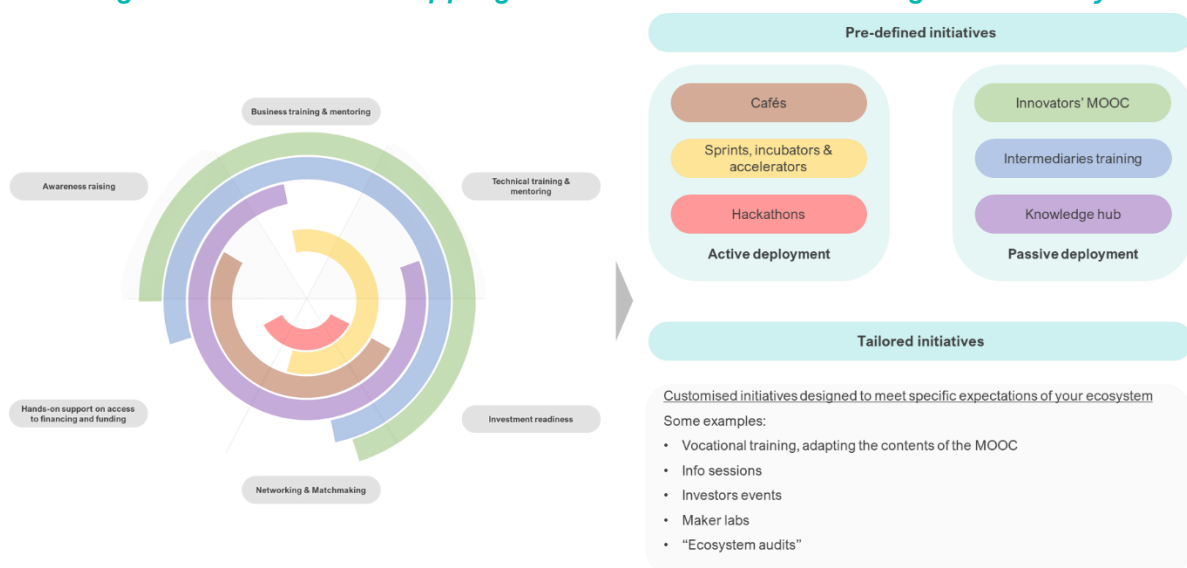
During the training phase of the Capacity Building Programme, several notable points have been observed that **have led to changes in Capacity Building Programme practice**.

Perhaps the two biggest ones are, first, both the Capacity Building and the Business Support programmes cannot be mentioned to external intermediaries. **It is a continuous flow** and intermediaries do not understand the difference, as they receive support from InnORBIT to develop their initiatives and implicitly their skills and capabilities. Hiding the internal terminology was the normal procedure, easing the understanding and the services offered.

And the second variation, linked to the first, is that **intermediaries do not need or want a fixed set of initiatives**. They tend to know about them, and to some degree, they know what can be achieved by implementing them. It has been found **particularly useful to show examples and a full mapping** of all the different initiatives because it helps to locate strengths and weaknesses quickly, by comparison against the map.

The service offering is quickly understood with the outline presented during the InfoDays, as InnORBIT transforms business services into initiatives useful for the local intermediary, training it in the process and later on supporting them during the deployment.

Figure 5: InnORBIT mapping of actions as shown during the InfoDay



The process itself has not changed; it remains the same but has been highly streamlined. There are no strict formalities, and you jump quickly to the phase you want, starting from the general outline of Chapter 4, or the CBP and the same chapter for the BSP. Lastly, one of the major learnings has **been to maximise the flexibility of the programmes, a key aspect of the custom tailoring for each intermediary**. This increases the attractiveness of the programme, as it gives room for the development of each intermediary's own ideas and ambitions.

3.2 Specific changes and adjustments from the previous version of the CBP

Intermediaries, particularly those who do not have large resources, are **reluctant to take fixed training** and are not keen on receiving help that is not related to their line of work and expansion interests. While this was anticipated, in practice it has been accentuated to the extent that **an intermediary can drop off from the programme** if it is talked about training for too long during a session, or about anything that does not move swiftly to their interests.

The **training shall be very direct** towards what the innovation intermediaries want to achieve. In this way, they participate and get actively involved in the programme. If this is not achieved, there is a danger of dropping out. In relation to the BSP, **the CBP training has to move in the same direction as the initiatives** they would like to launch later on.

The **most efficient way to deliver this training is throughout the check-in meetings, by continuously assessing each small step** that is necessary to develop the initiative. For example, in a call discussing the organisation of a CASSINI Hackathon, a detailed plan of the different milestones is made. It is during this plan that the degree of space awareness of the intermediary is evaluated, and when a flaw is detected, some time is spent talking about each specific element. The same goes for every small detail related to the initiative. It is the result of **applying flexibility and adaptation to the needs of each intermediary**, which are vastly different in the end. At the end of the programme, the innovation intermediary is comfortable and enabled to deploy the initiative thanks to the previous CBP which supported only where he wanted and needed.

This custom tailoring does not eliminate the entire fixed design part (D1.4 InnORBIT Capacity Building Programme, initial version). The programme shall be simply agile in selecting the content needed at each stage. One example is that, when intermediaries are interested in taking lessons on their own, there is recorded and on-demand material accessible through the Toolbox. Although not usually in demand, several intermediaries have requested, explored and taken lessons through InnORBIT's e-learning platform. **Different options and solutions are ready when the intermediary requires so.**

The most effective way to keep track of the training is **maintaining a periodic pace**, thus avoiding stress and also setting lengthy periods. Since it is almost impossible to think that a homework schedule of activities can be set up, it is important to **maintain attention by doing bilateral cooperation**. The involvement of the intermediaries enriches their skillset passively. This is a result of the evolution of the original programme; particularly in streamlining the lines connecting the milestones.

For these reasons, **InnORBIT's role has been defined as that of an advisor helping to understand, develop skills and ultimately support the implementation of a sustainable innovation initiative in the space sector.**

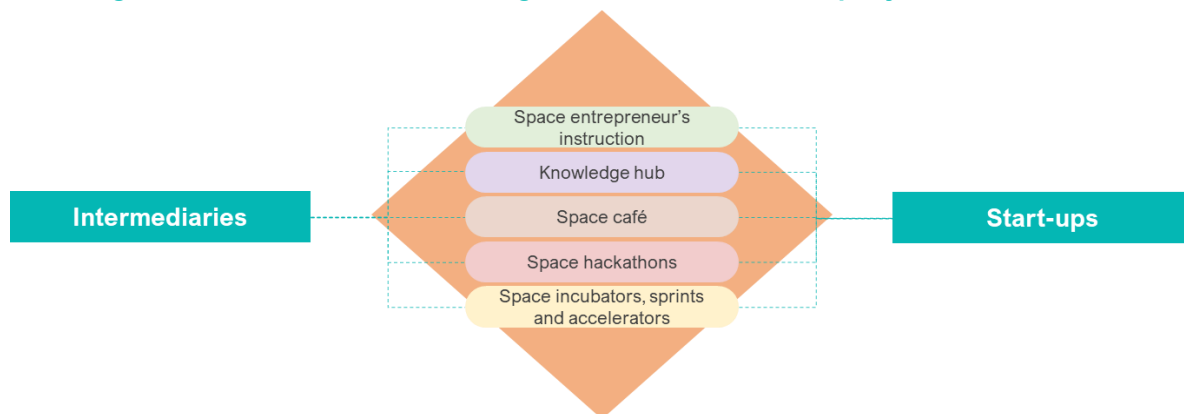
4 The Capacity Building Programme (CBP)

4.2 Programme conception

4.2.1 Overview of the CBP

The CBP is the **programme composed of training and advisory services that InnORBIT will deploy for supporting the innovation intermediaries**, as well as helping them to develop their **Initiative Deployment Plan (IDP)** or a simplified draft as described in some tracking notes or cards. From the range of initiatives proposed, the innovation intermediaries will choose the initiatives they would like to deploy in their ecosystems during the InnORBIT pilot rounds. The CBP offers, initially, to the scouted intermediaries a range of 5 fixed initiatives, allowing them to choose what they would like to have available for their start-up ecosystem and fully tailoring them. The initiatives are not limited to these, actually InnORBIT supports them in expanding their innovation activities to the space sector. Thus, the CBP meets the goals of the project in supporting innovation intermediaries to set up and run local space initiatives to support space entrepreneurship in their local ecosystems, as shown in the first phase of the image below.

Figure 6: Intermediaries' range of initiatives to deploy after the CBP



Among the initiatives, the Space Training and Knowledge Hub do not require the intermediary's proactive participation, but the other group of initiatives could entail them to dedicate capital and definitely personnel resources.

The initiatives chosen by the intermediaries will trigger InnORBIT to train and help them to further develop the initiatives during the BSP. **The CBP and BSP programmes are difficult to be conceived as units divisible from each other**, as depicted in Figure 7: InnORBIT delivery process flow. They can only exist as to cause and purpose between the two and some explanations across deliverables D1.4: "InnORBIT Capacity Building Programme – First version" and D1.5: "InnORBIT Business Support Programme – First version" may encompass similar elements.

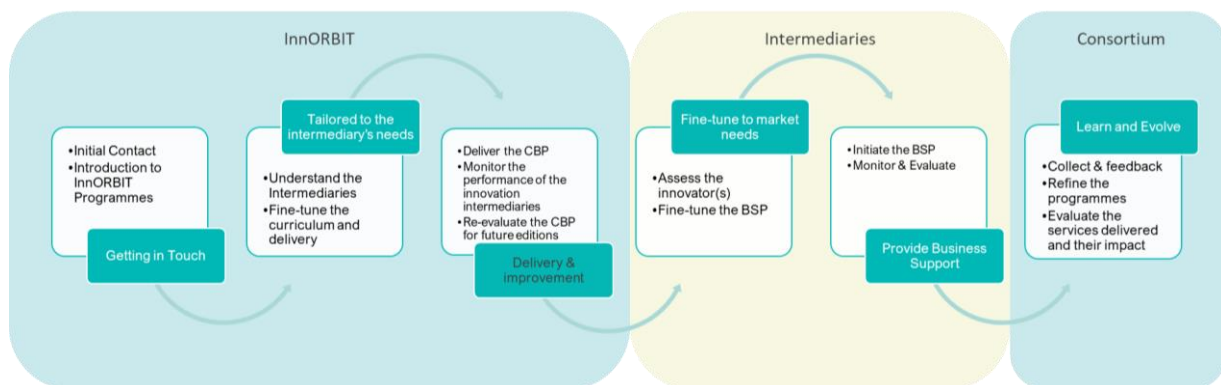
In the first stage, contacts are initiated with the intermediaries. After selecting initiatives and reaching an agreement, the CBP is released, whose contents are tailored and fine-tuned according to their needs, weaknesses, and ambitions. This selection will be guided during talks with InnORBIT as described in the waypoints chart in Section 4.3.4, CBP waypoints. During this second stage, the BSP, InnORBIT will be monitoring and acting as a support entity for the intermediaries. InnORBIT will also provide the toolbox, including repositories of material, for intermediaries and start-ups to use directly.

The delivery of the CBP and BSP is foreseen to reach a large number of organisations. These will force the training to be on-demand, requiring some part of the lectures to be recorded. As the initiatives will comprise recorded audio-visual material, it will be necessary to have a platform (Toolbox) to act as a repository for the

training. This toolbox will also include links and complementary material obtained from other European initiatives. InnORBIT's assistance to intermediaries is projected to be at certain points: kick-off and on-demand, allowing some flexibility. Online introductions to the programmes, formal explanations of each initiative, and tailoring will require 1:1 contact between InnORBIT and each intermediary. Given that the BSP is deployed by the intermediary, it will be necessary to build a memorandum of understanding before each intermediary launches selected initiatives, so as to get some commitment to track and monitor their start-ups.

Nevertheless, the main delivery method is through check-in calls, with a regular period that allows both intermediaries and InnORBIT to work and advance towards the deployment of the initiative.

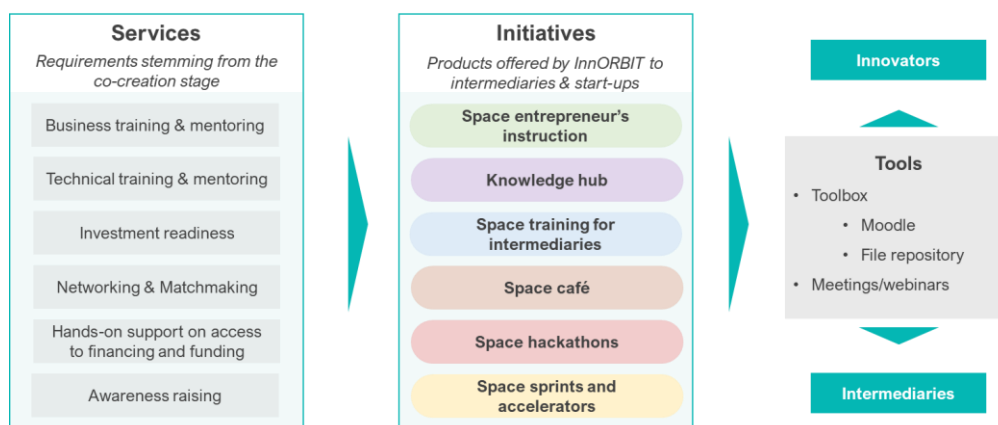
Figure 7: InnORBIT delivery process flow



4.2.2 The CBP relation to the service and initiatives

InnORBIT programmes are delivered in the form of 6 initiatives for both the CBP and BSP. The services, provided for the start-ups, scale-ups and SMEs, will be deployed by the intermediaries during the BSP under the initiatives they have selected, according to sus missing skills and innovation ecosystem. The graph, Figure 8: Overview of the services, initiatives, programmes and tools, depicts how the demanded services flow into the designed InnORBIT initiatives, to finally be delivered to intermediaries (CBP) and innovators (BSP) through the tools. **The CBP ensures that intermediaries have adequate support to deliver the initiatives.** For this, **the CBP trains, in a tailored way, the intermediaries on the implementation of each initiative.** Each initiative starts with specific training that continues with a custom follow-up and support, thus ensuring proper deployment on the intermediary. The support provided during the CBP also includes guidance during the elaboration of their Initiative Deployment Plan. These documents will define the milestones that each intermediary will follow during the implementation of its initiative.

Figure 8: Overview of the services, initiatives, programmes and tools

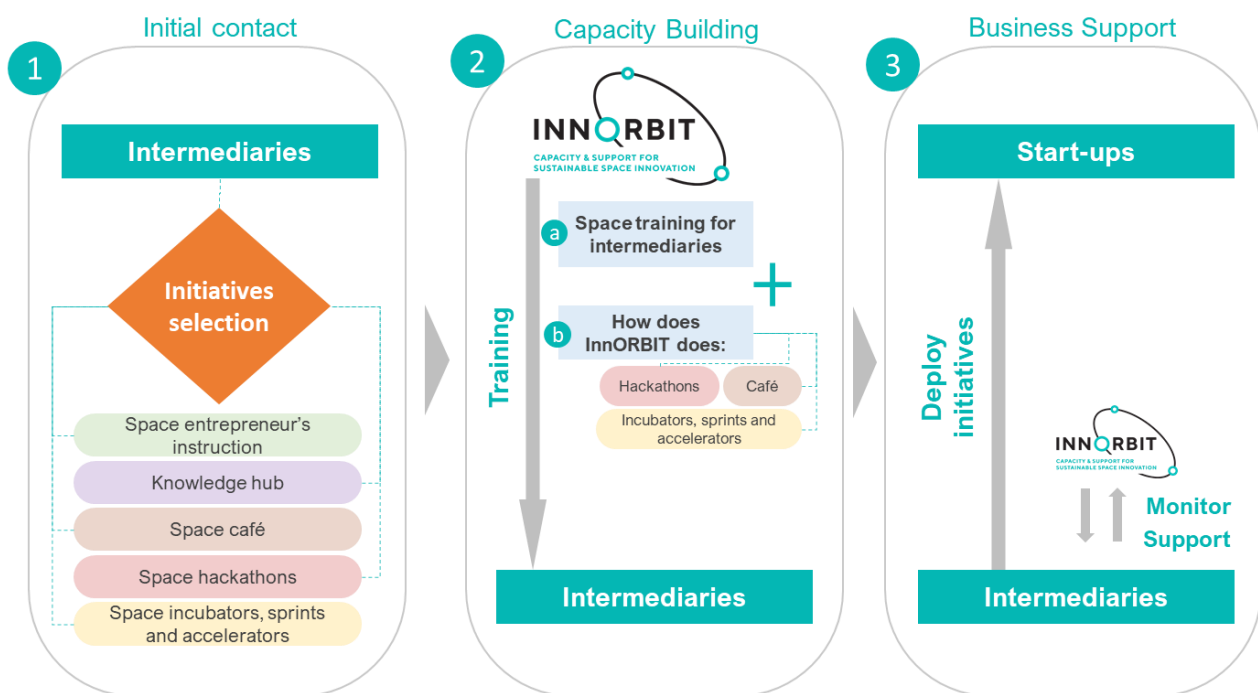


4.3 CBP deployment

4.3.1 Delivery method

The **CBP is deployed through planned calls, meetings, and the use of the InnORBIT Digital Toolbox by means of accessing the platforms and utilities included in the toolbox.** The delivery is preceded by a series of previous activities that are not part of the CBP, such as the scouting of intermediaries or the invitation to express their interest. The initial contact and presentation of InnORBIT initiatives take place in a series of meetings to understand what needs and missing skills may exist. **The full spectrum of services, initiatives and modules are presented to the intermediary at this point for its consideration.** The gaps are evaluated in a direct conversation between InnORBIT and each intermediary, funneling the selection of initiatives based on their identified needs. In the end, the intermediary cherry-picks one or more initiatives that will entail the services needed, by the signature of a Memorandum of Understanding (MoU). The signature of the MoU is the *de facto* separation between stages 1 and 2, thus the deployment of the CBP.

Figure 9: stages of the CBP and BSP programmes deployment



According to graph Figure 9: stages of the CBP and BSP programmes deployment (stages 1-2-3), a simplification of the entire InnORBIT process, the CBP would strictly fall under stage 2. This stage will solely be the deployment of the CBP, its contents, training and support, which will continue during the period of the BSP.

Due to its fully tailored nature, fully detailed steps of the CBP deployment cannot be detailed beforehand since they will be defined in each MoU. However, general steps can be found in more detail under Figure 18: InnORBIT's training syllabus for the CBP and BSP.

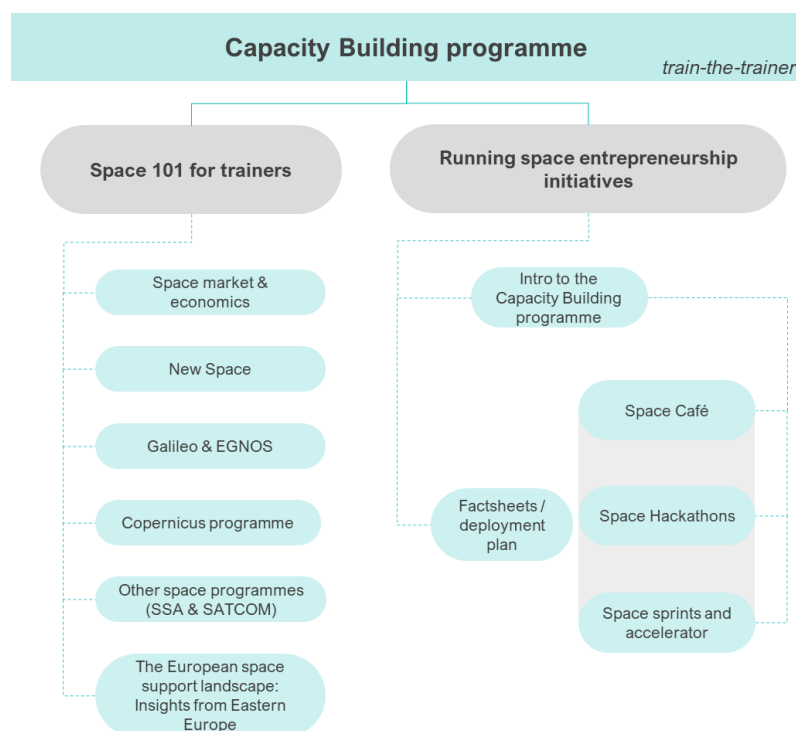
4.3.2 Curriculum

There is training for each initiative so that intermediaries are able to execute all the initiatives that InnORBIT proposes. The curriculum that InnORBIT provides here is grouped into two modules:

- **"Space 101 for trainers"** is an in-depth module on the space market, trends and new business, European space programmes and the state of the art on space innovation with a focus on Eastern Europe. The aim is to give the innovation intermediary an understanding of the dynamics behind this particular sector by familiarising him with space activities. The contents of "Space 101" will be recorded so that they can be reused on-demand by multiple intermediaries, multiple times. It is considered that this module should be "mandatory" for all intermediaries, and this should be stated in the Memorandum of Understanding. The training module has been prepared by the InnORBIT consortium for this project. The planned syllabus covers 3 main categories:
 - **Space market**, how the market works and how much money is there, players and stakeholders. As well, what is NewSpace is and what opportunities it offers.
 - **Space programmes**, from a technical perspective, with an emphasis on the major European programmes: Galileo & EGNOS, Copernicus, SSA and SATCOM.
 - The **status of space innovation support in Eastern Europe**

- The **"Running space entrepreneurship initiatives"** is the second module of the CBP and consists of a group of lectures on how consortium members currently implement such initiatives in their normal working routine. This serves as training for intermediaries by comparison with their own protocols. The module deals with the organisation of hackathons, accelerators, incubators, sprints or cafés, with a sound space flavour. These initiatives implement all the services previously identified at the conception of this plan, such as mentoring and training, investment readiness support, networking and matchmaking with industry players and investors, hands-on support on access to financing and funding and awareness raising on space.

Figure 10: CBP training for intermediaries



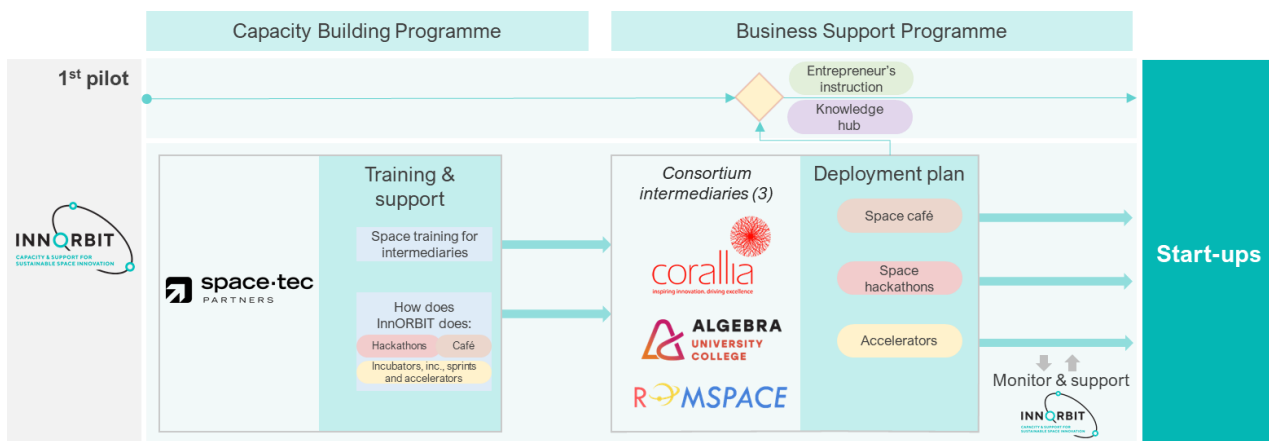
These modules are the core training of the CBP. The support to the intermediaries would be accompanied by control follow-ups, defined at the beginning during the MoU and the further deployment plan. The CBP and BSP programmes may be understood as a continuum of knowledge transfer between InnORBIT-Intermediary-Start-up. The role of InnORBIT changes from instructing and training during the CBP to supporting, monitoring, and guaranteeing the success of the BSP. A full picture of the curriculum of InnORBIT is attached in the annexed, Figure 9: stages of the CBP and BSP programmes deployment.

4.3.3 Deployment stages

The InnORBIT programmes officially start in M10 of this project, following the submission of reports D1.4 and D1.5. The project will spread the efforts in 2 deployment stages, first on the 3 intermediaries inside the consortium so as to gather internal feedback for the further improvement of the programme, subsequently supporting a more effective deployment on new intermediaries, at least 17, helping to establish local sustainable initiatives across Eastern Europe.

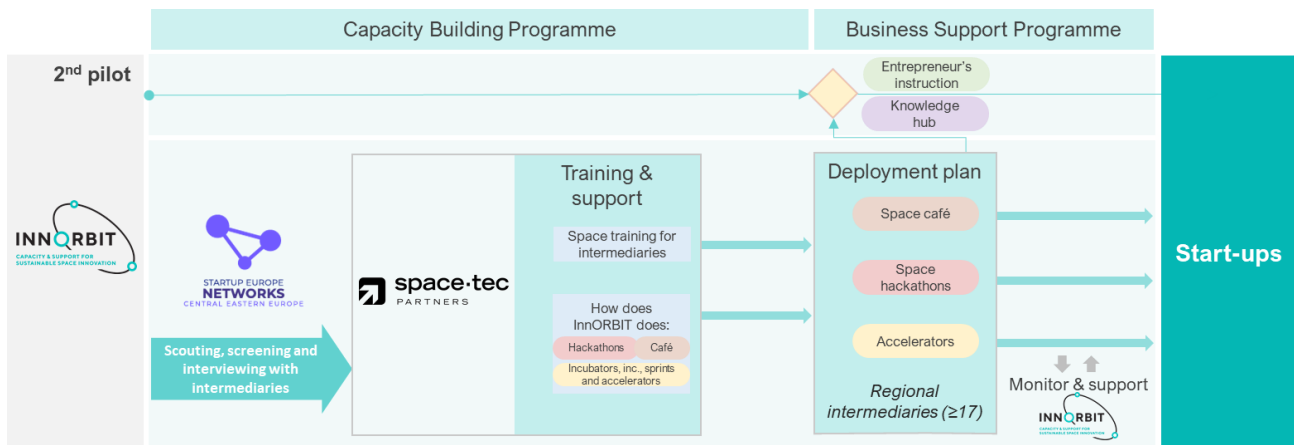
- 1st pilot.** At this stage, InnORBIT will start the delivery of CBP on Corallia, Algebra and ROMSPACE. The details of the contact protocol are further explained under CBP waypoints, chapter 4.3.4. As they are project partners, the preliminary contact, programme explanations and screening stages will be avoided, starting with the first workshop where the initiatives are explained. Once these are presented, our intermediaries will express their interest in some of them and InnORBIT will then advise and discuss the plans of each intermediary, offering advice and guidance for their implementation. In addition, the monitoring framework will be established during implementation, regularly checking progress towards achieving to benchmark the KPIs.

Figure 11: 1st pilot deployment scheme



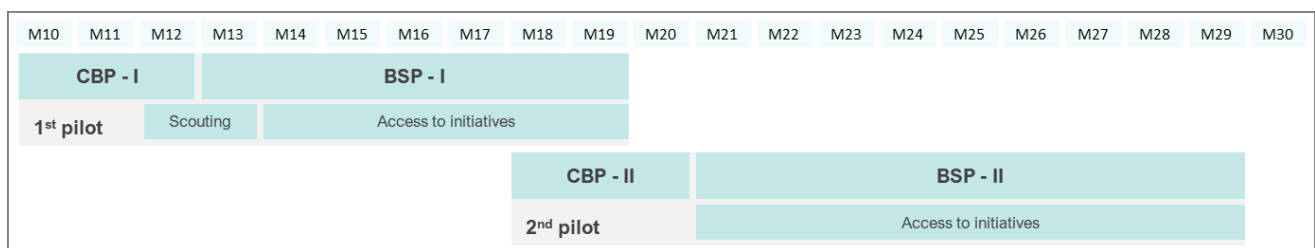
- 2nd pilot.** The process of this second stage is the same as the first with the exception that there is a first part where scouting and open call for applications to regional intermediaries will be carried out. Once these are received, contact calls are made in order to funnel the interest of the intermediary into InnORBIT programmes. Similarly, the process is more detailed in Section 4.3.4., CBP waypoints.

Figure 12: 2nd pilot deployment scheme



As reflected in Figure 11: 1st pilot deployment scheme and Figure 12: 2nd pilot deployment scheme, both pilots are procedurally the same. However, the number of intermediaries on which each pilot is applied, and the time frame are different. There is a temporal overlap between the two pilots, which can be clearly seen in Figure 13.

Figure 13: 1st and 2nd pilot deployment timeline

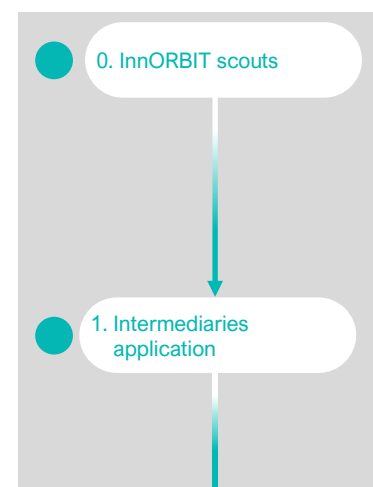


4.3.4 CBP waypoints

The CBP waypoints are the most granular description of deployment at an operational level. Due to the flexibility of the process, they represent the major functional groups that follow the logic of the process, starting by receiving applications, filtering them, organising info sessions, 1:1 conversation and signing the MoU for the launch of the CBP and its subsequent BSP.

- **Step 1: Open Call**

- Deadline to express interest in M18 (2nd pilot)
- High-level information about the CBP and BSP to be shown on the webpage and registration
- Registration form/page (intermediary basic info, space awareness level, type of innovators, etc.)
- Promoted campaigns on social media and bilateral communications
- Automatic response should be provided to the intermediary when completing the expression of interest



- **Step 2: Screening process**
 - To cluster together intermediaries with similar needs
 - Access to the responses from the first registration
 - Review and comment on the applications on a rolling basis, to create homogenous groups, if possible, for the group calls
 - InnORBIT (SEN) will inform the applicants and inviting them to the group call

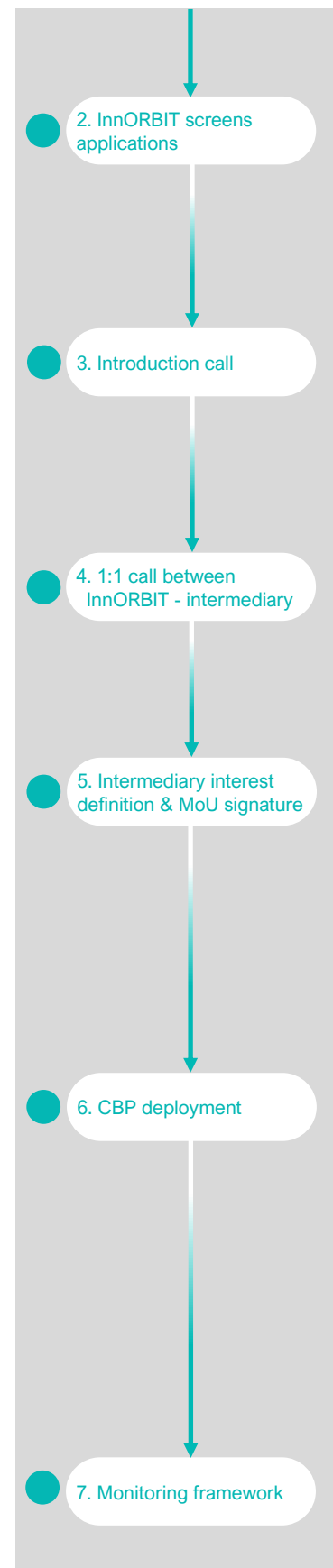
- **Step 3: Group calls with intermediaries (info day)**
 - Deliver the whole picture of InnORBIT. Next steps
 - Introduction to InnORBIT services and the offered initiatives

- **Step 4: Individual call**
 - Bilateral between InnORBIT (STP) and the intermediary
 - Scope of the services needed and tailoring of the initiatives. Initiative selection based on the services needed
 - Administration and management: MoU and commitment
 - Define timeline and monitoring
 - Demonstration of the Toolbox

- **Step 5: Sign the MoU & kick-off of the CBP**
 - *Indicative* deadline by M20 (BSP period starts in M21)
Tailored MoU including:
 - Steps of implementation (BSP and CBP timeline)
 - Agreement to monitor KPIs
 - Time allowance to explore the toolbox material

- **Step 6: Training release, monitor & support intermediaries within CBP**
 - Toolbox access for intermediaries. Access to the Knowledge Hub. Instructor role in BSP training in Moodle, student role in CBP's Moodle
 - Monitoring of the content quality and impact of the space training
 - **Kick-off workshop** with the intermediary, covering selected initiatives, showcasing the tools, business support services, hands-on experience on the tools, modules demonstration, and draft a timeline about, by the intermediary, the implementation (BSP)
 - Intermediary's plan, resources, objectives & timeline for the execution of the initiative on the BSP
 - Follow-up and monitoring of the plan. Guidance providing and help. Check critical points. On-demand support (email or calls/meetings)

- **Step 7: Feedback on the CBP**
 - Debriefing from the intermediaries on the usage of the Toolbox and supported initiatives
 - Evaluation through a call between InnORBIT (SEN) and the intermediary with a semi-structured interview



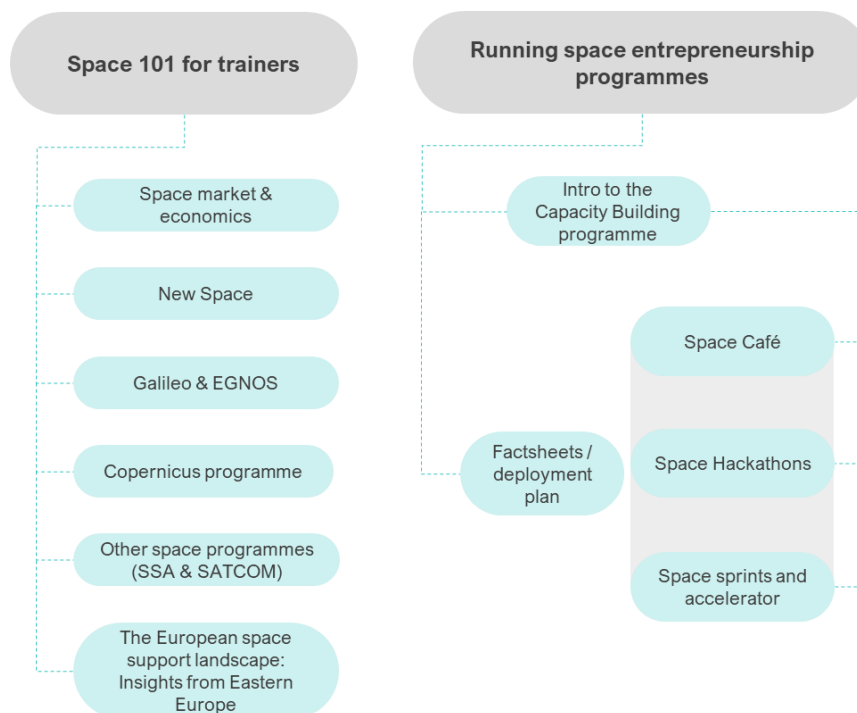
Even though the CBP waypoints end at Step 7, the waypoints extend to the BSP from Step 8 onwards, covering the complete flow of the InnORBIT programmes. The rest of the steps (i.e., the BSP waypoints) are presented in D1.5.

4.4 Programme Initiatives offered to the intermediaries

4.4.1 Space training for intermediaries

The space training for intermediaries is the core initiative to support intermediaries in building technical knowledge on space topics, markets, trends, and the European programmes like Galileo, EGNOS, Copernicus, SSA and SATCOM. This initiative builds on the missing technical knowledge and space gap for the Eastern European intermediaries. Besides the technical information on the space market and programmes, an additional introduction to the space support ecosystem in Eastern Europe will be offered to help understand the situation from a top-down perspective.

Figure 14: Space training for intermediaries' contents



The training programme for intermediaries is predefined, and it has two main modules. The first one, **Space 101 for trainers**, is a course in which the trainer becomes the student and will receive the technical contents created ad hoc by InnORBIT. The intermediary should be able to have an overview of what is happening in the space sector in order to be able to support its ecosystem of entrepreneurs. On the other hand, **Running Space Programmes** consists of a condensed set of lectures on how InnORBIT partners execute these initiatives in their local ecosystems of entrepreneurs. This first lecture will provide insights on the development of an initiative such as Hackathons, Sprints, Accelerators, Incubators or Cafés. This will clarify initial doubts and help intermediaries to develop their own deployment plan for the BSP, based on the factsheets, the draft deployment plan provided by InnORBIT, and the Support established in the memorandum of understanding.

The ultimate goal of this initiative is for intermediaries to be able to develop their own initiatives in a sustainable, effective and successful way with timely or specified support throughout the milestones of their deployment plans.

4.4.2 Space café

A space café is a type of event - virtual or physical - where a group of space enthusiasts meet and discuss space-related topics with an emphasis on New Space, trends and the latest market news considering its potential for start-ups. It is a relaxed, informal, affordable and straightforward event with a strong focus on community building and networking. The key is the cooperation between the different stakeholders, as the outcome is collaborative. This means that the organisation is made up of a group of space stakeholders who try to leverage their network to get speakers of interest. This type of event is often classified as a grassroots event.

The particularity that gives it its name and makes it unique is that the event takes place over coffee, drinks, lunch or dinner, and less frequently in a simple setting without food and drinks.

Figure 15: Overview of the timeline for a space café



For example, potential topics may include:

- Success stories of CEOs from space start-ups
- Thematic discussion of space applications domains, i.e. hyperspectral imaging, InSAR for the construction industry, space-based IoT for workplace safety in the energy sector, or aluminium alloy 3D printing of combustion chambers.

And some space café examples include:

- Geoawesomeness digital meet-up (<https://geoawesomeness.com/geoawesomeness-digital-meetup/>)
- Global space café (<https://www.spacecafe.global/>)
- EUSPA EO space café (<https://ears.org/2021/08/31/eocafe-the-eu-agency-for-the-space-programme-euspa/>)
- Space Brewery Munich (<https://www.linkedin.com/company/spacebrewery>)

The event has a very informal setting, which arouses curiosity because of the spontaneity of the conversation. Despite having a hidden or fake fixed agenda, it does not convey this perception. It usually has the outline of a keynote speech led by a presenter, followed by a Q&A session in panel format and closes with an informal networking opportunity. This chorus can be repeated up to 4 times, depending on the organisers.

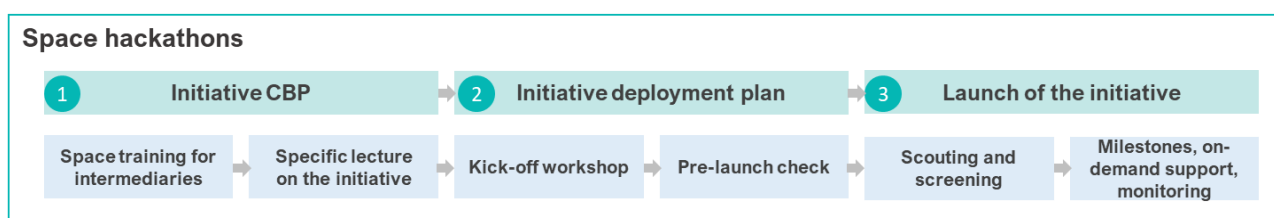
The audience consists typically of space and non-space students, and professionals. Given the nature of the event, participants pay for their own food and drinks.

The café is inexpensive as it does not require a lot of preparation time and hours. The venue can often be found for free, usually being an eatery, a bar or even a university. Speakers tend to participate pro bono while they are invited for a drink or lunch. Nevertheless, finding the proper speaker may represent the hardest challenge for a café. For example, in a series of 10 space cafés, having 20 keynote speakers may be a difficult task if the ecosystem is not very well developed.

4.4.3 Space hackathons

A space hackathon is a race that seeks to solve a challenge with a specific theme that is relevant to space, the economy and society. Logically, the first thing it will require is expert advice to determine the challenge as well as what space data is to be made available and how. Despite Earth Observation data is usually used due to its accessibility, other things like cloud storage and processing power may require further preparation. Copernicus DIAS may help with this if negotiated properly. The hackathon format involves a number of participants meeting at a specific location for a certain period of time. This implies that the venue, facilities, food, and related supplies will have to be secured.

Figure 16: Overview of the timeline for a space hackathon



Critical factors are related to the cost of the venue, furniture, subsistence, accommodation and manpower required. Among these, the following should be defined:

- Jury, although it can be external and high-level people
- Technical experts to collaborate in the definition of the technical parts, the technical challenge to solve
- Business experts for market validation. At least one person that understands the technical thematic.
- Moderator and facilitators. Mentors, around 1 per team during the days of the event, with teams of around 3 to 10 hackers
- Organisation and planning, which can take around a natural month

To help to reduce costs, hackathons usually are organised with the support of sponsors or external organisations that will bring on-kind benefits (*the pizzas and red bulls*, IT material) for advertising slots. The organisation shall be a collaborative matter to keep costs down, and it is important to find partners.

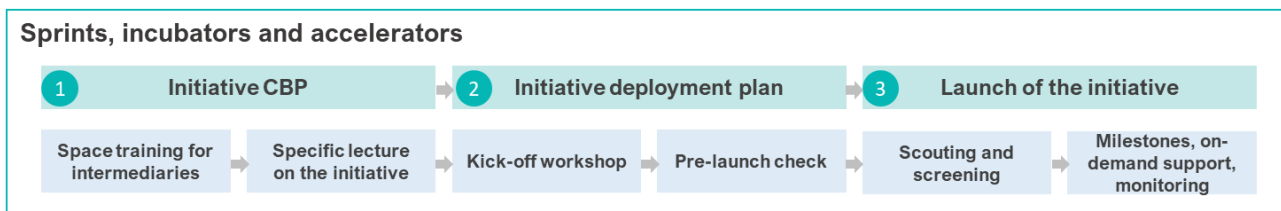
Other physical requirements are the cash prize, the business canvases to guide the process, and the advertising and promotion to find quality participants. Participants are asked to bring their laptops. However, furniture will have to be considered: tables, rooms, post-it notes, markers, printouts, electricity distribution, technical support, internet, etc. The usage of online platforms normally facilitates the organisation and management of the participants (DEFPOST, Junction, TAIKAI, ETC, etc.)

4.4.4 Space sprints, incubators and accelerators

Space sprints, incubators and accelerators are forms of innovation support that invest time, mentoring and funds in a start-up to try to help it move through its stages more quickly. All of them have a strong mentoring or tutoring relationship, along with the possibility of funding. Generically speaking, sprints would be the shortest initiatives with a strong focus on team mentoring, followed by incubators, where the training comes from the shared ecosystem, and ending with accelerators, where some funding and more personalised mentoring usually coexist. In more detail:

- Sprints are short mentoring events that aim to seed or improve early-stage start-ups. A sprint occurs in short cycles of one month, in which a cohort will work on finding solutions to a challenge while testing their ideas for validation.
- Incubators work with start-ups with ideas already generated but in initial stages prior to raising funds. They usually seek to place them in the same physical location so that there is cross-fertilisation with other start-ups. The atmosphere of sharing a facility amongst other start-ups encourages the learning of the entrepreneurs. Often, they are given a certain amount of training/mentoring where they are guided through their gaps, usually associated with the business side. An incubation programme will last at least half a year, while preparation can last another half a year. The organisation of incubators is more of a continuous process, where start-ups apply on a series of cut-off dates.
- An accelerator can be understood as an *incubator on steroids*. Having a common facility is usual as well, thus creating an ecosystem of start-ups. Accelerators have lots of mentoring and usually funding, but sometimes they may not provide capital and be only a mentoring programme. In some cases, the accelerator takes a share in the equity of the start-up taking an active role in the development of the company. Accelerators are definitely long-term programmes, lasting at least half a year due to the development of new services, products or market validations. The organisation has a good portion in the scouting as they are only interested in high potential start-ups.

Figure 17: Overview of the timeline of space sprints, incubators and accelerator



The large organisational workload for an innovation intermediary means that these initiatives require specific funding. Incubators are government-funded as non-repayable or at highly discounted rates. Accelerators follow this trend but the larger amount of training, mentoring, and funding for the start-up demands to secure government funds. Corporate sponsors are also especially important as very few accelerators survive from equity investment. Design sprints are a cheaper alternative for an ecosystem. They can be organised virtually and only require manpower.

Themes are generic for incubators; no sectoral knowledge is required as it is a common and early-stage space. Accelerators, on the other hand, are thematic - *about the space* - and will require specific knowledge. Sprints are strongly thematic and follow challenges of nowadays and shall target early immature seed-stage groups, depending on the programme definition.

5 Conclusions and next steps

The present document describes the design memory of the Capacity Building Programme in its second, interim, version. Changes have been noted across the document. Although the original and fixed plan remains valid, major changes happened in terms of flexibility between different points of the original schedule. The scarcity of resources and lack of interest has obligated InnORBIT plan to be extremely time efficient and adaptable to each intermediary. Despite intermediaries share common issues related to the immaturity of the space innovation ecosystem of Eastern Europe, each innovation intermediary has quite different ambitions and plans. Therefore, as D3.6 “Achievements of InnORBIT’s support initiatives – 1st round” will reflect, a variety of initiatives have been deployed across Eastern Europe.

The programme has been in execution since M10-M12 and M18-M20, leading to support for the development of the Initiative Deployment Plans, which will be effectively delivered in the Business Support Programme periods for the first pilot and second until M29.

The monitoring and feedback that is conducted in parallel to the Capacity Building Programme to be fine-tuned for its last version to be elaborated by M30.

Annexes

Annex I - Initiatives by Intermediaries

Table 2: Space training for intermediaries' fact sheet

Initiative summary
<p>Instruction material for the training of intermediaries in the space sector. The modules have a planned structure to catapult an outsider in the space sector. It will help to master the space basic knowledge and be able to recognise business opportunities while being familiar with the general topics of the space sector.</p> <p>The second set of lectures aims to give a consolidated and recorded version, for on-demand re-use, of how InnORBIT partners execute these initiatives.</p>
Features and functions
<ul style="list-style-type: none"> – Space technology training material – Recording and tracking of the completion of each participant in each intermediary – Fixed syllabus, with some detachable units based on their interest to develop during the BSP – Essential knowledge to be able to help their innovation ecosystems – Disposition of InnORBIT to the intermediary. This initiative is not passed on to the entrepreneurs, it is part of the CBP only – Planned to be implemented by the intermediary at its own pace – Commitment to finish written down in the MoU
Resources required
<ul style="list-style-type: none"> – Capital: N/A – Person-days: technically less than 1 full day. Further doubts and clarifications may extend the dedication depending on the level of knowledge and the agreement achieved in the MoU – Knowledge: Not required
Minimum eligibility requirements
<p>There is no eligibility requirement to deploy this initiative. However, to maximise the impact of InnORBIT, it would be interesting for each intermediary to choose initiatives that it has never done before.</p>
Service process & request steps
<p>The process is automated and preconfigured. The only requirement is to accomplish the space 101 training and selected running initiatives</p> <ol style="list-style-type: none"> 1. Commitment to accomplish. Tracking and monitoring 2. Selection of the initiatives to further develop, and receive the recorded training 3. Granting access and management of the platform
Relevant KPIs and metrics
<p>Content quality, usefulness, attendance & completion</p>
Materials required for the delivery
<p>Computer and registry. Database of people attending per innovation intermediary. Feedback forms and monitoring tools under the framework.</p>

Table 3: Space café fact sheet

Initiative summary
The space café is a simple and inexpensive networking and community building event that seeks to build on the shared interest of multiple sectors to launch a series of (10 for example) informal events where a keynote speech is followed by Q&A and networking in a friendly eatery-like environment.
Features and functions
<ul style="list-style-type: none"> — Economic. Based on the interest of multiple parties — Informal setting — Pro bono speakers; promotion of them an invitation to a drink — Fake or hidden agenda, repeating the process of keynote-Q&A-networking — Take advantage of a café, university or eatery type venue where expensive facilities are not mandatory — Critical aspect: finding the right speakers — Promotion and awareness are needed to ensure participation during the networking breaks
Resources required
<ul style="list-style-type: none"> — Capital: limited to the venue and the speakers; eating costs of the speakers — Person-days: 1 or 2 person-day work for each space café, excluding the event itself (1 to 4 hours) — Knowledge: event management and space community will be relevant
Minimum eligibility requirements
There is no eligibility requirement to deploy this initiative other than carefully planning the speakers. It would be interesting for each intermediary to choose initiatives that it has never done before.
Service process & request steps
The detailed process is to be defined during the intermediary's initiative deployment plan. The request is on-demand
Relevant KPIs and metrics
Number of attendees, audience. Number of events, speakers, and depth of the discussed topics
Materials required for the delivery
Specific materials to be defined during the IDP

Table 4: Space hackathons fact sheet

Initiative summary
A prize competition or race which requires accommodation for a number of days, guaranteed supplies, technical means and manpower. Hackathons are moderately expensive and time-consuming to run properly. They are an excellent tool to stimulate the student community to get involved in a certain topic such as space, attracting talent and fresh ideas into an ecosystem.
Features and functions
<ul style="list-style-type: none"> – Prize competition for a short period of time – Venue and manpower could trigger costs – Sponsorship is recommended – Challenge design, jury and tutors for the teams, require in-situ experts
Resources required
<ul style="list-style-type: none"> – Capital: average depends heavily on personnel, gross range in Western Europe ca. 10 and 20k. Cost reducing with sponsors providing food and the venue – Person-days: simple hackathons can take around 20 working days per person day. Additionally 1 expert, mentor or facilitator per team of hackers. Jury and in-site moderator – Knowledge: event management. Space thematic, ideally complemented with a good understanding of the innovation process
Minimum eligibility requirements
There is no eligibility requirement to deploy this initiative other than securing the funds and ensuring participation. It would be interesting for each intermediary to choose initiatives that it has never done before. Organisers should guarantee that skills are correctly spread among the teams.
Service process & request steps
The detailed process is to be defined during the intermediary's initiative deployment plan. The request is on-demand
Relevant KPIs and metrics
Number of teams, size of the event. Number of applications, prize and quality of the solutions.
Materials required for the delivery
Specific materials to be defined during the IDP

Table 5: Space sprints, incubators, and accelerators fact sheet

Initiative summary
<p>Sprints, incubators, and accelerators are innovation initiatives that last long term, starting in a month up to years. They require a large number of resources, and the innovation intermediary shall plan this accordingly procuring public funds to support its ecosystem. They are excellent tools to boost ideas into start-ups and scale-ups by providing direct training, mentoring and funds to their ecosystem.</p>
Features and functions
<ul style="list-style-type: none"> – Sprints: up to 1 month. Seed stage – Incubators: 6 months programme. Early-stage, common space to work. Training and non-thematic mentoring. Start-ups apply to the programme which consists of several cut-off dates – Accelerators: >6 months programme. Defined start-ups with the potential to go into the market. Hard thematic training and funds granting. – Incubators and accelerators require long-term planned resource allocation – Critical aspects: finding the right mentors and securing funds for the deployment and the funding of the innovators – Promotion and awareness are needed to ensure participation during the networking breaks
Resources required
<ul style="list-style-type: none"> – Capital: difficult to assess as it strongly depends on the wages – Person-days: <ul style="list-style-type: none"> – Sprint: 1 full time equivalent to run the show plus mentors on-demand. They can be found pro bono for the period. Normally 3 months in total. – Incubation: venue, maintenance of the venue and 2-5 staff, yearly planned. – Accelerator: 2-5 people for the whole year for only 6 months of an accelerator programme. The venue, maintenance and grants for the start-ups shall be considered as well. – Knowledge: event management and space community will be relevant. Fundraising and mentoring network on technical and business-related content
Minimum eligibility requirements
<p>There is no eligibility requirement to deploy this initiative other than finding the mentors, securing the funds and resource allocation. Particularly interesting for intermediaries with a venue that may cut this fixed cost.</p>
Service process & request steps
<p>The detailed process is to be defined during the intermediary's initiative deployment plan. The request is on-demand</p>
Relevant KPIs and metrics
<p>Number of start-ups supported, mentors, applications, audience, size of the grant. Number of sprints.</p>
Materials required for the delivery
<p>Materials to be defined during the IDP</p>

Annex II – Initiatives by InnORBIT

Table 6: Space entrepreneur’s instruction fact sheet

Initiative summary
<p>Instruction material for the training of intermediaries in the space sector. The modules have a planned structure to catapult an outsider in the space sector. It will help to master the space basic knowledge and be able to recognise business opportunities, while being familiar with the general topics of the space sector.</p> <p>A second set of lectures aims to give a consolidated and recorded version, for on-demand re-use, of how InnORBIT partners execute these initiatives.</p>
Features and functions
<ul style="list-style-type: none"> – Space technology training material – Recording and tracking of the completion of each participant in each intermediary – Fixed syllabus, with some detachable units based on their interest to develop during the BSP – Essential knowledge to be able to help their innovation ecosystems – Disposition of InnORBIT to the intermediary. This initiative is not passed on to the entrepreneurs, it is part of the CBP only – Planned to be implemented by the intermediary at its own pace – Commitment to finish written down in the MoU
Resources required
<ul style="list-style-type: none"> – Capital: N/A – Person-days: technically less than 1 full day, without considering the creation of the initiative development plan. Further doubts and clarifications may extend the dedication depending on the level of knowledge and the agreement achieved in the MoU – Knowledge: Not required
Minimum eligibility requirements
<p>There is no eligibility requirement to deploy this initiative. However, to maximise the impact of InnORBIT, it would be interesting for each intermediary to choose initiatives that it has never done before.</p>
Service process & request steps
<p>The process is automated and preconfigured. The only requirement is to accomplish the space 101 training and selected running initiatives</p> <ol style="list-style-type: none"> 4. Commitment to accomplish. Tracking and monitoring 5. Selection of the initiatives to further develop, and receive the recorded training 6. Granting access and management of the platform
Relevant KPIs and metrics
<p>Content quality, usefulness, attendance & completion</p>
Materials required for the delivery
<p>Computer and registry. Database of people attending per innovation intermediary. Feedback forms and monitoring tools under the framework.</p>

Table 7: Knowledge Hub

Initiative summary
<p>Complementary and supplementary material for mostly business training. Side technologies may be covered as well with technical training content that may enhance entrepreneur’s capacitation in their needs. The structure of the Knowledge Hub is not fully determined as it is a repository that is expected to grow over the course of the project. Innovation intermediaries will be able to customise the contents of their BSP training with the redundant material that will be available here.</p>
Features and functions
<ul style="list-style-type: none"> – Training material for start-ups – Supplementary and complementary training material for the original track – No registration or follow-up if not part of the main training track. Open or closed according to the will of each intermediary – Databases of funding opportunities and open calls for proposals in the space sector – Large amount of material from other initiatives – Updates during the execution of the InnORBIT project – Provision by InnORBIT directly to the entrepreneur
Resources required
<ul style="list-style-type: none"> – Capital: N/A – Person-days: N/A, without considering the creation of the initiative development plan – Knowledge: N/A
Minimum eligibility requirements
<p>There is no eligibility requirement to deploy this initiative. InnORBIT will provide access to selected innovators, approved by the intermediary.</p>
Service process & request steps
<p>The process is automated and loaded in the Toolbox. The only requirement is to define the complementarity or supplementarity of the lectures and contents del Knowledge Hub.</p> <ol style="list-style-type: none"> 1. Customisation during the MoU discussions. Tracking in Moodle if the content is used as the main source and the space entrepreneur’s instruction is modified. 2. Selection of the entrepreneurs accessing 3. Granting access and management of the platform
Relevant KPIs and metrics
<p>Content quality, usefulness, attendance & completion (depending on the tailoring).</p>
Materials required for the delivery
<p>Computer and registry. Database of innovators per intermediary and tailoring plan. Feedback forms and monitoring tools under the framework if applicable.</p>

Annex III - InnORBIT's training syllabus

Figure 18: InnORBIT's training syllabus for the CBP and BSP

