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CO-CREATION OF BENCHMARKING PROCESSES:

URBAN POLICIES FOR SMART SPECIALISATION

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RESUMEN

Este documento contiene los principales resultados que surgen de experimentar nuevos enfoques sobre cómo se puede diseñar y desarrollar el benchmarking para que la implementación de las lecciones aprendidas se pueda mejorar. El campo de políticas abordado por el benchmarking fue la estrategia de especialización de Bilbao y la experimentación tuvo lugar dentro de la implementación de la tarea de Benchmarking de Políticas en el proyecto Bilbao As-Fabrik (2017-2020).

El documento incluye una serie de ideas sobre el diseño y desarrollo de un proceso de benchmarking y recomendaciones sobre cómo se puede mejorar la adopción de los aprendizajes que resultan de dicho proceso y se mejore así su transferibilidad.

LABURPENA

Dokumentu honetan, benchmarking prozesuak nola diseinatu eta garatu daitezkeen aztertzeko antolatu den esperimentazioaren inguruko emaitza nagusiak biltzen dira. Benchmarkinga burutu den politika-eremua Bilboko espezializazio-estrategia izan da, eta esperimentazioa Bilbao As-Fabrik (2017-2020) proiektuan Politiken Benchmarking lana barruan egin da.

Dokumentuak benchmarking-prozesu baten diseinuari eta garapenari buruzko ideia batzuk biltzen ditu, bai eta prozesu horretatik ateratzen diren ikaskuntzen ezarpenak nola hobetu daitezkeen eta, hartara, transferigarritasuna nola hobetu daitekeen azaltzen duten gomendioak ere.

ABSTRACT

This document presents the main results that emerged from experimenting with new approaches on how benchmarking processes can be designed and developed so as to implement the lessons learnt in a more appropriate way. The policy field addressed by the benchmarking was the specialisation strategy of Bilbao and experimentation took place within the implementation of Policy Benchmarking in the Bilbao As-Fabrik project (2017-2020).

Included in this document are a series of insights into the design and development of benchmarking processes as well as recommendations on how to improve both benchmarking learning processes and the transferability of the lessons learnt.

EXECUTIVE SUMMARY

This publication builds on Orkestra's expertise on regional benchmarking to provide a guide and a set of concrete recommendations for the design and development of benchmarking processes that improve policy learning. It responds to transferability shortcomings identified by the literature on policy benchmarking, whereby good practices identified are often exported from one territory or organisation to another without being adapted to the specific environment in which they are to be applied.

The report is the outcome of research that sought to understand how benchmarking processes can be designed and developed so as to implement the lessons learnt from a particular policy area in a more appropriate way, by identifying the factors that boost and hamper the uptake of benchmarking learning. These questions were explored in the process of benchmarking policies within the Policy Observatory of the Bilbao As-Fabrik project. Funded by the European Commission's Urban Innovation Action initiative, this project involved 10 regional stakeholders with the aim of increasing the competitiveness of the advanced services sector (Knowledge intensive Business Services – KIBS) in the city of Bilbao.[1]

Main Lessons

- Benchmarking should be seen as a **learning process** for participants, especially policymakers, who can apply the methodology again and who gain knowledge on how to identify improvements which will support implementation. The process has helped team members to acquire competences in the field of benchmarking analysis and also on how to work collaboratively with public decision-makers in benchmarking exercises that support the implementation of Bilbao's urban smart specialisation strategy.
- Benchmarking exercises should be **carried out together with the public decision-makers** from the beginning to make learning as relevant as possible and to enable it to be more effectively applied. There are two specific challenges that are tackled in this way. First, the challenge of overcoming the imitation of practices without taking into account the context of the particular environment in which they are to be applied; and second, the challenge of building institutional capacities that facilitate learning so that improvement and change can take place in policies.
- It is very important to **identify the context** in which a benchmarking exercise is relevant, that is to pinpoint the challenges to which we want to respond with the benchmarking exercise. This must be done together by the analysts and decision-makers involved, including both technicians and elected officials. Specifically, it is necessary to specify the kind of policy instruments of interest for the policymaker (innovation policy, entrepreneurship, etc.), to ensure actionability. In the case of this experiment, interest lay in 'instruments for implementing specialisation strategies'.

- The process was initiated with the hypothesis that 'if benchmarking is co-designed and co-developed by analysts and policymakers (co-creation process), then the transferability of the lessons learnt can be improved and the results are more likely to be included in the policy decision process'. To date, the process has proven to be of value for the policymakers involved in it, who are principally civil servants; however, this **value has not spilled over to other levels of policy-making** (notably those levels that did not participate systematically in the process). This suggests the following considerations:
    - It is advisable that elected policymakers or representatives from the boards of directors also participate in the process so that they can contribute to and reflect on the potential actionability of the lessons learnt.

[1] The regional stakeholders included policymakers (Bilbao City Council, Bilbao Ekintza - Public Agency), universities and knowledge institutions (Mondragon Goi Eskola Politeknikoa, Mondragon Unibertsitatea Enpresagintza, MIK S. COOP., Deusto Foundation – Orkestra and IDOM Consulting, Engineering, Architecture), and cluster associations and business support institutions (GAIA - Association of Electronic and Information Technologies in the Basque Country, EIKEN BASQUE AUDIOVISUAL CLUSTER and Mondragon Centro de Promocion).

- The participating institution (or the department or internal unit that participates in the benchmarking exercise) should provide channels, mechanisms, and resources to spread the knowledge throughout the institution.
- Members of the working group should remain the same throughout the process to avoid slowing it down and to build on the knowledge accumulated during the process at the individual level of the group members.

- To date, **benchmarking has yielded an interesting list of policy instruments for the promotion of KIBS**, and an analysis of their value and "actionability" in the case of Bilbao. However, the question remains unanswered as to whether the lessons learnt will be actionable in the medium-long term.

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1 INTRODUCTION

1.1 The challenge

Benchmarking has proven to be a valuable tool in terms of identifying best practices and stimulating learning processes and evidence-based policymaking (Groenendijk, 2010; Huggings, 2010).

However, there are several weak points when it comes to applying these benchmarking exercises. What frequently happens is that the best practices identified are then exported from one territory or organisation to another, and are copied and imitated without being adapted to the specific environment in which they are to be applied (Huggings, 2010; Lundvall and Tomlinson, 2001). Kamp (2008) also highlights the need to adopt a more systematic approach to identifying good practices, arguing that the best practice in one specific context is often not appropriate for another context.

Furthermore, little attention is given to the design of these benchmarking exercises according to their purposes and the different contexts in which they take place (Groenendijk, 2010). This author argues that one of the challenges that these types of exercises have to deal with is 'transfer problems', which arise when the transfer of best practices is impossible due to the specific features of a given territory (e.g., different institutional environments, societal preferences, or the particular values and norms of a territory).

The objective of this document which studies a specific benchmarking exercise is to inform policymakers and analysts of research and innovation strategies for urban smart specialisation (RIS3) of the lessons learnt. Concretely, the aim here has been to explore how benchmarking exercises and their design can address the challenges linked to implementing these strategies. Some of these challenges are related to (i) the difficulties of implementing bottom-up strategies (such as entrepreneurial discovery processes), or (ii) to the lack of capacities needed at the organisational and territorial levels to be able to implement the strategy (Estensoro and Larrea, 2016). The latter has to do with the need to generate internal capabilities within the institutions and in stakeholders that are responsible for strategy implementation. Aranguren et al. (2018) also identified the existing governance processes in the territory as one of the dimensions that influence the implementation of RIS3, specifically concerning the entrepreneurial discovery processes (one of the key processes in the implementation of RIS3). Within this dimension, these authors distinguish factors such as the role that different actors and structures play in the implementation of RIS3. Therefore, understanding how to improve the capacities of the institutions involved in their implementation was also the focus of the research team.

The research team identified the need to explore and tackle the challenge of overcoming transfer problems in benchmarking exercises through experimentation in the specific policy domain of the urban specialisation strategies. The main questions addressed in the process were the following:

> How can benchmarking processes be designed and developed so as to implement the lessons learnt from a particular policy area in a more appropriate way? Concretely, how can we
>
> - gain insights into designing and developing benchmarking processes co-created with policymakers?
> - gain insights into co-creation modes of conducting benchmarking that improve the uptake of the lessons learnt?
> - understand the factors that hamper the uptake of benchmarking learning points

1.2 The co-creation approach

The objective of this section is to describe the co-creation approach undertaken by the working group throughout the process, rather than to introduce the discussions around the different approaches to the concept or its links and differences with other concepts (co-production, social innovation, open innovation, participation, etc.). In the last decade, there has been an increasing interest in the notion and practices of co-creation in policymaking, understood as the involvement of actors other than policymakers in the creation of public services (Deserti A., Rizzo F., Smallman M., 2020). Although this concept has its roots in the

business field (described as involving end users in the development of products and services), public policymakers soon began to use it as an approach for delivering public services and for thinking up and creating solutions for political and social challenges (Torfing, J., Sørensen, E., & Røiseland, A. ,2019; Itten, A., Sherry-Brennan, F., Sundaram, A., Hoppe, T., & Devine-Wright, P. , 2019). Co-creation in policymaking is based on the idea that engagement with stakeholders and citizens would allow a wider acceptance of the solutions created because of the active involvement of the actors whom the policy is aimed at, as well as making it possible for more context-based and tailored solutions to be found. Co-creation processes are based on the involvement of a wide range of actors where their experience, knowledge, and ideas are combined in order to find solutions.

Among the many different definitions of co-creation, several stand out. For instance, Prahalad and Ramaswamy (2004) define it as 'the active involvement of end users in various stages of the design, production, deployment and testing of public services or goods and processes'. It is also understood as 'citizens and professionals sharing power and responsibility to work together in equal, reciprocal, and caring relationships'.

Therefore, the working group used the hypothesis that if benchmarking processes are co-designed and co-developed by analysts and policymakers (co-creation), then the transferability of the lessons learnt can be improved and the results are more likely to be included in policy decision processes.

1.3 The experimentation field: The Bilbao As-Fabrik project

The opportunity to explore those questions came about through the participation of Orkestra in two research projects. In 2017, Orkestra had been supporting Bilbao's specialisation strategy for three years at that time (Bilbao Next Lab). Among other challenges that were being tackled, were the internal capacities needed to be able to implement the strategy within Bilbao's development agency (Bilbao Ekintza, BE hereafter). The research team involved in the project worked on this particular task. At the same time, Bilbao City Council was leading the Bilbao As Fabrik project, funded by the Urban Innovation Action initiative[2]. It was a strategic alliance between leading businesses and universities, local service providers, and entrepreneurs, with the objective of increasing the competitiveness of the advanced services sector (Knowledge intensive Business Services – KIBS) in the city, one of the priority areas of the specialisation strategies. Orkestra would lead the "policies for competitiveness in advanced services" project in the 2017-2020 period. In this particular project, the team sought to learn from best practices regarding policy instruments that support KIBS in other urban environments in Europe.

This document presents the main results of the project in which three different partners worked together from 2017 to 2020, developing the policy benchmarking process within the Bilbao As-Fabrik project and addressing the above-mentioned research questions. The institutions involved over the three year period had different and complementary profiles and capacities. On the one hand, BE, the Development Agency of Bilbao, contributed to the process as a policymaker that is capable of reflecting and incorporating the lessons learnt from benchmarking exercises within its scope of action. On the other hand, the two participating knowledge institutions, Orkestra, the Basque Institute of Competitiveness, and Idom, a Basque consultancy firm, brought analytical and methodological knowledge to the process.

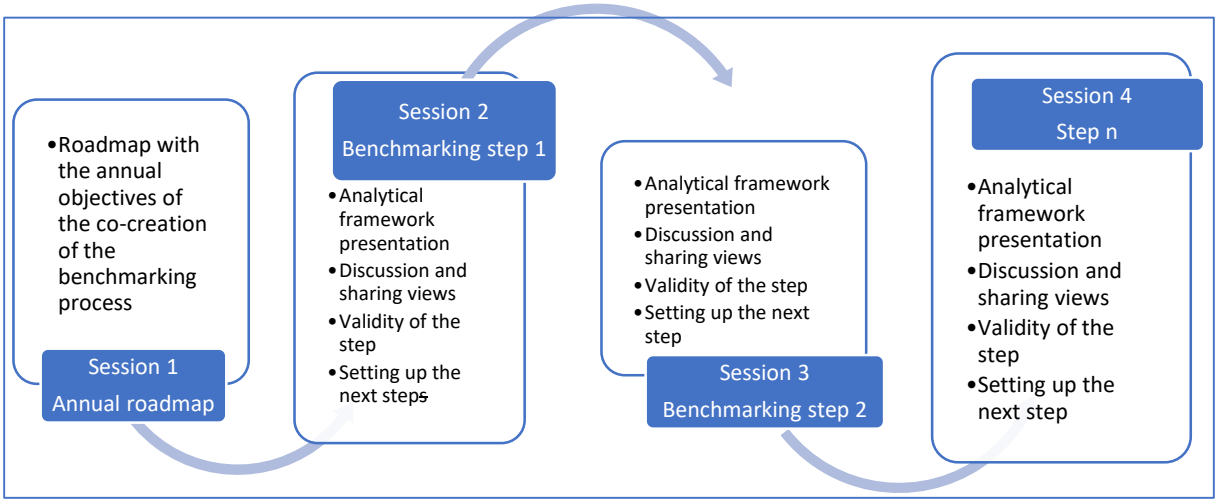
[2] This project is co-funded by the European Regional and Development Fund through the Urban Innovative Actions Initiative.

2 METHODOLOGY

The working methodology used in the project was participatory research, which was tested and applied in Orkestra for the first time by Alcalde et al. (2017) in an experimental project that gathered local development agencies, SMEs, and researchers who were attempting to face the challenge of both understanding and promoting organisational innovation in SMEs. This approach, which has its roots in action research, brings together researchers with practitioners, members of organisations, communities and networks to co-create knowledge in order to respond to the needs and challenges of the participants' starting point (Levin and Ravn, 2007).

Orkestra has facilitated this co-creation process in which BE (the policymaker) and Idom (the consultant) took part in an interactive learning process during the period of 2017-2020, which followed a collaborative working process.

Figure 1 Co-Creation process , annual working plan



Source: Own elaboration

The collaborative working process combined individual research work conducted in between the sessions and seminars where the focus was on learning, sharing and moving forward, as shown in Figure 1:

1. Roadmap with the annual objectives of the co-creation of the benchmarking process

The annual benchmarking process targets were agreed upon by the participants, and the steps to be taken in each session were planned. The annual working plan was discussed by the group and modified according to the different perspectives and needs.

The annual objectives are shown in Table 1. They became more specific and focused as the project approached 2020.

Table 1 Objectives and contributions to the co-creation of the benchmarking process 2017-2020

	Objectives	Contribution to the co-creation of the benchmarking process
2017-2018	- Framework for the analysis and learning - Identifying and prioritising peers: urban environments/regions - Analysing regions and urban environments	- How to define the benchmarking challenge - Identifying the benchmark territories - Defining the analysis framework for the benchmark territories
2018-19	- A first approach to monitoring the policy and instruments - Identifying actionable lessons	- Selecting and analysing the policy and instruments according to the policy challenge - Lessons for the policy challenge

2019-2020	- Proposal for implementing good practices	- Testing the actionability of the benchmark process

Source: Own elaboration

2. Each session addressed a step within the benchmarking process

The annual roadmap was made up of the specific steps of a benchmarking process in a coherent and logical manner. Each session was aimed at testing the validity of the step undertaken within the benchmarking process. Its objectives had been clearly established in the annual roadmap, and individual contribution was expected for discussion. The final methodology presented in this document is the result of validating the usefulness of the different steps undertaken during the period of 2017-2020.

3. Reflection on the methodologies and frameworks used for each step of the benchmarking process

The facilitator was responsible, sometimes with the rest of the participants and other times individually, for putting forward methodologies, resources, and frameworks that supported the issues to be tackled in each of the steps of the benchmarking process (e.g., competitive analysis of the urban environments, or introducing frameworks for the analysis of instruments, etc.).

4. Discussion concerning the approach presented

The group discussed and took decisions concerning the approach to be taken to address each step of the benchmarking process.

5. Sharing individual contributions

The participants were encouraged to work on the session's issues in advance so that the discussions held during each session would be more fruitful. Each member had to work on how to respond to the objective and was responsible for sharing her or his findings in the session.

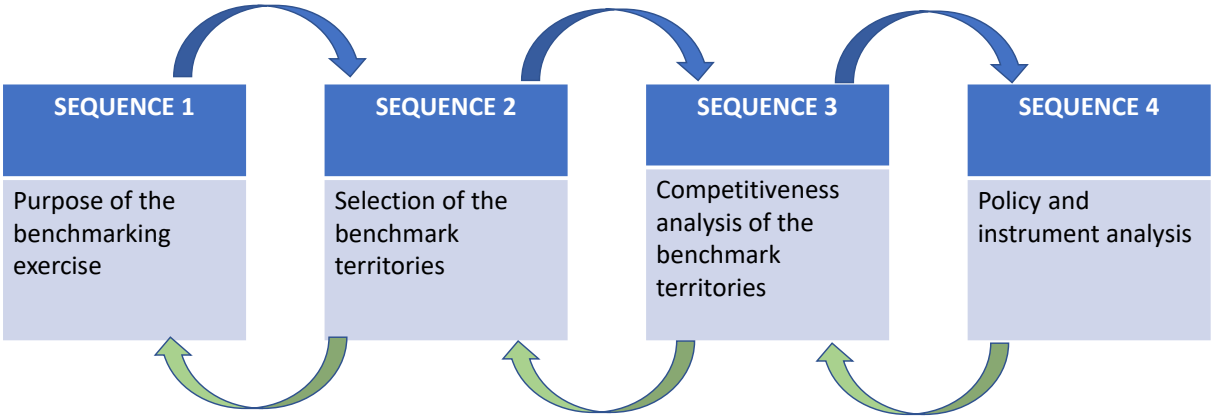
The space for interaction and learning was particularly important during the collaborative work undertaken. The co-creation of the benchmarking process took place in a space for discussion in which every participant had the opportunity to give their opinions and make decisions about the process.

Orkestra facilitated the benchmarking process, following the facilitation approach used by Larrea and Costamagna (2018). This approach consists in generating the conditions so that participants can reflect, decide and take action on the challenge undertaken in each of the benchmarking process steps, which is evaluated in each session. The aim of this process, which was set up in a cyclical way, was to generate a new methodology of benchmarking that was co-created by the participants. The following sections summarise the conclusions of the benchmarking co-creation process in the field of urban specialisation strategies and also present what Orkestra learnt and the insights it gained from observing the process, as well as the systematisation and analysis of each of the benchmarking steps and dimensions. Also included is the use of the different methodologies and frameworks tested along the process, and the collaborative work carried out.

3 CO-CREATION OF THE BENCHMARKING PROCESS

The co-created benchmarking process is described below in an easy 4- stage logic with each stage or *sequence of steps* representing different analytical and consultative sets of methods and their expected outcome within the benchmarking process.

Figure 2 Benchmarking process



Source: Own elaboration

Benchmarking processes can be carried out by following the proposed stages 1 to 4. This document gathers the insights observed in the process of how to overcome 'transfer problems' in a benchmarking exercise. The research process departed from the hypothesis that when benchmarking is co-created between analysts and policymakers, it becomes more transferable. This document summarises the lessons learnt through experimentation held within the Bilbao As-Fabrik project, where analysts and policymakers undertook a benchmarking process over three years, between 2017 and 2020.

This process has made it possible to gain understanding and insights into how benchmarking processes can be designed and developed to tackle policy challenges in a more appropriate way as well as how benchmarking processes can be designed and developed through a co-creation approach. It has also made it possible to test whether a co-creation approach improves the applicability of learning points in a particular policy domain.

The following subsections describe each of the sequences followed in the benchmarking process in which they were designed and developed using a co-creation approach. First, the steps taken in each sequence are described, including the level of co-creation expected from policymakers and analysts in each step, together with the set of resources that were used to support each step (academic references, databases, and other resources).

In order to assess the level of co-creation intensity of each step of the trajectory, this report follows the types of co-creation defined by Voorberg, Bekkers & Tummers (2015). These authors conducted a systematic review on co-creation/co-production with citizens participating in public innovation processes. In their analysis, they distinguish between three types of co-creation based on the level of citizen involvement: co-implementer, co-designer, and initiator. Here, we make use of two of these three types and adapt this approach to the specific co-creation exercise that was undertaken.

Table 2 Co-creation intensity

Types of co-creation	Intensity of co-creation based on the mix of types in each step		
	High	Medium	Low
Co-design	Analysts and policymakers	Analysts or policymakers	Analysts
Co-implementation		Analysts and policymakers	Analysts or policymakers

Source: Own elaboration based on Voorberg, Bekkers & Tummers (2015)

Co-design refers to participants (analysts/policymakers) deciding how each step of the benchmarking exercise is designed, while co-implementation refers to participants implementing the tasks in each step of the exercise. For example, the facilitator identified the need to define the scope of the benchmarking exercise as a first step (the analyst is the designer of this step). Then, BE together with Orkestra decided that benchmarking could be useful in implementing the specialisation strategy (both institutions play the role of co-implementers). Consequently, the co-creation intensity is medium.

How the different steps were implemented within the benchmarking exercise in the Bilbao As-Fabrik project is described next. Finally, a section with the main reflections and recommendations for each of the sequences is presented.

3.1 The purpose of the benchmarking exercise

SEQUENCE 1

Purpose of the benchmarking exercise

In the first stage (sequence1), the scope of the benchmarking exercise is established according to the main interests of the policymaker, in this case, BE (i.e., the lessons learnt could be adopted by this institution). Identifying the purpose is a critical step to assure that the benchmarking exercise targets a specific need of the policymaker and thereby increases the value of the benchmarking outcomes when the policy is implemented.

Secondly, once the general context in which the benchmarking exercise takes place is defined, it is advisable to specify the type of benchmarking exercise to be carried out. Benchmarking is a useful tool for actors in the political sphere that can support public decision-makers in three different ways (Huggins, 2009): supporting the monitoring of economic development processes and their progress (i); facilitating the exchange and gathering of knowledge about other practices and policies (ii); and supporting the promotion of the image and attractiveness of the economy (iii). It is in facilitating the exchange and gathering of information that the benchmarking exercise analysed was framed, the objective being for it to become a useful instrument in the process of implementing Bilbao's specialisation strategy. Thus, the lessons learnt from the benchmarking exercise could potentially generate capacities and insights that may be able to support the implementation of Bilbao's specialisation strategy.

This definition has a crucial influence on the type of information collection that should be carried out, as well as the choice of the territorial analysis units to be used (top territories with which to compare the territory involved in the process).

Table 3 Steps within sequence 1, the purpose of the benchmarking exercise

SEQUENCE 1 Steps	Objective	Co-creation intensity (*)	References
The scope of the benchmarking exercise	Identifying the policy challenge in which the benchmarking results could be used for improvement, reflection and learning.	Medium	NA
Type of benchmarking exercise	The type of benchmarking exercise to be conducted will influence the process, the type of information, etc.	Medium	Huggins, 2009 Groenendijk, 2010

Source: Own elaboration

(*) **See** Table 2

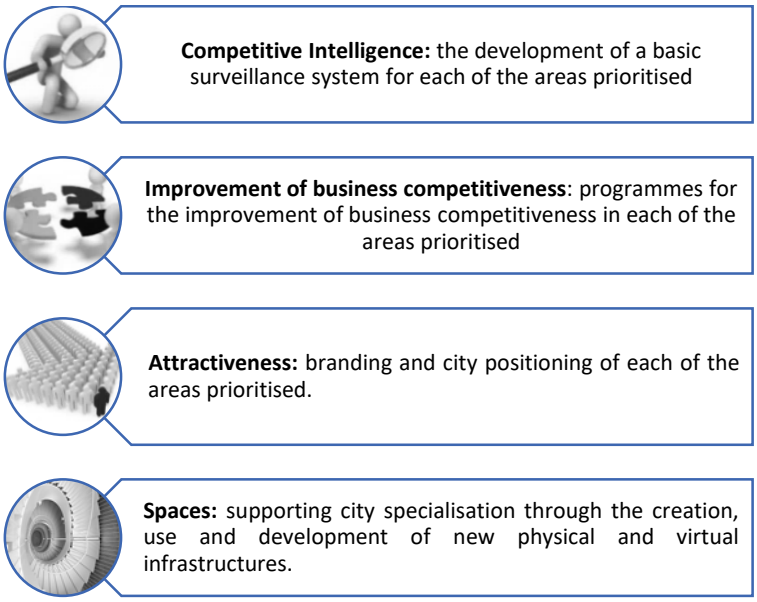
3.1.1 Experimentation in Bilbao As-Fabrik

The policy challenge of the benchmarking exercise in the pilot experience was implementing Bilbao's specialisation strategy. Specifically, to monitor the policies and instruments that support the KIBS sector at the urban/regional level. BE was especially interested in developing instruments for the policy areas that they had prioritised since these areas were crucial for implementing the specialisation strategy (see **Figure 3**).

The benchmarking process was connected with the policy process of Bilbao's specialisation strategy. The policy areas that would support its implementation were established in the strategy's design and definition. The so-called 'instruments to facilitate Bilbao's specialisation strategy' were developed in a strategic policy space in BE, which was made up of the Director, elected representatives, and researchers from Orkestra[3]. The instruments are shown in Figure 3.

[3] The instruments required for Bilbao's specialisation strategies were selected at the beginning of 2017 and within the Bilbao Next Lab project (a research project conducted by Bilbao Ekintza and Orkestra on the urban specialisation strategy)

Figure 3 Instruments to facilitate specialisation.



Source: BilbaoNextLab, 2017

The benchmarking exercise, in the context of implementing RIS3, sought to learn from the best practices in terms of policy instruments that support KIBS specialisation. Therefore, when selecting the units of analysis, it was important to select regions or urban environments that were better at promoting specialisation in KIBS, rather than selecting territories that only had a good socio-economic performance, or had the greatest structural similarities with Bilbao.

3.1.2 Co-creation: recommendations

1. The purpose of the benchmarking exercise was defined from several reflection meetings that took place in a strategic policy space The team had to work on identifying the field of opportunity4.
2. Identifying the challenge needs to be connected with policy strategies carried out by policymakers and has to be relevant at that level.
3. It is recommended that communication channels are opened between those involved in the benchmarking process and the policymakers working in the policy field (elected policymakers, direction board, etc.).
4. In this particular phase, deciding on the scope and objectives of the benchmarking exercise may be relevant. This is related to the focus of the benchmarking exercise carried out and how to do this. Based on Huggins (2010) and his classification of benchmarking, it can be performance benchmarking, which uses performance metrics to compare the regions involved with the benchmark regions; process benchmarking, which is based on a comparison between the structures and systems of the regions involved; or policy benchmarking, which compares types of public policy considered to have an influence on practices.
5. In this phase it is important to form a team that includes the top representatives of institutions as well as employees who are involved in the implementation of the policy. In order to support the whole process, it is also recommended that professionals with strong analytical capabilities are included in the team.

[4] This challenge identification was carried out together by Bilbao Ekintza and Orkestra between September and December 2017. More specifically, both institutions held several meetings with the aim of identifying the challenge: on November 17 (Mariví Riol, Oihana Eizmendi, Marije del Blanco, Usue Lorenz and Miren Estensoro) and on December 20, 2017 (Marije del Blanco, Nora Sarasola and Miren Estensoro).

6. If the team has difficulties to engage elected politicians or prominent officials in such a time-consuming process like benchmarking, it is suggested that less intensive coordination channels are made available to them (such as meetings, informative emails, etc.).

3.2 The selection of benchmark territories

SEQUENCE 2
Selection of the benchmark territories

This sequence consisted in identifying the urban environments to be used as benchmark territories in the exercise. Thus, it is proposed that it includes diverse sources and methods, following the steps below:

Table 4 Steps within sequence 2: the selection of benchmark territories

SEQUENCE 2 Steps	Objective	Co-creation intensity (*)	References
Identifying benchmark territories with similar policy challenges	This vertical focus on a specific field demands a more selective approach to the territories in which these policy challenges need to be addressed	High	Eye @ RIS3 database is a tool developed by the Smart Specialisation Platform (S3P) which brings together the priorities expressed by the regions and Member States together with those extracted by the S3P expert staff. This database gathers the priorities of 176 regions of the 271 NUTS2 regions, covering 65% of the regions. Information on priorities is described through three categories: regional capacities in research and innovation, the target markets or business areas, and the political objectives to which they respond.
Identifying territories through desk research of reliable sources on studies related to territories facing the same challenges	Literature review, analysis of studies, policy briefs and alike which identify territories or make an assessment of comparable territories with the same policy field challenge	High	Literature on KIBS performance by country/region Gotsch et al. (2010), Rodríguez and Camacho (2016), etc.

Source: Own elaboration

(*) **See** Table 2

The level of intensity of the co-creation process for selecting the benchmark territories was especially high in all the steps undertaken within this sequence. Reflection sessions were needed to be able to make explicit and to extract the tacit knowledge that participants had regarding the territories that were to be compared. It took several sessions before the participants' implicit knowledge became explicit, and individual knowledge became collective.

3.2.1 Experimentation in Bilbao As-Fabrik

In the case of Bilbao As-Fabrik, the sequence was implemented as follows:

1. **Identifying urban territories with a similar policy challenge to promote the KIBS sector within the specialisation strategy:**
   The selection of the initial set of regions was carried out according to the priorities of the research and innovation strategies for smart specialisation (RIS3) of the European regions. The hypothesis was that if a

region was focusing on the KIBS sector, it was very likely that the main city in the region would also be promoting KIBS, as cities are usually concentrating the activity on KIBS.

Searches using Eye @ RIS3 consisted in identifying regions that:

- Presented R&D capacities in the field of services and targeted all the sectors and business markets.
- Presented capabilities in the field of services and targeted the manufacturing market as an objective market. This criterion was used to respond to the overall goal of the project, which aimed to improve the competitiveness of the services sector so as to meet the demands of digital transformation in the manufacturing sector.
- Presented R&D capacities in the field of information and communication technologies (programming, consultancy and related activities; information services and activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities; publishing activities and telecommunications) and targeted all the sectors and business markets.

The initial selection of regions was made by identifying those regions that showed particular strength in the services sector.

2. Identifying reliable studies on KIBS and their performance at the regional/urban level

Research in this step consisted of two stages: the facilitator carried out an initial analysis of literature which led to identifying an initial group of European regions and urban environments that showed an outstanding performance in the KIBS field or a significant concentration of companies in this sector. In a second round, in order to select certain urban environments from the first long list, a second analysis was conducted by the rest of the team which brought forward new literature and references on regions and urban environments that also showed an outstanding performance in KIBS.

In accordance with the annual roadmap of the co-creation process, two reflection sessions were held. In this step of the exercise, it was the knowledge brought by the BE policymaker that especially added value to the process. In addition to the steps described before, policymakers introduced new criteria in the selection process. The challenge was to make BE's interests explicit and to understand how these would influence the selection of benchmark territories. The Box below describes how new selection criteria were introduced as a way of better adapting the benchmarking exercise to the policymakers' interests.

Tailoring the benchmarking process to stakeholders' interests: identification of the benchmark territories

The policymakers introduced new criteria for the selection of benchmark territories.

- They suggested that the search for industries should be narrowed down: although at first, the digital economy sector was included as part of KIBS sector, BE considered it would be more appropriate to focus only on the KIBS sector, as this was the focus of Bilbao's specialisation strategy.
- The urban-rural typology of the region had to be taken into account: the benchmark urban environment had to share similarities with Bilbao regarding its urban-rural typology. Rural regions were removed from the initial selection.
- Additional literature was introduced into the discussion.
- Relevance for the policymakers: BE's interest in concrete urban environments was considered as well as the existing international networks of the city council.

As a result, two groups of urban environments were selected: a priority group and a second group, to be explored as a secondary option. The team decided that the analysis would focus on the priority group, and members of the working group were appointed for this purpose:

Following is a Table showing the priority group of urban environments and the institution responsible for each analysis:

Priority	Selected benchmark territory	
1	Aahrus	Orkestra
1	Tampere	Orkestra
1	Rotterdam	Idom
1	Manchester	Orkestra
1	Emilia Romagna	Idom
1	Brno	Bilbao Ekintza (BE)
1	Tallin	Idom
2	Karlstad	Orkestra
2	Hamburg	BE

3.2.2 Co-creation: recommendations

1. The identification and selection of benchmark territories need to be aligned with the specific policy challenge tackled by the benchmarking exercise. In this sense, the BAF project experimentation has shown that selecting territories by choosing only comparable ones should be avoided. This type of benchmarking fosters learning from equivalents (i.e., those that have similar features regarding productive structure, economic performance, scientific and technological profile, etc
2. In the case when the benchmarking exercise is focused on a concrete policy field, it needs to use a type of benchmarking that is based on comparing the types of public policy which are better at tackling the policy field (the urban specialisation strategy and the promotion of a specific priority field), rather than focusing on the type of benchmarking that is based on comparing the metrics of benchmarked regions (process benchmarking). Consequently, selecting benchmark territories needs to go beyond merely identifying comparable territories or territories that show an outstanding economic or innovation performance and instead it needs to identify territories that are better at promoting the specific policy field (urban specialisation strategy and KIBS).The latter selection would typically include a selection based on the comparison of urban and regional territories using indicators from different fields, such as innovation (e.g., the Regional Innovation Scoreboard that ranks European regions according to their level of innovation); or competitiveness reports from different institutions (i.e., OECD's review on Competitive Cities in the Global Economy: or the EU's "The State of European Cities Report").
3. The selection needs to be more specific regarding the policy challenge to be tackled. The temptation to select benchmark territories on the basis alone of them being regional or national champions in the different rankings or studies could lead to unproductive learning, given that the territories compared may not necessarily show a remarkable performance in the policy challenge to be tackled.
4. Maintain a flexible approach when it comes to the definition of the selection criteria and take advantage of divergent thinking so as to use the tacit knowledge of every participant. In this step, the group starts to work together, and it is important that everyone is encouraged to contribute with their own way of thinking to work out collective solutions. No ideas should be left aside, and if necessary, an attempt should be made to integrate these ideas in order to develop a new approach for the selection of criteria.

5. Try to create spaces for dialogue and building trust: the sessions are spaces for dialogue, and in this stage, participants should start building them. Create transparent, open and informal spaces, where conflict and divergent views are welcomed.
6. Connect theory and practice, as well as reflection and action, so as to develop a tailored approach for selecting benchmark territories.
7. Integrate analytical support capabilities: quantitative and qualitative analysis capabilities are needed in order to conduct solid and accurate desk research.
8. Give a greater focus to the needs and challenges that policymakers express regarding the selection criteria. The Bilbao As-Fabrik project showed us that in the end, policymakers' interests need to be given more importance than the rest of the participants' needs, at least in this stage.

3.3 Analysing the competitiveness of the benchmark territories

SEQUENCE 3

Competitiveness analysis of the benchmark territories

The objective of this sequence is to better understand the benchmark territories and to identify the factors that lead to a favourable development of KIBS . The sequence consists of two steps: analysing the selected territories using a common framework of competitive analysis, and identifying the pillars of learning that result from the comparative analysis between the benchmark territories.

Table 5 Steps within sequence 3. Analysing the competitiveness of the benchmark territories

SEQUENCE 3 Steps	Objective	Co-creation intensity (*)	References
Framework for analysing the regional or urban ecosystem	To obtain an overall view of the situation of the ecosystem analysed	Medium	Database on statistical and document resources, including: Regional Yearbook Viewer; Urban Data Platform; Regions and Cities Illustrated (RCI); Urban Europe Statistics on cities, towns and suburbs; Regional Economic Accounts, Eurostat; Regional Structural Business Statistics; The Cluster Mapping Tool; Doing Business in (OECD) 2018; Benchmarking Regional Structure; OECD Regions At A Glance 2016; Benchmarking Regional Structure; European Innovation Scoreboard 2017; Regional Innovation Scoreboard 2017; Regional Innovation Reports; Regional Innovation Scoreboard 2018; Regional Innovation Monitor ; European Digital City Index 2016 (Nesta)
Drawing lessons from the competitive-ness analysis of the territories	To present a framework for analysing and extracting the learning points	Medium	'Advanced services in Bilbao', report from BilbaoNextLab project, 2016.

Source: Own elaboration

(*) **See** Table 2

The proposed structure for the competitiveness analysis of the territories and a short description of them are detailed below:

Table 6 Framework for analysing the regional and urban ecosystem

Structure	Description
Introductory text	Description of the context of the region or city to be analysed
Economic and business profile of the region/city	Description of the main characteristics of the region/city regarding its industrial, innovation, and scientific capabilities. Special attention should be paid to growing and emerging sectors in the region/city. Furthermore, specific information about KIBS will be provided including the particular characteristics of this sector in the region, such as the existence of successful KIBS companies and information on the sector's performance
Innovative performance	Mainly described by the Regional Innovation Scoreboard
Urban/regional/national strategy (specifically RIS3)	Identifying the strategic documents at the urban, regional or national level that laid the ground work for action in promoting and supporting KIBS. This framework may be more general (general territorial strategy) or more focused (innovation and RIS3 strategy) and sectoral (Digital Agenda, etc.). A concrete analysis of the RIS3 strategy will be conducted, specifying the scope and the different approaches to promoting KIBS in the regions/cities analysed. Different perspectives of KIBS in the regions/cities analysed mean that different challenges and different policy and initiative approaches can flourish.
Governance: stakeholders in the innovation ecosystem	Having a general overview of the innovation system of the region/city. Identifying the major players from the public and private spheres or other PPP collaboration schemes The existing governance structures and processes and decisions on the initiatives and policy approaches to support KIBS are taken.
Supporting institutions	This refers to the organisations involved in promoting KIBS and which are responsible for designing and implementing concrete initiatives or policy measures. The analysis includes aspects such as the name of the organisation, the geographical coverage (urban, regional, national, or European), its mission, nature (public, private, PPP), activities, the role it plays in promoting KIBS, and the municipalities' involvement in the institution.
Existing capacities	Given the role that skills and talent may play in helping KIBS thrive, the team suggested that this new factor was also analysed.

Source: Own elaboration

The second step consists in drawing lessons from the competitiveness analysis of the territories. For this purpose, it was suggested that the team carried out desk research on reports and literature that pinpointed the key factors believed to be linked with a territory's successful performance in the policy field in which the exercise is conducted. More specifically, the team studied a report that identifies the key factors which are influencing the development of KIBS initiatives in Europe.

3.3.1 Experimentation in Bilbao As-Fabrik

The analysis of the territories' competitiveness that was conducted by the team in this stage required a great deal of individual research work and less co-creation work. The analysis frameworks were explained to the group by the facilitator, alongside a short training session on how to use and interpret the statistical data and databases linked to the analysis. The facilitator also supervised the Individual research on the competitiveness of the territories

In order to identify the learning points, the team used a specific framework that had been proposed in the report drawn up by Orkestra within BilbaoNextLab[5] project in 2016. The report identifies the key factors that are having a positive impact on the development of KIBS and the digital economy sectors at the European urban level.

As shown in Table 7, these key factors were classified into two groups: the territorial strategy and environment conditions; and the business conditions and capacities in the territory.

Table 7 Key factors impacting KIBS development in Europe

Territorial strategy and environment conditions		
Multilevel focus	Innovation as a driver	Supporting institutions and structures
• The coexistence of different specialised strategies at the local-urban, regional and national levels, which are connected, coordinated and aligned with the promotion of KIBS. To what extent are municipal and urban governments focusing on the multilevel governance?	• The focus of territorial strategies on the KIBS and DE sectors brings about innovation as a driver of growth. It is not only about supporting the sector, but about supporting innovation in the sector to create employment and promote growth.	• The structures and systems involved in developing the sector, like clusters, research centres, platforms, etc., are obtaining results through the promotion of these sectors (new capacities, companies, start-ups, networks, etc.).
Business conditions and capacities in the region		
Business demand	Knowledge infrastructures and universities	A business environment that stands out for the presence of high technology firms
• The existence of a specialised business demand that drives innovation in the KIBS sector as well as its growth	• Universities with general powerful technological capacities provide an excellent ground for the development of technology-based companies providing ideas, specialised staff, spaces, incubation programmes, training, etc. Especially for DE development	• KIBS flourish in S&T environments. Cultivating and attracting specialised technical talent, and supporting leading companies and research organisations are measures that can have a positive impact on KIBS development

Source: BilbaoNextLab, 2016

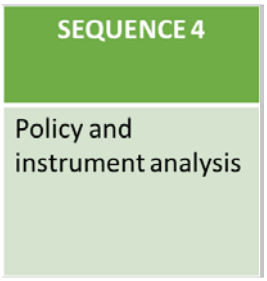
Based on the above factors and the results of the individual research on the competitiveness of each territory, the group came up with several conclusions about the benchmark territories. The results enabled the cross-analysis of territories. For example, territories that were successful in promoting the KIBS sector showed a specialised business demand that was driving the sector.

[5] Available at https://www.orkestra.deusto.es/en/research/research-labs-territorial-competitiveness/public-policy-institutions-lab/bilbao-next-lab-en

3.3.2 Co-creation: recommendations

1. Several resources were put together to be shared by the team conducting the competitiveness analysis of the territories: a shared repository with relevant reports and documentation on the different factors, and a source database (see Section 0). These resources supported the analysis and knowledge exchange among the team members.
2. The sessions held between the participants included a training session where they could learn and discuss how to use the different resources. The facilitator was responsible for the sessions. A channel was also set up to tutor participants regarding their doubts during the research process.
3. The analysis provided an informed interpretation of each of the urban environments selected and was based on readily available literature and desk research.
4. A brief summary of the analysis of the regional and urban ecosystems can be found in Section 0.

3.4 Policy and instrument analysis



The objective of the fourth and last sequence of the benchmarking exercise is monitoring the policies and instruments. Three steps are proposed to this end, with each one seeking to gain a greater insight into the policy instruments used in each of the territories analysed. Although the first step may be sufficient to understand better each policy instrument analysed, two more steps are proposed in case the team needs to acquire further knowledge on a certain instrument.

The sequence of consecutive steps proposed is shown in Table 8:

Table 8 Steps within sequence 4, policy and instrument analysis

SEQUENCE 4 Steps and objectives	Objective	Co-creation intensity (*)	References
Initial identification of the instruments to be studied	To carry out research on the existing instruments and analyse them within a framework for policy and instrument analysis	Medium	OECD for comparative analysis of regional development policies (OECD, 2010); the categorisation of RIM Plus of policy measures ; Innovation tools by Edler and Georghiou (2007) and Innovation policy instruments by the European Commission (2013).
Filtering the list of instruments according to the policy objectives	To use a methodology for filtering the instruments according to their relevance for the policy challenge, the policymakers, and the territory	High	Inputs form the Bilbao As-Fabrik project
In-depth analysis of the policy and instruments	Quantitative and qualitative information about the instruments.	High	RIM Plus, European Commission 2017

Source: Own elaboration - (*) See Table 2

Following the collaborative working process described in Section 2, the team worked on testing the different steps described in Table 8:

The initial identification process of the instruments to be studied

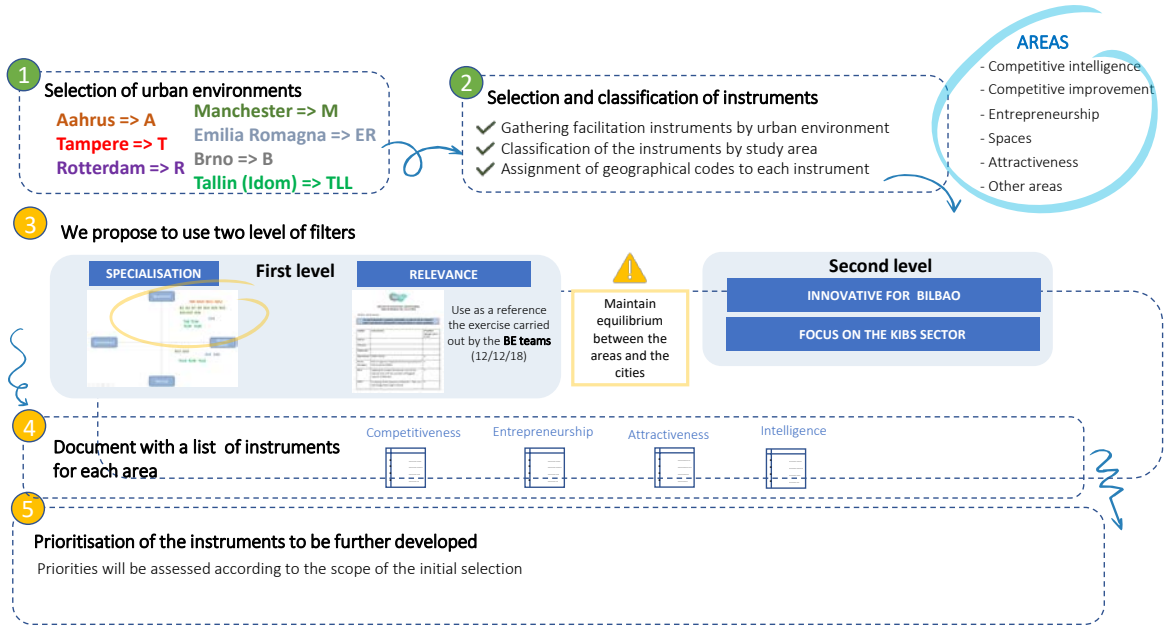
The team developed a framework to identify the instruments linked with the policy challenge tackled and the needs of the policymaker. During the construction process, all the team members studied and brought several literature references to the collaborative space.

Implementing this particular step in the Bilbao As-Fabrik project showed that the initial identification procedure of instruments was not sufficient when it came to choosing the most relevant ones. Consequently, the group designed a narrowing-down process.

Methodology for filtering the instruments

In order to narrow down the selection of analysis instruments, the team worked on developing a method of prioritisation according to the main characteristics sought by the policy challenge (see Figure 4).

Figure 4 Co-created method for filtering the instruments



Source: Bilbao As-Fabrik

In general, the filter criteria were linked to the policy challenge in terms of the following: their relevance for RIS3, their relevance for the policymaker, level of innovation, and their focus on KIBS.

In-depth analysis of instruments

The team designed a template in order to gather relevant and useful information on each instrument. However, the template served for gathering interesting information on the more standard instruments, but it was not appropriate for illustrating and describing new measures which are more innovative and for which standard elements do not apply in their description. This was the case for the 'Innovation Platforms', an instrument that due to its characteristics, does not fit the descriptions of standardised instruments (beneficiaries, budget, objectives, etc.).

In order to overcome this challenge, the group was asked to adopt a flexible approach to analysing the non-standard instruments.

3.4.1 Experimentation in Bilbao As-Fabrik

The initial identification of the instruments was conducted individually through desk research and using the framework designed by the team.

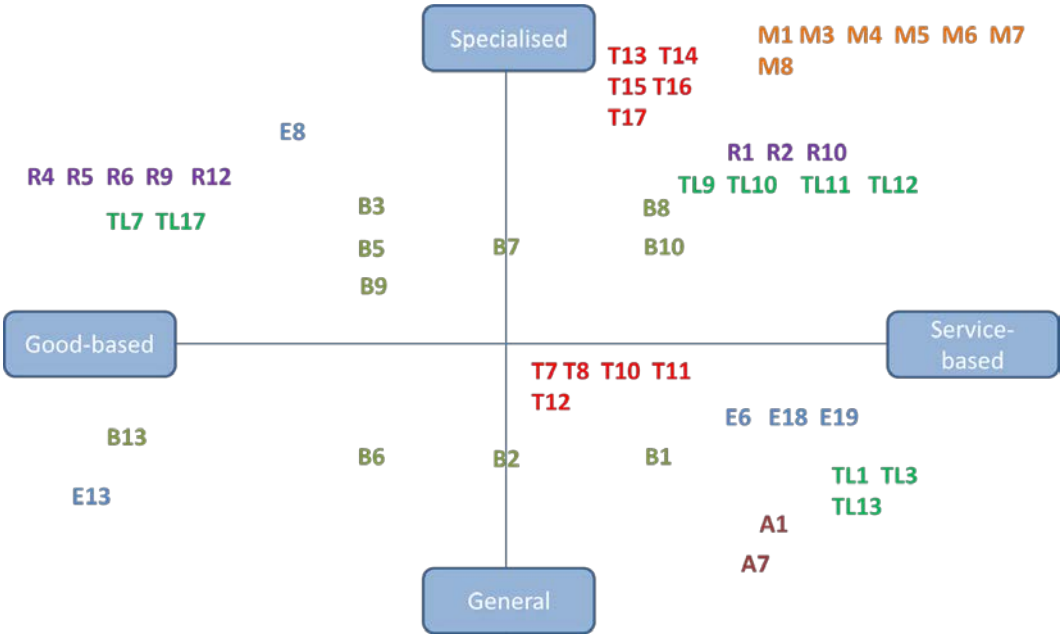
Given that this analysis resulted in an extensive list of instruments that was too long and the information on instruments was not rich enough to allow them to be prioritised, the team filtered the list of instruments to obtain

those which would better target the policy objectives of the benchmarking exercise (see Figure 4). The criteria used were:

1. Relevance for the urban specialisation strategy

   The relevance of the instrument in terms of Bilbao's specialisation strategy was measured by analysing whether or not the instrument targeted the specialised areas in the urban environment (those areas that were prioritised in the specialisation strategy). The instruments were classified according to two axes as shown in Figure 5. The vertical axe represents the degree of specialisation of each instrument (whether it targets a specialisation field or not); and the horizontal axe represents if the measure provides service-based support (advice, information, brokerage…), or good-based support (investment, grants, infrastructures, etc.).

Figure 5 Example of the analysis on the relevance of the instruments for the specialisation strategy



Source: Own elaboration - Codification of the measure: i.e. B1, B= Brno; 1: instrument 1)

2. Relevance for policymakers

   In order to measure the relevance of each instrument for BE (the policy instrument), the working group organised a workshop. The workshop participants were employees from BE, concretely, technicians from the economic development and entrepreneurship departments. They were asked at the workshop to reflect on which instruments they would like to gain greater understanding of and to prioritise them.

3. Level of innovation for Bilbao

   Each instrument was analysed in terms of whether it was innovative for Bilbao or not. If the city already had a similar measure in place, then it was considered not to be innovative.

4. Focus on KIBS

   Instruments were analysed as to whether they were targeting the KIBS sector or not.

As a result, the team obtained a short list of instruments to be studied in depth by the working group. The template used is shown in Section 0.

When this in-depth analysis was completed, the team shared the information and jointly reflected on the results and shortcomings. It was then possible to move forward and develop further the methodology described in this section.

3.4.2 Co-creation: recommendations

1. The steps proposed in this stage draw a path for instrument analysis, i.e., from the more general to the more specific issues that are relevant for policymakers.
2. This is the sequence in which the benchmarking process is more co-creative. The approach to the analysis of policy instruments needs to be flexible and open since it cannot be foreseen what type of information is going to be more relevant for each territory. This stage, therefore, needs more interaction among the participants.
3. The level of co-creation is therefore more intense in this particular stage, and the working methodology used by the participants required the following. First, participants were asked to reflect on relevant issues and prepare relevant inputs for the session. An example of this is that the method for filtering the instruments was proposed by a participant other than the facilitator as had been the norm in the process, and that the rest of the team worked on fine-tuning the framework.

4 TRANSFERABILITY

In the latter stage of the Bilbao As-Fabrik project, the working group developed an approach to make the lessons learnt in the benchmarking transferable. This approach was based on two main elements:

- A synthetic document called “proposal for action” which summed up the lessons learnt about each instrument. The document is structured along the following sections: relevance for Bilbao As-Fabrik justification of the proposed action, and a brief description of the lessons learnt.
- A dissemination and communication strategy which aimed to ensure that the lessons learnt from the benchmarking are transferred to agents who can make them actionable.

4.1 The action plans

The action plans gather all the lessons learnt in a user-friendly and easy to understand format. Three action plans developed by the consortium gathered the most crucial messages according to the working group:

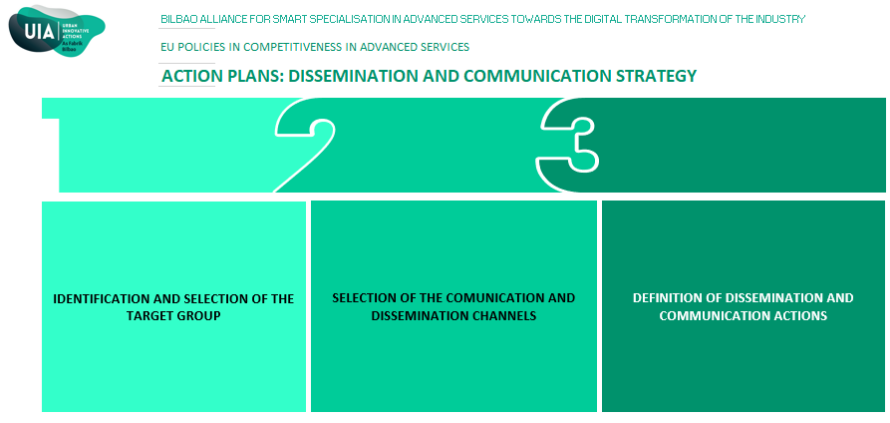
1. **Action plan 1 – Collaboration models in urban environments**
   This action proposal focuses on two collaborative models that have been studied in the policy benchmarking process, and that can serve as an inspiration for the actors who play a role in the BAF ecosystem.
2. **Action plan 2 – Specialised services**
   This Action Plan acknowledges that policy instruments based on the provision of specialised services can support businesses and provide the necessary knowledge and connections to enable them to innovate in areas of expertise.
3. **Action plan 3 – Strategic Partnerships for Innovation**
   This Action Plan focuses on the cross-border collaboration agreement established between Tallinn and Helsinki with a view to highlighting the benefits of this type of cooperation.

An example of the Action proposal 1 can be found in Section 0.

4.2 The dissemination and communication plan

As can be seen in the figure below, the dissemination strategy consisted of three steps: identifying and selecting the target group; deciding on the dissemination channels, and establishing the concrete actions to be deployed.

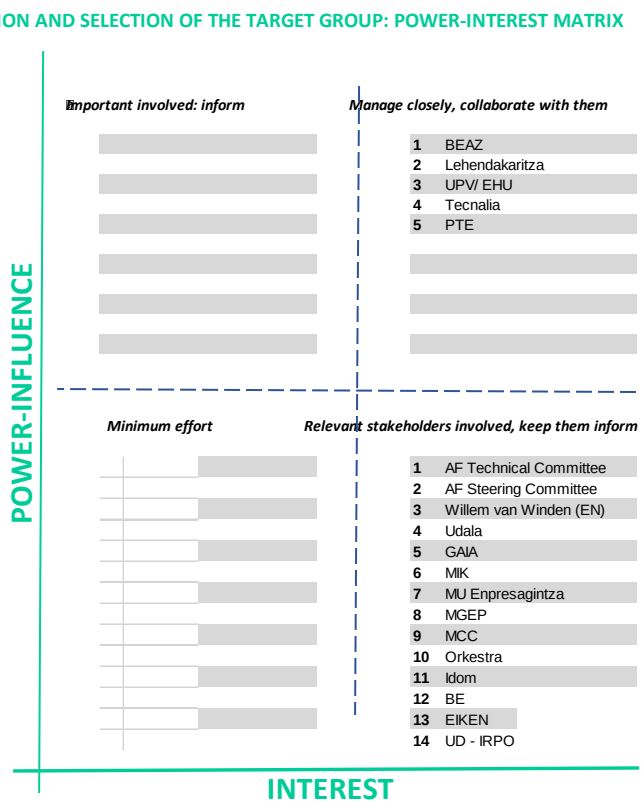
Figure 6 Communication and dissemination strategy: main elements



Source: Own elaboration

The first step was to identify the main target group to whom the dissemination actions should be aimed at. The working group used a methodology proposed by Idom, in which a power-interest matrix was created to pinpoint the main stakeholder group and decide on the type of the dissemination actions to be designed according to the chosen target groups.

Figure 7 Identification and selection of the target groups



Source: Own elaboration

The concrete actions to be deployed within the dissemination and communication strategy were defined by following the template shown below in Figure 8. The template includes the institution selected, the contact person, the means to contact him or her (by email or arranging a meeting), the person and organisation responsible for the action and a deadline:

Figure 8 Actions of the dissemination and communication strategy

Institution	Contact person	Contact means	Who and how	Deadline
AF Technical Committee		meeting	Orkestra (Usue)	February 2020

Source: Own elaboration

The first action plan was presented to both the steering committee and the technical committee before the lockdown caused by the COVID-19 crisis.

4.3 Conclusion of the transferability of the lessons learnt

The dissemination and communication actions were stopped due to the Covid-19 lockdown in March 2020. Given the special circumstances and because the priorities of the stakeholders were focused on other, more urgent matters, the actions foreseen were slowed.

In terms of actionability of the lessons learnt, circumstances have made it impossible to gather evidence and feedback on the usefulness of them for other interested actors.

5 CONCLUSIONS

5.1 Lessons learnt

The main lessons learnt throughout the process are summarised as follows:

1. The benchmarking exercise has been applied to respond to the specific challenge of learning from the best practices so as to implement political instruments that support the KIBS sector in the European urban landscape.
2. The co-created benchmarking exercise has also been a learning process for the participants, especially for policymakers, who can apply the methodology learnt again and who have gained knowledge on how to identify the improvements which will support the implementation of Bilbao's specialisation strategy.
3. The process carried out, together with BE and Idom, has helped team members to acquire competences in the field of benchmarking analysis. But beyond that, the process has helped the team gain knowledge on how to work collaboratively with public decision-makers in benchmarking exercises that support the implementation of specialisation strategies at the urban level. In this sense, the conclusions presented in this section tackle the challenge of any organisation at the urban level that is willing to gain knowledge on how to conduct actionable benchmarking exercises.
4. Benchmarking exercises have to be carried out together with the public decision-makers from the beginning. The objective is to make learning as relevant as possible and to enable it to be more effectively applied in future public actions. There are two specific challenges that are tackled in this way. First, the challenge of overcoming the imitation of practices without taking into account the context of the particular environment in which they are to be applied; and second, the challenge of building institutional capacities that facilitate learning so that improvement and change can take place in policies. The Bilbao As-Fabrik project has allowed us to explore and experiment with these challenges.
5. It is very important to identify the context in which a benchmarking exercise is relevant. That is to say, pinpointing the challenges to which we want to respond with the benchmarking exercise, and this must be done together by the analysts and decision-makers involved. By focusing on the concrete needs policymakers had, the team could explore how to overcome certain challenges that are related to the necessity of developing specific capabilities for the implementation of specialisation strategies, and also to explore the role that urban actors can play in those implementation plans. In other words, learning how to identify and analyse best practices in the European landscape which support specialisation in KIBS is a key competence for implementing specialisation strategies.
6. It is necessary to specify the kind of policy instruments that is of interest for the policymaker (innovation policy, entrepreneurship, etc.). In the case of the experiment in BE, the interest lay in the field of 'instruments required for implementing specialisation strategies'. These are areas where benchmarking exercises are more actionable. These exercises also have to take on board both the technicians and the elected officials.

5.2 Challenges and limitations

7. The process was initiated with the hypothesis that 'if benchmarking is co-designed and co-developed by analysts and policymakers (co-creation process), then the transferability of the lessons learnt can be improved and the results are more likely to be included in the policy decision process'. To date, the process has proven to be of value for the policymakers involved in it, who are principally civil servants; however, this value has not spilled over to other levels of policy-making (notably those levels that did not participate systematically in the process), mainly due to the following facts observed over the course of the process:
8. It is advisable that elected policymakers or representatives from the boards of directors also participate in the process so that they can contribute to and reflect on the potential actionability of the lessons learnt.
9. The participating institution (or the department or internal unit that participated in the benchmarking exercise) should make it possible for channels, mechanisms, and resources to spread the knowledge throughout the institution.
10. Members of the working group should remain the same throughout the process to avoid slowing it down and to build on the knowledge accumulated during the process at the individual level of the group members.

11. To date, benchmarking has yielded an interesting list of policy instruments for the promotion of KIBS, and an analysis of their value and “actionability” for BE. But the question remains unanswered as to whether the lessons learnt will be actionable and that policymakers apply them.

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ANNEX 1: RESOURCES DATABASE FOR THE ANALYSIS OF THE TERRITORIES

Objetive	Source type	Description	Where to find it
General context	Web	Regional Yearbook viewer - Interactive map with regional and city information from the Eurostat statistical base.	http://ec.europa.eu/eurostat/statistical-atlas/gis/viewer/?ch=C03,SCT,C08&mids=BKGCNT,C08M02,CNTOVL&o=1,1,0.7&center=51.74697,17.92973,3&lcis=C08M02&
	Web	Statistics on cities	http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban_Europe_%E2%80%94_statistics_on_cities,_towns_and_suburbs_%E2%80%94_tourism_and_culture_in_cities&oldid=345225
	Web	Urban Data Platform	http://urban.jrc.ec.europa.eu/?ind=popden&ru=fua&s=0&c=1&m=0&f=1&p=0&swLat=36.73888412439431&swLng=-49.130859375&neLat=59.130863097255904&neLng=70.927734375
	Web	City Statistics directory	http://ec.europa.eu/eurostat/statistics-explained/index.php/Category:Cities
	Report	Regions and Cities Illustrated (RCI)	Source: "Eurostat_Regions_and_Cities_Illustrated_Help.pdf"
	Web		http://ec.europa.eu/eurostat/cache/RCI/#
	Web	Urban development portal (+ links to Urban platforms and initiatives)	http://ec.europa.eu/regional_policy/en/policy/themes/urban-development/portal/#29
	Report	Links to databases of international organizations related to competitiveness	Source: "InternetEconomícSources2017.docx"
	Report	Urban Europe- Statistics on cities, towns and suburbs	Source: "Estadisticas ciudades.pdf"
Business and economic performance	Web	Regional Economic accounts Eurostat	http://ec.europa.eu/eurostat/web/regions/data/database
	Web	Regional structural business stadistics	http://ec.europa.eu/eurostat/web/regions/data/database

	Web	The Cluster Mapping tool provides sectoral and cross-sectoral regional data and allows the visualisation of the geographical concentration of cluster development in Europe - Each cluster must be selected.	https://ec.europa.eu/growth/smes/cluster/observatory/cluster-mapping-services/mapping-tool_en
	Web	Clusters in Spain	http://tools.orkestra.deusto.es/comexcnae/geo/ES21/typification/WLD/2008/2015
	Web	Doing Business in (OCDE) 2018	http://www.doingbusiness.org/
	Web	Benchmarking regional structure	http://s3platform.jrc.ec.europa.eu/regional-benchmarking
	Informe	OECD regions at a glance 2016	http://www.oecd-ilibrary.org/urban-rural-and-regional-development/oecd-regions-at-a-glance_19990057
	Database	Benchmarking regional structure	–Source: "smartspecbench2013variablesanddata.xls"
Innovative performance	Web	European Innovation Scoreboard 2017	http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_es
	Web	Regional Innovation Scoreboard 2017	http://ec.europa.eu/growth/industry/innovation/facts-figures/regional_es
	Web	Regional Innovation Reports	https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/report/innovation
	Report	Regional Innovation Scoreboard 2018	–Source: "Final_RIS_ETBC17001ENN (1).pdf"
	Web	Regional innovation monitor	https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/
	Web	European Digital City Index 2016 (Nesta) - The European Digital City Index describes how well different cities across Europe support digital entrepreneurs	https://digitalcityindex.eu/
Strategy	Web	Terms and searches: - Academic literature: google scholar - RIS3 regional, urban, city - Specialisation domains, fields - Clusters - Development agency	https://scholar.google.es/ http://s3platform.jrc.ec.europa.eu/home http://www.centreforcities.org/city-by-city/

Source: Own elaboration

ANNEX 2: BRIEF SUMMARY OF THE ANALYSIS OF THE REGIONAL/URBAN ECOSYSTEMS

AAHRUS	ANALYSIS OF THE REGIONAL AND URBAN ECOSYSTEM
INTRODUCTION	- City located in the Ostylland province of the central region of Denmark - 1.25 million inhabitants, which is 23% of the Danish population - The capital is Viborg and the largest town is Aahrus (335,000 inhabitants, the second highest in the country) - The GDP per capita (2016) of the region is 111% above the country's average, compared to 159% by Copenhagen. Since 2015 it has been increasing. In the case of Aahrus it is lower than the regional and national, but higher than the European average. - Regional unemployment is 5.5%, the lowest of all regions (the national rate is 6.2%), with the city of Aahrus having the lowest rate (3.9%)
INNOVATION, ECONOMIC AND BUSINESS PERFORMANCE	The region: - In terms of the sectoral distribution of employment, the public administration predominates (32%). The following sectors are also important for the region: wholesale distribution and transportation (23%), and industry (16%). Professional, scientific and technical activities account for 7% of total jobs. - In terms of technological specialisation, the region stands out in the field of mechanical engineering. Aahrus: - In the province of Ostylland manufacturing predominates over the knowledge services (22% versus 11%); in Aarhus (excl. PPAA) the services sector predominates with trade and transport (25%) and other business services (15%) over manufacturing (7%). - The business sector of Aarhus has focused its activity on the production and sale of innovative products and services; it is knowledge-intensive in and oriented towards the world market. It is led by big companies such as Vestas. - The service companies in the city are mostly international. The niche business approach of the Danish service companies (targeting the wind energy sector) has allowed them to export their services to other countries.
INNOVATIVE PERFORMANCE	
STRATEGY (national, regional, urban)	- The priorities of the regional industrial policy are: energy and environment, food products, innovation and well-being, and tourism. Four cross-cutting areas complete the priorities of the innovation strategy: innovation and business development, digitalization, entrepreneurship, and education and skills development. - Aarhus pursues a business development strategy to create solutions to respond to global challenges. The city relies on two basic pillars: the University of Aarhus, and innovation centers in the fields of cleantech, food, health care, ICT, and fashion and design.
GOVERNANCE (stakeholders in the innovation system)	- The central actor for the regional development policy is the Danish Growth Council. There are six regional Growth Forums, one for each region in Denmark (**Denmark Region Growth Forum**[6] for the Central Denmark region) - Business development in the city of Aarhus is promoted through Business Aahrus.
SUPPORTING INSTITUTIONS	
CAPABILITIES	- The University of Aarhus is among the 100 best of the 17,000 universities in the world, and is a hub attracting foreign employees, researchers and students.

[6] http://www.rm.dk/om-os/english/regional-development/

	- Human resources and innovation have traditionally been incorporated into the strategies of the city, which are considered as levers of growth.

ANNEX 3: TABLE FOR THE POLICY ANALYSIS

Class/Policy Instrument	Title	Organisation in charge and geographic coverage	Target group	Description (Cross-sectorial or single focus)	Policy objective	Facilitation instrument for the Bilbao specialisation strategy	Number
				1.			

Source: Own elaboration based on the European Commission (2013)

ANNEX 4: SHORT LIST OF INSTRUMENTS OBTAINED FOLLOWING THE METHODOLOGY FOR FILTERING THE INSTRUMENTS

Facilitation instruments – Bilbao's priorities	Instrument	Relevance for Bilbao	Content and interest	Priority
COMPETITIVE INTELLIGENCE (2)	M1: "Expertise and advice for creating New Market services/Innovation services "			
	M3: "Expertise and advice for diversifying and exploring new fields"			1ª
	M6 : "Direct support for priority fields: creative, digital & tech. Peer to peer collaboration and access to cutting-edge information, strategies and techniques."			1ª
COMPETITIVENESS IMPROVEMENT (4)	B5: "Design and creative credits. A form of cooperation between creative industries and the industrial sector based on creative credits"	X		1ª
	B8: "DIGIMAT", Access to expertise and know-how			
	R1: "The Port as Service", digitalisation and innovation in the port sector.	X		
	R4: "My Data, Our Health", puesta en marcha de un piloto de IoT, big data y realidad virtual en el sector sanitario. Implementation of an IoT, big data and virtual reality pilot project for the health sector.			
	R9: "Prototyping programmes."			1ª
	R12: "Regional Campus Network", network of sectoral campuses/experts (labs, incubators, institutes, etc.) in specific advanced services.			
	TLL7: "Mapping of entrepreneurial activism and innovative activities", Innovation Observatory.			
	ER4: "Knowledge and professional workers qualifications".			
	T15: "Fast Experiments: co-creation, stakeholders and users involved in the development process".	X		1ª
	T17: "Open Platforms"			1º
	M13: "Invest Manchester, commercial properties to help industries to grow".			
ENTREPRENEURSHIP (2)	B12: "Incubation and acceleration programme adapted to the needs of knowledge-intensive startups."	X		1ª
	R3: "Slim Gemaakt"			
	R8: "Field Lab ecosystem			
	TLL18: "Implementing opportunities for testing innovative products and services",creation of "Living Labs".	X		1ª
ATRACTIVENESS (2)	M12: "Study", talent attraction. M11 MEET - Manchester Convention Bureau Services M10 VISIT M9:" Investment			1ª
	TLL16:"Innovation networks and platforms. City of Talllin in collaboration with other city agencies and entrepreneurial support structures."	X		1ª

Source: Bilbao As- Fabrik

ANNEX 5: ACTION PLAN 1 – COLLABORATION MODELS IN URBAN ENVIRONMENTS

POLICIES FOR COMPETITIVENESS IN ADVANCED SERVICES

Action plan 1 – Collaboration models in urban environments

Bilbao Ekintza, Idom and Orkestra

September 2019

In this action proposal:

Benchmarking of competitiveness policies: action!

The aim of Bilbao AS-Fabrik (BAF) is to increase the competitiveness of the knowledge-intensive business services (KIBS) sector in Bilbao.

The Benchmarking of Competitiveness Policies project has studied 7 **reference urban environments and analysed the existing policies and instruments** in order to identify **new ideas and practices relevant** for the objective of the project.

This action proposal aims to transfer the main lessons learnt to organisations in the BAF environment and also to other stakeholders so that they can reflect on **how to apply these lessons in their specific contexts.**

Objective: to introduce the collaborative models studied in the policy benchmarking process

Collaboration models in urban enviroments

The need **to foster co-creation and cooperation** in the area around Zorrozaurre, i.e. around BAF's building, and from there in a wider urban ecosystem (universities, companies, governments, entrepreneurs, etc.) is a challenge that was already pointed out by the expert Willem van Winden (Journal No. 4 of Bilbao As Fabrik; Zoom In, May 2019).

Specifically, some of these challenges are related with transforming the building into an open space where new collaborations are established; new products and services can be tested; new companies are housed... in short, into an open space for experimentation and collaboration with Bilbao's innovation ecosystem.

This action proposal focuses on two collaborative models that have been studied in policy benchmarking processes, which can serve as an inspiration to actors with a role in the BAF ecosystem.

Open Innovation Platforms (OIPs)

The governance model proposed by the OIPs can boost the KIBS ecosystem in Bilbao through exchange and collaboration agreements

REFERENCE URBAN ENVIROMENT

TAMPERE, Pirkanma province, Finland

INDUSTRY AND KIBS

The existence of a major industrial sector (25% of GDP) is driving innovation and growth in a dynamic KIBS sector.

WHAT ARE THEY?

The OIPs represent a collaborative model for developing city services and business development activities aimed at social challenges.

The OIPs provide a new way of implementing urban specialization strategies that respond to the rapid changes in the environment and help to detect new emerging opportunities.

The "OIP" provide a new generation of co-creation spaces (triple helix), which are promoted by advanced platforms (digital or physical) and are often facilitated by universities.

OIPs 'STRENGHTS

The "OIP" allow to adopt a strategic vision for the exploitation of the business opportunities that facilitates the consensus in the establishment of objectives, of networks and allows the acceleration of the innovation. I DON'T UNDERSTAND. PLEASE SEND IT IN SPANISH

They focus on the city's relationship with public and private actors, especially end users of the innovations developed.

Operational framework for measuring a platform

RELEVANT LESSONS FOR THE DEVELOPMENT OF KIBS IN BILBAO

SMACC. Led by the VTT technology centre and the University of Tampere, it is an infrastructure and resource network aimed at research and services in the intelligent manufacturing and robotics fields. It is similar to other one-stop shop models (Basque Digital Innovation Hub) regarding the access to resources (infrastructures, networks, etc.), but is distinguished by its greater focus on knowledge transfer between the triple helix spheres and by its technological leadership.

KAMPUSAREENA. It is a building on the university campus which brings together companies, researchers, and students in interdisciplinary meetings to promote collaborations in R&D and innovation projects, and set up successful businesses. The facilities in this building are also suitable for experimenting and exhibiting projects. Pioneering R&D companies (Huawei, Nokia, Cargotec...) have created a Club to strengthen University-Industry collaboration.

HIEDANRANTA. New district in Tampere for whose development residents are being placed at the centre through cooperation with citizens, companies, research institutes, and other organisations. Hiedanranta Innovations serves as a platform for carrying out experiments and projects that promote intelligent and sustainable development and solutions for the circular economy. There are around 20 initiatives underway based on this philosophy that cover, among other issues, mobility, waste, construction, digitalization, inclusion and energy.

Development of urban innovative economic districts

REFERENCE URBAN ENVIRONMENT

ROTTERDAM, Netherlands

INDUSTRY AND KIBS

As an important and international logistics and trading hub, the Rotterdam-South Holland region has been developing service-oriented policies for several decades, particularly related to port activity, industry and KIBS (currently accounting for 16.3% of employment), which are connected in this case to the business demand for specialists in life sciences, medicine, health, and chemistry.

The three main principles of RID

WHAT IS IT?

It is a collaborative environment that seeks a greater presence of the emerging innovation economy in order to create a new base of jobs and to adapt to industrial changes and use technology as a lever for sustainability, resilience, and social cohesion.

ROTTERDAM INNOVATION DISTRICT (RID), EXAMPLE OF INNOVATION DISTRICT

RID is an example of an innovation district that was launched jointly by the City and the Port of Rotterdam with the aim of rehabilitating the former port and dock facilities and lands along the Maas River. It consists of:

- The RDM Campus, where university, industry and the public sector unite their efforts to find sustainable solutions for strategic sectors such as construction, mobility, and energy.
- M4H is an experimental environment for innovation in the biotechnology, food, and clean energy sectors.

RDM STRENGHTS

Develops a collaborative model in which universities, institutions and companies are aligned with start-ups, incubators and growth accelerators for the development of a smart manufacturing industry innovation ecosystem

RELEVANT LESSONS FOR THE DEVELOPMENT OF KIBS IN BILBAO

Bilbao has had the opportunity to design the island of Zorrozaure as an innovation district and is experimenting in BAF, a collaborative model similar to RID. The relevant points identified are related to:

1. Simplified regulations combined with world-class facilities in order to attract creative entrepreneurs.
2. Promoting experimentation is crucial for the creation of innovative environments.
3. Setting up "makerspaces" and favourable meeting places where users can share the facilities and cross-fertilisation between different sectors is encouraged.
4. Establishing an independent collaborative organisation to foster the district's development.
5. Building a critical mass of human capital to promote knowledge-intensive activities.

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