

**All companies
are
service companies**



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Disclaimer

The views expressed in this report are those of the author and the Twinning Team. They do not necessarily reflect the opinion or position of the European Commission and in no way commit the involved organisations.



“I didn't have time to write a short letter, so I wrote a long one instead”

The quotation above is normally credited to Mark Twain and it refers to the fact that explaining things concisely is not an easy task.

Editing is a painstaking process that requires the editor to read *and understand* things described using an abundance of words and then distil this down into a text that can allow the reader to understand all that is necessary to be understood.

What follows is our *short letter*; our distillation of the many impressive articles and papers listed in the Bibliography – the *long letter*.

The PLIS Partners



Design Options Paper

All companies are service companies



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Executive summary

The challenge

Servitization is a trend we see in almost all industries throughout the world. This is why it makes sense to title this Design Options Paper (**DOP**) “All Companies are Service Companies”. This *customer demand*-driven focus is not new, but it is poorly practiced despite being perceived by leading corporations as the only way to sharpen their competitive position.

Today it’s not enough to generate excellent products or services for customers, it’s about meeting their needs and providing good experiences by offering a customer-focused combination of goods, services, support, self-service and knowledge.

The aim of this DOP is to offer policy makers distilled knowledge and recommendations in order that they can help facilitate their regional industries to embrace a new, *service innovation driven*, competitiveness logic.

The conclusion

A shift in focus like this has profound implications for both company activities and innovation policies. For the companies, the changes are seen in the demand for new or changed employee competences, the need for new strategies and new ways of collecting insights to develop value propositions that meet customers’ needs. Whereas the implications for innovation policy makers are the need to develop and promote new initiatives that can inform, motivate and support companies to shift their focus from being technology and goods focused towards being focused on the *job-to-be-done (JTBD)* that will create customer value.

When developing innovation policies, the need is for an integrative approach. The policy response to this new Service-dominant logic (**S-D logic**) approach is subtle and evolutionary. It requires a cultural shift in policy thinking and action where support is more equitably distributed across more types of innovation and where value that is generated from non-technology and non-product innovation is equally recognised.

It has been difficult to find examples where we (the PLIS partners) have helped a company to work strategically in transforming their business towards S-D logic. Basically, this is because most of the current innovation support provided is still based on an assimilation approach, where Service Innovation is not truly considered from the start, but is viewed as an *add on* to technology and product development. Therefore, our research has drawn on academic evidence and global examples combined with the knowledge and experience we have about current policy initiatives and tools that are already working to support service innovation in companies – though in a piece meal rather than systemic fashion. These initiatives are listed in the appendix.

The recommendations

In order to support the transformation to a Service Innovation dominant environment this DOP has proposed recommendations to help sharpen policies that will support the upgrading and adaptation of regional innovation systems.

These recommendations should not be taken as a blue print. To be most useful each region should reflect on its current situation, capabilities and strategy. Each innovation agency should select from these recommendations and adapt them to best achieve the transformation in their region.

Among the most important recommendations are:

- Lead the movement towards a *job to be done* approach.
All successful companies will need to become *Service Dominant* in their innovation approach and must focus on addressing the customer’s *job to be done*.
- Stop funding based on technology and start funding based on the *job to be done*.



Technology alone cannot deliver success. Support should drive companies to best extract value from where the value is; i.e. from the market and in co-creation with customers.

- Value a company's ability to understand its customers, not its ability to develop products. Companies will struggle if they depend on their technical competences to develop new, desirable solutions – the future will belong to companies who better understand and fully respond to their customers' needs.

More than ever, successful companies will be those able to solve the problems and deliver with respect to all the needs of their customers. Given this need for Service Innovation, policy makers and innovation agencies must avoid inappropriate use of words like Product and Technology, and phrases such as the now ubiquitous *Technology Readiness Levels*, if they are to encourage companies to become *Service Dominant* in their innovation approach.

Good luck with your service-transformation.



1 Introduction

1.1 Challenge

There is universal recognition that constant change in the market is leading to transformation and (almost) perpetual upgrading in all industries and that we are living in a volatile, uncertain, complex and ambiguous environment (V.U.C.A). However, innovation policy is still predominantly focused on research, technology and product development. While this remains important it is not sufficient to respond to a service-led market dynamic. For companies and regions to flourish all of their innovation potential has to be nurtured.

One of the main features of the V.U.C.A environment is the dominance of the customer and the need for companies to be customer-centric in order to be competitive. More than ever, successful companies will be those able to solve the problems and deliver with respect to the needs of their customers. More than this, it's not enough to generate excellent products or services for customers; it's about providing good experiences – helping them to feel satisfied. This has profound implications for industries, markets and innovation policies that have, so far, largely centred on the outputs of firms.

Moreover, the emergence of Information and Communications Technologies (ICT) – in particular the Internet – has led to a democratisation of innovation and has opened up innovation processes. Digital transformation is changing the rules of the game for most industries. Linear models of innovation are giving way to systemic and collaborative models that enable the inclusion of users from the very start of the innovation process and increase the effectiveness and impact generated by investment in innovation. This new model enables the emergence of new, open and collaborative innovation structures, new design, development and delivery processes and new types of work.

Anticipating and utilising this change in customer demands and innovation activities will be what enhances the competitiveness of a region. It is in this context where Service Innovation¹ plays and will play a crucial role in the transformation and upgrading of traditional and emerging industries into more productive, competitive and *high value-added* business ecosystems.

But doing this requires conscious decisions; priority-setting based on the regional competences; a universal and systemic approach to innovation support²; and, a long term commitment from both policy makers and businesses. So the aim of this document is to offer policy makers some recommendations in order that they can efficiently and effectively help facilitate their regional industries to embrace a new Service Innovation driven competitiveness logic.

In the end it is not about supporting Service Innovation as such; it is about supporting companies to make this inevitable transformation to a service dominant mindset.

1.2 Structure

This paper is intended as a guide for any innovation agency, department or similar organisation that is considering fostering, or has decided to foster, Service Innovation among its small and medium-sized enterprise (SMEs). Different recommendations for designing, re-designing or improving current initiatives in the area of Service Innovation are suggested for policy makers and delivery organisations – regardless of where they and their SMEs are on this transformational journey.

Chapter 2 clarifies why it is important to foster a new Service Innovation mindset when defining innovation policies.

¹ For more information see chapter 2 “Service Innovation”.

² Service innovation alone cannot resolve the societal challenges as it needs to be integrated into a systemic policy approach geared towards supporting industrial transformation at regional level.



Chapter 3 reflects on the challenges for policy makers have in trying to define a *right* approach to innovation policies within a Service Innovation mindset.

Chapter 4 contains a brief description of different initiatives that are supporting – or could, with some small modifications, support – the transformation and adaptation of industries through to a Service Innovation mindset.

Chapter 5 draws the main conclusions for companies and policy makers when considering a Service Innovation approach.

Chapter 6 proposes recommendations to facilitate the transformation and adaptation of industries to the current environment through a Service Innovation approach.

1.3 Methodology

It is recognised by the European Commission and the PLIS partners that Service Innovation can play a key role in maximising the economic impact of SMEs at local, national, regional and international level. In this sense, this document aims at increasing knowledge and experience on how innovation policies should be designed and implemented in order to:

- Increase awareness of the importance of Service Innovation and how it aligns with other existing innovation support services.
- Support the upgrading and adaptation of the regional industries through a Service Innovation approach.
- Increase operational efficiency amongst innovation agencies in delivering Service Innovation support.
- Increase the number of innovation projects developed by SMEs within a Service Dominant approach and their impact on company competitiveness.

To reach these objectives, the consortium used the Twinning+³ methodology in order to:

- Accelerate the learning process among the participants and identify good practices and recommendations to help foster Service Innovation.
- Strengthen the relationship between the PLIS partners and expand into networks beyond consortia.
- Develop a document that could inspire and guide other innovation stakeholders to foster Service Innovation among SMEs.

Following this methodology has permitted all of the PLIS partners to:

- Reach a common understanding of Service Innovation and its main concepts.
- Understand that most of their innovation support programmes and services are focused on product and technology development.
- Understand that most of their innovation policies are following an assimilation approach; services are added to a core product or service.
- Learn, from each other, how to improve the services they provide in order to foster a Service Innovation approach within an integrative framework.
- Reflect about which measures should be developed in order to support the upgrading and adaptation of their regional industries through a Service Innovation approach.

During the project five meetings took place⁴; each partner was responsible for the organization of the meetings in their region. The project followed these three main steps:

- Understanding the concept of Service Innovation.
- Identifying different initiatives developed by each partners' regions that are supporting the transformation and adaptation of their industries through a Service Innovation mindset.
- Proposing feasible recommendations based on the existing initiatives.

³ The basic idea of Twinning+ is to have innovation support organisations collaboratively address a common innovation support challenge. By using their collective experience and knowledge, the idea is to develop and test an approach to address the support challenge in a new and better way.

⁴ For more information see section 9.2 of the Annex (Progress of Work).



2 Service Innovation

2.1 The Importance of Service Innovation

Innovation has always been considered an element central to the development of regions, for their contribution to the improvement of competitiveness and the creation of wealth and employment. Nevertheless, during the last few years, the concept of innovation has shifted from a technological approach to a customer-centric one.

In today's global and constantly changing market, customers are ever more demanding and powerful and are expecting their problems to be elegantly solved, their needs to be fully met and their experiences first-rate. Companies are under pressure to offer them integrated solutions in order to remain competitive. Today, more than ever, success is increasingly associated with simultaneously solving a customer's job-to-be-done (JTBD⁵) while delivering great customer experience.

A product driven approach founded on the premise that a company's competitiveness comes from technological leadership based on sustained investment in R&D, is not enough in this context. This has to be contained within, with a customer-driven approach based on an in-depth understanding of the customer's motivations, their needs and the problems they want solved in order to develop successful, new solutions. Both approaches are necessary, although successful companies will be those that strike the right balance between user demand and technological leadership to deliver the most appropriate solution.

Moreover traditional boundaries between products and services are now being blurred – manufacturing is becoming more like services and services are becoming more like manufacturing. Manufacturing firms are producing more product-service solutions (servitization⁶), while services firms are becoming more competitive by offering solutions based on the traditional technological innovation in manufacturing. This is not a new concept; the Expert Panel on Service Innovation (2011) stated that: *"...leading European manufacturers are responding to the challenge of global competition by not only improving the design, functionality and performance of their products, but also moving to user-centric and service-oriented business models, to better meet the needs of customers. At the same time, service providers are working closely with manufacturers to improve the reliability and performance of the systems behind their service offerings. The result has been a closer working relationship, indeed a blurring of the traditional divide between manufacturing and services"*. It is important to take into account this hybridization of products and services and the increasing bundling of them into integrated solutions.

Therefore, all companies must become service companies if they are to continue to prosper. All companies from all industries must understand that their products and services are used by customer to get jobs done and as such are aids to the service process of satisfying their customer's needs. This will require a shift in the company's innovation mindset to one where the customer, not the product, is at the core of the value proposition. Looked at this way, Service Innovation is understood as **the process of supplying new or improved resources to the customers in order to create value for and with them.**

This shift is understood by the most innovative companies, but a broad range of companies are still focused on delineation between products and services. Our responsibility as policy makers is to facilitate and foster their transition to a Service Innovation mindset. The challenge is how to do it, especially as it is clear that current innovation policies are biased toward technology and product development. Key changes must occur if we want to sustain the future competitiveness of our companies and generate *high value-added* business ecosystems.

⁵ For more information see section 2.2.3 "Job To Be Done (JTBD)".

⁶ For more information see section 2.2.2 "Servitization of the industry".



2.2 Main Service Innovation Concepts

Service Innovation – the process of supplying new or improved resources to the customers in order to create value for and with them – is a definition based on the concept of Service-dominant logic (S-D logic) introduced by Vargo & Lusch (2004) in their article “Evolving to a new dominant logic for Marketing”.

In order to understand how to address S-D logic, several aspects need to be explained. These are:

- **Servitization of the industry:** all companies will have to become service companies to compete, even manufacturers.
- **Job-to-be-done:** understanding the context of the customer is critical to construct the correct value proposition (companies cannot deliver value; they can only offer value propositions).
- **Value-added Ecosystems:** the aim of companies is to supply the right resources to the customers in order to create value with them. Companies become collaborative resource integrators and co-creators of value with customers, where the critical resources are knowledge and skills.
- **The critical role of Knowledge Intensive Business Services (KIBS):** companies will need to bring in new knowledge and skills so connection to KIBS – to provide those capabilities – is crucial.

This section focuses on understanding the rationale for all these concepts and the implications for the innovation process of companies.

2.2.1 Service-dominant logic vs. Goods-dominant logic

For decades, the underlying reasoning when developing innovations has largely been focused on product development or Goods-dominant logic (G-D logic). If companies and regions are to remain competitive through the longer term we believe that a transition is needed where companies take on a service-dominant view point; S-D logic.

With G-D logic the assumption is that value is added through the processes of developing and offering outputs (tangible or intangible) and that the supplier network creates value, while the customers consume it. In contrast, with S-D logic, outputs are seen as distribution mechanisms for service provision and therefore the focus is on the processes of serving rather than on offering outputs. It is the customer who creates value during use and it is this value in use that they pay for.

With S-D logic, a company’s offerings are not embedded with value; the value is in the exchange and occurs when the offering is useful to the customer in a particular context. This is the concept of value-in-use, in this logic companies cannot deliver value; they can only offer value propositions. The role of the company is to supply resources to the customers in order to create value with them. Thus, companies become collaborative resource integrators and co-creators of value with customers and not suppliers of products or services.

Therefore, in S-D logic, “Service” is understood as *“the process of applying specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of others or oneself”* (Vargo & Lusch, 2004). Here products and services (outputs) are only valuable to the extent they are aids in service or the process of doing something beneficial for and in conjunction with the customer. Therefore, it is service that is always exchanged while products and services are hired by customers to get jobs done. This shift in mindset has profound implications for industries and markets, which remain largely centred on the outputs of companies rather than the service they create to meet customer needs.

S-D logic is applicable to any kind of organization (business organizations, government organizations, non-profit organizations, etc.) regardless of whether it is offering a product, a service or a combination of both. This is why all companies are service companies, or have to become service companies, in order to prosper. However, most companies still base their understanding in service as an output and view services as add-ons to the core offering; something that is needed in order to improve their offering and maintain its competitive position. Even with service companies, most are too focused on creating a good offering than



on the all round satisfaction of their customers. They are focused on creating value through the development of good offerings to customers; not on helping customers in their own value-creation process.

In summary the main differences between the G-D logic and S-D logic are shown in the following table:

Criteria	G-D logic	S-D logic
Concept of value	Value-in-exchange	Value-in-use
Focus	Output (products or services)	Satisfaction (customer perception of benefits)
Approach	Inside-out	Outside-in
Value creation	Features and attributes (companies add better features and attributes in order to offer the best products or services to their customers)	Solution (companies collaborate with customers in order to help them to construct the best solution)
Solution development	Inside the company	A network including the company and customers
What is achieved	The company's output	The customer's JTBD

To conclude, we believe that a transition to S-D logic is necessary to drive sustainable competitiveness. This requires a significant shift in how Service Innovation is understood – it is the re-bundling of diverse resources to create novel solutions that are beneficial to customers in their context.

2.2.2 Servitization of the industry

The manufacturing industry is experimenting with servitization to increase financial margins, prolong a product's life, get closer to customers and maintain customer relationships for longer. This is especially applicable to mature products, whose manufacturers have to compete with innovative companies coming from adjacent or other industries, or other countries.

In this sense, servitization is about competing through value propositions that integrate products and services and deliver product-service systems that achieve higher margins, greater market share, increased customer satisfaction levels and loyalty – this evolution can even lead to the development of new business models.

This concept is not new; it was introduced in the 1980s. But today, enabled by the digital revolution, servitization is growing rapidly in the manufacturing industry. It is important to bear in mind that the transition from product to product-service offering needs resources. In an analogue context, most of the resources needed scale linearly with product sales, resulting in high costs for manufacturers. This situation has changed in the current digital context where automation and increased productivity in service delivery allow the application of servitization at a larger scale and lower cost.

Servitization can be seen from both the goods and service dominant logic:

- Under the G-D logic, servitization is viewed as an extension of the manufactured product with services considered to be add-ons to the physical product, adding more attributes to the offering.
- Under the S-D logic, servitization is viewed as the process of intentionally designing a product-service system that incorporates both the company's resources and the customer's resources in order to co-create the value attained by the customer when experiencing or using the solution.

Due to the product-orientation of their staff, most manufacturing companies still view servitization within their G-D logic. But, as it has been said before, companies must embrace S-D logic if they are to shift their focus from outputs to customer-centric solutions (value co-creation). In this sense, in order to facilitate this transition, it's important that traditional manufacturers understand the necessity to design services including products rather than as add-ons to their products. Once this service *infusion* has been internalised, the



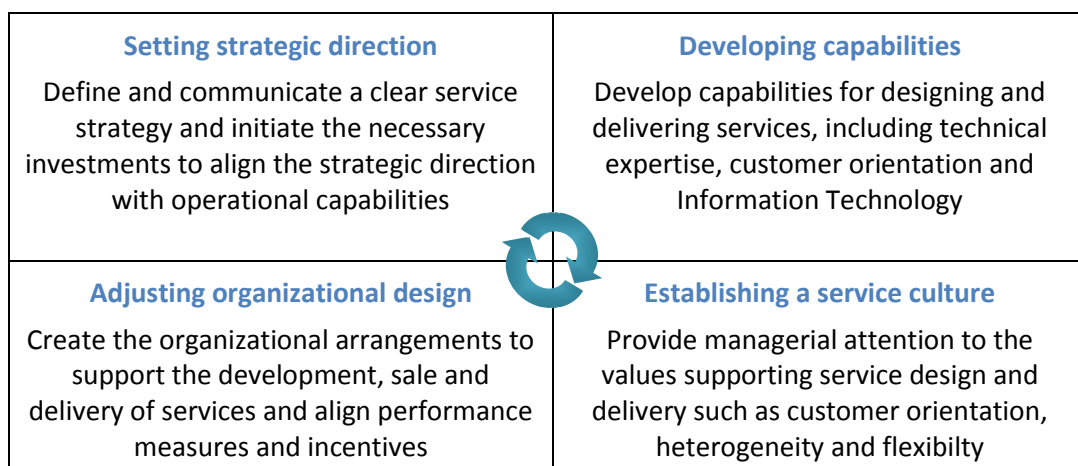
company will be more likely to adopt the S-D logic. Indeed, practice shows that the level of servitization evolves on the basis of their core-product offerings. For example: manufacturers can begin by developing an after-sales service that enables the recovery of equipment that has failed to work properly (asset recovery); later they offer a service that provides continuous support and guarantees uptime (asset availability); and finally, the most advanced manufacturers could provide customers access to resources in the form of service provision rather than ownership of equipment (customer outcomes).

The differences are summarised in the table below.

Value proposition	Description	Example
Asset recovery (G-D logic)	Minimising problems to the customer in case of equipment failure	Repair of equipment after notification
Asset availability (G-D logic)	Maximising the availability of equipment to the customer	Provide remote and preventive maintenance
Customer outcome (S-D logic)	Giving to the customer better capability to achieve the desired outcomes of equipment	Taking over customer activities and offer them capabilities to achieve the desired outcomes

Source: adapted from Avlonitis, V., Frandsen, T., Hsuan, J., & Karlsson, C. (2014). *Driving competitiveness through servitization: A guide for practitioners.*

A successful servitization strategy requires four key levers to be managed: setting strategic direction, developing capabilities, establishing a service culture and adjusting organizational design.



Source: *Driving Competitiveness through Servitization* (Avlonitis, Frandsen, Hsuan & Karlsson)
<http://www.industriensfond.dk/sites/default/files/20140509.pdf>

It must be noted that where a physical product or technology is difficult to change, companies will tend to add services in order to improve customer usage. Conversely, when the physical product or technology can be changed without much effort, companies are more likely to focus more on redesigning or developing the product or technology to suit specific customer needs. The technological revolution in manufacturing (Industry 4.0) could make it even easier to reconfigure manufactured products and this may have the effect of accelerating the transition of some manufacturers to S-D logic.



2.2.3 Job to be Done (JTBD)

Customer jobs innovation theory is aligned with S-D logic. This theory is based on the mantra that *people buy solutions to get a job done*. In other words, the solutions that win in the current marketplace are those that help customers to get their jobs done better.

It proposes that companies stop focusing on the product or service (what the customer buys) and instead focus on the underlying process or job the customer is trying to get done (why the customer buys it). Instead of limiting their innovation efforts on trying to improve their existing products and services, companies should focus from the outset on trying to find better ways to combine the right products and services to help customers get their job done. The implication of this change of thinking is profound: stop studying the solution and instead study the job that customers are trying to get done.

“Upgrade your user, not your product. Don’t build better cameras, build better photographers.”

Kathy Sierra

A specific job-to-be-done (JTBD) describes the motivation that comes before engaging in an activity. Harvard professor Theodore Levitt stated:

“People don’t want to buy a quarter-inch drill. They want a quarter-inch hole!”

This is partially correct; most people don’t want to make holes, they want achieve something more; e.g., hang something on a wall. Given this is the JTBD, why not develop a better solution that, perhaps, doesn’t require customers to make holes?

Here, the products and services used by the customers in order to carry out their JTBD come and go, whereas the underlying JTBD does not go away (it either doesn’t change or does so slowly). Solutions that achieved a JTBD in the past will probably be replaced by new solutions. Therefore, companies should focus on the JTBD and not the solution itself and rather than designing their business around a specific solution, companies should focus on designing their business around their customers’ JTBD. Doing this, companies will be always be focused on developing the best solutions, resulting in a more sustainable company as their business will be more difficult for competitors or new entrants to disrupt.

JTBD theory has two clear aspects in common with S-D logic:

- Focus on the satisfaction of the customer through an outside-in approach, not on the output through an inside-out approach.
- The provided solution generates value when it helps the customer to carry out a specific job (value-in-use concept).

2.2.4 Value-added ecosystems

With S-D logic, customers themselves, the products and services they buy (outputs) and the producers who create these outputs are all parts of an ecosystem. An ecosystem constructed to develop an offering that is useful to the customer in achieving their JTBD. It is very important to understand that the ecosystem doesn’t create value, it facilitates the customer’s value creation. The ecosystem must collaborate to provide the best service to fulfil the JTBD.

In this sense, companies need to understand that they are not going to help customers by optimizing parts of this ecosystem individually. They must improve it by optimizing how those parts work together. Understanding the interdependencies that exist between customers, their JTBD, the producer and other agents is fundamental in to creating and selling the right solutions for today’s demand and helps to predict future demand.



Identifying these interdependencies is very important. Many parts have some degree of connectedness with each other – a change in one part will affect some or all of the other parts. Companies must therefore become collaborative resource integrators and co-creators of value with customers.

Given this, there is little point in limiting a company's innovation to its own internal knowledge, ideas and skills. Such a closed model cannot be sustainable over time. The innovation process should be open to external agents. It is necessary to construct a model based on collaboration as today, and going forward, it is not companies that are competing, but ecosystems (the value experienced by the actors and beneficiary is more relevant than the output delivered by an individual company). Having a good ecosystem enhances the capability of all its participants to the best solutions for the JTBD of your current or new customers.

A collaborative innovation model cannot only be opening the door to external sources of ideas and knowledge; it must be the deliberate and systematic search to combine the capabilities and assets of other companies with the aim of helping their customer to create value. It no longer makes sense to decline to take advantage of resources from outside the company – customers, suppliers, universities, technology centres, research centres, business schools, design schools, investors, the media, government/public bodies, even competitors. Fostering the networking and interaction with all types of actors will be crucial to establishing collaborations that build the ecosystems necessary to generate the right value propositions.

2.2.5 The critical role of Knowledge Intensive Business Services (KIBS)

S-D logic considers all companies to be service companies and emphasises the role of knowledge and skills. In other words, future successful companies will be those able to marshal the knowledge and skills required to support the process of helping customers to carry out their JTBD. Here, the concept of knowledge intensive business services (KIBS) is highlighted and broadened. Highlighted because they will play a crucial role in all ecosystems; broadened because all companies can be KIBS to some extent (all companies can provide knowledge-intensive support to the benefit of others or themselves).

It is important to note that the main added value of KIBS is based on the accumulation, creation and dissemination of knowledge (technical and/or functional) with the purpose of developing a service adapted to the needs of their customers. KIBS have several common characteristics:

- The production and provision of the service is based on knowledge and professional competences.
- Their services can be used as sources of knowledge and skills to be applied on a specific solution or as inputs for the development of new knowledge and skills.
- Most of their customers are companies.
- There is a strong interaction between the service and the customers⁷.

⁷ One of the common characteristic of KIBS companies is that customers routinely play a critical role in co-producing the service solution along with the service provider, which it is totally aligned with the S-D logic.



3 Innovation Policy Implications

3.1 Approach to Innovation Policy Making

Three different types of innovation policies are identified:

- Assimilation (manufacturing-based approach);
- Demarcation (service-based approach); and,
- Integration or Synthesis (integrative approach).

The concept of service innovation is understood differently depending on the approach taken.

In the *assimilation* approach, service innovation is perceived as fundamentally similar to innovation in manufacturing (G-D logic). In other words, it focuses on adapting existing and traditional innovation theories and models (focused on products) to fit the service innovation context. Therefore, this approach mainly considers technological or visible modes of product and process innovation, ignoring other non-technological or invisible innovations outputs. Most innovation policies around today follow this approach.

The *demarcation* approach considers specific characteristics of services as relevant. Still, this approach does distinguish between product innovation and service innovation (G-D logic). Newer theories and models of service innovation are required; theories and models that take into consideration characteristics of service outputs such as immateriality, interactivity, co-production and invisibility. Unlike assimilation this approach considers the non-technological and invisible innovation outputs.

Finally, the *integration* approach aggregates both the assimilation and demarcation approaches within a common conceptual framework that enlarges the view of innovation. This approach considers both goods and services, and technological and non-technological modes of innovation.

The following table summarizes the three conceptual approaches:

Theoretical Perspective	Assimilation	Demarcation	Integration
Characteristics of innovation	Equates or reduces service innovation to the adoption and use of technology.	Leads to new typologies for innovation in services.	Shows convergence between manufactured goods and services in regards of innovation.
Innovation framework	Attempts to assimilate services within the consolidated framework used for manufacturing sectors and manufactured products.	Attempts to develop a specific framework for service innovation, while attempting to highlight all the specificities in service product and production processes.	Attempts to develop a common conceptual framework, able to account for an enlarged view of innovation that is applicable to any tangible or intangible solution.

Source: adapted from Morrar, R. 2014. *Innovation in Services: A Literature Review*. *Technology Innovation Management Review*, 4(4): 6-14. <http://timreview.ca/article/780>

Therefore the chosen approach will shape the policy undertaken to foster service innovation and will be very different in each case. Under an assimilation approach industrial policies will be applied to services; under a *demarcation* approach it will be necessary to develop specific policy for services; while under an *integration* approach it will be necessary to develop new integrative policies; policies that allow for product and service innovation and technological and non-technological modes of innovation.



Although there is no one-size-fits-all model when defining innovation support policies, an integration approach seems to fit better when developing innovation policies that fully include service innovation. Irrespective of your current innovation policy the destination must be one developed using the integration approach.

3.2 Measuring Innovation

Adopting this integration approach presents a big challenge to innovation policy makers: how to measure innovation? Until now, the way of measuring innovation has been focused on technological concepts, such as investment in R&D or tangible aspects (hardware, machinery, etc.). In other words, measurement within an assimilation approach. When using an integration approach a wider perspective is needed. This perspective must also include intangibles (knowledge, software, services, design, brand reputation and business models, among others).

Indeed, these intangibles are showing a "hidden innovation" that explains aspects of the growth of some advanced economies. Studies developed in countries such as the United Kingdom⁸, the United States⁹, Australia¹⁰ and Canada¹¹ show this. Underpinning the growing importance of this new vision is Standard and Poor's 500 (S&P500) stock market index that shows that the relative importance of the tangible and intangible assets of companies has changed over the last four decades¹². In 1975 tangible assets accounted for 80% of the value of the company – intangible assets only 20%. Currently, the situation has turned completely around; the intangible assets account for 80% of the value of the company.

Recently, companies and governments are assigning more significance to the intangible elements of innovation. A new paradigm¹³ shift in innovation is being consolidated: the growing weight of non-technological and intangible aspects are recognized within innovation as a whole. Given this, it is advisable to try to measure the effect of intangible elements in order to determine the best innovation policies.

Fortunately, several agencies, institutions and organisations are doing exactly that, including the OECD and European Commission. Their proposals question the traditional measures of innovation, considering that they do not adequately cope with the real situation of innovation as they are not measuring the intangible elements. In other words, they point out that current indicators can bias decision-making in the area of innovation policy.

Innovation Barometer: "Baròmetre de la Innovació a Catalunya"

The Innovation Barometer was developed by ACCIÓ in 2014 to provide direct data about the innovation performance in Catalonia in real time, taking into account the paradigm shift towards a greater weight of intangible elements as a source of innovation and creation of value. It is providing ACCIÓ with useful information and insights regarding current innovation policies and the future innovation policies that will be needed to improve the innovation management capacity of companies, innovation ecosystems, the level of internationalization of innovation, innovation financing and the outcomes and impacts of innovation, among others.

⁸ NESTA (2009): The Innovation Index. Measuring the UK's investment in innovation and its effects (<http://www.nesta.org.uk/publications/innovation-index-2009>); Office for National Statistics (2010): Survey of Business Expenditure on Intangible Assets, UK Government (<http://www.esds.ac.uk/>); BIS (2014), Insights from International Benchmarking of the UK Science and Innovation System, Department for Business, Innovation and Skills (<https://www.gov.uk/government/publications/science-and-innovation-system-international-benchmarking>).

⁹ Corrado, C.A., et al. (2012) Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results (<http://repec.iza.org/dp6733.pdf>)

¹⁰ Barnes, P. (2010), Investments in Intangible Assets and Australia's Productivity Growth, Productivity Commission, Australian Government (<http://www.pc.gov.au/research/completed/intangible-investment-sectoral-estimates>)

¹¹ Baldwin, J.R. et al. (2012), Intangible Capital and Productivity Growth in Canada, Statistics Canada, Minister of Industry (<http://www.statcan.gc.ca/pub/15-206-x/15-206-x2012029-eng.htm>)

¹² Source: Ned Davis Research and The Brookings Institution

¹³ Included in OECD guidelines in the Oslo Manual third edition (2005), where marketing and organizational aspects are recognized as innovation and grouped under the name of non-technological innovation.



The innovation barometer is published every year and is based on more than 1200 direct questionnaires to companies with at least 9 employees and based in Catalonia. It seeks to:

- *Raise regional awareness about innovation.*
- *Provide a portrait of the innovation situation in Catalonia.*
- *Obtain statistical information on the evolution of innovation year per year.*
- *Offer direct information about the innovation process and performance of Catalan companies, reducing the existing gap of two years in the different official surveys.*

http://coneixement.accio.gencat.cat/web/portal/estudis-i-tendencies/-/custom_publisher/lwB4/28584080/Barometre-de-la-Innovacio-a-Catalunya-2016

3.3 Writing a New Innovation Policy

The use of language is a particular area of innovation policy making that will need attention if companies and regions are to transition to S-D logic within an integration approach. When supra-national, national and regional governments and innovation agencies are writing policy documents and the guidelines, mechanisms or initiatives that cascade from policy they must avoid using inappropriate, and possibly distracting, terms. Care must be taken in the use of words like Product and Technology and phrases such as the now ubiquitous *Technology Readiness Levels* (TRLs) if they are to encourage companies to become service dominant in their innovation approach.



4 Existing initiatives for policy makers

Most existing initiatives are focused mainly on facilitating or supporting technological innovation – G-D logic. However, with a slight change in focus or design, some existing initiatives could be very useful in unlocking the transformative power of Service Innovation.

Initiatives of interest have been grouped into two different levels:

- At the company level: initiatives that support the development of new innovation projects or enhance the company's ability to innovate better and faster with a customer-oriented approach.
- At the ecosystem level: initiatives that foster the creation a favourable business environment.

4.1 At the Company Level¹⁴

In order to support companies in their transition from G-D to S-D logic, it is important that instruments, programs and services increase their ability to create hybrid¹⁵ value-propositions for their customers and develop new business models.

4.1.1 Skills enhancement

Most innovation agencies are helping companies to enhance their innovation capabilities by supporting their access to knowledge and skills (seminars, workshops, innovation coaching activities, etc.).

Many of these innovation seminars and workshops relate to topics aligned with S-D logic; for example:

- Design Thinking and Design-led approach to New Product and Service Development.
- Lean Start-up.
- How to apply ethnographic techniques.
- Agile Methodologies.
- How to identify opportunities (problems to be solved or needs to be satisfied).
- How to test and prototype.
- Co-creation.
- Open Innovation and Collaboration.

On the other hand, many current initiatives offered by innovation agencies seek to improve the innovation management capacity¹⁶ of companies. If these initiatives are re-designed to change companies' natural tendency to focus only on the exploitation side of innovation so that they understand the importance of the exploration side, companies will start their transition towards a service innovation mindset. Putting more emphasis on aspects related to the JTBD approach and the need to develop, select and validate value propositions will help companies to strike the right balance between exploration and exploitation side of innovation.

Delivering more initiatives like this could accelerate a regions' SME transition from the G-D mindset to the S-D mindset. Support could instil greater confidence in SMEs in driving their organisation towards more customer-centric business models.

¹⁴ In section 9.3 (Initiatives: Company level), some existing initiatives implemented by the PLIS partners are introduced.

¹⁵ A study by the IMP³rove European Innovation Management Platform discovered that the innovation champions are *hybrid innovators* that have the ability to construct desirable value propositions based on the combination of products and services.

¹⁶ In most cases, this service starts with a diagnostic – most commonly used are IMP³rove, IHC or GrowthWheel Toolbox (see section 9.5 of the Annex).



4.1.2 Access to new knowledge and skills

Most SMEs have limitations when developing innovation projects with a Service Innovation mindset. One of the most critical is their lack of knowledge and skills. Offering SMEs advice through external KIBS can overcome these constraints. All partners have some form of voucher scheme that can facilitate this transfer of new knowledge and skills into a company.

4.2 At the Ecosystem Level¹⁷

In order to support the transformation of the current environment through Service Innovation, it is not enough to apply instruments at the company level. These initiatives may increase the competitiveness of an individual company but can rarely construct the right business ecosystem to respond to the new market and society challenges.

In the current dynamic market, the nature of innovation and how innovations are emerging is continuously changing. Today, innovation is most likely to happen at the borderlines between different industries. The constant changes in the market are creating new global value chains that require new capabilities. In this new ecosystem, new – unexpected – winners can often emerge. They are winning because they have been able to co-create a better way to help customers carry out their JTBD by finding new combinations of knowledge and skills from different industries and areas.

Several existing initiatives are focused on creating dynamic and collaborative innovation ecosystems. The most interesting initiatives seen through the S-D lens are those that help in:

- Finding partners to collaborate with
- Facilitating collaboration to build customer-focused solutions
- Facilitating co-creation with users
- Enhancing the digital capabilities

4.2.1 Finding partners to collaborate with

In order to facilitate the creation of the right ecosystem, most innovation agencies are developing directories, search engines or broker services that companies can use to find appropriate partners (other companies, experienced consultants, coaches, experts, etc.) It is important to note that within S-D logic, successful companies will be those able to combine their own knowledge and skills with others. Innovation agencies must continue investing in the creation and maintenance of these mechanisms, above all those where companies can access the proper external knowledge and skills to collaboratively develop offerings that best fulfil the JTBD of their customer.

4.2.2 Facilitating collaboration to build customer-focused solutions

Finding the right partner will only take some companies so far. For many companies this may be their first time in a true collaboration (i.e. not a vertical/ supply chain relationship governed by a contract). These companies will benefit from having a trusted advisor to guide them through this – initiatives that provide this trusted advisor can only help innovation agencies move companies in their regions towards S-D logic.

Also, many companies may cling to their old ways without some ‘carrot’ that encourages them to begin this new experience. Moreover, the ‘carrot’ should encourage them to try again even if their previous experience did not produce a profitable outcome; we’re talking about innovation – many will fall short or fail.

Cluster organizations are very important in discovering and establishing new partnerships. They are important facilitators as they manage networks of a variety of entities with different knowledge and skills (companies, universities, research centres, technological centres, etc.) Today, most of these cluster organizations now understand that offering services within their own industrial sectors is not enough, since

¹⁷ In Annex section 9.4 (Initiatives: Ecosystem level), some existing initiatives implemented by the PLIS partners are introduced.



many innovations happen at the borderline of different industries. They have begun to create cross-sector¹⁸ services using a “related industries” approach, in order to facilitate the discovery and development of new opportunities found in these intersections.

In most regions, several initiatives have been deployed in order to combine the knowledge and skills of different agents and different industries in order to generate more value.

Other initiatives try to combine the innovative potential of start-ups with the capabilities of consolidated companies. The aim is to establish relationships that are beneficial for both parties¹⁹. It is not only about consolidated companies acquiring or investing in start-ups, but collaborating with them; examples include trade agreements, co-developing new solutions, creating a corporate incubator or accelerator, organizing start-up competitions and giving access to data or technological platforms. Each consolidated company has to define the best collaboration strategy based on its strategic objectives and on the competences and resources that it can make available to the start-up.

4.2.3 Facilitating co-creation with users

S-D logic deems that the value is co-created with users, so it is essential to facilitate the establishment of a dialogue with users, or potential target groups, in order to understand their real problems and needs and to develop the best value propositions for them.

Most innovation agencies are supporting the development of living labs; user-centred, open-innovation ecosystems. Living Labs integrate concurrent research and innovation processes within a public-private-people partnership in order to conceptualize more market-oriented, sustainable and user-friendly solutions. They foster co-creation and experimentation/testing with users and evaluation of new ideas or potential new solutions at an early stage of their development.

There are also some interesting initiatives from the public side, where innovation agencies help public organisations to define and communicate the challenges they face (health, social care, transition to a low carbon economy and digitisation, among others) and support a public procurement process that will reward the company or companies that propose the conceptual solutions with the greatest potential.

4.2.4 Enhancing the digital capabilities

It is clear that the revolution of digital technologies (digital transformation) is changing the rules of the game for all industries. All companies should be made aware about new applications that could have an impact in their business. Understanding how digital technologies can enable new service offerings to be developed and delivered, and how they can enhance the user experience, is fundamental to the successful transition to a service orientation. Therefore, connecting service developers with relevant, new technologies is extremely important – and is likely to be an expected role for regional bodies and/or innovation agencies.

Some innovation agencies are starting to develop Digital Innovation Hubs (DIHs), service platforms with a market or service perspective that showcase existing and new digital technologies such as 3D printing, augmented reality, photonics, simulation, robotics, Internet of Things and cyber security. A DIH is like a meeting point for technology providers and companies interested in starting innovation projects that employ new technologies. These meetings and innovation projects help accelerate the digital transformation of industry. DIHs are not just useful for companies they are also useful for the technology-providers as they can extract feedback containing some useful insights they can use in adapting or improving their offerings.

¹⁸ Although the concept of cluster has evolved during the last years from a *sector* perspective towards a *related industries* one, many cluster organizations still struggle with the facilitation of cross-sector collaborations across boundaries of industrial sectors.

¹⁹ To stay in the market, consolidated companies need to innovate continuously and be aware of disruptive changes that can affect their activity. Many of them have difficulties in developing or incorporating new radical innovations, due to their G-D logic approach. Start-ups do it naturally. Their reason for being is finding new radical value propositions.



5 Conclusions

This chapter draws together the main new aspects to be considered in order to design and construct a systemic innovation policy that will, through Service Innovation, facilitate the transformation and adaptation of industries to the current environment. From this work the following conclusions have been identified:

- **All successful businesses will need to become Service Dominant in their innovation approach and focused on addressing the customer's job-to-be-done.**

The real challenge for the future is creating value from customer use and co-creating with them to understand and deliver their un-met needs.

- **The distinction between product and service innovation has become blurred.**

Product companies are now focussing more on experiences and service companies are now focussing more on reliability and performance. Thus, it will be crucial to encourage ever more linkages between manufacturing and service firms.

Conclusions for companies

- **Understanding and responding to the real problems and needs of the customer is the new source of innovation.**

While product and technology driven innovation is important and necessary, it is not sufficient on its own to sustain long term competitiveness. In this context, companies need to make greater efforts to respond to the customer's job-to-be-done.

- **The transition to service dominant logic requires a change in company culture.**

A successful transformation will change the company's value proposition to focus first on getting the customer's job done and providing a compelling experience before solving technical problems. The change in culture will require training for some employees to carry out new roles.

- **Value is co-created with customers.**

Markets, information, technologies are changing at a rhythm and speed that is difficult to follow for most companies. Customers are more powerful than ever, demanding solutions or first rate experiences exactly customized to their needs and problems. Successful companies will be those that are co-creating solutions with the customer to meet their needs.

Conclusions for policy makers

- **An integration approach is required when developing innovation policies.**

The policy response to this new Service-dominant logic approach is subtle and evolutionary. It requires a cultural shift in policy thinking and action where the boundaries between product and service distinctions are blurred; where support is more equitably distributed across more types of innovation; and, where value generated from non-technology and non-product innovation is equally recognised.

- **New metrics are needed to capture this shift to service dominance.**

Currently few, if any, policy makers have metrics that capture service innovation activity, the changes this brings about in business and the contribution it makes to regional competitiveness. This is not an easy task to complete and we ask for policy makers and academics to investigate how we can create metrics that will capture service innovation activities in a broad perspective.

- **Shift how we talk about innovation and supporting innovation in companies.**

Policy makers and innovation agencies need to blur the distinctions between technology, product and service innovation and use language that will help more companies to understand and make this transition. We need to stop talking only about *technology readiness levels* and begin talking more about *solution readiness levels* (and encourage other stakeholders to do the same).



6 Recommendations

In this section, recommendations are made with respect to how to support the transformation of the current environment through Service Innovation (or at least, support the upgrading and adaptation of regional industries through it).

Stop funding based on technology and start funding based on the customer's job-to-be-done (JTBD)

Success comes from solving a customer's job-to-be-done (**JTBD**). Despite this most existing innovation support mechanisms are heavily biased toward technology and product development, e.g. most grant schemes focus on incentivizing innovation projects with high technological risk. Not enough importance has been given to questioning whether the proposed solution was solving a real problem or need. This is starting to change (a good example is the *SME Instrument* from the European Commission) but policy makers and innovation agencies still have a long way to go to alter this bias.

Before funding any innovation project, innovation agencies should help companies to assess if it is truly addressing a customer's JTBD, giving more importance to non-technological criteria in this assessment. Too many innovation grants focus too early on things like technology readiness levels (**TRLs**) – they should first establish that there is a value proposition that satisfactorily addresses the customer's JTBD. Innovation agencies should provide small grants that contract experienced consultants to help companies to:

- better understand the needs and problems of their customers;
- develop and validate their value proposition; and,
- develop a first prototype to gain customer feedback.

Use of these initial small grants might guide companies towards developing the right solution, achieving sales and growing a sustainable business. However, they could make the company pivot towards a different solution more fitted to the customer's JTBD or even drop the proposal entirely. All of these are good outcomes that should ensure that:

- the later, larger, monies (company and innovation agency) are being spent on the right things; and ,
- companies appreciate the value of this discipline.

Value a company's ability to understand customers more than its ability to develop products

In today's fast-changing environment, companies need to be good at identifying and understanding opportunities and developing new solutions that add value both to the customer and the company. Companies tend to be good at developing solutions, but not so good when it comes to knowing what needs a new solution; i.e. the opportunity. Without clear opportunities successful innovation is almost impossible.

Innovation agencies must disseminate success cases and offer companies innovation workshops where the emphasis is put on how the opportunity was discovered and the process followed to gather intelligence about it, analyse it, understand it and ultimately exploit it or discard it. Companies that focus a lot more on the **what** and **why** before spending time and other resources on the **how** are already, to some extent, working within a Service-Dominant logic (S-D logic). Others, with time, will move towards it. It would prove useful if innovation agencies could provide tools that help companies understand what is involved in moving towards, and measure how they are progressing towards, S-D logic²⁰.

Train your staff

An innovation agency must have people that can help companies understand and find answers to the new and more complex challenges that they are facing. If innovation agencies truly want to support the transition of companies from Goods-Dominant logic (G-D logic) to S-D logic it is essential that they develop the

²⁰ In Annex section 9.6 (Dominant logic tool), the PLIS partners propose an example of a tool to measure a company's transition.



knowledge and skills of their own people. Innovation agencies have many staff members that are actively coaching companies – these people must be trained with respect to the changes of focus and emphasis that are required. Training in disciplines such as Design Thinking and Lean Start-up, among others, would be appropriate. Elsewhere in innovation agencies there are people who review, appraise and approve which companies' innovation projects will be supported and the way that the agency proposes to support them – we must not forget to train these people so that they understand and become aligned with this new way.

Encourage greater diversity in problem solving

In S-D logic, the customer creates value during the use of a solution, while the supplier network facilitates this. Therefore, it is crucial to foster the interaction amongst all these contributors. More collaboration between relevant companies, research and innovation experts and end-users is necessary. Advisory services that can help identify and bring new partners into these collaborations, and spaces where these interactions and collaborations can occur, will be important.

Innovation agencies must:

- foster more collaboration with knowledge intensive business services (KIBS);
- enable more cross-sector collaborations using existing cluster organisations and the Enterprise Europe Network; and,
- develop more Living Labs, Digital Innovation Hubs (DIH) and other spaces for collaboration.

Lead the movement towards the 'customer's job-to-be-done (JTBD)', Service Innovation approach.

In order to facilitate a transition towards Service Innovation, innovation agencies must put much more focus on disseminating this new approach. Conferences, prizes, knowledge exchange platforms, public procurement initiatives and cluster policies can enable the different stakeholders in a region's innovation system to establish a shared understanding of this new way of thinking and the need to embrace it.

Innovation agencies must also encourage open innovation in public bodies and companies of scale in their regions and de-risk the participation of solution providers from their region that respond to open innovation challenges.



7 Glossary

Design Thinking

In business this is a discipline that 'uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.'²¹

Digital Innovation Hub (DIH)

A Digital Innovation Hub is a service platform, with a market perspective, that showcases existing and new digital technologies. It usually offers a range of services that help companies to become more competitive by improving their solutions and processes by means of digital technology. It often acts as a laboratory where companies experiment with new technologies.

Goods-Dominant logic (G-D logic)

In this logic the supplier network creates value, while the customers consume it (the value-in-exchange concept).

Job to Be Done (JTBD)

The job to be done is the actual purpose that motivates customers to buy products, services and solutions.

Knowledge Intensive Business Service (KIBS)

Knowledge Intensive Business Services (KIBS) are services and business operations heavily reliant on their professional knowledge. They are mainly concerned with providing knowledge-intensive support for the business processes of other organizations. Often it is useful to distinguish between T-KIBS; those providing scientific and technological knowledge - R&D services, engineering services, computer services, etc. -, and P-KIBS; traditional professional services such as legal, accountancy, management consultancy and marketing services.

Lean Start-up

Lean start-up is a methodology for developing solutions and businesses that aims to shorten product development cycles. It does this by adopting a combination of business-hypothesis-driven experimentation, iterative product releases and validated learning. The central hypothesis of the lean start-up methodology is that if start-up companies invest their time into iteratively building products or services to meet the needs of early customers, they can reduce the market risks and sidestep the need for large amounts of initial project funding and expensive product launches and failures.

Living Lab

A Living Lab is a user-centred, open innovation ecosystem that integrates concurrent research and innovation processes within a public-private-people partnership. In a Living Lab users are not just testers of new solutions to be observed, but value creating contributors of them. Stakeholders can concurrently assess their proposed solution both in terms of its performance and its desirability and potential adoption by users.

Service Innovation

Service innovation is the process of supplying new or improved resources to customers in order to create value for and with them.

Service-Dominant logic (S-D logic)

In this logic the customer creates value during the use of solutions, while the supplier network facilitates the customer's value creation (the value-in-use concept).

²¹ Tim Brown. Design Thinking. Harvard Business Review, June 2008.



Servitization

Servitization is an approach where the value propositions integrate services and products in order to improve customer satisfaction and loyalty and, through this, achieve higher margins and increased market share (or even develop new and more profitable business models).

Value in Exchange

Value-in-exchange is the amount of money, goods and/or services that can be obtained in the market in exchange for another good or service.

Value in Use

The satisfaction that one obtains from the use of a commodity is known as the value-in-use. For example water has immense use value because it quenches thirst and without it daily life is just impossible. The quality of water is the value-in-use of water.



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9 Annex

9.1 Partners

This Design Options Paper has been prepared as the main deliverable of the PLIS (Peer Learning Innovation Service) project. The overall objective of PLIS is to enable innovation support institutions in regions across Europe to quickly and effectively develop new initiatives - as well as refine current methodologies - that will engage, encourage and aid SMEs to use Service Innovation as a mean for maintaining or increasing sustainable competitiveness, growth and jobs.

The PLIS project is co-ordinated by ACCIÓ (Spain) and financed by the DG Enterprise (European Commission, Call H220-INNOSUP-2016-2017). It brings together a consortium established among four national innovation agencies from Spain, Italy, Denmark and Scotland.

Spain: Catalan Agency for Business Competitiveness – ACCIÓ

ACCIÓ is the Business Competitiveness Agency of the Catalan Government, affiliated to the Government of Catalonia's Ministry for Enterprise and Labour and Directorate-General for Industry. Its main objective is to promote innovation and internationalisation among Catalan companies (especially SME's, since they represent the 99% of Catalan companies) as well as attract inward investment to Catalonia. Its headquarters are located in Barcelona and has a network of 39 foreign trade and investment Offices and 4 antennas located throughout the world, in strategic locations. From these offices, ACCIÓ manages to detect and take advantage of the business opportunities that arise globally, but for which local proximity and knowledge is required. This network, multicultural and multidisciplinary, drives the connection of Catalan companies to the world.

ACCIÓ's mission is to furnish business with competitive edge. It offers support on strategy, R+D, innovation and internationalization to companies and entrepreneurs for improving their competitiveness. The support is open to all sectors and company sizes and it provides opportunities to create new companies and consolidate the growth of those which already exist with the objective of having a strong and competitive industrial position on a regional and international level.

After 20 years, ACCIÓ is a relevant actor for the competitiveness of Catalan SMEs, and has designed, developed and implemented several successful programmes. Since 2008, ACCIÓ is the consortium coordinator of EEN in Catalonia which means being responsible for providing Technology Transfer (TT), R+D and innovation activities and EU funding access services to SMEs. Moreover, ACCIÓ is an EU IPR Helpdesk Ambassador since February 2013.

ACCIÓ was selected as the organisation to provide H2020 – Support to the provision of services “Enhancing the innovation management capacities of SMEs by the EEN” in 2014-2015-2016 in the region of Catalonia under the project named INNOCAT.

Furthermore, ACCIÓ has a broad experience in coordinating and managing regional funding programmes focused on innovation and internationalisation. It is also responsible for the Catalan cluster policy and also holds specific programmes aimed at fostering Smart Industries, IOT, 3D Design and Industry 4.0.

Italy: Torino Chamber of Commerce - CCAA

The Torino Chamber of Commerce is a public institution with autonomy of statute, regulation, management and accountability whose mission is to foster the growth of local economy and enhance it through effective and targeted initiatives, thus playing the role of spokesman with competent authorities for more than 230,000 companies (industry, craft, agriculture, trade) working in the Torino Province and registered with the Torino Chamber of Commerce. The Chamber of Commerce has business support and promotion functions for the general interests of the companies under its territorial jurisdiction: innovation, entrepreneurship and internationalisation, access to EU R&D opportunities and legislation are the key features of the main support



services. Torino chamber of commerce has multiple major relations and partnerships at international level. Hence it has been coordinator of ALPS Enterprise Europe Network for 7 years; previously it was coordinator of Innovation Relay Centre consortium and participated in the Euro Info Centre Network.

The Torino Chamber of Commerce perfectly fits the tasks requested in the proposal as activities related to innovation have been undertaken since twenty years, first through Innovation Relay Centre activities and afterwards through the EEN network. Furthermore, the Torino Chamber of commerce hosts in its Promotion & Development Area the Innovation department (coordinating the actual EEN network) and a thematic cross functions Design & Innovation Support team, which is specifically dedicated to foster design driven innovation in the Torino Province area. The Department is certified under ISO 9001 standard procedures and offers to Torino innovative companies (the Innovative Companies Observatory has mapped and studied 2600 companies with high innovation potential) or those who have a high potential for innovation such as start-ups hosted by universities incubators, a detailed set of services summarised as follows:

- Assistance at a national and European level for R&D funding and partner search service for European R&D projects
- Assistance to technology transfer activities at a European level
- Company visits aimed at defining technology needs and excellence
- Organisation and participation in company missions and brokerage events through the EEN network in particular for the ICT, Aerospace, Automotive, Renewable Energy and Creative Industries (namely Industrial Design)
- Organisation of training days on European R&D funding opportunities
- Organisation of individual trainings and assistance packages on Innovation Management
- Assistance for IPR matters and patents at a national and international level (with a dedicated service to Designers)

Moreover, The Torino Chamber of Commerce cooperates with the Innovation Clusters created by the Regional Authority of Piedmont, particularly with those located in the Torino area such as the ICT, Biotech. Sustainable building and Advanced manufacturing as well as with local Universities, Research centres and High Tech Incubators. It runs a specific project dedicated to industrial design companies with market growth, moreover it manages specific tech start-up support programmes in cooperation with academia, incubators, finance and businesses.

Denmark: Væksthus Hovedstadsregionen – VHHR

Væksthus Hovedstadsregionen / Vaeksthus Copenhagen (VHHR) is the official state appointed innovation and business support agency for the Capital Region of Denmark and offers guidance to start-ups and businesses with growth ambitions. Vaeksthus Copenhagen is financed by the Danish Business Agency and the 29 municipalities in the Capital Region of Denmark and as a result, guidance delivered is free and independent.

The vision for Vaeksthus Copenhagen is to make the Capital Region the leading region in terms of high growth businesses and as a result has staff specialised in financing and funding, IPR, internationalisation, management and strategy, high-tech start-ups. The organisation cooperates with a very wide network of innovation and business support organisations, including banks, financial institutions, investors, accountants and law firms, Danish Trade Council and a number of other providers of public service to businesses.

VHHR is located in Symbion, the largest business incubator in the region and home to around 250 highly innovative businesses. VHHR provides innovation management support services to SMEs in the region, via a combination of internal and external staff using a wide variety of tools, including the Commission supported IMP³rove and the Irish Innovation Health Check. For several years VHHR has benchmarked performance compared with the other four Danish Vaeksthus and is looking to gain inspiration and experience from abroad.



Scotland: Scottish Enterprise – SE

SE is Scotland's enterprise, innovation and investment agency for the eastern, central and southern parts of Scotland. Mandated by the Scottish Government, it works with ambitious companies and sectors to support Scotland's goal of increasing Scotland's sustainable long-term economic growth. SE employs 1100 staff, based in 12 towns/cities. Its international arm, Scottish Development International, has a further 29 offices around the world.

SE's focus is on Growth Companies, Growth Sectors and Growth Markets. Building business and sector capacity to innovate and internationalise since 1991, Scottish Enterprise works with businesses across the full spectrum of their needs.

SE provides innovation support to enable SMEs to develop globally competitive products, services and processes providing services to enhance businesses innovation management capacity (including the use of IMP³ROVE) and wider innovation support around, for example, IP, design, business model innovation and service innovation.

SE is the host organisation of Enterprise Europe Network Scotland (EES), and a key member of the Enterprise Europe Networks' peer2peer working group "Establishing services enhancing the innovation management capacity of SMEs".

SE is also a partner in the Coachcom2020 project, supporting SME Instrument beneficiaries by linking them to an international pool of innovation and business coaches.

Relevant SE activities to this project include:

- By Design Programme (Supporting the Design or improvement of new products or services).
- Delivering Customer Excellence Toolkit (developed through Investigation of existing customer service excellence models/methods. Resulting in a 'customer experience' measurement methodology and a working module/diagnostic that can be applied on an ongoing basis).
- Partner with Dundee Design Ltd and V&A London in Design Led Business Innovation (DLBI) programme (Stimulating the development of new products, processes and services via DLBI. In particular, advocating the use of design thinking in the creation and enhancement of customer services).
- Internal Service Design team reviewing and tailoring services available to companies using AGILE project management techniques to design or redesign Scottish Enterprise's customer services. This includes the support and communication for Service Innovation.



9.2 Progress of work

During the project five meetings took place; each partner was responsible for the organization of the meetings in their region.

Kick-off Meeting - Barcelona (15th December 2016)

The kick off meeting took place in Barcelona and the objectives were:

- Initial challenge definition and introduction to Twinning+ methodology.
- Settle the work plan and agree the main objectives to be reached.
- Agenda for the peer learning workshops to be held in the other partners' countries.
- Discussion on the definition of Service Innovation.
- Review of some approaches to foster Service Innovation.

The main conclusions of this meeting were:

- A need to reach an agreement on the definition of Service Innovation.
- Do deeper research about the different projects and documents related to Service Innovation developed under the European Commission framework.

Copenhagen (8th – 9th March 2017)

The second meeting was held in Copenhagen and hosted by VHHR. During these meeting, the following documents and projects were reviewed and discussed:

- The Smart Guide to Service Innovation.
- European Service Innovation Scoreboard.
- Expert Panel on Service Innovation.
- Understand, measure & promote service innovation in Luxembourg.
- Transformative Power of Service Innovation (PWC).
- Lessons from the Model Demonstrator Regions.
- Service Innovation Policy – A Benchmarking Review.

The meeting included the following activities:

- Introduction to “Service Platform” and how they introduce SMEs to Service Design.
- Visit to KHORA (<https://khora-vr.com/>), company that offers Virtual Reality solutions for companies as means to develop new service concepts.
- Introduction to the Servitization research project ‘Driving Competitiveness through Servitization’.

The analysis of all these documents and projects helped us to understand the need to go deeper into what is Service Innovation.

Torino (23rd – 24th May 2017)

The third meeting was held in Torino and hosted by Torino Chamber of Commerce (CCIAATO). During this two-day meeting, PLIS partners worked on:

- The main concepts that sustain the definition of Service Innovation: Assimilation-Demarcation-Integration approach, Service-Dominant Logic, job to be done (JTBD), ecosystems, servitization and KIBS.
- The identification of concrete regional initiatives addressed to foster Service Innovation.
- Moreover, a preliminary set of recommendations were identified.
- The definition of the structure for the DOP document (in order to do so, several DOP documents were reviewed).



Edinburgh (13th – 14th September 2017)

The fourth meeting was held in Edinburgh and hosted by Scottish Enterprise (SE). During these two-day meetings, PLIS partners worked on:

- How to foster the transition from a Good-Dominant to a Service-Dominant approach.
- How to facilitate the right ecosystem.
- How to measure Service Innovation.
- Selecting good practices and experiences.
- Defining the main recommendations.
- Final structure of the document.

Barcelona (16th – 17th November 2017)

The final meeting was held in Barcelona and hosted by Catalan Agency for Business Competitiveness (ACCIÓ). During these two-day meetings, PLIS partners worked on:

- Revising and improving the final document.
- Defining the dissemination actions for this document.



9.3 Initiatives: Company level

Initiative	Function	Description	Link
Cupons a la innovació	Access to new knowledge and skills	A voucher scheme that offers an agile and fast method to contract external innovation services. This program is for companies that have 5 to 100 employees who need to contract some KIBS in order to undertake properly a concrete innovation project. 3 different categories of vouchers are offered: innovation, technology and ecoinnovation.	http://accio.gencat.cat/cat/innovacio-tecnologica/ajuts-i-financament/cupons-innovacio/index.jsp
Voucher alla digitalizzazione di impresa		The voucher scheme offers a grant to contract external innovation services. This program is addressed to SMEs who need to contract some KIBS in order to undertake properly a Digital innovation project, based on some key technology drivers such as: Artificial intelligence, additive manufacturing, 3D printing, cloud and Big Data analysis etc.	http://www.vr.camcom.it/content/concessione-voucher-tema-digitalizzazione-anno-2017
By Design		The objective of By Design grant (maximum £5000) is to increase and support more innovation activity in the Scottish SME base by improving how they use design in their business.	https://www.scottish-enterprise.com/services/develop-new-products-and-services/innovation-by-design/overview
Cicle de tallers d'innovació	Skills enhancement	Workshops addressed to train CEOs and managers on the required skills, capacities and methodologies in order to innovate.	http://accio.gencat.cat/cat/innovacio-tecnologica/capacitacio/tallers.jsp
Itinerari Innovar per Créixer		Support service addressed to improve the innovation process of Catalan SMEs in order to increase their business results. This service is structured in three phases: diagnosis, definition of recommendations and implementation.	http://accio.gencat.cat/cat/innovacio-tecnologica/orientacio/innovar-per-creixer/itinerari.jsp



9.4 Initiatives: Ecosystem level

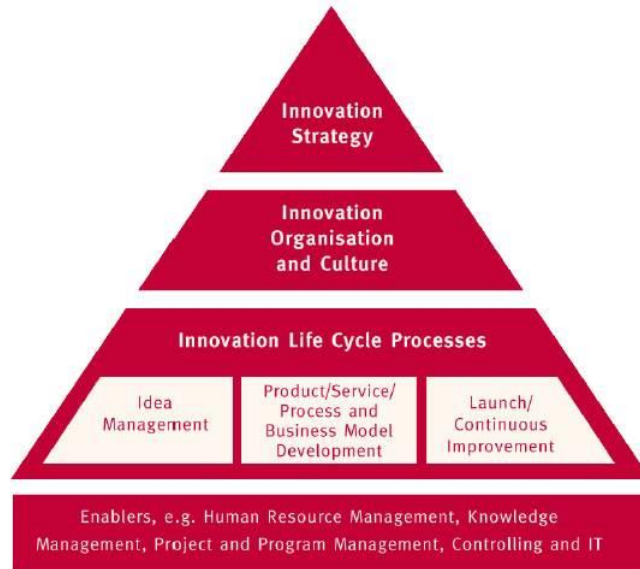
Initiative	Function	Description	More information
Assessors Acreditats	Finding partners to collaborate with	ACCIÓ provides a virtual platform where companies can search by different areas of expertise (innovation management, strategy, operations, marketing, legal, etc.). All the professionals willing to become part of this platform must pass an accreditation process in order to prove their expertise, knowledge and experience in advising companies.	http://comunitats.accio.gencat.cat/web/directori/cercador
Cercador de tecnologies		Search engine that helps companies to find all the different technological knowledge and skills provided by all the technological entities credited with TECNIO certification. (the TECNIO certification created by the Government of Catalonia, through ACCIÓ, identifies applied technology providers and facilitators).	http://comunitats.accio.gencat.cat/web/tecnio/tecnologies
Innovar a través de startups	Facilitating collaboration to build customer-focused solutions	An ACCIÓ program that helps consolidated companies to find the best way to collaborate within start-ups in order to incorporate technology, explore new business models or diversify their activity.	http://accio.gencat.cat/cat/innovacio-tecnologica/orientacio/innovar-a-traves-startups/innovar-a-traves-startups.jsp
Service Platform		Service Platform is a nationwide network of companies and researchers. Its main goal is to create growth and jobs in the service business of Danish companies. It has 1100 members. It strengthens research-based service innovation by creating new possibilities for co-operation and co-creation between enterprises, researchers and knowledge transfer institutions. Service Platform strives to be a trustworthy partner, facilitator and knowledge broker in the area of service innovation in Denmark and throughout Europe.	http://www.serviceplatform.dk/in-english
Barcelona and Catalonia Startup Hub		The Barcelona and Catalonia start up hub is a virtual platform that identifies more than 1000 Catalan start-ups with a high growth potential.	http://startupshub.catalonia.com/list-of-startups
100x100	Enhancing the digital capabilities	A number of important international tech congresses, fairs and events are held every year in Barcelona (Mobile World Congress, IOT Solutions World Congress, Big Data Congress, etc.). Usually non-tech companies are lost when visiting this type of event. ACCIÓ (jointly with the host of the event) offers a program that includes: training related to the main technological topics and a 2 hour guided tour to help them understand the implications of the latest technologies and gain insights about how they could be used to improve their current value propositions.	
Catlabs	Facilitating co-creation with users	The main aim of the Catlabs network is to form alliances in order to promote joint actions and generate synergies to foster the emergence and consolidation of new structures for open and collaborative innovation (among the R&I system, private companies, public administrations and users).	http://catlabs.cat/
Can Do Innovation Challenge Fund		This initiative will drive more innovation activity in the Scottish SME base by their responding to innovation challenges identified by public sector organizations and government departments. The Fund helps public sector organizations promote, evaluate and prioritize innovation challenges whilst building the network of Scottish SMEs with the imagination and capability to solve these challenges.	https://www.scottish-enterprise.com/knowledge-hub/articles/insight/can-do-innovation-challenge-fund



9.5 Diagnostic Innovation Management tools

IMP³rove

IMP³rove is a diagnostic and benchmarking tool that assesses a company's approach to innovation, their systems to support innovation and how successful they are at making a return on investment in innovation. The approach of IMP³rove combines a comprehensive online platform for self-assessment and e-learning with individual face-to-face consulting. Using the online IMP³rove platform, companies benchmark their innovation management performance and assess it against that of peer companies.



IMP3rove (based on House of Innovation by AT Kearney)

IHC (Innovation Health Check)

The Innovation Health Check benchmark (developed by Enterprise Ireland) is a facilitated self-assessment tool addressed to evaluate the company innovation process. It looks at how the process operates from the outset; capturing customer needs (stated and un-stated), idea generation, concept development, product/service development up to the commercial realisation stage and all steps in between. It explores how this process is impacted by company culture, business strategy and structure, the company capability and resources and the level of innovative processes that are in place.

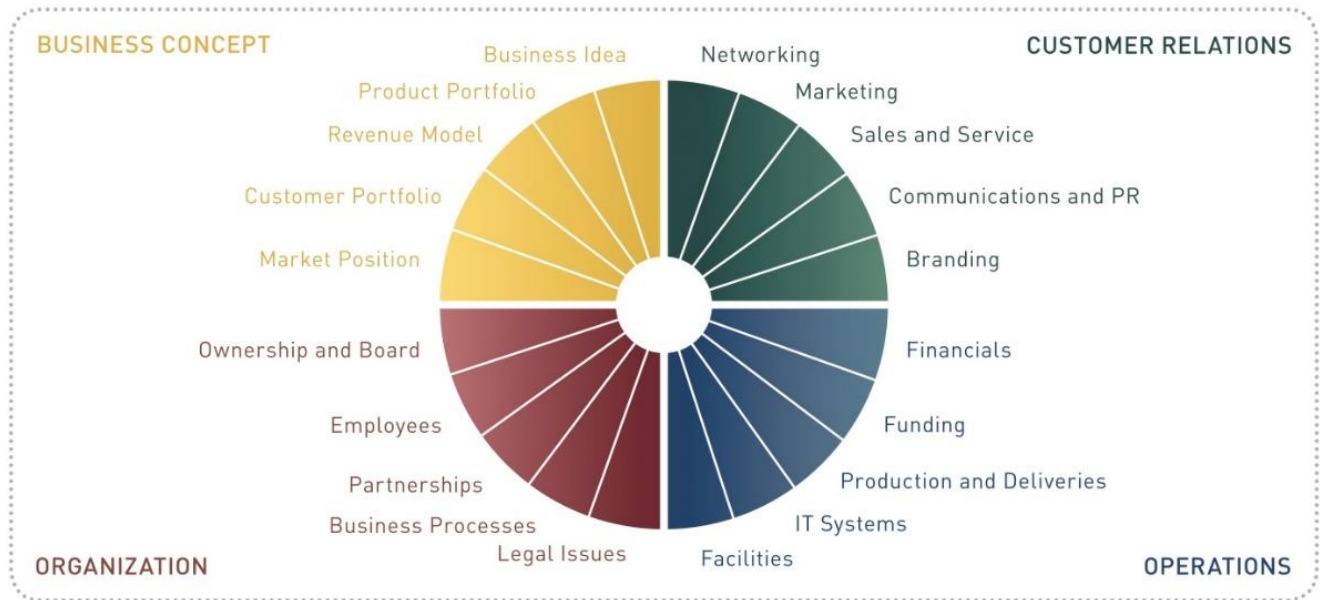


Innovation Health Check



GrowthWheel Toolbox

GrowthWheel is a toolbox for one-to-one business consulting for certified Business Advisors. It helps businesses and entrepreneurs to focus, set the agenda, make decisions and act. It is a visual toolbox for decision making and action planning for start-up and growth companies. The toolbox contains simple, visual, and practical tools that help entrepreneurs build their businesses through a simple action oriented process that stays true to the way most entrepreneurs think and work.



GrowthWheel Toolbox



9.6 Dominant Logic Tool

At an early point in a company's journey to improve its service innovation it is good to get them to set down a marker showing where they think they are in the transition from Goods-dominant logic (G-D logic) to Service-dominant logic (S-D logic). Often this transition can take months, if not years, and there is a power in being able to revisit the marker and see how far the company has come – rather than overly focussing on the simple (de-motivating) fact that they haven't completed it yet. The PLIS Partners propose a simple tool is used to get a best guess, gut feeling if you will, on seven criteria that change as a company moves from G-D logic to S-D logic.

1. How we compete...
Do we compete by supplying superior product technology or by giving the customer the optimum solution?
2. Our customer's perception...
Do our customers expect superior technology that performs required tasks or that our combination of products and services solves their challenges?
3. Driving our innovations...
Is the stimulus for our innovation increased sales or successful application of our solution?
4. How we innovate...
Is all our innovation done in-house or do we collaborate with others where it is best to do this?
5. Who is driving our innovations?
Do we have a clear and direct understanding of the needs of the customer or do we consider the sales team to be the best interpreter of the needs of the customer?
6. Who is delivering our innovations?
To what extent is our company's workforce involved in delivering innovation?
7. Engaging with customers...
Does our company deliver a solution for a customer or work with the customer to ensure that the best solution is implemented?

The market for assessing companies is already full of questionnaires with many questions, and, more often than not each with several answers (e.g. multiple choice, tick box, strongly agree to strongly disagree, etc.) and, therefore, we believe that something simpler would work best.



The tool is a set of slider controls that the company representative moves to indicate how far between the two ends the company believes it is at that point in time. A screenshot of the tool is shown below.

Assessing Dominant Logic Tool

This tool could also be used towards the end of an Innovation Agency's engagement with a company as a soft measure of how much progress has been achieved.