

# DesignShots

## Design Option Paper



Co-funded by the Horizon 2020 programme  
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## **Disclaimer**

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## **Acknowledgement**

This project was supported by the European Commission within the H2020 Innosup framework. It is the result of collaboration between Business and Cultural Development Centre – KEPA (Greece), Malta Business Bureau – MBB (Malta) and Luxinnovation (Luxembourg) and involved the following persons: Angeliki Barakli, Fabiola Bardelli, Lionel Cammarata, Arnaud Duban, Dimitris Kaboukos, Christina Skoubridou, Joe Tanti, Gaston Trauffler and Ana Vella.

### **What is a Design Option Paper?**

The DOP is intended as a guide or tool for the innovation agencies, department or similar organisations for the development of an innovation support activity. It shall identify and explore options to address the identified challenge and show the certain decisions made in the design preclude some other options. It is expected that most of the knowledge directly applicable in the agencies is created while working jointly on the DOP.

The DOP should as well serve as guide and source of inspiration for other agencies that become interested in the topic only later and did not participate in the initial project.

*(Source: [ec.europa.eu/easme](http://ec.europa.eu/easme))*



## Executive Summary

This **Design Options Paper (DOP)** is the result of a peer-review process realised by the three regional innovation agencies and project partners in the DesignShots project consortium (KEPA – Greece, Luxinnovation – Luxembourg, MBB – Malta). The peer-learning activity focused on peer-reviewing public and private design support programmes in order to compare, evaluate and mutually transfer good practices (after having adapted them to the local situation) in the **field of Design Driven Innovation support services for SMEs**.

The present Design Options Paper was designed and structured during the peer-learning activities along the project implementation and in particular through two workshops that took place in Luxembourg and Malta. During these two 2-day workshops, the three project partners exchanged expertise concerning how to improve SMEs design capacities, as well as how to transfer good practices into support programmes about design driven innovation. Afterwards, through conference calls and on a remote basis, the partners developed the contents of the DOP, in order to realise a useful and practical guide for other organisations interested in the topic.

This DOP's main purpose is to present tools on how to implement a design support programme aimed at national companies. In general terms, design support programmes are usually targeted at SMEs. Being framed by national, regional or local government policies, design support programmes are developed and managed by either enterprise departments, national councils or design promotion institutes.

As it will be elucidated in this document through several European cases, design support initiatives are implemented as a response to the increasing recognition of design: governments have started to understand design as a tool for innovating products, services and systems. However, challenges still need to be faced in order to introduce design as an overarching approach within SMEs. Since SMEs represent the majority of European economy, governments are to raise awareness and to enhance the understanding of design, by promoting and sponsoring design support programmes. These programmes can focus on raising demand for design in SMEs as well as on building capabilities among designers: from consulting or advisory services and mentoring, to training and dissemination of information about the economic value of design.



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**Design Driven Innovation for SMEs-  
DesignShots**

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 759629.

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## 1. General introduction to the paper

### 1.1. Background of the paper

This **Design Options Paper (DOP)** is the result of a peer-review process realised by the three regional innovation agencies and project partners in the DesignShots project consortium (KEPA – Greece, Luxinnovation – Luxembourg, MBB – Malta). The peer-learning activity focused on peer-reviewing public and private design support programmes in order to compare, evaluate and mutually transfer good practices (after having adapted them to the local situation) in the **field of Design Driven Innovation support services for SMEs**.

The present DOP has been realised through the **Twinning Advanced (Twinning<sup>+</sup>) Methodology**, a methodology taking place between two or more entities, which can bring many benefits to the participants by giving the opportunity to share problems, exchange views and understand different viewpoints. The Twinning<sup>+</sup> Methodology not only facilitates transferring good practices among agencies, but it provides opportunity to design and implement better practices about a common innovation support challenge.

### 1.2. Design for Innovation – the challenge

A particular importance of design as a key discipline and activity to bring ideas to the market has been recognised in the Innovation Union, Europe's 2020 flagship initiative. In line with the commitment taken in the Innovation Union, the EC has launched in 2011 the European Design Innovation Initiative (EDII) to exploit the full potential of design for innovation and to reinforce the link between design, innovation and competitiveness. It is clear that design has become a discipline of management and strategy. Management, since design gathers the staff and their skills around the solving of complex issues. Strategy, because design uses creation and innovation as a way to project into the future the durability of the structure and its profitability. When design principles are applied to strategy and innovation, the success rate for innovation dramatically improves. Design is a methodology used to solve complex problems, and find desirable solutions for clients by integrating innovation. Design draws upon logic, imagination, intuition, and systemic reasoning, to explore possibilities of what could be, and to create desired outcomes that benefit the end user (the customer). A design mindset is not problem-focused; it's solution focused, and action oriented. It involves both analysis and imagination. Innovation is a discipline that can be managed. SMEs could approach the practice of innovation (creating new products, services, and customer experiences) with a set of practical and rigorous methods, tools, and frameworks by design.

Design is a key driver in creating new products and services that are attractive to customers, and can make a business stand out among the competition. However, the lack of design management skills is a significant barrier to the wider adoption and integration of design into Europe's businesses. As stated in the Innovation Union Flagship Initiative, although some European countries are world leaders in design, others lack a robust design infrastructure and design capability. This systemic gap has largely gone unnoticed but now it is time to be tackled. Design drives the innovation process, and hence sharpens industry competitiveness for Europe. Because of effective global out-sourcing, cost and



quality are no longer entry barriers or competitive advantages for most global enterprises. Past successes and established paradigms can no longer guarantee the survival of Europe's enterprises in the post-industrial economy. Now, they must compete on innovation and design, with creative propositions based on new value, new user experiences, and new markets; rather than simply value-add. There is a huge potential for design to play a critical role in propelling the future economy, improving the standard of life, and harnessing EU's leadership position in the future world. It must be led by a vision that sets out to achieve extraordinary results, and realised by strategies that extract the most valuable assets of innovation, creativity, and design to propel EU SMEs to the next greater height. The basic DesignShots concept is **to tackle the challenges that European SMEs face to integrate Design Driven Innovation and become more** complete and resilient. Thus, **the possibilities to use different support opportunities depending on level of the design maturity of the company for SMEs competitiveness and growth**. The project addresses this key issue for the economic development of industry in Europe involving **three territories from different areas in Europe**: one from the Southeast (Greece), one from Western (Malta) and one from the Central (Luxembourg).

Design Shots is based on the results of the 6 EDII (European Design Innovation Initiative) and Design for Europe. KEPA was a partner in one of EDII projects, namely SEE Platform and Design for Europe. SEE platform developed an e-library and publications with existing EU Design Driven Innovation programmes, which they will be used for the peer learning and the DOP. Design for Europe is a project, which helps implement the European Commission's Action Plan for Design-Driven Innovation. KEPA and LUX are partners and MBB is an ambassador. One of the main goals of DfE is to provide the tools, case studies and resources to policy makers and innovation agencies in order to support them to integrate design for innovation into national and regional policies and programmes. One of the tools developed by the project will be used for the Design Shots service. This tool can be used to diagnose the level of design into SMEs and gives specific guidance for the needed design services

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## Methodology

The project aims to facilitate the integration of Design Driven Innovation to private sector actors to drive competitiveness and growth. By combining forces, the partners will create the guidelines of a support instrument for integrating design innovation to SMEs. The approach ensures that all the participating regions can work together, and exchange know-how on how to develop new ideas and implement change. The methodology is twining advanced but the approach is based on design thinking, meaning that we will put the end users at the centre of the creation process of the DOP. This will be achieved by: a) using co-creation tools during the two peer-learning workshops, b) using Design Shots pilot test to gather insights from the SMEs and engage them to the process. At the same time, the proposed solution and the results will be accessible beyond the Consortium members.

In this way, the DOP identifies and documents the existing options, guidelines and implementation alternatives that DesignShots partners have experienced and would recommend to other agencies interested in implementing the proposed best practice.

### 1.3. Structure of the paper

The present Design Options Paper was designed and structured during the peer-learning activities along the project implementation and in particular through two workshops that took place in



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Luxembourg and Malta. During these two 2-day workshops, the three project partners exchanged expertise concerning how to improve SMEs design capacities, as well as how to transfer good practices into support programmes about design driven innovation. Afterwards, through conference calls and on a remote basis, the partners developed the contents of the DOP, in order to realise a useful and practical guide for other organisations interested in the topic.

#### 1.4. Project goals

DesignShots project aims to use the experience, the tools, the capacity and the partners' knowledge in order to address a common innovation support challenge namely to enhance the integration of Design Driven Innovation to SMEs through the creation of tailor made "Design Driven Innovation support programmes" for private sector.

The realised Design Options Paper will serve as a "guide" or a "handbook" to other innovation agencies to provide similar and/or more focused services/support/programmes on Design Driven Innovation.

Innovation agencies offering support services on Innovation to SMEs are relevant actors in this process from two main points of view:

- 1) they can help policy makers in the development and application of programmes,
- 2) they can support SMEs to become more innovative.

The Peer learning activity will serve to learn from the best and to share good and bad practices in Design Driven Innovation support services for SMEs.

Specific objectives of the project are the following:

- Creation of a peer-learning group in order to strengthen the competences in designing and implementing programmes that support SMEs to integrate Design Driven Innovation, through the application of Twinning + methodology.
- Identification and evaluation of good practices related to: Support programmes and services that facilitate the integration of Design Driven Innovation to SMEs.
- Establish a sustainable partnership among the partners to engage in more frequent peer learning activities. A Memorandum of Understanding will be undersigned by the partners in the final phase of the project; it should be a first step of an EU based network of partners aiming to foster, enforce and develop Design Driven Innovation services to SMEs.

To achieve the overall and specific objectives, the project will facilitate the knowledge exchange among the participants on the following matters:

- Provision of support services about Design Driven Innovation to SMEs in the involved territories. Five SMEs in each region will use the DesignShots service that will be provided by the consortium. Design Shots is one-hour company diagnosis- consulting regarding the design need of the enterprise.
- Improvement of administrative and 'back-office' aspects in the management of Design for Innovation support programmes to SMEs
- Enhancement of qualitative procedures in identifying the needs of SMEs and the most suitable support schemes
- Identification of "good practices" among innovation agencies and intermediary organizations that have effectively implemented Design Driven Innovation support programmes.

#### 1.5. Target group

Innovation agencies are usually government funded or managed institutions that provide financial and other support to catalyse or drive private sector innovation.



No two innovation agencies are exactly alike. They are structured differently and use a variety of programmes and instruments to achieve their goals. Some focus on delivering the priorities of their sponsoring governments, while others are more autonomous and experimental in their approach. They also operate in very different economic and political contexts. However, they share a number of core characteristics – in the ways they operate and the challenges they face – that allow us to draw generally applicable insights for those involved in setting up and running an innovation agency.

Types of innovation agencies include:

- **Research and Technology Organisations (RTOs):** generally defined as public or private non-profit organisations that build links between different players in the innovation system and provide a range of research, development and technology services, primarily to business and governments.<sup>10</sup> An example of an RTO is the VTT Technical Research Centre of Finland, which has a national mandate, but works with a range of clients both in Finland and abroad, to develop science and technology solutions and networks.
- **Incubators and Accelerators:** publicly-funded organisations that give different mixes of support to very early-stage companies, from subsidised dedicated spaces, to mentorship, pooled administrative support, or modest seed financing. An example of this is the technology incubators programme of the Office of the Chief Scientist, which has established and funded private-public incubators across Israel since 1993.
- **Technology Transfer Offices (TTOs):** sometimes described as knowledge transfer centres, these are institutions designed to bridge the gap between research and innovation by supporting the practical transfer of knowledge within the economy. While they are generally attached to a public research organization, such as a university, they often have quite autonomous organizational structures. An example is Imperial Innovations plc, a unit attached to Imperial College London in the UK, which creates and invests in technology companies and licensing opportunities developed from scientific research discoveries.
- **Research funding councils:** bodies that provide public funding for scientific research and training. These organizations often work with businesses and may support projects with potential commercial benefits, but their primary purpose is to fund discovery-oriented research that will advance knowledge and generate new ideas. An example of this is the network of UK Research Councils, seven organizations which collectively invest more than £3 billion a year in UK research across the full spectrum of academic disciplines.
- **Research and innovation advisory bodies:** groups of experts which have responsibilities ranging from providing advice to governments and others on their innovation strategies through to directly coordinating strategy and allocating budget in key areas of innovation policy. An example of this is the National Council for Innovation and Quality in the Public Sector in Sweden, which was established in 2014 to drive innovation and change in public services.
- **Innovation investment funds or business banks:** institutions that finance R&D conducted by businesses or business-research partnerships alongside other business activities. An example of this is Bpifrance, a public investment bank that uses a mix of financial instruments (including loans, equity investments and guarantees) to help French companies grow and internationalise.
- **Public sector innovation teams or ‘i-Teams’:** units, teams or funds set up to transform the way that governments innovate. These can operate at national, regional or local levels, and tackle a broad range of economic and societal challenges. An example of an innovation team is the Mayor’s Office of New Urban Mechanics in Boston, which is designed to develop and pilot new ways of engaging citizens, civil servants, academia and others in solving civic innovation problems.

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Below we outline some of the main instruments used by innovation agencies to promote innovation. In different part of the DOP we will examine where design can fit and existing examples.

**Support instruments commonly administered by innovation agencies:**

<b>Instrument</b>	<b>Description</b>
Direct financial support for businesses	
R&D grants	Non-repayable transfers of money. These are often linked to a specific project and may be stage-gated in connection with the recipients meeting certain terms and conditions.
Convertible grants	Grants that may concern into full or partial loans, contingent on the achievement of defined milestones
Loans	Money lent to be paid over the course of a project (Usually with interest).
Equity investments	Loans or investments offering revenue participation rights, or ownership rights of the company.
Government backed venture capital funds	Government financing of VC investors or funds.
R&D tax credits	Tax incentives designed to increase the levels of resource that businesses commit to R&D.
Challenge or inducement prizes	Commitments of funding linked to evidence of ability to solve a novel problem.
R&D contracts	Government acts as lead customer, undertaking pre-commercial procurement of R&D from firms to provide an alternative route to market for innovations and stage-gated access to major public R&D contracts.

<b>Instrument</b>	<b>Description</b>
Non financial support for businesses	
Knowledge services	Support to help businesses develop the knowledge and skills that will help them innovate more effectively.
Business development support services	Provision of resources that help overcome practical barriers to engaging in innovation, such as access to physical space.
Matchmaking services	Assistance for businesses in finding additional sources of funding of funding for R&D activities, domestically or internationally.
Innovation management education	Support for the development of R&D and innovation management knowledge skills.

Instrument	Description
Support for intermediates	
Intermediary funding	Funding of third party institutions, which invest in or support business innovation (such as incubators or accelerators).

Instrument	Description
Connecting and institution- building activities	
Knowledge and technology transfer activities	Programmes designed to promote transfer of knowledge and technologies between research and industry.
Competence centres	Domain- focused physical centres designed to facilitate collaborative R&D projects between research institutions, businesses, public sector bodies and others.
Research consortia	Support for research consortia that involve several companies and/ or research organisations.
Internationalization of innovation collaboration	Support for development of international collaborative R&D projects or examples.

## 1.6. Project partners

### Business and Cultural Development Centre (Greece)

Business and Cultural Development Centre (KEPA) is an intermediate management authority of funding programmes for SMEs on behalf of Greek Ministry of Competitiveness and Development (since 1993). It is a non – profit organization, formed in March 1991 by the Federation of Industries of Northern Greece ([FING](#)) and Greek International Business Association ([SEVE](#)).

KEPA is an Intermediary Managing Agency of Operational Competitiveness Programme “Competitiveness and Entrepreneurship” 2007-2013 ([OPCII](#)) that comes under the National Strategic Reference Framework ([NSRF](#)) geographically responsible of the regions of Central and Western Macedonia for designing and implementing programmes dedicated to SMEs development.

In view of ensuring the successful implementation of its work, KEPA has introduced and applies an integrated quality system in the fields of design, application, monitoring and management of development projects, which has been certified in accordance with the [ISO 9001:2008](#) standard. The scope of certification relates to : "Implementation and management of programs funded with planning activities, monitoring and project management, reviewed the submitted investment projects, contract management, testing and acceptance of physical and financial, payments accepted in the end, internal control, information Management Authority, financial management, electronic surveillance application works". Alongside, KEPA in the continued improvement of customer services and management capacity and administrative operation acquired the certificate management competence, in order to be able to undertake management of programs and actions under the NSRF 2007-2013 (Certificate Number : 151.145./PSS 1133 – C).

Overall, KEPA has successfully managed 72 programmes (to support entrepreneurship and especially Small and Medium Enterprises that are co-financed by the European Union under the Community



Support Frameworks and the National Strategic Reference Framework for 2007-2013, concerning the implementation of investments in the sectors of Energy – Construction – Manufacturing – Tourism – Environment – Trade – Training - Service Provision). These programmes have co-financed 16.416 projects with a total budget of over 2 billion €.

Throughout its long-standing operation, KEPA has acquired substantial experience in:

- designing and tailoring specific actions that co-finance development activities, both on a geographical and sectorial basis;
- managing national programmes to support entrepreneurship and especially Small and Medium Enterprises that are co-financed by the European Union under the Community Support Frameworks and the National Strategic Reference Framework for 2007-2013.
- preparing sectorial/branch studies and research for the diagnosis of the developmental features and activities of businesses;
- evaluating technical/economic and construction investment/business plans through the creation and use of suitable statistical and IT tools;
- drafting technical/economic reports and proposals for enterprise developmental programmes.

Due to the above experience, KEPA's executives participate in designing and management committees of national programmes, as well as a number of committees set up by businesses at local, regional and national level.

In addition to the management of the Ministry of Development and Competitiveness for the Central and Western Macedonia programmes, KEPA has gained significant experience in delivering EU projects. Specifically, KEPA is partner in 2 funded by European Commission under the European Design Innovation Initiative (EDII); SEE Platform (Sharing Experience Europe - Policy Innovation Design) and EDIP (European Design Innovation Platform - Design for Europe). Nowadays KEPA is designing a financial instrument for integrating design to SMEs for the new programming period 2014-2020. Moreover, KEPA is launching the Hellenic Design Centre (HDC), the national design council based in Thessaloniki. HDC will provide design driven innovation services (consulting, training, management) to SMEs. The results of the project will be used by the HDC to formulate the new services.

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### Luxinnovation (Luxembourg)

Luxinnovation, the National Agency for Innovation and Research was created by the Government in 1984. In 1998, the Agency became an Economic Interest Grouping (EIG) managed by six organisations, three Ministries (Economy, Research, Small Business), the Chamber of Commerce, the Chamber of skilled craft, and the Federation of Luxembourg Industry (FEDIL). The services provided by Luxinnovation are divided into five main areas among which the service aimed for SMEs can be considered relevant to the project.

### SME Performance

Acknowledging the economic role of national SMEs, Luxinnovation has developed support programmes to help national companies increase their competitiveness and improve their ability to innovate.

More specifically, Luxinnovation has designed and launched a new funding programme, which will be the object of this European project. It aims to:

- support SMEs to design, implement and launch an innovation project;
- build a viable innovation system.



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The programme's implementation is performed by consulting firms in innovation approved by Luxinnovation. It is based on a three-step approach:

- a diagnostic of the SME strategy and maturity in innovation management;
- the writing of a business case of the project to be developed;
- the development and launch on the market of the project itself.

The purpose of the programme is to transfer the knowledge, tools and processes to the company directly, so that the SME could always apply the acquired expertise in the future.

One of the key differentiations of this approach is the application of design thinking principles at each stage of the programme: from the diagnostic of the strategy to the development of the innovation project. For instance, the second stage, whose deliverable is to write a business case, includes a first phase of identification of the job-to-be done expected by the targeted customers. To that end, design-thinking tools such as the empathy map, personas and ethnography are used. Secondly, prototypes are made so as to adopt a user-centric approach and co-develop with the customer.

### Malta Business Bureau (Malta)

The Malta Business Bureau (MBB) is run by the Malta Business Foundation (MBF), which is made up of six senior officials representing its parent organisations, being the Malta Chamber of Commerce, Enterprise and Industry and the Malta Hotels and Restaurants Association (MHRA). The MBB is currently composed of two offices, the Head Office in Malta and a Representation Office in Brussels.

The MBB represents its parent organisations in Brussels and Malta, by liaising directly with the European institutions, the Maltese Permanent Representation and with umbrella organisations such as BUSINESSEUROPE, EUROCHAMBRES and HOTREC on all policy and funding issues affecting Maltese business interests.

One of the main tasks of the organisation is to provide information to the Maltese Business Community with regards to EU Directives and Regulations related to their operations, while also keep them up to date with the latest development in the sphere of EU funding for business. Moreover, the MBB has as its core principles those established by the parent organisations, thus it acts in areas identified with the need for development and improvement of Maltese business in a European context. The MBB also has vast experience in EU funded projects which facilitate the exchange of best practices.

The Malta Business Bureau's competencies and expertise are in the areas of EU funding streams, knowledge in the area of access to finance, and the availability of alternative sources of finance. This places the organisation in an ideal position to support SMEs on the aforementioned by means of informing and advising SMEs on specific facilities relevant to their needs. These skills are also useful for the purpose of carrying out SME feedback related activities.

MBB's Permanent Delegate in Brussels plays a key role in continuing to develop and strengthen the organisation's ties with its Pan-European networks and its European partners – Eurochambers, BusinessEurope and HOTREC. The MBB's technical experts make it possible for the organisation to thrive in its EU advocacy and policy work, continue following business-related EU policies and also make it possible to target legislative lobbying in Brussels with European legislators, making MBB play an active role in the EU's legislative process.

Collectively, the MBB team comprises EU Policy and EU legislative experts, which are able to update, inform and advise SMEs on EU pipeline acquis in the EU policy areas affecting businesses and business competitiveness. The MBB team is also experienced in conducting various impact assessments on EU initiative legislation and policy that require primary data from stakeholders and SMEs, disseminating and communicating these results to the EU institutions and relevant (local) government bodies, following up and evaluating the process. MBB along with other Maltese stakeholders are trying to



design the first design driven innovation programme for SMEs in Malta. DesignShots project will help them during this process.



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## 2. Background Design Support Programme

*"Our clients search for the innovation not for the sake of innovation. Our Mission is to create something that satisfies the most requested needs." Ernesto Gismondi - Artemide*

### 2.1. What is design-driven innovation and how does it create value?

Design-driven innovation has recently become recognised and integrated in many countries' policies, both in Europe and outside. In its flagship initiative Europe 2020 - Innovation Union,<sup>1</sup> the European Commission has set the ball rolling by launching several activities that would seek to:

- increase the use of design for innovation and growth;
- raise awareness of how design-driven innovation increases efficiency in public services and drives business growth;
- create capacity and competencies to deliver these policies.

"It is the European Commission's vision that by 2020,  
design should be a fully acknowledged, well-known,  
well-recognised element of innovation policy across Europe,  
at European level, at nation level and at regional level"

Head of Innovation Policy Unit, EC DG Enterprise and Industry, 29<sup>th</sup> March 2011

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Over the last decade, several scholars and practitioners have been more and more attracted by design and its involvement in the innovation process. Design can help define what to focus on, how to deliver a result and break a big problem or aspiration into components. It allows solutions to provide multiple benefits, especially by developing problem solving projects.

According to Roberto Verganti, design-driven innovation is an approach to innovation based on the observation that people do not just purchase products or services, they buy "meaning". This approach considers its strategy as being the radical change of meanings; that is, the meanings that a product or service might have for its users include the memories it invokes, the extent and quality of interaction and enjoyment. These determine how closely the user identifies with the product or service and how much the product or service becomes part of the user's sense of self. A product or service can hold meaning by embodying goals, skills and shaping the identity of its users.

Innovation through design is often opposed to the user-centred design, whereby it implies that product or service development should start from a deep analysis of user needs: this latter type of innovation results in reinforcing existing meanings of the product or service that a company wants to put on the market.

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<sup>1</sup> [http://ec.europa.eu/growth/industry/innovation/policy/design\\_en](http://ec.europa.eu/growth/industry/innovation/policy/design_en)





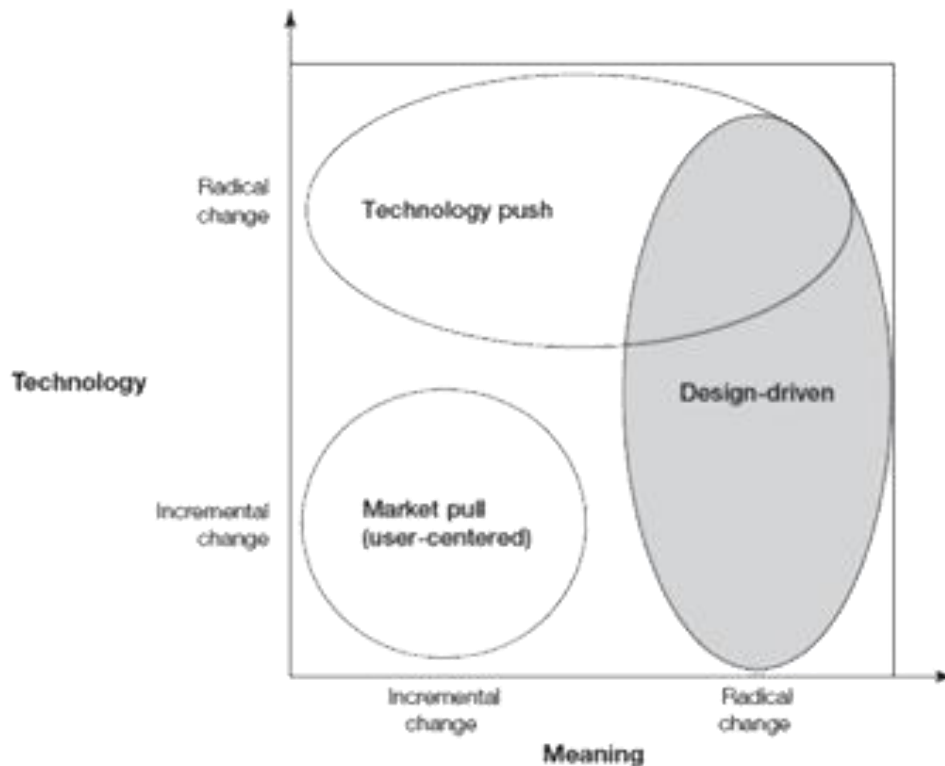


Figure 1: Strategy of design-driven innovation as the radical change of meanings (Verganti: 2009)

As shown in the figure above, innovation driven by design occurs when the technology used on the product or service is both disruptive and incremental, however, differing from the dominant meaning of the sector.

Successful design-driven innovation is realised through interactions with “interpreters”, that is experts that have an ability to understand and influence how people could give meaning to things. Companies adopting a design-driven innovation strategy trigger a three-stage process, which utilises the interpreter’s ability to understand and influence how people give meaning to things:

1. listening: gaining access to knowledge about possible new product meanings by interacting with interpreters
2. interpreting: allowing a company to develop its unique proposal
3. addressing: radical innovations of meanings, being unexpected, initially confuse people. By discussing and internalising a firm’s novel vision, interpreters change life context in a way that makes the company’s proposal more meaningful and attractive when people see it.<sup>2</sup>

Interpretation is an asset to companies and stems from the innovation process itself. Companies producing design-driven innovations value highly their interaction with this network of interpreters. They exchange information with them on scenarios, test the robustness of their assumptions and discuss their own visions. Design-driven innovation comes from a process of interpretation and envisioning. Innovation through design becomes therefore a process to search for a new meaning.

<sup>2</sup> Verganti, Design-driven innovation (2009)



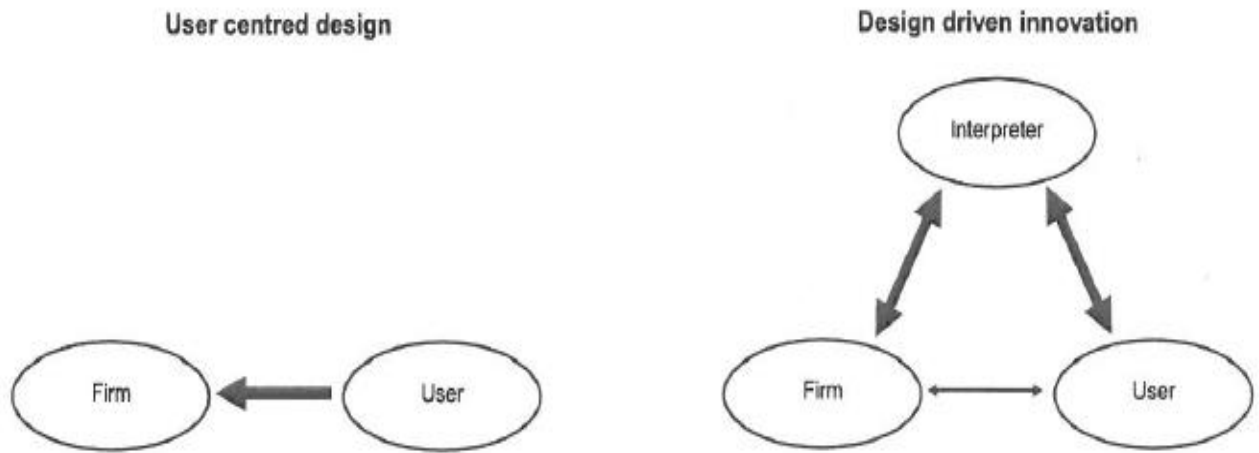


Figure 2: User-centred design and design-driven innovation (Verganti:2009)

Through design, a company can innovate product meanings, for design is important to creating competitive advantage. “Design innovates meanings, and meanings make a difference in the market”<sup>3</sup>

Bearing in mind the approach delineated by Verganti, design-driven innovation is more commonly applied with a different connotation, which is through the design-thinking methodology.

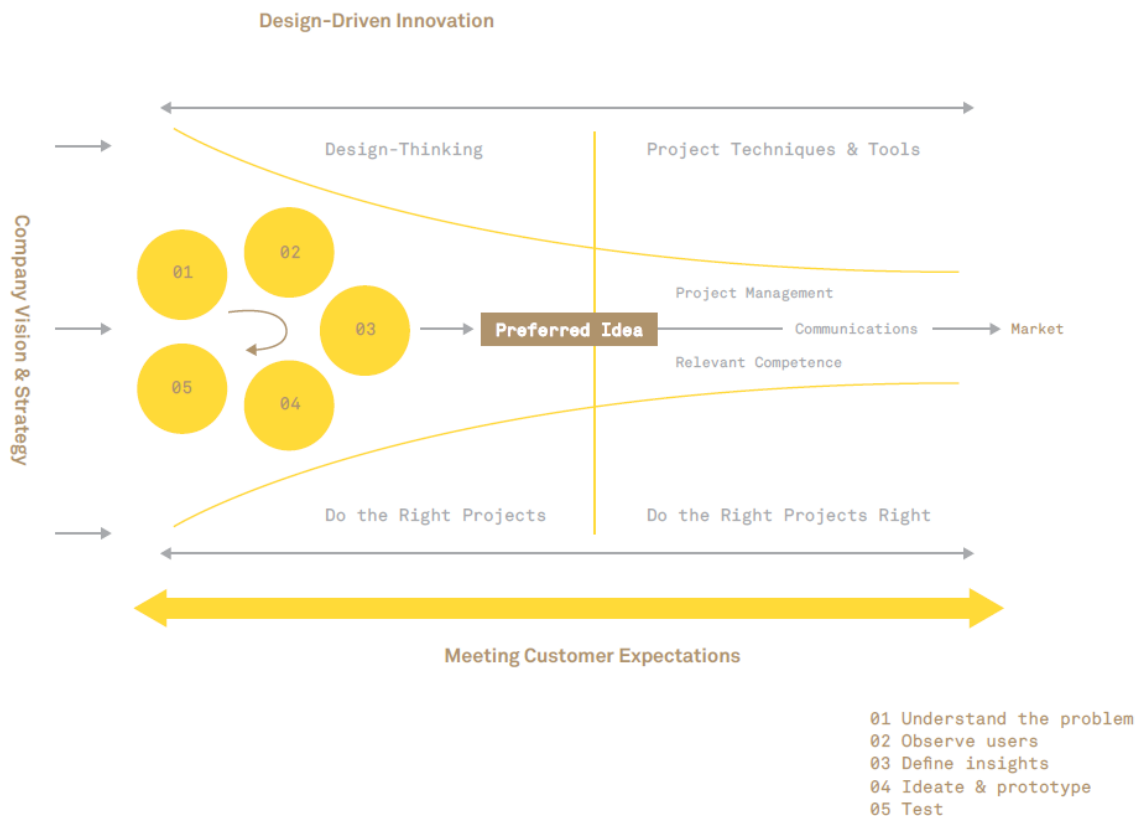


Figure 3: Design-driven innovation via design-thinking process (Circa Group)

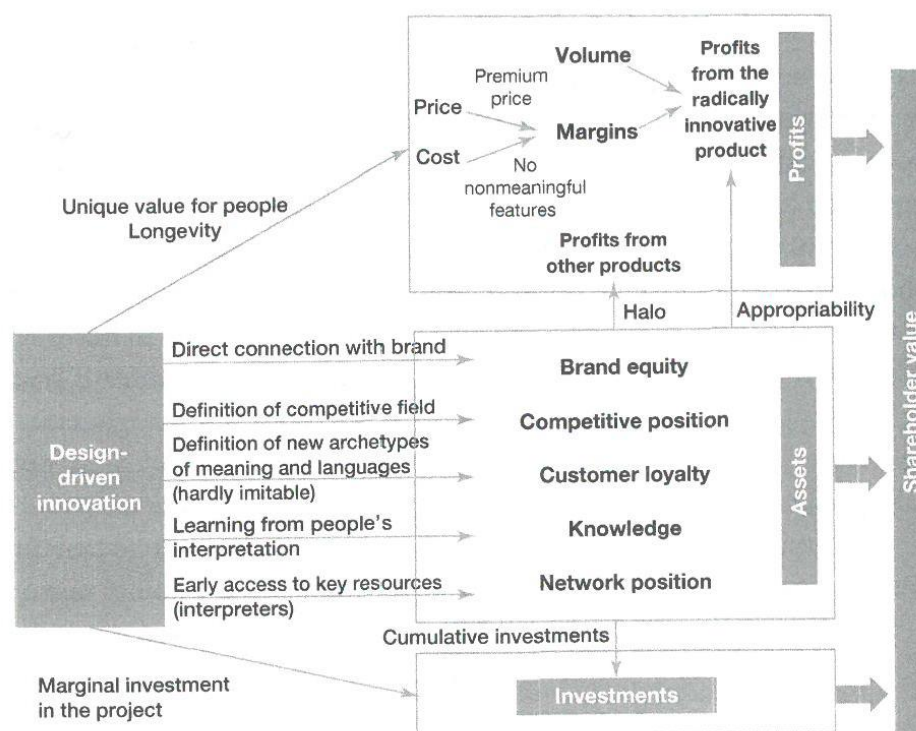
<sup>3</sup> ibid.

Design-thinking has emerged as a multidisciplinary, human-centred innovation approach influenced by the ways designers think and work. It includes aspects such as feasibility and viability, and one of its core aspects is the creativity that emerges from the tensions among these various constraints. However, design-thinking is an interactive activity that plays an important role in improving the innovation capability of the firm and it helps to change the mindset and culture of the staff.

Many would ask what the financial impact of design-driven innovation is. Higher profits, higher asset value and limited investments in creating and sustaining an external network of interpreters eventually produce significant growth in a company's share value and market capitalisation. The value of design-driven innovation is the ability to create products with a life cycle longer than that of the competition.

In the figure below, a model depicts four characteristics connecting innovation to a company's economy: profits, assets, investments and shareholder value. Design-driven innovation has an influence on all of them.

**Model of the value of design-driven innovation**



**Figure 4:** Model of the value of design-driven innovation (Verganti: 2009)

Profit: if a product is meaningful, profit margins are higher because when people love a product, they are willing to pay more than its pure utilitarian value.

Assets: design-driven innovation contributes to brand equity. It creates a brand value via a radical innovation of meaning: it is an advantage for the first mover; new archetypes of product meaning and languages are formed; it is itself an innovation process.

Investments: some SMEs do not have a design department, yet they are innovation leaders in their industry. Their unique innovation processes allow them to leverage the network of external key interpreters. Design-driven innovation requires a continuous effort to develop that network, which is a cumulative investment in relationships.<sup>4</sup>

The company's strategy about design-driven innovation is a potential to create and change markets, enabling them to drive the market. Having more and more governments support and develop opportunities of building design-driven innovation capabilities is the purpose of several EC initiatives. It is through support programmes that companies can learn to include the design-driven innovation approach into their strategy.

## 2.2. What is a design support programme for SMEs

This DOP's main purpose is to present tools on how to implement a design support programme aimed at national companies.

In general terms, design support programmes are usually targeted at SMEs. Being framed by national, regional or local government policies, design support programmes are developed and managed by either enterprise departments, national councils or design promotion institutes.

As it will be elucidated in the next subchapter through several European cases, design support initiatives are implemented as a response to the increasing recognition of design: governments have started to understand design as a tool for innovating products, services and systems. However, challenges still need to be faced in order to introduce design as an overarching approach within SMEs. Since SMEs represent the majority of European economy, governments are to raise awareness and to enhance the understanding of design, by promoting and sponsoring design support programmes.

These programmes can focus on raising demand for design in SMEs as well as on building capabilities among designers: from consulting or advisory services and mentoring, to training and dissemination of information about the economic value of design.

In several European countries, governments have developed strategies based on design-driven innovation, whose rationale includes the following factors:<sup>5</sup>

- competitive advantage: to develop competitive advantage for national industries;
- export-orientated economies: in open-market countries companies are encouraged to compete. The competition allows design to flourish;
- market failure: government intervention is justified, where the allocation of goods is not efficient and beneficial to society. Hence, design support programmes have an impact on the companies survival, economic growth and job creation;
- part of innovation strategies: design is an element of innovation and has been integrated as part of national or regional innovation policies.

<sup>4</sup> Ibid.

<sup>5</sup> Raulik-Murphy: A comparative analysis of strategies for design promotion in different national contexts, 2010



The work of Raulik-Murphy stresses the key feature for an effective design support programme is practical demonstration and actual experience of the benefits that design can bring to a business.

### 2.3. Existing design-support initiatives and best practices

Several initiatives have been taken up over Europe with intent of implementing design within SMEs. Despite the fact that some design-support initiatives were implemented as pilot actions, a few of them are still operating.

Programme name	Operating dates	Region / country	Delivery body
SME Wallet	2009-present	Flanders, Belgium	Enterprise Flanders
Design Boost	2010-2012	Denmark	Danish Design Centre
Design Bulldozer	2012-2014	Estonia	Estonian Design Centre
Extraversion: Competitiveness of Enterprises	2011-present	Greece	Ministry for Development, Competitiveness and Shipping, General Secretariat for Industry, Secretariat of SMEs
Design Silesia	2010-present	Silesia, Poland	Castle Cieszyn and Government of Silesia
The Service Design Programme	2010-2013	Wales, UK	Design Wales / Cardiff Metropolitan University
The Design Leadership Programme	2002-present	UK	Design Council

Figure 5: Overview of Design support programmes (SEE Platform)

In the following section, seven European initiatives are presented: their modus operandi as well as their main objectives are highlighted.

#### SME Wallet – Flanders (B)

##### Description of the programme

The SME Wallet programme enables companies based in Flanders to access subsidies of up to €25,000 for business support. In 2009, design was introduced as an eligible cost and between 2009 and 2014 more than 228 design projects were funded, receiving a total of €504,236 in subsidies.

The programme allows SMEs to benefit from services provided by approved and recognised experts in six key areas:

1. Training: training programmes for managers and employees, with the aim of improving the current or future operation of the enterprise (e.g. skills or language training).
2. Advice: bespoke analysis by a consultant of a specific challenge, including written recommendations and an implementation plan (e.g. a market research study or design proposal).
3. Technological insight: a study providing an answer to a specific technological problem relating to a product, process or service provided by the businesses (e.g. lab tests or complex modelling).
4. Advice on internationalisation: written, specific, efficient, studies, plans and recommendations with regard to internationalisation (e.g. studies of international markets or advice on setting up outlets abroad).
5. Coaching: improving the personal effectiveness of the coached entrepreneur in his/her business processes (e.g. business transfer, international growth).
6. Strategic advice: advice related to the transformation of the entire company. The advice provides a long-term solution that affects the whole organisation (e.g. a re-launch plan for an enterprise in difficulties or a design management plan).



Strategic design management advice was introduced as an eligible cost in the programme in 2013. The Flemish government have recognised the importance of design management for companies as a tool to support the uptake and integration of design as strategy for growth.

### Role of the innovation agency

The government-funded agency Enterprise Flanders runs the programme: the organisation has the remit to support businesses and entrepreneurs in the region. They are doing this by encouraging companies to incorporate design into their operations, through programmes like SME Wallet. A dedicated team within the agency called Design Flanders was given responsibility for promoting and implementing the design aspect of the programme.

### Design Boost – Denmark

#### Description of the programme

Design Boost was a short intensive intervention course focused on specific challenges such as product development, branding, export and services. The programme was launched in 2010 by Danish Design Centre, whose new objective was to raise the level at which design was being used.

Based upon the Design Ladder<sup>6</sup>, which measures the level at which businesses use design,

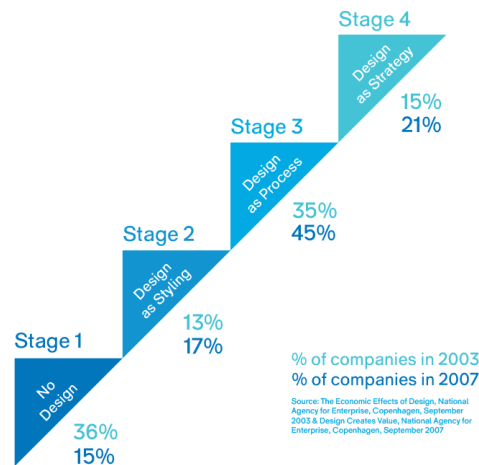


Figure 6: Design Ladder (Design for Europe website)<sup>7</sup>

the programme focussed on companies who were at the first two steps of the ladder in a survey carried out in 2003 and 2007. It aimed to introduce companies to design.

Design Boost consisted of three stages: firstly, a series of workshops over a two-week period was aimed at two employees (including the business leader) from five companies. The goal was to give a comprehensive understanding of the different ways design could contribute to their company. Secondly, participants were then paired with design companies representing product design, service design and graphic design, so as to discuss their specific business challenges. Thirdly, a final workshop was held to help attendees create an action plan for their own companies.

<sup>6</sup> The Design Ladder is a model for illustrating the variation in companies' use of design. It was developed by Danish Design Centre in 2001 and is based on the hypothesis that there is a positive link between higher earnings, placing a greater emphasis on design methods in the early stages of development and giving design a more strategic position in the company's overall business strategy. (Source: Danish Design Centre)

<sup>7</sup> <http://www.designforeurope.eu/>



## Role of the innovation agency

Founded in 1978 with the purpose of improving the competitiveness of Danish industry by means of design investments, Danish Design Centre has played a key role in implementing the design policy, in parts through efforts and activities aimed at Danish companies. The programmes developed by DDC, Design Boost and its complementary programme 360° Design, helped the participating companies change the perception of design. The identification of design needs and relationship building with designers facilitated the change in working practices towards the adoption of design as strategy.

Design Bulldozer – Estonia

### Description of the programme

In 2012, Estonia was the first country in Europe to implement a design policy: the national Action Plan for Design. The plan allowed the development of a support programme, Design Bulldozer, to boost the global competitiveness of Estonian businesses. In over two years, 10 companies participated in the pilot and were guided by 10 of the country's best design coaches. Design Bulldozer's main objective was to come up with new products and services based on the actual needs of end users, which would also increase the company's economic performance and competitiveness both in domestic and foreign markets.

In order for design to be incorporated into the company's innovation process, the programme led the way in five stages:

1. Let's speak the same language: Terminology was established and the key ideas behind human-centred design, branding and strategy were introduced
2. Design audit: The firm's specific needs were identified and an action plan for the rest of the programme was devised.
3. Design project: A brief was defined and design partners were chosen for its implementation.
4. Development: The design project was implemented.
5. Project closure: Outcomes and learnings from the project were summarised.

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## Role of the innovation agency

Created in 2008 as a culmination of advocacy and policy development, the Estonian Design Centre, together with the Ministry of Economic Affairs & Communications and Enterprise Estonia, launched Design Bulldozer as a pilot project in May 2012. The Design Centre has the mission to create an inspirational, innovative and cooperation-oriented environment for the development of design.

Extroversion – Greece

### Description of the programme

The Extroversion programme has been devised to enhance the competitiveness of Greek firms, as well as to expand their export activity and product awareness abroad. It focuses on internationalisation, recognised as a key factor for strengthening the country's economy and production sector by promoting products and services of high added value. Targeted at micro, small and medium enterprises, Extroversion emphasises the development of partnerships in the manufacturing, construction and services sectors on the one hand, and the cooperation between Greek and international firms, on the other.



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The programme provides a subsidy for expenditures such as marketing, translation, product development, exhibition enrolment fees, and design (i.e. product design, branding and packaging design) as eligible costs.

The Extroversion programme co-financed by the European Commission ran from 2011 to 2013. It was sponsored by the Ministry for Development, Competitiveness and Shipping with a national budget of €30M. In Central Macedonia the programme's budget was €8.4M; businesses could obtain 55% funds for costs between €30,000 and €250,000 for a range of innovation activities including design.

## Design Silesia – Silesia (PL)

### Description of the programme

In 2011, PDR<sup>8</sup> started a relationship with the voivodeship of Silesia. Several exchanges on service design in the public and private sectors were carried out to show the opportunities that may exist. These exchanges led to developing programmes to connect young designers with companies and a service design programme for public sector started. The aim was to train a team of designers in Silesia, civil servants and then use the skills that they learned and apply them in the projects with public authorities. The process adopted was user-centred design:

1. Understand: getting a deep understanding of all stakeholders involved in the service
2. Translate: finding out what service users and staff really think and turn assumptions about the problem into tangible design challenges
3. Create: generate many ideas. Choose the most relevant, interesting and innovative ones then build prototypes of them
4. Test: gather feedback on the prototype design from service users and staff. If needed, adapt the design with them before launch
5. Evaluate: check back with staff and service users to monitor the impact of each design

At the end, the impact sought revealed a mixture of both long-term plans for the future and short-term actions.

### Role of the innovation agency

Castle of Art in Cieszyn and the Government of Silesia set up a joint programme, Design Silesia, with the Marshal's Office in Katowice. The project promotes the use of design in the development of micro, small and medium enterprises, especially in the field of improving their innovation and competitiveness.

## Service Design Programme – Wales (UK)

### Description of the programme

The Service Design Programme was a three-year programme launched in 2010. Developed and delivered by PDR on behalf of the Welsh Assembly Government, the initiative used service design as a tool for economic growth within the advanced material and manufacturing sector. In response to a survey revealing that the manufacturing industry tended not to go towards servitisation, PDR

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<sup>8</sup> see p.14





developed the programme in order to demonstrate how service design can help companies achieve gains via a design-led service innovation.

Ninety SMEs participated in the programme, which consisted of workshops, seminars and conferences with the aim of raising awareness of service design and providing the opportunity to create a network. The workshops trained the companies in service design techniques: by mapping out “customer journeys” and identifying areas that had impact on the customer experience (good practices, current problems and potential improvements). The engagement of the participating companies showed a commitment to service innovation through internal investment; thus, the servitisation was possible thanks to a paradigm shift in management.

### **Role of the innovation agency**

PDR is a design consultancy located within Cardiff Metropolitan University. In order to provide practical support and training to organisations that want to develop skills in service design, PDR and Design Wales founded in July 2010 and launched in January 2011 the Service Design Programme. The programme was funded by the Welsh Government’s Department for Economy and Transport.

## Design Leadership – United Kingdom

### **Description of the programme**

The Design Leadership Programme was delivered on a regional basis before being expanded nationwide in 2012 by the Design Council. The programme is still operating and has the objective of raising awareness of the strategic role design can play in business.

Design Leadership is a support programme helping companies use design to innovate and grow. Participating firms have identified their biggest strategic challenges and have created new opportunities to overcome them by using design effectively. Being matched with Design Council’s Design Associates, UK businesses have been taken through a structured programme that includes workshops, coaching and peer-to-peer support. Companies’ CEOs and management teams have explored and defined design opportunities in order to implement projects to deliver business growth. The programme consists of three steps:

1. Exploration: an interactive session clarifies the goals of the business and identifies how design could meet them.
2. Definition: the design expert defines the design projects, then sets a roadmap and develops toolkits.
3. Implementation: the design expert ensures projects deliver their goals, while building confidence in managing design effectively.

Not only has the programme been changing how the companies’ work, it has also improved strategic thinking, brand and business identity.

### **Role of the innovation agency**

Being recognised as a leading authority on the use of design and the UK government’s adviser on design, Design Council has always used design as a strategic tool to tackle major societal changes, drive economic growth and innovation, and improve the quality of the built environment.

The table below summarises the seven national programmes and their respective target audience.



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	<b>Programme name</b>	<b>Programme description</b>	<b>Target audience</b>
Flanders	SME Wallet	Providing SME subsidies (50%) to a maximum of €2,500 for design advice or €25,000 for design management expertise.	Small companies Medium companies
Denmark	Design Boost	A short intensive intervention course focused on specific challenges such as product development, branding, export and services.	Small companies Medium companies Export companies
Estonia	Design Bulldozer	A 20 month pilot project to increase economic and export potential of 10 Estonian companies and 10 design managers.	Small companies Medium companies Large companies
Greece	Extraversion Competitiveness of Enterprises	Strengthening entrepreneurship of small companies by improving the production base for goods and services.	Small companies Medium companies Export companies
Silesia	Design Silesia	Providing diverse design support for small companies, civil servants and graduate designers	Small companies Medium companies Large companies Public sector Designers
Wales	The Service Design Programme	Improving understanding and use of service design in the manufacturing sector and building a regional capacity for service design	Small companies Medium companies Manufacturing sector Designers
UK	Design Leadership Programme	A package of design support and coaching for public and private sectors.	Small companies Medium companies Large companies Manufacturing sector Service sector Public sector Universities

**Figure 7:** Overview of design support programmes (SEE Platform)



## 2.4. Lessons learned from design-support initiatives

Based on the review of design support programmes that was the object of a study<sup>9</sup> from the SEE platform, the partnership formulated six recommendations addressed at governments and design stakeholders. The recommendations hereunder can be borne in mind whenever organisations wish to develop a design support programme:

- integrate design as a component of broader innovation and business support programmes and promote the take-up of design in national programmes targeted at SMEs
- pilot design support programmes as a means of implementing specific innovation policy targets such as economic growth for specific sectors like manufacturing, healthcare or life sciences
- provide support for both supply and demand for design expertise by improving the skills and business models of the professional design sector as well as training/interventions for companies and public officials to use design methodologies and user engagement tools
- build evaluation into the implementation costs of the programme so that ex ante indicators can be established and interim and ex-post data collected to demonstrate true impact and help future intervention planning
- develop a set of common evaluation indicators across Europe to empirically measure and evaluate design support programmes; including for example new products or services launched, new spending on design expertise following programme intervention and return on investment
- use programme evaluation results to feed into policy and programme improvement

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<sup>9</sup> SEE Platform, Policy Booklet 6, Reviewing design support programmes in Europe (2013)



### 3. The stages of a Design Support Programme

The first step to designing the stages that are necessary to create a design support programme is to apply lessons learned from personal experience and consult a quick overview of several international design support programmes.

It is recommended that the existing Design Support Blueprint canvas SWOT (strengths, weaknesses, opportunities and threats) analysis and other design methods are used in order to produce a number of programme concepts.

When planning a support programme, there are three **critical** categories to keep in mind:

1. **Planning** – *context, aims and actions*
2. **Delivery** – *set-up; management and promotion*
3. **Review** – *evaluations and sustainability*

#### Planning

##### Context

When planning a support programme, one must be able to identify the context in which the programme will operate in. It is helpful to begin by asking the question ‘what are the regional or national priorities’?

Step two in the ‘context’ stage is identifying how you are going to get the necessary political commitment. Therefore, one must be able to pin point exactly who the key stakeholders are that can help you to drive this forward. It is important to also assess how you intend to engage them.

##### Aims

The second planning stage requires that one establishes the aims of the support programme; i.e. the impact that you wish to achieve. It is necessary to begin this assessment by outlining the target audience (all businesses; start-ups; high-tech; high-export potential; SMEs etc.). This will facilitate in identifying the specific impact you wish to achieve.

##### Actions

The third planning stage will help you to assess exactly what actions are necessary to drive your idea forward.

Key questions that must be asked at this stage are:

What is the budget?

What approval is needed?

And what is the programme timeline?

In addition to this, you will need to identify what activities will be conducted to carry out the envisioned actions on order to be able to capture the target audience’s needs.

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## Delivery

### Set-Up

To decide the necessary set-up, it is important to ensure the appointment of someone who will develop the content for the support programme. Before doing so, one must ask the question as to whether any IP issues exist and how to determine client readiness. Prototyping is key and therefore part of the delivery plan must pre-empt exactly how the new service will be prototyped.

The next stage requires the recruitment of experienced design mentors. Naturally, if indeed you already have the internal capacity to offer design mentorship, this will not be necessary. However, should this not be the case, you will need to identify and connect with design mentors in order to carry out the objectives of your work.

### Management

When managing the delivery of a programme, a number of key performance indicators must be put in place. These will help to identify exactly what the key milestones are and what the desired customer journey is.

For this task, it is suggested that one consults the readily available **Service Design Toolkit** <http://www.designforeurope.eu/service-design-toolkit-0> as a method for either improving or designing the quality of the service. Those improvements are directed at both the users and staff of your organization. Innovating in services is not new. Every organization that provides services thinks seriously about improving the quality of its service at some point.

What is new, however, is that this innovation is approached from a human-driven way of design thinking. In this method, we start from the needs and requirements of users and look for solutions together with these users and other stakeholders. Ideas are swiftly crystallized using photos, drawings and models and systematically reviewed with the users.

In service design, a wide range of disciplines come together, such as ethnography, consumer research, interaction design, product design, industrial design, service marketing and corporate strategy.

### Promotion

Before promotion can happen, you need to first highlight the key messages that will be delivered for the different stakeholders. This can contribute to their willingness to engage with you along the way, especially if you envision the sustainability of the service or programme you have created.

In order to achieve the successful delivery of these messages to the relevant stakeholders, you also need to highlight the routes to engagement; i.e. how you are going to manifest your campaign. This could be done by means of using various business networks, other intermediary bodies, media campaign tradeshows, social media, mapping the stakeholders etc.

## Review

### Evaluation

Evaluation is key in order to measure design value. You must first identify the indicators that could be part of the evaluation. Thankfully, on an international level, a number of indicators have already been established to assist in this area, for instance the Danish Design Ladder, Design Bulldozer, DME Staircase. New spending by participants should also be an indicator to measure the effectiveness of your programme.



At this stage, you should also ask whether your chosen indicators are in line with the aims and the context of your regional or national strategies.

Questioning whether you have established a concrete mechanism to measure the satisfaction rate of the programme's beneficiaries is imperative to successfully conclude the evaluation stage.

### Sustainability

Some programmes are designed for the long haul whilst others are designed as a means to get to the next level. In this regard, you should ask – does the programme *need* to be sustainable? If yes, then what are the activities that should be continued?

The sustainability of any programme requires funding throughout its duration. But what happens if current means of funding shift or are about to change? Foresight is a necessary evil in order to plan ahead and create a strategy (or strategies) as to how you might be able to maintain your programme or service, even if future funds change.

### Lessons learned

Design-led innovation for business workshop/shaping Design Support Programme for EU regions

In October 2016, a two-day event was held in Lublin as part of the Design for Europe Programme initiative in partnership with Lublin Design Institute. The question at the heart of the *Design-led innovation for Business* event was how might we shape a design support programme for EU regions?

In keeping with the theme of this guide, Lublin, a city in Eastern Poland has for some time been undergoing significant regeneration in recent years. Policymakers had been exploring the creation of a business support programme to encourage the use of design for economic competitiveness.

This Design Options Paper cannot fail to mention the important reported outcomes of this two-day event which took the learnings from previous programmes that were aimed at promoting economic growth through design and assessed just how can future programmes can and should aim to do it better.

The foregone conclusion was to learn from past mistakes, and to repeat successes.

As opposed to the conference on day 1, the second day was built around a smaller, practical workshop, led by Design Council and Luma Institute. This brought together local Polish stakeholders, the Design Council, and a number of Design for Europe's national Ambassadors from Latvia, Lithuania, Poland, Portugal and Malta.

The workshop participants went through a thorough practical process to design a theoretical design support programme for an EU region. The Business Support Canvas, a methodology developed as part of the **Sharing Experience Europe Project (SEE)** - a predecessor to Design for Europe - was used as the main go-to-guide for this workshop. The support canvased used here was originally based upon design support programmes that had been run in Brazil, Denmark, Ireland, New Zealand, the UK and Wales.

Between them the participants shaped and tested four models of design support programmes: three regional-level and one EU-wide programme. At their core, all four models aimed to promote economic growth in Europe: by ensuring that businesses had the skills and resources they need.



Whilst this activity was designed to be a “rough-and-ready” prototyping exercise, the participants left with the skills and contacts to re-run this exercise and use it to support the development of programmes in their home countries.

Source: <http://designforeurope.eu/events/design-led-innovation-business>

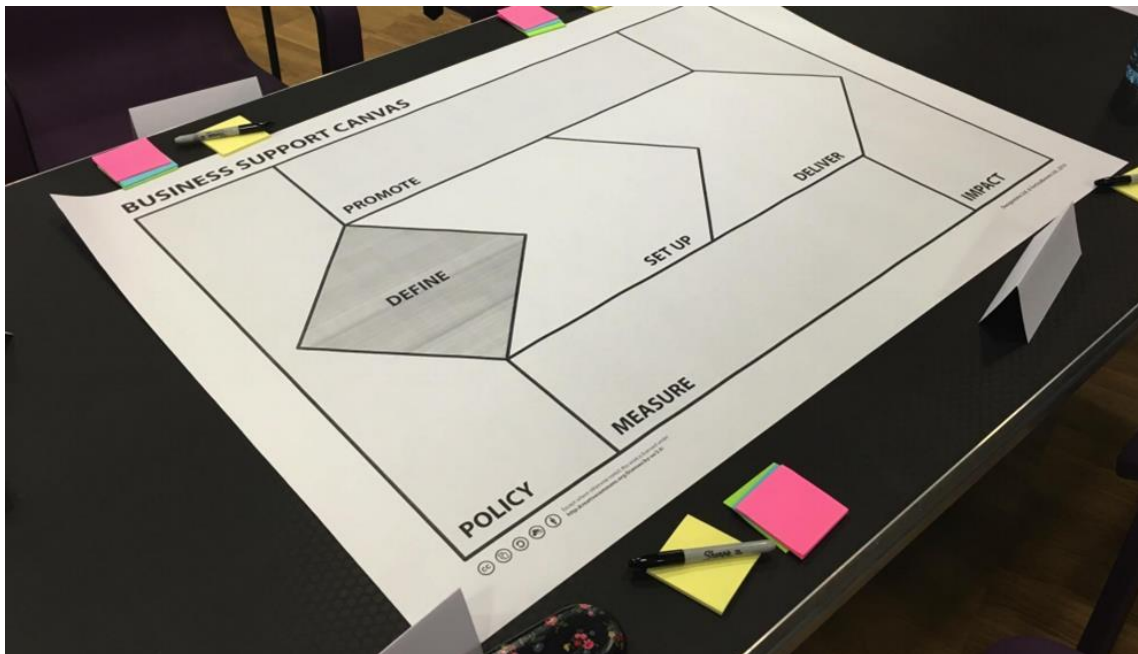
Using the Business Support Canvas for programme development

### Rose, Thorn, Bud Technique (RBT)

This problem framing exercise is a technique often used during brainstorming exercises. The Rose represents the brightspots, the Thorn painspots and the Bud being the possibilities on the horizon.

The business support **canvas** can be used to describe, **design**, challenge, and pivot the model of a business support programme.

The Canvas maps out the following themes which need to be taken into consideration when brainstorming the steps for creating a successful support programme.



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*The points below are the compiled feedback of the stakeholders that participated in this workshop. These can be used to facilitate examples when attempting to answer questions in the **DESIGN SUPPORT BLUEPRINT***

#### Define what is necessary first

- Diversity of companies taking part in the programme
- Educational programme at university level
- Include social design projects
- Start with prototyping (small scale)
- Take a holistic approach – 70% framework; 30% tailored to company needs



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- Take an interdisciplinary approach
- Independent design managers and strategist with proven track record needed on board
- Learning by doing
- Culture sharing
- Instigating culture change
- Methodology: open sourced (creative commons)
- Less promotion projects needed
- Service design piloting necessary to raise production
- Led by use of design – *what level?*
- Target companies who are ready – identify them first
- Programme should be created in the aim of social impact
- More open and led by business needs
- Don't forget to also target medium sized businesses who are already using design
- Programme should be flexible, modular and simple

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### Policy recommendations

- Imperative to have a clear country policy
- Look towards EU action plans
- You need to right facilitator between policy, business and design to connect the three
- First it is necessary to develop practical actions and then develop policy
- Avoid fragmented actions
- Ministries must communicate amongst and between themselves so that a national design strategy through policy can be planned
- SMEs should be involved at the policy making stage – they have important feedback to give
- Policy must be created to reflect and relate to what is needed after gaps have been identified
- There is no one national design strategy. This is needed to create better, higher standards for our SMEs
- Policy must be thought of in the long term and not in political (electoral) terms
- It is important that Policy Makers have substantial knowledge of Design Added Value
- Policy must understand that innovation is not a goal within itself



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- Policy must realise the link between innovation and foreign investment
- Client readiness

### Promotion

- Idea of transformation
- Success stories (local and international business)
- Case studies
- Trend setters
- Long term campaign about the value of design for society via different networks
- Use knowledge from other countries
- One to one interaction and direct communication
- Communication is key, it is not just a matter of promoting
- Heartbeat promotional activities
- Bring good journalists on board the journey
- Campaign design benefits for society and business
- Business and society speak two different languages
- More referral networks needed – industry associations, start-up accelerators, incubators
- Promote measures for other businesses

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### Setup

- Designers
- Design and Art associations / Councils
- Icons and good examples
- Involvement of Universities – rope in the educators
- Extra content available for universities
- This should be free to students
- Hackathons
- Financing: 50% EU grants; 50% SME contribution
- Client readiness is key – careful selection process in necessary



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- Setting up expectations from the start
- Design audit is the first step of the support progress
- Introductory level; Design audit level; one project; cultural change
- People who can tell the story (Business: peer to peer)
- Scalable fees
- Gender diversity
- Respond to current issues / problems
- Intensive programmes that should be more efficient than they are long

### **Deliver**

- Ambassadors
- Media campaigns
- Evangelists
- Events
- Courses
- Address cooperation issues
- Public-private partnerships
- Design Associate needed to drive the reporting process
- Phase/ Stage gate check ups

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### **Measure**

- Trials at Universities
- Ambassadors for the programme
- Design strategy
- Deliver at least one project
- Deliver a cultural change project
- Use networked eco-systems
- We need a universal methodology to measure design value
- Develop and implement common criteria measurements



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## Impact

- Design culture and understanding
- Practical guidelines
- Creation of an ecosystem
- Design as a main driver of business strategy
- What is the competitive advantages for SMEs?
- Practical information and inspiration for students
- Sustainability should be measured



# How can you ensure that companies apply Design Strategically?

## Lessons from the SEE Platform:

Below content extracted from the 'Reviewing Design Support Programmes in Europe', 2013

Research has shown that often design is not applied strategically in industry. Design is considered to be insignificant when part of a long series of activities. Often, it is solely limited to product aesthetics, adding little additional value. The application of design along the entire development and supply process is not considered. As a result, companies are unfamiliar with strategic design. Thus, companies are reluctant to implement strategic design activities as they are considered to be outside normal operations. Companies lack the necessary knowledge and skills to implement strategic design. Based on the findings, of the SEE Platform research an approach which could present and communicate the potential of design has been formatted.

### Rule 1: Ensure high level support

Often in SMEs, the company founder is still involved in the company at high-level managerial positions. To achieve change, founders/senior management must be made aware of the economic potential of a revised way of doing business and be willing to invest in the necessary resources.

### Rule 2: Create an awareness of the dominant culture

An integral part of implementing design strategically is to get companies to recognise their current logic. In order to break operational norms and habits, the company must first be aware that they have them. This opens discussion for the potential value-add areas for design beyond those of a product aesthetic role.

### Rule 3: Broaden and manage the value proposition

Design considers the value proposition in relation to the entire development and supply process (from concept generation through to final use) and includes both tangible (i.e. product, machinery) and intangible factors (i.e. customer journey, customer experience, brand).

### Rule 4: Define a clear strategy

A clear design strategy is essential as it provides a clear development path and encourages companies to make the appropriate organisational arrangements and resource allocations. This provides a base on which to build a systematically co-ordinated and transparent procedure which can support the development of new value offerings.

### Rule 5: Establish and manage customer relationships

Companies must understand and treat customers as co-producers. Shifting perspectives from that of product and services as static offerings to customer activity cycles can help companies quantify their level of interaction and co-creation with customers and identify opportunities for providing additional value.

### Rule 6: Manage communication and learning styles

There are two primary lines of communication. Firstly, communication between the company and staff. It is essential that the company clearly communicates the reasons for the changes. Staff must



plainly understand their role within the design process and their role within the company once the changes have been implemented. Secondly, communication between the company and their customers is critical. Effective communication closes the gap between what customers expect and what they receive in terms of products and services.

#### **Rule 7: Develop an open innovation mindset**

Staff involved in the design development process should be encouraged to find new ideas through testing and learning from mistakes. This is only possible if the company management actively supports such attitudes and staff feel comfortable and confident enough to freely offer suggestions. In order to be open to innovation from internal or external sources organisations need to be less risk averse. Good design management and the use of design and prototyping technologies should reduce new product and service development lead times but also enable a progressive approach to innovation.

#### **Rule 8: Define new approaches to measuring success**

Not all benefits derived from strategic design can be directly attributed to financial return. When determining the true value offered by design, companies must consider the benefit derived within their own processes and activities, and be aware of the indirect value offered to their customers.

Research has shown that design, when applied strategically, can have a positive affect across almost every aspect of a business.

#### **Conclusions**

Design support programmes are one of the prime implementation mechanisms of design policy. Barriers to the large-scale take up of design expertise in small companies and the public sector still exist across Europe. Design still largely remains excluded from the broader innovation and business support programmes. Design must be seen as a component of broader innovation and business support programmes and promote the take-up of design in national programmes targeted at SMEs.

Innovation policy is no longer purely technological and driven solely by R&D. Innovation is increasingly about services, society and the user. Design is a tool for service, societal and user-centred innovation. As such, the partnership also advocates that design stakeholders and public authorities pilot design support programmes as a means of implementing specific innovation policy targets, such as economic growth for specific sectors like manufacturing, healthcare or life sciences. Demand for design will only increase if the supply of design expertise is of a sufficient quality. Design actors should provide support for both supply of and demand for design expertise by improving the skills and business models of the professional design sector as well as training for companies and public officials to use design methodologies and user engagement tools.

Most design intervention programmes are targeted at small businesses that tend to lack a maturity of organisational structure and management expertise. In order to have greater impact with medium and larger sized organisations intervention programmes will have to become more focussed and specialised.

A serious setback to design forming part of innovation policy mechanisms across Europe is a lack of evidence of the value of design for innovation. The results and impact from design support programmes is currently not sufficient to inform policy-making. It is recommended that organisations build evaluation into the implementation costs of the programme so that ex ante indicators can be



established and interim and ex-post data collected. A set of common evaluation indicators across Europe to empirically measure and evaluate design support programmes is also needed. For example, new products or services launched, new spending on design expertise following programme intervention and return on investment. With robust empirical metrics, programme evaluation results will feed into policy and programme improvement.



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## 4. DesignShots – Pilot action

Design shots has created the Design Diagnosis Tool. This tool is used during semi- structured interviews with SMEs in order to understand what are their needs from a design support programme. Each partner conducted interviews with local SMEs.

### Design Diagnosis TOOL

#### Basic Info

##### 1. Industry/ sector

##### 2. Number of employees

##### 3. Year of establishment

##### 4. Which of the following statements best describes the activities of your company with regard to design?

Design is a central element in the company's strategy

Design is an integral, but not central element of development work in the company

Design is used as a last finish, enhancing the appearance and attractiveness of the final product

The company does not work systematically with design

Design is not used in the company

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##### 5. Has your company introduced any of the following types of innovation during the last two years?

Yes

No

1 New or significantly improved goods

2 New or significantly improved services

3 New or significantly improved processes (e.g. production processes or distribution methods)

4 New or significantly improved marketing strategies (e.g. packaging, product promotion or placement, or pricing strategies)

5 New or significantly improved organizational methods

##### 6. If introduced an innovation what changes have you seen in your company? (eg. Turnover, customer satisfaction, new collaborations)

##### 7. Since January 2014, what percentage of its total turnover has your company invested in each of the following activities?

0

Less than 1%

1 - 5 %

More than 5%



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- 1 Training
- 2 Software development
- 3 Company reputation and branding, including web design
- 4 Research and development (R&D)
- 5 Design of products and services
- 6 Organisation or business process improvements
- 7 Acquisition of machines, equipment, software or licenses

**8. Thinking about the commercialisation of your company's goods or services since January 2014, have any of the following been a major problem, a minor problem or not a problem at all?**

- A major problem
- A minor problem
- Not a problem at all

- 1 Lack of human resources
- 2 Lack of financial resources
- 3 Finding or using new technologies
- 4 Cost or complexity of meeting regulations or standards
- 5 Difficulties in maintaining intellectual property rights
- 6 Administrative or legal issues
- 7 Lack of marketing expertise
- 8 Market dominated by established competitors
- 9 Low demand for your innovative goods or services
- 10 Weak distribution channels

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**9. Thinking about possible public support for commercialisation of your innovative goods or services, which of the following two types of intervention would have the most positive impact on your company? Support for:**

- Meeting regulations or standards
- Accessing or reinforcing online selling
- Participating in conferences, trade fairs exhibitions
- Training staff in how to promote and market innovative goods or services
- Applying for, managing or protecting intellectual property rights
- Market-testing a product or service before launch
- Accessing or reinforcing your presence in export markets
- Other
- None

**10. What will be the focus of your planned investment in innovation in the next 12 months?**

- Goods
- Services
- Processes (e.g. production processes or distribution methods)
- Marketing strategies (e.g. packaging, product promotion or placement or pricing strategies)
- Organisational methods



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**11. What are the two main reasons why your company decided to invest in innovation in the next 12 months?**

Market potential

Customer request

Increased competition

Supplier offering a new feature or business solution

New legal or administrative requirements coming into force in the coming years,

Other

**12. Which two of the following skills could help kick start and support your company's innovation activities over the next two years?**

Technical skills needed in your sector

Engineering skills

Organisational and leadership skills

Skills linked to IT and the digital economy

Creativity, inventiveness, experimentation

Soft skills like flexibility, relationship building, resilience, etc.

Marketing skills

Financial skills relating to investment and access to finance

Other

None

**Connect Design with the business plans**

**13. WHERE ARE YOU GOING?**

The 3-5 year vision for the business:

**14.HOW ARE YOU GETTING THERE?**

The strategies in place this year to achieve your vision:

**15.WHAT RESOURCES HAVE YOU GOT?**

Budget, time, in-house expertise, contacts:

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Based on the results of the pilot action and the methodology described in the previous session the partners have designed a dedicated design support scheme for Greece entitled "Design Mentor".

**DesignMentor Scheme**

Description of the scheme

The major focus of this scheme is the delivery of a pilot design mentoring scheme for organisations from a broad range of sectors and organisational types. It will be promoted to a broad range of SMEs including those who have no (or very limited) experience of using user-centred design within their



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innovation processes. It aims to encourage SMEs to engage with design for the first time as well as support them to develop existing skills and embed design within their business practices.



**Figure 6:** The Design Ladder (DDC: 2003)

DesignMentor will attract 60 SMEs of that do not use design driven innovation or service design. The SMEs will receive either exclusive services from a design team in order to implement a full design project into the company or Business Development Services (BDS) -a group of more “mainstream” innovation support services pack, offered by KEPA.

The scheme will operate as a Randomised Controlled Trial (RCT), which will enable KEPA to obtain a robust assessment of the impact of different types services on participating SMEs. The Scheme will produce real and comprehensive evidence, while providing benefits for all the businesses who take part. This evidence will be used to scale up the scheme and include it in ERDF programmes as well as to inform future policy.

There are four main stages in the DesignMentor innovation-support scheme:

**Stage 1** is the initial application stage in which businesses apply to join the programme. The application process must be completed online at [www.e-kepa.gr](http://www.e-kepa.gr).

The DesignMentor programme is open to any business from any sector, based in Central Macedonia, that has been running for at least one year, has fewer than 50 employees, and has never used design for innovation. Eligible companies should be in stage 1 of the Design Ladder (figure 6) that means they have not incorporated design in any level.

As part of the application process, eligible businesses will complete a design diagnosis test that is designed to help assess what type of design support might benefit them most.

At **Stage 2**, businesses complete a design diagnosis test that is designed to help assess what type of design support might benefit them most. They can do this by completing and sending the assessment by email or meeting with an adviser in person to help them with the assessment.

At **Stage 3**, businesses will receive a personalized report with recommendations on how design can help them grow and solve their current challenges.

At **Stage 4**, half of the businesses will receive exclusive services from the design team, in order to implement a full design project into the company. The rest of the companies will receive and already developed innovation support services pack.

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### Aims of the Scheme

Every business that participates in the DesignMentor programme will be monitored to examine their progress over the next years. By monitoring their growth over this period, we hope to identify how design change the innovation attitude and performance of the companies involved.

In particular, we aim to answer the following key questions:

- Those SMEs given design mentor support perform better or worse from those given the more mainstream innovation support?
- Do SMEs that have received the design mentor support use design internally (mindset swift)?
- Are the innovation support needs of both groups met or any of them show the highest satisfaction rates?



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## Annex 1: How to fill out the tool

Use the Design Diagnosis tool to guide during a semi-structured interview with a representative of an SME. Semi-structured Interviews are used to gather focused, qualitative textual data. This method offers a balance between the flexibility of an open-ended interview and the focus of a structured ethnographic survey. Semi-structured interviews sit halfway between a structured survey and an unstructured conversation. Semi-structured interviews are particularly useful for collecting information on people's ideas, opinions, or experiences. They are often used during needs assessment, program design or evaluation. Semi-structured interviews should not be used to collect numerical information, such as the number of households with a bed net, or the number of farmers using fertiliser.

### TIPS:

You must consider ethical issues. Although it might seem like you're just sitting down to have a chat with some stakeholders, a semi-structured interview is actually a research tool and so you need to consider the ethical implications. You should always ask for informed consent and explain the purpose of the interview and how the information will be used.

Translate the Design Diagnosis Tool into the native language to avoid misunderstandings and confusions. One of the most common problems with semi-structured interviews is that the interviewer mixes in their personal opinions when they are taking notes. Sometimes it can be difficult to tell what the real opinion of the interviewee was compared to the interviewer. One of the best ways to prevent this is to provide a separate space at the end of the form where the interviewer can put their own subjective opinions.

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### Session Structure:

- Introduce yourself, explain the research and get the participant's consent (either written or videotaped). If any recording devices are being used, point them out to the participant and make sure they're working.
- Ask warm-up or demographic questions first; then, using the interview guide, move on to more focused questions. Allow flexibility for dialogue.

Here are some other tips to keep in mind during the interview.

- Use probing questions to gather as much information as possible.
- Try not to interrupt participants; make a note and come back to the idea later.
- If a participant gives an answer relating to a question you have not yet asked, record the answer and avoid repeating the question later.
- Keep the conversation focused on the main domains, avoiding tangents. Time is limited, so completing the entire interview guide may not be necessary. Instead, spend time on key factors, including what the participant is interested in speaking about.



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- If time permits, ask the participant if there is anything else they'd like to share. Turning off the recording device before asking this question may lead to a different response.

#### **After the Interview:**

- Record – Immediately after the interview, take the time to check that the recording device was functioning properly throughout, and review your notes to fill in any gaps or add comments.
- Analysis – Review interview responses and observational data for insights and patterns. A computer database, such as Ethnograph or others, may be used to analyze patterns and relationships.
- Report – The research can either end at this point with a report on the data analysis, or it can be used to build out an ethnographic survey or other qualitative or quantitative research methods.



## Annex 2: Full cases of design support programme

### **Programme: Innovation Voucher Aid Services, Operational Programme “Growth and Employment” from Latvia**

Information provided by Investment and Development Agency of Latvia (LIAA). LIAA is a public body under supervision of the Ministry of Economics of Latvia. Mission of LIAA is to promote business development by increasing the competitiveness of Latvian entrepreneurs in both domestic and foreign markets, facilitating more foreign investment, implementing national policy on tourism development and national innovation policy.

#### Description:

The objective of innovation voucher aid is to promote the innovation activity in micro, small- and medium-sized merchants (SME) with the support to the development of new or substantially improved products or technologies by technology transfer and which provides a contribution to achieving the objectives of the Smart Specialisation Strategy. The project application selection launched on the February 6th, 2017 and will run until 30 June 2022. The Outcome indicator: 320 supported SME which receive support in order to release new products into the market.

The key objectives and activities of the programme are the following:

Within the scope - development of new product or substantially improvement of products -the following activities is supported:

- feasibility study – for an evaluation and analysis of a potentially new product or technology;
- industrial research which is necessary for the development of new products or technologies;
- experimental development, including making of prototypes;
- development of the industrial design of the product;
- corroboration of the industrial property rights for the following objects of industrial property : invention patent, design sample and topography of semi-conductor articles;
- certification and testing services of a new product or technology.

SME can apply for support for all activities mentioned above or just for one. LIAA must ensure supported activities in the form of outsourcing in accordance with the laws and regulations in the field of public procurements.

Nature of the support is to encourage SME's to start cooperation with public research organisations. This cooperation must increase the competitiveness and productivity of the SME.

The Programme supports development of the industrial design of the product – for the development of aesthetic and functional solution of the product, concurrently improving or creating an engineering, use, ergonomic and brand development solution. The industrial design of the product is significantly improved in comparison to the designs of existing products or other products in the market and create the advantages of competitiveness.



The activity must be provided in the form of outsourcing.

Outsourcing is ensured by research organisations which conform to at least one of the following conditions:

- the research organisation is an institution of higher education registered with the Register of Scientific Institutions of the Ministry of Education and Science which is derived public person, an agency of such institution of higher education or a unit of institution of higher education, as well as scientific institution which is a derived public person;
- the participants (owners, co-owners, managers) of the research organisation are public persons or are co-funded from public resources, and the research organisation is registered in a EU Member State, European Economic Area state or the Swiss Confederation;
- the research organisation is registered with the Register of Scientific Institutions of the Ministry of Education and Science, and it has been granted evaluation 4 or 5 according to the international evaluation of the science of Latvia performed by the Ministry of Education and Science.

The maximum permissible intensity of funding is 60% from the outsourcing costs excluding value added tax and 100% for the value added tax part of outsourcing costs which is paid by LIAA.

The minimum amount of co-funding of an aid application is not specified. The maximum amount of co-funding of an aid application for one group of linked persons of the merchant shall not exceed 25,000 euro.

The total available funding for innovation voucher activity is 8,235,294 euros, funded by European Regional Development Fund and the State budget.

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Evaluation procedure of the programme:

Projects are rated by assessment criteria, which LIAA developed on basis of the Republic of Latvia Cabinet Regulation No. 692 Adopted 25 October 2016 "Regulation for Implementation of the Activity 1.2.1.2 "Support for Improvement of Technology Transfer System" of the Specific Support Objective 1.2.1 "To increase investments of private sector in R&D" of the Operational Programme "Growth and Employment".

A merchant may apply for receipt of aid:

- if the new product or technology has justified demand and such advantages have been identified which can increase the competitiveness and productivity of the merchant;
- if a merchant has drafted business and development plan for a new product or technology from the development of a new product or technology up to introduction and production.

When in the project result will be lead a new product or new technology, LIAA will measure the research organisation findings, whether developed new or substantially improved products or technologies as it was indicated in the project application. There are no obligation for SME to achieve some certain indicators. After project will be finished, LIAA for statistics will monitor increase of turnover, R&D costs and number of employees of SME.



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### **Programme: “DESIGN A NORTE” from Portugal**

Information provided by Associação Inovação Design (AID), Portugal.

#### **Description:**

DESIGN A NORTE is a 2 years regional program, funded by the regional programme Norte 2020, to support design innovation in SMEs based in the North Region of Portugal. It aims to disseminate design innovation practice in SMEs specifically aiming to increase the export capacities of these companies. The programme started in the end of 2016. It is funded by the regional program NORTE 2020, and promoted by the National Association of Business Innovation Centres and Assoc. Design Innovation. Responsible organization of the programme is the National Association of Business Innovation Centres.

The programme aims to increase the export capacities of SMEs, through the use of design innovation; the programme has several main activities: training; dissemination of best cases; exhibition in major national and international events; benchmarking visits to other European countries and organizations and major field studies to allow a better assessment of the current use of design as an innovation tool in the Region.

SMEs pay 10% of the full cost of their participation. The selection criteria is based on a project presentation that each company is required to make. SMEs are then selected to guarantee that they belong to different sectors and that they have similar degrees of development. The programme has several metrics, in terms of number of SMEs participating, number of hours of training, number of presences in international events, impact on the exporting level and value of the SMEs participating. Companies have to describe their current situation and how they expect to be impacted through their participation in the specially in terms of exporting capacity.

The programme duration is 2 years, with a total budget of 375K.

### **Programme: “Design consultancy for SMEs” (in French : Consultance en design export”) from Belgium**

Information provided by AWEX, Wallonia Foreign Trade and Investment Agency.

#### **Description:**

As an agency supporting exports, AWEX wants to improve SMEs’ competitiveness on international markets, by allowing them to adapt their product / service, packaging and/or brand image to international or market-specific standards and requirements. To support the launch of a new product (or an existing product on a new export market), AWEX offers Walloon SMEs manufacturing and/or services providers a grant covering 50% of the fees of external experts (designers) certified by AWEX. The programme is funded by Walloon government through AWEX its annual budget. To be eligible for the grant the company must be based in Wallonia, explain its export strategy and its needs in terms of design. It must be an SME (according to European definition). The SME has to pay 50% of the designer’s fee.





## Programme: “Design consultation” from Germany

Information provided by Hessen Trade & Invest GmbH, Enterprise Europe Network Hessen in Wiesbaden, Germany. The Hessen Trade & Invest GmbH is the economic development company for the State. Its central task is to position and strengthen Hessen as an economic and technology site nationally and internationally. Together with representatives from industry, science and government, it works as a catalyst to develop Hessen further and make it permanently competitive for the future.

### Description:

Design consultation provides grants to Hessian smes for design consultancy services. The delivery bodies of the scheme are RKW Hessen (the RKW is a non-profit national “Centre for Productivity and Innovation for the German Small and Medium-sized Enterprises” , situated in all German “Länder” offering consultancy to SMEs) and Design Hessen e.V. (a publicly funded centre for competency, consultancy and mediation for design in Hessen). The programme exists since 2013.

The government of Hessen created this programme to support the competitiveness of Hessian SMEs. They assumed that a recognisable brand and a good product design or a functionally and visually explicitly perceptible user interface is a precondition for commercial success everywhere.

Furthermore, they regard strategic design as decisive for corporate development, because it introduces subjects like sustainability and a resource-efficient design of new work and production processes.

Target groups of the programme are Hessian entrepreneurs who intend to further develop their products or their communication media or who would like to reposition their companies.

SMEs receive funding for design consultancy on development and redesign of their brand design, their communication strategies and product developments. Product and industrial design, graphic and communication design as well as web design are concerned. Entrepreneurs get concrete information how they can profit from involving a designer into their individual projects before they award a contract.

The nature of the support is solely consultancy: Design consultancy is funded up to a maximum of 600 EUR (650 EUR in particular ERDF priority areas) per consultation day (max. 5 consultation days). The remaining amount, 50 % of the consulting fee, has to be contributed by the clients. The maximum grant amount is 3.000 EUR (3.250 EUR in particular ERDF priority areas). Design achievements like communication, media and product design are not subsidized

RKW Hessen recommends to the SMEs qualified design consultants who support the development and redesign of the brand design, i.e. brand-typical offers, appearances, messages and und behaviours. The entrepreneurs receive suggestions for individual solutions concerning topics like brand design, brand launch, sustainable design strategies, means of communication, and web based applications, product development and optimisation as well as awarding of a contract, briefing and competition.



## Annex 3: In depth analysis of the design support programme of Norway

### DESIGN-DRIVEN INNOVATION PROGRAMME (DIP)

Design Driven Innovation Programme is the one the most successful and famous design support programme in Europe. The detailed information about the programme has been provided to us by Mr Skule Storheill, Director of R&D and Innovation – Norwegian Centre for Design and Architecture.

#### 1. 0 Background

##### 1.1 Weak degree of innovation in established companies

Norwegian business and industry operate in an intensely competitive global market, as exporters and/or as players in their own domestic market. In the face of this competition, innovation is vital to their success. A Statistics Norway report from 2007 e.g. shows the following trends in terms of innovation:

##### Reduction in turnover of new and changed products.

New or significantly changed products accounted for 5.9% of business and industry's total revenue in 2004. This is a reduction from 2001, when 7.7% of business and industry's total revenue originated from innovation.

##### Getting new products to market.

Companies that have achieved innovations have usually introduced new, or significantly changed products *for the company* – 21% state this. Far fewer companies, just 11%, have introduced products that are *also new for the market*. There is also a tendency for the same companies to introduce both new products and processes.

##### 1.2 Enterprises that use design methodology innovate more

A 2004/05 survey of 1,500 enterprises in the UK by the British Design Council showed that **32%** of all British enterprises had introduced a new product or service during the preceding three years. Among enterprises that used design methodology the figure was **67%**.

A 2009 survey in Norway by the Norwegian Design Council/Synovate of 500 enterprises showed that **28%** of all Norwegian enterprises had introduced a new product or service during the preceding three years. Among enterprises that used design methodology the figure was **69%**.

##### 1.3 Norwegian enterprises do not involve users in their innovation projects



The same 2009 survey by the Norwegian Design Council/Synovate showed that only **17%** of the enterprises involved the users in their innovation projects.

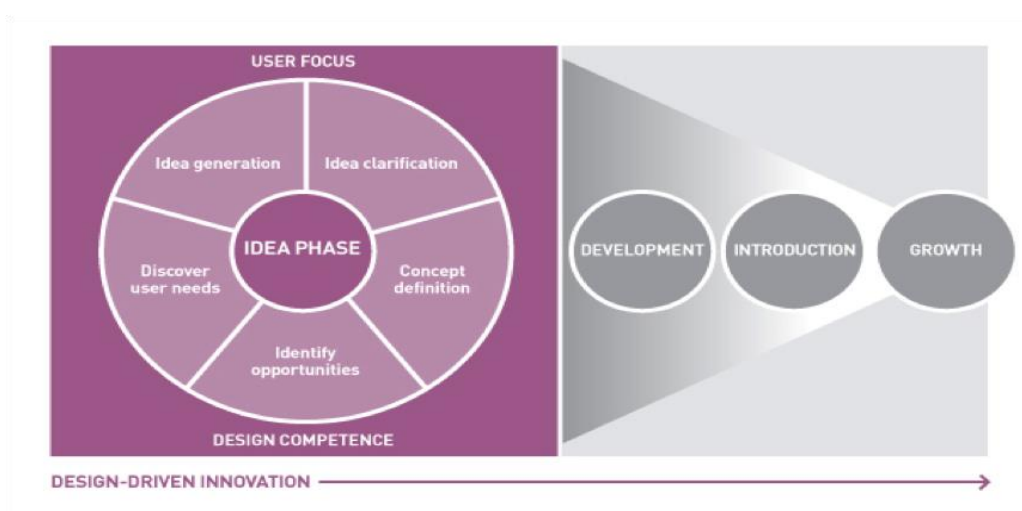
Since we know that 100% of the enterprises have a user group which receives their product or service offering, this result is alarming.

By user is meant end-user, which might be a consumer, enterprise, organisation, employee, patient, distributor or professional environment.

#### 1.4 Design-driven innovation tackles these challenges

The purpose of design is to contribute to problem solving, whereby the designer puts the user at the centre of the development process and helps to give the product and enterprise characteristics that are unique in the market, whether the customer is a consumer or another enterprise. This makes design a particularly innovative tool, starting from the idea phase.

The idea phase is the most important phase of the innovation process, since this is when the foundations for potential success are laid, whether this be for a new product or a new service.



When systematic user studies and idea generation are undertaken in established enterprises, based on design methodology, "obvious truths" are often challenged, and completely new solutions for today's goods or services will arise. This type of innovation process, often called *Design-Driven Innovation*, creates completely new competitive advantages within the enterprises' existing business areas.

International studies show that if enterprises are to increase their innovation speed, they must approach the idea phase more methodically, combined with qualified creativity and user focus.

## 2. Market failure and consequences

### 2.1 Source of the problem

There is great potential in innovation methodology that focuses on a methodical and user-focused approach to the idea phase. Design-driven innovation takes this approach, but only few enterprises in Norway today use this methodology in their innovation work.

The source of the problem seems to be that since this is a new method, in an early growth phase, information and knowledge dissemination to the enterprises concerning these processes is not very well-established. This new methodology is thus in an early phase in terms of process implementation and dissemination of useful value/evidence. For some time to come, it is therefore necessary to have incentives to encourage enterprises to take the "risk" related to implementing a new innovation methodology.

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### 2.2 Role of the authorities

Formerly, there were no targeted instruments to stimulate a systematic, user-focused approach right from the idea phase of enterprises' innovation work. To offset this market failure, the authorities have taken the initiative for a new instrument targeted at greater innovation in Norwegian business and industry, starting from the idea phase. This is being achieved by establishing a programme under the auspices of the Norwegian Design Council (now Design and Architecture Norway (DOGA)) to stimulate competence building and investments in the idea phase, based on systematic user studies and design methodology, called DIP (Design-Driven Innovation Programme).

## 3. Description of the Design-Driven Innovation Programme (DIP)

In Parliament White Paper no. 7 "*An Innovative and Sustainable Norway*", the Norwegian Design Council and the Design-Driven Innovation Programme were given a concrete role in the authorities' efforts to increase value creation in Norwegian business and industry. This is e.g. expressed in the White Paper's summary of 12 special action areas:



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*"The government will strengthen the use of design as an innovation tool by setting up a design-driven innovation programme."* Since 2009, the Norwegian Ministry of Trade and Industry (now NFD - the Ministry of Trade, Industry and Fisheries) has granted the Norwegian Design Council/DOGA approximately NOK 10 million per annum for the achievement of DIP.

The program aligns itself with established businesses wanting to strengthen their competitiveness or service level by creating new products or services for their users. As for the public sector, the program offers grants for projects where the objective is to improve end-user satisfaction, and at the same time introduce more efficient operational performance for the public body in question.

Thus, the aim of the DIP is to strengthen industry's as well as the public sector's ability to include user needs in a systematic way in the idea phase of innovation projects – and to use design methodology from the start to facilitate workshops and translate and visualize what possibilities and product/service ideas might arise from this increased user insight.

By "users" we mean, for example, consumers, customers, other companies, specialist environments, organizations, suppliers, patients, or citizens.

### 3.1 Main purpose

The aim of the programme is to strengthen the development of new products and services in existing enterprises, by deploying a methodical, user-managed and design-driven innovation methodology as from the idea phase. (Design-driven innovation)

### 3.2 Sub-goals and expected results

The "DIP" programme must be a tool to mobilise business and industry to invest in design-driven innovation in order to increase the enterprises' innovation speed and ability.

- to gather new knowledge and operational experience about the practice of design-driven innovation methods, both for the individual enterprise and at the national level;
- to contribute to the development of specific methodical tools and procedures that can form the basis of consultancy and business-related service programs;
- to help participating enterprises develop and launch entirely new and competitive innovations as a result of the project and methodology.

### 3.3 Instruments and programme description

The main purpose of the programme is achieved by implementing and performing three main activities:



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1. Funding of pilot projects covering the ideation phase/conceptual phase of an innovation project in industry and public sector based on a yearly call for applications that meets up with given professional criteria.
2. Research, interviews and following up of every project that has been finished in order to collect information and process-material connected to each project, experiences with the design driven innovation methods that has been conducted together with corresponding results.
3. Production of cases, knowledge-transfer and inspiration activities, seminars, PR and publications which arrives from the projects,- aimed at the industry, public sector, design community, political environments, and education institutes.

### 3.4 Overall enterprise criteria for participation in the programme

*Idea phase and basis in user requirements:* Weight must be given to the extent to which each project develops, tries out and disseminates methods to discover the users' recognised and unrecognised needs.

*Use of design competence:* Weight must be given to the extent to which design competence is brought into the project from the start and how new user insights are used to commercialise basic ideas.

*High novelty value:* Weight must be given to the extent to which the individual project descriptions differ from ordinary practice, are innovative and think in new ways with regard to e.g. target groups, value chain, cooperation partners and mindset.

*Measurable effect:* It is important that the project can yield concrete, permanent results. This can be assessed qualitatively or quantitatively at e.g. customer, employee and company level.

*Can be used by others:* Weight must be given to the extent to which the knowledge gained in the project is relevant and can be used by others.

*Dissemination of results to a wider circle:* Weight must be given to the extent to which the project's results are disseminated to players outside the project's group of participants.

*Additionality:* Weight must be given to the extent to which the project includes activities that would not otherwise be performed or would only be performed to a very limited extent.

*Collaboration:* Weight must be given to having at least two collaboration partners in a project, and that at least one is a qualified design agency that can investigate user requirements based on the enterprise's business idea, and plan the basis for a concrete development project.

#### *Other central assessment criteria*

Great importance is also attached to the following in the assessment of the competitiveness of the application:

- How clear and special is the issue to be addressed?
- How clear is the description of the project's objective?
- How soundly is the project anchored in the management/board of directors?
- How obvious is it that the project is a real idea development project and not a project to realise an idea that already exists?
- How clearly and exhaustively are method use and phase structure described in the project process, and does the process include the qualities that characterise a design-driven innovation process?
- How good and credible is the ability (finance, competence, organisation, commercial infrastructure, etc.) to bring the result further towards realisation as described in the application?
- How sound are the finances of the applicant alone, or possibly the applicant together with collaboration partners?

### **3.5 Case processing**

DIP is a non-discriminating program. By this we mean that applicants are welcomed from any geographical part of the country, any company-size and any branch or industry, as well as any level of technological expertise.

DIP is also an open competition arena. This means that projects from different areas compete for support on the basis of process and professional qualities, degree of innovation, potential to create value and feasibility. The scope and number of projects that can be supported is determined by the annual budget frameworks allocated to the programme from the Norwegian Ministry of Trade, Industry and Fisheries.

Case processing of applications after the closing date takes place in several phases by personnel from DOGA, as well as experts from the SkatteFUNN department of the Research Council of Norway. Proposals for which projects it is recommended to support are processed by a programme board comprising DOGA, the Research Council of Norway and Innovation Norway. The effective case processing time from the application deadline is three to four months, based on an average of 130 applications.



Projects that are recommended for support will receive a grant letter/offer. The funding is awarded as *de minimis* grants in accordance with Commission Regulation (EC) no.1407/2013 of 18. December 2013. The payments are made by the Research Council of Norway on behalf of DOGA. The grant contracts are based on DIP-specific terms in the DIP grant letter, as well as the Research Council of Norway's general contract terms. This provides legal cover for any sanctions.

### 3.6 Typical course of a DIP project that has been granted funding/ Overall methodology

#### 1. DEFINE THE FOCUS

The first, decisive step is to define a clear problem or area that shall be looked at from a fresh perspective. The project's goal must be clearly targeted towards creating completely new solutions that challenge the organisation itself, as well as its users



#### 4. SORTING AND VERIFYING

The aim of this phase is to test the alternative solutions in order to uncover potential and any practical challenges within the individual solutions. Through re-involving users and specialist environments, valuable feedback can be obtained on the work to select the idea concept that has the greatest support and potential. The designer has extensive experience in leading such processes, where established truths are challenged.



#### 2. USER STUDIES

The aim of this phase is to increase insight into both perceived and non-perceived user needs. The identification of user needs in the idea phase can include user involvement and user observation methods, as well as interviews. This work is most often carried out by a designer, who has the knowledge, ability and willingness to see problems and opportunities from a user perspective. In addition, professional expertise within, for example, anthropology, ethnology or sociology can be utilised.



#### 5. CONCEPT SELECTION

The aim of the last part of the Design Pilot project is to make a decision regarding the final concept to be realised and taken through a development and commercialisation phase. The selected concept often offers technical or organisational challenges, for which solutions must be found. Innovation Norway and the Research Council of Norway may have support schemes in this area, which it may be relevant to apply for.



#### 3. TRANSLATE

Here, user insight shall be transformed into concrete opportunities. The designer has unique competence and working techniques that enable him/her to translate the insight from the first phases into visualised solution alternatives. Current solutions are challenged, and new possibilities are drafted and justified. Through the ability to visualise suggestions, the first possible "prototypes" for future products, services or processes are created.



The result of the Design Pilot project is then taken through a development and launch phase.





Some projects may include loops and iterations between phase 3 and 4. A DIP project must be concluded within 12 months of start-up.

The aim of the DIP project is for this methodical process in the idea development phase to come up with solution proposals that no-one has thought of before and which can be of great benefit to the company, with great user satisfaction for the company's target groups, thanks to the methodology.

In other words, DIP provides a strategic direction for an innovation project with concrete content that can be followed up operatively.

During the period 2009-2013 this has also led public enterprises to apply for programme funding. This was based on the wish to test the hypothesis that, also in this case, design-driven innovation can lead to greater user satisfaction and more effective public enterprises. (Ref 4.1 Results)

### 3.7 Funding

DIP will cover up to 50 % of the individual project costs. The funding covers costs related to design fees whilst total costs also include other aspects such as labour costs for employees at the recipient organisation, travel costs, costs of rapid prototyping and audit of project accounts. In order to carry out a design-enabled innovation project according to the overall accepted methodology each project recipient needs to invest enough time and resources in order to;

- capture sufficient insight in user-needs through personal field-work
- undertake the creative work in translating insights into opportunities
- co-work with project-owner staff and lead-users in iterations
- end up with a recommended and validated innovative concept as a deliverable from the project

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Since 2009, the average funding has been approx. NOK 415.000.

This level of funding will secure the quality of performance in each project, the quality of monitoring each project, the ability to test different indicators and metrics and the necessary contact with real world situations. Enabling the different projects to perform to a sufficient quality in the conceptual phase is an important factor in securing a successful and implementable outcome for each of the projects.

### 3.8 What happens at the company after a DIP project has been concluded?

A DIP project will often promote proposals for new solutions that require completely new technology, production methods, or organisational or commercial methods for the solution to be used in practice.

In other words, this often leads to the start-up of an R&D project in the company, in order to find solutions to these challenges.



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The grants are made annually in October and as a general rule, the idea development projects must be completed before the end of the following calendar year.

In generalised terms, the overall course of a project may be as follows:

- DIP – idea development project: 1 year
- R&D/development time and realisation of idea concept: 1-4 years
- Launch and first measurement of effect in the market: 1-2 years

An average consideration of possible times to measure effects after a grant has been made might be as follows:

- Time of measurement of whether DIP has an effect in the form of implementation of R&D/implementation follow-up: 1-2 years
- Time of measurement of whether DIP has given new knowledge and changed innovation behaviour after achievement of DIP: 1-3 years
- Time of measurement of whether DIP has had an effect in the form of results in the market: 3-7 years

### 3.9 What happens in terms of DOGA follow-up of the individual project.

The programme includes follow-up on experience, results and process material after the project information has been released by the individual company. As far as we understand, this type of methodical follow-up activity performed by DOGA is, in programme terms, a unique activity in the Norwegian array of instruments. The release of project information can take some time, due to the need to protect the initiative before launch, for competitive reasons.

A good measure of whether DIP works will therefore in the first instance be to investigate whether the DIP projects lead to R&D activities and implementation activities – in anticipation of a launch and results in the market.

### 3.10 Measurement of effect

Relevant target management indicators have been drawn up. Such indicators include:

- Action additionality – to what extent is DIP a trigger for the project and which values has the project created for company and user ?
- Behaviour additionality – to what extent has new competence been added to the company that will be used in future innovation projects?



- Dissemination effect – to what extent is knowledge of the projects disseminated to other players in business and industry, and the public sector, and what are the impacts of this dissemination?

#### 4.0 DIP status as of 2017

Overview of results – applications and projects 2009-2017

	2009	2010	2011	2012	2013	2014	2015	2016	2017	TOTAL
Number of applications	180	81	80	138	145	116	137	102	113	1092
Application amount in NOK million	80	40	34	66	71	44	59	51	76	521
Number of projects launched	17	20	16	16	15	18	17	16	15	147
Granted funds in NOK million	5.7	6.1	6.5	7.1	6.8	7.5	8.0	7.4	7.5	61.1

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A number of projects have come far enough to be launched, while some projects are in a follow-up R&D phase. Only a few projects have been stopped. The final reports and follow-up meetings with the enterprises show that a large majority of the projects will lead to achievement of the programme objectives. A milestone evaluation of the accumulated results has been performed by Technopolis in 2016. ( Norwegian only )

In 2014, it was decided that industry should be prioritized in order to deliver on the main task of the Ministry of Trade, Industry and Fisheries within the budgets that were available. From this point on, no applications from the Public Sector has been processed.

Three "flagship" projects with remarkable results have emerged during this period:

#### 4.1 Results

##### Ulstein Bridge Vision



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Today, advanced bridge systems are the result of a fragmented, stepped development process due to legislative requirements, independent suppliers, high costs and complexity. A future of sustainable marine operations calls for the innovation of better, simpler and safer solutions. This has led the shipyard and industrial group of Ulstein to explore the operational centre of a ship – the bridge, and come up with a path-breaking concept, ULSTEIN BRIDGE VISION, the future of bridge control.

Through the use of optical projections, information will pop up directly on the windows (full frame head-up display) on the aft bridge and on seamless monitors directly below the windows on the front bridge. Operators can then access controls and information by using intuitive touch-commands and gestures. The optical projection of information provides the users with all relevant details related to an operation in their line of vision, which improves their ability to safely operate the vessel, for example when positioned close to offshore installations.

An initial DIP funding of the ideation phase of 50.000 Euros has so far resulted in more than 6 mill Euros in R&D investments.

<https://vimeo.com/72330811>

#### NCE Maritime Clean Tech

The result of the "Short Sea Pioneer" DIP project was launched in February 2015 and it has been decided to follow up with an R&D project with a provisional cost forecast of approx. 90 million Euros, for which financing partners are now being recruited via public instruments. The initial DIP funding of the ideation phase was 65.000 Euros.

<https://vimeo.com/119983009>

#### Oslo University Hospital

Previously, it could take anything up to 12 weeks from the doctor discovering a lump on the patient's breast to suspicion of cancer being confirmed or disproven by Oslo University Hospital. For many women this waiting time was an enormous burden on top of worrying about the actual disease. The result of the DIP project was launched at the Norwegian Radium Hospital in autumn 2013. The "If the patient could decide" project has now been implemented and has reduced the waiting time for breast cancer diagnosis by 90%. The milestone evaluation one year after implementation shows that the new logistics solution/patient procedure is still delivering results in relation to its aims.

<https://vimeo.com/95807106>

The DIP project at Oslo University Hospital has also been named as a "Best Practice" example by the "OECD Observatory of Public Sector Innovation" and is the only example from Norway so far. :

<https://www.oecd.org/governance/observatory-public-sector-innovation/innovations/page/breastcancerdiagnosisattheoslouniversityhospital.htm>



These DIP projects also opened the door into the European Commission and a meeting with Director General Robert-Jan Smits at DG Research & Innovation at the EC was set up in May 2014. (See also "4.3 References" below. ) The following presentation was shown at this meeting: <https://vimeo.com/136632407>

## 4.2 Dissemination - ambassador effect

The projects are drawing a lot of attention in business and industry and the healthcare sector, leading to many enquiries from several industries requesting information about the DIP programme and methodology.

Among other things, the Norwegian Ministry of Local Government and Modernisation granted a subsidy that was earmarked for DOGA in 2015/16 to implement three "Time-Thief projects" within the public sector, based on the DIP programme. Thus, 3 projects within the healthcare sector has been successfully executed. ( Documentation only in Norwegian )

It is particularly interesting that after two years' contract work with ND/DOGA, the European Commission, represented by DG Research & Innovation, announced its own "call" inspired by the DIP concept. *CO-CREATION-02-2016: User-driven innovation: value creation through design-enabled innovation.* (Section 13 : Inclusive Societies 2016-2017. Horizon 2020 work programme for 2016/17.) Budget framework: EUR 4 million.

Together with the Research Council of Norway and partners from Sweden and Spain, DOGA applied for a EU-DIP grant according to this call. Unfortunately we ended up in 2<sup>nd</sup> place.

## 4.3 References

Anne Kjersti Fahlvik, Director of Division for Innovation – the Research Council of Norway:

*"We are following DIP as we can see that this stimulates systematic method use in the idea development phase. Via DIP, the players can increase the viability of the projects and learn about design-driven innovation as a method in Norway. At the Research Council of Norway we are very pleased with the cooperation established between us for case processing and follow-up of the projects, and we benefit from the resulting transfer of competence. We can also see that several DIP projects lead to applications to our programmes – this is very good! The DIP report shows that DIP contributes and yields results. We hope and expect that DIP as a programme will continue in the future and look forward to even more cooperation and mutual transfer of competence."*

Robert-Jan Smits, Director General, European Commission – DG Research & Innovation:

*"I enjoyed our meeting and your presentation ! You are doing a first class job. Together with Peter, I will reflect over possible initiatives from our side under HORIZON 2020."*



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Tuomas Nousiainen, Policy Officer, European Commission – DG Research & Innovation:

*"Inspired by your public sector 'time thief' project, we are also contemplating whether it would be feasible to run a similar DDI pilot internally here at our directorate level. We would be curious to see whether our internal organisation and working methods could indeed be improved by applying design methodologies.*

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SS/Design and Architecture Norway ( DOGA )

Dec 2017

*The Norwegian Design Council became part of a new foundation as from 01.05.2014, with a change of name to the "DOGA." (Merger of the Norwegian Design Council and Norwegian Form)*

