DeEP
Design in European Policy

DESIGN POLICY ISSUES n°4

CONTENTS

European Commission

EDITORIAL

Toward an European platform for design Policy.

DeEP has finally delivered its objective.
Understanding the efficacy of design in innovation policy is currently one of the challenges facing new socio-economic development in Europe.
The evaluation of policies is an outstanding issue that is difficult to interpret, even in established areas like measuring innovation, where indicators and statistical models already exist.
An important issue is therefore the lack of comparative data relating to design innovation and the almost total lack of data regarding the quantitative description of design policies in terms of outputs and outcomes.

The main question leading the development of the DeEP Evaluation Tool has been: how to enable data comparison and allow evaluation of design innovation policy effectiveness?

The DeEP Tool aims at collecting specific knowledge, albeit incomplete and imperfect, which can fuel a monitoring system for design innovation policies. This could support policy makers to collect data for macro and micro national performance using a web-tool which makes knowledge accessible to the European design driven innovation community.

Design Policy Issues 4 describes the overall strategy, the approach, the structure and the main results of the DeEP Evaluation Tool, envisioning the benefits for the European Commission and the main answers to the European Design Driven Action Plan.

Acknowledgments

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RESEARCH ABSTRACT

– DeEP –

DESIGN IN EUROPEAN POLICIES

DeEP aims at creating an understanding of the impact of design innovation policies by building frameworks and indicators to evaluate these actions both at a macro (regional, national, European) and micro (specific initiative) level.

The role of design in innovation policies is very fragmented across Europe. Only few governments have developed clear national or regional strategies to include design in innovation policies. On the other hand, it is possible to recognize the effort of all European countries and regions to implement design programmes, although often tacitly, while others occupy a middle position with tacit and explicit design innovation policies. Furthermore, the difficulties in evaluating the impact of design innovation policies are compounded by this lack of frameworks. There is a lack of evaluation that leads to less effective design innovation policies, disconnected from firms' activities.
DeEP wants to fill this gap by developing and testing theoretical frameworks and practical tools aimed at evaluating the effectiveness of design innovation policies.
The resulting DeEP Evaluation Tool can become an instrument for policy makers, enterprises and other stakeholders involved in design in the policy making cycle to allow the strategic development of new design innovation policies across Europe.
The main deliverables that will be developed throughout the research are:

- A taxonomy of Design Innovation Policies;
- The DeEP Evaluation Tool made of: (a) a Design Innovation Scoreboard to evaluate regional and national performance (set of macro indicators); (b) an analytical framework and indicators to evaluate the impact of specific initiatives directly on companies (set of micro indicators);
- An Open platform for knowledge sharing (online repository of Design Innovation Policies) and for evaluation (web based evaluation tools).

The DeEP Evaluation Tool

A EUROPEAN PLATFORM FOR MONITORING AND EVALUATING DESIGN INNOVATION POLICY.

Design is becoming a strategic lever for innovation policies in Europe. Together with innovation, it is feeding the sustainable development of private and public sectors, increasing competitiveness, growth and jobs.

This stands on multiple souls:

- ***the link between design and innovation,***
- ***the awareness around design policies,***
- ***the reinforcement of a policy evaluation culture.***

As part of this, tools for orienteer policy makers are envisaged for the future. These tools will assist policy makers in their future tasks, helping them understand the potential of design in business innovation.

Within this framework, ***DeEP reflects and enquires on the importance of design policy evaluation, aiming to establish both a theoretical approach and a practical perspective of inquiry***.
This objective is focused on generating an overarching European platform, advocating design as a multi-faceted topic *(see the recent funded EDIP Project which aims at defining a European Design Innovation Platform)*.

In this context, DeEP has developed an idea of an evaluation tool, a web platform for policy makers, enterprises and other stakeholders involved or interested in design innovation policies (intermediaries institutions, public bodies).
This tool intends to facilitate the evaluation of design policy development and effectiveness.

WHY WAS THE DECISION TAKEN TO DESIGN A TOOL FOR MONITORING AND EVALUATING DESIGN POLICIES?

Understanding the efficacy and contribution of design in innovation policy is currently one of the challenges facing new socio-economic development policies in Europe.

At the same time, an equally extended framework of knowledge and support facilitating the rebuilding of a system, that of design innovation policies, which is highly fragmented and discontinuous, does not exist.

Furthermore, neither within the European Union nor in individual countries, do tools dedicated to assessing efficacy exist. This situation arises from the varying design innovation policy creation and implementation systems of national actors involved in these processes, as well as the different ecosystems in the various individual countries.

In general, the evaluation of policies is an outstanding issue that is difficult to interpret, even in established areas such as that of measuring innovation, where indicators and models of comparison based on systems of statistical surveying (e.g. European Innovation Scoreboard) already exist.
As shown by Loi and Rodriguez (M. Loi, M. Rodriguez, 2012), there are several different policy evaluation approaches and models, however, each one has its own limitations and difficulties, especially in relation to costs and to retrieving quantitative data.

The real issue is therefore ***the lack of comparative data relating to design innovation*** (with the exception of the International Design Scoreboard and its limits[1]) ***and the almost total lack of data regarding the quantitative description of design policies in terms of output and outcome evaluation***.
In fact, with the exception of certain qualitative assessments based on interviews following implementation of policies, such as *Designing Demand* in the UK and *Design som Utvecklingskraft* in Sweden (both cases studied by DeEP), active evaluation systems and/or historical databases of collected data cannot be accessed in order to formulate quantitative evaluations and/or comparisons.

These evidences lead to the main question driving the development of the DeEP Evaluation Tool (DeEP Tool) proposal: ***how can a macro level (nations, regions) and micro level (initiatives mainly directed at enterprises) data system be created, in order to increase awareness, enable comparison and allow evaluation of design innovation policy effectiveness?***

DeEP thus identified the need to establish a system of policy monitoring (micro level), in addition to the collection of existing datasets (macro level).

The proposed approach is based on the collection of data through

1 Non completeness of data in all countries, absence of historical records due to the non-continuity of collection, etc.

monitoring individual policies. These will be incorporated and compared with data at territorial scale (regional or national available datasets) to gradually build an orignal overview of design policies data. The objective is to design, over a longer time scale, a *European Design Innovation Scoreboard*.

The DeEP Tool aims to collect statistical data, which draws on the counterfactual method (DID - Difference in Differcence). As presented by M. Loi and M. Rodriguez (2012: 32):

> *"The Difference-in-Differences (DID) method explores the time dimension of the data to define the counterfactual. It requires having data for both treated and control groups, before and after the treatment takes place."*

In line with this definition, companies which have benefited from a policy (***beneficiaries***) constitute ***treated subjects*** in the deEP Tool, while companies which applied to participate, but were not selected (***participants***), are considered the ***control group***.
Before has been called ***T0*** (Time 0), that is the collection of data prior to participation in the programme or action, while ***after*** has been defined ***T1*** (Time 1), in other words, the collection of data after the end of the programme or initiative.

POLICY EVALUATION PRINCIPLE: TRANSFORMATION OF DESIGN CAPABILITIES

DeEP has defined an original design innovation policy evaluation principle, which acts as an engine to evaluate the direct effects of policies on its beneficiaries.
This sustains that ***the effectiveness of a design policy is measured by the positive change and/or transformation in the stock of design capabilities observed in design policies beneficiaries***.
In particular, DeEP has applied a ***capability approach*** defining ***design as a set of capabilities that enable people-centred innovation***.

The starting point is the description of ***design capabilities***, which – when measured – ***express the coherence between policy objectives and results.*** In particular, ***design capabilities are defined as the set of competencies needed to carry out design activities***.

The DeEP approach on capabilities involves two levels:

- ***Macro level***: i.e. the national context (Ecosystem) that enables and supports design policy activation. DeEP defines the ***Design Innovation Policy ecosystem*** as ***'the actors, context(s) and interactions required to support design as an enabler of people-centred innovation'***.
- ***Micro level***: programmes, initiatives and recipient enterprises, measuring design policy effectiveness. ***The sum of the effects of individual initiatives will provide a broader picture of policy results as a whole***. The collection of micro level data comprises both the surveying of both beneficiaries and companies which applied, but were not selected.

Following this, it can be stated that ***effective policy actions contribute to an increase in enterprise design capabilities by impacting on the enterprise itself; the ecosystem of which the enterprise is part; and/or in the capability of the enterprise to access the ecosystem***.

The system of assessment is therefore based on both levels described, for which specific indicators have been developed.

MACRO DESIGN INDICATORS

The Macro level corresponds to what has been defined as the Ecosystem (national system).
Macro design indicators common across all EU Member States are extremely limited, as is the range of specific issues to which they relate.
In order to analyse and evaluate the capacity of national systems to implement design policies (and namely to understand when design is present, widespread and supported nationally), nine indicators have been defined. These have been divided into three subcategories:

- ***Design Investment***,
- ***Design Supply***,
- ***Design Sector***.

Macro-level design indicators relating to certain Member States have been obtained from existing statistical sources. The main references include: the *International Design Scoreboard*, the *Official Journal of the European Union*, the *OECD - Education at a Glance*, *UN Conference of Trade and Development*.

CATEGORIES	MACRO DESIGN INDICATOR	DATA SOURCE
Investment	Public Expenditure on Design Support (as a % of GDP)	International Design Scoreboard
	Public Expenditure on Design Promotion (as a % of GDP)	International Design Scoreboard
	Public Expenditure on Design Services (as a % of GDP)	Official Journal of the European Union (OJEU)
Supply	Design Courses at Graduate Level (as a % of all courses)	OECD - Education at a Glance
	Design Courses at Post Graduate Level (as a % of all courses)	OECD - Education at a Glance
	Design Graduates (per million population)	International Design Scoreboard
Sector	No. of Design Business (per million population)	International Design Scoreboard
	Turnover of design services sectos (as a % of GDP)	International Design Scoreboard
	Creative Services (Exports/ Imports) (as a % of total services trade)	UN Conference of Trade and Development (UNCTAD)

Table 1 Macro Design Indicators

MICRO DESIGN INDICATORS

In order to assess the effectiveness of initiatives on recipient enterprises, an approach based on ***company design capabilities*** is proposed. In particular, design capabilities are defined as the set of competencies required to perform design activities. These are recognised in three macro areas:

- ***Design Leadership*** (holistic view and understanding of how people give meaning to things) is encountered when ***design participates in the strategic choices of companies/organisations***, so that a design driven innovation strategy is the core activity carried out through a people-centred approach.

- ***Design Management*** (managing design processes and creativity) is the ability to ***manage design resources, in terms of human resources, design processes and creativity, and economic resources.***

- ***Design Execution*** (visualising/prototyping, applying new technologies) involves the presence of ***human***

resources with technical skills, design technologies and infrastructures, as well as investments in the NPD process.

There are a total of twelve micro design indicators subdivided in accordance with these three categories.
Furthermore, to measure data relating to company performance, in addition to general data relating to turnover and number of employees, 4 Output indicators have been developed. ***Design Output*** refers to the ***indicators measuring tangible results related to design*** following policy participation (such as number of patents or revenue derived from new design products launched on the market).

DESIGN LEADERSHIP	
L01	Number of new products launched during last year that integrate functional, emotional and social utilities / Total number of new products launched during last year
L02	Number of new products launched during last year based on the involvement of clients in co-creative practices / Total number of new products launched during last year
L03	There are clear connections between the design activities and the overall strategy
L04	Number of products launched during last year that exceeded sales expectations / Total number of new products launched during last year
DESIGN MANAGEMENT	
M01	Investments in training programs on design during last year / Total revenues during last year
M02	Number of employees involved in design activities during last year / Total number of employees during last year
M03	Design activities are managed through explicit processes
M04	Number of new products launched during last year based on the involvement of external design professionals / Total number of new products launched during last year
DESIGN EXECUTION	
E01	Number of new products launched during last year improving the customer experience and the user interface through new technologies / Total number of new products launched during last year
E02	Number of prototypes developed during the last year / Total number of new products launched during last year
E03	Investments in hardware and software technologies enabling design activities / Total revenues
E04	Visualization (e.g. storyboard) and/or materialization (e.g. prototypes) techniques play a crucial role in concept development
OUTPUTS	
O01	Revenues from new products launched during the last year enabling new user experience / Total revenues.
O02	Number of design or innovation awards received during the last year / Total number of new products launched during last year
O03	Number of industrial design rights and patents associated to design projects developed during the last year
O04	The design activities allowed to develop new products that would not have been developed otherwise

Table 2 Micro Design Indicators

WHO ARE THE MAIN USERS AND WHAT ARE THE BENEFITS FOR RECIPIENTS

The DeEP Tool is directed at ***policy makers***, ***companies*** and, indirectly, to the wider ***design driven innovation community.***

Through the tool, ***Policy Makers*** will be able to:

- Know - Accessing original and up-to-date data and information on European design innovation policies and on the results achieved. Through available macro and micro data, policy makers will be able to programme design policies in different contexts with greater awareness and effectiveness (e.g. ascertain which are the most effective types of policy with respect to a particular context by evaluating the results of similar policies);
- Monitor - By means of a complete system for the management and evaluation of design policies, initiatives and actions related to the same, using objective data reports regarding policies and their effectiveness, as well as through access to data while policies are active.
- Assess - Through opportunities to complete self assessments on policies and their results on recipient enterprises, as well as through access to macro data, in order to interpret qualitatively contexts in which policies are implemented. In addition, the evaluation of different policies can facilitate and/or justify the allocation of public funds or the strategic choices supporting national or regional design systems.

Companies will be able to:

- Know - Accessing European, national and regional design policy data and information through a single platform, in addition to entering into contact with the ecosystem and community actors supporting design driven innovation;
- Monitor - Managing participation in initiatives or programmes in a simplified manner, while being able to monitor their situations and view results drawn from collected micro data, both in relation to their own profiles and in relation to other companies involved in the policy;
- Assess - Check variations in business capabilities generated through participation in the policy by conducting qualitative self-assessments on the same, in order to understand how the use of design capabilities has changed within the company and the behaviour or experience of other companies in relation to participation in different design policies.

In addition, on a broader level, the ***design driven innovation community*** will be able to obtain information and access public Design Policy Landscape data and gather information on design innovation policy from the information sections.

HOW IS THE PROJECT CONNECTED TO THE CURRENT EUROPEAN STRATEGY FOR THE PROMOTION OF DESIGN DRIVEN INNOVATION?

In line with the main challenge of the European Commission, DeEP aims at promoting a shared vision in which, by 2020, design will become more systematically embedded in the European Innovation system, both at a public body and policy maker level, as well as at the level of enterprises.
Within this framework, DeEP is in line with the strategic directions promoted by the European Commission.
In particular, the DeEP Evaluation Tool responds at various levels to the objectives proposed by the ***Action Plan for Design Driven Innovation.***

Promoting understanding of design's impact on innovation
The DeEP Tool - if envisaged as a European platform to manage and evaluate design policies in Europe - becomes a useful tool for policy makers to understand the

effectiveness of design policies in member countries.
The systematic collection of experiences and data relating both to the various ecosystems and to the results obtained by enterprises, facilitates the growth of awareness of how design can influence innovation processes.
In addition, the sharing of information regarding design policy developments in Europe enables policy makers to orient their decisions, promoting effective planning of future programmes.

Advocating design's role in innovation to policy makers across Europe

DeEP targets public bodies (Policy makers, Governmental Institutions, Business Support Organisations, Employers' Federations, Public Business Support organisations, Design Promotion Bodies) which are mainly interested in evaluating the effectiveness of design innovation policies, as beneficiaries of the project.
The Tool will develop a design policy knowledge repository, in order to disseminate an updated Design Policy Landscape in Europe. All governmental levels in each Member State should be aware of the benefits and value of design by having access to a constantly updated system of information and data.

Facilitating continuous dialogue among the key stakeholders of design-driven innovation policy

The Tool will promote an approach that will enable dialogue and share evidences between enterprises and policy makers, in order to promote recognition of the effectiveness of design policies. Currently, defending the importance and value of design and
design policies is extremely difficult for policy makers and governmental bodies across Europe. One of the main reasons for this is the lack of data directly connected to design innovation and the effectiveness of design policies.
To promote the development of such a knowledge base, the Tool has been designed to provide useful information concerning macro-level indicators, the assessment of micro-level initiatives, as well as the collection of cases and documents facilitating an understand of how design is employed to create new economic or social value.

Promoting design-driven innovation in industries, capacity to deliver support for design-driven innovation for businesses throughout Europe, and enhancing cooperation among companies that invest in design as a competitive asset

Companies are one of DeEP's main targets. Using the Tool companies will be able on the one hand to access constantly accessible information and data, and on the other hand to evaluate the results of their participation in design policies through
self-assessment relating to the change of design capabilities, by means of data collection employing micro design indicators. In addition, through identification of specific company profiles connoting the way in which design enters innovation processes (company outlines), companies can receive a qualitative
evaluation of the results obtained from participation in the design policies.
This allows for a greater awareness of the role of design within enterprises to be instilled and provides for comparison with other similar cases in Europe. Furthermore, access to ecosystem data enables policy makers and businesses from different European contexts to compare innovation models in similar contexts or to learn from leading regions in the promotion and support of design at a national level.

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The DeEP Tool in pills

WHAT EVALUATION STRATEGY DOES THE TOOL PROPOSE?

The DeEP Tool provides two different evaluation strategies:

- At the macro level: evaluation of national design ecosystems based on Macro indicators enabling country specific benchmarking and scenarios to be formulated;
- At the micro level: surveying of variations in design capabilities in enterprises participating in programmes and activities related to design innovation policies, enabling evaluation of the effectiveness of specific actions in the business context by measuring micro design indicators and qualitatively assessing business models related to the use of design described through a series of company outlines.

HOW ARE DIFFERENT TYPES OF POLICIES CONSIDERED?

The DeEP Evaluation Tool is designed to evaluate national contexts (ecosystems) and monitor and evaluate individual policy actions on businesses. While recognising different types of design policies (e.g. based on coaching activities or on direct funding to businesses), the indicators - especially at the micro level - currently do not take these differences into account. The focus of the evaluation concerns the ability of companies to absorb design capabilities, regardless of the type of design policy applied.
In the same way, conditions enabling the initiation and the promotion of design policies at the macro level may not necessarily be related to a specific type of policy. This issue currently remains outstanding and requires further development.

WHAT ARE THE MAIN RESULTS OF THE TOOL?

The main results of the DeEP Tool are attributable to two levels of macro and micro evaluation:

- At the macro level - the identification of dedicated design indicators enables a European design benchmark to be established in the various Member States, while the structuring of the Design Policy Landscape enables the sharing of information regarding design policy developments in Europe;
- At the micro level – identification of micro design indicators specific to design-driven-innovation, opportunity to collect structured data on the effectiveness of actions on individual companies, scope for companies to understand the use and diffusion of design capabilities within their organisations and to compare their profiles with other companies.

Furthermore, the Tool itself – if developed as a European platform for design policies and their evaluation – could highlight and recognise the richness, the differences and the potential of Design Driven Innovation for Europe.

WHAT ARE THE MAIN BENEFITS FOR POLICY MAKERS?

The DeEP Tool will enable Policy Makers to:

- Access benchmarks relating to national use and diffusion of design in various European countries;
- Know about design policies through the Design Policy Landscape and develop better design policies through comparison with other European experiences;
- Monitor programmes and initiatives at each stage of development (communication, collection of applications, selection of applications, monitoring, reporting) by accessing structured information deriving from micro design indicator data collection;
- Evaluate the results of initiatives and compare them with those of other policies.

WHAT ARE THE MAIN BENEFITS FOR THE EU DESIGN DRIVEN INNOVATION COMMUNITY?

The DeEP Tool was designed as an open and shared system, in which aggregate data is available to all stakeholders, in order to disseminate more effectively the value of design innovation policies. In addition policy makers promoting policies and relevant beneficiaries will have access to visual narratives on design capabilities. The design driven innovation community will be able to use the tool to obtain up-to-date information on European design innovation policies, tools and methods, instilling a new culture of design policy evaluation, as well as investigating results on the various types of policies in individual countries

HOW IS THE EFFECTIVENESS OF DESIGN POLICIES MEASURED NATIONALLY?

Data regarding Innovation Policy across Europe is fragmented and collecting specific design evidences is one of the important challenges to advance this field.
The DeEP Evaluation Tool describes 3 categories of Macro Design Indicators (Design Investment, Design Supply, Design Sector) that represent the areas where design-specific policy intervention has a direct effect on national design capability.
These are provided to build the basis for the beta version of the DeEP Evaluation Tool.
Macro Design Indicators are enablers that refer to the infrastructure and/or conditions in which design policy activities take place. They evaluate design innovation policy ecosystems through a narrative approach, using a combination of benchmarks and scenarios at national level.

WHY IS DATA ON COMPANIES COLLECTED USING THE PRINCIPLE OF DESIGN CAPABILITIES?

The DeEP research project has adopted variations in business design capabilities as the original principle for policy evaluation. The design capability model has been chosen as a measurement process to collect data on companies.
This includes understanding company performance, their design-driven approach to innovation, their design skills, and design investments.

HOW IS THE EFFECTIVENESS OF DESIGN POLICIES MEASURED AT THE LEVEL OF BENEFICIARIES?

The evaluation of design policies on beneficiaries is closely related to the transformation of their design capabilities. The 12 design indicators correspond to 3 categories of design capabilities (Design execution, Design management, Design Leadership).
These describe the way in which companies adopt design in innovation processes.
More in detail data collection is organised around a dual intake: prior to commencing the policy (Time 0), focusing on the initial status of companies, and at the end of the policy (Time 1), to understand if and how design capabilities have changed.
The effectiveness of initiatives on beneficiaries is measured evaluating the transformation of design capabilities.

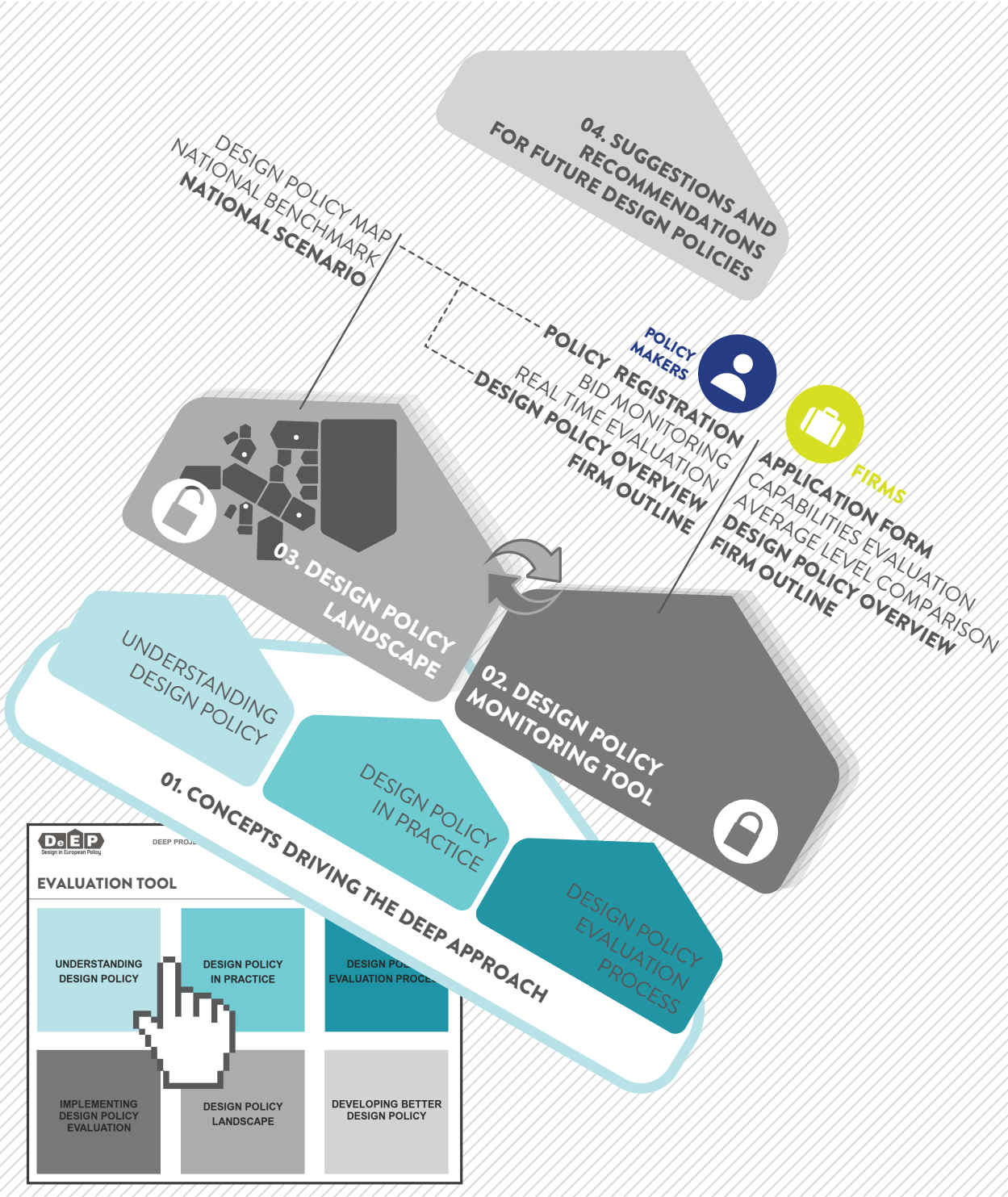
HOW ARE MACRO AND MICRO DESIGN INDICATORS INTEGRATED IN THE TOOL?

Macro design indicators outline a national framework of reference on the use and diffusion of design innovation. Micro indicators measure how design policy initiatives influence enterprises, and – summed up for all smaller actions in a geographical context – provide guidance for the national level.
In general, macro design indicators are conceived as enablers capturing the main drivers of innovation for the national design ecosystem, while micro design indicators can be regarded as the Activities capturing innovation efforts undertaken by companies. As a result, national/regional awareness of the value of design as an enabler of innovation, as well as company outputs and outcomes, will increase.

Structure of the DeEP Tool

The DeEP Evaluation Tool is structured into four main areas:

1. ***The description of the concepts driving the DeEP approach***
2. ***The description of the enabling conditions for design policies in Europe (Macro level)***
3. ***The observation of the effect of design policies on firms (Micro level)***
4. ***The suggestion of recommendations for future design policies.***



1 DESCRIPTION OF THE CONCEPTS DRIVING THE DEEP APPROACH

Understanding Design Policy

This section presents the definition of design adopted in the research (design as a set of capabilities that enable people-centred innovation), as well as the definition of design policy, in order to describe the Tool's field of interest and to promote a design policy culture. Furthermore, it pinpoints the main target users, namely policy makers, firms, evaluators and implementers.

Design Policy in Practice

This section describes the Policy Cycle, clarifying the main phases of design policy development. In particular, the main design policy development phases are described to further highlight their relation with each evaluation step.

Design Policy Evaluation Process

This section provides an explaination of the evaluation process described by DeEP in order to frame the Tool functions. In particular, the ex ante monitoring and ex post stages are described and connected to the use of micro and macro design indicators in the Tool.

Examples of Section 2 in the DeEP Tool

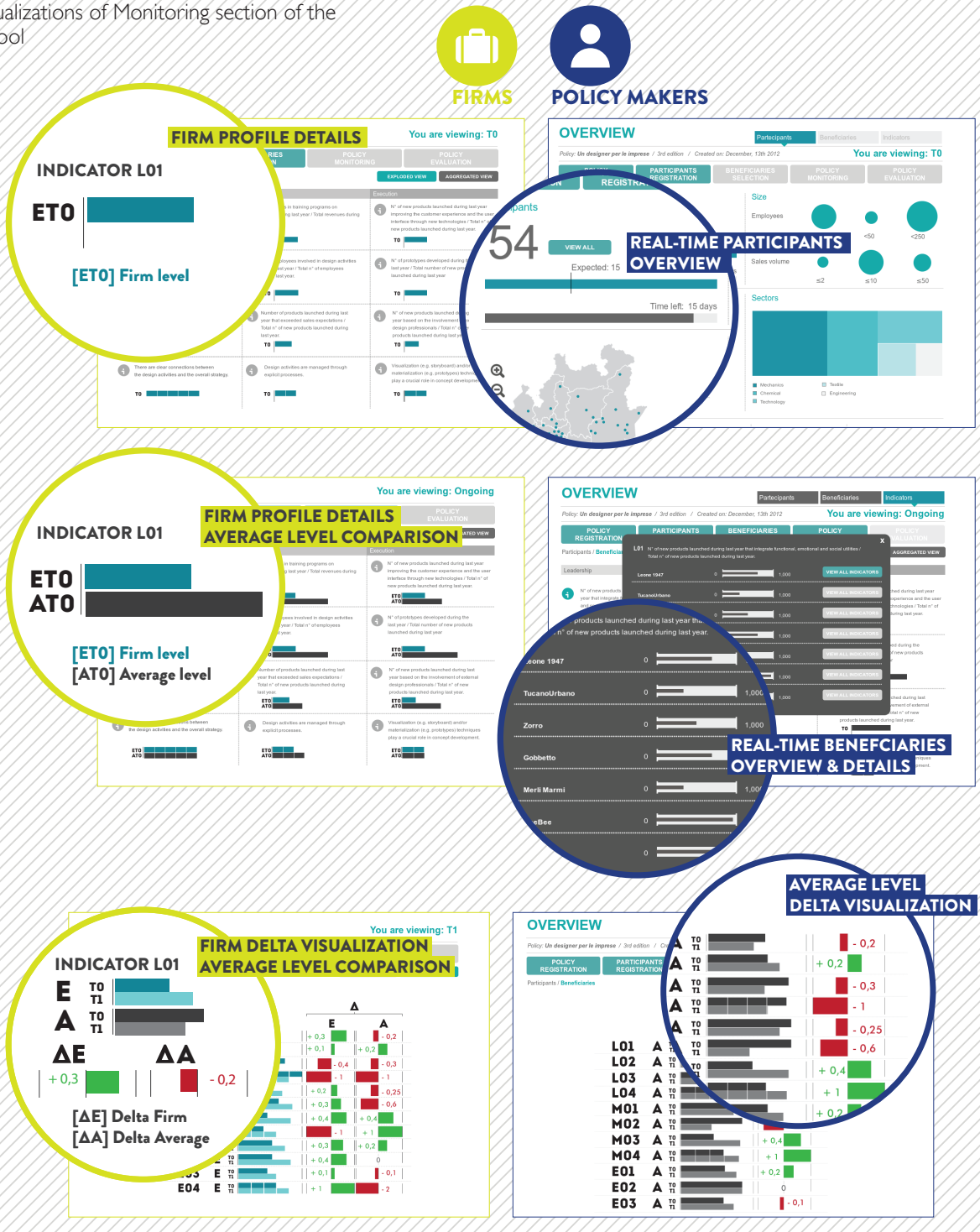
2 OBSERVATION OF THE EFFECT OF DESIGN POLICIES ON ENTERPRISES [MICRO LEVEL]

Implementing Design Policy Evaluation

This section collects data on the basis of design micro indicators clustered into three design capabilities (leadership, management and execution). This section is dedicated to managing and evaluating the effectiveness of design policies on beneficiaries.
This is the only part of the Tool that has restricted access. It is dedicated to policy makers and enterprises. The former can register, monitor and evaluate a policy, while the latter can register and apply to the policy, access their private profile and evaluate it using the micro indicators.
This data can also be compared with the other applicants.

The Tool is designed for dual collection of data to enable comparison between the enterprise's profile both before and after participation. For this purpose, data is initially collected during the registration/application phase - called Time 0 (T0) in the Tool.
Subsequently, at the end of the policy (final reporting), the enterprise is then required to input the same data.
This phase , is called Time 1 (T1) in the Tool.
This dual survey allows solid data to be collected to calculate (quantitatively and qualitatively) the transformation in the stock of capabilities as a result of participation in the policy.
This calculation defines the effectiveness of the policy itself, in line with the DeEP principle of evaluation.
Moreover, the Tool manages and visualises micro indicator data through info-graphics, in order to facilitate reading of the evaluation obtained. Each policy is registered in the central database to increase the Tool's breadth.

Key visualizations of Monitoring section of the DeEP Tool



3 DESCRIPTION OF ENABLING CONDITIONS FOR DESIGN POLICIES IN EUROPE [MACRO LEVEL]

Design Policy Landscape

This section connects design policies to national systems by collecting data on past and present design policies and initiatives in Europe. These are visualised on browsable maps. Macro design indicators are the engine for the collection of data at a macro level. The indicators are organised into three categories (Design Investment, Design Supply, Design Sector). These indicators are extracted from existing baselines of data obtained from the main available sources with a good level of breadth and depth.
n particular, the Landscape visualises data through two main outputs:

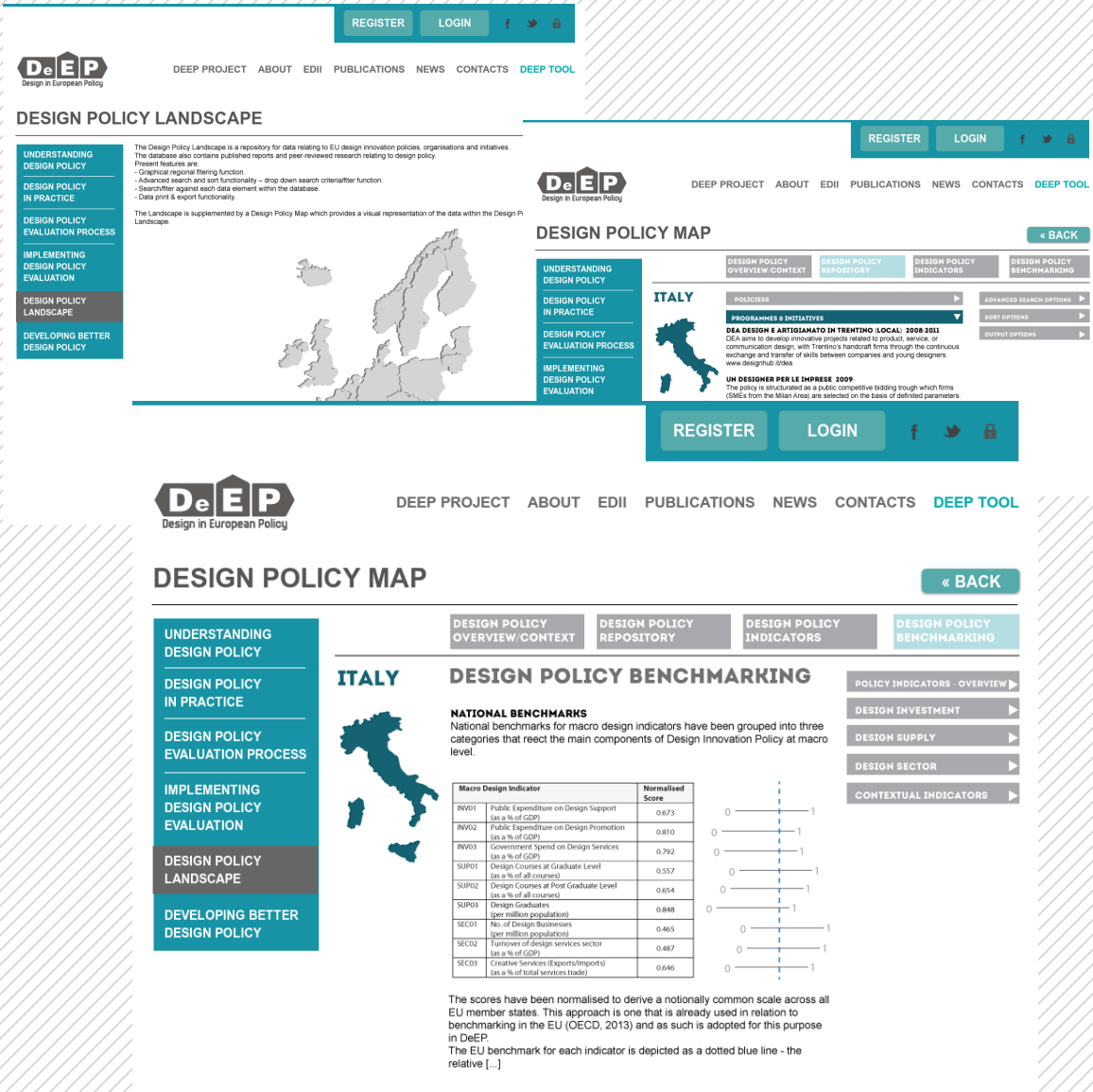
- ***Design Policy Map:*** a visual and interactive repository of data on EU design innovation policies, organisations and initiatives.
- ***National Benchmark:*** the possibility to compare national design performances across Europe and against a given EU benchmark;

4 SUGGESTIONS FOR RECOMMENDATIONS FOR FUTURE DESIGN POLICIES.

Developing better Design Policy

This part of the Tool aims at proposing a future perspective on the connection between design policy evaluation and making.
The objective is to promote an evaluation culture that expands beyond the "end of the pipe", to become an engine and generator of virtuous cycles for policy making, implementation, actuation and refinement at different institutional levels.

Moreover, it encompasses a selection recommendations for policy makers who are involved in promoting design innovation across Europe.



Examples of the Design Policy Landscape section in the DeEP Tool

The DeEP Tool design process

The Tool was designed following a process divided into various phases:

1. Definition of Micro and Macro Design Indicators
2. Evaluation of Design Indicators on field
3. Tool Architecture and Structure Design
4. Wireframe Tool Design
5. Wireframe On-Line Test
6. Wireframe refinement and future developments

1. DEFINITION OF MICRO AND MACRO DESIGN INDICATORS

Macro and micro design indicators were defined in three steps:

- Research and analysis of existing sources and database;
- Definition of an initial list of design indicators;
- Selection of the final list of design indicators.

Research and analysis of existing sources and database
The research focused on:

- reviewing existing literature on innovation indicators;
- checking existing innovation indicators at European, National and Regional levels (e.g. Eurostats, Innostats etc.) for their connection to design.

Definition of an initial list of design indicators
During the first phase of research, a long list of innovation indicators directly and indirectly related to design was identified.
More than 140 indicators were identified for the macro level, including measures for macro-economic evaluation of national innovation systems.
In parallel, an initial set of over 200 potential indicators related to design capabilities were developed for the micro level.
Both sets were identified for representing the various aspects of design innovation within businesses, including skills, management and strategic aspects.

Selection of the final list of design indicators
In a second stage, the final two sets of design indicators were selected during a series of workshops.
These have been defined as ***Core indicators***, that is, a limited set of indicators exclusively attributable to design innovation and adaptable to different contexts and policies to enable comparison at a later date.
The decision was therefore taken to establish two sets of indicators to facilitate the collection of useful data for a wide number of design policies and companies during the initial phase of development of the DeEP Evaluation Tool.

2. EVALUATION OF DESIGN INDICATORS ON-FIELD

In order to evaluate the comprehensibility and efficacy of the selected indicators with potential users directly, a testing phase was carried out involving face-to-face interviews with Policy Makers and Companies.

18 meetings with Policy Makers and 16 meetings with companies from four EU countries (Italy, UK, Sweden, Poland) were held. This process also aimed at validating the framework and the contents of the evaluation system developed in the research.

In order to collect comparable data from diverse national contexts, the process was supported by ad-hoc instruments, which have guided feedback gathering especially on the indicators.
Cards were developed and used to understand the interviewee's point of view on comprehensibility, the availability of data and the specific interests in each indicator.

01
MICRO AND MACRO INDICATORS
DEFINITION

02
INDICATORS TEST ON-FIELD
16 Firms
18 Policy Makers
4 Nation

03
TOOL ARCHITECTURE AND STRUCTURE
DESIGN

04
WIREFRAME
TOOL DESIGN

05
WIREFRAME ON-LINE TEST
8 Firms
12 Policy Makers
4 Nation

06
WIREFRAME
REFINEMENT

Cupris
Ikawa
Kwickscreen
Orbel
Studio Makgill

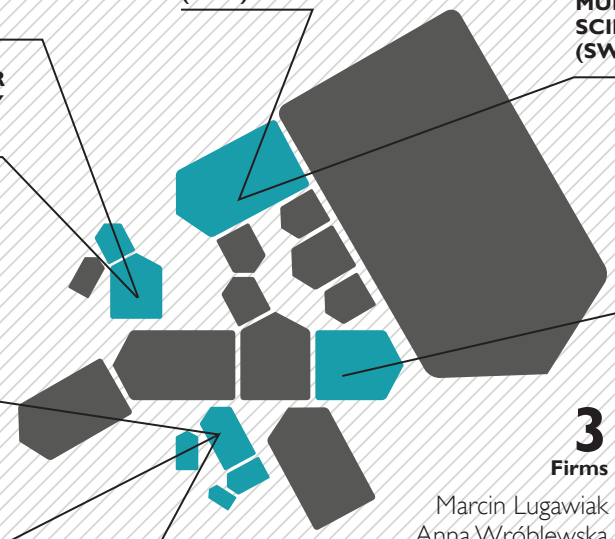
5
Firms

4
Policy Maker

Crawford
BIS
Ailbhe Mcnabola
Design Council
Jocelyn Bailey
Policy Connect
Jamie Jackie Walker
The Design Programme

3 **Firms** | **1** **Policy Maker**

Carin Torstensson
Interactive Institute Swedish ICT
Erik Asph Hennerdal
Erik Asph Hennerdal
Jonas Jähkel
Permobil
Inger Åckander
Almi Företagspartner Stockholm-Sörmland AB



3 **Firms** | **8** **Policy Makers**

Marcin Lugawiak
Anna Wróblewska
Joanna Sosnowska
Katarzyna Wicher Lambryczak
Wielkopolska Dep. of Innovation
Agata Zemska
Justyna Lasak
Anna Kucuk
Aleksandra Czapla-Oslislo
Joanna Dejka
Silesian Province
Katarzyna Faruga
Wroclaw City Hall
Agnieszka Ospipiuk
Poznan City Hall

5 **Firms** | **5** **Policy Makers**

Roberta Redaelli
Roberta Readelli Fashion
Roberto Galbiati
Galbiati Natale e figli
Lorenzo Frigerio
Tessile srl
Debora Guolo
Dexco di Debora Guolo
Filippo Berto
Berto Salotti
Giovanni D'Addario
Maristella Turi
Regione Lombardia
Renato Montalbetti
Unioncamere Lombardia
Enzo Colombo
Mediocredito Italiano
Roberto Calugi
Milan Chamber of commerce

TOTAL
16 **Firms** | **18** **Policy Makers**

Map of interviewees involved in testing design indicators

3. TOOL ARCHITECTURE AND STRUCTURE DESIGN

The choice of a Web Tool – rather than a paper one – is mainly due to easier data collection. The amount of data required for effective and relevant policy evaluation is fairly large, giving rise to difficulties in handling data on a paper medium. On the other hand, target groups can benefit directly from a web tool: direct access can be granted to all available data; data can also be interpreted for further personal needs; it is easier to diffuse, update and maintain virtual systems. Indeed, the web tool guarantees

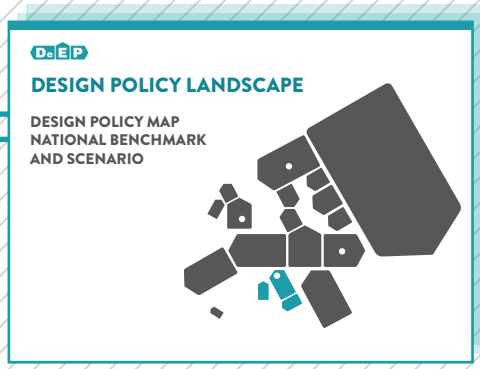
- Certainty in data collection in line with the current models of participation in EU policies, based on online submission and reporting mechanisms;
- Significant reduction in the cost of data collection, since data is entered directly by participants and beneficiaries;
- Easier evaluation and comparison of collected data;
- Easier ways to communicate and visualise data;
- Broader dissemination of the research, the tool and its results.

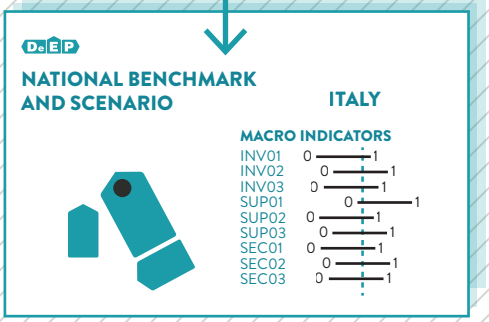
In line with the principles of ease of use, interaction, and access for users, all the other elements of the DeEP Tool have also been designed.

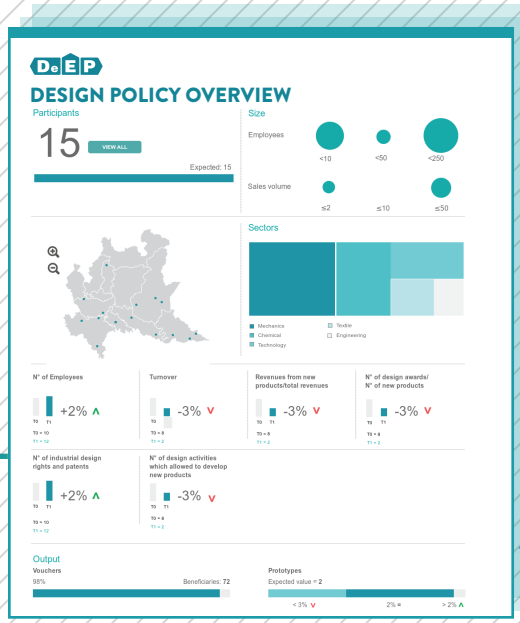
DeEP
Design in European Policy

DESIGN POLICY EVALUATION TOOL

A WEB PLATFORM FOR POLICY MAKERS, ENTERPRISES, AND OTHER STAKEHOLDERS INVOLVED / INTERESTED IN DESIGN INNOVATION POLICIES TO EVALUATE THE EFFECTIVENESS OF THESE POLICIES.







MACRO LEVEL
DESIGN POLICY LANDSCAPE

CONCEPTS DRIVING THE DEEP APPROACH

UNDERSTANDING DESIGN POLICY

DEFINITION OF DESIGN ADOPTED
DEFINITION OF DESIGN POLICY

DESIGN POLICY IN PRACTICE

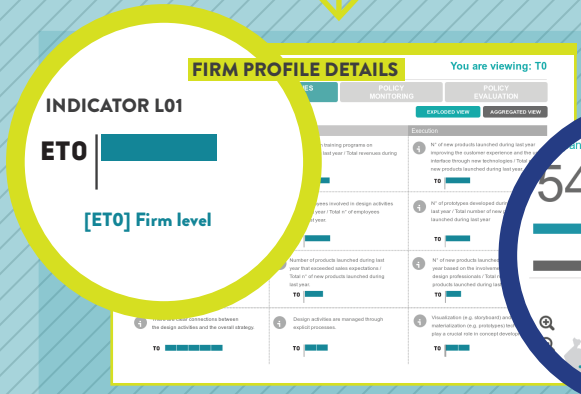
DESIGN POLICY
CYCLE

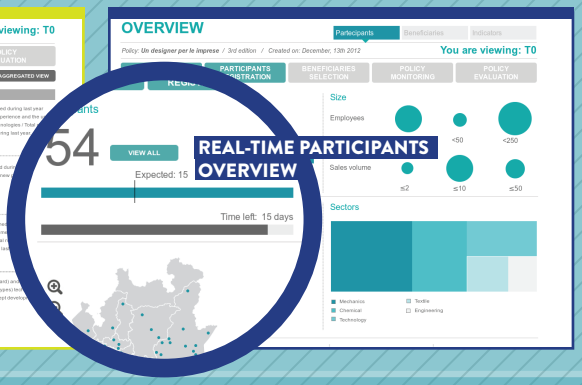
DESIGN POLICY EVALUATION PROCESS

EX ANTE, MONITORING, AND EX POST
MICRO AND MACRO DESIGN INDICATORS

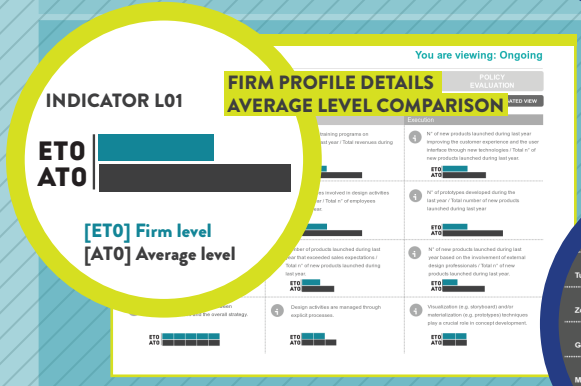
DEVELOPPING BETTER DESIGN POLICIES

RECOMMENDATIONS
FOR FUTURE DESIGN POLICIES





T0 BEFORE THE POLICY STARTS

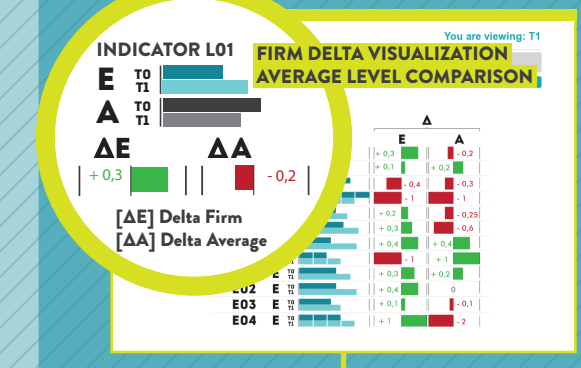


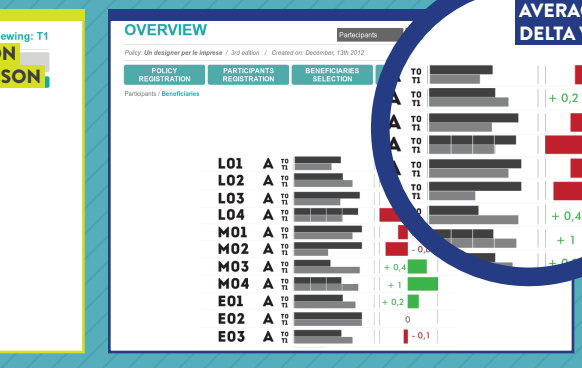
ON-GOING DURING THE POLICY

POLICY MAKERS

FIRM APPLICATION FORM

1. MICRO INDICATORS T1





T1 AFTER THE POLICY ENDS

FIRMS

FIRM OUTLINE

MICRO LEVEL
DESIGN POLICY MONITORING TOOL

04. WIREFRAME TOOL DESIGN

Upon defining the conceptual structure and engine of the Tool, the technical structure of the instrument, its contents and possible ways of using it, as well as interaction with policy makers and companies, was designed.
To continue applying a process of direct engagement of end users, a DeEP Tool wireframe was created, as a framework of its functions, contents and navigation processes.

> *"A wireframe is a basic outline of an individual page, drawn to indicate the elememnts of a page, their relationships, and their relative importance." (Wodtke, Govella, 2009)**

The schematic presentation of content, in addition to simulation of interaction, interface and display of potential results, has facilitated understanding of the system's strengths and weaknesses in terms of use.

05. WIREFRAME ONLINE TEST

Users can browse the architecture of content, and policy makers and enterprises can still participate in the test. Interviews and available macro data have been used to simulate the data collection process. In particular, data is displayed coming from interviews conducted as part of the Italian design policy "***Un designer per le Imprese***" (a designer for businesses). This navigable Mock-Up of the Tool was further tested by a selected sample of users from the various countries involved, specifically, a total of 8 companies and 12 policy makers.
The Tool wireframe online test is available at
www.deepinitiative.eu/test.

6 WIREFRAME REFINEMENT AND FUTURE DEVELOPMENTS

The main improvements made to the tool wireframe after the field test have aimed to incorporate the feedback received. In particular, further refinement of the narrative and storytelling of the tool has been regarded as crucial. As far as possible at this pilot stage, the Tool has been improved to adopt a language directed to a community of non-experts in design policy evaluation. In addition, content was also added to support policy makers for the design of future initiatives (recommendations).
At a later stage of development, further changes could be envisaged on technical aspects, including improvements in the collection and comparison of data from diverse types of companies (e.g. different sector, size, etc.), and in the display and comparison of evaluation for different types of design policies (e.g. subsidies, coaching, etc.) and final data display through info-graphics.
The Tool wireframe is currently visible online at
www.deepinitiative.eu/tool.

RESULTS FROM WIREFRAME ON LINE TEST

On the basis of the feedback received during the interviews, it is possible to state that structure, organisation of content and content of ***the Tool is generally appreciated***.

In relation to the ***macro part***, the importance of the ***Design Policy Landscape***, the opportunity to access European design policy information, and the comparison of the design initiatives undertaken in different contexts in particular were highlighted as relevant.
Notwithstanding, there were still some concerns regarding the retrieval of macro data from various countries.
In addition, the ***Design Policy Map***, presented as a single repository for European design policies, constitutes a highly attractive and distinctive element of the Tool, both as a basis of examples for planning new policies and for the retrieval of programmes and initiatives of interest to businesses.

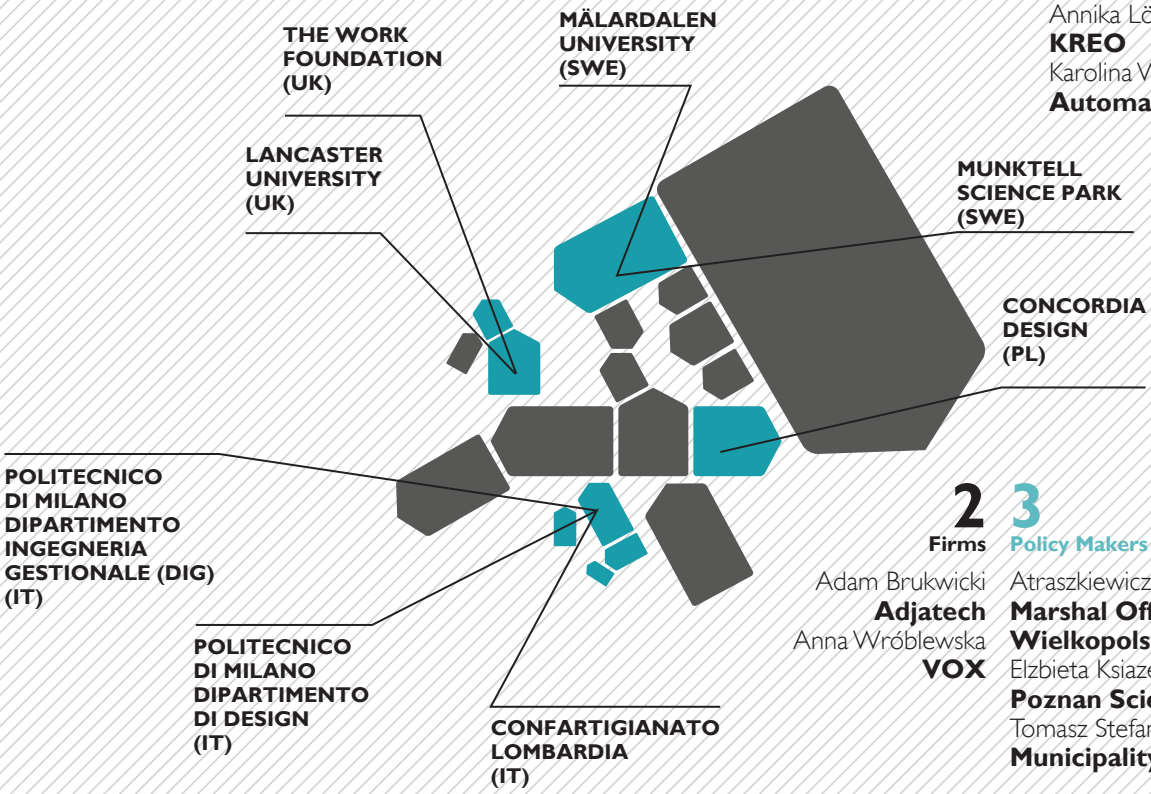
On the ***micro side***, positive reactions were observed in relation to the possibility to ***monitor data on individual design initiatives and to the sharing of evaluation results through a single platform***.
An interesting element is that all respondents were in favour of sharing evaluation outcomes on the effectiveness of initiatives on businesses. This outlines a potential of the Tool in terms of planning and managing policies openly and transparently.
Further, ***policy makers have shown an interest in the hypothesis of adopting the tool not only for policy evaluation, but also for managing all processes*** relating to the publication of calls for bids, constant relations with companies, information support and so on.
From the point of view of ***companies, the opportunity to access and compare data on other companies participating in the same policy is also interesting***.

From a broader prospect, and with a view to creating a European platform of reference, ***the Tool has been even perceived as a potential European Forum for Design Policy Making and Evaluating***.

* C. Wodtke, A. Govella, (,2009) Information Architecture: Blueprints for the Web, New Riderers

2 Firms **4** Policy Maker

Carin Torstensson
Interactive Institute Swedish ICT
Mikael Joki
Eskilstuna Elektronik Partner AB
Inger Åckander
Almi Företagspartner Stockholm-Sörmland AB
Anderman Eva-Karin
SVID
Annika Löfgren
KREO
Karolina Winbo
Automation Region



2 Firms **3** Policy Makers

Adam Brukwicki
Adjatech
Anna Wróblewska
VOX
Atraszkiewicz Karolina
Marshal Office of the Wielkopolska Region
Elzbieta Ksiazek
Poznan Science and Technology
Tomasz Stefanicki
Municipality of Wroclaw

4 Firms **5** Policy Makers

Roberta Redaelli
Roberta Readelli Fashion
Roberto Galbiati
Galbiati Natale e figli
Lorenzo Frigerio
Tessile srl
Debora Guolo
Dexco di Debora Guolo
Giovanni D'Addario
Maristella Turi
Regione Lombardia
Renato Montalbetti
Unioncamere Lombardia
Enrico Bindolini
Confartigianato Imprese Lomellina
Roberto Calugi
Milan Chamber of Commerce

TOTAL
8 Firms **12** Policy Makers

Map of interviewees involved in testing the online wireframe of the DeEP Tool

DeEP Design in European Policy

PROFILE LOGOUT

« BACK

POLICY MONITORING EVALUATION

OVERVIEW

Partecipants | Beneficiaries | Indicators

Policy: ***Un designer per le imprese*** */ 3rd edition / Created on: December, 13th 2012*

You are viewing: the policy card

POLICY REGISTRATION | PARTICIPANTS REGISTRATION | BENEFICIARIES SELECTION | POLICY MONITORING | POLICY EVALUATION

Participants

15 VIEW ALL

Expected: 15

Size

Employees: <10, <50, <250

Sales volume: ≤2, ≤10, ≤50

1

2

Sectors

Mechanics
Chemical
Technology
Textile
Engineering

3

N° of Employees

T0 T1 +2% ∧

T0 = 10
T1 = 12

Turnover

T0 T1 -3% ∨

T0 = 8
T1 = 2

4

Revenues from new products/total revenues

T0 T1 -3% ∨

T0 = 8
T1 = 2

N° of design awards/ N° of new products

T0 T1 -3% ∨

T0 = 8
T1 = 2

5

N° of industrial design rights and patents

T0 T1 +2% ∧

T0 = 10
T1 = 12

N° of design activities which allowed to develop new products

T0 T1 -3% ∨

T0 = 8
T1 = 2

INFO GRAPHIC POLICY OVERVIEW

1. ENTERPRISE SIZE
2. MAP OF BENEFICIARIES
3. SECTORS TREE MAP
4. ECONOMIC DATA VARIATION
5. DESIGN OUTPUT VARIATION
6. POLICY OUTPUT

Output

Vouchers

98% Beneficiaries: **72**

6

Prototypes

Expected value = **2**

< 3% ∨ 2% = > 2% ∧

Limitations of results

The DeEP Evaluation Tool is part of an on-going process aimed at promoting an evaluation culture across Europe for design policies. It currently represents the interim results of a much broader path of development, which will undoubtedly take more than two years to develop fully.
Many challenges still exist to its full development and adoption, in part linked to politics and governmental decisions, and in part constituting technical constraints requiring top level decisions to be implemented.

Among the limits found in this version of the Tool, we have highlighted those which deserve to be explored as conceptual challenges for future actions, without limiting discussions to technical issues.

a. Adoption of the Tool by the widest pool of European countries/policy systems to enable the collection of as many new design policies as possible and to make the tool the central European platform for design policy evaluation.

b. Lack of existing national data directly linked to design innovation and of historical data sets to enable– at present – proper simulation of the tool's workings. At present, the Tool fails to provide guidance on policies that have already been implemented, since ex post data regarding changes in design capabilities cannot be obtained. Because of this lack of evidences, the Tool proposes an evaluation method appropriate for future design policies where data can be collected since the beginning. This implies political support as well as widespread adoption by as many public administrations as possible.

c. Current need for further testing with policy makers coming from as many European policy systems as possible, in order to refine the platform and accommodate as wide a variety of countries as possible. Further testing would contribute to verifying:

- The data collection mechanism;
- The validity of macro and micro design indicators;
- The statistical relevance of data collected;
- The qualitative evaluations produced, and in particular National Scenarios and Firm Outlines.

Moreover, further development is required to incorporate diverse types of policies and business sectors, as well as to implement more targeted sets of design indicators in accordance with the context in which policies are delivered.

d. Need for expert qualitative interpretations of the data collected, in order to produce forward looking evaluations and to regenerate policy recommendations on a regular basis, as well as to justify policy makers investments.

DIFFERENT SCENARIOS OF FUTURE DEVELOPMENT

Hypothesis for further developments can include:

The evolution into an official European Platform for design policy making, monitoring, and evaluating connected to a wider and networked political strategy to promote and foster investment in design. The DeEP Tool could be at the disposal of the European Union to implement, manage and evaluate design policies, and create an original, extensive and open database. Further, this could facilitate dialogue and debate on design policies by raising awareness of the value of design innovation in Europe.

The identification of the most relevant areas in Europe for Design Innovation (Design Leaders), in connection to those countries who have best allocated their budget for design;

The diffusion and adaptation of the DeEP Evaluation Tool to extra-European systems for a larger and richer comparison. This could also be designed as an evolution into an open tool, available to wider design community. Governments national/regional and Europe could adopt this system to share and develop awareness around the importance/efficacy of investments.

On a smaller scale, the ***development and testing of the DeEP Tool can be envisaged in one or more countries which have adopted or which are about to promote design policies***, so as to constitute a case study enabling the validation of the model, followed by its diffusion in other country systems.

Repository.*

* This section is an exctract of the dedicated online repository.
For further documents/suggestions, please visit: www.designpolicy.eu

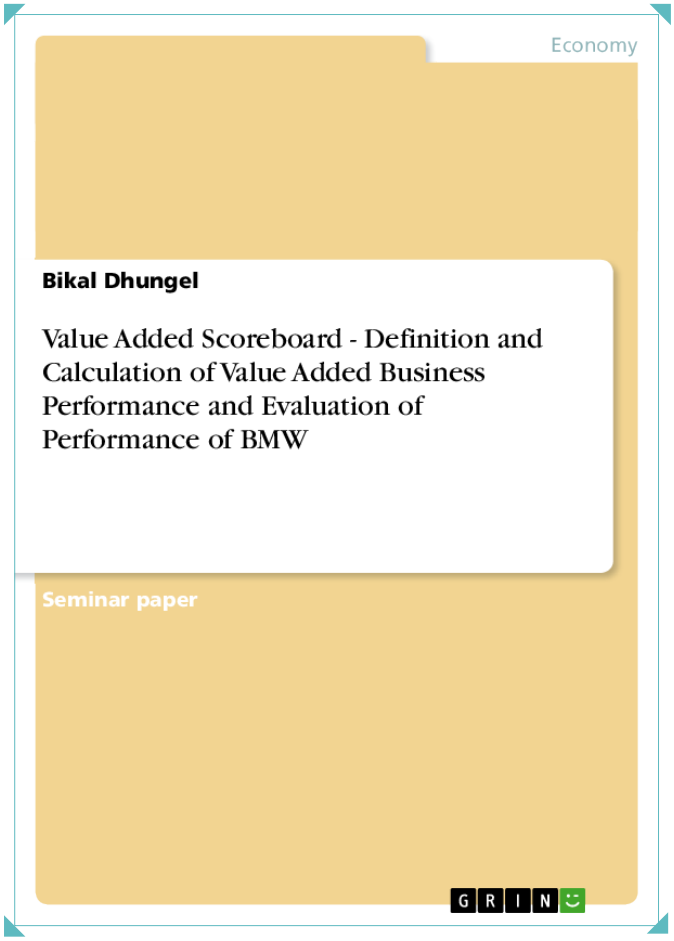
The Design Policy Monitor 2012

A report developed by the SEE project describing the results of a survey to describe design regional and national system. It uses thirty-four indicators divided into nine components (design users, design support, design promotion, design agents, the professional design sector, design education, design research and knowledge transfer, design funding and design policy).

EU R&D SCOREBOARD

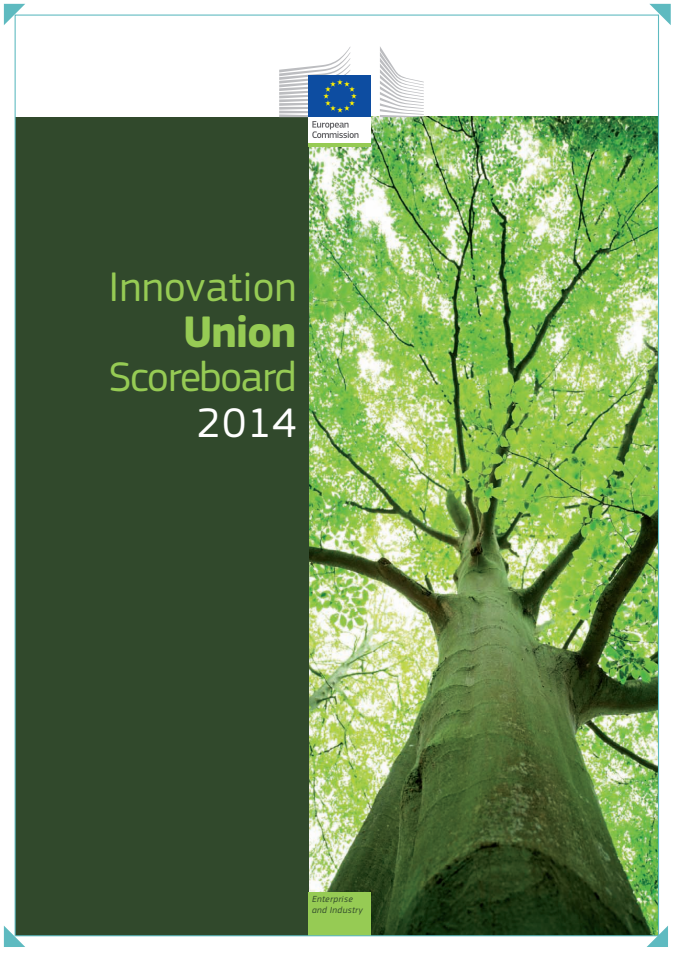
A yearly scoreboard that contains economic and financial data for the world's top 2000 companies ranked by their investments in research and development (R&D).

Value Added Scoreboard



A seventh annual report that contains details of the Value Added by the top 800 UK companies and the top 750 European companies. It measures the amount of wealth created by a company and provides a broader perspective on a company's economic contribution to indicate national performance.

The European Innovation Scoreboard



A yearly report that describe the state of the art of innovation in the different Member States. The survey is based on eight innovation dimensions and 25 indicators that analyse the performance of the different countries.
The measurement framework uses three main types of indicators and 8 innovation dimensions, describing in total 25 different indicators. Some data are drown from the Community Innovation Survey.

Partners

POLITECNICO DI MILANO (IT)

Politecnico di Milano is a scientific-technological university, which trains engineers, architects and industrial designers. The University has always focused on the quality and innovation of its teaching and research developing a fruitful relationship with business and productive world by means of experimental research and technological transfer. Within DeEP, Polimi is represented by the Department of Design, and the DIG Department (Management Engineering).

LANCASTER UNIVERSITY (UK)

Lancaster University is consistently placed with the top 10 academic institutions in the UK with strengths in interdisciplinary research and business engagement. Within DeEP this is represented by ImaginationLancaster, a design led research lab that investigates emerging issues, technologies and practices to advance knowledge and develop solutions that contribute to the common good

MÄLARDALEN UNIVERSITY (SWE)

Mälardalen University is one of the most important business schools in Sweden. The School of Innovation, Design and Engineering (IDT) is the main participant within DeEP, with a research profile in Innovation and Product Realisation (IPR) and with competencies in Design and Visualization; Innovation Management; and Product Realization.

CONFARTIGIANATO (IT)

Confartigianato Lombardy is the most representative trade union organization for Lombard crafts. Founded in 1972, it represents more than 100,000 firms and entrepreneurs in Italy belonging to 35 fields of activity. The institution promotes the growth of a business culture in SMEs and the full acknowledgement of their role in the economic growth of the Lombardy Region.

MUNKTELL SCIENCE PARK (SWE)

Munktell Science Park operates mainly within the southwest region of Stockholm, Sweden. It has a strong relationship with MDH of which it is a spinoff. The park is an innovation arena with about 90 tenant companies and about 200 employees focusing on innovative SMEs and on business development assistance.

THE WORK FOUNDATION (UK)

The Work Foundation is part of Lancaster University, and is a leading provider of research-based analysis, knowledge exchange and policy advice in the UK and beyond. It conducts practical research on a range of economic, social and organisational issues, and focuses particularly on developing clear messages for policy advice. As an externally facing organisation, TWF interacts with a wide range of partners in business, as well as policy makers and media outlets.

CONCORDIA DESIGN (PL)

Concordia Design is a centre for innovation, design and creativity. It operates in the Polish market since 2007 and has implemented several projects involving design, while operating as a platform for cooperation between different creative fields. It also delivers training on innovation and creativity, design management, and personal development

DeEP
Design in European Policy

Design Policy Issues n°4

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