

Design for Growth & Prosperity

Report and
Recommendations of
the European Design
Leadership Board

EUROPEAN DESIGN
INNOVATION INITIATIVE



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Foreword

Never before has so clear an opportunity existed as now, for the European Commission, Member States and regions to take bold action to enable a new level of awareness about the importance of design as a driver of user-centred innovation across Europe. And this, in spite of the pressures of austerity and the complexity of the global challenges we face in Europe.

In addressing the challenge set us by Commission Vice President Tajani – to enhance design's long-term contribution to smart, sustainable and inclusive growth through increased competitiveness and the pursuit of a better quality of life for all the citizens of Europe – we have been inspired by our vision for design embedded, by 2020, in the innovation systems of Europe and making a difference in society.

Our response has been to create twenty-one enabling recommendations that will drive a step-change in innovation behaviour and practice across Europe. The opportunity is to set in place framework conditions and infrastructure, supported through targeted measures and actions, that will enable a far-reaching and long-lasting impact on Europe's design innovation capability.

We are grateful to Commission Vice President Tajani for setting us this crucial and timely task and to his staff at DG Enterprise and Industry for their continuous

support and insight throughout the process. We also present our thanks to the Secretariat, Aalto University in Helsinki, which has supported our work in the preparation of meetings, the provision of working papers and the writing of the drafts that capture our thinking and intent. Further thanks are due to the many individuals and organisations that have contributed knowledge, insight and expertise to our deliberations, including those who participated in the co-design workshop held in Brussels in March 2012.

We do not underestimate the scale of the challenges that Europe faces. Nor do we shy away from

the level of change that is required if our vision for design is to be met.

The recommendations have therefore been constructed in sufficiently broad terms to inspire a wide spectrum of stakeholders to take action. Strong leadership from the Commission will be necessary to ensure on-going progress in their implementation.

We urge the Commission, Member States and regions to take hold of the recommendations and to act upon them in support of a shared vision for design in Europe for the 21st century.

[The European Design Leadership Board](#)



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Executive Summary

The European Design Leadership Board was established in early 2011 by Commission Vice President Antonio Tajani, responsible for Enterprise and Industry. Vice President Tajani invited the Leadership Board to provide recommendations on how to enhance the role of design in innovation policy in Europe at

the national, regional or local level and to develop a joint vision, priorities and actions to enable design to become an integral part of innovation policy at the European level, in line with the Innovation Union.

Over the period of one year, the European Design Leadership Board held seven meetings and a co-design policy workshop

with over fifty key stakeholders from government, industry, academia, the design industries and the public sector¹.

Taking a broad-based view of design, the Leadership Board identified twenty-one policy recommendations, grouped according to six areas for strategic design action that can be summarised as follows:

// Number of recommendations

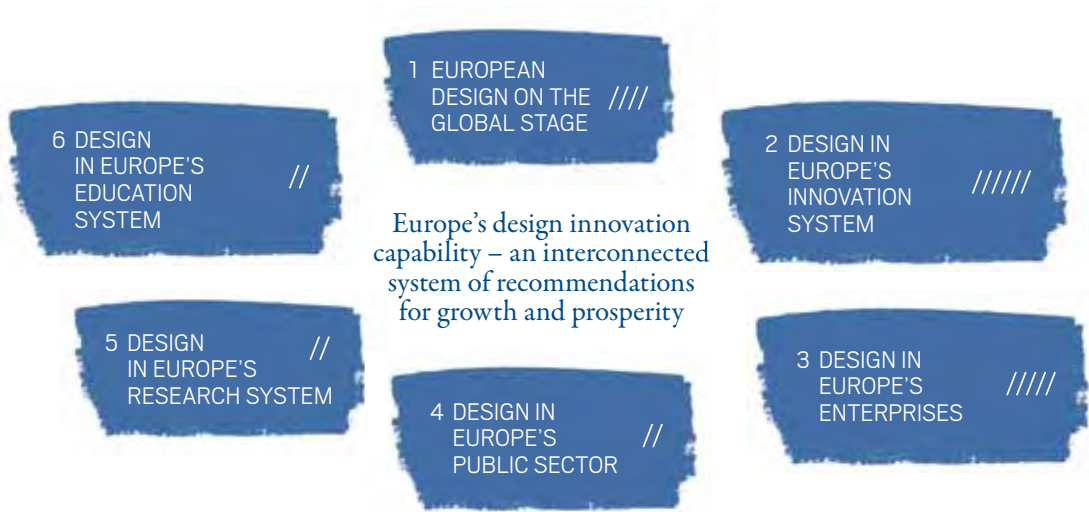


FIG 1 Six areas for strategic design action

¹ For a list of the co-design workshop participants, see Appendix 2

The twenty-one recommendations of the Leadership Board are positioned across the six areas for strategic design action as follows:

STRATEGIC DESIGN ACTION 1 Differentiating European design on the global stage

Based upon the unique characteristics and qualities of European products and services created within the culture, values and strengths of Europe, the recommendations call for the recognition of existing European centres of design excellence and the dissemination of good practice to wider industry to compete globally; the promotion of the benefits of sustainable design to European industry supported by more focused protection and enforcement of the Intellectual Property Rights of European design innovation and a greater international recognition of European design through the establishment of a European design label.

- 1 Identify and strengthen existing 'European centres of design excellence' in business and industry and provide means for those to collaborate in open networks that drive innovation into Europe's whole industrial ecosystem.
- 2 Promote the increased use of design in European industry to encourage synergies in support of economic

growth, environmental regeneration, and the raising of social and emotional value, whilst respecting the need for renewable and endogenous resources.

- 3 Work towards zero tolerance of infringement. This requires legislative revision, through the inclusion of a 'Duty of Care' for shared responsibilities on IPR protection across the digital value chain. Set up a specific EU Tribunal /Court for European IP cases and promote and increase the training of judges in national courts, in relation to the protection of Intellectual Property Rights in the physical world and online.
- 4 Create a 'Designed in the European Union' label in connection with the European ECOLABEL to stimulate the export of design services. The intention is to make the protection and enforcement of European design and innovation more effective and acces-

sible, whilst at the same time raising the bar on expectations and associating excellence with sustainability.

STRATEGIC DESIGN ACTION 2 Positioning design within the European innovation system

The recommendations focus on supporting more effective policy development for design through access to indicators and measures of design's impact on the economy, on return on investment (ROI) and on the environment, through gathering valid, comparable statistics on design as an economic activity within the existing EU statistical framework. Design is to be included in the programmes of the innovation and business



incubators across Europe making them more design aware. The opportunity to disseminate emerging design methodologies, such as Open Design, is supported. Design in innovative public procurement is addressed as a key strategic area and the role of design management is presented as a key management tool and process to improve the quality of design across Europe.

- 5 Continue to support and expand the work needed to develop more effective and reliable methods for measuring the impact of investment in design on growth and social well-being, at the micro and macro levels, and include these within European innovation statistics.
- 6 Enforce the implementation of the current NACE Code 74:10 for Specialised Design Activities by all Member States and ensure updating as necessary for benchmarking and comparative analysis across member states.
- 7 Include design within innovation and business incubators and their networks.
- 8 Create guidelines, codes of practice, legal frameworks and experimental spaces to promote the use of Open Design.
- 9 Develop a European policy that ensures a more sophisticated approach to the public procurement of innovative solutions through the recognition, inclusion and

implementation of design as a driver of user-centred innovation.

- 10 Improve access to design management expertise and tools for companies across Europe to support the uptake and integration of design and design management as a strategic tool for growth.

STRATEGIC DESIGN ACTION 3 **Design for innovative and competitive enterprises**

The recommendations focus on strengthening the design excellence that already exists within the large design-led companies of Europe; on maintaining Europe's design leadership where it is strong and on the on-going development of the next generation of Europe's design-aware top leaders. They address the opportunity to support medium-sized companies with ambitions to grow through design innovation into large, design-led companies and furthermore, they seek to harness the knowledge and expertise that resides in larger companies to the benefit of Europe's SMEs. The specific design innovation needs of SMEs are also considered, particularly with regard to the opportunities afforded by easier accessibility to the Programmes of Horizon 2020. The contribution of design innovation to job creation and its role in

the light of new forms of production, including the 'Future Factory' are addressed, as is the emergence of a next generation, 'Modern Craft' for Europe, whereby design needs to be more widely embedded in Europe's vocational education systems. The rapidly changing context for manufacturing and production is highlighted and the need for Europe to stay ahead of new and emergent processes and methodologies is emphasised as being critical to future success.

- 11 Establish a pan-European design leadership programme that ensures Europe's next generation of large companies have at their top, leaders who are design aware and more inclined to make better use of design.
- 12 Develop programmes that support European medium-sized companies with ambitions to grow into large design-led companies through design innovation.
- 13 Establish mechanisms whereby design knowledge and best-practice transfer can be more effectively enabled between large, design-led companies, academia and SMEs.
- 14 Strengthen design innovation in SMEs through taking into account the specific needs of SME's within EU programmes such as Horizon 2020 and improve their access to member state level programmes.
- 15 Recognise and value apprenticeships and vocational training for

generating world-class specialist and skilled crafts-people in traditional and emerging sectors with an increased awareness of design, as a driver of growth and job creation.

STRATEGIC DESIGN ACTION 4

Design for an innovative public sector

The recommendations call for the widespread development of more innovative public procurement through raising the awareness of design to policy-makers in the public sector, including the Commission. Providing more support in assisting the better integration of designers into public sector environments thereby enabling them to engage more closely in public-sector policy and service development, and through attracting support from Structural Funds for design innovation for social change. The development of guidelines, support materials and continuing professional and executive education in good practice relating to design in both procurement and policy is also recommended.

- 16 Increase the use of design/designers in public sector innovation:
- // Through establishing a Design Lab within the Commission to run small-scale demonstration projects showing the value of design-led

public sector innovation.

- // Through supporting designers' greater involvement in 'living labs' where social innovation and public services are critical challenges.

- // Through exploiting the potential of the European Structural Funds, in particular the European Regional Development Fund, on design innovation for social change across policy areas.

- 17 Build the capacity of public sector administrators to use design methods themselves and to procure design effectively:
- // Through design toolkits, case studies and designers in residence for EU institutions and Member States and regions.
 - // Through developing a design curriculum for public administrators' education and professional development, with attendant Master Classes in design for effective policy-making and procurement.

STRATEGIC DESIGN ACTION 5

Positioning design research for the 21st century

Design research is a vital strategic tool for the improvement of Europe's design innovation capacity. Recommendations are presented to embed design research and its methods and approaches more fully into the EU Research Programmes; to establish on-going evaluation of design's value within

Horizon 2020 and to create a European design research network serving the design innovation needs of business, industry, the public sector and society.

- 18 Embed design research in Europe's research system in order to create new knowledge that will enhance innovation whilst in parallel evaluating, on an on-going basis, the value of design in the Horizon 2020 programme:
- // Through including design researchers in cross-sectoral, multi-disciplinary research programmes addressing global challenges such as climate change, food security and health and well-being.
 - // Through funding the evaluation and communication of the value of design in the Horizon 2020 Programme.
- 19 Create a European network on design research at the European level to foster greater exchange amongst diverse actors and to encourage and enhance research that supports European design innovation capacity.

STRATEGIC DESIGN ACTION 6

Design competencies for the 21st century

The recommendations call for the development of Europe's competencies in design innovation as a key strategy for promoting growth and jobs. Within the context of continuous and life-long

Establish a permanent dialogue on design with the European Commission.



learning, they address the need for the inclusion of design learning in the general education of all the citizens of Europe, as well as within Vocational and Higher Education. Maintaining Europe's leadership position in the design sector is addressed through meeting the future competence needs of the design professions, as well as improving the design competence of the leaders and entrepreneurs of the future.

- 20 Raise the level of design literacy for all the citizens of Europe by fostering a culture of design learning for all at every level of the education system.
- 21 Encourage Member States to support the development of design competencies for the 21st century:
 - // Through embedding the strategic

role of design across disciplines in higher education

- // Through strengthening continuing professional development programmes for design professionals.
- // Through embedding design in the training of apprentices.

Ensuring success

In support of the implementation of the twenty-one recommendations, Chapter 4 sets out three separate proposals to ensure the success of embedding design in innovation in Europe. The proposals are specifically addressed to the European Commission.

- A Deliver a Europe-wide, high-level and appropriately targeted communication

and advocacy programme at European, Member State and design stakeholders levels in order to raise awareness of the policy recommendations and enable engagement with their implementation.

- B Establish a permanent dialogue on design with the European Commission, through an organisation like BEDA that provides Europe-wide coverage to provide a European-level focus for all matters relating to the development and growth of design in Europe's innovation policy.
- C Establish a mechanism to enable the continuous monitoring of progress at a strategic level, overseen by the Leadership Board, in the on-going implementation of the recommendations.

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Introduction: a broad understanding of design

The European Design Leadership Board was established in early 2011 by Commission Vice President Antonio Tajani, responsible for Enterprise and Industry. It comprises fifteen members drawn from a wide-ranging and representative cross-section of design, industry and academia as well as regional and national agencies promoting design and innovation. It is supported by a Secretariat based in Aalto University, Helsinki.

The Design Leadership Board's task, as defined by the Commission, was to provide policy recommendations on how to enhance the role of design in innovation policy in Europe – at national, regional or local level – and to develop a joint vision, priorities and actions to enable design to become an integral part of European innovation policy.

In March 2012, the Design Leadership Board took the unique step, (in the context of European policy-making), of bringing together end-users and other design stakeholders into a facilitated, one-day, co-design workshop in Brussels. The workshop enabled the introduction of expertise, insight and ideas from end-users into the deliberations of the European Design Leadership Board.

A broad understanding of design

From the outset, the Design Leadership Board has worked to a broad understanding of design.

In this report, design is perceived as an activity of people-centred innovation by which desirable and usable products and services are defined and delivered. Design has a role to play in business processes and metrics (such as value-adding or cost cutting). Design is considered as a sector in its own right of specialised, professional economic activity by trained and qualified practitioners and as a tool for business and organisational growth at the highest strategic level. In addition to its economic benefits, design also encompasses sustainable and responsible behaviour

contributing positively to an innovative society and improved quality of life.

Structure of the report

The report is structured into four chapters.

Chapter 1 establishes the context for design innovation in Europe. It identifies three key challenges for design in Europe as defined by the Design Leadership Board. These are:

- // HOW to develop the positioning of European design innovation on the global stage.
- // HOW to embed design in innovation processes across Europe for the benefit of society, enterprises and the public sector.
- // HOW to develop Europe's design competences and knowledge for the 21st century.

Chapter 2 sets out the vision and values underpinning the Design Leadership Board's work.

Chapter 3 introduces six strategic design actions within which the recommendations are placed. Within each strategic design action there is an outline context, associated priorities for action supported by case studies and a set of recommendations. The twenty-one recommendations form the main output of this report.

Chapter 4 presents three key proposals to the European Commission, outlining next steps to ensure the successful implementation of the recommendations.

Targeting design's impact

The European Commission has already begun to encourage opportunities to enhance and embed design in Europe's innovation behaviour and practice. Within the context of an expanded understanding of design, a number of key areas where design can have a significant impact have already been envisaged.

The recommendations of the European Design Leadership Board are therefore targeted at improving:

- // THE QUALITY of life of the citizens of Europe.
- // THE COMPETITIVENESS and growth of Europe's and its regions' economies.
- // THE QUALITY and efficiency of the public services.





1 Design-driven innovation as a response to the urgent need for growth and jobs in Europe



We are living in a time of unprecedented financial and economic crisis. In Europe, years of economic and social progress have been wiped out and structural weaknesses in Europe's economies have been exposed.

Today, the primary goal is to get Europe, 'back on track'² and Europe's response has been to focus on the critical role of innovation in delivering smarter, sustainable and inclusive growth.

Traditionally, the European innovation system has been based largely on technology-led development that has contributed profoundly to the growth and competitiveness of the European economy. Now, however, the emerging competitors of Europe are rapidly closing the technology gap and European growth can no longer depend on technology-led innovation, low production costs or the proximity of markets. Furthermore, the significant reduction of available funding drives the urgent need for innovative solutions based upon Europe's broader expertise³ at a time when some European nations are facing the highest recorded levels of general and youth unemployment for decades and the economic competition with the BRIC economies⁴ remains ever-present.

The complex economic and societal challenges faced by Europe call for new approaches and solutions. These must focus on ensuring a distinctive European design innovation capability that delivers attractive, desirable and sustainable products and services that can compete on the global stage. This new approach

must also be focused on public sector procurement of people-centred, design-led and innovative public services that stimulate, for users and providers alike, new expectations of quality of delivery.

Design as a driver of people-centred innovation

It is acknowledged that non-technological innovation, including design, (of products, processes and services), as well as culture-based creativity, are important tools for competitiveness and growth in order to improve the quality of life for the citizens of Europe⁵.

Design as a driver of user-centred innovation contributes to getting good ideas to market. It enhances agile and focused product and service development, strengthened and made more effective and desirable through good design management. It facilitates the development of better, transparent and more effective public services and contributes to social innovation, thereby raising the quality of life for all the citizens of Europe. And for complex societal problems, design offers people-centred approaches that can achieve better solutions. A number of European studies and reports written during the past three years have explored and communicated design's power to make a difference.⁶

2 Innovation Union 3 *"In time of crisis, we should reduce the cost but not the meaning"*, Roberto Verganti, "Design-Driven Innovation. Changing the Rules of Competition by Radically Innovating the Meaning of Things", Harvard Business Press, Boston, MA, 2009. 4 Brazil, Russia, India, China 5 'Conclusions on Creating an innovative Europe', 3016th Competitiveness Council meeting, Brussels, 26 May 2010 pp4 (II.5) 6 Commission Staff Working Document 'Design as a driver of user-centred innovation', 2009; INNOGRIPS MS05, 'Design as a tool for innovation', 2009

At the level of design practice, the role of design and the designer is also expanding. Traditionally, often associated only with product styling, designers now contribute at a number of different levels ranging from strategic business direction and design management to the conceptual design, design development and production of user-centred products and services for the private and public sectors. This extends onwards to user communications where, instead of the product or service driving the process, it is the users and the design process which lie at the heart of contemporary problem solving.

There is an urgent need for Europe to grow its design innovation capacity to develop and promote products and services that are distinctive, user-driven and sustainable. Construed in this way, design can be understood as a distinctive, competitive advantage of Europe, which is to be both protected and nurtured.

The Innovation Union – actions for design

The Commission is already paying attention to design, considering its leverage effect on innovation performance, in order to maintain the economic foundation that supports our quality of life and social model. Its flagship initiative,

Innovation Union, is committed to a wider definition of innovation within which design is recognised as an important driver of user-centred innovation, drawing upon the innovative and creative talents of Europe's small businesses and entrepreneurs that lie at the heart of Europe's strategy for growth.

In 2010, with the inclusion of design as a driver of innovation into the Innovation Union, the Commission set up the European Design Innovation Initiative. The European Design Leadership Board was set up in 2011 as an answer to the commitment taken in the Innovation Union⁷. The Commission also launched the first action plan for non-technological, user-centred innovation⁸ in order to raise awareness and stimulate policy-learning across

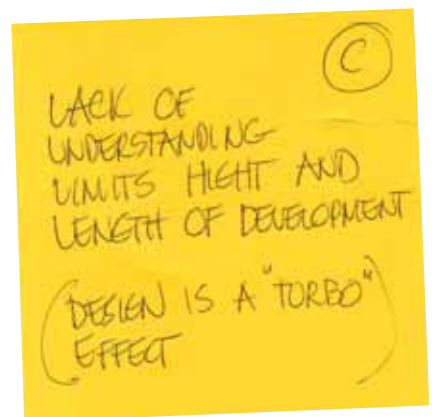
Europe to accelerate the uptake of design in innovation policies.

In parallel, the Commission launched actions aimed at growing the Creative Industries sector within which design is a significant player. The European Creative Industries Alliance was launched in December 2011.⁹

The Commission's initiatives engage a variety of actors within the European 'design landscape', which, as a future field for partnership, co-operation and programme delivery, offers potential in supporting and enabling the delivery of the recommendations of this report.

Europe's design landscape

Europe has an internationally recognised capability in design, if not a leadership position when compared



⁷ Innovation Union commitment number 19, Europe 2020 Flagship Initiative – Innovation Union – SEC(2010) 1161 ⁸ Four projects were awarded EU funding: 1/IdeALL – Integrating Design for All in Living Labs; 2/ €Design – Measuring Design Value 3/ DeEP – Design in European Policies; 4/ SEE Platform: Sharing Experience Europe –Policy Innovation Design ⁹ Creative Industries Alliance. See: <https://www.howtogrow.eu/ecia/>





to competitor countries¹⁰. It is estimated that there are approximately 410,000 professionally-trained designers practicing in Europe generating an annual turnover of €36 billion¹¹.

The majority of design consulting companies in Europe are themselves micro-companies or SMEs¹². There is a large body of trained European designers working in-house principally in medium and large companies. European designers are leaders in their field often also working for both European and non-European global brands.

The interests of qualified, professional designers are represented through national-level professional associations in Member States. Traditionally, these organisations

have been discipline specific in their membership segregating, for example, graphic design services from industrial design. However, in response to changing market conditions and needs, they are increasingly becoming multi-disciplinary. Trade associations, representing design businesses rather than individual designers, are also present in a number of Member States. Broadly speaking, Europe's trained, professional designers operate either within the design-services consulting sector as independent, external consultants, or 'in-house' in medium and large companies that have a dedicated design function.

In addition to the professional and trade associations for design

across Europe, most Member States support national and/or regional design promotion organisations that are funded through Ministries of Economy and / or Culture. They represent the visible face of design promotion at national and regional level. Their activities include the international promotion of their country or region's designed goods and services; the promotion of the role of design to local industry and the public sector; the running of national and international design and design management award schemes and the development of partnership projects promoting new programmes to introduce and embed design, for example, in the public sector and in government. Many of these actors have been or are currently engaged in European projects promoting the development of Europe's design competence.¹³ There remain some Member States without national representation for design, including Bulgaria, Cyprus, Malta and Romania. It is noted that opportunities for a level playing field of design promotion across Europe could be stimulated if this gap were to be addressed.

Over forty design promotion organisations and professional and trade design associations from more than twenty Member States, are members of the Bureau of European Design Associations (BEDA).¹⁴ Established in 1969, BEDA is unique in communicating, on their

¹⁰ S Korea national policy targets achievement of 95% of the design capability of western industrialised nations by 2015 ¹¹ Rosenberg Thesen, Oktober 2010, Zentralverband des Deutschen Handwerks ¹² Innovation in services: Issues at stake and trends, J Howells and B Tether, 2004. ¹³ www.seeproject.org ¹⁴ www.beda.org

behalf, the value of design to the European Commission and other institutions of Europe.

Three other organisations in Europe's design landscape are worth noting. The long-established Design Research Society¹⁵ promotes and develops design research; the 'EIDD Design for All Europe'¹⁶, a platform of 33 Member Organisations in 23 European countries, promotes the concept of Design for All and the European Academy of Design a network of design researchers has been hosting design research conferences across Europe since 1995¹⁷. Finally, there is also the extensive network of design schools across Europe.

These numerous design organisations represent a powerful strategic resource for design in Europe, in particular, when considering their potential to support the implementation of the recommendations of this report.

Three key challenges

The 'design landscape' represents but a tiny fraction of economic activity when taking into account Europe's large companies and the 23 million SMEs that drive the European economy, the large majority of which could benefit from using design as a driver of innovation. It is in those European companies not yet aware of design's potential as a contributor to smart, sustainable and inclusive growth, that a raising of design awareness and a change in perception of its value needs to take place.

This shift in perception of design's relevance and value is also required within Europe's public sector organisations and in European policy-making. It is needed in schools and universities as well as in vocational education. It is needed in the research community and it is needed in government.

The Design Leadership Board has identified three key challenges that focus on positioning, embedding and developing design's role in Europe.

Challenge 1: Positioning European design innovation on the global stage

In the provision of world-class design services, across a range of sectors, Europe already has some areas in which it takes a leadership position on the international stage. Cities such as Barcelona, London, Milan and Paris are internationally recognised as centres of excellence in design – whether it is fashion, product, brand or city design.

It is noted, however, that a huge gap exists between those leaders and other regions of the EU. As a consequence, there is a need to upgrade the use of design as a driver of user-centred innovation to a far greater extent across all of Europe. Achieving this goal would help to consolidate and sustain Europe's leadership position. However, significant barriers remain to making this a reality. Europe can also become a global leader in the development of 21st century design innovation policy. However, much remains to be done before this can be achieved. Adequate branding of European design on global markets is

The potential of design in leveraging successful business is currently realised in only a few, limited sectors of industry across Europe.

¹⁵ www.designresearchsociety.org ¹⁶ www.designforalleurope.org ¹⁷ www.ead.lancs.ac.uk

necessary as a decline in the perception of Europe's leadership position will hinder growth and erode jobs.

The potential of design in leveraging successful business is currently realised in only a few, limited sectors of industry across Europe. Design-led, user-centred innovation calls for new approaches and partnerships integrating design into product and service development. This is not yet widely understood. Awareness-raising of the strategic impact of design on innovation calls for much wider promotion and adaptation of design, including the show-casing of successful experiences that can practically demonstrate the power of design in value creation.

The prevailing image of design emphasises its individualistic nature and yet, the complexities of innovation call for a truly multidisciplinary approach. People-centred design requires consumers and citizens to play an increasingly active role from the beginning of the product or service development process to the end, including feedback loops to manufacturers on the performance and/or quality of those products and services.

Much progress is required if companies and organisations across Europe are to understand and adopt the new meaning of design as a people-centred method for innovation. This will require a step-change in perception and behaviour.

Challenge 2: Embedding design in Europe's innovation system for the benefit of society, enterprises and the public sector

The EU has the opportunity to re-think the ecology of innovation to understand how design fits as a value creator in innovation processes. There is a need to promote greater collaboration between research institutions, design intensive industries and the design sector. Designers are not participating proactively in the innovation policy discussion and are not represented in the making of Europe's innovation policy. Today, the role of design as a user-centred driver of innovation is not sufficiently recognised in the EU's R&D and Innovation programmes.

Europe's technology and innovation centres have proved an effective channel for disseminating R&D findings, especially for Small and Medium-sized Enterprises. Europe lacks a similar focus on the development of centres offering design services to industry and the public sector. These centres would provide opportunities for citizen-business-public partnerships to fully exploit the potential of design in developing people-centred innovation, and yet, currently, no strategy is in place to either identify

them or invest in their growth.

There is a lack of incubators, (or other mechanisms), that have the strategic competence and necessary local knowledge to build effective bridges between design agencies and those enterprises and public sector organisations that require design-intensive services. The means to connect companies and organisations seeking design-intensive services across Europe remain under-developed.

The wider uptake of people-centred innovation will increase the demand for design-intensive services. Europe's design industries, as currently structured, are comprised mostly of small and micro-companies that would not have the capacity and resources needed to respond to dramatically increased levels of demand. The lack of scalability in the design sector needs to be addressed.

In addition to the design of products, design is also not sufficiently recognised as a strategic tool in the redesign of business processes and/or services capable of bringing innovative solutions to complex issues. There is a need for a broader approach to design that can bring added-value in the public sector, driving innovative and economically sustainable solutions. Indeed, the link between improvements in business performance and the use of design by companies,

is not sufficiently demonstrated to public-policy makers in order to encourage dissemination of design methods from industry and their integration into design-led, user-centred policy-making.

Furthermore, today's rapid development of digital networks and communications technologies is having the same revolutionary impact on our society as the development of electricity and transportation networks had a century ago. The impacts of digitalisation on design can be divided into two broad categories: changes in the value-chain from producer to consumer and changes in the work-processes resulting from the use of new tools. As a result, the conventional borders between product design, production and the user are beginning to merge. The internet and the active use of social media not only enable the dissemination of digital works, but also the co-creation of products or services that can engage users from the outset. There is a need for more sophisticated adoption of digital technologies across the EU in order to strengthen design-led, people-centred approaches to innovation.

The European tradition of active citizenship includes citizens' participation in the design of public services. Co-design methods can ensure that public services are comprehensible, transparent and

accessible. They can also provide the basis for the development of new services focused on real needs. Currently, however, there are insufficient tools and methods available to the institutions and citizens of Europe. This is severely limiting the introduction of co-design methods as a method to support meaningful interaction between users and producers of public services.

Challenge 3: Developing Europe's design competences and knowledge for the 21st century

Without adequate investment to increase and deepen the design literacy of Europe's citizens and without adequate public funding for fundamental research in design, the new competitive advantage of design will not be realised.

Apart from some exceptions in some Member States, the skills, competencies and knowledge of design and designing are not sufficiently embedded in the education systems of Europe. Design, in its broadest sense, is not integrated as a key understanding or experience of the citizen's of Europe. The low level of design literacy is limiting Europe's broader innovation potential both now and for the future.

Companies invest in R&D but not in design research. In most Member States, public funding for

fundamental research in design is missing even though, in the field of applied research, design research is relevant because of its practical nature.

Currently, design research does not have sufficiently close contacts with other fields of expertise and yet the exploitation of the potential of design, to the benefit of European innovation, calls for multi-disciplinary approaches. Multi-disciplinarity requires a set of competencies that are not widely disseminated across Europe.

Any design issue is part of a complex inter-connected ecosystem in which factors as diverse as social, personal, economic, cultural, technological, physiological, and political all play a significant role. Through its interaction with other fields of endeavour, design research can lead to new and innovative solutions. Other fields can include technological and behavioural sciences, new materials, economic sciences, ICT and cultural studies. Action is needed to ensure that emerging understandings of design research and new approaches to multi-disciplinarity support the embedding of design behaviour and practice in the research agendas of Europe.

The development of more widespread and increased levels of design literacy and greater recognition and uptake of design research are needed if Europe is to remain competitive.



2 A vision for Europe's design innovation strategy



The work of the Design Leadership Board has been underpinned by its vision for Europe's design innovation strategy. The vision is presented as a brief scenario describing, through indicators, the situation as it is envisaged in 2020.

In 2020, design is fully embedded in the European innovation system and is recognised as a significant factor in enabling sustainable growth for increased prosperity, well-being and competitiveness. Sophisticated design innovation behaviour and practice is prevalent in the societies and economies of Europe and contributes at a fundamental level to quality of life.

In particular:

- // RESPONSIBLE European design plays a central role in strategic decision-making in a majority of enterprises, especially Small and Medium-sized Enterprises and in traditional businesses that lie outside the creative sectors.
- // IN EUROPE'S enterprises and organisations, the systematic and strategic use of design, anchored in principles of sustainable growth, contributes to social and environmental well-being, whilst offering them new perspectives and new market opportunities both locally and globally.
- // MANY companies relocate their (industrial) production in Europe, thereby fostering more highly-qualified jobs within Member States. Across all sectors, many enterprises and organisations apply innovative Open Design methods.
- // DESIGN is recognised by entrepreneurs and investors, both

as an important intangible value and a tangible asset of enterprises.

- // DESIGN in the public sector contributes to the rapid development of public services that are user friendly, environmentally friendly, economically responsible and accessible by all.
- // DESIGN is mainstreamed into the processes of policy-making at European, national, regional and local levels for solving complex local and global challenges contributing to European quality of life.
- // EUROPE is known and recognised internationally as a design economy/society.

European values underlying the vision

Ecologically and socially-responsible, people-centred products and services are a strength of the European economy. Global markets understand, desire and use products and services that are ecologically and socially responsible and people-centred. Europe's design innovation competence therefore enhances the competitiveness of European industry in rapidly changing and increasingly competitive markets.

Economic uncertainty provides an impetus for developing new approaches to product and service innovation and for reforming



DESIGN
FOR
BETTER
LIFE!

manufacturing in accordance with the principles of ecologically and socially responsible development.

Cultural, social and economic values have informed and guided the work of the Design Leadership Board. These are:

- 1 CULTURAL IDENTITY – Celebrating diversity and a responsible European identity; tapping into Europe's unique continuity of culture and heritage; synergy through complementarity.
- 2 QUALITY OF OPPORTUNITY – Considering social equity as a characteristic enabling European smart, sustainable and inclusive growth; continuously striving for excellence.
- 3 RESPONSIBLE ECONOMY – Resource responsibility; effectiveness; efficiency; responsibility in action, including accountability; social responsibility in entrepreneurship, ethics and trust; professionalism; prosperity; community.

CULTURAL IDENTITY

Diversity, Ingenuity,
Agility, Continuity,
Complementarity

QUALITY OF OPPORTUNITY

Equality, Prosperity, Ethics,
Well-being, Community,
Quality of Life

RESPONSIBLE ECONOMY

Effectiveness, Efficiency,
Resilience,
Professionalism

FIG 2 Design is based on cultural, social and economic values¹⁸

¹⁸ Design Leadership Board meeting, January 2012



3 Building a design innovation eco-system for Europe



Design can support the EU and its Member States in taking a more strategic and people-centred approach to innovation. Design adds value to the EU's research and innovation capacities and supports the need for a strategic, inclusive and business-oriented research and innovation policy to tackle major societal challenges, raise competitiveness and generate new jobs¹⁹.

Europe's design competence is a key differentiator that can contribute to a distinctive European approach to innovation. Design drives Europe's competitiveness in global markets and supports '*innovation in business models, design, branding and services that add value for users*'²⁰ taking, from the outset, a people-centred view of product, service and systems development.

The Design Leadership Board is seeking to embed design and improve design innovation behaviour and practice across Europe. This will require an effective, design innovation eco-system for Europe. In order to begin to build this, six areas for strategic design action have been identified. They are:

- // DIFFERENTIATING European design innovation on the global stage
- // POSITIONING design within the European innovation system
- // DESIGN for innovative and competitive enterprises
- // DESIGN for an innovative public sector
- // POSITIONING design research for the 21st century
- // DESIGN competencies for the 21st century.

For each of the six strategic design actions, a scene-setting context supported by case studies is provided; priorities for action are identified and recommendations are presented.

UNITE
THE DESIGN
BRANCHES
TO FORM A
STRONG TREE

SERVICE DESIGN IS
CRUCIAL FOR
PUBLIC AND FOR
PRIVATE
ENVIRONMENTS

¹⁹ Innovation Union pp8 ²⁰ Innovation Union pp7

STRATEGIC
DESIGN
ACTION 1:

Differentiating European
design innovation
on the global stage

European culture
as a differentiator in
a globalising world

Europe has a unique and diverse culture that possesses distinctive added-values. This is important in an age of globalisation where Europe needs to develop its own distinctive approach to innovation, building on its strengths and capitalising on its values ²¹.

The respect for cultural and historical heritage in Europe, combined with the political conditions enabling relative stability and social resilience over a long period of time, have led to an overall increase in prosperity across Europe. Europe has proved to be a fertile breeding ground for cultural development and innovation and this relative continuity means that a vast reservoir of experience can be tapped into at any stage and from anywhere.

The humanist tradition, respecting human life and the importance of the individual, is fully embedded in European culture. As Europeans work and thrive in non-hierarchical systems and structures, Europe is also a seedbed for creativity and ideas.

Furthermore, the long tradition of diplomatic and trade relationships within Europe offers a strong cultural basis for the development of design innovation networks across borders, both within and outside of Europe.

Because of its culture, history and traditions, the design innovation capacity of Europe is distinctive in its values, qualities and characteristics. The Design Leadership Board believes that the identity of European design innovation can be further strengthened through adopting a more systemically-oriented, higher-purpose approach to design innovation as a strategic means to address, in practical ways, the truly complex and critical problems the planet and our societies face. This broader approach may offer a larger and more robust framework within which to pursue long-lasting prosperity, incorporating competitiveness as a significant component within a wider context of inter-related strategies and needs.

Europe’s positioning attributes

Arising out of the unique and diverse cultures of Europe, European design

innovation therefore contains qualities and characteristics that enable it to be distinctive, desirable and competitive on the world stage. Key characteristics, demonstrating economic and ecologically responsible action and behaviour, contribute to a unique European identity for products and services that derives from a concern for exploring new methods of production and creation, mindful of the impact of processes on people and planet.

Design needs to be far-reaching across institutions, companies and citizens. It adds value to processes, products and services by reaching citizens and consumers through engaging their emotions whilst offering products and services that are sustainable. That can be achieved, when the use of finite, (non-renewable), resources is streamlined and optimised; multi-functionality is encouraged and when products and services carry within them meaning and ethics that encourage the elimination of planned and apparent obsolescence.

By incorporating and communicating these values of economic and ecological responsibility and

21 Innovation Union pp7

E15: ENGAGING GLOBAL CUSTOMERS THROUGH EUROPEAN DESIGN

Co-founded by architect Philipp Mainzer in 1995 and based in Germany, the furniture company e15 uses a stringent focus on design to re-engage people with traditional furniture materials, especially wood. In close cooperation with a network of European designers, architects and artists, e15 has developed original products, which reflect the brand's philosophy and an open approach to diverse cultures and disciplines. e15 designs are now sold in over 40 countries, with significant opportunities emerging in Asia. The success of a relatively small company such as e15 in an internationally competitive market, illustrates the competitive edge that high quality, original design – the hallmarks of European design practice – can deliver.

Impact on growth and prosperity: e15 employs 25 design and craft professionals in Europe and has an annual turnover of €6m.



ST04 Backenzahn™, side table, design: Philipp Mainzer, www.e15.com

European design innovation
contains qualities
arising from diverse cultures
of Europe enabling it
to be distinctive and
competitive in the world.

LVMH: BRINGING EUROPEAN DESIGN TO WORLD MARKETS

Despite the economic climate, in 2011 the LVMH Group, a European cultural and creative entrepreneur, experienced revenue growth of 16%, driven largely by sales in emerging markets. The continued success of the LVMH Group and its luxury Maisons, such as Louis Vuitton, Guerlain, and Fendi, illustrates the cultural and economic contribution of the design industries to Europe. Based on Europe's unique heritage of art, culture, design, craftsmanship and creativity, the LVMH business model is underpinned by continuous innovation, a relentless focus on quality and investment in highly skilled manufacturing in Europe. In 2011, Louis Vuitton opened its twelfth factory in France, in the Drôme agricultural region, employing some 250 artisans to create leather goods.

Impact on growth and prosperity: LVMH, and the 'high-end' design sector in Europe as a whole, provide jobs – directly and indirectly – to about 1.5 million people within the EU and create an annual turnover of approximately €440 billion.



by making the necessary systemic changes to enable them to be a valid claim, an image of cohesion will be given to the products and services of Europe. This value of sustainability can further differentiate Europe on the world stage where co-creation and the associated methods of bringing together diverse expertise from different fields, (living labs, knowledge and value chains), can be encouraged. Some envisage a move towards a circular economy that imagines not our current economic model of 'take-make-dispose, but rather one in which, *"today's goods are tomorrow's resources, forming a virtuous cycle that fosters prosperity in a world of finite resources."*²² In this way, design in Europe becomes a transversal tool connecting actors and players in the fields of sustainable product design, service design and co-creation.

In parallel to establishing unique methods to articulate Europe's identity in its products and services, emerges the need to protect European design and to establish rigorous enforcement of the protective measures.

The manufacture of mass-consumption products has moved to low-cost countries outside of Europe. In turn, sophisticated, sustainable products, raise awareness of the importance of sustainable development and increase respect for design's role in innovation and technology. Europe remains a competitive region for such production.

22 'Towards the Circular Economy. Economic and business rationale for an accelerated transition'. 2010. Ellen MacArthur Foundation. www.thecirculareconomy.org

High design quality

Europe has developed very high quality standards and labels that ensure reliable benchmarking across products as well as processes and services. In these cases, quality is monitored and measured and the information is made available to end-users, thus empowering them to make better choices. When the quality embedded in products, processes and services runs deep, they become more difficult to copy or replicate. Quality becomes a barrier to illegal competition.

Excellence in design is context specific and can be influenced by the local culture, resources and climate of a specific environment. Depending on the product, service or process, even though design can add considerable value, it may not always travel easily or well and there is a need to better understand 'adaptation' as opposed to 'adoption' of successful products and services. This has implications for companies designing products and services for export.

European design innovation for products, processes and services

The economic crisis has challenged Europe to adopt a broader concept of innovation, moving away from an interpretation predominantly driven by science and technology.

When confined to technology, innovation can lose sight of the advantages to be gained through cross-pollination with other sectors and capacities, as well as being far removed from the needs and aspirations of people.

The opportunity in Europe is to bring design into the mainstream as a key competence, ensuring that better designed and more innovative products, processes and services reach a much larger number of Europe's citizens, thus becoming more widely useful to society. As a mainstream competence, design has the ability to broaden its scope towards issues of sustainability, ageing, health and education – all areas in which changes of paradigm are urgently required.

Furthermore, European design increases the value of products, processes and services in relation to

reductions in the amount of material and energy they consume. Satisfying more needs with less material and reduced energy is one of the key challenges design is tackling. This has relevance for Europe's economies, as excelling in low resource use with high value-added supports differentiation and competitiveness, whilst more sustainably serving societal needs.

Finally, Europe's existing design leaders must remain competitive and relevant to ensure Europe's top positioning in the world. There is an urgent need to aggressively build and disseminate the world-class design strengths already prevalent in Europe. The opportunity exists to stimulate new approaches to networking, the sharing of best design practice and peer-to-peer learning at the highest level of design expertise in Europe.

**Satisfying more needs
with less material
and reduced energy
is one of the key challenges
design is tackling.**

Priorities for action

Four priorities for action have been identified:

- // A LACK of a strategic approach at the European level to strengthen and disseminate existing European design excellence.
- // THE NEED for yet greater efforts in diffusing economically and ecologically responsible behaviour in the design and development of Europe's products and services.
- // INSUFFICIENT rigour and enforcement of legal protection of design innovation Intellectual Property Rights (IPR).
- // A LACK of coordinated and strategic action to optimise the distinctive values and characteristics of Europe's unique identity in design innovation in order to promote European design internationally.

RECOMMENDATIONS

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- 1 Identify and strengthen existing 'European centres of design excellence' in business and industry and provide means for those to collaborate in open networks that drive innovation into Europe's whole industrial ecosystem.
- 2 Promote the increased use of design in European industry to

encourage synergies in support of economic growth, environmental regeneration, and the raising of social and emotional value, whilst respecting the need for renewable and endogenous resources.

- 3 Work towards zero tolerance of infringement. This requires legislative revision, through the inclusion of a 'Duty of Care' for shared responsibilities on IPR protection across the digital value chain. Set up a specific EU Tribunal /Court for European IP cases and promote and increase the training of judges in

national courts, in relation to the protection of Intellectual Property Rights in the physical world and online.

- 4 Create a 'Designed in the European Union' label in connection with the European ECOLABEL²³ to stimulate the export of design services. The intention of making the protection and enforcement of European design and innovation more effective and accessible, whilst at the same time, raising the bar on expectations and associating excellence with sustainability.



²³ The EU Ecolabel helps customers identify products and services that have a reduced impact on the environment throughout their life cycle, from the extraction of raw material through to production, use and disposal. Recognised throughout Europe, it is a voluntary label promoting environmental excellence, which can be trusted. See <http://ec.europa.eu/environment/ecolabel/>



STRATEGIC DESIGN ACTION 2:

Positioning design within the European innovation system

21st century contexts for design innovation

Innovation processes are no longer connected solely to traditional business models of innovation. They are now influenced and shaped by wider, social-based developments both in technology, (such as Wikis and the other peer-to-peer phenomena of Web 2.0), and in the growth of novel approaches to manufacturing, including 'FabLabs', 'Future Factories', 'Micro-Factories' and 'Living Labs'

The role of these new software and culturally-based eco-systems are being fostered and embraced by a new generation of innovators. The Open

Design method is an example of how practice and relationships are changing in the field. Open Design seeks to restructure the relationship between the actors involved in a design process utilising the advantages offered by new approaches to intellectual property protection and the new ways of working enabled by technology. A freer kind of collaboration is able to take place within networks of designers and stakeholders. These flexible networks are short-term, change according to current needs and do not have a fixed structure.

The core principles of Open Design prove successful in cultures that embrace diversity, support

low power distance and nurture democracy. As Open Design is based upon European values, it provides an opportunity for European design to stand out. However, in order to be successful, it requires supportive guidelines, a shared code of practice and appropriate legal frameworks. There is, therefore, a requirement at the European level to remove or mitigate obstacles and barriers hindering the spread of Open Design as a valuable form of innovation.

The emergence and application of new technologies and methods are opening up new and often experimental ways of working. As a result, the nature of the relationship between designer, producer and consumer is changing, thereby enabling new forms of innovation such as co-design. Co-design methods bring the user closer to the design creation process and a user-centred approach is increasingly a common characteristic of European innovation.

Overall, these new forms of design innovation are building on Europe's expertise in exploiting originality and ideas to create new products

New indicators are needed to integrate design into the EU statistical instruments.

and services. Our recommendations seek to amplify these valuable new approaches whilst, at the same time, building on the existing fundamental practices already creating world-class European design innovation.

Priorities for action

Dialogue and action on design at the European level

Currently there is no mechanism through which a permanent dialogue on design with the European Commission can take place.

Without such a mechanism it will not be possible to support the development of European design innovation over the longer term. Neither will it be possible to co-ordinate, for the purposes of policy development, the information and knowledge arising from the activities of the EU design promotion organisations across Europe. Finally, it will not be possible to harness the necessary expertise to enable greater, co-ordinated access to European funding for design innovation.

A lack of evidence of design's impact on GDP

There is a lack of reliable and comparable statistical evidence demonstrating design's contribution to the economy and its impact on return on investment. Because of this, policy-making in design has been hindered and opportunities have been lost in better integrating design

DESIGN IN SCIENCE: SPEEDING UP THE PATH TO COMMERCIALISATION

To improve the development and market potential of ideas coming from the laboratory, researchers at the University of Cambridge were teamed with industrial designers. Whilst the researchers were initially hesitant about the contribution that designers could make in early stage projects, significant results were achieved in a wide variety of projects. One team developed an improved tool for handling fluids in the lab; another developed a more effective oxygen mask for the delivery of anaesthetics. The designers were able to contribute through application exploration, user and market research, and rapid prototyping. It was also noted that, through providing different insights, designers were able to stimulate the creation of new knowledge.

Impact on growth and prosperity: Designers in research teams enabled results to be developed in a user-centred perspective from an early stage, improving market potential.



Julia Weckman

GOOD PRACTICE IN DESIGN-LED BUSINESS AND/OR PUBLIC SECTOR INCUBATORS

Design London – www.designlondon.net

The Royal College of Art's new business incubator helps transform innovative ideas, products, service concepts and prototypes into viable business propositions. It brings together talented teams from business, technology and design backgrounds, helping them transform innovative ideas, products, service concepts and prototypes into viable business propositions.

Helsinki Design lab – www.helsinkidesignlab.org

The Helsinki Design Lab helps government leaders see the 'architecture of problems'. It assists decision-makers to view challenges from a big-picture perspective and provides guidance toward more complete solutions that consider all aspects of a problem. Its mission is to advance this way of working which is defined as strategic design.

into innovation policy-making at the European, Member State and regional levels. Reliable statistical evidence would support SME uptake of design as a valuable strategic resource.

The European Design Leadership Board welcomes the EU projects recently awarded under the European Design Initiative.²⁴ One of these projects specifically seeks to create a system for measuring design's impact on the economy,²⁵ *"giving design as an innovation activity, a more distinct and independent role in innovation statistics, either in a future revision of the Oslo Manual, or, by the creation of a new manual on design."*²⁶

Over the longer term, considerable additional effort will be needed to create the reliable, valid and compa-

table statistics which policy-makers so urgently need. Without this, investors, business angels, enterprises and industries across Europe lack the necessary evidence of the return on investment in design that would give them the confidence to invest in design in the first place. In parallel, the lack of evidence means that the public sector is less inclined to integrate design into its procurement criteria.

This issue is one of the most critical areas requiring attention. Over many years, policy makers as well as businesses have been continually asking for tangible evidence of the link between design and improved business performance.

With the development of reliable new indicators for design,

the possibility will exist for design to be integrated into existing EU statistical instruments such as the European Innovation Scoreboard²⁷. With regard to indicators, although the Design Leadership Board acknowledges the inclusion of 'Community designs per billion GDP' as an indicator in the Innovation Union's Performance Scoreboard for Research and Innovation, nevertheless, the distinctive contribution of design remains difficult to assess. For example, indicators such as 'Non-R&D innovation expenditures as a percentage of turnover' and 'Innovative SMEs collaborating with others' do not currently isolate the contribution of design.

More work is needed to integrate design into EU statistics and to make it more visible as a critical component of innovation.

The lack of uptake of NACE Code 74:10 Specialised Design Activities

The lack of statistically valid evidence of the prevalence of design as an economic activity and its impact on GDP, at Member State and/or European level, means that the role of design remains difficult to justify in terms of its contribution to Member State economies.

No shared understanding of how to measure design's impact currently exists. The problem is further compounded in that there is no shared definition of design for the purposes

²⁴ ENT/CIP/11/C/N03C02 – Joint actions for non-technological, user centred innovation in particular mainstreaming design into innovation ²⁵ 'eDesign' – *Measuring Design Value, Consortium led by BCD Barcelona Design Centre* ²⁶ Design as a driver of user-centred innovation, Commission Staff Working Document, 2009 ²⁷ See 2011 – http://ec.europa.eu/enterprise/policies/innovation/files/ius-2011_en.pdf

of establishing the evidence base that is needed. Traditional forms of statistical indicators are not proving adequate in providing a sufficiently robust measurement methodology for design as a key intangible.

The integration of design into existing EU statistics gathering, because of its intangible nature, has proved problematic in the past. Eurostat must protect the robustness and validity of existing methodologies and the European statistical evidence bases, (for example, for the Innovation Scoreboard). The introduction of new 'unproven' indicators can adversely affect results achieved from implementing long-standing and proven statistical instruments.

This difficulty does not however, detract from the need to measure the value of design. The lack of evidence to demonstrate design's contribution to economic activity and to prove design as an economic activity in its own right, is a weakness

that hinders evidence-based design policy-making at both Member State and European levels.

The most recent revision of the NACE Codes in 2009 is therefore significant in that it included, for the first time, a Code 74:10 'Specialised Design Activities'²⁸. The revised Code now reflects more accurately than before, the nature of specialised design activity, including industrial design. This has created the opportunity to provide a new picture of economic activity in design across Europe.

However, out of 27 EU Member States, it is understood that only a small number have introduced the revised Code²⁹. Without the uptake of the NACE Code 74:10 by all Member States, it will not be possible to arrive at a more comprehensive and up-to-date picture of design-related economic activity in Europe. This information would provide a basis for validly connecting

design activity to economic growth.

Furthermore, future, on-going revision and refinement of Code 74:10 will ensure that category and activity descriptors will reflect as accurately as possible, the changing and complex reality of design activity in the field.

Statistical classification of products by activity

In parallel, the statistical classification of products by activity (CPA) 2008³⁰ is linked to the NACE activities and structure. At 74:10 it shows:

// 74.10.1 Interior, industrial and
other specialised design services
// 74.10.11 Interior design services
// 74.10.12 Industrial design services
// 74.10.19 Other specialised design
services

This tool also offers a means by which design's prevalence as an economic activity can be made more visible.

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THE EUROPEAN BUSINESS AND INNOVATION CENTRE NETWORK (EBN) – WWW.EBN.BE

The European Business & Innovation Centre Network was set up in 1984 as a joint initiative of the European Commission, European industry leaders and the first pioneering Business and Innovation Centres. EBN is now the leading non-governmental pan-European network bringing together 200+ Business & Innovation Centres (BICs), and similar organisations such as incubators, innovation and entrepreneurship centres across the enlarged Europe.³¹

²⁸ 'NACE Revision 2. Statistical classification of economic activities in the European Community': http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-015/EN/KS-RA-07-015-EN.PDF ²⁹ It is understood that Member States implementing 74:10 include e.g. Germany, Luxembourg, Spain, Switzerland and Portugal. ³⁰ http://epp.eurostat.ec.europa.eu/portal/page/portal/cpa_2008/documents/CPA_2008_structure_EN.pdf ³¹ EU Regional Policy. February 2010. http://ec.europa.eu/regional_policy/sources/docoffic/2007/working/innovation_incubator.pdf.

Constraints to emerging design innovation behaviour and practice across Europe

There is a lack of specialised design-based training and mentoring programmes for entrepreneurs and SMEs across Europe. This highlights the need for a fundamental integration of design into the programmes and activities, (and culture), of existing business and innovation-based incubators of Europe. A lack of design-led European innovation incubators offering specialist design services to industry and the public sector is also evident.³²

As a consequence, the wider emergence of sophisticated design innovation behaviour and practice is limited. This in turn, means that any related increase in demand for design-intensive services from Europe's design services sector remains latent.

It is noted that Europe's design agencies are small and lack models for growth. Incubation services, including in particular, business skills mentoring, are needed across Member States to increase the strategic capacity of Europe's design consultancies. There is a need to support the incubation of new forms of design companies, just as much as there is a requirement for those other forms of business being incubated, to themselves benefit from design-intensive services.

There is also a Europe-wide need to build more effective bridges between design consultancies and the private and public sector businesses and organisations requiring design-intensive services. Specialist mentoring services are also needed for design companies seeking to develop their export potential outside Europe.

A lack of co-ordinated action on Europe's Centres of design excellence

There is a need for a co-ordinated strategic approach to the emergence of European geographical areas which demonstrate high intensity location of enterprises specialising in design services. A current example would be the automotive sector in the Stuttgart region of Germany. Without the necessary co-ordinated action to identify such geographical areas during their emergent phase, strategic investments cannot be made to accelerate their growth.

There is a need to promote design innovation at the regional level especially where the design infrastructure in Member States is weak.

Procurement of innovative products and services

Public Procurement accounts for some 17% of EU's GDP³³. The Innovation Union proposes that governments set aside dedicated budgets for public procurement of innovative products and services, thereby creating a procurement market worth at least €10 billion a year for innovations that improve the efficiency and quality of public services, while addressing the major societal challenges³⁴.

In the US, public sector procurement is about 20 times bigger than in the EU where it plays a significant role in developing technology and providing innovative solutions to societal



³² One of a number of exceptions to this is the Belgian centre of competence, Design Innovation: www.designinnovation.be/. ³³ European Commission. http://ec.europa.eu/enterprise/policies/innovation/policy/public-procurement/index_en.htm#h2-2 ³⁴ "From 2011, Member States and regions should set aside dedicated budgets for pre-commercial procurements and public procurements of innovative products and services (including those defined by the Innovation Partnerships). This should create procurement markets across the EU starting from at least €10 billion a year for innovations that improve the efficiency and quality of public services, while addressing the major societal challenges." Commitment 17, Innovation Union – See: <http://i3s.ec.europa.eu/commitment/21.html>

The Design Ladder enables companies and organisations to identify where they are on a scale of design competence ranging from ‘no design’ to ‘design as strategy’.

% of companies in 2003
% of companies in 2007

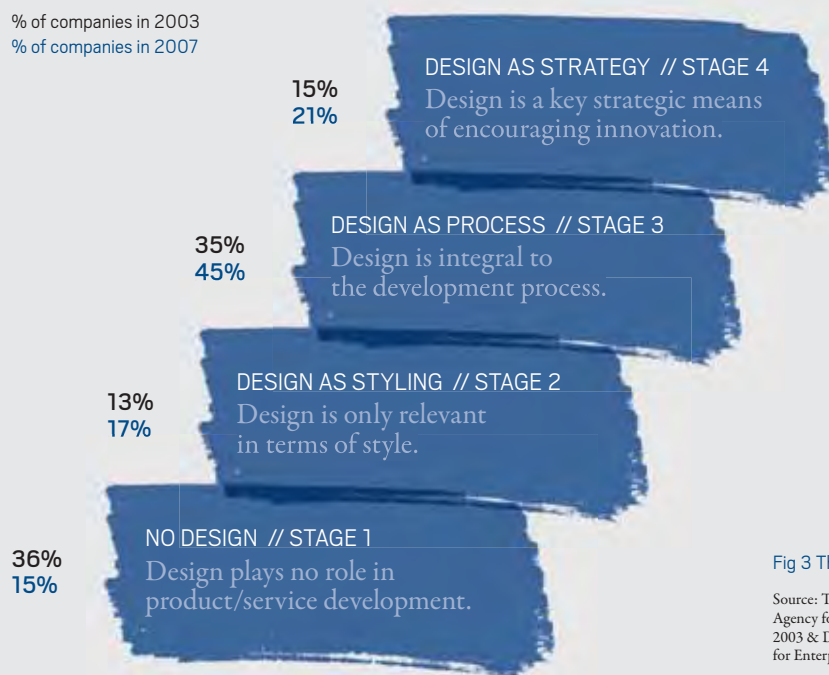


Fig 3 The Design ladder

Source: The Economic Effects of Design, National Agency for Enterprise, Copenhagen, September 2003 & Design Creates Value, National Agency for Enterprise, Copenhagen, September 2007.

The lack of design management skills is a significant barrier.

challenges. In response to this gap, a number of Europe2020 flagship initiatives, have announced Commission actions to support public procurement as tool for innovation.³⁵ One of these, is to create and run a European platform dedicated to 'public procurement as a tool for innovation'. The Design Leadership Board welcomes this trend towards a design-led approach that will stimulate differentiated, user-driven products and services that have not been procured to 'lowest cost' criteria.

A Europe-wide policy and supporting measures are needed to facilitate and reinforce the integration of design-led methods and approaches in support of the drive towards public procurement as a tool for creating innovative products and services.

The need for strategic design management

Whilst recognising that the discipline of design management is a relatively young one, the European Design Leadership Board is nevertheless concerned at the lack of design management skills evident in the private and public sectors.

There is a lack of tools and resources to support the absorption of design management as a strategic advantage in the enterprises and organisations of Europe. As an example of a simple though effective tool, the European Design Leadership Board draws attention to the Design Ladder developed by the Danish Design Centre³⁶ which enables companies and organisations to identify where they are on a scale of design competence ranging from 'no design' to 'design as strategy'. Subsequently, a version of this tool – the Design Management Staircase – was developed by the Design Management Europe (DME) EU project in 2009 (See Figure 4). Like the Design Ladder, the Design Management Staircase model is also a four-tier model, with the key difference that its four tiers are defined on the basis of five management factors.³⁷

The lack of design management skills is a significant barrier to the adoption and integration of design into Europe's enterprises, organisations and governments.

³⁵ 'Innovation Union,' 'Industrial Policy' and 'Digital Agenda' and the Communication, 'Regional Policy contributing to Smart Growth' ³⁶ Danish Design Centre (DDC), 2003. ³⁷ See: www.designmanagementeurope.com. For further explanation of the Design Staircase, see: 'The Incorporation of Design Management in Today's Business Practices. An Analysis of Design Management Practices in Europe', 2009. Gert L. Kootstra.

RECOMMENDATIONS



- 5 Continue to support and expand the work needed to develop more effective and reliable methods for measuring the impact of investment in design on growth and social well-being, at the micro and macro levels, and include these within European innovation statistics.
- 6 Enforce the implementation of the current NACE Code 74:10 for

Specialised Design Activities by all Member States and ensure updating as necessary for benchmarking and comparative analysis across member states.

- 7 Include design within innovation and business incubators and their networks.
- 8 Create guidelines, codes of practice, legal frameworks and experimental spaces to promote the use of Open Design.

- 9 Develop a European policy that ensures a more sophisticated approach to the public procurement of innovative solutions through the recognition, inclusion and implementation of design as a driver of user-centred innovation.

- 10 Improve access to design management expertise and tools for companies across Europe to support the uptake and integration of design and design management as a strategic tool for growth.



Fig 4 The Design Management Staircase

STRATEGIC
DESIGN
ACTION 3:

Design for innovative
and competitive
enterprises

Europe’s enterprises
competing through design

In the last decade, the global business environment has changed radically.³⁸ EU business and industry must now compete with low-cost manufacturing in China, Brazil, India and other emerging economies. Whilst technology-driven innovation has been a fundamental contributor to the prosperity of Europe, the recognition is emerging that design-driven,

non-technological innovation is now also a route to competitiveness. The economic significance of design is based on its potential as an enabler to create reliable, desirable, user-driven products and services that are ecologically and economically responsible.

Those large companies that compete successfully on the global stage with a family of brands or, that are themselves a strong consumer or B2B brand, are already by necessity, competent users of design. One needs think only of

the European automotive, home wares, telecoms, fashion and more broadly cultural and creative industries, as sectors in which design plays a central and critical role in their success.

Design-led enterprises embed design as a part of the ‘DNA’ of the whole company, connecting it directly to corporate objectives. They expertly integrate and manage design in order to differentiate their products and services and invest heavily in the creation and on-going guardianship of tangible and intangible design assets such as creativity and brand. This is underpinned by a clear focus on the needs, wishes and desires of their customers and/or end-users. Emerging methodologies such as Open Design are offering new ways of working to promote design competence. Some large companies have put design at the centre of their business strategy. Others, operating in the luxury segments and defining luxury for the 21st century, also drive value into their products through design.

The design excellence in European enterprises is as a strategic resource that needs protected and nurtured.



38 DG Enterprise and Industry: 'EU Manufacturing Industry: What are the Challenges and Opportunities for the Coming Years?'

European assets for competitiveness – disseminating better practice

Design excellence

The level of design competence residing in Europe's large companies is, in part at least, made visible through the numerous design award schemes that operate across Member States. The award schemes are both national and international in reach and they not only promote and evidence design excellence, but also demonstrate design's impact on business performance. Good practice in Design Management has, since 2007, also been recognised through the Design Management Europe Award.³⁹

At the European level, we need to ensure that Europe can maintain its leadership position and that large design-led companies can become even more competitive stimulating growth and jobs, whilst at the same time providing insights and new knowledge in the management and integration of design as a powerful strategic resource.

Design Management

It is clear that for a large, design-led company, sophisticated methods and systems for managing design within the organisation can co-exist effectively as a distinct and complementary function to sales, marketing and production. Different models of design management range in approach from centralised to

RELEASING THE POWER OF TECHNOLOGY THROUGH DESIGN: PHILIPS ELECTRONICS

To visualise new opportunities for growth, Philips Electronics complements technology driven R&D with design. One result is the Ambient Experience for Healthcare; a breakthrough application that reduces the anxiety patients often experience when they undergo medical scans. The multi-disciplinary design team at Philips developed a new vision of the user experience to guide product development. *"Ambient Experience has strengthened Philips's €3.27 billion imaging business around the world, allowed it to realise higher prices, and improved its profitability,"* says Thomas van Elzakker, the manager for new ventures who heads up the operation.

Impact on growth and prosperity: Design innovation has enabled an existing large company to increase sales. The patient experience has been improved for many thousands of people.

See: http://www.healthcare.philips.com/my_en/products/ambient_experience/



³⁹ Design Management Europe (DME). www.designmanagementeurope.com

Europe's SMEs must stay ahead of the curve in these innovations in production.

de-centralised forms as the successful integration of design requires highly specialised skills. Large design-led companies have learned that effective design management brings results and that good practice in managing design can be improved upon.

There is a need for best practice design management strategies and approaches to be more widely disseminated across the enterprises of Europe, large and small. For those large companies ambitious to upgrade their design competence, the design know-how residing in other, (non-competitor), design-led companies would be a valuable resource. Strategies to unlock and disseminate this knowledge are required if more of Europe's large companies are to be encouraged to develop world-class design management competence.

Design Management processes for SMEs although smaller in scale, are just as critical to their future competitiveness as they are for medium and large-sized companies. SMEs have much to learn from the processes and

methods used in large companies. This learning can subsequently be tailored to introduce design management processes and systems that are relevant to the specific needs and culture of an SME. The design knowledge and competence residing in large companies, if unlocked, would therefore constitute a valuable resource for SMEs prepared to learn and adapt models from their larger counterparts.

Design Leadership

Design leaders in Europe's large companies are those qualified professionals who drive design-led innovation into cultures, processes, products and systems, and who manage teams of design managers and in-house designers, as well as the engagement of external design consultants. Currently, not networked at the European level, they represent a valuable asset and competitive advantage for Europe. There is an opportunity to create measures that would, for the first time, network this extremely specialist and high-level target group across Europe, enabling

peer-to-peer learning and the sharing of best practice.

A new generation of design leaders will be needed in Europe's large and largest companies to support Europe's long-term competitive advantage.

Crucially, opportunities also exist to support large European companies that as yet, have undeveloped or inexperienced approaches to the integration of design into their business culture.

Design innovation in SMEs

It is recognised that the innovation processes in Small and Medium-sized Enterprises (SMEs) are, by necessity, very different in style and scale from the innovation processes of large companies. Very often, in Small and Medium-sized Enterprises, it is non-design specialists and skilled workers who are responsible for driving innovation processes.

There are 23 million SMEs in EU27 accounting for over 98% of businesses, two thirds of the total private sector employment and around 80% of the new jobs created since 2006.⁴⁰ The Commission's integrated industrial policy places, at its heart, the creation, growth and internationalisation of SMEs.⁴¹

Our recommendations seek to support the absorption of design into European SMEs in order to add to their competitiveness and increase opportunities to create new jobs.

⁴⁰ "Thinking Big for Small Businesses. What the EU does for SMEs". 2011 Edition. European Commission Enterprise and Industry
the Globalisation Era-Putting Competitiveness and Sustainability at Centre Stage. European Commission COM(2010) 614

New forms of production

During the past ten years, there have been indications of the emergence of a post-industrial production system that is able to handle individual aspects in mass-customised, low volume production. In this production process, each new product can be optimised or adapted for personal taste or individual needs. Different to traditional mass production, the post-industrial manufacturing process of the 'Future Factory' has been made possible through a number of recent developments⁴². These include standardised interfaces,

the increased use of communication technologies, (including the global exchange of files and ideas), computational fabrication over distance and new advances in 3D-Printing.

These developments have the potential to change the relationship between the consumer and the designer, with designers' facing a wider set of tasks and responsibilities driven by the closer involvement of consumers able, through new technologies, to get closer to the creation of new products. Should Future Factories prove to be viable, new forms of local production requiring new specialists,

professionals and skilled workers will emerge across Europe, adding value to local economies and communities.

Europe's SMEs must stay ahead of the curve in these innovations in production in order to remain competitive in the global economy.

Modern Craft

Crafts businesses are characterised by small and micro entrepreneurship. The UK Crafts Council describes contemporary craftspeople as creative entrepreneurs who are "...*highly qualified makers, practitioners, researchers*

DESIGN-LED COLLABORATION

The leading Italian furniture company Plank and global German chemicals company BASF have worked with furniture designer Konstantin Grcic to use a new plastic in the production of the cutting-edge "MYTO" chair. The chair uses a recently-developed, easy-flow plastic from BASF that is enhanced with nanoparticles to improve its strength, meaning the cantilever chair can robustly make a unique visual statement. The designer and BASF scientists worked together to refine the qualities of the material and design. In addition, less plastic is required and the injection process can take place at a lower temperature making the chairs more environmentally friendly. Their engaging design means the chairs have been a commercial success.

Impact on growth and prosperity: Two established companies found new markets through pioneering a design-led collaboration.



⁴² Atkinson, P.; Dean, L. and Marshall, J. (2008) "Automake/Future Factories" National Centre for Craft & Design, Sleaford, Lincolnshire, UK

OPEN DESIGN INNOVATION CREATES LOCAL/GLOBAL SMES

An Open Design Pop-Up Store, launched for Design Month Graz in 2011, demonstrates a new method of SME collaboration and production in Europe. The store showcased items including furniture, produced by small design companies from around the world. Customers ordered the goods online with the orders subsequently being produced by local small-scale producers. This novel approach to shopping and production means that products are manufactured in small numbers and on demand – eliminating transportation and/or stacking costs. Small-scale producers in the region of Styria, of which Graz is the Capital, profited as all the goods were produced in the region. Ponoko takes this concept further, providing a global marketing platform that connects designers with local producers. A designer contributes to the platform and, in another part of the world, a customer downloads the files and commissions a local manufacturer, who is also a member of the platform, to produce the goods.

Impact on growth and prosperity: Innovations in shopping and manufacturing mean that designers and manufacturers can thrive in markets that are both local and global.



CIS Community/Timski

and innovators...grounded in an educational experience that involves learning by doing... Innovation, high quality, authenticity and aesthetic value are important characteristics of the contemporary crafts output.”⁴³

However, the new ways of working that are emerging for the craftspeople of the 21st century have led to the concept of ‘Modern Craft’. The post-industrial, Future Factory is, for example, a logical step forward that

connects the advantages of mass production with those of traditional craft.

Traditionally, craftspeople either produced unique individual pieces for a local market or manufactured products on a small scale for low volume production. In the new scenario of the Future Factory, the boundaries of the craft sector may be shifted towards larger scale production and an even greater sophistication of crafted products demanding,

in parallel, a greater need for competence in design innovation.

In this scenario, Modern Craft could form an integral part of the innovation system of Europe.

Crafts, Craft (-type) SMEs and their relationship to Design Innovation

Tapping the potential of Modern Craft through design will require a shift in perception.

⁴³ <http://www.craftscouncil.org.uk/files/file/cd68904f6f59df22/crafting-futures-executive-summary.pdf>

A distinction is made between Craft(-type) micro companies, (Craft and Trades / Handwork), where hand-skilled work is central to their survival, (such as in the *interior construction sector*, or the *food sector* – meat, dairy and bakery production), and those micro companies active in Designer Craft, (usually creating limited editions of beautiful physical objects in a wide range of materials employing highly skilled techniques).

Whilst it is usually recognised that design is an integral part of the Designer Crafts sector, it is not well understood that design can have a significant role to play in the wider Craft (-type) micro companies. Unlike SMEs, there is no European definition for craft enterprises⁴⁴. Craft enterprises form a significant part of the economy of Europe and as the Directorate-General for Enterprise and Industry notes, “...[there are] some characteristics [that] craft enterprises have in common all over Europe and which reflect the vast majority of micro enterprises at the same time:

- // STRONG involvement of the owner or head of the enterprise in all steps of the workflow (financial independence, strong personal responsibility)
- // CRAFT, technical and management competences (apprenticeship as one means of passing on those competences)
- // ACTIVE contribution to production of products and services (in parti-

cular tailor-made and single-size-products or in small quantities)
// PROXIMITY to the client and local activities.”⁴⁵

A number of different studies conducted over the past decade have made it clear that Crafts and Trades, or Handwork, are primarily associated with tradition and technical understanding and less often with a competence in design. There is a need for a greater recognition of the contribution design can make to these micro and craft (-type) companies across Europe in order for their greater potential to be realised.

In a 2011 EU study⁴⁶, it was revealed that, “*the highest increase in demand for future skills is found in customer and market orientation, working in cooperative and collaborative work structures, and management aspects of businesses.*” The more widespread embedding of design as a strategy for innovation and growth in these micro and craft (-type) companies would complement these skills gaps and support accelerated growth.

A further distinction in the area of Modern Craft identifies those SMEs and large companies that depend on handwork and craft skills for their survival⁴⁷. Up to now, it could be argued, only a relatively few ‘crafts firms’ have recognised that they can improve their businesses via an orientation towards design.

Access to finance for SMEs

Investment in design transforming the fortunes of SMEs

Small and Medium-sized Enterprises struggle to find the time to look to the future as they are so caught up in the day-to-day challenge of making their businesses work. It is difficult and risky to introduce new ideas and new processes. The concept of investing in design is still alien to many of Europe’s SMEs and is associated with high cost and high risk. Businesses would therefore rather invest in what they have tried and tested before, even though this most likely yields only small levels of change. Investment in design brings about business transformation because it drives more innovative manufacturing, creates new routes to existing markets, (along with the ability to access new markets), builds brand value and challenges a company to think strategically and creatively about its potential.

Opportunities for SMEs to access finance for design investment will therefore drive improved design innovation leading to wealth creation, growth, competitiveness and job creation. Innovative approaches to financing at European and Member State levels, could unlock considerable potential for growth in SMEs utilising design.

For example, larger sums of finance could be made available to a smaller number of SMEs across Europe,

⁴⁴ “The next generation of craftspeople will need increased design education from early on in their vocational training” ⁴⁵ <http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/crafts-micro-enterprises/#h2-1> ⁴⁶ ‘Identification of future skills needs in micro and craft(-type) enterprises up to 2020’, January 2011 http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/skillsneeds_final_report_final_180211_en.pdf ⁴⁷ Examples here may include luxury branded goods companies in different sectors where hand finishing is a pre-requisite for products of the highest quality and distinction, but equally, companies such as Alessi promoting concepts and impulses from the crafts sector into mass produced products.

which would then be committed to a short to medium-term, facilitated programme of transformation through design. This would in turn kick-start a change in the perception of SMEs towards design, seeing it as an investment rather than as a cost. It would build and make available more sophisticated knowledge about embedding design in SMEs. The managers, owners and directors of SMEs would be persuaded of design's effectiveness through seeing a return on design investment as well as benefiting from the associated improvements in internal design management processes which can then enable the on-going replication of proven, new practices.

The Design Leadership Board is aware that the Commission recognises the pressing need to improve SMEs' access to finance through measures to increase the availability and use of bank loan guarantees, together with micro-credit for start-ups and micro companies in particular. It also supports the need to increase SMEs' participation in public procurement contracts⁴⁸. Simplifying the business environment is a key aspect of European policy and the Design Leadership Board draws attention to the Commission's appointment of SME Envoys in each Member State⁴⁹ supporting the growth of small businesses within the framework of the Commission's Small Business Act.

There is a need to consider innovative approaches to funding design

innovation behaviour and practice in Europe's SMEs.

Intellectual property

Despite strenuous efforts in a number of areas to increase the levels of protection of European intellectual property, nevertheless, Europe's SMEs do not yet have an adequately rigorous level of IP protection against companies from non-EU countries.

Examples exist where creative companies have seen their intellectual property poorly imitated overseas, leading not only to a direct loss of business, but also significant damage to their brand when the poor quality, imitation products fail in use. Such infringements of copyright can cost SMEs millions of Euros of lost revenue.

The Design Leadership Board welcomes the recently expanded role of OHIM in the establishment of the EU Observatory for Counterfeiting and Piracy⁵⁰. Nevertheless, it is clear that for design innovation to flourish in Europe, it will be necessary to continue to work relentlessly and comprehensively towards effective methods of enforcing intellectual property rights.

Priorities for action

Priorities for action for Europe's large enterprises:

// THE NEED to ensure adequate, relevant and targeted support

for Europe's large, design-led companies enabling them to maintain their leadership position thereby supporting Europe's positioning on the global stage.

- // THE NEED to support a greater uptake and integration of design management in all of Europe's large companies.
- // THE NEED to nurture and scale up the unique skills-base of Europe's current and future design leaders.
- // THE OPPORTUNITY to identify and support those medium sized companies with the ambition to grow to large companies through increasing their competence in design innovation.

Priorities for action for Europe's Small and Medium-Sized Enterprises:

- // THERE is a need to accommodate and stay abreast of developments in the field of manufacturing and production. New contexts, whilst challenging, are themselves opportunities for innovation and the European design innovation system should not only remain open to such developments but also seek to foster and further them as windows to new breakthroughs and trends.
- // SMES across Europe lack awareness in design management and the tools that are available to support them in introducing and integrating design into their everyday processes and behaviours. There is a need for the development of further information,

⁴⁸ The latest research shows that SMEs secure only 34% of public procurement advertised EU-wide despite their share to the wider economy being 52%. ⁴⁹ http://ec.europa.eu/enterprise/policies/sme/small-business-act/sme-envoy/national-sme-envoys/index_en.htm ⁵⁰ http://ec.europa.eu/internal_market/iprenforcement/observatory/index_en.htm

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PROTECTING THE GROWTH OF DESIGN-LED SMES

Whilst design undoubtedly gives a cutting-edge to SME offerings in the international market, experience has shown that the design contribution of the companies is not always adequately respected or protected. Recently, a leading Spanish SME had one of its products copied by a contractor in a third country, leaving the SME with no legal path of redress. The copying of designs at a commercial scale by international competitors directly endangers Europe's SMEs and the future of the creative industries. A more robust and enforceable regime for protection would ensure Europe profits from design innovation.

resources and methods to support the wider uptake and integration of design as a strategic tool in SMEs across Europe.

// ACCESS to finance is generally difficult for SMEs and there is, in particular, a lack of funding targeted specifically for investment in design and design management.

// EUROPEAN SMEs do not have an adequately rigorous level of IP protection against governments or companies from non-EU countries.

// MANY SMEs across Europe are not able to do their own research and yet they require sophisticated technological and non-technological knowledge in order to innovate. Nor do they have the capacity to participate in huge EU programmes. There is a need for specifically targeted, manageable, design innovation programmes for SMEs with accompanying

measures to support easier access to research funding.

// WITHIN an increasingly complex global context for product and service development, it will be necessary to establish SME-friendly measures to stimulate and improve the co-operation between SMEs and universities, research centres and design services.

RECOMMENDATIONS

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- 11 Establish a pan-European design leadership programme that ensures Europe's next generation of large companies have at their top, leaders who are design aware and more inclined to make better use of design.
- 12 Develop programmes that support European medium-sized companies

- with ambitions to grow into large design-led companies through design innovation.
- 13 Establish mechanisms whereby design knowledge and best-practice transfer can be more effectively enabled between large, design-led companies, academia and SMEs.
- 14 Strengthen design innovation in SMEs through taking into account the specific needs of SME's within EU programmes such as Horizon 2020 and improve their access to member state level programmes.
- 15 Recognise and value apprenticeships and vocational training for generating world-class specialist and skilled crafts-people in traditional and emerging sectors with an increased awareness of design, as a driver of growth and job creation.

STRATEGIC DESIGN ACTION 4:

Design for an innovative public sector

Towards innovative and better public services

Excellent public services are key to enhancing European prosperity by developing an environment that supports human needs and increases the quality of life of citizens. In addition to contributing to happiness and well-being through quality education, social services, health care and other services, an effective public sector is also fundamental for a well functioning private sector.

Without appropriate investments in modern physical and technical infrastructure, in research and development, and without smart regulation for business and society, public services can hold back private sector growth and reduce economic and social prosperity. Investing in public sector skills for design and innovation will not only lead to better public services, but is also likely to stimulate competitiveness and the generation of more high-value jobs across Europe.

In an era of austerity which puts significant pressure on public-sector budgets, governments are searching for

ways to deliver more value at less cost.

Design can play a vital role in ensuring that public services are usable, desirable, affordable and accessible. The design profession brings a whole series of methodologies, tools and techniques that can be used at different stages in the innovation process to improve the efficiency and effectiveness of new products and services⁵¹.

In recent years, there has been an acknowledgement across Europe

of the value of design-led innovation and a growing appetite for increasing the capacity within the public sector to apply design approaches to delivering future public services.

Yet this position is fragile and in most cases remains an aspiration. With a few notable exceptions⁵², the use of design as a methodology for service or policy development is not well understood or exploited, with many organisations lacking the internal



⁵¹ Directors General of Modernisation Agencies in the 27 European Union countries acknowledged that co-design and methods such as customer journey mapping can be effective approaches to public sector reform. European Public Administration Network (EUPAN), Resolution of 58th Meeting, Copenhagen, 7 June, 2012 ⁵² Design for Future Needs (DFFN), MindLab for policy development. Silk, Cornwall Council 'Thinking Room' for service development and through Design Flanders, pilot programmes of design mentoring are showing how investment in design innovation capacity can improve social return on investment.

capacity and culture to take up new approaches to innovation⁵³. Progress has been slow and despite evidence of successes in individual countries and contexts, the reality is that most public sector organisations are facing a range of social, environmental and fiscal challenges that are making investing in innovation, research & development of new services more difficult.

Significant opportunities exist in Europe for leveraging design to ensure that public services are fit for 21st century needs. If design can be harnessed as a tool for innovation, European public services could be transformed and become more agile and resilient to changes in economy, society, technology, and policy.

Opportunities for design in public service innovation

Bold leadership will be needed at an EU, national and regional level to catalyse and speed up the necessary transformation required to tackle the challenges and exploit the opportunities that will arise in the coming decade and beyond. There are five cross-cutting opportunities where Europe can leverage design-led innovation to increase public sector effectiveness.

First and foremost, there is an economic imperative for increasing design capability in the public sector. Public finances and national deficits in the economy present significant challenges for investment, (and

USING DESIGN AT THE DANISH ENTERPRISE AGENCY TO MAKE IT SIMPLER TO REGISTER A BUSINESS

To make the creation of new businesses easy, the Danish Enterprise Agency provides a website for registering new businesses. The entrepreneur must select an 'industry code' that describes the business' activity. If a business is in an emerging field or has multiple activities, this can be challenging which, in turn, leads the entrepreneur to telephone or visit the Agency, local government office, or tax authorities in order to find someone to help them. In 2011, MindLab, a design-led innovation unit started by the Danish Government to support the development of effective public services and develop methods for citizen engagement, reviewed the branch code system. MindLab was able to bring together the key actors – both the business users as well as different government agencies with oversight of this data – to design a system that is more intuitive for the user and better integrated from the perspective of the agencies.

Impact on growth and prosperity: An independent review of the design improvements showed that the benefit/cost ratio of the solution, counting the time and money saved for business and the public sector over a 3-year period, would be approximately 20:1.

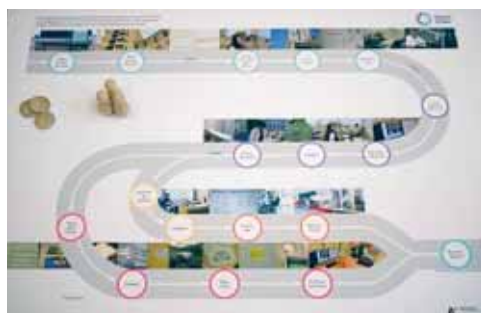


⁵³ Evidence from NESTA shows that for many public sector organisations innovation when it does happen does so despite rather than because of the prevailing organisational culture, Hughes, A., Moore, K. And Kataria, N. (2010) Innovation in Public Sector Organisations, NESTA.

THE PATIENT JOURNEY: A NEW WAY TO UNDERSTAND PATIENT CARE IN SPECIALIST CANCER UNITS

Caring for patients with cancer presents specific challenges as the provision of care is both urgent and long-term as well as emotionally sensitive. A service design team from Aalto University in Finland used new design methods to support staff at a large regional hospital to improve the patient experience. The team modelled a patient's journey through the various treatment phases as a visual board game to open up and structure discussions with patients. The patients were asked to place wooden pawns on touch-points they felt were critical to their experience. An analysis of the interviews led the team to create new service concepts and recommend several improvements throughout the treatment process, such as designing a patient folder for facilitating discussions between doctors and patients and storing important documents during various stages of the cancer treatment.

Impact on growth and prosperity: Adopting a design-based approach allowed the hospital staff to improve the patient experience as well as making better use of limited resources.



R&D), in future public services. Incremental innovation may lead to improvements. However, radical transformation of public service provision will require more creative approaches which, through 'invest to save' approaches, have also been shown to deliver more for less in the medium term.⁵⁴ The British Design Council for example found that for every £1 spent raising design capability, £26 was saved by providers.⁵⁵

Secondly, we need to put people at the centre of future, service re-design and improvement. Transformation without sufficient consideration of user needs can reduce the effectiveness of any investment in innovation. Public service provision in Europe is often standardised around the needs of the provider rather than the 'user': citizens, businesses, and other end-recipients of policies and services. Demands from the public for greater personalisation of services will require public sector managers to understand their 'users' needs much better and provide flexible, agile and in some cases co-produced services. Europe's tradition of active citizenship can be extended to include citizens' participation in the design of new and improved public services. These new design approaches can help public sector organisations create more innovative and economically sustainable solutions that fit with the needs of people and society. A better educated workforce presents new

⁵⁴ See NESTA's 'Radical Efficiency' global case studies. ⁵⁵ Independent evaluation of Public Services by Design, Centrifuge Consulting (2010)

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ENGAGING WITH GOVERNMENT AND THE PUBLIC SECTOR IN THE UK

'Public Services by Design' is a Design Council (UK) mentoring programme that helps service leaders and frontline teams meet service delivery challenges. Design Associates help clients use design to ensure priority services are more effective and efficient and meet the needs of local people. Since 2009, the initiative has already helped a wide range of public sector organisations tackling challenges across a range of service issues including homelessness, adult health and well-being, young offenders, children's health, and business services.

<http://www.designcouncil.org.uk/our-work/support/public-services-by-design/>

Creative Councils is a new programme from NESTA, working with the Local Government Group, to support local authorities to develop and implement radical innovations that meet the challenges of tomorrow.

http://www.nesta.org.uk/areas_of_work/public_services_lab/creative_councils

opportunities to develop social value creation through design.⁵⁶ We envisage resilient communities based on a new 'social contract' that supports active citizens, civic engagement and co-production of innovative solutions with the public sector.⁵⁷

Thirdly, escalating environmental costs will reduce efficiencies and directly impact on front line services. The cost of energy and physical resources that underpin public services will increase in the coming years and environmental pollution taxation and clean up is already costing public sector organisations significant resources. Studies have shown that 80% of the impact of a product or service is determined in the design phase; therefore

action to improve design effectiveness can lead to significant reduction in environmental impact. This will be compounded as global population growth will put further pressure on existing resources, (such as water, housing and schools), and demographic change from an ageing population will place demands on many public services which have not been designed to cope with the use we now expect.

Fourthly, next generation public services will be enabled by increasing levels of sophistication of ICT and other emerging technologies, (from tele-health to electronic tax returns). Public sector investment in next generation broadband will lead to greater digital inclusion in a knowledge economy

and will make digitally-enabled public services a realistic alternative to more costly face-to-face service provision. However these next generation services will need to be well designed and Europe's designers working together with technology innovators can bring decisive skills to bear on this task.

Finally, the increased complexity of challenges and the systemic nature of innovation will call upon governments to work in new ways as mentioned previously. There have been various experiments in 'living labs', 'innovation camps' and open innovation in public services, which are providing tangible examples of new ways of working. As governments seek to re-balance the economy towards public-private collaborative enterprise, designers can bring private sector experience to the development of public sector services, cross-pollinating new ideas and approaches to tackle public sector challenges. This 'T-shaped' approach to combining different knowledge from a range of sectors is invaluable for tackling complex, interrelated challenges.

Priorities for Action

The EU, national, regional and local governments can play a leadership role in demonstrating the value of design-led innovation in driving the kinds of changes that will also stimulate private sector growth. Priorities for action are evident in the areas of

⁵⁶ Jackson, T., *Prosperity without growth et al.* ⁵⁷ OECD report shows citizen participation in innovation in public services as a key priority.



leadership, procurement, skills and fostering better practices:

// **LEADERSHIP:** At a strategic level, good service design approaches can support the co-ordination of actions across systems, including directorates, sectors or institutional silos. Designers can also take on an evangelist role in creating the conditions for innovation and new ideas to flourish. In secondments, this role can catalyse change in institutions working to raise the visibility of innovation, bring new approaches and strengthen existing competencies.

// **INNOVATIVE PUBLIC PROCUREMENT:** Current approaches to procurement, which often favour larger suppliers over small innovative ones, are placed under increased pressure as budgets are reduced and public sector managers retrench from projects that are perceived to be 'high risk'. Various studies are currently showing that improving public procurement in ways that foster innovation in products and services can stimulate

private sector growth whilst simultaneously improving the quality of public service delivery.

// **SKILLS:** Presently Europe lacks the skills to ensure that public sector demand for design is stimulated and can be met both now and in the future. To encourage a joined up approach to design-led innovation in the public sector will require public service 'intrapreneurs' and designers to work together, and to develop new business models, a common language and new practices to understand how design might be applied to emerging public service problems.

// **BETTER PRACTICES:** Design's role within and across public sector organisations when developing personalised, transparent, agile and increasingly co-produced services presents a significant opportunity. Likewise, the role design can play in fostering innovation in public-private enterprises and increasingly civic collaborations⁵⁸ should be a priority as governments seek to re-balance national, regional and local economies and will require

changes to procurement and commissioning policies.

RECOMMENDATIONS

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16 Increase the use of design/ designers in public sector innovation
// Through establishing a Design Lab within the Commission to run small-scale demonstration projects showing the value of design-led public sector innovation.

// Through supporting designers' greater involvement in 'living labs' where social innovation and public services are critical challenges.
// Through exploiting the potential of the European Structural Funds, in particular the European Regional Development Fund on design innovation for social change across policy areas.

17 Build the capacity of public sector administrators to use design methods themselves and to procure design effectively.

// Through design toolkits, case studies and designers in residence for EU institutions and Member States and regions
// Through developing a design curriculum for public administrators' education and professional development with attendant Master Classes in design for effective policymaking and procurement.

Design ensures that public services are usable, desirable, affordable and accessible.

⁵⁸ www.dottcornwall.com

STRATEGIC DESIGN ACTION 5:

Positioning Design Research for the 21st century

Design research is an essential component of the innovation system of Europe. It is relevant to those who have to decide on how to use design strategically. With improved knowledge and insight gained through design research, executives in the private sector and policy-makers in the public sector will take more informed decisions and better capture design's value. This will be achieved through improved design management knowledge in integrating design practice and behaviour in their innovation processes. Design research is a powerful tool to support the introduction, utilisation and management of design to its utmost effectiveness as a funda-

mental aspect of our distinctive capacity in European design innovation.

Design research is undertaken in universities, industry and society. It is multi-faceted covering, for instance, the professional design disciplines, (including product and industrial, services, fashion, graphics, brand, interiors, architecture), design methods, (processes, tools, management), design issues, (people-centred approach, sustainable design), and design history and theory.

Increasingly located in multi-disciplinary programmes reflecting design's contribution to almost every aspect of daily life, design research methods are diverse and include traditional

qualitative and quantitative approaches. Design research is not only deductive and inductive, but also abductive⁵⁹, as design inherently aims at proposing new and better futures.

The most distinctive methods are those of practice and experimentation as is most common in university and business /design departments and which have been identified as contributing to innovation in businesses, organisations and society.

Recent trends in design research are significant for supporting the development of better design innovation in Europe. Firstly, through an increase in inter-disciplinarity, (for example, designers working alongside scientists and social scientists, addressing issues and complex problems such as digital economies, sustainability, democracy and citizenship). Secondly, through the emergence of the new methods that are a recurring theme of this report, (for example, co-design, participatory design and open design), and thirdly, through the emergence of new domains, (including service design, strategic design and policy design).

Recent trends in design research are significant for supporting the development of better design innovation in Europe.

⁵⁹ Abductive validation is the process of validating a given hypothesis through abductive reasoning. This can also be called reasoning through successive approximation. Under this principle, an explanation is valid if it is the best possible explanation of a set of known data. The best possible explanation is often defined in terms of simplicity and elegance.



Currently, design research exists in pockets of excellence across Europe, both in Universities and businesses / organisations. There is a need to nurture and further develop this excellence in order to ensure that the knowledge chain between researchers and between research and application is connected as a strategic benefit for innovation in Europe.

There are two dimensions of design research that are critical to innovation, growth and well-being, at a personal, societal, organisational and environmental level. The two dimensions are:

Design research supporting sustainable business and society

We refer here to research *for* design, (targeted at creating better designs), and research *through* design, (targeted at applying design methods to

TRANSLATING DATA INTO KNOWLEDGE FOR SOCIETAL PROSPERITY AND ECONOMIC GROWTH

We are increasingly able to access complex social and organisational data and information, however to extract value from it we need a fundamental understanding of the how to translate and deliver it effectively. Researchers in the Department of Design at the Politecnico di Milano have established a Density Design research lab to explore the potential of information visualisation and *information design theory and practice* to provide innovative and engaging visual artefacts that enable data-users to share, explore and communicate information and generate understandable insights. Through researching user needs and theories on communication design, one project developed a software tool to help parents visualise multi-dimensional information about the performance of schools.

Impact on growth and prosperity: Research on the fundamentals of design visualisation, legibility, readability and perception resulted in new tools and technologies for understanding complex data, enabling more effective decision-making at all levels of society, business and government.



Aalto University Image Bank

BUILDING FLEXIBILITY AND CHANGE WITHIN HEALTHCARE PROVIDERS

Healthcare provision faces major challenges across Europe, including the challenge of reduced budgets alongside innovation and improvement in diagnosis and treatment technologies, and drug delivery. Innovation in the commissioning of services and care pathways is also required. A research team from Lancaster University, in collaboration with Salford University in the UK, explored how design and other creative methods and tools can help modes of governance and processes in order to commission improved services for patients.

They designed and prototyped tools alongside healthcare professionals. For instance, they collaborated with a Medical Practice to explore and understand how to practice 'design in practice', meaning how they re-design their services as part of their daily activities. The research included observations of daily practice, interviews with key staff and the facilitation of short design sessions. One such design prototype enabled the development of personas, (narratives of typical patients through drawings and stories), aimed at sharing existing knowledge of their patients. A second exercise involved a design game that was aimed at exploring the interpretation of 'urgency' both with staff and patients. This helped to redesign



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activities of the Urgent Care Centre into the Unscheduled Care Service. The research team also identified other similar projects to illustrate the value and impact of similar design methods.

Impact on growth and prosperity: The use of design methods to innovate in healthcare generates efficiencies in delivery whilst enhancing the patient experience. This research provided design tools for healthcare practitioners.

Research '*for*' design concerns
research to support industry
in competing more effectively.

other fields, e.g. co-designing public services)⁶⁰. In both cases, the methods used are aimed at creating new *fundamental knowledge* with a strong concern for application.⁶¹

Research *for* design concerns research to support industry in competing more effectively. It does so by developing new integrated knowledge on the dynamics of people's needs and aspirations, of society and culture, of environmental systems, of businesses and of technologies. We focus here on the development of *fundamental knowledge* that enables us to design more meaningful products, services, infrastructures, processes and systems.

Methods can include understanding people needs and aspirations through observation, empathy, scenario building and co-design (e.g. citizens as co-creators), prototyping, experiments and the use of living labs as mentioned elsewhere in this report.⁶²

Research *through* design contributes to business and society by applying its unique design methods and processes that engage systemic thinking. Examples exist where this has been introduced successfully in public services and organisations⁶³. Nevertheless, there is a need to ensure that SMEs and social enterprises draw on design research expertise in product/service/system design, and that public procurers engage with design research in the task of rethinking, services and systems in the public sector. City leaders also need to engage with

design research in facing the challenge of designing sustainable cities.

Supporting and incorporating research both *for* and *through* design into EU programmes will improve the quality of design innovation in European enterprises and in particular SMEs whilst at a more strategic level, contributing to Europe's ability to rethink consumption, production, and ways of living that support sustainable growth.

Research about the value of design

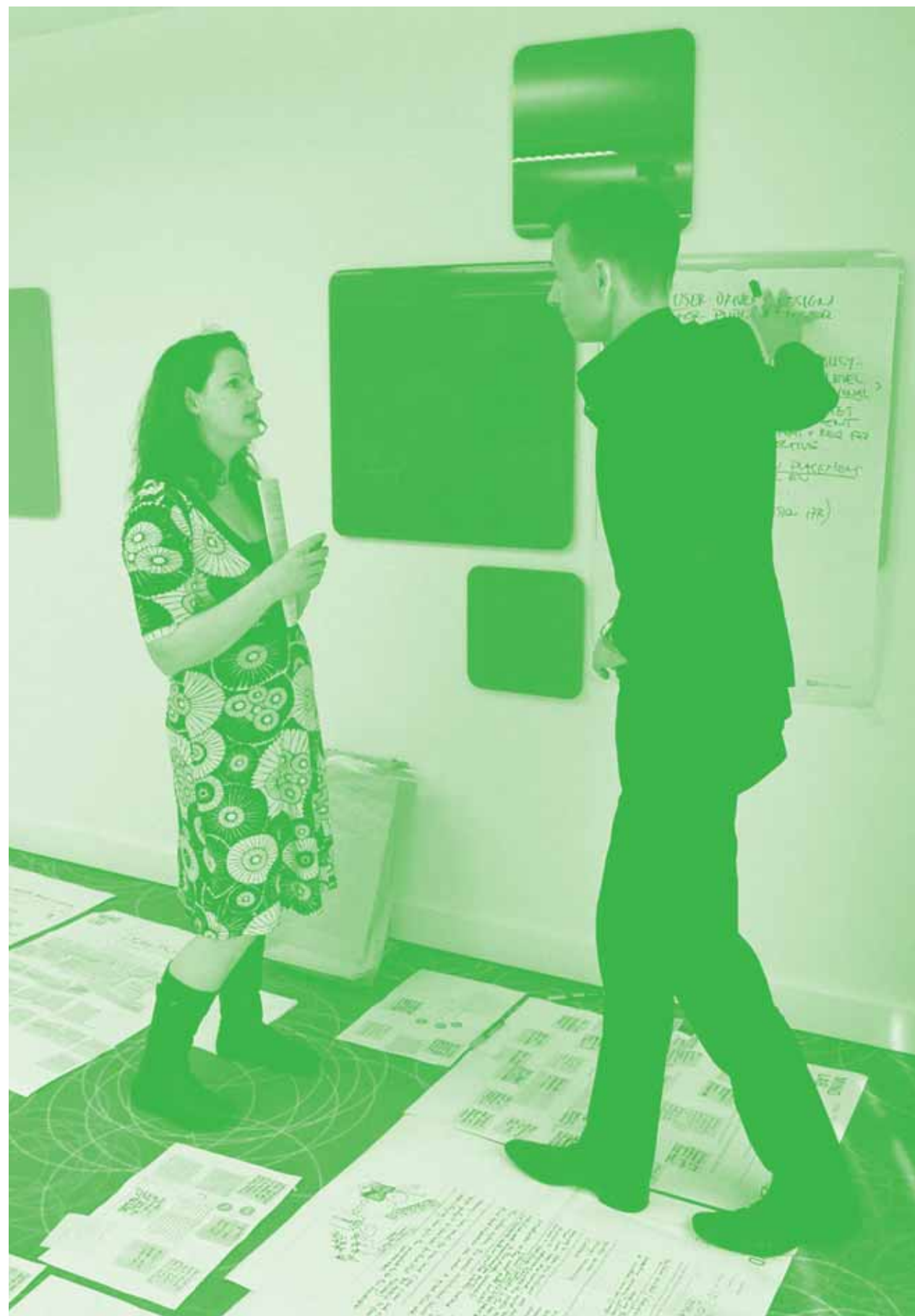
In addition to continuing to support the development of knowledge on how to design more meaningful products and services, we need to better understand the value of design, (research *about* design), how design

is a successful contributor to the economy, society and businesses.

As illustrated above and elsewhere in this document, the use of design and design methods in business and society successfully addresses global challenges. There is a need for a comprehensive knowledge and understanding of the links between: design and economic growth, design and management, design and social well-being, design and environmental sustainability, and design and policymaking. This knowledge – gained through the successful and more widespread implementation of European design research – will enable a better understanding of the multifaceted value of design and therefore equip enterprises including SMEs and public sector organisations to better harness and make use of design's power to transform.



60 Frayling, C. (1993), 'Research in Art and Design', Royal College of Art Research Papers [1], London: Royal College of Art 61 Norman, D. and Verganti R. (2012), "Incremental and Radical Innovation: Design Research versus Technology and Meaning Change". 62 Examples of businesses that have thrived through design research are the Italian manufacturing company Alessi, which has redefined the meaning of kitchenware, growing almost tenfold compared to its competitors as a result and Philips that has redefined healthcare experiences through design. 63 See: the Australian tax office; ThinkLab; the growth in service design consultancies; the Helen Hamlyn Research Centre (RCA London) NHS Ambulance design; the EU Design Against Crime project; Vivacity 2020 – urban design decision-making.



Equip enterprises and organisations to better harness design's power to transform.

Priorities for action

Priorities for action are identified in three areas:

Design innovation in Horizon 2020

There is a need to better embed design and design research in the next EU research, development and innovation programme: Horizon 2020. This will open new opportunities for SMEs and public sector organisations to improve their capability to better apply findings of technological and non-technological research to user-centred, desirable, sustainable and competitive products and services.

In particular, work programmes in various technology and science fields are needed to enable the formation of multidisciplinary consortia in which design is one essential element. Output of science-technology projects would then be required to envision new, meaningful applications with a better design content, better technology usability and better value for users.

An action is needed to better achieve the target of designing for

sustainable business and society and to embed design research in the EU research programmes as a tool for improved and more competitive design innovation.

New knowledge on value of design

A complementary European action is needed to activate a specific research programme to provide the basis for producing knowledge on the value of design, in particular within the following areas:

- // THE ECONOMIC impact of design
- // THE STRATEGIC value of design for competition and design management
- // THE ROLE of design in policy making
- // MEASURING the value (including social value) of design
- // SUPPORTING and developing design research capabilities in experimental and systems thinking and practice

Multi-disciplinary design research communities

Design research communities are still in their infancy given the relative newness of the field. A European action is needed to support the creation of

mixed communities of businesses, professionals, scholars and policy makers with the aim of sharing and disseminating knowledge on design research and on supporting the collaborative development of tools, methods and resources which will increase the competitiveness of European design innovation.

RECOMMENDATIONS

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18 Embed design research in Europe's research system in order to create new knowledge that will enhance innovation whilst, in parallel, evaluating on an on-going basis, the value of design in the Horizon 2020 programme:
// Through including design researchers in cross-sectoral, multi-disciplinary research programmes addressing global challenges such as climate change, food security and health and well-being.
// Through funding the evaluation and communication of the value of design in the Horizon 2020 Programme.

19 Create a European network on design research at EU level to foster greater exchange amongst diverse actors and to encourage and enhance research that supports European design innovation capacity.

STRATEGIC DESIGN ACTION 6:

Design competencies for the 21st century

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Embedding design in the European systems of education and training

A rise in the overall level of design literacy in the citizens of Europe will enable design to become a more generally accepted value and competence in European society, business and industry, as well as public-sector organisations and government.

A raised level of design literacy will ensure future generations of more

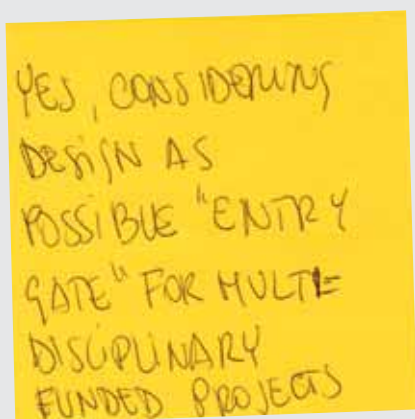
informed consumers and will contribute to a more conducive climate for Europe's future entrepreneurs and innovators driving jobs and growth.

Design literacy is critical at all levels of general education – basic, vocational and higher. At primary and secondary levels, design competencies can be included directly in arts as well as design and technology education but also in cross-curricula approaches. At secondary level, it can be linked, amongst other

possibilities, to environmental, business and science education.

Rooted in the principles of design and designing, at its best, design education fosters creativity and develops a sense of the language of aesthetics and engenders visualisation skills, alongside craft and making skills. It promotes skills in strategic problem-seeking and creative problem-solving, (including the re-framing of problems). Experience in using design methods, (in thinking and doing), brings an understanding of user-centred approaches in decision-making and insight into the culture and emotional value of design as a component of products, services and environments. Young people become aware of the design decisions that exist in almost every aspect of their lives and empowered to make design decisions of their own.

There is no intention here to train every citizen to become a professional designer. No more than it is expected, in providing education in mathematics, that all citizens will become professional mathematicians. Nevertheless, whilst promoting the concept of design literacy for all, it



still remains critical to Europe's future competitiveness that, in parallel, the highest possible quality of specialised design education and training is made available to Europe's current and future professional design and / or design management practitioners.

Embedding design as a fundamental aspect of the European systems of education and training is an ambitious vision that will require a long-term, coordinated approach at both European and Member State levels.

Priorities for action arise in a number of areas.

Priorities for action

Design literacy for all

There is a lack of a shared understanding of design as an integral feature of the education of the citizens of Europe at every level of the Member State's systems of education.

Design literacy complements the fundamental attributes of numeracy

(number) and literacy (word) and empowers design-led behaviour and practice when confronting challenges and problems, in all walks of life.

Design learning also supports improved performance in other subject areas at school. The Sorrell Foundation provides a number of design-led initiatives for children and young people across the UK, bringing them into contact with design and designers. Through encouraging young people to develop their skills as

PROVIDING MODERN CRAFT AND DESIGN SKILLS FOR DISADVANTAGED YOUNG PEOPLE

To enable young people with learning difficulties or disadvantaged backgrounds to gain the necessary skills to enter the craft and design-based employment market, Vienna complements company-based apprenticeships with Vocational Training Centres. These centres offer training in vocational crafts such as catering, metalwork, woodwork, textiles, gardening and construction to young people who would otherwise struggle to enter work life. 1,700 students between the ages of 15 and 18 are accepted each year, receiving support to develop their learning skills as well as craft skills. Many students transfer to company apprenticeships at some point during the four-year study programme. Of those that remain in the programme, 75% find a job immediately after completing their studies. http://www.jaw.at/home/en_information/40/About-us

Impact on growth and prosperity: Young diverse learners gain the necessary craft skills to support the continued growth of Vienna's craft and design-based industries.



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clients, consumers and critics of design, they claim that students “develop work and social skills such as problem-solving, reasoning, communication and team-working, which lead to increased self-confidence and self-esteem.”⁷⁴

The newly formed Creative Education Academies in the UK put design at the centre of the curriculum as, *“it can set young people on the path to economic independence as creative, practical and enterprising adults.”*⁶⁵

Vocational Education

There is a need for the teaching of design innovation competencies to be more widely embedded in vocational education. This would help to raise the potential for design innovation capacity across Europe and support knowledge transfer from creative sectors to young people seeking jobs, for example in Modern Craft, as well as in wider industry.

The opportunity exists to better integrate craft as a complementary component of the European innovation system. Changes to the education system are needed if the concept of Modern Craft is to be better enabled to produce practical artisans with added-value skills in design, modern manufacturing, (including digital technologies), business and entrepreneurship. The teaching of design innovation skills in vocational education requires significant development in order to facilitate this change. However, the right changes will enable

FOCUSING THE SKILLS OF
DESIGN PROFESSIONALS AND
POLICY MAKERS ON THE CITY

The 'Cities Programme' at the London School of Economics (LSE) in the UK brings together designers, architects and policy makers to focus and develop their skills in promoting urban development. A one year Masters course, based around a city design research studio, engages students with real-life urban challenges, providing designers with an opportunity to focus their skills and policy makers to develop an appreciation of the impact that design-based approaches can have. All students gain an insight in to the complexities of city development and an understanding of the role that well-functioning, interdisciplinary teams play in securing successful urban development.

Impact on growth and prosperity: A focused, continuing education allows designers to contribute to pressing social challenges and policy makers to appreciate the role that design can play, all in the service of creating better urban environments.



⁶⁴ Quotation from 'Design Club', one of a number of initiatives run by the Sorrell Foundation in the UK. <http://thesorrellfoundation.com>. ⁶⁵ CET academies provide a rigorous education, inspired by the principles of creativity, innovation and enterprise, and using the concept of design to connect all areas of the curriculum, drive up attainment and increase employability. www.creativeeducationacademies.org.uk ⁶⁶ http://images.businessweek.com/ss/09/09/0930_worlds_best_design_schools/index.htm, 2009. The European schools listed were: Cranfield University/University of the Arts London; Delft University of Technology, The Netherlands; Domus Academy, Milan; Helsinki School of Economics/University of Art and Design Helsinki/Helsinki University of Technology (Now Alto University), Finland; Imperial College/Design London; Royal College of Art/Imperial College London; Umeå University and University of Gothenburg Sweden. In 2007, the list also included Politecnico di Milano, Italy; the University of Oxford Said Business School, UK; ENSCI Ateliers, France and Central St Martin's School of Design, UK.

the ingenuity and skills resident in the craft sector to be more effectively linked to the potential for new product development across industry.

Europe's design schools and business schools – integrating design and business

The European model of design education has been exported all over the world with Europe boasting some of the world's finest, (and oldest), design schools. Many of the schools are internationally competitive with, for example, eight institutions featured in the 'Bloomberg 2009 Business Week D-Schools Top 32 Global List'.⁶⁶ It is estimated that approximately 300–350 European design schools produce somewhere in the region of 25,000 graduates annually.⁶⁷ The number of PhDs in design and design research also continues to grow.

Europe's design schools already encourage entrepreneurship and support innovation skills with strong links to business and industry.⁶⁸ However, this activity often remains at the level of

a designed product or service concept. More could be done to help design graduates to engage with design's role in business as a strategy for innovation in order to help them develop strategic thinking skills for business. And, in support of recommendation 16 (p 61), considerable effort is required to bring design schools' connectivity with the public sector institutions up to the same level as it is currently in the private sector.

Europe's business schools are equally renowned and offer internationally leading MBA programmes. Many of them are already aware of the role of design in modern product and service development and understand design as a strategic tool for management and innovation. However, yet further effort is needed to ensure a more widespread uptake of design as a strategic, cross-disciplinary tool for business, where design's strategic role in business is emphasised and where a cross-disciplinary approach to design, business, and technology is encouraged. This may entail the

initiation of more innovative forms of collaboration between design schools and business schools.

The potential for integration in Higher Education across discipline boundaries is well exemplified by the merger of three Finnish universities to form the new multi-disciplinary Aalto University in Finland in 2011.⁶⁹

Integrating design education into other programmes and initiatives in European institutions and in Member States

Design should be more broadly represented as a component of non-design specific programmes and initiatives at the European, national and regional levels. An integrative approach would include the introduction of design education into relevant education and training programmes in science, technology, innovation and innovation management, as well as in public sector education and training.

Such an approach might, for example, facilitate the introduction of design into the proposed Masters and PhD programmes that are being developed for the European Institute of Innovation & Technology (EIT)⁷⁰ in partnership with the existing Knowledge Innovation Communities (KICs)⁷¹.

Building on the recent work of the EU SEE project⁷², it is also possible to envisage an education programme for the introduction of design methodologies at regional level and for local government to foster the ongoing

The European model of design education has been exported all over the world.

⁶⁷ Estimate by the secretariat of the International Association of Universities and Colleges of Art, Design and Media – Cumulus ⁶⁸ As one example of many across Europe, the 2012 BA(Hons) Product Design programme of Central St Martin's London included Client Projects delivered in collaboration with John Lewis, Nokia and LG. ⁶⁹ The Helsinki School of Economics, the University of Art and Design Helsinki and Helsinki University of Technology ⁷⁰ <http://eit.europa.eu/education> ⁷¹ <http://eit.europa.eu/kics> ⁷² www.see-project.org



Design literacy is critical at all levels of general education – basic, vocational and higher.

development of best practice in design policy-making.

A further approach could seek to embed design in Europe-wide education initiatives including, for example, the Commission's future programme, 'Erasmus for All', which foresees a new category of transnational partnerships, among them a pilot project 'Sector Skills Alliances.' These will encourage transnational partnerships involving organisations with expertise on specific economic sectors, bodies and authorities in charge of the design of vocational training curricula, as well as training providers. Design could, for example, be recognised within this programme as a priority sector.

CPD⁷³ for professional design practice in Europe

The most successful design companies have developed a deep awareness of the strategic design in business as well as in the public sector. Designers must

continually improve their ability to be comfortable and effective at communicating with senior management operating at the strategic level of businesses and organisations and capable of integrating into multi-disciplinary teams at different phases of product and service development.

The Continuing Professional Development of professional designers calls for new training offers especially in the areas of strategic management, multidisciplinary product and service development processes, user-driven innovation and the social impact of design. Support and training is also needed for designers to enable them to better integrate into public sector environments.

The professional practice of design continues to evolve rapidly. Traditional discipline boundaries are blurring and the demands of clients are increasing in complexity as they face the challenges of the global economy.

Europe needs to act strategically to build on strengths and to drive and maintain the global leadership of its design sector.

RECOMMENDATIONS

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The Design Leadership Board recognises that decisions on the structuring and implementation of education and training in the EU rest largely with Member States and that a single initiative is not possible to implement as a top-down approach across Europe. These recommendations are therefore presented for the attention of the Commission and individual Member States.

20 Raise the level of design literacy for all the citizens of Europe by fostering a culture of 'design learning for all' at every level of the education system.

21 Encourage Member States to support the development of design competencies for the 21st century:

- // Through embedding the strategic role of design across disciplines in higher education.
- // Through strengthening continuing professional development programmes for design professionals.
- // Through embedding design in the training of apprentices.

73 Continuing Professional Development

Challenge: How to... benefit of enterprises
Theme:
Group no/name: 1A

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This report has focused on the integration of design into Europe's innovation behaviour and practice in line with the goals and objectives of the Innovation Union.

The twenty-one recommendations are presented to the European Commission, the institutions of the European Union and Member States at national and regional levels. They have been constructed to enable and empower Europe's stakeholders and actors to embed design as a key strategy for innovation across Europe.

If implemented with the spirit and vision intended, these recommendations will have a far-reaching and long-lasting impact on Europe's design innovation capability.

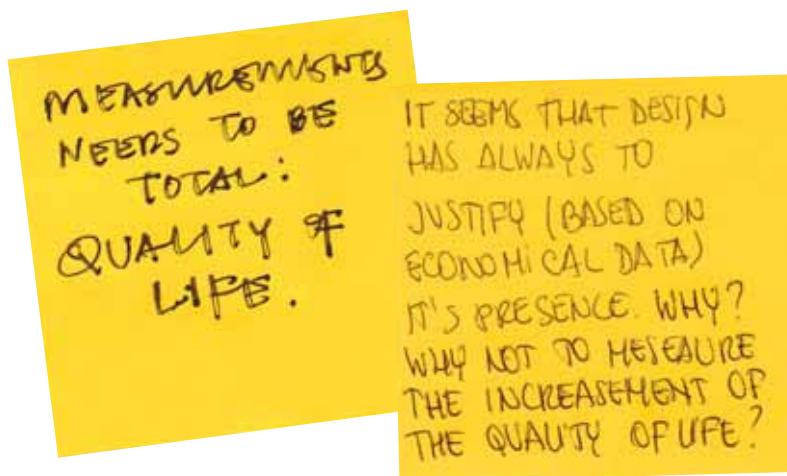
The need for leadership from the European Commission has been stipulated elsewhere in this document and the European Design Leadership Board has remained

sensitive throughout to the need for amenable framework conditions within which the recommendations are to be implemented. Its recommendations target design policy, design promotion and design support for the private and public sectors, as well as education and research.

In order to support the European Commission in implementing the recommendations, the Design Leadership Board proposes:

// A. COMMUNICATION
– raising awareness

Deliver a Europe-wide, high-level and appropriately targeted communication and advocacy programme at European, Member State and



design stakeholders levels in order to raise awareness of the policy recommendations and enable engagement with their implementation.

This communication and advocacy programme will, in parallel, involve the key stakeholders and actors in Europe's design landscape, (including European-level design organisations, national and regional design centres and trade associations).

// B. PERMANENT dialogue and future action at the European level

Establish a permanent dialogue on design with the European Commission, through an organisation like BEDA that provides Europe-wide coverage to provide a European-level focus for all matters relating to the development

and growth of design in Europe's innovation policy. It would be tasked with pursuing future action on the policy recommendations of this report and it would be the guardian of their implementation and uptake.

A number of directions can be envisaged: a newly formed mechanism; a follow-on from the existing Leadership Board, or alternatively, it could be linked to an established, representative and long-term player in the design field already operating at the European level.

Further options may draw upon successful models already adopted by the Commission such as the network of SME Envoys. We envision here a design innovation Envoy for the Commission tasked with driving the design agenda for innovation across the Member States.

Whichever route is chosen, the Design Leadership Board sees a visible and permanent dialogue with the EU as a crucial building block in ensuring the long-term implementation of the recommendations of this report.

// C. MONITORING progress

Establish a mechanism to enable the continuous monitoring of progress at a strategic level, overseen by the Leadership Board, in the on-going implementation of the recommendations.

Following the conclusion of its two-year mandate, the Design Leadership Board proposes that it may continue to be involved in the work of the committee, in full or in part, in order to maintain continuity and adherence to the aims and spirit of this report.

Establish a permanent dialogue on design with the European Commission, through an organisation like BEDA.



Appendix 1

Glossary

- // **CO DESIGN** A community centred methodology that designers use to enable people who will be served by a designed outcome to participate in designing solutions to their problems.⁷⁴
- // **DESIGN** Design is perceived in this report as a broadly-defined activity of user-centred innovation that focuses on people in the process of defining new products and services; as a sector in its own right of specialised, professional economic activity by trained and qualified practitioners and as a tool for business and organisational growth at the highest strategic level. In addition to its economic benefits, design also encompasses sustainable and responsible behaviour contributing positively to an innovative society and improved quality of life.
- // **DUTY OF CARE** Duty of care is a legal obligation imposed on an individual requiring that they adhere to a standard of reasonable care while performing any acts that could foreseeably harm others. It is the first element that must be established to proceed with an action in negligence. In business, “the duty of care addresses the attentiveness and prudence of managers in performing their decision-making and supervisory functions.”⁷⁵
- // **FUTURE FACTORY** A concept encompassing the emerging post-industrial computational and communication technologies that are making direct digital manufacturing possible, including 3D printing, additive manufacturing and rapid prototyping.
- // **GROWTH** The concept of growth in this report refers to balanced economical growth, aiming at full employment and social progress and a high level of protection and improvement of the quality of environment. It shall promote scientific and technological advance focusing on effective use of finite resources and their gradual substitution with renewable ones. It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child.
- // **HOT SPOT** Referred to in this report as a ‘Centre of design excellence’. Geographical area with a high concentration of enterprises specialising in design
- intensive business services. Economist and urban theorist Richard Florida originally coined the concept of a Hotspot in his book, “The Rise of the Creative Class.” It refers to professions in areas that include the arts, media and entertainment as well as health care, engineering and law; exhibiting a higher level of economic development. An example of a hotspot – in the context of this report, a centre of design excellence – is the Stuttgart region with its numerous enterprises specialising in automotive design.
- // **INCUBATOR** Business incubators are programs designed to support the successful development of entrepreneurial companies through an array of business support resources and services. Successful completion of a business incubation program increases the likelihood that a start-up company will stay in business for the long term. Incubators differ from research and technology parks in their dedication to start-up and early-stage companies.
- // **IP** Intellectual property.
- // **LIVING LAB** A living lab is a people-centred, open-innovation ecosystem, often operating

⁷⁴ From the Design Council. www.designcouncil.org.uk/resources-and-events/designers/design-glossary/co-design/ ⁷⁵ Alan R. Palmiter, Corporations: Examples and Explanations

in a territorial context, (e.g. a city or a region), integrating concurrent research and innovation processes within a public-private-people partnership. The European Network of Living Labs (ENoLL) is the international federation of benchmarked Living Labs in Europe and worldwide. Founded in November 2006, under the auspices of the Finnish European Presidency, the network has grown in five 'waves', with 274 Living Labs having been launched to date. A not-for-profit association, ENoLL is Headquartered in Brussels.

// **MICRO COMPANY** Defined in the EU as a company of between 10 and 49 employees and with a turnover or Balance Sheet total greater than €2m.

// **MICRO FACTORY** A small-scale machining and assembly area utilising micro machine tools and requiring only 500mm x 700mm working area. First proposed by the Mechanical Engineer Laboratory (MEL) of Japan in 1990.

// **NACE** Nomenclature Générale des Activités Économiques dans les Communautés Européennes. NACE is the acronym used to designate the various statistical

classifications of economic activities developed since 1970 in the European Union (EU). NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics, (e.g. production, employment, national accounts), and in other statistical domains.

// **OPEN DESIGN** Based on the methods of open-source design, new approaches to intellectual property and facilitated by the internet, Open Design enables the collaborative development of physical products, machines and systems through the use of shared design information.

// **PEOPLE-CENTRED DESIGN** People-centred design is focused upon human needs and aspirations at a broader and deeper level than that of designing for people as users, (see user-centred design below). A people-centred approach can open out new, previously un-imagined opportunities for product and service development.

// **POWER DISTANCE** "Power distance is the extent to which less powerful members of institutions and organizations

within a country expect and accept that power is distributed unequally."⁷⁶

// **QUALITY OF LIFE** The concept emerged as a response to objective measures of material progress including gross domestic product (GDP). Quality of life, which has gained prominence in social research study since the 1970s, is a broad concept concerned with overall well-being within society. Its aim is to enable people, as far as possible, to achieve their goals and choose their ideal lifestyle. In that sense, the quality of life concept goes beyond the living conditions approach, which tends to focus on the material resources available to individuals. Three major characteristics are associated with the quality of life concept (Fahey, Nolan and Whelan, 2003): 1. Quality of life refers to individuals' life situations; 2. Quality of life is a multi-dimensional concept; 3. Quality of life is measured by objective as well as subjective indicators."⁷⁷ (Eurofound, 2004)

// **RD&I** Research Development and Innovation.

// **SME** Small and Medium-sized Enterprise. Defined in the EU as a company of between 50

⁷⁶ Geert Hofstede, *Culture's Consequences: International Differences in Work-Related Values* ⁷⁷ Eurofound, 2004 and 2007, www.eurofound.europa.eu/pubdocs/2004/105/en/1/ef04105en.pdf

and 250 employees and with a turnover ranging from €10m to €50m or a Balance Sheet total of €10m to €43m.⁷⁸

// USER-CENTRED DESIGN

User-centred design means that design innovation is focused on users' needs and the delivery of new benefits to them in their use of products, services, environments, systems etc. A user-centred approach is a strong support to incremental innovation.

// USER-DRIVEN DESIGN User-driven design means innovation that comes from users, leading to new approaches and methods to engaging end-users in the design process from the outset.

// SYSTEMS THINKING / SYSTEMIC Systems thinking is an holistic approach to problem solving that recognises 'problems' as inter-related parts of an overall system, that is, as parts of the greater whole.

⁷⁸ http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm

Appendix 2

Co-design policy workshop

The following participants attended the co-design, one-day workshop held in Brussels on 21st March 2012:

- | | | |
|---|--|--|
| // CHRISTIAN BASON * | // GIOVANNI ANTONIO COCCO * | // PETER DRÖLL |
| Director of Innovation,
MindLab, Denmark | Managing Director,
Istituto Nazionale Ricerche
Turistiche ISNART, Italy | Head of Unit, Innovation
Policy, DG Research and
Innovation, European
Commission, Belgium |
| // ANDRÁS BAUER | // LUISA COLLINA | // ISABELLE DUFOUR |
| Head of the Marketing
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Corvinus University
of Budapest, Hungary | Professor, School of Design
Politecnico di Milano, Italy | Director, ISIPCA, France |
| // TULGA BEYERLE | // RACHEL COOPER * | // ROBIN EDMAN |
| Director of Vienna Design
Week, Austria | Professor, Lancaster University,
United Kingdom | Chief Executive Officer,
Swedish Industrial Design
Foundation, Sweden |
| // JO-ANNE BICHARD | // NICOLA DALLATANA | // RICHARD EISERMANN |
| Research Fellow,
Helen Hamlyn Centre for
Design, United Kingdom | Vice President Regulatory
Affairs and Government
Relations, Segway Inc., Italy | Strategic Director,
PROSPECT, United Kingdom |
| // BEATA BOCHIŃSKA | // DEBORAH DAWTON * | // BERNARD FAUCONNIER |
| President, Institute of Industrial
Design Warsaw, Poland | President, BEDA Bureau of
European Design Associations,
United Kingdom | Senior Vice President, Lafarge,
France |
| // GAVIN CAWOOD | // DUARTE CABRAL DE MELLO | // SEVERIN FILEK |
| Operations Director, Design
Wales, United Kingdom | Senior Urban Planner, Lisbon
EXPO '98, Portugal | Director, Design Austria,
Austria |
| // JULIEN CEDER | // RICARDO DE OSTOS | // BONIFACIO GARCIA PORRAS |
| Designer,
International Marketing,
Veuve Clicquot, France | Architect, NaJa & deOstos,
United Kingdom | Head of Unit, Policy
Development for Industrial
Innovation, DG Enterprise
and Industry, European
Commission, Belgium |
| | // MATIAS DEL CAMPO | // DEBORA GIANNINI |
| | Chief Executive Officer,
SPAN-ARCH, Austria | Istituto Guglielmo Tagliacarne,
Italy |
| | // RALF DIEMER | // CLIVE GRINYER |
| | Head of Brussels Office,
VDA German Association
of the Automotive Industry,
Belgium | Director of Customer
Experience, Cisco IBSG,
United Kingdom |

- | | | |
|--|---|---|
| // CHRISTIAN GUELLERIN
Director, L'École de design
Nantes Atlantique, France | // TITUS KOCKEL
Zentralverband des Deutschen
Handwerks, Germany | // MASSIMO MENICHINELLI
Producer, Aalto University,
Finland |
| // ILONA GURJANOVA
President, Estonian Association
of Designers, Estonia | // TAPIO KOSKINEN
Secretary General,
Aalto University, Finland | // JAVIER NIETO
Chairman, Santa & Cole, Spain |
| // ANDREAS HERRMANN
Professor, University of
St. Gallen, Switzerland | // JUHA KRONQVIST
Facilitator, Aalto University,
Finland | // EUSEBI NOMEN
Professor, La Salle University,
Spain |
| // HELENA HYVÖNEN
Dean, Aalto University, Finland | // ANDREJ KUPETZ *
Chief Executive Officer, German
Design Council, Germany | // EIJA NYLUND
European Regions Research &
Innovation Network – ERRIN,
Belgium |
| // ANNA SOFIE JACOBSEN
Project Manager, MindLab,
Denmark | // IRENE LAAKSO
Project Coordinator,
Aalto University, Finland | // ISABEL ROIG *
Director General, Barcelona
Design Center, Spain |
| // HELGA JÄGER
Head of Unit, Hessian Ministry
of Economics, Transport,
Urban and Regional
Development, Germany | // LAURA LEE
Professor,
School of Architecture
Carnegie Mellon University,
United States of America | // ULRICH ROMER
Head of the Division, German
Federal Ministry of Economics
and Technology, Germany |
| // NANNETTE JAKOWSKI
Architect, NaJa & deOstos,
United Kingdom | // MIKKEL LEIHARDT
Head of Strategy and
Development, Danish Ministry
of Science, Innovation and
Higher Education, Denmark | // KLEMENS ROSSNAGEL *
Head of Concept Design
Munich, Audi Brand Group,
Germany |
| // OLLI-PEKKA KALLASVUO *
Chairman of the Committee
supporting World Design
Capital Helsinki 2012, Finland | // MARTTI MÄNTYLÄ
Chief Strategy Officer, EIT ICT
Labs Knowledge and Innovation
Community, Finland | // PEKKA SAARELA
Design Policy Expert,
Aalto University, Finland |
| // BÉLA KARDON
Head of Science
Policy Department,
Hungarian Ministry of
National Resources, Hungary | // STEVE MASTERSON
Partner & Chief Operating
Officer, KISKA GmbH, Austria | // JULIA SCHAEFER
Service Designer and Associate,
NHS, United Kingdom |

// EBERHARD SCHREMPF
Managing Director, Creative
Industries Styria, Austria

// CHRISTINE SIMON
Policy Officer, Policy
Development for Industrial
Innovation, DG Enterprise
and Industry, European
Commission, Belgium

// ANDREA SIODMOK *
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Council, United Kingdom

// MICHAŁ STEFANOWSKI
Vice President, The Association
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Poland

// MARCO STEINBERG
Director of Strategic Design,
Finnish Innovation Fund,
Finland

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Design Academie KHLiM,
Belgium

// MICHAEL THOMSON
Director, Design Connect,
United Kingdom

// LIVIA TIRONE *
Architect, Founder of Tirone
Nunes, Portugal

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Microgiants Industrial Design
GMBH, Austria

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// ANETTE VAERING
Project Manager, MindLab,
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// JOHAN VALCKE
Director, Design Flanders,
Belgium

// RUDY VAN HOVAERDE
Head of Retail, Retail Shop
Luxury, Belgium

// ROBERTO VERGANTI *
Professor, Politecnico
di Milano, Italy

// STÉPHANE VINCENT
Director, La 27e Region, France

// THIERRY WASSER *
Perfumer, Guerlain, France

// BERND ZIMMER
Austrian Federal Ministry of
Economy, Family and Youth,
Austria

The participants worked in seven groups, each targeting a specific theme. The themes are reflected within and across the six areas for strategic design action. The workshop consisted of three phases:

- // IDENTIFYING and exploring the key themes
- // GENERATING and selecting policy ideas
- // DEVELOPING and presenting up to three of the most promising policy ideas.

The workshop generated hundreds of ideas and seventeen developed concepts that were subsequently used by the Design Leadership Board when preparing its policy recommendations.

The photographs on pages 16, 19, 20, 23, 28, 31, 32, 39, 60, 66, 72, 74 and 77 have been taken at the co-design policy workshop. The post-its used to illustrate this report are all from the co-design policy workshop.

* Members of the Design Leadership Board

Appendix 3

Design promotion and design support organisations operating at Member State and regional levels

The following table, provided by BEDA, lists national and regional design centres and design support organisations across the countries of Europe, including Norway, Switzerland and Turkey.

creativ wirtschaft austria	AT	www.creativwirtschaft.at
Creative Industries Styria (CIS)	AT	www.cis.at
Wallonie Design	BE	www.walloniedesign.be
WBDM (Wallonie Bruxelles Design Mode)	BE	www.wbdm.be
Design Flanders	BE	www.designvlaanderen.be
Design Innovation	BE	www.designinnovation.be
Croatian Design Center – HDC	HR	www.hdc.com.hr
Croatian Centre for Design/Croatian Chambre of Economy	HR	www.hgk.hr
Czech Trade	CZ	www.czechtrade.cz
Regional Development Agency of South Bohemia – RERA	CZ	www.rera.cz
Dansk Design Center	DK	www.ddc.dk
Estonian Design Centre	EE	www.edi.ee
Design Forum Finland	FI	www.designforum.fi
APCI – Agence pour la Promotion de la Création Industrielle	FR	www.apci.asso.fr
ARDI	FR	www.ardi-rhonealpes.fr
Cité du Design	FR	www.citedudesign.com
Design in Pays de la Loire	FR	www.paysdelaloire.fr
Lille Design	FR	www.lille-design.com
4 Design Bordeaux	FR	www.4design.fr
Design Marseille	FR	www.designmarseille.org
VIA – Valorisation de l'Innovation dans l'Ameublement	FR	www.via.fr
Le Lieu de Design	FR	www.lelieududesign.com
Bayern Design GmbH	DE	www.bayern-design.de
Design Zentrum Nordrhein Westfalen	DE	www.red-dot.de
Face-to-Face	DE	www.face-to-face.eu
IF	DE	www.ifdesign.de
Internationales Design Zentrum Berlin (IDZ)	DE	www.idz.de
Descom Mainz – Designforum Rheinland-Pfalz	DE	www.descom.de
Wilhelm Wagenfeld Haus	DE	www.wwh-bremen.de
Hessen Design e.V.	DE	www.hessendesign.de
Hamburg und Design	DE	www.hamburgunddesign.de
Rat für Formgebung – German Design Council	DE	www.german-design-council.de
Design Center Stuttgart	DE	www.design-center.de/english
KEPA – Business and Cultural Development Centre – KEPA	EL	www.e-kepa.gr
EIDD Design for all Europe	EU	www.designforalleurope.org
Hungarian Design Council	HU	www.hipo.gov.hu/English/formaterv
Iceland Design Centre	IS	www.icelanddesign.is
Centro Sperimentale del Mobile	IT	www.csm.toscana.it
Consorzio Poli.design	IT	www.polidesign.net
Institute of Creative Advertising and Design (ICAD)	IE	www.icad.ie
Dizaina Informacijas centrs	LV	www.dic.lv
Lithuanian Design Forum	LT	www.dizainoforumas.lt/en.php
European Design Centre – EDC	NL	www.edc.nl
Premisla	NL	www.premisla.org
Norwegian Design Council – Norsk Designråd	NO	www.norskdesign.no
Silesian Castle of Art and Enterprise	PL	www.zamekcieszyn.pl/
Gdynia Design Centre	PL	www.centrumdesignu.gdynia.pl
Kielce Design Centre	PL	www.designcentrumkielce.com
Wielkopolska Design Centre	PL	www.concordiadesign.pl

Polish Design Centre	PL	www.youareinposnan.pl/en
Cieszyn Castle	PL	www.zamekcieszyn.pl
Institute of Industrial Design	PL	www.iwp.com.pl
Centro Português de Design	PT	www.cpd.pt
Remade In	PT	www.remadeinportugal.pt
Belgrade Design Week – BDW	RS	www.belgradedesignweek.com
Mikser Festival	RS	www.mikser.rs/en/mikser-festival/about.html
Design Slovakia	SK	www.designin.sk
SDC – Slovak Design Centre – Slovenské centrum dizajnu	SK	www.sdc.sk
Biennial of Industrial Design – BIO	SI	www.bio.si
BCD Barcelona Design Centre	ES	www.bcd.es
Beaz Bizkaia – Creativity Centrum Bilbao	ES	www.bai.bizkaia.net
Centro Aragones de Diseño Industrial (CADI)	ES	www.aragon.es/cadi
ENISA – Empresa Nacional de Innovación SA	ES	www.enisa.es
SVID – Swedish Industrial Design Foundation	SE	www.svid.se
– Stiftelsen Svensk Industridesign		
Swiss Design Transfer	CH	www.swissdesigntransfer.ch
Kale Design Centre – Kale Tasarim Merkezi	TR	www.kaletasarimmekezi.com
South West Design Forum	UK	www.swdf.co.uk
Essex County Council & Designers network	UK	www.designersnetwork.co.uk
Design Council/CABE	UK	www.designcouncil.org.uk
Designed in Devon	UK	www.designedindevon.co.uk/
RTC North	UK	www.designnetworknorth.org
South Coast Design Forum	UK	www.sedf.org.uk/
South East & South West uk – The Design Programme	UK	www.thedesignprogramme.co.uk/
West of England Design Forum	UK	www.wedesignforum.co.uk/
Centre for Design Innovation	UK	www.designinnovation.ie
Helen Hamlyn Centre for Design	UK	www.hhc.rca.ac.uk
Design Wales – Dylunio Cymru	UK	www.designwales.org

Appendix 4

Professional Design and Designers' Associations

The following table, provided by BEDA, lists the Professional Design and Designers' Associations of Europe, including Norway, Switzerland and Turkey.

Designaustria	AT	www.designaustria.at
Bund Österreichischer Innenarchitekten, BOIA	AT	www.innenarchitekten.at
UDB – Union des Designers en Belgique – Unie der Designers in België	BE	www.udb.org
vVIO	BE	www.vvio.be
Associate van Interieurarchitekten van België, AlnB	BE	www.ainb.be
Association of Applied Artists and Designers of Bosnia	BA	www.ulupubih.com.ba
Croatian Designers Association – HDD	HR	www.dizajn.hr
Association of Graphic Design	CZ	www.aug.cz
Czech Union of Graphic Design	CZ	www.uniegd.cz
Danish Designers – Danske Designere	DK	www.danishdesigners.com
Estonian Association of Designers – Eesti Disainerite Liit	EE	www.edl.ee
Estonian Society of Interior Architects	EE	www.esl.ee
Association of Finnish Work	FI	www.avainlippu.fi
Finnish Association of Designers – Ornamo	FI	www.ornamo.fi
Alliance Française des Designers	FR	www.alliance-francaise-des-designers.org
Association Design Communication	FR	www.adc-asso.com
Allianz German Designer – AGD	DE	www.agd.de
VDID – Verband Deutscher Industrie Designer e.V.	DE	www.vdid.de
Bund Deutscher Innenarchitekten, BDIA	DE	www.bdia.de
Association of Hungarian Graphic Studios	HU	www.aranyrajzszog.hu
Association of Hungarian Interior Designers	HU	www.lakberendezok.hu
Design Business Ireland (DBI)	IE	www.designbusinessireland.org
Institute of Designers in Ireland – IDI	IE	www.idi-design.ie
ADI – Associazione per il Disegno Industriale	IT	www.adi-design.org
AIAP – Associazione Italiana Progettazione per la Comunicazione Visiva	IT	www.aiap.it
AIPI – Associazione Italiana Progettisti d'Interni	IT	www.aipi.it
Latvian Designers' Society (LDS)	LV	www.design.lv
Lithuanian Designers' Society	LT	www.ldis.lt
Design Luxembourg a.s.b.l.	LU	www.designluxembourg.lu
BNO – Beroepsorganisatie Nederlandse Ontwerpers	NL	www.bno.nl
GRAFILL	NO	www.grafill.no
SPFP – The Association of Industrial Designers in Poland	PL	www.spfp.diz.pl
– Stowarzyszenie Projektantów Form Przemysłowych	PL	www.stgu.pl
STGU (The Association of Applied Graphics Designers)	PT	www.apdesigners.org.pt
APD – Associação Portuguesa de Designers	SK	www.zpds.sk
Association of Industrial Designers of Slovakia	SI	www.dos-design.org
DOS – Slovene Designers Association – Drustvo Oblikovalcev Slovenije	ES	fad.cat/contents/view/home/association
ADG-FAD	ES	www.adp-barcelona.com
ADP – Associació de Dissenyadors Professionals	ES	www.dimad.org
Madrid Designers' Association – Dimad	ES	www.adicba.org
ADIC – Asociación Diseñadores Industriales Córdoba	ES	www.aepd.es
AEPD	SE	www.sverigesdesigner.se
Swedish Association of Designers – Sverigesdesigner	CH	www.swiss-design-association.ch
SDA – Swiss Design Association,	CH	www.vsi-asai.ch
Association of Swiss Interior Architects, VSI ASAI	TR	www.etmk.org.tr
Turkish Industrial Design Association	UK	www.csd.org.uk
Chartered Society of Designers (CSD)	UK	www.dba.org.uk
DBA – Design Business Association	UK	www.britishdesigninnovation.org
British Design Innovation (BDI)	UK	www.bida.org
British Institute of Interior Design, BIID		

Appendix 5

The EU NACE Code statistical system

NACE is the 'statistical classification of economic activities in the European Community' and is the subject of legislation at the European Union level, which imposes the use of the classification uniformly within all the Member States.

The most recent revision of the NACE codes in 2009 included for the first time a code 74:10 for Specialised Design Activities⁷⁹. The revision of the code reflects more accurately than before, the nature of specialised design activity and includes in particular industrial design.

The NACE class 74:10 now reads:

// FASHION design related to textiles, wearing apparel, shoes, jewellery, furniture and other interior decoration and other fashion goods as well as other personal or household goods

// INDUSTRIAL design, i.e. creating and developing designs and specifications that optimise the use, value and appearance of products, including the determination of the materials, mechanism, shape, colour and surface finishes of the product, taking into consideration human characteristics and needs, safety, market appeal in distribution, use and maintenance

// ACTIVITIES of graphic designers

// ACTIVITIES of interior decorators

This class excludes:

// DESIGN and programming of web pages, see 62.01

// ARCHITECTURAL design, see 71.11

// ENGINEERING design, i.e. applying physical laws and principles of engineering in the design of machines, materials, instruments, structures, processes and systems, see 71.12

⁷⁹ http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-015/EN/KS-RA-07-015-EN.PDF

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