



Federal Ministry
of Economics
and Technology

Federal Government Commissioner
for Culture and the Media



Cultural and Creative Industries
Initiative of the
Federal Government

The cultural and creative industries in the macroeconomic value added chain

Impact chains, innovation, potentials

Summary of an expert report compiled on behalf of the German Federal Ministry of Economics and Technology

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Authors

Prognos AG

Dr. Olaf Arndt
Kathleen Freitag
Florian Knetsch
Fabian Sakowski
Rada Nimmrichter

Fraunhofer ISI

Dr. Simone Kimpeler
Dr. Sven Wydra
Dr. Elisabeth Baier



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1. Introduction

Cultural and creative industries are a harbinger for the increasingly knowledge-based economy in Germany. Thanks to their ability to solve problems and the strong emphasis placed on innovations, the cultural and creative industries act as a driver of innovation for other sectors as well and contribute to making the economy as a whole more competitive. The cultural and creative industries create new user experiences and embellish products and services with an emotional appeal, which renders innovations applicable and marketable.

In 2010, the cultural and creative industry contributed approx. 63.7 billion Euros to the gross value added in Germany and is therefore ranked as one of the country's most important economic fields alongside sectors like automobile manufacturing, mechanical engineering and the information and communication technologies. Its high degree of heterogeneity is a defining characteristic of the cultural and creative industry: its actors include performing artists and artists, musicians, journalists, media as well as marketing and advertising companies, designers and the makers of games and software.

For almost a decade, cultural and creative industries have been a focus of the economic policy of the German government and the local state governments. The objective in the next few years is to further develop the value added interrelations among the market segments of the cultural and creative industry and its relations with other sectors and to better exploit the innovation potentials. The German Federal Ministry of Economics and Technology (BMWi) commissioned this study in order to be able to actively monitor this development.

The objectives of the study are: to describe the innovative capacity/potentials of cultural and creative industries, to quantify and qualify their value added effects and to derive recommendations for economic policy and company strategies.

In an online survey, in which approx. 1,400 companies of the cultural and creative industry, their cooperation partners and clients participated, data were collected on supplier and buyer interrelations, activity profiles and innovation activities and effects. Alongside qualitative statements about innovation impulses and value added interrelations, the survey results are used to derive macroeconomic indicators of the innovativeness and the stimulation effect of cultural and creative industries (quantification). Successful innovation strategies and business models of cultural and creative industries are elaborated based on eight qualitative case studies. The study finishes with concrete recommendations for economic policy and industry actions which can be derived from the results.

2. Core messages

Our analyses show: cultural and creative industries not only possess strong innovation potentials themselves, but they also function as an important catalyst for innovations and knowledge-based growth in numerous other economic fields. They act as a cross-cutting sector, affecting value added chains both horizontally and vertically as suppliers and customers. Creative upstream inputs contribute to optimising and marketing products, services and business processes in a multitude of sectors in line with customer demands. In this way, sectors profit from the outputs of cultural and creative industries all along their value added chains.

Message 1: Cultural and creative industries are innovative and pioneering in their use of new kinds of methods and forms of working.

Open innovation processes and short innovation cycles are characteristic for cultural and creative industries. While this development poses a challenge to companies from other sectors, many client markets of cultural and creative industries have always been characterised by the short lifetimes of their products and services. Examples for this include the development of online games or smart phone apps.

This observation complies with the results of the study: 86.5 % of those questioned have developed or introduced innovations to the market in the past three years. Cultural and creative industries are therefore very innovative.

In order to be able to quickly and openly develop new products and services, cultural and creative enterprises have created specific methods and ways of working. Alongside an interdisciplinary approach to working, which is oriented very strongly around projects, new work forms have been established like innovation communities or co-working spaces.

Because there is a rising demand for innovation in every sector, these forms of working are increasingly becoming a model for other sectors. The ability of many actors of cultural and creative industries to see a problem from a different perspective and to come up with innovative solutions as a result, as well as the systemic approach to recognising user and customer

requirements is finding increasing access to other sectors and user markets.

Message 2: Enterprises from cultural and creative industries make great use of non-technical innovations and are thus broadening the innovation system characterised by technical advances.

The innovations in cultural and creative industries broaden the technical understanding of innovation to include the aspect of new kinds of social practices (e.g. consuming, working, organising). With the transition from the industrial to the knowledge society, the ratio of technological and social innovations is also changing in the economy as a whole.

Innovations are happening less and less as the result of further developments/innovations in the field of technology, and more due to innovative ways of using products or transferring them into different application contexts. Other user markets are formed like this with the support of new kinds of distribution models. Actors from cultural and creative industries assume an important role here as go-betweens between the sectors, between users and producers and between technologies and working methods. They support the development of hybrid markets and are drivers of cross innovation (merging application fields which have had little contact up to now). Only recently has the realisation dawned that social and organisational innovations can also have positive effects on economic development.

Combining methods and processes in other sectors or user fields in a way which has not been done before is one of the main abilities shared by many actors from cultural and creative industries. For example, many market novelties in IT technologies result from new combinations of already existing technologies and processes. Another form of this type of innovation can be seen in the cross-sectoral application of knowledge building on a specific artistic-creative field. Because of the cross-cutting character of cultural and creative industries, the transfer across sectors is easy to manage.

Message 3: Cultural and creative industries drive innovations in other sectors and contribute to improving the competitiveness of the economy as a whole due to their strong orientation towards innovations.

Close cooperation between creative enterprises and firms in other sectors help to improve the innovativeness of the latter. For instance, there is a positive correlation between the creative intensity of customers' enterprises (share of intermediate goods from cultural and creative industries) and the development of new forms of organisation and marketing of products.

The results show that two thirds of creative enterprises support their clients in the initial phase of innovation processes and thus make a significant contribution to conceiving ideas and developing concepts for new products. This is managed, for instance, by recognising and communicating the specific needs of possible target groups. Almost half of those questioned brought different groups of actors into contact with each other for this purpose, such as, e.g. potential customers with producers.

These results are confirmed from the viewpoint of the customers of cultural and creative enterprises. The survey showed that creative firms are primarily tasked with providing support services at the beginning of the client company's innovation chain and, in addition to this, trigger innovative processes mainly in sales and marketing. Cultural and creative enterprises are valued for their different view of business issues and their approach of developing specific business models and products from new trends.

Furthermore, enterprises of cultural and creative industries implement new innovation practices with their client companies. For instance, customer wishes can be identified more accurately with the help of the design thinking process than with other traditional problem solving approaches. At the same time, other, more creative ways of thinking make a change of perspective possible for enterprises in other sectors too.

Message 4: Cultural and creative industries make the innovations of other sectors applicable and marketable by creating new user experiences and emotionalising products and services.

The analyses show: Cooperative innovation processes between companies from cultural and creative industries and other sectors lead to better products and services. The focus of such cooperation is not on increasing innovation activities at the client companies. Instead, creative skills are employed to tailor innovative developments much more closely to users' and customers' requirements and make them more user-friendly as a result.

This becomes particularly clear when looking at the market segments of advertising, design and film. Appealing to viewers, readers and users emotionally plays an important role here. This kind of emotionalising products and services raises the visibility of client companies and can become their unique selling point. This is of great significance in market environments under high competitive pressure.

In addition, cultural and creative industries also assist in developing new business models and sales channels, designing them to be more interactive and, in this way, reaching and opening up new target groups. This is made possible especially by the use of Web 2.0 technologies.

In particular due to collaboration in niche markets and hybrid markets, where different sectors intersect, cultural and creative enterprises create new user experiences and call existing business models into question. These include new sales channels for digital products (e.g. e-books) and new services (e.g. e-learning portals, web design) or new payment models (pay per view, premium customers etc.).

Message 5: In order to increase the exploitation of previously untapped innovation potentials, cultural and creative industries need to become more visible to enterprises from other sectors.

The innovation potentials of cultural and creative industries can be enhanced if the understanding of innovation on the part of industry, trade and other sectors is opened up and extended. So far, many actors from cultural and creative industries do not see themselves as being in the kind of equal partnership which is necessary for joint innovation processes.

But creative enterprises themselves also have to continue learning and adapt themselves more strongly to the requirements, attitudes and language of the respective user markets. Many creative enterprises avoid too close ties to customer enterprises because they are afraid that this might reduce their creative and artistic added value.

Furthermore, the creative enterprises are not well enough known at potential partners and clients. Cultural and creative industries consist primarily of micro and small enterprises, which are active in very varied market segments. It is therefore very difficult for them to attain a sufficient degree of visibility.

Overview of key messages

- 1: Cultural and creative industries are innovative and pioneering in their use of new kinds of methods and forms of working.
- 2: Enterprises from cultural and creative industries make great use of non-technical innovations and are thus broadening the innovation system characterised by technical advances.
- 3: Cultural and creative industries drive innovations in other sectors and contribute to improving the competitiveness of the economy as a whole due to their strong orientation towards innovations.
- 4: Cultural and creative industries make the innovations of other sectors applicable and marketable by creating new user experiences and emotionalising products and services.
- 5: In order to increase the exploitation of previously untapped innovation potentials, cultural and creative industries need to become more visible to enterprises from other sectors.

3. Analysis of the innovation behaviour and impact chains of cultural and creative industries

3.1 Innovations of cultural and creative industries and their macroeconomic impacts

According to the definition of the Organisation for Economic Cooperation and Development (OECD), a company is innovative if it has implemented a product, process, organisational or marketing innovation. The OECD therefore includes both technical and non-technical innovations.

Innovations are a core competence of cultural and creative industries. Creative enterprises develop new ideas, products and services and produce these in small series, with customer-specific adaptations, as unique specimens or prototypes. This usually concerns non-technical innovations, so-called soft innovations. Their main features can only rarely be described using specific, clearly defined patents, products or processes.

The product and service innovations of cultural and creative industries are distinguished by a high degree of individualisation (e.g. by customer-specific solutions) and close ties to users and customers. The decisive factor here is the ability of the actors to pool their knowledge, combine it in new ways and transfer this

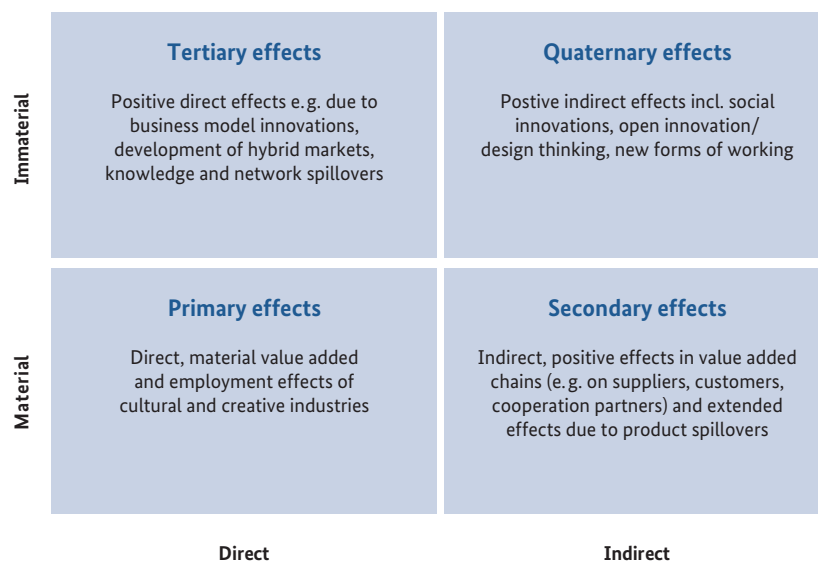
into products and services (content). In addition, existing technologies and processes are frequently linked in new ways and placed in a different working context, or existing contents are transferred into new formats. These types of “hidden” innovations are usually formed in an iterative process of adjustment and optimisation.

Innovations due to close ties to customers and users

Cultural and creative enterprises are not only innovative themselves in an above average way, they also trigger innovations in other sectors due to their marked tendency to cooperate with others (indirect innovation effects, see Figure 1). A large number of small enterprises and a high proportion of the self-employed characterise the market segments of cultural and creative industries; cooperation is therefore vital for companies' success. Creative actors tend to operate in networks and maintain close collaborative relationships with suppliers, customers or partners.

“Communities of Practice” are one example of this. These are informal professional networks, which develop a specific group competence. In these networks, the division of labour, resource allocation and decision-

Figure 1: Macroeconomic effects



Source: Prognos/Fraunhofer ISI, based on Falk et al. 2011

making are organised through personal contacts. “Communities of Practice” comprise not only creative enterprises, but increasingly also their suppliers and partners from other sectors. This is how creative enterprises contribute to the macroeconomic diffusion of more open, networked ways of working in the sense of open innovation.

Drivers of IT and media innovations

Digital technologies form an important sector-specific knowledge and technology basis of cultural and creative industries. Even in design sectors like interior design, fashion or industrial design, high priority is assigned to the development and use of online and internet activities.

These online products and services are usually designed to be interactive. Customers’ or users’ reactions can be used to rapidly improve products and therefore make innovations. Digitalised information like, e.g. software, draft designs or media contents, is developed using the internet, collaboratively further developed, distributed and consumed via online platforms. As a result, enterprises of cultural and creative industries simultaneously spark off IT and media innovations at their suppliers and customers, because online and internet activities are becoming more important in other sectors as well.

New business models and markets

Cultural and creative industries are taking on a key role in industrial change. Their experimental use of emerging technologies and the development of new contents and their applications lead to new technologies being integrated into social practices and lifestyles. This is the precondition for new business models, or for transferring existing business models into new, e.g. online markets. Evolutionary economics and the theory of innovation systems consider the interaction between actors to be a key component in the innovation process.

Social networks and the internet-based communication of Web 2.0 (e.g. social media) enable and spur the trend towards opening firm-internal innovation processes and knowledge sources. This includes different

approaches of open innovation whose common feature is either a phase-by-phase or a complete opening for the transfer of knowledge, technology and know-how.

The marked tendency of cultural and creative industries to collaborate promotes knowledge and innovation spillovers into other sectors as well as hybrid market activities, both within the eleven cultural and creative market segments as well as between the creative markets and the markets of other sectors. New hybrid markets are formed, which have a high innovation potential, especially at the interfaces between cultural and creative industries and other sectors. Overall, as a cross-cutting sector, the creative industry forges strong links between other sectors which reinforces its macroeconomic innovation effect.

3.2 Culture and creative industries in the value added and innovation system – survey results

Of the cultural and creative enterprises which were questioned as part of this study, 86.5% stated they had developed or introduced market novelties in the past three years. This makes the cultural and creative industries highly innovative. The games industry is the most innovative. The press market, the design and advertising industries are highly innovative.

More than half of the surveyed enterprises of the cultural and creative industries (52%) name developing content as an important part of their innovation activity. In the past three years, almost 42% had developed new forms of distribution/networking to support sales. As well as the actual development of content, products and services, sales and marketing are very important for the success of creative enterprises. About 40% of those questioned had created new forms of customer interaction and communication. The actors from the areas of advertising, press and music show the highest innovation rates.

The performance spectrum of the cultural and creative industries is characterised by its strong involvement in creative processes such as design, fashion or architecture. A third of the questioned actors also regard offering strategic advice to their customers as one of their main tasks. Such services take place when demonstrating

new marketing or service approaches, or questioning the design of products and services. Consulting services and content production turned out to be the most frequently performed activities among those questioned in the sample.

Almost 83 % of the questioned cultural and creative enterprises fall back on supplies (such as EDP devices, software, services) from other industrial sectors for their own business activities. Two thirds of respondents stated that combining technologies, materials or contents in new ways is important or very important for the development of their own innovations. This is particularly important for enterprises from design, architecture, advertising but also the art market.

Within the framework of internal innovation processes, the actors of cultural and creative industries apply primarily design thinking as one of the new working methods. This method allows the development of innovations from a systematic user perspective.

Innovation communities are the second most commonly used forum. Here actors who are in different places can work together on innovation projects and link up via IT technologies.

The cultural and creative enterprises were also asked about the external motivators for their creativity and how they get ideas. For more than a third of creative enterprises, the actors of the business network (clients, cooperation partners and end consumers) are the principal motivators for their own creativity. Universities (17.5 %) and investors (3.4 %) do not play a significant role here.

Innovation obstacles

The cultural and creative enterprises also named factors which act as obstacles to the innovation process. As the main obstacles they cited the lack of funding programmes for freelancers and new kinds of business models. Financing is one of the biggest challenges for micro and small entrepreneurs in cultural and creative industries. An insufficient equity base, low wages and project budgets as well as irregular incomes are responsible for the underfunding of many creative individuals. It is virtually impossible to build up financial

cushions. This makes pre-financing new projects very difficult. Often there is a lack of planning security to be able to implement creative ideas with a fixed budget.

The actors of cultural and creative industries see another problem in the fact that the development of content without technological processes is often regarded as not being really innovative. This shows that the classical understanding of innovation, which does not include many innovation processes of the cultural and creative industries, still dominates the market.

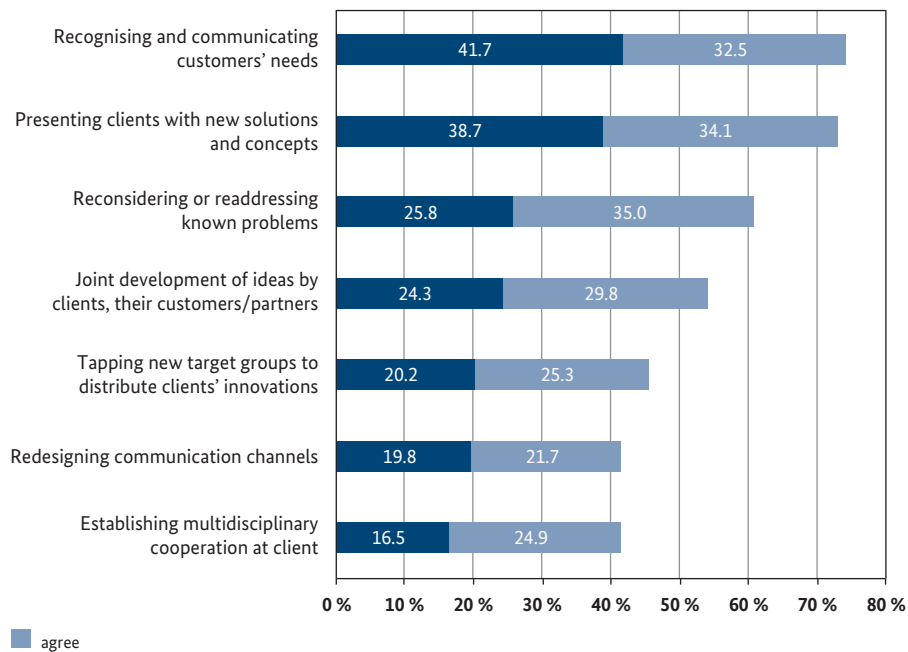
Motivators for other sectors

In addition to their own innovation performance, the enterprises are motivators for other sectors. Primarily, respondents support their clients when developing concepts (66.7 %) and generating ideas (38.4 %). These are by far the most often mentioned support services, especially by enterprises from the market segments of design, architecture, film and press.

It has to be distinguished in which development phase of a product or service the support of cultural and creative industries is used. In the first phase, that of inspiration, the actors of cultural and creative industries support their clients mainly by recognising and communicating the needs of their target group (cf. Figure 2). The creative enterprises also present their clients with new solutions, point to alternative concepts and help them to take a fresh look at familiar problems.

In the subsequent phase of creation and development, the cultural and creative enterprises encourage their clients to bring together fragmented knowledge or resources in one design (approx. 68 %). The actors of cultural and creative industries also introduce existing materials and technologies to new contexts and contexts of application (around 45 %).

Creative enterprises are particularly sought after in the last phase of implementation and distribution when new target groups for the innovations have to be tapped. Clients also fall back on actors of the creative and cultural industries when creating new communication channels.

Figure 2: How cultural and creative industries support their clients

Source: Unternehmensbefragung Kultur- und Kreativwirtschaft 2012, Prognos AG

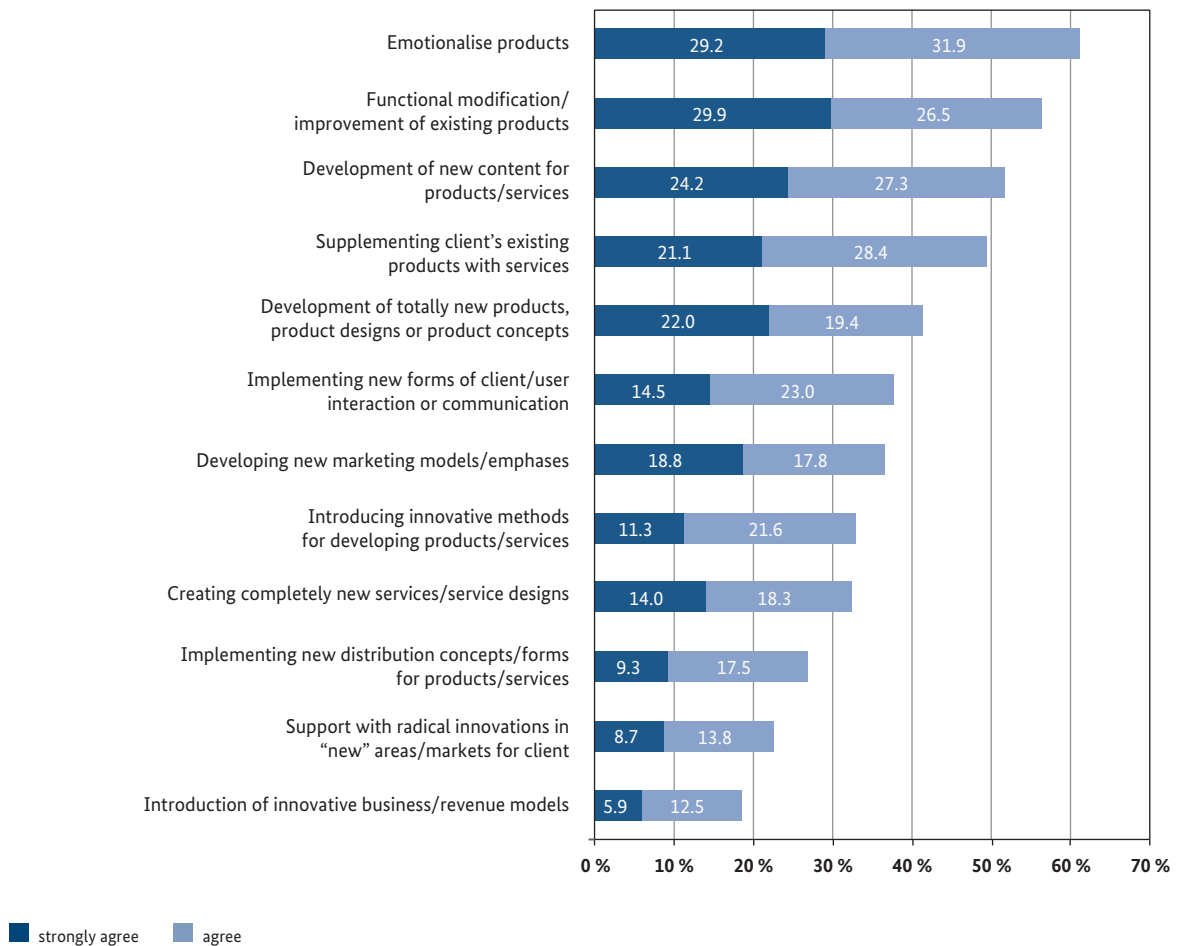
When looking at the entire innovation process from inspiration through the creation and development phase and finally the implementation and distribution phases, it becomes apparent that a quarter of the creative enterprises support their clients along the entire value chain. With shares between 23% and 27%, enterprises from design, press, advertising and architecture are more likely to support their clients throughout the entire value added process. With regard to the individual process phases, it also becomes apparent that creative enterprises are primarily consulted during the inspiration phase and comparatively rarely concerning the implementation and distribution of products and services.

However, the results of the survey also show that actors from the cultural and creative industries trigger innovative processes mainly in marketing and sales. Two thirds of those questioned say that they obtain graphic and design elements from creative individuals. Another 25% obtain texts and other media content from enterprises of the cultural and creative industries.

The enterprises of the cultural and creative industries were asked to assess the innovation effects which had arisen from the cooperation for their clients (see Figure 3). The emotionalising of products was mentioned most frequently. The creative enterprises create new user experiences, appealing designs or specific images which are communicated with the products. The second most frequent statement by the enterprises of the cultural and creative industries was that functional modifications (e.g. more intuitive user guidance) or improvements of existing products had produced innovation effects. Around half of the enterprises regard the development of new content for products and services as their most important contribution to their clients' innovation performance.

The surveyed customer enterprises confirm this image to a large extent. Cultural and creative enterprises are appreciated for their own view of entrepreneurial questions and the ability to use new trends to develop concrete business models and products.

Figure 3: Innovation effects of business cooperation at clients of the cultural and creative industries from the perspective of the cultural and creative industries

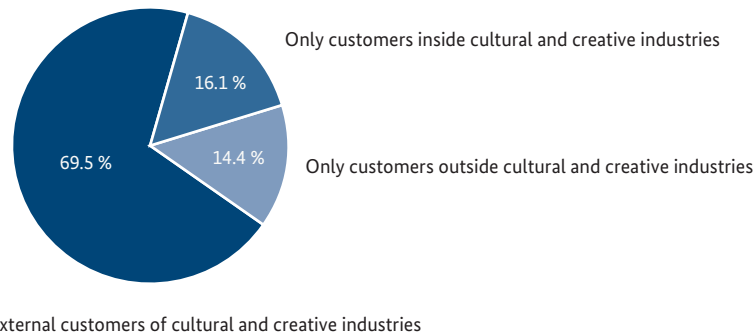


Source: Unternehmensbefragung Kultur- und Kreativwirtschaft 2012, Prognos AG

Customer structure

The cultural and creative industries are as diverse as their customer structures. Around 86% of creative enterprises work for commercial enterprises and 79% for end-consumers. The customers for more than half of the creative individuals (55%) come from both segments. Clients from the cultural and creative industries and other sectors are important for the business activities of creative individuals. Around 70% of creative workers supply the cultural and creative industries as well as other sectors with their products and services (see Figure 4).

Around 30% of the enterprises with commercial clients have customers in the industrial sector. Particularly actors of the design industry and advertising are closely linked to industry (around 55%). This means that to a great extent industrial customers are demanding creative services in order to create new user experiences for products and services, to adapt services to clients' needs and to create images and brands and thus influence customers' purchase decisions. Services in the fields of film and broadcasting are also demanded in industry; a good third of actors in these market segments have customers from industry. Here, too, the focus is often on marketing aspects.

Figure 4: Customer structure of the cultural and creative industries

Source: Unternehmensbefragung Kultur- und Kreativwirtschaft 2012, Prognos AG

The survey of customers of cultural and creative industries confirms that, compared to other market segments, there are more interrelationships with designers and advertising specialists. One in five of the surveyed companies stated they had used design and advertising services. Furthermore, more than 10% of companies assign jobs to actors of the press market and the music industry.

In general, however, the relationships between enterprises of the cultural and creative industries and other branches of industry are by comparison not very well developed. It can be assumed that innovation potentials here have not been fully exploited. On the one hand, this requires clients to know the actors and what they can offer and, on the other hand, a correspondingly open corporate culture, which allows new approaches, techniques and thinking processes.

3.3 Innovation-based impact of cultural and creative industries – macroeconomic analysis

For cross-cutting sectors such as the cultural and creative industries, their macroeconomic interrelations are particularly interesting. However, this is very difficult to express in terms of primary statistics. An input-output analysis can help to estimate which interrelations exist between suppliers of the cultural and creative industries and other production sectors in Germany. The input-output table of the Federal Statistics Office

which is divided into economic branches and shows the primary/intermediate products and production factors (input) and simultaneously the use of the produced quantities (output).

On the one hand, products and services of the cultural and creative industries are utilised as so-called inputs in order to produce more goods (outputs). For example, automobile manufacturers ask creative individuals to work out consumer attitudes and design concepts. On the other hand, the cultural and creative industries require preliminary services and inputs (e.g. electricity, computers, software, services) so they can offer their products and services on the market.

On the basis of the input-output table, an estimated production value of around 129.6 billion euro and a demand for input of around 47.1 billion euro can be calculated for the year 2007. The service industry clearly dominates input use (84%). The economic sector “Financing, leasing and business services” accounts for the largest part (around 49%).

Creative intensity

In a second step, the “creative intensity” of an industry is established, which is defined as a proportion of the intermediate products of a production sector from the cultural and creative industries related to its total production value. The creative intensity therefore shows the share of the cultural and creative industries’ costs

related to the production value of the respective sector.

If the input supplied to the cultural and creative industries is related to all inputs of the respective sectors, it becomes apparent that the creative output in some service sectors is highly significant. For example, cultural and creative services in the production process can account for up to 30% in the production process in the case of data processing and data bases.

This results in a macroeconomic production effect of around 188.9 billion euro which is made up of the direct production value in the cultural and creative industries of around 129.6 billion euro and an indirect production value of 59 billion euro. The direct and indirect contribution of the cultural and creative industries to the total German production value is therefore estimated at around 4.1%. This means that the contribution the cultural and creative industries make to the economy is for example above that of the production sector of rubber and plastic products (2.4%) or the tourism industry (2.3%), but below that of the mechanical engineering sector (8.8%) or the automotive industry (14.8%).

Innovation effect on the macroeconomy

In a third step, the contribution of the cultural and creative industries to the innovation performance in the overall value-added system is examined. Here, statistically significant relationships between the creative intensity and the innovation output of enterprises were investigated and their precise meaning was calculated with the aid of a regression analysis.

The results show that high creative intensity has a positive influence on innovative capability, particularly in the areas of product and process innovation. It also became clear that the capability to develop new products/processes increases if the enterprise relies on services of the cultural and creative industries. The creative intensity also has a positive influence on improving the quality of products/services through organisation innovations.

The central results of the macroeconomic analysis are:

- A high interrelationship with the creative economy does not result in more innovation activities for enterprises of the macroeconomy; however, it has a positive influence on the quality of effected innovation results.
- A high creative intensity has a positive influence on product and process innovations in the macroeconomy.
- The creative economy has particularly positive effects on the marketing and organisation activities in the macroeconomy.

The calculations underline that the co-operation with actors of the cultural and creative industries makes enterprises of other sectors more innovative and consequently more competitive. The significance of the creative intensity is not the same for all innovation dimensions.

3.4 The main success factors of the cultural and creative industries – methods, processes, impulses

In order to find out how typical procedures and methods in the cultural and creative industries are successfully applied and transferred to other sectors the success factors of cultural and creative enterprises were identified using eight case studies.

The areas design thinking, crowdsourcing, re-combination of methods and tools, open innovation, integration of the complete innovation chain, the emotionalisation of products and the exemplary correlation of creative enterprises with industry and commerce. Representatives of particularly innovative enterprises of the cultural and creative industries were questioned. Also empirical values and additions from service enterprises of other industries were incorporated into this study.

Success factors due to the own competence of actors of cultural and creative industries:

1. Consultation competence in order to overcome existing thought patterns and structures in the innovation process:

The case study Design-Thinking illustrates how this user-orientated approach contributes to the identification of users' and customers' hidden needs and motivations. Creative individuals use the design thinking method to break through existing thought patterns and structures of the customers' enterprises. Particularly in areas which are characterised by huge competitive and innovation pressure (e.g. by a high proportion of end customers), this approach has proved to be very productive. However, also science and politics can benefit from the creative individuals' open mind and take customers' requirements into account.

The broad network of creative enterprises also ensures that concrete needs and niches are discovered outside of the own industry which can be covered by an own offer. However, not only customers have to dare to take the broader view but also the creative individuals themselves. Due to their small size many cultural and creative enterprises cannot expand on what they offer indefinitely. Here the creation of enterprise groups could help.

2. Experience in dealing with social and "hidden" innovations

Product and service novelties of actors of the cultural and creative industries can often be matched with so-called hidden innovations which happen beyond of patent applications in non-scientific and non-technical areas. The focus here is the new combination of existing technologies and processes which are incorporated into a new work context and which often take place beyond the perception of common assessment and evaluation systems as the case study "New re-combination of methods" shows. Common forms are new practices, performance models and formats or the transfer of existing contexts to new formats which are created during iterative adaptation and optimising processes. This form of developing novelties is typical for the cultural and creative industries.

One example how artistic-creative approaches can be transferred to business-related processes and services is the training and counselling concept "hero principle" which is based on hero myths. Traditional sagas and myths were assessed to determine how "heroes" have coped with change. These insights were transferred to the challenges senior managers face in change processes and applied successfully in enterprises.

3. High communication and media competence

Actors of the cultural and creative industries are pioneers in using technical communication solutions as for example Web-2.0 mechanisms, an important basis for integrating users. They meet the central requirements, for example to accompany the implementation of crowd based innovation processes of enterprises (generation of ideas by a great number of users). Within the framework of the case study Crowd sourcing it was worked out that creative individuals were well suited to accompany such a process communicatively and to moderate and realize a continuous dialogue with the users (crowd). This is crucial in order to integrate the crowd successfully in corporate innovation management.

The communication competence of the creative actors is especially effective when it operates at the interface of the company's innovation departments and users and customers (see case study Open Innovation).

Success factors in combination with enterprises of other sectors:

1. Detailed knowledge of potential user markets

Successful enterprises of the cultural and creative industries – as in other industries too – have detailed knowledge of their customers' sectors, for whom they produce and implement products and services. Specific requirements of the industry, market trends and enterprise structures are taken into account and are supported by a clear focus on the language and requirements of the respective buyer market.

Successful actors of the cultural and creative industries often take on the role of a "mediator between different

worlds". On the one hand, they have typical attributes and competence of the cultural and creative industries at their disposal and at the same time know about specific requirements and problems of other sectors. The creative enterprises' task is to recognize which trend or entrepreneurial challenge has generated a new – as yet unsolved – question. A possible answer could be the transfer of methods and processes which have been successfully applied in other areas to this market or sector.

Detailed knowledge of user markets can create completely new products and services as one example from the field of industrial design illustrates. Here innovative solutions based on Japanese origami were devised for industrial applications. These can be applied for example in light weight design, in minimally invasive surgery and the automotive and packaging industries.

2. Own self-understanding as a service provider

The self-understanding of the creative enterprise as a service provider and innovation partner has also been recognized as a success factor. A decisive factor here is the willingness to adapt the product or service to the client's requirements and to offer the necessary consulting skills.

This is an important prerequisite to expand the stages of the value-added chain which are possible and which creative enterprises, together with their clients, can handle. It has to be noted that clients often appreciate far more to be accompanied when new products and services are being developed and implemented than when they are "just" given ideas. Together with attractive partners the involvement in additional implementation steps presents the opportunity to develop more complex and therefore often more competitive offers for clients. This, however, is only successful if a special proximity to the market and a thorough knowledge of the target markets is in place.

3. Competence in "emotionalizing" products and approaching the target group

Emotionally appealing to spectators, readers and users is an essential tool of communication. Enterprises

from traditional areas also increasingly recognize this potential. Charging products and services with emotional messages and symbols supports branding and unique selling points especially when there is great pressure to increase their competitiveness and when at the same time the products are highly comparable. Due to the increasing differentiation of many sectors of industry and the ensuing increased differentiation of products it has to be expected that in future more and more products are sold by emotionally appealing to customers, as the case study Emotionalising products and services shows.

Therefore, the creative enterprises have to have thorough knowledge of the user market and the end customers/users' motivations and needs, only then they can implement customer requirements. It is necessary to have researched the milieu and be aware of market research results.

4. Mutual respect among cooperation partners

Bringing together actors of the cultural and creative industries and enterprises from other industries presents a challenge to the entire creative sector. The respect and visibility of creative enterprises has to be increased. Enterprises which are able to show the customer the quantifiable added value of their work are particularly successful in the market.

Here too thorough knowledge of the target markets plays a large role; then creative enterprises can gain a reputation by getting involved in networks, trade fairs and by contributing to trade publications of the user market. Their chances of success increase considerably if creative actors are also successful in recognizing sector specific focal topics and deal with them thoroughly.

As this summary shows, the actors of the cultural and creative industries are able to bundle their specific capabilities and turn them into commercial success. Many creative enterprises possess concrete unique features which are an important prerequisite for the cooperation with other sectors. At the same time the results also show that creative enterprises have to have further competence in order to be able to enter into successful cooperative relations with other sectors.

4. Areas for future support

The results of the study show that more support of the cultural and creative industries is needed in order to strengthen its involvement into the innovation and value-added system of the macroeconomy. This means developing and testing support instruments for enterprises which facilitate cooperation and spillover effects across sectors. This also entails encouraging change within a sector and integrating new expertise and skills into other sectors – and vice versa. The areas for action and recommendations below follow this guiding principle.

As innovations in the cultural and creative industries often happen in non-technological areas it is difficult for this cross-sectoral industry to have access to many programmes which fund innovations. Therefore relevant programmes or project oriented financial aid have to create the frame work conditions specific to the target group. Tailor-made offers for the cultural and creative industries – also as regards their temporary, project oriented method of production – have to be made available.

Admission to the “Central Innovation Programme Mittelstand”

As shown, based on the extended understanding of innovation it has to be examined whether the Central Innovation Programme Mittelstand of the Federal Ministry of Economics (BMWi) is suitable to include the innovation efforts of the cultural and creative industries in their funding activities. As well as funding investments of companies in technologically sophisticated and innovative projects it is feasible to introduce relevant criteria in the area of social innovation to assess the eligibility for funding of projects. At the same time, this would raise awareness for this kind of innovation.

Expanding the competition “Culture and Creative Pilots”

Currently the competition “Cultural and Creative Pilots Germany” of the German Federal Government’s Initiative Cultural and Creative Industries focuses successfully on young companies in the start-up phase. An additional possibility to fund these companies pre-

sents itself here: Innovative activities of enterprises already established should also be funded for the duration of the project. The objective of the funded projects could be the development of new or significantly improved products, procedures, services, methods, systems and processes and their introduction into a market.

So far the initiative cultural and creative industries have looked for creative pilots three times. The objective is to show the public the innovative potential of cultural professionals and creative enterprises, to introduce new entrepreneurs from all over Germany to each other and to encourage start-ups by best practice examples. Similar initiatives for innovation efforts of already established cultural and creative enterprises and their customers need to be established. The additional award of a so-called co-pilot in a competition could reward cooperative innovations together with and by actors of the cultural and creative industries and thereby make their achievements more visible to the public. This award shows how innovative and successful the established cultural and creative enterprises are.

New financing instruments

As financing is the main obstacle to innovation in the mainly small cultural and creative enterprises this could be addressed by introducing a new financing instrument that is outside the usual assessment criteria. One possibility here would be to establish a market-based assessment by a panel of experts which gives clear recommendations to banks regarding the implementation coupled with offsetting the risk of non-payment as a supporting measure.

An independent institution should be responsible for assessing the market viability of business ideas in the cultural and creative industries and to negotiate relevant opportunities for financing. A paid team of experts could assess the financial operations and creative enterprises and thus give banks a better basis to decide which enterprises to give loans to.

Creative and innovation vouchers

In order to allow the cultural and creative industries to operate closer to the market and also to orient them towards new markets creative vouchers may give an important impetus. They are a financing instrument with a low threshold which can be used to stimulate a stronger involvement in macroeconomic innovation activities.

An inventory of the existing supplies of innovation vouchers shows that they are, with a few exceptions, directed at technologies, research and development. This gap should be closed in the sense of a wider innovation concept. This concerns the networking of small and medium-sized enterprises (SMEs) in all sectors with the innovation driver cultural and creative industries. All services of the creative and cultural industries which an applying SME draws on would be financed.

Developing mutual understanding

Supportive advice about potentials would be useful for enterprises from cultural and creative industries. Experienced business consultants from industry or other user markets can convey a more application-oriented way of looking at things to creative actors. The focus here is on questions such as: Where does the creative actor with his core skills find a suitable market or new target groups? What does each customer need? What changes have to be made to the portfolio?

The services of the creative industry are important input factors for innovations in SMEs. But traditional businesses often hesitate to involve creative actors in their innovation processes. The services of cultural and creative industries are frequently still developed separately and then added onto the traditional value added process in companies. Supportive approaches here could be to raise enterprises' awareness for these additional markets and to promote the understanding that the planning of products/services and artistic, aesthetic elements should be understood as a holistic and integrated process.

The introduction of creative assistants is an additional possibility for industry. Industrial enterprises could be supported by the promoted use of personnel or be given advice by creative actors to increase their use of methods/tools and processes (like, e. g. design thinking) which are typical for cultural and creative industries.

In order to enhance the adaptability of companies, it makes sense to start at the beginning with vocational training. The potentials of creative techniques and preliminary services could be integrated in training courses for business managers and engineers (e. g. creative engineering). The actors of cultural and creative industries also have to develop the corresponding skills. The goal could be the qualification as a "creative engineer", who is highly skilled in his creative specialist field but at the same time is also familiar with the processes and demands of industry and commerce.

In addition, an information and awareness-raising campaign should be started which shows how services of cultural and creative industries are applied in different sectors (e. g. industry) and initiate or reinforce innovations there, and how these sometimes would not be possible at all without them.

Internationalisation

The already existing promotion of trade fairs could be expanded to further the internationalisation of cultural and creative industries in a targeted way. This would make creative industries more visible to potential client enterprises from other sectors and enable contacts to be made. Trade fair promotion or a general trade fair strategy should start here by promoting more appearances, e. g. at industrial trade fairs, whose clients have to be accessed to a greater extent by cultural and creative industries. The concept should be designed in such a way as to identify sector-specific focuses which are examined more intensively. Participation at trade fairs should then be geared towards each specific event. The first step should be to include those trade fairs in the portfolio which are relevant for cultural and creative industries.

