Design economy in the Valencian Community

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Report on Design Economy in the Valencian Community ↷

A research project on defining, identifying, measuring design and assessing the use thereof in key Valencian economic sectors

Foreword

A key and cross-disciplinary element in the innovation strategy of all corporate activities, design has taken up residence in the Valencian Community, where it is experiencing a new golden age at the service of a productive system composed mainly of small and medium-sized enterprises (SMEs).

Having an economic impact which exceeds 3,700 million Euros per year in this territory, design-related activities have been consolidated as effective instruments in order to increase corporate productivity and competitiveness, delivering innovative solutions to the challenges of the present and the future of our business structure.

This has been understood by traditional industries and sectors, such as that of furniture or footwear, which have turned design into one of its main tools to contend with international *low cost* players.

Only the combination of differentiation, quality, customisation and innovation in products and processes enables a company to compete and succeed in a global market, which has accelerated its transformation due to the impact of an unprecedented technological revolution. A new challenge to which the Valencian Innovation Agency (AVI) intends to provide solutions from scientific and technological knowledge, but similarly promoting design as a hub of innovation.

The Valencian Government's commitment to this cross-disciplinary activity is not new. Already at the outset of self-government in 1985, the International Meeting of Industrial Design and Fashion was organised in Alicante with the backing of the Valencia Institute for Small and Medium-Sized Industry (IMPIVA). A historical event which brought together some of the foremost figures of the second half of the twentieth century, such as Alessandro Mendini, Dieter Rams, Philippe Stark, Attilio Marconi, Tapio Vikari or Bernhard Burdek, among others.

Design economy in the Valencian Community represents another step forward in order to showcase the work which designers undertake in a contemporary, creative and complex territory such as this. The research not only measures the impact of design, in the widest sense, but seeks to structure the first sector map and its relationship with the various activities of our economy.

The conclusions of this work enable, in a nutshell, to clearly envision the paramount importance of design and the positive effects which are generated for businesses that systematically incorporate design into their processes. But above all else, the report points to the challenges that this sector must confront in the medium and long term.

Andrés García Reche ↷
Executive Vice President of
the Valencian Innovation Agency (AVI)

Design is a creative and projective discipline which determines the qualities of objects, messages or areas of our daily surroundings. **Yet design is not just a creative way of thinking or a powerful and essential tool for innovation and transformation in companies. Design is likewise a cross-disciplinary activity which employs technical know-how and technological capabilities for the development and strategic planning of products and services intended at meeting the needs and desires of individuals.**

The Montréal Design Declaration[1], published at the Montréal World Design Summit (October 2017), underscores the "fundamental role of design in creating and shaping the world around us, now and in the future" as:

- Design is a driver of innovation and competition, growth and development, efficiency and prosperity.
- Design is an agent for sustainable solutions created for people and supporting the planet on which we rely.
- Design expresses culture. Designers have a particularly potent role in making, protecting, nourishing, enhancing and celebrating cultural heritage and diversity in the face of globalisation.
- Design adds value to technology. Through the consideration of human perspective and interface, and by focusing on individual interaction first, design bridges technology with human needs.
- Design facilitates change. Design enables all aspects of society, public and private, governmental and non-governmental, civil society and individual citizen to transition through change (austerity, demographic changes, shifts in services...), to deliver a better quality of life for all citizens.
- Design introduces intelligence to cities as a foundation for better communications, improved environments, enhanced quality of life and more prosperous local communities.
- Design addresses resiliency and manages risk through comprehensive research, robust methodology, prototyping and consideration of life-cycle consequences.
- Design fosters development of small and medium enterprises, in general, and creative industries, in particular.

1 → Sommet Mondial du Design de Montréal (Montréal World Design Summit) (2017). Déclaration du Design de Montréal.(Montréal Design Declaration) (Retrieved on 12 May 2018 from the website: Organisation du Sommet Mondial du Design (World Design Summit Organisation) at https://designmontreal.com/sites/designmontreal.com/files/20171004 wdsm2017_brochure_declaration_65x9_fr-1.pdf

In this fashion the value of the design in the Montreal Declaration is defined.

This report called *Design Economy in the Valencian Community*, undertaken by the Association of Designers of the Valencian Community (ADCV), is governed by the call to action included in the Declaration. A call which entreats designers to take responsibility for communication as regards the scope and meaning of their work, processes and results, and likewise to develop effective procedures capable of assessing the impact of design in order to demonstrate its strategic value and public interest.

In these activities, designers are called to work in concert with other agents, and so, we would like to thank the Valencian Innovation Agency (AVI) for its participation in making this report possible through its financing. **This work intends to identify and specify relevant, quantitative and qualitative indicators, which perceive the strategic magnitude of design, and which, in turn, may be comparable.**

In order to forge ahead with the report, an inclusive taxonomy of design practices and the uses thereof has been undertaken. A taxonomy of design practices which is perceived as a consolidated, plural and dynamic professional exercise; and a taxonomy of the various uses that companies undertake of their design and creation of value.

It is likewise sought to undertake an initial mapping, a primary cartography of the education territory because it is there where the profession's past is underpinned as an occupation, and simultaneously, an integral part of its future is played out.

This work has been undertaken with the objective of contributing to the definition of specific design value analysis models which compile valuable data and information for designers, companies, governments and for society in general.

Italo Calvino states that the ordinary is that on which the view flows by without coming to a stop. Design is focused on the creation of the ordinary, embodying universal values and bringing about a transformation of society in a discreet and, more often than not, anonymous manner. We are aware of the fact that design has a strong economic effect, yet we are unfamiliar of its real dimension. There is no good updated map of the design sector, or of its interweaving in the business sectors which use design intensively.

Design economy in the Valencian Community **is an initial contribution in order to highlight and showcase the impact of design on the Valencian economy, in addition to contributing to pushing designers as a key figure in corporate innovation strategy given that design puts forward innovative and desirable, commercially viable, productively feasible and economically profitable solutions. If it is well managed, design becomes a key factor which contributes to productivity and competitiveness, delivering differentiation and innovation.**

The interest in dimensioning the design profession, in assessing its economic impact and in unravelling and measuring the manner in which design is related to innovation processes is not recent. In 2011, the Vice President of the European Commission established the European Design Leadership Board, a committee of experts from which recommendations were requested in order to enhance the role of design in European innovation policies. **From among the twenty-one recommendations of the Design for Growth and Prosperity report[1], the 5th recommendation is noteworthy: "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 design innovation statistics" and the 6th recommendation: "Enforce the implementation of the current NCEA (National Classification of Economic Activities) 7410 code for specialised design activities by all Member States and ensure updating as necessary for benchmarking and comparative analysis across States".**

More recently, the Montreal Design Declaration[2], signed in 2017 by fourteen international organisations, includes among its calls to action: "Development of design metrics: collection of data and establishment of effective measures to better enable the evaluation of the pace of design, thus demonstrating the strategic value of design in organisations and businesses and in the serving the public good". Finally, it proposes twenty possible projects to be furthered. The first three refer to the need for metrics and are expressed as follows:

"Project 1: Develop, collect and circulate indicators, as is metric measures (both quantitative and qualitative) for evaluating design impact (economic, environmental, social and cultural). Project 2: Develop, collect and circulate case studies demonstrating design impact, utilising metric measures. Project 3: Communicate value of design to target audiences through presentation of case studies".

These declarations and many other similar statements taking place in recent years come to highlight the alarm as regards a fact of

1 → The European Design Leadership Board. Design for Growth & Prosperity. DG Enterprise and Industry of the European Commission. 2012, p. 9.
2 → Montréal World Design Summit Meeting Working Committee. Montréal Design Declaration. 2017. pp. 6 and 9.

great significance: despite the existence of empirical evidence on the positive impact of the design, there is no consensus on how to define the processes involved in design use or in the method to measure and assess its results or the return on investment. **This absence of measurement tools is a huge impediment when it comes to conceiving and implementing design fostering policies, commencing with the difficulty in identifying and sizing the main agents involved, and concluding in a lack of measurement tools for the assessment of results.**

Obstacles in measuring design impact

The barriers to a better understanding of the impact of design are evidenced in three main aspects: the difficulty in identifying and quantifying the design profession, the methods for measuring its results and the role of design in innovation processes.

1. The design sector

If design is considered as a professional economic activity or as a sector of activity, it is not easy to establish its size or its turnover. As an occupational specialty it is not regulated and, therefore, there is no registry of design professionals. In the National Classification of Occupations (CNO-11) certain design occupations are included, but this classification is recent and furthermore is not used in employment contracts but as a framework in the drawing up of surveys.

Insofar as companies and self-employed persons are concerned, it is obligatory to declare the main activity using the NCEA classification, which only since 2009 includes the 7410 heading: Specialised design activities, in line with the European NCEA Classification (Nomenclature statistique des Activités économiques dans la Communauté Européenne/Statistical classification of economic activities in the European Community). Under the Tax on Economic Activities (IAE) headings the word design appears only in Code 432: Decorators - Interior designers.

Given the complexity of accessing statistical data, it should be added that the definition of which design activities are included is somewhat inaccurate and is subject to debate, including furthermore differences according to countries and which are in constant evolution.

2. Design use and results thereof

If it is difficult to find official data on design activity, measuring the use that organisations make thereof and the returns obtained is an almost impossible task. The only variable whose use has been generalised to identify those sectors which invest in design is the Intellectual Property Register. The Observatory of the European Union Intellectual Property Office and the European Patent Office have undertaken three studies at a European level (2013, 2015 and 2016) as regards the contribution of the intellectual property rights intensive sectors of the Union economy. These studies analyse the performance of the economic sectors identified as design intensive, those that make the most use of intellectual property registers in the Design section (in Spanish the "Drawings and models section"). The methodology used facilitates the comparison of the EU results with those obtained in the study undertaken in 2016 by the United States Patent and Trademark Office.

Furthermore, the United Kingdom Design Council published in 2018 its latest report "The Design Economy", a continuation of its previous 2015 study. The design sector is identified as that which incorporates 30% or more design-related jobs, which includes architecture and engineering. The result combines in the same group design service providers and industrial sectors with increased design use.

Finally, field research is inevitable if it is wished to further fine tune the characterisation of the use of design and its results, and only the undertaking of surveys and case studies may shed light on the reality that official statistics do not demonstrate. One of the standards for the assessment of the degree of design use is the so-called Design Ladder[3] proposed in 2001 by the Danish Design Centre. In 2015 the Innobarometer of the European Commission included this question for the first time and in 2016 it was used once again, although this report does not examine the impact of design specifically. The Department of Business, Enterprise and Innovation of Ireland commissioned in 2015 a report on the importance of design in the “non-intensive design” sectors, wherein a survey was undertaken where the Design Ladder was one of the indicators which facilitated the correlation of the use of design with business results.

3 → Danish Design Centre. The Design Ladder: Four steps of design use https://danskdesigncenter.dk/en/designladder-four-steps-design-use [Enquiry: 24/01/2019].

3. Design in innovation

The Action Plan for design innovation[4] drawn up by the European Commission in 2013 was intended at accelerating the incorporation of design into innovation policy. This plan proposed three lines of action, the first of which was: "Improvement of the understanding of the impact of design on innovation". Two years earlier, in 2011, the European Initiative for Design and Innovation had been launched, one of whose projects was the €Design[5], spearheaded by the Barcelona Design Centre (BCD), that was commissioned to "specify a new set of questions for the Community Innovation Survey to furnish information on design as an economic factor for the creation of value". The €Design project proposed three new questions for the CIS, but there is no record so far as to whether these have been included in the survey, nor do their results appear on the Innobarometer or on the Innovation Scoreboard. Nevertheless, as mentioned previously, since 2015 the question as regards the Design Ladder in relation to innovation activity has been included in the Innobarometer.

Proposed by the Organisation for Economic Co-operation and Development (OECD), the Frascati and Oslo Manuals are the reference benchmarks for measuring R&D and innovation activities. The aforementioned €Design project likewise analysed the limitations of these manuals on the conceptualisation of the role of design in innovation and proposed improvements for the next revision of the Frascati Manual. In 2015, an OECD document, "Measuring Design and its Role in Innovation",[6] analyses various possible measurements of the use of design within the context of innovation, including those proposed by €Design, and particular attention is given to the Danish Design Ladder model. The document concludes that, although it is required to update the design definitions in the Frascati Manual, recommendations for quantifying the percentage of R&D expenditure that corresponds to the design are not likely to be included in the short and medium term. Further research and debate are required in order to obtain reliable qualitative indicators. Instead, it is suggested that qualitative indicators (such as those used by Statistics Denmark in 2010 and 2012) may help to further elaborate on the heterogeneity of strategies and realities.

In May 2018, the United Kingdom Design Council published a report which compiles, analyses and unifies the different theories as regards

4 → Services of the European Commission. Implementation of an action plan for design innovation. [Translation. The original document is drawn up in English SWD (2013) 380]. 2013, p. 7.
5 → € Design, Measuring Design Value. http://www.measuringdesignvalue.eu/ [Enquiry: 24-1-2019].
6 → Galindo-Rueda, F.; Millot, V. Measuring Design and its Role in Innovation, OECD Science, Technology and Industry Working Papers, 2015/01, OECD Publishing, 2015.

the relationship between design and innovation and the abundant literature in this regard.[7]

In relation to this debate on the quantitative study of the design activity, the doctoral thesis of Anxo López,[8] is very interesting, the first study of this type in the Spanish academic field, whose objective is to endeavour to determine in a scientific manner the basis of the existing relationship between design and the economy in Spain. One of its main conclusions is that it is not possible to determine the size of the design sector from official statistics, due to several reasons:

- In the Central Companies Directory of the National Statistics Institute (INE) only data as regards the main activity of the companies may be obtained, yet not the remaining activities.
- 94% of the design professionals surveyed work in companies whose main activity is not design.
- 25% of design professionals are not registered in Social Security, which represents an underground economy percentage exceeding the national average.

The dilemma of primary or secondary research

Despite the fact that official data does not accurately represent the reality of design in Spain, it is necessary to continue exploring the available sources to elaborate on an understanding of the situation and to propose improvements therein. "The official statistics are within an internationally standardised model and, therefore, the State shares that information with other countries which undertake their own models and comparisons can be established using a scientific basis"[9]. This applies both to studies carried out based on the NCEA classification to calculate the size of the design sector and those based on the intellectual property register.

The situation in the various countries of the world as regards this type of secondary sources is very diverse, even within the European Union. Nevertheless, likewise in the international context there have been many reports undertaken since 2002 as regards surveys and case studies, in combination with estimates made from official sources. The United Kingdom, through the Design Council, spearheads this activity by testing several approaches over the years in order to secure the impact of design. Similarly in Denmark, surveys have been used

7 → Flood, R.; Lambert, R. Understanding design-intensive innovation: a literature review. Design Council. 2017.
8 → López, Anxo. Design as an economic activity in the Spanish industry of the 21st century from a statistical perspective (doctoral thesis), 2017. **9 →** Ibid, p. 237.

both by the Danish Design Centre as well as Statistics Denmark. Other countries such as Ireland, Finland, Australia or New Zealand have implemented nationwide surveys which have produced reports with distinct approaches.

In our country, the first study based on field work[10] was undertaken in 2002 by the extinct Spanish Federation of Design Promotion Entities, which in 2010 published the results of another survey[11]. Two other reports were undertaken in 2005[12] and 2008[13] by the likewise extinct Ddi (State Agency for Design Development and Innovation). In 2012, the Spanish Design Observatory published its study The economic value of design,[14] the only one that, despite the limitations identified, is based solely in the analysis of official data.

The obtainment of a snapshot of the impact of design is a major challenge for any country. Nevertheless, the majority of the actions that governments may implement in order to promote design require initiatives at a regional level and, therefore, it is particularly important to draw from a knowledge of the closest reality. Not surprisingly cities such as Seoul[15] (South Korea) or New York (USA)[16] have implemented their own reports, or that territories such as the State of Ontario,[17] in Canada, or Victoria,[18] in Australia, analyse their own situation. In Spain, initiatives have similarly emerged in Catalonia[19] (BCD), Madrid[20] (Economic Observatory of Madrid City Council) or the Region of Murcia[21] (Design and Architecture Observatory of the Region of Murcia).

As can be observed, publications based on official statistics are unavoidable, but rather unusual when a diagnosis is required which can regulate design and innovation policies. **Much remains to be done for the purposes of having approved quantitative indicators in relation to the use and impact of design, and headway in this regard must be vindicated. In the interim, it is necessary to continue exploring research models based on surveys and qualitative studies.** This choice is not devoid of its drawbacks; on the one hand, the cost of undertaking surveys and interviews is much higher than analysing existing data tables. And on the other, the absence of standards for undertaking surveys hinders comparative analysis between different countries and regions.

10 → Spanish Federation of Design Promotion Entities. Design in Spain. 2002. **11 →** Spanish Federation of Design Promotion Entities. Descriptive analysis of the survey responses undertaken to all design sector agents. 2010. **12 →** State Agency for Design Development and Innovation. Study on the economic impact of design in Spain. 2005. **13 →** State Agency for Design Development and Innovation. Study on the economic impact of design in Spain. 2008. **14 →** Spanish Design Observatory. The economic value of design. 2012. **15 →** Seoul Metropolitan Government. Seoul Design Survey. 2008. **16 →** Center for an Urban Future. Growth by design. 2011. **17 →** Martin Prosperity Institute. The place of design: exploring Ontario's Design Economy. 2009. **18 →** Design Victoria. Five Years On Victoria's Design Sector 2003-2008. 2008. **19 →** BCD. Mapping of the design sector in Catalonia. 2015 **20 →** Economic Observatory of Madrid City Council. The design sector in the city of Madrid. 2007 **21 →** Design and Architecture Observatory of the Region of Murcia. Analysis of the design sector of the Region of Murcia. 2011.

The Valencian Community

According to the GECE (Government, Strategy and Corporate Competitiveness Observatory) 01/18 (IVIE-Bankia) Report[22], "The Valencian Community suffers from a problem of business dimension. Companies are, on average, smaller than in the rest of Spain". This data is not new and already in the first years of existence of the regional government, in the midst of industrial restructuring, the Institute for Small and Medium-Sized Industry (IMPIVA) was created to develop the industrial promotion and innovation policy of the Valencian government within the SME context. In these early years, the promotion of design as a catalyst for innovation and competitiveness was one of the priorities of the IMPIVA and the effects of those policies, unfortunately interrupted for years, are still felt in the Valencian business fabric. **There is a wide range of design degrees in the educational landscape, the design associations of our Community are among the most active in the State, the National Design Prizes have been awarded on eight occasions to Valencian professionals or companies, and numerous companies of our territory are among the most noted examples of excellence in the use of design.**

Notwithstanding this interesting background, we are unaware of the existence of studies on design in the context of the Valencian Community so far. Throughout its existence, the IMPIVA has developed dissemination actions, prizes, exhibitions, directories and publications which include success stories, but never a report on the economic dimension of design. Nevertheless, as of 2015 a growing interest in design in Valencian institutions can be discerned, which is evident among other initiatives in support of the research work at hand, and in the commissioning of the Valencia Institute of Economic Research (*Instituto Valenciano de Investigaciones Económicas*, IVIE) of a study on the economic impact of design, whose publication will coincide in time with our study.

As has been mentioned earlier, in order to improve our understanding of the reality of design, it is necessary to supplement secondary research — based on existing internationally approved statistics— with primary research based on interviews and surveys, and brought into line to a more immediate context. Whilst the IVIE study is based on the analysis of corporate intensive intellectual property registers use, this report examines various means

22 → Escribá, A.; Albert, C. and Aragón R. Examination of the state of competitiveness of the Valencian Community companies. GECE. Observatory. 2018. p. 7.

of identifying the Valencian design ecosystem players and that of understanding the interactions that exist inter se.

An inherent approach

When framing this report on the Design economy in the Valencian Community, all previous experiences have been taken into account. **The final objective is to understand which agents compose and how design operates in our Autonomous Community, and most notably to unravel the relationship between the design sector and the economy and society as a whole, as design consumers, users or beneficiaries.** For this reason, the Design Council model has been ruled out wherein the value of the design economy is calculated as the sum of the sectors that employ a certain percentage of design professionals, without distinguishing those who render design services from those who are hired, but it has similarly been precluded limiting the sector to that included in the NCEA 7410 (Specialised design activities) heading.

In order to classify the design-production sector, Anxo López's observations as regards the representativeness of the 7410 heading have been very relevant. Starting from a unique conceptual definition of design has been precluded and, in lieu thereof, a comprehensive definition has been used which includes the following design activities: industrial design, product design, packaging and labelling, graphic design, publishing, photography, illustration, advertising and communication, audiovisual, digital, computer and web applications, textile, fashion, services, interiors, spaces, food, events and experiences, processes, brand, design management and strategic design.

Accordingly, and similar to the study of the Spanish Design Observatory, **those NCEA headings which correspond to these activities have been selected, including those that, being industrial in nature, base their activity entirely on design. This group is called purely design production sectors.**

Secondly, NCEA headings have been identified which, although they include design production activities, they also incorporate activities non related to design production. These sectors have been surveyed in order to obtain an estimate of the percentage of their activity that can be assigned to the design production

sector, and have been called partial production design sectors.

When assessing the use of design in the Valencian economy as a whole, and given that the objective was to understand the impact of the design depending on the activity, we have resorted to the use of a telephone questionnaire and have questioned company managers belonging to the main activity headings with specific weight in the Valencian Community. This has enabled us to quantify –through this comprehensive primary research – the economic contribution and the relevance that the design sector has in the non-primary production structure of our Autonomous Community, as well as its connection to corporate innovative processes.

Case studies

As pointed out previously the importance of qualitative research as a supplement has enabled us to better interpret the remaining indicators and sources of information. **In order to understand the different methods in which design intervenes in the company, the case study methodology has been used and thirty samples of companies, which cover a wide range of activity areas, geographic location and business sizes have been selected.**

In the identification of these cases we have avoided limiting ourselves to the stereotype of excellence in design, so very customary in existing literature. Although all case studies may be considered successes to a greater or lesser degree, design does not always play a central role or have the same visibility. Not all cases are on the highest step of the Design Ladder, but they may shed light on the functions of design in the company, and the results it offers.

Educational map

Finally, the importance of the educational system in design, not only for its fundamental strategic role, but likewise for its weight as an economic activity must not be forgotten. To that end, we have drawn up a first Formal Design Education Map of the Valencian Community, still incomplete in terms of quantitative data, but wherein it is expected to be completed in the future in order to offer a more accurate view of the scope of this activity.

Conclusions ↷

1. The design production sector contributes 3,762 million Euros to the Valencian Community economy

The weight of the design production sector as regards to the productive economy of the non-primary sectors of the Valencian Community is 2.1% or in other words 3,762 million Euros. For the purpose of comparison of these figures, the chemical industry has a weight of 2.5% and the information and communications sector of 1.9%. That is, it is a relevant sector in the regional productive structure. This data refers to the direct turnover of the production sector. It is interesting to add that if the turnover of the companies which are positioned at levels 3 and 4 of the Design Ladder are calculated, which can be understood as "intensive sectors" in the use of design in the Valencian Community economy, this would be 12.1% of the total.

2. Design is more productive than other economic sectors

Specialised design activities (NCEA 7410) are more productive than other sectors of the Valencian economy. The productivity of the companies of this NCEA, according to National Statistics Institute (INE) data, exceeds 84,000 Euros/employee, a figure significantly higher than that of sectors such as service, industry and commerce.

3. The design production sector is composed mainly of companies

The data indicates that there is a high presence of companies in the purely design production sector. **Contrary to what one might think, design is not a self-employed worker sector.** The percentage of companies dedicated to design activities is similar to that of the industry sector and much higher than that of the tertiary sector.

4. Companies make a professional use of design

Approximately 50% of companies surveyed in non-primary production sectors have included the professional use of design into their business dynamics. This data is calculated based on two variables, on the one hand, the percentage of user companies that are positioned on levels 2, 3 and 4 of the Design Ladder (52%), and on the other, those who declare to have invested in design in the last two years (49%). Based on the 30 case studies undertaken, it can be stated that the professional use of design is widespread in all cases. **The entirety of the companies interviewed has a clear understanding of the practicality of design for certain business activities and know how to include same to meet their requirements.**

5. The design production sector is highly innovative

The purely design production sector demonstrates major innovation activity. 23.8% of the sector's companies carry out all innovation variants (products, processes, organisational and marketing), a figure that stands at 17.3% in the industry sector and drops to 4.9% in the business and services sector.

6. Correlation between the Design Ladder and innovation

The probability of innovation in processes, products and marketing is twofold in those companies positioned on levels 3 and 4 of the Design Ladder than those found on levels 1 and 2. This connection implies either that the design culture shares the culture of innovation, or that the very use of design at intensive levels produces innovation, or that when companies wish to innovate have to resort to very intensive design uses.

7. Design is an investment

Over 70% of companies in the non-primary production sectors which have used economic resources in design consider that it has been an investment in order to obtain a profit, in lieu of being an expenditure. It follows that 3 out of 4 companies are able to identify the profitability of the use of design and that design is a tool incorporated into business practice. Nevertheless, the case studies reveal the difficulty of entrepreneurs to adequately measure the return on design investment.

8. Use of all design disciplines

In all case studies design is found in all its disciplines. Logically, each company employs those that assist one to find a solution to one's needs and requirements. This use of design is undertaken either using in-house designers, or the outsourcing of specialised external services. The major investments in design made by companies in the non-primary production sectors have been in advertising and communication, closely followed by investment in digital design (websites and applications) and editorial design and posters. Nevertheless, in the industrial sector, product design is on par with the remaining specialties.

9. Diversity in design intensity and uses

Our report shows that 76% of the companies which are positioned on the lower levels of the Design Ladder have carried out certain design-related activities. The case studies have enabled us to extract a variety of usage patterns which help explain this relationship between companies and design management.

10. Close relationship between design and business success

In general, companies in the non-primary production sectors positioned on levels 3 and 4 of the Design Ladder have better economic expectations. This is evidenced to a greater extent in the specific case of industrial sector companies where 71% of those which have a robust relationship with design are likewise those with good expectations, as compared to 41% of those with little or no connection with design. This high correlation is clearer in companies with less than 25 employees, which represent 96% of those in the Valencian Community. **The case studies have enabled us to identify these best expectations in areas such as: turnover, productivity, export, economic benefit or the opening up of new markets.**

11. The design sector exports very little

The purely design production sector has a low volume of exports and **its scope of activity is, primarily, regional.**

12. Low female participation in design production

Although currently 57% of students enrolled in design are female, it is evidenced that in the NCEA 7410 **only 33% of the persons hired are women.**

13. High level of education in design jobs

The purely design production sector is more professional and has a greater number of graduates hired than in the non-primary production sectors. Elsewhere, in these sector companies, design employees are twice the number of graduates than the rest of the workforce.

14. Designers are underpaid

The average salary of designers, despite being a sector with high educational levels, is equivalent to that of the average salary of the workforce, both in the purely design production sector as well as in the non-primary production sectors.

15. Boom of the design education offer and interest in design

Design education in the Valencian Community has experienced a strong growth in the last eight years both in the educational offer — with approximately a 60% increase — and in the number of enrolled students — over 200%—. The data provided by the educational centres reflect that in 2018 5.08% of the students enrolled in Tertiary Education of the Valencian Community studied design-related degrees whilst in 2010 this figure dropped to 1.53%. **In conclusion, currently 5 out of 100 students of the Valencian Community choose design-related educational degrees.**

The Association of Designers of the Valencian Community (ADCV) has developed this first quantitative and qualitative report on the design economy in the Valencian Community which is financed by the Valencian Innovation Agency (Regional Government of Valencia). A research project which emerges from the need to assess the sector itself, as well as to contribute to the measurements to understand the close relationship of design with the various corporate innovation processes.

For its execution, the ADCV has had the support of the GfK consultancy firm, which has carried out the research intended at understanding the impact that design has on the Valencian economy, in order to quantify the value of this activity in terms of turnover and productivity among others.

A number of the indicators used in the research are accessible through existing secondary sources. Nevertheless, the objectives of this project made primary research work essential. To that end, GfK and the ADCV have drawn up a survey which has been forwarded to 1,345 Valencian companies. By means of a semi-structured telephone questionnaire, lasting approximately 12 minutes, corporate managers of the companies the subject matter of analysis were interviewed (methodology of the research, p. 149).

By means of this comprehensive primary research, whose results are presented herein, the economic contribution and the importance that the design sector has in the productive structure of the Valencian Community has been quantified.

On the one hand, the data obtained offer a better awareness and understanding of the weight of the design production sector in the Valencian economy. Figures which demonstrate the legal structure of the design sector as well as its close relationship with innovation, and likewise the productivity of the group of companies belonging to the NCEA 7410 (Specialised design activities), in addition to many other economic variables which are presented herein.

1 → Design Ladder is a model developed in 2001 by the Danish Design Centre. The companies are positioned on one of the four steps which specify the degree of design implementation, from the absence thereof to the most strategic level.

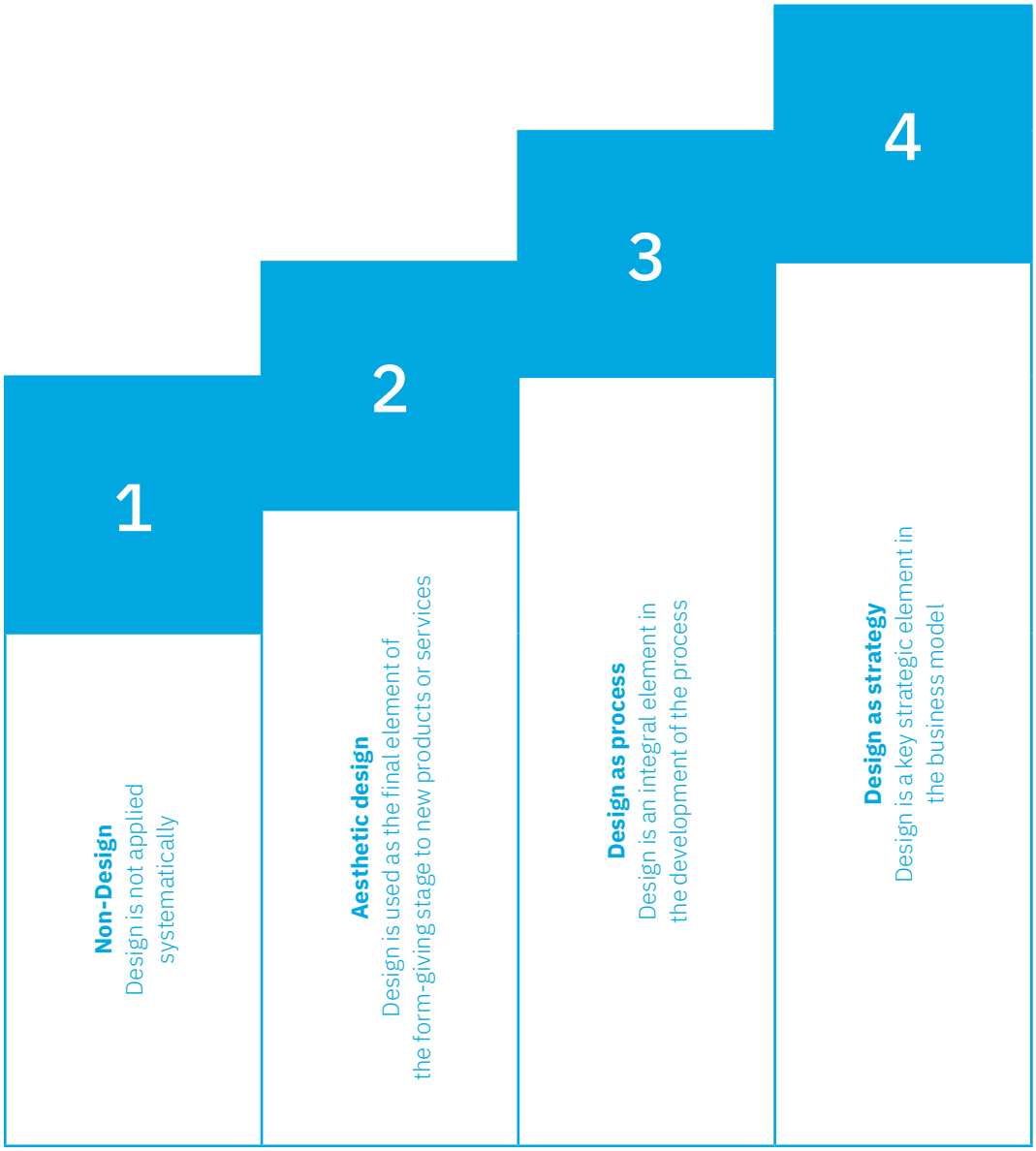
On the other hand, an overture to the understanding of the use of design by Valencian companies has been obtained. To that end, the Design Ladder has been used as a tool (see graph), a measurement model developed in 2001 by the Danish Design Centre. The Design Ladder analyses how design is used in the company and according to its inclusion positions the organisation on one of the four steps. The further up the ladder, the use of the design improves and acquires a greater presence in the company.

In light of the figures presented herein, it can be said that the weight of the design production sector in relation to the economy of the non-primary production sectors of the Valencian Community is 2.1% or, in other words, 3,762 million Euros (pp. 36-37). For the purpose of comparison of these figures, the chemical industry has a weight of 2.5% and the information and communications sector of 1.9%. Specifically, it is a relevant sector in the regional production structure. This data refers to the direct turnover of the production sector, understood as that whose activity consists in the provision of design services or either in the production of goods whose added value is necessarily generated by design. It is interesting to add that if the turnover of the companies which are positioned at levels 3 and 4 of the Design Ladder are calculated — which can be understood as "intensive sectors" in the use of design in the economy of the Valencian Community — this figure would be 12.1% of the total.

The data provides an assimilation as to what the impact of design on the economy may be based on a reference benchmark — the Design Ladder— which we believe is more suitable than other indirect allocation methods of that impact. In our report it is the interviewed companies themselves which are positioned on the corresponding step and, as shall be discussed later, the correlation between this positioning and the investment in design is very significant.

It has been identified that "Specialised design activities" (NCEA 7410) are more productive than other sectors of the Valencian economy. The productivity of the companies of this NCEA, according to National Statistics Institute (INE) data, exceeds €84,000/employee, a figure significantly higher than that of the industrial sector with €59,000/employee, €25,000/retail trade employee and €35,000/service employee.

Design Ladder ↷
Danish Design Centre



The data likewise indicates that the purely design-production sector is mostly made up of companies given the high presence of legal persons. **Contrary to what one might think, design is not a self-employed worker sector. The percentage of legal persons dedicated to design activities is similar to that of the industry sector and much higher than that of the tertiary sector.**

Following the research and analysis of results, it has been discerned that approximately 50% of companies surveyed in non-primary production sectors have included the professional use of design into their business dynamics. This data is calculated based on two variables, on the one hand, the percentage of user companies that are positioned on levels 2, 3 and 4 of the Design Ladder (52%), and on the other, those which declare to have invested in design in the last two years (49%).

If one talks about innovation, it should be noted that the design production sector demonstrates a major innovation activity. 23.8% of its companies carry out all innovation variants (given that it can be seen that there is innovation in products, processes and likewise applied to organisational innovation and marketing. If compared to other sectors, this figure stands at 17.3% in the industrial sector and drops to 4.9% in the commerce and services sector.

When getting down to detail, the probability of innovation in processes, products and marketing is twofold in those companies positioned on levels 3 and 4 of the Design Ladder than those companies positioned on levels 1 and 2. This correlation implies or either that the design culture shares the culture of innovation, or whether the very use of design at intensive levels produces innovation, although likewise may be that when companies wish to innovate have to resort to very intensive design uses.

Another data that this report specifies is that companies consider design as an investment. Over 70% of companies in the non-primary production sectors which have used economic resources in design admit that it has been an investment for the purposes of obtaining a profit, rather than being considered as an expenditure. **It follows that 3 out of 4 companies are able to identify the profitability of the use of design and that design is a tool included into business practice.** Logically, in those companies in which the design has a

high consideration the expectations of future investment in design are greater.

The major investments in design made by companies in the non-primary production sectors have been in advertising and communication, closely followed by investment in digital design (website and apps) and editorial design and posters. Nevertheless, in the industrial sector, product design is on par with the remaining specialties. The following observation is worth noting: our report demonstrates that 76% of the companies which are positioned on the lower levels of the Design Ladder have carried out certain design-related activity. This reflects that there is diversity in the intensity of use of the design but, all things considered, design is present at all levels.

This report verifies the close relationship between design and business success. In general, companies in the non-primary production sectors positioned on levels 3 and 4 of the Design Ladder have better economic expectations. This is evidenced to a greater extent in the specific case of industrial sector companies where 71% of those which have a robust relationship with design are likewise those with good expectations, as compared to 41% of those with a little or no connection with design. This high correlation is clearer in companies with less than 25 employees, a significant fact given that companies whose structure is framed within this parameter represent 96% in the Valencian Community. **It is likewise noted that the design sector exports very little and its scope of activity is, primarily, the regional level.**

As a result of our research on design education in the Valencian Community (p. 131) it is understood that, **currently, 57% of students enrolled in design are female, while in the NCEA 7410 only 33% of the persons hired are women.**

In light of the figures presented herein, the purely design production sector is more professional and has a greater number of graduates hired than the non-primary production sectors. On the other hand, in those sector companies, design employees are higher qualified than the rest of the staff. This is not reflected in the salaries: the average salary of designers is equivalent to that of the average salary of the workforce, both in the purely production sector of design as well as in the non-primary production sectors.

Turnover ↷
Economic weight of design
in the Valencian Community

€3,762M

2.1% of the turnover of the Valencian Community was generated by activities related to design and management in 2018. The weight of design as regards the economy is remarkable.

Economic weight ↷

Comparison as per economic activities according to the NCEA

Food and Beverage Services	2.6%
Chemical industry	2.5%
Land transport and transport via pipelines	2.4%
Sale of motor vehicles	2.2%
Design producers	**2.1%**
Information and communications	1.9%
Rubber and plastics	1.7%
Wholesale trade	1.6%
Real estate activities	1.2%

Source: Structural Business Statistics: service, commerce and industry sectors 2016 (National Statistics Institute (INE)), Regionalised figures according to autonomous communities and cities and main activity.

Productivity ↷

Comparison of productivity per employee between sectors

Productivity per employee. Intersectoral comparison (2018)			
NCEA 7410	Industry	Retail trade	Services
€84,115	€65,392	€24,693	€35,335

Source: Structural Business Statistics: service, commerce and industry sectors 2016 (National Statistics Institute (INE)), Structural business statistics, main figures and indicators according to principal activity.

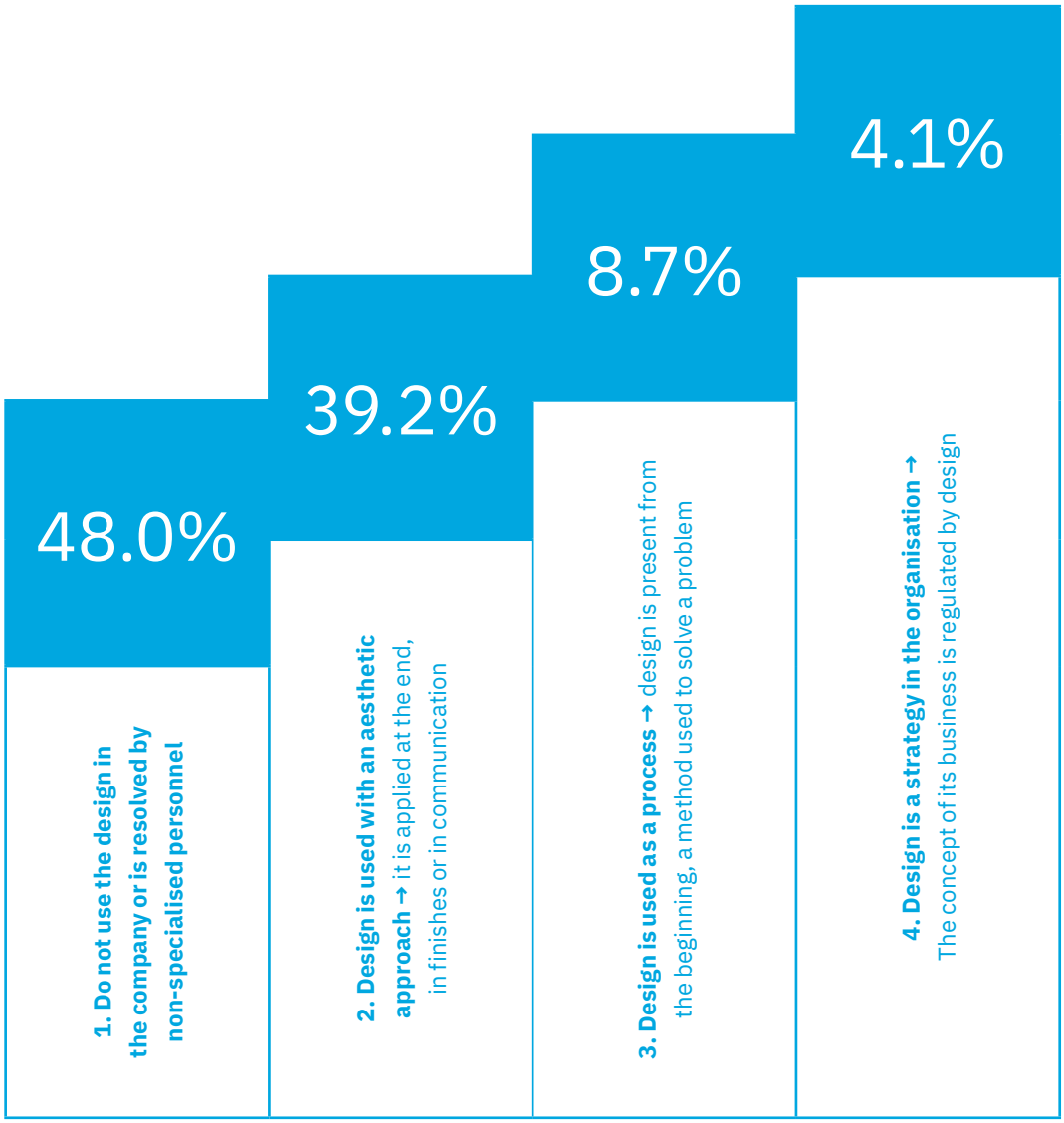
Legal structure ↷
Business structure of the design sector

Legal structure NCEA 7410 business structure	
Are a natural persona	Are a legal person
28.1%	71.9%

Source: Mercantile Register. Valencian Community Data, 2017.

Corporate design use ↷

Positioning on the Design Ladder of the non-primary production sectors (Industry + Commerce + Services)



Corporate design use ↷
Design Ladder Positioning. Sector Analysis

Industry — Design Ladder. Positioning of the companies			
Step 1	Step 2	Step 3	Step 4
38.6%	35.5%	15.3%	10.7%

One in four corporate users in the industry sector considers that design is a fundamental part of their business strategy.

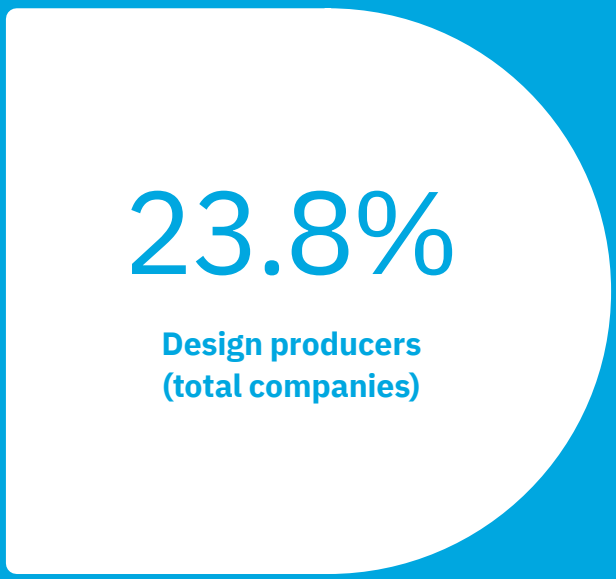
Commerce + Services — Design Ladder. Positioning of the companies			
Step 1	Step 2	Step 3	Step 4
50.4%	40.2%	7.0%	2.3%

One in ten corporate users of the commerce and services sectors uses the design in their processes or in their business strategy.

Innovation in the design production sectors ↷

Companies which undertake all innovations

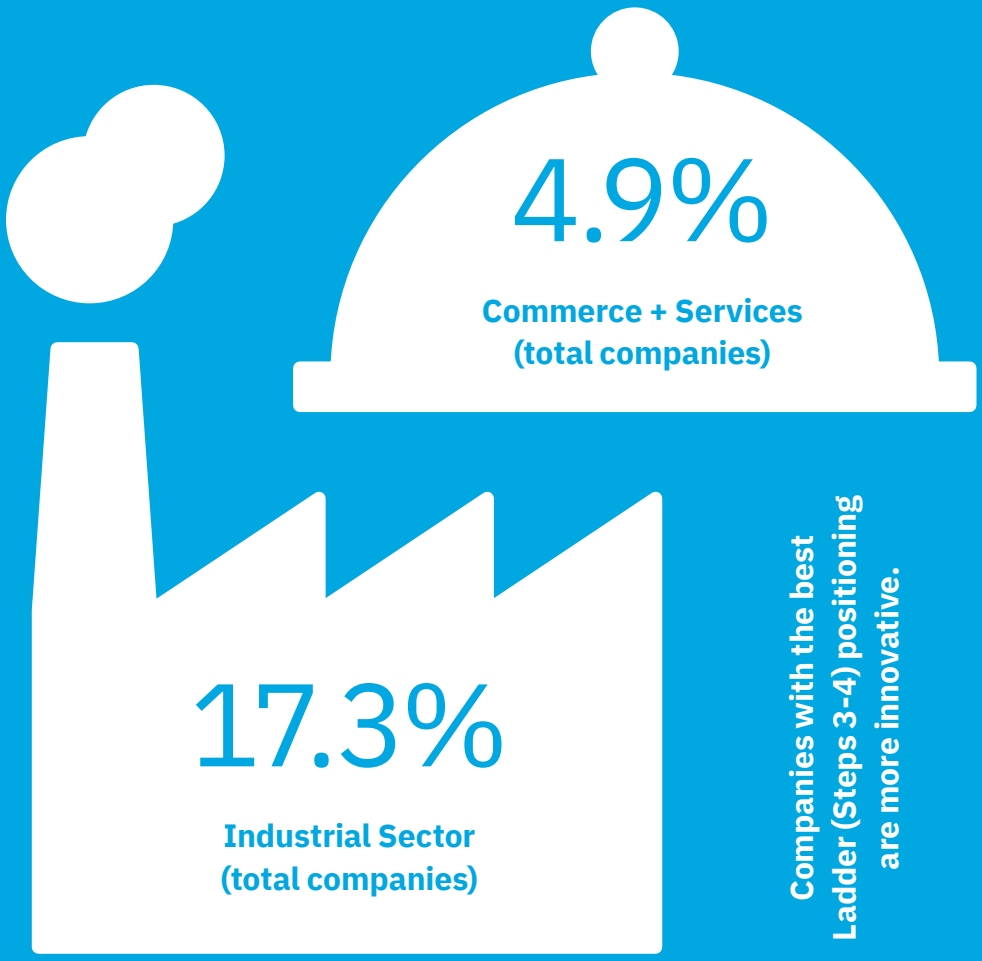
The design production sectors are significantly more innovative than other business groups.



Sectors (design producers)	Undertaking all innovations
Purely producers	29.7%
Partial producers	18.0%

Innovation in non-primary production sectors ↷

Companies which undertake all innovations



Companies with the best Ladder (Steps 3-4) positioning are more innovative.

Sectors (non-primary productive)	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Industry	10.7%	36.2%
Commerce + Services	3.6%	17.2%

Innovation in processes ↷
Non-primary production sectors: Industry + Commerce + Services

Companies from non-primary production sectors which have undertake innovations in their production or distribution processes (2018)			
Industry		Commerce + Services	
Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
63.9%	86.6%	32.1%	39.9%

Design utility — Innovation in processes Total non-primary production sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Design is an integral element in the development of new processes	36.8%	43.1%
Design is a strategic element in the processes to be implemented	9.8%	39.0%
Design is not used in innovation processes	53.4%	17.8%

Innovation in products ↷
Non-primary production sectors: Industry + Commerce + Services

Companies from non-primary production sectors which have undertaken innovations in their products or services (2018)			
Industry		Commerce + Services	
Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
55.8%	74.7%	34.0%	65.8%

Design utility — Innovation in products Total non-primary production sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Design is an aesthetic complement in the development of new products	21.0%	8.1%
Design is an integral element in product development	56.2%	86.4%
Design is not used in product innovation	22.7%	5.5%

Organisational Innovation ↷

Non-primary production sectors: Industry + Commerce + Services

Companies from Non-primary production sectors which have undertaken organisational innovations (2018)			
Industry		Commerce + Services	
Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
35.0%	46.5%	25.3%	47.7%

Design utility — Organisation innovation Total Non-primary production sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Design is a central element in innovation, formulation and execution of commercial policy	10.2%	61.5%
Design is an element in organisational innovation development	11.9%	12.6%
Design is an aesthetic contributor to the new identity of the company	37.7%	20.8%
Design is not used throughout organisational innovation	40.2%	5.1%

Marketing Innovation ↷
Non-primary production sectors: Industry + Commerce + Services

Companies from non-primary production sectors which have undertaken innovations in marketing (2018)			
Industry		Commerce + Services	
Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
26.0%	58.7%	31.0%	66.7%

Design utility — Innovation in marketing Total non-primary production sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Design is an aesthetic contribution to marketing innovation	28.3%	45.7%
Design is a strategic element in marketing innovation	49.1%	48.3%
Design is not used in product innovation	22.5%	5.9%

Investment and/or expenditure in design ↷

Non-primary production sectors: Industry + Commerce + Services

Investment and/or design expenditure made in 2017-2018. (% companies which have undertaken investments and/or expenditure)		
Sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Industry	49.9%	77.3%
Commerce + Services	42.7%	89.8%

Investment or expenditure expectations in design for 2019. (% companies which plan to make investments and/or expenditure)		
Sectors	Design Ladder (Steps 1-2)	Design Ladder. (Steps 3-4)
Industry	35.6%	74.3%
Commerce + Services	36.0%	51.7%

Companies which have a greater consideration of design in their activity (Design Ladder — Steps 3 and 4) which will undertake a greater investment in design.

Investment and/or expenditure in design ↷
Non-primary production sectors: Industry + Commerce + Services

Design investment and/or expenditure made in 2017-2018. (% companies which have undertaken investments and/or expenditure)	
Sectors	**% companies**
Industry	57.0%
Commerce + Services	47.1%
Total	49.2%

Design consideration (per sectors)		
Design consideration	**Industry (% companies)**	**Commerce + Services (% companies)**
Design is an investment geared towards obtaining an economic benefit	71.4%	72.5%
Design is an expenditure which was not intended to obtain an economic benefit	28.6%	27.5%

Corporate design activities ↷
Non-primary production sectors: Industry + Commerce + Services

Investment and/or design expenditure (per activities) made in 2017-2018		
Activities	Industry (% companies)	Commerce + Services (% companies)
Product design	55.3%	21.4%
Fashion and textile design	9.2%	8.2%
Packaging and labelling design	46.1%	20.2%
Brochures / catalogues / posters / publications	47.9%	44.0%
Corporate image design and branding	36.0%	31.4%
Advertising and communication	55.9%	57.8%
Digital design / web design / applications	50.5%	45.9%
Audiovisual design	19.0%	16.7%
Architecture / interiors / commercial spaces	14.4%	14.4%
Services / events / experience design	13.7%	20.7%
Design management / strategic design	9.3%	13.7%
Process design	33.6%	17.6%
None	14.8%	22.8%

Corporate design activities ↷
Non-primary production sectors: Industry + Commerce + Services

Investment and/or design expenditure (per activities) made in 2017-2018. % of companies according to the Design Ladder classification (Steps)		
Activities	Total companies (Steps 1-2)	Total companies (Steps 3-4)
Product design	23.7%	60.5%
Fashion and textile design	6.6%	20.7%
Packaging and labelling design	21.0%	57.0%
Brochures / catalogues / posters / publications	40.2%	76.9%
Corporate image design and branding	28.6%	58.4%
Advertising and communication	54.9%	74.9%
Digital design / web design / applications	42.1%	79.2%
Audiovisual design	13.8%	40.0%
Architecture / interiors / commercial spaces	11.8%	32.3%
Services / events / experience design	18.1%	26.9%
Design management / strategic design	10.6%	27.7%
Process design	16.6%	50.0%
None	24.0%	1.6%

Economic expectations 2019 ↷
Non-primary production sectors: Industry + Commerce + Services

Companies with economic growth prospects in 2019. Non-primary production sectors (Industry, Commerce and Services)		
Sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Industry	40.6%	70.7%
Commerce + Services	46.6%	49.0%

Companies with economic growth prospects in 2019. According to company size (non-primary production sectors)		
Number of workers	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
1-5 workers	47.5%	68.6%
6-10 workers	28.4%	62.1%
11-25 workers	56.5%	62.8%
More than 25 workers	57.1%	56.7%

The companies which are positioned on the highest steps of the Design Ladder are those which show better growth expectations for 2019.

Internationalisation ↷
Turnover distribution in the design production sectors

Design production sectors — 2017 Turnover. Market segmented results		
Markets	Purely design production sector	Partially design production sector
Valencian Community	64.9%	70.3%
Spain (except Valencian Community)	28.7%	18.6%
Export (outside Spain)	6.4%	11.2%

The design production sectors are local sectors with a comprehensive scope for national and international growth.

Internationalisation ↷
Non-primary production sectors turnover

Industrial sector — 2017 Turnover. Market segmented results		
Markets	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Valencian Community	56.8%	54.8%
Spain (except Valencian Community)	26.9%	28.1%
Export (outside Spain)	16.4%	17.1%

Commerce and services sectors — 2017 Turnover. Market segmented results		
Markets	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Valencian Community	73.1%	69.4%
Spain (except Valencian Community)	14.3%	20.1%
Export (outside Spain)	12.6%	10.5%

The results verify that there is no correlation between Ladder positioning and internationalisation.

Workers classification ↷
Comparison between design employees and the rest of the workforce

Design production sectors. Comparison — Employee Characterisation		
Characteristics used	Designers (% workforce)	Other employees (% workforce)
Men	57.6%	65.6%
Women	42.4%	34.4%
Graduates (bachelor degrees or diploma holders)	72.0%	39.1%

Non-primary production sectors. Comparison — Employee Characterisation		
Characteristics used	Designers (% workforce)	Other employees (% workforce)
Men	58.6%	59.4%
Women	41.4%	40.6%
Graduates (bachelor degrees or diploma holders)	52.9%	25.2%

In-house designers, both in the design production as well as non-primary production sectors, have tertiary education degrees in a higher percentage than other employees. The absence of employment parity is evident in both cases.

Worker salaries ↷

Comparison between designers and the remaining workforce

Design production sector.
Comparison — Annual average gross salary

€20,712	€21,179	€20,878
Designers	NCEA 7410*	Other employees

Non-primary production sectors.
Comparison — Annual average gross salary

€21,781	€21,179	€20,385
Designers	NCEA 7410*	Other employees

Designers, despite having a higher level of education in both sectors, do not have an average annual gross salary higher than the remaining employees.

** Source: Structural Business Statistics: 2016- (National Statistics Institute (INE)).*

Registered Patents ↷
Non-primary production sectors: Industry + Commerce + Services

Companies which registered patents in 2017-2018. Comparison — Design production sectors	
Sectors	Patents registered (% companies)
Purely producers	10.0%
Partial producers	1.3%

Companies which registered patents in 2017-2018. Ladder Comparison — Non-primary production sectors		
Sectors	Design Ladder (Steps 1-2)	Design Ladder (Steps 3-4)
Industry	3.0%	10.7%
Commerce + Services	5.7%	37.1%

The results verify that there is no correlation between Ladder positioning and the number of registered patents.

In our research we wanted to understand the different methods in which design intervenes in the company. To that end the case study methodology has been used and a total of 30 samples which cover a wide range of activity areas, geographical locations and business sizes have been selected.

Selection process

Given that all activity sectors may use design, the report's strategic management team made a first case selection using the NCEA codes with significant weight in the GDP of our territory, from which those that were already the subject matter of study as "purely design production sectors", those whose activity is based on design were excluded.

The next step was to make a selection of cases of the group which were called "non-primary production sectors" that includes the industrial, commerce and services sectors, without forgetting the public sector. The set should reflect the diversity of activities of these non-primary production sectors, identified by their NCEA codes, but likewise their geographical distribution and dimension. The cases to be studied were required to show a significant design use, reason why a random sample would be of no avail. Elsewhere, the various sectors present different intensities of design use, which is why it was necessary to consult business organisations and technological institutes in order to focus the search on the most active areas. In certain instances it was possible to handle the NCEA codes using four digits, whilst on others it was impossible to specify so many digits.

Once all the information was collected, the report's management drafted a comprehensive list of possible cases, which was meticulously discussed until concluding in the relationship of companies with which contact was made. These first interviews served to rule out organisations which did not wish to participate or could not furnish sufficient information. As a result of this weighting process, certain codes initially considered were left without representation, whilst others are included in more than one case.

Case Presentation

The information has been obtained by conducting in-depth interviews with decision makers as regards the design of each of the samples. In drawing up of the texts not all the information furnished by the company has been included. The information furnished by each organisation has required the subsequent work of the report coordination team for the unification of style, length and editing criteria, seeking a certain coherence that will facilitate the information to be more easily understood.

The result is a collection of experiences illustrating the use of design in the Valencian Community. Aware that there is no single reality in the use of design, this compilation should be seen as a whole, as illustrations of an atlas, without claiming to be an exhaustive account, but that it is only intended to serve as a guide and to be of interest. There are companies of very different size, with the predomination –as is characteristic in our Autonomous Community – of small and medium-sized companies instead of large companies. There are family-owned companies, with a lengthy history or of new generation, traditional and emerging economy sectors, consolidated, very relevant, internationally known and brand new businesses and cooperatives. Territorial representativeness has likewise been sought out, which has evidenced the industrial geographic concentration in certain regions and the diachronic development thereof. It should not be understood as a list of success stories, although it includes brilliant track records with international recognition. Nevertheless, from all these companies a future full of good news is expected.

The companies have been selected to illustrate the use of design irrespective of its exemplarity in this field or its relevance in the Valencian economy as a whole. Although certain cases merited a special distinction, it is the whole which is given as an exemplary value. The sum of all of these demonstrates how design is an overall discipline which naturally integrates into the daily functioning of its organisations. Although the selection is not based on a statistical representativeness, it does include a profusion which contributes to qualitative research given that it reflects the confirmation of companies first-hand.

Certain in the belief that anyone reading this report and that of those case studies will derive his/her own conclusions with responsibility, the report has allowed us to highlight certain observations which are of interest.

Professional use of design

The first conclusion is that the professional use of design is widespread. The entirety of the companies surveyed are clearly aware that in which facets of their activity design is useful and know how to incorporate same so as to meet their requirements. It can be verified that this is a reality very different from that of previous periods, when design was ignored by business managers or an unconscious use was made thereof in a non-professional manner. **There has been a profound change in the perception of design as a tool whose adequate management contributes to productivity and competitiveness.**

Design is present in all companies and is developed in the entirety of its disciplines although, logically, each company uses those which are necessary, either with in-house designers or through the hiring of specialised external services. Depending on each sector and business activity, which is implemented or outsourced: product design, fashion and textile design, packaging and labelling design, graphic design of catalogues and publications, corporate image and branding, advertising and communication design, digital design, website and applications (apps) design, audiovisual design, architecture, interior design and commercial spaces, services, events and experiences design, design management, strategic design and process design.

This diversity of design disciplines generates a multiplication of positive impacts on the economic variables of the companies which use same (turnover, productivity, export, economic benefit, opening up of new markets) as well as those related to the image and the relationship with users. As has already been mentioned, each sector and each company experience their own situation and, in many cases, due to different circumstances or availability of resources, either consciously or unconsciously, the possibilities of professional specialised design are not exploited for optimisation in attainment of objectives. There is a striking absence of institutional support for better design implementation.

The case studies have enabled us to extract a set of patterns which explain the relationship between companies and design management, and how these companies find in design a powerful tool in order to attain specific objectives. In a certain number of cases a single pattern is present, whilst in others several patterns synergistically overlap.

Companies have been identified where design is their main tool for an irrevocable pursuit of excellence; there are a certain number that have found in design a solution to a circumstantial critical issue; some rely on design to obtain strategic positioning; many others do so to obtain a competitive differentiation; in other cases, the company has been able to use design to provide meaning and structure to its organisation, whilst others have discovered in design the seed of innovation and an increasingly more companies are influenced by a culture of design, upon seeing success which is added in others, which is taken as a role model to follow.

Return on investment

Another noteworthy conclusion is that the majority of the companies interviewed do not have accurate or reliable information as regards the investment or expenditure undertaken in design, nor the economic result of the employment thereof. These companies find it difficult to perceive the allocation as an investment or expenditure of the resources used in design. One might think that if these companies make a professional design use, either with in-house designers or hiring external designers, these companies must be very clear that it is carried out in order to be profitable and, nevertheless, have trouble measuring its economic return.

This conclusion invites putting forward recommendations to governments, universities, schools and associations, intended at facilitating the measurement of individual impact in each organisation, as regards the economic value of design. And which leads us to believe that maybe we perceive design as an invisible resource, something that looks natural, in the same manner that landscape or field crops can be. Something that is omnipresent and of which, paradoxically, we are not aware of the importance that it has, whose exploitation unlocks wealth, but not quantified, and that in unfair result does not seem to require attention, nor deserve recognition

or prestige. This situation is that which we wish to contribute to reverse with this research.

Beyond the Design Ladder

The comparative study of 30 companies of the Valencian Community and how these companies implement design has led us to develop a new interpretation framework capable of better reflecting the complexity of these experiences. **The most used course of action when analysing the integration of design in the company is the so-called Design Ladder, a model developed in 2001 by the Danish Design Centre. Therein companies are positioned on one of the four steps which specify the degree of implementation of design, from the absence thereof to the most strategic level.** The ladder having the advantage of simplicity and is based on the hypothesis that there is a positive connection between the most strategic use of design and its economic results.

We are convinced of the validity of this hypothesis and that is why this report includes the Design Ladder both in the surveys as well as in the case studies. As a result, the results obtained of our research as a whole with those published by the Innobarometer in relation to the European Union countries can be compared.

Nevertheless, two limitations of the model when applying same to the cases studied have been identified. Firstly, the linear design adoption structure does not reflect the various design entry points which can be noted in actual cases, nor the areas of the organisation wherein same proceeds. Elsewhere, the ladder metaphor implicitly implies the message that the benefits of design only grow if it climbs up to the strategic level, irrespective of the company or its circumstances and needs.

As an alternative and supplement to the Design Ladder two new analysis tools have been developed which endeavour to complete the vision as regards the entry of design and its progress in organisations. The first tool focuses on the initial rationale for the use of design. The second tool identifies a series of common patterns in companies which use design.

1. Design Compass

Based on four different scenarios, the Design Compass specifies that design is present in the culture of companies in four different ways. To that end a quadrant graph has been used wherein positioned to the left are those situations in which design is the predominant driver – in certain cases it has been found that the company was created for that very reason, that of making design – whilst to the far right are position the cases in which the main rationale is the economic benefit. Elsewhere, on the vertical axis in the upper part positioned are those more integrative approaches –which seek to reconcile both business objectives– and in the lower area the most focused in only one of the objectives.

This tool may help to understand why sometimes there is no concern to calculate and optimise the design return on investment, given that its emergence in organisations is not always based on the attainment of an economic or market objective. This design compass likewise offers the option of tracing the strategic evolution which takes place from the emergence of the design, when the progressive results of its use enable the company to realign its initial objectives.

2. The seven design utility patterns

The second tool developed is based on the identification of a series of recurring behaviours and phenomena in the companies that use design. The classification of these patterns has the advantage of demonstrating not only the precipitating factors of the introduction of design, but similarly the main utilities and benefits thereof within the company.

The purpose of this new tool is both to analyse existing cases, as well as to disseminate how design can help all manner of organisations. This classification enables companies which decide to approach design, how it acts, what objectives it obtains, how it progresses in the short, medium and long term, and what areas of the organisation it affects.

These patterns have been determined following a qualitative study of the companies analysed, belonging to various sectors

Design Compass ↷
Association of Designers of
the Valencian Community (ADCV)

of the Valencian Community economy and that of different sizes. This tool enables us to verify that, although companies differ substantially in their objectives, purpose and evolution, demonstrating common practices of design use which serve to understand same and even to envision what their future plans will be. In certain organisations a single pattern was identified, whilst in others several patterns are evidenced. The relevant consideration is that one or several of these seven patterns which are present in each and every one of the cases analysed, and it is safe to say that these patterns can be identified in any company that uses design.

Three tools related inter se

The two new tools introduced in this report do not question the Design Ladder, but rather are related thereto and inter se. It can be seen as three dimensions which contribute to obtain a prolific and dynamic image of the presence of design in any company. Specific examples of each of the seven patterns can be represented as a point or an avenue in the Design Compass. The number of patterns demonstrated by a company is directly related to the level it occupies on the Design Ladder. The combination of the three tools can provide a diagnosis of any organisation that enables the optimisation the company's design use. **It is hoped that beyond the purpose of this report, these proposed tools be used and developed by all those interested in design management.**

The seven design utility patterns ↷
Association of Designers of the Valencian Community (ADCV)

1. Design in the pursuit of excellence / Design as a factor of excellence

2. Design as a problem solution

3. Design for strategic positioning

4. Design as a differentiating factor

5. Design adds meaning and structure to the organisation

6. Design as the seed of innovation

7. Design as a role model to follow

The seven design utility patterns (rationale)

1. Design in the pursuit of excellence/Design as a factor of excellence → Design emerges in the company as a result of an indisputable pursuit for excellence. This pursuit of the sublime in all aspects of the organisation makes the use of design essential.

2. Design as a problem solution → Design emerges as a solution to an existential problem of the company. In its history the company encounters a barrier that threatens its subsistence. The case of the disappearance or limitation of access to traditional raw material is paradigmatic. In such cases, the company finds in design the solution which enables subsistence and subsequent progress.

3. Design for strategic positioning → Design emerges and is used as part of the company's positioning strategy. Design helps the world perceive the company as it wants to be seen, and facilitates an advantageous position over the competition.

4. Design as a differentiating factor → Design emerges and is used as part of a differentiation strategy. In certain cases, traditional, primary or undifferentiated production (textile, milk, oil ...) goes beyond being a mere commodity to becoming a differentiated product with added value due, in large part, to the contribution of design.

5. Design adds meaning and structure to the organisation → Over the course of the organisation's history, it has developed seemingly unrelated capabilities, products and images inter se. Design is the vehicle which imbues meaning to the whole.

6. Design as the seed of innovation → Innovation, whether technological, material or process, follows design. It is because there is design in the organisation which is required to generate new ideas and solutions. Design is the engine of innovation and propels the remaining activities.

7. Design as a role model to follow → There are organisations which influence their clients and suppliers through their designs. There are others which have been influenced, either by this avenue or by others (family, cultural context etc.). With this contagiousness there are significant changes in the manner in which organisations behave and see themselves.

"Design helps us to be visible on shelf. It encourages the consumer to make the purchase decision before knowing the product. Then it will be the quality of the oil which will generate customer loyalty".

Diego Barquero ↷
Owner of 565 MSNM

565 MSNM

Design use in order to add value to an excellent raw material, extra virgin olive oil.

565 MSNM is the trademark of the oil which is produced, bottled and distributed by the agricultural engineer Diego Barquero. His fields are 565 metres above sea level in Millena (Alicante), a location which inspired the name of this new organic product, an extra virgin olive oil (EVOO).

Barquero is adamant that until he started working with Pedro González Design Studio, he was just another olive oil producer. Design helped him position himself onto the market. He recognises that his family environment, very close to the world of design and Fine Arts, was an influencing factor in the decision of having a designer from the very first moment. His environment made him aware of design relevance. **He states that the joint work with the designer facilitated finding the name and design of the overall communication strategy of the project.**

Following the choice of the name (naming) came the graphic image (the logo), the packaging (cardboard boxes and metal cans), the website and other elements of the communication process with which to connect with the public chosen by Diego, a discerning public that understood the value of the product, its history and differentiation. The result of this artisan process is that their oils are found in gourmet stores and in discerning restaurants.

«Internally we have developed the Cool Working by Actiu project, for the design of contexts which enhance well-being and productivity in all types of spaces, corporate, educational, health, contract settings...".

Soledat Berbegal ↷
Director and Media Officer
at Actiu Berbegal y Formas S.A.

Actiu

Use design to redefine business strategy and to be competitive.

Actiu (Castalla, Alicante) is the trademark of the Actiu Berbegal y Formas S.A. company which designs and manufactures furniture for work and contract settings (corporate and institutional clients, public or private sector). Design has been its competitive weapon to position itself in the market and when facing difficult times.

The new corporate decisions came following the 2008 economic crisis. At that stage the company, in a rapid redesign of its business strategy (strategic design), opted to make a commitment to internationalisation and market diversification. Explains Soledat Berbegal, Actiu Director and Media Officer, which established its own showrooms in several capitals (Madrid, Barcelona, London, Paris, Sydney, Miami...) and found opportunities in the airport, education and hospital sectors.

Each year 5% of its turnover is invested in R&D+i and in design. Design is the foundation of its strategy, which is applied to its products, communication, projects, logistics and commercial strategies. The R&D+i and Market Departments (Marketing and Strategy area) are the main areas of the company. The objective of the company is to adapt to the needs of the client, which influences the facility management prompting a constant redesign of the layout of the factory (changes in workflows, components and job positions).

For the design of projects the company has its own designers (Technical Office) but similarly has established partnerships with external designers (Alegre Design, Item Designworks...). Collaborating with a large number of technological institutes, associations and universities in research programmes and agreements (Aemma, Aitex, Aiju, Aimplast, Aidimme...).

"The changes which we have been applying in packaging design and innovation since 2009 have enabled us to improve the presentation of the product and show its excellence, with nothing standing in its way. Packaging must be at the service of the product, not the other way around".

Carlos Jiménez ↷
Director of the R&D+i Department
at Ahumados Gimar S.L.

Ahumados Gimar

Using design in order to make the brand visible and to imbue consistency with the level of exigency of the product.

Ahumados Gimar (Petrer, Alicante) is a company specialised in the manufacture of seafood and distribution thereof throughout Europe. Set up in 1989 to supply the restaurant and catering market, smoked salmon has been present in its daily life but its landing in the distribution sector brought new demands from consumers, forcing the company to expand its offer.

In order satisfy clients, we had to launch more products onto the market (tartar, saku, carpaccio ...), which entailed designing more packaging. **The company continued to grow, organically, in a variety of products and in packaging, which is why in 2009 — the first turning point— the reorganisation and innovation of the packaging with the objective that the packaging exhibited the product, evidencing its high quality and helped to position the brand on the market.** Leaving behind the typical trays for smoked foods —which it is claimed that many others still use— and abandoned the use of photography to showcase the product. The second turning point came in 2015. The growth of the company made an overall revision of the image and packaging (new logo, typography and packaging) necessary.

At Ahumados Gimar design and innovation complement each other. Carlos Jiménez, Director of the R&D+i Department, explains that investment in innovation is much more important than in design due to continuous investment in technology (thermoforming machines for cutting, packaging, labelling ...). The company solves its design needs with in-house designers.

"We continue to grow. We still require and search for more designers to reinforce the Design Department".

Miguel A. Serra ↷
Marketing, Advertising and Design Department Manager at Clave Denia S.A. (ALE-HOP)

ALE-HOP

Design use for the purposes of sales and stores growth.

ALE-HOP (Ondara and Bellreguard, Valencia) is the trademark of the Clave Denia S.A. company, a company dedicated to the retail trade of gift items, fashion accessories and decoration, always under the premise that these are original, fun and at an affordable price. **Despite the widespread belief that this company acquires already designed and finished third-party products, at ALE-HOP the Design Department is very important given that its personnel manages 90% of the finishing (styling) of each product. The Product and Marketing Manager, Raúl Grimalt, is the decision maker.**

The founder and current managing director, Vicente Grimalt, noted (2000) that in the future the company would proceed to start up franchises and sell its own products. From its first store at Calle de la Paz (València) the company has grown to over 160 stores, between franchises and own stores. **After five years of existence (2005), in the flush of rapid growth, the company commenced to invest in design. The workforce was increased and investment made in computer programmes, likewise incorporating a studio and a photography equipment ... There are currently 14 in-house designers and the company collaborates with external designers.**

The main design disciplines are graphic design, packaging, interior design and textile design. Focussing on the Marketing, Advertising and Design Department, and the Technical Department. Miguel Ángel Serra explains how the company works: "We make product requests on demand, sending the manufacturer the design whether from a product idea to the printing of a fabric or a bag. The supplier sends us the products without the final aesthetic finish, which we design". Insofar as innovation is concerned, the company maintains collaborations with educational centres and the University of Valencia. It does not collaborate with Redit institutes.

"In this company there is design in everything that surrounds us: in the product, in our website and corporate image, in the new headquarters designed by Francesc Rifé...".

José Luis Latrás ↷
Chairman of Arkoslight S.L.

Arkoslight

Design use in order to specialise in the manufacture of technical products and finding a niche market.

Arkoslight is a company (Ribarroja del Turia, Valencia) which offers lighting solutions, specialising in the design and manufacture of technical lighting for the contract, home and retail sectors. Its evolution since the 80s has always been defined by the manufacture of luminaires. From the classic bronze and rhinestone lamps (90s), moving onto the recessed halogens prior to technical lighting, in which it currently specialises in.

The high technical component of the luminaires requires the designers of this company to have specific education and training in the design of technical lighting to be able to work in that field. "The absence of a greater and better education in this field makes it rather impossible for the company to find talent," states its Chairman José Luis Latrás. **For this reason the company, when designing new products, works only with its in-house designers. To attract young talent, the company relies on universities and design schools.**

Designers are concentrated in three departments: the Design Department, with industrial designers; the Marketing Department, with graphic designers, and the Projects Department, with interior designers and lighting designers. **The R&D+i Department is very important in the company, in which electronic engineers work at the forefront as regards the use of new components.** The Design and Innovation departments work as a team. In the last seven years, Arkoslight has won 44 design prizes (Red Dot, IF Product Design Award...).

"We do not sell a product, we sell a service. Naval design is paramount when building a vessel, as factors such as comfort and convenience on board will depend on it".

Verónica Catany ↷
Sales and Marketing Director at
Baleària Eurolíneas Marítimas S.A.

Baleària

Design use in order to improve the client experience on each crossing and to optimise the carriage of goods.

Baleària (Dénia, Alicante) is the trademark of Baleària Eurolineas Marítimas S.A., a leading shipping company in Mediterranean maritime transport, both passenger as well as cargo, which stretches to the Strait of Gibraltar, North Africa and the Caribbean. Its Chairman is Adolfo Utor, likewise the main shareholder.

The company uses different design disciplines: graphic design, process design, textile design and the most significant herein are naval design and architectural design, interior and space design, the latter fundamental in constructing new intelligent and eco-efficient terminals, which facilitates the carriage of passengers and goods, explains Verónica Catany, Sales and Marketing Director.

The redesign of the image in 2017 led to the development and implementation of the new Trademark Manual in 2018-2019, with which to obtain a uniform image and reinforce the core values. The areas with the greatest use of design are Service on Board, Marketing, Fleet, Purchasing, Communication and Information Systems.

In this services sector company the decisive purchase factor is very functional and is connected to schedules, services and crossing times. Even so —Catany acknowledges — design helps convey their brand values and to sell. **Design likewise supplements and improves innovation projects —related to the eco-efficient energy of the fleet— by helping to convey same to users.**

"Professionalising the Corporate design has enabled us to confer an overall coherence to our brand, and it contributes to make the consumer understand us better".

José Mendoza ↷
Oenologist and Manager at
Bodegas Enrique Mendoza S.L.

Bodegas Enrique Mendoza

Design use in order to classify the meaning of the brand and imbue same with consistency.

Bodegas Enrique Mendoza is a company that mainly deals with the elaboration, bottling and distribution of wines. Having two centres in the province of Alicante, an ageing winery in Alfaz del Pi —where the wines are bottled and launched onto the national and international markets— and another wine elaboration winery, in Villena (Finca El Chaconero/El Chaconero Estate).

For many years the company only occupied itself with the quality of its wines and only remembered design when new labels had to be designed. Adding labels, styles and designs without paying attention to the overall image. In 2014 the winery decided to professionalise the design and hired the services of a company specialising in wine packaging, graphic design, branding and website. "We commenced working with Calcco, for us the best. With them we have given coherence to our image as a whole", explains José Mendoza, the winery's manager for over 25 years. Confessing to be restless in design, "every year we increase the design budget by approximately 5%".

Mendoza, as the oenologist that he is, relies above all in the quality of the product which is elaborated. To this quality he largely attributes his sales successes for 30 years. In his opinion for a good connoisseur of wines the label is not an influencing factor as when one chooses a wine from Bodegas Enrique Mendoza one does so knowing what one is going to find, searching for this brand and not any other — he explains — but for the average aficionado a good label has an influence when making the purchase decision. **It is recognised that without design it would cost the winery more to reach the end customer and likewise would have difficulties in selling the wines. The company has 16 brands and over 20 varieties of wine.** Innovation is integrated into the Oenological Management, from where new products, study trends, production development are researched. Mendoza explains that talking about innovation means research to improve wine quality. "That is the innovation in which we have been undertaking for ten years because the higher quality the better the price of the bottle".

"The arrival to the distribution of self-service products, the popular packs, prompted the use of design".

Álex Salvador ↷
Marketing Director
at Cárnicas Serrano S.L.

Cárnicas Serrano

Design use in order to differentiate its meat products on shelf.

Cárnicas Serrano (Paterna, Valencia) is a food company specialising in the manufacture of meat products, which works with the major European distribution chains. Its directors recognise that design is the main tool in order to obtain a differentiation in the visual expression of the brand, in short to stand out on shelf and win over the customer, explains Álex Salvador, Marketing Director.

Salvador believes that design must be at the service of branding and contribute to conveying an imagination capable of generating adequate perceptions. In the company there has always been design yet not with the same intensity. The turning point came in 2001 when the self-service product or, to phrase it in another way, the packaged meat product: the packaging, boomed into the world of distribution, the packaging. Until that date the main activity consisted of serving pieces in bulk. Its current design needs move through graphic design, art direction, space design and textile design (sponsorship of sporting events). The company has no in-house designers. Working with the branding agency Esteve Durbá.

At Cárnicas Serrano innovation and design go hand in hand. An Interdisciplinary Design Committee composed of engineers and personnel from the Marketing, R&D and Sales Departments, makes decisions in both in terms of design as well as innovation. For innovation projects the company has maintained collaborations with Ainia. Currently working with Sigma Biotec in product development and the determination of aspects (colour, flavour, textures, aromas...).

"We need design to continue being present in the mind of the consumer. Each year we incorporate one or two new design agencies as we like to let fresh air in".

Inmaculada Gómez ↷
Client Relationships and
Innovation Executive at
Consum S. COOP. V.

Consum

Design use in order to improve all cooperative interactions with the client.

Consum (Silla, Valencia) is the largest Spanish cooperative based on number of members and is one of the leading companies in the distribution sector. The cooperative is adamant that the design is something much more than the appearance, shape and colour of the final products, even going beyond the way of communicating. Stating that for the cooperative there is design in the purpose of the objective, in the conception of the stores and in the assortment of the products... in short, in all matters which interact with the user.

Design has always been present in the organisation but 2015 is highlighted as a turning point. The design management of the brand was previously assumed by the Commercial Communication Division but, currently, and with the objective of involving the client, the design was transferred to the Client Relationship Division. Until 2015, explains Inmaculada Gómez, Client Relationships and Innovation Executive, the conventional technical criteria of packaging design prevailed "but on that date we incorporated our clients in the planning of 100% of the reference items, whether product redesign or launch".

In these processes, after listening to the client's contributions, the design technician and the design manager of the brand itself make the final decision. **Consum every year redesigns between 400-500 reference items of its brand. In these packaging design change processes, in 2017 alone, 8,685 partner-clients and clients participated. At Consum the prevailing design discipline is that of packaging.** Having in-house designers but likewise external collaborators, specialists in packaging and mock-ups for fictional products. Likewise relying on technological institutes and in the cluster of packaging and containers.

"Chie Mihara does not follow fashion, fashion follows the designer. It is our choice. We want to be and are trendsetters, and the industry + design binomial is the key to our success".

Carmen G. Cuevas ↷
Business Development Officer
at Studio Mihara S.L.

Chie Mihara

Design use in order to create global market trends.

Chie Mihara is the brand marketed and sold by Studio Mihara S.L. that manufactures footwear for women. It is named after the designer and co-owner of the company, who was born in Brazil and is of Japanese descent. **The company was set up in 2002 in Elda (Alicante) and sits on the site of a factory set up in the 50s by the family of the current CEO Francisco Sanchis, which confers on the designer's work the backing of a solid industrial structure.**

"The former factory was in the world's top in manufacturing quality but its business model consisted of manufacturing products for other brands", explains Carmen G. Cuevas, Business Development Officer at Chie Mihara, who adds that the majority of the companies operating in that manner in the footwear cluster of Alicante.

The company, which launches two collections a year, works with in-house designers and therein the design disciplines present are product design and graphic design. The creative director is the designer Chie Mihara. She has carte blanche and the last word. Alexa Sancho, R&D Manager and Design assistant, explains that once the designer has created the new collection, it is then when the Commercial Department intervenes —which is the department that holds the keys to what the markets want— and that of the Marketing department. Technicians and modellers are likewise incorporated into this second stage. Its products are available in several continents (Europe, Asia and America).

"The design of processes for new products of complex manufacture, such as macarons, enables us to democratize gourmet products by incorporating original raw materials and giving them exclusive shapes."

Alberto García ↷
Media Officer at
Grupo Dulcesol Holding

Dulcesol

Design use in order to democratize gourmet products.

Grupo Dulcesol (Dulcesol Group) (Gandía and Villalonga, Valencia) is an industrial holding company with 40 companies. It is currently the leading packaged pastry manufacturer in Spain and Algeria, and has diversified the business into other categories such as organic baby food, creams, soups and smoothies. The holding company likewise has a manufacturing plant in Oran (Algeria) and prepares to spearhead strategic markets such as Portugal, Italy, France and Morocco.

Design arrived in Dulcesol under graphic design, in the 60s, when the matriarch and owner Victoria Fernández purchased the Dulcesol brand from an orange entrepreneur. This company has no in-house designers and its requirements are outsourced. The following design disciplines are present therein: graphic design, which is outsourced to an external agency; packaging design, for which it relies on the packaging specialists, ITC Packaging; and the design of processes that non-designer professionals undertake in the company and with which it is managed to manufacture gourmet products for large retailers distribution and manage to standardise products which are more typical of other establishments.

From the outset in this company, design and innovation are closely interrelated. According to Alberto García, Media Officer at Dulcesol, both factors depend on how the consumer will perceive same. For innovation projects the company maintains collaborations with the Ainia Technological Institute. **Grupo Dulcesol (Dulcesol Group) is currently immersed in a revision process. Sensitive to the Circular Economy and the problems of plastic, the group is investigating recyclable solutions, in sustainable and biodegradable packaging.**

"Design has enabled us to enhance what makes us unique and authentic: the manufacture of rattan furniture; Expormim's hallmark".

Alberto Ales ↷
Design Department Manager
at Expormim S.A.

Expormim

Design use in order to add value the former trade of rattan furniture manufacturing.

Expormim (Moixent, Valencia) is a manufacturer of artisan rattan furniture, manufactured by bending, sanding and twisting the rods. Since its creation (1960) natural fibre has always accompanied the company. From the twisted braided esparto moving onto wicker and then came the cane, chestnut and rattan (1970). But successive crises —the rattan import ban in 1984, the fall in prices of rattan furniture (1990s) due to the massive arrival of this furniture from Asia, the introduction of the Euro (2000) and the rejection by the market of traditional rattan furniture— led the company to properly look at design in order to be able to add value the noble craft of rattan manufacture.

The arrival to Expormim of the third generation (Mercedes Laso) entails an appropriate design management, which is decisive for the decisions taken, explains Alberto Ales, Design Department Manager. **In 2005 the Design Department was created, and at the same time a strategic external design consultancy firm was hired, with which the Long-term Strategic Design Plan was defined.**

The company redesigned its manufacturing process, invested in prototypes for new products and which were differentiated from traditional furniture. The result of all this was in 2012 the Fontal chair by Oscar Tusquets, with which — it is stated — that the company returned to its essence. Although not working with a mono material —likewise using technical materials—, although the rattan represents 10% of its production, the company is aware that it is the rattan which makes them unique and authentic. **In 2018 it is the only European company which industrially manufactures designer rattan furniture. The company has fought for craftsmanship and managed to make it profitable in 2018, concludes Ales.**

"Many exhibitions of our artists require the close collaboration of a graphic designer to enhance their expression in the showroom ".

Managers ↷
Fundació per Amor a l’Art —
Bombas Gens Centre d’Art

Bombas Gens Centre d'Art

Design use in order to add value to the artist's work and to publicise the foundation.

The Fundació Per Amor a l'Art (Valencia) is a family-owned project, as Susana Lloret likes to define it, which was formally created in 2014 and arrived to give a name to a work which commenced ten years ago by José Luis Soler and Susana Lloret. The foundation from its origin has been adding projects: support for minors and adults in situations of vulnerability and need, collaboration in the dissemination and research into Wilson's disease and other rare diseases. Years later, art likewise flourished within the foundation.

The important collection work of its managers encouraged the family to share its private art collection. In 2017 the foundation opened its doors in the València Bombas Gens Centre d'Art. **Design is present from the first day both in the foundation as well as in the Art Centre, given that the Gallén-Ibáñez Studio was in charge—of the creation of the identity of the foundation and its corporate image — moving through reconstruction and design interior, or likewise the expansion of the former factory undertaken by Ramón Esteve, up to the graphic design necessary in the exhibitions and for the external dissemination.**

As regards design issues, the managing director of the Foundation, Susana Lloret, and the director of the Art Centre, Nuria Enguita have the last word. The foundation and the art centre share the same design strategy. **Its managers consider that the design has an important indirect influence on its prestige and credibility.** "To talk about design is to talk about a constant endeavour to innovate, which in the case of Bombas Gens happened to add value to great little known and recognised artists," explains Nuria Enguita. To further their projects, many of which involve their closest environment, the foundation and art centre collaborate with the "Barreira Arte + Diseño" School and likewise with the Juan Comenius Education Centre.

"For us the reference benchmark is Vitra, a company which creates products and adds cultural value. We like its pedagogical view of design".

Alejandra Gandía-Blasco ↷
Creative and Communication
Assistant Director at Gandía Blasco S.A.

Gandía Blasco

Design use in order to create iconic products and a global market positioning.

Gandía Blasco S.A. (Ontinyent, Valencia) is a company which through three brands: Gandía Blasco, Gan and Diabla is dedicated to the design and manufacture of terrace and garden furniture, and similarly carpets, furniture, outdoor accessories and the design of spaces. **The company is currently managed by the second generation, represented by José A. Gandía-Blasco. When it was incorporated in 1998, the company was an undifferentiated blanket factory. Under José A. Gandía-Blasco came product diversification, design and the designers Sandra Figuerola and Marisa Gallén, creators of the iconic logo and several carpet collections, in its day awarded an innovation prize.**

The company attributes to the design all its successes. "We do not have an Innovation Department as our creative team is the one that spearheads innovation. Here aesthetics prevail", says Alejandra Gandía-Blasco, Creative and Communications Assistant Director. Qualifying that innovation was very important for the company in 1995, with the development of a construction system with machined aluminium profiles and white polyethylene sheets, but currently design prevails.

Having in-house designers and with the collaboration of external designers. In its history the company has created emblematic pieces (Daybed) and unique collections (Saler, Flat, 356...). The company promotes diverse actions which enables it to collaborate with universities and creatives. **Its products are in stores worldwide and in charming hotels through contract projects.**

"Design has given us life, first helping us to professionalise ourselves and in 2008, by investing in strategic design, we projected our future and were able to weather the economic crisis."

Daniel Matoses ↷
Project Manager at
Gráficas Litolema S.L.

Impresum

Design use to be more professional and improve the printing process.

Impresum (Valencia) is a family-owned printing company which similarly provides online services. It specialises in ecological printing, recycled papers and the use of plant-based inks. In 2008 with the restructuring of the business the company likewise changed its name to the current name, Impresum, although the fiscal name —and by which everyone still knows them as— is Gráficas Litolema S.L., a reflection of the naming fashion of the 90s, that of the use of acronyms. Litolema is derived from Litografía Lerén Matoses.

Daniel Matoses, project manager, recognises that design has given life to this company. Design arrived in 1996 to the former Litolema by Tàndem Edicions which presented the graphic designer Paco Bascuñán to the company ,which led to the arrival of many designer clients and similarly design studios. "That professional encounter with design forced us to be more demanding and to improve processes". After Bascuñán, and the arrival of Juan Nava, Juan Martínez, Lina Vila and the entire following generation of the 70s and 80s.

The onset of the 2008 crisis forced the company to rethink the business. Matoses explains that there was a lot of investment of time and money in strategic design. The result was the design of a new website and an online store tailored to its needs. With this initiative the company managed to obtain half of the turnover online, with orders from all over Spain and cash payment.

In the company there is a design presence in the Strategic Management, in Advertising and Marketing. All design jobs are outsourced. Each year the company endeavours to up its game in design. Maintaining a close relationship with the education centres (EASD, Barreira, CEU-UCH and Vocational training cycles). It is said that the company has never managed to have a relationship with technology centres.

"We have a packaging business line and for these projects we rely on technological institutes. We seek to solve packaging problems for our clients and we are working on it".

Mónica Alegre ↷
Commercial Director
of Industrias Alegre S.L.

Industrias Alegre

Design use in order to improve and professionalise production and innovation in new products.

Industrias Alegre (Albal, Valencia) is a manufacturer of plastics for car interiors, one of the largest in the European market. **In the 70s, the company commenced rendering services for the automotive sector (Seat, Ford, Opel-PSA, Volkswagen Group, Ford Almussafes, Citroën, Peugeot-Talbot and General Motors) and it is when the company incorporates the process design to production.**

In this company there is design work in the following departments: in the R&D+i Department there are industrial design engineers for product development (specialised in automotive sector) and corporate image (graphic design). In the Engineering Department and Technical Office there are industrial design engineers specialists in automotive design for parts and tools. In the Process Department the design jobs are carried out by the process engineers (process layouts, machine design, job design, production flow design ...). The company is drawing up its 2019-2022 Strategic Plan.

The R&D+i Department focuses on innovation. The Packaging Business Unit works on innovation projects for new packaging solutions (Hybrid Box and others). The Innovation Committee, comprising of Management and the directors of the remaining departments, adopts the decisions of the new designs, both of product as well as technology.

When it comes to innovation, the company considers the support and advice of the Aimplas, Ite technological institutes to be fundamental — the latter due to the arrival of the electric car— and for the pursuit of excellence in product and process sustainability explains Mónica Alegre, Commercial Director and Amparo Vázquez, R&D+i Director. In order to incorporate new professionals, the company relies on UPV (Polytechnic University of Valencia), UJI (Jaume I University, Castellón) and La Florida.

"Every innovative product contemplates design as a fundamental element from its conception. For me, design creates the perfect balance between product-price-customer, with a significant impact on the company's revenues".

Fernando Saludes ↷
CEO of Industrias Saludes S.A.

Industrias Saludes

Design use in order to find the perfect product-price-client balance.

Industrias Saludes is a company located in Valencia which offers its own design and manufacturing products for sectors such as signage, road safety, mobility and urban facilities for over 110 years. **This company is a pioneer in the use of design. The company's CEO, Fernando Saludes, explains that design has been present in this company since 1940, when his grandfather Arquímedes Saludes decided to incorporate same into products such as home theatre projectors, toys and helmets for motorcyclists.**

In 1970, with the arrival of the second generation, the company commenced on the renewal of automotive industrial products and the emergence of new product prototypes. But it is in the 80s when design breaks into the company. **The incorporation of the first designers to the company — Dani Nebot, Paco Bascuñán, Lorenzo Company— generated new widely accepted product lines: the first luggage racks (automotive sector), the first range of street furniture (Aphrodite fountain, Bulevar bank, Alameda litter bins ...) and new signalling and signage programmes (Gulliver Project with Javier Mariscal and others).**

In this company, design and innovation go hand in hand and when it comes to complex designs, collaborating with different technological institutes of the Redit network —of which Fernando Saludes was the chairman in 2018— such as Aidimme, Ite, Aimplas and Iti. For Fernando Saludes, design creates the perfect balance between product, price and client.

"The design enables us to add value to the product and improve the functionality, usability, industrialisation and aesthetics of the packaging. With our distracting designs we managed to increase sales".

Managers ↷
ITC Packaging S.L.

ITC Packaging

Design use to be pioneers in distracting packaging and eco-design.

ITC is a manufacturer of plastic containers whose head offices are located at Ibi (Alicante), which specialises in the food sector. **From the Technical Office, its industrial and product designers, provide a comprehensive service to their clients through which the concept of packaging that will reach the market is developed from scratch.**

The managers of several departments consulted explain that the client not only offers aesthetic and functional solutions, but likewise an efficient industrialisation. In these proposals the final decision is incumbent, above all, on the client. This company in its evolution —and after having worked in its beginnings for the toy sector— as the Expo 92 Curro mascot ice cream container to the incorporation of designers (1998) to its workforce, with the consequent optimisation of molds and processes. In 2000 the company commenced specialising in packaging. The company's current undertaking is the MyPack product range, packaging solutions tailored to the client.

The company is likewise very centred on eco-design, focused on promoting the sustainability of the packaging by improving weights, thicknesses and use of bio materials. Its managers stress that for its constant innovation the support of research, technology and teaching centres such as Aiju, Aimplas, Itene, Tecnalia, Eurecat, the University of Alicante and the UPV is fundamental.

"LZF Lamps, from its LZF LAB innovation centre, acts as a catalyst for the development of new generations of designers".

Managers ↷
LZF Lamps S.L.

LZF Lamps

Use of design and innovation to be unique.

LZF Lamps (Chiva, Valencia) is a lighting company which since its inception (1994) specialises in the design and manufacture of lamps manufactured from wood. This company was set up with design and has as an embryo an exhibition organised by its founders and owners, Mariví Calvo and Sandro Tothill, in the Trapezzi Theatre of Valencia. That experience represented the essence of the future company. Its promoters, under the graphic designer Mac-Diego, invited professional painters, sculptors and designers to make an object/artefact that used wood for a purpose, to be a diffuser of a light source. The meeting brought together many: Paco Bascuñán, Pepe Gimeno, Nacho Lavernia, Boke, Trazo, Perico Pastor, Daniel Torres, Carmen Berenguer, Mavi Escamilla and Marcelo Fuentes...

Currently wood is the main raw material used at LZF Lamps. Having the Timberlite® patent which enables the company to mold the wood and which, together with the design, is what differentiates the company from other luminaire manufacturers. The Design area is managed by the creative Mariví Calvo and composed of a multidisciplinary team which is committed to innovation: product designers, graphic designers, architects, technical engineers ... Here consecrated values (Isidro Ferrer, Ray Power, ...) coexist with young up and coming persons (Cuatro Cuatros, Macalula...).

Its innovation centre is LZF LAB. This is where the multidisciplinary team interacts with professionals from other fields: writers, street artists, musicians, painters, photographers ... to develop experimentation projects which last at least two years, whereby LZF is involved in all stages (approach, prototype, ideas, financing ....). LZF is in permanent contact with technology centres (Aidimme, Ite, Tecnocrea) and collaborates with educational centres (EASD). Its best selling products are Link and Agatha. The most desired product, the Koi fish.

"At Marie Claire it is impossible to imagine us without design, it is directly connected to our turnover and productivity".

José Antonio Pérez ↷
Design and Product Area
Manager at Marie Claire S.A.

Marie Claire

Design use in order to be positioned in an international market.

Marie Claire, popularly known in the 60s for manufacturing "a pantyhose for every woman", added to the powerful marketing of those years design as discipline to the manufacturing process. **The arrival of design to this company located between Borriol and Villafranca del Cid (Castellón) — which had originally been dedicated to manufacturing and selling stockings and pantyhose — facilitated the diversification of its products. The brand likewise moved onto to design and manufacture socks, its own fibres and threads, including new bathroom, pyjamas and seamless lingerie lines, products which are currently distributed across Europe.**

Design played and continues to play an important role in its positioning strategy, states José Antonio Pérez, Design and Product Area Manager. The present design disciplines — Textile Fashion product design, graphic design and industrial design— enables the company to project its trademark image (packaging, promotional media design, catalogues, brand communication) in a very mature market, in which it is different to bring out innovative and differentiating products.

Design and Innovation are keys for this company which has R&D in the Product Design and Manufacturing departments. These departments are currently working on the development of new fabrics or fibres in cooperation with the world's leading manufacturers (Invista, Nilit). Likewise investigating new methods of weaving using current fibres and how to apply functional finishes in the dyeing process. For the development of new products, the company similarly relies on Aitex research.

"Design is a cross-disciplinary strategic element, present in all the initiatives of this public space which, in the near future, will become a new international technological Hub".

Ramón Marrades ↷
Strategic Director of
La Marina de València —
Consorcio València 2007

La Marina de València

Design use in order to differentiate and imbue meaning to a public space.

The La Marina de València is the waterfront of Valencia and the city's old port, currently converted into a one million square metres strategic public spaces open to innovation and nautical activity. **The current managers of the Consorcio València 2007, a public entity which manages the La Marina de València, is based on three pillars: use, design and management, and on four strategic lines: an epicentre of nautical activity, a hub of economic development, reconnection with citizens and streamlined and efficient management.**

For the redesign and the change of use of the space the company has drawn up the 2017-2022 Strategic Plan. This new strategy, in which design is an integral part, has enabled in two years to increase turnover by 64% and the number of users by 80%, states Ramón Marrades, Strategic Director of La Marina de València. Here there is design in the processes, in the public space, in the communication, similarly in the application of placemaking —converting spaces into playgrounds— or through ideas competition such as the project to create a skate park in front of the Base", explains Marrades.

The design of places is not only its material configuration, it is likewise to imbue meaning to the space —explains Marrades— and to reconstruct the identity of the place and the change of brand resorting to a Project Call, following the recommendations of the ADCV. At the La Marina de València innovation is understood as an open process, territorially located, which generates relevant ideas, products and services, all well connected with the city. Making a commitment to the few intensive use public spaces (Tinglado 2) and to refurbish new spaces (modernist pergola).

"Design combined with innovation and the development of Shintotex® has enabled us to adapt our furniture, so far designed for indoor terraces, to outdoor areas".

Antonio Pons ↷
Marketing and Design
Director at Point S.L.

Point

Design use in order to innovate with new materials and expand the niche market.

Point (Xaló, Alicante) is a furniture manufacturer mainly outdoor furniture for dwellings and facilities, whose manufacture uses mostly synthetic fibre. **The company is one of the pioneering companies in the Valencia Community in the incorporation of designers into its production process. The works of its then first designer, Gabriel Pons, in the 60s, when the company used the rattan as material, opened the doors of the company to the European markets.**

This company had been working since 1920 using natural fibres (wicker, rattan) and due to the rattan crisis in 1980 —export ban from Indonesia—the company decided to make a U turn, and embarked on an ambitious innovation project culminating in the development and patenting of Shintotex®, a new synthetic fibre which imitates nature fibre. The new material enabled the company to exhibit their products abroad, being more resistant to climatic changes than the natural fibre. "Shintotex® has the same advantages as rattan but without its drawbacks", explains Antonio Pons, Marketing and Design Director.

Design is the pillar of the company, it is assured. The Marketing and Design Department focuses on the design and innovation projects. A Design Committee, wherein all departments are represented, adopts the decisions. For the new proposals the company has in-house designers and the collaboration of external designers (Vicent Martínez, Nica Zupanc, Francesc Rifé, Ximo Roca...). Currently, the company similarly has an indoor catalogue where natural fibre (rattan) is still used, which connects the company with its origins. The company has agreements with educational centres — work placement students — and with technological institutes — Aitex and Aidima— for innovation purposes using raw materials.

"The Porcelanosa company seeks to make its products very commercial. Design helps us obtain quality, our own style and commercial success".

Carlos Suárez ↷
Product Manager
at Porcelanosa S.A.

Porcelanosa

Design use to imbue value to stoneware and worldwide positioning.

The Porcelanosa company (Vila-Real, Castellón) is part of the Porcelanosa Group and is dedicated to the manufacture of ceramic tiles for cladding. The rest of the group (Venís, Gamadecor, Systempool, l'Antic Colonial, Butech, Noken and Urbatek) manufactures bathrooms, kitchens and construction solutions.

The company has had design as the main objective since its inception in 1973, explains Carlos Suárez, product manager of the Porcelanosa company. The branding campaign with celebrities (Gina Lollobrigida in 1980 and since 1982 Isabel Preysler) has no direct relationship with the design of its products or its stores. The managers consulted recognise that these public personalities have given their products a differentiation, a positioning and have improved the perception (image) of the product by the end customer, all throughout its 970 stores present in 150 countries.

The person who continues to make decisions as regards the design proposals made by the Product Department is Héctor Colonques, one of the founders and owners of the group. Decisions in which marketing likewise intervenes and occasionally, the commercial section as well as the group managers. The objective of the Porcelanosa company is that the product be as commercial as possible.

Design and innovation go hand in hand, "for example, if we seek to innovate in parts which have suffered from slight wear and tear, a design of many colour contrasts which will prevent wear and tear", explains Suárez. Innovation is managed from the R&D+i Department, where ceramic technicians develop textures, new products.

In the Porcelanosa company new designs are incumbent on in-house designers whilst the companies of the rest of the group, occasionally, have external collaborators such as Norman Foster, Zaha Hadid... The group maintains a close relationship with the technology centres, mainly with Itc.

"The first cheeses which we elaborated were below par. This forced us to change the work processes (pasture area, animal management and feeding). We are currently redesigning the work processes in order to obtain the product (cheese and dairy) that the customer demands from us".

Mayte Rambla ↷
Co-founder and owner
of Quesería Tot de Poble
COOP. (cheese factory)

Quesería Tot de Poble

Design use in order to redesign the business model and add value to the raw material.

Quesería Tot de Poble (Les Coves de Vinromà, Castellón) is a family-owned cooperative dedicated to the production of traditional artisanal cheese, run by Mayte Rambla and Óscar Sales, two of the founding members. In its origins (2003) the company was dedicated to producing sheep's milk but the dairy sector crisis in 2010 and the fall in the price of milk forced a change in strategy. Deciding to add value to its raw material, milk, driven by the desire to make the best cheese on the market.

Placing the cooperative into the hands of one of the best master cheese makers in Spain but the result was not satisfactory. What followed was months of much trial, error and enquiries to the consultant. "Finally we decided to change the work processes, from expanding the pasture area to changing sheep feeding and management". **Using design as a strategy and successfully weathering both crises. The result was that production was tripled, the accounts improved and positioning of its cheeses among the top positions in the gourmet cheese championships of Spain and the Valencian Community.**

In this business clients are positioned in the centre. "We elaborate cheeses almost to the customer's preferences, customers who are mainly from the restaurant and catering sector". For that reason the company has designed, for example, cheeses with flavourings in its interior, so as not to dirty the catering trays. **Likewise innovation in products: truffle cheese, aged in beer (2019 project) and in marketing (organising workshops for children and adults so as to learn to value artisanal production). Safeguarding its graphic image which is commissioned from a designer. The pursuit of excellence. The co-operative is currently immersed in a new redesign of the production process so as to obtain the organic certification.**

"At Ricard Camarena design is in our DNA, it is that which leads us to innovation or to phrase it in another way, to evolution. And all because of our tireless search for flavour".

Luis González ↷
Media Officer at
Ricard Camarena

Ricard Camarena

Design use as a strategy in order to offer a cohesive context at the gastronomic level.

Ricard Camarena is a Valencian chef of creative haute cuisine inspired by the Mediterranean, who acquired his first experience in the small town of Barx (La Safor-Valencia). In November 2018 he obtained his second Michelin star, which is added to other distinctions. His professionalism can be sampled at: Canalla Bistro, (Valencia and Madrid); Central Bar (Valencia Central Market), Ricard Camarena Colón and Habitual (Valencia Colon Market) and Ricard Camarena Restaurant, at Bombas Gens Centre d'Art (Valencia).

Luis González, Media Officer explains that design as a strategy is in the DNA of this company and serves to conceive and design the physical spaces (interior design), the menus (graphic design), the team's workwear (design textile), website design, tableware design (product design) and music of the premises (experience design). In order to improve the gastronomic experience, they receive proposals from the School of Designer Engineers of the UPV, and for the design of the tableware they work in collaboration with the Ceramics School of Manises.

At Ricard Camarena the word innovation means evolution. **Innovation is understood as an improvement of the raw material — a search for autochthonous varieties and use of proximity products — and similarly the search for nuances in food, which leads to the creation of new flavours and textures.** One of his latest successes has been the new Letern product, a seafood umami which enhances the taste of the dishes.

"Design is not only to make beautiful products, a good design is that which best connects one with consumers".

Vicente Ruíz ↷
Co-chairman
of RNB S.L.

Design use in order to generate new products and a connection with the consumer.

The RNB company (La Pobla de Vallbona, Valencia) is dedicated to the research, development, production and manufacture of facial, body, photoprotector and cosmetic products and since 2005 also fragrances. Founded in 1989 by Vicente Ruíz and Romualdo Bertomeu, this company commenced working for Mercadona in 1994 and in 1999 became an integrated supplier.

The turning point of the company in question of design took place n 1998, when the collaboration commenced — which still continues today — with the designer Nacho Lavernia. Vicente Ruíz explains that with Lavernia came art and creativity. The company has a design in all areas (R&D+i, Innovation, Product Development, Purchasing, Marketing and Clients).

The designers focus on the Marketing and Product Development areas. The Product Development Department has industrial designers, product designers and graphic designers. RNB similarly likes to collaborate with external designers (Pepe Gimeno, Pati Nuñez, Enric Batlle, Cul de Sac...) and, occasionally, has external professional architects and interior designers for the design of its facilities.

The Innovation Department from its three areas (scientific, consumer, health-medical), researches from the product ingredients which are manufactured, to the end user (consumer) and the usefulness of the products. In this company the Innovation Department is distinguished from that of the R&D+i. The Innovation Department applies itself to longer-term approaches and monitors and assesses products and business models. Whilst the R&D+I Department is focused on product formulation. **All decisions, whether design, innovation or any other kind, are adopted by the Development Committee, composed of all department managers of the company, except Vicente Ruiz (co-chairperson).**

"GTA Spano is the result of a multidisciplinary design exercise. There is industrial, mechanical, aerodynamic design ... In this company, any designer requires a knowledge of mechanical engineering".

Domingo Ochoa ↷
Founder and CEO of Spania
GTA Tecnomotive S.L.

Spania GTA

Design use in the pursuit of excellence and the manufacture of an exclusive product.

Spania GTA Tecnomotive S.L (Ribarroja del Turia, Valencia) is a company dedicated to the manufacture of high-end, exclusive and unique supercars. No two identical vehicles are manufactured. This company is the culmination of a clear vocation, that of its owner Domingo Ochoa, who always wanted to build the best supercar. After 40 years working on engines, seven of which were dedicated to the Ferrari company and with over than 25 years associated with top-level competition, in 2004 his moment had arrived and he created the company.

This company was set up to spearhead the structure of the competition team of his first company — GTA Motor Competición (1994)— and likewise to further the technological projects with which he had been working on since day one. In 2007 —coinciding with the economic crisis — is when Ochoa was ready to build his supercar. Following the first prototypes, the final version was presented in 2015: the GTA Spano model which is currently part of the most prestigious artisan brands. It is one of the most powerful cars marketed. Having the only chassis in the world built entirely from carbon, titanium, Kevlar and graphene.

The Spano GTA has a significant multidisciplinary design load for which mechanical engineering knowledge is required. Ochoa states that his supercar is superior to the brands that the public has as a reference benchmark (Ferrari, Lamborghini, Porsche) and is only comparable to a Bugatti or a Pagani. The company has a high rate of innovation. Having three patents (chassis construction system, electrical and electronic system, and curved glass opacity system) for whose development the company has had the support of companies and suppliers, rather than that of the Valencian technology centres. The German Ministry of Industry has awarded the company the German Design Award (2016) for the best supercar design. In the company product design is undertaken internally and as regards graphic design and web design these services are outsourced to external companies.

"Design helps us to add value to the fabrics we create (denim and sportswear) and helps us to make sales".

José Royo ↷
Director of Tejidos Royo S.L.

Tejidos Royo

Design use and innovation to imbue greater value to fabrics (jeans and sportswear) and to sell more.

Tejidos Royo (Picassent, Valencia) is a family-owned business which is dedicated to the manufacture of denim fabric (indigo denim fabric) and sportswear. Founded in 1903, it is currently managed by the fourth generation. **The company is a pioneer in the field of 360 degree product and sustainability and is currently the leader of the cotton textile sector in Europe. José Royo, director, is internationally recognised as one of the 50 most influential denim professionals in the world.**

Since its inception, design and innovation have been fundamental, which is reflected in several milestones: in 2000 its innovative processes enabled the company to dye the indigo and weave 100% TENCEL® by Lenzing (the most environmentally friendly cellulose fibre existing on the market, manufactured from wood pulp). With the arrival on the market of elastic and super-elastic fabrics, Tejidos Royo developed controlled shrinkage products. In 2009/10 the company launched onto the market a product which did not exist until then, the finish which imitates leather. And in 2018 — following 10 years of research— launching its worldwide exclusive, Dry Indigo®, a 100% waterless sustainable denim dye.

Design has always been important but in the last 20 years more so due to fact that the relationship with the client has changed. The client now wants to see the finished product, which entails design and several washes. The company's fashion designers propose silhouettes and patterns for each fabric. Design is centred in the Product and Marketing departments. The company works with the major European brands (Diesel, Pepe Jeans, Hugo Boss, Inditex,...) and so as to attract talent the company collaborates with the best design schools, Central Saint Martins (London), Jean School (Amsterdam), Barreira (Valencia) and EDS (Madrid Superior School of Design) (Madrid).

“Our 100% natural beer may be the best beer on the market but without design we would not even be a beer brand. A well-defined design strategy enables the consumer to choose us".

Guillermo Lagardera ↷
Marketing and Media
Manager at Zeta Beer S.L.

Zeta Beer

Design use so that consumers know that they are drinking a good beer.

Zeta Beer (Alboraia, Valencia) is the trademark of the Zeta Beer Company, a company set up from the joining of two friends as well industrial engineers united by the same motivation: to manufacture the best 100% natural beer and make it a fresh product, of the highest quality, unfiltered or pasteurised and carbonated naturally. Their friendship, common hobbies and experience in the business world did the rest.

The level of exigency demands at Zeta Beer is very high. Although the company has always had the collaboration of different external designers, it has never worked on a joint brand strategy, a necessity which was identified in 2018. "We are in an overall revision of the brand stage. Our products possessed too many styles and do not stand out on shelf, which is why we are working on the process of imbuing coherence to the brand", explains Guillermo Lagardera, Marketing and Media Manager.

Its short and medium term design strategy will require considerable design and several design disciplines: graphic, interior and product design given that its needs are as follows: the redesign of the logo and labels, improvement of the visual image of the product, a rethinking of the factory and the defining a tasting area and store, the production of new media (t-shirts, vinyl for the store ...), customisation of the beer handles and the launch of a Growler (jar-container) product line. **All things considered, with this new strategy, it is desired that the consumer identifies the beer and knows that he/she is drinking Zeta Beer because he/she believes in the right to drink beer with authentic beer flavour.**

"Design is one of our key pillars and differential value, together with innovation and technology. Our products are characterised by an aesthetic, functional and avant-garde design".

José González ↷
Innovation and Creativity
Director at Zumex S.A.

Zumex

Design use in order to innovate products and develop facilities, packaging and manufacturing processes.

Zumex (Moncada, Valencia) is a manufacturer of squeezing solutions. From among its products are, on the one hand, the professional orange juice squeezer extractor machines —with which it is a world leader —, that incorporates the Original System ® technology. Furthermore, the company similarly has other juice extractor solutions such as the popular cold pressing (or cold press), which enables to obtain fruit and vegetable juices, and detox juices, are designed for use in juice bars.

The company commenced in 1985 with the development of the innovative Original System®, squeezing system, which in 2018 sold products to over 100 countries and whose target is the Horeca (hotels, restaurants and cafeterias) and retail (supermarkets and greengrocers...) sector. In this line one of its latest products is Soul, a small and compact juice squeezer for cafeterias and signature bars.

In the day to day of Zumex there are several design disciplines: product design, packaging, graphic design and process design. José González, Innovation and Creativity Director, explains that design and innovation are very present. "At Zumex we apply Design Thinking and role play to put ourselves in the shoes of the client and consumer. In the entire process there are mechanical, electronic engineers etc. Working hand in hand and in a team with the product designers team. Adding up in all to 14 persons. Our latest product is Mastery, based on cold press technology. Its advantage is that when the product is pressed, the enzymes remain and do not oxidise"**. This company has designers in each stage of its developments, internal or external, in the areas of Innovation, Engineering (R&D), Industrialisation, Marketing, Markets, Product and After Sales.**

It was necessary to draw up an initial map, a first approach, as regards the scope of design education in the Valencian Community and its main aspects. In this fashion, this report on the impact of design on the Valencian economy is concluded as it is inferred that understanding the contribution of education to the design economy enriches its scope, by demonstrating trends that will characterise the future of the profession.

Design education is determined in the different levels of tertiary education specified in the Spanish Qualifications Framework for Higher Education (MECES), which is applied by the European qualifications system QF-EHEA (Qualifications frameworks in the European Higher Education Area (QF-EHEA)).

The MECES classifies all degrees into four levels:

- Advanced technician diploma
- Bachelor's degree
- Master's degree
- PhD

Firstly, in order to address this first approach, the classification of official degrees that are given as regards design in the Valencian Community, in its different MECES education levels, has been used Secondly, based on the analysis of the academic curricula that each degree gives, three levels of relationship with design education have been identified: an intensive level which corresponds to those degrees which dedicate over 60% of their education credits to design specific education; a second level which has been considered as average, that corresponds to the degrees that dedicate up to 60% of the credits given to specific design education; and, finally, a third level, which has been estimated as low, which corresponds to those degrees that dedicate approximately 25% of their credits to a specific design education. Each level of relationship with design education has been assigned a value when weighting the data collected. Thus, the intensive level has been given the value of 1, the average level has been weighted by 0.50 and the low level by

0.25 for comparison purposes and in order to add data.

The entire territory of the formal design education in the Valencian Community has been addressed, both public and private, both university and higher arts education, both higher level education cycles (CFGS) (level 1 MECES) and higher arts education and undergraduate university studies (level 2 MECES), and similarly an official master's degree (level 3 of the MECES). In total, information as regards 82 degrees has been requested from 16 educational institutions.

The questionnaire which has been undertaken, the same for all centres and all levels, compiles the following information in relation to each degree and each centre:

- Degree implementation date
- Degree tuition amount
- Number enrolled (since 2008)
- Ratio of men/women enrolled (since 2008)
- Total credits of the Degree Study Programme
- ECTS (European Credit Transfer System Points) credits of obligatory work placement in design studies or companies (as of 2018)
- % of total credits of the degree represent the obligatory work placement (as of 2018)
- Number of degree graduates (alumni) (since 2008)
- What percentage of graduates work in design (since 2008)
- If the centre has a labour exchange
- Annual budget of the school/faculty/centre (since 2008)

Spanish and European Tertiary Education has been modified by the creation of the European Higher Education Area. This has entailed, among other issues, the automatic recognition of all degrees between all the signatory countries to the agreement, which will undoubtedly facilitate the free movement of professionals in Europe. Bearing in mind that the implementation of this European Higher Education Area dramatically modified the Spanish education system and the catalogue of degrees. For this reason, 2008 has been selected as a reference benchmark in order to request information, although when drawing conclusions, **it has been decided to use 2010 as a starting point because it is, from then on, when significant information**

as regards the new degrees implemented following the Bologna Process is first collected.

Of the 16 centres to which the questionnaire has been forwarded to, 10 have responded in its entirety and 3 partially. Another 3 declined to participate in this study. Information has likewise been requested information from the Regional Ministry of Education, Research, Culture and Sports, through its Directorate General of Universities, Research and Science of the Regional Secretariat of Education, as well as the Higher Institute of Art Education of the Valencian Community (ISEACV).

From the analysis of the information obtained, the following must be highlighted:

1. Turnover generated in design degrees

The total amount of revenue from the different degrees and levels for tuition amounts to just over seven million Euros in 2018. This means that the turnover of students in design degrees has increased in the last eight years by 585.11%.

There is a notable growth in investment in formal design education, the result of the progressive implementation of new degrees and the considerable increase in students enrolled in these last eight years. This amount is higher than the increase in tuition fees payable in each course.

In overall figures it can be said that the increase in the offer of degrees as compared to 2010 is approximately 60%. If we look at the development by levels, it was ascertained that of the total level 1 MECES degrees, higher level education cycles (CFGS) have increased their offer as compared to 2010 by over 8%; the degrees, level 2 MECES, have been undertaken in over 42%; and insofar as the offer of master's degrees are concerned, level 3 MECES, it is noteworthy to mention that in 2010 there were none related to design. Currently there are 8 masters' degrees given in relation to design.

2. Enrolment information in design degrees

The education boom is clearly seen in the evaluation of the information as regards students enrolled in the design education. **In 2010, representing 1.53% of the total number of students enrolled in Tertiary Education of the Valencian Community has increased to 5.08% in 2018.**

The data in reference to the Valencian students have been obtained from the information furnished by the distinct Valencian administrations consulted. Thus, the total of the students of the Valencian Community has been obtained from the sum of university students plus the higher arts education students. **The result indicates that 5 out of every 100 students of the Valencian Community undertaken degree studies related to design education. Insofar as the number of students enrolled in 2018 is concerned, as compared to 2010, this number has risen by over 200%**, which specifies an increase in interest in design-related studies, likely due to the increase in the offer of education degrees to which reference has been mentioned beforehand.

It should be stressed that this increase took place in the midst of a difficult economic crisis and within a context where the enrolment data of the total number of students enrolled in Tertiary Education in the Valencian Community have remained stable.

It is noted that a materialisation has taken place in levels 2 and 3 of the MECES, that is, in the bachelor and master's degrees level, yet enrolment in level 1 education remaining stable.

3. Information on the percentage of men and women in design education

With the partial data which have been compiled through the information facilitated by the centres, it can be stated that design education has a greater presence of women than men, in a percentage very similar to that given in population statistics. **In this regard, it should be noted that 57% of students enrolled in design are women.**

4. Percentage of ECTS credits for education in design studies and in companies

Only half of the centres consulted have answered this question, both in the case of CFGS education and university degrees, **nevertheless practical education in design studies or in companies to complete a designer's training is considered essential. In this regard, it seems reasonable that a percentage between 5% and 15% of the compulsory credits of the study programme — which have to do with design education — are work placement credits in studios and companies.**

This implies warranting the adequacy, relevance and quality of the work placement. Furthermore, it may be likewise a good instrument in order to connect education and profession.

5. Labour exchange and percentage of graduates who are working in design

Of the 82 degrees surveyed, only 26 claim to have a labour exchange. Most certainly, there is little data which is similarly considered remarkable. **The information obtained from the surveys indicates that neither the degrees nor the centres have specific resources to manage these labour exchanges and in general these are either voluntary or specific actions rather than the result of a policy sustained over time by the centres.**

Elsewhere, it has been unable to perceive significant data as regards the percentage of graduates who are working in design. The centres and likewise the administration have no information in this regard. Undoubtedly, a comprehensive investigation as regards the percentage of graduates who, in a certain period of time, are working in design in order to be able to ascertain the relationship between education and profession which would be very interesting. This aspect must clearly be addressed in the framework of broader research, underpinned by statistical study organisations.

Results tables ↷
Design education

Design education levels. Spanish Qualifications Framework for Higher Education (MECES)		
Level		
1. Advanced technician	• Adv. Technician in Vocational Training • Adv. Technician in Plastic Arts and Design • Advanced technician in sports	120 ECTS (credits)
2. Bachelor's Degree	• University degree • Advanced Design Education	240 ECTS (credits)
3. Master's degree	• University Master's degree • Master's degree in Arts Education	60 ECTS (credits)
4. PhD	• PhD	

Royal Decree 96/2014, of 14 February, wherein the Spanish Qualifications Framework for Higher Education (MECES) is established.

Total amount of tuition revenue (total figure + levels). Design education centres of the Valencian Community	
2010	2018
€1,050,711	€7,198,529
Revenue per levels	Revenue per levels
€742,121 (intensive)	€3,234,101 (intensive)
€9,531 (average)	€1,031,877 (average)
€72,381 (low)	€410,085 (low)

Offer of design-related degrees in the Valencian Community. 2010-2018 comparison (number of degrees + increase)		
Levels (MECES)	Number of degrees (2010/2018)	Increase (2018)
CFGS (level 1)	12/14	+16.67%
Bachelor's Degree (level 2)	21/30	+42.86%
Master's Degree (level 3)	0/8	
All	33/52	+57.58%

In overall figures it can be said that the increase in the offer of degrees as compared to 2010 is approximately 60%.

Students enrolled in design in the Valencian Community. Total students enrolled in design studies	
2010	2018
2,434	7,452
1.53% of total students of the Valencian Community	5.08% of total students of the Valencian Community
Total VC students	Total VC students
158,712	146,549

Results tables ↷
Design education

Students enrolled in design in the Valencian Community. 2010-2018 Comparison (percentage of men and women)		
Year	Women (percentage)	Men (percentage)
2010	968 (61.11%)	616 (38.89%)
2018	2,938 (57.22%)	2,197 (42.78%)

Students enrolled in design in the Valencian Community. 2010-2018 Comparison (number of students)		
Levels (MECES)	2010	2018
CFGS (level 1)	503	528
Bachelor's Degree (level 2)	1,569	6,812
Master's Degree (level 3)	0	112
All	2,434	7,452

Percentage of ECTS credits for education in design studies and in companies		
Studies	ECTS credits (for work placement)	ECTS credits (total)
Adv. Technician in Plastic Arts and Design (level 1 - MECES)	No data	120 ECTS
University Bachelor's Degree (level 2 - MECES)	No data	240 ECTS
Higher Design Education (level 2 - MECES)	5%	240 ECTS
University Master's Degree (level 3 - MECES)	No data	60 ECTS
Master's Degree in Arts Education (level 3 — MECES)	Between 10% and 17%	60 ECTS

Update of national data classification systems

A review of the classification systems of different public bodies is necessary, such as the State Tax Administration Agency (AEAT) and the National Statistics Institute (INE) in relation to the economic design sector.

The current breakdown of the headings of the Tax on Economic Activities (IAE), without the presence of the majority of design specialties, and the difficulty of working with the National Classification of Occupations (CNO) given the fact that in the surveys to companies certain decisive parameters are not included, which in particular complicates the measurement of the sector through official sources.

It is the responsibility of the administration through the AEAT to offer a solution for the companies which are registered in the NCEA 7410 (specialised design activities) and that nevertheless do not find a coherent correlation of these activities with IAE headings. **Currently there is no tax heading which makes reference to graphic design, product or new media, among others.**

Insofar as the CNO is concerned, it has been verified that the surveys do not reflect the reality of design. An issue of some concern when this classification is that which warrants the processing of statistical information in relation to occupations at the national level and the international and community comparability thereof, as well as sector measurement.

Dissemination of the NCEA 7410 as a design heading

All agents involved in ensuring a correct reading of the business reality must facilitate the allocation of professionals and design companies in the NCEA 7410 (specialised design activities) heading.

The National Classification of Economic Activities (NCEA) is used to identify economic sectors in order to draw up statistics. The economic measurement of a sector is essential so as to be recognised in its aspects and therefore obtain its incorporation, for example, into public support plans and initiatives. A downsized sector is a sector of lost public opportunities. And this, in partly, occurs in design.

Adequate notification is required through awareness campaigns intended at design professionals and companies but similarly at corporate managers and consultants as regards the necessary registration for all those who exercise specialised design activities under the NCEA 7410. **Among other issues, it is necessary to notify as regards the requirement to place on record in the deed of memorandum of association of companies and in the corporate resolutions the corresponding NCEA. And in the event of wishing to update the information, it is recommended to undertake the corresponding procedures similarly in the Mercantile Register.**

It is likewise important to verify that the statistical data system offered by the INE through the NCEA does not include all headings of the different economic activities in which a company may be registered. The statistics are only based on the main activity declared by the company, which is the activity that contributes to a greater extent the added value generated by same. Insofar as design is concerned, there was an obvious difficulty. **It was not until 2009 when the 7410 heading was included into the NCEA. Whereby it was intended that the majority of design companies incorporated prior to that year were (and will continue to be) registered in a distinct main economic activity heading to that corresponding to specialised design An update of all these companies to the NCEA 7410 as the main activity is recommended.**

Greater detail in statistical data

As a suggestion, the processing of the information of the official statistics may be formulated in greater detail. It has been previously mentioned that the statistical data system offered by the INE based on the NCEA does not include all the headings of the different economic activities in which a company may be registered, only the main activity declared by the company is used for its statistics.

It would be interesting that, from this public entity, two options which may contribute to greater clarification and an image of the economic reality be assessed. On the one hand, to enable obtaining information of all the headings to which a company is assigned whether the main activity or the secondary activity. And on the other, to facilitate the modification of the main NCEA of a company if the company so requests same.

Fostering of innovation policies through design to increase corporate productivity

Based on the results of this report from which it is extracted that the major use of design there is a greater degree of innovation in the company and likewise better economic expectations, it is presumed that support for design through innovation plans to the company will generate productive improvements in the economic sector.

Our research similarly reflects the existence of a substantial potential for expansion in the professional use of design by various economic sectors. To the extent that this reality prevails in the Valencian business fabric, further guidance can be expected to incorporate design as a standardised management tool.

The support of the public administration is therefore required to implement initiatives for the promotion and understanding of the use of design through innovation policies intended at the industrial, services and commerce sectors. In this regard there has been certain progress, but it is necessary to establish further and new lines of relationship between design and companies.

Deduction of non-technological innovation

In Spain, the Tax Agency offers companies a deduction for research and development activities and technological innovation as regards Corporate Tax. Article 35 of the Corporate Tax Law specifies precisely which activities are considered as research and development, and technological innovation.

Although certain design activities are specifically included in the drafting of the Article, including the design of processes or production systems, the design of the sample for the launch of new products, the materialisation of new products or processes in a design or the creation of prototypes, these activities are contemplated only in the context of strictly technological innovation.

It is urgent that in the text of the Corporate Tax Law, as well as in any other government innovation incentive measure, the technological name vanishes and the four types of innovation defined by the Oslo Manual are contemplated: products, processes, marketing and organisational innovation. Design, in all its disciplines, contributes – as does technology – to research, development and innovation processes. The application of tax incentives to design activities would have a very positive impact on the improvement of corporate innovation and competitiveness in our country, and in particular the Valencian productive framework.

Improvement of the design education system

From the research carried out in the academic field, great opportunities have been identified in order to improve design education. **Firstly, the relationship between the academic and professional fields should be encouraged. In this regard, it is essential, on the one hand, the effective participation of designers in the exercise of the education of future designers.** Elsewhere, that the administrations related to education develop the legal frameworks which enable study programme work placements in companies for all formal design degrees, to ensure the compulsory undertaking of these external work placements and facilitate professional participation in the formal education programmes through its hiring for the giving of courses, seminars or workshops.

Secondly, the creation of an information exchange platform which promotes student and teacher mobility, exchanges, research projects and opportunities, both nationally and internationally, should be encouraged.

Thirdly, access models to continuous education for professionals must be promoted through the participation of education centres and social design agents in the definition and implementation of continued learning plans for designers. In order to implement this recommendation it is necessary to compile, develop and share new formats, methodologies and study programmes for design education and the improvement of its competences.

And it is likewise suggested...

- The creation of a Design Observatory which is responsible for the continuity of studies on the measurement of design economy, the development of public policies and strategies based on design, the promotion of research on education and the laying down of the foundations of a Valencian design action plan.
- In future studies on design economy based on primary sources, the impact of design must be connected to the positioning of companies in the Design Ladder.
- A more direct relationship and greater exchange of information between associations in the design production sector and the various public agencies responsible for promoting internationalisation. In addition to requesting that internationalisation support programmes be planned, in order to be truly effective, according to the demands of the sector, and not vice versa.
- Foster research on the employability of graduates in order to analyse the results of formal education. This exceeds the realm of possibility of the educational centres and should therefore be the work of the administration or independent bodies responsible for population studies.
- Amendment of the Spanish translation"Drawings and models section" in reference to the name "Community design" of the European Union Intellectual Property Office (EUIPO) by one more in line with its original meaning. This misinterpretation of the English term contributes to the invisibility of the design and hinders the options for improvement so that this protection is more in line with the needs of the sector.
- The results of this report should be disseminated to the entire business sector, in particular that of the Valencian Community, through all available channels. One of the main objectives of this research has been to contribute to the development of initiatives that lead to increased productivity in our region. It is expected that, if companies have access to the information included in the report that establishes the use of design as a factor of business success, that information will be incorporated to a greater extent in their strategies and, therefore, will increase sectoral performance.

The research methodology of the "The Design economy in the Valencian Community" report has been worked in conjunction with the strategic management team and the consulting company GfK Emer Ad Hoc Research in order to attain the objective of obtaining results which manage to define, identify, measure design and assess its use in the main Valencian economic sectors.

The univers of this study is made up of companies from the Valencian Community from both the design production sector, wherein included are the categories called "purely production sector of design" and "partially production design sector", as well as of the "non-primary production sectors" category that refers to industry, commerce and services. The distribution of the sample —according to type — can be found in the attached tables (pp. 152/155). 1,345 telephone interviews (Computer Assisted Telephone Interviewing) have been conducted having an average duration of 12 minutes. The field work was undertaken during December 2018.

Initially, the strategic management team put forward the proposal to consign the telephone surveys only to the less intensive design use sectors, and therefore to undertake same out only to the non-primary production sectors. Nevertheless, following the recommendation of the GfK consultancy firm, it was likewise decided to include companies in the design production sector in the telephone stage of the research. The rationale was that only in this way could the consultancy firm undertake a comparative analysis of the results obtained between both sectors.

The survey content contemplated both generic issues — economic expectations, turnover level, personnel characteristics and others — as more specific questions related to design use within the company.

In order to undertake the subsequent comparative analysis, it was necessary to use the same tool and hence the importance of the questions being identical for all those companies that participated in the research, although the aforementioned questions were, on occasion, too obvious for the design producer sector survey respondents.

The sample has been weighted in order to make same the representative univers:

- 1st Stage: Through the Structural Business Statistics: Services Sector -2016- (INE), the national turnover figure of the 4-digit NCEA has been obtained from non-primary producers and design producers.
- 2nd Stage: The turnover of the 4-digit NCEA has been obtained from non-primary producers and design producers at the national level from the Mercantile Register (2017).
- 3rd Stage: The variation between both sources has been calculated: Mercantile Register and INE for Spain at 4 digits.
- 4th Stage: This corrective index has been applied to the 4-digit NCEA turnover of non-primary producers and design producers within the scope of the Valencian Community from the Mercantile Register (2017).

Quality control has been undertaken during field work by telephone supervision of at least 25% of the surveys. On an overall level, the technical team responsible for the GfK study has supervised all stages of the research.

Insofar as the data compiled in the field of design education are concerned, research has been undertaken internally from the ADCV. To that end, the catalogue of official degrees which are given on design in the Valencian Community has been used, in all education levels of the Spanish Qualifications Framework for Higher Education (MECES), both of public as well as private centres, of both university as well as higher arts education.

The questionnaire, the same for a total of 10 centres that completely responded to every question and 3 that have done so partially, has been answered by the persons responsible for each educational agency. This information has been obtained and processed directly from the ADCV.

From the analysis of the study programme given by each degree, three levels of relationship with design education have been identified: an intensive level which corresponds to those degrees which dedicate over 60% of their credits to specific design education; a second level that has been considered as average, which corresponds to the degrees that dedicate up to 60% of the credits given to specific design education; and, finally, a third level, which has been considered as low, which corresponds to those degrees that dedicate approximately 25% of their credits to a specific design education.

Each level of relationship with design education has been assigned a value when weighting the data collected. Thus, the intensive level has been given the value of 1, the average level has been weighted by 0.50 and the low level by 0.25 for the purposes of comparison and in order to add data.

GfK Sample (interviews) ↷

Classification per sectors (design, industry, commerce and services producers) and NCEA codes

Purely design production sectors (258 interviews, which represents a margin of error of +/- 6.2 with a 95% confidence level, where p=q=0.5)
1320 Textile weaving
1330 Textile finishing
1391 Manufacture of knitted and crocheted fabrics
1392 Manufacture of made-up textile articles, except apparel
1393 Manufacture of carpets and rugs
1412 Manufacture of workwear
1413 Manufacture of other outerwear
1414 Manufacture of underwear
1419 Manufacture other clothing and accessories
1420 Manufacture of fur articles
1431 Manufacture of knitted and crocheted hosiery
1439 Manufacture of other knitted and crocheted apparel

Purely design production sectors (258 interviews, which represents a margin of error of +/- 6.2 with a 95% confidence level, where p=q=0.5)
1512 Manufacture of articles of luggage, handbags and the like, travel, saddlery and harness
1811 Graphic arts
1812 Other printing activities and graphic arts
1813 Pre-press and pre-media services
5811 Book publishing
5812 Publishing of directories and mailing lists
5813 Newspaper publishing
5814 Magazines publishing
5819 Other publishing activities
6312 Web portals
7410 Specialised design activities
7311 Advertising agencies

Partial production design sectors (193 interviews, which represents a margin of error of +/- 7.2 with a 95% confidence level, where p=q=0.5)
5829 Other software publishing
6201Computer programming activities
6202 Computer consultancy activities
6203 IT resources management
6209 Other information technology and computer service activities
6311 Data processing, hosting and related activities
7111 Architectural activities
7112 Engineering activities and related technical consultancy activities.
7022 Business and other management consultancy activities.
7490 Other professional, scientific and technical activities
8291 Activities of collection agencies and credit bureaus
8299 Other business support activities n.e.c.
2562 Mechanical engineering on behalf of third parties
7740 Lease of intellectual property and similar products, except copyrighted works
8230 Organisation of conventions and trade shows
7021 PR and Communication
2341 Manufacture of ceramic household and ornamental articles
8292 Packaging Activities
7420 Photographic activities
5829 Other software publishing
6201 Computer programming activities
6202 Computer consultancy activities
6203 IT resource management
6209 Other information technology and computer service activities

Partial production design sectors (193 interviews, which represents a margin of error of +/- 7.2 with a 95% confidence level, where p=q=0.5)
6311 Data processing, hosting and related activities
7111 Architectural services
7112 Engineering activities and related technical consultancy activities
7022 Business and other management consultancy activities
7490 Other professional, scientific and technical activities
8291 Activities of collection agencies and credit bureaus
8299 Other business support activities n.e.c.
2562 Mechanical engineering on behalf of third parties
7740 Lease of intellectual property and similar products, except copyrighted works
8230 Organisation of conventions and trade shows
7021 PR and Communication
2341 Manufacture of ceramic household and ornamental articles
8292 Packaging activities
7420 Photographic activities

Non-primary production sectors: Industry (298 interviews, which represents a margin of error of +/- 5.8 with a 95% confidence level, where p=q=0.5)
1013 Production of meat and poultry meat products
1031 Processing and preserving of potatoes
1039 Other processing and preserving of fruit and vegetables
1043 Manufacture of olive oil
1052 Manufacture of ice cream
1053 Manufacture of cheeses
1054 Preparation of milk and other dairy products
1071 Manufacture of bread, manufacture of fresh pastry goods and cakes
1081 Manufacture of sugar
1082 Manufacture of cocoa, chocolate and sugar confectionery
1083 Processing of coffee, tea and infusions
1084 Manufacture of condiments and seasonings
1085 Manufacture or prepared meals and dishes
1086 Manufacture of homogenised food preparations and dietetic food
1089 Manufacture of other food products n.e.c.
1102 Elaboration of wines
1105 Manufacture of beer
1310 Preparation and spinning of textile fibres
1394 Manufacture of Cordage, rope, twine and netting
1395 Manufacture of non-woven and articles made from non-wovens, except apparel
1396 Manufacture of other technical and industrial textiles
1399 Manufacture of other textiles n.e.c.
1520 Manufacture of footwear
1814 Binding and related services

Non-primary production sectors: Industry (298 interviews, which represents a margin of error of +/- 5.8 with a 95% confidence level, where p=q=0.5)
2041 Manufacture of soaps and detergents, cleaning and polishing preparations
2042 Manufacture of perfumes and cosmetics
2219 Manufacture of other rubber products
2221 Manufacture of plastic plates, sheets, tubes and profiles
2222 Manufacture of plastic packing goods
2229 Manufacture of other plastic products
2331 Manufacture of ceramic tiles and flags
2511 Manufacture of metal structures and parts of structures
2512 Manufacture of metallic carpentry
2550 Forging, pressing, stamping and roll-forming of metal, powder metallurgy
2561 Treatment and coating of metals
2573 Manufacture of tools
2593 Manufacture of wire products, chains and springs
2599 Manufacture of other fabricated metal products n.e.c.
2740 Manufacture of electric lighting equipment
2751 Manufacture of electric domestic appliances
2893 Manufacturing of machinery for food, beverage and tobacco processing
2932 Manufacture of other components, parts and accessories for motor vehicles
3101 Manufacture of office and shop furniture
3102 Manufacture of kitchen furniture
3103 Manufacture of mattresses
3109 Manufacture of other furniture
1721 Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
1723 Manufacture of paper stationery

Non-primary production sectors: Commerce + Services (596 interviews, which represents a margin of error of +/- 4.1 with a 95% confidence level, where p=q=0.5)
Retail Food and Beverage
Other retail trade
Wholesale trade
Restaurant and catering
Accommodation
Transport

Design education centres ↷

Centres consulted by the Association of Designers of the Valencian Community

Summary of centres consulted				
Centre	Institution	Level of education	Degree name	Design education level
BARREIRA. Art and Design	BARREIRA	CFGS	Advanced Technician in Clothing Fashion Design	INTENSIVE
		CFGS	Advanced Technician in Advertising Graphics	INTENSIVE
		CFGS	Advanced Technician in Design and Project Management of Decorative Works	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Fashion Design	INTENSIVE
Technical College of Further Education	UCH-CEU (CEU Cardenal Herrera University)	BACHELOR'S DEGREE	Bachelor's Degree in Industrial Design and Product Development Engineering	INTENSIVE
		BACHELOR'S DEGREE	Bachelor's Degree in Basics of Architecture	AVERAGE
		MASTER'S DEGREE	Master's Degree in Fashion, Design Management and Operations	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Graphic Design and Communications	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Product Design	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Interior Design	INTENSIVE
School of Technology and Experimental Sciences	UJI (Jaume I University)	BACHELOR'S DEGREE	Bachelor's Degree in Industrial Design and Product Development Engineering	INTENSIVE
		BACHELOR'S DEGREE	Bachelor's Degree in Video Game Design and Development	AVERAGE
		BACHELOR'S DEGREE	Bachelor's Degree in Technical Architecture	LOW

Summary of centres consulted				
Centre	Institution	Level of education	Degree name	Design education level
Superior School of Art and Design of Alcoi	ISEACV (Higher Institute of Art Education of the Valencian Community)	CFGS	Advanced Technician in Animation	INTENSIVE
		CFGS	Advanced Technician in Advertising Graphics	INTENSIVE
		CFGS	Advanced Technician in Illustration	INTENSIVE
		CFGS	Advanced Technician in Clothing Fashion Design	INTENSIVE
		CFGS	Advanced Technician in Projects and Works Management	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Fashion Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Product Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Illustration Applied to Design [Product Itinerary]	INTENSIVE
		MASTER'S DEGREE	Parametric Design and Digital Production	INTENSIVE
Superior School of Art and Design of Alicante	ISEACV	CFGS	Advanced Technician in Ephemeral Architecture	INTENSIVE
		CFGS	Advanced Technician in Design and Project Management of Decorative Works	INTENSIVE
		CFGS	Advanced Technician in Model Making and Mock-up	INTENSIVE
		CFGS	Advanced Technician in Illustration	INTENSIVE
		CFGS	Advanced Technician in Advertising Graphics	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Degree in Product Design	INTENSIVE
Architecture and Polytechnical School	UE	BACHELOR'S DEGREE	Bachelor's Degree in Basics of Architecture	AVERAGE
	UE	MASTER'S DEGREE	Master's Degree in Architecture	AVERAGE
Faculty of Fine Arts	UMH (Miguel Hernández University)	BACHELOR'S DEGREE	Bachelor's Degree in Fine Arts - Visual Arts and Design	INTENSIVE
	UMH	BACHELOR'S DEGREE	Bachelor's Degree in Fine Arts - Plastic Arts	AVERAGE

Summary of centres consulted				
Centre	Institution	Level of education	Degree name	Design education level
Superior School of Art and Design of Orihuela	ISEACV (Higher Institute of Art Education of the Valencian Community)	CFGS	Advanced Technician in Design and Project Management of Decorative Works	INTENSIVE
		CFGS	Advanced Technician in Art Photography	AVERAGE
		CFGS	Advanced Technician in Advertising Graphics	INTENSIVE
		CFGS	Advanced Technician in Clothing Fashion Styling	INTENSIVE
		CFGS	Advanced Diploma in Applied Stone Arts	AVERAGE
		BACHELOR'S DEGREE	Advanced Diploma in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Fashion Design	INTENSIVE
Superior School of Art and Design of Valencia	ISEACV	CFGS	Advanced Technician in Art Photography	AVERAGE
		CFGS	Advanced Technician in Artistic Jewellery	AVERAGE
		CFGS	Advanced Technician in Sculpture	LOW
		BACHELOR'S DEGREE	Advanced Diploma in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Product Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Fashion Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Photography and audiovisual media [Graphic Itinerary]	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Jewellery and Object [Product Itinerary]	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Artistic Teaching in Analogue and Digital Publications	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Art Education in Fashion and Sustainability Co-design	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Artistic Teaching in Creativity and Product Design	INTENSIVE
Higher School of Ceramics of L'Alcora	ISEACV	BACHELOR'S DEGREE	Advanced Diploma in Ceramics: Ceramic Art and Design	AVERAGE
		BACHELOR'S DEGREE	Advanced Diploma in Ceramics: Ceramic Science and Technology	AVERAGE

Summary of centres consulted				
Centre	Institution	Level of education	Degree name	Design education level
Castellón Superior School of Art and Design of Castellón	ISEACV (Higher Institute of Art Education of the Valencian Community)	CFGS	Advanced Technician in Artistic Ceramics	AVERAGE
		CFGS	Advanced Technician in Design and Project Management of Decorative Works(PIDOD)	INTENSIVE
		CFGS	Superior Technician in Pavements and Ceramic Coatings	INTENSIVE
		CFGS	Advanced Technician in Art Photography	INTENSIVE
		CFGS	Advanced Technician in Advertising Graphics	INTENSIVE
		CFGS	Advanced Technician in Illustration	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Graphic Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Interior Design	INTENSIVE
		BACHELOR'S DEGREE	Advanced Diploma in Product Design	INTENSIVE
		MASTER'S DEGREE	Master's Degree in Arts Education in Graphic Work Publishing	AVERAGE
Superior School of Art and Ceramics of Manises	ISEACV	CFGS	Advanced Technician in Artistic Ceramics	AVERAGE
		CFGS	Advanced Technician in Ceramic Coatings	AVERAGE
		BACHELOR'S DEGREE	Advanced Diploma in Ceramics: Ceramic Art and Design	AVERAGE
		BACHELOR'S DEGREE	Advanced Degree in Ceramics: Ceramic Science and Technology	AVERAGE
School of Design Engineering (ETSID)	UPV (Polytechnic University of Valencia)	BACHELOR'S DEGREE	Bachelor's degree in Industrial Design and Product Development Engineering	INTENSIVE
Higher Polytechnic School	UPV	BACHELOR'S DEGREE	Bachelor's degree in Industrial Design and Product Development Engineering	INTENSIVE
School of Building Design Engineering	UPV	BACHELOR'S DEGREE	Bachelor's degree in Technical Architecture	LOW
Faculty of Fine Arts	UPV	BACHELOR'S DEGREE	Bachelor's degree in Design and Creative Technologies	INTENSIVE
		BACHELOR'S DEGREE	BB.AA.	LOW
Superior Technical School of Architecture	UPV	BACHELOR'S DEGREE	Bachelor's degree in Basics of Architecture	AVERAGE
		MASTER'S DEGREE	Master's Degree in Architecture	AVERAGE

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