Acelera pyme

Digital products and services design

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSFORMACIÓN DIGITAL
SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL

red.es

UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Acelera pyme

Contents

GOBIERNO DE ESPAÑA MINISTERIO DE TRANSFORMACIÓN DIGITAL SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL

red.es

UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Acelera pyme

1. Introduction

We live surrounded by digital products and services, from WhatsApp to Google Maps, and all of them start from an idea, from a previous design.

The design of a product or service is an act of communication. It is necessary to understand the target audience, the objective to be achieved, what we want to communicate.

Any object starts with a previous design, the same happens with digital products. They need a phase of conceptualization, thought and reflection to work and fulfill a purpose.

Until recently, product design was associated only with physical products such as furniture or cars. In recent years, the design of digital software products and applications has been gaining ground. Examples of these products range from a website or application to digital books or online training.

The products, moreover, no longer fulfill a single function, but are increasingly accompanied by greater meaning. When we prioritize the design of digital products and services, what we do is to achieve a more effective communication with our audience and our customers. We seek to add as much value as possible to the offer.

GOBIERNO DE ESPAÑA · MINISTERIO DE TRANSFORMACIÓN DIGITAL · SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL · red.es · UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

It is easy to understand how **digital products have revolutionized our lives,** from the most well-known ones like YouTube, Spotify, Netflix, Amazon, Instagram, JustEat to other applications like TooGoodtogo or Filmin. **Behind every successful product there is a work dedicated to its design.** Moreover, this design does not stop once the digital product is created, but continues to evolve. New functionalities can be added, as for example when WhatsApp audios appeared. Unlike the physical world, **this continuous improvement of the product and service is easier to apply.** A chair has a final design; if a better product is released, it will have to be bought again. A computer application is usually improved by having a team behind it that continually seeks to provide more value.

Startups focus especially on the creation of digital products and services, putting the focus on innovation and the search for new opportunities, to provide new solutions to old and new problems, although it is a field in which SMEs can also enter. The concepts applied in the design of products and services, putting the user or customer at the center, are transversal for any type of business.

McKinsey has made a forecast according to which companies that integrate design into their functions generate on average 32% more revenue and 56% more returns for shareholders [REF-01].

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSFORMACIÓN DIGITAL
SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL
red.es
UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

2. What is the design of digital products and services?

To understand the design of digital products and services, we must first analyze what a digital product and service is.

Defining a digital product

A digital product, as the name suggests, is a product whose **existence and form is digital**, as opposed to a physical object. They are, **for example, an application, software, a website, a digital platform,** an e-book, music, videos or online courses. It is not a computer or a cell phone, which are objects in themselves.

Digital products, once in "production," allow direct access through an internet connection. That is to say, they do not require shipping costs. They can be in a free format and often operate on a subscription basis (for example, platforms for audiovisual content) **[REF-02].**

Difference between a service and a digital product

While a software application is a digital product, if we go up a level, we find that this digital product is part of a broader service. When we talk about a service, we consider the user, the brand, and the company itself. It is not the vision of the digital product, but of everything that can encompass it.

It is about mapping all points of the service taking into account **people, resources and processes involved, considering the experience of the who's company [REF-03].**

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

In other words, all the actors of the service are contemplated: end user, provider user and intermediate user, as opposed to the digital product that only considers the end user.

To give another example that serves to understand these differences, if you want to market a product, such as an application for booking sports classes, the **service includes the map of all providers (sports centers), users and other possible actors.** In addition, there are several points of contact; the website, the mobile app version, and behind, supporting what the user sees, is a class management system, an internal platform for the company's team. All these digital products make up an overall service **[REF-04].**

The design of digital products and services

Once the difference between service and product is understood, it is pertinent to inquire about their design. Design, in general, is the **mental process of imagining and thinking of solutions to a specific problem.** It is imagining how something that does not exist could be. It requires **observation and analysis, projection and subsequent construction and testing.**

Digital product and service design is a strategic approach to creating a product that is **intuitive,** provides a needed solution, is easy to use and desired by a potential customer **[REF-05].**

The premise of design is to solve a problem, and there are several methodologies with steps in the design that we will see later.

GOBIERNO DE ESPAÑA MINISTERIO DE TRANSFORMACIÓN DIGITAL SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL
red.es
UNIÓN EUROPEA
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Are product design and UX design or UI design the same thing?

It is common to confuse product design with other branches of design, such as "UX design" (user experience) or "UI design" (user interface).

UX design is a specific part focused on the interaction of the user (e.g. the customer) with the digital product, on its "usability", that it is easy, intuitive, fluid. UI design specializes in the visual elements of the product (buttons, typography, icons, colors, etc.).

Product design encompasses these elements, it must work with them, but it is a broader concept. It takes into account from the beginning of the conceptualization of the product (what problem is to be solved and what solutions can be found). It involves work from start to finish: market research, identifying problems, finding solutions, developing the product, testing and improving it.

The design must also consider what is to be communicated, how to integrate with the brand and how to provide the greatest possible added value.

Therefore, **the main tasks of product and service design** are:

- Identify design opportunities within a market niche
- Create new ideas for products and services
- Conducting market research and researching prototypical users
- Taking into account the user experience
- Direct and supervise final tests
- Design product updates, in a continuous evolutionary process

GOBIERNO DE ESPAÑA · MINISTERIO DE TRANSFORMACIÓN DIGITAL · SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL · red.es · UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

3. Examples of digital products

In order to inspire and better understand the types of digital products that exist, the most characteristic examples are detailed [REF-06]:

Applications and software programs

It is the most characteristic digital product, there are both applications of a brand to sell products or services, as well as applications that are themselves the product to be marketed, such as social networks.

Digital book or "ebook".

These are books in digital format, either prepared specifically for digital book readers, or in digital formats compatible with any device (such as, for example, a simple PDF).

Online games

It is one of the areas in constant growth, as well as digital platforms from which to share the use of these games.

Online courses

Online training or "e-learning" has also been gaining weight, with a proliferation of closed content formats with the possibility of consumption at any time, as well as blended formats, where in addition to online resources there is face-to-face or online training with a tutor, and "training Webinars" formats, where there is an expert who provides live online training on a topic [REF-07]. This broadens the possibility of training consumption to a much greater number than strictly face-to-face training.

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Acelera pyme

Online forms

This is a product that is usually integrated into a broader service, they exist both to open an account and to complete a questionnaire requesting more information.

Music and podcasts

There are multiple platforms for listening to music and/or podcasts.

Series, movies and other audiovisual content

The proliferation of streaming platforms for viewing large audiovisual catalogs is another of the most popular digital products.

Digital newspapers and magazines

Another business model that can be developed both in free or subscription format.

Mailchimp

It is a well-known tool for sending newsletters either free or paid.

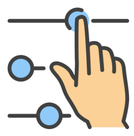
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

4. Benefits of digital products and services

There are several benefits of creating digital products and services, compared to traditional physical products. The following are the most relevant ones:

Convenience. A digital product can be accessed instantly with a digital device connected to the Internet. This allows its use anytime, anywhere.

Saving time and money. As they do not require storage and shipping costs, they save money. In this sense, they are cheaper than their digital counterparts.



Customizable. In general, they can allow for further customization.

Ecological. Savings in the creation of materials and shipments allow a reduction in the pollution associated with physical production. However, it should be borne in mind that digitization also generates the so-called "digital footprint", so it will be necessary to look for developments that integrate the ecological perspective.

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Acelera pyme

5. Objectives and principles of product and service design

The general principles that have marked the design of products and services have been evolving in recent years.

The so-called **"user-centered design" or "costumer centric"** was the pioneering design philosophy around the design of digital products and services. With the birth of computing in the 60s and 70s of the 20th century, this technology was not simple and understandable. In the 1980s, when it began to be used more commercially, both in homes and offices, the need to create designs that took the user into account, that managed to make designs understandable, usable, in short, by people, was put on the table. This implied putting the user at the center, thinking about their needs, their context and always seeking to facilitate their tasks and the use of tools. Nowadays, mention is also made of **"Human Centered Design (HCD)"** or people-centered design, emphasizing the idea of the person beyond the specific user of a tool, with a more holistic approach.

After the establishment of these principles, the **"design for all" or inclusive design** philosophy was extended in the 1990s, which seeks to ensure that products and services are accessible to all people. It takes into account the perspective of diversity in human capabilities (vision, hearing, skills...) and the need to adapt designs to a variety of profiles. Likewise, design for all includes not only the principles of accessible design, but also the vision of existing social plurality, the differences, for example, of ages when using a product. There is no single user, there are multiple users. It is essential both to know the users who will mostly use a product, to make adaptations to their needs, and to take into account a more universal and inclusive vision.

GOBIERNO DE ESPAÑA · MINISTERIO DE TRANSFORMACIÓN DIGITAL · SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL
red.es
UNIÓN EUROPEA
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

In recent years, the **planet-centric design** has also gained weight. It focuses on environmental impact and seeks solutions that benefit the planet. Consumers value sustainability, so integrating sustainable practices can be a key differentiator. This philosophy was born because not all practices that may seem positive for the user or people, are positive for the planet as a whole. It is about integrating the notion of environmental and social sustainability into products, with an eye on the planet and its conservation.

In short, it is adding another layer to inclusion, with a perspective that takes into account society as a whole, present and future generations and the planet as a whole.

To achieve these principles and objectives there are different design philosophies **and techniques.** The "**Design Thinking**" methodology puts people at the center, looking for inclusive and innovative solutions, as we will see in detail below.

Future Thinking includes thinking not only in the short term but also about products with a vision for the future. It is about anticipating and designing considering possible future scenarios, taking into account emerging trends and possible evolutions in technology and consumer behavior. In this sense, it is essential to be aware of emerging technologies, taking into account their continuous evolution.

In addition, **data analytics** is also trending. That is, using data, within the Data analytics approach, to understand user behavior and gather ongoing feedback to help refine and adapt products and services over time.

Principles of Digital Product Design

In addition, along with these general objectives, when creating a product or service, a series of principles to take into account for a successful design can be taken into account, and are those defined by Wouter de Bres, a renowned digital product designer [REF-08].

Define the problem

Simplify as much as possible its features to provide value in what users really need.

Increase the number of consumers (promote "conversion")

Be coherent and consistent

Guide the user to perform **only one action at a time**

Reduce the amount of information the user has to input

Think about communication aimed at the target audience, with understandable, non-technical language

Minimize the user's "cognitive" load, simplify the decisions he/she has to make.

Create a **clear visual design**

Do not focus so much on the "wow" effect, but focus on **presenting solutions to the user's specific problems.**

Take into account **continuous improvement** based on product metrics.

GOBIERNO DE ESPAÑA · MINISTERIO DE TRANSFORMACIÓN DIGITAL · SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL · red.es · UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Mistakes to avoid:

On the other hand, there are a number of errors to be avoided in the design [REF-09]:

Design an obsolete interface. The user experience must be taken into account and user-friendly solutions must be provided, always keeping the user in focus. That is to say, to take into account interactivity, adaptation to different devices, image quality, etc.

Enforcing a very broad user or market. It is important to take into account the target audience and be able to adapt to their problems and needs.

Prioritize speed over quality. Digital product designs require time and fulfill phases such as research, conceptualization, prototyping and testing. It is important to ensure correct functionality before going into production.

Design inconsistencies within the brand. If several products of a brand are shown, there has to be a connection and identification of style.

Not responding to a need or purpose. It is necessary to know what the customer needs and adapt to it, build a product that solves existing problems.

GOBIERNO DE ESPAÑA · MINISTERIO DE TRANSFORMACIÓN DIGITAL · SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL · red.es · UNIÓN EUROPEA

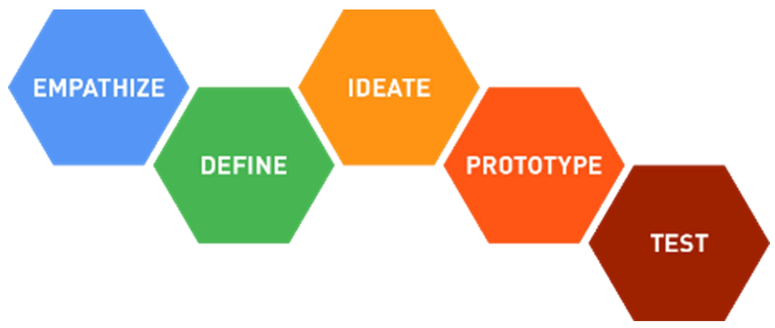
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

6. Design Thinking and the required steps for quality design

One of the methodologies that stand out to create a digital product included in a quality service is "design thinking". It is a vision for people-centered innovation, seeking the identification and creative resolution of problems. In this way, a **"people-centered design"** is guaranteed. involving them from the beginning to the end.

This methodology or design thinking was created by **David Kelley and Tim Brown from the company IDEO**, and can be applied very well to the design of digital services and products.

Its five essential steps are detailed below **[REF-10]**:



1. Empathize.

It is about understanding **who the target audience is and what their difficulties are,** looking from the user's point of view, always putting people at the center of the design. This requires **customer research, which in addition to quantitative data, it is advisable to collect qualitative data through interviews or workshops**. It is also possible to create a **"user persona" profile**, an image of the essential characteristics of the target audience, which serves to keep this profile in mind throughout the process. Similarly, it is also common to refer to **"empathy maps",** which seek to think about what the user thinks and feels, to analyze their main concerns.

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

2. Define (the problems).

To land the difficulties and problems of the ideal customer, classifying them. Defining well the identified problems helps to then work on possible solutions. It is common to jump to the solutions first, however, the design thinking methodology emphasizes on being very clear about the problems to be solved, so that you can create a product or service that people will really want to consume.

3. Ideate.

Apply methodologies to look for **concrete solutions from different perspectives.** For example, you can start with brainstorming. In the first instance, it is important not to put filters looking only for more realistic ideas, but you can look for the ideal options, and then analyze how you could get as close as possible to that perfect solution. In other words, to generate more creativity, it is not necessary to think about the budget or the known technological limit, etc., because the first key to innovation is imagination.

There are tools such as **WiseMapping or Mural**, which are used to create interactive mind maps, with the option of multiple participants. **[REF-11] ; [REF-12].**

4. Prototyping.

Make representative models of the solution, to measure if it meets the needs and expectations before its digital development. The variability with respect to the final design may change, but it is important to **create a previous version that is fast and economical**. Tools such as **Canva, Miro or Invision** can be used for prototyping **[REF-13]; [REF-14]; [REF-15]**.

5. Testing

Once the prototype is created, it has to be **tested with the target audience** to know how it interacts with them. After collecting the feedback, or opinions and comments from the users, it goes back to the ideation phase. In this way, these **perspectives are integrated into the final design.** A final analysis can be made as to what needs to be kept, removed or included.

In addition to this design and creativity methodology, there are other points to consider in the design and production of digital products and services:

Budget: based on this essential point, an affordable solution can be found.

Planning and delivery dates: it is important to have a plan that can phase the design period and that has validation milestones, delivery dates and clear responsibilities (for market research, prototyping, testing, etc.). Likewise, as will be discussed later, the production or development phase itself should also have a plan and methodology, such as agile [REF-06].

Marketing and promotion: an essential phase in the implementation of the marketing and promotion strategy for the new digital product. Although it is not the scope of this monograph, it will be essential to have it planned sufficiently in advance so that the digital product not only meets expectations, but also really reaches the target audience.

7. Steps in the production or development of digital products

After the completion of the design, it is necessary to give way to its development, where the functional design vision must remain present, since its adaptation may be needed once the product is effectively developed.

The development of digital products consists essentially of four phases, the development of the digital product, testing, launching and maintenance and support [REF-16].

1. Development: or this phase must be previously well defined the design and scope of the product to be developed. It is common to use agile methodologies, i.e., a flexible way of working in which partial deliveries of the digital product development are made to validate its scope instead of making a complete final delivery. This allows to analyze the progress and rectify in a flexible way, having knowledge of the progress of the project. In addition, it is based on the concept of continuous improvement.

2. Testing: part of the development itself is testing and continuous quality control. Functional testing consists of ensuring that the visual design and operation is as intended and agreed. User acceptance tests are used to test with real users that can guarantee the effective needs of the target audience. As a result of these tests, adaptations to the initial design may be required.

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

3. Launching: once the development is finished and sufficiently tested, it is launched. This is a critical phase. For a successful process it is important to have a launch plan, with a schedule and marketing activities. Marketing can be done both upstream, to generate expectations, and downstream. In addition, attention must be paid to the reception by the real public and be able to adapt to their needs.

4. Maintenance and support: once put into production, there may be technical incidents to be resolved. Likewise, within a framework of continuous improvement, the product can evolve to add improvements and functionalities. This is a continuous process of revision and adaptation. To this end, performance monitoring and structured collection of user feedback is key.

8. Conclusions

We live surrounded by various types of digital products, such as computer applications of all kinds, online courses, or web forms to register on a new page before, for example, purchasing new sneakers

Without good design, any product is destined to fail. Thinking and conceiving digital products and the services they integrate is a fundamental part of achieving the ultimate goal: creating a product or service that people want to use. **It has to solve a problem, meet a need, and provide added value.** Additionally, if it is oriented towards **socially and environmentally sustainable design**, it can contribute value to society as a whole and have a forward-looking perspective, focusing on long-term goals and innovation. **Design is fundamentally about using empathy**, always thinking about how and why a specific digital product is wanted and needed. Furthermore, all pieces of the puzzle, the web ecosystem, and the encompassing company or brand must be considered.

In the field of product and service design, it is important to **understand key concepts such as User-Centered Design**, meaning always considering the user from research to final development, or **User Experience**, having the ability to apply techniques that create digital designs that are intuitive and simple for users/customers. Additionally, within digital product **design methodologies**, **Design Thinking** stands out. From the perspective of putting the user at the center, it identifies the problem to be solved, seeks solutions by fostering imagination, generates an economical prototype that can be tested with real users, and creates from that validated design.

In conclusion, if two key points had to be chosen within design, it is to always think about the end user and have a clear understanding of the problem being addressed.

GOBIERNO DE ESPAÑA MINISTERIO DE TRANSFORMACIÓN DIGITAL SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL
red.es
UNIÓN EUROPEA
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

9. References

[REF-01] – Diferencia entre UX Design y Product Design explicada (plussmarketing.com) https://plussmarketing.com/diferencia-entre-ux-design-y-product-design-explicada/

[REF-02] – Qué es un Producto Digital | Definición y cómo crearlos (arimetrics.com) https://www.arimetrics.com/glosario-digital/producto-digital

[REF-03] – Diseño de Servicios y Diseño de Producto: cuáles son sus diferencias - Comunicarme.com https://www.comunicarme.com/diseno-de-servicios-y-diseno-de-producto-cuales-son-sus-diferencias/

[REF-04] – ¿Cómo se diferencia el Service Design del Product Design? (meetliquid.com) https://meetliquid.com/como-se-diferencia-el-service-design-del-product-design/

[REF-05] – Todo sobre el diseño de productos digitales (con ejemplos) (netsolutions.com) https://www.netsolutions.com/insights/digital-product-design/

[REF-06] - Qué son los productos digitales: 8 ideas para vender (platzi.com) https://platzi.com/blog/amb-que-son-los-productos-digitales/

[REF-07] – Modelos formación online que triunfan en las empresas (iseazy.com) https://www.iseazy.com/es/blog/modelos-formacion-online/#:~:text=Estos%20son%20los%204%20modelos%20de%20formaci%C3%B3n%20e-learning,Formaci%C3%B3n%20blended%20...%204%204.%20Webinars%20formativos%20

[REF-08] – https://global.tiffin.edu/noticias/en-que-consiste-el-diseno-de-productos-digitales https://global.tiffin.edu/noticias/en-que-consiste-el-diseno-de-productos-digitales.

[REF-9] – Diseño de producto digital: 5 errores que evitarás al apoyarte en expertos – Eykkon https://www.eykkon.com/blog/diseno-de-producto-digital/

[REF-10] - WiseMapping | Visual Thinking Evolution https://www.wisemapping.com/es/

[REF-11] – https://www.mural.co/

[REF-12] – Canva: una Suite Visual para todo el mundo https://www.canva.com/es_es/

[REF-13] – Miro | La plataforma visual para la innovación https://miro.com/es/

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"

Acelera *pyme*

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSFORMACIÓN DIGITAL
SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL

red.es

UNIÓN EUROPEA

Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"