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1. Introduction

The digital revolution implemented in recent years in all areas of society and the economy has meant that citizens and companies have had to adapt to the reality and opportunities offered by the technological improvements developed.

The situation resulting from the COVID-19 pandemic has accelerated this transformation, forcing the conversion of all areas to a 100% digital society. This process has revealed the existing digital divide faced by citizens and companies, highlighting the points to continue working on in Spain in order to evolve and offer quality public services and economic activity in line with the new trends.

The digital transformation is a reality and digital skills are becoming a basic and necessary tool to strengthen the business fabric through talented professionals with skills suited to the new demands of the labour market.

As such, the use of technology helps and offers tools that make it possible to identify the level of digital maturity (of companies and workers) and serve as a basis for the definition of training plans and specific actions that help to increase and improve their skills, becoming a primary objective for SMEs.

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The importance of digital competences has been recognised both at national and European level, where they are working on the development of reference frameworks for the development of digital competence of citizens in Europe, such as DigComp "Digital Competence: Identification and European-wide validation of its key components for all levels of learners" and DigComp at Work, as well as other more sectoral frameworks: DigcompEdu (education sector), GreenComp (sustainability). In terms of digital competence frameworks at national level, the Common Framework for Digital Competence in Teaching carried out by the National Institute of Educational Technologies and Teacher Training (INTEF) focuses on the diagnosis and improvement of teachers' digital competences [REF-1]. There is also the Digital Skills Framework for Public Employees by the National Institute of Public Administration (INAP), an autonomous body attached to the Ministry of Finance and Public Administration whose aim is to promote the digital skills of the country's civil servants [REF-2].

As such, in Spain, in line with Europe, the **National Digital Skills Plan** was created, with the aim of developing the digital skills and abilities of both workers and citizens as a whole.

According to the Digital Economy and Society Index (DESI) Report 2022, Spain occupies an advanced position in the Digital Economy and Society (7th out of 27 member states); however, there is still some way to go in terms of certain results:

- Almost half of the Spanish population lacks basic digital skills.
- Spain ranks 11th in relation to the integration of digital technologies by enterprises.

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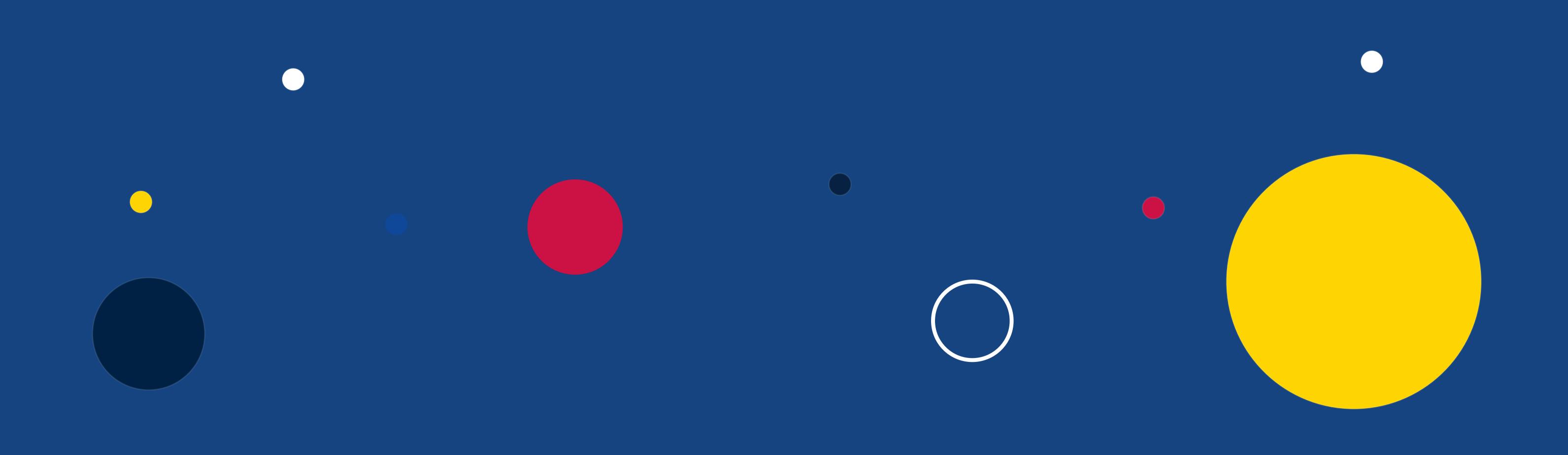






To meet this challenge, Spain owns Digital Spain 2025, now updated to Digital Spain 2026 (Axis 09) and the Recovery, Transformation and Resilience Plan-PRTR (components 13 and 19). Both plans propose a series of ambitious measures and actions to make progress in this area, including the SME Digitalisation Plan 2021-2025, and measures aimed at strengthening the skills of workers in the National Digital Skills Plan, to whose objectives the development of this project will contribute (in turn framed in component 11 of the PRTR). On the other hand, within Digital Spain 2026, reference is made to the implementation of the Digitalizate+ training platform, managed by FUNDAE and focused on the professional and personal development of workers and SMEs [REF-3].

In fact, according to a RAND Europe study commissioned by Salesforce, 56% of European SMEs have problems finding technological talent and, therefore, do not have sufficient digital skills [REF-4]. According to the study, this is because the demand for tech talent is outstripping the currently scarce supply, because emerging technologies require more digital skills. In addition, the high costs and disorganised approaches of traditional education increase barriers to learning. In addition, access to digital infrastructure and skills is limited by the socio-economic situation.



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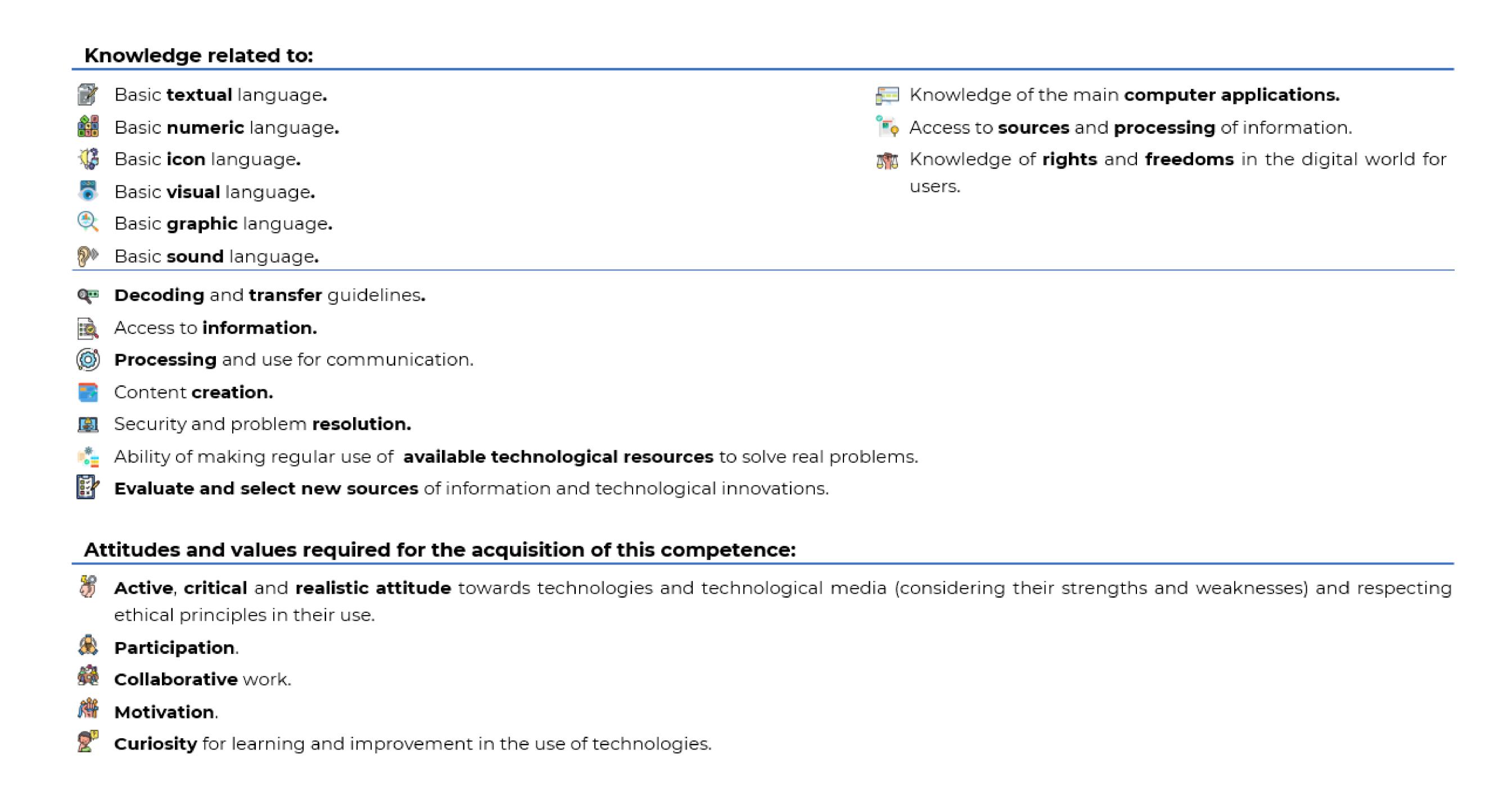


2.Digital competence and maturity

Context

According to the Spanish Education System Portal (educagob), digital competence (DC) is "that which involves the creative, critical and safe use of information and communication technologies to achieve objectives related to work, employability, learning, use of free time, inclusion and participation in society" [REF-5].

In addition, the same portal details the requirements to be met in order to have digital competence and the attitudes and values required for the acquisition of digital competence as shown below:



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Alongside the concept of digital competence related to the individual or SME employee, there is the concept of digital maturity, which is related to the organisation itself. It is a rather broad concept, with numerous definitions and approaches. However, the starting point of the concept itself is quite clear: digital transformation.

Today, all organisations are involved (directly or indirectly) in the process of digital transformation. However, depending on the sector, activity or size, the impact it has on business is different.

Therefore, it must be clear that the digital transformation of companies is a process by which organisations transform and create new business models based on the use of digital technologies..

Some of the transformative technologies:

	Mobile	Not just as a device, but for what it means to use mobile devices to get closer to customers and other business stakeholders.
	Social Media	As a channel of communication and information gathering
	Collaboration Tools	To facilitate the management and exchange of information between people within the organisation and external parties such as customers, suppliers and public administration. To streamline processes and often automate them.
• • • • • • • • • • • • • • • • • • • •	Data Analytics	Tools that help organisations to be more efficient, to put effort and resources where it makes the most sense, through the collection of information sources, processing and exploitation in graphical form and readable intelligence, being able to offer recommendations automatically.
	Cloud	Beyond storage, computing or processing capacity, it is a key technology in the digital transformation from the moment we centralise many things; write once and have multiple accesses.
	Big Data	Apart from capturing data, we can transform it. We are able to use this data to give us relevant information and, from there, to make decisions.

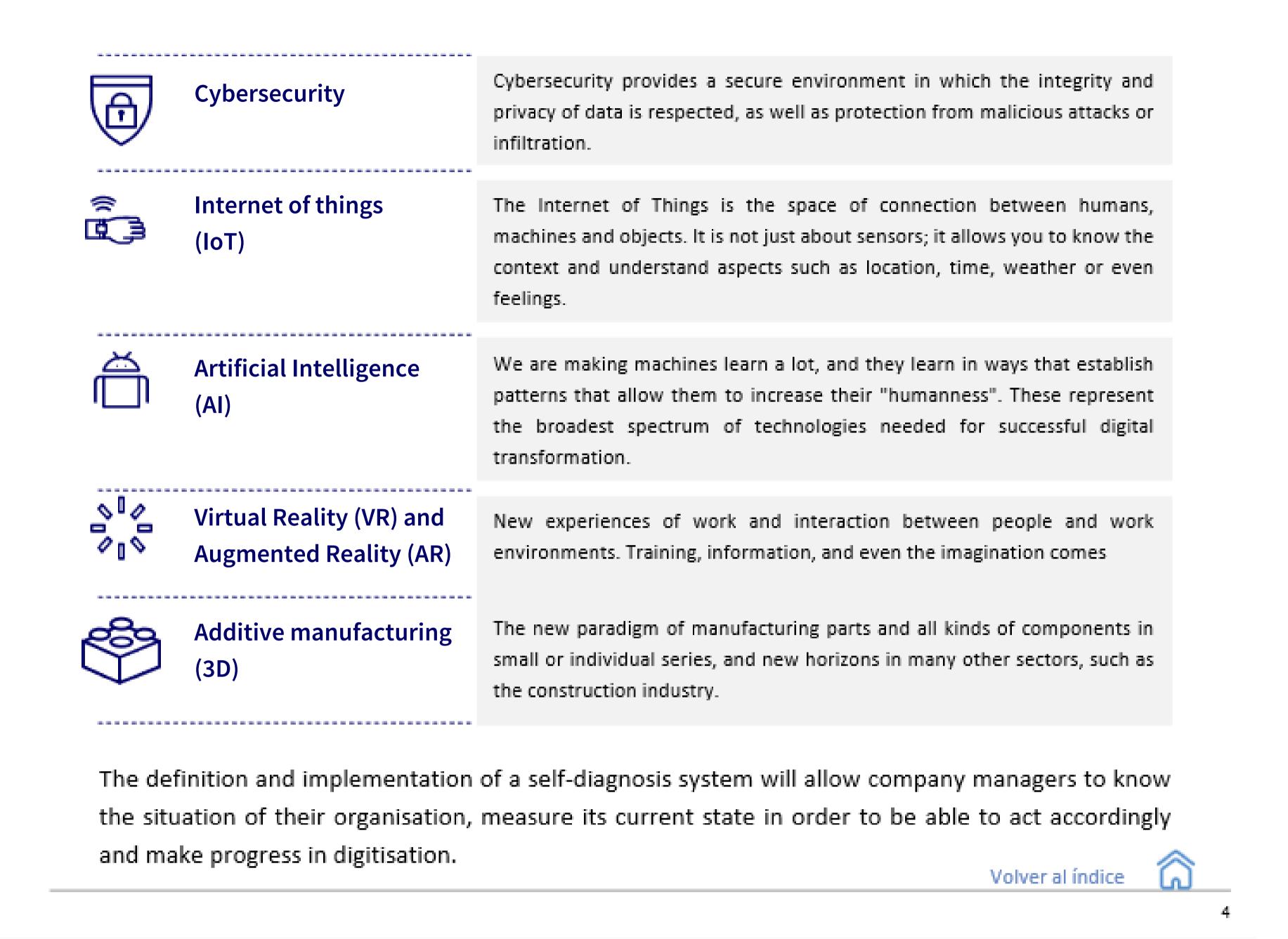
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Digcomp 2.2. Digital skills for citizenship

In order for companies to reach an optimal level of digital maturity, it is not enough to simply incorporate technologies, but employees need to know how to make good use of them, which is why the acquisition of digital skills is essential. The European e-skills framework for citizenship is presented below:

Digital skills and competences

The areas and competences covered by the DigComp are:



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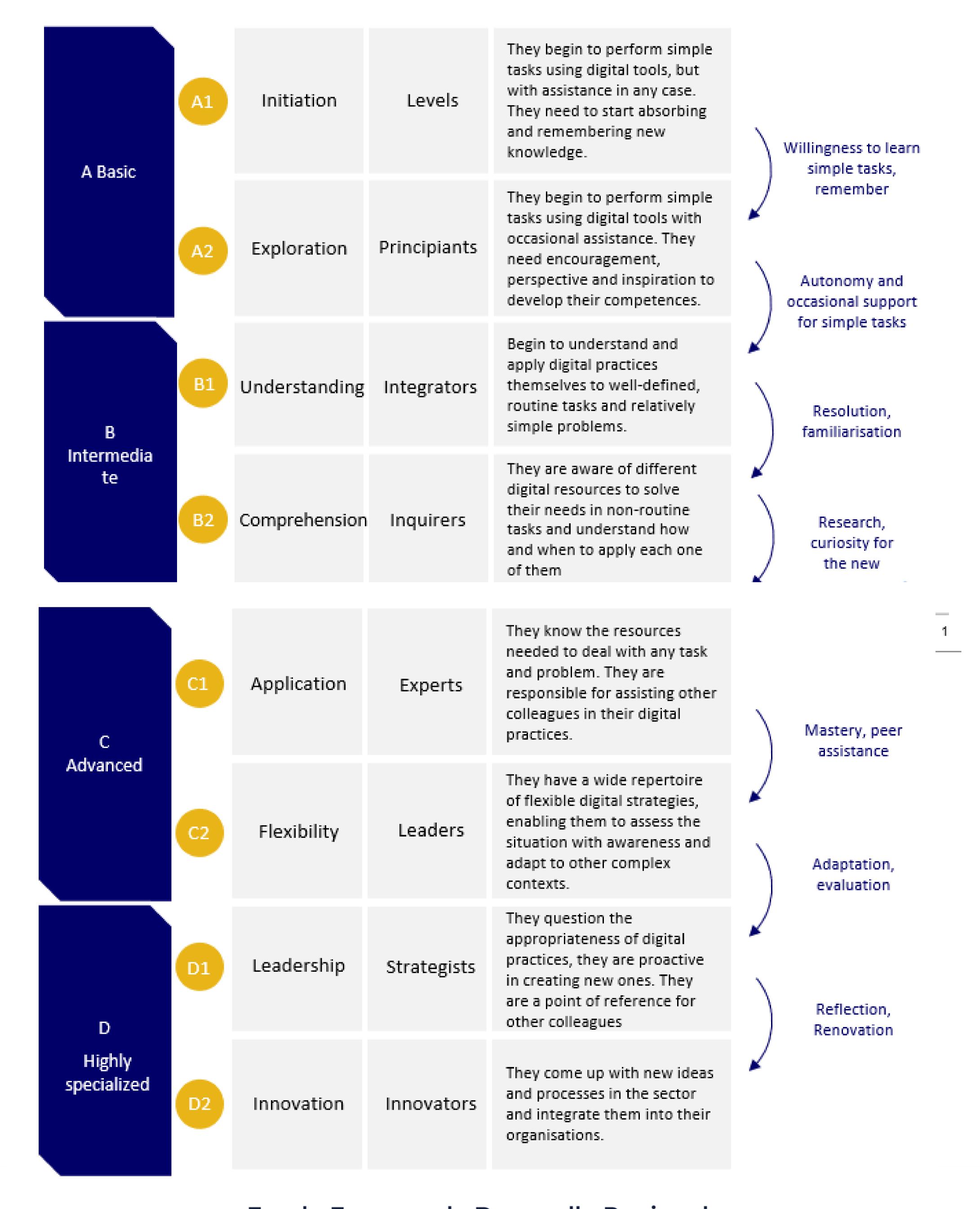






Development levels

The assessment will position each of the workers at one of the eight competence levels defined by the European Framework of Digital Competences for Citizenship. Each level can be characterised as follows, taking into account the skills and knowledge assumed at each level according to the European Framework of Digital Competences for Citizenship:



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Why are digital skills important for SMEs?

Digital skills in SMEs are fundamental to continue to grow and evolve their business. Especially at the beginning, task automation allows companies to allocate their resources to higher value tasks, saving costs and time.

In this respect, four main dimensions of each user's digital competence applicable to SMEs are identified. On the one hand, there is the user's knowledge of the possibilities that exist to digitally transform a business. On the other hand, there is the skill dimension, i.e. having the necessary digital skills to apply the new measures. This is where the use dimension comes in, applying the knowledge and skills and bringing them to the real world. Finally, there is the attitude dimension, which identifies the user's predisposition to employ certain actions aimed at the digitisation of the business and the digital transformation of the SME.

DIMENSIONS OF COMPETENCE

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Knowledge



Skill



Use



Attitude

EXAMPLES OF OBSERVABLE BEHAVIOUR

"I know that there are tools to perform my tasks in an agile way"

"I am able to create a slideshow presentation"

"I use mailing lists to keep colleagues or managers informed"

"I believe that digital tools can be very useful for everyday work"

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This approach will allow an SME to identify where the "gaps" in the digital competence of each employee are, so that appropriate measures can be put in place. For example, it will identify if an employee is interested in digital competence but does not show a high level of knowledge or, for example, if he/she already uses certain digital competence tools, but lacks the skills or ability to use these tools correctly.

This multidimensional approach will allow the **exploitation of data** and the **analysis of information**, as well as the **drawing of conclusions** on the different types of competence adoption.

The definition and implementation of a self-diagnosis system will allow company managers to know the situation of their organisation, to measure its current state in order to be able to act accordingly and to advance in digitalisation.



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3. An SME model and its benefits

In this sense, in order to carry out the digital transformation process of an SME, it is not essential to wait for the employees themselves to have sufficient digital skills, as there are alternatives that accompany SMEs in this process. Within the framework of the SME Digitalisation Plan 2021-2025, there are many initiatives such as the SME Digital Transformation Expert Training or the Agents of Change Programme [REF-6]. While employees are acquiring skills and abilities, SMEs themselves can apply to participate in this programme, which aims to subsidise the costs of incorporating a digital transformation professional up to a maximum of €20,000 per company/agent/year [REF-7].

The European e-skills framework for citizenship, and the benefits it brings to the individual in particular, have been presented above. However, it is worth noting that e-skills and their benefits can be specifically grounded by considering a global approach towards SMEs. Specifically, there are several skills that bring different benefits to SMEs as outlined below:













Digital overview

Ability to understand the keys and of trends the digital identify phenomenon, influence and incorporate it into the organisation's strategy.

- Generates security during change and uncertainty.
- Increases the speed of response to changes in market demand.
- Motivates the organisation to achieve objectives.
- Opens business opportunities and new sources of income.

Digital innovation

integrate different Ability tο methodologies, techniques and subjects through knowledge and understanding different of technologies.

- Creates value-added experiences for customers.
- Drives creativity and continuous improvement.
- Offers greater intuition to better solve any problem.
- Allows differentiation from the competition through a more inspiring work environment.

Learning capacity

Ability to learn autonomously through digital tools and collaborative learning communities to acquire new knowledge and skills.

- Keeps the organisation up-to-date and competitive in the marketplace.
- Strengthens the brand's reputation in a competitive. market.
- Helps the company to develop new products and services.
- Facilitates information exchange and ultimately innovation...

Information management

Ability to effectively access all information content and available on the network.

- Provides business intelligence and competitive analysis.
- Increases information flow and process efficiency.
- Improves the localisation, sharing and reuse of data.
- Real-time business control.

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>®**<**Cibersecurity

It shows precise technological knowledge and skills to detect, analyse and solve security vulnerabilities in digital devices and environments, where cyberattack prevention and contingency plans are established.

- Protection of own and customer information to prepare against external attacks that lead to data loss.
- Knowledge of the risks to which one is exposed and strengthening of weak points.
- Increased efficiency of the company, having full control of what happens with the data and processing them in an integrated way.
- Increases the credibility and improves the image of the SME.

Digital communication

Ability to make optimal use of the digital communication new channels and environments available in a corporate and/or professional environment.

- Improves customer and internal communication.
- Generates market and customer knowledge.
- Increases internal efficiency and productivity.
- Favours positioning and brand building.



Collaboration in Red

collaborate Ability to and cooperate effectively delocalised, multi-project, hyperconnected and asynchronous environments, demonstrating great capacity to establish working relationships in any cultural and social environment.

- Improves the efficiency of processes.
- Promotes informal learning among members of the organisation.
- Improves the sense of belonging and alignment to strategic objectives.
- Sharing of information and greater interaction. between employees.

Digital Leadership

Ability to take on the role of leader of a group of people or work team to guide the digital transformation processes organisations by being a real driver of change.

- Increases productivity and improves competitiveness in the market.
- Improves the integration of work teams.
- It favours the optimisation of resources and the skills of professionals.
- Improves performance and makes the SME more efficient.

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4. How to measure the digital skills of your employees and the digital maturity of your SME?

To measure competences, two different types of tests should be carried out to ensure the reliability of the assessment results.

1. Self-assessment (SELF ASSESSMENT)

Questionnaire based on a Likert scale that collects the employee's own vision of their positioning in the levels of each digital competence of the conceptual framework defined by the SME itself.

Its purpose is to encourage employees' self-knowledge about their level of use, knowledge, skills and degree of interest in the defined digital competences. The test will also allow employees to familiarise themselves with the tool they will use in the assessment.

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2. Evaluation of digital competences

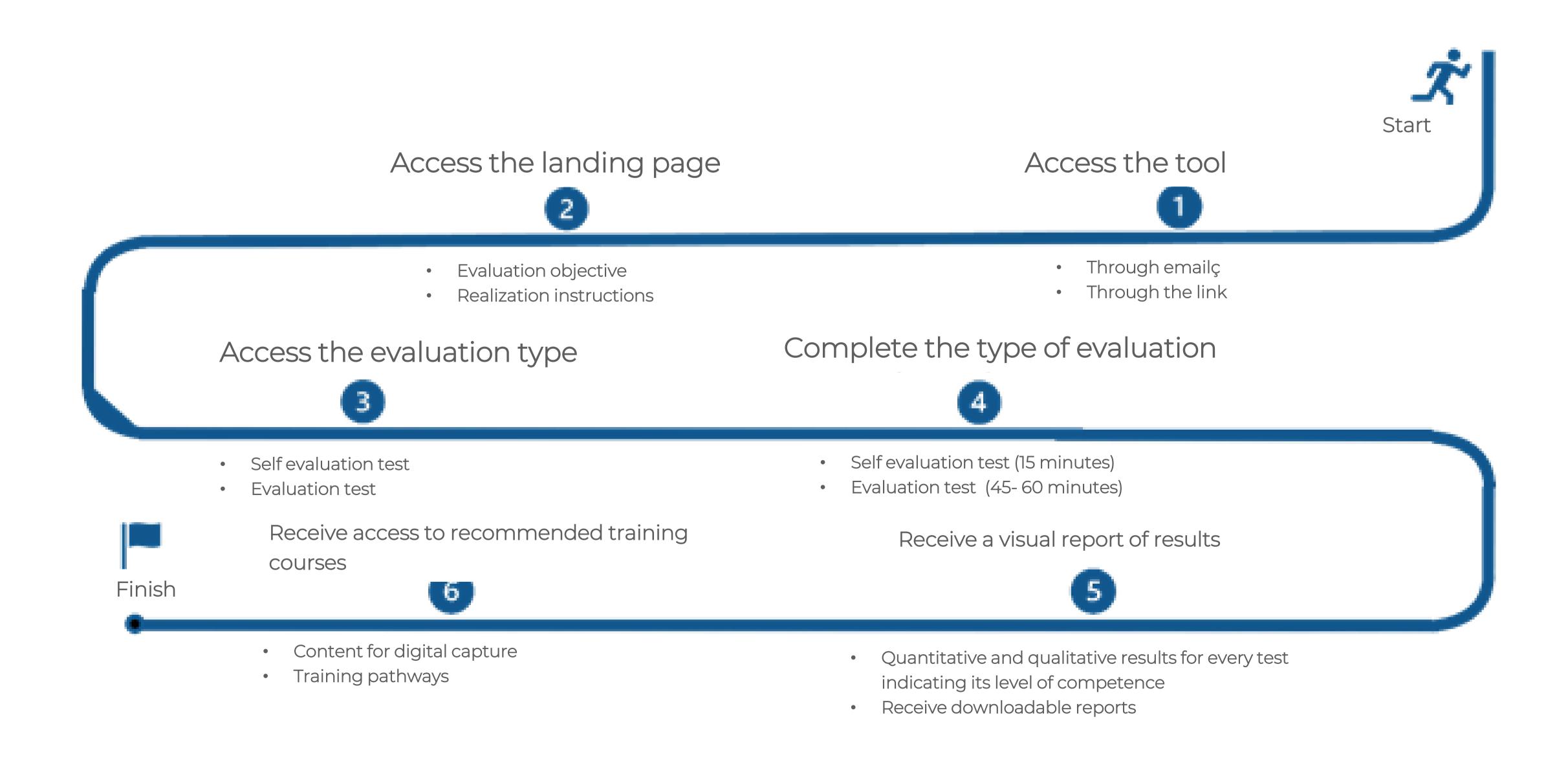
Questionnaire with different types of theoretical questions and practical exercises (scenario mode) of situations involving the use of digital tools. It situates the employee in his/her current level of digital competence of the competence framework established in the SME.

It aims to objectively measure the degree of competence development. Knowledge and skills can be measured in the same questionnaire.

- To assess knowledge, users will answer different types of questions (multiple choice, single choice, v/f...).
- To assess ability or skill, practical exercises reflecting situations they may encounter in their day-to-day life.

This combination avoids mismatches between what users think about their level (self-assessment) and what they know and are able to do (assessment of digital competences).

Below is an example of the employee journey on an assessment platform to carry out the complete assessment process.



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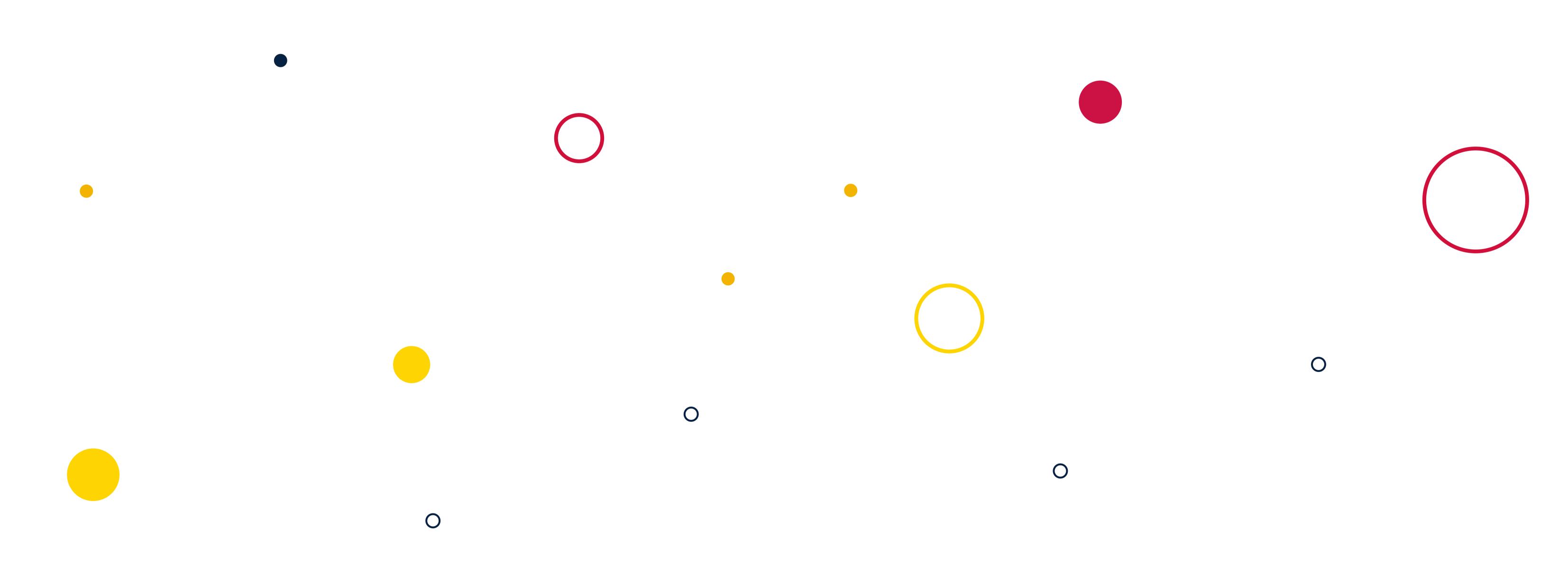






In addition, there are several free-to-use tools that can be used to carry out self-assessment. The European Commission has its own MyDigiSkills tool [REF-8] and another test that covers the domains of information and data literacy, digital communication and collaboration, digital content creation or security aspects and can be incorporated into the Europass profile [REF-9]. At regional level and based on DigComp, the Government of Navarre and the Basque Government have developed the self-diagnostic tools Testlink Navarra [REF-10] and Ikanos Test [REF-11], respectively.

On the other hand, there are more ways to measure one's own or employees' digital competences. One of these alternatives may be to gamify the self-testing application.



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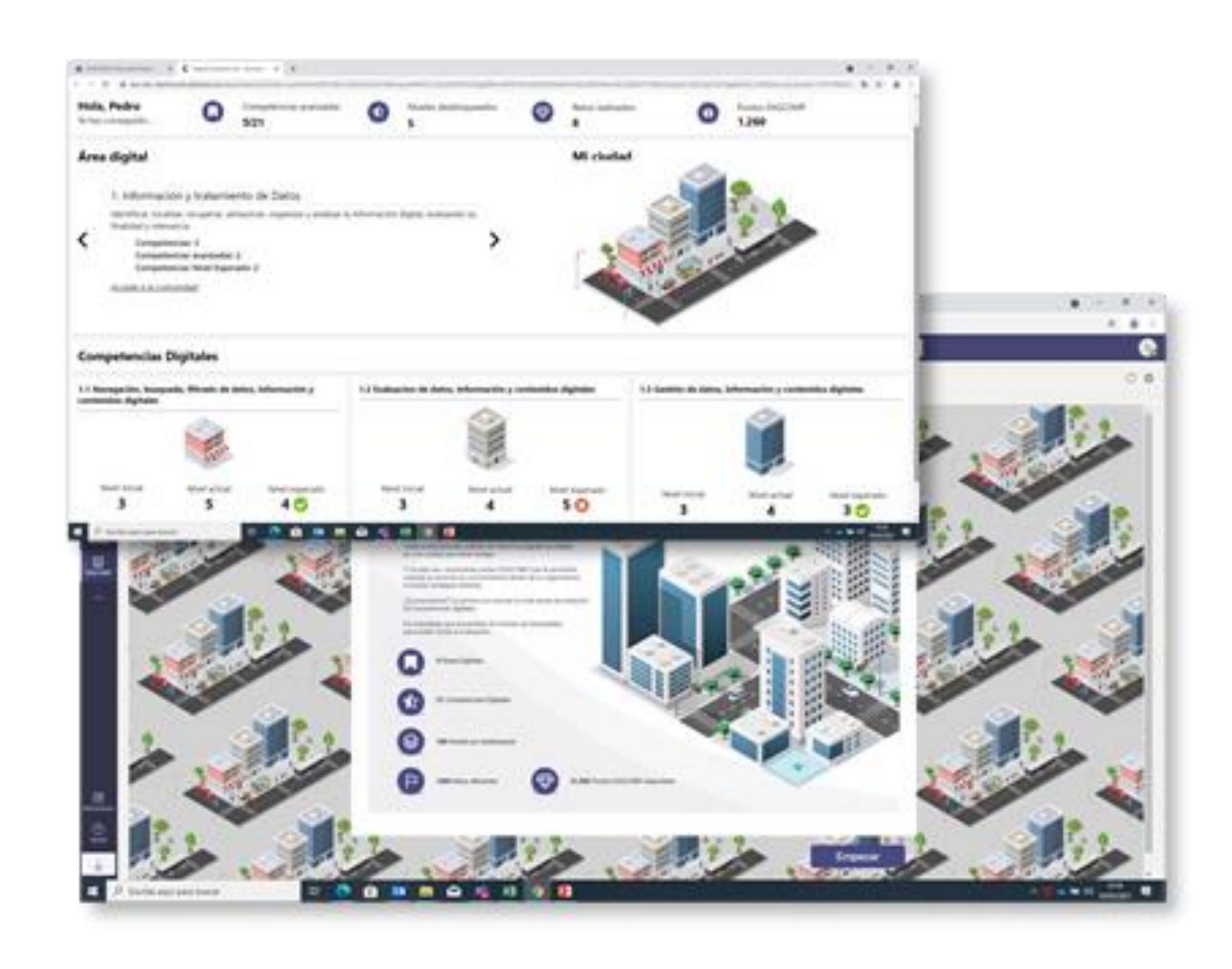


Why gamify the self-testing application?

To ensure the success of self-diagnosis in an SME we aim to improve the experience and increase user motivation and satisfaction. By adding that layer of gamification we can get users to perform a task for the pleasure of doing it, with the added value of achieving personal satisfaction at the end of the process.

By improving the experience of users when interacting with the tool, we will increase their commitment to the process, avoid abandonment during the task, increase their involvement, thus preventing them from responding randomly and achieving answers that are more in line with their reality. This ultimately translates into an increase in the quality of the data collected and in the satisfaction of the people who participate

Digcomp Example:



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5. Conclusions

After the evidence of the existing digital divide of citizens and enterprises, the need to improve the digital skills of society has become evident. As a result, public administrations, both at European and national level, are promoting different initiatives and developing different frameworks for the development of digital skills.

Today there are different ways to continue acquiring digital skills and many organisations are already doing so through the use of transformative technologies such as social networks, collaboration tools, cloud, cybersecurity, IoT, Artificial Intelligence, etc.

Specifically, for SMEs, the development of digital skills brings various benefits such as increased responsiveness of the SME to changes in market demand; greater digital efficiency and productivity thanks to the ability of digital communication; or better total control over what happens with data and processing them in an integrated way thanks to cybersecurity competence.

In that sense, it is essential to know the degree of digital skills of all the employees that make up an SME, for which there are different digital skills (self-)assessment tools. In fact, there are different ways to increase the motivation of employees and the experience of this process, for example, by gamifying the self-diagnosis application.

If SMEs want to move forward with their digitalisation process in order to be ready for the demands of the market, employees belonging to these SMEs must have sufficient digital skills. Nowadays it is very easy to acquire these skills through different means and thus be able to have a flexible organisation that is prepared for disruptive changes such as the Covid-19 crisis and all that it has meant for businesses.

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