IO1 - Executive Summary Report

THE MISSING ENTREPRENEURS

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This report has been developed by:

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IO1 Executive Summary Report

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Contents

1. Introduction

The Missing Entrepreneurs executive summary report is a document complied on the basis of research – both desk-based and field-based – conducted by the Missing Entrepreneurs partners. The report follows the analyses of the national contexts of six EU countries (France, Portugal, Spain, Cyprus, Italy, and Austria). Its primary aim is to identify skill gaps of under-represented population groups (women, immigrants, youth, and seniors) in the digital entrepreneurship realm. To do so, the comparative report is structured as follows.

First, a national report of each of six countries' context is provided after a desk research. Second, an assessment of the currently existing good practises (4-7 from each partner country). Third, a section with the results of questionnaires, which was provided to 40 stakeholders from each country and within our target groups (target 240 but reached 267 replies in total). These questionnaires aimed to investigate the national context within the realm of our proposal as well as gave us a transnational perspective that helped us define common gaps within the jurisdictions of the participating countries and perhaps the European Union as a whole. The final part is focused on the comprehensive summary of the skills gaps of under-represented population groups (women, immigrants, youth, and seniors) in the digital entrepreneurship realm.

2. Key Findings from Desk Research

France

The European Startup Monitor survey suggests that **women are greatly under-represented** among digital entrepreneurs in France. In 2018, women accounted for only 20% of start-up founders in France. According to the Digital Agency's January 2019 report, the number of female start-up leaders in France is 12.4%. Over the period 2014-18, 2.9% of women in the EU were trying to start a business. Regarding the youth and their entrepreneurship activities, **more and more young people are taking on a new challenge or seeking to access employment**. With a growth of 22%, the number of business start-ups increased the most last year in transport and storage activities. In this sector, 62% of the founders were under 30 years old. This

was followed by real estate (+10%) and trade (+9%) where the proportion of young entrepreneurs is also high. Among senior citizens, the creation/takeover of a business is motivated by the desire to be independent and the taste for entrepreneurship, yet it is often simply unemployment that pushes them to establish their own businesses. **People aged 50 and over lead around 16% of business start-ups and takeovers.** Few businesses created by senior citizens have benefited from start-up aid.

Frances's measures to improve the digital skills of its population are underway and should produce tangible results over the coming years. More targeted initiatives will be important to upskill the workforce for the digital economy and to promote advanced digital skills development. The **"Entrepreneurial Spirit" Plan in favour of student entrepreneurship** reflects the minister's desire to make student entrepreneurship a priority in the coming years by increasing the number of entrepreneurships training courses, encouraging the conduct of entrepreneurial projects during studies, and improving the recognition of the skills developed by student entrepreneurs. Furthermore, the French Government plans to establish strategies for adapting the workforce to the needs of the digital economy. At the same time, the digital revolution is transforming organizations and jobs in all sectors. It is **estimated that 50% of current jobs are likely to be transformed by digital technology in the coming years**. However, digital technology also offers new job opportunities, particularly in new professions. Finally, as regards the more mature stages of development, the **size of French venture capital funds does not allow start-ups to finance major fund-raising, which is essential to ensure the industrialization and internationalization of their activity**.

Portugal

In Portugal and according to "The Missing Entrepreneurs 2019: Policies for Inclusive Entrepreneurship" the **women, youth and seniors were more likely than the European Union (EU) average to be involved in starting a business** or managing one that is less than 42 months old between 2014 and 2018 – 7.0% vs. 4.9% for women, 9.7% vs. 7.7% for youth, and 5.4% vs. 4.4% for seniors. Portuguese women show significantly less preference for self-employment than men. Most of them are unlikely to make the decision to start their own business without the

existence of a stress factor such as unemployment or sudden loss of income, the need to escape adverse working conditions, or wage and career discrimination. Concerning initiatives aimed at fostering the entrepreneur spirit of women in Portugal, an initiative named ''Women at work ("Mulheres à Obra")'' was created for women willing to seek a different professional path, more in line with their needs of adjusting family-work life, their preferences and skills. There are several projects and initiatives that support immigrant entrepreneurship with special focus on those living in more vulnerable neighbourhoods. About initiatives seeking to support seniors, considering that there are gaps in the offer of effective solutions to mitigate unemployment in age groups over 45, particularly in individuals with high levels of qualification, the Portuguese Business Association (AEP Foundation- Associação Empresarial de Portugal) has defined a strategy to support senior entrepreneurship. Therefore, apropos of **public support measures for young entrepreneurship** in Portugal, the Government launched a national entrepreneurship strategy.

Spain

The key relevant finding from desk research in Spain are:

- 43% of people between 16 and 74 years of age lack basic digital skills

- 36% of the workforce lack basic digital skills, the situation being worse among the unemployed population (55%) than that of the employed (32%).

- The governmental strategy Spain Digital 2025 will prioritize closing the digital skills gap between employed and unemployed people to mitigate the chronification of unemployment situations and allow continuous requalification throughout the working life, paying special attention to the existing digital gap in areas of low population density and in the rural world.

The identified "digital" needs of each of the beneficiaries' group are:

Young people (15 - 24):
- ➢ "knowing how to do" with new technologies to participate in the community and in the new digital society (programming, operating devices such as drones, generating digital content, designing, etc.).
- ➢ responsible use of technology, security, privacy and critical thinking.

➢ orientation, training and specialization in preparation for entering the world of work. Need to work and reinforce soft skills or "soft skills" (communication, leadership, creativity, teamwork ...), which are transversal skills that are increasingly valued in the workplace.

Young people (15 - 24) without studying, without working:

➢ motivation and knowing how to do with purpose through new technologies, both digital and linked to STEAM concepts and maker spaces, for social or economic entrepreneurship.

Adults in general (25 - 65), without a specific segmentation:

➢ "knowing how to do" with technology, participate in communities and networks, generate content, use it in complex environments.

➢ digital electronic administration, new services related to community and democratic participation and related to the use of digital services of all kinds that are deployed in sectors such as financial, insurance, energy, mobility, etc.

➢ coexistence at home, work or environment of new digital concepts, such as Artificial Intelligence, robotics, chatbots, distributed registry systems, etc. Skill in solving problems related to technology in these environments.

➢ legislation, regulation, or privacy and security issues.

➢ continuous learning, especially for the requalification of digital skills for the job.

➢ certification of digital skills for accreditation in the workplace

People looking for work, both young and old:

➢ qualification and requalification for employability, including both technical skills (programming), as well as horizontal skills related to creativity, design, teamwork, etc.

➢ certification of digital skills.

Entrepreneurs, freelancers and workers of small companies and SMEs:

➢ knowing how to do with purpose through new, digital and related technologies: management of tools for their application in processes, products and services, linking with clients and partners, eCommerce, people development, etc.

➢ digital electronic administration from a business point of view.

- ➢ skill in solving problems related to technology in the work environment.
- ➢ legislation, regulation and issues related to privacy and security from a business perspective.
- ➢ continuous and virtual learning of all kinds of skills and abilities.
- ➢ qualification and requalification in the workplace for the skillful use of technology.

People at risk of digital exclusion (rural population, women, immigrants, people with disabilities …):

- ➢ digital Literacy as a tool to improve their quality of life.
- ➢ development of digital skills for their social, labor and personal inclusion in society, attending to the specific needs of each specific group: ICT accessibility in the case of people with disabilities, possible language support in the case of immigrants, etc.

We recommend to follow the established 10 key disciplines in the digital environment of a company and a total of 41 derived competencies requested by the Spanish SMEs presented on the page 17, in the National Report Spain in the moment of the creation the training programmes to be offered by The Missing Entrepreneurship project.

Cyprus

In Cyprus **financing remains one of the core challenges for all entrepreneurial activities**. Due to the financial crisis in the country in 2008-09 which led to a restructuring of the financial sector and according to the National Policy Statement (2015), 92% of Cypriot entrepreneurs strongly believe that securing funding is a requirement for the proper function of their businesses. Furthermore, the **policy statement focuses on strengthening entrepreneurial skills and activities for all and highlights a need to enhance support for youth and female entrepreneurship.** However, not for all social groups e.g. older people, migrants, people with disabilities are set targets and objectives on business creation. Although their support is foreseen through best practices and programs.

An important issue that will contribute to inclusive entrepreneurship is regulatory reforms that will also facilitate business creation. By 2020 it was supposed to

accomplish a series of regulatory initiatives to strengthen the entrepreneurship ecosystem, as it is described by the 2017 National Reform Program.

Italy

In Italy there are about 500,000 companies led by young people under 35, representing 8.6% of the national production system. **Almost 70% of small entrepreneurs in this country are over 50 years old, while the under 30 are in sharp decline.** Looking at the individual sectors, we find that entrepreneurs over 50 years of age account for 72.3 % in agriculture and 60.3 % in manufacturing. There are many youth entrepreneurship initiatives and support measures on the table e.g. from chambers of commerce. Few companies are run by foreign women, and representing 10.8% of all female companies in the country. The highest incidence of immigrant enterprises in the total is due to rental activities, travel agencies and business service (17%). **Since the crisis of 2008, self-employed immigrants have made a decisive contribution to maintain the entrepreneurial base.** Covid-19 has led to a further slowdown in the growth of companies as everywhere. The difficulties faced by foreigners in seeking employment are a) lack of language skills, b) early school dropout of minors, c) unrecognized qualifications, d) citizenship or residence permit, e) origin, religion and social class. The profile of the new female Italian entrepreneur that is under 40 (60% against 55% male), has a high level of education and on average higher than men. Within women's enterprises, the young ones, compared to the non-young ones, show better performances from all points of view: they are more innovative, they invest more in the green tech and sustainability as well as in the corporate social responsibility. However, **female youth enterprises are less digitalized** (19% have adopted or are adopting business measures 4.0 compared to 25% of non-female enterprises), mainly due to a lesser knowledge of the current measures on the digital transition.

Austria

The share of Austrian enterprises initiated by women is increasing - from 39.5% in 2010 to 44.5% in 2017.

However, **there is certainly a gender gap in Austria**, as women are significantly less likely than men to possess the entrepreneurial skills needed to start a business

(41% vs 58,1%), and women in general operate smaller businesses with less employees, capital and growth ambitions than men.

Youth in Austria have one of the lowest levels of self-employment in the EU - - 3.3% compared to 6.5%. Young people are slightly less likely than adults to possess the entrepreneurial skills needed to start a business – 45 % vs 49,6 %, but they are more likely to have significantly better digital skills compared to adults on average. 13.7% of Austrian adults indicated that they had no prior experience with computers or lacked very basic computer skills.

Seniors in Austria are less likely to be self-employed than the EU average - 15.5% compared to 17.7%, with a leap at retirement age of 65, seniors over 65 are significantly less likely to be active as entrepreneurs.

Migrants born in another EU member state used to have a higher rate of self-employment than average, but this is no longer the case. The self-employment rate of migrants born outside of the EU has always been lower, with a difference of close to 4%.

Proficiency in literacy and numeracy peaks among 25–34-year-olds while the proficiency of 55–64-year-olds is generally the lowest of all age groups. Austria has developed its own competence model for digital skills, called "Digital Competence Framework for Austria - DigComp 2.2 AT.

3. Research Results: Best Practices

A lot of best practices were mentioned on each countries' national reports. More specific there are initiatives and projects that are targeting to women, youth, immigrants, and seniors. Some examples are:

France

- The Digital Transition of the Voluntary Sector (Initiative) – Target group: SMEs and micro-businesses. The Association offers a simple and free self-diagnosis service that allows SMEs/micro-businesses to evaluate their level of digital maturity in the Web and obtain a personalized action plan in less than 10 minutes.

- Women in the digital professions (Initiative) – Target group: Women who wish to start their own business. It provides long-term support to women who wish to start their own business, access training or first jobs, or seek a change of direction; a commitment that sometimes extends far beyond France.

Portugal

- PEI - Project Promoting Immigrant Entrepreneurship (Project) – Target group: immigrant citizens willing to structure a business idea and implement it. It aims to foster entrepreneurship among immigrant communities, with special focus on those living in more vulnerable neighbourhoods.
- Empreender 45-60 (Project) – Target group: Individuals in the 45-60 age group, particularly with high levels of qualification.

Spain

- Cybervolunteers: Cibervoluntarios promoting technological volunteering in Spain (Initiative) – Target group: elderly, people with disabilities, women entrepreneurs and primary and secondary students, educators and parents. 1,500 volunteers around Spain detect digital skills needs, organise workshops and train citizens in digital competences.
- donate devices (Project) – Target group: school students from disadvantaged backgrounds. AMETIC, in collaboration with the Ministry for Education and Professional Training is mobilising its members to donate devices such as tablets, laptops and high-capacity phone lines to be distributed to school students from disadvantaged backgrounds.

Cyprus

- CYPRUSINNO (Project) – Target group: young people, social entrepreneurs, and start-ups. It is a digital platform offering Cypriot entrepreneurs and problem-solvers island-wide the chance to connect with like-minded innovators, network, and even post to the site.
- Migrant & Youth Social Inclusion Through Entrepreneurship – MYSITE (Project) – Target group: Third Country National and local young people interested in entrepreneurship. This project addresses entrepreneurship as

a tool towards integration. One of the objectives of the project is to promote youth entrepreneurship as a means of employment and financial independence

Italy

- #HERE (Project) – Target group: Guests of the SPRAR ENEA reception centre. Creation of a permanent facility dedicated to new technologies – at the service of guests and operators of the SPRAR ENEA centre to strengthen digital skills and experiment with new ways of socializing and learning in a creative and innovative way.
- Be-Win (Business Entrepreneurship Women In Network) (Project) – Target group: New young female Italian entrepreneurs. The project aims to develop an "Italian network of women entrepreneurs" to support, thanks to the communication opportunities offered by new technologies, the transfer of experiences and knowledge from 32 women who have gained significant experience in the field of managerial and entrepreneurial field (Mentors), to 64 new female entrepreneurs in the world of entrepreneurship

Austria

- aws (Programme) – Target group: SMEs, prospective entrepreneurs. It supports companies in implementing their innovative projects by offering soft loans, grants and guarantees, particularly in cases where the funds required cannot be obtained sufficiently through alternative funding.
- fit4internet (Platform) – Target group: youth, employees and those re-entering the workforce, seniors. fit4internet is the platform that contributes to the increase of digital competences in different ways, particularly by bundling different forces The f4i-tools offer the possibility of obtaining an orientation on one's own level of competence and thus, continuing to learn and improve oneself in a targeted way.

4. Research Results: Questionnaires

A questionnaire was provided to be given out in all partner countries. The target was to be at least 40 questionnaires collected from each partner country for a total of 240 but we achieved to reach the total of 267 questionnaires. Specifically, in each partner country at least 5 questionnaires were to be collected from each of the social groups addressed by the project (women, youth, seniors, immigrants). The questionnaires were distributed according to the proposed plan of action. The questionnaire was provided as an online questionnaire in Google Form so as to receive responses faster and be able to analyse the results more efficiently.

Almost 78% of people that replied to the questionnaire in **France** were between 18-34 years old, 6% were between 35and 44, and 16% ranged from 45-54 and 55-64 years old. 67% of respondents were French, while the rest 33% came from EU and non-EU countries. 97% of all of them had superior level of studies (university and above). More than 79% of the participants considers itself very familiar with the term of the entrepreneurship and more that 83% are familiar with the setting up a business. However, the majority of respondents still prefer to stay out of digital entrepreneurship, the inability to afford starting a business and the lack of knowledge being the main reasons preventing them from taking the initiative.

In **Portugal,** the respondents were as below: Women – 28 responses; Youth – 25 responses; Seniors – 7 responses and Immigrants – 8 responses. Regarding their entrepreneurial background, the results showed a balance. As far as it concerns the term "Digital Entrepreneurship", the majority of the participants feels quite familiar with it. They stated that the field of Digital Entrepreneurship has attractive business potential, has a greater proximity to customer's needs, being a low-cost growing sector with better reach and practicality. It was given high importance to the skills regarding Communication, Finance, Operations Management and in addition, the highest chosen option were regarding Project Management.

Almost 70% of participants of the questionnaire in **Spain** were between 18 and 34 years old, 11% over 65 and 7% each of the rest age ranges 35-44, 45-54 and 55-64. Regarding the gender, 70% of the participants were female and 30% were male.60%

of all of them had tertiary education level. Of those who were entrepreneurs in the past, 9% closed it down and 36% sold it. The majority reasons given for not having a running business in the moment are of financial nature (50%) or related to the lack of other resources like energy (29%), time (18%) and other operational issues (24%). 17% of participants claim the lack of knowledge about business creation and management. Only 14% of the participants considers themselves familiar with the digital entrepreneurship although almost the half of the participants has considered it as an interesting option to start a business. The complete analysis of the perceived existing skills and the skills relevance give us quite a clear idea of the needed skills. We can observe that the participants declare to be more skilled in communication, design and project and product management rather than in finances, data analysis, digital marketing or web development. At the same time, they show clear needs to close the gap of knowledge they perceive that they have in those area as they consider these skills relevant for setting up the business.

In **Cyprus**, 40% of the participants where covering the age range from 25 to 34, while only 5% was 18-24. Regarding the gender, 67% of respondents were female and 33% male. The main reasons that the surveyed participants do not own a business today are financial and operational. Participants that still own a business has a duration of 2 years. Only 12 out of 40 participants have never considered of getting into Digital Entrepreneurship. The rest of them are considering of going into digital, because it can offer relevant business and financial opportunities. To this end they intend to expand their knowledge of starting a digital enterprise. When people were asked to rate their knowledge and practical familiarity with some skills, most people indicated to be very familiar with communication and project management term. Many participants though do not possess skills related to web development, data analytics and product service development.

In **Italy,** 53 persons were interviewed, of which 29 were women and 23 men, and they hold mainly Italian nationality. About 70% of the respondents belong to the young age group (18-34 years), the rest belong to the age group 35-64 and only one respondent declared an age higher than 65 years. 25% of the respondents claim to have high knowledge related to business creation, 47% claim to have medium knowledge and 28% claim to have low knowledge. About 30% of the respondents

claim to be well familiar with the term entrepreneurship, 59% has medium familiarity and 11% low familiarity. 15% of respondents claim to be familiar with the term digital entrepreneurship, 60% claim medium familiarity and 25% low familiarity. This suggests that respondents are less familiar with the world of digital entrepreneurship than with the wider world of entrepreneurship: around 15% of respondents who said they were familiar with the term entrepreneurship moved into the group of those who said they were unfamiliar with the term of digital entrepreneurship. Some other skills related to digital entrepreneurship suggested by respondents such as 1) Problem Solving in emergency situations; 2) Content creation, soft skills, empathy; 3) Language skills; 4) Teamwork; 5) Innovation.

The respondents in **Austria** were nearly perfectly divided by gender. As far as age is concerned, all age groups were represented, with the ones 35-44 years old being the most active, while respondents aged over 65 were the least represented. 29 respondents (62%) were born in Austria. The vast majority of them (83%) do not possess a university degree. The main reasons for closing down of companies have been related to the market and the inability to meet financial obligations. That said, a number of companies were closed for personal reasons – their owners could not keep up with the demanding lifestyle of an entrepreneur and were not prepared to make further sacrifices. 70% of respondents rate their knowledge of entrepreneurship as significant, and half of them as the highest possible. More than half of respondents rated their competences in digital entrepreneurship as insufficient and only 13% gave it a maximum result. The existing business and financial opportunities, as well as the relative ease of starting on online business, are the main pull factors. However, the majority of respondents still prefer to stay out of digital entrepreneurship due to the inability to afford starting a business and the lack of knowledge. On the negative side, respondents mentioned: a lack of interest in digital entrepreneurship in general – either because of the job security of employment or of retirement plans; a lack of concrete business ideas; a lack of opportunities; and a lack of know-how.

This section comprises conclusions and recommendations of each country. Structured thusly, this report offers an in-depth overview of gaps and needs in the area of digital entrepreneurship for under-represented groups in EU countries. One

of the most important insights offered by this report is that, despite the differences in the situations across partner countries, certain issues regarding entrepreneurship activities appear to be common cross all national contexts. For instance, it was noted that many relevant initiatives to increase the level of digital skills exist but need to develop.

5. Conclusions and Recommendations

Based on the research results, there are two key recommendations that should be exploited to boost the participation of under-represented population groups (women, immigrants, youth, and seniors) in the digital entrepreneurship.

1. First of all, more tailored government initiatives supporting entrepreneurs should be put in place in order to become more suitable to the needs of prospective entrepreneurs.

2. Furthermore, the fact that a significant part of stakeholders has low skills regarding entrepreneurship and more specifically on digital entrepreneurship, creates the challenge and a barrier for potential entrepreneurs to start their own business. Thus, another recommendation is to set up training and capacity building courses and programmes on relevant and on-demand skills for potential digital entrepreneurs so to ensure that they possess the required knowledge and skills to start digital business. This kind of approach can contribute to adapt labour market and its workforce to the digital world.

In conclusion, in order of priority, the most important skills that respondents are not familiar with are:

- Data analytics
- Web development
- Finance
- Digital Marketing
- Product service development

For an extensive list of skill gaps per consortium country you can visit Annex 1.

Annex 1: Summary of skill-gaps.

Finally, regarding the research that was accomplished through the questionnaires the participants replied some important questions that are referenced below. Thus, some recommendations with the important summary table of skill-gaps per partner country are noticed.

France – 36 questionnaires

An important question that needed to be studied was Q7 which was regarding the familiarity of setting up a business. The majority in France is familiar with that.

Another noticeable question was Q13 which was asking the familiarity with the term Digital Entrepreneurship and the majority is familiar with the term, even though there were some replies below 5.

The question that needed to be asked in order for us to understand the needs was Q17, regarding the knowledge and practical familiarity with skills that they might have. Below we can see in list the skills that participants are not familiar with to the ones they are more.

a. Finance

b. Web development

c. Digital marketing (Branding, Logistics, Distribution)

d. Product service development

e. Data analytics

f. Social media management

g. Operations management

h. Business networking

i. Design thinking/Creativity

j. Communication

k. Project management

Portugal – 42 questionnaires.

Q7: there is a variation of the respondents that are familiar with setting up a business. A lot of them replied number 5 (8 people) which is the middle number of the scale, while many of them answered more than 6 (22 people).

Q13: the majority (27 people) is familiar with the term Digital Entrepreneurship, there were some replies <5 though (10 people).

a.   Web development

b.   Product service development

c.   Design thinking/Creativity

d.   Business networking

e.   Data analytics

f.   Digital marketing (Branding, Logistics, Distribution)

g.   Operations management

h.   Social media management

i.   Finance

j.   Project management

k.   Communication

Spain – 45 questionnaires

Q7: the majority is familiar with setting up a business.

Q13: the majority is familiar with the term Digital Entrepreneurship, there were some replies <5 though.

a.   Finance

b.   Operations management

c.   Web development

d.   Data analytics

e.   Digital marketing (Branding, Logistics, Distribution)

f.   Project management

g.   Product service development

h.   Business networking

i.   Social media management

j.   Design thinking/Creativity

k.   Communication

Cyprus – 43 questionnaires

Q7: most of them are familiar with setting up a business.

Q13: most of them are familiar with the term Digital Entrepreneurship, there were some replies <5 though.

a.   Web development

b.   Data analytic

c.   Digital marketing (Branding, Logistics, Distribution)

d.   Product service development

e.   Operations management

f.   Business networking

g.   Social media management

h.   Finance

i.   Design thinking/Creativity

j.   Project management

k.   Communication

Italy – 53 questionnaires

Q7: most of them are not familiar with setting up a business.

Q13: most of them are not so familiar with the term Digital Entrepreneurship (24 out of 53 replied 5-6).

a.   Web development

b.   Product service development

c.   Business networking

d.   Data analytics

e.   Finance

f.   Digital marketing (Branding, Logistics, Distribution)

g.   Design thinking/Creativity

h.   Operations management

i.   Social media management

j.   Project management

k.   Communication

Austria – 48 questionnaires

Q7: most of them are familiar with setting up a business.

Q13: there were a variety of respondents that are familiar with the term Digital Entrepreneurship.

a.   Data analytics

b.   Web development

c.   Digital marketing (Branding, Logistics, Distribution)

d.   Design thinking/Creativity

e.   Business networking

f.   Social media management

g.   Product service development

h.   Finance

i.   Operations management

j.   Project management

k.   Communication

Annex 2: IO1 skills with DigComp and EntreComp

Through the use of the European Quality Assurance in Vocational Education and Training (EQAVET), the aim of the project is to provide an overview of skills and competences relevant for digital entrepreneurship. To this end, the consortium mapped skills analysed within IO1 together with two key European competences frameworks:

- The European Entrepreneurship Competence Framework (EntreComp): offers a comprehensive description of the knowledge, skills and attitudes of an entrepreneurial mindset.

- The European Digital Competence Framework (DigComp): offers the key building blocks to a shared vision on what digital skills are.

The results of the matching skills analysed within IO1 together with and DigiComp can be found in the tables below.

TME Skills	Relation EntreComp		
	Area	Competence	Descriptors
A. Finances: Ability to collect, integrate, and interpret relevant financial information from a variety of sources.	2. Resources	**2.4. Financial and economic literacy** (develop financial and economic know how)	Estimate the cost of turning an idea into a value creating activity Plan, put in place and evaluate financial decisions over time Manage financing to make sure my value-creating activity can last over the long term
B. Web development: Ability to create and maintain websites.	no direct link		
C. Digital marketing: Ability that combines different marketing practices such as web design, SEO, social media marketing, content writing etc.	2. Resources	**2.5. Mobilizing others** (Inspire, ethuse and get others on board)	Inspire and enthuse relevant stakeholders Get the support needed to achieve valuable outcomes Demonstrate effective communication, persuasion, negotiation and leadership
D. Product service development: Ability to define a service for a new product, this is an adequate business model / delivery model.	1. Ideas and Opportunities	**1.1. Spotting Opportunities** (use your imagination and abilities to identify opportunities for creating value)	Identify and seize opportunities to create value by exploring the social, cultural and economic land scape Identify needs and challenges that need to be met Establish new connections and bring together scattered elements of the landscape to create opportunities to create value

	2. Resources	**2.3. Mobilizing Resources** (Gather and manage the resources you need)	Get and manage the material, non-material and digital resources needed to turn ideas into action Make the most of limited resources Get and manage the competences needed at any stage, including technical, legal, tax and digital competences
E. Data analytics: Ability to visualize data effectively and present it in a manner that flows like a coherent story and provides valuable insights.	1. Ideas and Opportunities	**1.1. Spotting Opportunities** (use your imagination and abilities to identify opportunities for creating value)	Identify and seize opportunities to create value by exploring the social, cultural and economic land scape Identify needs and challenges that need to be met Establish new connections and bring together scattered elements of the landscape to create opportunities to create value
F. Social media management: Ability to manage social media by reaching the right audience, engaging them, and leading a service or brand over social media.	2. Resources	**2.5. Mobilizing others** (Inspire, enthuse and get others on board)	Inspire and enthuse relevant stakeholders Get the support needed to achieve valuable outcomes Demonstrate effective communication, persuasion, negotiation and leadership
G. Operations management: Ability to coordinate teams, projects, budgets and analyse and take decisions in this regard.	2. Resources	**2.1. Self-awareness and self-efficacy** (believe in yourself and keep developing)	Reflect on your needs, aspirations and wants in the short, medium and long term Identify and assess your individual and group strengths and weaknesses Believe in your ability to influence the course of events, despite uncertainty, setbacks and temporary failures
		2.2. Motivation and perseverance (Stay focused and don't give up)	Be determined to turn ideas into action and satisfy your need to achieve Be prepared to be patient and keep trying to achieve your long-term individual or group aims Be resilient under pressure, adversity, and temporary failure
		2.3. Mobilizing resources (gather and manage the resources you need)	Get and manage the material, non-material and digital resources needed to turn ideas into action Make the most of limited resources Get and manage the competences needed at any stage, including technical, legal, tax and digital competences
		2.4. Financial and economic literacy (develop financial and economic know how)	Estimate the cost of turning an idea into a value creating activity Plan, put in place and evaluate financial decisions over time Manage financing to make sure my value-creating activity can last over the long term

		2.5. Mobilizing others (inspire, enthuse and get others on board)	Inspire and enthuse relevant stakeholders Get the support needed to achieve valuable outcomes Demonstrate effective communication, persuasion, negotiation and leadership
	3. Into Action	3.1. Taking the initiative (go for it)	Initiate processes that create value Take up challenges Act and work independently to achieve goals, stick to intentions and carry out planned tasks
		3.2. Planning and management (prioritize, organize and follow-up)	Set long-, medium- and short-term goals Define priorities and action plans Adapt to unforeseen changes
		3.3. Coping with uncertainty (make decisions dealing with uncertainty, ambiguity and risk)	Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing Handle fast-moving situations promptly and flexibly
		3.4. Working with others (team up, collaborate and network)	Work together and co-operate with others to develop ideas and turn them into action Network Solve conflicts and face up to competition positively when necessary
		3.5. Learning trough experience (learn by doing)	Use any initiative for value creation as a learning opportunity Learn with others, including peers and mentors Reflect and learn from both success and failure (your own and other people's)
H. Business Networking: Ability to build and maintain effective and constructive working relationships, partnerships or networks of contacts with people who are, or might someday be, instrumental in achieving work-related goals. Also known as Business networking/relationship/network Building.	3. Into Action	3.4. Working with others (team up, collaborate and network)	Work together and co-operate with others to develop ideas and turn them into action Network Solve conflicts and face up to competition posi tively when necessary

I. Creativity / Creative Thinking: Ability of discovering new opportunities and solutions for problems by looking beyond current practices and using innovative thinking.	1. Ideas and Opportunities	1.2. Creativity (develop creative and purposeful ideas)	Develop several ideas and opportunities to create value, including better solutions to existing and new challenges
			Explore and experiment with innovative approaches
			Combine knowledge and resources to achieve valuable effects
J. Communication: Ability to achieve communicative goals in a socially appropriate manner, adapted to the target audience.	2. Resources	2.5. Mobilizing others (Inspire, ethuse and get others on board)	Inspire and enthuse relevant stakeholders
			Get the support needed to achieve valuable outcomes
			Demonstrate effective communication, persuasion, negotiation and leadership
K. Project management: Ability of planning, organizing, and managing resources to bring about the successful completion of a specific project.	2. Resources	2.1. Self-awareness and self-efficacy (believe in yourself and keep developing)	Reflect on your needs, aspirations and wants in the short, medium and long term
			Identify and assess your individual and group strengths and weaknesses
			Believe in your ability to influence the course of events, despite uncertainty, setbacks and temporary failures
		2.2. Motivation and perseverance (Stay focused and don't give up)	Be determined to turn ideas into action and satisfy your need to achieve
			Be prepared to be patient and keep trying to achieve your long-term individual or group aims
			Be resilient under pressure, adversity, and temporary failure
		2.3. Mobilizing resources (gather and manage the resources you need)	Get and manage the material, non-material and digital resources needed to turn ideas into action
			Make the most of limited resources
			Get and manage the competences needed at any stage, including technical, legal, tax and digital competences
		2.4. Financial and economic literacy (develop financial and economic know how)	Estimate the cost of turning an idea into a value creating activity
			Plan, put in place and evaluate financial decisions over time
			Manage financing to make sure my value-creating activity can last over the long term
		2.5. Mobilizing others (inspire, enthuse and get others on board)	Inspire and enthuse relevant stakeholders
			Get the support needed to achieve valuable outcomes
			Demonstrate effective communication, persuasion, negotiation and leadership
	3. Into Action	3.1. Taking the initiative (go for it)	Initiate processes that create value
			Take up challenges

			Act and work independently to achieve goals, stick to intentions and carry out planned tasks
		3.2. Planning and management (prioritize, organize and follow-up)	Set long-, medium- and short-term goals Define priorities and action plans Adapt to unforeseen changes
		3.3. Coping with uncertainty (make decisions dealing with uncertainty, ambiguity and risk)	Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing Handle fast-moving situations promptly and flexibly
		3.4. Working with others (team up, collaborate and network)	Work together and co-operate with others to develop ideas and turn them into action Network Solve conflicts and face up to competition positively when necessary
		3.5. Learning trough experience (learn by doing)	Use any initiative for value creation as a learning opportunity Learn with others, including peers and mentors Reflect and learn from both success and failure (your own and other people's)

TME Skills	Relation DigCom		
	Area	**Competences**	**Descriptors**
A. Finances: Ability to collect, integrate, and interpret relevant financial information from a variety of sources.	1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content**	To articulate information needs , to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.
	1. Information and data literacy	**1.2 Evaluating data, information and digital content**	To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.
	1. Information and data literacy	**1.3 Managing data, information and digital content**	To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.

B. Web development: Ability to create and maintain websites.	3. Digital content creation	**3.1 Developing digital content**	To create and edit digital content in different formats, to express oneself through digital means.
	3. Digital content creation	**3.2 Integrating and re-elaborating digital content**	To modify, refine, improve and integrate information and content into an existing body of knowledge to create new, original and relevant content and knowledge.
	5. Problem solving	**5.2 Identifying needs and technological responses**	To assess needs and to identify, evaluate, select and use digital tools and possible technological responses to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).
C. Digital marketing: Ability that combines different marketing practices such as web design, SEO, social media marketing, content writing etc.	2. Communication and collaboration	**2.1 Interacting through digital technologies**	To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context.
	2. Communication and collaboration	**2.2 Sharing through digital technologies**	To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.
	2. Communication and collaboration	**2.3 Engaging in citizenship through digital technologies**	To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.
	2. Communication and collaboration	**2.4 Collaborating through digital technologies**	To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.
	2. Communication and collaboration	**2.5 Netiquette**	To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments. To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments.
	3. Digital content creation	**3.1 Developing digital content**	To create and edit digital content in different formats, to express oneself through digital means.
	3. Digital content creation	**3.2 Integrating and re-**	To modify, refine, improve and integrate information and content into an existing body

		elaborating digital content	of knowledge to create new, original and relevant content and knowledge.
D. Product service development: Ability to define a service for a new product, this is an adequate business model / delivery model.	1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content**	To articulate information needs , to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.
	1. Information and data literacy	**1.2 Evaluating data, information and digital content**	To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.
	3. Digital content creation	**3.4 Programming**	To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or perform a specific task.
E. Data analytics: Ability to visualize data effectively and present it in a manner that flows like a coherent story and provides valuable insights.	1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content**	To articulate information needs , to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.
	1. Information and data literacy	**1.2 Evaluating data, information and digital content**	To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.
	1. Information and data literacy	**1.3 Managing data, information and digital content**	To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.
F. Social media management: Ability to manage social media by reaching the right audience, engaging them, and leading a service or brand over social media.	2. Communication and collaboration	**2.1 Interacting through digital technologies**	To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context.
	2. Communication and collaboration	**2.2 Sharing through digital technologies**	To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.
	2. Communication and collaboration	**2.3 Engaging in citizenship through digital technologies**	To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.

	2. Communication and collaboration	**2.5 Netiquette**	To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments. To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments.
G. Operations management: Ability to coordinate teams, projects, budgets and analyse and take decisions in this regard.	1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content**	To articulate information needs , to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.
	1. Information and data literacy	**1.2 Evaluating data, information and digital content**	To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.
	1. Information and data literacy	**1.3 Managing data, information and digital content**	To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.
	2. Communication and collaboration	**2.1 Interacting through digital technologies**	To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context.
	2. Communication and collaboration	**2.2 Sharing through digital technologies**	To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.
	2. Communication and collaboration	**2.3 Engaging in citizenship through digital technologies**	To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.
	5. Problem solving	**5.1 Solving technical problems**	To identify technical problems when operating devices and using digital environments, and to solve them (from trouble-shooting to solving more complex problems).

H. Business Networking: Ability to build and maintain effective and constructive working relationships, partnerships or networks of contacts with people who are, or might someday be, instrumental in achieving work-related goals. Also known as Business networking/relationship/network Building.	2. Communication and collaboration	**2.3 Engaging in citizenship through digital technologies**	To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.
I. Creativity / Creative Thinking: Ability of discovering new opportunities and solutions for problems by looking beyond current practices and using innovative thinking.	2. Communication and collaboration	**2.4 Collaborating through digital technologies**	To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.
	5. Problem solving	**5.3 Creatively using digital technologies**	To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.
J. Communication: Ability to achieve communicative goals in a socially appropriate manner, adapted to the target audience.	2. Communication and collaboration	**2.2 Sharing through digital technologies**	To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.
	2. Communication and collaboration	**2.4 Collaborating through digital technologies**	To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.
K. Project management: Ability of planning, organizing, and managing resources to bring about the successful completion of a specific project.	1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content**	To articulate information needs , to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.
	1. Information and data literacy	**1.2 Evaluating data, information and digital content**	To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.
	1. Information and data literacy	**1.3 Managing data, information and digital content**	To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.