

#### **T4.3.2 Soft Skills Library - Entrepreneurial Finance**

# ORANGE: CREATIVITY, INNOVATION & TECHNOLOGY PROJECT Erasmus+ Programme 2014-2020 KNOWLEDGE ALLIANCE 2018







#### **SUMMARY TABLE**

WP nº and title	WP4. Innovative toolkit				
Task nº and title	T4.3. Compilation of good practices and creation of new training				
	modules until a total amount of 6 validating the process with				
	different cultural elements, processes or business models.				
Result nº and title	R4.2. TRAINING MODULES				
Full Title of the	T4.3.2 Business skills – Entrepreneurial Finance Course				
document					
Short Description	This document presents the Entrepreneurial Finance course,				
	which is part of Module III. The aim of the course is that the				
	teacher learn the basics of finance for entrepreneurs and transmit				
	this knowledge to their students in the classroom. Following the				
	lessons proposed in this course, the students will have the				
	opportunity to learn entrepreneurial finance through examples.				
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# Module III Business Course III.4 Entrepreneurial Finance

## **Chapter 1. Introduction**

The purpose of the O-City project is to discover and promote the natural and cultural heritage of our cities, and, at the same time, to stimulate the orange economy injecting technical and professional knowledge in natural and cultural promotion of the cities involved. On the one hand, the promotion of the natural and cultural heritage of the cities will be achieved by creating creative multimedia items (photo, video, comic, animation, podcast, ...) of each city and upload them into the O-City World platform. On the other hand, with the aim to develop the creative economy of the cities, different courses have been developed for teachers about the creative multimedia items that will be located into the O-City platform. These courses include resources about how to put into practice the contents with their students. In this way, teachers and students will create new creative multimedia items of their own cities that, after being validated, will be uploaded to the O-City World platform.

Additionally, the development of cultural, soft and business skills is also necessary for new practitioners in the orange economy. For this reason, the O-City training plan consists of the following 4 skill modules:

- 1. Module I. Heritage & Intellectual Property (IP): Basic content related to natural and cultural heritage (definition, classification, importance, etc.) and the protection of intellectual property (definition, categories, methods, etc.)
- 2. Module II. Technical: Basic content needed to develop multimedia elements (photography, video, animation, etc.) on heritage.
- 3. Module III. Business: Basic contents related to business and entrepreneurship skills in the orange economy (creation of business models, digital marketing, etc.)
- 4. Module IV. Soft skills: Contents to stimulate creativity, critical thinking and in general interpersonal skills as a tool to improve professional integration.

This document presents the Entrepreneurial Finance course, which is part of Module III. The aim of the course is that the teacher learn the basics of finance for entrepreneurs and transmit this knowledge to their students in the classroom. Following the lessons proposed in this course, the students will have the opportunity to learn entrepreneurial finance through examples.

The main topics of this course are forms of business organization, starting a new venture, financing a business, measuring performance in a short term, statement of cash flow, financial ratios and learning finance through examples. Finally, the teacher will upload the multimedia produced in his/her classroom to the <u>O-City World platform</u> if they have the required quality.

The course is available in open format in:





https://poliformat.upv.es/portal/site/OCW CUR1157407 2020/tool/99dc0e32-08f3-491e-a425-7d15cb887ad3

This document is structured as follows. Chapter 2 details the learning objectives of the course. Chapter 3 describes the three types of learning materials developed: T2L-Teacher to learn, T2T-Teacher to teach and S2P- Student to practice. Chapter 4 reports the innovative learning methodologies that are used in the proposed course (project based learning and blended learning) and the ones that teachers can decide to use (flip-teaching and gamification). Chapter 5 is dedicated to give the contents of the course, which is divided in three topics, each one consisting of four lessons. For each lesson, all the materials (T2T, T2L and S2P) are linked and recommendations about how to plan the lessons are given. Chapter 6 includes links to some useful tools related to the soft skills learned during the course. Chapter 7 is dedicated to evaluation/assessment: teachers will be evaluated through tests about the materials T2T. Chapter 8 define the pathway to acquire competences by identifying the DIGCOMP (Ferrari, 2013) and ENTRECOMP (Bacigalupo, Kampylis, Punie, & Van den Brande, 2016) framework competencies that the students will work with each one of the proposed activities of digital marketing content course. Finally, in Chapter 9 teachers can find more learning materials from other O-City modules. Teachers can decide which resources are more suitable or useful for their classroom depending of their teaching reality (educational level, subject, ...). In this way, teachers will adapt the learning path of their students focusing in technical, culture, intellectual property, business and/or soft skills.

# **Chapter 2. Learning Objectives**

The general objective of O-City project is to provide a series of virtual tools that allow teachers to be trained in multimedia issues, granting technical as well as artistic knowledge to obtain an audio-visual product that is consistent with the project requirements. The final objective is that teachers transmit all this knowledge in the classroom so that their students generate audio visual products that feed the O-City World platform.

After taking the Entrepreneurial Finance course, the teacher (and his/her students when the course is brought to the classroom) will be able to:

- 1. Understand different forms of Business Organization
- 2. Understand key factors that an entrepreneur need to consider while developing a business model.
- 3. Understand the business life cycle and find out at what stages their business can be
- 4. Make a difference between Debt Financing and Equity Financing
- 5. Understand accounting methods and formulas
- 6. Understand and make a difference between Balance Sheet, Income Statement ,Statement of Cash Flow, Statement of Owners' Equity
- 7. Apply the formulas and Identify Financial Ratios
- 8. Understand importance of Cash and Working Capital





## **Chapter 3. Types of educational materials**

One of the purposes of O-City is that teachers use our training program, not only to learn, but also to incorporate the O-City project into their daily academic activities in the classroom, where their students will create multimedia. In this sense, teachers will choose which contents of the Entrepreneurial Finance course (and other related courses: culture, IP, business and soft skills) are useful for them depending of their previous training; and which contents to take to their classroom, depending on the type of subject or level of their students.

In general, the educational materials developed are classified into three types

**Teacher to learn (T2L)**: contents (videos, ppts, pdfs, ...) to provide teachers with a basic technical knowledge applied to cultural and natural heritage. Teachers will transmit this knowledge to their students (they can use the same contents in the classroom).

**Teacher to teach (T2T)**: contents (videos, ppts, pdfs, ...) and activities prepared for teachers to use in the classroom. These activities are prepared to be directly developed by the teacher in the classroom and they can be adapted to the subject and to the educational level. The T2T activities are the ones recommended to get that students create the multimedia.

**Student to practice (S2P)**: optional extra activities prepared for students to go deep into some topic. Teachers will decide if they propose some S2P activity or not.

# **Chapter 4. Innovative learning methodologies**

This chapter is dedicated to explain the innovative learning methodologies that are or can be used in the Entrepreneurial Finance course when the teacher takes the course to the classroom.

#### **Case Study**

The case study is an interactive method based directly on the pedagogical process. The case study started in 30 years at Harvard Business School. Examples of study are based on real or fictional situations (problems) in practice that need to be solved independently or in a group. In the case study, participants have to deal with a particularly problematic situation. Students put themselves in the role of leader and, with a proposal, try to solve a particular problem. Common to all case studies is that participants give a positive experience that they can use later in practice.

#### **Project Based Learning**

The objective of this course is that students develop a specific project working in teams to develop some of the activities that we propose. Additionally, working in teams through the project encourage collaborative learning: responsible and team autonomous work, increased respect and tolerance, personal growth, improvement of communication skills, internalization of academic





knowledge, greater control of the student in the learning process, teamwork, interest, and motivation, improvement of self-esteem, development of intellectual and professional skills and efficient use of resources.

### Flip-teaching (optional)

Most of the materials prepared for teachers (T2L) can be used by students (T2T). Teachers can propose students to work on these materials at home before the class. In this way, the time in the class can be used to answer queries about the work made at home or to go deeper into the topic. This methodology promotes students' active involvement. Moreover, it offers a chance to focus class time on the higher forms of cognitive work (application, analysis, synthesis, and evaluation). As described by Bloom's revised taxonomy, by engaging students in complex tasks with the support of the teacher and the involvement of the group of peers. Chapter 5 specifies the activities that can be proposed using this methodology. More information about this methodology can be found in (Bergmann & Sams, 2012).

#### **Blended learning**

This course combines online educational materials (such as T2T videos described in Chapter 5) and traditional place-based classroom methods. Face-to-face classroom practices are combined with computer-mediated activities that students are assigned to do at home (some T2L activities described in Chapter 5). This methodology allows students to work on their own with new concepts, while teachers can support individually students who need special or customized attention.

#### **Gamification (optional)**

Teachers can introduce gamification in the course to increase participants' engagement. Students can get points by doing the proposed activities in Chapter 5 (T2L and S2P). The teacher assigns points to each team (or to each student if the teacher considers necessary that some task is done individually) after assessing each activity and makes the ranking visible. At the end of the course, teacher assigns points to each multimedia created and students assign points to the multimedia created by their peers.





# **Chapter 5. Contents of the course**

At the beginning of the course we show a <u>video</u> that introduces main topics, "Forms of Business Organizations", "Starting a New Venture", "Financing a Business", "Measuring performance in short term", "Statement of Cash Flow", "Financial Ratios", "Cash and Working Capital Management" and in order to have a general overview of the course structure.

The table shows the seven topics, each one divided into lessons.

TOPIC	LESSON
T1. Forms of Business Organization	L1. General Forms of Business Organization
T2. Starting a New Venture	L1. Lean Start-up, Online Start-up and Social Venture
T3. Financing a Business	L1. Life Cycle of a Business L2. Sources of Debt Financing and Equity Financing
T4. Measuring performance in a short term	L1. Accounting Methods L2. Financial Statements
T5. Statement of Cash Flow	L1. Cash flow statement L2. Annual report
T6. Financial Ratios	L1. Profitability L2. Efficiency L3. Liquidity and Leverage ratios
T7. Cash and Working Capital	L1. Cash L2. Non-Cash Payment Methods

**The first topic** of this course is focused on forms of business organizations. We will talk about the difference between Sole Proprietorships, Qualified Joint Venture, Partnerships, Corporations and Limited Liability Companies. In this topic course participants will be able to learn all about the forms of different organizations.

The second topic is about starting new venture. We will talk about the key factors that an entrepreneur should consider while developing a business model. Also, it will be explained what Lean start up, online start up and social venture are.





**The third topic** is dedicated to financing a new business. This topic consist of two lessons, and we'll talk more about Life Cycle of a Business, Sources of Debt Financing and Sources of Equity Financing. An entrepreneurs dream or idea cannot be realized without some kind of cash flow into the business, because of that we are going to talk about different sources od financing.

The fourth topic is more dedicated to accounting methods and financial statements. Without accurate accounting, the company would not know where it is financially located, which would most likely result in its collapse. The financial statements provide a brief overview of the financial condition of the corporation. They provide all the information about the company income, expenses, profitability, and debt.

**The fifth topic** is dedicated to Cash Flow. Growth of an business is directly related to the amount of money a particular company currently has. Without money, company cannot grow in other markets, it cannot expand the range of products and services. Cash Flow is the one that shows us where the cash comes from, where it is going and can we growth our business.

**The sixth topic** focuses on financial ratios. Ratios are an important assessment tool that business owners and managers can use to quickly assess an organization's performance.

**The last topic** it's about the Cash and Non-Payment Methods. Cash is the most liquid of all company assets. This is what the company mainly uses to settle debts and acquire goods. By generating enough cash, a company can meet its daily business needs and avoid taking on debt.

In the next sections each topic and its lessons will be described more in detail.





#### **TOPIC 1: "Forms of Business Organization"**

This topic emphasizes the importance of forms of business organizations. The main objectives of the topic are described in a <u>video</u>. Once the topic is completed and approved, learners will be able to apply received knowledge about the different forms of Business Organizations. Let's imagine that you have a perfect business idea but you don't know what is your next step. First, you need to make a decision about the form of your business organization.

When you are making this decision, you need to consider the following factors:

- 1. Organization costs
- 2. Reporting requirements
- 3. Tax consequences
- 4. Influences on succession planning or future sale of the company

Most of these factors are regulated by state laws, but It is always a good idea to consult a lawyer or accountant who will ensure that your business starts on a good basis. In this topic you will learn what kind of forms of business organization exist.

#### Lesson 1 General Forms of Business Organization

Table 2 describes the materials provided to the teacher for each lesson. Each lesson corresponds to one class of the teacher with his/her students. The materials (videos and pills) prepared for the teacher to learn (T2L) can also be used directly in the classroom (teacher to teach – T2T), or a task for the students can be assigned, which consists on watching the videos at home before the class (in green colour in the tables). The latter option is known as flip-teaching, in which the time in class is used to solve doubts and go further into the project. Videos explain the theoretical concepts of a lesson, whereas pills show practical examples of these theoretical concepts to help in the understanding. The objective of this course is that the students, guided for a teacher who has took this course to understand the concept of Entrepreneurial Finance. To achieve this goal activities are following the lessons (T2T- in blue colour) and it is detailed if the students need to work in the classroom or at home. Extra activities (S2P – in salmon colour) are proposed for those teachers who want to go deeper into the topic of the lesson. All the prepared materials (lesson content in pdf, videos, video contents in pdf and activity factsheets in pdf) are linked in the tables. Students should deliver all the proposed activities before the following lesson, when the teacher will solve their doubts (if students do not do/deliver the activity, they won't have doubts). After solving their doubts, students should correct their activities and deliver them again to the teacher.





Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
1 General Forms of	T2L/T2T	Video T1.L1. General Forms of Business Organization (lesson content in pdf, video, video content in pdf)	Explanation of different forms of Business Organization	10′	at home or in the classroom	Present O-city World platform
Business Organization	S2P	Extra activity EA.T1.L1.1. Discover the best examples of different types of business organizations (activity factsheet in pdf)	Each student need to find famous examples of different types of business organzations	1h	at home	Explain Video T1.L1 or solve doubts  Propose the Extra activity EA.T1.L1.1.

Table 2. Materials provided for Lesson 1. General Forms of Business Organization Topic 1. Forms of Business Organization.





#### **TOPIC 2: Starting a New Venture**

An entrepreneur is very often passionate about his product or service and does not have a clear plan on how to turn a product or service into a sustainable business. Although neglecting the financial aspect of the company is fatal, it is important to stay true to the entrepreneurial vision and passion. In this topic, we will talk about the key factors that an entrepreneur should consider while developing a business model. The main objectives of the topic are described in a video.

Basic questions that every entrepreneur should answer at the beginning of each venture include (Book Entrepreneurial Finance Concepts and Cases, 2020):

- 1. Who is the customer?
- 2. What does the customer value?
- 3. How do we make money in this business?
- 4. What allows us to provide value to customers at an affordable price?

While designing your business model you need to consider the following factors:

- The position of the company in the value chain You need to answer the question: Are you
  the creator of products or services or you enabling the delivery of the product or service?
- Business Development How will you attract your customers?
- Sustainability Can your product lead you to a sustainable business?

#### <u>Lesson 1 Lean Start-up, Online Start-up and Social Venture</u>

Tables 3 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1.





Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
1 Lean Start- Up, Online	12L/121	Video T2.L1. Lean Start-Up, Online Start – Up and Social Venture (lesson content in pdf, video, video content in pdf)	Explanation of key factors that an entrepreneur should consider while developing a business model	10′	at home or in the classroom	Explain Video T2.L1 or solve doubts
Start - Up and Social Venture	S2P	Extra activity EA.T2.L1.1. Discover examples of lean start-ups, online start-ups (activity factsheet in pdf)	Each student should find some examples of lean start-up and online start-up	1h	at home	Propose the Extra activity EA.T2.L1.1.

Table 3. Materials provided for Lesson 1. Lean Start-Up, Online Start-Up and Social Venture Topic 2. Starting a New Venture





#### **TOPIC 3: Financing a Business**

Finding money to finance a new business is a huge challenge for almost all entrepreneurs. Some of them use their own savings and borrow from friends, to begin with, but sooner or later businesses will have to obtain funding from external sources. This topic consist of three lessons, and we'll talk more about Life Cycle of a Business, Sources of Debt Financing and Sources of Equity Financing which are the lessons of this topic. The main objectives of the topic are described in a <u>video</u>.

<u>Lesson 1 Life Cycle of a Business</u> <u>Lesson 2 Sources of Debt Financing and Equity Financing</u>

Tables 4 and 5 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1 and 2.





Lesson	Туре	Materials	Description		Where the student work?	What to do in class
1 Life Cycle of a Business	T2L/T2T	Video T3. L1 Life Cycle of a Business (lesson content in pdf, video, video content in pdf)	Explanation of Life Cycle of Business and its significance	10'	at home or in the classroom	Explain Video T3.L1 or solve doubts

Table 4. Materials provided for Lesson 1. Life Cycle of a Business Topic 3. Financing a Business.

Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
2 Sources of Debt Financing and Equity Financing	T2L/T2T	Video T3.L2. Sources of Debt Financing and Equity Financing ( <u>lesson content in pdf</u> , <u>video</u> , <u>video</u> <u>content in pdf</u> )	Explanation of two main sources of financing	10'	at home or in the classroom	Explain Video T3.L2 or solve doubts

Table 5. Materials provided for Lesson 2. Sources of Debt Financing and Equity Financing Topic 3 Financing a Business.





#### **TOPIC 4: Measuring performance in a short term**

Accounting refers to recording and organizing important financial data into categories that provide useful information. Accounting is also a common language of business. (*Book Entrepreneurial Finance Concepts and Cases*, 2020). The main objectives of the topic are described in a video.

Through the next lessons, we will focus on Accounting Methods and Financial Statements. You will lean what is chart of accounts, which accounting methods exist and what formulas we can use, and more about financial statements (Balance Sheet, Income Statement, Statement of Cash Flow and Statement of Owners' Equity).

<u>Lesson 1 Accounting Methods</u> <u>Lesson 2 Finance Statements</u>

Tables 6 and 7 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1, 2, and 3.





Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
1	T2L/T2T	Video T4.L1.Accounting Methods ( <u>lesson content in pdf</u> , <u>video</u> , <u>video content in pdf</u> )	Explanation of the significance of accounting methods	5'	at home or in the classroom	Explain Video T4.L1 or solve doubts
Accounting Methods	S2P	Extra activity EA.T4.L1.1. Calculation of COGS (activity factsheet in pdf)	Each student should calculate COGS for manufacturing business	10′	At home or in the classroom	Propose the Extra activity EA.T4.L1.1.

Table 6. Materials provided for Lesson 1. Accounting Methods Topic 4. Measuring performance in a short term

Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
2 Financial Statements	T2L/T2T	Video T4.L2 Financial Statements ( <u>lesson content in pdf</u> , <u>video</u> , <u>video content in pdf</u> )	Explanation of Financial Statements (Balance Sheet, Income Statement, Statement of Cash Flow and Statement of Owners' Equity)	15'	at home or in the classroom	Explain Video T4.L2 or solve doubts

Table 7. Materials provided for Lesson 2. Financial Statements Topic 4. Measuring performance in a short term





#### **TOPIC 5: Statement of Cash Flow**

This course topic is dedicated to cash flow. The main objectives of the topic are described in a <u>video</u>. The cash flow statement shows where the cash comes from and where it is going. What you and your stakeholders want to see is a positive cash flow that indicates the day-to-day stability of your business. This financial report is an important addition to your income statement and balance sheet. In this topic, you will learn which segments of cash flow exist, what is the annual report and what are the elements of the annual report.

<u>Lesson 1 Cash flow statement</u> <u>Lesson 2 Annual report</u>

Tables 8 and 9 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1, 2, 3 and 4.





Lesson	Туре	Materials	Description		Where the student work?	What to do in class
1 Cash Flow Statement	T2L/T2T	Video T5.L1 Cash Flow Statement (lesson content in pdf, video, video content in pdf)	Explanation of Cash Flow Statement and it's main segments	10'	at home or in the classroom	Explain Video T5.L1 or solve doubts

Table 8. Materials provided for Lesson 1. Cash Flow Statement Topic 5. Statement of Cash Flow

Lesson	Туре	Materials	Description		Where the student work?	What to do in class
2 Annual Report	T2L/T2T	Video T5.L2 Annual Report ( <u>lesson content in pdf</u> , <u>video</u> , <u>video content in pdf</u> )	Explanation of Annual Report and it's elements	5'	at home or in the classroom	Explain Video T5.L2 or solve doubts

Table 9. Materials provided for Lesson 2. Annual Report Topic 5 Statement of Cash Flow.





#### **TOPIC 6: Financial Ratios**

This course topic is dedicated to financial ratios. The main objectives of the topic are described in a <u>video</u>. Financial Ratios are tools that help in summarizing the financial statements and condition of a company or enterprise.

We will learn more about:

- 1. Profitability
- 2. Efficiency
- 3. Liquidity and
- 4. Leverage

The first two categories are often in the focus of an entrepreneur. The last two categories provide information about financial risks facing the firm in the short term (liquidity) and long term (financial leverage). They also provide early warnings about whether the firm is approaching its capacity.

<u>Lesson 1 Profitability</u> <u>Lesson 2 Efficiency</u> <u>Lesson 3 Liquidity and Leverage ratios</u>

Tables 10, 11 and 12 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1, 2, 3, 4 and 5.





Lesson	Туре	Materials	Description		Where the student work?	What to do in class
1 Profitability	T2L/T2T	Video T6.L1 Profitability ( <u>lesson</u> <u>content in pdf</u> , <u>video</u> , <u>video</u> <u>content in pdf</u> )	Explanation of Financial Ratios - Profitability	5'	at home or in the classroom	Explain Video T6.L1 or solve doubts

Table 10. Materials provided for Lesson 1. Profitability Topic 6. Financial Ratios.

Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
2 Efficiency	T2L/T2T	Video T6.L2. Efficiency ( <u>lesson</u> content in pdf, <u>video</u> , <u>video</u> content in pdf)	Explanation od Financial ratios - Efficiency	5'	at home or in the classroom	Explain Video T6.L2 or solve doubts

Table 11. Materials provided for Lesson 2. Efficiency Topic 6. Financial Ratios.

Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
3 Liquidity	T2L/T2T	Video T6.L3. Liquidity and Leverage Ratios ( <u>lesson content</u> <u>in pdf</u> , <u>video</u> , <u>video content in</u> <u>pdf</u> )	Explanation of Financial Ratios – Liquidity and Leverage	5'	at home or in the classroom	Explain Video T6.L3 or solve
and Leverage Ratios	Т2Т	Activity T6.L3.1. Quiz (activity factsheet in pdf, video, video content in pdf)	Short quiz to test the knowledge of the lesson 6 (Financial Ratios).	15′	in the classroom	doubts  Do Activity T6.L3.1 in the classroom.

Table 12. Materials provided for Lesson 3. Liquidity and Leverage Ratios Topic 6. Financial Ratios.





#### **TOPIC 7: Cash and Working Capital**

With this topic we are closing our course. The main objectives of the topic are described in a <u>video</u>. One of the most important principles in financial management is a trade between risk and return as it relates to cash and working capital management. Current assets, also known as gross working capital, include inventories receivables, prepaid expenses, and, of course, cash. Current liabilities are debts that fall due within one year and usually include debts, accrued payroll, accrued taxes, and portions of long-term amortized debt. Cash flow management involves ongoing management assets such as receivables and inventories and current liabilities such as the number of liabilities. In this topic we will learn more about Cash and Non-Payment Methods.

<u>Lesson 1 Cash</u> <u>Lesson 2 Non-Payment Methods</u>

Tables 13 and 14 describe the materials provided to the teacher for each lesson, using the same nomenclature (T2T, T2L, STP) and recommendations to use this topic in the classroom than tables in Topic 1, 2, 3, 4, 5 and 6.





Lesson	Туре	Materials	Description		Where the student work?	What to do in class
1 Cash	T2L/T2T	Video T7.L1. Cash ( <u>lesson</u> content in pdf, <u>video</u> , <u>video</u> content in pdf)	Explanation of different types of cash	10'	at home or in the classroom	Explain Video T7.L1 or solve doubts

Table 13. Materials provided for Lesson 1. Cash Topic 7. Cash and Working Capital

Lesson	Туре	Materials	Description	Student workload	Where the student work?	What to do in class
2	T2L/T2T	Video T7.L2. Non – Payment Methods ( <u>lesson</u> <u>content in pdf</u> , <u>video</u> , <u>video</u> <u>content in pdf</u> )	Explanation of Non-Payment Methods and difference between credit and debit cars	5'	at home or in the classroom	Explain Video T7.L2 or solve doubts
Non- Payment Methods	Т2Т	Activity T7.L2.1. Learning Finance Through an Example (activity factsheet in pdf, video, video content in pdf)	A financial task that will help students to better understand how finances work through a basic example of a lemonade stand	1h	In classroom	Do Activity T7.L2.1 in the classroom. Suggest that students write instructions for each table that they need to fill.

Table 14. Materials provided for Lesson 2. Non – Payment Methods Topic 7.Cash and Working Capital





# **Chapter 6. Useful tools**

This chapter incorporates complementing resources and recommended tools for this course:

- 1. Microsoft Excel
- 2. Google Sheets
- 3. Mint
- 4. Runway

## **Chapter 7. Evaluation**

This chapter is divided into two sections, the evaluation of the teacher and the evaluation of his/her students.

#### Teacher evaluation to obtain the Europass certificate

The Entrepreneurial Finance concept course is available in open format in <a href="https://poliformat.upv.es/portal/site/OCW CUR1157407">https://poliformat.upv.es/portal/site/OCW CUR1157407</a> 2020/tool/99dc0e32-08f3-491e-a425-7d15cb887ad3, so teachers have all the resources to implement the project in their classroom.

If teachers are interested in obtaining a certificate, they need to register for one of the editions of the course offered by CFP UPV (Posgraduate Formation Center of Universitat Politècnica de València <a href="http://www.cfp.upv.es/">http://www.cfp.upv.es/</a>), which will be announced in our <a href="https://www.cfp.upv.es/">web.</a>

Teachers will be evaluated through tests, which ensure that the contents (T2L) have been assimilated correctly. In this way, teachers can demonstrate the correct understanding of the module materials and obtain the Europass certificate.





## Chapter 8. Pathway to acquire competences

In this chapter, the pathway in the Entrepreneurial Finance course to acquire competences is defined. As concluded in WP5, we are working with DIGCOMP (Ferrari, 2013) and ENTRECOMP (Bacigalupo, Kampylis, Punie, & Van den Brande, 2016) competences.

#### **DIGCOMP Competencies**

In this section, we identify the DIGCOMP competencies that students will work with each one of the proposed activities of the Entrepreneurial Finance content course. The proposed activities will help students to develop these competences through 3 proficiency levels: A (foundation), B (intermediate) and C (advanced). The list of indicators for the development of digital competences are included in Tables A.I.1 and A.I.2, and the list of learning outcome descriptors for each competence and level of proficiency (Tables A.I.3-A.II.5). Using the learning output descriptors of the digital competences, the proficiency level that students can develop by doing the proposed activities has been identified. Table 15 details this information for topics 1, 2, 4, 6 and 7 of this course, respectively. For each lesson, activities (T2T) are represented in blue colour and extra activities (S2P) are represented in salmon colour (see the description of the activities in Chapter 5).

#### **ENTRECOMP Competencies**

In this section, we identify the ENTRECOMP competencies that students will work with each one of the proposed activities of the Entrepreneurial Finance course. The proposed activities will help students to develop these competences through 3 proficiency levels: A (foundation), B (intermediate) and C (advanced). These proficiency levels are summarized in Annex II (Table A.II.1). ENTRECOMP does not offer a list of indicators for the development of the entrepreneurial competences, but a detailed list of learning outcome descriptors for each competence and level of proficiency (Tables A.II.2-A.II.16). Using these lists of learning outcome descriptors, the proficiency level that students can develop by doing the proposed activities has been identified. Table 16 details this information for topics 1, 2, 4, 6 and 7 which are the ones in which have T2T and S2P activities, respectively. For each lesson, activities (T2T) are represented in blue colour and extra activities (S2P) are represented in salmon colour (see the description of the activities in Chapter 5.



Lesson 1 Lesson 1 Lesson 3 Lesson 2  EA T1.L1.1 EA T2.L1.1 EA T4.L1.1 T6.L3.1 T7.L2.1  1.1 Browsing, searching and filtering data, information and digital content A A A A							
INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND COLLABORATION  AND COLLABORATION  AND COLLABORATION  INFORMATION AND COLLABORATION  AND COLLABORATION  INFORMATION AND AND AND AND AND AND AND AND AND AN			Topic 1 Lesson 1	•	•	Topic 6 Lesson 3	Topic 7 Lesson 2
INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND DATA LITERACY  INFORMATION AND COLLABORATION  COMMUNICATION AND COLLABORATION  INFORMATION							
INFORMATION AND DATA LITERACY  I.2 Evaluating data, information and digital content  A A A A A A A A A A A A A A A A A A A							
COMMUNICATION AND COLLABORATION AND COLLABORATIO	INFORMATION AND DATA LITERACY			А	А	А	А
COMMUNICATION AND COLLABORATION  2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette 2.6 Managing digital identity 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment 5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies			А		А		
COMMUNICATION AND COLLABORATION  2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette 2.6 Managing digital identity 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment 5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies		2.1 Interacting through digital technologies	Α	Α			
COMMUNICATION AND COLLABORATION  AND COLLABORATION  2.4 Collaborating through digital technologies  2.5 Netiquette 2.6 Managing digital identity  3.1 Developing digital content  3.2 Integrating and re-elaborating digital content  3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices  4.2 Protecting devices  4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies		2.2 Sharing through digital technologies					
COLLABORATION  2.4 Collaborating through digital technologies  2.5 Netiquette 2.6 Managing digital identity  3.1 Developing digital content  3.2 Integrating and re-elaborating digital content  3.3 Copyright and licences 3.4 Programming  4.1 Protecting devices  4.2 Protecting personal data and privacy  4.3 Protecting health and well-being  4.4 Protecting the environment  5.1 Solving technical problems  5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies							
2.6 Managing digital identity  3.1 Developing digital content  3.2 Integrating and re-elaborating digital content  3.3 Copyright and licences 3.4 Programming  4.1 Protecting devices  4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems  5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies		2.4 Collaborating through digital technologies					
2.6 Managing digital identity  3.1 Developing digital content  3.2 Integrating and re-elaborating digital content  3.3 Copyright and licences 3.4 Programming  4.1 Protecting devices  4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems  5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies		2.5 Netiquette					
DIGITAL CONTENT CREATION  3.2 Integrating and re-elaborating digital content  3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices  4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems  5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies							
CREATION  3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  PROBLEM SOLVING  5.3 Creatively using digital technologies		3.1 Developing digital content					
3.3 Copyright and licences 3.4 Programming 4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  FROBLEM SOLVING 5.3 Creatively using digital technologies		3.2 Integrating and re-elaborating digital content					
SAFETY  4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies		3.3 Copyright and licences					
SAFETY  4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies		3.4 Programming					
A.4 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies		4.1 Protecting devices					
4.3 Protecting health and well-being 4.4 Protecting the environment  5.1 Solving technical problems 5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies	CAFETY	4.2 Protecting personal data and privacy					
PROBLEM SOLVING  5.1 Solving technical problems  5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies	SAFETY	4.3 Protecting health and well-being					
PROBLEM SOLVING  5.2 Identifying needs and technological responses  5.3 Creatively using digital technologies		4.4 Protecting the environment					
PROBLEM SOLVING  5.3 Creatively using digital technologies		5.1 Solving technical problems					А
	PROBLEM SOLVING	5.2 Identifying needs and technological responses					
5.4 Identifying digital competence gaps		5.3 Creatively using digital technologies					
		5.4 Identifying digital competence gaps					

Table 15. DIGICOMP competences developed with the activities proposed in Topic 1, 2, 4, 6 and 7.



		Topic 1 Lesson 1	Topic 2 Lesson 1	Topic 4 Lesson 1	Topic 6 Lesson 3	Topic 7 Lesson 2
		EA.T1.L1.1	EA.T3.L1.2	EA.T3.L1.1	T3.L2.1	T3.L2.1
	1.1 Spotting opportunities	A A	LA.13.L1.2	LA.13.L1.1	13.LZ.1	13.LZ.1
	1.2 Creativity	A				
IDEAS AND OPPORTUNITIES	1.3 Vision					
OPPORTUNITIES	1.4 Valuing ideas					
	1.5 Ethical and sustainable thinking			А		A
	2.1 Self- awareness and self- efficacy					
	2.2 Motivation and perseverance		А		А	А
RESOURCES	2.3 Mobilizing resources					
	2.4 Financial and economic literacy			А	А	А
	2.5. Mobilizing others					
	3.1 Taking the initiative	А				
	3.2 Planning and management					
INTO ACTION	3.3 Coping with uncertainty, ambiguity and risk					
	3.4 Working with others					
	3.5. Learning through experience	А	А	А	А	А

Table 16. DIGICOMP competences developed with the activities proposed in Topics 1,2,4,6 and 7.





# Chapter 9. Other training related to Entrepeneurial Finance

In this chapter, teachers can find more learning materials from other O-City modules with activities that can be implemented in the classroom while implementing the multimedia. Teachers will decide which resources to take to their classroom depending of their teaching reality. In this way, teachers will adapt the learning path of their students focusing in technical, culture, intellectual property, business and/or soft skills.

#### **Module I. Heritage & Intellectual Property**

In this section teachers will find learning and teaching resources about basic contents related to heritage and intellectual property. This module is divided into two courses, which can be opened using their link:

- I.1 <u>Heritage</u>
- I.2 <u>Intellectual Property</u>

#### Module III. Business

In this section teachers will find learning and teaching resources about basic contents related to business and entrepreneurship skills. The module is divided into 6 courses, which can be opened using their link:

- III.1 Business models
- III.2 Digital marketing
- III.3 Branding
- III.4 Entrepreneurial finances
- III.5 Testing business ideas
- III.6 Pitch.

#### **Module IV. Soft Skills**

In this section teachers will find learning and teaching resources to stimulate creativity, critical thinking and interpersonal skills as a tool to improve professional integration. These are the three courses of the module, which can be opened using their link:

- IV.1 Interpersonal Skills
- IV.2 <u>Creativity</u>
- IV.3 Critical Thinking





# **Bibliography**

- (CFO) Definition. (2020). <a href="https://www.investopedia.com/terms/c/cash-flow-from-operating-activities.asp">https://www.investopedia.com/terms/c/cash-flow-from-operating-activities.asp</a>
- Annual Report Definition. (2020).
   <a href="https://www.investopedia.com/terms/a/annualreport.asp">https://www.investopedia.com/terms/a/annualreport.asp</a>
- Book Entrepreneurial Finance Concepts and Cases. (2020).
   <a href="https://www.taylorfrancis.com/books/entrepreneurial-finance-miranda-lam-gina-vega/10.4324/9780429325045">https://www.taylorfrancis.com/books/entrepreneurial-finance-miranda-lam-gina-vega/10.4324/9780429325045</a>
- Corporation Definition. (2020, April 24).
   https://www.investopedia.com/terms/c/corporation.asp
- Credit Cards vs Debit Cards. (2021). <a href="https://www.investopedia.com/articles/personal-finance/050214/credit-vs-debit-cards-which-better.asp">https://www.investopedia.com/articles/personal-finance/050214/credit-vs-debit-cards-which-better.asp</a>
- Crowdfunding. (n.d.). Retrieved February 18, 2021, from <a href="https://www.igi-global.com/dictionary/crowdfunding/42454">https://www.igi-global.com/dictionary/crowdfunding/42454</a>
- Finance and Business Strategies for the Serious Entrepreneur. (2008, May).
   https://www.google.com/search?q=Entrepreneurial+Finance%2C+Third+Edition%3A+Finance+and+Business+Strategies+for+the+Serious+Entrepreneur&oq=Entrepreneurial+Finance%2C+Third+Edition%3A+Finance+and+Business+Strategies+for+the+Serious+Entrepreneur&aqs=chrome
- Lean Startup. (2019). <a href="https://www.linneinnovation.com/en/en-blog/79-methods/116-lean-startup.html">https://www.linneinnovation.com/en/en-blog/79-methods/116-lean-startup.html</a>
- Liquidity Ratio Definition. (2021).
   https://www.investopedia.com/terms/l/liquidityratios.asp
- The Art of Startup Finance. (2014).
   <a href="https://www.youtube.com/watch?v=2PU9F4CeKql&list=PLkplm4nc4fy\_ss38UyFUyi6omN">https://www.youtube.com/watch?v=2PU9F4CeKql&list=PLkplm4nc4fy\_ss38UyFUyi6omN</a> nMS7s8h
- Venture Capital. (2020). https://www.businessnewsdaily.com/4252-venture-capital.html





# Annex I. DIGCOMP: framework to develop and understand digital competences

DIGCOMP (Ferrari, 2013) defines a list of 5 competence areas (Dimension 1: Information, communication, content creation, safety and problem solving), each one with several competences as a framework for developing and understanding digital competences in Europe. DIGCOMP provide us with indicators for the development of digital competence, shown in Tables A.I.1 and A.I.2., with three proficiency levels: A (foundation level), B (intermediate level) and C (advanced level). Moreover, DIGCOMP also describes learning outcome descriptors for each competence, which are collected in Tables A.I.3, A.I.4 and A.I.5.



	Getting to A	Moving from A to B	Moving from B to C
Information	<ul> <li>Understanding what a search engine is</li> <li>Finding out how to do searches with simple words</li> <li>Understanding how to save content and information</li> <li>Understanding which information is covered by Copyright</li> <li>Understanding that how to trust online information</li> </ul>	<ul> <li>Finding out about and using effective search methods.</li> <li>Finding out how to judge information and using these strategies.</li> <li>Finding out how to maintain files and content regularly and implementing practices.</li> <li>Understanding terms as copyright, copy left and creative commons.</li> </ul>	<ul> <li>Finding out about and trying a wider range of search techniques and strategies.</li> <li>Finding out about how to cross-check and filter information and using these strategies.</li> <li>Finding out about and trying a wider range of methods and tools to organise information.</li> <li>Understanding about different types of licences and how to apply them.</li> </ul>
Communication	<ul> <li>Finding out about different digital communication channels</li> <li>Understanding how to use a few communication tools</li> <li>Becoming aware of basic principles for communicating through digital means</li> <li>Becoming aware of how to use technologies for cooperating with others</li> </ul>	<ul> <li>Finding out about and trying more ways to communicate with others.</li> <li>Finding out about and regularly using ways to shares files and content with others.</li> <li>Ensuring that cooperative tools are used as regularly as possible and seeing opportunities when needs arise.</li> <li>Finding out about online services</li> <li>Finding out about netiquette</li> </ul>	<ul> <li>Finding out and trying a wide range of communication tools and devices.</li> <li>Finding out about and trying these in the context of their match to needs and purpose.</li> <li>Finding out about a wide range of information sharing devices and tools, and identifying which of these tools and devices best matches different needs and purposes.</li> <li>Becoming engaged in civic online participation</li> <li>Understand cultural differences</li> </ul>
Content- creation	<ul> <li>Finding out about different tools, software and packages to produce content</li> <li>Understanding how to use some simple tools</li> <li>Understanding how to modify content</li> </ul>	<ul> <li>Finding out about and using different ways that ICT can produce content.</li> <li>Become familiar with multimedia tools</li> <li>Understanding how to apply licences to the content one has produced</li> <li>Finding out about tools that support creating new programmes or applications</li> </ul>	<ul> <li>Selecting ways to produce content that are not so familiar and using these in contexts appropriate to needs and purpose.</li> <li>Finding out about and using ways to edit and refine content.</li> <li>Finding out about and using expert ways of combining existing content such as mash-up.</li> <li>Becoming familiar with different types of licences.</li> <li>Learning how to code and programme.</li> </ul>

Table A.I.1. Indicators for the development of digital competence: Information, Communication, Content Creation.



	Getting to A	Moving from A to B	Moving from B to C
Safety	<ul> <li>Finding out simple means of protections (passwords, anti-viruses, avoid sharing information)</li> <li>Understanding how to protect self from addiction or cyber bullying</li> </ul>	<ul> <li>Finding details of the information that should not be shared online, and having opportunities to put this into practice.</li> <li>Finding out about and using a range of tools to protect digital devices.</li> <li>Finding out about the impact of technologies on the environment</li> </ul>	<ul> <li>Finding out about and using a wide range of protection strategies and how these apply to online identities.</li> <li>Knowing how to change online security and privacy settings, and monitoring and adjusting these regularly as needed, checking them against expert practice.</li> <li>Having access to expert sources that detail the different privacy issues, and how to address these in practice.</li> <li>Finding out about the impact of technologies on society</li> </ul>
Problem-solving	<ul> <li>Finding out simple means of protections (passwords, anti-viruses, avoid sharing information)</li> <li>Understanding how to protect self from addiction or cyber bullying</li> </ul>	<ul> <li>Having access to sources or centres that demonstrate digital technologies, and having chance to explore their use according to personal needs.</li> <li>Having access to sources or centres that offer technical advice, and enable the individual to gain personal experience in solving technical problems.</li> <li>Creating own network of experts to recur to for help</li> </ul>	<ul> <li>Having access to a range of expert advice relating to new tools, devices, applications, software and services, to provide opportunities to review these in terms of current or future personal needs and purpose.</li> <li>Having access to expert technical advice that demonstrates how to solve technical problems that arise, and being able to use this in practice.</li> <li>Having access to a means to check personal competence, and being directed to sources to update competence areas that are identified as weak.</li> <li>Finding out about the potential of technologies in the resolution of complex or cognitive problems</li> </ul>

Table A.I.2. Indicators for the development of digital competence: Safety, Problem-solving



	Competence	A-Foundation	B-Intermediate	C-Advanced
	Browsing, searching and filtering information	I can do some online searches through search engines. I know that different search engines can provide different results.	I can browse the internet for information and I can search for information online. I can articulate my information needs and I can select the appropriate information I find.	I can use a wide range of search strategies when searching for information and browsing on the Internet. I can filter and monitor the information I receive. I know whom to follow in
_	Evaluating information	I know that not all online information is reliable.	I can compare different information sources.	online information sharing places (e.g. micro-blogging).  I am critical about the information I find and I can cross-check and assess its validity and credibility.
Information	Storing and retrieving information	I know how to save files and content (e.g. texts, pictures, music, videos, and web pages). I know how to go back to the content I have saved.	I can save, store or tag files, content and information and I have my own storing strategy. I can retrieve and manage the information and content I have saved or stored.	I can apply different methods and tools to organise files, content, and information. I can deploy a set of strategies for retrieving the content I or others have organised and stored.
	Interacting through technologies	I can interact with others using basic features of communication tools, (e.g. mobile phone, VoIP, chat or email).	I can use several digital tools to interact with others using more advanced features of communication tools (e.g. mobile phone, VoIP, chat, email).	I am engaged in the use of a wide range of tools for online communication (emails, chats, SMS, instant messaging, blogs, micro-blogs, SNS). I can adopt digital modes and ways of communication that best fit the purpose. I can tailor the format and ways of communication to my audience. I can manage the different types of communication I receive.
	Sharing information and content	I can share files and content with others through simple technological means (e.g. sending attachments to emails, uploading pictures on the internet, etc.)	I can participate in social networking sites and online communities, where I pass on or share knowledge, content and information.	I can actively share information, content and resources with others through online communities, networks and collaboration platforms.
	Engaging in online citizenship	I know that technology can be used to interact with services and I passively use some (e.g.: online communities, government, hospital or medical centres, bank).	I can actively use some basic features of online services (e.g.: government, hospital or medical centres, bank, eGovernment services, etc).	I am actively participating in online spaces. I know how to get actively engaged in online participation and I can use several different online services.
	Collaborating through digital channels	I can collaborate with others using traditional technologies (e.g. email).	I can create and discuss outputs in collaboration with others using simple digital tools.	I frequently and confidently use several digital collaboration tools and means to collaborate with others in the production and sharing of resources, knowledge and content.
ation	Netiquette	I know basic behaviour norms that apply when communicating with others using digital tools	I know the principles of online etiquette and I am able to apply them in my own context.	I can apply the various aspects of online etiquette to different digital communication spaces and contexts. I have developed strategies to discover inappropriate behaviour.
Communication	Managing digital identity	I am aware of the benefits and risks related to digital identity.	I can shape my online digital identity and keep track of my digital footprint.	I can manage several digital identities according to the context and purpose, I can monitor the information and data I produce through my online interaction, I know how to protect my digital reputation.

Table A.I.3. Learning outcome descriptors for competences in areas Information and Communication.



	Competence	A-Foundation	B-Intermediate	C-Advanced
	Developing content	I can create simple digital content (e.g. text, or tables, or images, or audio, etc.).	I can produce digital content in different formats, including multimedia (e.g. text, tables, images, audio, etc.).	I can produce digital content in different formats, platforms and environments. I can use a variety of digital tools for creating original multimedia outputs.
	Integrating and re- elaborating	I can make basic changes to the content that others have produced.	I can edit, refine and modify the content I or others have produced.	I can mash-up existing items of content to create new ones.
ion	Copyright and licences	I know that some of the content I use can be covered by copyright.	I have basic knowledge of the differences about copyright, copy left and creative commons and I can apply some licences to the content I create.	I know how different types of licences apply to the information and resources I use and create
Content creation	Programming	I can modify some simple function of software and applications (apply basic settings).	I can apply several modifications to software and applications (advanced settings, basic programme modifications).	I can interfere with (open) programmes, modify, change or write source code, I can code and programme in several languages, I understand the systems and functions that are behind programmes.
	Protecting devices	I can use basic steps to protect my devices (for instance: using anti-viruses, passwords, etc.).	I know how to protect my digital devices, I update my security strategies.	I frequently update my security strategies. I can take action when the device is under threat.
	Protecting personal data	I know that I can only share certain types of information about myself or others in online environments.	I can protect my and others online privacy. I have a general understanding of privacy issues and I have basic knowledge of how my data is collected and used.	I often change the default privacy settings of online services to enhance my privacy protection. I have an informed and wide understanding of privacy issues and I know how my data is collected and used.
	Protecting health	I know how to avoid cyber bullying. I know that technology can affect my health, if misused.	I know how to protect myself and others from cyber bullying and I understand the health risks associated with the use of technologies (from ergonomics aspects to addiction to technologies).	I am aware of the correct use of technologies to avoid health problems. I know how to find a good balance between online and off-line worlds.
Safety	Protecting the environment	I take basic measures to save energy.	I understand the positive and negative aspects of the use of technology on the environment.	I have an informed stance on the impact of technologies on everyday life, online consumption, and the environment.

Table A.I.4. Learning outcome descriptors for competences in areas Content Creation and Safety.



	Competence	A-Foundation	B-Intermediate	C-Advanced
	Solving technical problems	I can ask for targeted support and assistance when technologies do not work or when using a new device, programme or application.	I can solve easy problems that arise when technologies do not work.	I can solve a wide-range of problems that arise from the use of technology
solving	Identifying needs and technological responses	I can use some technologies to solve problems, but for limited tasks. I can make decisions when choosing a digital tool for a routine practice.	I understand what technology can do for me and what it cannot. I can solve a non routine tasks by exploring technological possibilities. I can select appropriate tool according to the purpose and I can evaluate the effectiveness of the tool	I can make informed decisions when choosing a tool, device, application, software or service for the task I am not familiar with. I am aware of new technological developments. I understand how new tools work and operate. I can critically evaluate which tool serves my purposes the best.
	Innovating and creatively using technology	I know that technologies and digital tools can be used for creative purposes and I can make some creative use of technologies.	I can use technologies for creative outputs and I can use technologies to solve problems (i.e. visualizing a problem). I collaborate with others in the creation of innovative and creative outputs, but I don't take the initiative.	I can solve conceptual problems taking advantage of technologies and digital tools, I can contribute to the knowledge creation through technological means, I can take part in innovative actions through the use of technologies. I proactively collaborate with others to produce creative and innovative outputs.
Problem so	Identifying digital competence gaps	I have some basic knowledge, but I am aware of my limits when using technologies.	I know how to learn to do something new with technologies.	I frequently update my digital competence needs.

Table A.I.5. Learning outcome descriptors for competences in area Problem Solving.





# Annex II. EntreComp: the entrepreneurship competence framework

EntreComp (Bacigalupo, Kampylis, Punie, & Van den Brande, 2016) defines a list of 3 competence areas (Ideas and opportunities, Resources, Into action), each one with several competence as a framework with learning outcome descriptors to promote the entrepreneurship competence in education and work.

The EntreComp progression model consist of four main levels, Foundation, Intermediate, Advanced and Expert, each one divided into two sub-levels. However, O-City courses will develop only the three first levels, as in DIGCOMP: : A (foundation level), B (intermediate level) and C (advanced level). Table A.II.I shows an overview of the learning outcome descriptors provided by EntreComp, which are detailed in Tables A.II.2 – A.II.16.



	Competence	A-Foundation	B-Intermediate	C-Advanced
ies	Spotting opportunities	Learners can find opportunities to generate value for others.	Learners can recognise opportunities to address needs that have not been met.	Learners can seize and shape opportunities to respond to challenges and create value for others.
and opportunities	Creativity	Learners can develop multiple ideas that create value for others.	Learners can test and refine ideas that create value for others.	Learners can transform ideas into solutions that create value for others.
pppor	Vision	Learners can imagine a desirable future.	Learners can build an inspiring vision that engages others.	Learners can use their vision to guide strategic decision-making.
and c	Valuing ideas	Learners can understand and appreciate the value of ideas.	Learners understand that ideas can have different types of value, which can be used in different ways.	Learners can develop strategies to make the most of the value generated by ideas.
Ideas	Ethical and sustainable thinking	Learners can recognise the impact of their choices and behaviours, both within the community and the environment.	Learners are driven by ethics and sustainability when making decisions.	Learners act to make sure that their ethical and sustainability goals are met.
	Self-awareness and self-efficacy	Learners trust their own ability to generate value for others.	Learners can make the most of their strengths and weaknesses.	Learners can compensate for their weaknesses by teaming up with others and by further developing their strengths.
	Motivation and perseverance	Learners want to follow their passion and create value for others.	Learners are willing to put effort and resources into following their passion and create value for others.	Learners can stay focused on their passion and keep creating value de-spite setbacks.
	Mobilising re- sources	Learners can find and use resources responsibly.	Learners can gather and manage different types of resources to create value for others.	Learners can define strategies to mobilise the resources they need to generate value for others.
Resources	Financial and economic literacy	Learners can draw up the budget for a simple activity.	Learners can find funding options and manage a budget for their value-creating activity.	Learners can make a plan for the financial sustainability of a value-creating activity.
Res	Mobilising others	Learners can communicate their ideas clearly and with enthusiasm.	Learners can persuade, involve and inspire others in value-creating activities.	Learners can inspire others and get them on board for value- creating activities.
	Taking the initiative	Learners are willing to have a go at solving problems that affect their communities.	Learners can initiate value-creating activities.	Learners can look for opportunities to take the initiative to add or create value.
	Planning and management	Learners can define the goals for a simple value- creating activity.	Learners can create an action plan, which identifies the priorities and milestones to achieve their goals.	Learners can refine priorities and plans to adjust to changing circumstances.
	Coping with uncertainty, ambiguity and risk	Learners are not afraid of making mistakes while trying new things.	Learners can evaluate the benefits and risks of alternative options and make choices that reflect their preferences.	Learners can weigh up risks and make decisions despite uncertainty and ambiguity.
action	Working with others	Learners can work in a team to create value.	Learners can work together with a wide range of individuals and groups to create value.	Learners can build a team and networks based on the needs of their value-creating activity.
Into	Learning through experience	Learners can recognise what they have learnt through taking part in value-creating activities.	Learners can reflect and judge their achievements and failures and learn from these.	Learners can improve their abilities to create value by building on their previous experiences and interactions with others.

Table A.II.1. EntreComp overview



Area	Ideas and opportunities		Competence	Spotting o	pportunities	
Hint	Use your imagination and abilities to	Use your imagination and abilities to identify opportunities for creating value.				
Descriptor			_		omic landscape. Identify needs and challenges that andscape to create opportunities to create value.	
		Levels	of proficiency			
	A - Foundation	B - I	ntermediate		C - Advanced	
recognise of community I can find do need solution community to solve.  I can find expression from a solutineeds in model in the land different rolution community is community to solve.	opportunities to help others/ I can apportunities to create value in my and surroundings. Ifferent examples of challenges that ons/ I can recognise challenges in my and surroundings that I can contribute amples of groups who have benefited tion to a given problem/ I can identify y community and surroundings that en met.  e difference between different areas e can be created (for example, at e community, in the environment, or omy or society)/ I can recognise the es the public, private and third sectors egion or country.	I can explain what may value/I can proactive create value, including I can identify opport alternative ways/ I can a challenge, so the address it may become I can recognise the private and third secountry/ I can estably which needs, I want value.  I can tell the differ creating value (for informal networks, market)/ I can identify professional opporture in existing organisativentures.	ely look for opporing out of necessity.  cunities to solve promote the desert alternative oppore apparent.  different roles to ectors play in my polish which user got to tackle through the community of the comm	roblems in scription of portunities the public, region or group, and the creating entexts for nities and tions, the social and value, both	I can describe different analytical approaches to identify entrepreneurial opportunities/I can use my knowledge and understanding of the context to make opportunities to create value.  I can take apart established practices and challenge mainstream thought to create opportunities and look at challenges in different ways/ I can judge the right time to take an opportunity to create value.  I can carry out a needs analysis involving relevant stake-holders/ I can identify challenges related to the contrasting needs and interests of different stakeholders.  I can identify the boundaries of the system that are relevant to my (or my team's) value-creating activity/ I can analyse an existing value- creation activity by looking at it as a whole and identifying opportunities to develop it further.	

Table A.II.2 Learning outcome descriptors for competence Spotting Opportunities (Area Ideas and Opportunities)



Area	Ideas and opportunities	Competence Creativity	
Hint	Develop creative and purposeful idea	ns	
Descriptor		ities to create value, including better solutions to exi	
	with innovative approaches. Combine	e knowledge and resources to achieve valuable effects	5.
		Levels of proficiency	
	A - Foundation	B - Intermediate	C - Advanced
can explorer resources.  I can develor relevant to as part of a value for ot I can approtent to generate I can assemand others services and my needs community.  I can find services and services and services and services and community.	ach open-ended problems (problems ve many solutions) with curiosity/ I can in-ended problems in many ways so as multiple solutions.  able objects that create value for me s/I can improve existing products, diprocesses so that they better meet or those of my peers and the	I can experiment with my skills and competences in situations that are new to me/ I can actively search for new solutions that meet my needs.  I can experiment with different techniques to generate alternative solutions to problems, using available resources in an effective way/ I can test the value of my solutions with end users.  I can take part in group dynamics aimed at defining open-ended problems/ I can reshape open-ended problems to fit my skills.  I can identify the basic functions that a prototype should have to illustrate the value of my idea/I can assemble, test and progressively refine proto-types that simulate the value I want to create.  I can tell the difference between types of innovations (for example, process versus product innovation and social innovation, incremental versus disruptive innovation)/ I can judge if an idea, product or process is innovative or just new to me.	I can actively search for new solutions that improve the value-creating process/ I can combine my understanding of different contexts to transfer knowledge, ideas and solutions across different areas.  I can describe different techniques to test innovative ideas with end users/ I can set up processes to involve stake-holders in finding, developing and testing ideas.  I can describe and explain different approaches to shaping open-ended problems and different problem-solving strategies/ I can help others create value by encouraging experimentation and using creative techniques to approach problems and generate solutions.  I can create (alone or with others) products or services that solve my problems and my needs/I can develop and deliver value in stages, launching with the core features of my (or my team's) idea and progressively adding more.  I can describe how innovations diffuse in society, culture and the market/I can describe different levels of innovation (for example, incremental, breakthrough or transformation-al) and their role in value-creating activities.

Table A.II.3 Learning outcome descriptors for competence Creativity (Area Ideas and Opportunities)





Area	Ideas and op	portunities Compet	ence	Vision
Hint	Work toward	ds your vision of the future		
Descriptor	Imagine the	future. Develop a vision to turn ideas into action. Visuali	se future s	scenarios to help guide effort and action
		Levels of profic	iency	
A - Fou	ndation	B - Intermediate		C – Advanced
future/ I of simple futu where value	e a desirable can develop re scenarios e is created nmunity and s	I can develop (alone or with others) an inspiring vision for the future that involves others/ I can build future scenarios around my value-creating activity.  I can explain what a vision is and what purpose it serves/ I am aware of what is needed to build a vision.  My vision for creating value drives me to make the effort to turn ideas into action/ I can decide what type of vision for creating value I would like to contribute to.	visions vision f I can ex prepare activity process I can id	the my understanding of the context to identify different strategic for creating value/ I can discuss my (or my team's) strategic for creating value.  Explain the role of a vision statement for strategic planning/ I can be a vision statement for my (or my team's) value-creating or that guides internal decision-making throughout the whole is of creating value.  Hentify the changes needed to achieve my vision/ I can promote was for change and transformation that contribute to my vision.

Table A.II.4 Learning outcome descriptors for competence Vision (Area Ideas and Opportunities)

Area	Ideas and opportunities		Competence	Valuing ideas
Hint	Make the most of ideas and oppo	rtunities		
Descriptor	Judge what value is in social, culti	ural and economic terms. F	Recognise the poten	tial an idea has for creating value and identify
		Levels	of proficiency	
	A - Foundation	B - Interme	ediate	C - Advanced
myself and of groups, such value in my I can clarify used and a rights/ I can and circulate can be pr	amples of ideas that have value for others/ I can show how different in as firms and institutions, create community and surroundings. It that other people's ideas can be acted on, while respecting their explain that ideas can be shared and for the benefit of every-one or otected by certain rights, for py-rights or patents.	I can tell the difference cultural and economic which type of value I wan choose the most appropriate.  I can tell the difference licences that can be used protect rights/ can cappropriate licence for sharing and protecting the my ideas.	value/ I can decide t to act on and then riate pathway to do between types of I to share ideas and choose the most r the purpose of	through entrepreneurship, such as social, cultural or economic value/ I can break down a value chain into its different parts and identify how value is added in each part. I can tell the difference between trademarks, registered design rights, patents, geographical indications, trade secrets, confidentiality agreements and copyright licences, including open, public-domain licences such as creative com-mons/ When creating ideas with others, I can outline a

Table A.II.5 Learning outcome descriptors for competence Valuing ideas (Area Ideas and Opportunities)



Area	Ideas and opportunities	Competence	Ethical and sustainable thinking		
Hint	Assess the consequences and impact of ideas, opportunities and actions				
Descriptor	Assess the consequences of ideas that bring value and the effect of entrepreneurial action on the target community, the market, soci the environment. Reflect on how sustainable long-term social, cultural and economic goals are, and the course of action chos responsibly.				
		Levels of proficiency			
	A - Foundation	B - Intermediate	C - Advanced		
honesty, commitmer importance I can list e behaviour recognise e behaviour I society as a I can find ar human actic economic of between the	nise behaviours that show integrity, responsibility, courage and at/I can describe in my own words the of integrity and ethical values.  xamples of environmentally friendly that benefits a community/ I can examples of environmentally friendly by companies that creates value for whole.  Ind list examples of changes caused by on in social, cultural, environmental or contexts/ I can tell the difference impact of a value-creating activity on ommunity and the broader impact on	I can apply ethical thinking to consumpt production processes/ I am driven by hone integrity when taking decisions.  I can identify practices that are not sust and their implications for the environment produce a clear problem statement when with practices that are not sustainable.  I can identify the impact that take opportunities will have on me and my to the target group and on the surrecommunity/ I can identify stakeholders affected by the change brought about by my team's) value-creating activity, it stakeholders who cannot speak up (for efuture generations, climate or nature).  I can tell the difference between account use of re-sources and accounting for the important problems.	supported by ethics and values relating to gender, equality, fairness, social justice and environmental sustainable sustainability/ I can take responsibility for promoting ethical behaviour in my area of influence, (for example, by promoting gender balance highlighting inequalities and any lack of integrity).  I can discuss the impact an organisation has on the environment (and vice versa)/ I can discuss the relationship between society and technical developments, relating to their implications for the environment.  I can analyse the implications of my value-creating activity within the boundaries of the system I am working in/ I can define the purpose of the impact assessment, impact monitoring, and evaluation of		

Table A.II.6 Learning outcome descriptors for competence Ethical and sustainable thinking (Area Ideas and Opportunities)





Area	Resources	Competence Self-awa	reness and self-efficacy		
Hint	Believe in yourself and keep developing				
Descriptor	The state of the s	nd wants in the short, medium and long term Identify on influence the course of events, despite uncertainty,	y and assess your individual and group strengths and setbacks and temporary failures		
		Levels of proficiency			
	A - Foundation	B - Intermediate	C - Advanced		
goals/ I can and goals. I can identif not good at. I believe in successfully, what I inten I can list difunctions/ abilities are	my ability to do what I am asked / I believe in my ability to achieve	I can commit to fulfilling my needs, wants, interests and goals/ I can reflect on my individual and group needs, wants, interests and aspirations in relation to opportunities and future prospects.  I can judge my strengths and weaknesses and those of others in relation to opportunities for creating value/ I am driven by the desire to use my strengths and abilities to make the most of opportunities to create value.  I can judge the control I have over my achievements (compared with any control from outside influences)/ I believe I can influence people and situations for the better.  I can describe my skills and competences relating to career options, including self- employment/ I can use my skills and competences to change my career path, as a result of new opportunities or from necessity.	I can translate my needs, wants, interests and aspirations into goals that help me reach them/ I can help others to reflect on their needs, wants, interests and aspirations and how they can turn these into goals.  I can team up with others to compensate for our weaknesses and add to our strengths/ I can help others identify their strengths and weaknesses.  I believe in my ability to carry out what I have imagined and planned, despite obstacles, limited re-sources and resistance from others/ I believe in my ability to understand and take the good out of experiences that others may label as failures.  I can discuss how a realistic understanding and evaluation of my personal attitudes, skills and knowledge can influence my decision-making, relationships with other people and quality of life/ I can choose professional development opportunities with my team and organisation based on a clear understanding our strengths and weaknesses.		

Table A.II.7 Learning outcome descriptors for competence Self-awareness and self-efficacy (Resources)





Area	Resources	Competence Motivati	on and perseverance		
Hint	Stay focused and don't give up				
Descriptor		on and satisfy your need to achieve. Be prepared to under pressure, adversity, and temporary failure.	be patient and keep trying to achieve your long-term		
		Levels of proficiency			
	A - Foundation	B - Intermediate	C - Advanced		
to somethin am motivat myself and of I see tasks motivated but I can recognized and of I show passion goals/ I an trying to ach I do not give	as challenges to do my best/ I am y challenges. gnise different ways of motivating others to create value. sion and willingness to achieve my n determined and persevere when nieve my (or my team's) goals. The up and I can keep going even when ulties/ I am not afraid of working hard my goals.	I can anticipate the feeling of achieving my goals and this motivates me/ I can regulate my own behaviour to stay driven and achieve the benefits of turning ideas into action.  I can set challenges to motivate myself/ I am willing to put effort in and use resources to overcome challenges and achieve my (or my team's) goals.  I can reflect on the social incentives associated with having a sense of initiative and creating value for myself and others/ I can tell the difference between personal and external factors that motivate me or others when creating value.  I can overcome simple adverse circumstances/ I can judge when it is not worth continuing with an idea.  I can delay achieving my goals in order to gain greater value, thanks to prolonged effort/ I can maintain effort and interest, despite setbacks.	I drive my effort by using my desire for achievement and belief in my ability to achieve/ I can coach others to stay motivated, encouraging them to commit to what they want to achieve.  I can use strategies to stay motivated (for example, set goals, monitor performance and evaluate my progress)/ I can use strategies to keep my team motivated and focused on creating value.  I can persevere in the face of adversities when trying to achieve my goals/ I can devise strategies to overcome standard adverse circumstances.  I can celebrate short-term achievements, in order to stay motivated/ I can inspire others to work hard on their goals by showing passion and a strong sense of owner-ship.		

Table A.II.8 Learning outcome descriptors for competence Motivation and perseverance (Resources)





Area	Resources	Competence Mobilizing	ng resources		
Hint	Get and manage the re-sources you need.				
Descriptor	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 (for example through suitable partnerships, networking, outsourcing and crowd-sourcing).				
		Levels of proficiency			
	A - Foundation	B - Intermediate	C - Advanced		
appreciate with others. I value my p I can descril reuse, repair I can recog example, stime as a scil can look fachieving w sources of h	that resources are not unlimited/I can the importance of sharing resources ossessions and use them responsibly/be how resources last longer through r and recycling.  nise different uses for my time (for udying, playing, resting)/I value my arce resource.  for help when I am having difficulty hat I have decided to do/I can identify help for my value-creating activity (for achers, peers, mentors).	I can experiment with different combinations of resources to turn my ideas into action/ I can get and manage the necessary resources to turn my idea into action.  I can discuss the principles of circular economy and resource efficiency/ I use resources responsibly and efficiently (for example, energy, materials in the supply chain or manufacturing process, public spaces).  I can discuss the need for investing time in different value-creating activities/ I can use my time effectively to achieve my goals.  I can describe the concepts of division of labour and job specialisation/ I can find and list public and private services to support my value-creating activity (for example, incubator, social enter-prise advisors, start-up angels, chamber of commerce).	I can develop a plan for dealing with limited resources when setting up my value-creating activity/ I can get together the necessary resources to develop my value-creating activity.  I take into account the non-material cost of using resources when taking decisions about my value-creating activities/ I can choose and put in place effective resource- management procedures (for example, life-cycle analysis, solid waste).  I can manage my time effectively, using techniques and tools that help make me (or my team) productive/ I can help others manage their time effectively.  I can find digital solutions (for example, free, paid for, or open-source) that can help me manage my value- creating activities efficiently/ I can find support to help me take advantage of an opportunity to create value (for example, advisor or consultancy services, peer or mentor sup-port).		

Table A.II.9 Learning outcome descriptors for competence Mobilizing resources (Resources)





Area	Resources	Competence Financial	and economic literary		
Hint	Develop financial and economic know-how				
Descriptor	_		luate financial decisions over time. Manage financing		
	to make sure my value-creating activ				
		Levels of proficiency			
	A - Foundation	B - Intermediate	C - Advanced		
to money/concepts (f market price) I can judge wup a simple manner. I can ident families, bus the state/I of the economy I can outline how taxatio	l can explain simple economic or example, supply and demand, e, trade).  what to use my money for/ I can draw household budget in a responsible diffy the main types of income for sinesses, non-profit organisations and can describe the main role of banks in y and society.  the purpose of taxation/ I can explain in finances the activities of a country in providing public goods and services.	I can use the concept of opportunity costs and comparative advantage to explain why exchanges happen between individuals, regions and nations/ I can read income statements and balance sheets. I can draw up a budget for a value- creating activity/ I can judge the cash-flow needs of a value-creating activity.  I can explain that value-creating activities can take different forms (a business, a social enter-prise, a non-profit organisation and so on) and can have different structures of ownership (individual company, limited company, co-operative and so on)/ I can identify public and private sources of funding for my value-creating activity (for example, prizes, crowd-funding, and shares).  I can estimate the main accountancy and tax obligations I need to fulfil to meet the tax requirements for my activities.	I can explain the difference between a balance sheet and a profit-and-loss account/ I can build financial indicators (for example, return on investment).  I can apply the financial planning and forecasting concepts that I need to turn ideas into action (for example, profit or not for profit)/ I can judge the cash-flow needs of a complex project.  I can choose the most appropriate sources of funding to start up or expand a value- creating activity/ I can apply for public or private business support programmes, financing schemes, public subsidies or calls for tender.  I can estimate how my financial decisions (investments, buying assets, goods and so on) affect my tax/ I can make financial decisions based on current taxation schemes.		

Table A.II.10 Learning outcome descriptors for competence Financial and economic literary (Resources)





Area	Resources	Competence	Mobilizing others
Hint	Inspire, engage and get others on b	oard	
Descriptor	Inspire and enthuse relevant stake persuasion, negotiation and leader	cholders. Get the support needed to achieve valuable ship.	e outcomes. Demonstrate effective communication,
		Levels of proficiency	
	A - Foundation	B - Intermediate	C - Advanced
involved in or I can persua arguments. I can commu can commu persuasively example post I can procommunicat	usiasm for challenges/ I am actively creating value for others.  de others by providing a number of unicate my ideas clearly to others/ I nicate my team's ideas to others by using different methods (for sters, videos, role-play).  rovide examples of inspiring tion campaigns/ I can discuss how edia can be used to reach audiences ways.	I do not get discouraged by difficulties/ I can lead by example.  I can persuade others by providing evidence for my arguments/I can persuade others by appealing to their emotions.  I can communicate imaginative design solutions/ I can communicate the value of my (or my team's) idea to stakeholders from different backgrounds effectively.  I can use various methods, including social media, to communicate value-creating ideas effectively/ I can use media appropriately, showing that I am aware of my audience and purpose.	I can get endorsement from others to support my value-creating activity/ I can inspire others, despite challenging circumstances.  I can pitch effectively in front of potential investors or donors/ I can overcome resistance from those who will be affected by my or my (team's) vision, innovative approach, and value-creating activity.  I can communicate the vision for my (or my team's) venture in a way that inspires and persuades external groups, such as funders, partner organisations, volunteers, new members and affiliate supporters/ I can produce narratives and scenarios that motivate, inspire and direct people.  I can influence opinions in relation to my value-creating activity, through a planned approach to social media/ I can design effective social- media campaigns to mobilize people in relation to my (or my team's) value-creating activity.

Table A.II.11 Learning outcome descriptors for competence Mobilizing others (Resources)





Area	Into action	Competence	Taking the initiative
Hint	Go for it	•	
Descriptor	Initiate processes that create value. tasks.	Take up challenges. Act and work independently to achieve	goals, stick to intentions and carry out planned
		Levels of proficiency	
	A - Foundation	B - Intermediate	C - Advanced
am comforts activities.  I show some am given/ value-creatil I can have a surrounding	but the tasks I am given responsibly/ able in taking responsibility in shared e independence in carrying out tasks I I can work independently in simple ing activities. go at solving problems that affect my is/ I show initiative in dealing with at affect my community.	individual and group responsibility in value-creating activities.  I can initiate simple value-creating activities/ I am driven by the possibility of being able to initiate value-creating activities independently.	I can delegate responsibility appropriately/ I can encourage others to take responsibility in value-creating activities.  I can initiate value-creating activities alone and with others/ I can help others work independently.  I take action on new ideas and opportunities, which will add value to a new or existing value-creating venture/ I value others taking the initiative in solving problems and creating value.

Table A.II.12 Learning outcome descriptors for competence Taking the initiative (Into action)





Area	Into action	Competence	Planning and management	
Hint	Prioritise, organise and follow	up.		
Descriptor	Set long-, medium- and short-	term goals. Define priorities and action plans. Adapt to	unforeseen changes	
		Levels of proficiency		
	A - Foundation	B - Intermediate	C - Advanced	
value-creati alternative g context.  I can carry creating act of simple to feeling unco I can recall needed in a took part in that are activity. I can recogn made on a task is going I am open t	the order of steps that was simple value-creating activity I I/ I can identify the basic steps needed in a value-creating hise how much progress I have task/ I can monitor whether a	I can describe my goals for the future in line with my strengths, ambitions, interests and achievements/ I can set short-term goals that I can act on.  I can create an action plan which identifies the necessary steps to achieve my goals/ I can allow for the possibility of changes to my plans.  I can develop a business model for my idea/ I can define the key elements that make up the business model necessary to deliver the value I have identified.  I can prioritise the basic steps in a value-creating activity/ I can set my own priorities and act on them.  I can identify different types of data that are necessary for monitoring the progress of a simple value-creating activity/ I can describe different methods for performance and impact monitoring.  I can adapt my plans to achieve my goals in light of changes that are outside my control/ I can adapt my plans to achieve my goals in light of changes that are outside my control/ I can adapt my plans to achieve my goals in light of changes that are outside my control/.	I can define long-term goals arising from the vision for my (or my team's) value-creating activity/I can match short-term, mid-term and long-term goals to the vision for my (or my team's) value-creating activity.  I can summarise the basics of project management/I can apply the basics of project management in managing a value- creating activity.  I can develop a business plan based on the model, describing how to achieve the value identified/I can organise my value-creating activities using planning methods such as business and marketing plans.  I can define the priorities to meet my (or my team's) vision/I can stay focused on the priorities set, despite changing circumstances.  I can describe different methods for performance and impact monitoring/I can define what data is needed to monitor how effective my value-creating activities are and an appropriate way to collect them.  I can embrace change that brings new opportunities for value creation/I can anticipate and include change along the value-creating process.	

Table A.II.13 Learning outcome descriptors for competence Planning and management (Into action)





Area	Into action		Competence	Coping with uncertainty, ambiguity and risk	
Hint	Make decisions dealing with u	incertainty, ambiguity and risk	ζ.		
Descriptor		n the value-creating process, fast-moving situations promp	include structured ways of tly and flexibly.	railable is partial or ambiguous, or when there is a risk of f testing ideas and prototypes from the early stages, to	
			s of proficiency		
	A - Foundation	B - Interm	ediate	C - Advanced	
trying new to achieve t I can ident surrounding	raid of making mistakes while things/ I explore my own ways hings. tify examples of risks in my gs/ I can describe risks related value-creating activity in which	I can discuss the role the reducing uncertainty, amb actively look for, compared sources of information ambiguity, uncertainty, and I can tell the difference be unacceptable risks/ I can benefits of self-employment options, and make checopterences.  I can critically evaluate the idea that creates value, taking of factors/ I can critically evaluate the formal set-up of a value area in which I work.	piguity and risk/ I can and contrast different that help me reduce risks in making decisions. Detween acceptable and weigh up the risks and t with alternative career pices that reflect my risks associated with an ang into account a variety aluate the risks related to	I can find ways of making decisions when the information is incomplete/ I can pull together different viewpoints to take informed decisions when the degree of uncertainty is high.  I can apply the concept of affordable losses to make decisions when creating value/ I can compare value-creating activities based on a risk assessment.  I can demonstrate that I can make decisions by weighing up both the risks and the expected benefits of a value-creating activity/ I can outline a risk management plan for guiding my (or my team's) choices while developing my value-creating activity.	

Table A.II.14 Learning outcome descriptors for competence Coping with uncertainty, ambiguity and risk (Into action)





Area	Into action	Competence	Working with others
Hint	Team up, work together, and networ	·k.	
Descriptor	Work together and cooperate with opositively when necessary.	others to develop ideas and turn them into action	on. Network. Solve conflicts and face up to competition
		Levels of proficiency	
	A - Foundation	B - Intermediate	C - Advanced
and situation can bring to I can show recognise the behaviours and behaviours and behaviours the benefits for achievin I am open to playing diresponsibility working in a I am open to activities/creating act I can expassociation, support (I communities)	o involving others in my value- creating I can contribute to simple value-ivities.  Ilain the meaning and forms of cooperation and peer-to-peer for example, family and other s)/ I am open to establishing new dicooperation with others (individuals	I can combine different contributions to create value/ I can value diversity as a possible source of ideas and opportunities.  I can express my (or my team's) value-creating ideas assertively/ I can face and solve conflicts.  I can listen to other people's ideas for creating value without showing prejudice/ I can listen to my end users.  I can work with a range of individuals and teams/ I share the ownership of value-creating activities with the members of my team.  I can contribute to group decision- making constructively/ I can create a team of people who can work together in a value-creating activity.  I can use the relationships I have to get the support I need to turn ideas into action, including emotional support/ I can establish new relation-ships to get the support I need to turn ideas into action, and support (for example, joining a mentor network).	I can support diversity within my team or organisation. I can compromise where necessary/ I can deal with non-assertive behaviour that hinders my (or my team's) value -creating activities (for example, destructive attitudes, aggressive behaviour and so on)/ I can manage conflicts effectively.  I can describe different techniques for managing relationships with end users/I can put in place strategies to actively listen to my end users and act on their needs-I can build a team based on the individual knowledge, skills and attitudes of each member/I can contribute to creating value by teaming up with distributed communities through digital technologies.  I can use techniques and tools that help people to work together/I can give people the help and support they need to perform at their best within a team.  I can use my network to find the right people to work on my (or my team's) value-creating activity/I proactively make contact with the right people inside and outside my organisation to support my (or my team's) value-creating activity (for example, at conferences or on social media).

Table A.II.15 Learning outcome descriptors for competence Working with others (Into action)





Area	Into action	Competence	Learning through experience
Hint	Learn by doing		
Descriptor			luding peers and mentors. Reflect and learn from both
	success and failure (your own and ot		
		Levels of proficiency	
	A - Foundation	B - Intermediate	C - Advanced
created va temporary achievemen I can provide and compet I can anticip will grow successes ar I can recogn in value- cre experience activities an	e examples that show that my abilities ence have increased with experience/ ate that my abilities and competence with experience, through both nd failures. ise what I have learnt from taking part eating activities/ I can reflect on my in taking part in value-creating d learn from it.	I can reflect on failures (mine and other people's), identify their causes and learn from them/ I can judge if and how I have achieved my goals, so that I can evaluate my performance and learn from it.  I can reflect on the relevance of my learning pathways for my future opportunities and choices/ I am always looking for opportunities to improve my strengths and reduce or compensate for my weaknesses.  I can reflect on my interaction with others (including peers and mentors) and learn from it/ I can filter the feedback provided by others and keep the good from it.	I can reflect on my (or my team's) achievements and temporary failures as things develop so as to learn and improve my ability to create value/ I can help others reflect on their achievements and temporary failures by providing honest and constructive feedback.  I can find and choose opportunities to over-come my (or my team's) weaknesses and to develop my (or my team's) strengths/ I can help others develop their strengths and reduce or compensate for their weaknesses.  I can integrate lifelong learning into my personal development strategy and career progress/ I can help others reflect on their interaction with other people and help them learn from this interaction.

Table A.II.16 Learning outcome descriptors for competence Learning through experience (Into action)





## Annex III. Letter of invitation template to include a city in O-City

Request for permission to incorporate the city of to the digital world O-City.org
Exmo. Mr. Mayor:
D. Jose Marin-Roig Ramon,
Project Manager
O-CITY (Orange: Creativity, Innovation & TechnologY)
Erasmus + (600963-EPP-1-2018-1-ES-EPPKA2-KA)
http://o-city.webs.upv.es

## **EXPOSES**:

That the O-CITY project, funded by the European Commission, within the Erasmus Plus (Knowledge Alliances) program, develops an online application to visualize the natural and cultural heritage of the world's towns and cities. On this platform, cities can represent not only their monuments and natural spaces, but also their culture and traditions through videos, photographs, animations and other multimedia elements produced as educational projects in the classrooms of training centers and institutions.

## **REQUEST:**

**O-CITY** 

That the Polytechnic University of Valencia be authorized to incorporate \_\_\_\_\_ into the O-City.org application, to enhance the city's heritage in the online world, and stimulate digital skills in local training centers.

En the city of	, on		202_,
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**AUTHORISATION** 

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