

# Talentjourney

## WP5

Consolidation:  
Interview with partners

Author: PARK  
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# Table of contents

## Introduction

### 1. Interviews overview

- Dates & location
- Time frame
- Target group
- Objectives
- Relevant WP5 output

### 2. Questionnaire

- Points to note
- PARK introduction
- Partner introduction
- Regional context
- Stakeholders and collaboration
- EU context
- Ending

### 3. Regional aspects

- VET curricula
- Industry (focus on CDS/IoT in Smart Manufacturing)
- Ambition level
- International context

### 4. Expectations for Talentjourney

### 5. Success factors for Talentjourney

# Introduction

This document contains the main insights captured in the interviews with Talentjourney partners for Work Package 5 (WP5). Its overall intent is to provide an objective and straightforward outlook of the uncovered findings, in order to stimulate discussion and help further develop the WP5 deliverables.

The first two sections refer to the preparation for the interviews: an overview showcasing their framework – how, when and why they were conducted; and the questionnaire used to interview the partners.

The other sections are comprised of the consolidation of the interviews, as following:

- General findings, containing relevant points to all regions regarding learners, tutors, the VET education and the industry;
- Regional aspects, containing main aspects that vary per region concerning VET curricula, industry, ambition and international context;
- Expectations for Talentjourney, containing the main aspects partners anticipate from the platform;
- Success factors for Talentjourney, containing aspects mentioned by the partners on what is necessary to drive the project forward and for it to succeed.

Please note that there is a degree of subjectivity to these insights – they are not always based on hard facts, but also on the perception of the interviewees.

This document is work in progress, and will evolve at the pace the WP5 progresses. Although all information captured in the interviews are not outlined in this document, the WP5 deliverables will be created using the full data collected as a foundation – for example, even though specific ambition and challenges expressed by different stakeholders are not fully listed here, they will be used to create personas.

# Interviews overview

## Dates & location:

15<sup>th</sup> and 16<sup>th</sup> April, virtual

## Time frame:

90 minutes per interview

## Target group:

All Talentjourney project partners (VET providers, companies, associations), except Elfi-Tech

- Eleven different organizations
- 3 people per organization
- One interview per organization, not per person.

Partner organization	People
P1 Šolski Center Nova Gorica	Director Miran Saksida
	Headmaster Egon Pipan
	Project leader Talentjourney Adrijana Hodak
P2 Šolski Center Kranj	Director Jože Drenovec
	Headmaster Aljaž Rogelj
	Head of Intercompany Education and Training Centre Nataša Kristan Primšar
P3 Šolski Center Velenje	Director Janko Pogorelčnik
	Headmaster Uroš Sonjak
	Project manager Igor Doler
CPI (Institute of the Republic of Slovenia for Vocational Education and Training)	Director Janez Damjan
	Senior advisor Boris Klancnik
	Senior advisor Bostjan Kosorok

P5 Mahle	Head of product development Electric drives systems Iztok Špacapan
	Head of operation IT Damijan Mihelj
	Head of business division Mechatronics Jadran Gorjan,
	Head of product development Actuators & Auxiliaries division Mechatronics Robert Vodopivec
	Head of production Engineering Electric Actuators & Auxiliaries Matevž Tavčar
	Head of Human Resources Mahle Slovenia Peter Jan
P6 SATAEDU	Director Matti Isokallio
	Principal Anne Laine
	Head of International Affairs Marko Kemppinen
	Project lead Jaakko Niemelä
	Instructor Jari Pentinmäki
P7 SAMK	President, Managing Director Jari Multisilta
	Project manager Janika Tommiska
	Project manager and teacher Peter Virtanen
P8 Talinn Polytechnic School	Director/Development Manager Andres Ojalill
	Headmaster Helen Pärk
	Project manager Ege Meister
P9 Estonian Electronics Industries Association	Managing director Arno Kolk
	R&D Advisor Aivar Usk

P10 ECIPA	Associate partner Andrea Jester
	Project manager Simona Aceto
	Business Innovation Unit Laura Castellan
P11 ISIS Malignani	Spokesman for the Principal Santino Bandiziol
	Supervisor of pedagogical processes Sara Ciganotto
	Coordinator of School-to-Work projects Cecilia Rizzotti

**Objectives:**

The interview has the intent to gather key insights in order to map the regional and EU ecosystems regarding CDS VET Excellence. That means having a clear overview of stakeholders involved, the relationship and interconnection between them, and the different characteristics and processes that happen within these ecosystems. It is a fundamental step to drive WP5 activities, and to envision strategies for the future of the Talentjourney project.

- Map the profile of key stakeholders (represented by our partners) to further understand their perspective in the context of IoT in Smart Manufacturing (e.g.: strengths, challenges, opportunities) and build personas (WP5 deliverable)
- Understand stakeholders current and potential role within their regions and within EU
- Understand current and potential relationships and interconnections between different stakeholders (on a regional and EU level)
- Have an overview of levels of interaction between stakeholders (primary, secondary) to further map the ecosystems (on a regional and EU level)
- Gather key insights about the processes that happen within these different ecosystems
- Gather key insights about regional differences regarding the IoT in Smart Manufacturing sector, as well as regional differences regarding stakeholders and their interactions
- Identify key stakeholders to further interview (e.g.: learners, tutors, companies, fab labs, associations, etc.)

## Relevant WP5 output

Please notice that not all WP5 deliverables are listed below. The ones highlighted in **blue** are the main focus of this interview.

### Personas B2C and B2B

The image shows two persona cards. The first is for Tobias Hagmann, a 35-year-old male with a background in IT and a focus on digital transformation. The second is for Sandra Giesler, a 45-year-old female with a background in marketing and a focus on customer experience. Both cards include details on their roles, skills, and interests.

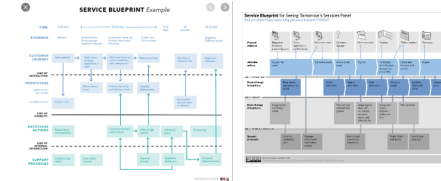
### Ecosystem map



### User journey map



### Service blueprint



# Questionnaire

## Points to note

- This is a semi-structured interview, allowing for flexibility in its format to help gather insights.
- In the interview, the Talentjourney project is differentiated from the Talentjourney platform for vocational excellence. The project refers to the collaboration that is currently taking place to establish the platform.
- There are B2B and B2C stakeholders and relationships. B2B refers to organizations such as VET providers and companies (with individuals who represent the organization), and B2C refers to individuals, such as learners.

## PARK introduction (5 minutes)

Objective: Make sure partner understands the interview objectives and has a clear overview of WP5 deliverables

1. PARK to introduce themselves and to explain:
  - a. WP5 project planning
  - b. WP5 deliverables
  - c. Interview objectives
  - d. Interview structure
  - e. How the information collected is going to be used

## Partner introduction (8 minutes)

Objective: Get an overview of partner organization (supports creation of B2B personas)

2. Please give a brief introduction of yourself and your organization.
3. What are the three main services provided by your organization?
4. What types of jobs and roles are relevant for your organization?
5. Please describe briefly your organization's role and motivation for the Talentjourney project.

## Organization (15 minutes)

Objective: Gather information to start empathizing with the stakeholder and map their profile (supports creation of B2B personas)

6. What does Connectivity Devices and Services/CDS (IOT in smart manufacturing) mean to your organization?



7. What is your organization main objective/goal regarding CDS (IOT in smart manufacturing)?
8. Considering that objective, please answer for your organization the top three:
  - a. Strengths
  - b. Gaps/needs
  - c. Challenges
  - d. Opportunities
9. What would be the main benefit of the Talentjourney platform for your organization?
10. What is the greatest strength and value you would bring to the Talentjourney platform?

**Regional context** (15 minutes)

Objective: Map the region profile (supports creation of regional ecosystem map)

11. How is CDS (IOT in smart manufacturing) relevant to your region?
12. How would you rate the maturity of the CDS (IOT in smart manufacturing) sector within your region? Why? (Please consider scale below)
  - 1) Not well-established: region lacks resources and competencies, and also fails to understand the value
  - 2) In development: region recognizes the value but still lacks resources and competencies
  - 3) Well-established: region has resources and competencies but lacks international visibility and cooperation
  - 4) Role model: Region is a champion for IoT in Smart Manufacturing, having international recognition and cooperation
13. Considering the answer before, what is the current status quo of VET in CDS (IOT in smart manufacturing) in your region?
14. Is your region behind or ahead of the rest of Europe in VET in CDS (IOT in smart manufacturing)? Why?
15. What would you claim to be the main goal/objective for the CDS (IOT in smart manufacturing) sector for your region?
16. Considering your own experience regarding the CDS (IOT in smart manufacturing) sector in your region, please point out the top three:
  - a. Strengths
  - b. Gaps/needs
  - c. Challenges
  - d. Opportunities

### **Stakeholders and collaboration (15 minutes)**

Objective: Understand and map the regional ecosystem (supports creation of regional ecosystem map)

17. You've sent a list with the key stakeholders for your region. With whom does your organization already collaborate?
18. With which stakeholders would you like to collaborate more? Why?
19. From the stakeholder category list, please rank them in order of collaboration (from who you collaborate the most with, to whom you collaborate the least with). Feel free to add any new categories you find important.
  - Learners
  - VET providers
  - Employers
  - Associations of sectors
  - Regional authorities
  - Research centres
  - Chambers
  - Technological parks/incubators
  - Universities of applied sciences
20. Regarding the collaboration, please summarize in a couple of sentences for the top three stakeholders:
  - a. The overall goal/objective
  - b. Their role and your role
  - c. The top three aspects that work well
  - d. The top 3 challenges
21. What do you see as the critical factors to ensure successful collaboration and actionable results?

### **EU context (15 minutes)**

Objective: Understand and map the EU ecosystem (supports creation of EU ecosystem map)

22. What are your organization international strategies? (e.g.: mobility charter)
23. With which other regions/EU level organizations does your organization have strong collaboration/connection with?
24. What role do you play in this collaboration? What about them?
25. Considering your experience when collaborating at an EU level, please point out the top three:
  - a. Strengths
  - b. Gaps/needs
  - c. Challenges

d. Opportunities

26. Considering VET excellence in CDS (IoT in Smart Manufacturing), what do you see as main the potential of your region for the EU?

**Ending** (8 minutes)

Objective: Identify stakeholders to further interview and finalize interview.

27. Are there any learners and tutors in your organization we can connect with to interview?

28. From the stakeholders (organizations) you collaborate with, are there any important ones you would recommend us to interview?

29. Is there anything you would like to add to this interview?

30. PARK to briefly recap:

a. How the information collected is going to be used

b. What will be done with the interview input, as well as the expected involvement of the partner with WP5 in the future

# General findings

The general findings are divided in four different topics: learners, tutors, VET education and industry. These insights are relevant to the context of all regions, and therefore should be fully considered during the development of the WP5 activities. Although divided in four different topics, they are all interconnected, highly influencing each other.

Please note that interviews with companies, learners and tutors will be conducted in the near future, possibly evolving and adding up to the learnings listed below.

## Learners

Although there are different types of learners, all regions showcased similar challenges and points of view regarding young learners (around age 15-19), who are for the first time undertaking a program in VET (in an area related to CDS/IoT in Smart Manufacturing).

- A considerate amount of time and effort is needed to establish a solid foundation in areas such as electronics, mechanics, automation, etc. This can sometimes be too hard on young learners, therefore, they need constantly to be motivated – otherwise it can be easier for them to give up.
- Young learners want to move from a passive role to an active one, making more decisions on their own education. As they already learn a lot by themselves (e.g.: searching the web, watching videos, etc.), they would also like to teach and have co-ownership of the educational process and content.
- It can take time for a young learner to fully grasp the future potential and opportunities related to technology and automation, which can make it less attractive to them. On a first sight, other immediate careers seem more appealing, such as becoming an influencer on social media. Purpose is key to help learners look further into the future.

## Tutors

All VET providers recognised the importance to have qualified tutors with a connection to the industry. Having a strong alumni network can support VET providers with connecting to companies and recruiting tutors.

- The tutor plays a very important role – they are the ones who can motivate and influence the students on a daily basis for their future career. They are also the first contact of students with the industry, as many of them often are also professionals in companies or have an extensive network.
- Although there are varying degrees of need depending on the school and region, the general high demand of workforce in the industry (with attractive opportunities and financial compensation) directly affects the supply of tutors for school - it can be hard to find and retain them, especially to work full-time. Many schools rely on their alumni network to attract them.
- There is great potential for the role of the tutor in the future, going beyond teaching content in the classroom. One example is providing career counseling to learners.

#### **VET education**

VET providers in the four approached regions face some common challenges. The implementation of CDS/IoT in Smart Manufacturing in the curricula and the overall low perception of VET education are some of them.

- Although embedded in some courses and subjects, CDS/IoT is in most cases not enough connected in the VET system. Schools still haven't matured a structured plan/overview for it. Students lack an understanding of the bigger picture of the industry and its applications. This gap is also one of the biggest industry needs: professionals who have a holistic view of CDS and automation.
- Vocational education can be sometimes perceived as 'least prestigious', with dedicated students being expected to enroll 'gymnasias' and then pursue university. This push can come from different directions (from parents or even society in general, for example).
- It can be a challenge for schools to manage their human resources in order to balance between teaching activities and research/projects. This directly affects their prospective for collaborations and growth, as many workstreams can end up becoming underserved.
- Having diversity of stakeholders in a region and strong collaboration between them reflects directly on the opportunities and quality of education provided; and subsequently, on the workforce and on the

development of the region and industry. For example, while VET education focus more on the end-use of CDS devices/IoT in Smart Manufacturing, universities and higher institutions have a stronger focus on research and development. Another example is how collaboration with technological parks can help improve learners' entrepreneurial skills. However, most VET providers interviewed face the challenge of having to look for collaboration with these stakeholders on a national or international level – not all of them are based in their local region.

## Industry

Standardisation and the demand for well-rounded professionals (with a perspective of the bigger picture for CDS/IoT in Smart Manufacturing) are some of the needs of companies.

- The automation industry lacks strong standardisation. Although there is a lot already being done by institutions (such as IPC), they still lack a plug-and-play system. Different devices and machines operate in different languages, making it difficult to oversee the entire chain and to communicate with different suppliers/stakeholders.
- Due to the fact that to fully automate a production line one needs a holistic view of different fields of knowledge (such as mechanics of the machine, control of the electronics, informatics data, etc.) it is a challenge for a company to find a well-rounded professional (also considering how the VET education is still segmented).
- Different industries and organizations are at different stages in CDS/IoT for Smart Manufacturing – some of them only use/apply these technologies, while others also develop them. Developing these technologies helps organizations to advance the knowledge in their region and increases their influence on a global level, exporting more of their services (e.g.: IT solutions). They become strategic stakeholders, more able to decide the future of the industry.
- Micro and small enterprises that need to integrate digitalization/automation have concerns regarding high investment costs in machinery and infrastructure, especially considering their lack of knowledge in the area. At the same time, these small organizations often perceive training as secondary, not giving it enough importance as their regular business activities.

# Regional aspects

Relevant aspects that concern only an specific region were identified and divided into four different categories. Due to the fact that more stakeholders from some specific regions were interviewed, there was a considerable discrepancy on the level of information received from each one of them.

## VET curricula

Each region/country has their own mechanisms for schools to adapt their curricula to industry needs and to innovate, with varying degrees of freedom.

- Slovenia: 80% of the curricula is tied to the national base, while the other 20% is open curricula. In the open curricula each school can provide the needs of the local industry according to their own wishes. Although it takes around 5 years (depending on the urgency and the needs) for the national base curricula to be reviewed, schools are allowed to review their open curricula more often.
- Estonia: through strong collaboration with IPC (an association connecting and supporting electronics industries), VET providers can use their resources to offer trainings and certifications to the industry. This helps them respond to industry needs in their standard VET education.
- Finland: the Finnish educational policy is characterised by the decentralisation in decision-making. Although VET providers need to follow a national core curricula, they have considerable freedom to focus education and training according to local and regional needs.
- Northeast Italy: the Italian educational system is strongly regulated, and bureaucracy can impose a challenge to them. The restrictions and obstacles can hinder Italian schools to become more modern (e.g.: desks arrangement in classrooms have to comply with rules; external activities need several authorisations; etc.). However, there is a strong desire to innovate, which seems to be carried out easier in the entrepreneurial environment.

**Industry (focus on CDS/IoT in Smart Manufacturing)**

Although there are similarities regarding challenges and needs concerning CDS/IoT in Smart Manufacturing, each region has their own history, focus and maturity level.

- Slovenia: the Slovenian industry is rapidly developing, although a considerable part of it is composed of suppliers for other EU industries, such as the German automotive industry. However, the country is also trying to take the lead with their own organizations, large (e.g.: Gorenje, Adria Mobil) and SMEs (there are a lot of small entrepreneurs who try to find a niche in the market). The development of CDS/IoT in Smart Manufacturing in Slovenia is mostly led by large companies or small local producers, highly specialized and advanced.
- Estonia: Estonia is an industrialised country highly dependent on export. Their stakeholders in industries such as IT, industrial engineering, and electronics are very well-connected, and trying to move towards an alignment with IPC standards. Estonia can be characterised by having strong industrial IT solutions offerings; small specialised companies using AI and automation; and a very advanced forestry industry with modern machinery.
- Finland: Finland companies in the region of Satakunta operate in subcontracting chains and in the international market. Internationalisation is a priority for the country, and they focus on developing strong international connections (with countries such as China, for example). Although they are relevant players in the industry, they could still have more international recognition.
- Northeast Italy: Italy has a diverse industry. The region of Veneto is very industrialised and known to be highly entrepreneurial, with big organisations and also several micro and SMEs, either operating on a more traditional industry (focusing on “made in Italy” products) or on a highly innovative one (start-ups). Taking into consideration the local culture and needs, the industry is putting efforts in undertaking digital transformation and implementing automation where possible.

#### **Ambition level**

Although the points below were some of the ambitions mentioned by interviewees, they cannot be considered hard facts, but rather one of many perspectives regarding the potential direction for each region.



- Slovenia: Slovenian interviewees all mentioned the overall ambition to consolidate their industry development, moving from supplier to OEM. Regions and their respective authorities/governments have also expressed the ambition to establish smart 'greener' cities.
- Estonia: Although it is already happening in some areas (such as IT), Estonian interviewees recognised the need to progressively transition from IoT user to IoT developer, becoming then an international reference point for the industry.
- Finland: more international visibility and recognition and the progressive integration of IoT with sustainability, social issues and healthcare to attend national objectives were some of the ambitions expressed for Finland.
- Northeast Italy: Some of the ambitions expressed for Northeast Italy concerns more international collaboration and develop the industry through digital transformation, supporting the transition of traditional, well-established organisations; and the establishment of new ones.

#### **International context**

There were many aspects mentioned regarding internationalisation, mobility, collaboration and economy. Each region raised different topics that together, helped understand a bit better their international context.

- Slovenia: Slovenia attracts some international talent in smart manufacturing, with some international companies and engineers. Along the Italian border, as well as in other areas, there is expressive foreign investment. The current ministry of industry and business seems very open to internationalization - 1.6% of foreign companies that are incorporated in their business system provide 25% of GDP. It is important to note that usually in more remote regions, human resources can comprise a challenge, with local workforce moving to Ljubljana and abroad due to economic reasons.
- Estonia: about 75% of Estonian export is related to the industrial sector, and a quarter of that is related to the electronics industry; as the local market is small, Estonia is highly dependent on export. Because workforce is progressively becoming expensive, the country cannot compete on cost; therefore it needs to compete on quality and technology offerings.

- Finland: beyond international cooperation on an industry level, Finland has strong international cooperation for mobility and research. Besides that, around 10% of international students in the VET system are people who first come to the country to learn the language and then decide to stay further and fully establish themselves there.
- Northeast Italy: Northeast Italy has different cooperation projects for digital transformation/innovation hubs on an EU level, with the intent to improve and strengthen their EU-wide ecosystem, and influence smart specialization strategies considering market needs. They have collaborations on the fields of digital transformation, sustainable tools, energy efficiency (smart building). Internationalization and mobility still has space to grow in VET.

# Expectations for Talentjourney

The aspects below were the most mentioned by partners on what they anticipate the platform to deliver:

- Help the education system to become more learner-oriented by bringing different approaches for digital transformation in education
- Create an ecosystem that connects VET providers with experts to exchange knowledge and experience; as well as to further advance the knowledge within CDS/loT in Smart Manufacturing.
- Provide direction for different stakeholders on how to develop and in which areas to develop; and ensure they are all aligned and connected, on a regional and international level.
- Support and further develop education to better follow the trends and the requirements of the labour market; and have a good overview on skill, competence and knowledge gaps and industry needs in Europe, supporting research in the area
- Support the creation of a school environment that actively includes their partners (.e.g.: companies, technological parks, research labs) and connects them to their students; so they can apply their knowledge; discover their talent; and develop in different directions.
- Create an open and engaging virtual platform to make knowledge in the field more accessible, autonomous and collaborative – not only for learners, but also for partners.
- Increase interest in the area in order to recruit new students and workforce; as well as promote schools to help them get more funding for labs and initiatives regarding CDS/loT in Smart Manufacturing and digitalization
- Align different stakeholders (companies, learners, tutors, etc.) to address real and tangible problems in regions/EU while fully considering the economical perspective.

- Increase mobility between teachers, students, companies and labs, improving regional and international collaboration.
- Increase general awareness on CDS/IoT in Smart Manufacturing, new technologies, user-centered learning and innovation to encourage learners, families, institutions, authorities and society to become more open for new programs, to look into new areas of education, and to promote new professions among young people.

# Success factors for Talentjourney

According to partners, the aspects below are crucial to drive the Talentjourney project forward, and also to help the platform succeed during and after implementation.

- Clearly defined roles and goals for each partner involved, with measurable and concrete targets
- Reliability and commitment from all partners
- Have a medium and long-term planning
- Adjust to the platforms, systems, standards and criteria that are already being used by the industry
- Have a good flow of information, sharing knowledge and relevant data on the field
- Have effective articulation of the needs, expectations and priorities of each partner/stakeholder
- Ensure the human connection behind the collaboration
- Have policies for allocating resources
- Stay attentive to changes in the economy