## Next steps

The Aveiro Labour Observatory launches in April the prospective report on competences and the future of work in the context of digital transformation. The prospective research aims to provide a coherent description of the future scenario, allowing a vision from the current situation to the future situation.

The prospective study on the future of the work of the Observatory focuses, in a first stage, on the ITCE (Information, Communication and Electronic Technology) and industry sectors and aims to provide a clear overview of the current labour market situation, its challenges and opportunities, in particular with regard to the need for the competences that will be most relevant in the future of a labour market arising from digital transformation.

This publication is intended, in particular, for education and training entities, as well as, for businesses in general and for all citizens who wish to increase their qualifications in line with the technological trends expected in the near future.

Questionnaires for enterprises will also be released in May, in order to be one more mechanism for listening to the business fabric of Aveiro. the questionnaires will be made available online and will be launched in May.

The prospective report and the questionnaire belong to the set of actions that aims to identify the priorities and qualification needs of Aveiro, more specifically identifying the competences for digital transformation required by the regional labour market. The Aveiro Labour Observatory has been conducting a series of research and information gathering activities in close collaboration with local actors and the most representative companies of the region in the ITCE, Industry and Tourism and Services sectors, considered as the great engine of the regional economic fabric.
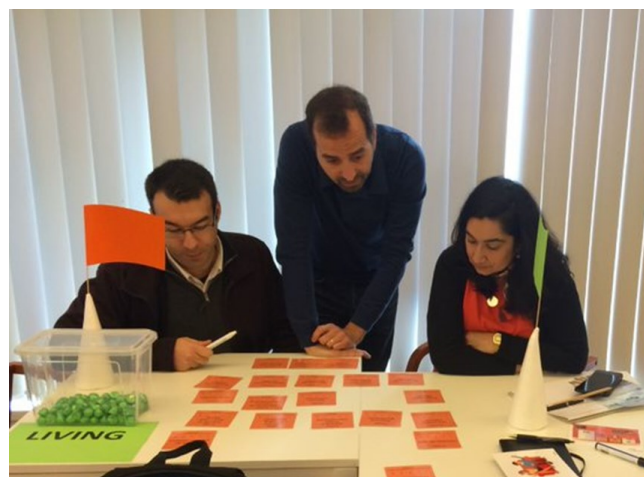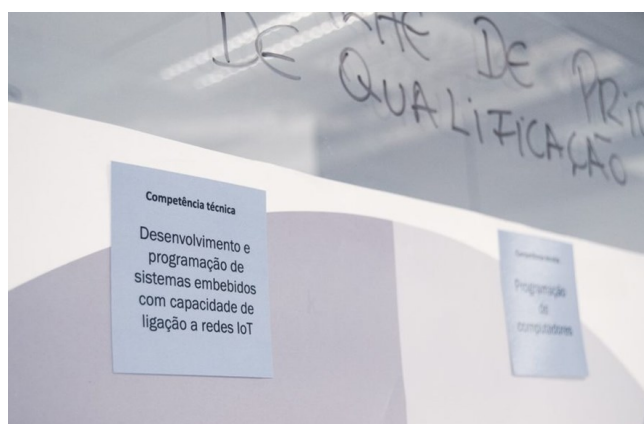
Measuring Competence for the Digital Future in the ITCE Sector in Aveiro

The Digital transformation is not just about implementing new technologies. Digital tools are one of the edges of this transformation that must be accompanied by a digital mentality of the people who use these technologies on a daily basis. When we talk about digital competences, we mean the ability to use technological knowledge and competences to optimize processes and make them increasingly efficient.

In order for technological changes to be successfully implemented in a region, socially responsible restructuring is necessary. Recycling of workers, competences and continuing professional education are some of the most important aspects of this restructuring. Limitations in competences may negatively affect labour productivity and hamper the ability to innovate and adopt technological innovations. In addition, lack of appropriate competences may also limit the prospects for employability and access to quality jobs.

In this sense, the Labour Observatory has an important role in the restructuring of the labour market in the Aveiro region. Through interviews, questionnaires and workshops, together with companies and local actors, makes the diagnosis with the identification and prioritization of qualification needs, hinders the users' experience and limits the market potential for digital businesses.

The planned activities include listening to different business sectors, including TICE (Information, Communication and Electronic Technology), Industry and Tourism, for which there may be different priorities for qualification to be developed in the context of the project.

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The technical competences pointed out as more needed for the sustainability of the digital transformation of the ITCE sector, in the Aveiro region, were: Computer programming, Development of automated learning algorithms, Statistics for big data and data mining, Software testing and development and programming of embedded systems with IoT.

The results for the region are in line with global trends, where the role of data collection and data processing is increasingly relevant. In order to obtain increasingly assertive data for the company, in addition to investment in data analysis, it is necessary to find machine learning and AI (artificial intelligence) solutions. Thus, the existence of complex data at the service of companies requires that they be analyzed in a fraction of the time that a human being would need, for which machine learning and AI algorithms are presented as extremely efficient.

Figure 1 - Most needed technical competences ITCE sector
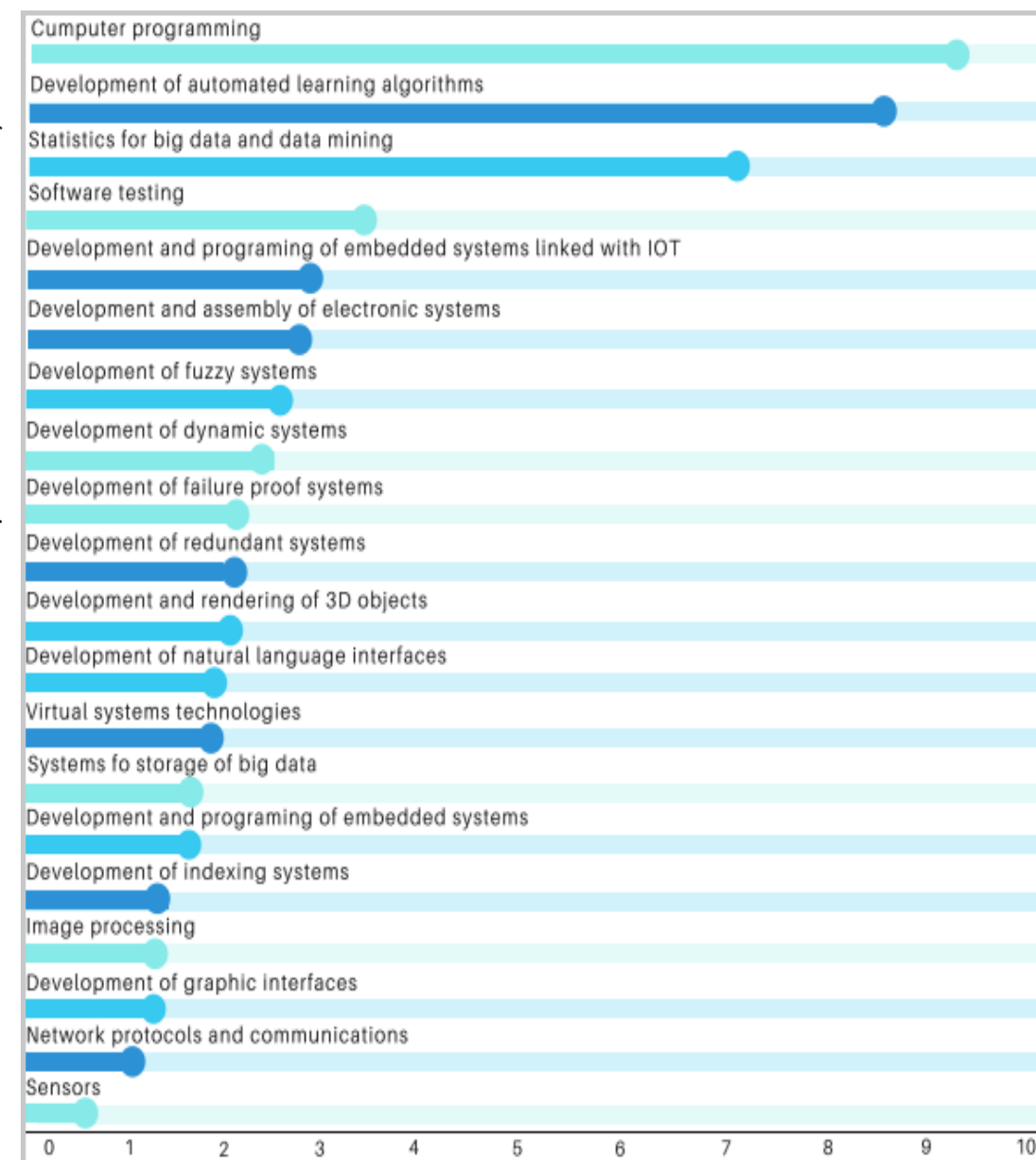
Transversal competences as a differential for a good professional

Transversal competences, also known as soft skills, are personal attributes that help professionals to deal with the situations present in their daily lives and to improve their interactions with the rest of their team. These competences play a key role in the good performance of any profession, and gain particular importance in the context of digital transformation. With the digitalization of the labour market we perceive a scenario where professionals act and will act increasingly in strategic and management positions and where manual work will be increasingly attributed to machines.

In this new scenario, collaborative and multidisciplinary work becomes of decisive relevance for the adoption of new technologies and processes and, thus, to transform the business and cause a rupture with traditional models. The valorization of transversal competences adding to the technical competences gains prominence, companies are increasingly seeking active professionals who pursue to develop their transversal competences.

The work of the observatory in prioritising competences for the digital future also includes the benchmarking of transversal skills needs. Along with the process of identifying and prioritizing technical competences, companies and local actors were invited to give their vision on the needs of transversal skills for the sustainability of the digital transformation of the Aveiro region.

The results (figure 2) showed which are the transversal competences pointed out as most needed, according to the ITCE sector. Autonomous learning received great prominence showing that digital transformation requires professionals capable of acting with independence and self-confidence. In addition, the professional who reveals autonomous learning must also show himself/herself to accept criticism and suggestions and have great decision capacity. Other transversal competences highlighted were: team work, communication, adaptability and time management. Showing once again the need of a professional capable of adapting, working and managing his activities in face of a scenario with rapid changes and great demand.


Figure 2 - Transversal competences considered most needed, ICT sector
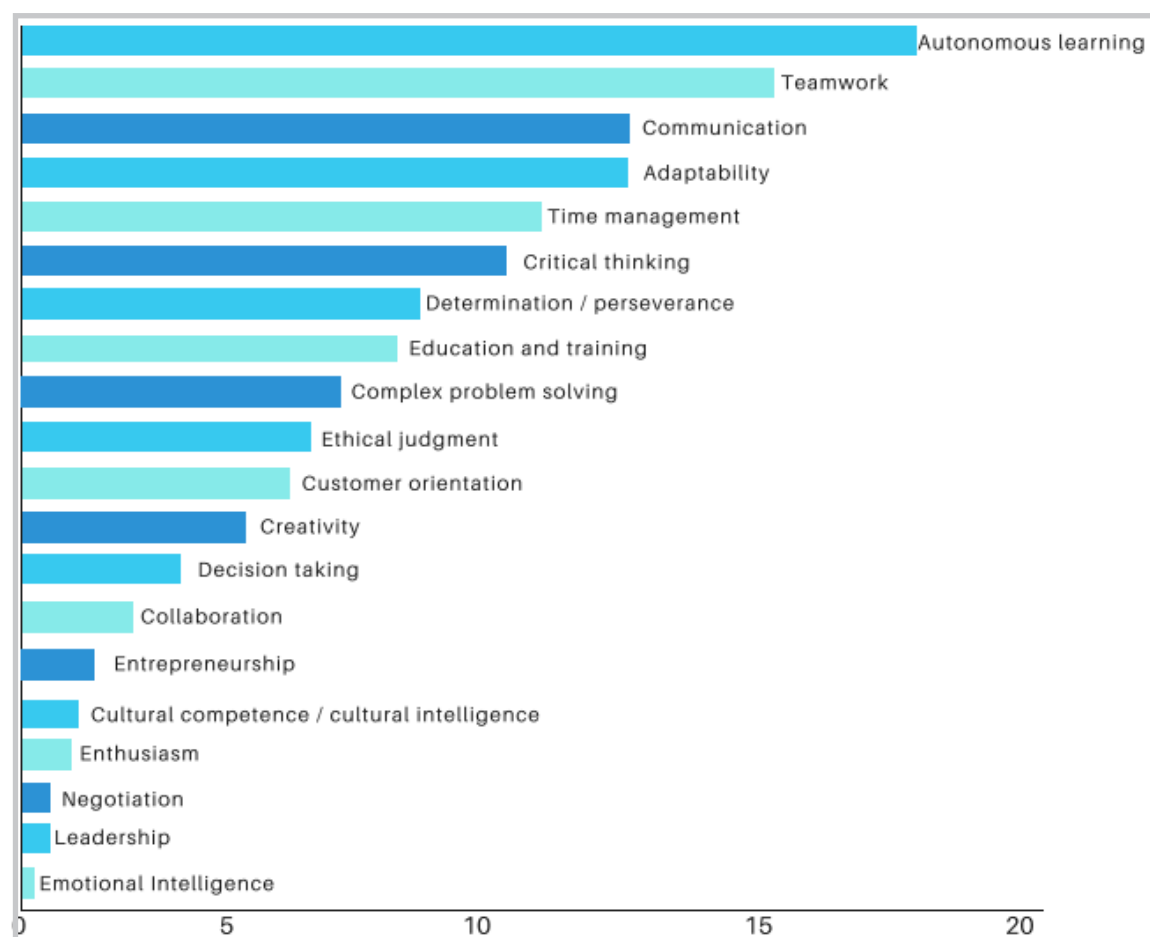
Did you know...?

The European Skills Index (ESI) is Cedefop's composite indicator measures the performance of EU skills systems. This indicator quantifies countries' "distance to the ideal" performance. This ideal performance is chosen as the highest achieved by any country over a period of 7 years. Ideal performance is scaled to 100 and for all countries it is calculated and comparisons are made. The ESI consists of three pillars, each of which measures a different aspect of a competence system. The first pillar is competence development - it represents the education and qualification activities of the country as well as the immediate outcomes of that system in terms of competences developed and achieved. The second pillar is the activation of competencies. This part of the indicator includes indicators of the transition from education to labour market, together with labour market activity rates in different population groups, to identify those with a higher or lower representation in the labour market. Finally, the skills adequacy factor - represents the degree at which skills are successfully used, i.e. the extent to which skills are effectively matched by the labour market. The basis of the ESI are 15 individual indicators of various internationally measured data sets. Scores are calculated between countries at the indicator level. The scores are then averaged across the various tiers and finally the Index score is determined. Portugal, in 2020, obtained 53% of the ideal performance index. It should be noted that there is a 47% margin for improvement. In the index in a whole, in the 2020 edition, Portugal ranks 23rd among the 28 EU countries (the United Kingdom was still included in this calculation).

Figure 3 - European Skills Index
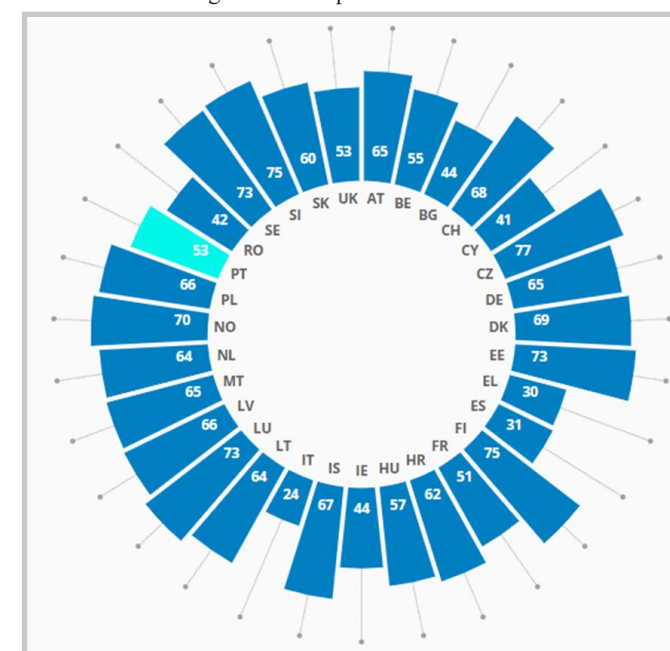
Source: Cedefop

To learn more about the Aveiro Labour Observatory: http://observatoriodoemprego.web.ua.pt/

To learn more about the Urban Innovative Actions: https://www.uia-initiative.eu/en/uia-cities/aveiro

To learn more about the project: https://www.aveirotechcity.pt/pt/atividades/observatorio-do-emprego

Would you like to receive more information? Register and receive the newsletters: observatoriodoemprego@ua.pt