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LEARNING, WORKING AND COMPETING IN THE HORIZON OF THE 4TH INDUSTRIAL REVOLUTION
Social dialogue on the emergence of the fourth industrial revolution:
Education, Employment and Youth
30 - 31 March | Lisbon
Futurália – Lisbon International Trade Fair

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The Context :

According to the International Labor Organization (ILO), Social Dialogue is the term which describes the participation of employees, employers and governments in employment decisions and labor laws. Its scope is based on every type of negotiation, consultation and share of information between these groups' representatives with mutual interests regarding social politics, social economy and employment.

The Social Dialogue is a way to achieve the social and economic progress and a goal itself, since it can be a channel for the peoples' opinion, allowing them to actively participate in the society and in their workplaces.

The social dialogue as an instrument for progress and development is particularly important and opportune nowadays, given the recent changes in the global economy with the emergence of a new paradigm associated with the 4th Industrial Revolution and its major implications for technology, economy and for the society, which can profoundly modify the way we learn, work and compete over the next 20 years.

These changes have an undeniable strategic significance for many issues that we are currently facing, particularly in countries of the north and south of the Mediterranean, in economic, social and political scope, on topics such as education and training, employment, youth, competitiveness and cooperation. Social dialogue is extended to other stakeholders and is expected to play a crucial role, not only as "guidelines", but also in strategic areas of cooperation where it can shape policies and actors' behavior which is related to new paradigm governance promoting justice, fair labor, sustainable development and social and political stability.

It is understood that the emergence of the 4.0 industry will promote profound changes in economic activities, perhaps unprecedented in recent history, on a global scale.

In the south and north countries of the Mediterranean, the issues about education, employment and youth, will have greater interest and opportunity, because "Learning, working and competing" is changing over time.

In this context, we held an international conference in Lisbon on March 30 and 31 of 2017, as part of an initiative of the AIP Foundation, designated by "Futurália", which aims to reflect about education, employment and youth, mobilizing key players in the social dialogue of the SOLID project countries. It was an excellent opportunity to confront the major actors of social dialogue and other stakeholders about issues that today are crucial in terms of qualifications, employment and youth, in a world increasingly based on a knowledge economy.

Education, Employment and Youth in the Emergence of the 4th Industrial Revolution

Education and learning in respect with upcoming trends is more technology-intensive and student oriented – which means that teachers will have to meet new requirements. These requirements have to be quickly put in place, since the "world of work" is dramatically changing. In a hyper-competitive world with the constant progresses of the "digital economy", how affirming companies are within the competition will require greater flexibility and agility, where business models based on NET are fundamental for the affirmation in global value chains (GVC). Networks and new strategies of cooperation at various levels, especially in a micro level, but also in research, science and technology will be a constant in the business ecosystem.

Digitization of the industry is the key driver for a broader economic transformation including robotics, materials sciences and new production methods known to the industry 4.0. It is also a paradigm shift that will radically transform business and society as we know. This fourth industrial revolution is linking the physical world to the Internet and other data with profound implications for society and the economy. The "Internet of Things" is a central element, providing a comprehensive symbiosis of the Industry with the Services. "Platform 4.0" in Germany and Austria "Industrie4.0 the Future of Industry" in France, "Catapult" in UK, and "Intelligent Industry" in Netherlands are the designation of initiatives associated with the fourth industrial revolution that we have found so far.

It is true that the digitization of the economy and particularly industry 4.0 covers much more than technology. Enterprises must be prepared for radical changes due to a variety of factors: speed, scale and unpredictability of production, and greater fragmentation and reorientation of value chains, new links between research centers, and between large and small companies, new business models, SMEs, new forms of cooperation among all businesses levels (design, production, sales, logistics, maintenance) the need for new skills, as well as new methods of work, and closer links between the company and the consumer. Traditional industries, in particular, are faced by completely new conceptual challenges.

The new paradigm of smart growth has a set of dynamics that must be examined, because it could possibly create new employment opportunities (especially for youth) and businesses with new requirements in terms of qualifications, professional profiles and learning systems

Conference' s Objectives :

✓ Understanding issues regarding digital transformation of the economy under the 4th industrial revolution and facing the challenges on a business, economic, social and political level.

✓ Anticipate proposals and solutions brought by the 4.0 industry in the framework of qualification employment and youth, engaging the different stakeholders.

✓ Mobilize social dialogue actors and stakeholders in strategic areas of cooperation regarding three main themes: education, training, employment and youth.

✓ Analyze transnational cooperation opportunities, in particular in the Euro-Mediterranean framework regarding three main themes: qualification, employment, and youth.

The Methodology:

The March 31 Conference was open to all stakeholders and debated some of the issues and results held during thematic workshops that took place on March 30, around three main subjects approached by the Social dialogue actors: Learning; Working; Cooperating and Competing.

The proposals, conclusions and recommendations resulted from the work developed on the morning of 30th March were systematized by a moderator responsible for each workshop during the afternoon and were presented for debate by some participants during the Conference on the following day.

Stakeholders in the workshops had a dedicated area during the open Conference on March 31 and were called upon to take the floor by the moderator.

In sum, this conference was open to all interested parties adopting an unconventional model. The central themes were prepared beforehand with specialized nuclei of the stakeholders, aiming to promote the adoption of new initiatives and added value proposals by the several panels integrating the international conference.

Simultaneous Portuguese / French / Portuguese, Portuguese / English / Portuguese and Portuguese/ Arabic/ Portuguese translation were available for all international participants during the workshops on 30 March and during the major Conference on 31 March.

Topics discussed:

The issues under discussion during the March 30 workshops were:

Workshop 1 - Learning: Education and training systems

- ✓ How to consider education and training in the context of industry 4.0?

- ✓ How to learn in the face of the density of digital technologies?

- ✓ In what extent can lifelong learning promote the access of young people and adults to the labor market?

- ✓ What will be the qualifications for upcoming professions?

- ✓ How to meet the increasing demands of interdisciplinary of knowledge and methods?

- ✓ What will it change in education and training systems in the face of the demands of this transition?

Participants : Schools, universities and their associative structures, public institutions of training and qualification; Students and Parents Associations; Organizations linked to the European and international students' mobility, etc.

Number of participants: 13

Worskhop 2 - Working: Employment and Organizations

- ✓ What are the characteristics of the new professions associated with Industry 4.0?

- ✓ What will be the changes in organizations' ecosystems?

- ✓ Where will jobs be created and where will they disappear?

- ✓ What can be done to retain talent in the company in the face of the digital transformation of the economy?

- ✓ How to meet the needs of new professional profiles?

- ✓ Can employment be considered only from a national perspective?

- ✓ What should we expect from active labor market policies?

- ✓ How will the social protection systems function in the face of increased demands for flexibility and new working models?

![SOLiD logo - South Med Social Dialogue / fórum futurália 2020 - INDÚSTRIA 4.0 - APRENDER, TRABALHAR E COMPETIR]

- ✓ How can new opportunities for the less qualified, the long-term unemployed, the disabled, the disadvantaged migrants and young people be developed?

- ✓ How can the interests of workers and employers be compatible in this context?

- ✓ What can we hope for and what can the actors of social dialogue do?

Participants : Industrial and Entrepreneurial Associations, Unions, Enterprises, Human Resource Managers, Chambers of Commerce and Industry, Employment Promotion Organizations, Social Solidarity Organizations, Organizations in the Science and Technology World

Number of participants: 21

Workshop 3 - Cooperating and Competing: The importance of transnational cooperation in education and training

- ✓ Which are the possible areas for cooperation in lifelong learning? Who, where and with whom will be able to anticipate shared solutions to the challenges of industry 4.0?

- ✓ How important are the spaces for cooperation between the school / university (knowledge centers), companies, government and community?

- ✓ How important are regional and international cooperation spaces to meet the challenges of industry 4.0?

- ✓ In particular, what can we expect from Euro-Mediterranean cooperation in the framework of industry 4.0?

- ✓ What is the space for public policy intervention?

- ✓ How will the results of the productivity's increase be distributed?

- ✓ How can international mobility and the inclusion of increasing migrant flows be properly addressed?

- ✓ Which are the challenges of retaining talent to cooperate and compete?

- ✓ What can we expect and what can the actors of social dialogue do?

Participants : Universities, technology centers and other knowledge centers, national confederations and associations, trade union structures, enterprises, international cooperation agencies for training and education.

Number of participants: 19

Activity Programme :

Wednesday, 29 March

Morning: Participants' arrival and transfer to the hôtel TRYP Lisboa Oriente

Afternoon: Visit to *Futurália | Youth and Education*, with the President of the Portuguese Republic

20h00: Networking dinner between SOLiD partners and Portuguese Social Dialogue Stakeholders

Thursday, 30 March

09h30: Opening Session

AIP Foundation – Jorge Rocha de Matos

Businessmed – Union of Mediterranean Confederations of Enterprises – Habib Yousfi

ITUC / Arab Trade Union Confederation – Mustapha Tlili

National Youth Council – Hugo Carvalho

International Labor Organization – José Manuel Cordeiro

Secretary of State for Industry – João Vasconcelos

10h15 : Coffee-Break

10h30 : Paralel Workshops

Workshop 1: Learning | Room 5

Workshop 2: Working | Room 2

Workshop 3: Cooperating and Competing | Aud. 2

13h15 : Debate lunch with the Secretary of State for Industrial Strategy

Friday, 31 March

9h30 – 10h30   Learning, Working and Competing : Interrogations and Challenges

Keynote speaker, Calouste Gulbenkian Foundation – Felix Ribeiro

European Deputy – Carlos Zorrinho

CESM – Economic and Social Council of Morocco – Mouncef Kettan

CESE – European Economic and Social Council - Peter Schmidt

Ernst & Young – Miguel Fernandes

10h30   Coffee-Break

10h45 – 13h10 Qualification, Employment and Global Economy : What will change ?

National Laboratory of Energy and Geology – Teresa Ponce de Leão

Institute Pedro Nunes (innovation and knowledge transfer) – Teresa Mendes

Calouste Gulbenkian Foundation (civil society and social economy) – Guilherme D'Oliveira Martins

PARTEX OIL – António Costa e Silva

13h10 – 13h30 Closing Session

AIP Foundation – Carlos Oliveira

Eduardo Marçal Grilo – Past Minister of Education, Member of the Calouste Gulbenkien Foundation, of the Manuel dos Santos Foundation and President of the Direction of the University of Aveiro

Secretary of State for Science, Technology and Higher Education – Fernanda Rollo

Conclusion

A. The "Futurália Forum 2020", promoted by the "SOLID-South Med Social Dialogue" and Futuralia (fair of education, training and educational guidance), held its 10th edition with the theme "**Industry 4.0: learn, work and compete**". It was structured around 3 thematic Workshops (**learning, working, and cooperating and competing**) on the 1st day, and a debate open to the public, on the 2nd day. The methodology was based on the involvement of the different stakeholders, in particular the actors of the tripartite social dialogue (trade unions, employers and government), taking into account their ability to influence public policies on education, training, work and youth, as well as the business community in regard to business strategies and guidelines.

B. In the "Futurália Forum 2020", the nature and focus of the Industry 4.0 rather than technology is focused primarily on the economic and social implications that support infrastructure, which is based on a panoply of technologies that work in an increasingly integrated way and with multiple functionalities, conferring changes in the economic and social system. Above all, it was **intended to address the challenges of qualification** (education and training systems), **employment and youth**. At the outset, a set of questions were placed serving as the guiding thread for Workshops and panels. Rather than a fixation on the threats that many studies anticipate in employment, the discussions were mainly about the challenges and opportunities of industry 4.0, which refers to the strategies of different actors, including collaborative strategies at European, national and International cooperation (Euro-Mediterranean cooperation was evidenced, above all by SOLID partners, in particular Morocco, Tunisia and Jordan).

C. The contributions from the seminar are intended to synthesize the approaches, ideas and key proposals that resulted from the different interventions and reflections, integrating them into a coherent narrative, without individualizing them. There were several questions that were raised from the start, namely:
-   What will be the impact of the general digitalization of the economy on employment, and on the relations between employers and workers?
-   Which professions and sectors will be affected?
-   What new qualifications will be required?
-   How can new opportunities be developed for the low-skilled, long-term unemployed, people with disabilities, migrants and disadvantaged young people?

- Are lifelong learning and education systems capable of responding to the challenges and needs in terms of skills and competences?
- How will the results of the productivity increase be distributed?
- In this context, what is the role of tripartite social dialogue?
- What is the importance of international cooperation, particularly in the Euro-Mediterranean context?

Seminar Main Findings

1. First of all, **the concept of Industry 4.0** was assumed within a broad framework, meaning that "Behind this designation - Industry 4.0, embodied in a panoply of technologies functioning in an integrated way, linking virtual space with the physical world, is a process of **profound transformation in the way we think, learn, conceive, produce, distribute and use products and services, powered by the development and availability of a new generation of digital technologies with increasingly competitive prices.** This also means that the widespread digitization of the economy is not limited to the technology dimension. It is imperative to prepare companies for the new coming changes, perhaps radical due to the combination of several factors such as:

- Speed, scale, unpredictability of production

- Greater fragmentation and reorientation of value chains,

- New relationship between knowledge centers, particularly between research centers, higher education and business,

- New business models and new links between large companies and SMEs

- New forms of cooperation between all levels of business activity (human resources, design, production, sales, logistics, Maintenance, marketing and communication, etc.)

- The need to refresh the portfolio of qualifications and skills in the face of the new coming changes

- Closer relationship between companies and consumers.

This challenge is even greater for companies with more traditional and conventional business structures and models. This 4th industrial revolution (which is not a totally peaceful concept, in which some prefer to speak in industrial evolution) also includes the challenge of the **energy transition associated with the decarbonization of economies, namely the issues related with the climate change effects**.

In this framework, the importance of our global social responsibility, embodied in the commitment of states, companies, associations and other organizations and institutions, in the **ODS-Sustainable Development Objectives**, as a result of the United Nations Summit **in France in 2015**, was underlined.

2. In this context, a **new agenda for social dialogue** was mentioned, an agenda capable of mobilizing stakeholders around common interests, more specifically around the value chain of the economy underlying Industry 4.0, which should include workers, entrepreneurs and other economic, social and political agents. This new agenda is really important, taking into account the deep changes that are taking place in the content of jobs, skills and qualifications, the way we learn, work, cooperate and compete.

No doubt that one of the greatest challenges of our time is how to deal with evolution of technology, since it is evolving at unprecedented rates, and in the absence of appropriate proactive strategies, it could be a factor of social exclusion, leaving s lot of people behind.

Therefore, it should exist a real commitment to anticipate Industry 4.0 opportunities, which will test the performance the education and training systems.

3. **International cooperation, particularly in the Euro-Mediterranean framework**, has been emphasized, in particular by SOLID partners and Portuguese trade union and employers' representatives, who consider that the Battle of Industry 4.0 requires cooperation between regional areas and between the economies of different countries. Not only the logic of value chains, but also regional stability and cohesion. Cooperation (and also social dialogue) around common objectives must be undertaken at all levels (EU, interregional, national, regional and enterprise level) within a framework of joint responsibility and involvement, with due respect for the specificities and conditions of the economies, social and cultural environment of different countries and regions.

D. In **the strategic and operational plan**, Industry 4.0 has a number of challenges, questions and profound changes, namely in education, training, employment and youth, due to the integrated support technologies, where cyber physical systems and particularly the Internet of Things constitute a new technical-economic paradigm, with multiple implications for the various economic and social agents.

The main contributions are summarized below:

I.   We may be witnessing the formation of a technical and economic organization that:

- Organizes the functioning of economies around cyberspace as a global access space for communication, information, transactions and entertainment - putting cybersecurity at the top of State concerns;
- Marks a new phase in computing architectures, in the electronic components and in the manufactured materials;
- Expands human capacities by the presence of assistants in cognitive interaction (including forms of automatic learning / artificial intelligence, etc.);
- **Organizes production in a decentralized way** - not in a linear production chain distributed in the global space - but **in a parallel production chain - which can completely change the pattern of international trade**;
- Makes it possible to organize a transitional period in which hydrocarbons will continue to be dominant on the basis of energy systems, but will cease to be as fuels;
- Opens new frontiers in mobility from drones to self-propelled and electric vehicles to new generations of faster aircraft with new propulsion systems or new configurations and structures;
- Places carbon-derived materials at the center of the economic technical system, both in terms of structural materials and functional materials.

II.   It is in the Cluster of Information & Communication & Internet technologies through its multiplication applications that it is the main driver of the new Technical and Economic System, dependent, however, on the Cluster of Materials and Nanotechnologies "and" Instrumentation / Micro Engineering. This technology cluster will completely change the services sector, in terms of intermediation and transaction functions. And as we "rise" on technology we find the key areas that will greatly renew the knowledge intensive services and the Clusters of "Production Technologies" and Mobility Technologies. It is also in this cluster that technological innovations associated with the internet and mobile communications will proliferate due to the boost in computing power of mobile equipment and the multiplication of digital devices connected to the internet, involving machines and people, usually referred as Internet of Things. We will witness the development of software with new algorithms that, combined with extensive databases, allows real-time results / decisions - Big Data + Analytics. In the same sense, new computing architectures will also be developed, involving also innovation in processors and memories. In addition, the development - in successive approximations - of artificial intelligence, including Machine learning technologies and deep learning, initially based on the advances of GPUs - Graphics Processing Units.

III. The **Cluster associated with Energy Technologies** was also emphasized given its importance in the energy transition. This cluster has to respond to three major challenges imposed on it "from abroad". It has a key role in the use of today's primary energies - coal, oil and natural gas - and should include technologies in its center to enable the use of hydrocarbons without burning or burning them, without sending CO_2 into the atmosphere. In terms of electricity, its supply has to be made with a superior quality, taking into account that the economy and society will be organized around the cyberspace. However, it is also true that cyberspace is much more vulnerable to the shutdowns or even destruction of centralized electricity distribution networks, suggesting the future integration of self-provision energy into urban construction, reducing its dependence on centralized networks.

IV. **The Cluster associated to the Production Technologies** is the one where will be tested the manufacturing system regarding the new forms of mobility and the production of new materials, functioning as a creator and diffuser of innovation. While robotics has penetrated industrial production technology for decades, what we are currently talking about the diffusion of mobile robotics with increasing autonomy - from robots interacting in extreme environments (war/natural catastrophes) - to robots interacting with people and communities. It is also about robotics as a production technology with groups of robots functioning in the context of multifunctional and flexible production of various objects.

V. **The cluster associated with mobility technologies** plays an important role in different levels, in particular in the infrastructures for intelligent cities and in the disruptive innovations that will emerge. Some of the solutions and advances come from the defense areas - for example, drones, autonomous vehicles, hang-glider planes - combined with the search for innovative multimodal solutions (formerly transportable cells by drones and cars) and management Mobility in order to save on heavy infrastructures and current consumption.

VI. With respect to the value chain of the economy and enterprises, industry 4.0 has a wide range of opportunities: (i) digitization affects the company's supply chain and can improve existing products or services by adding new technologies (for example, the integration of sensors that reproduce the data to other intelligent equipment) or through the creation of new products designed to satisfy the factory of the future; And (ii) digital business models, which will allow a reorientation of marketing,

financial, production and other additional strategies, generating and providing to customers access to integrated platforms or services and data, that will strengthened the enterprise value.

E.   In relation to the general problem of employment and qualification, involving education and training systems, there are many challenges, implications and questions of Industry 4.0, which are summarized below.

   I.   The three major technological forces emerging with industry 4.0 require a rethinking of how the work will be organized and managed. In fact, automation leads to an increasing number of companies working without or with little human interference. Additionally, management driven by large databases (especially Big Data) complements intuition and experience with data and experimentation. Finally, the fluidity of resources, associates the tasks with the performance of the most qualified people, inside or outside the organization, meaning that many tasks previously performed by humans, such as driving vehicles, handling customer orders or writing newspaper articles, can now be performed by machines. However, taking this logic to an extreme can be a business and management failure, meaning that in many organizations all workers could be hired and paid only when the company needs them. The same could happen with data-driven management (Big Data), which would evaluate all employees' actions and hire and fire people on the basis of numbers only. An approach of this nature, which places the employment relationship as a mere impersonal market transaction can have very negative implications for both the company and employees. Therefore, it is considered that the digital revolution must be associated with a world where computers and advanced robotics and other instrumental technologies should help people collaborate fluently and better support their decisions and value proposals. In the long term, the best performing companies will be able to reconcile the benefits of technologies and skills associated with the digitalization of the economy with the involvement of employees, which will lead to a strong corporate and organizational culture.

   II.   The ongoing digital revolution is a challenge to rethink about organizational structures, talent management, and human resource strategies. In fact, the gap between the high level of technological sophistication and lower levels of productivity constitutes an opportunity for human resources through the implementation of better organizational strategies and people's development.

III.   Agility, flexibility and collaboration are seen as key factors in organizing the future, putting leaders and managers to the test, who are challenged to reorganize and encourage the empowerment of team networks in a context of increasing automation and increasingly widespread digital businesses. In this context, the training model is a critical element of this strategy, as capacity building, in order to give people the ability to integrate new challenges and functions in the future.

IV.   One crucial question has to do with "what will the work of the future be?". Work has not only been a pillar of our lives, but also a factor of citizenship and social inclusion. In fact, there is an awareness that contractualized or stable work, as we know it, is increasingly vulnerable. It is more likely that the future work, will be more technologically intermediated and will require other kind of interventions from the employees, that will generate other model of contract or agreement between worker and employer. The greatest risk will probably come from the incorporation of computers in the cognitive world, previously restricted to humans, and the capabilities of mass data processing and advanced analytics, as well as artificial intelligence (AI), through the automation of high value functions, contemplating analysis, opinion and decision with a superior level of precision, which cannot be achieved by human beings. The impact of technology on jobs will be felt both vertically, with greater specialization requirements, and horizontally, that is, those that are common to almost all functions. In future scenarios regarding the world of work, more important than solid skills and knowledge about the use of advanced digital tools and concepts, more social, relational and human interaction capacities will be required, making the difference in terms of relevance and workers' value.

V.   Tackle these new demands in the world of work is a major challenge for education and training systems whose traditional teaching models tend to be outdated in terms of content and speed. Focusing the education / training on the student / forming different rhythms of learning, seems not only necessary, but desirable and possible with the appropriate use of digital technologies. "Learning to learn" is the attitude recommended to all employees, because this will be a constant throughout life. Likewise, the personalization of teaching will be a key word in the future, also contemplating the segments that are more resistant to learning, in which alternative ways have to be considered. Perhaps one of the major challenges for education /

training systems will be to build education / training programs incorporating a new mix of skills (social skills + tech skills), addressing both simultaneously. It was underlined that a significant part of the jobs and new non-existent professions will be occupied by those who are entering the school at the moment. These new professions will emerge with industry 4.0, for example, engineer of renewable industries; Supercomputing professionals; Robotic engineering; Mechanic of electric or autonomous cars; IoT specialist; Artificial intelligence programmer; Chatbots manager; Specialist in prosthetics and electronic implants.

VI. The challenges of internalizing and developing new skills and competences, with a strong digital component, increasingly decisive for the performance of companies and organizations, require a proactive stance, whose implementation also includes the ability to create spaces of strategic cooperation mobilizing: the business community (companies, business associations, trade unions, etc.); Knowledge centers (schools, vocational training centers, universities, polytechnics, science, research and technology); And the government and its autonomous institutions, which should play a catalytic role through public policies.

VII. Naturally, the entry, development and performance of people and organizations in a digital matter does not appear to be a linear or standardized path for all organizations. It is especially important to dynamize models that combine experience and knowledge with creative and intuitive digital tools, allowing a continuous calibration and improvement, aiming to evolve in the process of digital transformation and to prospect a greater vision about the instrumental role of technology in the performance of organizations.

VIII. Education and training systems today have new challenges and great pressure associated with time and how we learn, work, cooperate and compete. They enable the permanent and proactive adjustment between the needs of the economy and society and the new skills and competences with greater integration into the ecosystems in which they are generated, in particular the business systems. In the face of the emergence of Industry 4.0, they are illustrative, with some European data: (i) 7 out of 10 European workers need digital skills; (Ii) 1 in 3 have no knowledge of the area and half of people in low-skilled activities do not work with technology; (Iii) it is estimated that 9% of employment in the developed world is about to become automated; 1 in every 4 jobs is moving to the digital world, in a

logic of getting more and more productivity; However, 4 out of 10 companies say that they cannot find workers with the necessary skills.

IX.   Finally, the catalytic role of public policies aimed to anticipate the challenges and opportunities of Industry 4.0 constitutes an important recommendation for policy-makers. In Portugal the "Portugal i4.0 Initiative" has been highlighted in this regard, similar to what has been happening in other European countries and in the United States of America. The i4.0 defined in Portugal as a National Strategy for the Digitalization of the Economy, presents a plan of measures for the valorization, promotion and investment in the digitization of the Portuguese economy. (1) Human resources training (2) Technological cooperation (3) StartUp i4.0 (4) Financing and investment support (5) Internationalization (6) Legal and normative adaptation. The chapter dedicated to empowering organizations and people in digital skills is one of the most encouraged.

Annexes

- Workshop's and Panel's registration

- Fórum Futurália 2020 Catalogue (includes the participants description)

- Photos/Videos of the activity

- Testimonies