

The future of labour in the digital era

Ubiquitous computing, virtual platforms and real-time production

Jobs have a technological side.
(Source: freepik)



Key ideas

- The legacy of Catalonia's extensive industrial history needs to evolve with the emphasis on key competitive factors such as innovation, technology, design and training for professionals.
- Since 2010, in Catalonia, employment figures for potentially more digitisable activities are better than employment as a whole.
- Catalonia wants to lead the regulation of the collaborative economy and put the Catalan economy at the head of the new digital economy.

1. Statu quo: what's going on in Catalonia?

In Catalonia, in a widespread move that is required throughout Europe, work is under way on the RIS3CAT smart specialisation, which defines a shared vision of the country for 2020: Catalonia is a country with an industrial foundation, an open, competitive, sustainable economy combining talent, creativity, a varied business fabric and its own system of top-level research, all in the framework of a dynamic, entrepreneurial and inclusive society. It includes multinationals as well as local businesses, established sectors with international leadership and emergent technological sectors.¹

RIS3CAT has been drawn up based on an ample analysis of the weaknesses, dangers, strengths and opportunities of the Catalan economy, also by sectors and technological skills.

This analysis identifies three main vectors that connect the activities with which the Catalan economy can successfully face the great social and economic challenges of the 21st century:

1. The legacy of Catalonia's extensive industrial history needs to evolve: in the 21st century, Catalan industry needs to evolve with the emphasis on key competitive factors such as innovation, technology, design and training for professionals.
2. Personal well-being in areas such as food, health, leisure or lifestyle, in which R&D&I generates economic opportunities and direct benefits for individuals and society.

3. The global challenges posed by climate change, the impact of human activity and the shortage of natural resources.

Some of the tendencies of the new digital technologies with an obvious impact on the world of labour and on society can be found in Spain 20.20: ICT and Sustainability Report by the 'Club de Excelencia en Sostenibilidad'. The first thing it mentions is the demand for sustainability in the social sphere by workers in search of a higher degree of reconciliation between personal and work life using options like teleworking or the incorporation of information technologies.

It's well known that in the coming decades we will witness a transition in the workforce in which the type of employment will vary, the same as happened in the Industrial Age. Jobs will have a technological side to them which will offer better quality and security at work and will also require longer training. Continuing education and an ability to adapt to the demands of the labour market will be key in the next decade and will depend largely on each individual.

ICT will provide new work models in which physical presence will become less important than the results obtained. Working hours will be much more flexible and, as far as possible, adapted to each individual worker and his or her particular moment in life, allowing for greater diversity and equal opportunities.

The creation of new jobs could also mean that work that is now done by hand will become automated (for example, automatic reading

of smart utility meters cuts out the need for manual inspection by an employee visiting Spanish homes in person).²

The annual *Enquesta sobre l'ús de tecnologies de la informació i la comunicació i del comerç electrònic a les empreses* ('Survey on the use by businesses of information and communication technologies and of e-commerce')³ (ETICCE), carried out by the INE⁴ (Spanish Institute of Statistics) in partnership with the Idescat (Statistical Institute of Catalonia),⁵ provide a snapshot of the incorporation and use of ICT and e-commerce in businesses active in Catalonia.

According to the latest figures available:

- In the first quarter of 2015, the ICTs most used in Catalonia by businesses employing ten or more people were the computer (99.3%), Internet (99.1%) and the mobile telephone (95.3%). Local area networks (LAN) are also available in a very large proportion of them (95.3%).

- In companies employing less than ten people, the main ITC is the computer (78% use them), followed by mobile telephones (76.7%) and Internet (70.7%), which has dropped since 2014 (74.3%). These businesses stand out for the high proportion of them using open source software (62.5%).

- Practically all businesses with access to Internet use a broadband connection (landline or mobile). A point worth mentioning is that in the case of companies employing ten or more people the use of cabled and fibre optics networks, present in 33.1% of the total, has dropped 9.7% with respect to the previous year.

- Of those businesses employing ten or more people, 83.9% have a website or web page (either working or under construction), while the gap with respect to companies employing less than ten people widens to 54 percentage points, as only 29.9% of these have a website or page.

- Of those businesses employing ten or more people, 43.3% use social media for reasons of work and, in the case of companies with

less than ten employees, the proportion is 27.2%, a gap of 16.1%.

- The total volume of e-commerce purchases by companies with ten or more employees reached 26 million euros in 2014, 7.5% more than in 2013, and sales exceeded 40.7 million euros, an increase of 5.9% over 2013.

As regards activities with a high-tech profile:

- As of 31 December 2015, there were 244,542 people registered with the Social Security in sectors of this type, 8% of the total for Catalonia.

- 3.8% were registered in industrial sectors with a medium to high-tech profile (116,673), 3.3% in high-tech or cutting-edge services (100,084) and 0.9% in high-tech industrial sectors (27,785).

- Since 2010, employment figures for potentially more digitisable activities are better than employment as a whole and since 2013 have shown an increase.

2. Social debate and political dimensions

The report by the European Trade Union Institute (ETUI) Digitalisation of the economy and its impact on labour markets⁶ asks for a new social pact in the age of the digital economy and states that the creation of jobs in new sectors, new products and new services will transform labour:

1. For one, digitalisation allows the emergence of new forms of occupation, such as on-demand work organised through online platforms, and new forms of interaction between people and machines. This change involves, on one hand, new social risks (intensification of work, effects on health and safety, blurring of the boundaries between work and private life, lack of proper information or discrimination) and, on the other, changes in management and organisation to adapt to new ways of working.

2. Secondly, jobs could be destroyed as a result of computerisation, automation and robotisation or there could be a shift in jobs as the development of digital platforms leads workers in one country with high levels of social protection to enter into competition with workers in developing countries with low levels of protection.

One interesting publication in this field of action, by the Consell de Relacions Laborals de Catalunya (Catalan Council for Labour Relations),⁷ a forum for dialogue between trade unions and employers' associations, is its *Recomanacions per a la negociació col·lectiva en matèria de gestió del temps de les persones treballadores* ('Recommendations for collective negotiation in matters of workers' time management', 2009).⁸ The document deals with locational flexibility (remote work or teleworking) as a

Practically all businesses have access to Internet, and use a broadband connection. (Source: www.pixabay.com)



The digital labour era uses social media for reasons of work.
(Source: www.pixabay.com).



more flexible and rational management tool for work time: teleworking. In this respect, it indicates that collective and company agreements should state that the fact that a worker accepts the company's offer of teleworking should not affect his or her remuneration, professional career with the company or the number of hours worked.

The digital era could be a threat or an opportunity, but a priori its impact could be either positive or negative.

In this context, public policies and the role of regulators are key issues:

- Maximising the positive effects, favouring a setting that allows the creation of new businesses and new employment, eliminating the institutional barriers in their way, and establishing educational and training policies that help turn workers'skills to the new needs.
- Developing continuous education throughout life.
- Palliating the negative effects through active and passive policies.
- Supporting mediation to ease job transitions.
- Adding guarantees to regulations for self-employed workers.
- Improving social protection measures.

Catalonia wants to lead the regulation of the collaborative economy (a competency shared between the Spanish state government and the autonomous communities) and put the Catalan economy at the head of the new digital economy, and in the framework of the Catalan Smart Strategy (SmartCAT).

In this respect, on 5 April 2016 the Catalan Government began revising all the sectoral regulations to incorporate the collaborative economy, with the aim of creating a legal framework to regulate this new economic practice and, at the same time, guarantee fair competition between the different ways of providing services:

- Promoting collaboration agreements between collaborative employment platforms and the administration to increase information and transparency regarding the activities undertaken and to improve adaptation of public policies to the needs of users and different sectors of activity, at the same time respecting the right to privacy and the protection of personal data.
- Promoting the drafting of a Code of Good Practice in the collaborative economy sector in Catalonia, establishing the general principles for defining the activities included in the framework of the collaborative economy:
- Convening sectoral boards in which agents for the collaborative economy and representatives of traditional organisations take part.
- Supervising government action in response to the present situation and future trends in keeping with the emerging technological, economic and organisational paradigm.
- Analysing the characteristics defining the collaborative economy and key factors in its development, prospects for growth and evaluation of the impacts on the productive, economic and social model, the challenges for adapting it to the obligations of the platforms connecting supply and demand as intermediaries in the transaction.
- The analysis of the measures adopted by other countries and by the institutions of the European Union.

This policy should lead to objectives that strengthen those activities with most added value and drive new economic activities and niches on the basis of innovation.

Another point to mention, as an experience in civil society, is the mSchools initiative,⁹ led by the Mobile World Capital Barcelona¹⁰ foundation, to publicise the results of applying technology in learning, promote methodologies and best practices for adopting mobile technology to education and to inform and motivate heads of schools in the implementation of effective and useful policies.

There is a need to respect the right to privacy and the protection of personal data.
(Source: www.pixabay.com)



3. Main conclusions of the scientific and technical advisory studies

The Parliament of Catalonia's Resolution 1155/X (Conclusions of the Report by the Study Commission on Public Policies in Matters of Collaborative Economy) shows its commitment to the collaborative economy. The resolution also recommends adapting the legal regulations in the framework of Community directives, the role of mediating technological platforms and their rights and obligations with relation to consumers and administrations. In questions of working conditions it recommends establishing the boundaries between collaboration in an activity and employment.

The Parliament of Catalonia also urges the Catalan government to regulate rental of rooms in one's place of residence as a new form of accommodation and revise the rules covering the powers of the Generalitat to allow carsharing, establishing the boundaries with other activities involving regulated forms of transport and differentiating between the use of private vehicles as leisure resources in the framework of a trip one had already planned (which needs to be promoted and allowed) and providing passenger transport in return for a price and on a professional basis (which requires the corresponding taxi licence or vehicle rental with driver).¹¹

CAPCIT's report on Research and Business: collaborating to compete better (June 2014) stated that: 'Specific plans for communication and information to citizens and society must be designed in order to make them aware of the advances and benefits of innovation and its role in the development of our country'.¹²

There is a need to regulate collaborative economy.
(Source: www.freedomdesignfile.com)



References

- 1 Catalan Government (2015). RIS3CAT 2015-2020 action plan. See: http://catalunya2020.gencat.cat/web/.content/00_catalunya2020/Documents/estrategies/fitxers/pa_ris3cat.pdf.
- 2 Club de Excelencia en Sostenibilidad (2012). Spain 20.20: ICT and Sustainability Report. See (in Spanish): http://www.clubsostenibilidad.org/f_publicaciones/spain%202020.pdf. For the English version, see: http://www.clubsostenibilidad.org/main.asp?id_pagina=33.
- 3 INE & IDESCAT (2015). Enquesta sobre l'ús de TIC i del comerç electrònic a les empreses. See: <http://www.idescat.cat/estad/eticce>.
- 4 See: <http://www.ine.es/>.
- 5 See: <http://www.idescat.cat/>.
- 6 European Trade Union Institute (2016). Digitalisation of the economy and its impact on labour markets. See: <http://www.etui.org/Publications2/Working-Papers/Digitalisation-of-the-economy-and-its-impact-on-labour-markets>.
- 7 Consell de Relacions Laborals (2009). Recomanacions per a la negociació col·lectiva en matèria de gestió del temps de les persones treballadores. See: http://empresaocupacio.gencat.cat/web/.content/13_-_consell_relacions_laborals/documents/04_-_recursos/publicacions/arxius/recomanacionsnctemps.pdf.
- 8 See: http://empresa.gencat.cat/web/.content/13_-_consell_relacions_laborals/documents/04_-_recursos/publicacions/arxius/recomanacionsnctemps.pdf.
- 9 See: <http://mschools.mobileworldcapital.com/>.
- 10 See: <http://mobileworldcapital.com/>.
- 11 Resolution 1155/X of the Parliament of Catalonia approving the conclusions of the Report of the Study Commission on Public Policies in Matters of Collaborative Economy (*Informe de la Comissió d'Estudi de les Polítiques Públiques en Matèria d'Economia Col·laborativa*). See: <http://www.parlament.cat/getdocie/10014975>.
- 12 CAPCIT (2014). Research and business: collaborating to compete better. See: <http://www.parlament.cat/document/intrade/31300>.