Climate watchdog, urban farmer, green marketer and other new jobs with a future

The ambitious goals of the energy transition will make specializing in sustainability synonymous with job placement in the coming decades for engineers, consultants, scientists and many other profiles

Choosing a university career, envisioning future successful professionals, has always been a vital process full of uncertainties, a dilemma between vocation and mouthing (of "mouth", of eating...) marked by the fear of choosing the wrong path. The current speed of change caused by the fourth industrial revolution makes it even more difficult to make confident decisions for the future. Technologies such as artificial intelligence (AI), automation and biotechnology are completely transforming the world of employment. Machines will make certain job profiles unnecessary and new areas of specialization will emerge. But wich ones? When? How to get on that wave?

"A lot of young people ask me which profiles they should target and I have some good recommendations." Olivier L. de Weck is a professor in the Apollo Program for Astronautics and Systems Engineering at the Massachusetts Institute of Technology (MIT) and a true guru when it comes to the future of technology and its consequences, as well as that there are many who seek in it answers to the big questions about the choice of professions.

“I usually recommend robotics, the Internet of Things (IoT), biotechnology… They are the growth areas for the future and the young people who enter these new areas will be competent and valuable”, explains the who was also director of Technology Planning at Airbus.

Most analyzes of what the professions of the future are going to be tend to point in very similar directions. This is confirmed by reports such as Jobs of the Future, prepared by the World Economic Forum. The specialization in smart houses, cities and means of transport, digital transformation and online marketing, Artificial Intelligence (AI)... All of them are repeated as a safe bet. Among many cases, their success has to do with the fact that they will be very transversal to all industries and areas of human life.

A circumstance that also occurs in the field of sustainability. Everything will be digital and everything will be sustainable, so the demand for profiles linked to these two vectors is going to grow exponentially in the coming years.

THE ‘BOOM OF SUSTAINABILITY’

Already in 2018, the International Labor Organization published a report entitled Greening the Jobs in which it estimated that the implementation of the measures set out by the Paris Agreement to limit global warming to two degrees at the end of the century would mean the creation of 24 million of jobs until 2030. Only the six million new jobs related to the adoption of a circular economy that said report predicted would compensate for the six million jobs that could disappear as a result of the ecological transition.

"The circular economy generally requires a multidisciplinary team. Scientists are in charge of selecting the most efficient technologies," explains Ignacio Fresneda, from Repsol's People and Organization area of ​​Industrial Transformation and Circular Economy. "They are usually chemists, engineers , biologists, materials experts… who, together with industrial engineers, chemical engineers and process engineers, adapt these technologies and integrate them into our current processes”, he specifies.

In any case, this expert clarifies that, more than new profiles, "the circular economy is going to demand specific training focused on emerging businesses such as renewable hydrogen, experts in new materials, new energy engineers or big data computer scientists".

The other great source of employment linked to sustainability has to do with the growing weight of renewables. The aforementioned ILO study spoke of an 11% growth in jobs related to these energy sources between 2018 and 2030, which would mean 5 million new jobs. “The number of terawatts we need to generate from solar, wind, geothermal or tidal sources will require large investments and many people to install, maintain and monitor all that infrastructure,” De Weck confirms.

The truth is that both renewables and the rest of the aspects of the energy transition are going to cause a flourishing of new profiles and professional specializations that will mean a great job opportunity.

Detailing the different specialties and facets of this sector would allow the list to be extended as much as desired, but the types of profiles can be included in five large blocks.

ENGINEERS AND RESEARCHERS

They are the profiles of engineer and researcher that have to do with the development of low or zero carbon footprint fuels in the laboratory, with the implementation of increasingly efficient energy infrastructures and the construction of solar power plants, wind farms... They could also be include in this section the research profiles linked to the search for increasingly sustainable materials or new recycling and use techniques that allow progress towards a circular economy.

"Repsol is analyzing more than 40 types of waste and technologies to ensure the production of advanced biofuels and circular petrochemical materials," says Fresneda, who lists some examples of this line of work such as "the production of low-footprint fuels and circular materials through from pyrolysis oil from landfill plastics or the production of biofuels from frying oils…”. All this, as he explains, developed by "professionals such as scientists and researchers, chemical engineers, process engineers, materials experts..."

MARKETING AND MANAGEMENT

This second block encompasses the profiles linked to the management of renewable energy infrastructures or the monitoring and analysis of the data generated by these facilities. Also with the definition of products and services aligned with the new demands derived from the decarbonisation objectives and the growing environmental awareness of customers. Thus, it includes positions such as chief sustainability officer, green marketer, sustainability analyst...

SUSTAINABILITY CONSULTING

Of course, sustainability will be the main business of many companies or will mark their activity so much that they will have this type of profile on staff. On the other hand, others will limit themselves to complying with the regulations in relation to CO2 emissions, recycling, energy efficiency... so they will prefer to hire the services of external consultants to help them resolve these issues.

In one way or another, profiles of specialists or advisors in sustainability will be necessary, such as those listed in the different lists of jobs with a future in the field of energy transition: specialist in water resources, manager of wind energy projects, sustainable logistics consultant , carbon footprint controller…

TECHNICAL PROFILES

Countless technicians will also be needed to install and maintain renewable energy infrastructure, assisting scientists in laboratories where new materials or new recycling procedures are developed.

“In the sector, in general, the profiles of the STEM disciplines (science, technology, engineering and mathematics) are key. And I'm not just referring to university education; professional training is fundamental in our sector”, emphasizes Ignacio Fresneda. In this category, the lists include jobs of the future such as methane energy generation technician, wind turbine technician, biofuels processing technician, waste and recyclable material collector...

OTHER PROFILES

Finally, there is a block of future jobs related to sustainability that are specializations in various disciplines that do not have much to do with each other. Here we could include environmental educators, eco designers and eco builders, cultural managers specialized in sustainability

In short, the multiplication of professional profiles in this field shows that the energy transition will not only help us reduce global warming and minimize the impact of human activity on the planet. It can also be a great job opportunity for millions of people around the world.