

Digital manufacturers: the green revolution starts here

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What are the sustainable jobs of the future? Why does sustainability become a social obligation for everyone, including small, medium and large companies? Why will the professions of the future have to integrate technical skills - primarily digital - and soft skills with the aspect of care of the ecosystem, an asset that belongs to all and that must be preserved and handed down to those who will come after us?

Nowadays, there are two focal elements in the world of business and jobs, **two revolutions in progress, the green one and the digital one** (which crosses all “hot” issues such as factory 4.0, big data, ...). How can schools, research and society in general be able to keep these two elements together? This was discussed at [Green Week](#) on Saturday, March 17 by FBK president **Francesco Profumo**, **Stefano Micelli**, economist, professor of Economics and Business Management of the Ca ‘Foscari University, and **Salvatore Majorana**, scientific director of [Kilometro Rosso](#), in a meeting moderated by Filiberto Zovico, founder of Italy Post.

According to **Stefano Micelli**, author of the famous book Futuro Artigiano, a “guru” for small and medium-sized businesses, the answer lies right **in the essence of the “Made in Italy”**, which today must necessarily be dyed green in order to exist and be competitive. “The true champions among Italian manufacturers today are those small businesses – maybe grown today and that even with a turnover of 35 million euros, consider themselves as such, like Bergamo-based Kask – that manage to **integrate technology with sustainability of the production process**. This does not happen only for innovation-driven companies, such as those in the **automotive** industry, but also in **food, construction, fashion, furniture, wood** and more generally in all the leading Italian industries. The specific issue is how can we speed up the many companies that in the past have struggled with sustainability, especially the Italian manufacturing sector, in this direction”.

According to Micelli, the winning models are the 4.0 small businesses that are able to combine “Made in Italy” and green innovation. Instances? Insulation panels integrated with sensors to make

the building sector competitive, electric motors produced by the many manufacturers traditionally devoted to high-end components for the automotive sector and, finally, a world leader in milk bottling – now a case of excellence in the export of machinery for locally produced milk harvesting plants – which aims to develop an idea of ??sustainable food in the world.

From the most traditional sectors to the most advanced enterprises, the formula is one:

combining sustainability and digital 4.0 to grow in competitiveness and internationalization.

All this must be supported by a strong, new technical training that brings the new '**digital manufacturers**' to be the answer to the demand of companies that want to drive these two co-revolutions. The new 'green high and high tech jobs' will have another advantage: quality manufacturing tends to **pay and make quality jobs permanent**.

“Rediscovering oneself as a manufacturer is a direct consequence of our country’s model, because of our need to be sustainable. – **Salvatore Majorana** added – We are only a few million people in comparison with global economies and we could never compete with giants like China. ” And since quantity is not on our side, in Majorana’s view we must necessarily invest in quality: “There are two key words when we talk about sustainable jobs of the future: innovation and system. The system must revolutionize the way of making products and processes: for example, electric cars cannot ignore the idea that batteries must be green. Research, on the other hand, must push very hard on the fact that the whole supply chain becomes so”, he concluded. Kilometro Rosso focuses on the training of technical figures to be included in new companies and who can specialize in a '**mixed**' **space between research, training and business**. The idea is to create a link between these three worlds so that the jobs of the future be perfectly responsive to the idea of ??innovation and to the demands of the new labor market.

“To be ready for a challenge such as that dictated by the dual revolution, green and digital, the imperative is to **focus on young people** and quality time dedicated **to their education** – according to FBK President, **Francesco Profumo** – Education projects look at a twenty year stretch: they must overcome political alternations and aim for a pact that maintains a line in order to give a concrete answer to young people and businesses “.

And what will happen on the front of new professions? There will be a **need for higher education, graduates and specialized technicians**. Only 10% of current jobs will be increased in numerical terms and there are only three current sectors that will grow, primarily those of services to people. About 20% of current jobs will be cut down significantly and on a remaining 70% we have no certainties.

The “knowledge silos” mindset in which we were raised is no longer an effective response in terms of fluidity and adaptation: “What is needed is a **mixture of various kinds of knowledge**: only this fosters creativity. We need the brains of the new ‘digital craftsmen’ be stimulated at the right time and we need to start very early, because it is a long journey, “said Profumo, who already at the time of his term as President of the Turin Polytechnic, at the request of the students themselves, had decided to include the study of some humanities subjects also in a scientific and technical school such as Engineering.

And what is the **role of research** in this new scenario? “Research, if confined to its own walls, risks to be poorly incisive – Profumo concluded – it **must open up and get contaminated**. In addition, a big part of its results must be transformed into **development**, as the European Research Council actually claims that starting from the ninth framework program, **innovators** will be introduced in addition to researchers “.

To Micelli, **Europe** is unique from this point of view: “It is the only area that has launched the topic of **social innovation**: no one else in the world is doing it and it is the factor that can really make the difference”.

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