



PRESENTATION OF THE COMPANY

Eurofork S.r.l., founded in 2000, is an Italian B2B company that produces automatic handling systems, such as pallet trucks and telescopic arms. The assembly and design are totally made in Italy, and offered to integrators all over the world.

Eurofork is today one of the main players in the world market for the production of telescopic forks, both in terms of the number of units produced and turnover. During its 15 years of activity, Eurofork has produced more than 13,000 handling devices used in several industrial sectors such as Automated Storage/Retrieval System, automotive, food and aeronautics.

The company has two other sectors: the Service department, which deals with after-sales assistance, maintenance and the purchase of spare parts, and the ESMARTSHUTTLE-€ division, which specializes in the design and manufacture of shuttle systems for multi-deep automated warehouses.

Eurofork distributes its products in 93 countries. 70% of sales are made outside Italy, and 50% outside Europe, mainly in China and Korea.

A CENTRE OF INNOVATION

Eurofork's objective is to always be synonymous with reliability, flexibility and innovation. The past, present and future of the company consist of the ambition to offer ever more innovative products, providing customers with state-of-the-art solutions and truly tangible benefits.

In 2002, Eurofork invented the first bi-motorized telescopic arm, and in 2009, the first patent was filed, in Europe and in China.

The will to increase its innovation is certified by the numerous international patents that Eurofork holds

In 2018, Eurofork is selected among the top 5 most innovative mechatronics companies in Italy (Italian mechatronics Award). In 2019, 2020 and 2021, they are winners of several European innovation awards.

SUSTAINABILITY

Eurofork pays special attention to social and environmental sustainability. In 2020, a new factory is inaugurated in Roletto, in the province of Turin. It embodies this objective in terms of sustainability, as it is "plastic free" and self-sufficient in energy thanks to its solar panels.

The latest generation of Eurofork products is powered by lithium batteries, which ensure continuous operation and guarantee "multiple machines to work 24/7 with the same stacker crane".

Lithium batteries offer a better weight to power ratio and have a higher specific energy than the historical chemistries used in rechargeable batteries (Lead, Nickel-Cadmium, Nickel-Metal-Hydride), thus allowing energy savings with an efficiency of up to 96%. They allow partial charges (biberonnage) and fast charges.

However, their environmental impact remains to be qualified because the extraction of lithium consumes a lot of water and could, if not properly controlled, generate risks for the local biodiversity. Finally, the components of a lithium-ion battery can be harmful to the environment if they are not recovered and properly treated.

Giving a second life to this lithium through recycling is therefore a major challenge, but for the moment, lithium recycling is struggling to take off since the collection rates of batteries containing lithium are still low (10% of existing volumes) and recycling costs are high compared to those of primary production.

INDUSTRY 4.0

In 2012, Eurofork launched a new Business Unit "Industry 4.0" to work on the concept of "Shuttle System", i.e. internal shuttles at the production site that allow monitoring and better management of physical flows.

The concept of industry 4.0 (also called industry of the future or fourth industrial revolution) corresponds to a new way of organizing the means of production.

Les grandes promesses de cette quatrième révolution industrielle sont de séduire les consommateurs avec des produits uniques et personnalisés, et malgré de faibles volumes de fabrication, de maintenir des gains.

It has become the 4th great industrial revolution after the "steam engine" revolution, which for the first time produced energy at will for production and transport, the "machine tool" revolution, which reproduced human hand movements and amplified their strength (automotive assembly line work with the Ford T), the revolution in electronics, programming and robotization.

The first E Smart Shuttle is launched in 2014, and Eurofork thus diversifies by penetrating a nascent market thanks to the anticipation of the problems of industry 4.0. Issues specific to static handling, and no longer just production handling, were integrated into their design.

Program of the visit

First, we visited the production lines.

The factory is divided into 2 areas:

A logistics area which is a storage area with a lot of turnover of material that comes from multiple suppliers. The work starts from iron bars which are stored here.

A mechanical assembly area which does not have so many employees, but only the most important technicians. When a part of the production line does not have added value for the product, it is outsourced. The technicians are mainly responsible for quality control, since Eurofork has no room for error in the products it sells.



We also visited the Technical and Supply Chain Department. It includes the teams that develop products (research) as well as the artists who customise projects for customers.

We then went to the sales department. Sales are made worldwide and exclusively in b2b. Eurofork has offices in China and recently also in Germany.

The mechanics are of prime importance and at the centre of the product, although the software is also important. This is why Eurofork focuses primarily on the product (shuttles) rather than on the automated solution.

With the health crisis of the last two years, it was necessary to be able to continue to sell machines without being able to travel, and therefore with a simple remote configuration offer.

Employees with no particular experience or qualifications can therefore be guided simply from another country, with the supervision of only one employee manager sent on site. This crisis has therefore been synonymous with opportunity, as the company now travels less while maintaining the same level of competence and quality.

The machines produced have artificial intelligence. If a sensor indicates that a manipulation is impossible on the production line, due to a blockage for example, the machine understands this and the production line stops and warns the employees of the problem.

In order to be able to solve a problem remotely without a qualified engineer on site, everything has to be easy to do for the employees and this has been widely deployed thanks to the covid crisis.



MESAP

Eurofork is part of a larger consortium of innovative players in Lombardy. Mesap is a mechatronics innovation cluster composed of various actors, focusing on smart products and smart manufacturing.

It now brings together cross-sectoral partners. Their role is to enable cross-fertilisation, technology transfer and more broadly, to facilitate cooperation between its 241 members.

In particular, Mesap has enabled Eurofork to find the suppliers and technologies it needs to enter its market, and continues to open up the company to new technologies. horizontal cluster (not vertical like textile or food)

Debrief

Our discussions following the visit focused on the ultra-modernity of the product, which plays a role of call product to other innovative products created.

Eurofork has a large import-export activity, which corresponds to a side market activity.

The main theoretical framework to analyze this company is above all strategy.

- Eurofork's corporate strategy echoes two metaphors found in the work *La jungle de l'innovation* (Rémi Maniak, Nicolas Mottis, 2021)
- The rabbit: representing speed and frequent incremental innovation. It is a business model that innovates every 2 years, without waiting for a tension and a decline on its products to innovate.
- The butterfly: representing mutation and transformation. It is a business model that radically changes every 5 years and jumps on the market as soon as a new technology is developed. This is embodied in the strategy of project/product lineage programs: each product allows for the development of internal skills that can be used on future products.