



INTI

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Industrial

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SMEs EXPORT

Argentine technology and innovation



INDUSTRIAL DESIGN



INSTITUTIONAL RELATIONS AND COMMUNICATIONS OPERATIONAL MANAGEMENT

Institutional Relations Deputy Management



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Editorial



The Fundamental Role of Industrial Design in Business Competitiveness and Sustainability

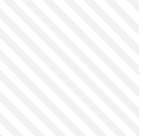
The industrial design has proven to be much more than a mere aesthetic issue. Its impact extends to the competitiveness, innovation, and sustainability of industrial activity. Research of various kinds has confirmed that companies that invest in design obtain significant returns, enabling them to thrive in an increasingly demanding and competitive world.

Design integration can leverage the talents of small and medium-sized enterprises (SMEs), and is a key factor in optimizing production, reducing costs and increasing productivity. Carefully conceived design not only creates products with attributes valued by consumers, but also enables companies to stand out and gain a competitive advantage both in the current market and in potential new horizons.

With this vision in mind, it is essential that institutions are prepared to provide solutions to present and future challenges in the productive sector. The multidisciplinary and prospective approach becomes crucial to collaboratively integrate the innovative ecosystem and creative thinking, adapting to a constantly evolving market.

Since the 1960s, the National Institute of Industrial Technology (Instituto Nacional de Tecnología Industrial - INTI) has dedicated a specific section to industrial design, which today is consolidated as a Research and Development Center. Since then, its main objective has been to encourage local SMEs to incorporate design and innovation in their processes, products, and services.

The adoption of sustainable design approaches not only improves the quality of life and the experience of people in their environment, but also has positive impacts on the economy and society in general. Considering the full life cycle of the product, from the extraction of raw materials to its final disposal, improves the reduction of environmental impact. It also becomes a driver of innovation by encouraging the exploration of new ideas, materials, and technologies to create more advanced, current, and meaningful products and services.



In summary, industrial design stands as a key partner for companies seeking to stand out in a competitive and constantly changing environment, promoting innovation, sustainable development, and continuous improvement in today's society.

Rodrigo Javier Ramírez

Industrial designer

Director of INTI's Center for Research and Development in Industrial Design

Technological Development and Innovation Management



SILVESTRIN FABRIS S.R.L.



Cutting edge in medical technology



The electromedical products industry has witnessed significant advances in recent decades and has revolutionized the way in which various health conditions are diagnosed, treated, and monitored.

Within this sector, companies such as Silvestrin Fabris S.R.L., better known by its trademark Silfab, have played a crucial role in developing innovative technologies that expand the functionalities of these devices, improve the effectiveness of treatments and the quality of life of patients.

Founded in 1981 by Mario Silvestrin and Humberto Fabris, Silfab was born from the dream of creating the first domestically manufactured nebulizer, after Silvestrin noticed the scarce accessibility of these devices to the population. Since then, the company has specialized in the development and production of a wide range of electromedical products, including nebulizers, aerocameras, heating pads, vaporizers, blood pressure monitors, among others.



“The global industrial design market size was \$44.36 billion in 2021 and is projected to reach \$72,813.88 million by 2031, exhibiting a CAGR of 5.1% during the forecast period”.

Source: Business Research Insights

The company's latest innovation is the launch of the "mini mesh", an ultra-compact nebulizer designed to connect to the USB port of cell phones. This novel solution allows users to carry the device with them and use it both outside the home and in emergency situations requiring nebulization.

With the aim of promoting innovation, Silfab has participated in the Design and Innovation Program developed and organized by INTI. Through this collaboration, valuable knowledge and methodologies have been transferred that can be replicated by the company in future projects, which will allow them to explore new frontiers and new markets. In this case, it will be in the field of environmental conditioning.

In this regard, Cristian Sandre, from INTI's Industrial Design team, points out: "As a result of our participation in this program, we have conceived a new line of products that includes humidifiers and other devices aimed at improving the quality of spaces. The distinctive feature is the integration of wireless technology, as well as the possibility of controlling them by voice commands. This marks a milestone in the application of innovative ideas in electro-medical equipment".

The company's Engineering and Innovation Manager, Javier Munin, highlights the importance of the services provided by the organization: "We regularly visit INTI to calibrate and verify our measuring instruments, to carry out electromagnetic compatibility tests on electronic products and phthalate control analysis on nebulizer masks". Munin also highlights the valuable contribution of the INTI's Industrial Design area: "The training we received allowed us to organize our ideas in a methodical way to apply them to each project. In fact, this enhanced the capabilities of a new humidifier, whose innovative functionalities differentiate it from its peers in the market. INTI once again demonstrates its solid commitment to the technological development and innovation of the national industry. It is a key reference for the productive sector".

Certified by IRAM in ISO 13.486, the company is endorsed by the Argentine Association of Respiratory Medicine (AMR) and the Argentine Federation of Cardiology. It is also certified by the National Administration of Medicines, Food and Medical Technology (ANMAT).





It is also worth mentioning that it is the first Argentine company to manufacture with national technology a product that is increasingly present in the world: nebulizers.

The company has extensive experience in foreign trade. Its presence stands out in countries such as Saudi Arabia, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, South Africa, and Venezuela. Its next challenge is to enter the United States of America and Europe.

In terms of innovation, Silfab has developed distinctive products, such as the surgical aspirator for secretions or the feminine heating pad, designed for menstrual cramps. According to the company's marketing manager, Roxana Martínez, the nebulizer lines are the most recognized and the company has even manufactured for brands that at some points have been the most commercial in the country.

In 2023, its Pixel piston nebulizer won the Good Design Award, granted by the National Ministry of Economy, as an innovative national product. In this regard, Javier Munin said: "We are proud of our legacy and of continuing to lead in the healthcare sector".



Silvestrin Fabris S.R.L. (SILFAB)

Autonomous City of Buenos Aires, Argentina.

Manufacturing of technological products for health in homes.

-Annual production capacity: 200 thousand nebulizers, 100 thousand air chambers, 20 thousand aspirators; 100 thousand heating pads and hygiene articles.

-Production plant: 6,000 m²

• HS CODE (NCM):

-9019.20.20 / Nebulizers and air chambers.

-9018.90.99 / Vacuum cleaners



TOMORROW FOODS S.A.U.



Precursors in plant proteins and sustainable bio-inputs with traceability



The demand for alternatives to animal proteins is constantly growing. Meat analogues represent a booming category that seeks to replicate the organoleptic and nutritional qualities of meat without using ingredients of animal origin.

Argentina is a country with great potential to satisfy this global trend. On this path, the National Institute of Industrial Technology (Instituto Nacional de Tecnología Industrial - INTI) has a vast experience in creating tools and methodologies to understand market needs, promote innovation in design, the diversity of options available to consumers, and deepen its focus and commitment to the continuous improvement of the user experience in the sector.

On the conscious food horizon, Tomorrow Foods is renowned for its capacity for innovation and sustainability. Endorsed by Certified Sustainable Agriculture (ASC), the company emerges as a strategic partner for the food industry, offering plant-based protein solutions and innovative bio-inputs, driving an increasingly conscious consumption.

In order to broaden its vision and incorporate innovation contents through design, the company participated in the second edition of the Design and Innovation Program in 2023. This program aims to provide tools that facilitate working on real cases to advance in the development of a project, explains Luciana Torregiani, member of the



Design Management Department of INTI's Industrial Design Center, and continues: "The company was accompanied in the search for and development of a new concept of plant-based food aimed at improving the sensory experience of this type of products". This project is pointed at enriching the experience of current users and at the same time expanding the market with new consumers. From this participation, they were able to advance in the creation and development of an innovative criterion.

INTI's Design and Innovation Program has not only enriched the company's product portfolio but has also redefined the standards of excellence in the food industry, promoting a new era of plant-based food, Agustín Belloso reflects, general manager of Tomorrow Foods.



"According to the latest industry forecasts, the market value of plant protein-based products as an alternative to those of animal origin will increase fivefold in the coming years, approaching \$104.7 billion by 2032".

Source: Statista

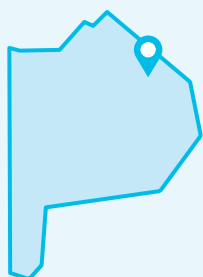
The most outstanding products are vegetable protein solutions (VPS) - dry premixes, where the vegetable protein is derived from legumes (peas, beans, and chickpeas), and function as meat analogs (beef, poultry, and pork) - which, combined with other functional ingredients, stimulate food companies to launch new plant-based products, speeding up design and development times. These are dry foods, so their logistics are simple, and their shelf life is long (more than 12 months). Its product portfolio also includes dairy analogs, dressings, beverages, and sports supplements.

Their bioinputs have several uses, such as the reproduction of microorganisms in laboratories in different industrial fields, particularly in biotechnology. For example, they produce functional protein for clarification of wines, beers, and other beverages.



Belloso points out that the company has a presence in the Peruvian and Uruguayan markets, and given the growing demand for plant based foods in Latin America, it would be a great opportunity for the company to satisfy it with local and sustainable ingredients, since all plant based products in the region are developed with inputs that come from countries outside the American continent without traceability.

“Tomorrow Foods stands out for being the first company in Latin America to offer sustainable products with traceability from the field to the factory. All its products have a QR code on their packaging that, when scanned, describes the entire value chain, from planting date, growing conditions, environmental and social impact, and transformation in the different links; something highly valued in foreign markets where the demand for healthy protein foods is increasing day by day, all over the world”, adds Belloso.



TOMORROW FOODS S.A.U.

José León Suarez, Partido de Gral. de San Martín, Buenos Aires

Company dedicated to the research, development and production of solutions plant-based for the global food industry.

-Production plant: 1200m²

-Annual production capacity: 1000 tons

• HS CODE (NCM):

-2106.10.00.000Z / Derivatives of protein concentrates. Protein concentrates and textured protein substances. Food preparations not elsewhere specified or included.



EMOV S.A.S.



Argentine pioneers in electric bicycles



In the era of sustainable mobility, bicycles are a versatile and efficient option for urban and rural travel. In this sense, it is worth mentioning EMOV, a distinguished company in the Argentine industry, with more than 15 years of experience in the design and production of bicycles with electric pedal assistance. Recognized both nationally and internationally, EMOV is identified for being one of the few companies in the world that offers hybrid models, ideal for various urban and mountain environments. Its products stand out for their excellent quality, original design, usability and affordable costs.

✓ **“The electric bicycles market size is estimated at USD 34.98 billion in 2024 and is expected to reach USD 51.78 billion by 2029”.**

Source: Mordor Intelligence

EMOV's flagship model is the Brina 2, which has conquered the market with an innovative concept and sophisticated features. Winner of the prestigious “Seal of Good Design” award, granted by the Ministry of Economy in 2022, this bike stands out for its lightness, its minimal weight of 21 kg. and its advanced technology. It is a very versatile ebike, for all terrain and multiple uses. It is elegant and smooth-running for city streets, powerful and resistant for mountain roads.

Its components include a one-piece carbon fiber frame, a 350-watt direct-drive motor, a 3.6 kg lithium battery with fast charging in just 3 hours at home, hydraulic brakes and high-performance LED front and rear lights. In addition, its integrated handlebar display provides access to crucial information such as time of use, battery charge and speed.

Its aerodynamic design and oblique geometry make it much more stable and comfortable than the average conventional and electric bikes. Its hyper-smart app available for IOS and Android cell phones, gives it the maximum intelligence of the current ebike market, ideal for those seeking total connectivity and useful and intelligent information. Among its functions are GPS, map navigation and geolocation, direct service request with EMOV, among many others.

With a one-year warranty and the first free maintenance after 60 km, the company is committed to the satisfaction and safety of its customers, backed by certifications such as IRAM standards 40020 and 60020, as well as patents granted by the National Institute of Industrial Property (INPI).


Gilda González, a member of the User Experience team at the Industrial Design Center of the National Institute of Industrial Technology (Instituto Nacional de Tecnología Industrial - INTI), **describes the technical assistance process focused on usability and user experience.** She says that the laboratory **focused on evaluations ranging from the presentation of information in the instruction manual and marking of the product, to the detailed analysis of its materiality, ergonomics, and shape.**

In addition, **intensive usability tests were carried out with volunteers, where the effectiveness, efficiency and satisfaction of the product's user experience were evaluated, with a precise focus on every detail.**

On the other hand, Gabriel Muñoz, visionary founder of the company, reflects on the assistance provided by INTI. He emphasizes that the resulting report offered concrete data that addressed key aspects of the market, safety, usability, and technical improvements, covering aspects ranging from the user's operating position to connectivity with the application. It also highlights the importance of improvements aimed at simplifying the user experience, which has enabled them to start developing new advanced versions of the Brina 2 model.

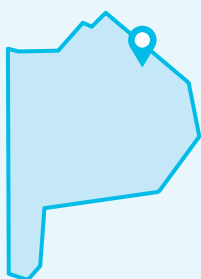
In their words, "We feel genuinely valued as a company by INTI, whose recognition translates into the tangible results obtained from this study, boosting our capacity for professionalization and continuous evolution".





EMOV's vision goes beyond Argentina's borders. With a solid exporting experience to the United States of America countries, the company aspires to expand its presence in key markets such as Europe, where interest in Argentine bicycles is growing, and in countries such as the United Arab Emirates, Dubai, and Japan, where this sporty and distinctive product finds a niche eager for innovation.

Backed by a transversal approach to design and a philosophy focused on user experience, EMOV products offer a unique combination of aesthetics, functionality, and enjoyment. Riding an EMOV bicycle is an unforgettable experience, says Gabriel Muñoz, founder of the company, who adds: "We are pioneers in electric mobility in Argentina, and our track record is ratified by the loyalty of our users, who continue to choose us".

**EMOV S.A.S.****City Bell, Buenos Aires***Manufacturers of electric mobility.*

-Annual production capacity: 360 bicycles

-Production plant: 100m²**HS CODE (NCM):**

-8711.60.00 / Motorcycles (including mopeds), and velocipedes equipped with auxiliary motor, with or without sidecar; sidecars. Powered by electric motor.



CASIBA S.A.



Leader in equipment and solutions for air treatment and purification



Nowadays, air quality in industrial environments is crucial to guarantee the health and safety of workers, and to comply with current environmental regulations. The demand for specialized equipment and solutions for air treatment and purification has experienced a significant increase, being essential to have efficient and reliable technologies.

In this field, Casiba S.A. is one of the leading companies in the Argentine market dedicated to the production of filters and air treatment units. Key concepts such as innovation, quality, commitment to the environment and the ability to offer customized solutions for different industrial environments are pillars for the company.



Data Bridge Market Research analyzes that the global air purifier market of \$14,230.00 million in 2022 is expected to reach \$25,048.41 million by 2030, growing at a CAGR of 7.6% during the forecast period of 2023 to 2030.

With more than 70 years in the industry, this pioneering company has established itself as a reference and strategic partner for entities seeking effective solutions to ensure air purity in their facilities, particularly in the pharmaceutical and food sectors, laboratories, hospitals, and cement plants, among others, where the proliferation of microbacteria is a major concern.

Casiba is ISO 9001:2015 certified in all its plants and thus guarantees high quality standards in its processes and products. Its air treatment units, equipped with different filtering stages according to customer needs, represent an innovative solution for industries that require contaminant-free environments. These units can purify air up to 99.5%, eliminating viruses and bacteria, either by recirculation or through forced ventilation systems, backed by a comprehensive after-sales service that guarantees satisfaction. It also offers UV lamps for bacterial decontamination processes, ensuring a category A1 cleanroom environment when this is necessary.

A key differential of the company is its remote monitoring system, which makes it possible to verify the operation and air quality of the equipment installed anywhere in the world. This focus on technology and customization distinguishes the company in the market, allowing it to meet the most demanding needs of its customers in a unique and complete way.

In this same sense, the company contacted INTI to optimize the operation of a self-cleaning dust collection machine, adapted to user profiles and contexts. To this end, it joined the Product Performance in Use Program, run by the User Experience Department of the INTI's Industrial Design technology center. This proposal, which began in 2023, is aimed at companies in the capital goods sector to improve the user experience and efficiency of products, with the objective of promoting innovation and industrial development.

In this case, INTI specialists worked on an exhaustive analysis of the interfaces and the measurement of the efficiency and satisfaction of users when interacting with the equipment. Victoria Díaz, head of INTI's User Experience Department, explained: "Based on the diagnosis obtained and the recommendations for improvement on the self-cleaning dust collection machine, Casiba implemented the suggested changes, both in the information of use and the design of the product, which resulted in a significant improvement in its usability".

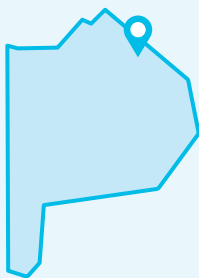


For her part, Johaida Astudillo, responsible for quality at the company, expressed her satisfaction with INTI for the transforming impact obtained: “Thanks to the joint work, today we are more critical when designing solutions for customers. We have a different look in relation to the usability and practicality of the final product”. The company’s reference also points out that they have used the recommendations of the Institute as part of the continuous improvement of their processes, extending it to the rest of the equipment, as well as the solutions in air treatment, considering the interface with the end user in the most efficient and effective way as a vital element to ensure maximum utilization.

“This new critical eye allows us to contribute more significantly with innovations that improve air quality. The advice and guidance provided by INTI has not only driven tangible improvements in the company but has also strengthened its commitment to innovation and positive community impact”, reflected Astudillo.

In addition to its established presence in Argentina, Casiba has expanded its reach to Latin American countries such as Bolivia, Paraguay, Peru, and Uruguay. And it aims to enter the Brazilian and Chilean markets, where the demand for air treatment is also significant.

From design to installation and validation of clean air sectors, the firm offers a complete and specific service, differentiating itself in the market for its customer-centric approach and excellence in every step of the process. In this sense, Astudillo summarizes: “We offer standard products and solutions, but the real strength lies in our ability to adapt and propose the best customized solutions for each client”.



CASIBA S.A.

Caseros, Buenos Aires

Manufacturers of filters and air treatment units.

-Annual production capacity: 105,000 units of finished product. It has 2 production plants of 1500 m2 and 3120 m2 respectively.

• HS CODE (NCM):

-8421.99.10.000A / Air filters

-8421.39.90.900T / Motorized impulsion module

-8543.70.99.990Z / UV lamps





International Cooperation



In a global context where collaboration and knowledge exchange are essential to face the challenges of the 21st century, the Technical Directorate of Industrial Design of the National Institute of Industrial Technology (Instituto Nacional de Tecnología Industrial - INTI) has participated in the recent initiative “Sustainable transformation for the competitiveness of MSMEs”, developed within the framework of the European Union - Latin America and the Caribbean Triangular Cooperation Window.

This initiative, which includes INTI as coordinator, the Ministry of Industry, Commerce and MSMEs (MICM) of the Dominican Republic, the Science Center and Antioquia Technology (CTA) of Colombia and LEITAT Technological Center of Spain, is a collective effort to strengthen the competitiveness of micro, small and medium-sized enterprises (MSMEs).

Under this transcontinental collaboration, four central working axes were addressed: digital transformation, ecological transition - circular economy, innovation culture in organizations and continuous improvement processes. The central objective was to share knowledge and experiences to develop tools that drive digital transformation and promote the circular economy, always with a focus on responsible production and environmental preservation.

The participation of INTI’s Industrial Design team focused on the Culture of Innovation in Organizations axis. Its main mission was to cultivate a continuous innovation mentality capable of inspiring transformational changes in business structures. Throughout the initiative, **key concepts such as the strategic stance towards innovation, design thinking as a driver of innovation, teamwork, and the importance of understanding the innovation ecosystem in which organizations operate were explored.**

In collaboration with LEITAT Technological Center, INTI conducted a virtual training on Advanced Manufacturing, aimed at exploring the essential concepts, available technologies, and their practical applications in the day-to-day life of companies, with the objective of boosting the adoption of innovative practices in the business fabric.

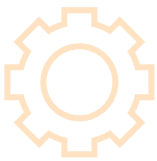
INTI’s participation in this initiative reflects its ongoing commitment to technological development and innovation in Argentina and its international projection as a key player in promoting the competitiveness and sustainability of MSMEs.





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