

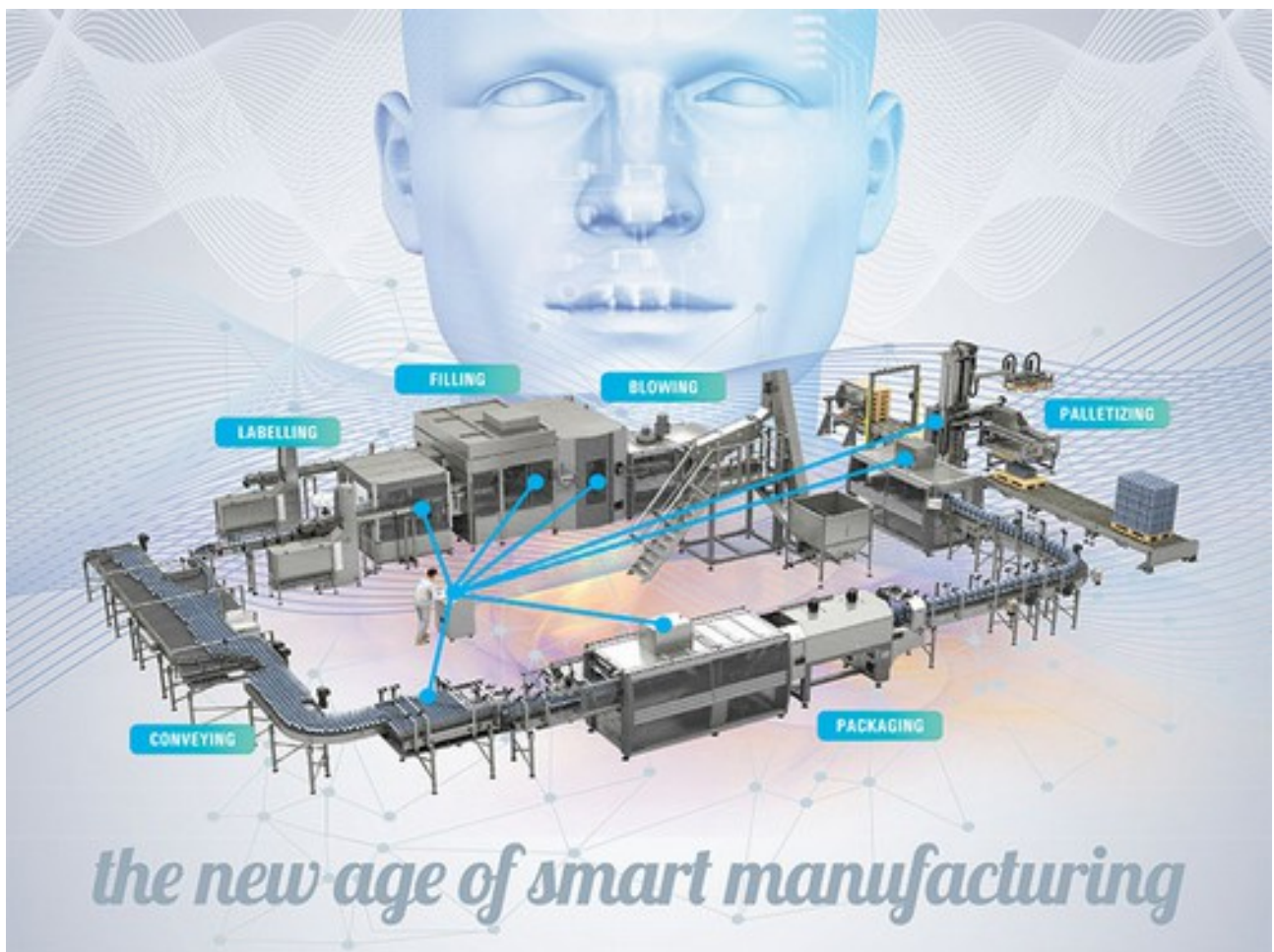


SMI S.p.A.

GLOBAL COMPACT

Communication On Progress

Year 2017



the new age of smart manufacturing

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The United Nations Global Compact's 10 Principles

The United Nations Global Compact, also known as Global Compact or UNGC, is a strategic policy initiative but also the world's largest voluntary corporate citizenship. Announced in 1999 by Kofi Annan and officially launched by the United Nations in 2000, it aims at encouraging businesses to commit themselves in adopting responsible and sustainable policies, in line with ten core principles in the areas of human rights, labor, environment and anti-corruption.

Since 2003, one of the Global Compact commitments establishes that, every year, all participating companies have to publish a Communication On Progress (COP). This disclosure expects businesses to share their efforts in implementing the United Nations Global Compact and its principles.

SMI S.p.A., who joined the Global Compact in 2008, is now fulfilling its duty, and communicating on its own efforts and accomplishments through its COP.

Global Compact 10 Principles:

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights;

Principle 2: make sure that they are not complicit in human rights abuses.

Labor Standards

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labor;

Principle 5: the effective abolition of child labor;

Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility;

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

About SMI S.p.A.

SMI designs and manufactures a wide range of bottling & packaging machines as well as systems for food & beverage, household cleaning and personal hygiene products and chemical and pharmaceutical products, able to meet production requirements up to 33,600 bottles per hour.

These machines are marketed both individually, as stand-alone units, and integrated, forming a complete turnkey line. Globally speaking, SMI is the leading manufacturer of automatic packers for secondary shrink film and corrugated cardboard packaging, and one of the leading manufacturers of rotary stretch- blow moulders for the production of PET bottles.

98% of SMI's systems, which are entirely produced in Italy, are exported to **130 foreign countries** where the company is present with its own direct subsidiaries and also through a network of agents and dealers who provide commercial and technical support to more than **6,300 customers**, which include multinational companies such as Coca-Cola, PepsiCo, Nestlé, Danone, Unilever, Inbev, Heineken, Kraft (just to name a few) and many local, regional and national bottling and packaging companies. SMIGROUP is the parent company of the Group, which includes subsidiaries SMI, ENOBERG, SMIPACK, SMIMEC, SMITEC, SMILAB, SMIENERGIA and SARCO RE, as well as the foreign branch network.

With a workforce of **763 people** and an industrial area of **76,315 m²** including offices and production departments, SMI Group achieved a sales volume of **146 million Euros in 2017**.

In 2017 SMI celebrates its 30th anniversary. That's a crucial goal that the company would like to share with all the stakeholders who contributed to it.

Since the very beginning SMI's path to success has been characterized by countless challenges and innovative ideas which have made the history of packaging and have turned the company into a reference point for many businesses of the food & beverage, dairy and detergents sectors. The bottling and packaging machines manufactured by SMI are increasingly more inspired to the principles of **Industry 4.0 and the Internet of Things (IoT)** platforms for totally automated production systems.

SMI's latest technical developments are marked by "the new age of bottling, packaging and smart manufacturing" concepts and by the launch of the new ERGON series of primary, secondary and tertiary packaging machines satisfying production requirements up to 33,600 bottles/hour. Moreover, SMI offers today cutting-edge technologies for both the supervision and automation of bottling lines, the monitoring of production cycles, data collection and a more efficient and environment-friendly industrial process management.

The constant innovation is the driving force of SMI products' success enabling to design, manufacture and offer to thousands of clients worldwide state-of-the-art machines and systems capable of adapting easily and efficiently to the requirements of an ever growing marketplace.

The latest developments resulted in even more compact, ergonomic, eco-friendly machines, such as the new EBS K ERGON rotary stretch-blow moulder and the ECOBLOC® K ERGON integrated

system, cutting-edge solutions fit to be installed even in smaller bottling plants.

Thanks to the EBS K project SMI was selected as one of the 11 National Winners among 189 businesses representing Italy in The European Business Awards, Europe's largest business competition, sponsored by RSM.

SMI was named as a 'National Winner' by independent judges from a list of almost 3,000 businesses called 'Ones to Watch', resulting from a list of candidates of over 110,000 European companies.

SMI was chosen by a panel of independent judges including senior business leaders, politicians and academics as the best in Italy in the category "Awards for Innovation".

Mission

Our principles

- We are a customer-oriented organization engaged in the design and manufacture of high technology bottling and packaging systems up to 33,600 bottles / hour, featuring the best price / quality ratio on the market.
- We want to provide our customers worldwide with innovative solutions capable of fully meeting their demands in terms of efficiency, reliability, flexibility and energy saving.

Our customers' satisfaction

- We provide our customers with quality products and services they can always rely on.
- We undertake to maintain and enhance our customers' satisfaction.
- We are constantly in search for the best solution to meet our customers' demands when we develop a new product or we improve the existing ones.

Our staff's undertaking

- The success of our business is based on the enthusiasm, the engagement, the ability, the skillfulness, the creativity and the spirit of initiative of each individual working for us.
- The sharing of the same goals is a key factor for our organization's advance.
- The merger of the skills of all members of our staff is a vital resource of our company in order to achieve the best results.

The challenge of changes

- We exploit all opportunities generated by changes.
- We change pro-actively the way we carry on our activity, so as to be successful forerunners in an ever-evolving world.
- We consider innovation as a key factor for the continuous enhancement of our wide spectrum of solutions.

Our History

The SMI Group's origins date back to the mid-'70s, when Luigi Nava sets up a machine shop in San Pellegrino Terme (Bergamo). In the beginning the craftsman's small enterprise activity is represented by machine finishings for third parties. Some years later such activity is enlarged to the maintenance and repair of machinery and equipment employed in the bottling and packaging lines of the beverage industry.

1987: the first packer (called "shrinkwrapper") comes to light: APET series is born and immediately catches the market's attention. In the same year, in addition to the "F.lli Nava" machine shop, the limited liability company SMI (Sistemi Macchine Impianti) Srl is established.

1989: SMI officially presents its shrinkwrappers in the occasion of "SIMEI" international exhibition in Milan. In the same year SMI also manufactures the first overlapping cardboard sleeve multipacker of the MTB series (then MP), achieving the speed of 100 packs/minute.

The '90s mark the phase of impetuous growth in the manufacturing and sales activities. SMI rapidly climbs the ranking of the largest producers of packaging machines, thanks to a revolutionary mechanical and electronic technology which allows reaching higher and higher output speeds.

1994: the year of the big change: SMI Srl moves its headquarters to San Giovanni Bianco (Bergamo) in a modern industrial complex of 7,600 sqm (in the following years they will become 65,000 sqm), which allows a remarkable increase in the manufacturing capacity. In year 1994 the machine production bounces to over 100 units and the workforce goes up to 90 people.

1997: SMIPACK Srl is established as a SMI's subsidiary company for the manufacture of L-seal hood machines and sealing bar shrinkwrappers.

1998: SMI starts Smiline project, a company division created for the production of conveyors and line logistics systems.

1999: SMI sets up Smiform, a unit specialized in the production of rotary stretch-blow moulders to produce PET containers.

2000-2010: The years of the internationalization and advanced research with the establishment of a widespread network of offices abroad (to provide technical and commercial assistance).

2006: a year of extreme importance to SMI: the 3,000th shrinkwrapper is delivered and meanwhile the first 20-mould stretch-blow moulders comes into service.

2007-2008: the SMI Group undergoes a deep internal reorganization, which casts solid foundations to efficiently face the market's newer challenges: production cost optimization, revised internal management procedures and advanced innovation programs are the key points.

2008: SMI launches SMILAB project, the technological center, whose activities are "Research & Innovation", "Training" and "Services to Enterprises". All SMILAB activities aim at innovative and sustainable solutions in the industry, energy, social and cultural domains.

2009: SMI sets up the new Smipal division and at Drinktec 2009 presents the APS 3000, an innovative automatic palletising system for end-of-line operations up to 300 layers per hour.

2010: Smiform expands its product range with ECOBLOC® integrated systems, combining in one machine stretch-blowing, filling and capping technologies and ECOBLOC® PLUS integrating the labelling machine as well.

2011: SMI installs a complete water bottling line at "Fonte Stella Alpina" production plant, called SACS (Stella Alpina Cost-Saving), capable of outputting up to 14,400 bottles/hour. It features state-of-the-art technology, compact size, low energy consumption and high operating efficiency.

2012: SMI celebrates its 25th anniversary with the slogan "constantly innovating the packaging industry since 1987". Furthermore, Smipal brand expands its product range of automatic palletisation systems with the APS 1035 series, equipped with a row pre-formation conveyour and a picking gripper and with the APS 3100 L series, equipped with a continuous in-line layer pre-formation system.

2013: at the Drinktec fair in Munich, SMI presented the fastest stretch-blow moulder in the world, capable of producing up to 2,500 bottles per hour per mould.

2014: In April SMI's employees move to the new headquarters of the Group, which houses offices and manufacturing facilities on a 65,000 m² area. The new site, resulting from the renovation of former Cartiera Cima papermill's historical workshops, boasts modern plants generating electrical power from renewable energy sources such as water and sun.

2015: SMI launches the new ERGON series of SK shrinkwrappers, introducing onto the market a newly-conceived range of packers that combines advanced technology and ergonomic design.

2016: At K exhibition in Düsseldorf SMI presents the new EBS ERGON series of fully electronic rotary stretch-blow moulders, equipped with a new energy-saving preform-heating module and with motorized stretching rods.

2017: At Interpack exhibition in Düsseldorf SMI presents the new EBS K ERGON series of ultra-compact, fully electronic rotary stretch-blow moulders, equipped with a new energy-saving preform-heating module integrated with a blowing carousel featuring motorized stretching rods.

Moverover, SMI also launches the SWM supervision, automation e control system based on an open and flexible modular enterprise web portal; developed according to IoT (Internet of Things) and Industry 4.0 principles, it combines the functions of collecting and monitoring bottling plants' production data, with a set of tools that simplifies the monitoring and management of the entire manufacturing system, improving productivity, safety and cost reduction, and ensuring an excellent return on investment.

SMI CEO's statement

Since 2008 SMI S.p.A. has adhered to the United Nations Global Compact and is committed to respect its 10 Universal Principles on Human Rights, Labor, Environment Standards and Fight Against Corruption. During last years, our company is developing an huge number of actions to implement these principles in our corporate policy, which involves our employees, suppliers and customers. All SMI Group's business decisions translate into a number of operating strategies that reconcile our growth targets with the economic and environmental sustainability of the products we make and the territory in which we operate. Our commitment in this regard is expressed each and every day in our intensive research and development of new technologies, to offer bottling and packaging solutions to our customers which comply with the increasingly stringent parameters of production cost reduction and energy saving. The centrality of the issues concerning sustainable development and energy conservation has also affected the entire organizational structure of our company.

SMI Group's new headquarters, extending over an area of **76,315 m²** is a unique example of zero impact buildings, built in accordance with "Architecture and Environment" guidelines, which led to the adoption of a set of innovative solutions to minimize energy consumption as well as the carbon footprint of SMI's new industrial complex. The new assembly plants are equipped with a photovoltaic roofing with an installed power of 1.5 GW, which allows reducing carbon dioxide emissions in the surrounding environment by about 600 tons per year. There is even a hydroelectric power plant inside the building which has an installed power of 1 GW and generates "green energy" from the Brembo River that flows nearby. Thanks to all this, the SMI Group tangibly testifies how the smart integration between technological innovation and strategic vision can lead to fully sustainable models of industrial development from an economic, social and environmental point of view. Within this document are our task to define our global objectives, responsibilities and achievements in the implementation of some of the 10 Principles.

Paolo Nava,
President & CEO
SMI S.p.A.



Communication On Progress

Year 2017

www.smigroup.it

HUMAN RIGHTS

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.

Actions and results

The Universal Declaration of Human Rights is the basis on which we create our daily work.

Our company fully recognizes the right of all human being to express her/his own opinion, culture, religious and sexual preferences, political orientation and any other aspect of private life.

Our employees operate in a fair and healthy working environment in accordance with the Italian law provisions as per the D.L. 81/2008 and D.L. 106/09 bills governing the safety at work. Both bills, which combine, amend and enhance the previous regulations provided by decrees n. 626/94 and 388/03 for safety and health at work, have been immediately acknowledged and implemented by our company. As far as our foreign branches personnel is concerned, we fully comply with labor rules and regulations in force in the country where the branch is located.

Our company promotes the individual and professional growth of each worker by creating a socially stimulating environment, where anybody can benefit from a continuous exchange of ideas, knowledge, experiences.

Constantly, our employees take part in training courses focusing on a wide spectrum of matters in order to be informed and updated about new rules, enhancements, progresses and opportunities.

In the training activity, SMI avails itself of the contribution and partnerships with companies, communities, private and public institutions, universities, research centers and other organizations operating locally, nationally and internationally.

Our mission is based on the full satisfaction of the needs of customers and employees; therefore, our actions and strategies are developed in accordance with these principles. The constant goal of our organization is to maintain and improve the results achieved in this field.

Principle 2: Businesses should ensure that they are not complicit in human rights abuses.

Actions and results

SMI fully respects current laws and regulations governing workers' employment and rights. Our organization refuses to keep business relationships with third parties (customers, suppliers, etc.) which do not fully comply with the same rules. We periodically ask our business partners to fill in detailed forms where they have to state their policy in terms of recruitment and employment.

LABOR STANDARDS

Principle 3: Businesses should uphold the **freedom of association and the effective recognition of the right to collective bargaining.**

Actions and results

Our company fully respects and promotes the freedom of association and trade unions activity in the company sites. SMI employees can freely join the trade union association they prefer and are entitled to elect the RSU members (united trade union delegates), who are entrusted to deal with all matters related with the collective bargaining between the employees and the employer. Through workers' meetings and committees, we create an ideal dialogue between the company executive management and the company workforce, both at the headquarters and at our subsidiaries all over the world.

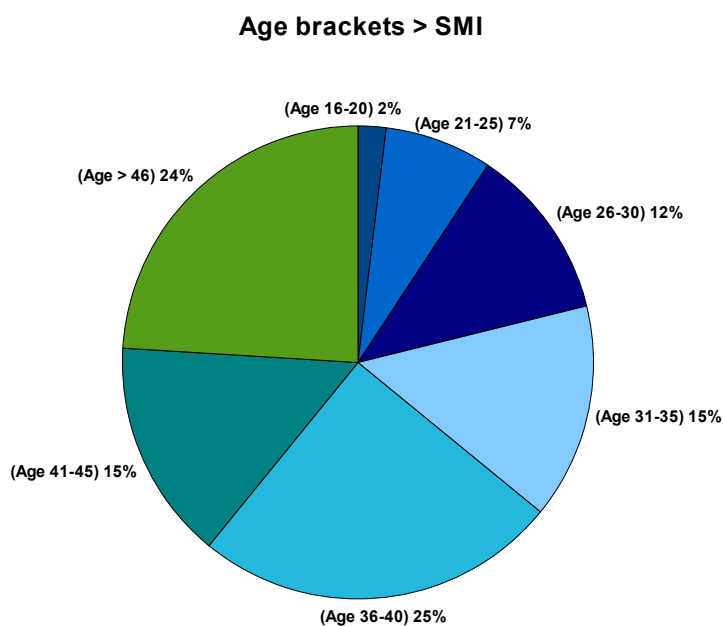
Principle 4: The elimination of all forms of forced and compulsory labor;

Principle 5: the effective abolition of child labor; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

Actions and results

SMI fully respects current laws and regulations governing workers' employment and rights. Our company fully recognizes each individual's right to express his / her own opinion, culture, religious and sexual preferences, political orientation and any other aspect of private life. All of 763 employees of SMI and its subsidiary companies are aged 18 or older, with an average age of 38,68.



ENVIRONMENT CARE

Principle 7: Businesses should support a precautionary approach to environmental challenges.

Actions and results

Our company pays great attention to environment-related issues and is always looking for eco-friendly solutions in the daily management of its activity.

SMI S.p.A. and the other companies belonging to the SMI Group (SMIGROUP – ENOBERG -SMIPACK – SMILAB – SMIMEC - SMITEC - SMIENERGIA – SARCO.RE) have always been considering sustainable growth as one of the essential values of their mission, in order to achieve a close harmony between industrial activity, product quality, environment protection and safety at work. The companies of the SMI Group have adopted a Quality-Environment integrated management system, in compliance with UNI EN ISO 9001:2015 (Quality Management System) and UNI EN ISO 14001:2015 (Environment Management System). SMI S.p.A. has also adopted a Safety Management System, in compliance with the international standard BS OHSAS 18001:2007. The OHSAS 18001 is a British Standard (BS) for occupational health and safety management systems. It exists to help all kinds of organizations put in place demonstrably sound occupational health and safety performance. It is widely seen as the world's most recognized occupational health and safety management systems standard. The OHSAS Project Group published the OHSAS 18000 Series in 1999. The Series consisted of two specifications: 18001 provided requirements for an OHS management system and 18002 gave implementation guidelines. The OHSAS 18001 specification was updated in July 2007. Among other changes, the new specification was more closely aligned with the structures of ISO 9000 and ISO 14000 so that organizations could more easily adopt OHSAS 18001 alongside existing management systems. Additionally, the 'health' component of 'health and safety' was given greater emphasis.



Quality, Environment and Safety are three essential values to be taken into consideration during the production process, in order to create a harmonious co-existence between individuals, technology and nature and for offering a valid contribution to customers and to social development. One of the SMI Group's priorities is getting the company's workers, suppliers, customers and the public involved with the principles and values of its corporate mission in terms of environmental respect and safety at work.

In order to pursue its policy, the company has adopted a series of strategies, better described in the **Quality – Environment – Safety Policy**.

Among the many innovations introduced in our organization, it is worth mentioning the following initiatives:

- the company cars fleet has been recently upgraded with new vehicles featuring more efficient engines and low emission of CO₂;
- SMI has set up the subsidiary company SMIENERGIA, which has an installed power of 1 GW and generates “green energy” from the Brembo River's waters that flow nearby.
- our office buildings and manufacturing shops are heated/cooled by a fully automated self-adjusting air conditioning system, equipped with special sensors detecting the ambient temperature and humidity, which keeps work environment at constant conditions in all seasons;
- the new 65,000-m² head office of the SMI Group is the result of a renovation project based on a careful study of environmental issues and impact on the territory, which focused on the “Architecture and Environment” combination and which led to the adoption of a set of innovative solutions to minimize energy consumption as well as the environmental impact of SMI's new industrial complex. The new assembly plants are equipped with a photo-voltaic roofing with an installed power of 1.5 GW, which allows reducing carbon dioxide emissions in the surrounding environment by about 600 tons per year. Among the energy-efficient facilities installed in the new headquarters, there is also a solar thermal system for heating the water used in the company service areas (bathrooms, gardens, etc.).
- SMI has implemented a differentiated waste disposal program allowing to minimize the environmental impact of production process wastes and to improve the waste material collection and recycling.



SMI regularly measures the greenhouse gases it emits and identifies the possible areas in which it can reduce its "carbon footprint" such as, for instance, by encouraging the use of environmentally sustainable materials, pursuing greater energy efficiency and developing new low-power products. The ISO 14064-1 guidelines inspired SMI to that effect. Specifically, the survey that we conducted in 2014 on the company's environmental impact was audited by CSQA which found, thanks to the measures taken by SMI, a reduction of about 85 tons of CO₂ equivalent released to the environment compared to a total of about 920 tons. It is also interesting to point out that the installation in 2014 of three photo-voltaic systems at the facility in Via Ceresa actually led to budget improvements. The verification was validated internationally in October 2015 by CSQA , when SMI obtained the relating certificate. The calculation was made by analyzing in detail both direct emissions of GHG (Greenhouse Gas), resulting from the combustion of methane gases, transport fuels, technical gases used and cooling gas leaks and indirect emissions linked to energy consumption.



Principle 8: Business should undertake initiatives to promote greater environmental responsibility.

Actions and results

In order to reduce the impact on the environment, SMI encourages a wise use of resources and energy through the organization of events and conferences, called “Smilab Days”, during which high profile speakers – researchers, academics, scholars and businessmen – discuss key technical and scientific issues, such as nanotechnologies, electronic paper and renewable energies. The “E-Paper Day” took place by virtue of the collaboration between SMILAB and CREDEMTEL, a company belonging to CREDEM (Credito Emiliano) Banking Group, a provider of on-line crediting and payment management services to banks and businesses via its CBI remote banking service since 1989. The main topic of discussion was “document digitalisation”, that is to say the importance and state of critical urgency of keeping an “electronic replacement copy” of corporate documents. The paper-based model of modern society has become unsustainable from an environmental point of view, since the huge quantity of paper required is among the main causes of the Earth's deforestation.

The “Energy Day” conference is the result of SMILAB growing commitment towards the development of innovative technologies to produce energy from renewable sources. Renewable energies (solar, wind, water, geothermal) represent the main path towards global economic growth in the future, as, as well as being renewable, they also have a zero environmental impact given that they do not produce greenhouse gases or polluting waste. Among the most notable projects developed by SMILAB in the renewable energy sector are the “Solar Park Control System Project” and the “Public LED Lighting Project”.

The “Mobility Forum” took place with the collaboration between SMILAB and Fraunhofer Gesellschaft, the Europe’s largest application-oriented research organization. The main topic of discussion were technical, economical, environmental and legislative aspects related to the mobility in Europe. Railway, road and air transport are in fact highly important for the international economic development and can contribute to the strengthening of each company.

Principle 9: Business should encourage the development and diffusion of environmentally friendly technologies.

Actions & results

SMI "R&D" Center is constantly committed in searching new solutions and in developing new technologies which assure machine enhanced performances, high environmental compatibility, low energy consumption and low total costs of operations (TCO). Among the many innovations recently introduced in our product range, it is worth mentioning:

In 2007 SMI introduced on its SR series of stretch-blow moulding machines the innovative ARS (Air Recovery System) device, now assembled on all SR models as a standard equipment. The ARS device allows to recover up to 40% of the high-pressure compressed air used during the PET plastic bottle manufacturing and to save up to 20% of the electrical power absorbed by the machine in the stretch-blow moulding process.

In 2009 SMI displayed at Drinktec exhibition in Munich a newly designed SR 8 stretch-blow moulding machine, capable of producing up to 14,400 bottles/hour. This equipment was designed especially for the production of lightweight 0.5 L PET plastic bottles for water and soft drinks and it allows to manufacture robust and versatile containers weighing only 9.94 gr, in comparison with the widely used 15-16 gr. bottles. From the environment point of view, the huge reduction in the bottle weight (-30/40%) turns into a much lower quantity of plastics input in the ecosystem (PET comes from petroleum), a lower consumption of the electrical power required in the bottle-manufacturing process and in a more environment-friendly waste disposal and recycling of empty bottles.

In 2010, SMI introduced a new methane-heated shrinking tunnel to be joined with its shrink-wrapping packaging machines; in order to "shrink" the plastic film wrapped around a cluster of beverage or food containers, this tunnel employs the heat generated by the combustion of natural gas in place of commonly used electric resistances. Since electricity is largely produced by burning traditional combustibles, SMI new tunnel allows to reduce air pollution as natural gas is smog-less and pollution-free.

In 2011 SMI displayed at Interpack exhibition in Dusseldorf (Germany), the new ECOBLOC® PLUS system: a compact, cost-saving and eco-friendly integrated solution. SMI laboratories' relentless engagement in Research and Innovation projects has led to the launch of this machine, featuring integrated systems of stretch-blowing, filling/capping and labelling of PET containers with capacity from 0.2 to 3 L, running up to 36,000 bottles/hour. ECOBLOC® series stand out for compact and modular frame; state-of-the-art technologies; cost-effectiveness; eco-friendly solutions; high level of hygiene and cleanliness and considerably lower energy consumption.

In 2011 SMI also installs a complete water bottling line at "Fonte Stella Alpina" production plant, called SACS (Stella Alpina Cost Saving), capable of outputting up to 14,400 bottles/hour. It features state-of-the-art technology, compact dimensions, low energy consumption and high operating efficiency. More in details:

- up to a 20% reduction in the purchase, running and maintenance costs of the machines;

- lighter packaging material; SACS project stands out for the considerable reduction of primary and secondary packaging material;
 - » up to a 30% reduction in the plastic (PET) used to produce bottles, thanks to the design of new "ultra-light" containers, one for 0.5L and the other for 1.5L, obtained by stretch-blow moulding preforms of 11g and 23g respectively;
 - » up to a 50% reduction in thermo-shrinkable film, achieved by equipping the shrinkwrapping machine with a new knife with a motorised blade controlled by digital servo-drivers, which allows for the use of shrink film with a thickness less than 30 micron (as against the 50- 60 micron previously used by Stella Alpina) for the 3x2 format of 0.5L bottles;
- low water and energy consumption: the consumption of water used for cleaning the plant has been reduced by up to the 90%, thanks to the "baseless" technology applied to the filler, which allows for the base of the machines to be "freed" from moving components and mechanical parts, where dirt and waste from the production process usually accumulates; Also the energy consumption of the whole production line has been lowered by up to the 15%, thanks to the application of state-of-the-art technology solutions;
- thanks to the use of integrated machines, of high energy-efficient motors, of air and heat recovery systems, as well as to the lightening of primary and secondary packaging material, a reduction in CO2 emissions of up to the 50% has been accomplished.

In 2012, SMI introduced a new system for recovering the heat produced by the shrinking tunnels of Smiflexi-branded shrinkwrappers. The installation of this new system, both on new or existing machines, makes it possible to reduce the consumption of electrical power during the packaging process.

In 2013 SMI's response to the pressing demands of the beverage industry for faster, more efficient and energy-saving bottle-manufacturing systems now has a new name: the HSR (High-Speed Rotary) series by Smiform.

In 2014 SMI introduced a new compact cutting-edge solutions: the **APS P series** of automatic palletising systems, integrating in the central column both the layer-loading head (basket) and a SCARA articulated arm which takes care of the operations of empty pallet feeding and interlayer pad insertion, thus forming a "3 in 1" compact unit. The palletisers proposed by SMI adopt a series of technical solutions designed so as to dramatically reduce the machine size and dimensions with respect to traditional layouts. The handling of pallets and cardboard pads is performed just on one side of the machine and the use of forklifts is concentrated in a well-defined area of the plant, thus optimizing loading and unloading activities. Smipal APS P automatic palletising systems are available both as "stand-alone" equipment and integrated with a Smiflexi automatic packer in order to form a so called **Packbloc compact system** which gathers within a unique block the operations of secondary packaging and palletising. The system can also be configured in a **Packbloc Neo version** by adding an integrated turnplate wrapper.

In 2015 SMI has presented the new ERGON series of primary and secondary packaging machines. Ergonomics, technology, robustness and modularity are only a few examples of the elements featuring the new ERGON series. With the launch of this new line of equipment SMI wants to mark another important date in its history. New design, new colour, new benefits matching the advanced technology content that since forever has been distinguishing SMI packers. Here are the main innovations of the ERGON line:

- New "rounded" protection doors, which allow to house all motors in an outer position in respect to the mechanical groups they move, thus facilitating the line operator's access in case of maintenance interventions.
- Door-closing system equipped with a slow-down hydraulic device that decelerates the safety doors sliding in the last leg of their ride and allows them to close smoothly.
- Stainless steel frame, the ideal solution to fulfill the food industry needs.
- Absence of motor-reducers: SMI packers are driven by brush-less motors directly connected to the drive shafts, with the advantage of reducing energy consumption, noise and maintenance.
- Heat-shrinking tunnel featuring advanced technical solutions that enable energy consumption reduction, maximum environmental compatibility and the improvement of the pack quality.

In 2016, among the solutions for the blowing and bottling processes, SMI has presented the new EBS ERGON stretch-blow moulder in stand alone version and in ECOBLOC® version with an electronic filler. The new EBS (Electronic Blowing System) ERGON is the result of a demanding research and development project, which has introduced innovative concepts for the design and manufacturing of the new SMI rotary blow moulders.

The current EBS ERGON range includes both models suitable for the manufacturing of PET containers up to 3 L with a maximum output of 33,600 bottles/hour and HC (High Capacity) models for the manufacturing of containers up to 10 L with a maximum output of 7,200 bottles/hour.

The stretch-blowing module of the EBS ERGON series is equipped with motorised stretch rods, whose functioning is controlled by electronic drives and does not require mechanical cams; this ensures a precise control of the stretch rod's path and position, as well as significant energy savings. The EBS ERGON series also uses high-performance, low dead-volume valves that reduce pre-blowing and blowing times, thereby improving the machine efficiency and the quality of the bottles produced.

The motorisation of the mould mechanical assembly is integrated with the electronic stretch rod, making the EBS ERGON stretch-blow moulders a "cam-free" system, with considerable advantages in terms of greater kinematic accuracy, less maintenance, less vibration, less noise and increased system longevity.

The stretch blow-moulders of the EBS ERGON series is equipped with a newly designed preform-heating tunnel, featuring very compact dimensions, with a horizontal preform-holding mandrel chain

and with optimized ventilation and aeration systems.

The new heating module is equipped with a system of thermo-reflective panels made from a highly energy-efficient ceramic material, situated both in front and behind the infrared lamps units responsible for heating the preforms; this innovative solution ensures a high reflexion of the heat generated by the lamps and consequently a more uniform distribution of the heat over the entire surface of the preforms.

Thanks to their technically advanced solutions, the new SMI EBS ERGON blow-moulders stand out for their low energy consumption and the total environmental compatibility of the stretch-blowing process.

In 2017 SMI solution are ever more inspired to Industry 4.0 and Internet of Things (IoT). A further important step forward taken by SMI is the new EBS (Electronic Blowing System) **K ERGON** series of ultra-compact stretch-blow moulders suitable for manufacturing PET containers up to 3 litres at the top output rate of 8,800 bottles/hour.

The new EBS K ERGON stands out for a series of cutting-edge innovations:

- The preform-heating section (tunnel) is integrated with the stretch-blow moulding section (blowing wheel) into a single, ultra-compact module, which can be installed even in small bottling lines. The tunnel features a horizontal preform feeder chain and an optimized ventilation and aeration system. Moreover, the infrared lamp units responsible for heating the preforms in transit are equipped with a system of thermo-reflective panels (situated both in front of and behind the lamps) made of a highly energy-efficient composite material; this latter feature ensures excellent reflection of the heat and its more uniform distribution over the entire surface of the preform.
- The machine frame containing the tunnel and the blowing-wheel is equipped with slightly rounded safety doors, which provide broader space inside the machine to perform cleaning and maintenance operations easily and safely.
- The stretch-blowing wheel is equipped with motorized stretch rods controlled by electronic drives and do not require mechanical cams; this innovative solution ensures precise control of the stretch rod's path and position, as well as significant energy savings.
- The stretch-blow moulding system uses high-performance, low dead-volume valves that reduce pre-blowing and blowing times, thereby improving the machine efficiency and the quality of the bottles manufactured.
- The mechanical assembly of the mold is equipped with its own motorization, which ensures the utmost precision for the up/down motion of the mould bottom and the opening/closing of the mould-holder unit.
- The system is controlled by the Motornet System® for automation and control, which ensures constant maintenance of optimum processing parameters throughout the entire bottle-manufacturing cycle and the direct modification of machine settings, thus simplifying format changeover operations.
- The blowing pressure is automatically adjusted according to bottle format, offering

unquestionable advantages compared to the manual adjustment solutions employed on linear blow-molders that SMI's EBS K models compete with directly.

- The new machine also comes standard with a two-stage air recovery system.
- The new EBS K ERGON series of rotary stretch-blow moulders features a really attractive quality/price ratio and also provides savings on installation and start-up costs, since the system's compactness permits these operations to be carried out in just one day.

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Actions and results

SMI undertakes different initiatives to ensure that the Procurement Department complies with ethical values.

The Ethical Code expresses the commitment and the ethical responsibilities related to the conduct of business and company affairs, undertaken by anyone dealing with SMIGROUP S.p.A. and the other companies of the Group.

Compliance with laws, management transparency and honesty, good faith, trust and cooperation with the stakeholders are the ethical principles SMI takes inspiration and behaviour models from, so as to effectively and loyally compete on the marketplace, to enhance customers' satisfaction and to develop human resources' skills and professional growth.

[Download the Ethical Code of the Smigroup](#)