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Machines Italia

magazine

Rethinking the Future

Transforming Manufacturing for Success

Transforming Manufacturing for Success
The Future of Manufacturing—Today

Italian machinery and equipment builders help deliver the goods for leading brands worldwide amid industry changes

Manufacturing continues to rebound coming out of the pandemic and is poised for rapid growth thanks to technical innovations, improved supplier relationships and workforce advances. Italian machine builders are leading the charge to enable manufacturing partners throughout North America to ramp up output and meet increasingly stringent customer demands in terms of quality, timing, technology, cost-effectiveness, sustainability and safety.

The optimism is reflected in the 2024 Future Outlook Study commissioned by the Italian Trade Agency. Of the purchasing executives surveyed—from a wide cross section of manufacturing companies and industries—many indicated the importance and urgency of implementing five technologies: robotics; industrial cybersecurity; machine condition monitoring; cobots; and additive manufacturing/3D printing.

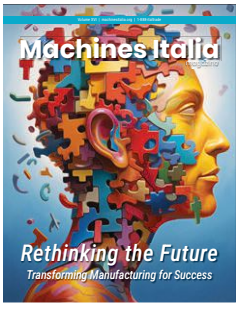
Digitization, meanwhile, is expected to spread to nearly half of factory floor applications by the end of 2024, up from about one-third today. In fact, some 88% of companies plan to maintain or increase spending on "digital transformation" technologies in 2024. The top expenditures look to be on digital twins, predictive analytics, automated guided vehicles, augmented and virtual reality, and industrial machine vision, all of which represent at least $400,000, on average, of company budgets.

At the same time, employees are being asked to learn new skills and take on more responsibility; the fight for new talent will be fierce amid the ongoing worker shortage and skills gap. The jobs in the highest demand, according to the survey, will be manufacturing engineers, CNC machinists and programmers, design engineers and CAD/CAM engineers, as well as general production workers.

This edition of ***Machines Italia*** addresses all of these issues and more, including one of the industry's biggest megatrends: sustainability. Such efforts are not only a boon for the environment—and good public relations—they also boost manufacturing efficiency and can bolster a company's bottom line. To this end, more than 40% of Italian enterprises have already installed more efficient machinery—and many more are expected to do so soon, according to industry experts.

Articles examine how Italian companies are helping manufacturers implement and succeed in the transition to Industry 4.0 and other advanced technologies. For example, a manager at a leading supplier underscores the importance of the transformation: "The integration of automation and industry 4.0 principles is not just the future, it's the present imperative for the manufacturing world."

Italian companies also are employing automation, digitalization and other advanced technologies to strengthen the resiliency of their supply chains and support workers, allowing them to focus on more value-added activities. Amid the wave of new technologies, one thing never changes: high-quality, "Made-in-Italy" craftsmanship. Steeped with unrivaled experience and commitment, Italian machine companies help leading brands worldwide produce best-in-class products across all industries, from fashion and food services to medicine, transportation and energy. *Benvenuti!*



This issue of Machines Italia covers a host of issues affecting the global manufacturing industry, with a focus on North America. A common thread across all the articles is the growing importance of strong partners, especially considering the recent supply chain disruptions during the COVID-19 pandemic. Italian companies have the experience and ingenuity to ensure success and enable their North American partners to excel.

Sincerely,
Marco Verna
Trade Commissioner—Chicago

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For a detailed interactive digital map on Italian Solution Providers in North America, please visit https://tinyurl.com/USMCAItalianSolutionProviders

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The Italian Trade Agency's NAFTA offices in Chicago, Houston, Los Angeles, Toronto and Mexico City are principally responsible for the machinery and technology sectors covered in this publication.

All aboard the manufacturing express
The Adventure Continues

Industry partnerships, ingenuity and perseverance are keys to success and survival as manufacturers accelerate into the future

After 40 years with Navistar, most recently as the chief information officer for the company's Engine Group—I thought I'd seen it all. Boy, was I wrong. The last few years have been a multi-track, topsy-turvy roller-coaster ride of excitement, fear, innovation and resiliency.

In 2023, manufacturers in the United States capitalized on earlier pieces of legislation: the Infrastructure Investment and Jobs Act, the CHIPS and Science Act and the Inflation Reduction Act. And the momentum is expected to continue, reports Deloitte's 2024 Manufacturing Industry Outlook, which notes that the initiatives are designed to promote rebuilding the nation's infrastructure, advancing clean energy and growing the semiconductor industry. Investments in these areas jumped as much as twentyfold in 2023 compared with 2019 levels, according to the report.

At the same time, however, several challenges remain, including economic uncertainty, supply chain disruptions and the ongoing shortage of skilled manufacturing workers. Making strategic investments in technology and developing next-generation workers will be critical to future success—or even a company's survival.

Moving Forward

While we continue to strengthen domestic manufacturing, the United States and North American institutions must also enhance global partnerships. Not only do large manufacturers such as Navistar operate and sell products around the world, they also can benefit from international suppliers, which are increasingly setting up shop in North America.

As it is in the U.S., manufacturing is also a cornerstone industry in Italy. Italian machinery and equipment suppliers, for example, have long been known for innovation and craftsmanship, and teaming with such companies can help U.S. manufacturers at home and abroad.

"Italian manufacturers have always had the United States as an extraordinary partner, which is currently the first export destination area," Barbara Colombo, president of UCIMU-SISTEMI PER PRODURRE recently said, noting the dynamism of North American demand. I couldn't agree more.

Such collaborations are essential for success. Manufacturers must work closely with equipment builders, trade organizations, academia, technology specialists and industry experts, as well as local, regional and national government resources. We need to support and grow companies of all sizes and foster a continuous pipeline of new talent into manufacturing.

The potential benefits are abundant, many of which are detailed throughout this issue of ***Machines Italia***. This is especially true for small- and mid-sized job shops and manufacturers, which often have limited resources, as they increasingly transition to automated and digital processes, additive manufacturing, predictive analytics and other Industry 4.0 solutions. Artificial intelligence and "self-learning" robots are also on the horizon, which one expert views as a "near-term certainty."

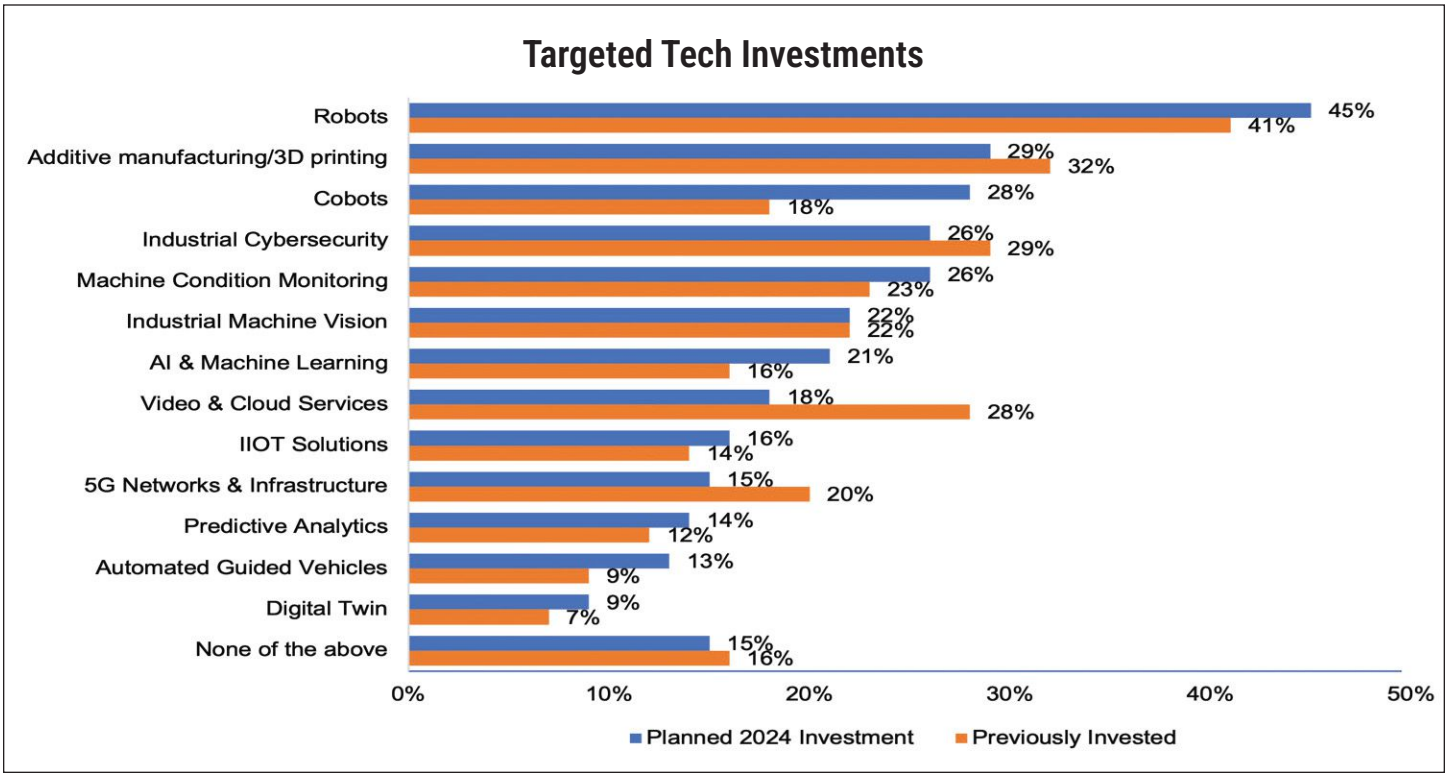
Automation has long been a big part of automotive manufacturing. But the industry is now taking the technology to the next level. Comau, which is a subsidiary of automaker giant Stellantis, for example, supplies a range of articulated robots, wearable exoskeletons and automated-guided vehicles to help its customers improve efficiency and safety, while lowering costs.

Navistar has a rich history, starting as International Harvester, and we always prided ourselves on building durable, high-quality engines and trucks. In addition to our own team, we relied on best-in-class suppliers, including several Italian companies that we could always count on as true partners.

In the years since leaving Navistar, I have continued to serve as an industry consultant, professional mentor, board member (most recently as SME President) and staunch advocate of all things manufacturing. During this time, I've seen tremendous growth and opportunity throughout the North American industry.

As new technologies continue to emerge, industry must take time to understand them, have the tools to support them, and provide the necessary training and leadership to properly implement, adjust and enhance them. Only then can we achieve true transformation and flourish together.

James Schlusemann, LSME
Navistar (retired)
Past President, SME
Industry consultant and executive mentor



Automation, Digitalization Drive Manufacturing Tech Investments

Steven George
Owner, Mercury Research LLC

Manufacturers in North America are ready to implement new technologies and upgrade their facilities. This includes opening their wallets to invest in new machinery and equipment—especially robots, cobots and other automated systems—as well as a host of digital solutions, according to the findings of the 2024 Future Outlook Study commissioned by the Italian Trade Agency (ITA).

Conducted by SME and Mercury Research LLC, the study surveyed equipment purchasers from more than 200 manufacturers in Canada, Mexico and the United States. Executives from 15 manufacturing sectors responded, providing insight on what key challenges, drivers and changes are on the horizon.

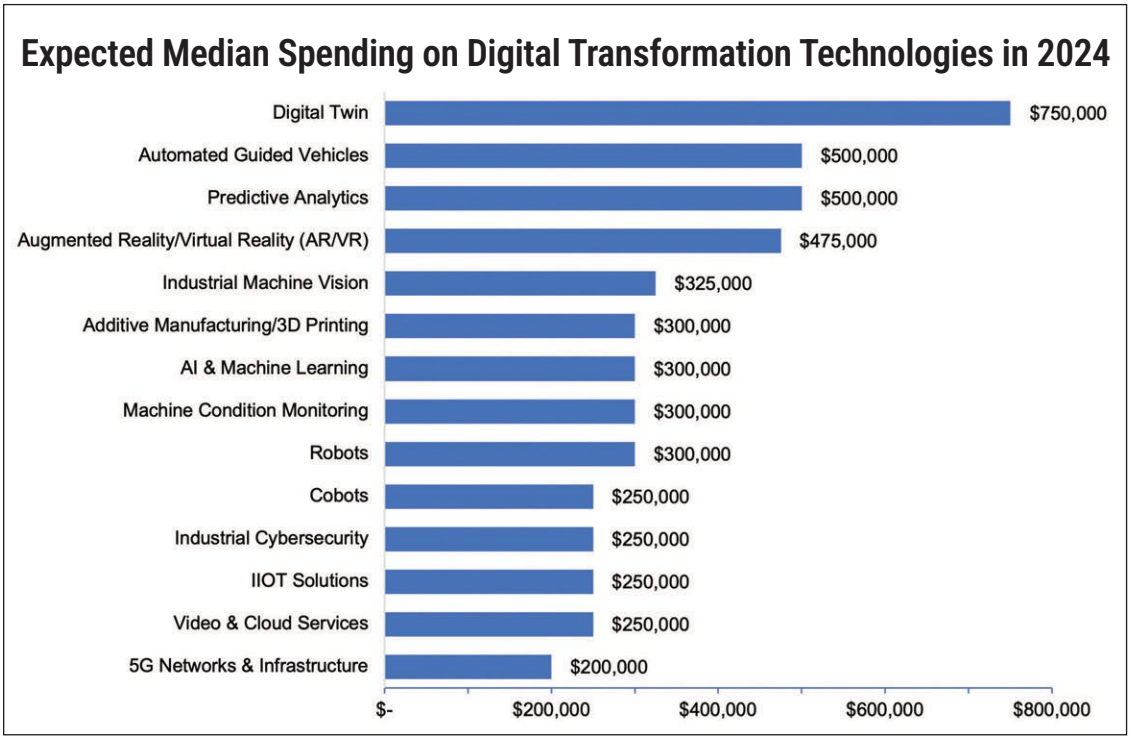
Industrial cybersecurity, robots and machine condition monitoring are the top three technologies respondents indicated are most important to an organization's near-term success. When combined with which technologies respondent organizations' are planning to purchase or continue to invest in, five technologies were identified as both important and urgent for their organization. In addition to the previously identified top three, the other two areas of focus identified for 2024 are cobots and additive manufacturing/3D printing.

Sustainability also is becoming increasingly important. Some 38% of respondents said environmentally friendly practices are extremely or very important in their purchasing decisions.

Digital Revolution

When asked about investment changes, respondents said they will invest significantly more in cobots during 2024 compared to current spending, while video and cloud services will see a significant decrease in investment during the same period.

Respondents indicated that their organizations' factory floors are currently about 32% digitized, with the expectation that almost half (49%) of their factory floors will be digitized by the end of 2024. The primary drivers for this digital transformation include operational efficiency (73%), cost control (57%) and



plant optimization (56%). The key benefits of digitization from a manufacturing standpoint are improving on-time delivery (61%) and reducing quality risks (57%).

On average, manufacturers plan to invest about $100,000 on digital transformation projects, according to respondents. Leading the list of technologies with the highest anticipated spend are the digital twin, automated guided vehicles, predictive analytics and augmented reality/virtual reality (AR/VR).

Overall digital transformation spending is expected to be higher than in previous years for about half of companies (48%), with another 40% maintaining current expenditure levels.

In the coming year, respondents said the top three anticipated challenges in pursuing digital transformation initiatives will be: 1) Cost required to implement; 2) Time required to implement; and 3) Complexity of system integration.

Growth Mode

Respondents indicated 2024 will be a time of stability and growth in terms of their workforces. Nearly half (49%) indicated that their organization plans to keep headcount the same as 2023, with another 43% planning to increase headcount. General production workers, CNC machinists and manufacturing engineers top the list of positions companies need to fill.

Organizations were also asked about their satisfaction with and importance of 12 different soft skills among their current employees, based on an IS (Importance-Satisfaction) Rating. The rating helps organizations best prioritize the types of skills both current and future employees should have to best prepare them for success. Initiative and effective oral communication were the highest priority skills, followed by problem solving, effective written communication and adaptability.

Almost all respondent companies (92%) indicated that their organization has plans to train factory floor staff in 2024. The most utilized method will be on-the-job training, followed by work instructions and process documents, third-party training, job aids and technical manuals.

Study Methodology

The sample selection for the 2024 Future Outlook Study was taken from a mix of ITA and SME's databases. Data was cleaned to ensure accuracy. In some areas, the 15 sectors were analyzed or referred to separately, but the majority of the report focuses on overall industry trends and issues.

Respondents were about evenly divided among those who worked for companies with 25 or fewer employees (32%), between 26 and 100 (24%), 101-1,000 (25%) and more than 1,000 employees (19%). Estimated annual company revenues ranged from less than $1 million (13%) to more than $100 million (24%), while the bulk were between $1 million and $50 million.

ITA and SME will host a webinar in early 2024 to present the full findings of the 2024 Future Outlook Survey. Registration information and other details can be found at tinyurl.com/ITAOutlook.

Skills Assessments

Very High Priority:
- Initiative
- Effective oral communication

High Priority:
- Problem solving
- Effective written communication
- Adaptability

Medium Priority
- Accessing and analyzing information and data
- Critical thinking
- Collaboration across diverse divisions or business units
- Leading by influence
- Innovation
- Agility
- Entrepreneurship

The breadth and modularity of Prima Power's product range allows the company to flexibly create manufacturing solutions for each individual customer. (Provided by Prima Power)

Building a Sustainable, Efficient and Automated Future

Considering that global temperatures were the hottest on record this year, it's not surprising that manufacturers everywhere are taking steps to reduce their carbon footprint. These include making their products more energy efficient, investing in advanced technology for their production floors, and looking for ways to reduce waste wherever they can find it.

Stefania Arioli sees significant movement in this direction. The marketing area manager for **AMAPLAST, the Italian Plastics and Rubber Processing Machinery and Molds Manufacturers Association (Milan, www.amaplast.org/en**), Arioli says the country's manufacturers are taking various steps to increase sustainability in both their products and internal operations.

"The ecological transition represents one of the main challenges companies must face, but it also offers great growth potential. Regarding digitalization and automation, the recent Industry 4.0 national plan and incentives associated with it have encouraged companies to invest in new capital goods, both tangible (machinery) and intangible (software) to improve production and quality processes."

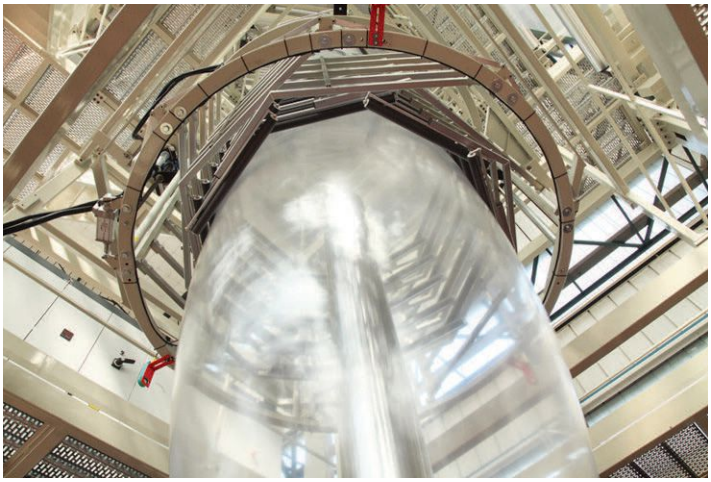
Arioli notes that the new digitalization frontier largely depends on artificial intelligence (AI), which promises to support sustainability efforts to improve energy efficiency and use of resources, reduce waste and monitor production processes. She adds that automation, technology, and creativity define Italian machinery, which features high accuracy, the increasing use of electronics, agility in adopting tailor-made solutions, and a growing content of services.

"Demonstrating commitment in regard to the concepts of sustainability becomes an added value for companies, as it is a virtuous mechanism by which the market rewards those enterprises who are beginning to take on a greener, more precise profile," Arioli says.

The commitment to reducing environmental impacts and increasing workplace safety is more marked in industrial enterprises, Arioli points out. One way to lower environmental impact is via energy management. As such, about 40% of enterprises have installed more efficient machinery, while Italian plastics and rubber machinery manufacturers have boosted their efforts and investment to offer higher-performing solutions.

Technology and Passion

IMG Srl (Brescia, www.imgmacchine.it/en), an AMAPLAST member that produces molded rubber parts for demanding automotive applications, agrees with these initiatives. "(Auto companies) need repeatable, high-quality machines that deliver products as close to perfect as possible, and with a very low percentage of wasted raw material," says Export Manager Andrea Merlini. "Moreover, they want their machines to be highly automated and customized to their specific needs while maintaining a reasonable price tag."



A blown film extrusion line. (Provided by AMAPLAST)

Like many equipment manufacturers, IMG is also seeing a call for increased energy efficiency and smaller environmental footprints in its products. For this reason, the company developed the REM, which Merlini describes as the "first completely electric machine in the rubber sector."

According to the company's website, the REM "ensures a significant reduction in energy consumption thanks to a combination of factors like the introduction of plug-and-play energy management, where power is only consumed when it is actually needed, and more efficient and repeatable movement thanks to the use of electrical motors. The model is also equipped with new Internet of Things (IoT) devices such as vibration sensors, IO-LINK transducers and drivers with predictive diagnostic libraries for performance detection and remote control."

"There's no hydraulic oil with our electric machine, so the environmental impact is lower, but it also uses roughly 20% less energy than a standard hydraulic model," says Veronica Lorandi, a member of the company's sales and marketing department. "And since no pumps are running all the time as with traditional machines, it's also much quieter."

Striving for Increased Outputs

Union Officine Meccaniche SpA (San Vittore Olona, Milan, www.unionextrusion.it/en) is also an AMAPLAST member. Richard Donnell, the company's longtime agent for the United States and the United Kingdom, says Union has been building plastic sheet-production machinery for 80 years. During that time, Union pioneered many new technologies across various polymer industry sectors that have since become commonplace.

"Union specializes in flat extrusion lines and exports 90% of its equipment to customers in the medical, automotive, construction, geo-membrane, and corrugated packaging industries," he notes. "The company's engineering and design ethos is to think like a sheet producer, ensuring intuitive operation that doesn't leave production and engineering managers scratching their heads as to why somebody designed the machine in a particular way."

Through this collaboration and close attention to customer requests, Union embraces the changing green agenda by utilizing as many new technologies for power, air and water conservation within its production line. However, it has reached a point where further gains are limited relative to the costs of integration and operation. Thus, it also looks at ways to increase output while using the same amount of power, water, air and labor, striving for the highest line speeds without compromising quality.

Packaging Prowess

UCIMA, the Italian Packaging Machinery Manufacturers' Association (Baggiovara, Modena, www.ucima.it/) also has an eye toward sustainability Executive Director Gian Paolo Crasta says Italy has always represented a virtuous model from the circular economy perspective.

"Italian manufacturers are actively incorporating sustainability into their product development and internal operations," he says. "They are adopting green manufacturing practices to reduce energy consumption, minimize waste and lower carbon footprints. This involves using energy-efficient equipment, optimizing production processes and embracing lean manufacturing principles. The 'Italian Way to Circular Economy' anticipated a business model now indispensable for sustainable development."

One significant focus is on renewable energy sources such as solar and wind power to reduce the reliance on fossil fuels, which helps lower greenhouse gas emissions and energy costs. Manufacturers are also exploring circular economy principles, emphasizing product durability, repairability and recyclability. Product lifecycle assessments help identify areas for improvement, while collaborations with research institutions and industry associations keep manufacturers informed about sustainable practices and technologies.

"Overall, Italian manufacturers are embracing sustainability to reduce environmental impact, enhance competitiveness, and appeal to environmentally conscious consumers," Crasta asserts.

And yet, there's more to sustainability than solar panels and wind turbines. Manufacturers must also strive to become more efficient, which often involves a combination of automation and workforce development. Achieving both is not necessarily an either/or situation, he suggests, but is rather about finding a balance that aligns with a manufacturer's specific goals and circumstances, leveraging the combined strengths of automation and human expertise.

When asked how manufacturers can optimize production, Crasta says it's essential to first understand the current state in order to identify inefficiencies. "Define clear objectives, such as reducing production time or cutting costs, while also considering the budget allocated to this improvement process. Key steps include investing in technology, standardizing processes, promoting a culture of continuous improvement, efficiently managing inventory, and working with suppliers to streamline the supply chain. And don't forget that quality management, employee training, data analysis and performance monitoring are also important components of manufacturing process optimization."

Tackling Tubes

Gunar Gossard knows all about factory optimization. The Director of Sales for Novi, Mich.-based **BLM Group USA, the North American subsidiary of BLM SpA (Cantu, Como, www.blmgroup.com/)**, Gossard points to the CNC fabricating machinery builder's recent expansion of its ADIGE plant in Levico to how sustainability and manufacturing efficiency complement one another.

Boasting an eco-sustainable design, the factory is constructed of fully recyclable materials that are 50% more durable than those previously used. Meanwhile, solar and geothermal energy has cut winter heating consumption by 72%. Yet corporate sustainability initiatives like these are nothing new in Europe, he says, and while he's rightfully proud of the company's efforts in this area, it's the efficiency of BLM's products that has Gossard most excited. The fiber lasers found in its tube-cutting machinery use at least 25% less electricity than the traditional CO_2 alternatives and are 2x to 3x faster to boot.

Similarly, BLM's all-electric tube benders and press brakes provide the same benefits cited by IMG's Lorandi earlier when describing the REM molding machine—no waste from spent hydraulic fluids, less noise and lower energy consumption. With that are various Industry 4.0-related features such as integration with the factory's ERP system, a common HMI (human-machine interface) that helps drive more efficient fabricating sequences, and a modular machine design that increases flexibility while reducing manufacturing costs.

Beyond the Night Train

Prima Power, the Prima Industrie Group brand for sheet-metal manufacturing **(Collegno, Turin, www.primapower.com/en),** produces a wide assortment of 2D- and 3D-laser machines, punch presses and punch/shear combos, panel benders, press brakes, and other sheet-metal fabrication machinery. One of its most well-known systems is the Night Train, introduced in the early 1990s and among the first Flexible Manufacturing Systems (FMS) to enter the sheet-metal market.

Chief Marketing Officer Enrico Garino seconds what Gossard says about fiber lasers, noting their higher speeds and energy efficiency relative to CO_2, as well as far less maintenance. Yet Garino is quick to mention the company's recent advancements in FMS technology—the latest example was displayed at Blechexpo, an international sheet metal trade fair in Stuttgart, Germany.

"Recent technological improvements," Garino says, "include the possibility of twin-laser cutting, with combined punching and shearing in the same machine, as well as an integrated press brake with robotic loading and stacking of the finished components. In addition, we've made some of our machines fully electric, most notably our line of panel benders. At Prima Power, we define this as 'energy in efficient use' due to the high performance of our servo-electric technology and direct cost savings in regards to the operation and maintenance of our machines, while also aligning on environmental impact goals. We as a company are strong believers in this type of highly efficient technology and feel that it sets us apart from our competitors in this market."

Embracing Electric

Another indicator of the move to electrification comes from workholding specialist **SMW Autoblok SpA (Caprie, Turin, www.smwautoblok.com/).** The company introduced its line of e-motion products several years ago to make CNC workholding smarter and more flexible, according to Larry Robbins, president of SMW's commercial division in North America.

"The MM-series chuck uses a contactless, inductive coupling to control and monitor jaw movement," he says. "Aside from exerting exceptional gripping force, it can also report the torque and clamping pressure used, part temperature, jaw movement during machining, and other variables. From the beginning, it has promised to one day eliminate traditional vises, chucks, and other hydraulic- or pneumatic-powered clamping systems."

Union Officine Meccaniche SpA has been building plastic sheet production machinery for eighty years. (Provided by Union)

With applications well beyond the technology's original use, SMW created a separate electronics division to capitalize on its capabilities. SMW-electronics offers a host of mechatronic products similar to the MM-series chucks, including electrically powered vises and zero-point quick-change clamping systems, as well as axial couplers, robotic grippers, RFID readers and electronic sensors—all based on inductive positioning and data exchange.

"Let's say you're operating a commercial bakery and need to ensure that the bread has cooled sufficiently before packaging," Robbins explains. "By placing an inductive sensor at the end of the line, you can measure the residual heat and adjust the conveyor speed accordingly. You can apply those same capabilities to any assembly or production line and use it to control auxiliary systems or software based on feedback from the inductive device."

Francesco Fussi is vice president for the Americas at **Marposs SpA (Bentivoglio, Bologna, www.marposs.com/)**, a manufacturer of dimensional gaging systems and components, leak testing, non-destructive testing

equipment, machine tool probing and in-process monitoring. Fussi notes that manufacturers feel increased responsibility for making more sustainable products and processes. "One key driver here is the lowering of fossil fuel emissions, part of which comes from the automotive industry," he says.

He should know, seeing that 50% of the company's North American sales revenue comes from this market, mostly from the manufacture of internal combustion engines along with a growing amount of electric vehicle components. Today, roughly half of our sales to the automotive sector in the U.S. are related to electric vehicle components within electric drive units or battery systems," Fussi says, compared to virtually zero five years ago.

Cleaning Up

Then there's waste. Fussi says he is proud to work for a company that is adapting strongly to a different future. Marposs continues to invest heavily in developing the products and technology needed to help automakers lower emissions, and it is working on various internal activities to reduce waste.

The electric ZeroAct e-Motion module automates manufacturing with a built-in mechatronic drive and inductive component detection. (Provided by SMW Autoblok)

"Marposs has made public a statement of compliance towards the ROHS [Restriction of Hazardous Substance] directive, which is about reducing dangerous substances like those found in electrical components," Fussi says. "We are compliant with VOC [volatile organic compounds] guidelines, as well as those governing POP chemicals [persistent organic pollutants]. And, of course, we have strict rules about recycling at our facilities, and we even constructed an artificial pond for treating wastewater at our headquarters in Bologna, a project that earned us a regional award. Simply put, whatever we can do to help our planet and future generations, we will do it."

Next Technology Tecnotessile (Prato, www.tecnotex.it/en/) is a private research organization that collaborates with the Italian Ministry of Education, University and Research to promote technological innovation. According to Project Manager Matteo Lepri, the company recently developed a semi-automatic machine for selecting and sorting textile waste.

"The composition and color classes have been chosen according to arbitrary criteria and can be tailored to suit specific needs," he explains. "A machine training phase is required to acquire a set of standard samples. Once the learning algorithm has a sufficient set of data to ensure the required level of reliability, the system is ready to start selection, which involves a three-step process: loading a garment for color and structure recognition, followed by automated sensing of its composition with a hyperspectral camera and an automated sorting area at the end for the analyzed products."

That's a Wrap

Sitma Machinery SpA (Modena, www.sitma.com/en) is also concerned with sustainability, and is a company you might now think about upon receiving your next package from Amazon or Wayfair. Robert Nilsson, general manager of the Americas at Sitma USA Inc., notes that the company began operations in Italy decades ago by designing machinery that performed fairly simple tasks such as stuffing credit cards in mailers.

The company has since expanded its reach in response to the ongoing e-commerce boom. "Thanks to a robust manufacturing sector in this part of Italy, at least some of which is due to the automotive market, we are very technology rich. As such, we have the knowledge and a supplier network able to deliver some very cool capabilities. Automated packaging is one example."

That's a good thing, as the packaging materials and methods used by e-commerce providers are often wasteful. For starters, there's an overreliance on plastic bags, most of which end up in landfills. There's also a tendency to ship small items in heavy oversized corrugated cardboard containers, increasing transportation costs and wasting fuel. Add to this the manual, error-prone picking and packing methods that even large e-tailers rely on, and it presents plenty of opportunities for optimization.

Sitma produces a range of environmentally friendly automated packing, sorting and wrapping machines. "My mission is to allow customers to follow whatever sustainability mandates they're getting to remove plastic packing materials while simultaneously making their organization more efficient and productive," Nilsson says. "Our machines are fast and flexible. They can run multiple materials at once, and can create optimized mailers and custom packaging on demand. That allows them to automatically sort the products, get them into an optimized package, attach a tracking label, and gather the data needed to make the entire process visible to management as well as their shipping partners. Each of these is a crucial component of a rapidly evolving marketplace ... (and) addresses the need for more sustainable packaging."

The push toward a sustainable manufacturing future is gaining momentum, with an emphasis on innovation and efficiency. Italian manufacturers are at the forefront of this transformation, leveraging AI, Industry 4.0 and a blend of technical ingenuity to meet the ecological demands of our time and carve a path for economic growth. As manufacturing continues to evolve, it's clear that sustainability is no longer just an ethical choice, but a strategic imperative that promises to reshape the industry for the better.

Inspecting a lathe turret prior to assembly. (Provided by Famar)

Industry 4.0 and Beyond

Thanks to a host of new and emerging technologies, the manufacturing industry is transforming at an unprecedented rate, giving companies of all sizes an opportunity to improve their efficiency, quality and throughput. From advanced machine tools and 3D printers to robots, cobots and artificial intelligence (AI), manufacturing will never be the same. Welcome to Industry 4.0 and the Industrial Internet of Things.

"In our opinion, Industry 4.0 is neither hype nor hope: it is reality. However, we prefer to call it the 'digital factory.'" That's according to Barbara Colombo, who is president of **UCIMU-SISTEMI PER PRODURRE, Cinisello Balsamo, Milan, (www.ucimu.it/en/home)**, the Italian machine tool, robots, automation systems and ancillary products manufacturers' association.

Colombo states that the digital factory has two aspects: the manufacturing systems themselves and the wide utilization of data for value creation regarding services related to those machine tools. Such services include predictive maintenance, remote machine commissioning, digital twins for the integrated design and development of new machines, products and manufacturing systems, and the real-time monitoring of each.

"Collectively, our member companies cover all of the most advanced technologies represented in this sector, among them machine tools for metal cutting, metal forming and the so-called 'unconventional technologies,' such as laser- or plasma-based machines and solutions for additive manufacturing," she says.

The UCIMU member directory is not limited to manufacturers of so-called "pure" machine tools, Colombo notes. Many other technologies are represented—robotics and other forms of automated material handling systems, measurement and quality assurance, surface finishing and treatments, as well as the companies that specialize in producing the mechanical, pneumatical, hydraulic and electrical/electronic components, all needed to enable production.

"Moreover, in the last few years, UCIMU membership has been enlarged by numerous companies specializing in the development of software and ICT (information and communication technology) solutions for manufacturing, a fact that definitively marks the transition of the Italian machine sector from a pure electro-mechanical field to the more sophisticated world of technical

advancements and integration currently seen among the machinery, computer and automation worlds," Colombo says.

Going Vertical

Famar Srl, Avigliana, Turin (www.famargroup.com/en), specializes in the manufacturing of vertical pick-up, single-spindle and double-spindle CNC lathes. Sales Director Beatrice Marinello explains that the product portfolio consists of many models, which allows the company to customize machines based on the workpieces that the customer will need to machine. Besides producing vertical lathes, Famar also manufactures and assembles automation systems and related equipment, such as spindles and turrets.

"Our primary market is the automotive industry, but we also supply many machines to industrial vehicle manufacturers, aerospace, medical, hydraulics, bearings, electric mobility and others," Marinello says. "Unfortunately, the global uncertainty in the automotive sector regarding new motor technologies is strongly affecting the market, and many sub-suppliers of the industry suffer from that situation, which also affects us. Another issue is the lack of programming, designing, assembly and production engineers."

Despite these industry-wide difficulties, Marinello points out several innovative technologies, such as the patented Famar Infinity system that allows tool replacement during loading/unloading, reducing downtime. "Moreover, all our vertical lathes allow different machining operations such as skiving, grinding, drilling and many others, in addition to classic turning operations."

Famar's primary market is the automotive industry, but the machine builder also supplies equipment to industrial vehicle manufacturers, aerospace, medical, hydraulics, bearings, electric mobility and others. (Provided by Famar)

On a Roll

Pierangelo Laghi is the research and development director for plate roller maker **Davi, Forlì-Cesena (www.davi.com/int/en)**. Like Famar and other machine manufacturers, he also faces difficulties, although his are more related to making metal behave predictably. "Unlike metal-cutting machines where you remove material to achieve a shape, we use a series of rollers to bend it," Laghi says. "Depending on the hardness, microstructure, temperature and other factors, it can be challenging to get exactly the result we expect because the material can react in different ways."

Plate rollers are integral to the shipbuilding industry, mining and earthmoving equipment, oil and gas facilities, and the enormous tubular structures that support windmill turbines. Considering the sheer mass and thickness of the components involved, all are demanding applications with relatively tight tolerances. Noting that it will be too late to measure after the bend is complete, Laghi says the only way to achieve the required accuracy is to "predict it before it happens."

Fortunately, such predictions no longer depend on operator experience and institutional knowledge. A new generation of electric plate rollers is much more precise than the traditional hydraulic alternative. Moreover, these machines are now equipped with AI, significantly increasing predictability.

"The challenge is that AI needs a large training dataset to make accurate predictions and must also be fast enough that manufacturers can apply it in real-time," Laghi says. "We've found a way to generate this data artificially using FEA (finite element analyses), simulation software and digital twins of our equipment, then reconciling it with large numbers of test bends made at our facility. In addition, we have begun installing sensors in our machines, which not only augment these capabilities and make them even more accurate but offer predictive maintenance capabilities as well."

Meet the Press

The printing industry is seeing similar digitization. In the past, this has been "a very analog business, with craftspeople running presses who would set up and operate machinery by touch, feel and, occasionally, a gentle tap from a hammer," explains Jeff Kewin, president for the Americas and Asia Pacific region with **Tecnau Srl, Ivrea, Turin (www.tecnau.com)**.

Fast forward to today and the skillset is much different. Those old-school operators have been replaced by highly skilled technicians, who set aside hammers in favor of computer screen settings.

"I've been in this business for most of my life and can tell you that everything about it is far more advanced than it once was," Kewin says. "The flexibility of today's digital printing technology amazes me."

Much of this flexibility comes courtesy of Tecnau's equipment. The company produces several dozen high-end and highly automated printing solutions, from book-on-demand systems to continuous-cut-and-stack, roll-to-roll and wide-web solutions. Each makes it possible to print, cut, sort and collate even low-volume documents quickly and cost effectively, with intelligent controls that adjust for variables like paper thickness and quality.

"It's so much easier than it once was," he adds. "There have been significant investments in technology, such as automation and what we refer to as 'deterministic controls,' that ease the setup and troubleshooting processes. Here is one area where Tecnau has done an excellent job of developing the technology needed to automate and simplify the printing process. When you combine all these things together, you have one heck of a solution."

Internal Drive

Jdeal-Form Srl, Oleggio, Novara (www.3ntr.net/en), also known as 3ntr, is a family owned company established in the early 1960s that specializes

in the construction of automatic machines for the textile sector. Leveraging the expertise accumulated over the years and driven by internal needs, the company designed and built its first 3D printer in 2010. The success achieved soon led to the creation of 3ntr, which has since been dedicated to designing and producing fused-filament-fabrication (FFF) deposition 3D printers for various applications across industrial sectors.

These range from the A4, a compact printer suitable for research or production, the large format A2 and the Spectral. The latter is designed to meet complex markets, such as aerospace, with its ability to print superpolymers. "Lastly, there's Sequoia, our newest printer, with a print volume of over a cubic meter, currently the world's largest FFF heated-chamber printer. It can handle both large pieces and numerous small ones, adapting to every production need," says Ilaria Ardizzoia, 3ntr's co-owner and chief technical officer.

Given the large number of FFF printers on the market today, he notes that 3ntr distinguishes itself through different strength points, among them the use of at least three extruders that enable the co-printing of multiple materials for increased versatility in both research and production settings.

"We also have an open approach to our hardware and software offering, allowing versatility for both research and production modes," Ardizzoia adds. "Additionally, our commitment to continuous material research and combating planned obsolescence ensures durable, long-lasting solutions. This aligns perfectly with our broader commitment to environmental sustainability and responsible manufacturing practices."

Consortium to Powerhouse

Comau Srl, Turin (www.comau.com/en/) began in 1973 as a consortium of machine tool manufacturers in the Turin area. It has since become a subsidiary of automaker Stellantis NV (formed in 2021 via the merger of Fiat Chrysler Automotive and PSA Group), and offers a range of robots for industrial automation, including articulated robots, wearable exoskeletons, automated guided vehicles and complex automation systems for manufacturing. Although its roots are in Italy, Comau has expanded its presence globally with operations in Europe, North and South America, Asia and other regions.

"At Comau, we firmly believe that the integration of automation and Industry 4.0 principles is not just the future—it's the present imperative for the manufacturing world," says Alessandro Piscioneri, global head of product and solution management, Advanced Automation Solutions. "As global markets evolve and consumer demands shift, the need for flexible, efficient and sustainable production methods becomes paramount. Automation and the tenets of Industry 4.0 offer a transformative approach, allowing manufacturers to optimize production, enhance product quality and reduce operational costs. These technologies represent a synergy where machines, systems and humans come together in harmony, leading to smarter decision-making and real-time adjustments."

Roboze Knows

Ilaria Guicciardini is the head of marketing at **Roboze, Bari, Apulia, (www.roboze.com/en)**. She says the company's core mission is "to transform manufacturing by offering advanced 3D-printing technologies and materials that not only enhance performance but also reduce costs and enable local production."

The 3D-printing equipment manufacturer services several regulated industries. These include the energy sector, where it provides corrosion-resistant, industrial AM solutions for subsea, downhole and topside applications. Due to its expertise in creating lightweight, durable components that enhance vehicle performance and efficiency in the mobility and motorsport industry, Roboze was a technical partner of Ducati Corse and Yamaha during the 2023 MotoGP season. And for aviation and space, its aerospace-grade materials and technologies meet the industry's stringent requirements for precision and reliability.

"Our strength lies in our ability to provide high-performance 3D-printing solutions tailored to the unique demands of these and other industries," says Guicciardini. "We offer 3D printers that can work with high-temperature engineering thermoplastics such as PEEK and ULTEM, polymers engineered to replace traditional metals in various applications. This enables us to produce parts with superior mechanical properties and thermal resistance, meeting the exacting standards of our target industries."

Since 2010, 3ntr has designed and produced fused filament deposition printers for various applications and different industrial sectors. (Provided by 3ntr)

She adds that manufacturers face many challenges related to complex part geometries, material performance and lead times. Roboze helps address these challenges by offering 3D-printing solutions that enable the rapid production of intricate parts with improved material properties. the company also has a robust recycling and reusing program, ensuring that its materials contribute to a circular economy.

Better with Bacci

"Training the workforce and automation are not contradictory, but are rather participants in a common goal: making companies increasingly capable of serving and addressing the needs (implicit or explicit) of their customers," says Maurizio Giorgetti, brand sales manager for **Bacci Automation Srl, Cascina, Pisa (www.bacciautomation.com/?lang=en)**.

He notes that automation and people are partners in this dynamic mission that requires human intelligence to be sustainably guided, meaning it serves its purpose and respects the world we live in. "Human capital is the primary asset to nurture and preserve, and the introduction of automated systems, in fact, translates into a significant improvement in the safety and well-being of our employees."

Examples include advanced monitoring and detection systems, which allow for a swift response in emergencies. Automation also enables us as manufacturers to optimize production processes, reducing material and resource wastage. Furthermore, it represents an ideal solution for enhancing the overall efficiency of our factories, ensuring better utilization of energy resources.

In the end, Giorgetti maintains that success depends on a strong customer focus. "What an entrepreneur must do before embarking on a path of optimization or restructuring is to clearly define what their customers need and focus solely on those factors that limit or could limit their value proposition."

He goes on to predict that AI is destined to make a substantial impact on factories. "One of the most challenging problems to address and manage is the variability in the market and the overall logistics and production systems," Giorgetti says. "This variability is due to the complexity and multitude of factors that can influence it. All of this generates chaos, and AI is a powerful tool at our disposal to try to control it."

Success With Spraying

Another automation provider, albeit one more specialized than most, is **CMA Robotics SpA, Pavia di Udine, (www.cmarobot.it/en/)**. The company is a member of **ACIMALL, Italian Woodworking Technology Association, Milan (www.acimall.com/en/)**. Area Manager Luca Gallo explains that CMA Robotics manufactures a variety of robots, all intended for one purpose: spraying.

Double extruders mean double the print speed. (Provided by Roboze)

For more than 30 years, this specialization has served to differentiate the small company from its competition. All of its robotic arms are sealed against the dusty, sometimes sticky paints, glues and powders it applies to surfaces that are often quite complex. It also uses advanced laser scanners and special software that automatically "teaches" the robot the optimal spray pattern, eliminating the chance of drips and runs that might occur were the finish to be applied manually.

"We developed the world's first completely automatic window spraying line," Gallo says. "Since then, we've continued to expand our capabilities and now serve a variety of industries. Whether it's automobile parts, metal structures, ceramic components and even coffins, we have the knowledge to understand the unique problems each presents. And surprisingly, the discussions we have with our customers are usually not so much about the robots, but rather the overall solution, including the scanning process, part placement and fixturing, and integration with existing systems."

The View from Federtec

None of these advancements come as a surprise to Marco Ferrara, of **FEDERTEC, Cinisello Balsamo, Milan (www.federtec.it/?lang=en)**, **the association representing the Italian Industry of Mechatronic Technologies and Components for Fluid Power, Power Transmission, Smart Automation and Control of Industrial Products and Processes**. As FEDERTEC's director, he says the digital transition is here at all levels, from multinationals to small and medium-sized companies, each with its own peculiarities.

"It is essential to develop integrated solutions capable of allowing greater speed and reliability in control—even if remote—always guaranteeing maximum flexibility, evolving one's role from a manufacturer of components to a supplier of complete and customized solutions," Ferrara asserts. "The most important change, however, concerns the need for new skills and a review of the business model. This involves an evolution of the services offered, which until recently were considered a complement to the product—but, which today, constitute a distinctive factor in an increasingly competitive field.

"There are, then, other aspects linked to specific processes or services available thanks to new technologies, from additive manufacturing to collaborative robotics or so-called 'self-learning robots,' up to cognitive systems," Ferrara continues. "The environmental transition, however, is still in its early stages regarding its future impact on the way of doing business and production, leading not only to social benefits but also to positive effects on economic and productive activities. Companies are increasingly aware of these aspects, which they are adopting and integrating into their internal processes."

When it comes to AI, Ferrara says it's no longer a question of "if" or even when. He views the technology as a near-term "certainty" for manufacturers.

"AI will soon have a significant impact on working methods and industrial processes," he declares. "It is, in fact, poised to influence every aspect of the production industry, from design to production, maintenance to after-sales service, and the supply chain to logistics, bringing advantages in each case in terms of efficiency, customization and the possibility of making informed decisions. As for Industry 4.0, the entire industrial and manufacturing world cannot ignore digitalization and the integration of digital technologies. The industry's present and future are well defined, and all companies must seize these opportunities to chart a path of sustainable growth through the digital and ecological transition."

In summary, the manufacturing industry stands on the brink of a revolution, propelled by the advancements encapsulated in Industry 4.0 or, as Colombo calls it, the "digital factory." This transformation transcends mere automation and moves into a realm where data, predictive analytics and seamless integration form the backbone of modern production. From traditional machine tools to sophisticated software and ICT solutions, Italian manufacturing companies are engaged in a dynamic shift toward a comprehensive, interconnected manufacturing ecosystem. This is a bold leap into a future where the fusion of machinery, computing power and automation ushers in an era of unparalleled efficiency and innovation.

Italian manufacturers are rising up to meet today's workforce recruitment, training and retention challenges with innovative programs that ensure new candidates are found and employees have the skills needed to succeed.

Filling the Skills Gap is Job One in Italy

The state of manufacturing across the globe is at a crossroads. Still reeling from the after effects of a global pandemic, companies worldwide are struggling to fill myriad open positions that are crucial to continuing production and ensuring they remain relevant in a fast-paced and competitive environment.

While global manufacturing production is on pace to dip slightly in 2023, it's expected to rise in 2024 and 2025 to reach an industry-wide value of $44.5 trillion, according to market intelligence firm Interact Analysis.

It's apparent that successful companies will be those that invest time and resources into helping their existing workforce by enhancing recruitment, training and retention programs. With less specialized talent available than ever, the days of hiring outside talent to fill roles are largely over. Companies must increasingly look inward and give current employees the tools they need to survive and thrive in manufacturing.

But how can manufacturers give workers the proper training and incentives they need? That's the question on the minds of CEOs and managers throughout Italy. Developing sustainable solutions requires a comprehensive approach, evaluating everything from upskilling to governmental support.

No Winner-Take-All Strategies

To fill important roles within a company, a refined approach to hiring and retaining talent is necessary, no matter how difficult it might seem. Organizations such as **ACIMGA, the Italian Graphic Printing and Converting Machinery Manufacturers' Association (Milan, www.acimga.it/en**), are watching this play out as they lobby on behalf of their member companies that deliver so much knowledge and expertise, which is often unique to Italy.

"A winning strategy for retaining workers is going to be one that combines elements of economic incentives alongside measures that pertain

to the general well-being of the workers," says Enrico Barboglio, general manager, ACIMGA.

These steps won't be enough. Companies have to go above and beyond to attract and retain top talent, requiring new and innovative approaches from hiring managers and HR teams.

"To attract the right type of talent, our companies are attending career fairs and collaborating with schools to find a specific skillset, but it's not enough," Barboglio says. "In order to get to the heart of the matter and fill these roles with competent people, new strategies need to be put in place."

One company that is committed to retaining and encouraging its workforce is ACIMGA member company **Brofind SpA (Milan, www.brofind.it/)**. Brofind, which specializes in the abatement of volatile organic compounds, acid fumes and inorganic pollutants, is finding that taking the right steps to retain and attract talent includes offering financial and social incentives—as well as providing a pleasant working environment.

The competition for top talent is fierce amid the ongoing workforce shortage and manufacturing skills gaps. Successful companies need to be innovative and creative.

"For several years now, Brofind has been applying various forms of welfare for the benefit of its employees," explains Marina Jurjevic, a marketing manager at Brofind. "These include cash bonuses, work flexibility and even the organization of sports events and social gatherings outside the corporate offices."

Even in an environment where it's not so easy to fill roles, Brofind has found that these simple steps, when implemented correctly, keep employees happy. This goes a long way in reducing the time spent searching for job candidates, especially when it comes to hard-to-fill roles.

"We have very low employee turnover, which leads us to believe that we are doing something right," Jurjevic says. "It doesn't take a lot of creativity to get the most out of your existing workforce if the steps you take are logical and sound."

Executives at another ACIMGA member company, **APR Solutions Srl (Rondissone, Turin, www.aprsolutionssrl.com/en)**, think part of the problem lies within the education system. Essentially, APR is starting from scratch when it comes to finding strong candidates to train and take over roles now held by more experienced employees.

"The people we need to integrate into our company need to maintain a certain level of expertise, which is very hard to find on the market today," laments CEO Riccardo Virgilio. "They are getting little to no training outside of our company walls, which adds to the time our experienced workers have to spend training them."

APR must maintain optimum uptime to ensure the company is operating at top capacity, developing and manufacturing paper and carton converting machines for the finishing and packaging industry. Any type of downtime impacts the company's bottom line. If a skilled worker is pulled in to train a new employee, no matter how briefly, it immediately lessens overall production. This creates somewhat of a Catch-22 for the company and its future, according to Virgilio.

"Right now, using experienced workers to train new employees is the only way to ensure the future of the company," Virgilio says. "To sweeten the pot, we enroll our employees in additional skill development programs and ensure them the possibility of professional growth as they train alongside our senior employees."

But the promise of training and education will only go so far. There is still a desire to find top employees who want a future in the manufacturing industry. With that segment of workers dwindling, Italian companies are forming partnerships with trade schools to find and foster potential hires. As students, they are already interested in the manufacturing industry and likely view jobs in this areas as a solid career choice.

UNACEA, the Italian Construction Equipment Association (Rome, www.unacea.org/en), has established partnerships with educational institutions, such as the University of Rome's "La Sapienza," to promote careers within the construction equipment sector.

"The effectiveness of these types of measures can and will vary," concedes Luca Nutarelli, secretary general, UNACEA. "But they typically contribute to the attraction and retention of a skilled workforce."

Despite these efforts, the challenges of evolving labor market dynamics and competition from other sectors will always persist. As a good counterbalance, companies can tap into government programs for assistance.

Government's Role

As finding qualified workers has become more challenging, companies are forced to shift some of the focus away from operations and dedicate resources to training workers. One way to circumvent this predicament is to tap into government training assistance.

"As companies like ours are forming their staff, we are faced with stepping in and doing what a trade school or vocational program would do before potential employees are allowed to begin work," says Virgilio of APR Solutions. "It's our belief that the government should be more hands-on with developing the workforce, improve qualification programs, as well as improve access to training programs."

UNACEA's Nutarelli also maintains this view about the government's role in boosting training in Italy. "The government can, and should, play a role in workforce development for the construction equipment industry," he asserts. "Whether it's financing and supporting specialized vocational training programs or collaborating closely with industry associations to identify skills gaps, government has a place and should do their part."

"It's our belief that the government should be more hands-on with developing the workforce, improve qualification programs, as well as improve access to training programs."—Riccardo Virgilio, APR Solutions CEO.

By increasing their roles, local, regional and national governments can make a difference when it comes to encouraging companies to hire and train workers, especially in high-demand areas, with incentives or grants. To take it a step further, according to Nutarelli, increasing the role of government can address skill shortages, stimulate industry growth and bolster the global competitiveness of all Italian companies in the sector.

The Italian government gives companies 50% tax benefits for three years if a company hires people who are under 36 years old and have no previous experience or a permanent working contract. In addition, there are separate incentives for hiring women over 50 years old, people who have been unemployed for longer than a year and those who live in disadvantaged areas.

"It's important to see the Italian government step up and make these decisions to spur innovation when it comes to upskilling and workforce development," adds Jacopo Nava, president of ACIMGA member company **Vega Srl (Paderno Dugnano, Milan, www.vegagroup.it/en)**. "There could be more done to engage and recruit younger people to enter the manufacturing industry, but this is a good start."

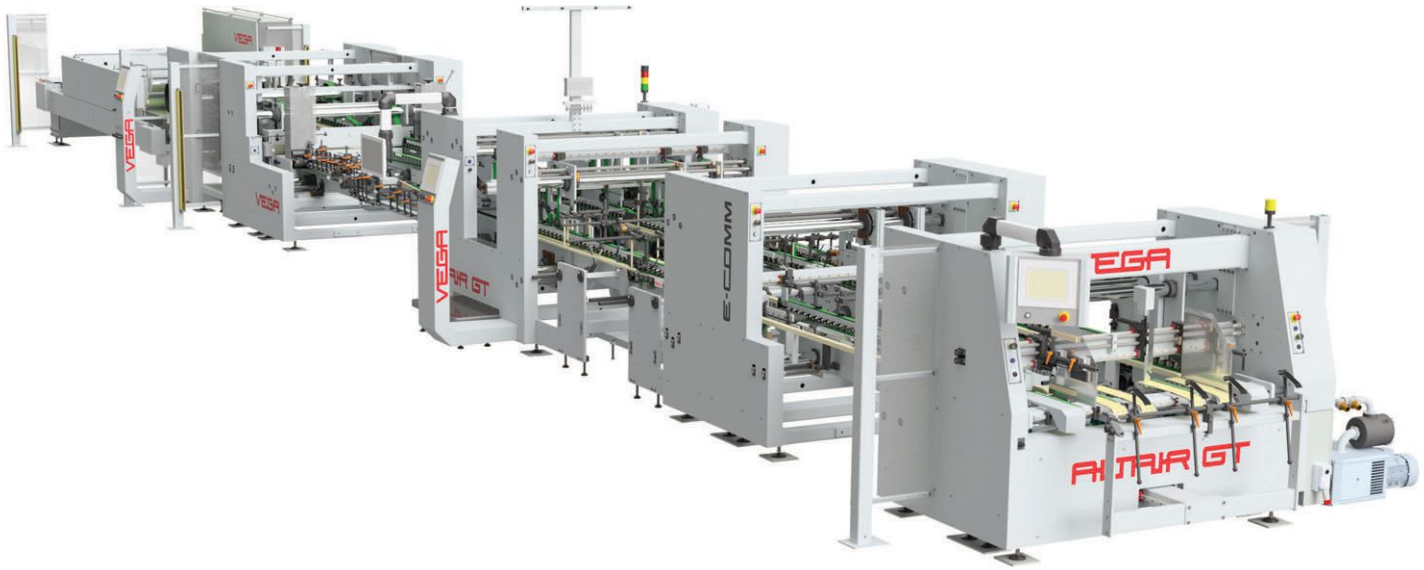
Government agencies also could initiate communications between trainees and manufacturers, recommending candidates that are a suitable match.

"Employers, training providers and individuals seeking employment should be able to easily and efficiently communicate with each other," Brofind's Jurjevic says. "The government has the capability to successfully coordinate these steps, which can facilitate synergies between various entities, prioritize and align efforts to address skills shortages, and meet the demands of industry."

Indeed, the Italian government can be a part of the solution to help the nation's companies find the right people for available jobs. It's not an exact solution, but it can put many companies on the right track to hiring the skilled employees they need.

Full Automation Isn't the Answer

When companies are struggling to find qualified workers and the talent pool becomes increasingly difficult to mine, the question of whether or not automation is the solution will invariably come up.



The newest folder-gluer Vega Altair GT. (Provided by Vega)

It's not always a straightforward decision. Several factors come into play that must be examined before an automation choice is made. But one thing is clear: The move to full automation is not possible now, nor will it be anytime soon if work needs a manual component.

At Vega, automation is just not an option for the type of work the company regularly provides. "We produce our packaging machines at our plant in Italy, and we need human workers and their manual capability," Nava says. "At this time, based on our needs, we don't foresee automation becoming a possibility within our assembly department."

It's also a stance executives at APR Solutions takes when it comes to deciding if automation is something they would ever see within the walls of their company.

"Automation definitely has a place in certain fields and industries where constant decision making is not necessary, which is why we are always investing in projects and designs we can automate," says Virgilio. "But while artificial intelligence is definitely starting to come into its own, it is still a high cost that employers can find difficult to sustain."

Other companies are also finding it more difficult to justify the cost, both financially and in terms of manpower. The manufacturing work being done across Italy is not conducive to a fully automated process, nor is it at the point where humans need to do all the work inside of factories.

Manufacturing tasks can be very complex, and the capital needed to automate them is too high for some companies, leaving them at a disadvantage. With the ongoing worker shortage, it's a double whammy of not enough support and not enough money to invest properly.

"Automation may not present a universally applicable remedy within an industry such as ours because adaptability and decision-making skills are not easily replicated," Nutarelli explains. "The cost associated with implementing automation technology, particularly for smaller enterprises, can be too high."

A better approach is to examine the intrinsic value of human expertise and experience and see the potential for a balanced strategy—the kind that integrates both human labor and automation to increase efficiency and safety in complementary manners.

The Brofind staff meeting with their Chinese partners. (Provided by Brofind)

UNACEA works with educational institutions, such as the University of Rome, to promote careers within the construction equipment sector. (Provided by UNACEA)

"Automation should be implemented gradually ... but in a way that complements and facilitates human work, not acting as a substitute for it," Jurjevic says. "If we rely too heavily on automation, that can lead to a loss of human skills and knowledge that we have spent years maintaining."

Another often overlooked aspect of automation is a disruption to operations and the possibility of sensitive data being compromised. While automating processes can enhance efficiency, it can also bring new threats, including cybersecurity. Like all new tools, automation has risks that must be addressed ahead of implementation.

For most Italian companies, automation requires an entirely new set of skills that many workers don't have. With more basic production skills already lacking, it's unlikely that automation will play a large near-term role in Italian manufacturing plants.

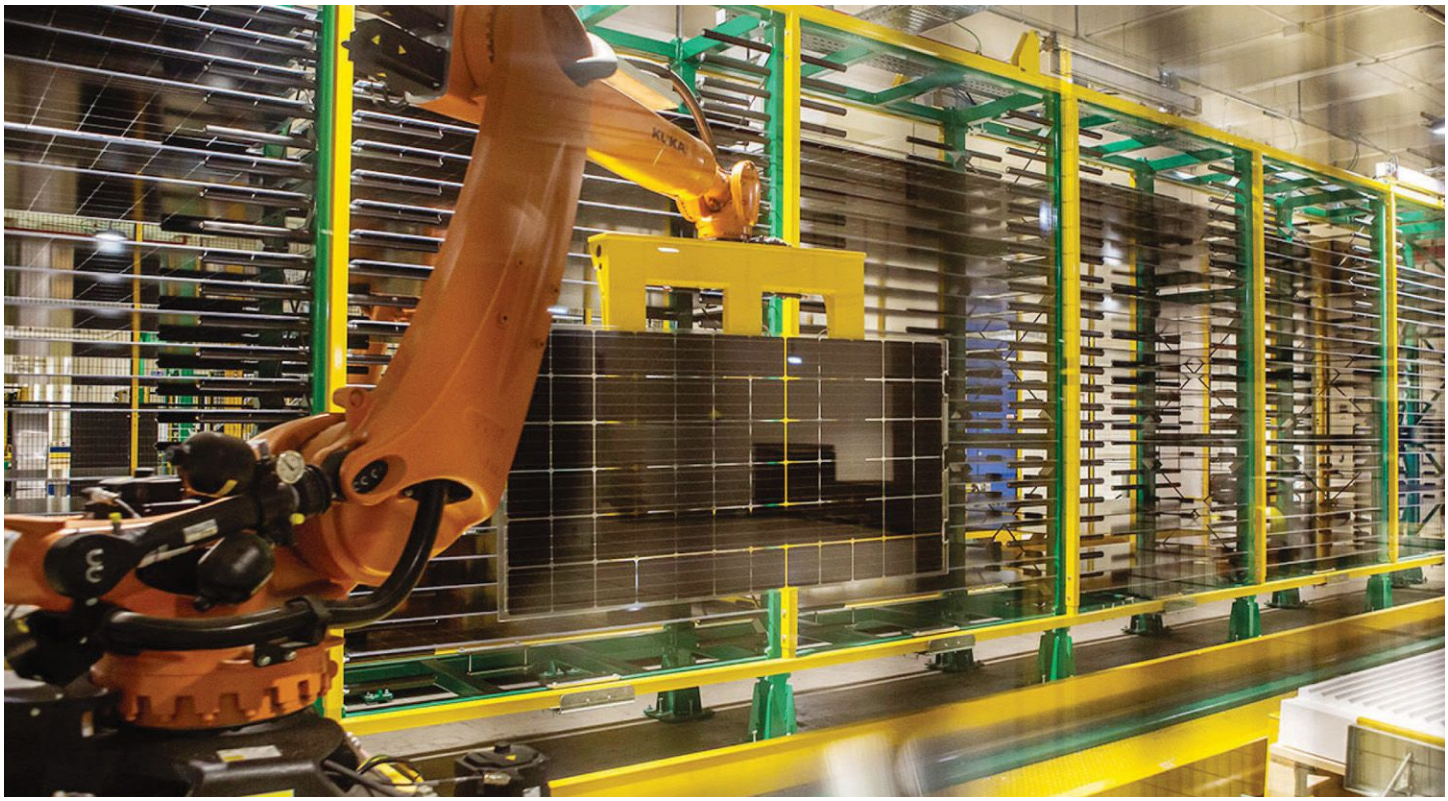
Meeting Tomorrow's Needs

The competition to find fresh talent is at an all-time high in Italy, and that demand will only increase as experienced workers retire or leave the industry. Without plans in place to fill these positions, companies face a dire future. That's why upskilling and reskilling will be of vital importance, along with some assistance from the Italian government.

While automation hasn't taken a firm hold on the country's manufacturing industry, there has been a global shift toward adopting technological processes to boost plant operating efficiency worldwide. Considering where the future points, automation may be a worthy investment, creating a pool of tech-savvy workers who can tackle these and other roles far into the future.

Filling roles will always be a challenge, especially with less skilled workers available. But Italian manufacturers are rising up to meet the challenge with innovative programs that ensure new employees have the skills needed to succeed, or putting into place internal programs that help current employees take the next step in their manufacturing journey.

No matter how this happens, Italian manufacturers know the fight for qualified workers will continue, so they are ramping up their efforts to ensure they can stay ahead of the curve—and their competition.



Customized Products: "Made in Italy" Craftmanship

More than 60% of North Americans consider the authenticity of "Made in Italy" products important and associate the phrase with exotic vehicles from Alfa Romeo, Ferrari and Lamborghini; fashionable clothing and accessories from Giorgio Armani, Fendi and Versace; pasta in its many forms and flavorful wines from Tuscany, Puglia, Sicily and Trentino Alto Adige.

However, none would be possible without the right tools to create textiles and fabrics; instruments and machines to produce leather goods or create highly technical man-made materials; robots to assemble and paint vehicles; and precision machinery to crush fruits, chill wines and even produce staples of life like pasta or tomatoes.

ACIMIT, the Association of Italian Textile Machinery Manufacturers (Milan, www.acimit.it) and other Italian trade associations create a flourishing environment suitable for evolution by encouraging members to emphasize the customization required to build customer value.

Marco Salvadè, president of ACIMIT, says the textile industry is dynamic and diversified, ranging from clothing products to technical materials used in automotive, geotextile and medical arenas. Therefore, the production of these different items needs machines built with technical specifications that vary depending on the material used.

"More than talking about specific technologies, it is necessary to emphasize digital solutions' role in customizing production in the textile industry," Salvadè says. "They provide high levels of flexibility, waste and resource use minimization and continuous quality control. Machine learning and generative AI (artificial intelligence) will be the next step. Intelligent solutions integrated into machinery that can collect data from the production process will be increasingly relevant for optimizing production of each textile company."

Alcantara SpA (Milan, www.alcantara.com/) is a "Made in Italy" luxury lifestyle brand best known in North America for providing uniquely branded materials for high-end automotive interiors. The limited edition

of Lamborghini's Aventador Ultimae, for example, features laser-treated Alcantara with a "Y" pattern.

A leader in environmental initiatives, Alcantara was certified as carbon-neutral in 2009—the first Italian industrial company, and one of the first globally, to achieve this status. The manufacturer uses a proprietary technology to produce its often-colorful material for products as diverse as Microsoft's Surface tablet and top-end headphones. In the fashion world, Alcantara recently collaborated with two Japanese fashion brands, Facetasm and Fumie Tanaka, for special Capsule Collections presented at the Italian Embassy in Tokyo.

Alcantara technology enables it to provide unique customization options for automotive interiors. The limited edition Aventador Ultimae features laser-treated Alcantara with the Y pattern. (Provided by Alcantara)

"Our 100% 'Made in Italy' quality and our experience in customization are what make Alcantara the choice of the world's most admired brands," declares Andrea Boragno, Alcantara's chairman.

This includes working with Microsoft to develop renewable materials for product lines since the tech giant introduced its Surface portfolio of computers in 2017. Alcantara is also introducing new material with higher proportions of recycled polyester, which could lead to future products that rely solely on recycled material.

Innovation Enables Efficiencies

Savio Macchine Tessili SpA (Pordenone, www.saviospa.com/) was founded in 1911 by entrepreneur Marcello Savio as a small mechanical workshop. According to CEO Maruro Moro, Savio is the leading company in the yarn-finishing machinery sector. "We were the first to introduce electronics and mechatronics into machinery, enabling us to offer more flexible, customized and 'non-mass-produced' solutions."

Savio's newest contribution to fashion, textiles and other materials is the Lybra Smartspinner, which uses air-jet spinning technology. This provides customers with a versatile, flexible, cost-saving and easy-to-use machine.

"Air-jet spinning offers yarn manufacturers the opportunity to produce yarn at high production rates and low processing costs," Moro explains. "The system can modify the composition of the blend directly from the machine (control system) without changing the feeding mechanism. This reduces production costs and optimizes the preparation lines."

The Smartspinner supports different material blends and color mixtures. It will be especially useful for knitting and home-textile applications, Savio says, "producing mélange knits and fabrics."

Biancalani Srl (Prato, www.biancalani.com/) is another well-known machinery builder. In 1957, Fiorenzo Biancalani opened his first factory, and quickly understood the need to develop new textile machinery that he thought could give a "magical touch" to fabrics. Biancalani developed a new method of driving fabrics at very high speed with airflows, and the original AIRO machine was created, which the company said "revolutionized the textile industry."

Their new AIRO24 DUETTO, with double capacity, dries and softens fabrics in less space. Fabric is processed inside the upper part of AIRO24 DUETTO and then in the lower part for effective double-drying and softening actions. Important to factory design, overall height is minimally increased.

At **ITMA (www.itma.com/)**, the world's largest textile and garment technology conference, in Milan was the "Blue Jean Lady" Aquaria with three distinct denim treatments—Aquastone, Aquaflat and Aquafixto. Aquastone delivers stonewashed and worn effects without eliminating color. Aquaflat provides smooth, flat fabric with a soft feel. Aquafix, utilizing AQUARIA's mechanical washing, can remove up to 50% of color without employing harmful substances.

Customized Solutions

Comez International Srl (Cilavegna, Pavia, www.comez.com) delivers custom machinery for highly specialized applications ranging from rigid and elastic crocheted products to industrial and technical cloths and surgical-knit fabric. Comez's experience as a knitting-machine manufacturer facilitates delivery of what it calls "non-standard realization," yielding customized customer solutions.

Originating in 1953, and today a part of the Swiss Jakob Müller Group, Comez now supplies warp-knitting machines with single- and double-needle beds, as well as mechanical and electronic crochet machines featuring compound needles.

The company has received requests for "non-standard realization" since at least 2019, particularly in North America, where requests for customized machinery have reached 60%. Globally, such requests "mainly concern technical sectors, such as automotive, orthopedic, surgical and r&d," the company says, with fewer custom needs from home textiles and traditional apparel markets.

The company developed customized machinery for specialized applications such as forked veins, heating mats and elastic bands with loop effects. Personalized applications may require special devices, such as custom and automated feeding and collecting systems, as well as special needles to allow processing all types of yarns, according to the company. This includes synthetics (polyester, polyamide and polypropylene), traditional natural yarn and specialty yarns such as aramid and fiberglass.

"Customer-driven needs have had a positive impact within our organization as it allowed us to further develop new technologies that increase our know-how," Comez says. "Each customer's request is carefully evaluated to offer the best solution for performance and workability, and our technical department may even develop a prototype and perform testing to ensure custom machinery is set up based on the customers' needs. Further, our group can add functions (accessories or machines) such as warping, confection, winding and finishing systems."

Speed Drying

RF Systems (Solagna, Vicenza, www.rfsystems.it/) uses radio frequency (RF) technology in speed drying and thermal processes, cutting energy costs and operating expenses. RF technology provides uniform chemical- and radiation-free drying in just minutes or even seconds.

With more than 1,000 machines delivered globally, RF Systems provides machinery for non-wovens, textiles, recycling and waste material reuse, as well as for food.

Sign of the Times

EFI Reggiani (Milan, www.efi.com/), founded in 1988 in San Francisco, Calif., originated the well-known Fiery color server for printing professionals, and later acquired Italy's Reggiani Macchine after deciding professional super-wide inkjet printers were necessary to the textile industry. With multiple acquisitions in inkjets, ceramic tile decoration, corrugated packaging, 2D and 3D CAD/CAM software, EFI Reggiani recently celebrated 75 years in textiles. Today, the company drives its growth with a portfolio of products, services and partnerships for the manufacturing of signage, packaging, textiles, ceramic tiles and building materials.

After examining other digital printers (many with closed ecosystems), Springs Creative purchased a Reggiani Terra Gold because of the Italian textile company's well-established pedigree and "open system." After several years using dye-sublimation printing, Springs Creative expanded into other forms of textile printing using digital technology.

The company planned on pigmented inks printed on fabric as a sustainable solution that uses less water, explains John Wirth, vice president of technical and global sourcing for Springs Creative. This cut the lead time from printing fabric to shipping to customers.

With its customer committed to pigment ink, Reggiani was challenged by significant changes in the drying section to fully complete the curing of the pigment ink and binder, but the partners ultimately prevailed.

Savio's new winding machine, the Proxima Smartconer, is capable of perfectly adapting to demands of connectivity, Industry 4.0 and Industrial Internet of Things. (Provided by Savio)

While no machine has 100% uptime, Reggiani has been very responsive to requests for maintenance and service interventions, Wirth says. "When we print a fabric and it comes off the exit end of the printer, it's ready to ship to the customer. ... We have not missed customer deliveries because of unplanned downtime on the machine."

For four generations, **Guarneri Technology Srl (Busto Arsizio, Varese, www.guarneri-technology.com/en)** has delivered calender manufacturing

and service to the textile, technical textile and paper industries. Calenders, a series of temperature- and pressure-controlled rollers, are used to smooth and coat fabrics like cotton, linen, silk or manufactured polymers such as vinyl.

Because the distance between rollers—the nip—is adjustable, fabric effects like moiré, embossment and ribbing can be created. Guarneri employs a variety of calenders, particularly those using NIPCO adjustable technology, which allows a variety of material-dependent pressures and widths. Some machines deliver independent pressure settings in each nip between 50 and 400 N/mm. With motorized width adjustment, retracting forces can be automatically combined. Pressure across the width can be automatically set to fabric width, allowing the pressure to be released in the non-fabric area and protecting the sleeve from burning. Notably, Siemens S7 computer systems are employed to control machines and make maintenance and service announcements.

More in less space, with twice the capacity and a softer hand, the new AIRO24 DUETTO dries and softens your fabrics like never before. (Provided by Biancalani)

Guarneri's new NIPCO HT applies flexible pressure across the entire material width for technical fabric finishing and may heat select roll surfaces up to 300°C. The company has also developed embossing calender machines for the paper industry using similar technology.

Finding the Right Frequency

Stalam SpA (Nove, Vicenza, www.stalam.com/en), established in 1978, is known for its use of RF equipment on food-product processing requirements such as tempering, sanitizing and pasteurizing. The ACIMIT member uses RF power in drying and thermal processing, often in machines customized for medium and large dye houses to efficiently dry materials at production scale. Additionally, air circulation and evacuation systems assist in evaporation to maximize moisture removal.

San Francisco-based Ziel uses Stalam's RF technology to remediate mold and other microbial pathogens in food products. RF is an FDA-approved organic process and thus requires no extra labeling and retains organic labeling for all nuts, seeds, hemp and cannabis.

A Cut Above the Rest

Tecnofirma SpA (Monza, www.tecnofirma.com/en) traces its origins to 1949, based on technology originated by Roto Finish in Kalamazoo, Michigan, and became Tecnofirma in 1985. The Italian Roto Finish was established in Italy to introduce mass deburring and cleaning processes, and after introducing the first carbon-dioxide-washing plant in the world, expanded into the treatment of plastic and metal surfaces. This is particularly relevant to the motors used in the growing electric vehicle market.

Tecnofirma opened a facility in Charlotte, North Carolina, to serve customers in North America, says Dario Geraci, country manager. With the North American market contributing about one-fourth of its revenue, Tecnofirma continues to invest in its regional engineering team.

"Our products are customized based on customer needs regarding production capacity, parts, dimensions and process requirements," Geraci explains, citing cleaning, coating and impregnation equipment. "The impact is especially (strong) on the design phase to fulfill all the customer customization needs," he says.

Lamebo Srl (Leni, Salina, www.lamebo.it/home.php?lang=2), an ASSOMAC member, produces splitting band knives for tanneries, shoe and leather manufacturing, paper and foam materials. All Lamebo knives are custom products delivered to a variety of machine manufacturers. "Customization starts with the choice of the steel used for our knives and continues into branding and packing, passing through our production process, which includes the specific type of bevel and finishing," notes CEO and Director Gabriella Marchioni Bocca.

Lamebo offers a wide range of machine-specific blades of different widths and thicknesses, producing splitting band knives for tanneries, shoe and leather manufacturing, paper, foam materials and non-woven fabric.

Choosing the correct alloy is based on customer trials and production requirements. Because processes vary, the customer can select between types of blades with differing tolerances. Three quality levels are available: Platinum, Extra and Silver. "Customization delivered to machine manufacturers continues into branding, as customers can request their logo on Silver and Extra splitting knives," Bocca says, adding that the "Lamebo Platinum" trademark is reserved for top-of-the-line knives.

"Our more than 3,000 customers appreciate our assistance before and after sales and the care we give them," Bocca says. And, he adds, the company continues to look for ways to improve its operations, including upgrading machinery and processes to better serve North American customers.

Innovation, Industry 4.0, digitalization, and environmental sensitivity lie at the heart of today's customized, "Made in Italy" machinery and products. No matter the arena—textiles, leather goods, food service, human medicine, or energy—Italian industry has created and sustained its enviable pedigree of technological competence and responsiveness to customer's needs.

The digital transition and automation of manufacturing operations are key change drivers in Italy's woodworking industry. (Provided by ACIMALL)

Making Supply Chains More Resilient

After surviving the last few years of global supply chain disruption, manufacturers the world over have discovered a new appreciation for the importance of building and maintaining strong partnerships with suppliers and customers. Italian trade associations and their member companies have learned this lesson well, and continue taking aggressive actions to ensure quality products while meeting market demands in the face of ongoing challenges.

Repeat Performance

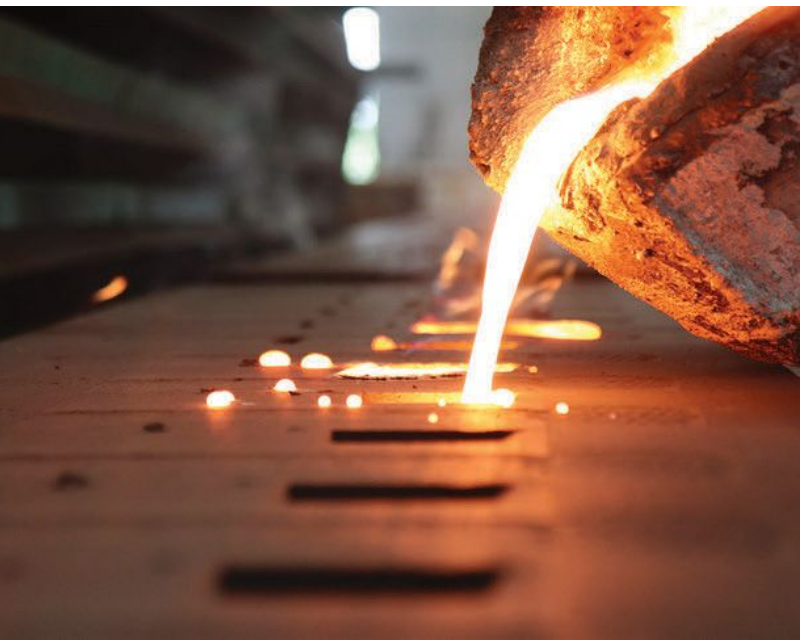
One such organization is **ACIMAC, the Association of Italian Manufacturers of Machinery and Equipment for the Ceramic Industry (Baggiovara, Modena, www.acimac.it).** Regarding the effects of recent supply chain challenges on ACIMAC member companies, Chairman Paolo Lamberti notes that the Italian ceramic machinery industry achieved record results in 2022 despite rising energy costs.

Although raw material shortages have mostly subsided, Lamberti warns that companies will be unlikely to immediately replicate last year's performance for several reasons.

"The situation in 2021 and 2022 highlighted the importance for customers to adopt more energy-efficient technologies equipped with servitization, or the integration of products and services," Lamberti says. "As always, our industry's challenge is to continue delivering increasingly rapid and tailored solutions to our ceramic tile manufacturer customers."

He also suggests that the government should diversify energy sources and their origins, while the industry needs to continue promoting continuous collaboration among all stakeholders in the ceramic district. ACIMAC is

committed to raising awareness of key issues and representing the interests of its members, according to Lamberti, and frequently works in collaboration with Confindustria Ceramica (the ceramic tile producers' association) and Ceramicolor (the glaze and color producers' association) as part of a regional approach.



According to AMAFOND, the Italian Association of Foundry Suppliers, pandemic-related lockdowns were the leading cause of supply chain reorganization among its member companies.

As suggested, strong partnerships with reliable suppliers are proving essential. "The true strength of our members lies in the fact that many of these companies also serve as suppliers to one another, forming a kind of district-wide ecosystem," Lamberti says. "Often situated in close proximity to one another, they can supply top-quality equipment, semi-finished products and components that align with the levels of excellence for which our region is renowned in global markets. This is a strength that needs to be maintained, because locally sourced solutions provide a competitive advantage for everyone."

Winning with Wood

ACIMALL, the Italian Woodworking Technology Association (Milan, www.acimall.com/en/), reports that 2022 was a positive year for woodworking technology, which closed with a production value of €2.65 billion (US$2.9 billion), up 4.6% compared with 2021. ACIMALL member companies accounted for 90% of this value, with three-fourths of their production shipped abroad.

"These figures illustrate a trend that, however positive, is nevertheless affected by gaps and disruptions in the supply chain," says Piero Borroni, a member of ACIMALL's marketing department. "Such issues have impacted the lead time for machinery and plants, with an unprecedented expansion of time frames: Many orders submitted in 2022 will be actually shipped during 2023."

Borroni points out that, although preliminary results have been excellent, the "real" development of orders in the first two quarters of this year, shows a massive reduction, which is likely to continue in the near future and negatively impact the industry.

And yet, the industry can take different directions, Borroni notes. The digital transition and automation of manufacturing operations are key change drivers that—combined with production optimization—can support a significant improvement of the supply chain. Other factors include the need to maximize the use of raw materials and resources, including people, especially when the lack of labor represents a big challenge for companies.

"Also, interacting with suppliers quickly and efficiently is essential," he says. "This is why many of our members are exploring ways to expand their supplier base, maybe for logistical reasons, focusing on local suppliers with available stocks covering most of their requirements."

The need for enhanced stock strategies is a key topic for suppliers and manufacturers, Borroni adds, noting that many have decided to place larger orders in anticipation of potential raw material shortages, especially for electronic parts. "Such measures, fitting into a well-organized strategy, not only support each company's growth, but also contribute to the development of entire territories," he says.

Friends of the Foundry

Fabrizio Carmagnini voices similar concerns. As the director of **AMAFOND, the Italian Foundry Suppliers' Association (Milan, www.amafond.it/en/),** he points to pandemic-related lockdowns as the leading cause of supply chain reorganization among member companies—and slow delivery of some electronic products has delayed deliveries to customers.

"In this situation, companies often try to find new suppliers nearer to home," Carmagnini says. "Many are also seeking to expand partnerships with their existing suppliers, are exploring alternative procurement solutions and are raising their safety stock levels to guard against future disruptions."

Finally, some of these companies are turning to political institutions for support. "There is a growing demand for protection and the need for a resilience strategy to positively address those factors that continue to change the rules of the game," he adds. "Governments have an important role in increasing the internal strength of manufacturing supply chains."

Apparently, they're listening. Reuters reported in August that the Italian government "plans to set up a fund with at least €2 billion (US$2.2 billion) at its disposal to bolster strategically important supply chains." This move is further enhanced by Italy's advanced manufacturing incentive plan, known as Piano Transizione 4.0, which the United States Department of Commerce's International Trade Administration says allocates €13.4 billion (US$14.67 billion) in tax credits for investment in capital goods, intangible goods, r&d, innovation and training, money that will play "a key role in the growth of the advanced manufacturing technologies market."

Glass Gains

That should be welcome news to Fabrizio Cattaneo, general director of **GIMAV, the Association of Italian Manufacturers and Suppliers of Machinery, Equipment and Special Products for Glass Processing. (Milan, www.gimav.it/en/),** who shares similar views to those of his counterparts in other trade associations.

"In Italy, we are excellent throughout the entire supply chain," he told a reporter from the media firm Teleborsa earlier this year. "However, there are divisions within the industry and even within individual technologies, differences that are often difficult for those outside the industry to understand. Perhaps on this front, we could do more by trying to have a unified and clear representation. Of course, some recent measures taken by our politicians and administrators do not help."

He's referring to Italy's so-called "nightlife decree," which bans the use of glass containers in an attempt to improve street conditions. "I don't think a street covered in plastic is better than one covered in glass," Cattaneo lamented.

Unfavorable laws notwithstanding, pandemic-related logistics and supply chain disruptions have had a profound effect on this sector. Among the most notably impacted are manufacturers of glass processing technologies—many had made contractual commitments that, through no fault of their own, they were unable to fulfill.

As a result, the glass sector experienced a significant and important halt, Cattaneo says. In 2020, the sector plummeted by about 16.5%. This significantly affected exports, which lost about 15%, as well as domestic markets, where deliveries dropped by 20%.

By 2021, however, the sector achieved a so-called "technical bounceback." This means it recovered in one year what was lost between 2020 and 2021. "By the end of 2021, the turnover had already exceeded €2.5 billion (US$2.74 billion), values even higher than we'd seen before the pandemic," Cattaneo said.

During the same interview, Cattaneo was asked, "What are the most urgent challenges for the entire supply chain?" Given the European Union's Circular Economy Action Plan (CEAP), his answer was unsurprising. "One of the important challenges—probably the most important—is the green and eco-sustainable transition," he said. "We are committed to this challenge and are changing both glass products and the processes used to produce them to be more environmentally friendly."

No less important is the smart paradigm, he pointed out, noting that we now live in an environment that, from Industry 4.0 onward, requires forward thinking about processes and products that incorporate intelligence and add value. As an example, Cattaneo said that a window could eventually also serve as a television or a 360° view of a smart home, in addition to its primary function as a window.

"These are the more strategic trends, which are medium- to long-term oriented. In practical terms, probably the main challenges today are the processing of increasingly thinner glass as well as flexible glass," he continued. "We are already seeing various applications that are becoming more accessible—for instance, we currently have foldable smartphones, but there are also prototypes of glass panels and screens that can be unrolled and used in ways that were unthinkable until recently."

Meet the Members

Italian manufacturers are embracing these and other advanced technologies. One example comes from **Mappi International Srl (Cisterna di Latina, Latina, www.mappi.it/)**—a GIMAV member—which now offers an enhancement package that brings greater efficiency, process control and data security to its line of glass tempering furnaces.

"In partnership with Siemens, we developed a system called MEC, an acronym for Mappi Edge Computing," says CEO Nancy Mammaro. "It gives our customers access to more data, faster processing and, with the help of artificial intelligence, the ability to perform predictive maintenance checks on the machine. Further, it presents the possibility of using all or part of the data in the cloud, so that it can easily be exchanged with ERP and other software systems."

GIMAV, the Italian Association Of Suppliers Of Machinery, Plants, Accessories And Special Products for Glass Processing, remains committed to making glass products and the processes used to produce them more environmentally friendly.

Fortunately, Mammaro says supply chain problems over the past few years have had little affect on her company. Yes, she and her team have dealt with price increases on many of the components needed to build furnaces, but thanks to a decision to order additional parts well in advance, there was little to no impact on product delivery.

"Mappi uses only European suppliers and has long enjoyed good partnerships with companies like Siemens, Festo and Schneider Electric, so we all work for the same result," she says. "And because we've always tried to be both flexible and efficient even before the crisis, with an emphasis on small lot sizes and reducing production downtime, we were well-prepared."

That's a Wrap

This type of Italian expertise doesn't go unnoticed. Davide Ceccarelli, the CEO for automated packaging machinery builder **Technowrapp Srl (Fonzaso, Bologna, www.technowrapp.com/en),** shares how a long-time customer asked him and his employees to co-design a factory in the U.S. during the early days of the COVID-19 pandemic.

"After collaborating for more than 15 years with an important pharmaceutical group, we were asked to assist with an intralogistics project in the United States," he says. "The customer's need was to combine two factories that were separated at that time by 4,000 kilometers (2,485 miles) into a single factory that encompasses the entire production cycle. It was our biggest intralogistics project to date."

The plan was to divide the new plant into two areas: the loading and unloading docks. At the loading dock, robotic loaders position medical bags in a series of layers to form a truck, which is then taken to conveyors for sequential loading into an autoclave. After sterilization, conveyors move the trucks to an unloading area, where another series of robots depalletize the product and place it into boxes for storage and shipping.

Correct sizing of the buffers at either end of the autoclave was essential to keeping the plant "under pressure" at all times. Making matters even more challenging, the timing was tight; Technowrapp received the customer's request in early 2020, and presented a solution within one month. The layout has since been adopted as a model for the opening of new factories in other countries.

A Cool Partnership

David Lambert will tell you that North American investment in Italian equipment and technical expertise is not unique. As the director of Top Glaciers Inc., a Quebec-based leader in the frozen dessert market, Lambert explained in a recent company newsletter how this maker of premium ice creams, pure fruit sorbets and plant-based desserts leveraged Italian machinery to "delve into their journey of success."

Seeking reliability with a proven track record, Top Glaciers was drawn to Italy's reputation for gelato craftsmanship, he said. The country has maintained its heritage and evolved its machinery to meet the highest standards, which is why Top Glaciers decided to invest in equipment that would elevate its production processes.

Through a mix trade shows, internet research and word-of-mouth recommendations, the company discovered the Italian equipment manufacturers **Technogel SpA (Grassobbio, Bergamo, www.technogel.com/en)** and **MCM Srl (Nerviano, Milan, www.mcmwrap.com/index_en.html).**

Technowrapp recently assisted with an intralogistics project for a large pharmaceutical group in the United States. (Provided by Technowrapp)

"What sets the Italian machinery apart is its streamlined design, technological advancements and user-friendly interfaces," Lambert said. "Its features make operation a breeze, enhancing overall efficiency. Further, Top Glaciers has experienced excellent post-sale support from both Technogel and MCM. We're very impressed, which is why we've committed to the purchase of a new extrusion line in Q1 2024, a testament to the enduring partnership between our company and these two innovative Italian equipment manufacturers."

In closing, supply chain resilience has become a paramount concern for manufacturers, as evidenced by the recent experiences of Italian trade associations and their member companies. Each has underscored the significance of robust partnerships and agile responses to supply chain disruptions and rising costs.

Despite the challenges, manufacturers have managed to deliver record results, highlighting the importance of energy-efficient technologies and the integration of services, while the local ecosystem of suppliers, renowned for quality and excellence, provides a competitive edge in the global market, exemplifying how close-knit industry clusters can foster resilience and competitive advantages amidst global supply chain volatility.

ZILMET BREAKS GROUND IN SOUTH CAROLINA TO KEEP PACE WITH GROWING NORTH AMERICAN DEMAND

In September, **Zilmet USA** broke ground on construction of a 150,000-sq-ft facility in Georgetown County, South Carolina. The planned $32.7 million investment at the site is expected to create about 50 new jobs. Since its formation in Rhode Island in 2012, Zilmet USA has imported all its products from the company's primary manufacturing plant in Italy. But greater than expected demand, both in the United States and worldwide, prompted Zilmet to expand its existing 2 million square feet of manufacturing space. The Rhode Island facility will allow the company to better serve its growing customer base, while freeing up existing capacity in Italy for customers in Europe and other markets. Phase 1 of the new project is due to be completed in late 2024, with production beginning in 2025.

Website: zilmetusa.com

ADVANCING TECHNOLOGIES AND PIONEERING PROJECTS FOR "TAILOR-MADE" EXPERIENCES

Tonello Srl has always designed its machines from the production and logistical needs of its customers. One example of this is THE Laser Lab, a solution for stores, laboratories and small businesses. The machine is extremely compact and easy to use, according to the company. It allows for rapid and creative customization of garments and accessories—from a whole jean with whiskers and abrasion to even the smallest logos and details, thanks to a three-level system that varies according to the precision and size of the graphic or design you want to "laser."

Website: tonello.com

MARELLI WINS ALTAIR ENLIGHTEN AWARD WITH "LIGHTWEIGHT URETHANE FOR INTERIOR PRODUCTS"

Global technology company Altair Engineering Inc. and the Center for Automotive Research (CAR), both based in Michigan, named **Marelli SpA** a 2023 Enlighten Award winner in the Future of Lightweighting category for the Italian company's "Lightweight Urethane for Interior Products." Marelli has developed a new lightweight polyurethane foam that can be applied to all foam-in-place (FIP) applications, particularly the main dashboard panel. It reduces weight by 40% with new tooling (8% with current tooling), decreases foam thickness by 50% and reduces raw material costs by 20%, as compared to the current foam in use. The award ceremony was held on Aug. 1, as part of the CAR Management Briefing Seminars, an event focused on the future of the global automotive industry.

Website: marelli.com

STALAM IN-LINE RF DEFROSTERS TAKE JUST A FEW MINUTES

Established in 1978, **Stalam SpA** of Nove, Italy, is a world leader in the development, design and manufacture of radio frequency (RF) equipment for the drying and thermal processing of raw materials, intermediates and finished industrial products. Over the last few decades, Stalam has introduced many innovations in products processing for the food industry, the most widespread being the radio frequency system for the rapid defrosting of meat, alternative proteins, seafood, vegetables and other food products. Stalam "RF COLDWAVE+" defrosters have become best-sellers in the food industry, according to the company. Defrosting is achieved in minutes rather than hours or days, even for large product blocks and, if necessary, directly inside packaging used for storage (carton boxes, polyethylene bags, etc.). Further, the process speed and uniformity minimize product degradation.

Website: stalam.com

ADDITIVE MANUFACTURING BOOM: ONE MORE REASON TO PARTICIPATE IN PIÙADDITIVE AT 34.BI-MU 2024

According to the European Patent Office, applications for additive manufacturing (AM) solutions registered an average annual increase of about 30% in the last decade. The total number of AM requests was six times higher than in other high-technology sectors. With a turnover that reached a record-breaking total of 16 billion euro in 2022, AM has its most important markets in the U.S. and in Europe. Italy is among the top 10 with regard to the number of patent applications, and ranks second in the European Union in terms of industrial installations. The results show that Italy has a high potential for the development of AM, which boasts a growing number of applications in a cross section of industries, including pharmaceuticals, healthcare and biomedical engineering, as well as aerospace and transportation, many of which will be showcased at 34.BIMU in Milan. For more information on 34.BI-MU 2024 (October 9-12) and the Italian offerings exhibited, visit bimu.it/en/.

Website: ucimu.it

SAPOVITE MEETS VERICUT

Saportiti Srl of Italy, which has manufactured milling machines for more than 50 years, is looking to the future with its latest systems for screws and twin-screw cutting. The screw profiles have become more complex over the years, which can make toolpath programming difficult. For this reason, Saporiti has developed a software (SAPOVITE) to support operators by simplifying the programming. To better support customers and keep machine features updated, Saporiti is collaborating with CGTech Software to integrate the Italian-developed SAPOVITE software with a full-3D simulation of the programmed screw, thanks to the VERICUT software, a technology for manufacturing simulations that specializes in numerical control verification, optimization and analysis.

Website: saporiti.it

BRAZILIAN AND ITALIAN PARTNERS TEAM UP ON U.S. PRODUCTION

Headquartered in Brazil, tile manufacturer Portobello America Inc. recently took receipt of 630 tons of machinery from Imola, Italy-based **SACMI Group** for a new production plant in Baxter, Tennessee. From dough preparation to presses and ovens, SACMI—a global supplier for the ceramics, closures, preforms and containers, food and beverage, packaging, metals and advanced materials industries and services—supplied the company with the key machines for the plant. The various parts of the investment support a single vision: to create an ultra-modern production unit at the Baxter headquarters in line with Portobello's growth in North America, which is the production of 8-9 million square meters of tile annually.

Website: sacmi.it

PASTEURIZERS TUNE IN FOR INDUSTRIAL BAKING

Founded in 1990, **RF Systems** manufactures radio frequency (RF) dryers and equipment that speed up and improve drying and thermal processes, cutting energy consumption and operating costs. High-performing and energy-saving, the company says its equipment allows customers to make the most of RF technology's advantages with the best cost/benefit ratio. Traditionally, food processors often rely on steam or other conventional heating systems (mostly based on hot-air circulation or surface-heat exchangers) for the microbial inactivation/stabilization processes: The heat transfer is generally slow and uneven, severely damaging the properties of the product. With RF pasteurizers, however, the product is submitted to a rapid and gentle dielectric heat treatment for a few minutes, which leads to live cell destabilization and microbial inactivation. In this way, food substrates can be sanitized while preserving their physical, sensorial and nutritional properties.

Website: rfsystems.it

INDIANA COUNTY ATTRACTS INVESTMENTS WITH A TRIO OF ITALIAN MANUFACTURERS

Following a recent visit to northern Italy, officials in Delaware County, Indiana, signed memorandums of understandings (MOUs) with three Italian companies related to future investments in the area. The first MOU was signed with **Gamma Meccanica**, a manufacturer of machinery that recycles plastics. The company initially plans to lease a facility in Delaware County, but also is considering locations to build a new facility. The second MOU was signed by **Trebi Srl** to build a warehouse in the area. The robotics company already has a sales office in Delaware County, which serves as its North American headquarters. The third Italian manufacturer is **Vi-Technik Srl**, which will lease a 15,000-sq-ft facility that eventually will employ 40 skilled technicians to produce plastic parts for cameras used in automated driving systems.

Website: gamma-meccanica.it/en/
Website: trebi-bs.com/en/
Website: vi-technik.com

OMERA AUTOMATIC TRIMMING/BEADING MACHINE FOR INWARDS BEADING

With an export index of 70% on the turnover and constant attention to new technologies for industrial automation, Vicenza, Italy-based **Omera Srl,** has been a leading player in the sheet-metal deformation sector since 1951. The company produces mechanical and hydraulic presses, trimming/beading machines and turnkey production lines. The purpose of a recent project was to develop new equipment able to offset/joggle steel heads measuring 24" OD to 30" OD (610-762 mm) with a machine cycle time for inwards beading of bottom ends within approximately 30 seconds, including piece loading/unloading. All ASME material (SA-414-G) will have tensile strength between 75ksi and 95ksi. The joggle geometry of the final product must meet at minimum the requirements shown in ASME regulations.

Website: omera.com

MAPEI CANADA EXPANDS QUEBEC PLANT

In September, **MAPEI Inc.** officially opened a powders production and warehouse expansion at its flagship facility in Laval, Quebec. The facility is among the biggest and most technologically advanced plants in MAPEI's North American network, according to the company, and will allow it to meet northeastern Canada's growing need for construction materials, admixtures for concrete and cement grinding aids. A new powder line will produce 30,000 tons annually per shift, while the admixtures line will produce 7,000 tons annually per shift. MAPEI's increased production capacity in Laval also will allow for more balanced production across Canada—shifting production as needed between plants in Ontario, Quebec and British Columbia—which is expected to reduce its carbon footprint through quicker deliveries and shorter transportation distances of supplies to construction sites.

Website: mapei.com

SISMA: WELDING WITH NO BOUNDARIES

SISMA SpA of Piovene Rocchette, Italy, is at the forefront in the development of laser solutions and offers a wide range of welding machines for different applications. Characterized by a sturdy structure and a high axes stroke, the SWT welding machine is designed for maintaining and repairing small- and medium-sized molds. In the Class I version (closed), SWT can be placed in any production environment, working in complete safety, according to the company. SWT can be equipped with fiber and variable laser power up to 450W for high productivity. The ergonomics of the SWT system is suitable for long or occasional use, thanks to the improved aesthetic and functional details. The SWT systems are designed for high performance over time, in addition to fluidity and precision of movement, which ensure ease of use and repeatability of the result.

Website: sisma.com

MG2 SUPPLIES FLEXALAB TO QUOTIENT SCIENCES' U.S. FACILITY

Quotient Sciences, a drug development and manufacturing accelerator, and **MG2 Srl,** a Bologna, Italy, company that produces capsule filling and other automated machinery, recently announced a strategic agreement. The partnership includes the purchase and installation of a FlexaLAB continuous-motion capsule filler at Quotient Sciences' early phase drug development facility in Garnet Valley, Pennsylvania. The new machine can reach a speed of up to 3,000 capsules per hour, and is designed for R&D environments. For Quotient Sciences, the capsule filler has been configured with different dosing units to handle several oral solid forms, including powders, pellets, tablets and mini tablets. The FlexaLAB is also equipped with the ability to fill different dosing units at the same time, thus enabling it to fill multiple products in a single capsule.

Website: mg2.it

LAIP ITALIAN TEXTILE DYEING TECHNOLOGY

LAIP Srl was founded in 1958 in Prato, Italy, and provides innovative products and technologies tailored to the needs of individual customers. Every machine is Industry 4.0 capable—once installed, the customer receives advanced assistance from a dedicated person who is informed of the client's needs, and an app that provides remote assistance via augmented reality software, as well as local technicians in case of on-site intervention. One of the company's most productive and eco-sustainable machines for today's dye houses is the 198 HT; designed for tow packages and fiber dyeing, it allows the same liquor ratio to be maintained even with partial loads. Additionally, the 250 HT Jet is an easy-to-operate machine ideal for fabrics with a high percentage of elastic fiber for fashionable, sport and modern textile products, according to the supplier.

Website: laip.it

RETUNER LANDS IN AMERICA WITH FIRST CUSTOMER AND PARTNER INSTALLATIONS

RETUNER is **Orchestra Srl's** (Turin, Italy) digital solution based on a cloud-driven, edge-computing architecture interconnecting machines, systems and people, and thus offering a new level of integrated automation for Factory 5.0 processes. The cornerstone of RETUNER is an EDGE board designed to directly perform on-board digital processing and services. SMARTEdge 5.0 NG is an all-in-one electronic device with modular boards, a Linux operating system and an RTOS co-processor to combine the speeds of a real-time system with the flexibility of an operating system. By the end of 2023, the first installations are planned on the machines of U.S. customers and partners. The RETUNER solution is marketed by the company of the same name, Retuner GmbH, the subsidiary opened by Orchestra in Germany to oversee the international market.

Website: orchestra.it

GDM'S BUSINESS MADE EASY APPROACH: INNOVATION, SUSTAINABILITY AND DIGITIZATION

Founded in 1986, **GDM SpA** as we know it today was born in 1995 from the merger of two companies acquired by Coesia, a group of innovation-based industrial and packaging solutions companies operating globally. In 1999 GDM acquired the engineering department of a well-known multinational disposable hygiene manufacturer, taking advantage of 50 years of engineering experience. The company has recently released Accordion Core, a patented solution designed to deliver superior absorbency, skin friendliness and discretion while ensuring manufacturers have meaningful savings on raw materials. And the same applies to one of its latest technological innovations: In-line Laminated Waistband, an advanced development that responds to consumers' needs for more comfortable and performant products and guarantees manufacturers flexibility and full process control.
Website: gdm-spa.com

BIANCO CELEBRATES 50 YEARS OF MADE-IN-ITALY EXCELLENCE

With over 40,000 installations in 50 countries worldwide and 30 registered patents, **Bianco SpA** proudly reaches 50 years of excellence in textiles in 2024. The company is a qualified expression of Made-in-Italy: All machines are entirely designed and manufactured in Alba, Cuneo, and most of the production is custom-made, thanks to unparalleled technical design capabilities, passion and technological know-how. Bianco is leading the way in R&D and constantly

involved in testing new, state-of-the-art instrumentation with high technological value, according to the company. For example, Bianco Clever, Smart and Magnifica are modular and versatile solutions, made with the most advanced technology for automation and control, allowing operations such as inspection, cutting, winding and packing of technical fabric, non-woven and coated fabrics, laminates, paper, plastics and rubber.
Website: bianco-spa.com

TECNOFIRMA OPENS NORTH CAROLINA FACILITY

Tecnofirma SpA expands into the U.S. with the opening of Tecnofirma America Inc. in Charlotte, North Carolina. The company designs and manufactures a wide range of industrial solutions, including washing, coating, and impregnation machines and plants. Tecnofirma says the North Carolina site will provide customers throughout North America with on-site service treatment solutions from the initial commercial phase to the post-sale phase. The facility's well-equipped laboratory will validate technical cycles based on customer needs, while a spare parts warehouse enables immediate availability of critical components and has a dedicated hotline. Tecnofirma's design and production departments remain at the company's headquarters complex in Monza, Italy. Machines and plants for the washing, impregnation and coating business units will be designed and engineered by the Italian team.
Website: tecnofirma.com/en

VACCARI—THE FORGING SCREW PRESSES SPECIALIST

Vaccari SpA specializes in the production of screw presses between 1.000 and 100.000 kN. The Vaccari screw presses are heavy-duty, precise, reliable and user friendly, according to the company. They are used around the world in several sectors: automotive, trucking, agriculture and off-roads vehicles, oil and gas, mining and construction machines, aeronautics, medical, defense and many more. With four different series, 27 models and the latest technologies, the Vaccari screw presses are designed for the forging of steel, brass, copper, aluminium alloys, titanium alloys, nickel and other alloys for special applications, both for mass and niche productions. The screw presses are Industry 4.0 ready, energy saving and highly automated, tailored around customer needs.
Website: vaccaripresse.com

SPERONI DESIGNS INNOVATIVE SOLUTIONS TO IMPROVE PART QUALITY AND PRODUCTION EFFICIENCY

Digital manufacturing is the goal of many companies. INTELLIGO, the tool management software developed completely by **Speroni SpA** of Italy, includes all functions for the optimization of shop-floor activities tied to the tool resource: stock management, location management, cost management, tool assembly/disassembly and dialogue with NC machines and CAM.
To further expand its product range, Speroni has introduced its tool balancing system—STB AEQUILIBRIA. Tool balancing is fundamental to ensure quality and precision, to protect your NC machine and to reduce its related production costs. With Speroni's focus on the optimization of its customers' production processes, the company says it was only natural that a highly precise, easy-to-use balancing unit would be added to the its vast product range.
Website: speroni.info

DOS&DYE: THE RELIABLE SYSTEM FOR LABORATORY AUTOMATION

Dos&Dye is designed to help manufacturers upgrade to a fully automated laboratory for dyeing. This system was conceived years ago by **Tecnorama Srl,** the same company that in 1998 patented the multi-pipette dispensing machine, eliminating the possibility of dyes contamination, which can happen using traditional systems. The absence of washing operations between one dispensing and the other ensures high productivity, according to the company.
Founded in 1984, the Italian-based Tecnorama develops machines and devices to automate dye houses worldwide, increasing the quality and productivity of the dyeing process. The company says it "looks at the future to build the present."
Website: tecnorama.it

Italian Technology Award Programs

Now in its second decade, the **ITA—Italian Trade Agency (ICE-Agenzia in Italian, www.ice.it/en),** along with several partners, has sponsored the Italian Technology Award. ITA and its partners have made it possible for groups of students and professors, not only from USMCA but from around the world, to gain firsthand knowledge of Italian technology for the machinery manufacturing industries, including machine tools, textiles, plastic, foundry, ceramic, glass, leatherworking, marble and packaging.

In January 2023, more than 50 awarded students and faculty from six countries took part in educational programs at leading academic centers—along with visiting Italian machinery manufacturers within their respective industries of study—throughout northern Italy. The 2024 edition of the program will provide another opportunity for USMCA students and professors to experience and be educated in Italy's latest technology.

Italian Machine Tool Technology

The Italian Machine Tool Technology Award (IMTTA) program asked upper-level students attending premier North American universities to write theses on contemporary innovations and issues taking place in mechanical engineering-related industries.

For more than a decade in the United States, IMTTA has been coordinated and sponsored through the ITA's Chicago Office, and co-sponsored in Italy by **UCIMU-SISTEMI PER PRODURRE—Association of Italian Manufacturers of Machine Tools, Robots, Automation Systems and Ancillary Products (ucimu.it).**

This year (2023) also saw the sixth edition of IMTTA Canada, coordinated by ITA's Toronto Office. Canadian students had the opportunity to experience educational and intercultural activities with their counterparts from other countries while in Italy.

Italian Leathergoods and Tanning Technologies

The ILTTA program in North America was organized by the Italian Trade Agency's Chicago and Mexico City Offices. It was co-sponsored in Italy by **ASSOMAC—Italian Footwear, Leathergoods, and Tanning Technologies Machinery Manufacturers Association (assomac.it)**. University partners include the University of Oregon in the U.S. and Tecnologico Nacional de Mexico, Campus Leon, from the leather working cluster of Guanajuato, Mexico. Both schools are recognized for their studies in leather and tanning technologies.

Italian Packaging Technology

The Italian Technology Award program includes the Italian Packaging Technology Award (IPTA), known in Mexico as IPaTA (Mexico's fifth edition), specific to the packaging technology sector. Winners of a student writing competition on technical innovations in packaging receive a trip to Italy to visit leading packaging machinery manufacturers.

The IPTA program in North America is coordinated and organized by the ITA's Chicago and Mexico City Offices, and co-sponsored in Italy by **UCIMA—Italian Packaging Machinery Manufacturers Association (ucima.it),** along with major academic institutions in the U.S. and Mexico recognized for their studies in packaging engineering.

Italian Glassworking Technology

The Italian Glassworking Technology Award (IGTA), conducted in the U.S. for its fourth edition, was organized by ITA's Houston Office and co-sponsored in Italy by **GIMAV, the Association of Italian manufacturers and suppliers of machinery, equipment, and special products for glass processing (gimav.it).** The program brought students and faculty from leading U.S. academic institutions recognized for their studies in glass-related technologies.

Italian Plastic Technology

The Italian Plastic Technology Award (IPTA) was developed to further develop the Italian Technological Center in Puebla, Mexico, and to foster interest in plastic technology. **AMAPLAST—Italian Plastics and Rubber Processing Machinery and Moulds Manufacturers' Association (amaplast.org)** has championed projects of further tech education and innovation in Mexico, through the Technological Center and IPTA's seven past editions.

Italian Ceramic Technology

The Italian Ceramic Technology Award (ICTA) was pioneered in Mexico for students linked to the ceramic industry. Together, ITA and **ACIMAC—Association of Italian Ceramic Machinery Manufacturers (acimac.it)** now have concluded seven editions of the award, with more than 20 winning students taking part. The award has traditionally involved the Universidad Autónoma de Nuevo León (UANL), located in the industrial city of Monterrey, where the most important ceramic producers can be found.

Italian Foundry Technology

The Italian Foundry Technology Award (IFT) was included among the 2022 award programs. This initial edition, coordinated and organized with **AMAFOND—Italian Association of Foundry Suppliers (amafond.com)** included the participation of students and professors from an important roster of universities, such as Universidad Autónoma de Nuevo León (UANL), Universidad Autónoma de San Luis Potosí (UASLP), Universidad Nacional Autónoma de México (UNAM) and Instituto Politécnico Nacional (IPN).

Other Italian Award Programs Beyond North America

In addition to the countries and programs listed above, the 2022 edition of the Italian Technology Award program included other sectors and operated in 2023 in Iran, Uzbekistan and Poland.

ITA program partners can connect students, faculty members and Italian companies and associations via the agency's website for the latest updates on all the 2024 programs at **machinesitalia.org/italian-technology-awards** and via its social media channels on Twitter, LinkedIn and YouTube.

Italian Innovation in the Spotlight

Machines Italia is "turning innovation into productivity" at major North American events. Machines Italia—together with partner associations—is proud to be a featured participant or sponsor of major industry events in North America. If you make the purchasing decisions for your company, you have an enormous responsibility. You must know the ins and outs of production in a way no one else does. Italian machinery can make your decision easier, even in these uncertain times. Over the course of 2024, Machines Italia will promote events where Italian companies participate, as listed here.

Machines Italia USA @ IMTS 2024

The International Manufacturing & Technology Show (IMTS) 2024 is the 35th edition of the premier manufacturing technology show in North America. Being one of the world's leading shows for capital goods technologies and machinery, for 2024 the Machines Italia Chicago Desk will have representatives working to explore the show's opportunities in collaboration with Italy's **UCIMU-SISTEMI PER PRODURRE**, within a co-shared booth onsite at IMTS for both organizations. Traditionally Italy has over 100+ companies exhibiting either directly or indirectly at the show.

Machines Italia México @ Expo Cihac 2024

Expo Cihac, the trade show dedicated to the construction, interior design and architectural sectors (**expocihac.com/es/home.html**), will be held from October 9-11, 2024, at Centro Citibanamex, Mexico City. The Mexico City office will coordinate the Italian pavilion, which will host a high number of Italian producers of marble related technology.

Machines Italia Mexico @ Fundiexpo 2024

Monterrey hosts the 2024 edition of Fundiexpo (**fundiexpo.mx)**, the main Mexican exhibition for the foundry industry, to be held in the autumn of 2024. The trade show, in the CINTERMEX convention center, will showcase technology and innovation from Mexican and international providers. Given the importance of the foundry industry to the Mexican economy, Machines Italia, via its Mexico City office, will host Italian leading machinery and technology suppliers.

Machines Italia Canada @ PDAC 2024

The Machines Italia Canada Desk, together with **UNACEA**, the Italian construction equipment association and **ANIMA**, the umbrella association that represents the Italian mechanical engineering industry, will promote Italian earthmoving, construction technology at PDAC 2024, the annual conference organized by the Prospectors and Developers Association of Canada, taking place March 5-8, 2024, at the Metro Toronto Convention Centre.

An Opportunity for Canadian Companies to Experience Italian Manufacturing Innovation—in Italy!

For 2024, the Machines Italia Toronto Desk is providing Canadian manufacturers and entities an opportunity to experience the latest in Italian innovation with complimentary trips to Italy. Applications by Canadians to experience the latest offerings in Italian manufacturing and related technologies are being accepted for its delegations to the following events in Italy: 34.BI-MU (Metalworking technologies—Oct. 9-12, 2024), XYLEXPO (Woodworking technologies—Oct. 12-15, 2024), EIMA (Agriculture machinery—Nov. 6-10, 2024), and SIMEI (Winemaking technologies—Nov. 12-15, 2024). Contact the Toronto office for more information and check back for additional opportunities in 2024, via machinesitalia.org/events.

To the right are some of the major events starting now and going through 2024. Machines Italia frequently adds events and conferences to its roster. For a complete up-to-date list of events, visit **machinesitalia.org/events.**

Calendar of North American Events

World Of Concrete 2024
January 23-25, 2024
Las Vegas, Nevada
worldofconcrete.com

Expo Manufactura 2024
January 30-February 1, 2024
Monterrey, Mexico
expomanufactura.com.mx/en

World AG Expo 2024
February 13-15, 2024
Tulare, California
worldagexpo.com

Canadian Concrete Expo
February 14-15, 2024
Toronto, ON, Canada
canadianconcreteexpo.com

PDAC (Prospectors & Developers Association of Canada) Convention 2024
March 3-6, 2024
Toronto, ON, Canada
pdac.ca/convention

National Heavy Equipment Show
April 11-12, 2024
Mississauga, ON, Canada
nhes.ca

FABTECH Mexico
May 7-9, 2024
Monterrey, Mexico
mexico.fabtechexpo.com

FABTECH Canada
June 11-13, 2024
Toronto, ON, Canada
canada.fabtechexpo.com

MMTS—Montreal Manufacturing Technology Show
June 11-13, 2024
Montreal, QC, Canada
mmts.ca

IMTS 2024
September 9-14, 2024
Chicago, Illinois
imts.com

EXHIBITIONS 2024-2026

TRADE SHOW	DESCRIPTION	SECTOR	SHOW LOCATION	SHOW DATES	WEB SITE
XYLEXPO 2024	The 28th biennial world exhibition for woodworking technology and components for the furniture industry.	Woodworking Machinery	Milan, Italy	May 21-24, 2024	xylexpo.com/en
MEAT TECH 2024	The only Italian exhibition dedicated to process and packaging technologies for the traditional and innovative protein world.	Processing and Packaging	Milan, Italy	May 27-30, 2024	www.meat-tech.it/en
SIMAC TANNING TECH 2024	International exhibition of machines and technologies for footwear, leathergoods and tanning industries.	Footwear, Leathergoods & Tanning Machinery	Milan, Italy	Sept. 17-19, 2024	home.simactanningtech.it/en
MARMO+MAC 2024	International exhibition of stone design and technology.	Natural stone, machinery, processing technology	Verona, Italy	Sept. 24-27, 2024	marmomac.com/en/home-english
TECNA	The international exhibition of technologies and supplies for surfaces.	Ceramic Machinery and Equipment	Rimini, Italy	Sept. 24-27, 2024	en.tecnaexpo.com
34.BI-MU	Metal cutting, metal forming and additive machines, robots, digital manufacturing and automation, enabling technologies, subcontracting.	Machine Tools for Metalforming, Robots, Automation Systems and Components	Milan, Italy	Oct. 9-12, 2024	bimu.it/en
Ecomondo 2024	International exhibition for circular economy.	Construction and Earthmoving Machinery	Rimini, Italy	Nov. 5-8, 2024	en.ecomondo.com
EIMA	International agricultural and gardening machinery exhibition.	Agricultural Machinery	Bologna, Italy	Nov. 6-10, 2024	eima.it/en
METEF 2025	Expo of customized technology for the aluminum and innovative metals industry.	Aluminum and Metals Industry, Foundry and Metallurgical Machinery	Bologna, Italy	Mar. 5-7, 2025	metef.com/en
LAMIERA	Machines and equipment for the machining of sheet metal, pipes, sections, wire and metal structural work. Dies, welding, treatments and finishing. Subcontracting, robots, automation and enabling technologies.	Machine Tools for Metalforming, Robots, Automation Systems and Components	Milan, Italy	May 6-9, 2025	lamiera.net
PRINT4ALL 2025	Exhibition for commercial printing, converting, package printing, labelling and industrial printing.	Industrial Printing, Graphics and Converting, Package Printing and Labelling	Milan, Italy	May 27-30, 2025	print4all.it/en
GREENPLAST	The exhibition-conference dedicated to materials, technologies and transformation processes of plastic and rubber, with a focus on sustainability, recovery, recycling and energy efficiency.	Plastics and Rubber	Milan, Italy	May 27-30, 2025	greenplast.org
IPACK IMA	The fair specializes in food and non-food processing and packaging.	Processing and Packaging	Milan, Italy	May 27-30, 2025	ipackima.com
MECFOR 2025	Mechanics for manufacturing and subcontracting.	Subcontracting. Revamping, Turning	Parma, Italy	May 28-30, 2025	mecforparma.it/en
VITRUM 2025	International trade show specialized in machinery, equipment and systems for flat, bent and hollow glass and in glass and processed products for industry.	Glass	Milan, Italy	Sept. 1-4, 2025	vitrumlife.it/en
ITMA ASIA + CITME 2025	International exhibition of textile machinery.	Textile Machinery	Shanghai, China	Oct 14-18, 2025	itmaasia.com
HOSTMilano 2025	International exhibition of the hospitality industry.	Food Technology: Catering & Restaurant	Milan, Italy	Oct. 17-21, 2025	host.fieramilano.it/en
SaMoTer 2026	International exhibition for construction equipment.	Construction and Earthmoving Machinery	Verona, Italy	May 6-9, 2026	samoter.it/en

Italian Exhibitions listed by date

MACHINES ITALIA ASSOCIATION PARTNER	ORGANIZER	ADDRESS	ZIP	CITY	E-MAIL
ACIMALL	CEPRA SRL UNIPERSONALE	Milanofiori, 1a strada Palazzo F3	20090	Assago (MI)	info@xylexpo.com
UCIMA	IPACK IMA Srl	Fiera Milano Fairgrounds	20017	Rho (MI)	ipackima@ipackima.it
ASSOMAC	Assomac Servizi Srl	Via Matteotti, 4/a	27029	Vigevano (PV)	exhibition@assomac.it
CONFINDUSTRIA MARMOMACCHINE	Veronafiere SpA.	Viale Del Lavoro, 8	37135	Verona (VR)	info@veronafiere.it
ACIMAC	ACIMAC-IEG	Rimini Expo Centre	47921	Rimini (RN)	segreteria@tecnaexpo.com
UCIMU	UCIMU-SISTEMI PER PRODURRE	Viale Fulvio Testi 128	20092	Cinisello Balsamo, (MI)	exhibitions@ucimu.it
UNACEA	Italian Exhibition Group	Via Emilia, 155	47921	Rimini (RN)	info@iegexpo.it
FEDERUNACOMA	FederUnacoma Surl	Viale Aldo Moro 64	40127	Bologna (BO)	info@federunacoma.it
AMAFOND	Metef Srl	Piazza della Costituzione, 6	40128	Bologna (BO)	info@metef.com
UCIMU	UCIMU-SISTEMI PER PRODURRE	Viale Fulvio Testi 128	20092	Cinisello Balsamo, (MI)	exhibitions@ucimu.it
ACIMGA	CPA-Centro Promozionale Acimga SpA	Piazza Castello, 28	20121	Milano (MI)	info@cpa-spa.com
AMAPLAST	Promaplast Srl	Fiera Milano Fairgrounds	20017	Rho (MI)	info@greenplast.org
UCIMA	IPACK IMA Srl	Fiera Milano Fairgrounds	20017	Rho (MI)	ipackima@ipackima.it
UCIMU-SISTEMI PER PRODURRE	Fiere di Parma together with CEU-CENTRO ESPOSIZIONI UCIMU SpA	Viale dlle Esposizioni 393a	43126	Parma (PR)	mecfor@fiereparma.it
GIMAV	VITRUM Srl	S.S. del Sempione n. 28	20017	Rho-Pero (MI)	vitrum@vitrum-milan.it
ACIMIT	ITMA Services Pte Ltd	73 Ubi Road 1,#08-48 Oxley BizHub 1	408733	Singapore	itmaasiacitme@itma.com
ANIMA (ASSOFOODTEC)	Fiera Milano SpA	Strada Statale del Sempione, 28	20017	Rho-Pero (MI)	host@fieramilano.it
UNACEA	Veronafiere SpA	Viale Del Lavoro, 8	37135	Verona (VR)	info@veronafiere.it

Innovations at work in global markets

AGRICULTURE/FARM MACHINERY

FEDERUNACOMA—The Italian Agricultural Machinery Manufacturers Federation represents a very wide sector of mechanical engineering industries and brings together associations of manufacturers of machinery, equipment and technologies for agriculture, gardening, groundskeeping, earthmoving and components. FEDERUNACOMA's member manufacturers account for 80% of national production in the sectors represented and for 60% of exports. Italian farm equipment manufacturers rank first in the world in terms of the range of machines produced. Italy's diverse climate and geography give its agriculture equipment producers an edge over competitors in the development of creative solutions for growers. Through their skill and expertise, they consistently produce farming innovations. **federunacoma.it**

CERAMICS

ACIMAC—The Italian association of manufacturers of machinery and equipment for the ceramics industry has earned a world-class reputation for providing solutions that meet a vast range of customer needs—from traditional ceramics to the latest design trends. Customers around the globe choose machinery produced by ACIMAC member companies, thanks in large part to their easy programmability and maintenance simplicity. Members' machinery is also well known for its ability to increase productivity while allowing for design flexibility. **acimac.it**

CONSTRUCTION AND EARTHMOVING MACHINERY

UNACEA is the Italian trade association of construction equipment, open to the contribution of all companies, institutions and organizations involved in the CE industry. Created in 2010, its 50 company membership includes those who produce earthmoving machines, attachments, concrete equipment, tower cranes and drilling machineries. Unacea's mission is to create a lean, business-led association with zero bureaucracy, being able to defend the sector in Italy in an authoritative, unitary manner while representing the sector in Europe and around the world. **unacea.org/en/**

FOOD TECHNOLOGY

ASSOFOODTEC—The Italian Association of Machinery and Plant Manufacturers for Food Production, Processing, Preservation represents global leaders in the most important Italian association for technologies for the food industry, thanks to a diversified offer that ranges from relatively simple machines to extremely sophisticated production lines. Prestigious and qualified companies, a great wealth of experience and reliability, and an increasing technical development of products—this is what ASSOFOODTEC can offer. ASSOFOODTEC cooperates in the activity of the most important bodies charged for the drawing up of European and world technical standards. ASSOFOODTEC operates within the Federation of Italian Mechanical and Engineering Association (ANIMA). **en.anima.it**

FOOTWARE, LEATHERGOODS AND TANNING

ASSOMAC is the national association that represents the Italian manufactures of Footwear, Leathergoods and Tanning Machinery, a world leading industrial sector. Italian exports account for more than 47% of all the exports of countries manufacturing machinery in this industrial sector worldwide. Every year, Italian companies export more than 80% of their production to 130 countries around the world. It is not just quality that sets Italian machinery apart from the competition, it is also customization. Italian leather-machinery manufacturers work closely with customers to create a product that is "right" for the job, much like the relationship between suppliers and users. **assomac.it**

FOUNDRY AND METALLURGICAL MACHINERY

AMAFOND is the Italian association of companies producing machinery, plants, furnaces, products and services for the foundry industry. Its about 100 member companies provide machinery used in the manufacturing of everything from automobile engines and components to domestic appliances. AMAFOND credits the "Italian approach" to business—characterized by extra customer care and stronger personal relationships—as one of the reasons its member companies attract worldwide customers. **amafond.com**

GLASS

As an evolution of the Italian glass-making tradition, Gimav—the Italian Association of Glass-Processing Machinery and Accessory Suppliers—represents Italian excellence in glass-making machinery. This industry sector has expanded internationally by employing innovative technology that meets today's marketplace needs. Gimav's 70 members companies are known for customizing machines to meet end-user specifications—from high-rise building constructions to fine arts applications. **gimav.it**

MARBLE AND STONE

Three hundred and twenty-five companies form the foundation of Associazione Italiana MARMOMACCHINE (CONFINDUSTRIA MARMOMACCHINE), the association representing the Italian marble and stone machinery industries. These companies supply the advanced technology that makes Italy a global leader in the stone and manufactured stone industries. Italian machinery is engineered to be versatile and provide customers with unique solutions to process marble and stone at competitive prices. **assomarmomacchine.com**

MECHATRONIC SYSTEMS AND COMPONENTS FOR POWER TRANSMISSIONS

Italian Association of Mechatronic Technologies and Components for Fluid Power, Power Transmission, Smart Automation and Control of Industrial Products and Processes. After the establishment of FEDERTEC in 2019—with the merger of ASSIOT (Italian Transmission Elements and Gears Manufacturers Association) and ASSOFLUID (Italian Fluid Power Association)—FNDI (National Federation of Industrial Distribution) joined in 2022, adding a new piece to the mechatronic technologies chain. FEDERTEC has 280 member companies and represents one of the most important industrial sectors in Italy and worldwide, with 55,000 employees. **federtec.it**

METALWORKING

UCIMU-SISTEMI PER PRODURRE is the Italian Machine Tools, Robots and Automation Manufacturers' Association. As an official industry representative, UCIMU-SISTEMI PER PRODURRE is a global ambassador for some of the latest Italian technology. About 200 members, which produce 70% of the sector's output, have won universal recognition for their quality, flexibility, reliability and customization. **ucimu.it**

PACKAGING

UCIMA groups represent the Italian manufacturers of Automatic Packing and Packaging Machinery. Its members represent 70% of the total Italian production and, on average, 80% of Italian exports. One packaging machine out of every four in the world bears the wording "Made in Italy," and the United States is the industry's main outlet market for the sector. The worldwide success of the Italian packing and packaging industry is firmly rooted in a consolidated technologic tradition and in the ability to find customized packing solutions. **ucima.it**

PLASTICS AND RUBBER

The companies of AMAPLAST, the Italian Plastics and Rubber Processing Machinery and Molds Manufacturers Association, are globally renowned for their "turnkey solutions"—addressing customer needs through sophisticated machines and engineering. As a result, the Italian plastics and rubber processing machinery industry has seen steady growth since its inception in 1960. Italian machines are highly prized by the world's most industrialized and economically advanced countries. **amaplast.org**

PRINTING, GRAPHIC AND CONVERTING

ACIMGA represents the Italian manufacturers of machinery for the graphic, converting and paper industry. Members of this association are world leaders in making machinery for rotogravure and flexographic printing, paper and cardboard processing, and converting. Most of what is produced is absorbed by the packaging market with 60% of the industry's turnover, followed by the graphic art industry with about 35%, and the rest is employed in various sectors. **acimga.it**

TEXTILE MACHINERY

ACIMIT is the Association of Italian Textile Machinery representing 80% of the entire Italian textile machinery production. Its members meet the full spectrum of industry needs (spinning, weaving, knitting and finishing machines). They are well appreciated for their commitment in the sustainable technologies and in the production of equipment for the most innovative niche markets (technical textiles, nonwovens). Leading American textile and clothing manufacturers rely on the quality of Italian high-tech machinery. **acimit.it**

WOOD

ACIMALL—Italian Woodworking Machinery and Tools Manufacturers' Association, with over 220 of the most qualified companies in their fields, represents 90% of the entire industry in terms of employees and turnover. In every segment of woodworking, from sawmills to the industrial processing of solid wood and panel to finishing, the Italian industry is present with technological solutions capable of responding effectively to a multitude of user requirements. **acimall.com**

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For more information on the companies cited within this publication or any of the other thousands of Italian manufacturers, you may either contact them directly, through our partner associations or via any of the Machines Italia offices listed here.

Don't forget to visit regularly **www.machinesitalia.org** for the latest news, information, trade shows and other activities which the ITA brings to North American companies such as yours.

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