WeRoll

The new magazine by ARMO

Exploring the qualities of rotational molding

Issue **02.2025**

in this issue:

and much more....

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Editorial

Innovation Between Design and Function

by Marek Szostak - ARMO Chairman

The new issue of WeRoll explores the many approaches that industry uses to transform ideas into real products. Rotational moulding offers many opportunities to create innovative products based on the right balance between aesthetics and functionality.

Today, talking about innovation means understanding many aspects that go beyond the mere form and function of an object: it means considering the environmental impact of a certain product, the circular economy process in which it is developed, its ability to spread throughout the world, crossing national borders and becoming a successful product everywhere.

This issue of WeRoll addresses these issues through a series of important testimonials from different personalities, belonging to different worlds and cultures, but united by a constant desire to focus on total quality. This is the main challenge that rotational moulding faces, and technology offers us numerous opportunities to transform this mission into a great opportunity.

Talking about innovation also means accompanying it with effective communication, because today the value of a product is also measured by its ability to be correctly described and easily understood by users.

For this reason, we also explore the strategic theme of the role of communication, which today takes on a new dimension, broader and more comprehensive than in the past. It means promoting products through the various tools that characterise our contemporary language in order to engage more users with a specific set of values and meanings.

Finally, we never fail to consider the poetic side of things, the ability of products to evoke emotion and create added value through their aesthetic quality. The relationship with designers is essential for creating products that are capable of establishing a special connection with consumers in a world where it is increasingly important to be original and recognisable.

Enjoy reading!

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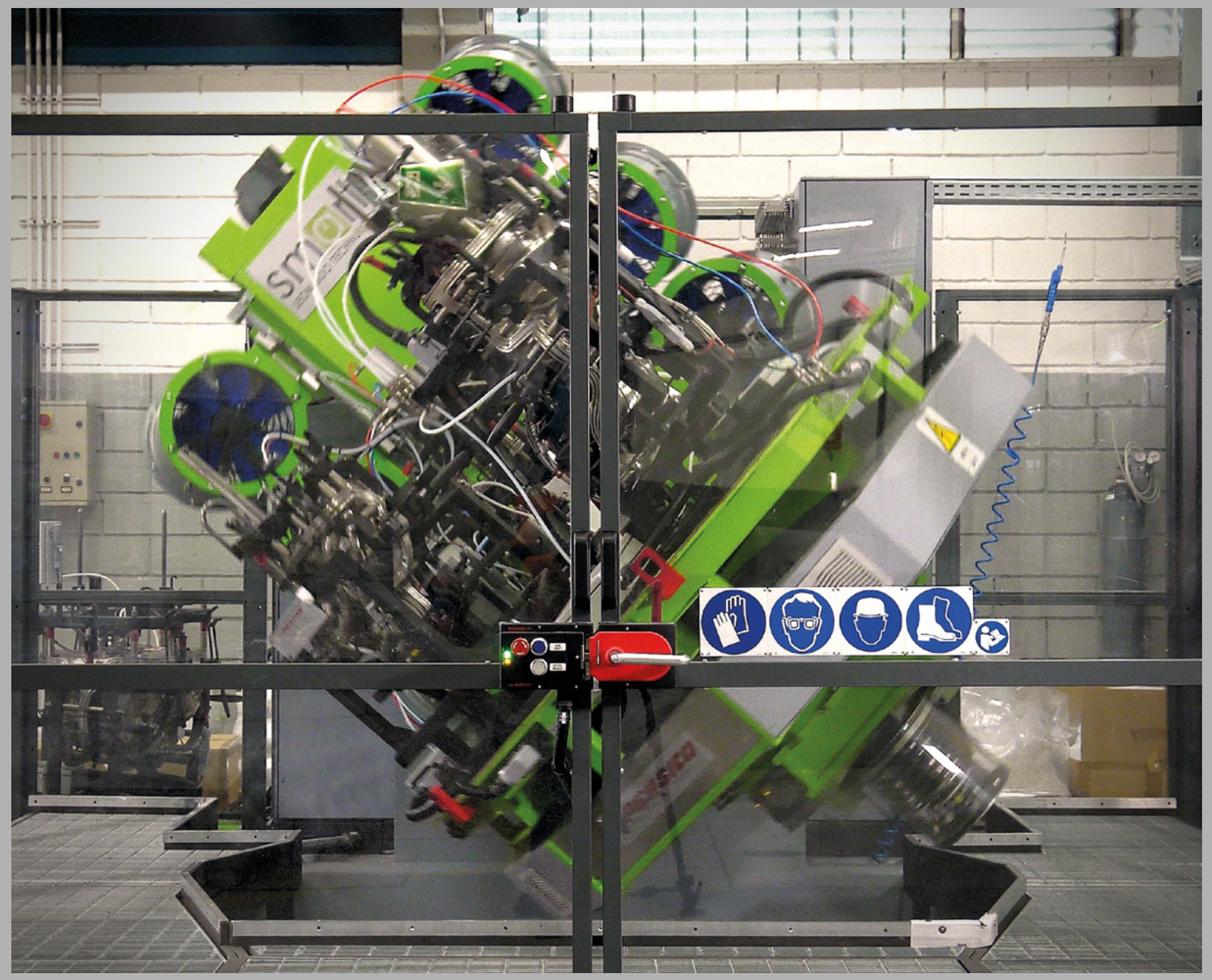

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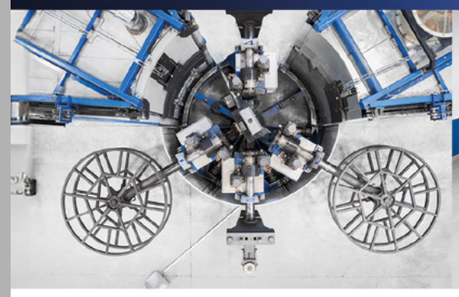

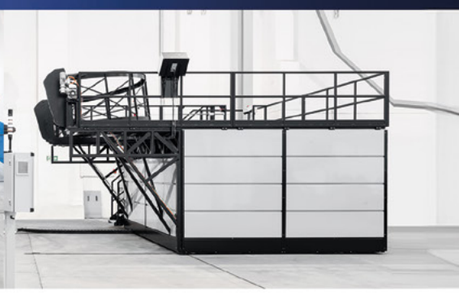

OCTOBER 2025	OCTOBER 2025	NOVEMBER 2025	JANUARY 2026
THE WORLD'S NO.1 TRADE FAIR FOR PLASTICS & RUBBER	Association Francophone du Rotomoulage	Association of Rotational Moulding (Central Europe) e.V.	Nordic ARM
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GERMANY | EXHIBITOR	**FRANCE** | TABLE TOP	**GERMANY** | TABLE TOP	**SWEDEN** | TABLE TOP

1. Telling the Product

Brogliato Traverso

Plust, Ponte di Barbarano, Vicenza, Italy

Twist - Transforming Spaces

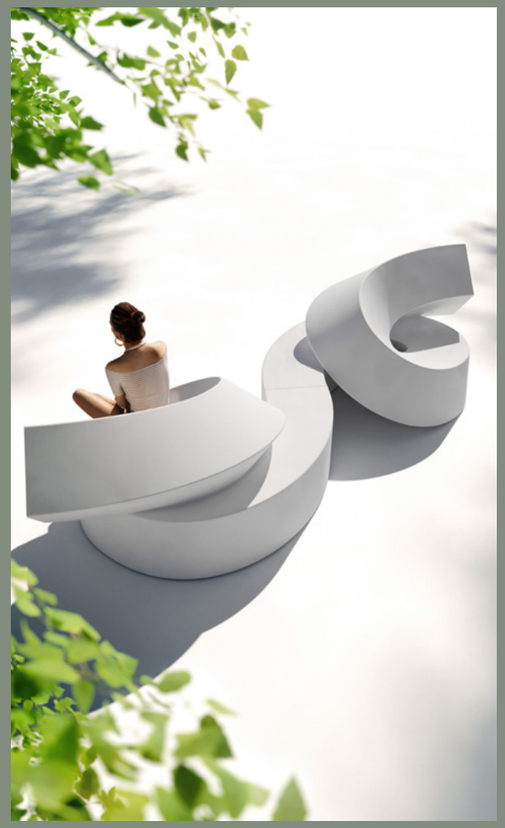
www.brogliatotraverso.com

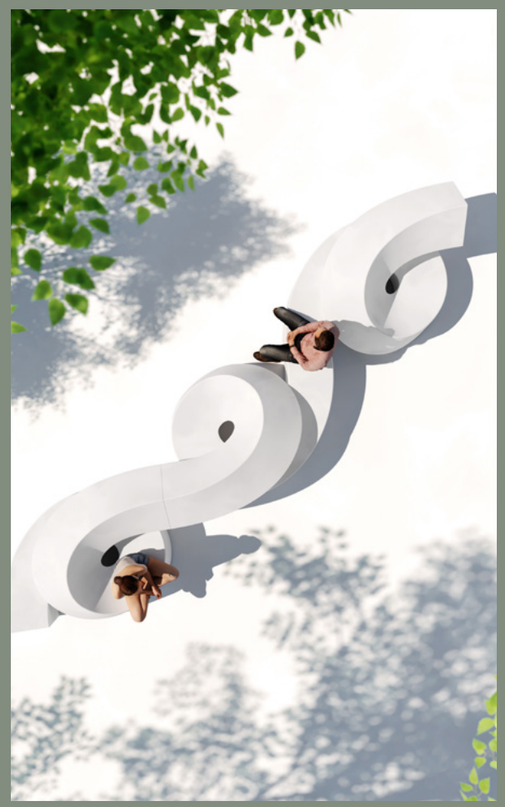
Text by Roberto Gonne

Twist is a new modular seating system for public spaces characterized by its articulated and dynamic shape combined with precise functionality.
Designed by Brogliato and Traverso, Twist is born from the intersection of graphic form and structural dynamics, challenging the conventions of outdoor design with a unique and dramatic presence.
Twist is not a simple seat, but a modular system that can evolve into different configurations. Thanks to the combination of the Twist seat, Twist bench, and Twist storage box, the structure transforms, becoming a platform that allows for limitless modularity. Entirely rotomolded, the system allows for the creation of single or multiple seats, perfect for lounges and waiting areas.
Furthermore, Twist's articulated shape allows it to be imagined as a green installation, enhancing squares and public spaces with a strong aesthetic identity. The extreme flexibility of the elements that compose Twist also allows for the creation of multiple scenographic versions for contract and retail installations, adapting to the needs of designers and architects.

One Product, More Parts

The Twist family consists of three elements molded from polyethylene: the seat, the bench, and the multipurpose container that can be transformed into a plant holder or used as a storage space for a variety of objects. With clean lines and a strong visual identity, Twist reinterprets outdoor design through a three-dimensional graphic gesture. The seat can be used in various ways, in its conventional form or as a support on the back. The combination of the three basic elements allows for the creation of more or less long





Drawing inspiration from the natural world, Twist translates its invisible rules into a dynamic and poetic system. Just like nature itself, it evolves and adapts, offering infinite possibilities for transforming any space.

Twist represents a successful blend of graphic precision and organic fluidity. A long, flexible seating system that transforms to adapt to the needs of the space, achieving a delicate balance between architectural rigor and organic spontaneity.

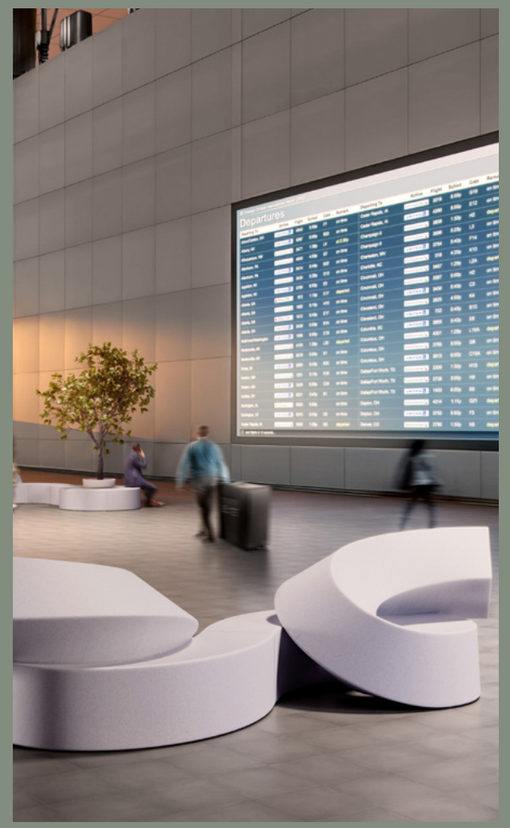
configurations, thus adapting to any space and living environment. Thanks to the use of rotational molding technology, Twist is suitable for both indoor and outdoor use and is available in various mass-produced colours.

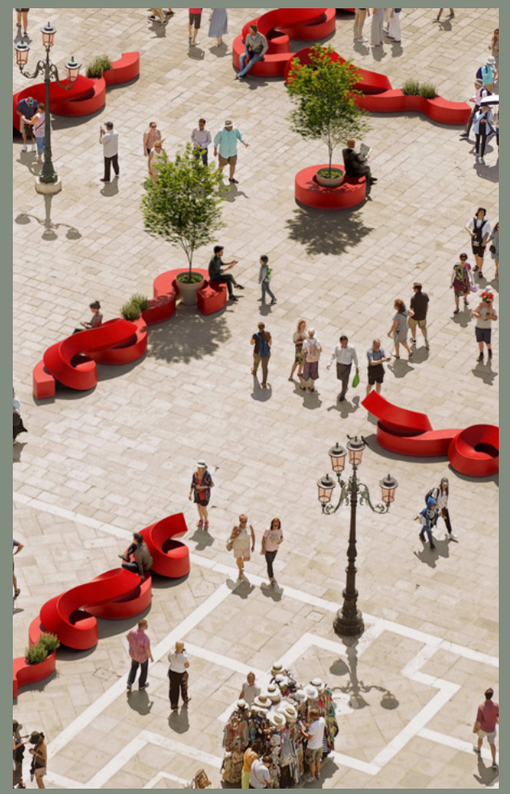
A Story of Values and Creativity

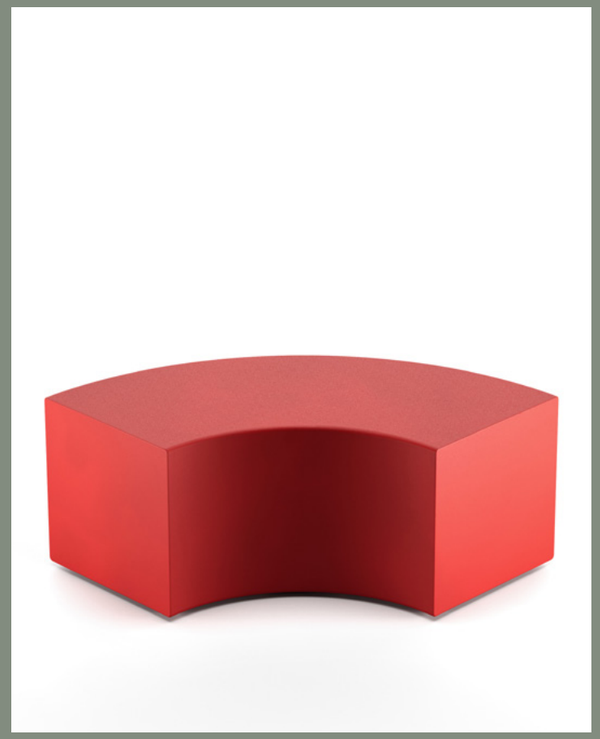
Twist is produced by Euro3plast, founded in 1974 in an Italy thriving with design, creativity, and innovation. A family united around the company, a passion that from the very beginning has combined ideas and commitment to create products of great value. The group is firmly committed to infusing care and style into all its products, and constantly raises the bar for innovation and respect for the environment.
In 2007, the first Plust collection was presented, proud of its collaborations with internationally renowned designers. The result is an exciting melting pot of expertise that produces truly inspiring objects: the ideas behind the shapes, the details that create the most authentic beauty of true Italian excellence.

Space is Constantly Evolving

Twist inspires a rethinking of the very concept of outdoor furniture, elevating it to a new level of contemporaneity. Drawing inspiration from the natural world, Twist translates its invisible rules into a dynamic and poetic system. Just like nature itself, it evolves and adapts, offering infinite possibilities for transforming any space. Twist represents a successful blend of graphic precision and organic fluidity. A long, flexible seating system that transforms to adapt to the needs of the space, achieving a delicate balance between architectural rigor and organic spontaneity. A result achieved by optimally combining the potential of rotomoulding with a recognizable design vision.

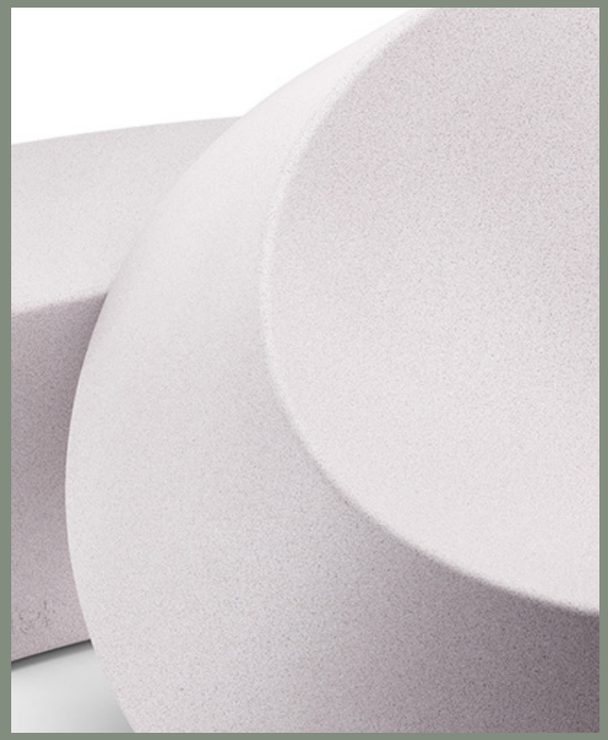


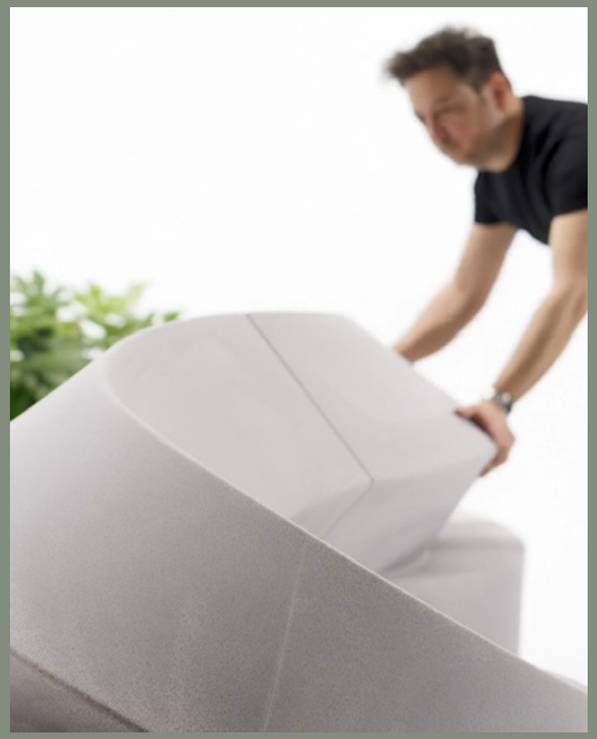




Thanks to rotomoulding, the modules that make up Twist are hollow and easy to move.

The slightly embossed surface prevents slipping and allows for a safe and comfortable support.





The elements are simply placed side by side, without complicated joints, thus facilitating reconfiguration.

The curved shape of the backrest allows for multiple postures when sitting.

2. Inside Matter

Claudia Persico

Persico Group, Nembro, Bergamo, Italy

Always Be One Step Ahead

www.persico.com

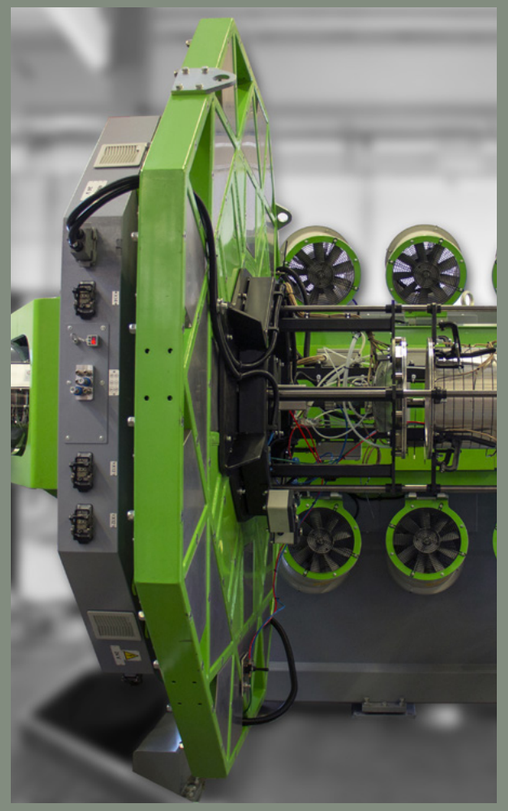
Interview by Riccardo Giovanetti

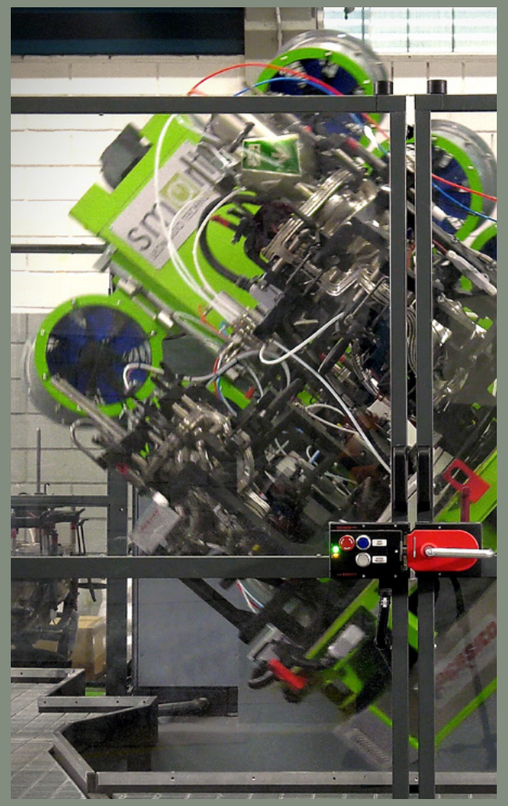
Today, Persico Group is a multinational company operating in multiple sectors: you lead the company's most historic division, where your entrepreneurial success began...

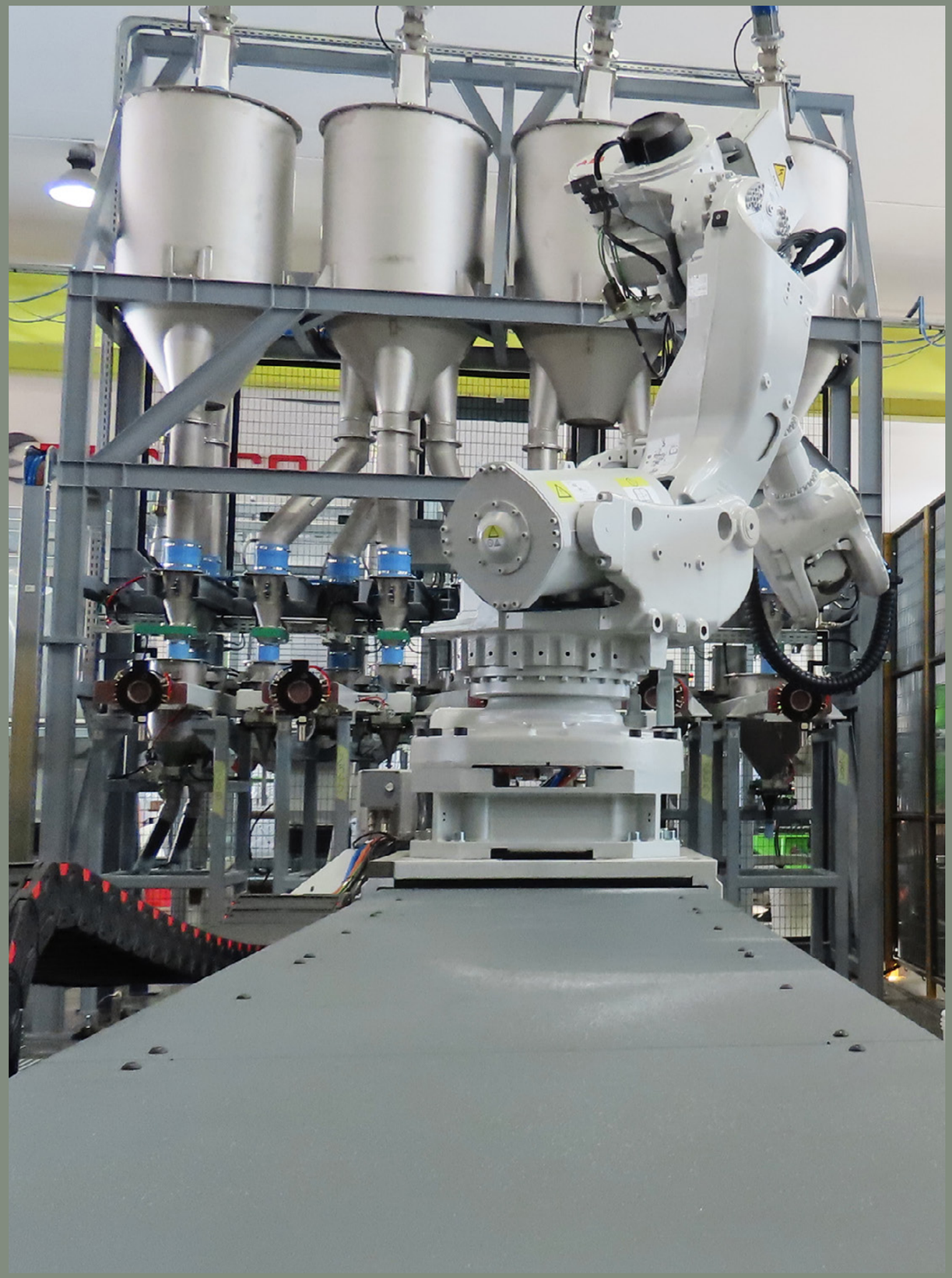
Persico's story certainly began with my father Pierino, who opened his own wood modelling workshop in 1976. Then, a trip to the United States allowed him to learn about rotational moulding, bringing the production of moulds for this sector to Italy. Since then, our company has gradually evolved and expanded, becoming a global benchmark in the world of rotational moulding.

What has been your entrepreneurial approach since you joined the company?

After graduating, I started working at Persico in 1998, initially performing simple tasks and spending six months in the United States at a rotational moulding company. These early experiences allowed me to gain the necessary experience and knowledge of the industry. My particular character has always pushed me not to be satisfied with what we were achieving, with the aim of constantly improving. From this point of view, I have always appreciated interacting with our customers because these conversations give me interesting ideas and insights to implement in our way of working. We have introduced several innovations that have allowed us to strengthen our presence in the industry: first and foremost, our product design assistance service, which supports our partners and allows us to optimise ideas based on the possibilities offered by technology. Then there was the introduction of a moulding machine to test new products, offering an even more comprehensive service to our customers.

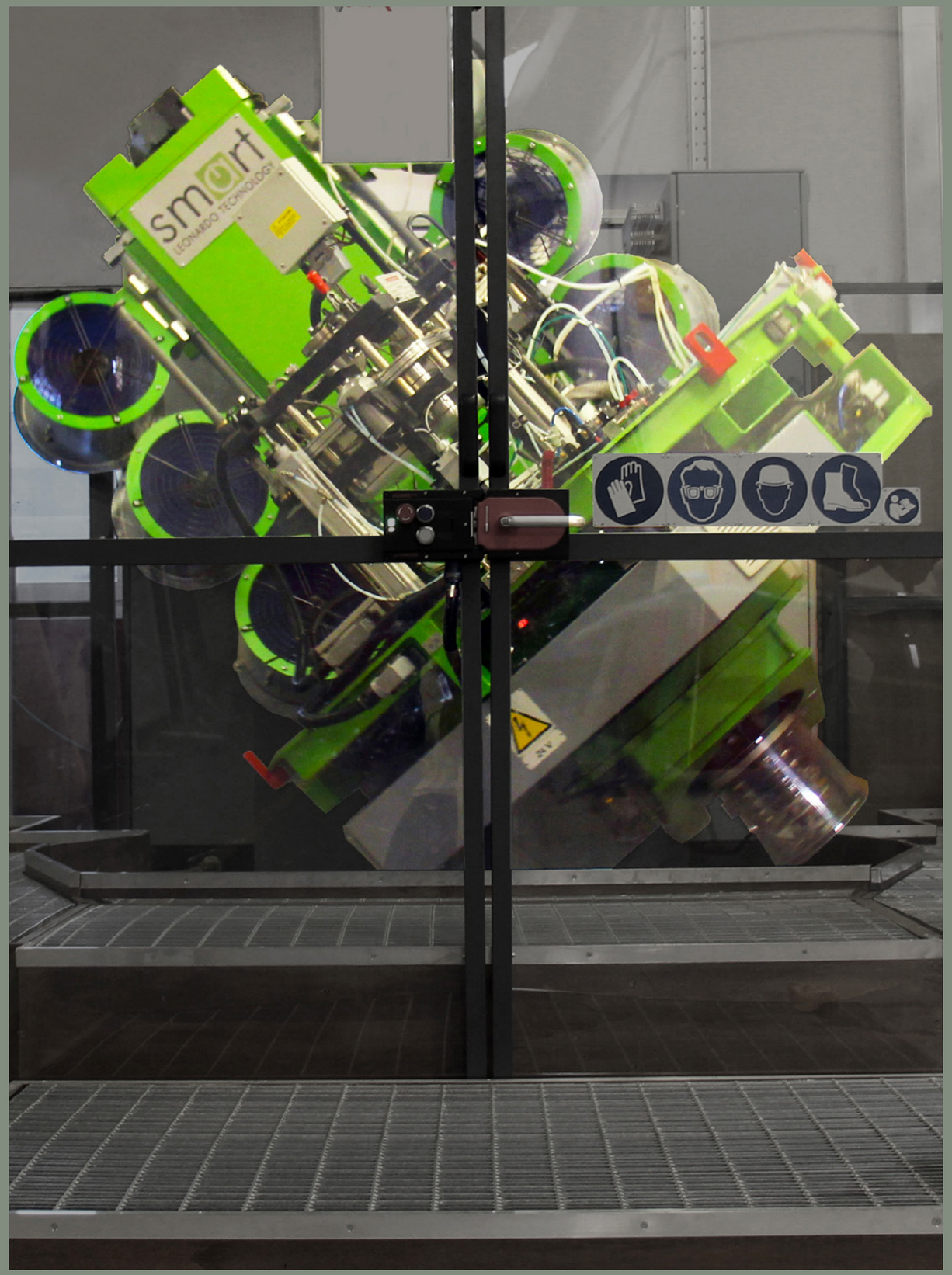






“Personally, I have always seen my father as a charismatic figure with whom I have a great rapport. We have similar personalities, and even today his presence in the company provides an opportunity for us to discuss many projects and share our points of view.”

“For me, this entrepreneurial attitude has been a source of pride but, above all, a clear business philosophy. It means taking a proactive approach to new challenges having the ability to question yourself every time, avoiding living in your “comfort zone” and pushing beyond your usual habits.”



You have always remained tied to mould production and then machine production: have you ever thought of completing the circle by expanding into moulding?

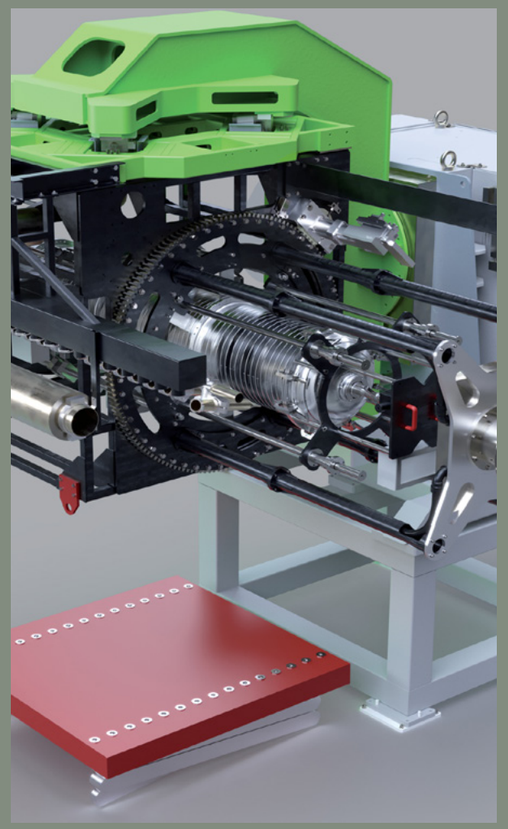
For years, I discussed this issue with my father, but I remained convinced that we should not expand our scope to include product moulding. It wasn't that we lacked opportunities in this area, but I wanted to strengthen our relationship with operators in the sector by avoiding risky overlaps in roles.

Is the presence of such a strong and legendary figure as Pierino in the company a source of inspiration for you, or has he ended up being a cumbersome figure?

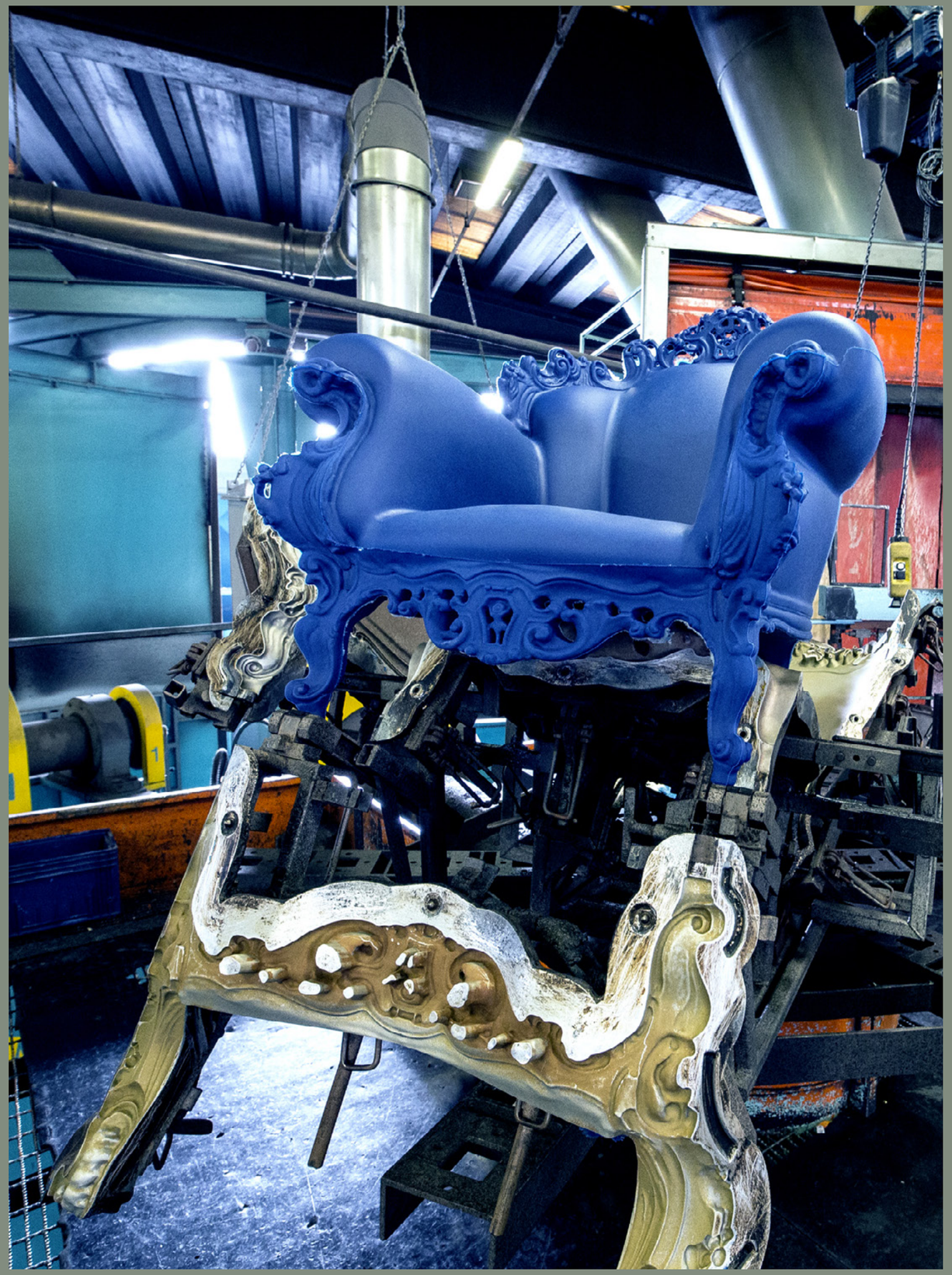
Personally, I have always seen my father as a charismatic figure with whom I have a great rapport. We have similar personalities, and even today his presence in the company provides an opportunity for us to discuss many projects and share our points of view. Sometimes we may not entirely agree on a particular idea, but our dialogue always remains absolutely constructive and represents real added value.

What has the idea of always being 'one step ahead' meant to you over the years, the desire to chart an innovative course, often anticipating trends in the sector?

For me, this entrepreneurial attitude has been a source of pride but, above all, a clear business philosophy. It means taking a proactive approach to new challengeshaving the ability to question yourself every time, avoiding living in your "comfort zone" and pushing beyond your usual habits. I convey this approach to all my employees on a daily basis so that it remains a defining feature of our way of doing business. Only by raising our ambitions can we create innovation.



“I believe in the possibility of profoundly innovating the world of rotational moulding by introducing not only machines with higher performance in terms of quantity, but also offering the possibility of moulding with better quality.”



Speaking of new challenges and innovations, Persico has certainly played a leading role in introducing a new way of thinking about rotational moulding, introducing for the first time highly automated systems that increase production levels and reduce manual labour...

I believe in the possibility of profoundly innovating the world of rotational moulding by introducing not only machines with higher performance in terms of quantity, but also offering the possibility of moulding with better quality. Through our new generation machines, it is possible to mould using multiple materials, with greater control over the quality of the final product.

Let's try to look ahead to the coming decades: how do you see rotational moulding? As a technology that has already reached maturity and has limited room for growth, or as a source of new opportunities that can further grow the sector?

I see great opportunities for rotational technology in the coming years. I am convinced that the evolution of the sector must also be accompanied by a new cultural approach on the part of printers in the search for new applications for the technology. We need to look to new sectors, imagining new applications capable of replacing existing materials and bringing new added value in terms of performance. This challenge often involves introducing new polymeric materials into the moulding process that can guarantee high standards in terms of durability, aesthetics and resistance.

Innovation does not only mean new applications, but also replacing what already exists and significantly improving it...

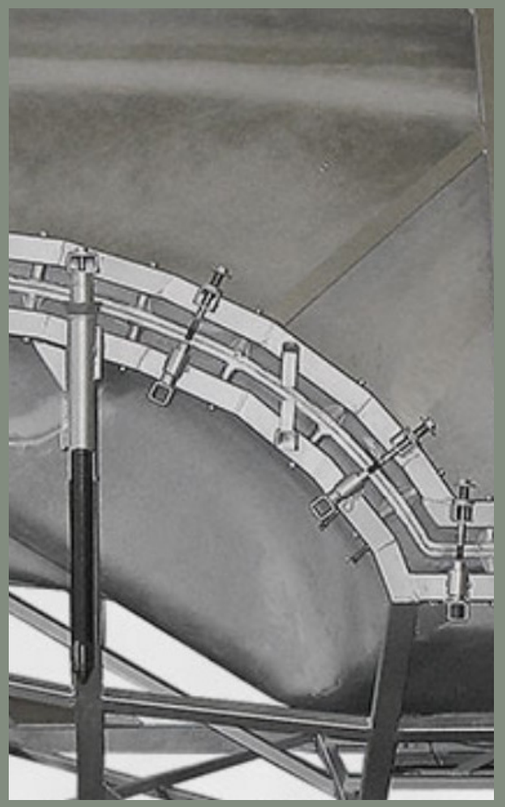
Absolutely, yes. There are great opportunities in rethinking

“I fully agree that companies need to be more willing to communicate the advantages of their products effectively. The idea that we cannot talk about a product because others might copy it is an outdated concept: if a product is innovative, it acquires its own value when we are able to communicate its merits and advantages effectively.”

certain industrial products by exploiting the qualities of rotational moulding. Just as new possibilities arise when new legislation is introduced: very often companies find themselves obliged to renew their products to adapt them to new rules imposed by local governments: these are great opportunities to break into new sectors and put forward innovative solutions.

From this point of view, do you believe it is important to spread awareness of rotational moulding among companies and designers who still know little or nothing about this technology?

We definitely need to spread awareness of the technology, starting with companies that work in different sectors and could potentially use rotomoulding to replace other technologies. We also need to work hard on training the next generation of technicians and designers. Furthermore, I believe it is important to engage in dialogue with professional designers, especially in sectors such as furniture, where, after a period of strong growth, it is necessary to communicate the new possibilities that this technology offers.



Do you think it is also important to move beyond certain stereotypes that are still present in the collective imagination?

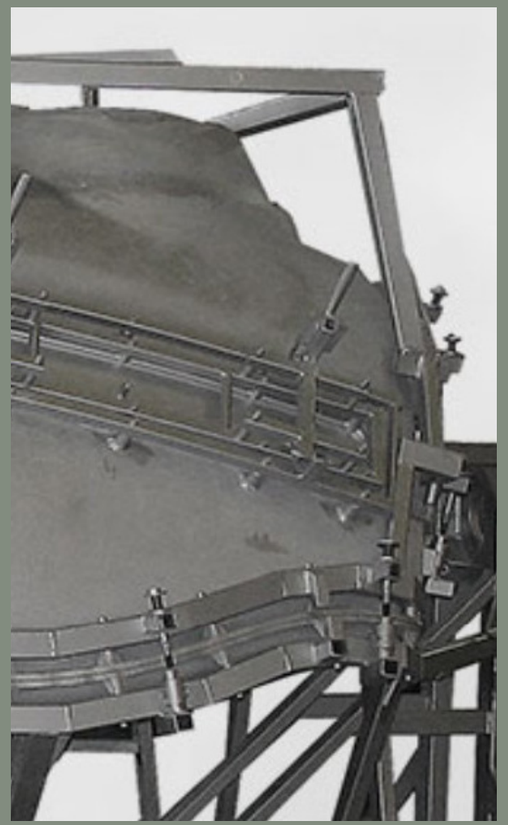
This is also an important challenge: for example, many companies still believe that rotational moulding can only be used to produce small quantities, that the surface of the product is always the same, or that only a few materials can be used, and so on. In reality, we know that there are many opportunities, and our task is also to communicate them comprehensively in order to encourage companies to explore new applications, highlighting the possibilities that the technology offers.

Do you think that this effort in terms of communication is also linked to a greater ability to describe the characteristics of a given product without hiding behind unnecessary prejudices?

I fully agree that companies need to be more willing to communicate the advantages of their products effectively. The idea that we cannot talk about a product because others might copy it is an outdated concept: if a product is innovative, it acquires its own value when we are able to communicate its merits and advantages effectively. We cannot hide behind a finger: we must drive innovation by promoting the innovations that underpin products.

Finally, let's talk about another major challenge affecting every industrial sector: environmental sustainability. What is Persico's vision on this crucial issue?

The introduction of automation in the rotational moulding process represents a great opportunity from this point of view. SMART technology guarantees significant energy savings compared to the traditional process. Controlled wall thickness helps to reduce the amount of material required, and the shorter, repeatable cycles provided by SMART save time and energy. The automated systems we manufacture not only increase the quality and quantity of rotomoulded products, but also create a combined effect of rationalising electricity consumption and improving material control.



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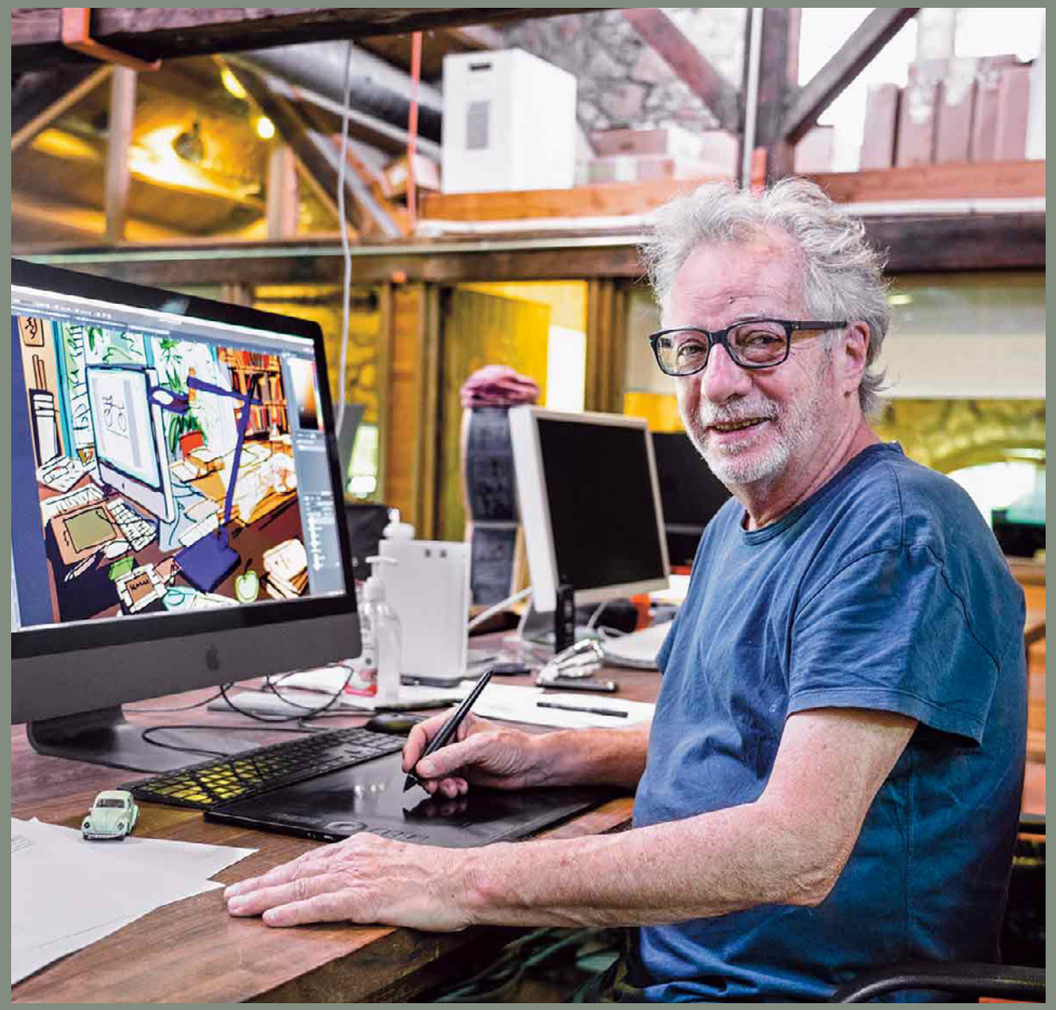
Javier Mariscal

Estudio Mariscal, Barcelona, Spain

The Projects of an Image Creator



www.mariscal.com

Text by Corinne Lambert

Graphic designer, illustrator, furniture and interior designer, painter, sculptor, Javier Mariscal is an artist who loves challenges. An irreverent artist whose existence has been guided by the word "freedom". He draws in any corner everything he sees. His style is impulsive and carefree and he moves with ease in different techniques and media.
His product designs are present in the furniture brands Moroso, Memphis, BD Ediciones de Diseño, Nani Marquina, Bidasoa, Vondom and Magis among many others. His broad vision allows him to work on large-scale artistic interventions such as the exterior of the Glòries Shopping Center in Barcelona, a large-scale sculpture in the courtyard of the Río Hortega Hospital or the famous Hotel Domine in Bilbao, where he signed - in collaboration with Fernando Salas, the integral design of the project.

The Poetics of Rotational Technology

The creation of Estudio Mariscal in 1989, comprising a team of specialists who work closely with him, has allowed him to deal with complete projects. Mariscal is internationally renowned and his work reverberates widely in the media, due to the fact that he knows how to communicate directly with the general public, as does his work. Since his great speciality is drawing, his approach to any commission is an artistic one, using a universal, timeless language which adds value, uniqueness and emotional depth to his projects. His boldness is porportionate to the great challenges he has taken on, from the mascot for the Barcelona Olympic Games to the overall design of an extremely luxurious hotel.

Designing furniture and accessories for children means going beyond simple utility, creating objects that are safe, durable and capable of inspiring play and growth.

Shaping your ideas through rotational moulding

Javier Mariscal expresses himself through a very personal language which is theoretically complex but practically simple. His work is sometimes innocent, but always provocative. For Mariscal, technology represents an opportunity to put his ideas into practice while maintaining the poetic soul that distinguishes his products. This has led to the creation of a new generation of objects made using rotational moulding, which has allowed Mariscal to give free rein to his imagination, creating objects that conceal multiple functions within them.

Design for children as an opportunity to explore new functionalities

Design is no longer exclusive to adult environments: in recent years, it has also made its way into the world of children's furniture, bringing with it creativity, functionality and aesthetics capable of stimulating the imagination. Designing furniture and accessories for children means going beyond simple utility, creating objects that are safe, durable and capable of inspiring play and growth.

Javier Mariscal's contribution to the world of design is renowned for its originality and playful spirit. The Spanish designer has always believed that design should be accessible, cheerful and capable of telling a story, even when aimed at children.

In his work with Magis Me Too, Mariscal has pursued a clear idea: design for children should not be a simple miniature version of objects for adults, but should be conceived with its own visual language, leveraging colours, shapes and function in an innovative and engaging way.

Through ergonomic shapes, safe materials and bright colours, Mariscal has created pieces that are not only

For Mariscal, staying creative is synonymous with staying alive. He believes that all children, regardless of their background or culture, are born to play. And this “play” is a powerful symbolic language that allows us to remain creative, until school and other social structures stifle our freedom and our joyful way of thinking.

beautiful to look at, but also comfortable and stimulating. His approach encourages children's independence and makes spaces more welcoming and lively, fostering an environment conducive to learning and playing.

Exploring multiple types and transforming them into poetic objects

The collaboration between Mariscal and Spanish manufacturer Vondom has expanded to include a wide range of products, from sofas to lanterns, armchairs to plant pots, creating an outdoor collection that is instantly recognisable for its contemporary style. The products designed by Mariscal exploit the qualities of rotational moulding, creating soft, sinuous lines that give a welcoming dimension to the polyethylene moulded products. Mariscal also plays with light and reinterprets objects from the past, such as old outdoor lanterns, developing a new contemporary version.

Creativity is looking at things differently

For Mariscal, staying creative is synonymous with staying alive. He believes that all children, regardless of their background or culture, are born to play. And this "play" is a powerful symbolic language that allows us to remain creative, until school and other social structures stifle our freedom and our joyful way of thinking. His art is a way of trying to regain it. Against all impositions and constraints, his style is one of freedom, colour and vitality, finding magic in everyday life. Perhaps this is why, in the mind of this legend of contemporary design, an everyday object is transformed into a poetic work that expresses multiple meanings, capable of communicating with adults and children alike.

Julian is a children's chair shaped like a little dog. Nido is a place where little ones can hide and play.

Mariscal's objects are often multifunctional and adaptable to multiple spaces in contemporary living.

Ladrillos is a bookcase with rotomoulded polyethylene modules in different shapes.

The lucid nature of the objects designed by Mariscal finds its perfect synthesis in plastic.

Daði Valdimarsson

Rotovia, Dalvík, Iceland

Sustainability as an Opportunity

www.rotovia.com

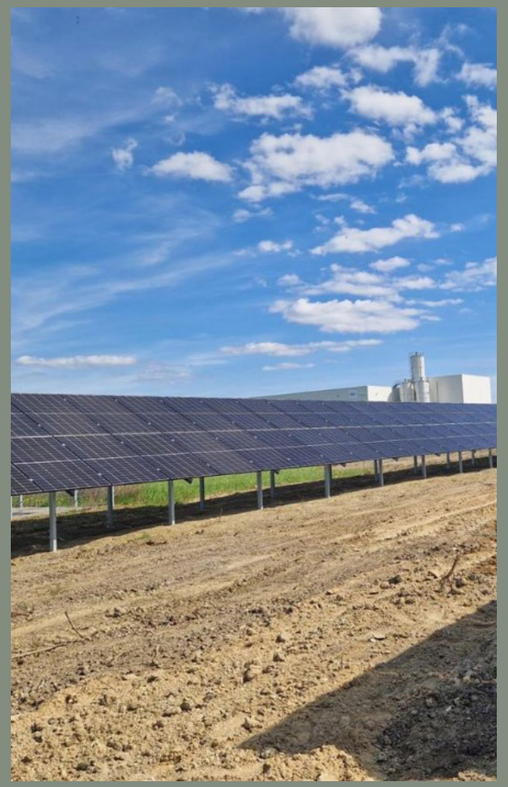
Interview by Elena Chechet

Sustainability of production processes is certainly one of the key issues for the rotational moulding industry. How do you address this important challenge within your company?

At Rotovia, we've made sustainability a concrete part of how we operate — not just a statement, but something that shows up in our decisions and design work.
First, we're making our products lighter. By redesigning them with less virgin polymer, we reduce material use without sacrificing performance — that cuts both our footprint and our dependency on raw materials. At the same time, we're gradually increasing the amount of recycled content we use. The goal is 20% by 2028; we're currently at 6%, and climbing.
We've also launched a take-back system for end-of-life products. It helps us close the loop and avoid unnecessary waste.
On the energy side, we're tackling two fronts: efficiency and source. We actively track and lower our energy use per processed kilo of material. And we've already shifted part of our production to electric ovens powered by renewable sources like hydro and solar.
Lastly, our focus on reusable, durable products pays off. The longer our products last, the fewer need to be produced, replaced or transported. That's a win — not just for our customers, but for the planet too.

Your company is not only one of the main players but also a service provider, assisting your partners from the concept phase to the final product.

You're absolutely right — at Rotovia, we don't just manufacture, we work alongside our partners from the earliest design stages to the final product.



“One promising area is renewable energy, where the need for durable, often large-scale components matches well with what rotomoulding can offer. Its ability to produce custom, complex parts with consistent wall thickness remains a clear advantage over other plastic forming methods.”

Our custom moulding division plays a key role co-developing solutions with our clients. Beginning with detailed product requirements, we use our expertise in rotomolding to transform these into practical, durable designs. With our in-depth understanding of materials and polymers, we not only optimize performance but also ensure long-term usability and sustainability. Beyond that, some of our brands, like iTUB, offer services that go beyond production. Clients can rent or pool rotomolded tubs without the burden of ownership, which gives them more flexibility — especially when their needs vary seasonally or by project. And because every tub is cleaned and reused, it's a model that makes operational and environmental sense.

How do you see the near future of rotational moulding: do you see it as a technology that has already reached its maximum development or do you see further possible growth margins?

Rotational moulding hasn't reached its ceiling — far from it. The technology continues to evolve, driven by innovation, sustainability goals, and new applications across industries. One promising area is renewable energy, where the need for durable, often large-scale components matches well with what rotomoulding can offer. Its ability to produce custom, complex parts with consistent wall thickness remains a clear advantage over other plastic forming methods. That flexibility opens doors, especially in sectors where both performance and design freedom matter. There's still room to grow.

If you try to imagine the future ten to fifteen years from now, what are the trends that, in your opinion, will most characterise the world of rotational moulding?

“Today, we’re producing technically advanced, custom-designed solutions with high demands on repeatability, durability and functionality. Better tooling, smarter materials and improved process control have all contributed to that development. ”

Looking ahead, the industry will likely become more consolidated — especially in Europe — with fewer but stronger players. At the same time, materials will change. We'll see a broader shift toward recycled, bio-based and biodegradable polymers, driven by both regulation and customer demand.
On the production side, energy will play a key role. New heating technologies and more efficient ovens will help reduce both emissions and costs, while hybrid and fully electric machines will become more common as pressure to move away from fossil energy increases.
And then there's digitalisation. Automation, AI and smarter control systems will take over more of the process — improving consistency, shortening cycle times and helping manufacturers do more with less.
The direction is clear: cleaner, leaner, and more connected.

Technological evolution has also been important to bring rotational molding out of the shadow of a basic technology with which only simple products can be made. Today the degree of sophistication of products is very high.

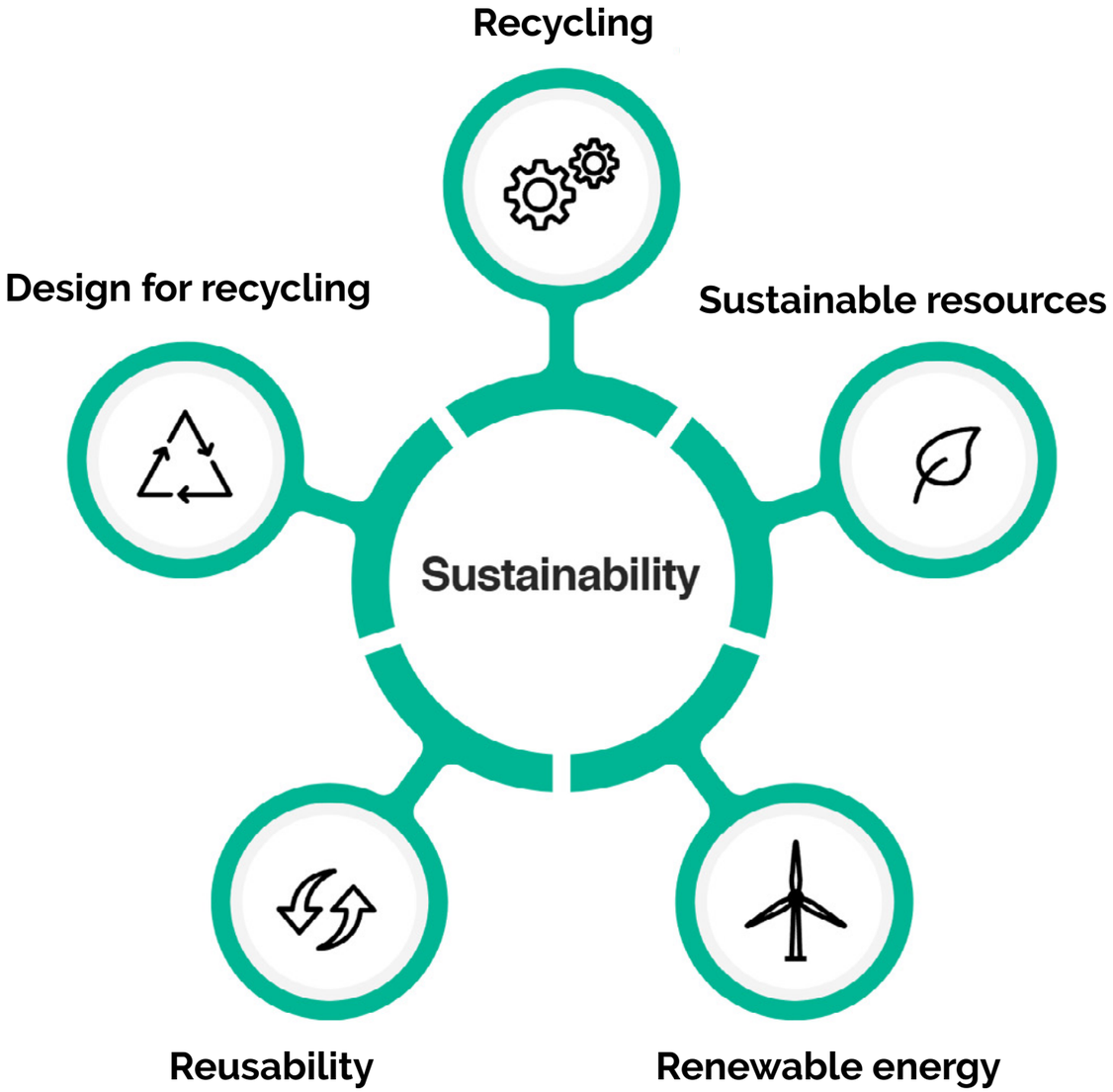
That's true — and we've seen that shift up close. Rotovia has been active in this industry for decades, and the change has been gradual but clear. Rotomoulding used to be seen as a basic method for simple containers or parts. Today, we're producing technically advanced, custom-designed solutions with high demands on repeatability, durability and functionality.
Better tooling, smarter materials and improved process control have all contributed to that development. But it also comes down to how the industry has matured — both in what clients ask for and in what we're able to deliver. The technology may be familiar, but what we can do with it today is at a completely different level than when we started.

In recent years the rotational molding industry has progressively occupied various market niches with new products: is there room for further growth in the sector?

Yes, there is. We still see untapped potential in several areas — especially in industries that are only now discovering what rotomoulding can offer. Renewable energy is one example, but there are others where durability, design flexibility or low tooling costs make a difference. There's also room to grow by improving what already exists. Smarter use of materials, better lifecycle management, and services like pooling or reuse can give even established products a second life. Growth isn't just about entering new markets — it's about doing more with what we already have.

How important is it today to spread knowledge of the production possibilities linked to the use of rotational technology? Does a widespread rotational culture contribute to the growth of the sector?

Yes, I believe that sharing knowledge about what rotational moulding can do is essential. Many designers and engineers still aren't fully aware of the specific strengths of the process — like the ability to create seamless, hollow parts that are both durable and material-efficient. A widespread "rotational culture" can significantly contribute to the sector's growth. The more people understand the possibilities, the more likely they are to consider it for new applications. That applies across sectors — from logistics and water treatment to agriculture and energy. A broader understanding of the technology doesn't just benefit individual companies; it helps grow the industry as a whole.



“One promising area is renewable energy, where the need for durable, often large-scale components matches well with what rotomoulding can offer. Its ability to produce custom, complex parts with consistent wall thickness remains a clear advantage over other plastic forming methods.”

How has the development of biopolymers and high-quality, mechanically recycled polymers significantly increased the potential for lowering the industry's CO2 footprint?

The impact is clear. On average, the carbon footprint of recycled polyethylene is only about 30% of that of virgin material. That makes it one of the most direct ways to reduce emissions in our industry. At Rotovia, once we reach our goal of 20% recycled content, we expect to lower the CO2 footprint from raw materials by around 15%. That's a meaningful reduction — especially considering that raw materials are one of the largest contributors to our overall footprint. Improvements in recycling quality make it possible to take this step without compromising durability or performance.

Rotational moulding is renowned for its ability to produce a diverse range of stress-free products, from small to very large and in complex shapes, all while being cost-efficient. What do you think about it?

That's true — but with one important addition: rotational moulding is cost-efficient mainly at low to medium volumes. That's where the process really proves its value. Tooling costs are relatively low compared to other plastic forming methods, which makes it ideal for customised products or series that don't require mass production.
The ability to create large, seamless and complex parts without internal stress remains a key strength. But like any method, it's about choosing the right tool for the right scale.

A few years have passed since the Covid pandemic that triggered the subsequent energy crisis with the exponential increase in supply costs: in this context, is the issue of rationalising consumption still important in rotational moulding?

Yes, it absolutely is. Even though the peak of the crisis has passed, energy costs remain high — and the rotational moulding industry still relies heavily on fossil fuels. That makes rationalising energy use just as relevant today as it was a few years ago.
Reducing consumption isn't only about cost efficiency. It's also one of the most direct ways to lower the sector's overall CO_2 footprint. In that sense, it's both an economic and environmental priority — and it's here to stay.

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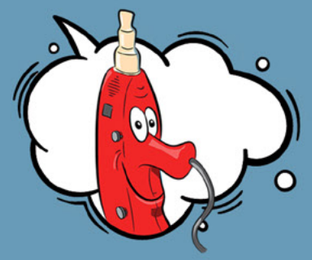
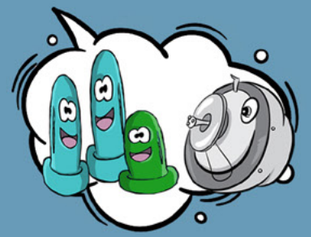
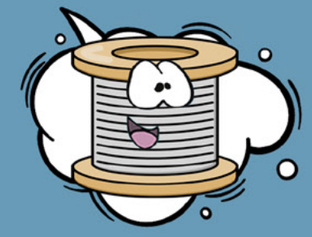


LaPlastecnica

Powercore
Plastic Welding System

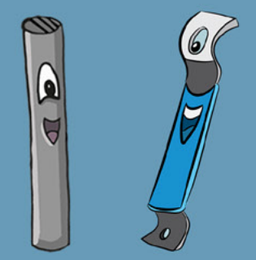
Stoner Molding Solutions
You Mold It. We Release It.





Tramaco

WIZ chemicals
release agents

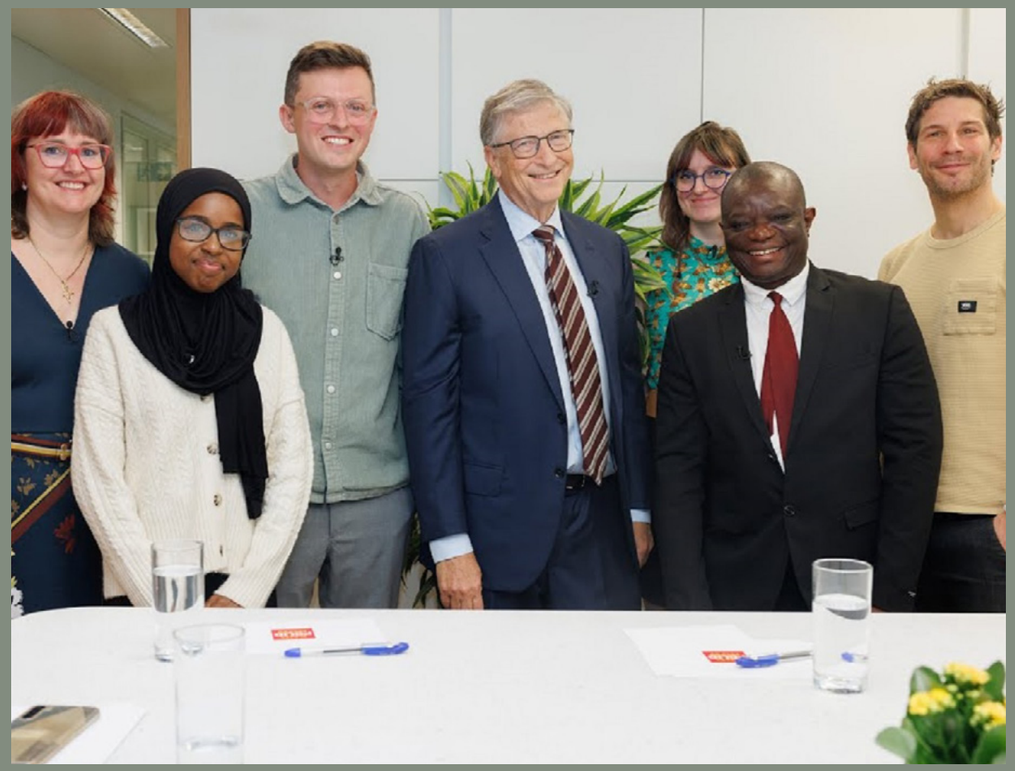


5. Visionary Entrepreneurs

Gates Foundation

Seattle, USA

Blue Diversion Toilet



www.bluediversiontoilet.com

Text by Roberto Gonne

The Blue Diversion Toilet, was developed as part of a grant programme by the Gates Foundation to investigate ways to "reinvent the toilet" and has now been nominated for the Designs of the Year awards.

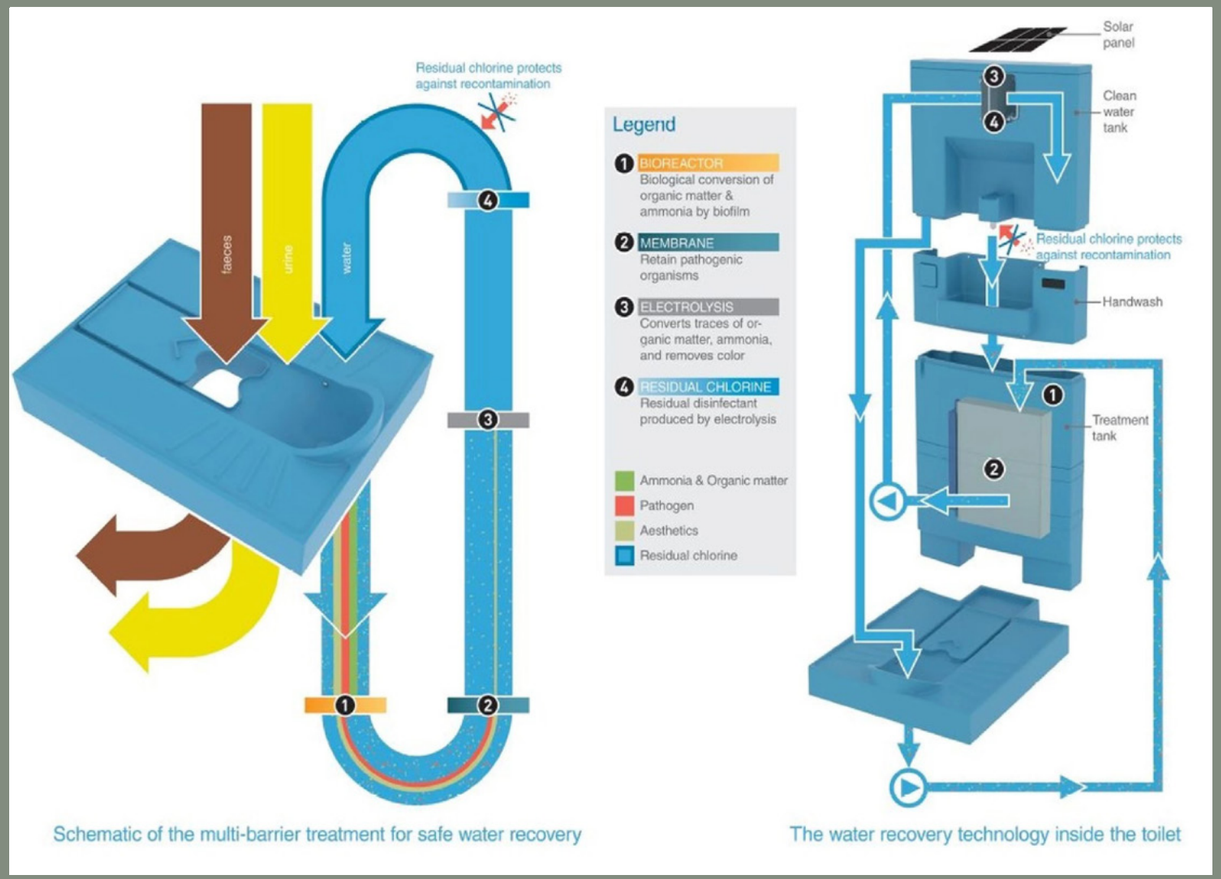
For Better Hygiene in the Poorest Areas of the World

The project aims to develop ways to improve living conditions for the estimated 2.5 billion people who have inadequate access to sanitation – a major cause of serious diseases around the world. The Blue Diversion Toilet is attractive and easy to use, and suitable for both washers and wipers. It provides safe running water 24/7 and is designed for 50 uses per day (~10 users). The rotomoulded toilet presents a next generation model of the urine diverting dehydrating toilet (UDDT), which is usually not very popular among users, especially amongst washers.

The Blue Diversion Toilet was amended with a flush function (for the front part), a washbasin for hand washing, and a showerhead for personal hygiene (for anal cleansing and menstrual hygiene). The water provided for these functions is water that has been recycled and treated on-site in the back wall of the Blue Diversion Toilet. Guaranteeing safe and high quality water without high electricity requirements is possible only because the water, urine and faeces are separated into three different streams at source. The squatting toilet pan divides these three streams, and is especially designed to be easy to use for washers, and to prevent the splashing of urine. The basis for the on-site water treatment is the three-stream separation in the toilet pan.

Thanks to an innovative water recovery technology inside the Blue Diversion Toilet, there is always pathogen-free, clean water available.

The Blue Diversion Toilet is a sustainable solution: it recovers resources from urine and recycles them to be used as fertilizer.



Schematic of the multi-barrier treatment for safe water recovery

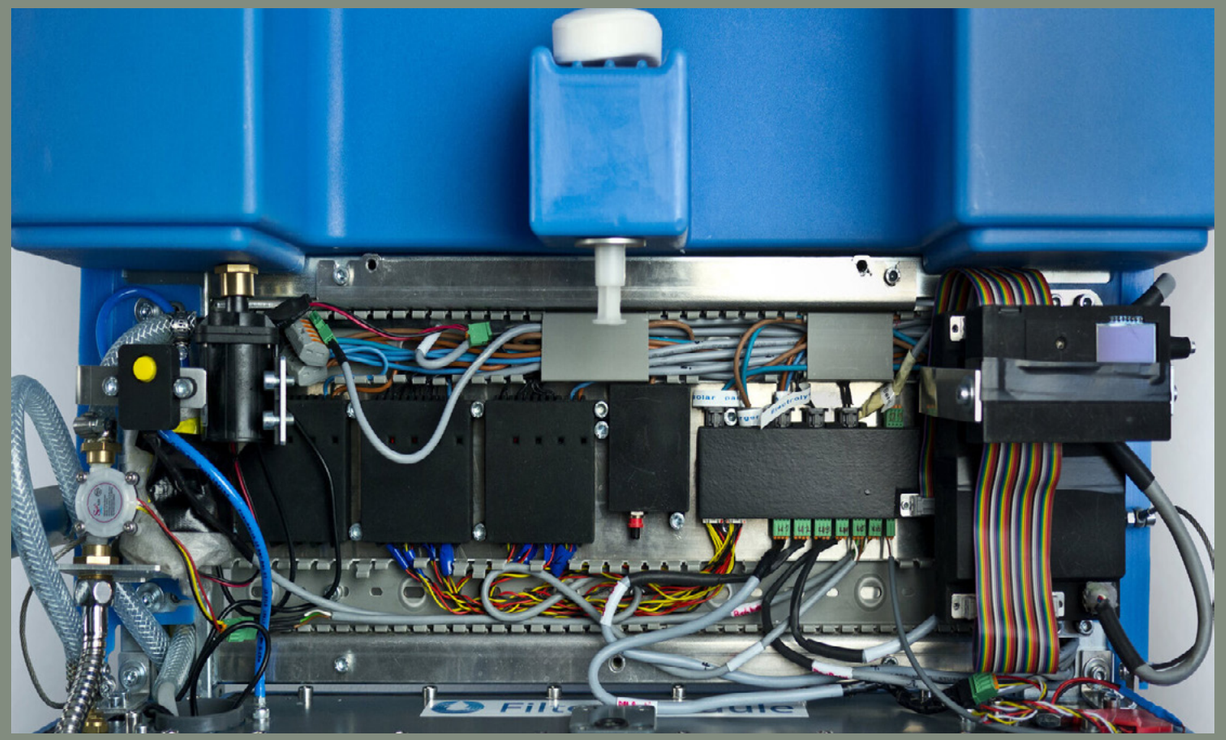
The water recovery technology inside the toilet

High Water Quality Through a Safe Process

The Blue Diversion Toilet is safe for users, their environment and for the service personnel. Thanks to an innovative water recovery technology inside the Blue Diversion Toilet, there is always pathogen-free, clean water available. This is made possible by the multi-barrier treatment system built inside the back wall of the toilet. Undiluted urine, dry faeces and the flush and wash water are separated in the source-separating toilet pan. Although the flush water is not used for transporting the faeces and the urine, the used water is still contaminated with some faecal matter and some urine. However, compared to a flush toilet, the contamination of the water is very low. This is why the water can be treated safely on-site and recycled without using a large amount of energy.

A Reliable and Sustainable System

The Blue Diversion Toilet is a solution for densely populated urban slum areas. It has very limited space requirements and is easily (re)movable. It can also be installed in existing superstructures. To ensure that upfront investment costs are not too high and the safe collection of urine and faeces, it was proposed that people rent the toilet. This makes the Blue Diversion Toilet attractive to tenants who do not own land. The rental agreement covers the operation and maintenance of the toilet, and the collection services. The Blue Diversion Toilet is a sustainable solution: it recovers resources from urine and recycles them to be used as fertilizer. The technology for resource recovery from urine consists of two processes: stabilisation and volume reduction. The service fee pays for the manufacturing, installation, and maintenance costs of the toilet.

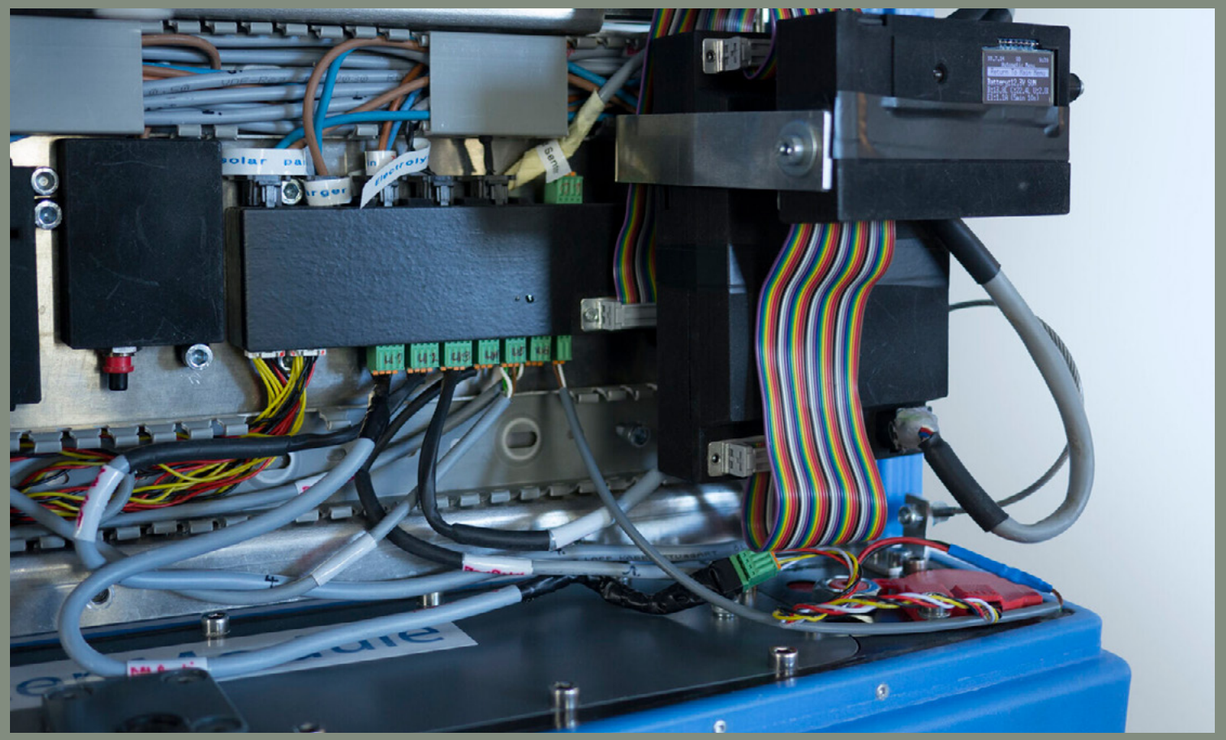


The Blue Diversion Toilet is designed for high-volume industrialized manufacturing and assembly.

The toilet is attractive to people who are normally not willing to invest in sanitation.

The toilet is mainly used in urban areas where hygiene conditions are very poor.

The toilet is rotomoulded in high-density polyethylene and is completed by a steel structure.



Ranbir Kooner

Liverpool, United Kingdom

Telling the Qualities of Technology

www.armo-global.org

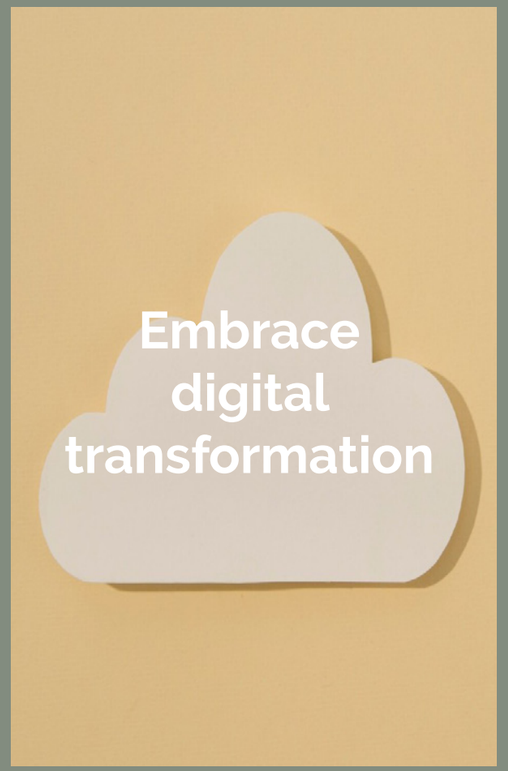
Interview by Elena Chechet

Ranbir, your role in the world of rotational moulding represents a certain novelty in this sector: you are one of the first female professionals working full-time in communications, specifically for Matrix Polymers....

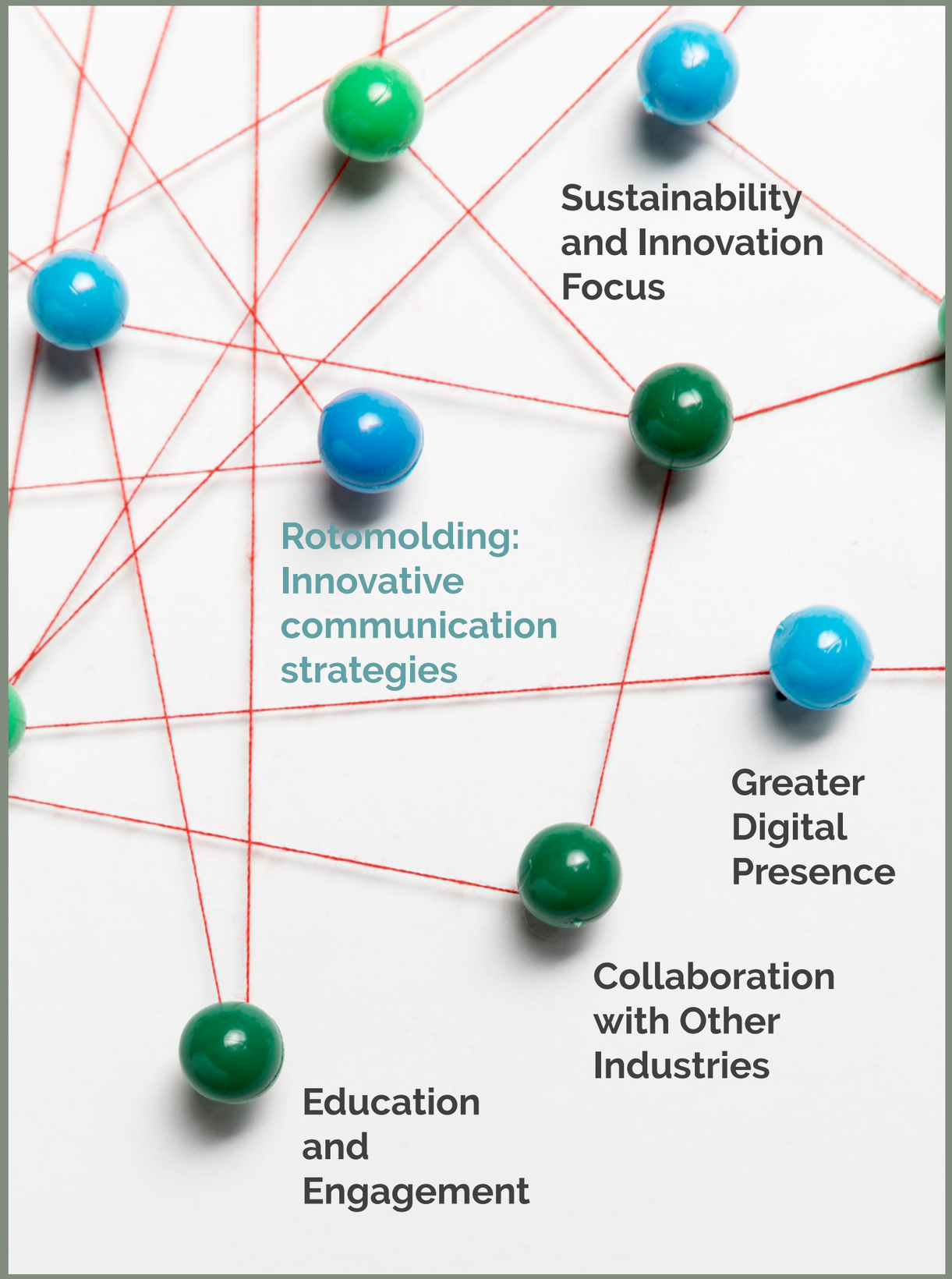
Yes, it's an exciting and dynamic space to be in! Rotational moulding has traditionally been a more technical and male-dominated industry, so being one of the first female professionals in a full-time communications role at Matrix Polymers is both a privilege and a responsibility. My goal is to bridge the gap between the technical aspects of the industry and effective storytelling, making information more accessible and engaging for a wider audience. It's inspiring to see the industry evolving, and I hope to encourage more diversity and fresh perspectives in this field.

For years, rotational moulding was an industry where information circulated mainly within a narrow circle of specialists: looking at your work, it seems to me that your mission is to progressively involve a wider audience....

Absolutely! Traditionally, rotational moulding has been a niche industry where knowledge was primarily shared among technical specialists. My role is to help change that by making information more accessible, engaging, and relevant to a broader audience. Through clear communication, storytelling, and digital platforms, I aim to highlight the innovation, sustainability, and potential of rotational moulding not just for industry insiders, but for designers, engineers, and even end-users. Expanding awareness can help drive new ideas and growth within the sector.



“More case studies and success stories should be shared, highlighting the real-world impact of rotational moulding in various industries, from automotive to medical. Showcasing innovation, such as sustainable practices or new applications, can inspire new ideas and attract attention to the industry.”



From your point of view, what things can this sector do to further improve the way it communicates and promotes itself

From my perspective, there are a few key areas where the rotational moulding sector could make significant strides in improving communication and promotion:

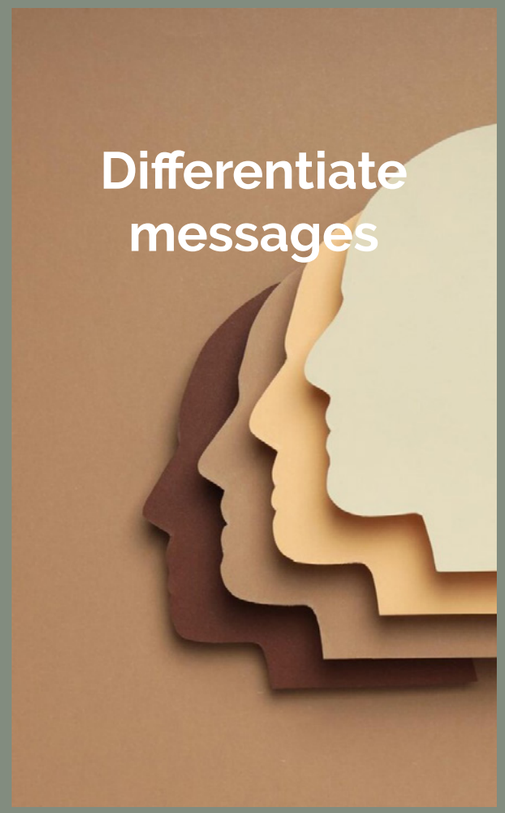
1. Embrace Digital Transformation: The industry could benefit from utilizing modern digital tools, including social media, webinars, and interactive websites, to reach a wider audience. This would make technical content more digestible and accessible to non-specialists while showcasing the versatility of the technology in different sectors.

2. Showcase Success Stories and Innovations: More case studies and success stories should be shared, highlighting the real-world impact of rotational moulding in various industries, from automotive to medical. Showcasing innovation, such as sustainable practices or new applications, can inspire new ideas and attract attention to the industry.

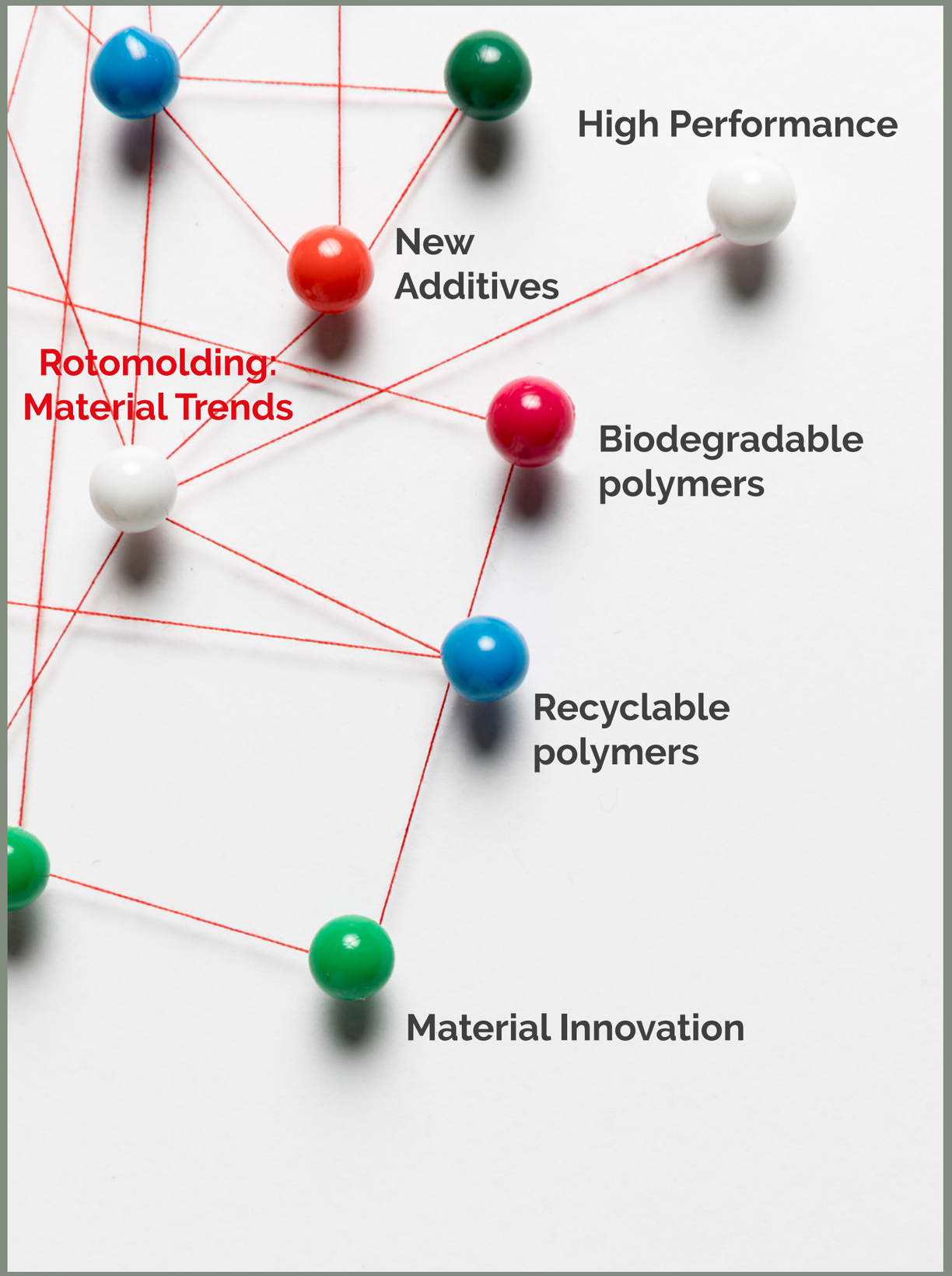
3. Educational Outreach: By hosting educational workshops, webinars, and collaborating with universities, the sector can promote awareness about the potential of rotational moulding. This helps build interest and a pipeline of new talent for the industry.

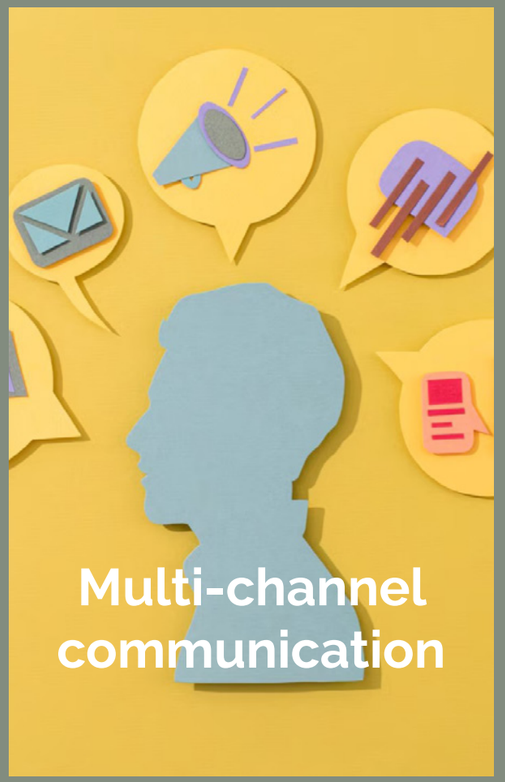
4. Collaboration Across Sectors: The industry should collaborate more with sectors outside of its immediate field, such as product design, architecture, or sustainability advocates, to demonstrate how rotational moulding can contribute to solving broader challenges, like reducing waste or creating innovative products.

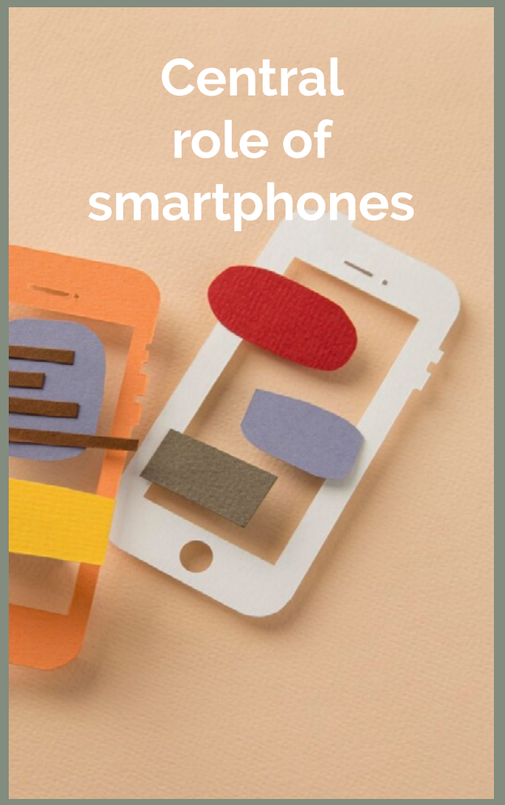
5. Diversifying Content: Creating more engaging, visually appealing content such as videos, infographics, and behind-the-scenes looks at manufacturing processes can help demystify the complexity of the industry and make it more relatable to a wider audience.



“Regularly updating content whether it’s through blog posts, case studies, or product updates ensures that your audience remains engaged and informed. A well-maintained website also boosts credibility and trust, which is essential for building long-term relationships in any industry.”







By focusing on these areas, the rotational moulding sector can enhance its visibility and appeal to both new audiences and potential collaborators, fostering growth and innovation.

In today's digital age, having an efficient and constantly updated website is absolutely crucial. It serves as the first point of contact for many potential customers, suppliers, and even talent looking to understand what your company is all about. An up-to-date website reflects the company's commitment to staying current and relevant in a fast-evolving industry. It's not just about providing basic information; it's about creating a user-friendly experience, offering fresh insights, showcasing innovations, and highlighting the company's expertise. Regularly updating content whether it's through blog posts, case studies, or product updates ensures that your audience remains engaged and informed. A well-maintained website also boosts credibility and trust, which is essential for building long-term relationships in any industry.

Do you think it is important to be present on social channels to promote rotational moulding?

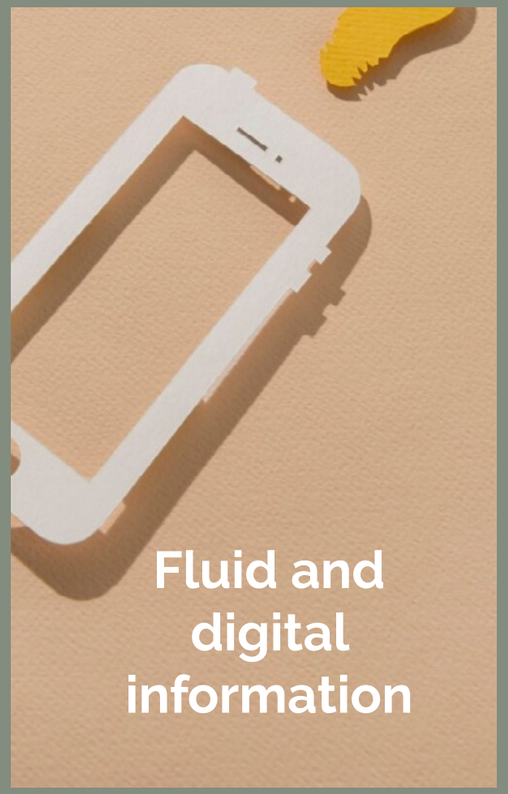
Yes, absolutely. Being present on social channels is essential for promoting rotational moulding. Social media platforms offer an invaluable opportunity to reach a broader, more diverse audience, including potential clients, industry professionals, and even those outside the traditional sector who may not have considered rotational moulding before. By showcasing innovative projects, sharing success stories, and engaging with both current and future stakeholders, the industry can build a stronger, more connected community. Social channels also allow for real-time interaction, making it easier to respond to questions, address concerns, and share insights.

Do you see differences between countries in the communication strategies adapted to talk about rotational technology?

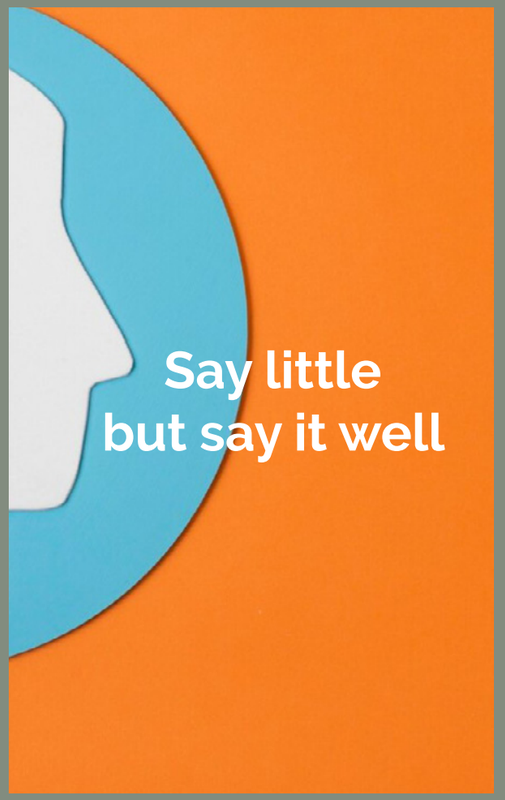
Yes, definitely. Communication strategies around rotational moulding can vary quite a bit from country to country, influenced by cultural differences, industry maturity, and regional focus areas. For example, in more technically driven markets, such as Germany or Japan, communication tends to focus heavily on the precision, efficiency, and advanced technology behind rotational moulding. These regions often prioritize technical specifications and detailed product performance.
In contrast, in markets like the US or parts of Europe, where there's a stronger emphasis on sustainability and design, the focus may shift to the eco-friendly aspects, cost-effectiveness, and creative potential of rotational moulding.
Emerging markets, on the other hand, might prioritize education and awareness, using simplified messaging and a focus on how rotational moulding can be a solution to local challenges, such as affordable manufacturing or creating versatile products.
In essence, while the core of the message remains the same highlighting the advantages of rotational moulding how it's communicated can change based on the regional context, audience, and the specific needs of that market.

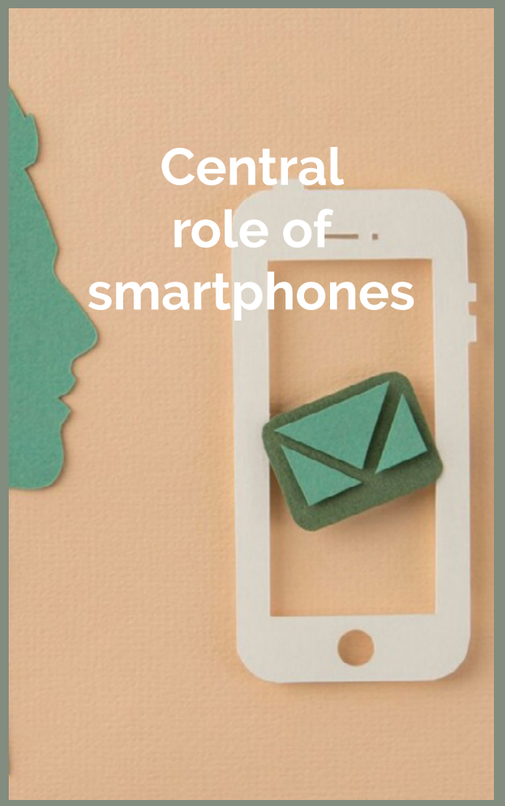
How do you see the development of this sector in terms of communication over the next 10 to 15 years? What can be done to grow?

Over the next 10 to 15 years, I see the rotational moulding sector embracing even more dynamic and innovative communication strategies. As the industry continues to evolve, I think we'll see a shift toward



“My main suggestion would be to start by simplifying their messaging. The rotational moulding process can seem complex, but it’s important to break it down in a way that’s clear and relatable for a wider audience, including those outside the industry. ”





a more integrated, cross-platform approach that combines traditional and digital communication in new ways.

1. Greater Digital Presence: The industry will likely continue to leverage digital tools like social media, blogs, and videos to reach a wider, more diverse audience. With the rise of AI and data analytics, communication strategies will become more personalized and targeted, allowing companies to engage with potential customers in a more meaningful way.

2. Sustainability and Innovation Focus: As sustainability becomes an even larger focus globally, there will be more emphasis on communicating the environmental benefits of rotational moulding, such as material efficiency and reduced waste. Highlighting innovative practices, like the use of recycled materials or energy-efficient processes, will resonate with consumers and businesses alike.

3. Collaboration with Other Industries: There's a real opportunity to collaborate with industries like automotive, consumer goods, and healthcare to showcase the versatility of rotational moulding. These collaborations could not only broaden the communication landscape but also highlight how this technology can play a role in solving global challenges.

4. Education and Engagement: More will be done to educate the next generation of designers, engineers, and entrepreneurs about rotational moulding. Offering accessible, interactive learning materials online or through partnerships with universities and design schools could spark fresh ideas and encourage new talent to enter the field.

To grow, the sector should focus on simplifying its messaging and making it more accessible to non-specialists, building stronger relationships with a wider range of industries, and embracing new technologies to stay relevant in a rapidly changing world.

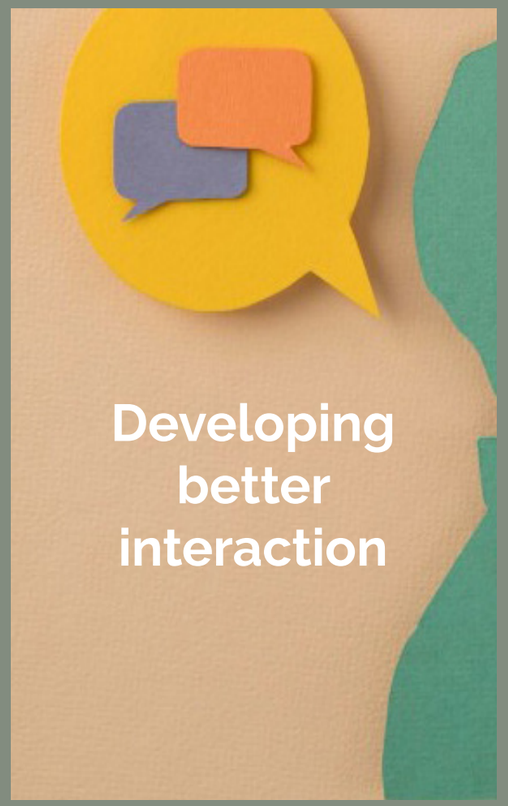
Fostering a culture of open communication and transparency will help grow trust and visibility for the industry as a whole.

What suggestions would you give to companies working in this sector to improve their communication?

My main suggestion would be to start by simplifying their messaging. The rotational moulding process can seem complex, but it's important to break it down in a way that's clear and relatable for a wider audience, including those outside the industry. Visual content, such as videos, infographics, or behind-the-scenes looks at the manufacturing process, can help make technical concepts more digestible.

Another key point is to focus on storytelling. Sharing real-world success stories, innovations, and the tangible benefits of rotational moulding such as cost-efficiency, sustainability, and versatility helps humanize the technology and connect with both current and potential clients. It's also crucial to highlight the environmental impact and sustainability aspects more prominently, as these are becoming central in many industries today.

Furthermore, companies should actively engage with their audience on social media platforms and other digital channels. Regularly posting updates, news, and case studies not only keeps the community informed but also builds a sense of trust and authority. Lastly, collaboration with other industries, educational institutions, and organizations can broaden the scope of communication, helping to position rotational moulding as a solution for a variety of challenges.

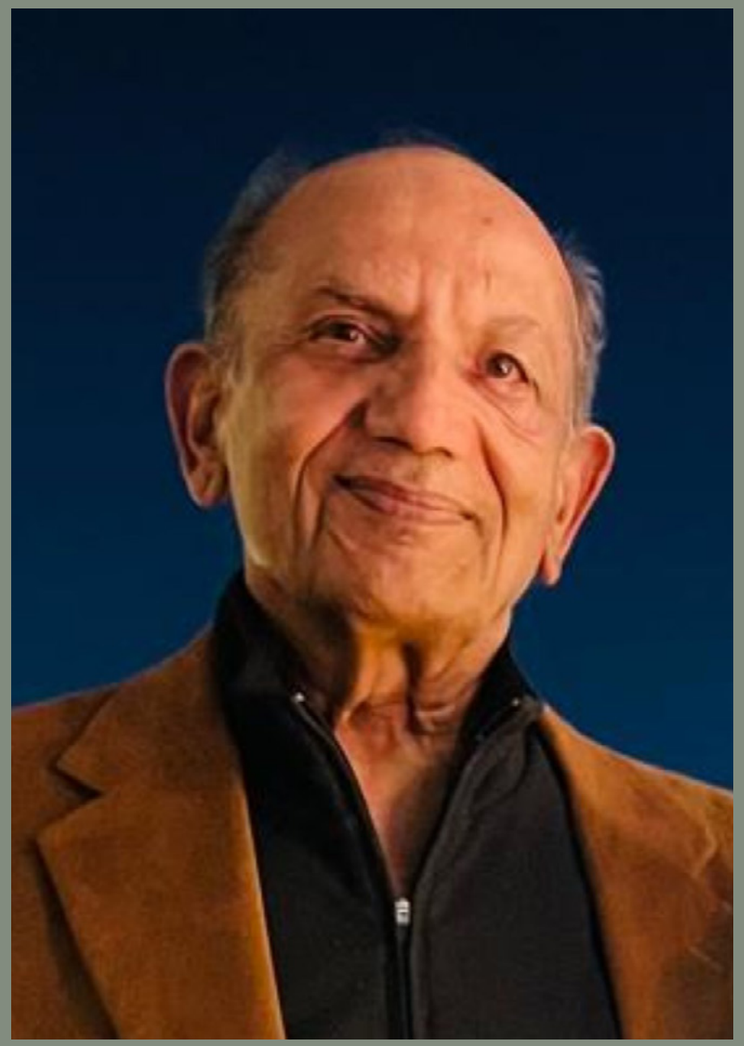


7. Telling ARMO

Ravi Mehra

StAR - Society of Asian Rotomoulders

India, a Country in Constant Evolution



www.starasia.org

Interview by Elena Chechet

Ravi, you were one of the promoters of the Delhi conference: from your point of view, how do you see the evolution of rotational moulding in India?

Rotational moulding in India has come a LONG way since the inception of StAR in India in 2004. From an industry that was mostly entirely in water tanks, to the one today where almost 25% of the activity is in products other than water tanks. The industry in India today is on par with the rest of the world. Confidence in design & development of new products is building up, in many different sectors e.g. automotive, transportation, materials handling, infrastructure, industrial, chemical-processing, consumer-furniture, agriculture, defense and other sectors.

What are the improvements that the rotational moulding industry in India should work on most?

Desire, decision & drive to continue design & development of products in different sectors must continue and even be accelerated. Opportunities are abundant, all domestically. "Atamnirbhar" the national call provides means and opens new sectors for vigorous growth; be it infrastructure, disaster management, infrastructure, defense, agriculture - produce storage & handling, environmental-pollution control, light weighting and more. For all this moulders need to accept and invest in new materials knowledge, better quality designs, molds & processes / machines, including post-moulding operations. Global tie-ups can also be beneficial for leapfrogging entry into new markets, opportunities & growth.

Do you think it is important for the Indian local

“One significant way I describe the difference is that most other plastics processes produce parts, components that then go through an assembly operation. Where as rotomoulding produces complete products, solutions.”

industry to differentiate its range of rotomoulded products by opening up to new applications?

That's exactly what I am suggesting in both my answers above; it has already been happening and there are many innovative indigenous new products. But areas for growth are many more. Of course most of the areas for growth are functional and problem solving solution and not just aesthetics based e.g. as in Europe. Although the planters and garden furniture is a happening place.

If you try to imagine the future ten to fifteen years from now, what are the trends that, in your opinion, will most characterise the world of rotational moulding?

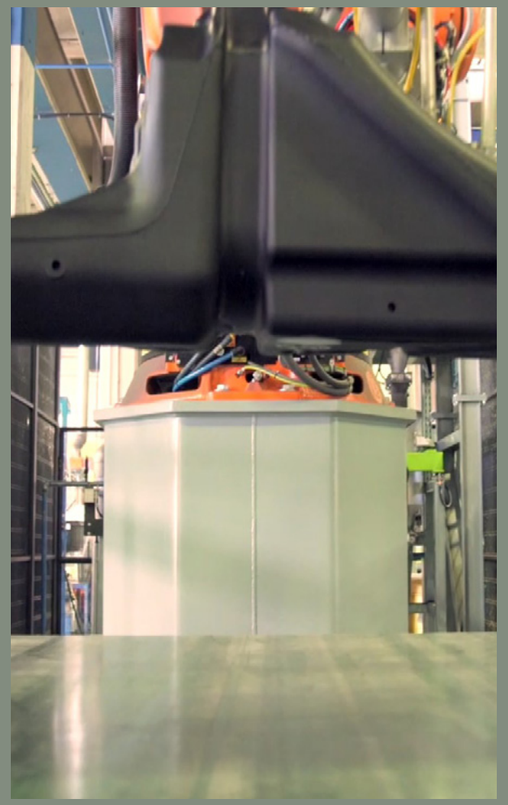
I have held the opinion since my beginning years in India that rotational moulding has a tremendous potential & future in India. This process is most suitable for the Indian scenario, more so than most other countries / regions of the world. Rotomoulding could & should be the largest in the world in India. But that is going to need acceleration of the evolution, changes taking place in India. E.g. competent design, development with analysis and test validation. Of course new engineered quality molds, new process capability machines including direct electrically heated and robotics processing controls & monitoring. More specific to your question, these same comments are true for the rotational moulding world over. All kinds and era [old and new] of technologies will continue to be used depending on the application, product. What large tanks and products need is different from high production, highly engineered, high precision products. Old will not die out, but the new will continue to take up more and more of the future applications and growth.

In the competition with other moulding technologies, how do you see the current challenge between rotational moulding and other technologies as blow moulding and thermoforming?

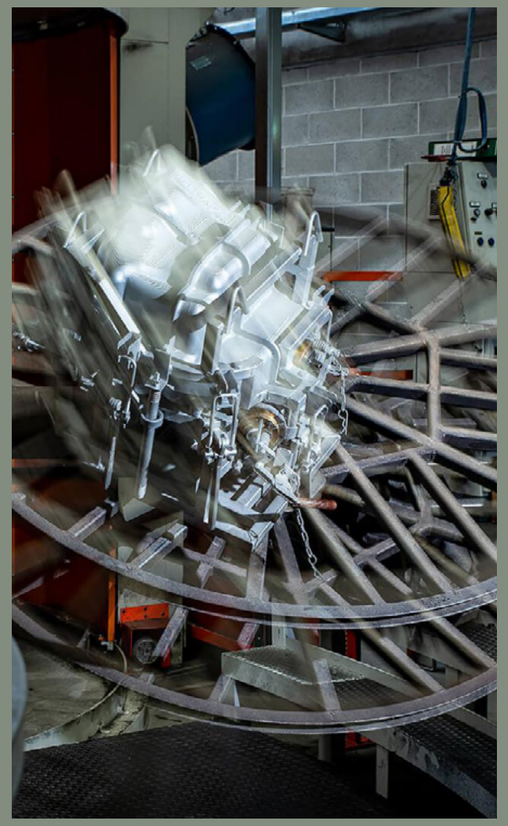
In my past 50+ years in the plastics processing industry I have been fortunate to have worked with & have experience in most other processes. One significant way I describe the difference is that most other plastics processes produce parts, components that then go through an assembly operation. Where as rotomoulding produces complete products, solutions. We all understand that rotomoulding offers tremendous leeway in design, limited primarily by imagination. We must focus on this design flexibility and freedom to differentiate from what or how other processes can compete against. We must emphasize attractive designs and features. Shapes, sizes, feature and capital investment costs in rotomoulding are mostly significantly lower --- we should offer differentiating features and attractive benefits in the rotomoulded products-solutions.

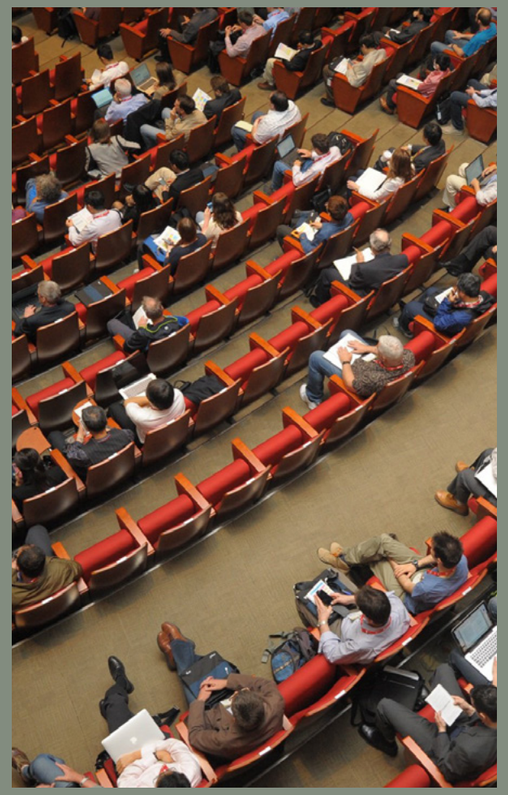
In recent years the rotational molding industry has progressively occupied various market niches with new products: is there room for further growth in the sector?

I would like to make the case for "we have just got started" in the new phase growth world for rotomoulding. Besides tremendous growth potential continuing from what is already happening & being done, there are major new ones. The whole "H2 – Hydrogen" powered world for all transportation & movement is a market size larger than any we have experienced to date --- I like to let my imagination run wild. Of course there are no short cuts and it is not for the faint of heart. The whole global challenge for recyclability and circular economy ---- rotomoulding offers the most significant opportunity,



“We must focus on this design flexibility and freedom to differentiate from what or how other processes can compete against. We must emphasize attractive designs and features. ”





not only for rotomoulded products, but also products produced by most other processes and applications; we are already seeing some of this happening. Potential again is huge!

How important is it today to spread knowledge of the production possibilities linked to the use of rotational technology? Does a widespread rotational culture contribute to the growth of the sector?

This is like asking do we need the SUN to continue and grow life. Educating most other players in the whole B2B and B2C chain is the greatest challenge and opportunity. Besides providing practical, easy to understand knowledge thru the digital / social media we must commit to using old fashioned education, information and interest building. This must be done at the educational institutions. We must also create and engineer opportunities to inform, educate and excite the designers, marketers, entrepreneurs, business decision makers about rotomoulding.

Training is one of the key activities to increase knowledge of rotational moulding among new generations of workers and professionals in the industry....

This is perhaps the most important part for capturing all the future growth potential outlined above ... ...and without this it cannot happen. Of course the education & training needs will keep changing, evolving with the development of new technologies and equipment. We will continue to need interested and motivated supply of younger work force to materialize these growth business opportunities. Type , level of education and training will need to keep developing. We must as an industry invest in this. Of course ARMO has initiated programs and publications to inform the world

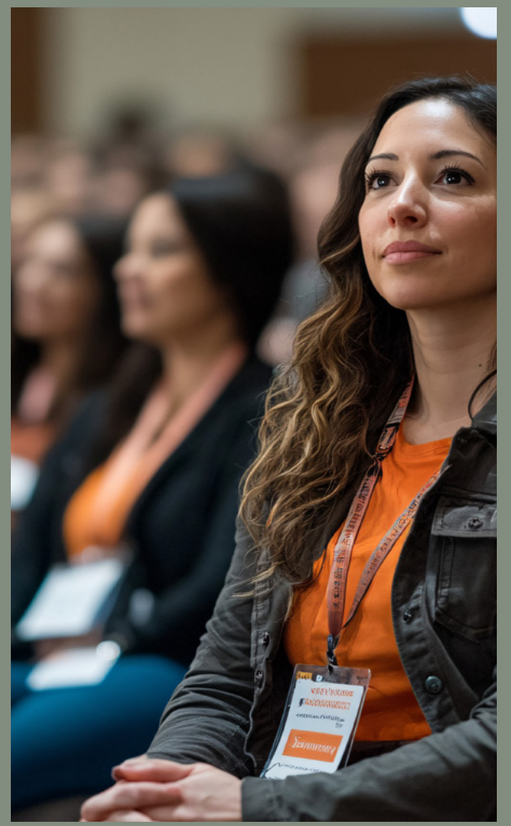
at large, But commitment and old fashioned efforts are still going to be needed and be most effective. That is by spreading the word in people to people talks and presentations at local opportune levels. That is all of us in rotomoulding must make an investment in educating and accomplishing this.

Spreading knowledge of the potential of rotational technology among designers is another important activity to stimulate new applications?

Yes this is most important and some of this has been done over the past decades, but what has been done is barely scratching the surface. Besides educative and informative tools and literature that can be prepared at global level i.e. ARMO; old fashioned in person presentation and talks with Q & A are most effective and necessary. This needs to be done at the regional level by each affiliate & their membership. Tools andpresentations can be tailored and used most effectively.

Last but not least, how do you see ARMO's role within the world of rotational moulding?

ARMO has come to recognize and define the challenges for the awareness and growth of rotomoulding globally; and this needs to continue more purposefully and in a planned manor. Must be done so that all affiliates can experience benefits and growth of the industry in their regions. And lets not forget the time tested saying for each one of us "the more you give ; the more you".



8. International Events

ARMO

Affiliation of Rotational Moulding Organisations

Calendar

www.armo-global.org

ARM Annual Meeting

Dallas, Tx Sep 29 – Oct 1, 2025

The Association of Rotational Molders brings together hundreds of rotomoulders and their suppliers to learn from one another, troubleshoot, and network. Moulders call their Annual Meetings "the most informative conference" they have ever been to and they report that it's a very interesting event.
www.rotomolding.org

Troubleshooting Surface Porosity and Voids

Webinar online October 2, 2025

The British Plastics Federation organizes a webinar on October 2nd, 2025 - H 10.00 (GMT+2). In this session rotomoulding consultant Ian Hansen will provide you with his expert view on troubleshooting on the important topic of surface porosity and voids.
www.armo-global.org

Innovation in Rotational Moulding

United Kingdom September 25, 2025

The British Plastics Federation organizes the annual rotational moulding seminar, kindly sponsored by Matrix Polymers. Featuring speakers from Dram, Persico and Matrix Polymers this event will explore cooling, problem solving, cycle times and new technologies. This event will attract rotomoulders for a full day of networking.
www.bpf.co.uk

9. Affiliates

AFR - Association Francophone du Rotomoulage www.rotomoulage.org

ARM - Association of Rotational Molders www. rotomolding.org

ARMA - Association of Rotational Moulders Australasia www.rotationalmoulding.com

ANIPAC - The Mexican Plastic Association www.anipac.org.mx

ARMSA - Association of Rotational Moulders Southern Africa www.armsa.co.za

ARM-CE - Association of Rotational Moulders Central Europe www.rotational-moulding.de

StAR - Society of Asian Rotomoulders www.starasia.org

Nordic ARM - Nordic Association of Rotational Moulders www.nordicarm.org

BPF - Rotational Moulders Group www.bpf.co.uk

IT-RO - Italia Rotazionale www.it-ro.it

RPC-CPPIA www.crotomolding.com

Rotopol Association www.rotopol.pl

ARMO

www.armo-global.org

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WeRoll is a bimonthly publication available for free download on the ARMO website and the websites of ARMO-affiliated organisations.

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