

WOOD MADE

ISSUE 6

# STORIES

MAY 2024

SONAE ARAUCO WORLD STORIES



## KNOWLEDGE IN OUR DNA

Adelaide Alves and Paulo Pinto de Sousa share their vision of the company and the importance of knowledge.

## TRAINING FOR VALUE

Training as a factor for attraction, transformation and retention.

## CRISTINA SIMÓN

The specialist in Organisational Behaviour talks about the role of companies in motivating employees.

## INDUSTRY 5.0

Sonae Arauco is moving towards the necessary intersection between humankind and technology.

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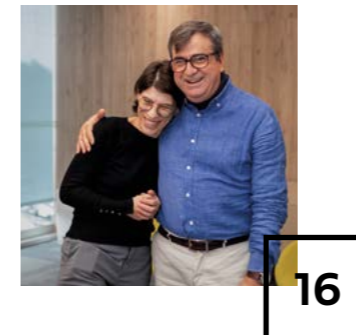
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Taking wood further



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## Editorial

# Technology at our service

**Rui Correia,**  
CEO Sonae Arauco

At Sonae Arauco, we are proud to be part of a company that contributes to building a better world through the products it puts on the market, every day. And at the root of our purpose is an unwavering desire to improve the lives of People, the theme of this issue.

It is for People that we take a valuable natural raw material - wood - and transform it into added-value solutions. It is for People that we work every day in a circular bioeconomy model and we want to achieve carbon neutrality, helping to ensure the sustainability of our planet. And it is also for People - and with People - that, in a sector as competitive as wood-based panels, we rethink processes, optimise systems and add purpose to every decision, every change.

In the past year, Sonae Arauco has consolidated its **positioning as a key player - and stakeholder - in the transition to a sustainable economic model and, in the strategic review, we have given People a central role.** We are committed to being a benchmark in the sector, guided by continuous

improvement and operational excellence. More than just a set of intentions, we strive every day to create an increasingly agile and flexible organisation.

Proof of this is the implementation of the Darwin and Value 2 Win programs, two transformational journeys based on the company's strategy. While with Darwin we are already working on simplifying and standardising processes, and adopting industry best practices, with V2W we are focusing on creating a true value mindset that cuts across the entire company and places the client at the centre of the equation. These projects not only strengthen our teams, making them more effective and cohesive, but also give us greater capacity to answer to the challenges of a constantly changing sector.

At the same time, **it is alongside People that technological advances take place.** It is unthinkable these days to move towards operational excellence without the leverage that digitalisation gives us. Tools such as Artificial

Intelligence (AI) make it possible to process large volumes of data and establish relationships between variables, facilitating the generation of knowledge, which is becoming infinitely greater and faster. And more knowledge translates into more opportunities, less effort and more valuable routines for everyone.

At Sonae Arauco, we've been working on several projects that take advantage of AI, and our Digital Plant is probably the one that best reflects our evolution so far. However, we are developing countless examples to leverage AI tools, such as a model for the timely detection of defects on our production lines, or an intelligent and adaptive production plan that interprets criteria such as delivery dates, set-up or storage times, among many others.

We're also developing our own "ChatGPT", which began to be thought up even before the launch of the popular natural language model, and which will be able, among other things, to help navigate the Digital Plant.



05

“Our approach to technology involves identifying what it can do for us, for the business, for the planet—the opportunities—then using it to empower each employee.”

However, leveraging does not mean replacing. A machine will never have the dedication and creativity of a human being, the key ingredients for a successful business. An algorithm can never have the Sonae Arauco values, which are central to the construction of our identity. So, technology *per se* will never be able to replace a human being. Our approach to technology involves identifying what it can do for us, for the business, for the planet - the opportunities - then using it to empower each employee, enabling them with correct and timely information that will lead to better and quicker decisions.

People will always be the basis of Sonae Arauco's work. That's why they are one of our five main strategic pillars. Through

the Sonae Arauco Knowledge Academy (SAKA), we have been supporting the development of our employees in areas as diverse as production processes, maintenance and robotics, among others, building the foundations of the knowledge that supports our company. Now, there are countless resources available, including e-learning modules, webinars, and tutorials, created by our experts for technical and non-technical training. It is, in essence, a Sonae Arauco academy, tailor-made for us.

In this edition of our magazine, we highlight Sonae Arauco's ongoing efforts to maximise the work and value of each employee, from training to technology and, of course, innovation.

**Everyone's involvement, day after day, helps us continue to build the foundations of a company of excellence, more solid and competitive. I'm counting on you for another year of challenges, opportunities and success, proudly taking Sonae Arauco further.**

Refresh



# Overview

## A NEW STRATEGY

2023 was a year of change at Sonae Arauco. The world changed and it is part of the company's DNA to evolve to keep up with this development. Looking to the future, we reviewed our strategy, aligning it with the company's maturity and the world we live in. With this we want to reaffirm our commitment to be the benchmark in a sector that, through the products that it delivers to the market - for furniture, interior design and construction - contributes to creating a better world.

**"Our goal is not to be the biggest company, but the one that consistently fulfils its promises to the right sectors and partners."**

Rui Correia, CEO Sonae Arauco

### Vision

To create wood-based solutions for a better life, a better future and a better planet.

### Mission

To sustainably develop, produce and deliver renewable wood-based solutions through operational excellence, innovation, inspired people and partnerships, creating long-term value.

### Strategy

With the same guiding purpose - to be the company of choice - and an unwavering will to affirm the potential of wood-based solutions as key to the transition to a sustainable economic model, **the new strategy is customer centric, value creation based, and it has partnerships at its core.**

### Five main strategic pillars:



People and Culture



Value-based Innovation



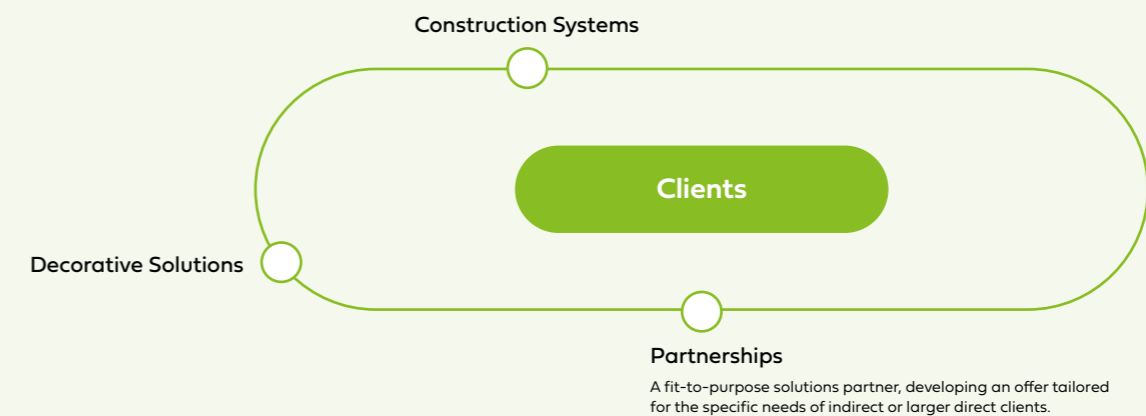
Partner for Value



Operational Excellence



Caring for the Planet



## DARWIN, a transformative journey

# Darwin

Digital Acceleration Ready (to) Win

**DARWIN** is the implementation project for Sonae Arauco's new cloud-based **Enterprise Resource Planning (ERP)** solution, based on SAP S/4 Hana technology. It will shape the company's future for at least a decade. This new solution is another important step in the continuous pursuit of excellence, and will involve all the company's employees, as well as impacting various stakeholders. Started in 2023, **the project is already at the implementation and configuration phase of the processes in the system, and the migration to the new solution** is being prepared, supported by a cohesive change management program.

### Why a new ERP?

- It simplifies and standardises complex processes
- It adopts the best industry practices
- It allows us to keep up with technological developments
- It has a long-term impact
- It transforms the business

## V2W, a mindset oriented towards creating value

Designed to strengthen the company's ability to generate, measure and provide value to customers, the Value to Win (V2W) project is allowing Sonae Arauco to progressively assert itself as a value partner, **providing its customers with products and services based on a win-win logic, far beyond a simple commercial transaction.** In 2023, further steps were taken towards this cultural change, whose focus is the customer:



**+200** employees trained

**+4000** hours in training and other activities

**+2500** customers analysed in a segmented way

## Health, Safety And Environment

### Eight industrial sites without LWC in 2023

**Beeskow, Cuéllar, EuroResinas, ImPaper, Mangualde, Meppen, Tecmasa and Valladolid** are the Sonae Arauco plants that, in 2023, did not record any lost workday cases (LWC) involving their own employees. This achievement reflects the company's commitment to safety, which materialises in the execution of the strategic plan defined for the area in 2021. Three of these industrial units celebrated longer periods without LWC:

- Valladolid: 2 years
- EuroResinas: 3 years
- ImPaper: 4 years

### A new Consequence Management procedure

Establishing a true safety culture throughout the company requires several steps, including a new Consequence Management procedure, launched in 2023 in South Africa, Spain, the Netherlands, Portugal, the United Kingdom and Switzerland. **The aim of this procedure, which is part of the safety roadmap, is to promote and recognise good internal practices** (such as Safety Observations, active participation in daily Gemba Walks, among others) so that they inspire proactive adoption, as well as correcting and, when necessary, penalising behaviours that could result in accidents and injuries. In Germany, the procedure will be implemented throughout 2024.

## Supply Chain

### Transport optimisation in Germany

**Nettgau, Beeskow and Meppen** have implemented **Oracle Transportation Management (OTM)**, a multifunctional project that cuts across different areas and aims to unify the transport management of Sonae Arauco's entire supply chain, minimising costs, and optimising service levels. Through a unique algorithm, it is possible to establish interconnectivity with hauliers and, at the same time, obtain data to support decision-making, guaranteeing strict fulfilment of order requirements and delivery times. The results show a positive trend:

**76%** of automatically planned orders

**64%** of dispatches contracted automatically

## Cybersecurity and Technology

### (Even) Stronger Cybersecurity



In line with the company's objectives, the **Cybersecurity** team continues to increase the level of protection of digital assets, in an effort that includes the mobilisation and training of employees, particularly with regard to phishing, as well as the establishment of a response plan to computer attacks. Last year our units' level of preparedness for ransomware threats was also assessed. The results reinforce the need for greater attention to backups, network segmentation between IT and OT, and the use of Endpoint Detection and Response, a technology for monitoring and responding to cyber threats.

### Remote access to industrial units

In light of the constant need for remote maintenance access, all of Sonae Arauco's industrial units now have a new solution, **Zscaler**. In addition to digital protection, this implementation also makes it possible to monitor and better understand remote access patterns between factories and by suppliers.

### Network renewed in Nettgau

Sonae Arauco's largest plant saw its network structure renewed in the last year, improving internet access through the Wi-Fi 6e standard and minimising the lack of mobile coverage. Segmentation between IT and OT connections was also implemented, ensuring not only the quality of operations but also network security.

#### Renewal in numbers:

- 4** km of optical fibre
- 21** km of copper cables
- 300** network points
- 112** access points
- 25** commuters

## Digital Transformation

### Digitalisation from inside the factory...

**Technological progress doesn't stop at Sonae Arauco, and 2023 was the year in which the Digital Plant was implemented at Nettgau and Valladolid plants.** In Valladolid, the project is fully operational and widely implemented: all daily meetings are supported by loW Digital, with the actions arising from these meetings being followed up via the new Digital loW Action Plan tool, and employees already receive Digital Plant Viewer+ notifications on their mobile phones. In Nettgau, the main screens for monitoring the daily meetings have been created and the IT and Digital Industrial Competence Centre teams have visited to train the local teams, in a project that went live in April 2024.

### ... to the woodyard

The Mangualde plant's operational efficiency has received a significant boost with the digitalisation of the woodyard. **This innovation enables the automatic and very precise measurement of the amount of wood received, practically in real time.** This development makes it possible to accurately qualify and quantify the flows of wood and by-products at each stage of production.

The technologies that make a digital woodyard are:

Artificial vision with stereoscopic cameras

NIR hyperspectral cameras

3D radar

### Predictive Maintenance being implemented at three factories

**White River, Linares and Beeskow** have made great strides in adopting the Predictive Maintenance platform, which allows them to anticipate anomalies and breakdowns. At the **South African** plant, around 300 sensors have been installed to monitor critical equipment, providing recommendations from suppliers and guidance on assets on alert. **Linares and Beeskow** have been given the go-ahead to become operational in the fourth quarter of 2024.

### R&D investment in Valladolid

The Valladolid plant has received a research and development grant from Instituto para la Competitividad Empresarial de Castilla y León. The funding supports the development of new wooden structural elements that optimise the material and its mechanical characteristics, while minimising thermal losses. **The aim is to create a new type of industrialised building panel with high-performance thermal insulation, contributing to energy-efficient buildings.**



## Prizes and Awards

### Improvement Awards

In the 6<sup>th</sup> edition of the Improvement Awards, seven Sonae Arauco projects were honoured out of more than two dozen applications received. The company's various teams were thus recognised for the significant improvements implemented during 2023, which have an associated saving of more than 4 million euros annually.

### +20 nominations

### +4M€ annual savings

#### Awards:

**SAFETY** - Cuéllar  
Motivational games

**QUALITY** - Mangualde  
Containment actions management

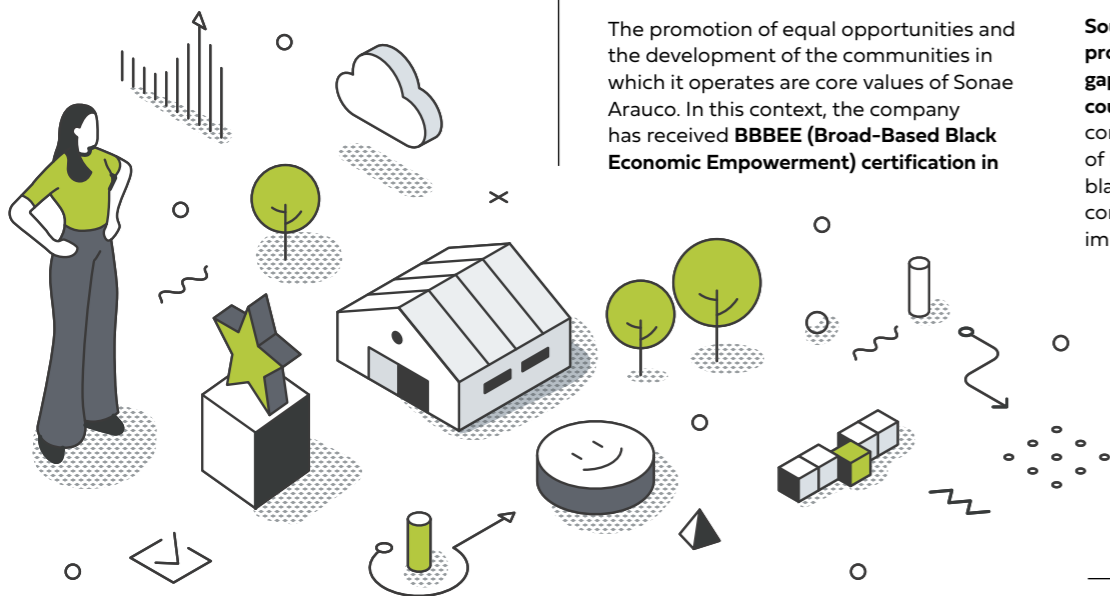
**SERVICE** - Maia  
Customer service issue-Ticket system

**INNOVATION** - Valladolid  
Weighting station

**SUSTAINABILITY** - Linares  
Wood dust waste management

**COST SAVINGS** - Oliveira do Hospital  
Paper scrap reduction

**TEAM INVOLVEMENT** - Oliveira do Hospital  
Cardboard reduction



## People

### Mark Schubert is the new Chief Industrial & Technology Officer (CITO)

With a wealth of experience in operations, Mark Schubert took over as CITO of Sonae Arauco in 2023. With a degree in Mechanical Engineering, Production and Management from the University of Manchester, his career includes companies such as Teka, Electrolux and General Electrics, where he stood out for his commitment to operational excellence, his unquestionable leadership skills and his passion for innovation.



### Training and promoting knowledge

The 4People Learning section of **Sonae Arauco Knowledge Academy (SAKA)** was enriched in 2023 with the addition of nine revised and updated courses in the Products and Processes area and three new Safety courses. The offer was also complemented by four webinars on MDF and MFC in factories and at customers and 32 tutorials specifically designed to train operators of the new Nettgau MFC line.

Also in 2023, Sonae Arauco gave the opportunity to **45 employees at the Oliveira do Hospital and Mangualde industrial units to participate in the RVCC** (Recognition, Validation and Certification of Competences) program. This is a governmental initiative in Portugal and it allows participants to obtain equivalence to basic or high school education levels, based on the demonstration of knowledge resulting from daily learning of skills in a work context.

### Sonae Arauco is now BBBEE certified

The promotion of equal opportunities and the development of the communities in which it operates are core values of Sonae Arauco. In this context, the company has received **BBBEE (Broad-Based Black Economic Empowerment) certification** in

**South Africa, a South African government program that aims to reduce the inequality gap in order to ensure that everyone in the country can fully enjoy their rights.** The company is thus (proudly) part of a list of businesses that integrate members of black communities affected by Apartheid, contributing to South Africa's national imperative of economic transformation.

## Marketing

### Launch of the new Innovus® collection

May marked the launch of the new **Innovus®** collection under the motto **Matching our nature**. There are 40 new decorative items, now totalling more than 220 **Innovus®** decorative solutions which, in combination with the premium textures, are capable of creating cosy and authentic environments.

#### Why Innovus®?

- Suitable for residential, public or commercial projects;
- Antibacterial properties;
- Easy to clean and maintain;
- All decorative options are available as panels (particleboard and MDF) and laminate;
- Incorporation of more than 70% recycled wood.

### Always present at the sector's main events

In 2023, Sonae Arauco was present at the most important events in the construction and interior design sectors: **Euroshop** and **Interzum** in Germany, where the new **Innovus®** Collection was officially presented, **Sicam**, in Italy, and four editions of **ARCHITECT@WORK** in Hamburg, Stuttgart, Lisbon and Düsseldorf.

### A new virtual home and new promotional materials

The launch of a collection as important as the new **Innovus® Matching our nature**, not only brought innovation to the design, but also inspired a redesign of the company's official website, which now includes new features such as a revamped design studio, new renders and new catalogues and brochures. The showrooms, the vans and the Premium Dealers' spaces also have a new look, so that the whole sector can get to know the new products in the best possible way.

[www.sonaearauco.com](http://www.sonaearauco.com)

## Sustainability

# 3.000.000



This is the amount of tonnes of carbon dioxide that the wood solutions produced by Sonae Arauco throughout 2023 will retain during their lifecycle. The independent calculation is based on the international Environmental Product Declarations system and considers the company's entire portfolio.

### A company driven by the future

Sonae Arauco has made progress in several projects to consolidate the use of renewable energies in various industrial units over the next few years:

**12%** in Linares through solar panels by 2023;

**15%** in Nettgau, Meppen and ImPaper through wind energy by 2024;

**25%** in Valladolid through more than 13,000 solar panels by 2025.

This is an important axis for achieving carbon neutrality, and similar investments will be announced for other industrial units throughout 2024.

### And committed to leveraging a circular bioeconomy model

#### Two years of EcoReFibre with remarkable advances

With the principles of the circular bioeconomy forming the basis of a truly sustainable business model, Sonae Arauco maintains its commitment to finding alternative sources of raw materials, favouring post-consumer wood, with special emphasis on the EcoReFibre project. Two years after its launch, various technologies for recycling and using the fibres obtained, whether in new MDF or PB panels, are already being evaluated by independent bodies. This is a consortium project that brings together various stakeholders in the European wood industry and its **main objective is to create viable processes for sorting, recycling and incorporating the various by-products.**

#### More recycled wood in Oliveira do Hospital

Since July, the Oliveira do Hospital industrial unit is closer to its goal of **incorporating 85% of recycled wood into some of its products by 2025**, thanks to the installation of a new production line. This investment, of six million euros, is in line with one of the pillars of the company's mission and will make it possible to surpass the record of 70% recycled wood set in May 2023 in this industrial unit.

#### Forest R&D: promising results from Chilean Radiata Pine

The year 2023 was another year of development for Sonae Arauco's Forestry R&D project, focused on strengthening the resilience of forests. With 16 trials carried out and monitored, including five species of Pinus spp. and more than 200 families of Pinus Radiata, the results are promising. **The performance of Chilean Radiata Pine families stands out, with a mortality rate of zero per cent in various environments, and growth of more than 40 per cent compared to maritime pine in the best performing sites.**

#### Linares and Valladolid receive ISO 50001 certification

Sonae Arauco's industrial plants in Linares and Valladolid have been awarded the ISO 50001 Energy Management System certification by SGS, which attests to their efficient overall energy performance.

Opinion

# Human Capital for Tomorrow: Challenges, Obstacles, and Opportunities

**Edite Barbosa**

Chief Corporate Officer

Shaping human capital for the future of a company has never been so challenging. Leading people has never been so thought-provoking. All at the same time, there's technological disruption, skills mismatches, changes in workforce dynamics, budget constraints, leadership and management challenges, resistance to change, shifts in learning paradigms, career management, individual development plans, and work-life balance. On top of this, there's a business to run, and the world as we knew it seems to have disappeared in the blink of an eye. All the well-known management theories and practices just don't seem to apply anymore. I'm not nostalgic for the old days; I'm just facing reality, trying to learn, fail fast, and adapt to this new era.

This is something that's been occupying my mind for a while. In fact, all our HR senior team is aligned with the need to learn and adapt to these new days where everything is just totally different, and complex.

**Technological disruption looms large as we strive to ready our people for what's already here and what's yet to come. While we have some insights, the real challenge lies in preparing individuals**

**for the unknown.** We understand that the pace of change is staggering, requiring us to be swift in developing our workforce to navigate this rapidly evolving world. As a company, we're investing in automation, AI, and soon in machine learning, but we recognize the necessity to reshape job roles and skill requirements. Agility and rapid learning have become critical skills for the present and future alike.

Swiftly responding to technological evolutions is crucial for a company's survival. Yet, we still encounter various challenges in adopting and developing Information Systems, where these technological advancements necessitate negotiation with employees' representatives. These stakeholders must recognize that the world has changed, and their alignment and timely responses are key to the company's success.

Furthermore, it's crucial to address the human aspect: while a company can provide ample opportunities, it's futile if individuals lack the desire to learn. Now more than ever, alignment between people and companies is crucial: if resources (both time and money) are allocated to

training and development, individuals must be ready and willing to learn and grow. **Lifelong learning is no longer exclusive to physicians; it's essential for every job in this rapidly changing world.**

This requires a shift in traditional management thinking. In the past, managers may have been primarily focused on delivering results within their own technical domains. Today, people management and people development have risen to the same level of criticality as business-specific KPIs on managers' agendas. It's time for our managers to reconsider how they establish priorities, as leading people has rapidly ascended the priority scale.

All these changes also impact daily management paradigms. Running a company with short-term thinking is no longer feasible. While immediate decisions and addressing urgent matters remain necessary, agility in decision-making is crucial. Getting closer to the source of problems allows for faster reactions and helps prevent reoccurrences. Agile communication channels are essential, and organisations must be lean to react swiftly.



When talking about people's management, there's another topic of high concern for both companies and individuals related to the adoption of remote or hybrid working models, which has been a growing trend. However, more recently, we've observed shifts in how companies implement these models, with some moving towards less flexible arrangements. Why is this happening? The disconnection between people and companies has become too evident. The gap between business goals and personal goals has widened. When it comes to working models, commitment is crucial for achieving good results - it's about giving and returning. Companies

will continue to allow flexible working arrangements as long as they can observe employee engagement, commitment to results, a shared and believed-in culture, and an undeniable alignment with the company's vision and values. The only surviving flexible working models will be those proving to be successful for both parties.

All these challenges present opportunities for our company to advance further. Technology serves as a catalyst for success and enables the creation of more engaging jobs. By automating non-value-added tasks, individuals are liberated to focus on strategic concepts, long-term thinking,

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“Companies will continue to allow flexible working arrangements as long as they can observe employee engagement, commitment to results, a shared and believed-in culture, and an undeniable alignment with the company's vision and values.”

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and invest more time in learning. This fosters an environment of continuous improvement and enables thriving in a rapidly changing landscape.

**The success of our people is essential to sustaining the success of our company, and it is our foremost obligation to leave behind a better, faster, and more successful organisation for future generations. In this rapidly changing landscape, only those who can adapt quickly will survive.**



**SONAE ARAUCO**   
Taking wood further

We are all unique in our own way.





Adelaide Alves  
Group R&D and Product  
Development Director

Paulo Pinto de Sousa  
Industrial Strategy, Technology  
& Projects Director

## Interview

# Adelaide Alves and Paulo Pinto de Sousa: knowledge as the basis of Sonae Arauco's identity

When they joined Sonae Arauco fresh out of university, the company's goal was to become one of the ten largest producers of wood-based solutions in the world. They grew as professionals while the company was consolidating, with room for trial and error, to build and conquer, to learn from colleagues and managers. Today, and after the company has achieved its initial ambition, they lead teams and are considered by many to be an example of the Sonae Arauco identity.

Adelaide Alves, Group R&D and Product Development Director, and Paulo Pinto de Sousa, Industrial Strategy, Technology & Projects Director, have been colleagues for almost 40 years. From the shop floor to meeting rooms, no discussion is left unfinished and no project is held up for lack of enthusiasm. After all, they still have that 1980s energy and passion.

They believe that people are at the heart of any organisation and therefore take every opportunity to learn from others and share their knowledge.

Outspoken and determined, they are friends outside of work and there is always a beer nearby to go with the long conversations.

**You have both been working at Sonae Arauco since you graduated, starting almost at the same time. How was your first experience with the company?**

**Adelaide Alves (AA)** - I joined the company a year after Paulo, but basically, we've known each other for 38 years. And we both did the same thing: we graduated, got married and joined Sonae, all within three months.

**Paulo Pinto de Sousa (PPS)** - I joined on 8 September 1986, exactly eight days after I got married. It wasn't my choice, because I wanted to have worked for two years without getting married, but they wouldn't let me.

**AA** - On the other hand, I joined by choice, but if I'd been clever, following the interview, I wouldn't have (laughs). I studied at a religious school, so they asked me if I read the Bible. Then the human resources person showed me the site where the resin plant was, pointed to a distillation column and said that it was the urea silo, and I thought that maybe this wasn't the best place for a chemical engineer. Apart from that, six trainees were coming in at the same time, it was fun.

**PPS** - I joined through Sonae's first Contact Program, with 100 other people. I chose Sonae Indústria because I identified with the sector and on the very first day I was interviewed by the chairman, Eng. Jaime Teixeira, who was very positive and charismatic. I was very excited because he told me about the projects and the possibility of being involved. Walking nervously into an office and coming out again wanting to build the world happened all the time back then; there was a lot of ambition and a desire to achieve it.

**AA** - When I joined, it was like that too. I remember going to a strategic meeting and one of the objectives was to become one of the world's top ten producers of wood-based solutions. A small Portuguese company with no international presence. And that spirit was like a drug, it gave us such an adrenaline rush that we were exhilarated.

**What differences do you notice from then to now, whether in the processes, the people, or the work itself?**

**AA** - Paulo was better-looking 30 years ago (laughs).

**PPS** - And skinnier too (laughs). Companies are like people and their experiences have an impact on the way they shape themselves. Either because of the post-revolutionary period the country was going through, or because of the company's structure, which was small, it was easier to catalyse this enthusiasm. Today it's more mature, it had its experiences, some better, some worse, and sometimes the energy is more measured and controlled. Despite everything, our ambitions today are much greater than they were then; it's a matter of scale.

**AA** - Being small made us really fast in terms of communication and involvement; you just don't get that anymore. And the scale also brings more geographies, which makes everything different. It would be impossible for someone with one-and-a-half years' work experience, like me at the time, to be present at a strategic reflection like I was. That year they didn't even need to give me a bonus, they'd let me go and play with the big boys.

**Speaking of inspirations, how did you decide to pursue this career? Who inspired you?**

**PPS** - My father was a vet and didn't want me to be a vet, one of my brothers is an engineer and the other is a lawyer. In my high school group we had more or less the same interests, we liked cars, motorbikes. As a result of all this, I opted for mechanical engineering. Sonae came up because it was a constant topic at home, my brother



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worked at Sonae, and the company was always in the news because it was going through a high point, so it ended up being a natural choice.

**AA** - No one in my family was an engineer, but I was influenced by a very close friend of my parents, who was an engineer and, at the time, very close to a role model I wanted to follow. He was very interesting and travelled a lot for work. Sonae was a coincidence because I got an internship through a lecturer at the University of Coimbra. It was a leading company in its field, but at the time I didn't have a particular passion for wood.

**And in the company, was there anyone who was particularly important to you, almost like a mentor, especially in the early years of your career?**

**AA** - My first boss was very important to me, because she knew how to let us grow, she let us do things. She was very good technically, but she knew how to give us

a hard time when she had to. She wasn't a patronising boss. The best boss I ever had was Eng. Moreira da Silva, a brilliant man.

**PPS** - I don't really have a mentor. I've had managers who have left a mark on me, such as Jaime Teixeira, Carlos Moreira da Silva, Belmiro de Azevedo himself, but there are also people like Mr Costa, Mr Freitas, Mr. Filipe, who have less training but who have taught me a lot. And some of those people were very difficult to win over, because their family's livelihood depended on the knowledge they had acquired, so sharing that knowledge wasn't easy. You had to earn their respect, but it was very rewarding because, once you got it, they passed on astronomical amounts of knowledge.

**AA** - I agree. Mr. Freitas taught me almost everything I know about particleboard. And it was funny because most of the company's knowledge was really in those people – the know-how, not the theory. When we went to Sines to start

up the factory, the only way we could keep everything together was to take operators with us, because we had a full crew of people who had never worked before. These people brought with them details of the operation that only those who do it can know.

**In the last strategic review, it was specified that leaders are expected to display alignment, empowerment, execution, simplicity and accountability. Do you feel that your leadership style is aligned with these values?**

**AA** - Execution and responsibility are my strongest points, so I feel comfortable saying yes. Simplicity is a harder one because our structure is so complex. But in general, I feel very much aligned with these principles.

**PPS** - Yes, I agree with these values, but the most complex thing for me is alignment. That's because I sometimes

have a diverging opinion, but I always try to align myself and bring people into a certain process that leads to that alignment, whether it's executing or delegating.

**And do you feel that you are seen as an example here, that what you do and say influences other people?**

**AA** - Because of my role and some of my traits, I feel that I influence my team, and even people from operations and sales, because nobody says "no" to an idea straight away; they listen and we discuss.

**PPS** - My mum used to say "you're worth what other people think of you", so I can't really answer the question. I don't feel like I'm an example, because I'm very opinionated, I bring a conflict of ideas. But my opinion is listened to by my team and sought by the other operations.

**AA** - You could say that this applies to both of us: we have opinions about the company, the paths, the technologies, and we are never afraid to share them. Sometimes we're a little too passionate.

**In your opinion, what is the role of a leader in a failure scenario?**

**AA** - A leader has to realise with the team on what went wrong and do everything they can to make sure it doesn't happen again, and that has to be very clear. But there's also no point in "flogging" people; they realise when they've made a mistake. Punishment doesn't work because we're not children; neither does ignoring mistakes, holding hands and saying that everything is fine. None of that is part of my style.

**PPS** - For me, it depends on the mistake. My first reaction to a mistake isn't exactly pretty...

**AA** - Right, it includes a lot of swearing and combing your hair back (laughs).

**PPS** - I know it's not one of my finest moments. But you have to process the mistake, mourn over it, realise what went wrong and what went well. And if it's a member of the team with whom I get on well, it becomes a joke between us, I'll remind them of their mistake as a way for them to grow professionally.

**If you had to introduce yourselves to each other, what would you say? Adelaide, who's Paulo? And Paulo, who is Adelaide?**

"Paulo has a sense of humour and is a great storyteller. Sometimes it annoys me because we're discussing things and he's already looking ahead; it's a mixture of intelligence and business knowledge that allows him to make *quantum* leaps that leave us thinking. What?"

Adelaide Alves

Some days he's in a really bad mood; I mean, we're friends and he might walk straight past me and not even say hello. He's a very good teacher, so if someone can deal with his temper on a daily basis, working with him is a plus.

"Adelaide, besides enjoying my stories and laughing with me, is someone who gives me structure, who manages to put things in order when everything is in chaos."

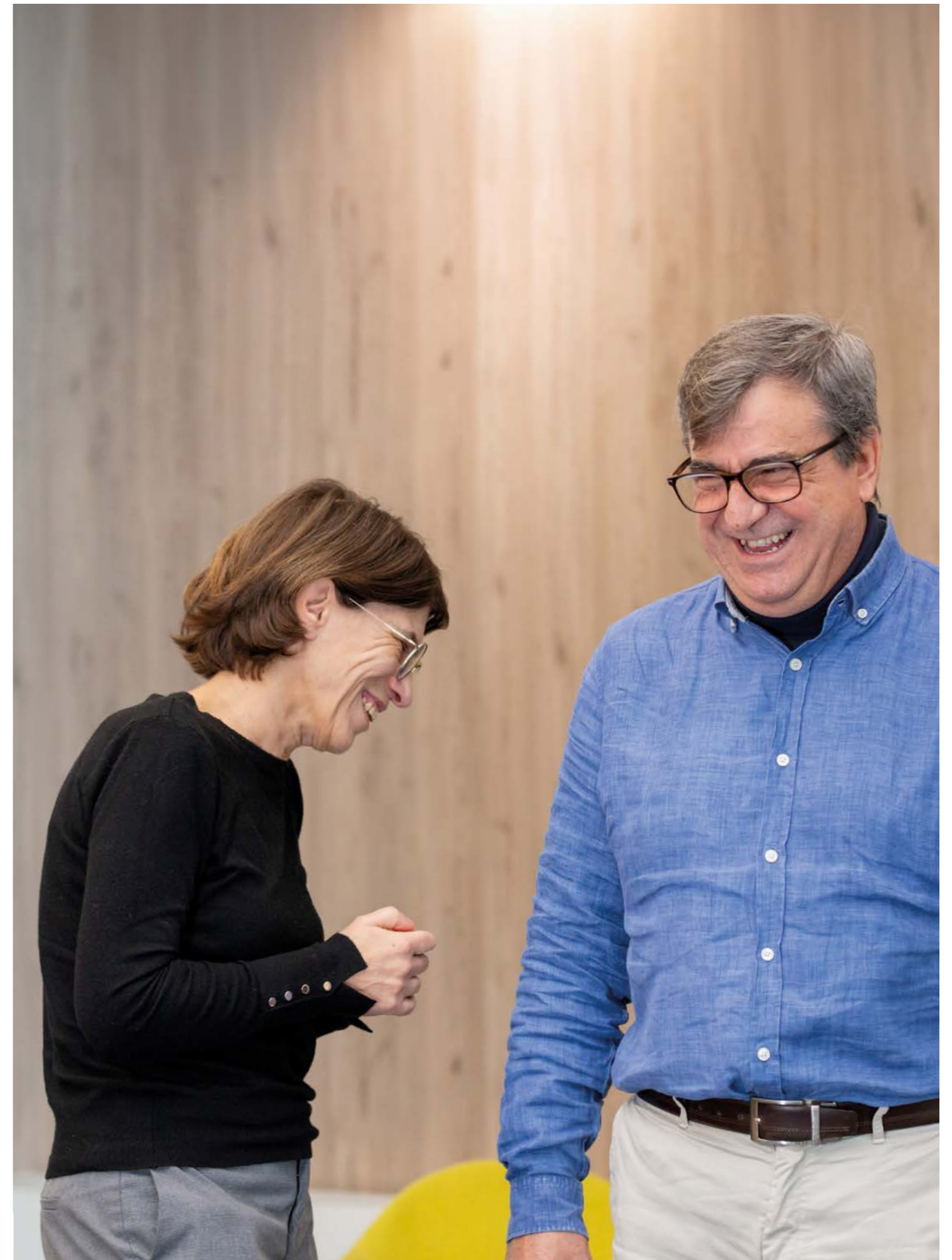
Paulo Pinto de Sousa

Adelaide is also a business enthusiast, she has a particular enthusiasm for what she does, especially when it sparks her creativity. She's also an excellent leader, her teams have a good atmosphere. But I think what I like most about Adelaide is that we're comfortable having intellectually challenging discussions.

**How do your roles interconnect and what projects do you work on together?**

**AA** - Technology makes the product grow, and the product sometimes has needs that challenge technology, so these areas are closely linked. We are currently working together on fibre recycling and the new Agepan line.

**PPS** - There are projects where it's not defined that our teams have to talk to each other, but they naturally do so, because if there's a recipe for making a product, it's not a done deal that when the equipment starts up, the technology will allow me to follow that recipe. On the new Meppen line, for example, we have





an area of work that Adelaide's team has to develop so that production can understand whether the assumptions we're working under are correct. And there's a lot of interaction when questions arise.

**What was the project you worked on together that was the most memorable achievement, the one where you ended up going for more than just one beer?**

**PPS** - Beer has a place in failures and successes, it's as much for moping as it is for celebrating. But I would highlight the trauma that was producing E1, it was our first project together.

**AA** - And it was the company's first E1 production. It was nothing out of the ordinary, but at the time...

**PP** - It was a big challenge at the time, as it is today to make EO. I don't know if it's just me, but the successes pass very

quickly, they're like an explosion of joy. Failures stay in our minds longer.

**At this stage in your careers, do you feel you still have something to learn?**

**AA** - We have a lot to learn, it's difficult for someone to be an engineer and work in our fields and not be curious. I'll be learning until my last working day.

**PPS** - I agree. It's not the first time I've been certain of something, and someone comes along and shows me that I'm wrong. You have to be able to acknowledge your mistakes. It's hard for me, but I still want to learn.

**What are your strategies for keeping up to date, for fuelling this curiosity?**

**AA** - There are several topics I follow that don't even have much to do with our product, such as trends in society or technology, which I then try to bring

into the organisation. For example, this year we held Impulse sessions with our industrial clients and talked about artificial intelligence and its impact on business, - a topic that the team wanted to tackle, albeit with some trepidation, but which was successful. I also talk to suppliers a lot, I follow some small companies, like more innovative start-ups, only to see how they do things.

**PPS** - My strategy is to have as many points of interaction with people and organisations as possible, to do networking. My curiosity is stimulated more easily by talking than by reading or writing, but in the end, I don't have as much time for that as I'd like. Sometimes I make these contacts because of a problem, sometimes it's enough just to talk to a supplier's technician, to understand what they have to say. And we have to feed off those who know the business at different levels.

**Do you take time to share your knowledge with your teams, formally or informally?**

**AA** - At the moment, one of my worries is that I can't pass on knowledge to my team in a structured way, in a way that's systematised and easy to consult. I'm demanding in terms of organisation, I have reports going back to 1990 of all the tests I've done, and I'm confused as to how people don't know about something that was done 10 years ago. I ask my team to take time out every week to get to know the market better, and I fill their inboxes with articles and different topics. And I think it's important to be able to pass on not only this knowledge but also how I see Sonae Arauco, and how I feel I'm part of it.

**PPS** - I don't have Adelaide's level of structure, but when I have important information I always pass it on to my team. I often tell them that the main shareholder in the asset that they are, is themselves. In other words, they're the ones who have to manage and realise where they want to go and go in search of that. This year, I did an exercise with the people in my team and asked them about their career plans and there's almost always someone who tells me they want to be a Plant Manager. Of course I don't doubt it, but I ask how they imagine getting there, what they'll actually do.

**AA** - That's probably the hardest thing to do as bosses, because even if you're not good at passing on knowledge or values, you make an effort and you get there. However, helping people manage their

careers, to adjust expectations, is much more complex done than said.

**PPS** - The best way is to help draw up a plan, because you get a sense of the challenges and how to overcome them. We all have limitations, but having a strategy and being held accountable is important. Things don't just fall into our laps.

**Do you have a key phrase, or a motto that you often use to motivate your teams?**

**AA** - We have a few phrases in the team. One is, "it's not bad, all things considered"; it started as a joke, and now we use it when something isn't quite right. Then there's, "if it's not good it's because it's not finished, because when it's finished it'll be fine" and we use it when projects are blocked. Another comes from my private life and I often think and sometimes say when people try to justify something to other teams: "right, but they're not my kids."

**PPS** - There's a phrase I often say: "The path of least resistance is a sign of intelligence." Humankind invented the wheel because we didn't want to make the effort, we didn't want to carry stuff. Electrons look for the place of least resistance; water goes down, not up. The path of least resistance is a basic principle of nature that avoids unnecessary effort, waste and makes systems efficient. That's why I often say "the path of least resistance is a sign of

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intelligence, and at Sonae Arauco we are all intelligent."

**What is your favourite part of working for this company? What makes you wake up in a good mood because you have to come in to work?**

**PPS** - I never wake up in a good mood, I've always been a night owl, but nobody works for 38 years in a company they don't like. And what makes the difference is people, I like being with them, doing projects, and spending time with them. I confess that there are two things about the younger generations that I don't understand: remote working and dating by text message. There's just something missing, you know?

**AA** - I also like what I do, so I don't need much encouragement. And I really like people. One of the things I miss the most is corridor conversations, where many ideas are exchanged. However, I do feel the need for a calmer role, not in the sense of less work intensity, but to allow me time to do other things.

**And what message would you give someone who is just starting their career in this company?**

**PPS** - Let them come with enthusiasm, let them bring energy.

**AA** - That, and being a little bit mad helps too!

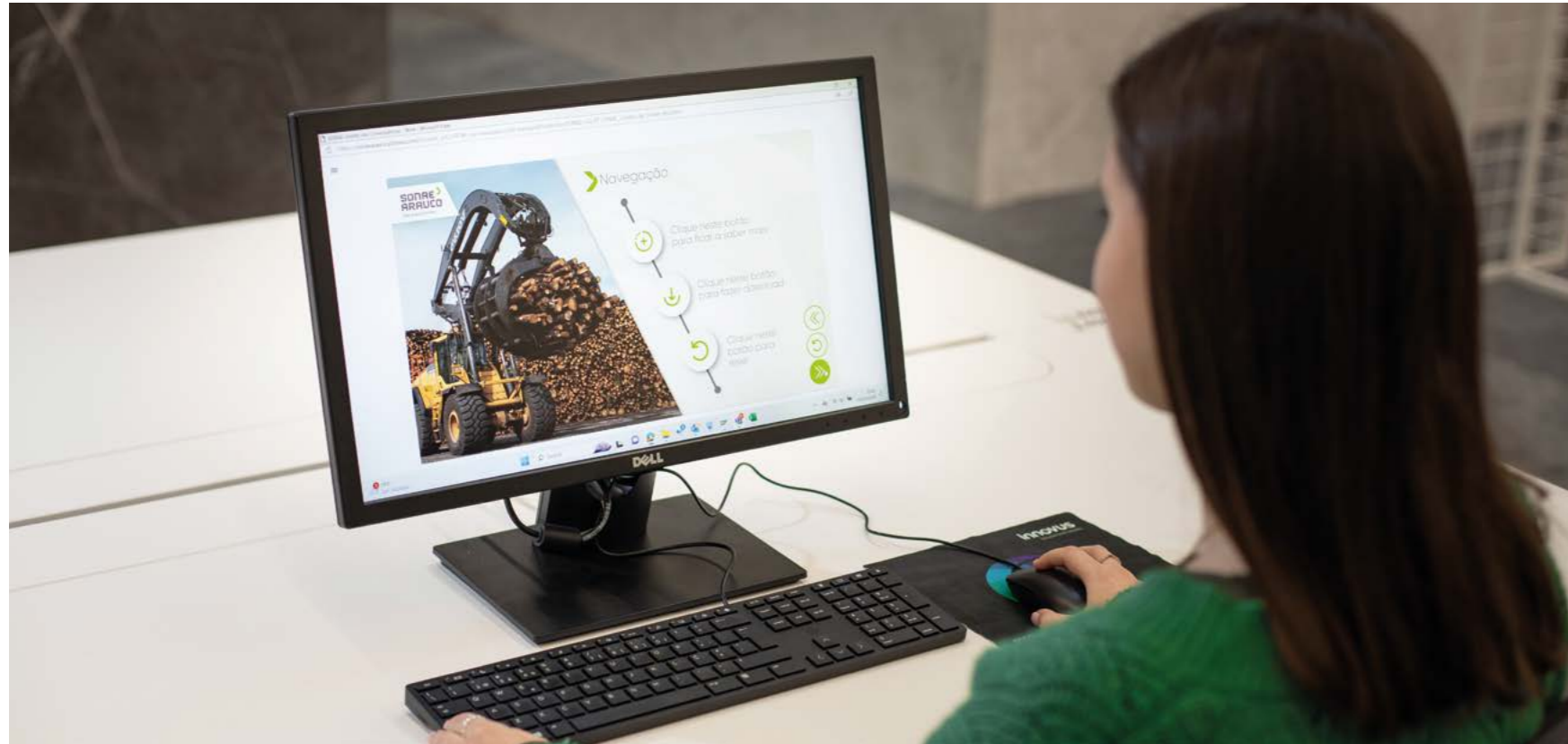
In-Depth Report

# Training to improve, learning to evolve

At Sonae Arauco, the aim is for training to be an attractive factor for those who join, an asset for those who stay and a facilitator of change in the organisational culture. Increasingly, training should take place throughout a person's career, in a personalised way and valuing internal know-how, to create a solid concept of Sonae Arauco knowledge. From retrained employees to future leaders, valuable learning journeys are taking place in our company, both for those who learn and for those who teach.

Our vision is to create wood-based solutions for a better life, a better future and a better planet.





E-learning training.



Edite Barbosa  
Chief Corporate Officer



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Gabriela Mota  
Sonae Arauco Knowledge Academy Responsible

Knowledge is the basis of development. This maxim, which at first glance seems so trivial, is now at the heart of companies that want to ensure the sustainability of their business and remains relevant in a world that is constantly changing. **Knowledge - and the constant search for it - generates innovation, creates value and builds legacy.**

Knowledge keeps teams motivated and attracts new talent. A commitment to knowledge is, above all, a commitment to people and to the future: of each individual and of the company. The figures show this clearly: according to a Gallup study, team motivation has a tangible impact on business, with motivated teams able to increase a

**“Our aim in investing in training is to foster a culture of success, with a team of highly qualified, motivated and skilled people. People committed to leaving a better company for the next generation.”**

Edite Barbosa

company’s productivity by 17 per cent and its profits by 21 per cent.

Sonae Arauco’s latest strategic review reflects this consideration, with a focus on the axis **“People and Culture” in guiding processes, investments and decisions for the different stakeholders.** The commitment to human capital is clear

when talking about initiatives involving safety, for example. However, it becomes crucial in projects to develop the skills of each employee, the so-called career-long training.

“Our aim in investing in training is to foster a culture of success, with a team of highly qualified, motivated and skilled

people. People committed to leaving a better company for the next generation,” says Edite Barbosa, Chief Corporate Officer.

Training people and generating knowledge creates a win-win situation. Firstly, it is the company itself that benefits from an organisational culture geared towards the continuous development of people. In the words of Gabriela Mota, Head of SAKA (Sonae Arauco Knowledge Academy), **“the success of the projects associated with each strategic axis depends, on a large scale, on the way we sustain knowledge; it is inseparable from the corresponding training, which must be thought out in detail, both in terms of format and content.”**

**“The success of the projects associated with each strategic axis depends, on a large scale, on the way we sustain knowledge.”**

Gabriela Mota

Secondly, people increasingly see opportunities for training and internal growth as an indicator of how much they are valued. By promoting appropriate training, opportunities for reskilling and upskilling and career management tools, employees respond with greater loyalty, dedication and commitment. Human resources

consultancy Randstad’s latest annual Workmonitor report, a study on the state of the market, shows that around a third of workers (29 per cent) would leave a job that didn’t offer training and development opportunities.

## Internal training

Practically all the internal training needs identified at Sonae Arauco are now managed by SAKA, the department that is the central pillar of our company's human resources development, whether in the different areas of technical business knowledge or in functional, management and leadership skills. The academy was created in 2017 as a result of **the need to identify and collect the company's critical knowledge and standardise training processes.**

A year and a half of work led up to the launch of this project which was described at an early stage by Edite Barbosa, its designer and creator, as an "agile response to fill knowledge gaps specific to our business."

Meanwhile, the project has moulded itself to the characteristics of this

sector, which has evolved so much in the last five years. "As a result of a much more dynamic business context, boosted by process automation and artificial intelligence, SAKA now incorporates into its mission the end-to-end management of all the training needs identified at Sonae Arauco, except those related to the fulfilment of legal requirements in each country, seeking answers for now and for the future, in line with new trends," says Gabriela Mota.

Now, the in-house training portfolio consists of 12 e-learning modules, 21 tutorials and 4 webinars, all focussed on the product, industrial processes and safety. These materials complement Sonae Arauco's annual training plan and are developed in close collaboration with the various competence centres. They are available to employees via the company's internal platforms (4people and Our Portal), training them in the necessary skills.

But what really sets this academy apart from the original project is its

customisation. As Gabriela Mota explains, "an employee who is going to receive training must necessarily play an active role in it. So much differs from person to person, from existing knowledge to the learning curve and day-to-day needs. So, if the starting points are different, it makes sense to have customised development plans. That is the only way we can truly develop our people in essential skills and they really feel that their time and effort is being channelled in the right direction."

The alignment with the company's objectives and, at the same time, with individual career plans is highlighted by the various employees impacted by the academy's actions. Sami Mrad, Regional Purchasing Europe, took part in a procurement training program specially designed for his team, which "wasn't just about learning new skills. The training brought our team closer together and involved them in perfecting processes and tools, following on from the knowledge

acquired," he points out. José António Rocha, Group HSE & Risk Management Director, applauds the "priority given to comprehensive training initiatives aligned with our Safety Roadmap, in order to ensure that all employees have the necessary knowledge and skills to carry out their daily tasks safely."

Jannes Meyering, Electrical Maintenance Coordinator in Meppen, attended an "important" training course dedicated to the TIA Portal (Totally Integrated Automation Portal) which "enabled me to keep up to date" and "to co-operate with colleagues from other German industrial units, which is necessary to support each other". Bruno Almeida, Electrical Maintenance Coordinator in Oliveira do Hospital, emphasises the ability "to provide training for all the needs that have arisen in order to equip employees with more knowledge and provide a faster and safer response."

The SAKA team is currently working on defining customised development plans for around 150 employees, according to a previous skills analysis.

The department has already responded to more training requests in the first quarter of 2024 than it did in the whole of 2023. In addition, and in line with the goal of boosting internal knowledge, SAKA has already mapped 82 per cent of critical technical skills. Planning for 2024 also includes the **creation of a pool of Sonae Arauco specialists, a group of people with extensive experience and skills, who will enhance and promote their knowledge by sharing it with their colleagues.** "We have to be responsible and respectful of our colleagues who have given so many years of their lives. To show respect for all their years of work and dedication to our company; and responsibility for retaining their knowledge and maintaining the work and legacy they leave us," says Gabriela Mota.

Looking back on the work done in recent years, "the growth of the academy is a source of enormous pride and satisfaction, but especially to feel that we are helping our people

to evolve", a feeling she would like to see spread throughout the company. "I want SAKA to be a benchmark and everyone to feel proud to work for a company where training means so much." Edite Barbosa believes that the academy has the potential to transform the way Sonae Arauco is understood both internally and beyond the front door.

**"My conviction is that, given the journey we have already made and the ambition we have in the field of knowledge management, our academy will increasingly be an attraction factor for new starters, an asset for those who stay and a facilitator of change, essential in a company that is constantly evolving."**

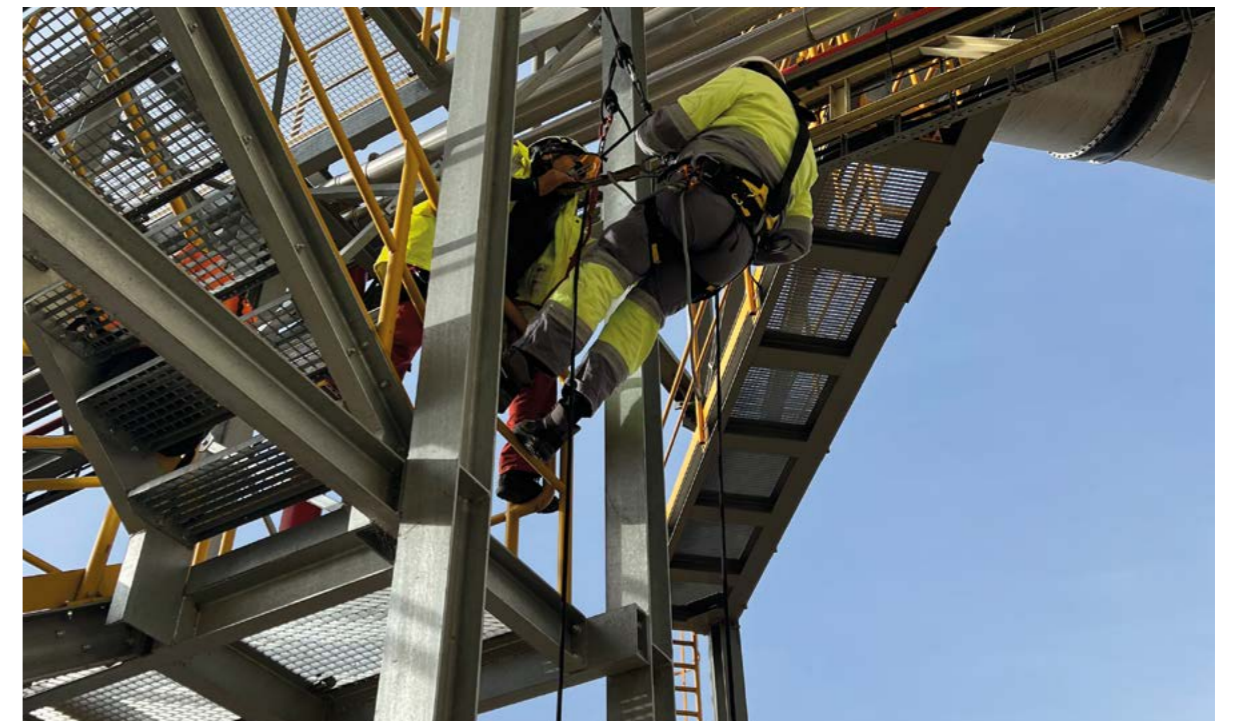
Edite Barbosa



Employees during the Safety Escape Room activity in Oliveira do Hospital.



View of the Safety Escape Room back office, from where directions were given to participants.



Training in working at height.



## A partnership for reskilling and upskilling

PRO\_MOV by Reskilling 4 Employment (R4E) is a Portuguese government initiative led by Sonae, in partnership with Nestlé and SAP, that brings together several companies to promote competitiveness and prosperity through reskilling. This consortium, which is part of the European R4E, will contribute to the ambitious but necessary goal of retraining one million

Europeans by 2025. **It has more than 70 companies in Portugal and seven laboratories in key sectors of the economy:** Digital, Green Jobs, Health, Industry, Agriculture, Distribution and Business Intelligence. Sonae Arauco is one of the companies that make up the Industry Laboratory.

## Training in partnership

However, Sonae Arauco's educational dimension goes beyond the boundaries of the company itself. It often works in partnership with other organisations to ensure a truly robust skills development process, **which brings together specialists in the most diverse fields, be they government bodies, suppliers, universities or associations.**

One of the programs that Sonae Arauco joined, developed by the Portuguese government, was the RVCC Program: Recognition, Validation and Certification of Competences. This initiative allows participants to obtain equivalence to basic or secondary education, based on the demonstration of knowledge, the result of daily learning in a work context. Last year, 45 workers from the Mangualde and Oliveira do Hospital industrial units obtained equivalences, an achievement

that was also due to the involvement of six employees who acted as co-teachers and helped boost internal knowledge. "The participation and commitment of our employees and the pride shown in completing the program is to be commended and is very rewarding for everyone involved," says Gabriela Mota.

Nelson Monteiro and Sónia Lopes, took part in this initiative, Nelson as a participant and Sónia as a co-teacher in the Shop Floor Control and Digital Plant area. For Nelson Monteiro, this "was an excellent experience that allowed me to acquire new skills that I'll need in the future, listen to new experiences and gain more diverse knowledge." Sónia Lopes emphasises the sense of belonging that such experiences create in teams, because "colleagues feel part of the process of solving each challenge and the final result."

**One of the most successful partnership training initiatives was, however, the first masterclass with a supplier.** Valmet, which supplies us with some of

our MDF production equipment, was chosen to take part in an experience that brought together two worlds that appear (sometimes too) far apart: those who design the equipment and those who use it on a daily basis.

The training was attended by around 40 employees from the Mangualde and Valladolid plants, as well as some colleagues from the Maia office, and was, in the words of those who attended, "perfect." "I was very pleased with this masterclass; it presented clear concepts and detailed explanations to increase and reinforce our knowledge of the defibrator area," recalls Javier Balsa, Quality and Production Manager at the Valladolid plant. "It was important to meet colleagues from different areas and with different visions of our production."

## Training for the future

As well as looking to the present, a company operating in a sector as changeable as the industrial one must look proactively and constructively to the future. **Anticipating trends and ensuring a workforce that is prepared and willing to keep up with paradigm shifts is fundamental**, with Sonae Arauco adjusting its processes to the challenges and opportunities brought by technology, including, of course, training.

The Training for Tomorrow strategy is the answer to the question "what is Sonae Arauco doing today to safeguard tomorrow?", equipping employees with the necessary tools to deal with the technologies and techniques that will be applied in the near future. To make this possible, the teams in the R&D and IT,

together with the competence centres, among others, also play a central role in identifying what's new in the field of Research and Development, as well as market trends. This joint work between the academy and other areas ensures that the training strategy remains aligned with the company's future needs.

**"Emerging themes such as robotics, automation and generative artificial intelligence are crucial if we are to continue bringing innovation to our business."**

Gabriela Mota

In fact, some of these technologies are already being applied to our reality, for example in the Digital Plant, which is in

operation in five locations, or in Pinus, the in-house "Chat GPT" which is currently being developed.

The relevance of retraining in the current context is even greater when you consider the rapid outdated of digital skills. According to IBM, these skills become obsolete after two to three years, which means that a skill learnt today has a relatively short shelf life.

Faced with this reality, Sonae Arauco promotes the re-qualification of its employees as a strategic measure to ensure that their knowledge and skills remain up to date and that the company is competitive. "Training based on upskilling and reskilling is the support and the basis for achieving our ambitions," says the head of the academy.

Masterclass with Valmet.







Ana Pais  
Group HR Processes Design

“Leadership is a strategic and challenging position in organisations that is directly responsible for people’s satisfaction. That’s why we have to be able to identify potential and train people for these roles.”

Ana Pais

## Training for leadership

Sonae Arauco’s future is intrinsically linked to technology and innovation, but also to excellent leadership. Focusing on the future also means training leaders and looking at how leadership aligns with the organisation’s structure. In this sense, the strategic review resulted in the definition of five practices that Sonae Arauco leaders must ensure in the fulfilment of their duties: **alignment, empowerment, execution, simplicity and responsibility.**

This led to the conception of a Leadership Program, a **training initiative that aims to strengthen the skills of current leaders, while preparing future leaders to navigate an evolving business landscape with confidence and resilience.** “This

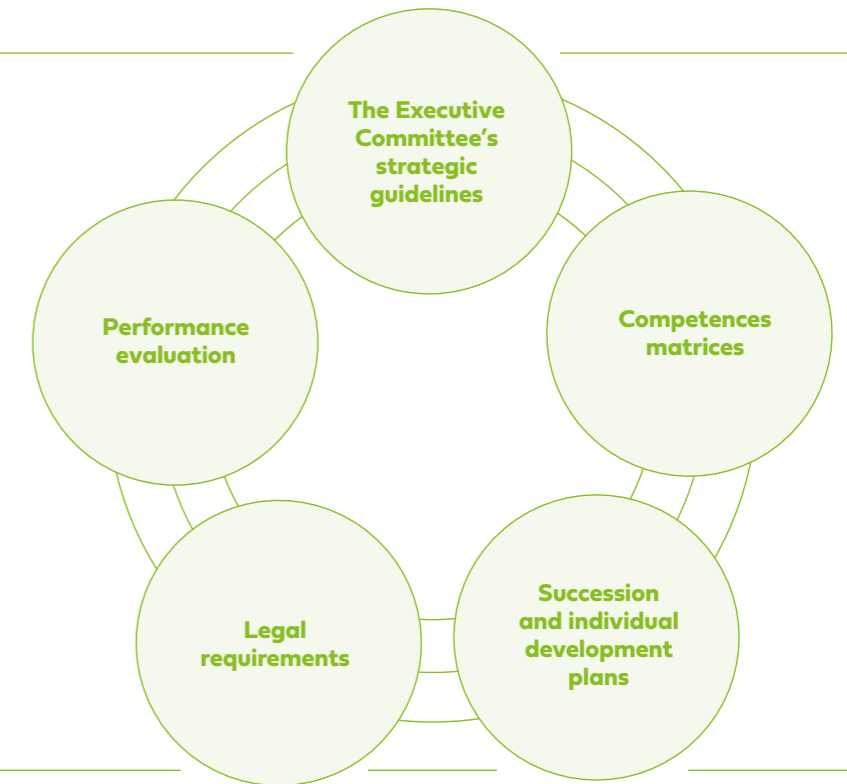
investment is fundamental to long-term success, since our leaders play a crucial role in the organisational culture, in driving our strategic vision and in promoting performance excellence,” says the Chief Corporate Development Officer. Following the SAKA approach, this program, which is now getting underway, provides an understanding of leaders’ competencies, identifies specific development needs and formulates a robust and personalised training pathway that will enable them to leverage the full potential of each of these people.

One of the pilot programs has been successfully implemented in two Portuguese industrial units with shift supervisors, and training plans are currently being designed. The results achieved are solid and plans are already underway to expand it to other geographies and to develop it for more senior leadership levels throughout

the organisation. For Ana Pais, Group HR Processes Design, “leadership is a strategic and challenging position in organisations that is directly responsible for people’s satisfaction. That’s why we have to be able to identify potential and train people for these roles.”

This transformative journey at Sonae Arauco will be based on personalised training at all levels and the constant enhancement of knowledge, such a valuable asset, in order to boost innovation, productivity and competitiveness. As each training session draws to a close, we know that we are contributing to planning a more promising future for everyone.

## Defining axes of Sonae Arauco’s training plan



Several company leaders at the Strategy Meeting, an event of the Value 2 Win program.



# Contributing to the creation of a sustainable future, with our wood-based solutions

At Sonae Arauco, there are 2600 associates working on a daily basis to leverage the full potential of wood-based solutions. Wood is natural, renewable, recyclable, and has an intrinsic ability to store CO<sub>2</sub>.

Together, we are creating a better life, a better planet and a better future.

## 3M TONS OF CO<sub>2</sub>

yearly retained

As carbon retainers, our products play an important role in mitigating CO<sub>2</sub> emissions, thus tackling climate change.

## 100%

of the wood we use comes from sustainable, certified or controlled sources.

## 2040

**Our Commitment to achieve Carbon Neutrality** through several initiatives being implemented (scopes 1 and 2). Simultaneously, we are decarbonizing of our entire value chain (scope 3) by 2050.

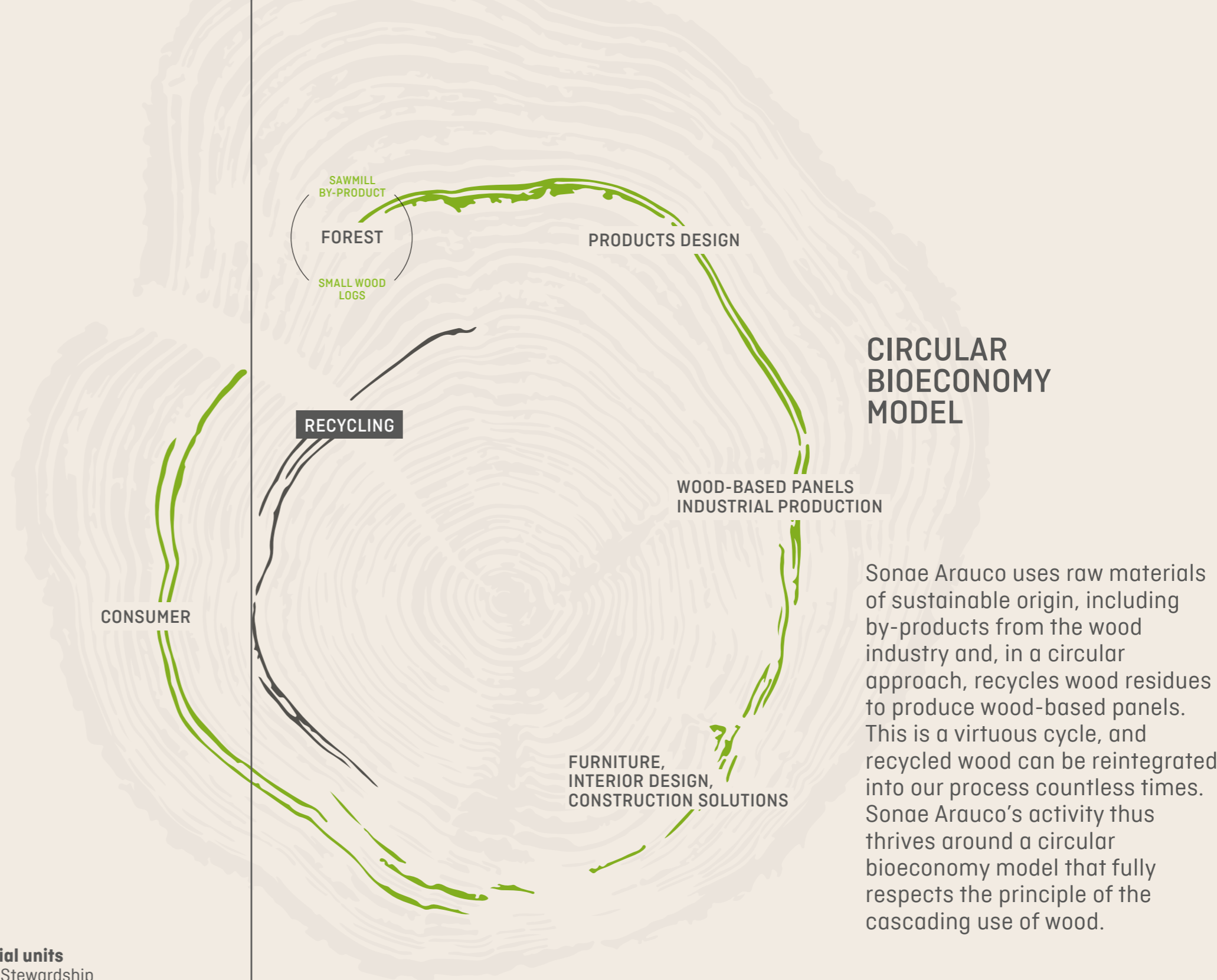
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all of our **industrial units are FSC®** (Forest Stewardship Council®) certified. South West Europe (FSC® C104607) and North East Europe (FSC® C009049)

## 200,000

**pine radiata and maritime pine seeds being tested under our R&D forest project**

Created in 2020 and starting in Portugal, this pioneering initiative aims to enable forest producers to access plants of high quality and productivity.



## CIRCULAR BIOECONOMY MODEL

Sonae Arauco uses raw materials of sustainable origin, including by-products from the wood industry and, in a circular approach, recycles wood residues to produce wood-based panels. This is a virtuous cycle, and recycled wood can be reintegrated into our process countless times. Sonae Arauco's activity thus thrives around a circular bioeconomy model that fully respects the principle of the cascading use of wood.

## +70%

of recycled wood

Some of our product ranges incorporate more than 70% of recycled wood and we are committed to increasing this value up to 85% within the next three years. While extending the material's life cycle, we are prolonging its ability to store CO<sub>2</sub>.

## ZERO WASTE

**The small portion of wood that can't no longer be recycled is used as a source of energy for the industrial plants.**



Arman Fatunz is 40 years old and was born in Leipzig, Germany. He has a degree in Mechanical Engineering with a specialisation in Production Engineering from the Technische Universität Berlin. He also has a degree in Finance for Non-Financial Executives from London Business School and last year completed a management program at the Institut Européen d'Administration des Affaires, INSEAD. He began his career at Sonae Arauco in 2017 as Plant Manager of the Meppen industrial unit, and now holds the same position in Beeskow.

## Profile

# Arman Fatunz

*Respecting our heritage  
to build a better future*

*He represents a new generation of company leaders who are productive, efficient, value what has been built and achieved so far, and strive to create a dynamic and positive working environment. "Driven" and "thoughtful" are some of the words that colleagues use to describe the Plant Manager who is guided by the motto "the factory has to run" and recharges his batteries through daily interactions. This is also the legacy he intends leaving at Sonae Arauco.*

As the saying goes, the apple never falls far from the tree. In the case of Arman Fatunz, you could say that the son of industrial entrepreneurs knows how to run a factory. Born in Leipzig before the fall of the Berlin Wall, Arman grew up in a family where there was always room for trial and error, for learning and growing with every step. "My mother has a PhD in Philology and my father is what you would call a natural entrepreneur," says the Plant Manager, who claims to have felt involved in the world's big issues from an early age in a "fun and educational" way. "At the dinner table, we would discuss creative solutions to problems, negotiation techniques, business ideas, and the adults would ask me and my siblings how we would tackle those. This shaped my way of thinking," he recalls.

The same freedom to decide and take risks was given when it came to choosing a hobby or educational activity. “They gave us the opportunity to pursue any idea we had, even if it was daft,” Arman explains with a laugh. “If I wanted to take up the piano, I could, as long as I made a real commitment, i.e. going to lessons, practising at home, and if after a year or two I realised it wasn’t for me, I could try something else.” This was the case with the piano and basketball - two hobbies he still plays in his spare time - photography and so many others.

“We learn who we are through practice, not theory,” writes David Epstein in his book “Range: Why Generalists Triumph in a Specialised World”, one of Arman’s favourite on the subject. Epstein believes that someone with generalist practical skills is able to navigate the world more efficiently, even in the most specialised areas, coming up with various solutions and paths in their mind. This in contrast to those who choose to specialise in just one subject and do so theoretically. Arman is living proof of this paradigm: the context in which he grew up, he says, gave him a wide range of skills, a kind of Swiss Army knife of abilities that he still uses today in his professional and personal life.

As a Plant Manager who is familiar with the reality of two of Sonae Arauco’s largest industrial units, he has implemented pioneering projects that have made an important impact on the way the company works. As a leader, he is agile and committed, efficient and is eager to set and drive ambitious goals. He spends as much time as possible on the shop floor, practising what he calls “transformational

leadership” by prioritising close contact with people so that nothing is left unsaid or undone.

#### **The family business as inspiration**

His fascination with the industrial world came naturally when he finished high school. Along the way, he wanted to become an architect (“the most likely option if I hadn’t come to the industry”) and later a physicist.” Eventually, it was the family trade that prevailed. With the fall of the Wall, his parents who started out in the trade business during 1980s and early 90s, began to expand their activities to Eastern Europe and the Baltic states. They had two factories in the timber industry with around 450 employees, and also to Germany, where the commercial operation was located.

“When I was in my teens, I started taking an interest in the family business and spending parts of the summer holidays in the industrial units. Around the time I graduated from high school, the compulsory military service had just ended and I wanted to use my time more productively with this experience as a kind of internship,” recalls Arman, who guarantees that he never felt any pressure from his family to follow this path. He worked in various departments, from accounts to purchasing, from cleaning to production. “During my degree years I didn’t stop working there, it was like having a part time job. In the classroom I learnt the theoretical basis, the science, and in the company I applied it in different situations.”



**Frank Günnemann**  
Project Manager, Meppen



**Johannes Wendt**  
Plant Quality Manager, Beeskow



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**Stefan Schur**  
Manager Projects & Assets,  
Beeskow



**Steffen Körner**  
NEE Industrial Operations Director

From that time, he remembers the days spent working in  $-35^{\circ}\text{C}$ , where wood was cut even though it was frozen, the Gemba Walks where breath froze as soon as it left the mouth, the real and sometimes harsh conditions in which the workers, including him, had to fulfil their tasks. “All of this was good training, a way of strengthening character and learning that, however difficult or stressful things may seem, they can be solved,” says Arman. “Growing up in this kind of environment makes you develop a sense of urgency, because the machines have to keep working, no matter how many things may get out of hand. We have to make sure that the basics are covered.”

Hence his professional motto, which demonstrates his ability to deal with all matters rationally and constructively: “the factory has to run.” And it is precisely this solution-oriented mentality in Arman that Stefan Schur, Manager Projects & Assets, emphasises. “He is always willing to learn and help with projects, he challenges his colleagues to always achieve the best results, and he is very ambitious with his goals,” says his colleague.

#### **Respecting heritage to plan for the future**

He joined Sonae Arauco in April 2017 as Plant Manager of the Meppen plant,

a process that, in his words, was insightful. “My previous experience had been in a medium-sized family business and the challenge now was to work in a larger company and in a sector that, despite some similarities, is very different from what I was used to”, says Arman, who immediately highlights the “strong connection” he felt with the team.

Frank Günnemann, Project Manager, still remembers the day he met Arman Fatunz and how he accompanied him on his first tour of the plant. Arman’s “drive and determination” were visible even then. Steffen Körner, NEE Industrial Operations Director, also met the current Beeskow Plant Manager on the day of the visit, but his

impression was slightly different. “Because of his youthful appearance, I had my doubts that he would be able to successfully lead the older, more established employees,” he admits, but he quickly changed his mind.

In Meppen, Arman Fatunz found an industrial unit that gave him “the opportunity to learn a lot, and very quickly, as I was concentrated on one production line and had meetings with the same people every day.” And there was so much to do there, so much to consolidate, that even though his first day of work was officially 1 April, he was called in three days early to attend a meeting that would dictate one of his first major projects in the company,

“Working with Arman is always refreshing and inspiring, all his ideas and proposals are carefully thought through and he is never afraid to passionately defend what he believes in.”

Steffen Körner

the installation of the Bio-Washers, the biological exhaust air cleaning systems for the MDF lines.

After two years of hard work in Meppen, he arrived at the Beeskow plant and found an operation more than twice the size and a legacy that could not be ignored. “Meppen is 30 kilometres from the Dutch border, while Beeskow is 40 kilometres from the Polish border. That makes it seem like we’re in two different countries when it comes to mentality, the way people work”, Arman points out, clarifying that neither approach is right or wrong, they are just very different. “Besides, the Beeskow plant is almost 60 years old and has been through

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the processes of a division of a country and its reunification. Some people have been working there forever, so you need to know the history and legacy of the site to be able to understand the present and shape what the future could be.”

#### A transformational leader

**Arman Fatunz believes that the only way to know everything that goes on in an industrial unit is to be there all the time.** “It’s my job to make sure that everything is working, to put enough energy into the team and the processes, from maintenance to logistics, to keep the focus, the standards”, he explains. At the same time, as Plant Manager, Arman also has to ensure the organisation and strategy of the plant, not only through planning and conceptualisation, but especially through implementation and execution, as fast and agile as possible.

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“At the end of the day, the future of the company is in our hands, it’s a big responsibility,” he says, adding that this is both the best and the worst part of his job.”

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Therefore, Arman considers his leadership to be transformational in the sense he is always willing to listen, interact and question, all in the name of continuous improvement in the truest sense. “Ninety per cent of my day is spent communicating, learning and guiding, and this is very important for calibrating priorities. We work in an environment that some call VUCA, volatile, uncertain, complex and ambiguous, so communication cannot fail”, he explains. Stefan Schur confirms this availability, saying that “even though he is always very busy and his time is limited, he always has time to discuss how best to do things.”

In addition to his agility and availability, his colleagues also emphasise the thoughtfulness and clarity with which Arman makes decisions and manages teams, resulting in a positive and stimulating working environment. “His ability to make decisions made my job easier, contributing to greater team efficiency”, says Frank Günnemann. “All his approaches are the result of good decision making, taking into account many factors, reflection and active continuous training”, adds Steffen Körner, who takes pleasure in reading Arman’s detailed and stimulating reflections in the Performance Appraisal and Competences Development Process (PACD).

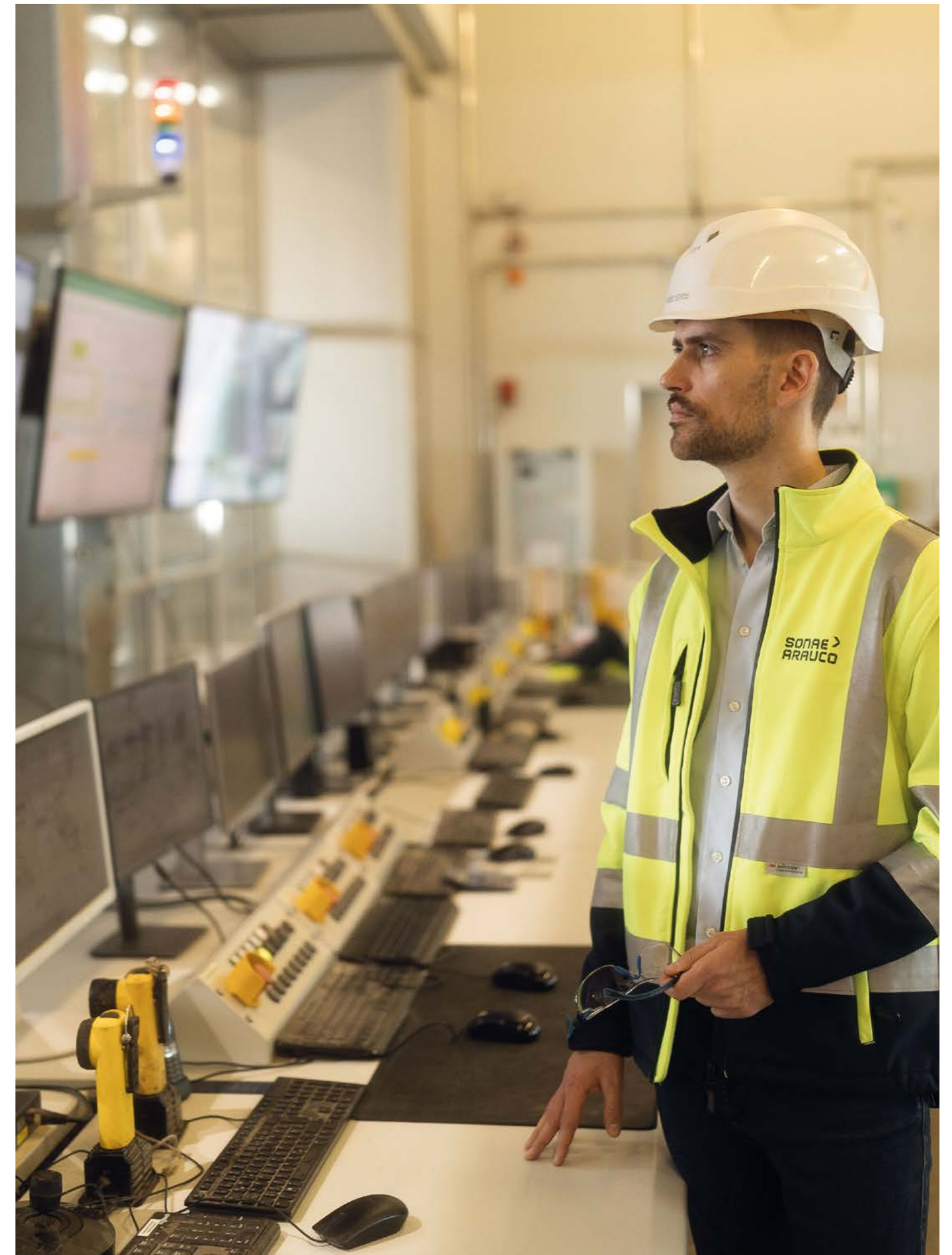
On the contrary, and with a team of around 300 people from different backgrounds and contexts under his supervision, there is a list of very clear red lines for Arman, and they are well known to his team. Johannes Wendt,

Plant Quality Manager, emphasises that there is no room at Beeskow for “poorly prepared meetings, pointless discussions or problems that aren’t presented without concrete information and supporting data”, since the Plant Manager himself is very “clear, direct and focused on details.” Stefan Schur says that because Arman is “so committed, he doesn’t tolerate it when others aren’t”.

It’s with a sense of fulfilment that Arman looks back on his teams’ achievements and this feedback. He is the first to recognise that when people are happy and comfortable in their workplace, and see their efforts recognised and positively reinforced, their productivity, efficiency and success in the work place can skyrocket. “I like to emphasise the value of a job well done, compliance with safety rules, and even hard work. I’m not an advocate of smart work; it is too simplistic for a world as complex as the one we live in”, he points out. “Working, however hard and difficult, and generating economic value is the basis for being able to do what we love. A successful career is inevitably linked to hard work, we can’t rest on the achievements of the work of previous generations.”

#### Always learning more

Anyone who has talked to him for a few minutes can attest that Arman Fatunz is an outgoing person. He can’t explain it, but the fact that he grew up in a large family with two brothers and a sister





may have had some influence. “There are people who recharge their batteries by being alone, but my energy comes when I express my thoughts and communicate”, Arman points out, laughingly admitting that he wishes he could “say the same thing using fewer words”, or be less talkative. Johannes Wendt is a witness to these long conversations, saying that Arman “is a good speaker, but he has a tendency to speak quite a lot. But I think he’s aware of that”, Beeskow’s Quality Manager suggests with a smile.

Arman’s calendar, he says, is like a game of Tetris: “I need to organise everything in time slots to ensure that time spent with my team is used as productively as possible.” For example, he delays the more bureaucratic work, such as answering

emails, for later, as he considers sitting alone in the office is time wasted. He also takes advantage of every available minute to learn, something that is becoming harder and harder now that he’s a “father of two and Plant Manager”. He learns from the examples of others - good and bad - from courses, and from books, one of his favourite companions. “That’s one thing we have in common, drawing as much knowledge as possible from relevant literature”, adds Steffen Körner.

Outside of the industrial unit, his attention is focused on his family, trying to “spend as much time as possible with my children, who are still young” and keeping up traditions such as basketball games with his brothers. Music also

continues to play a central role in his life, encompassing an eclectic range of styles: “I love jazz, rock and classical music, I even was in a rock band with my brother for a short while. In fact, my next concerts will be a piano recital at the Berlin Philharmonic, then John Mayer and Pearl Jam.” Sport and music, he points out, were responsible for much of the structure and character he built throughout his life, which is why he appreciates when people value both as well. “When someone dedicates themselves to something for a long time, it translates into the way they live their life, both personally and professionally”, he concludes.

Agility, efficiency and progress. These are the values that Arman Fatunz wants others to associate with his time at Sonae Arauco, especially at the Beeskow plant, where he works daily to improve processes. “Not because they’re bad, but because everything is changing and adaptation is necessary to preserve what we have and ensure the best for future generations”, he reiterates. That’s how you build the right side of history.

## BEESKOW 50+, the legacy of Arman Fatunz at Sonae Arauco

The most challenging projects are often the ones that make us most proud when they succeed. So it was with the installation of the new Beeskow particleboard production line, the so-called Beeskow 50+ project, implemented under the supervision of Arman Fatunz. “It’s one of those projects where everything had to be structured so that failures were minimal”, he says, as this is an investment exceeding 50 million euros. However, no one was expecting a worldwide pandemic to break out. “The project was already behind schedule and we had around 500 extra people for the construction, mechanical and electrical installation phases. When Covid-19 hit, we were forced to rethink everything, we couldn’t ask those people to work remotely”, explains Arman. “It was a challenge to my project team’s management competences and my leadership skills.”

Work continued with a drastically reduced team, due to cross-boarder travelling restrictions, under strict compliance with the protection regulations essential at the time. “Everyone knew what their role was and what they had to do”, he says. Shortages in the supply of raw materials also slowed the pace, but in July 2020 the first panel came off the production line, a moment that both Arman and Stefan Schur remember with great pride.

“We had to take a photo and send it to our superiors to celebrate”, they say about the picture above.

The first board of the new production line.



Inauguration ceremony for the new line, attended by Minister Dietmar Woidke.

# Inside Out

Enrique Quirós Domínguez,  
SWE Specification Manager  
at Sonae Arauco

## Enrique Quirós Domínguez: between Spain and the world

He considers himself a citizen of the world, because he carries in his blood the need to always be on the move. Whether for work or pleasure, he has travelled to every continent. But, New York City is the destination to which he returns and will continue to return. Enrique Quirós Domínguez, Specification Manager SWE, takes us on a journey through his origins, from the city where he was born, Madrid, to his country, Spain, to the places that have captured his traveller's heart, all over the globe.

### Inside (Spain)

A Madrilenian through and through, Enrique Quirós Domínguez went through the usual merry-go-round of professions any child growing up in the 1970s/1980s dreamed of. "I wanted to be a firefighter; I don't know why, it's so dangerous. Then I wanted to be a footballer, but my technique didn't allow me to go that far", says the Specification Manager SWE.

However, contact with people has always held a special place in his life. "My parents constantly instilled in me the idea that being a good person was the main thing: not hurting others, cultivating good relationships and, above all, the value of work", he says. "Family" is therefore a word that defines his background, along with "happiness" and, like any southern European, "gatherings around the dinner table." "I had a very urban childhood, but my parents had a country house half an hour from Madrid where we spent

weekends and holidays", he recalls. "And it was wonderful because I had the best of both worlds: going for a burger in the centre of Madrid and cycling through the countryside."

From his grandfather he inherited his passion for Atlético de Madrid, the football club where he worked. "He used to take me there ever since I was little", recalls Enrique, who returned to their stadium - the Novo Estadio Metropolitano - with Sonae Arauco as a supplier of materials for the renovation of key areas, such as the VIP lounges and the auditorium. His father was a source of "inspiration in every sense", "a Renaissance man" who created worlds with his hands, from graphic design to watches.

Enrique studied Political Science in the city of his birth, but his interest in Marketing and Sales spoke louder, which led him to

return to university and take a Master's degree. Even so, the political scientist in him is still alive. He reads a lot about philosophy and personal development and his favourite film is the Dead Poets Society: "It represents the way we should live life, with passion."

Whenever he's in Madrid, he tries to take advantage of everything the city has to offer, from after-work drinks with his colleagues in a bar after a long day, to trips to El Retiro Park, to nights out in the Ponzano neighbourhood. "We have a saying that applies to me - *"no se te cae la casa encima"* - which means that if I'm not in the street, the house could fall on me", Enrique admits with a laugh.



Enrique Quirós Domínguez in the Zippy office at the Sonae Campus in Maia, where Sonae Arauco materials are used.



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## Out (the world)

When asked what his favourite city is, he doesn't take long to answer: New York. "In New York, I can get lost in the streets, I don't think of myself as a foreigner. And then there's the nature side of things, with Central Park. I never get tired of going there", Enrique says.

During his student years, he didn't have any international experience, but he made up for it when he started working. "I set myself the goal of visiting every continent and I've achieved it, I'm doing it all again. And there's a part of my personality that makes me always want to travel, meet people, share experiences", he says. His role at Sonae Arauco makes it all possible.

As a professional, Enrique spends his days visiting interior designers and architects, factories and construction sites, always showing what Sonae Arauco does best. "It's one of my favourite things to do

because we're a very industrial company and it's good that the Specification team are sensitive and let us do this", he says. "I've been here for 18 years. Now, Sonae Arauco is in my DNA; you can tell when I have to defend something produced by the company because I feel it's something that's also mine. I'm not a shareholder but I feel like one."

When we talk about favourite cities in Spain, Seville and Granada are the chosen ones, but the locations of Sonae Arauco's plants in Spain also have a special charm: "Valladolid was once the capital of Spain and has very interesting historical sites, churches, cathedrals and, above all, lots of tapas and excellent lamb. Linares is a town with less history, but no less pleasant, where you can walk around and enjoy the scent of olive oil in the air."

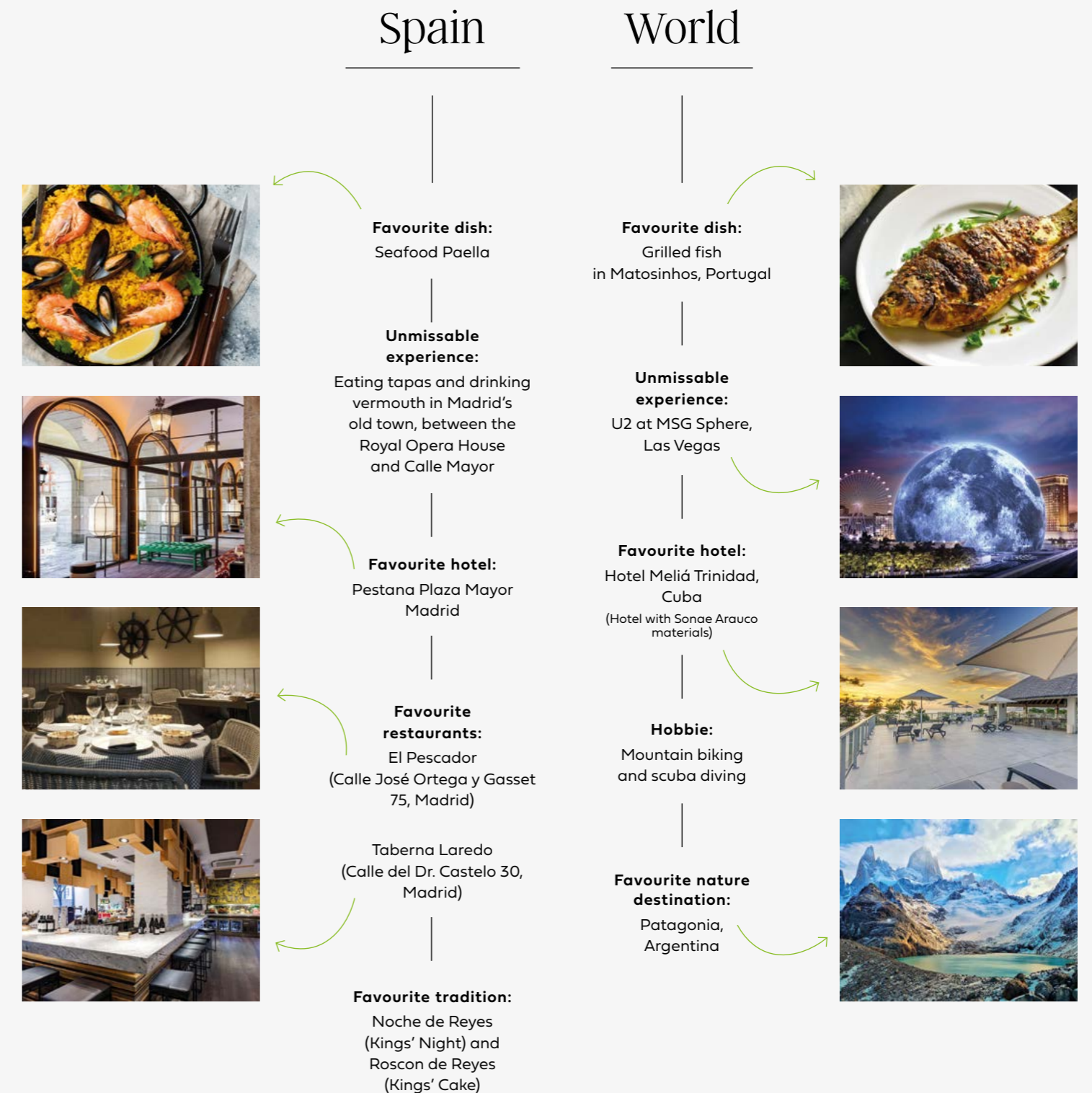
He also loves Porto, not just for its quality of life, but also for the culture and energy

of its streets. Even if his visits are almost always work-related. "It's a city I've been visiting for many years and I've seen it develop. I feel very welcome, the people are very friendly and helpful", says Enrique, for whom Porto's Ribeira area is the jewel in the crown.

When he's not working, he's travelling the world. In Las Vegas to see U2, his favourite band, at the majestic MSG Sphere - "a fabulous experience" - at the Perito Moreno glacier in Patagonia, Argentina - "one of the places that has left the biggest impact on me" - scuba diving in the Caribbean - "it's one of the hobbies I can't do in Madrid" - or simply on his mountain bike.

# Face to Face

by Enrique Quirós Domínguez





Guest

# Companies need to train their leaders' ability to influence so that they can be the motivational trigger their teams need

|  
*Cristina Simón*

The issue of employee motivation is having an increasing impact on the strategies of companies, which are now dealing with an unprecedented situation: generations with different approaches to work, a greater awareness of work-life balance and movements such as quiet quitting, which are gradually changing the fabric of human resources management. In an interview with our magazine, Cristina Simón, a specialist in organisational behaviour and people management, highlights the broad outlines of a talent development plan that should be applied at all levels and her own outlook for the future.

## Employees motivated/involved in their work:

Source: Global Employee Engagement Index, Gallup



### How would you describe the current situation regarding people management and people motivation?

We have been experiencing challenges in terms of people motivation for quite a long time now. The Gallup's Global Employee Engagement Index reports that in 2023 only 23% of the workforce felt involved with their workplace. This data may look worrying; however, if we look back to 2009, only 12% of employees felt engaged. What we are living now is the result of a slow but steady change in the motivation of workers that started late in the 90s. Those times marked the breach of the employee-employer contract that was created in the 50s. Both the economy and society have experienced

major changes since that moment, but organizations in general and the people management function in particular have not been able to catch up with the times.

### Many people point to the Covid-19 pandemic as a trigger to this paradigm shift. Do you agree with this, or do you think there are other underlying factors?

More than a trigger I would say that the pandemic has acted as a catalyser of the transformation that I have been referring to. First, we experienced gigantic levels of emotional stress related to what matters most to us in life - our families and close relations, our own health and life. Additionally, our routines

were totally broken, and uncertainty governed our lives for a long time. These personal crises made us reorganize our priorities in some way. Surely you are familiarized with the "Great Resignation" phenomenon that emerged in the US as a result of the pandemic. Turnover shot up in 2021 and over 2022, with millions of workers quitting mainly from the health and hospitality sectors. Interestingly, many people decided to leave and live out of their savings while possible to get over and rethink their working lives. This would never happen in Europe, where the opportunity cost of quitting is much higher due to the nature of our labor markets in general. But my guess is that the Great Resignation reflected the actual attitudes of workers in many other

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geographies where we rather speak of "quiet quitting", that is, staying in the job but mostly disengaged. Personally, I expected that the pandemic would bring about a new vision of the world of work on the part of companies, but everything seems to be going back to the 2019 scenario. Even hybrid work is being questioned in most organizations.

### How can organizations adapt themselves to this new paradigm? What does it take for it to happen?

I am afraid I do not have a clear answer to that question. I have always been amazed by how companies are so good at adapting rapidly to the market conditions while being at the same time so conservative in their internal

practices. I am very much with the change framework that states that there are mainly two theories of change: Theory E (focusing on economic value) and Theory O (emphasizing people capabilities and development). Both theories are still seen as opposing, with Theory E still being by far the favorite. Striking a balance between the two would be a starting point. Hopefully the inevitable trend towards sustainability will bring a more nuanced conception of what really work should mean for all stakeholders involved.

**Your work is mainly focused on workforce motivation. Do you find it more challenging to motivate people nowadays or do you think companies aren't prepared for it?**

## BIOGRAPHY

**Cristina Simón** is a professor of Organisational Behavior and People Management and currently acts as Academic Director of the IE Brown EXMBA program at IE University. From the perspective of a psychologist, she worked for consultancy firms such as Cooper & Lybrand and Ernst & Young. She is the author of two books and numerous academic papers on the different aspects of talent management, development, and measurement.

## “In people management there is no pleasing everybody.”

It is definitely more difficult to motivate people nowadays. As I said, we are still trying to manage people with a mindset that worked perfectly during the production economy of the second half of the 20<sup>th</sup> century. The rise of services, knowledge based work and the integration of technology should have brought a change in organisational dynamics that has not happened.

**How does this differ - motivation of the workforce - from generation to generation? What are the main differences you encounter in the different age groups?**

Although “generation” is an artificial construct and there are no clear-cut points, there is an obvious evolution of how the younger employees contemplate work. They foresee a future living worse than their parents no matter how hard they work (I am talking about Western societies here). And of course, they differ a lot in their view of their professional careers. They feel that their best option is to try and progress through different companies, have “growth experiences”

in each of them... and enjoying and having fun is also an important part of their aspirations. Although some of these differences in values may get balanced with time (e.g., by starting a family), they will always see the world in a different way. Surprisingly, when teaching senior managers I still see that they do not understand the new generations' mindset. They are simply different. It is not a matter of taming them, but of building a good future together.

**How can we measure motivation and what do those data points tell us about the job market? And about our society?**

For us psychologists, motivation is a very difficult construct to measure. Economists would tell you that the best measure is the number of quits -after all, if employees don't leave it should be because they don't find a better option in the market. As per your question, companies are increasingly using the so-called e-NPS (“Would you recommend this company to work?”). But motivation is much more than that; it is making people bring their best to

work every day. **Academic research has proven that, apart from a competitive salary, there are five key conditions to increase motivation: skill variety, feedback provision, task significance, autonomy and identity.** And the best way to measure it is to ask employees regularly how they feel about these conditions in their daily activity.

**How can companies ensure that they prioritise employee motivation while maintaining high performance standards?**

The second is a natural consequence of the first - together with professional competence, of course. I do not see how motivation and performance might be understood as opposites.

**Can companies really reach full motivation, as there are so many different people in their workforce, with different expectations and generational specifications?**

In people management there is no pleasing everybody, and that is true. But if one thinks again in terms of managerial action it should be easier to



understand the expectations of teams and intervene at that level. This is why I say that managerial action is critical. And people do not leave their jobs because of their HR departments; they leave because of their managers.

**As this issue of our magazine is focused on people, how can companies incorporate people into their mission, their values and their goals?**

If I had to reduce to one piece of advice it would be: get a CEO that intrinsically

believes in people and the value they provide to the business. All the rest will come out right, there will be an effective HR department and, above all, the quality of the managerial layers will be high.

**What will be the most pressing challenges in human resources management for the next years?**

Let me get back again to managers as a priority. With organisations getting flatter and the increasing power of technology, which acts as a sort of

steamroller that eliminates the traditional sources of hierarchy and cries the voice of individuals, companies have to train managers' ability to influence in a different way, and to become the lever of motivation that the workforce currently demands.



## Trends

# From the woodyard to the heart of production, it's People who make Industry 5.0

At Sonae Arauco, the values and processes linked to Industry 4.0 have long ceased to be merely an ambition and have become an integral part of the company's day-to-day operations. The road to operational excellence, one of our strategic pillars, can only be travelled by anticipating needs, digitising processes, predicting errors, and using intelligence models and data interpretation to make better decisions. But the role that People play must not be forgotten. We are already talking about the arrival of Industry 5.0, the perfect collaboration point between human capital and technology, and we believe that it is at this intersection that we will continue to add value, with solutions designed by people, for people. Find out about the technologies that shape the way we work and their impact on employee routines.

Until a few decades ago, the idea of having machines producing automatically, computers “thinking” for humans, or processing large amounts of data in a short period of time seemed like something out of a sci-fi movie. The truth is that technology has advanced at a breathtaking pace and **Sonae Arauco has been at the forefront of modernising the wood-based panels sector.** With the continuous generation of value at its core, our company has kept up with - and preempted - the trends of the 21<sup>st</sup> century, contributing to a better world.

**With so many changes, though, we can say that there is one thing that remains and will remain at the heart of everything: People. They work every day, from the shop floor to the offices, to fulfil the mission of sustainably develop, produce and deliver renewable wood solutions. They, the planet, and everyone’s future are the reasons that our company continues to evolve.** And it is in this intertwining of people and technology that the concept of Industry 5.0 emerges, a humanistic evolution of the values established by Industry 4.0. According to the European Union, Industry 5.0 “offers a vision that goes

beyond efficiency and productivity as sole objectives and strengthens the role and contribution of industry to society”, while “putting people’s well-being at the centre of the production process and using new technologies to deliver prosperity beyond jobs and growth, while respecting the planet’s production limits”. The ultimate goal is to create a “sustainable, resilient and human-centred industry.”

Thus, in a 5.0 factory, the connection between humans and machines is collaborative and the question is no longer “what can we do with new technologies” but “what can technology do for us.” For SAP Insights analysts, innovations such as personalised simulation models, digital twins, virtual reality, artificial intelligence applied to collaborative processes, sensors and machine learning are essential for bridging the gaps left by Industry 4.0 and transforming factories into places where creativity and innovation come together to create a more human and personalised experience.

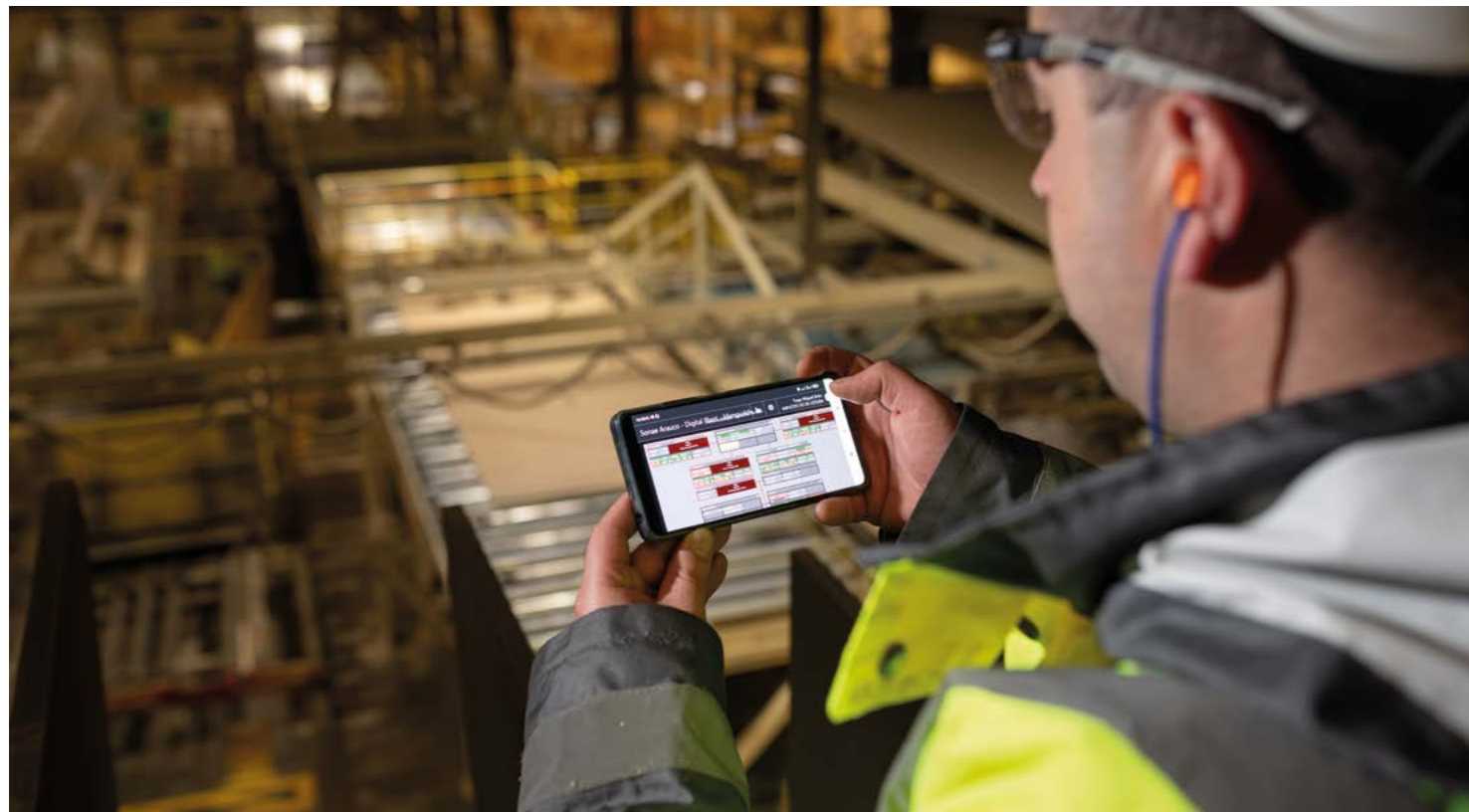
**In light of all this, we can say that Sonae Arauco is committed to implementing this new Industry 5.0 paradigm: we**

deliver sustainable products, made from a priceless raw material and through a circular bioeconomy business model; we work daily to achieve a carbon-neutral future; we value our employees throughout their careers and implement the latest technologies, while continuing to actively invest in innovation, research and development.

**Digital Plant, predictive maintenance systems, models for forecasting optimum quantities of raw materials, intelligent weighing and digitalised woodyards.** These innovative processes are now a reality in several of Sonae Arauco’s industrial units, the realisation of years of work by various teams who, in a transversal and interdisciplinary way, are producing clear answers to the question “what can technology do for us?”

Given its scope and complexity, this is a journey made possible by the involvement of different Sonae Arauco’s Competence Centres (CC), namely the Industrial Digital Transformation CC, the Asset Management & Reliability CC and the Process Engineering CC, joined by the corporate IT, IOW and HR areas, complemented at the industrial units by the Maintenance, Production, Quality and IOW teams.





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## Digital Plant

### A perfect collaboration

It was in 2021 that Sonae Arauco implemented its first Digital Plant in Linares, a project that has already been replicated in four other industrial units in Portugal, Spain and Germany.

**These digital versions of the factories provide an extensive and relevant set of data in real time to support decision-making, from line entry to dispatch.**

There are over **2000 indicators** in a drill-down approach, from global to individual indicators, visualised in Pareto diagrams. This makes it possible to access all the data via a single platform, anywhere - from control rooms to mobile phone - at any time.

The tool, called **Digital Plant Viewer** and complemented by "Smart Notifications", also relies on the power of artificial intelligence to interpret the data and issue alerts when performance is outside the ideal parameters: in addition to sending a notification to the mobile phones of all those responsible when this happens, it automatically initiates

a chain of reactions after a defined period, which can range from a small adjustment to stopping the line. The result is a **fluid collaboration between humans and machines, with many practical benefits, in particular significant improvements in OTIF service indicators (On-Time In-Full) and Operation indicators (Overall Equipment Efficiency)**. We're talking about a reduction in bureaucracy, since there's no longer any need to enter data or calculate Pareto ratios manually, a more accurate daily analysis, with the data from the **Digital IoW Action Plan** tool being used in practically every meeting, and a shorter response time, which translates into faster and more effective problem solving.

As a wood-based panels factory has very specific characteristics and needs, it became imperative to have a project that was completely tailor-made for our type of product, but standardised across all our factories. From the complex technological architecture, heavily supported by Microsoft's cloud tools, to the small details of design and user experience, the Digital Plants were developed 100% in-house. And

respecting the rationale of continuous improvement, the systems in operation today are optimised versions of the initial project, which has undergone changes based on the experiences and feedback of the teams, thus ensuring that the processes remain optimised, and that the full potential of the tool is exploited.

## 1h30

Every supervisor and process engineer at the industrial units where the Digital Plant has been installed has seen their free time extended by an hour and a half due to the reduction in bureaucracy and repetitive processes. More free time means more time for improvement.

**Locations:** Mangualde, Oliveira do Hospital, Linares, Valladolid, Nettgau

# Digital Woodyard

Automate to make the most of all the wood

Woodyards are still an area of little digitalisation in the wood-based panels sector, but Sonae Arauco is leading the transition with a project that brings innovation to the furthest upstream point of the plants.

**At Mangualde, information on the quantity, quality and variety of raw materials is available as soon as they arrive at the plant, and automatic and accurate inventories are kept in real time.**

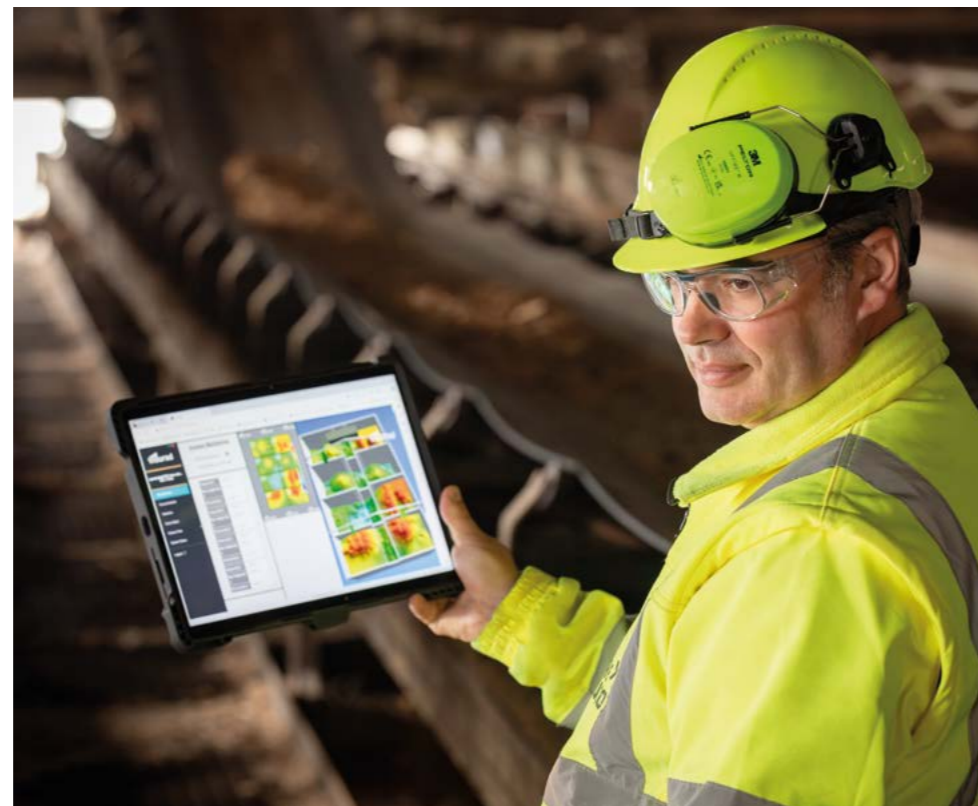
Artificial vision with stereoscopic cameras analyses the trucks as soon as they enter the factory gates to determine the weight

and volume of the load. Next, the humidity and heat capacity of the wood is measured using hyperspectral NIR cameras. The same technology is used to analyse the chip on the production line, from its composition to moisture levels, including the detection of foreign matter. Finally, the 3D radars installed in the silos make it possible to measure the volume of raw materials stored in real time.

Completing this technological ecosystem is the interpretation of data through advanced artificial intelligence algorithms and its automatic integration into the Digital Plant, which feeds the visualisation and alarm applications and makes information accessible to everyone for better and faster decision-making processes.

Before this implementation, measurements were made manually, at just a few points in the circuit, and infrequently, as these are time-consuming processes that involve centralising a lot of resources. With the project fully operational, all wood and by-product flows are now automatically analysed at all stages of preparation and feeding into the production lines, making it possible to reduce raw material waste and use it more efficiently. When you have an asset as precious as wood, every effort counts.

**Location:** Mangualde



# Internal Bond Model

Stronger connections

The principles of continuous improvement dictate that there is always room to make things more efficient, more precise and more rigorous.

**This is what the technology department at the Meppen plant thought when it created an online application that uses artificial intelligence algorithms to predict the amount of resin needed to produce MDF panels.**

The model, developed with the support of a British partner, combines the different variables in the MDF production process, such as weight, humidity, line speed and weight distribution, to provide the exact

amount of resin needed to achieve the ideal internal bonding point, in real time.

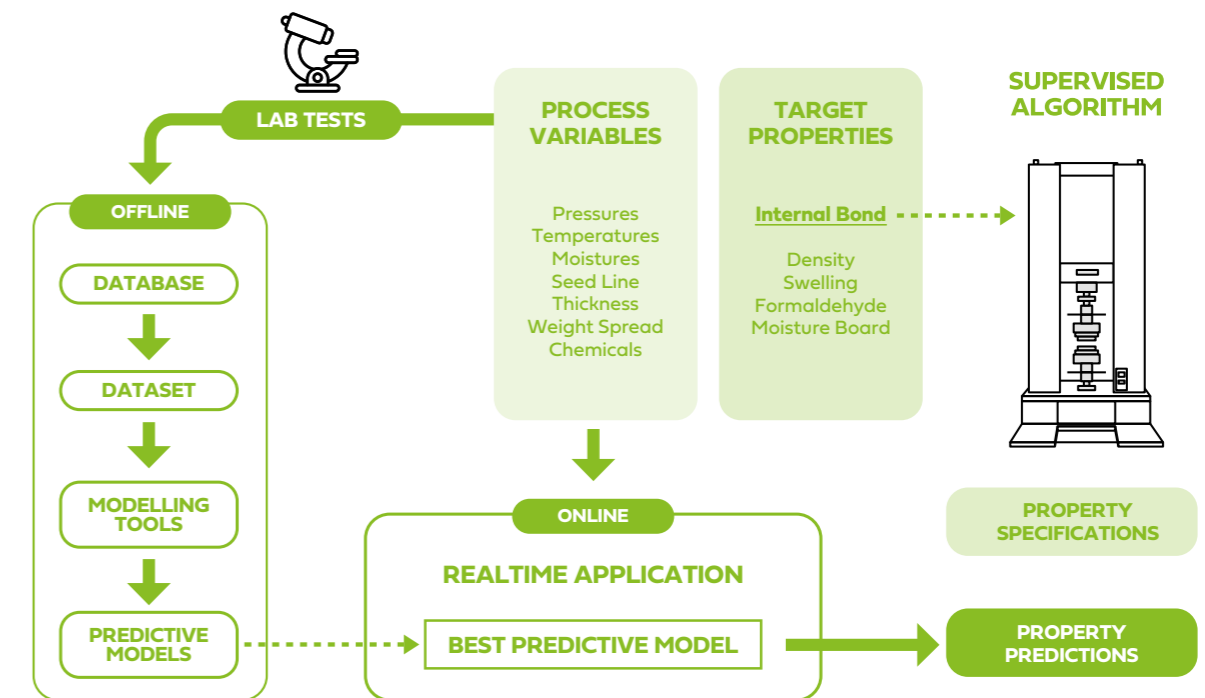
In addition to the forecast, this scheme, which is entirely cloud-based, also calculates the Reliability Index of each estimate, which is presented to operators in the form of a “confidence traffic light”: if the forecast is within the parameters it is coloured green, if it is within the sampling limits it is coloured yellow and if it is a total anomaly it is coloured red. As a result of its integration into the Digital Plant, it provides teams on the shop floor with an appropriate tool for simple and clear verification of the validity and reliability of the forecast. The implementation of this application drives other improvements in the production line, such as increasing

production speed or constantly optimising revenue, so that we continue to deliver the best wood-based solutions to the market.

## 1 minute

Time needed to predict the value of the ideal internal bonding point, compared to the two or three hours needed with laboratory tests.

**Locations:** Meppen. In the next months will be a reality in Mangualde, Oliveira do Hospital and Linares.





## Predictive Maintenance

### Anticipate to optimise

Currently, the timing of maintenance on critical equipment at six of Sonae Arauco's industrial units is decided by the teams, rather than just being a reaction to a problem. The paradigm shift came with the implementation of the Predictive Maintenance model, which is opposed to a passive reaction approach and is aligned with the strategic pillar of operational excellence. The concept is simple:

**if you can foresee problems, you can act in time, making scheduled stops and resolving the situation before it becomes an anomaly or breakdown.**

All so that, at the end of the day, the Availability Index of the equipment remains high and the production lines don't stop unexpectedly.

In order to have sufficient data to support decision-making on the ideal time for maintenance, the condition of the equipment is constantly monitored through hundreds of sensors that capture aspects such as vibrations, temperature or electric current, and this information is then analysed in the light of a set of diagnostic rules, which include not only the recommendations of the equipment suppliers, but also the history of records. In practice, when there is an imbalance in conditions, the system sends an alert email to the maintenance teams, who analyse

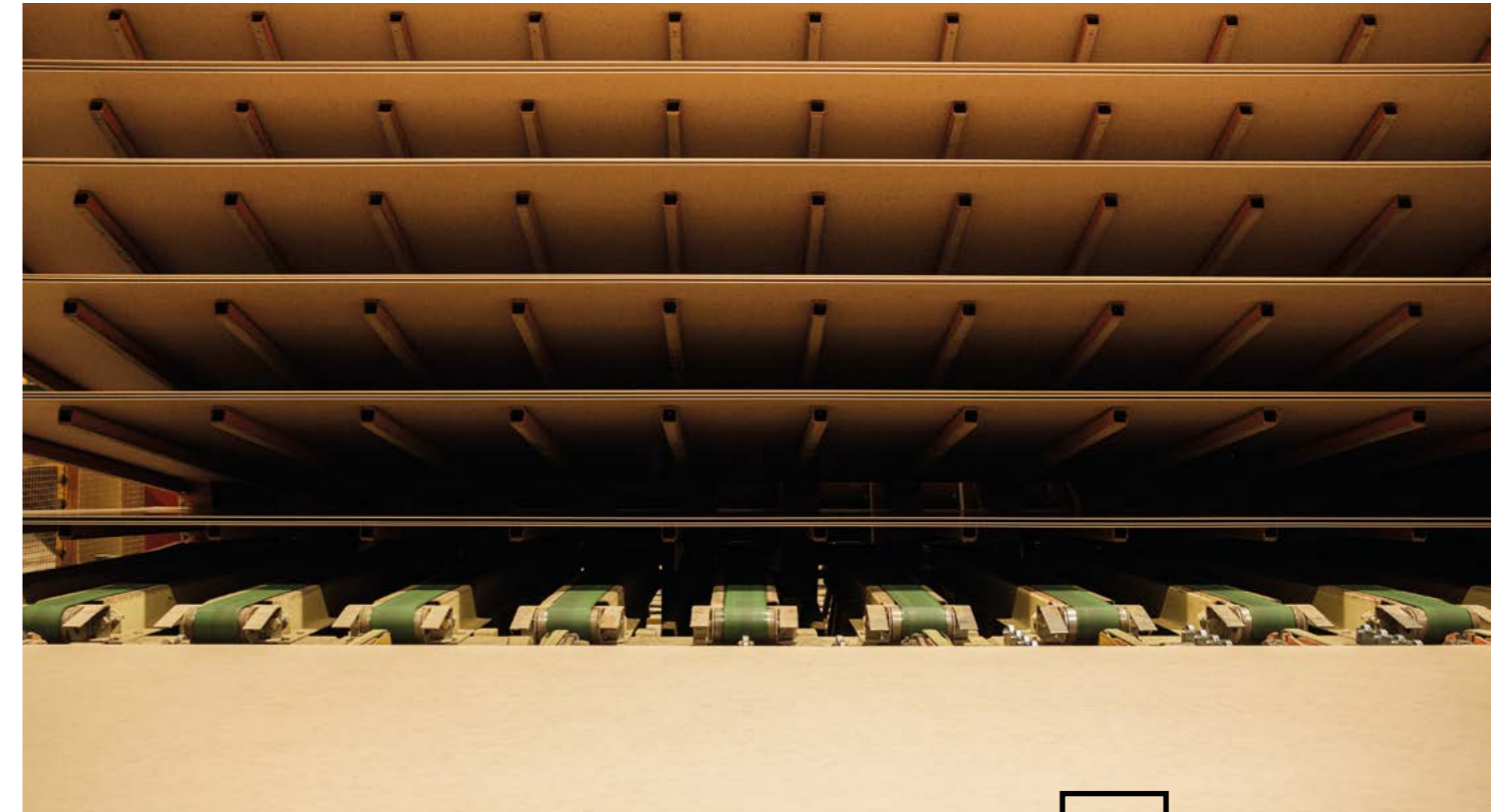
the data and follow one of two courses of action: if it is not a critical imbalance, it is discussed at the daily IoW meeting, while if it is critical, they immediately proceed with planning the intervention and registering the request in Maximo, the company's official Computerised Maintenance Management System.

The level of customisation in the implementation of this project was high, since each piece of equipment is unique and each factory has its own portfolio, but whenever possible it follows a standard format that facilitates comparison and learning between the different realities. The Asset Management & Reliability team was responsible for creating a tailor-made action plan for each industrial unit, identifying priority issues and critical equipment, suggesting organisational improvements and even redesigning Maximo to ensure consistent reliability in plants with different maturities. We can now say that **this model has led to cost optimisation and a significant increase in the equipment working life, as well as a reduction in unforeseen events in an environment as changeable as that of a factory.**

## 300

At the White River plant, three hundred sensors monitor critical equipment, materialising the concept of the Predictive Maintenance.

**Locations:** Oliveira do Hospital, Meppen, White River, Nettgau, Linares, Sines



65

## In-line Panel Density Measurement

### Check before producing

To ensure that the MDF panels produced in our industrial units always fit the ideal parameters, the teams prepare receipts with higher values, thus accounting for possible deviations.

And if the panels end up having a lower density or greater weight than expected, this deviation is only identified in the laboratory, which makes this alert useless - it's impossible to go back and do it again. The new in-line panel density measurement system, installed at the Valladolid plant, transfers this alert from

the end of the production chain to the middle, with a **real-time assessment of the weight, width and density of each panel leaving the production line.**

This intelligent platform is the combination of accurate load cells to weigh the board, laser sensors and digital encoders to measure the width and thickness, respectively, online.

**The benefits of this system are clear, from reducing reaction times to cutting raw material costs, as are its results: the**

**average density factor has improved by 0.6 per cent.**

## €166,000

The implementation of the In-Line Panel Density Measurement system saves an average €166,000 per year in raw materials, from wood to chemicals, in this industrial unit.

**Location:** Valladolid



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