

WOOD MADE

ISSUE 4

# STORIES

MAY 2022

SONAE ARAUCO WORLD STORIES



## SUSTAINABILITY

Our commitment to achieving carbon neutrality in less than two decades

## TEN YEARS OF INNOVUS®

Ten employees present us with the history, fun facts and future ambitions of our collection of decorative products

## THE FACTORY OF THE FUTURE

Digitalisation and predictive maintenance models are high on the agenda for industrial companies. At Sonae Arauco, they are already a reality

## AKANKSHA KHATRI

The World Economic Forum's Head of Nature Action Agenda writes on the role of wood on the path to carbon neutrality

**Director**  
Joana Martins

**Editorial Committee**  
Carolina Pinto  
Inês Rijo  
LLYC

**Editorial**  
Rui Correia

**Special Participation**  
Akanksha Khatri

**Contributors**  
Adelaide Alves  
Alfonso del Rio  
Andreas Koch  
Angel Garcia Bombin  
Christoph Wenderdel  
Dirk Eynck  
Doris Buchmesser  
Frederico Moniz  
Helena Silva  
Isabel Moutinho  
Isolino Valiño  
Joana Faria Resende  
Jorge Lado  
Juan Luis del Pozo  
Marco Ferreira  
Marco Moura  
Michael Jordaán  
Michelle Quintão  
Nerses Fatunz  
Paul Lerios  
Pedro Conceição  
Pedro Costa  
Sandy Hilgenfeld  
Sebastian Prieto  
Susanne Böwingloh

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António Castro  
Edite Barbosa  
João Berger

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Sonae Arauco

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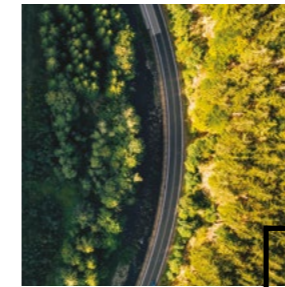
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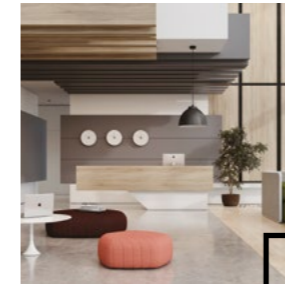


Taking wood further

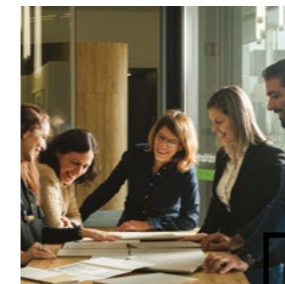
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## Editorial

# A manifesto for (our) Transformation

Rui Correia,  
CEO Sonae Arauco

Wood is much more than our raw material. It is our inspiration. Through its extraordinary capacity to transform itself, it allows us to create added value solutions that improve people's lives and the planet. This process of continuous transformation is also - today more than ever - in Sonae Arauco's DNA.

The year 2021 proved to be another impressive example of our consistent ability to respond to challenges and our admirable motivation to always do better. We have recovered from the impact of the pandemic, while at the same time seeing a progressive recognition of wood's potential as a material of the future: a sustainable, durable and reliable alternative.

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**The market is increasingly dynamic, with a growing demand for products like the ones we offer, which combine technical performance and ecological credentials like few others. We are proud of our contribution to this paradigm shift.**

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It was also a year marked by important challenges. We saw our business constrained by the sharp increase in energy costs; we had to cope with significant growth in transport prices and numerous limitations in access to raw materials, namely wood and chemicals. However, we adapted (in fact, we adapted again) and overcame these barriers. We have succeeded thanks to our people – their knowledge, dedication, and resilience – and because the investments made in recent years have enabled us to strengthen our response-ability in an increasingly demanding market.

I feel very proud. For all that we have achieved, I thank you. I would also like to thank our customers, our partners and our shareholders for their trust in the work done by this team.

French scientist Antoine Lavoisier said that “nothing is lost, nothing is created, everything is transformed”. This phrase, which has been passed down for three centuries of history, remains pertinent. It is, once again, the moment to renew ourselves. There are, all around us, several agents of transformation, triggers that make us question the way things are done and rethink them. Uncertainty reaffirms itself



every day as our only certainty. To move forward, let us focus on what depends on us, what we can control. Let us transform this collective energy into something new, into something even better.

We believe that the success of our company is based on greater synergies in the organisation, in constant communication, and sharing of knowledge. Only through people engagement will we achieve operational excellence that results in innovative, competitive products focused on customer needs. And in line with the need to optimise processes, anticipate deviations, increase our productivity – making us more competitive – we will

continue to focus on the continuous improvement of our operations.

We also want to be an agent of transformation of our society and continue to lead by example in responding to the climate emergency. In this regard, and as part of our commitment to carbon neutrality, we will reduce greenhouse gas emissions in all areas of our activity and increase the introduction of recycled wood in our products, strengthening our circular economy model.

Our magazine accompanies this metamorphosis, under the theme Transformation – Embracing Change,

which aims to convey a change of mentality and the journey we are making.

When we achieve it, there will be more. More questioning, more introspection, more opportunities to improve, to do things differently, to stand out from the competition by how we think, how we act, how we inspire and how we allow ourselves to be inspired.

**Like wood, we will be transformation. Because the world is constantly changing, and to persist, we cannot just keep doing what we have always done.**



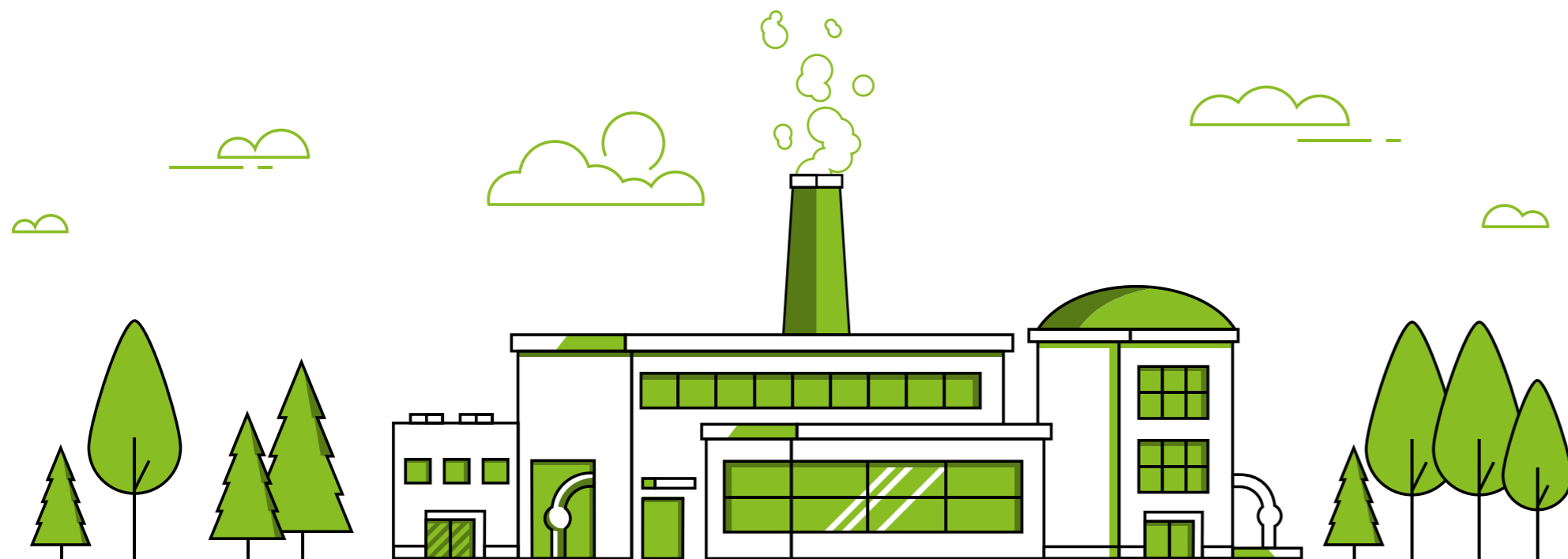
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# Overview

## WHAT WE HAVE DONE

### MORE DIGITALISATION

Among the main transformations marking this year, which will continue to be part of our journey, are the digitalisation, simplification, and automation of processes and systems. From industrial units to customer service, all areas are being covered.



### IN THE FACTORIES

Analysis of data from our Digital Plant (big data) to anticipate or speed up the handling of problems in the production process.

Implementation of an industrial network monitoring project for faster detection and resolution of network incidents; fewer operation interruptions; network availability and visibility; forecasting of hardware failures.

New architecture of industrial information storage in the cloud to improve performance and access to an exponentially growing volume of data.

Creation of an online application that uses artificial intelligence algorithms to predict the amount of resin necessary to produce MDF (still under validation).

Ongoing journey to transform the industrial maintenance with the implementation of new processes and the support of the Maximo tool at the Beeskow, Linares and Valladolid plants.

### IN CUSTOMER SERVICE

**New Customer Portal for European and South African markets...**



The new Customer Portal has been made available to all European and South African customers. Customers now can track orders, access delivery, and stock information notes, and manage flexible date-based orders – all in real-time.

**Around**

**300 users in 4 countries**

(Portugal, Spain, Germany, and South Africa)

**... and an increasingly responsive customer service**

Customer support centres in all geographies now allow a simpler, faster, and more customised experience – starting with the fact that there is only one phone number per country. The Computer Telephony Integration (CTI) project – which implemented Talkdesk’s cloud-based, Salesforce-integrated technology – provided Sonae Arauco’s Customer Service teams with relevant tools to make the customer experience a competitive advantage.

**Greater (digital) proximity to customers**

IMPULSE sessions are a space for proximity and sharing with our industrial customers from the NEE and SWE markets. These sessions are organised every year by Sonae Arauco to promote our products and present our view of the main trends and learn first-hand about our clients’ needs. In 2021, as we were unable to meet with our clients in person, these sessions took place mostly online.

In a constant effort to share knowledge, the product development department also organised technical training sessions on the different properties and applications of our products, “Decorative solutions (why and how to use our products)”, “Formaldehyde, VOC and Sustainability” and “Cutting behaviour of melamine and fire resistance properties” are some examples of the training courses available for all employees through SAKA – Sonae Arauco Knowledge Academy.

**In numbers:**

**24 digital sessions** with NEE market customers

**14 digital sessions** with SWE market customers

**8 face-to-face sessions** with SWE market customers

**7 SAKA training modules**

**31 employee workshops**

**141 employees** who participated in each workshop on average

### IN PROCUREMENT

**Buying in one place**

One Way – Ariba is an SAP tool that supports a more connected and intelligent procurement process. We already have more than 300 registered suppliers, and more than 500 procurement projects have been carried out, giving us several benefits: speed, compliance, better collaboration between the various teams, and cost reduction.

**More effective pricing management**

After being launched in 2020 in Sonae Arauco’s main markets, the PRICE FX platform, which enables better and faster pricing management, was implemented last year across seven markets: Poland, Benelux, Exports SAF, Czech Republic, Slovakia, Hungary, and Austria. Featuring functionalities to define price lists and discount policies, the whole process is now managed in an integrated way for greater productivity, responsiveness, and control.

## Proximity to the customer

### A new distribution centre

On June 1<sup>st</sup>, 2021, a Distribution Centre opened in Germany to serve the NEE region and ensure personalised service to our commercial customers.

### More Innovus® dealers in Europe

The Innovus® partner network continues to grow at a sustained rate, with several contracts closed in 2021 and many more under negotiation.



## Continuous Improvement

The new Management Control tool is already being implemented in all our locations, after a test phase in the Iberian plants. Find out more about the system and its impact on the company's day-to-day operations:

### 1. What is Management Control?

It is a structured standardised management process based on routines and activities to identify and solve problems and thus improve the plants' results.

### 2. How does it differ from the previous method?

This process strengthens the coherence between Continuous Improvement / IOW tools that were previously promoted individually. This structure allows a greater focus on the ground, on people, and processes.

### 3. What does this approach aim to achieve?

Improve results and achieve goals by focusing efforts on controlling processes and variables and implementing priority changes.

## Health, Safety and Environment

**2021 was the year for consolidating our Safety roadmap as part of the industrial model of Competence Centres, for processes alignment, standardisation, and optimisation across all units. From all the work carried out, it is worth highlighting some key processes:**

**Comprehensive procedures to standardise the expected practices and conditions across all Sonae Arauco sites** regarding the most important risk – the interaction between pedestrians and vehicles. This required significant changes and investment, and was particularly evident for a safety reinforcement in the following priority areas:

- Walkways
- Woodyards
- Warehouses
- Loading areas

**Daily Gemba walks with a focus on safety** implemented in all industrial units to establish a ritual that allows a continuous process of identifying unsafe conditions, making it possible to quickly correct and eradicate them.

**Safety communication:** a fundamental axis of work in this area that supported many of the processes, increasing teams' awareness. Various tools were developed to standardise messages, demonstrate the company's commitment and also raise awareness and engage employees.



Sonae Arauco's new safety programme

### Better legal support

To improve the control and management of environmental, health and safety requirements, new Legal Compliance Management Software is being implemented: Agenda Law (Germany) and SIAWISE (Iberia and South Africa). These will allow factories to keep up to date with new legal requirements and provide them with implementation support.

### More information about products

Sonae Arauco's environmental product declarations are being updated to better describe the products, their functions and technical characteristics, especially the environmental impact based on life cycle assessments. This information is increasingly sought after by the market, particularly to be used in sustainability assessments and certifications.

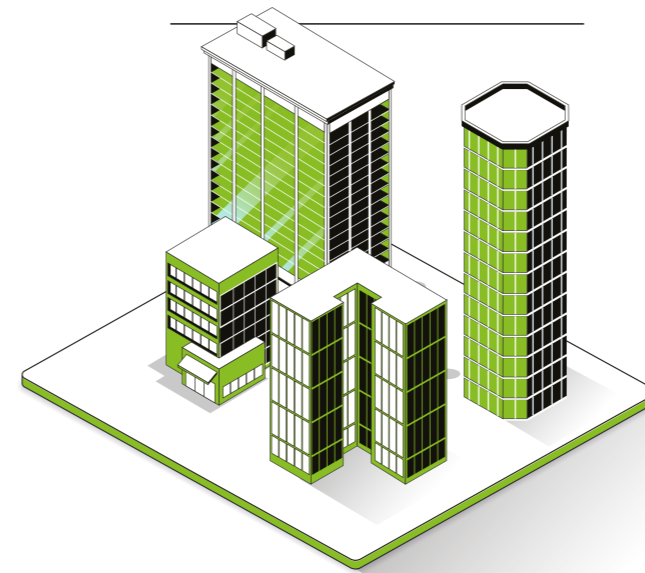
### Improved exhaust gas treatment

The installation of bio washers ("BIOCAT-DUO", by Wessel) in the Beeskow, Meppen and Mangualde plants has been completed. These are biological systems for exhausting and purifying air from the dryers. This unprecedented investment in the sector amounted to €22.7 million and represents an important step that, among other benefits, allows us to ensure that emissions of fibres, formaldehyde, and VOCs remain within legal limits.

## Marketing

### The return to international events

Sonae Arauco participated once again in the sector's major international events, namely Interihotel, ARCHITECT@WORK, Decorhotel, and Interzum Digital.



### BIM: our contribution to digitalising the construction industry

**BIM - Building Information Modeling** technology is increasingly important in the context of architecture and civil engineering. One of its main assets is the creation of 3D models of buildings fully modelled using software, even allowing the creation of a "digital twin".

Last year, Sonae Arauco joined this important platform, providing more than 80 Innovus® finishes and decorative combinations in the BIM data set for ArchiCAD and Revit. Our data is available not only on the Sonae Arauco website but also on BIMobject, one of the largest international collections of materials for architects. Our BIM data is also available on the Polantis platform.

## Sustainability



# 100%

of the wood used by Sonae Arauco comes from sustainable, certified, or controlled sources

# 800,000

tonnes of recycled wood incorporated in 2021

# 3,5 millions

carbon dioxide retained in 2021 (products placed on the market)

# 11

wood recycling centres in Iberia

# 11

industrial units with FSC® certification

**Towards Zero Waste, which comes from a circular bioeconomy model**

### Pine Trees

# +21,600

The second stage of Sonae Arauco's Forestry R&D project kicked off with the planting of around 21,000 pine trees. These pine trees were planted in various locations around Portugal and their growth is being monitored. The preliminary results, published earlier this year, are quite promising: they suggest that the radiata pine plants from Chile are more resilient in a Portuguese context.

### Fighting deforestation

Sonae Arauco joined the Calouste Gulbenkian Foundation and Efanor Investimentos as the operational and technological partner in a project that aims to create social and economic value through active forest management.

# €31 million

of investment

# 15,000

hectares across northern and central Portugal

**Awards and distinctions**

Improvement Awards

The 4<sup>th</sup> Improvement Awards recognised and rewarded Sonae Arauco teams that stood out for relevant improvements implemented during the year. The event was hybrid and introduced new features such as a new category – Innovation & Digital Transformation – as well as a special award, which distinguished the successive improvements that have been made at the WAX Emulsion plant in Mangualde and its impact on cost reduction.

- Quality:** Oliveira do Hospital
- Productivity:** Beeskow
- Cost Savings:** Beeskow
- Team Involvement:** Oliveira do Hospital
- Service to Customer:** Woodmead
- Innovation & Digital Transformation:** Maia
- Safety:** White River
- Special Award:** WAX Emulsion Plant, Mangualde

Linares receives "Industry Award"

The industrial unit in Linares, Spain, received the Industry Award from the city's Chamber of Commerce in recognition of the company's development, growth, and involvement with the city and its continuous commitment to sustainable development.

Gold for our magazine

The 3<sup>rd</sup> edition of **Wood Made Stories - Sonae Arauco World Stories** magazine was distinguished at the Communicator Awards 2021 in the **Design & Print – Employee Publication Magazine Category**.

Innovus® Feel Light Grey makes a hat-trick

This decorative panel with a three-dimensional matt melamine finish received three design awards last year, continuing its path of success and international distinction. Its textile felt base won over the jury of the **German Design Awards**, the **Iconic Awards**, and the **Interzum Awards**.

Safety of Aserraderos de Cuéllar awarded

At the 9<sup>th</sup> "Asepeyo Antoni Serra Santamans" Awards, the Aserraderos de Cuéllar plant in Spain was awarded second prize in the "**Best practices, small and medium-sized enterprises**" category in an initiative that recognises the best Mutua partner company safety prevention projects. This award highlights that employee safety is a strategic priority for Sonae Arauco.

**Anniversaries**

- Valladolid:** 75 years
- Meppen:** 60 years
- Nettgau:** 20 years



**WHERE WE WILL INVEST**

€ **37** M

This is the amount of the key industrial investments we have planned for next year.

Globally, on one hand, we intend to increase our production capacity for value-added solutions, namely Innovus® decorative products, in line with market evolution, where smaller orders and reduced response times are increasingly the reality. On the other hand, we plan to increase the incorporation of wood – both new and recycled – in an effort to maximise the potential of this raw material.

**Oliveira do Hospital**  
Portugal  
€ **10** M

**Where?**  
Recycling area, packaging lines, intermediate and final warehouse

**What for?**  
To increase the incorporation of recycled products and encourage greater efficiency in wood consumption

**How?**  
Intervention in the recycled products area to increase the capacity to receive and integrate pre-crushed recycled wood (to over 75%), optimisation of the handling flows, modernisation of the packaging lines, and expansion of the storage capacity

**When?**  
August 2022 to June 2023

**Mangualde**  
Portugal  
€ **4,8** M

**Where?**  
MDF lines, loading bays, and railway branch lines

**What for?**  
Greater diversification of the wood types incorporated and reduction of wood waste, maximising the reuse of all by-products resulting from the MDF industrial process

**How?**  
Upgrading of the lines, widening the access to wood through the upgrading of the railway branch line (a more sustainable way of long-distance transport), construction of a new loading dock, and expansion of the current warehouse

**When?**  
August 2022 to June 2023

Investments in Portugal will mostly be made under the European funding framework Portugal 2020.

**Nettgau**  
Germany  
€ **18,7** M

**Where?**  
MFC line, new warehouse, packaging line, and internal logistics

**What for?**  
To increase the installed production capacity of decorative solutions and improve the service level

**How?**  
Line upgrade; construction of a new warehouse to improve logistics, supported by greater stock availability; improvement of the packaging line and internal logistics

**When?**  
1<sup>st</sup> quarter of 2023

**Linares**  
Spain  
€ **3,2** M

**Where?**  
The two MFC lines

**What for?**  
Leverage the production capacity of the presses and the quality of the final product

**How?**  
Intervention in the equipment core, replacing the main component of the presses

**When?**  
Until the end of 2022



Opinion

# Our carbon neutrality roadmap

Rui Correia  
CEO

The goal is zero: carbon neutrality. Sonae Arauco has committed to reaching this milestone in less than two decades, anticipating European targets by at least 10 years, a natural development that is in line with what has been the company's performance in terms of sustainable development.

Let us not deceive ourselves, however. This is a huge ambition. Carbon neutrality has to be placed at the centre of Sonae Arauco's business model and that will mean aligning all our actions with the vision of zero emissions. It will probably be the biggest transformation we have ever experienced within the company. But this is a necessary and urgent step for the sustainability of the planet – to which we are committed since our creation – but also for the business. Businesses today are faced with increasing regulatory challenges that put them on this path of transformation. Getting ahead of regulation is crucial to maintaining a competitive advantage. It is also a way to reduce production costs and develop growth tools. However, the impulse for change also comes from other interlocutors: employees seek companies

that think – and act – sustainably; customers have a growing preference for brands that are CO<sub>2</sub>-neutral, even though they know that this implies an increase in the price of products; investors choose companies that are future-oriented and that take consistent steps in line with the transition, unafraid of change; the capital market is changing so that a company's environmental performance goes from being accessory to elementary. In a company that, like Sonae Arauco, has always been committed to sustainability, this is also a matter of positive impact, the ability – the duty – to set an example to the market and to its stakeholders.

This is not the first time we have set out to spark – and even lead – ambitious change. In the past, we have made significant progress. As an example, we switched from heavy fuel boilers to using biomass as a source of thermal energy; we developed improvements in technology to remove the additional moisture in the wood, reducing the energy required for the drying process. We have also incorporated circular bioeconomy principles into our industrial practice,

whether through more efficient production models, reducing the use of raw materials and energy consumption; through the extension of the wood life cycle, through the promotion of recycling networks, or through other awareness and social involvement projects. But the step we will take now is even more decisive, and anticipates what most companies will have to do.

At this stage we are designing a company-wide greenhouse gas emissions inventory, following the principles of the GHG Protocol. We will then establish a baseline and assess the challenges and opportunities. Based on this analysis, we will establish an effective strategy for carbon neutrality, and we will define and prioritise the decarbonisation actions that will shape the roadmap of the steps and projects needed to achieve this ambitious goal.

What distinguishes Sonae Arauco's ambition on this path? Most companies have committed to decarbonisation plans that only account for Scope 1 and 2 emissions - those that are directly linked to the company and that it can control.



This is a huge ambition. Carbon neutrality has to be placed at the centre of Sonae Arauco's business model and that will mean aligning all our actions with the vision of zero emissions. It will probably be the biggest transformation we have ever experienced within the company.

However, at Sonae Arauco, we believe that businesses must be sustainable throughout their value chain. We have therefore committed to a complete reduction of greenhouse gas emissions, from our direct operation to the supply chain, also accounting for Scope 3 emissions. This means that this transformation includes purchased goods and services, business travel, employee travel, waste disposal, use of products sold, transport and distribution (upstream and downstream), rented goods and franchises and all future investments. The plan includes all greenhouse gases covered by the Kyoto Protocol, from carbon dioxide to hydrofluorocarbons. So, for example, we will be able to assess where in our supply chain the main CO<sub>2</sub> emission points are and identify energy efficiency and

cost reduction opportunities. We will be able to identify which suppliers are leaders in this area and which need to improve their performance. We will be able to engage suppliers in this cause, and help them implement performance optimisation initiatives and improve the energy efficiency of their products. And, for the success of this journey, we will count on the involvement of our employees, whose commitment and dedication will be the first basic condition for a successful transformation.

If at the beginning of the pandemic we were all aware of the responsibility of each one of us to ensure a more sustainable world for the next generations, at Sonae Arauco we believe that there is a

widespread awareness that the transition to a more sustainable world has to happen very quickly, and that this will only be possible with concerted action by all, that is to say, involving companies, citizens, societies and governments in an unprecedented international effort.

And we aim to lead by example. We will generate a positive impact on the various businesses across our entire value chain and from our different locations, playing an innovative role in achieving net zero at sector level. We will exceed ourselves. Join us in this transformation.



## Featured Photography

This is a privileged perspective on Sonae Arauco's largest industrial unit: Nettgau. Stretching over 58 hectares in northern Germany, the impressive plant has a covered industrial area of approximately eight hectares; a production capacity of more than one million square metres of PB, MFC and OSB; and around 400 employees.

These indicators demonstrate the importance of the region for Sonae Arauco. That is why the company will continue to strengthen its long-term commitment to its employees and to the local community, now through an investment of around 18,7 million euros.

The investment includes the renovation of an MFC line, which will increase the production capacity of decorative solutions and improve the level of service, as well as the construction of a new warehouse that will add capacity to the existing one, which has three hectares.

This is how we intend to continue leveraging our ability to provide value-added wood solutions to the market, an aspect that has distinguished Nettgau's industrial unit throughout its 20 years of existence.

Photography: (C) Foto Wiedemann







Sonae Tech Hub  
Maia, Portugal

## Interview

# Doris Buchmesser and Marco Moura, an unlikely conversation

She grew up in Austria's second largest city, Graz. He grew up almost 2,500 kilometres away, in Mindelo, a Portuguese seaside town near Porto. They were among the first European students to participate in the Erasmus international exchange programme, both in Italy. It was a transformative experience for both. Later, Doris specialised in marketing and sales and Marco became an engineer.

They found their motivation and professional fulfilment in Sonae Arauco's culture, whose hallmarks are the ambition to always do better. Doris is now Sales Director NEE (North East Europe) at Sonae Arauco and Marco is Group Supply Chain Director, the company's overall supply chain manager. They lead teams whose roles are complementary to each other (without customers, there is no business; without product, there are no customers), but who might easily forget it: market time is often different from factory time. The key to meeting the challenges, they agree, lies in a close dialogue, so that there is mutual understanding, empathy and true teamwork.



## Doris Buchmesser

### Sales Director NEE

Doris Buchmesser is 54 years old and was born in Graz, Austria. She graduated in Business Economics at the Karl-Franzens-University Graz and since then has made a career in the wood and wood products industry, in the field of management and sales. She joined Sonae Arauco in 2020 as Sales Manager for NEE.



## Marco Moura

### Group Supply Chain Director

Marco Moura is 49 years old and was born in Porto, Portugal. He graduated in Mechanical Engineering from the University of Porto and later undertook intensive training in management. He has worked at several multinationals in robotics, packaging, and pulp, and arrived at Sonae Arauco in 2017 to take up the position of Group Supply Chain Director.



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**You are both more or less of the same generation. How were your childhoods? Do you have many memories?**

**Doris Buchmesser (DB)** – I was born and grew up in Graz, the second largest city in Austria. I have a sister and we grew up in a historic house, which is still in the family. My parents were business people; they had very busy routines, so we grew up with a nanny, who lived with us until she turned 98. My parents always wanted us to learn several languages, to do a variety of sports. I had a very happy childhood: lots of sports, lots of fun, in a big house, and surrounded by lovely human beings.

**Marco Moura (MM)** – I was born in Porto, but my parents and I moved to Mindelo, a seaside town, when I was very young. Many people spent the summer there, but the rest of the year there was only one boy on my street. I still keep

in touch with him. I really liked playing football, I wanted to be like Eusébio, but I ended up becoming an engineer.

**Is there a particular event that marked your youth and is related to your choice of profession?**

**MM** – From a very young age I wanted to be an engineer like my father, who was an industrial director and worked in a factory in Mindelo. On the weekends, he would go there to monitor the maintenance work and used to take me along with him. Health and safety in the factories at the time was not like it is today... I liked to go there, to touch everything, to see how it all worked. I would come home covered in oil, something that didn't make my mother very happy [laughs].

**DB** – I always wanted to work in sales and marketing. I started working in the field during university. I applied for a summer

internship at a company: it was my first work experience and the first contact I had with wood products. Then I was invited to stay. I have had a connection with the sector ever since.

**Was there an extraordinary event - of great transformation - in your life journey?**

**MM** – During my student years, the European Union did not yet have open borders like it has today. In 1996 I decided to be one of the first Portuguese people to sign up for the Erasmus programme: I was away for a year in Milan, Italy. And it wasn't like it is now, where you can come home at weekends. I only came home for Christmas.

Everything was new. I was abroad for the first time, all alone, and all the lessons were in Italian. It was hard; I had to

make a real effort, especially to learn the language. I didn't have a lot of money. I knew it was an effort the family was making. I didn't want to spend the money and fail in the end. But I ended up getting a lot out of it and getting good grades.

**DB** – So we're not from the same generation, Marco. I went to Bologna through Erasmus in 1989 [laughs]! And it's funny because I was one of the first Erasmus students in Graz.

**MM** – I know Bologna. It's a student city, right?

**DB** – Yes. La Dotta, la Grassa, la Rossa! [meaning "The Wise, the Fat, the Red"]

**MM** – [in Italian] Do you still speak Italian, Doris?

**DB** – [in Italian] A little. [laughs]

**Are there any other episodes you would like to highlight?**

**MM** – Later on, I had another transformative experience when I was invited to work in Spain. It was a learning curve because it was a new country, a bigger company with more factories and greater complexity, and because my family couldn't join me right away.

**DB** – I was in the timber industry for nearly 30 years, always doing the same thing. Then, in 2015, I was diagnosed with a brain tumour. It was very scary because it was advanced and I needed to have surgery. It went well, but the first weeks were very difficult because I had to learn to talk and walk again. Then I thought: "I have to change something". I quit my job, took a short break, and became a consultant in the same industry. I quickly realised that being a consultant is like being a toothless

lion: you can recommend and propose, but you can't make decisions or change anything. So, I moved again, fortunately to Sonae Arauco.

**Doris, you have been at Sonae Arauco for a year and a half, and you, Marco, for five. What do you find most special in our company?**

**DB** – It's a combination of things. I like the people, I like the product, and I like my customers. I like the culture and the agility, how we do everything on a rational basis. In my previous jobs, the people in charge had ideas and just told the team to implement them without asking anyone whether they made any sense. At Sonae Arauco, the thoughtfulness before making a decision, and the fact that the teams are heard, even if it sometimes takes time, increases my motivation to work.



**MM** – I really like to do new things, to transform. And that's why I was hired, to reinvent, to transform and improve the Supply Chain. Sometimes people get tired of me because it seems I'm never happy, but I really just want the company to always do better. I couldn't work for a company that would tell me that everything was fine. For me, the best thing about our company culture is this constant willingness to change.

**Doris and Marco, you have ended up having complementary responsibilities and your teams need to work together. How have you observed that the functioning of each other's team contributes to the company's success?**

**MM** – It's easy. Doris' team manages clients, and without clients there is no business. So even if I'm not aligned with the sales department, I understand that customers are essential.

**DB** – It's simple for me too: Marco's team is very important because, without it, I couldn't supply the products to my customers on time. So, our teams go hand in hand. And Marco's team provides a very good service, almost perfect in fact. (laughs)

**In your opinion, Doris, what should the priority be for Marco's department?**

**DB** – Increasing the On Time In Full [delivery of the quantity ordered within the time requested], for example. And I would like to see a little more flexibility.

**MM** – When we talk about flexibility in the supply chain, we need to understand what it means. For example, if Doris says to me, "I need to receive my products in less than seven days," that flexibility

can happen. We need to understand whether it is profitable enough or not.

**Marco, for you, how difficult is it to balance the development of the company's supply chain areas with the pressure of the internal sales team?**

**MM** – The challenge is to meet some of our clients' deadlines. And we often have to explain to the sales department the deadlines we can and cannot meet. That is very important. Because if we explain what our factories are capable of producing, why it happens, everyone understands what's possible and what's not, and everyone adjusts their expectations. This is happening more at the moment.

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**At Sonae Arauco, the thoughtfulness before making a decision and listening to the teams increases my motivation.**

Doris Buchmesser

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**What contribution can sales make to improving service levels?**

**MM** – It's an ongoing process, and we have made progress. But the sales team must be aligned with our industrial capabilities, and bear in mind that the challenges that the supply chain area has to deal with must have a coordinated response, with input from various departments.

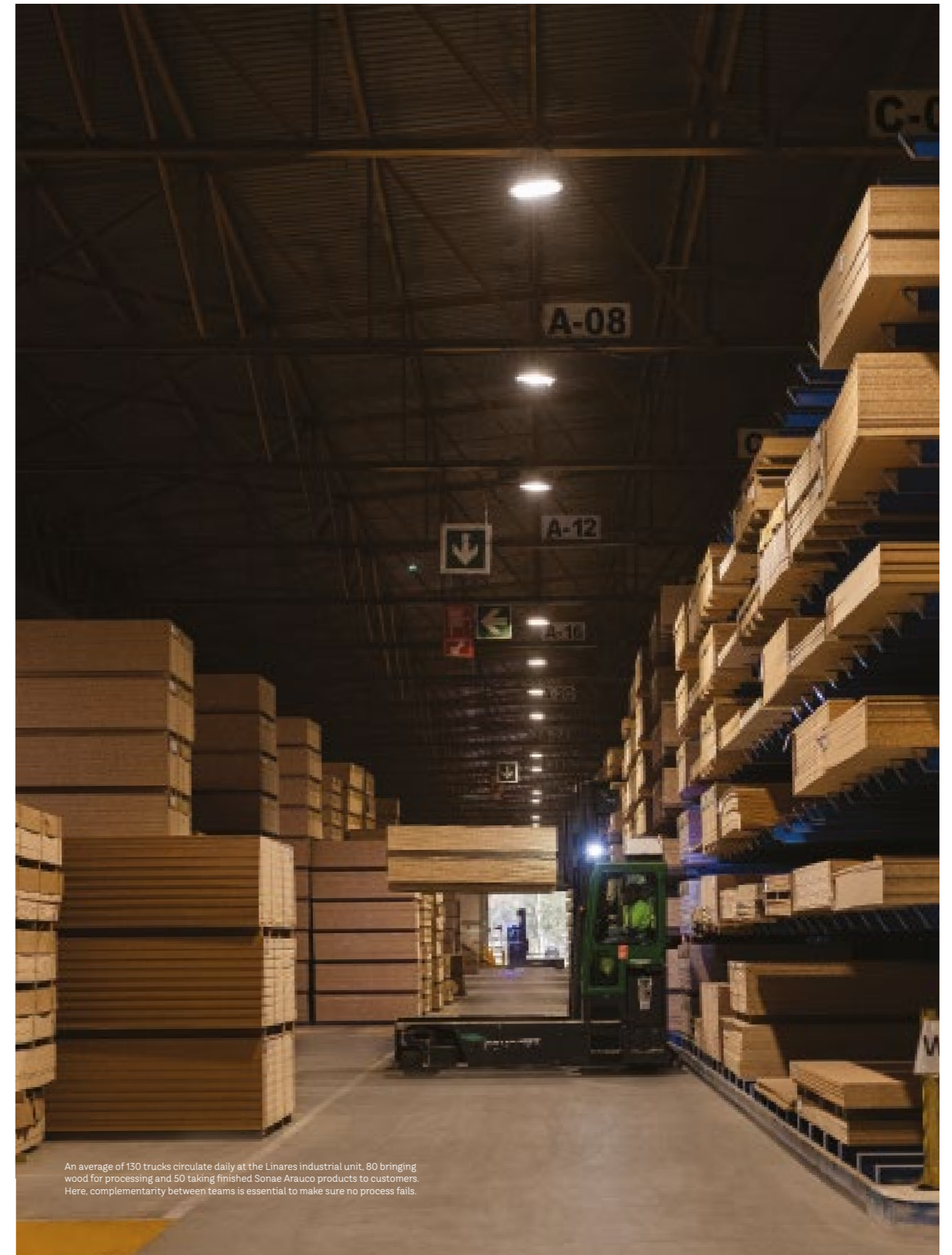
**And from your perspective, Doris?**

**DB** – Communication is very important. The sales team has to understand what requests and constraints their colleagues are dealing with. If we communicate, we understand. And if we understand we can communicate with customers and explain the situation better.

**What are the main transformations that have happened in your business areas in the last five years, and how have the teams adapted?**

**MM** – I think the main one was the pandemic. It has made transport more difficult and increased demand: we are selling more, because people are investing more in their homes, refurbishing them, furnishing them. And that puts more pressure on the supply chain. In this context, the transformation we have carried out in our supply chain is crucial, both from the perspective of the reorganisation and improving processes, and by creating larger warehouses, which allow us to have more stock to respond to our customers' demands more quickly. We are doing several focused improvement projects, and invest quickly, which is difficult considering that the market is more challenging – it demands shorter times and smaller quantities – and that we have to be able to continue to do our normal work.

**DB** – Covid-19 has also completely changed the way we sell, which is now more reactive than proactive. The context is very difficult. On the one hand there is a huge demand for Core & Technical® products, which we cannot always meet, and on the other hand



An average of 130 trucks circulate daily at the Linares industrial unit, 80 bringing wood for processing and 50 taking finished Sonae Arauco products to customers. Here, complementarity between teams is essential to make sure no process fails.





From left to right:

- Hans-Robert Holzer**  
Sales Manager Construction DE, AT
- Jochem Sneep**  
Sales Backoffice Manager NEE
- Markus David**  
Sales Manager Trade & Specification DE, AT
- Leo Jager**  
Sales Manager Trade SAN, SAS, IT, FR
- Doris Buchmesser**  
NEE Sales Director
- Wolfgang Welling**  
Sales Manager Industry
- Nerses Fatunz**  
Sales Manager East Europe



From left to right:

- Marta Gonçalves**  
Master Planner
- Marco Moura**  
Group Supply Chain Director
- Tiago Fernandes**  
Master Planner
- João Sá**  
Supply Chain Project Manager

we have to fight for every square metre with regard to the positioning of MFC and AGEPAN®, for example. In other words: we work partly to limit damages, because it is not always possible to deliver to the client the volume of C&T products they need at the time they need it; and, at the same time, we try to gain market share and increase the volume in value-added products.

**And what transformations will we see in the next five years?**

**MM** – The need for digitalisation will lead us to transform our work processes and tools. We already have projects under way in the supply chain area in connection with this. Restrictions in the transport sector and on CO<sub>2</sub> emissions

will also bring a lot of change. We have to become more sustainable and invest now so that we are not caught off guard.

**DB** – My greatest concern relates to the resilience of our customers in the face of a scenario of rising raw material costs. They are going through a particularly difficult time, where they

cannot always reflect the increase in raw materials in the prices of their products. As partnerships are a strategic priority, we will continue to work with them to overcome these challenges together.

**How can the two teams work together to address these challenges?**

**MM** – We have several projects in common for improvement. The focus is on being more effective and efficient. My teams need to improve in terms of logistics so that Doris' teams can sell more easily, but Doris can also help me to put products on the market according to our industrial capacity, which allow us to be more productive and sell them at competitive prices. Doris can help us optimise our product portfolio.

**DB** – I think we can also help in small things, like trying to get the customer to buy larger quantities of product, and more sustainable products.

**Doris, what do you see as the greatest advantage in Sonae Arauco having such a robust supply chain department?**

**DB** – It's a great competitive advantage. It gives us negotiating power with customers. Besides selling the product, we can sell the service. And that is essential in this context.

**The need for digitalisation will lead us to transform our work processes and tools. We already have projects under way in the supply chain area in connection with this.**

Marco Moura

**Back to your personal stories: what do you each do in your free time?**

**DB** – I really like doing sports. I live in Salzburg, so I have about 30 different places where I can go skiing without travelling too far. And I really enjoy running, at least two or three times a week.

**MM** – I used to love playing football, but now I'm more likely to go to the gym and go running. I usually do it in the morning before I come to work. And I also used to sail, I had my own sailing boat, but I ended up selling it because I didn't use it much, the family didn't like it, and my father can no longer sail with me.

**Do you have any advice or an inspirational quote you would like to share with your colleague?**

**MM** – Working in Supply Chain creates a tendency to want to control everything. I read some time ago that the emperor Marcus Aurelius, whose name I share, said that we can only control our mind, not external events. So, trying to control everything can be stressful, but we can always control our own actions and reactions.

**DB** – Mine is: "Be the change you wish to see in the world", by Mahatma Gandhi.

# FUN FACTS

Favourite meal	Favourite destination	Guilty pleasure
<p><b>DB</b> – Wienerschnitzel [traditional Austrian dish, breaded veal] <b>MM</b> – Argentine barbecue</p>	<p><b>DB</b> – Botswana <b>MM</b> – Southwest Asia</p>	<p><b>DB</b> – Reading crime novels <b>MM</b> – Red wine and tapas</p>









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Whenever you ask a Sonae Arauco employee how they would define the Innovus® brand in a single word, the tone is of surprise, and the answer is both hesitation and a question: “A single word?!”. That’s because the brand that, a decade ago, was created to aggregate our entire offer of decorative products, is hard to describe in such a limited way. It has been 10 years full of history, creativity, innovation, inspiration, quality,

sustainability, transformation, evolution, clients and teams – 10 years of life, as the claim “Matching life” sums up so well. The authorship of the brand we celebrate is collective. We owe the success of Innovus® to around 2600 employees who, directly or indirectly, are part of its history, and who have participated in the journey that put it at the level it is today: the best collection on the market.

**It has been 10 years full of history, creativity, innovation, inspiration, quality, sustainability, transformation, evolution, clients and teams – 10 years of life, as the claim “Matching life” sums up so well.**

Innovus® is one of the faces of a global and modern Sonae Arauco, a company that anticipates market trends and works with a focus on customer needs and the importance of sustainability. With more than 200 decorative products that can be matched with innovative high-quality finishes, it also makes it possible to combine decoratives available in MFC and HPL. Its *avant-garde* proposals in wood, patterns and single colours, including exclusive melamine and laminate panel solutions, are present and patented in 80 countries and today are a tool of choice and a source of inspiration for architects and interior designers. In more and more markets, customers are saying directly to salespeople: “I want Innovus®”. The collection is complete and comprehensive, featuring distinctive and versatile solutions that elevate any

environment, from a kitchen to a bedroom; from a restaurant to a hotel or office building.

For Innovus®, ten years of existence are also synonymous with quality – certified according to the most demanding international standards and distinguished with international awards – and sustainability. At a time when the market is looking for solutions that align with its environmental concerns, we stand out. The success of Innovus® has also contributed to the fact that by 2021, the products that Sonae Arauco placed on the market retained 3.5 million tonnes of carbon dioxide.

These achievements were also possible due to the robust investments made over the years, both in the improvement of our industrial units and equipment and in

**Innovus® is one of the faces of a global and modern Sonae Arauco that anticipates market trends and works with a focus on customers’ needs and the importance of sustainability.**

the training of our people, in research and development, and in close contact with our customers. The first decade of Innovus® also brought the company much-desired integration, which translates into cohesive and motivated teams, optimised processes, greater visibility in the market and a key brand at an international level.

Over the next few pages, we go back in

time and travel through the memory of some of those who have left their mark on our brand. From the launch of the first collection to the most significant innovations; from their most relevant challenges to the decorative materials that inspire them. There is much to say about this enriching experience. There is also room to look to the future: while we celebrate, we plan it, so that we can spend at least another 10 years celebrating.



## Innovus® 10 years, 10 stories

### João Berger

Chief Marketing & Sales Officer



‘Pride’ is the word that João Berger uses most often to describe today’s Innovus® brand. He feels proud of his colleagues and the work they have done – that is the mirror of the satisfaction he sees in customers’ faces when they see our collection. “These are the happiest moments that come to mind,” he says. This feeling accompanies his history at Sonae Arauco. “We have done a lot in the last few years. We have a lot to be proud of. The Innovus® brand is, in itself, a great achievement. We were able to take the leap and leave behind years and years of disinvestment.”

That’s why if he has to present the Innovus® collection to a potential customer he does not hesitate: “You’re about to see the best collection on the market”. From the quality of the finishings, widely recognised across the market, to their variety, which means the collection appeals to a very wide range of customers in all segments, there are numerous strong points that he highlights. **If forced to choose just one distinctive feature, João Berger highlights the fact that the Innovus® collection can contribute to meeting the challenges of the climate emergency.** This, he says, is “the trend that will affect business the most” – a positive impact for Sonae Arauco: “We deliver wood-based solutions, which retain carbon dioxide, to the market and we do so using a collection of excellent quality.”

Listing the main challenges that he foresees for the brand, he says: “We need to balance

the need for novelty and differentiation in the market with a constant search to reduce complexity and simplify processes, making trade-offs and choices in terms of the offer. In parallel, we need to maintain our focus on the continuous improvement of our processes and infrastructure so that we can remain competitive in the market”. Alongside this, João Berger believes that there is still a long way to go. “We are improving every day, but we must continue to promote our collection to all markets and all customers, benefiting from its full potential and in order to make it a truly universal brand”.

In any case, he looks to the future with confidence. He believes that the company is better prepared today to overcome challenges such as increased demand, mass customisation or the urgency of digitalisation. “In the future, I see a collection that is constantly being renewed and puts Sonae Arauco at the forefront of the industry. I see a collection that is an example of sustainability and of everything that needs to be done to preserve the planet. And I see something we can all continue to be proud of,” he concludes.



### Michelle Quintão

Group Marketing Director



The most defining moment of these ten years of Innovus® for Michelle Quintão is its latest update, launched in 2019 and featuring the claim “Matching Life”. **“It has undoubtedly contributed to us currently having one of the best collections on the market. That is how we created it, that is how we believed it would be. And, after the launch, the market confirmed it,”** she says.

And what is this incomparable collection made of? “This was the biggest overhaul ever: 40% of the décors were updated, which meant investment in new finishes, new papers, a greater choice so that this

could be the collection that matches our life,” she continues. The Innovus® brand, she says, is also made of a lot of teamwork, a great desire to innovate, a lot of work with clients and, especially, a lot of resilience: “The brand’s success did not begin with the launch of the products, but with all the work that went on behind the scenes. Without our teams, it wouldn’t have been possible to create such an impressive collection”. Her décor of choice is Elegance Natural in Spirit.

### Frederico Moniz

South-West Europe Commercial Director



The path of ambition is not always the most consensual. Especially when it involves a major transformation. This is what Frederico Moniz felt when the Innovus® Trade Network was created in Spain: “I remember a team meeting where I realised that we were not all aligned with the route that this project should take”, he recalls. “However, Innovus® came to show that being ambitious was the best decision.” This ambition, the willingness to take risks, is at the basis of this collection that means differentiation – concerning competitors and the company of the past. **“Through Innovus®, we have clarified who Sonae Arauco is, we have gained our position in the market and**

**quality, innovation, contemporaneity are some of the attributes that are easily associated with the company and the brand today”.** He anticipates that the next few years will be a lot of work: “We must ensure the Innovus® brand remains the best collection on the market”. At a time when sustainability is the watchword, “we should benefit from the collection’s solid credentials in this regard. This is because, since Sonae Arauco was created, we have been aligned with the principles of sustainable development”. He is a fan of Supreme White in Spirit. “Every time I see it applied to a project, it looks different to me,” he concludes.



## Doris Buchmesser

North East Europe Commercial Director



For Doris Buchmesser, “empathy” is the word that best describes Innovus®, an “authentic brand”, through whose products, she says, “it is possible to express emotions and demonstrate character.” It was this empathy, this authenticity, that meant that, a few years ago, she managed to convert a distributor who was a regular buyer of competing products. “He went into the meeting on the back foot, ready to give us a ‘no’ for an answer,” she recalls. But after the presentation, there was something that made him change his mind. “It’s an honest brand. Everyone can identify with it. Now, he is a distributor for our collection.” Him and other partners are also responsible

for the emergence of a strong brand in the northern region of Europe, which today stands out in the market, despite the highly competitive context. This is also because of its “variety and innovation”. **“The fact that we are now being imitated by our competitors confirms that we have done everything right,”** she concludes. As her favourite décor, Doris selects Feel Light Grey | Cosmos. “It is an extraordinary product, with which Sonae Arauco has demonstrated its true innovative strength.”

## Paul Lerios

Marketing Manager South Africa



Paul Lerios sees the Innovus® brand as a promise of more: “More choice, more credibility, more inspiration, more than expected.” He is proud to have been part of the team that made this choice available to the South African market, and chooses Elegance Natural as his favourite finish. “Despite the difficulties imposed by the pandemic, Innovus® is already establishing a solid presence in the country and will be able, in the next 10 years, to become the brand of choice, asserting itself as synonymous with style, sustainability and confidence.” This success is the realisation of Paul’s idea of the company before he joined Sonae Arauco; incidentally, that was

the reason he applied. He expressed that view in his first job interview: **“I was asked why I wanted to join this company and not a competitor. My answer was that Sonae Arauco had to make a decision: innovate or die. And that was the beginning of a journey of innovation that I wanted to be part of. It’s in our DNA and it’s also what Innovus® is made of.”**

## Michael Jordaan

Chief Marketing and Sales Officer South Africa



For Michael Jordaan, Innovus® takes both decorative materials and wood further. **The collection, which is now available in South Africa, represents “endless choice and a continuous flow of innovation and new trends.”** Looking back, Michael feels that the road to launching the brand in that country was an “interesting journey”. The distance in time and the conclusion of this process, which started before 2020, transformed the disappointment facing the teams because of the pandemic, which prevented them from placing the product on the market, into satisfaction. “Rather than becoming victims of the situation, we have channelled our time and energy into

becoming an even more reliable partner with whom it is now simpler and easier to do business. The relaunch turned out to be more special and set us apart,” he says. The challenge now, he says, is to move forward with consolidating the brand, with one goal in mind: Innovus® everywhere. He identifies opportunities, for example, in entering other value-added and decorative areas: “My desire is that we in South Africa will lead the group’s entry into some of these areas.” Favourite decorative material? Aurora in Spirit.

## Andreas Koch

Sales Trade NEE



The career of Andreas Koch at Sonae Arauco walks side by side with Innovus®. “The brand has been with me every day since its launch,” says one of the collection’s first representatives in the country. In his opinion, this brand is “the key to the company’s business success” in Germany. “As the name suggests, Innovus® is innovative.

**The décors and finishes just make sense in the world. In addition, they are high-quality products,”** he continues. These characteristics made the opening of the first Innovus® showroom in Hamburg such a “very special” moment

for him. From there he was able to show his customers this product and especially his favourite decorative, Organic Stone. “The proven décors in combination with the new finishes are proof that we are on the right track. It is important to continue to pay attention to new trends and never lose sight of the issue of sustainability,” he concludes.

Innovus®  
10 years,  
10 stories



## Juan Luis del Pozo

Sales Trade SWE



In the view of Juan Luis del Pozo, there are two Sonae Araucos: one before and one after the appearance of the Innovus® brand. "Innovation was adopted as a business model. This brand represents the company's biggest turning point. It has made us leaders at Iberian and almost at European level," he says. Juan highlights the creation of the Fusion range as a milestone. "From then on, all the models that followed had a very good outcome, with the help of the teams involved." His décor of choice is Supreme White in Spirit.

The salesman considers that the diversity on offer is the brand's strongest point,

as the products can fully adapt to customers' projects and visions. And when that happens – when a plan becomes reality – that is when he is most proud. "I particularly enjoy seeing the application of our products in homes." In other words, he finds particular satisfaction when Innovus® shows that it can blend perfectly into people's everyday lives.

## Susanne Böwingloh

Specification & Contracting NEE



When Susanne Böwingloh visits her customers in Germany she is often announced as the representative "of the Innovus® company". "It always makes me laugh because people remember the name of the collection more easily. And it's a good sign. It means that this name reaches everyone's heart," she says. And it is not just the name that has that ability: "It's an easy collection to present because it's very strong in terms of design, it's modern and global, and it offers a reliable service."

Although she has worked with Innovus® since the creation of the brand (or perhaps

because of this), she finds it difficult to choose just one of the more than 200 references. So, she highlights three: "Natural Concrete, Palazzo Gold, and Elegance Natural in Spirit". Her favourite project, though, is an easy choice: "There is a bakery in Berlin, near Checkpoint Charlie, where we used Innovus® HPL Digital to cover the walls with newspaper headlines about the fall of the Wall. It's a fantastic piece!"

## Jorge Lado

Specification & Contracting SWE



Jorge Lado highlights timelessness as one of the most differentiating features of Innovus®. "The fact that our decorative materials, even the earliest ones, have not gone out of fashion is a guarantee that we will be able to carry out very interesting projects in the future", he says. His favourite is Etna Oak.

Jorge confesses that he feels proud whenever he sees a good application of an Innovus® décor, whether in a hotel, in retail or even in restaurant chains. And among his most rewarding projects, he highlights a storefront redesign project for the Inditex group that has been replicated

in 3700 clothes shops around the world. The "Matching Life" collection, he says, was the most striking for him, because he was with it from the start. Regarding the future of the brand, he answers optimistically: "We are at a very high level. Our ambitions are within reach."

The headquarters of the Ageas insurance company, in Lisbon, integrates Innovus® solutions.



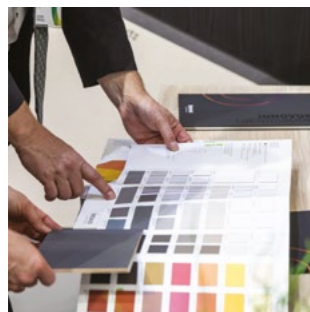


## The most significant dates of the first decade of Innovus®



### 2012

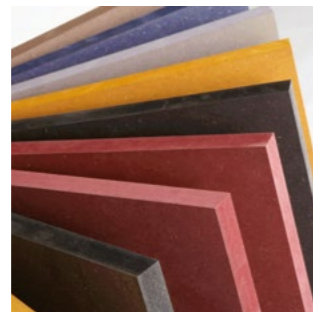
Global launch of the collection following a successful pre-launch in the German and Benelux markets. The slogan was then "A New Way to Create". This collection communicated the ambition to enable the creation of new spaces – for work, leisure and living – with innovative quality materials. This was also the year when the first IMPULSE sessions were held to introduce the product to industrial customers.



#### Did you know?

The first Innovus® catalogue consisted of just one A3 page with some samples, enough to allow salespeople to explain the essence of this collection. Currently, the catalogue contains the complete collection and has the single-colour collection in a separate, removable format so that they can be crossed and combined with different décors.

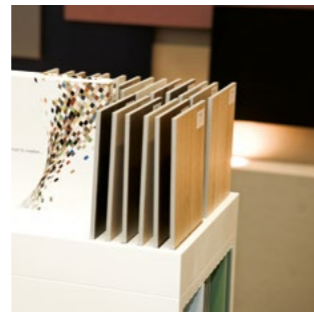
### 2014



The Topan brand became our Innovus® Coloured MDF, standing out in the market as the first coloured MDF with no added formaldehyde (NAF).

### 2015

The first major evolution of the Innovus® brand took place. The offer of 250 decorative materials included products such as Innovus® Essence, Innovus® Colour Boom and Innovus® Unicolor.



A new slogan was created, "From concept to creation". This expression was also intended to mark the evolution in the industrial field, with greater interconnection between factories, systems and teams.

### 2017

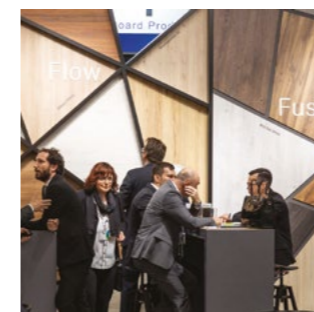
This year represented a new momentum for Innovus®. The presence at Interzum coincided with the public announcement of the joint venture between Sonae Indústria and Arauco and the new corporate brand Sonae Arauco.



The year 2017 was also marked by the launch of two new finishes: Stucco and Fusion.

### 2019

A new collection was born, with a 40% renewal of decorative materials and a new claim: Innovus® Matching Life. The desire to meet customers' day-to-day needs led to the creation of new finishes – Cosmos, Flow and Spirit – presented at Interzum along with the new collection.



In 2019, we also start implementing the Innovus® Dealers network in Europe.

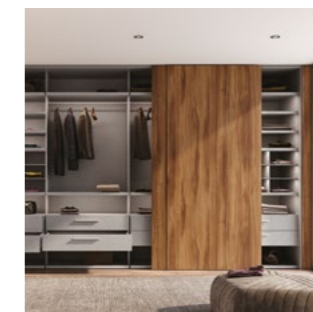
### 2020

The world has changed and so has Innovus®. We promoted Innovus® products with antibacterial properties.



### 2021

The Innovus® brand is launched in South Africa, resulting in an alignment of the decorative product range across all of Sonae Arauco's regions and a brand commitment that is consistent with customers operating in multiple countries.



Bearing in mind the way our workspaces and homes were transformed during the pandemic, the communication and promotion of the collection were adapted according to the principle "feel @home".

The collection is updated and new decorative products are launched, with one particular décor standing on the market and on employees' preferences, that has conquered the judges of the German Design Awards, the Iconic Awards and the Interzum Awards: Feel Light Grey Cosmos.

### 2022



Sonae Arauco is one of the main participants at FIMMA-Maderalia, Iberia's largest wood and furniture trade fair, presenting the most innovative decorative and finish proposals from the Innovus® collection, on the back of the brand's anniversary in Europe.

In 2022 we also celebrate the successful implementation of Innovus® Dealers in Spain and we will continue committed to growing in the remaining European markets.

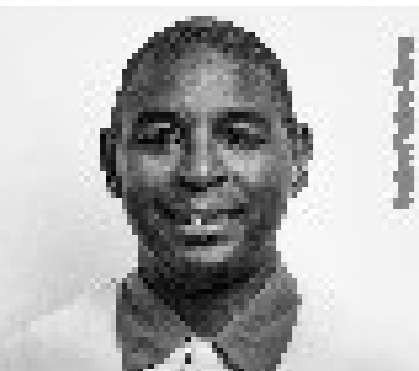




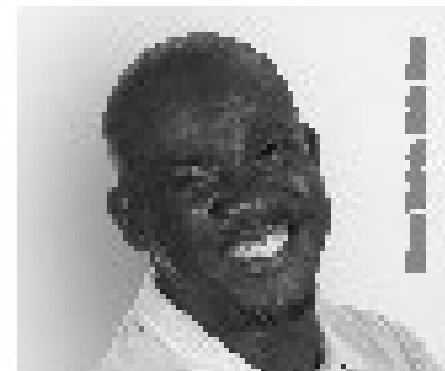
**2**  
Continents



**33**  
Nationalities



**WE ARE ALL  
UNIQUE IN  
OUR OWN WAY.**



**2600**  
Employees



**This diversity is taking  
Sonae Arauco further.**



**9**  
Countries







Adelaide Alves, 57, has been Sonae Arauco's Group R&D and Product Development Director since 2016. She has been with the company for 34 years. Today, she coordinates the Integrated Product Innovation Process, combining a long-term perspective in portfolio development with the much-needed answer in the short term, to improve the company's ability to face the market's changing demands.

## Profile

# Adelaide Alves

### *A leader who feels at home*

*Focused, solution-oriented, demanding, attentive to detail and whose technical skills are recognised by colleagues and customers in all countries where Sonae Arauco is present, Adelaide Alves is a charismatic figure in the company she's been calling home for over three decades. Direct and with a sense of humour that helps her keep calm even in the most delicate situations, she's an approachable sensitive leader who loves her "Dream Team" – and who loves her back.*

When she was called in for her first interview at Sonae, Adelaide Alves was on holiday in Algarve. With her brand-new degree in Chemical Engineering and a very particular style – “My parents used to say that I was a freak”, she says laughing, recalling also “the permed hair” – Adelaide caught a night train to get to Maia the following day. “I only had jeans and had never carried a handbag”, she says, now as a director at Sonae Arauco. It wasn't just the opportunity that took her by surprise. The interview started with a question Adelaide was not expecting, despite her Catholic school education. “The interviewer must have thought I was weird too because the first thing he asked me was if I read the Bible,” she recalls. “I nearly died.”





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Adelaide Alves manages a team spread across several geographies. Dirk Eynck, Global Design Manager (NEE), on the left, is based in Germany. Isolino Valiño, Manager Development Decorative Product, in Spain. Her colleagues say that she remains close despite the distance.

Even speechless, her determination and ability to find solutions led to her being hired for a six-month internship in the resins' development department at Sonae Indústria de Revestimentos, as it was known at the time. And there she made her first work-related investment: "I bought a handbag for my first day at work. I thought that not owning one wouldn't look good."

It's been 34 years since that day, and after having taken on various positions in different companies of the group, Adelaide is certain that she's found her home in Sonae Arauco, the feeling of belonging to a team, and a big reason to enjoy going to work every day. So much so that she doesn't even lock her car (which she doesn't particularly like to drive): "I take it very seriously when I say that I feel at home. Who's going to steal my car here?"

Going into engineering was never a goal as clear as her vast experience might suggest. She dreamed of becoming an Air Force pilot. Lacking 20/20 vision, she chose Chemical Engineering on an "impulse". "A friend of my parents was a chemical engineer and I thought his life was great: he travelled a lot, and told stories of the differences between factories in Germany and Italy." What she couldn't understand at the time, but does now, is that that man was also a very sensitive manager, a person who valued experiences and interactions with other people, with his team. It were also these traits that captivated her – and that Adelaide's colleagues now see in her. "To

be a boss is fundamental to know how to motivate people. And that's one of her most evident characteristics", points out Isolino Valiño, Manager Development Decorative Product, whom Adelaide has line-managed for seven years, although they've known each other for 20. "Above all, she's very sensitive."

#### A "very well-behaved" student

During her student years, she was "very well-behaved". She never missed a class, always paying maximum attention so she could learn easily. "In fact, I never crammed before exams: I used to go and drink beer in Praça da República", she says, referring to the usual student meeting point in Coimbra (Portugal). "And never became nervous about assessments." In this respect, she hasn't changed. Colleagues say it's very rare to see her lose focus, even when faced with a difficult situation. Helena Silva, Prototype & Sampling Centre Coordinator, who works with Adelaide since 2017, but knows her for 15 years, when she was her client. Even at that time, Adelaide's confidence and thoughtfulness were obvious: "We had to deal with many critical situations, and she was able to resolve them with empathy towards the client and without jeopardising the company's interests. I always admired her for that." Adelaide agrees: "I'm not highly strung. In very difficult situations, I sometimes resort to my sense of humour." For the R&D Director, "there is no problem

For Adelaide, "there is no problem that cannot be solved" especially when the approach is dialogue.



that cannot be solved”, especially when the approach is dialogue. Isolino recalls, for example, when the team started up the production of decorative products in Nettgau, Germany, that “the atmosphere was very reserved”. Adelaide managed to steer the situation, negotiate, and the project was successfully concluded.

#### An ongoing search for knowledge

It was not the first time that Adelaide was called upon to intervene in a delicate context. In 1998, she was challenged to lead the opening of the new EuroResinas plant in Sines. “I put the team together, chose the technology, and had a year to deliver an efficient factory,” she recalls. The lack of skilled labour, especially for base roles, and conflicts with trade unions marked this stage of her career. Her return to Porto was dictated by the success of the project and by the need to “bring the family back together”, as she had moved alone to Sines, and at a time when her two children were still very young. Despite the distance, she never lost the close connection she has with her family. “I used to watch films over the phone with my husband and we’d comment on them as if we were in the same room.” After that, she held the position of Industrial Manager, first at EuroResinas and then at Sonae Indústria.

In 2006, she returned to school. She completed a postgraduate degree in Marketing and a programme in Management for Companies, two courses that defined the manager she’s today. She’d be returning full time to Sonae Indústria as Product and Technology Development Manager.

She continues to study regularly; it’s her strategy for unlocking creativity and

staying on top of what’s happening in her industry. “I take two or three hours a week to read articles published by academia, look at competitors’ websites, attend workshops from companies in other industries...” she says. The result is often forwarded to her team members’ inboxes: “She often sends me emails with just a link, not to discuss, not to assign me a task, just to share”, says Dirk Eynck, Collection Management (NEE), who has been in her team for four years.

#### A new breath of fresh air, a greater ambition

Adelaide believes that the creation of Sonae Arauco brought a breath of fresh air, and with it, the ambition – to be creative and seek value – grew. “Up until then, it wasn’t our ambition to be recognised as trendsetters, or to have collections that could be compared to the big players in Central Europe.” After dedicating many years to Core & Technical® products, especially following her experience in resin development, the challenge also came to lead the decorative products section. Adelaide played an important role in the process of integrating techniques and products into Sonae Arauco’s European plants, paving the way for a truly global collection, now branded Innovus®. “We had the Portugal collection, the Spain collection, the France collection. A design that could be prescribed in France, could come from a German collection and be produced in Portugal. And that created a lot of entropy,” she explains.

Monday to Friday, the day starts with two coffees even before leaving her house. She gets to Maia before 9 am, at which time she has another coffee with another cigarette. “I can’t be sociable before I’ve had three coffees,” she jokes. “She drinks

The team that works with Adelaide Alves from the Sonae Arauco headquarters in Maia is composed of (from left to right in the photo):

**Joana Faria Resende**  
Collection Management (SWE)

**Helena Silva**  
Prototype & Sampling Center Coordinator

**Adelaide Alves**  
Group R&D and Product Development Director

**Isabel Moutinho**  
Product Development Manager

**André Mota**  
Senior Product Developer Technologist



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“I really like my team because it’s made up of different and somewhat irreverent people, and really works as a supportive and dedicated team”



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about seven or eight a day," says Joana Faria Resende, Collection Management (SWE), who has worked closely with Adelaide for over a decade. Cigarettes, she says, also multiply throughout the day. "If she's very focused, she can go a whole day without eating. It's often her team who interrupts her and calls her for lunch, or, if she's very busy, brings her food. We have that spirit," she adds. The first thing that Adelaide does when she arrives at her office, whose door is never closed unless she's in a meeting, is to open the notebook that lists the pending tasks from the previous day (she writes everything down, and has several notebooks, for different topics). "Some days I don't even open my email, because if I start replying to everything I can't plan meetings or think."

Outside the office, she devotes much of her time to reading crime novels and biographies (her favourite genres), watching television series, and to try out new food. "My husband and I really enjoy choosing new restaurants and trying them out," she says. Joana Faria Resende has had the opportunity to go to The Yeatman, a landmark in the national hotel and restaurant business, because of Adelaide. She says she will never forget that experience. That's not the only episode her colleague recalls with her current boss; this one also remained in Isolino Valiño's memory: "After several intense days of attending an international fair, which are always fun because of Adelaide, we arrived at the hotel and there weren't enough rooms for everyone." "Our boss didn't get flustered, Joana says. "We shared the room and the bed."

#### A people person – but direct too

It's in the relationship with her team -

which she calls the Dream Team - that she finds motivation. "I really like my team because it's made up of different and somewhat irreverent people, and really works as a supportive and dedicated team," she says. "And it's because I love this group so much that I can be very critical at times, especially if I feel that someone has delivered work that fell short of their ability. If there's one thing that makes me lose my temper, it's knowing that the person is capable and seeing them squander the opportunity." Adelaide can even be intimidating to those who come across her for the first time. "She has a very direct temperament. If she has to tell someone off, she will", Joana says. But that doesn't mean that she's not very sensitive, she recalls: "When it became official that she'd be my direct manager, we were already friends. I asked her if I should change anything in our relationship, if I should be more formal. She replied in true Adelaide style: "Are you out of your mind!?"

Adelaide "lives the company's issues a lot." She celebrates the team's victories effusively: "Sometimes even in childish ways", she says. She's been known to come out of her office and start dancing in the open-space area. The most recent celebration that Isabel Moutinho, Product Development Manager, remembers had to do with the results of a trial on the emission of VOC [volatile organic compounds] in OSB production in Germany. And even though she can't go to the industrial units as often as she'd like, and less as she has moved up the career ladder, she still gets excited when she gets to participate in creating something from scratch. "That is the most exciting part of my job." Currently, the team is involved in

renewing the Innovus® collection, creating a melamine product that can compete with the super matt lacquer and, in line with the company's goal of achieving carbon neutrality by 2040, in a project that puts the values of circular economy into practice.

### The whole company knows they can count on her attention to detail, knowledge and critical spirit for any matter

Her willingness to help, her ability to detect a flaw and find solutions in a project after a quick analysis and asking the right question, has been there ever since she joined the group wearing jeans to her first interview. And the whole company knows they can count on her attention to detail, knowledge and critical spirit for any matter. "There's a certain familiarity that comes from spending 30 years here. For example, I know that if I need to measure a gloss, I pick up the phone and call any laboratory, and I know they'll do it for me. Likewise, I know that when many people from the factories or the commercial area have a question, they'll pick up the phone and call me directly, so that we can try to work the problem out," Adelaide says. That's how it is when you're at home.

## THE PRODUCTS THAT MARKED HER CAREER



#### Core & Technical®

Much of her journey has been focused on these products. "That happened both because I started with resins, and gained a lot of experience in that area, but also because I worked on technical support and development," she explains. Adelaide considers that the most important thing she did in her career was the development of the resin that made it possible to limit formaldehyde emissions in the production of particleboard: Sonae's first E1 particleboard in Iberia. The challenges that she's now working on are in reducing VOCs and increasing the incorporation of recycled wood into our products.



#### Decorative products

When it came to decorative products, she shattered a dogma that had existed until then: that those who managed Core & Technical® products could not manage the decorative ones. "I accepted the challenge because, although I didn't know the decorative area in detail, beyond its technical characteristics, I knew that the team was very strong and experienced." In an early stage, she explains, she coordinated "from the technical side to market analysis and positioning, a bit of product management and a lot of product development and optimisation." With the arrival of Sonae Arauco, the role has specialised.

**innovus®**  
Decorative Products



#### The creation of Innovus®

It was the company's first global collection and marked an alignment of our strategy with the market trend. "I remember thinking it was strange how much money was being invested in creating a brand, but for the first time, we were thinking about messages, values, and a whole image around it. I'm glad the name was good enough so that nobody was tempted to change it."

#### Innovus® 3.0

The finishes were developed by Sonae Arauco. "I'm particularly proud of that. That's the most exciting part of my job – creating something from scratch." Even when teams are happy, she explains, the proof of success is provided by the market. "At the presentation of the collection, a lady touched our Cosmos, my favourite finish, and gave us the best possible compliment: 'I didn't know you sold stones too.'"





Destination

# Berlin

Discover the German capital and its surroundings

## Berlin

The metropolitan region of Berlin/Brandenburg is the heart of Germany. Famous for its diverse architecture and for ensuring a good quality of life for its six million inhabitants, this area includes not only the country's capital but also Beeskow, one of Sonae Arauco's most valued locations. From urban to industrial, including rural landscapes, it's a place where you can find a bit of everything you need in a visit – whether it's a few days or longer, alone or with your family. This is our destination in this issue, through our employees' suggestions.

### Sonae Arauco in Germany

Around 1100 employees  
Industrial and commercial units:  
Beeskow, Detmold, Meppen,  
Nettgau and Kaisersesch

The Sonae Arauco team  
who contributed to this article:



Christoph Wenderdel  
Process Engineer  
in the PB line



Nerses Fatunz  
Eastern Europe Sales  
Manager

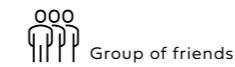


Sandy Hilgenfeld  
Plant Manager  
Assistant

### Where to go?

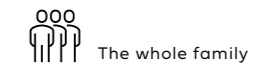
#### Schlaubetal

Perfect for long walks, this region is known for its green, leafy forests and is only 80 kilometres from Berlin. Several marked trails allow you to get to know the lakes, the valleys, and the most characteristic bridges, not forgetting the rich (and photogenic) fauna and flora that can be found there.



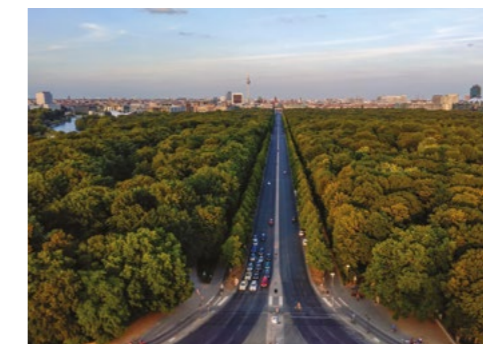
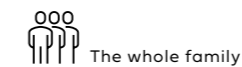
#### Lake Scharmützelsee

Just 45 minutes by car from Berlin and 15 minutes from Beeskow, is the summer paradise for locals: Lake Scharmützelsee offers not only a cool dip but also a variety of activities for couples and families, such as sailing or fishing.



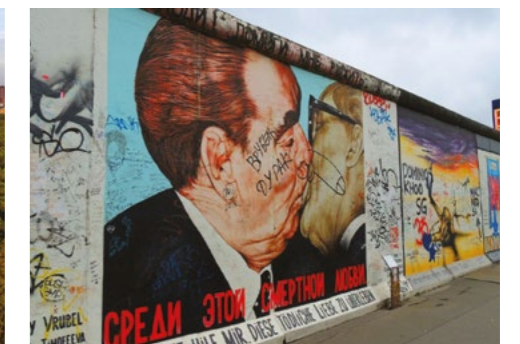
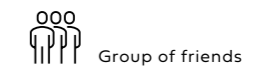
#### Tiergarten

Covering 210 hectares, the Tiergarten is Berlin's second-largest park and is known as the city's green lung. It's ideal as a break between monuments, a relaxed weekend picnic, or an energising run. It's also home to the city's zoo, one of the largest in Europe, with 20,000 animals of 1,300 species.



#### East Side Gallery

What was once a wall dividing the country now brings the whole world together around art. These 1.3 kilometres of the Berlin Wall that remain from the Fall make up the largest open-air art gallery in the world, where you can see Dmitri Vrubel's famous Fraternal Kiss or Birgit Kinders' Trabant ripping through the wall.





## What to do?

### Kulturforum

This is what the cultural area of the city of Berlin is called, where the main museums are located, such as the Neue Nationalgalerie, the most important art museum of the 20<sup>th</sup> century in Germany, and also one of the city's architectural landmarks.



The whole family



### Mauerpark

This is Berlin's best-known stall market, held every Sunday. Here you can find a wide variety of items, from local designer clothing to old records and vintage items. There is also an outdoor stage where hundreds of people gather for live concerts.



Group of friends



### Schaubühne am Lehniner Platz

Germany is the world capital of avant-garde theatre and this is one of the venues keeping that flame alive in the city. The building, designed by Art Deco pioneer Erich Mendelsohn, is a must-see and its billboard always invites you to enter.



Couples (or two travellers)



### Reichstagskuppel

Visiting the national parliament may not be the first priority on a sightseeing trip. However, it's easy to change your mind when it comes to Berlin. When you climb the dome of the building, you can see the city from a privileged point – and also watch parliament at work.



The whole family



## Where to eat?

### Markthalle 9

This old market, nearly 130 years old, is now a dynamic place that, besides hosting the traditional weekly market, has several street food stalls and local products. Who can say no to currywurst, the city's traditional dish? It's also a perfect representation of the Berlin of our times: vibrant, aware, and diverse.



Group of friends



### NENI Berlin

Located on the rooftop of the 25hours Bikini Berlin hotel, with fantastic panoramic views of the city's west side, NENI Berlin offers a menu with diverse inspirations, from European to Oriental flavours. Here you can order a "Beautiful Chaos", a dish that offers all the experiences the chef has in store for visitors.



Couples (or two travellers)



## Events not to be missed

### The Berlinale

February

The *Berlinale* (or Internationale Filmfestspiele Berlin) is one of the most important film festivals in the world and probably also the biggest cultural festival in Berlin.

### Karneval der Kulturen

Spring

*Karneval der Kulturen* is a carnival festival that has been celebrated in Berlin for over 20 years and aims to send a cultural message of diversity in the German capital.

### Lange Nacht der Museen

Last Saturday of August

On *Lange Nacht der Museen* (Long Night of Museums), around 80 museums remain open overnight with surprising programmes. The ticket covers entry to all museums and the use of some of the city's public transport.

### Nobelhart & Schmutzig

Number 45 in "The World's 50 Best Restaurants 2021", at Nobelhart & Schmutzig, considered "Germany's most political restaurant", you will find only food sourced from the Berlin region. In this establishment you are encouraged to leave your mobile phone aside and enjoy the moment; you're not even allowed to take pictures.



Couples (or two travellers)



### Plant Base

Plant Base is a vegan café and also a bookshop. In this pet-friendly space, most of the products on the menu are organic and sustainably sourced. In addition to great breakfasts and lunches, you can also participate in various events and workshops. Brunches are also a specialty.



The whole family



## Where to stay?

### Hotel Aldon Kempinski Berlin

The 5-star Aldon Hotel is considered one of the most luxurious hotels in the German capital, located on the main avenue in Mitte, the city centre. This fantastic hotel offers city tours, spa services, and excellent bars and restaurants.



Couples (or two travellers)



### Singer109 Hostel Berlin

Singer109 is a hostel located in the centre of Berlin, close to all major tourist attractions. It offers everything from private rooms to beds in mixed and/or women-only dormitories. The hostel also guarantees a cheaper price for bookings made through its website.



Group of friends



### Pet-friendly loft

In this incredibly equipped industrial loft available on Airbnb Plus, located in Kreuzberg, you can take your pet with you to Berlin. This one-bedroom flat is ideal for couples – although it also has a sofa bed that can accommodate two more people.



The whole family



### SATAMA Sauna Resort & SPA

On the shores of Lake Scharmützelsee you will find this resort and spa, which is known for its ten saunas, each with different characteristics, such as temperature and humidity, or the various rooms equipped with jacuzzis. A dip in the fresh waters of the lake is recommended afterwards for a more effective treatment.



Couples (or two travellers)





## Guest

# Reimagining wood solutions for a nature-positive built environment

## Akanksha Khatri

Head, Nature Action Agenda  
Centre for Nature and Climate  
World Economic Forum

With an estimated 40% of global GDP currently originating from the built environment, this system is of crucial importance to the global economy. Together, the built environment and the construction industry are responsible for 39% of all carbon emissions globally. As such they are a crucial part of our path to delivering on the Paris Agreement goals.

But this is not only about the macro-economic indicators, but also about inclusivity and well-being of people. Every week until 2030, around 1.5 million people will be added to cities, and built areas will continue to grow. In addition to looking at direct use of materials, it is important to look at the system that supports the generation of input materials and allied industry sectors. For example, forest economies support more than 45 million direct and indirect jobs globally. In the Congo Basin, 80 million people depend on the forest ecosystem for their livelihood, food, energy, medicine, and water, and in Ethiopia, 13% of the national GDP is dependent on forests, with half the country's population employed in the forest sector. The decisions we take today will bind us into a future that can

either be built on an old-school extractive economic model with negative health and environment externalities, or we can pivot towards a new nature and people-positive economic model that supports a regenerative construction and forestry sector.

This also creates new investment opportunities for businesses to secure the future of forests, thereby securing the commodities supply chain to meet the demand for timber and non-timber products. Private sector can bring its expertise in investment and innovation to combine with indigenous and local people's knowledge on native species that can be climate-resilient. In the future it is imperative to look at forests as opportunities for significant value-add and transforming from primary to multiple-benefit advanced commodities.

The World Economic Forum's initiatives on Circular Bio-Economy and BiodiverCities by 2030 are working through public-private cooperation to reimagine the way we design our urban infrastructure for both residential and commercial properties. Working with



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experts, architects, corporates, real estate developers and the public sector, the initiatives are furthering understanding of sustainable materials and carbon footprint of our buildings. Some of the most carbon-intensive materials in the built environment are also the more mainstream choices today such as concrete, steel, and masonry. Various alternatives are gaining popularity, including wood construction solutions. In addition to the private sector's efforts on new constructions, greater transparency and public disclosures are required so consumers can make informed decisions and investors can manage their risk portfolios.

A new movement amongst the construction sector is taking shape, that advances the principles of circular bioeconomy and looks at the entire life cycle of materials such as

sustainable timber. For example, a social housing tower in Barcelona and Stora Enso's new HQ built from timber provide inspiration by mixing design principles, corporate commitments and social and environmental considerations.

There is urgent need to pivot away from business-as-usual towards a net zero, nature positive pathway and how we reimagine our buildings must be central to this transition.

**This model also creates new investment opportunities for businesses to secure the future of forests, thereby securing the commodities supply chain to meet the demand for timber and non-timber products.**







The demands of the market are changing, mirroring an interconnected world that never stops. Smaller volume orders and shorter delivery times are the new normal for factories, which must continue to ensure maximum quality of their products, taking into account external constraints, namely in the supply chain, while complying with increasingly demanding sustainability criteria. This context demands a profound transformation of industrial operations and the digitalisation of processes is unavoidable. Along with a mindset of ongoing research and development, it is becoming consolidated as the basis for maximum optimisation of operations, but not only. **Available data shows that this transformation is also a way to ensure business sustainability.** A recent study by management consulting firm McKinsey & Company estimates that **companies that manage to introduce Industry 4.0.-related tools into their processes will see machine downtime reduced by between 30 and 50%**; see improvements in productivity of

15 to 30%; increases in production capacity of 10 to 30%, and reductions in quality costs of 10 to 20%.

This is why Sonae Arauco has carried out a profound reorganisation of the Industrial & Technology department. This new organisational model (see chart) was built to maximise and homogenise the creation of added value in our industrial units, in the different geographies where we are, explains Ana Fernandes, Chief Industrial & Technology Officer (CITO) of Sonae Arauco: **“The reorganisation is underpinned by the belief that corporate functions and industrial units should work in close partnership, driven by the principle of leveraging the full potential of the factories in each industrial domain, to make Sonae Arauco an industrial benchmark in the wood solutions sector and contribute to our company’s long-term sustainability.”**

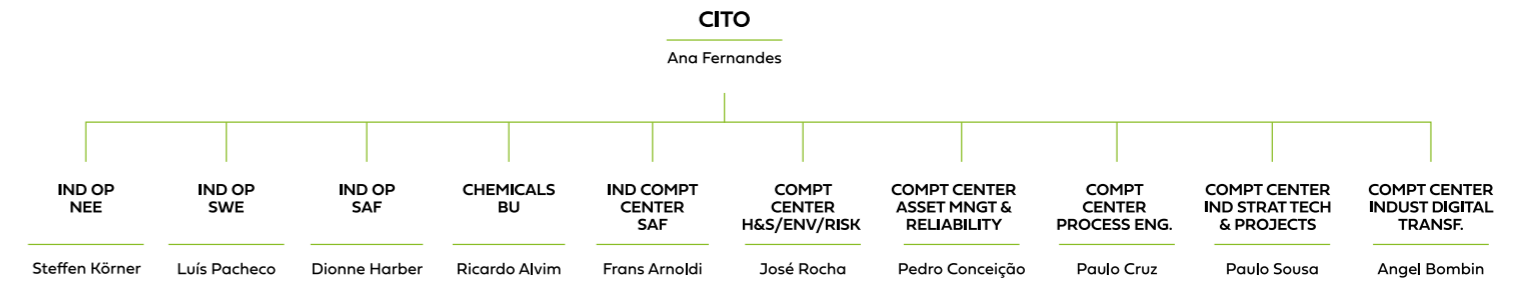
Sonae Arauco’s new industrial organisation model is based on Competence Centres,

which, she adds, “will be responsible for identifying processes and tools to meet needs, achieve specific objectives, and share knowledge in a very pragmatic way, also ensuring the standardisation and continuous improvement of processes.” In other words, our people are key to the equation.

**So, what is the factory of the future made of?**

**On one hand, it is a digital plant, which has a dematerialised twin (accessible via a mobile phone, for example) that provides teams with extensive, relevant, real-time data to support decision-making. On the other hand, it is a factory in which equipment problems are anticipated and equipment potential is optimised – based on a predictive maintenance model.** To implement this vision, Sonae Arauco has created a new department - Asset Management and Reliability. “Our strategy is based on the joint working of the various

**The new organisational model of Sonae Arauco’s Industrial and Technology area**



Competence Centres with the factories, supported by the IOW department, and based on the premise of anticipation. Our aim is that in the future we will be able to act rather than react, avoiding equipment breakdowns and increasing service life. The rule will be to make scheduled stops.

All this on a common platform for all factories and following the technological architecture of Factories 4.0.”, she concludes.



Ana Fernandes  
Chief Industrial & Technology Officer (CITO)



## The Digital Plant: a smart factory in the palm of your hand

Since the end of last year, the operation of our industrial unit in Linares, Spain, fits in the palm of your hand. What does this mean? “There is a digital twin of the plant, which allows you to know what is happening at any time, via a mobile device, for example, from input on the production line to dispatch,” explains Plant Manager, Sebastian Prieto. All the information comes from a single source: it is centralised on a platform that monitors over 2,000 indicators in a drill-down system – from global indicators to individual ones, visualised in Pareto diagrams.

To support decision-making, the platform relies on the power of artificial intelligence. The manager explains that “if there is equipment whose performance is out of the specified parameters, the teams receive a notification on their mobile phone and act immediately.” A “chain of help for critical parameters” is triggered. This automatic notification is also intelligent: it is sent to the right people, depending on each situation – and can reach the smartphone of an operator or an industrial director. “The Digital Plant has transformed the way we work. Today we have a powerful source of information in real-time. In addition to

reacting quickly to unforeseen events, we can reduce them by acting on situations which, without the proper attention, could become serious and maybe even result in a total stoppage of a line or compromise the quality of production”, he concludes.

**The Digital Plant is enabling us to improve our OTIF service indicator (On-Time In-Full) and has already changed the way the various daily meetings of the factory production lines are run.**

From left to right: Sebastian Prieto, Blas Moreno and Juan Manuel Cortes



“Whenever several departments are involved, less time is wasted, as the data is already prepared by default”, stresses Sebastian Prieto, explaining that this group unit was the first to fully implement what began as a pilot project on the melamine line at the

Oliveira do Hospital plant in Portugal. The advantages of this system are not only short-term. “Detecting the first signs of error also makes it possible to prevent equipment breaking down and to increase its lifespan by acting with strictly necessary scheduled shutdowns”,

explains Angel Garcia Bombin, Industrial Digital Transformation Competence Centre Director.

**“This is the culmination of a very large, cross-sectional project, developed in conjunction with several departments – IT, IOW, Industrial Digital Transformation and the Factories – in which the teams collaborated in an exemplary way, this being the determining factor for success,” says Ana Fernandes.**

From left to right: Eugenia Molino, Nicolas Olivencia, Joaquin Cabrera, Juan Manuel Cortes, Blas Moreno and Manuel Garcia



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How did we get here? The foundation was extraordinary teamwork (see box) and the talent of our people.

Sonae Arauco's Digital Plant is based on complex technological architecture, heavily supported by Microsoft cloud tools, and was developed 100% in-house according to need, explains Pedro Costa, Group Strategy Process Management & IT Director. In other words, we have created a bespoke digital factory. This is one of the reasons that make this project different from others developed within the scope of Industry 4.0., especially when looking at the reality of the

market. "It is normal for companies to have a team dedicated to Industry 4.0., but the kind of synergies you get by involving the different departments is unprecedented. It is more complex, but the gains outweigh that", adds Angel Bombin.

**During this year, the Digital Plant model will reach all lines in Oliveira do Hospital and the units in Mangualde and Valladolid. There are plans to apply it to factories in Germany and South Africa in 2023.**

"This roll-out is greatly facilitated by the migration we did a few years ago to the cloud. All information is centralised, which allows for local configuration", says Pedro Costa. In the meantime, the teams will continue to focus on monitoring the projects that are already up and running, to make them evolve and make the most of their potential, based on the premise of continuous improvement.

## This is the team that is leading the Digital Plant project



**Alberto Vicente**  
Project Engineer



**Angel Garcia Bombin**  
Industrial Digital Transformation  
Competence Center Director



**António Pereira**  
SC & Industrial Bus  
Applications Manager



**Carlos Gómez**  
Project Engineer



**Cristina Rosa Correia**  
Head of Technology Architecture



**Gabriela Mota**  
Sonae Arauco Knowledge  
Academy Manager



**Miguel Gomes**  
Technology Architect



**Pedro Costa**  
Group Strategy Process Management  
& IT Director

## A predictive maintenance model: from reaction to anticipation

**In the future, Sonae Arauco's teams will decide the best time to carry out maintenance on their most critical equipment – there will be less reactive responses to errors or breakdowns.**

The company is moving from a reactive to a predictive management model. The new Asset Management and Reliability department, which is Sonae Arauco's first corporate department focused on maintenance, was created to turn this vision into a reality. It will be dedicated to ensuring a proper maintenance service in all plants, anticipating problems and optimising the potential of the equipment. "We aim to improve equipment availability and optimise costs, based on the implementation

of standard excellence processes for maintenance and risk, supported by data and digital transformation," says Pedro Conceição, Asset Management & Reliability Director. Digitalisation plays a key role in this process: "By monitoring all performance indicators and building up a traceable information history, it is easier to see when equipment might need maintenance and you do not have to wait until it has stopped completely for that to happen.

One of our goals is to reach 90% minimum availability of the production lines (of Availability Index - AI) and, later, 92%, in line with the current reality of our shareholder Arauco", he adds.

The first steps taken by this department towards this paradigm shift – from reaction to anticipation – were the definition of a policy that will be the basis for designing all maintenance processes.





This is divided into two main groups: management and engineering. “From here, we signposted priority initiatives that will be redesigned to be able to adapt to the reality of each industrial unit,” explains Pedro Conceição.

The journey will be long, he warns, but the action plan is set out. There are six key projects identified by this team (see box): implementation of Root Cause Analysis (RCA)/Problem Resolution processes; definition of a new maintenance organisational model; definition of master indicators; implementing Maximo in all plants (the company’s official Computerised Maintenance Management System); supercritical asset management; and the company’s methodology for preparing and carrying out shutdowns.

The first point is a pillar for maintenance since to solve a problem, it is necessary to understand how this is done and what the priority issues are. “Our aim is to monitor and have actions that prevent repeat downtime and to train the teams to do RCA well, involving more and more employees in this problem-solving mentality,” he sums up.

The implementation of these processes implies an improvement in how maintenance is organised, which will mean the existence of a maintenance engineering and planning department,

which we call the Reliability Centre, that supports implementation, with the definition and revision of strategies to be applied to assets, as well as the planning of tasks. “The idea is to have the right strategy for each type of equipment. We cannot treat all equipment the same. We need to have a plan to follow up, to measure how the equipment is performing,” he continues. The identification of four priority indicators, in addition to the Availability Index, is also necessary for these strategies to be well defined, balancing costs, risks, and results.

The strategy to implement Maximo is being redesigned to generate the desired results. “We carried out an analysis, saw the results, identified failure modes and the main causes, and decided to change the format, bearing in mind also that the same system must be implemented in factories with completely different maturities,” says Marco Ferreira, Asset Management, Master Data & Tools Expert. Thus, the new implementation strategy of Maximo will be adjusted to the reality of each plant and will have a measurement system with a greater focus on reliability results.

The management of supercritical assets is related to risk, as the equipment produces different types of impact. Thus, a system was created for the identification of each one, taking into account their criticality (from secondary to supercritical). The

maintenance strategy for each asset is adjusted accordingly and we start with the equipment that has the highest risk. “In this context, it is worth highlighting the work of real-time vibration monitoring/sensing of supercritical equipment – standardising, measuring, and reacting is the new way to be – which is supported by Industry 4.0. methodologies aimed at increasing its reliability and avoiding downtime,” says Alfonso del Rio, Reliability Engineering Expert.

Finally, the methodology for preparing shutdowns and their follow-up will be a priority area. “There is still a long way to go to implement all the maintenance excellence processes,” explains Pedro Conceição. “And there are many challenges at this stage, such as training people, gradual and sustainable implementation, combined with demonstrating short-term results that show we are moving in the right direction. This is a transformation that requires time,” he summarises.

**The factory of the future is thus based on an unprecedented interaction between industry, technology, and big data. But it does not do away with vision, ambition, knowledge and, of course, teamwork, the hallmarks of companies that last.**

## This is the team leading the challenge of evolving toward a predictive maintenance system

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**Alfonso del Rio**  
Reliability Engineering Expert



**Marco Ferreira**  
Asset Management,  
Master Data & Tools Expert



**Pedro Conceição**  
Asset Management  
& Reliability Director







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