

AMORIM NEWS

YEAR 37 / NUMBER 4

A material for the millennium

Did you ever imagine that cork makes an important contribution to reducing the carbon footprint of cars, ships and trains? Did you know that houses, companies and public buildings use cork as a thermal, acoustic and anti-vibration insulation material? Did you have any idea that cork is the common denominator that enables children to play in harmony with nature, helps mitigate climate change and ensures safer space exploration? Did you believe that it would be possible to eradicate detectable TCA (trichloroanisole) from cork stoppers? Did you realise that cork oak forests provide benefits to society that on average are worth more than €1300/hectare/year? We demonstrate all this and more in this edition of Amorim News.



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When António Alves de Amorim built his first cork stopper factory in 1870, in Vila Nova de Gaia, he surely never imagined that this modest entrepreneurial gesture was the embryo of what would become, 150 years later, the world's biggest cork transformation group.

Successive generations of employees have always shared, defended and preserved the core values of Corticeira Amorim, that underpin this extraordinary story, filled with challenges, obstacles and achievements. The company has continuously striven to achieve success through a combination of work, talent, perseverance and ingenuity, combining knowledge and technical expertise.

But above all united by the passion that inspires us all: cork. Cork has unique characteristics that no product created in a laboratory has yet been able to replicate: each cubic centimetre of cork contains about 40 million cells! It is a 100% natural, ecological, renewable, recyclable and reusable raw material. Light, waterproof and hypoallergenic. An elastic and compressible organic resource, waterproof, floating and resilient, which offers thermal and acoustic insulation. An unparalleled raw material that is capable of generating social, environmental and economic value, with high sustainability credentials, and helps ensure a balanced climate.

Given these attributes, and observing the new paradigms of sustainable development, increasing environmental concerns and the countless possible uses within an endless set of activities, it is easy to foresee rising demand from different industries for cork-based products, solutions and applications. First and foremost, there is an umbilical link between the cork stopper and wine. Year after year, we have consistently gained higher market share compared to so-called plastic closures, using a strategy based on innovation, performance and sustainability. In fact, the recently introduced Naturity and Xpür technologies reflect this successful plan. Today, all of our cork

stopper segments deliver non-detectable TCA performance, and thereby fulfil the promise made in mid-2018.

I would underline the increasingly widespread use of cork in the fields of architecture, construction and interior design. This positioning will be further consolidated as we enhance cork's appealing visuals, sensory character and tactile characteristics, as well as its technical performance that delivers improved well-being, comfort and long-term use. Finally, we are investing in the development of new applications and combining cork with other materials, reinforcing our understanding, expertise and partnerships. The aim is to expand the portfolio of products and solutions beyond the established sectors of aeronautical and aerospace, transport, design, fashion or sports.

It is easier to attain such goals in line with our accelerated ability to embrace ESG (Environmental, Social, Governance) practices. We are aware that ensuring a stable future crucially depends on facing environmental, social and governance factors as critical conditions for competitiveness. In this context, Corticeira Amorim's mission is crystal clear: to add value to cork in a competitive, differentiated and innovative manner, in perfect harmony with Nature.

António Rios de Amorim
Chairman and CEO of Corticeira Amorim

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Corticeira Amorim issues 40 million euros in Green Bonds

Corticeira Amorim completed its first issue of Green Bonds. The €40 million bond issue aims to refinance a diversified set of green investments conducted in 2017, 2018, 2019 and the first half of 2020, by eight companies from the five Business Units of the Corticeira Amorim group. Banco BPI, SA was responsible for organising and managing the issue and providing the subscription guarantee. It will also act as paying agent. This was the first time that the world leader in the cork sector has issued Green Bonds. “This pays testament to our commitment to sustainability”, stressed António Rios Amorim. “This is not a new commitment – this bond issue will refinance the investments made from 2017 until the end of the first half of 2020. This is a strategic and financial involvement that has

already been implemented and which, we estimate, will provide a positive environmental impact, helping us attain the UN Sustainable Development Goals. Sustainability has always been a fundamental pillar of our business activity, transversal to our entire value chain, and now also plays a central role in our financing strategy – a segment which we can access because we have incorporated this vision in our strategy and decision-making”, concluded Corticeira Amorim’s Chairman and CEO. Sustainalytics (a company that specialises in research, ratings and ESG information) reviewed these investments and issued the respective Second Party Opinion, confirming their alignment with the Green Bond Principles (version June 2018) of the ICMA – International Capital Markets Association.

Corticeira Amorim wins a World Finance magazine Sustainability Award

Corticeira Amorim received the top prize in the “Wine products industry” category of the World Finance magazine’s Sustainability Awards. Distinguished for the second year running, the award recognises Corticeira Amorim’s sustainable development principles and practices implemented throughout its value chain, underpinning a vast portfolio of products and solutions with superior technical performance and unparalleled sustainability credentials.

The Sustainability Awards are attributed to companies that have demonstrated a remarkable commitment to sustainable development. The World Finance magazine explains that the awards are

granted to entities that have “made an extra effort to integrate financial, social and governance (ESG) values in their different areas of business”.

Referring to Corticeira Amorim, World Finance stated: “The company has been adjudged the winner for its longstanding commitment to environmental, social, governance and Socially Responsible Investors’ reporting, alignment with the UN Sustainable Development Goals, responsible supply management, FSC certification, as well as ongoing commitment to R&D. The international jury has taken into consideration efforts on investment in sustainable forestry by preserving land and biodiversity with

the cyclical harvesting of cork without damaging the trees, as well as looking after the well-being of its workforces.”

“Corticeira Amorim has been recognised for its analysis of the environmental impacts of its products, comparing the life cycle of cork stoppers with those of aluminium screwcaps and plastic stoppers, which highlight Corticeira Amorim’s effort to align its production processes with natural environmental cycles and promotion of the circular economy.”





Cork is a “living” material, each piece is unrepeatable, and this makes it unique and eternally surprising

Guta Moura Guedes, the co-founder of Experimenta Design, is the best-known Portuguese professional in the international design scene, with an active and intense career, as a curator, creative director, strategist and thinker. She has developed a special relationship with cork, at both an emotional and intellectual level, and has in-depth and intimate knowledge – through the projects Metamorphosis, Materia and now CityCortex. She believes that this “flexible, adaptable and resilient” material still has much more to offer, and that the future will depend on everyone’s contribution, through the process of user innovation

What was your first memory / experience of cork?

My first contact was, perhaps, typical for a Portuguese woman, especially for someone who likes nature as I do. My childhood memories include seeing cork oak trees and I soon realised that cork comes from these trees, since I saw the cork bark on the tree and sometimes, on the ground after it had been stripped. As an adult, I have a memory that marked me immensely and changed my perception of cork in terms of its application in the field of architecture. It was during a visit to a house on Lake Maggiore, in Switzerland, designed by the American architect Marcel Breuer in the 1960s. The house is entirely made of stone, glass and wood, which is evident from the outside. But as I entered inside, the atmosphere of the house was quite different from my expectations, with a unique sound quality and aroma, very comfortable and warm. When I looked up at the ceiling, I realised that Breuer had covered it with regular, thick tiles, made of 100% natural, dark cork. This option changed the entire house in a huge number of dimensions, significantly improving it, which is something that I have never forgotten.

What makes this material so special?

First, the fact that it is natural and sustainable – which is an absolute priority for all humanity. Next, its texture, gentle aroma, comfort and its capacity to alter its shape when compressed, to repel water, and offer protection. We are talking about a material that a specific tree – the cork oak tree – produces to protect itself, to become more resistant. It is also special because we can use it without harming the tree, on the contrary. And that is wonderful.

What characteristics of cork would you highlight as being central to contemporary design and architecture?

All of them. From impermeability and thermal and acoustic insulation to its resistance to fire, high temperatures and friction. Its elasticity, compressibility and resilience. The fact that it is hypoallergenic, comfortable and soft to the touch. It has an immense range of characteristics, all of which are important for equipment design, product design and architecture. This century is all about sustainability and mobility, in which we must design artifacts, buildings and cities that are flexible, adaptable, resilient, comfortable, and which interact emotionally and intellectually with our body. Cork, as a material, brings these dimensions to the design culture.

First MATERIA, then Metamorphosis and now City Cortex. These are striking projects, with involvement and proximity with cork. After these experiences, does cork still surprise you?

I am still surprised by cork's physical impact on me. I can feel the presence of cork, when it is being used somewhere. That impresses me a lot. The projects that you just mentioned, first Metamorphosis, then MATERIA, were, I think, true levers for innovative use of cork and attracted the attention of thousands of creatives around the world for this material. I clearly remember the day when Corticeira Amorim's CEO, António Amorim, met with me in 2006 at the Casa da Música, where I was the Director of Strategic Design and Communication, and challenged me to think about how to explore the potential of this material that, at the time, was only being used by relatively few architects and designers. I remember my genuine surprise when I learned everything about cork. City Cortex, which will be presented in New York in 2021, will take cork to urban contexts and bring it closer to people in

very stimulating and positive ways. I have been following the development of these new projects and yes, I am also surprised by the way that cork is responding to the imagination of architects and designers. Cork is a "living" material, each piece is unrepeatable, and this makes it unique and eternally surprising.

Sustainability is undoubtedly a critical issue, absolutely strategic and transversal. In this context, how does cork make a difference, compared to other materials / options?

Cork is a sustainable material that is not artificially produced by humans. It does not depend on an industrial creation process. It is combined with a system that is itself renewable, recyclable and reusable, and is therefore truly environmentally friendly. The "*montados*" – oak, holm oak, chestnut and cork oak forests – actively contribute to the balance of the Mediterranean ecosystem, and form part of one of the world's 36 global biodiversity hotspots, offering an ideal habitat and survival conditions for more than 200 species of fauna and 135 species of flora, and actively helping to combat climate change. All of this makes a huge difference.

Cork is profoundly linked to Portuguese identity. But it is also a material with incredible potential, on a global scale. How is this bridge achieved?

It is excellent for a material to be part of a country's identity. In this case, cork and Portugal are an inseparable binomial. But it is even more extraordinary to be able to expand that identity on a global scale. And that is what is being done – from the traditional use of cork in stoppers until its present use in floor and wall coverings, spacecraft and everyday objects. This bridge is achieved because the material itself and the way that our national industry has developed, has confirmed its potential as a material of choice for society in general, and for humanity. We were all born in different places, we are all individuals with unique characteristics, but in so many different aspects we are all looking for the same. Everywhere in the world we look for safety, comfort, flexibility, physical and mental well-being, resilience. And cork helps provide that. When it is well designed and used, of course.

Which cork-based applications do you think are most notable and why?

I can't help but start with the beginning, which is the cork stopper. It is so simple, so effective, and so positive for the liquid it protects. A wine is only a good wine when sealed with a cork stopper, in my opinion. I confess that I have a special appreciation for the use of cork in private or public spaces, when it helps improve their acoustic conditions and temperature; when it is used in small objects, that replace equipment or objects made from plastic or other less sustainable materials. I must also say, although I cannot disclose any details, that what we are developing with City Cortex will deliver some new and remarkable applications to cities, where we need so much quality in the area of public or semi-public urban spaces.

How can the potential of cork be expanded?

Corticeira Amorim has done a unique job in the development of several new solutions in which cork is used. It has invited some of the world's greatest creatives and researchers to expand its industrial achievements with them. This dynamic will certainly continue, but in a very short space of time something wonderful will happen, with more expression, based on the idea of user innovation. In other words, as cork becomes more familiar and better known by everyone, and more people know about its value and characteristics, the more innovation we will have. This will come from the least expected areas, through the genuine contribution of users, who have tremendous creative capacity. The fact that the world in general is finally aware of the need for sustainability will lead people everywhere to pay more attention to sustainable materials. And the "do it yourself" spirit will contribute to expand the use of this unique material, which has so much to give us.



Cork

A MATERIAL FOR THE MILLENNIUM

The future is happening now. At Corticeira Amorim, the future is our present and cork is at the centre of our world. The unique characteristics of this completely sustainable natural material establish a bridge between the worlds of today and tomorrow. Between what we currently have and know, and what we long for and imagine. From the forest, where everything begins, to the cities where we build a future that has a positive impact on the community. From the comfort of our homes, to the mobility that enables us to be connected, communicate and grow. From the micro-universe of a cork stopper, with 800 million cells, to outer space. The future of cork is happening here and now. It opens, expands, renews and surprises us. A snapshot of a material for the millennium.



City Cortex: smart cities are also made of cork

The question is urgent: what cities do we want for the future? And what contribution can be made by cork – one of nature's most versatile and sustainable materials – to achieve this new reality? Corticeira Amorim challenged some of the world's finest designers and architects to reflect on the subject and present proposals, in a ground-breaking project curated by experimentadesign. City Cortex explores the intersections between cork and urban contexts, and how the future is happening now.

After many months of hard work, City Cortex was scheduled to be presented in the summer of 2020, in one of the world's largest cities: New York. But it had to be postponed due to the pandemic, which also forced the postponement of major international events, such as the Olympic Games (for the first time since 1944). But that didn't stop this effervescent project, which spans various parts of the planet, from uniting some of the brilliant minds in the field of design and architecture, around a common goal: using cork to rethink the cities of the future. There are five renowned design

studios that, within the framework of City Cortex, are creating items of urban equipment for public use in New York City, using cork from Portugal. Diller Scofidio + Renfro, Gabriel Calatrava, Leong Leong, Sagmeister & Walsh and Philippe Starck began by visiting the cork oak forest and Corticeira Amorim's facilities to gain an initial approach to a material that is so incredible that many view it as the natural technology of the future. Within a continuous process of questioning and discovery, they are now responding to the stimulus that cork has posed to their imagination and creativity.

Each of them, inspired by cork, is developing new applications for cities, solutions that have been conceived and designed to improve people's experience and quality of life, in public and semi-public urban spaces. City Cortex is a research project, and also an implementation project: the idea is to take cork – a material born in the forest (which makes it possible to preserve and protect this forest) – to the heart of cities, bringing it closer to people through different contexts, applications and scales, where it can deliver a new dimension.



Corkeen: playing in harmony with Nature

Directly inspired by nature, Corkeen is a revolutionary system for playgrounds and leisure and recreation spaces. It marks a before-and-after moment in the way that we enjoy public spaces in cities. Safety, accessibility and sustainability are the keywords of an innovative solution that, after achieving success in Northern Europe, has now been installed in Monsanto Park, in Lisbon.

Community, nature and the planet. These three key concerns are strongly upheld by the new Corkeen solution, developed by Corkeen Europe, a company owned by Corticeira Amorim. Developed on the basis of circular economy principles, Corkeen is a revolutionary solution for impact-absorbing surfaces for playgrounds and leisure and recreational spaces. Produced with cork – a 100% natural, recyclable and renewable raw material – Corkeen combines safety, accessibility and sustainability credentials.

Light, odourless and hypoallergenic, Corkeen results from comprehensive use of waste from the cork industry. The

energy used during production derives from biomass (cork powder) and at the end of the product's life cycle all materials will be reusable. Installed in situ as a two-layer system (a shock-absorbing base layer, plus a wear-resistant top layer), it preserves its unique characteristics even after years of use. Corkeen has excellent drainage capacity and lowers the surface temperature by more than 20% compared to synthetic solutions. Corkeen is weatherproof, easy to maintain, rotproof, flameproof and elastic and also reduces the spread of microplastics.

All of these attributes, which stem naturally from cork's intrinsic characteristics,

are attractive to designers and parents concerned with their children's safety and well-being. Children deserve a better, safer and healthier planet. This requires being able to play in harmony with nature, create communities and respect the planet. Cork's unique properties give Corkeen a series of exclusive advantages for the playground market. It is a safe system, where children can walk barefoot, the impact of their falls is absorbed, and the surfaces are free from irradiation of any noxious substances.

After the success of more than 100 projects implemented in northern Europe, in particular in Sweden and Norway, Corkeen is finally being implemented in Portugal – in the Children's Playground of the Monsanto Interpretation Centre, also known as Espaço Monsanto. The installation of the work in the space, coordinated by FL Gaspar, Corkeen Brand Master, is part of the programme of Lisbon European Green Capital 2020.





Mazda MX-30: green mobility

In the future, mobility will be completely green. And as a raw material that is sustainable by nature and offers unique physical and mechanical characteristics, cork is playing a central role in this revolution. Examples include the new Mazda MX-30 electric car, which incorporates Amorim cork.

Thinking about the cities of the future, with all the associated challenges, also requires thinking about green mobility, that ensures maximum freedom and accessibility with the minimum environmental impact. The role of different means of transport has long ceased to be simply about transporting passengers or goods from A to B. That is an overly simplistic view. Mobility is now understood as the ability to move freely and easily and also efficiently. Mobility projects of the future must be sustainable, accessible, safe and efficient. This is where cork can play a key role, as a vitally in today's most avant-garde mobility projects, designed for the future. Ranging from electric cars (such as the new Mazda MX-30), to smart trains and green ocean liners, cork is helping achieve significant reductions in the carbon footprint of the different means of transport in which it is incorporated, either in a visible or invisible manner. As a natural, sustainable, biodegradable and recyclable raw material, cork is one

of the most sought-after materials and is being incorporated into numerous mobility projects.

This is due to the fact that these industries are increasingly demanding CO2 reduction requirements, starting with the choice of materials. Cork has been used for many years in the least visible parts of different means of transport: in the assembly and sealing of electric batteries, in panels for structural parts, etc. But now it is also gaining exterior visibility – from car cabins to passenger ship decks.

Cork's natural characteristics – such as lightness, elasticity and fire resistance – mean that it has a unique value proposition. In projects where the visual aspect is also critical, such as the Mazda car, cork offers major advantages, in particular because it is a very resilient, compressible material, with unique resistance to friction, thereby ensuring durability. When combined, these attributes provide a feeling of well-being, natural beauty, and comfort inside the car.



Portuguese Presidency of the European Union: ecological awareness

Cork has been chosen for the flooring of the Sophia de Mello Breyner Andresen room, at the Centro Cultural de Belém, that will host several meetings of the Portuguese Presidency of the Council of the European Union. Combining beauty, sustainability, comfort and quality, Portuguese cork is the perfect material to create an excellent environment.

Sustainability is a daily concern, starting with the spaces where we live and work. In domestic interiors, workspaces or major event venues, we are increasingly looking for ecological solutions, which means that it makes perfect sense to choose efficient, sustainable and intelligent cork flooring solutions. This is the case for the Centro Cultural de Belém (CCB), which until June 30 will be the seat of the Portuguese Presidency of the Council of the European Union. Portugal will receive its European partners and showcase the country's finest attributes and achievements. Cork has inevitably been included in this context and is demonstrating its strong identity and full value in the Sophia de Mello Breyner Andresen room, on the CCB's 2nd floor, which offers a magnificent view over the

Tagus river. The installation includes a total of 425m² of Amorim Wise flooring, from the Cork Pure collection, that delivers tremendous benefits in terms of health and well-being, including thermal and acoustic insulation, improved air quality and walking comfort.

This is just one example of a rising trend in the fields of architecture and interior design – where choices are increasingly based on greater environmental awareness. No-one knows exactly what the houses of the future will look like, but one thing is certain: they will reflect greater environmental awareness, throughout the entire inhabited space – from the structural architecture to the floors. In the modern digital world, both millennials and Gen Xers increasingly value natural materials.

Younger generations are highly focused on new technologies, and also have a strong environmental awareness. This dual interest will be reflected in the houses of the future – which will be smarter and more efficient, and above all conceived and designed with products and solutions that are sustainable in all aspects – from the raw materials with which they are made, to the production process and, of course, the end result and environmental impact. As a 100% natural raw material, obtained in a sustainable manner, cork will certainly play a major role in the choices made in the future by consumers, designers and manufacturers. This is already evident, and this renewed green awareness will become increasingly central. Otherwise there will be no future to look forward to. This means that cork will have an even clearer relevance. Starting with the fact that no other manufactured product can provide the benefits offered by this material, which is a “star” product in environmental terms, since cork is obtained without cutting or damaging the cork oak tree, which regenerates after each extraction and plays a key role in the forest's delicate ecosystem.



Evaporcork: A future under construction

The cities of the future require innovative construction solutions. Evaporcork, the new passive façade cooling system developed by Amorim Isolamentos in partnership with IteCons, uses cork to mitigate the urban heat island effect.

The climate crisis is already with us, and the disastrous effects of global warming are unfortunately not a forecast, but a reality. The urban contexts, where most of the world's population lives, are under enormous pressure, and the impacts of climate change are leading, among other things, to higher cooling requirements for buildings. Evaporcork has been developed in this context. It is an innovative project developed by Amorim Isolamentos in partnership with IteCons, that aims to design a passive evaporative system, capable of cooling façades covered with Expanded Cork Agglomerate.

The system will be designed in a modular and customisable manner, adopting prefabrication techniques and permitting a variety of configurations and application

scenarios. With these characteristics, tailored to market needs, Evaporcork is expected to be adopted worldwide, especially in regions where the climate is warmer and drier, and where urban heat island effects are more critical. At this stage of the project, the existing prototypes are being monitored in terms of carbon sequestration, temperature profile and effect on the surrounding air, thereby making it possible to anticipate the system's added value.



João Alves

Cork oak forests provide benefits to society, on average worth more than €1300 / ha per year.

Over recent years, the consultancy firm EY has developed several independent studies for Corticeira Amorim that have assessed the company's environmental, social and economic impacts. As part of the group's sustainability strategy, based on the three pillars of ESG (Environment, Social and Governance), these studies have included an important assessment of the ecosystem services associated to the oak cork forest, making it possible to calculate the environmental footprints of various of the company's products. João Alves, Managing Director of EY in Portugal, Angola and Mozambique, has accompanied these studies very closely, and highlights their main conclusions, as well as the importance of quantification to make accurate assessments.

Why is it important to assess ecosystem services in order to reinforce public perception and interest in the conservation of ecosystems and biodiversity?
The concept of ecosystem services – which can be defined as nature's contributions to people's well-being – has been instrumental in increasing public awareness of the importance of the conservation and biodiversity of ecosystems. This concept introduces a perspective in which ecosystems and biodiversity are part of a specific type of capital – natural capital – which provides multiple material goods or experiences that are essential for people's quality of life. This viewpoint highlights the fact that human beings depend on the sustainability of this natural capital, as an imperative for their own long-term survival as a species. An emblematic example is climate regulation through the carbon sequestration achieved by forests, which constitutes an essential contribution by nature to mitigate the impacts of climate change, in line with the aim to achieve carbon neutrality by 2050. There are also many other ecosystem services, such as hydrological regulation, prevention of extreme events such as flooding and fires, pollination by bees that is important for

agricultural crops, and also including the potential for recreational experiences in nature such as ecotourism, which underlines the direct and indirect benefits that society can derive from ecosystems. Evaluation of such services is therefore essential to provide tangible information on the value for economic cycles of conservation of ecosystems and biodiversity. This makes it increasingly possible to maximise integration of such considerations in management and decision-making frameworks at the territorial level. This trend has been recorded at the European Union level, through the commitment of Member States to map and evaluate the condition of their ecosystems and the services that they provide, as well as to assess the respective economic value associated with the benefits derived from them, in order to integrate these flows in national accounting and reporting systems. This context reinforces the need for companies to align their sustainability policies and strategies with this agenda, which in 2020 became an urgent need for several companies (e.g., for those subscribing to the Act4Nature initiative).

Why is it important to quantify these services?

Firstly, because we need to understand the complex interaction of biological and ecological processes that result in the provision of a service, thus providing the basis for managers of the territory to intervene in the system, in order to maximise the provision of ecosystem services in a sustainable manner. Secondly, quantification is the underlying basis for valuation, which is fundamental in order to integrate the value of ecosystem services in accounting systems, for assessment of the environmental impacts of projects, or for the development of economic instruments such as the remuneration programmes for ecosystem services (attributed to owners who opt for forestry and rural management practises that are compatible with the provision of services of ecological and monetary value).

From a corporate perspective, quantifying and valuing the direct and indirect impacts of company's activities on ecosystems and their associated services, as well as assessing the risk of their dependence on natural capital, is crucial in order to understand the true extent of the footprint of activities

and operations associated with their value chain, in terms of the degradation or preservation of ecosystems and biodiversity.

What methodologies did you use and why?

In the study developed by EY on the value of the ecosystem services of the cork oak forest, the assessment of ecosystem services was based on use of methodologies for mapping and quantifying services using geographic information systems, cartography and forest inventories, provided by four case studies. In this assessment, three services were monetised: climate regulation; regulation of extreme events; fire prevention, hydrological regulation and soil protection. The valuation took into account the avoided cost method, i.e., the social cost that would be borne by society if it had to remedy the environmental damages associated with absence of ecosystem service. For example, the social costs related to greenhouse gas emissions are a result of the damages that are caused to agricultural crops, medical care associated with heat waves and droughts, as well as the damages caused by floods and rising sea levels. Considering the climate regulation service, the consideration of a social cost of carbon (€/ton of CO₂eq emitted), makes it possible to estimate the monetary value associated with this ecosystem service.

What conclusions have you reached?

The study developed by EY, based on the selected case studies, concluded that cork oak forests provide benefits to society worth on average over €1300/ha per year. The value of the total quantified services is an underestimate of the total value of the ecosystem services associated to the cork oak forest. This ecosystem plays an essential role in the maintenance of biodiversity and habitats, responsible for invaluable ecological functions, some of which are not yet fully understood by humanity. There is also a complex set of benefits generated for society, ranging from provision of services, regulation or cultural services. These services are evaluated in the study using qualitative and quantitative information in order to provide a set of useful information on the dimension of the identified contributions.

What can this work offer for the future?

This work demonstrates the value associated with the cork oak forest, which goes far beyond its landscape importance, and includes the fact that it forms part of the cultural identity of Portugal and the Mediterranean and considers the multiple applications of cork in different sectors. For the various stakeholders in the cork sector and its respective products, the work demonstrates the societal benefits associated with good management of the cork oak tree and can serve as a catalyst for the adoption of management practices that ensure a compatible balance between economic exploitation and conservation in the rest of Portugal. This is also a good example of how companies can benefit from knowledge about their impacts and their dependence on natural capital, both in reputational terms and through demonstrating their contribution to achieving public policy objectives, in terms of biodiversity conservation and ecosystem services.

The most innovative, green and efficient anti-TCA technologies in the world

Fulfilling a long-awaited promise, with Naturity and Xpür technologies, Corticeira Amorim is extending non-detectable TCA performance to both natural and technical cork stoppers. The world's greenest and most innovative and efficient anti-TCA technologies are redefining the future of the industry.



In the wake of robust financial investments, an enduring commitment to Research & Development and major resilience, dedication and time, Corticeira Amorim is beginning the new decade with a renewed sense of accomplishment. The company has just launched Naturity and Xpür into the global market. These technologies are designed to remove detectable TCA from natural corks and create a new segment of micro-agglomerated stoppers, respectively. Considered to be the most innovative, efficient and ecological anti-TCA technologies known to date, Naturity and Xpür also represent the fulfilment of the promise announced by the company in mid-2018: to achieve non-detectable TCA performance for natural and technical stoppers of cork by the end of 2020.

Research to develop the patent pending Naturity technology began in 2016 with the NOVA School of Science and Technology. The technology is based on the principles of thermal desorption using a proprietary, non-sequential use of pressure, temperature, purified water and time. No artificial elements are employed in the process, which facilitates the extraction of over 150 volatile compounds, including



TCA. Launched worldwide, Naturity expands non-detectable TCA performance in the natural cork product segment, while further strengthening the operational deliverables of NDTech, the advanced screening service that individually analyses and removes any natural cork stopper with more than 0.5 nanograms per litre (ng/L) of TCA.* Extensive bottling trials with a wide array of wine producers have yielded exemplary results in terms of measuring the technology's impact on cork performance, with additional third-party validation trials to be conducted as soon as possible with the Geisenheim Institute in Germany and the Campden & Chorleywood labs in the UK. Another revolutionary milestone announced by Corticeira Amorim is Xpür technology, developed to expand the non-detectable TCA performance for micro-agglomerated stoppers. Xpür improves upon the conventional supercritical CO₂ application developed several decades ago, updating, reformulating and restructuring the concept with 21st century technology. Corticeira Amorim's innovative approach based on this system uses only 25% of the energy and has just 10% of the CO₂ emissions previously needed.

Furthermore, Xpür reduces levels of TCA to 0.3 ng/L in treated micro-agglomerated stoppers, while leaving the physical-mechanical properties of cork intact. As a result, Corticeira Amorim's range of micro-agglomerated stoppers features the highest possible percentage of cork and does not require additional chemical solutions to maintain cork's natural properties, namely the all-important compressibility and expansion rates. The Xpür technology will be used in the treatment of technical stoppers Neutrocork Premium and QORK – the latter employing an innovative binding agent made exclusively with polyols of plant origin, and which is expected to reduce the amount of single-use plastic stoppers in the world by several million units. Commenting on this important milestone, António Amorim, Chairman and CEO of Corticeira Amorim, underlines that “These technologies come as a result of robust financial investments, time, and dedication to R&D from our team. Despite the obstacles of 2020, we were able to achieve the promise we made to have non-detectable TCA performance for all the cork stopper segments by the end of the year. This is our commitment to our

30,000 customers around the world – to guarantee the quality and consistency of their products and ensure that consumers' preference for cork will only grow stronger.”

** Releasable TCA content equal to or below the 0.5 ng/L quantification limit; analysis performed in accordance to ISO 20752*

ESG: investing with responsibility and purpose

The consideration of environmental, social and corporate governance factors in addition to traditional financial factors when making investment decisions is commonly called ESG, standing for E – Environmental, S – Social and G – Governance.

ESG considerations have become increasingly important for companies and their shareholders, and have structurally and permanently changed the way that companies define their purpose, strategy and action, and also the way that the company is appraised and evaluated by the community – investors, shareholders, workers and other stakeholders. The inclusion of a corporate governance component in investment analysis has evolved considerably over recent decades. In general, companies are now broadly transparent in providing relevant information, and therefore the respective robustness or fragility of the corporate models are clearly perceived by investors. The consideration of social and environmental factors has evolved more slowly. For a long time, these were perceived as qualitative and intangible elements and, as such, difficult to measure. More recently, refinements in their identification and analysis and increased reporting by companies have resulted in greater quantifiable information and the process of incorporating such data into investment decisions is evolving rapidly.

The recent acceleration of this new dynamic has decisively benefited from a significant increase in investment products focused on ESG metrics, based on findings that the incorporation of ESG factors translates into better global performance of companies, that will be more sustainable over the medium / long term, and awareness that environmental and social

issues can reduce the value of a company (there are various examples of considerable losses suffered by shareholders as a result of environmental accidents, social controversies, or weak corporate models). It is also important to bear in mind the important role played by regulators, both nationally and supranationally (namely by the EU), customers, suppliers, employees and other stakeholders, who are pressuring companies to adopt more ethical, sustainable and value-creating behaviours over the long-term for society in general.

Important component of many investment strategies

Whereas in the past sustainable investments were sometimes a marginal concern, the incorporation of qualitative and quantitative factors related to environmental, social and corporate governance when assessing the value of companies today constitutes an important component of many investment strategies and is used by the vast majority of asset managers. Their approaches, however, can differ significantly. For some asset managers, the incorporation of these factors continues to be ensured by filtering processes, which at the outset exclude companies that do not meet the defined criteria. Others have sought to identify risks and opportunities arising from ESG factors and determine whether a company is correctly managing its environmental, social and corporate governance resources, in line with its sustainable business model.

Over recent years, new products have been launched and increasingly innovative strategies have been developed, whose objective is to identify companies that successfully manage ESG risks and, as such, may benefit from ESG opportunities in their sector.

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ESG issues, particularly environmental and social issues, that can have a material impact on a company's financial performance, vary from sector to sector and even from one company to the next. For example, environmental factors such as CO2 emissions or water consumption are normally significant for electricity suppliers or mining companies, but are relatively immaterial for financial institutions. In general, environmental factors that are considered to be materially relevant include management of natural resources, prevention of pollution, management and use of water, energy efficiency and reduction of emissions. Social factors primarily aim to assess the management of human capital and talent (human rights, development and well-being of people; product development; and, in some cases, the impact on local communities) and the ability to maintain competitive advantages (personnel retention, health and safety at work, training and education, diversity, value chain management). Finally, governance factors seek to gauge the robustness of the corporate model, including analysis of the shareholder structure, independence of the members of the governing bodies, remuneration policy, shareholder rights and transparency of the reporting model.

The challenges of the future

Despite significant advances over recent years, ESG metrics are still “taking baby steps” when compared to financial metrics. As such, major challenges lie on the horizon. The first, and perhaps the most important, is to ensure the dissemination of high-quality information, in particular the provision of objective and accurate information, as well as promoting increased transparency and improved reporting. The second is related to the need for greater systematisation and standardisation of information, in order to facilitate comparability, a critical factor in the selection of companies. Finally, it is essential to define a robust classification that clarifies investors about how ESG issues are addressed, in order to ensure that the information transmitted is reliable. In this context a fundamental role is played by initiatives such as the creation of a taxonomy and the independent review of the information. The importance of ESG factors is expected to continue to grow in the future and will shape the strategies of a rising number of companies. Although some companies continue to see this new approach as a

mere compliance exercise or an additional risk management tool, many others view it as a critical and integral element of their strategy, allowing them to obtain competitive advantages and access long-term sources of financing on more favourable terms. Regulators, investors and the general public will continue to demand that corporate practices are aligned with universal principles – such as a clean environment, workers' rights, and good corporate model practices. In addition, there will be an increasing level of demand and scrutiny by the different stakeholders, which should contribute to greater rigour and systematisation in the reporting and dissemination of information.

First-mover advantages

Finally, but equally important, companies that anticipate ESG legislation and develop differentiation strategies based on ESG factors and sustainable growth, are likely to benefit from competitive advantages (“first-mover advantages”), resulting in the ability to generate more sustainable returns and create greater notoriety and better reputation in the market. They will be perceived as attractive companies and, as such, will attract the interest of long-term investors. The creation of value for stakeholders in the future will necessarily involve the consideration of environmental, social and corporate governance factors as absolutely critical for the life of companies.



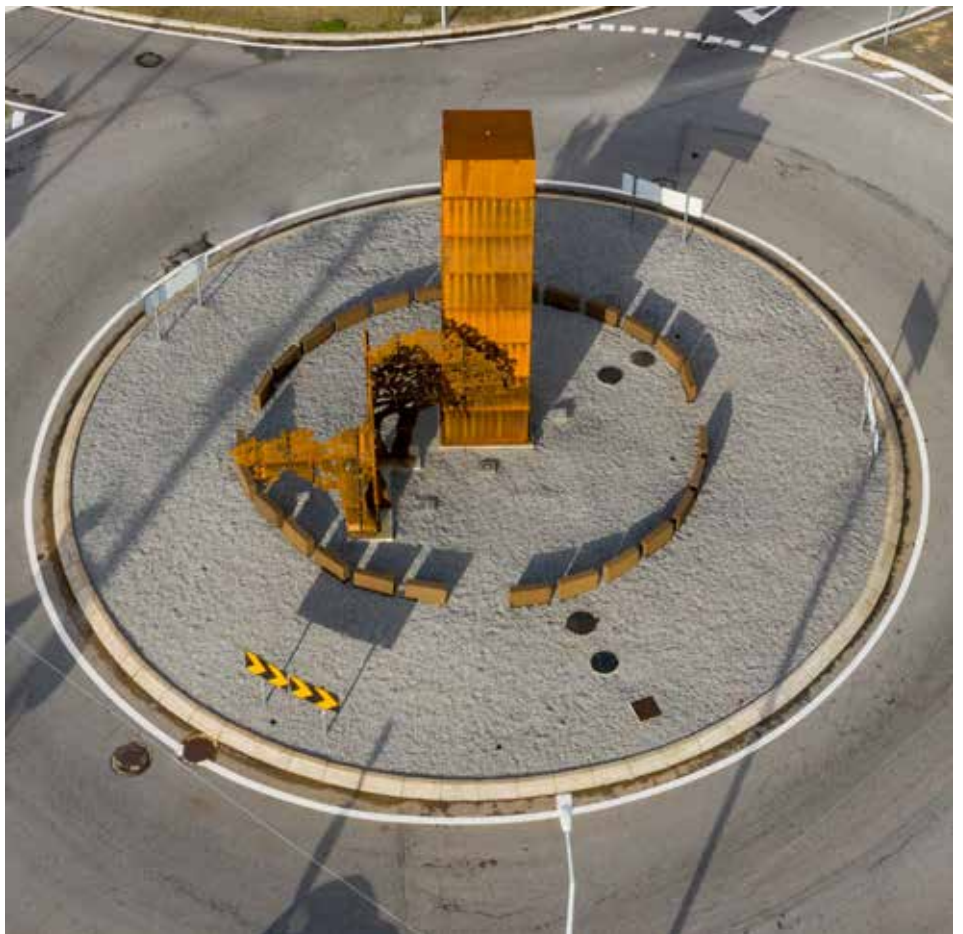
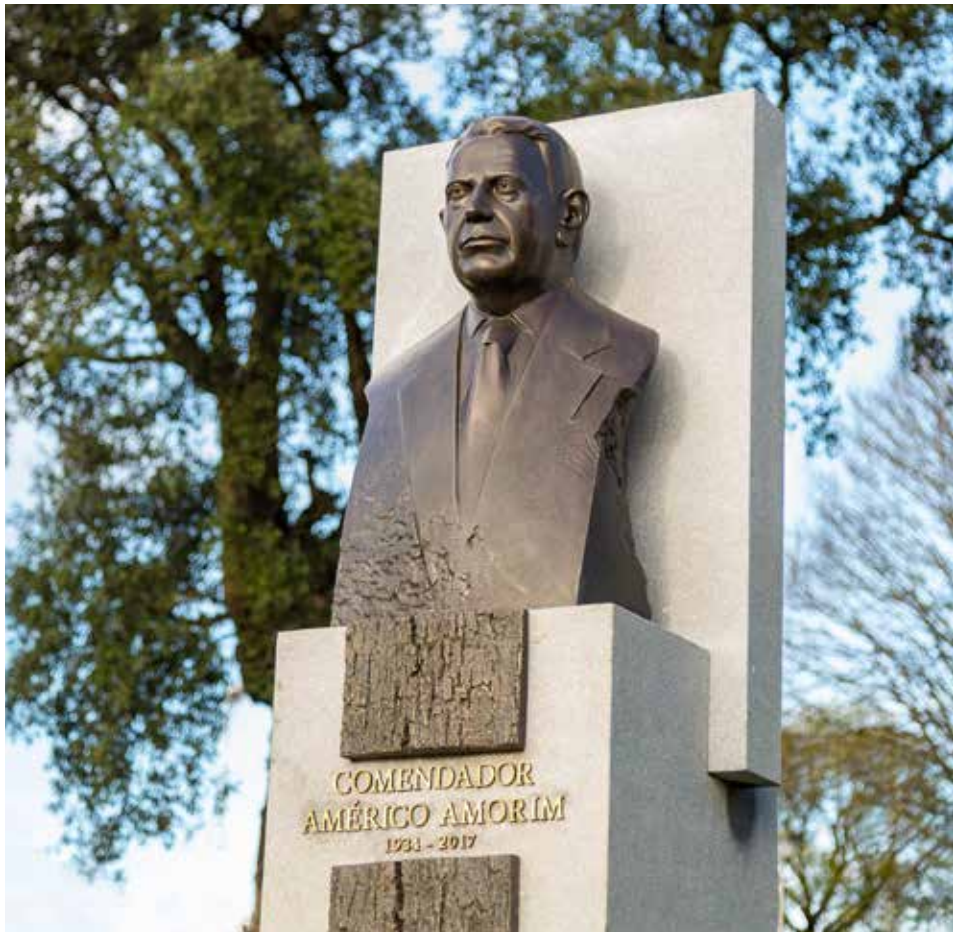
Cristina Rios de Amorim
Director

The future begins every day

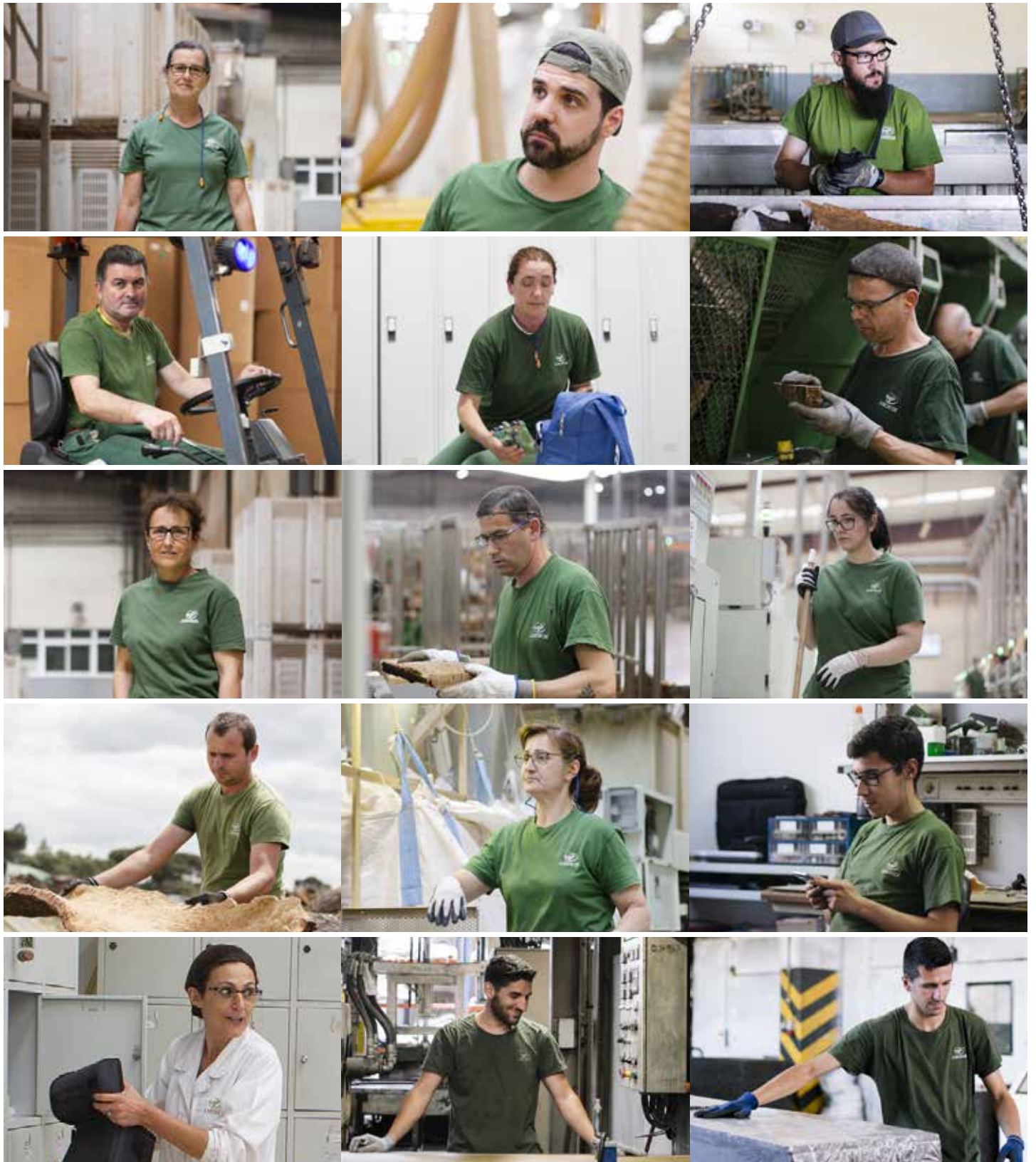
The Amorim Group paid tribute to Américo Amorim in December 2020 as part of the celebrations of the 150th anniversary of the world's biggest cork processing group. The tribute included inauguration of a sculpture by Pedro Cabrita Reis, of a street renamed Rua Comendador Américo Ferreira Amorim and a bust of the businessman. The Amorim family, Amorim Group executives and representatives of various local authorities attended the ceremony.

The day began with the inauguration of a sculpture by Pedro Cabrita Reis (in the roundabout that connects the former Rua de Meladas and the Avenida Albertina Ferreira de Amorim). The sculpture is based on a continuous dialogue between the harmony of Nature, as represented by a steel sculpture of an ancestral cork oak tree and the action of Man, represented by a solid column, also made of steel.

The monument is accompanied by one of Américo Amorim's iconic phrases: the future begins every day. This moment was followed by inauguration of the renamed street, the Rua Comendador Américo Ferreira Amorim (formerly known as the Rua de Meladas). Finally, a bronze bust of Américo Amorim was created by the sculptor Artur Moreira, next to the family home (in the Parque do Murado). Born in Mozelos, in the municipality of Santa Maria da Feira, in 1934, Américo Amorim became one of Portugal's all-time greatest businessmen. Passionate about geography, an excellent cultivator of diplomatic relations and with a rare talent for business, at the age of 19 he commenced the transformation of his 2.5% inheritance of a cork stopper factory that was founded by his grandfather in 1870, António Alves de Amorim, into the largest group in the cork sector, that is now the world leader. Immediately after concluding his General Course in Commerce in the Escola Académica, in Porto, he began his trajectory and went on to overcome several industrial constraints and economic crises, different political regimes, countless territorial obstacles and revolutions in Portugal and abroad.



Our People



AMORIM

Sustainable by nature