

MORE FROM WOOD.

E EGGER

E

The EGGER Group Customer Magazine

05



Questions of Taste

Taste is just another word for emotions.
Those who can sense it understand the customer.

CONTENTS

03 Editorial

10 E_INSPARATION

11 Ideas for Tomorrow

12 Focus Taste:
As You Like It

20 Do It Yourself:
Customize It

24 The Perfect Touch:
A Conversation with
Wood Scientist
Tim Rypstra

28 E_SOLUTIONS

29 Faces of the Company

30 Job or Vocation? The
Changing World of Work

34 Five Things about
Formaldehyde

36 In the Laboratory:
Tried and tested at EGGER

40 E_NATURE

41 Living Sustainably

42 Change is the Mother
of all Invention

46 Natural Quality:
The Cork Market

50 Tree-Huggers' Corner:
Picture Puzzle

51 Imprint

HIGH-GLOSS SURFACES FROM GIFHORN

The new L8 lamination line at the EGGER plant in Gifhorn is the seventh of its kind to enter production. One novelty in the plant's 39 year history: the integrated cooling section in the lamination line, built by the Hymmen company, will make it possible to produce high-gloss laminates in the future. The launch increases the plant's annual capacity by six million square metres to a total of 33 million. An additional 20 jobs were also created.





IS TIMBER THE RIGHT ARCHITECTURAL BUILDING MATERIAL FOR OUR TIMES – OR IS THE WOODEN HOUSE MERELY A MATTER OF TASTE ?



Six storeys and a penthouse, built using products from the native forest: North America's highest wooden construction has just been completed in Canada. The **29.25** metre high "Wood Innovation and Design Centre" in Prince George, British Columbia, provides compelling proof of what wood has to offer as a building material. The architect Michael Green even believes in a future which will see 30-40 storey timber skyscrapers. The great ecological and climate-related advantages of this renewable and CO²-binding raw material have become salient arguments. But are they the only valid ones?

In other words, is wood the right architectural building material for our modern times – or is the wooden house merely a matter of personal taste? Timber's qualities appeal directly to the senses: many people like its smell and its look, it

provides the right sound for instruments and hi-fi devices and gives the great barrique wines the right flavour. Recent studies at the University of Tampere in Finland show that contact with wood is relaxing. At room temperature, aluminium, plastics and metal can trigger stress reactions such as higher blood pressure. Can we continue to call wood a matter of taste in the light of these findings?

Indeed, what is to be understood by taste – elegant style or true **emotions**? How does taste work? Reasons enough to sample all the many facets of this fascinating topic in the latest edition of MORE. We hope it is to your taste.

MORE 04 appears to have whetted appetites: many thanks for your inspiring feedback. On behalf of the EGGER team, enjoy.

EGGER Group Management

Walter Schiegl
(Production / Technology)

Ulrich Bühler
(Marketing / Sales)

Thomas Leissing
(Finances / Administration / Logistics)



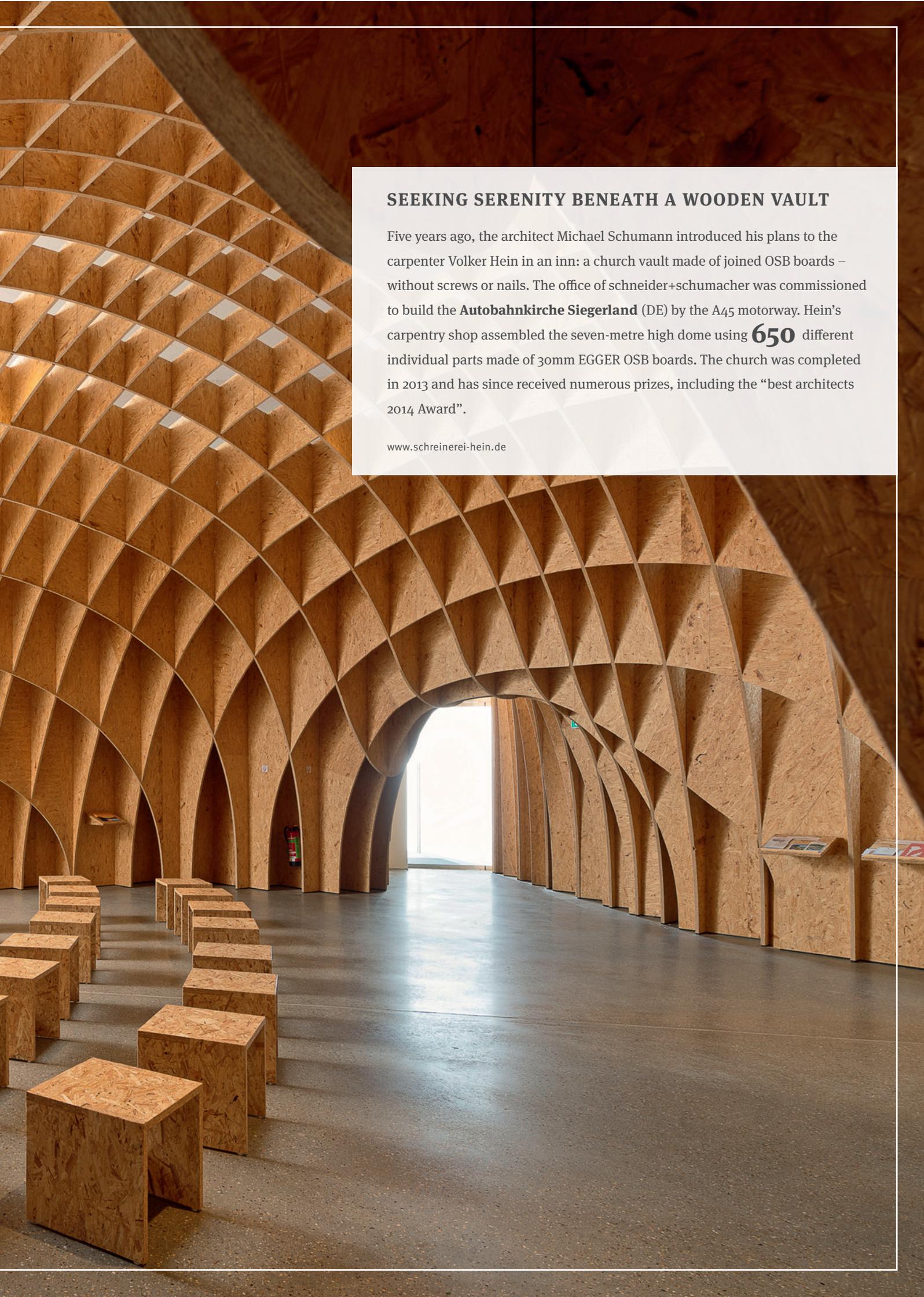


A ROOM WITH AN UNDERWATER VIEW

The Swedish artist Mikael Genberg has been working for a decade and a half on a topic that has always fascinated people – living underwater. His latest project is the **Manta Underwater Room** on Pemba island in the Zanzibar archipelago off the East African coast. Pemba produces about **70 percent** of the world's cloves. And the island is immersed in other traditions, too. Accordingly, Genberg turned to the expertise of local boat builders who constructed the floating hotel room using their native timber and woodworking techniques.

<http://underwaterroom.com>



The image shows the interior of the Autobahnkirche Siegerland church. The most striking feature is the vaulted ceiling, which is constructed from a complex arrangement of curved OSB (Oriented Strand Board) panels. These panels are joined together to form a series of overlapping, pointed arches that create a rhythmic, geometric pattern. The walls also feature similar curved OSB panels. In the foreground, several rows of simple, rectangular wooden pews are arranged on a concrete floor. The lighting is warm and even, highlighting the natural texture and color of the wood. A bright light source is visible at the far end of the church, creating a strong contrast and illuminating the interior. The overall atmosphere is one of modern, organic architecture.

SEEKING SERENITY BENEATH A WOODEN VAULT

Five years ago, the architect Michael Schumann introduced his plans to the carpenter Volker Hein in an inn: a church vault made of joined OSB boards – without screws or nails. The office of schneider+schumacher was commissioned to build the **Autobahnkirche Siegerland** (DE) by the A45 motorway. Hein's carpentry shop assembled the seven-metre high dome using **650** different individual parts made of 30mm EGGER OSB boards. The church was completed in 2013 and has since received numerous prizes, including the “best architects 2014 Award”.

www.schreinerei-hein.de

SKILLS FOR FUTURE MOTORISTS

Increasingly, the auto industry is less about the cars themselves but mobility itself. This is underscored by the wooden, root-like play-scape “MobiVersum”, designed by the architect **Jürgen Mayer H.** for young visitors to the Autostadt Wolfsburg (GER). While climbing and clambering around the **1,600 m²** facility, children can discover and hone their own motor skills and learn about sustainability – from resource to motion. The concept was developed in co-operation with the Institute for Sport and Mobility Science at the University of Osnabrück.

www.autostadt.de





E_ INSPIRATION

“They say ‘there is no accounting for taste.’ Architecture has its own famous answer: ‘good taste can be acquired.’ ”

Dietmar Steiner, director of the Architekturzentrum Wien
As You Like It (Pages 12 to 17)

Ideas for Tomorrow

ROBOTS AS CARPENTERS

<http://icd.uni-stuttgart.de/>

Automation is reaching such a level in industrialized countries that a new term was coined: “Industry 4.0”. Robots are still a rare sight in carpentry shops but that may be about to change. Carpenters pre-cut the boards for the pavilion at the Landesgartenschau in Schwäbisch-Gmünd (DE) 2014 to calculations by the Institute for Computational Design at the University of Stuttgart. Robots took over the finer details.



TUBULAR PLYWOOD

www.lignotube.de



The trend towards lightweight materials made of renewable raw materials, such as wood, may well have provided the impetus for the award-winning product innovation from Robert Taranczewski and Curt Beck set up their own business in 2013. Lignotube is a lightweight and thin-walled veneer tube, with the manufacturing process having been adapted from fibre composite technology. Lignotube’s inventors see it being applied in automobile or aviation construction or as a design element in products and at trade fairs.

SIMPLY REAL

www.q-c.be

The solid spruce blocks that make up the staircase are not just physically heavy – they also add stylistic weight to the 60m³ maisonette apartment in the Polish city of Rzeszów. Designed by the architect Lucjan Kuc/QC, the staircase was easy to assemble as it took just a few hours to stack the stairs. That took some of the pressure off the cash-strapped young client. The stairs are glued together and secured with steel rods. The preparation took a lot longer than the execution, though. The wooden blocks had to do three stints in the drying chamber to harden sufficiently. One nice side-effect though is the weather-beaten surface – all contributing to the popular authenticity of this style of interior design.



FOCUS TASTE

In 2013, the fragrance and flavour manufacturer Firmenich declared lime to be the “flavour of the year.” Green also played a prominent role in interior and packaging design, like the shower gel by Axe / Lynx or Coca-Cola’s new product.



TOPIC OVERVIEW

13 – 19 As You Like It

20 – 23 Customize It

24 – 27 A Conversation with Wood Scientist Tim Rypstra

As You Like It

The “matter of taste” is the most personal judgment a human being can make. Scientists, aroma designers and trend scouts are understanding more and more about how it works. And their findings provide food for thought – and not just in the food and drink industry.

BY Till Schröder

The study grabbed global attention at the time. The American scientist Samuel McClure and his colleagues presented people with two different types of cola, unlabelled. They wanted the testers to rely solely on their taste buds when choosing the “better” version. The majority unknowingly chose Pepsi Cola. Then the scientists repeated the exercise, complete with branded bottles. Now the majority preferred Coca-Cola – they simply associated too many good memories with the brand.

That’s what makes a brand’s value. Although the Coca-Cola brand has lost its number one status to the likes of Google, Apple and IBM in recent years, it came in sixth place globally, just behind McDonalds, with a value of 60.68 billion US dollars in 2014, according to Millward Brown Optimor. Stories about a secret recipe stored in a closely guarded safe seem to have a greater effect on a customer’s judgment than whether or not it actually tastes good. That certainly seemed to be the lesson learned from McClure’s experiment, which was conducted ten years ago and is considered the birth of neuro-marketing. With the advent of modern technology such as magnetic resonance tomography (MRT), scientists began feverishly measuring brain activity to gain a better understanding of the consumers decisions. The authors of the famous Pepsi Cola experiments

deduced from their measurements that two different parts of the brain were involved: one for emotions and one for culture. And that the acquired cultural knowledge prevailed when choosing the famous brand.

The sense of taste is closely linked to life. Scientists at the University of New York demonstrated that a person with a bitter taste in his mouth is more likely to harshly criticise a mistake than someone who has just eaten something sweet. Philosophers have long since suspected that taste and morals are closely connected. Now, that’s being proven by hard science.

It’s also interesting how taste and colour trends interplay. Firmenich, one of the global aroma industry’s big five players, conducts extensive market observation, including the menus of trendy

“People only like beer with a nice head on it.”

Johannes Meister, second master brewer at Privatbrauerei EGGER

restaurants and bars, and regularly identifies the next year’s flavour. The “Flavour of the Year 2013” was lime. Indeed, according to the market →

→ research institute Mintel, the number of lime-flavoured food products rose from 725 in 2012 to 873 the following year. At the same time, Firmenich's marketing division noticed a plethora of new, yellow-green packages for anything from Lynx / Axe shampoo to the new, stevia-sweetened Coke Life. Coincidence or not, the paint manufacturer Pantone made the related "emerald" its "Colour of the Year", a verdict that influenced designers, architects and graphic artists.

In 2014, the parallels continued: Pantone selected "radiant orchid" as "Colour of the Year". It's not that far away from Firmenich's "Flavour of the Year" 2014: blackberry. The nomination is confirmed by new products such as apple & blackberry pie or blackberry & raspberry fruit tea fusion at McDonalds.

Firmenich said several factors went into the selection of blackberry. Not only is it rich in antioxidants but it also has a complex flavour. According to Firmenich, that matches the high demands placed by today's consumers, especially those known as millennials, who were born between 1980 and 2000. They have a reputation for knowing exactly what they want and being willing to embark on an adventure in the process.

Lovers of gummy bears hardly have a reputation for thrill-seeking but their most famous manufacturer, Haribo, embarked on an adventure of its own. 2014 will go down in history as the first year in its 90+ year history in which it launched a blue "Gold Bear". The "whortleberry bear" was the company's response to a survey on its Facebook page asking customers to choose six

new types of bear from a total of twelve new flavours.

So is it taste or appearance that determines these trends? The Pepsi taste or the Coca-Cola bottle? "People only like beer with a nice head on it" says Johannes Meister, second master brewer at Privatbrauerei Egger. "The eye needs to enjoy the experience, too." He says the phenomenon is so deeply rooted that many people do not even recognise orange juice if flavour-free blue food colouring is added. The taste also contains elements of what the taster knows about the drink. Today, an alcohol-free beer labelled as "isotonic" also tastes "healthier" to the consumer. And health is a powerful trend right now. Local and regional products are also enjoying increasing popularity: they're considered fresh and natural. And the sense of taste can trump regional or local taste: ironically, the

→



Dietmar Steiner is director of the Architekturzentrum Wien, president of the International Confederation of Architectural Museums and has published numerous articles on architecture and construction culture.

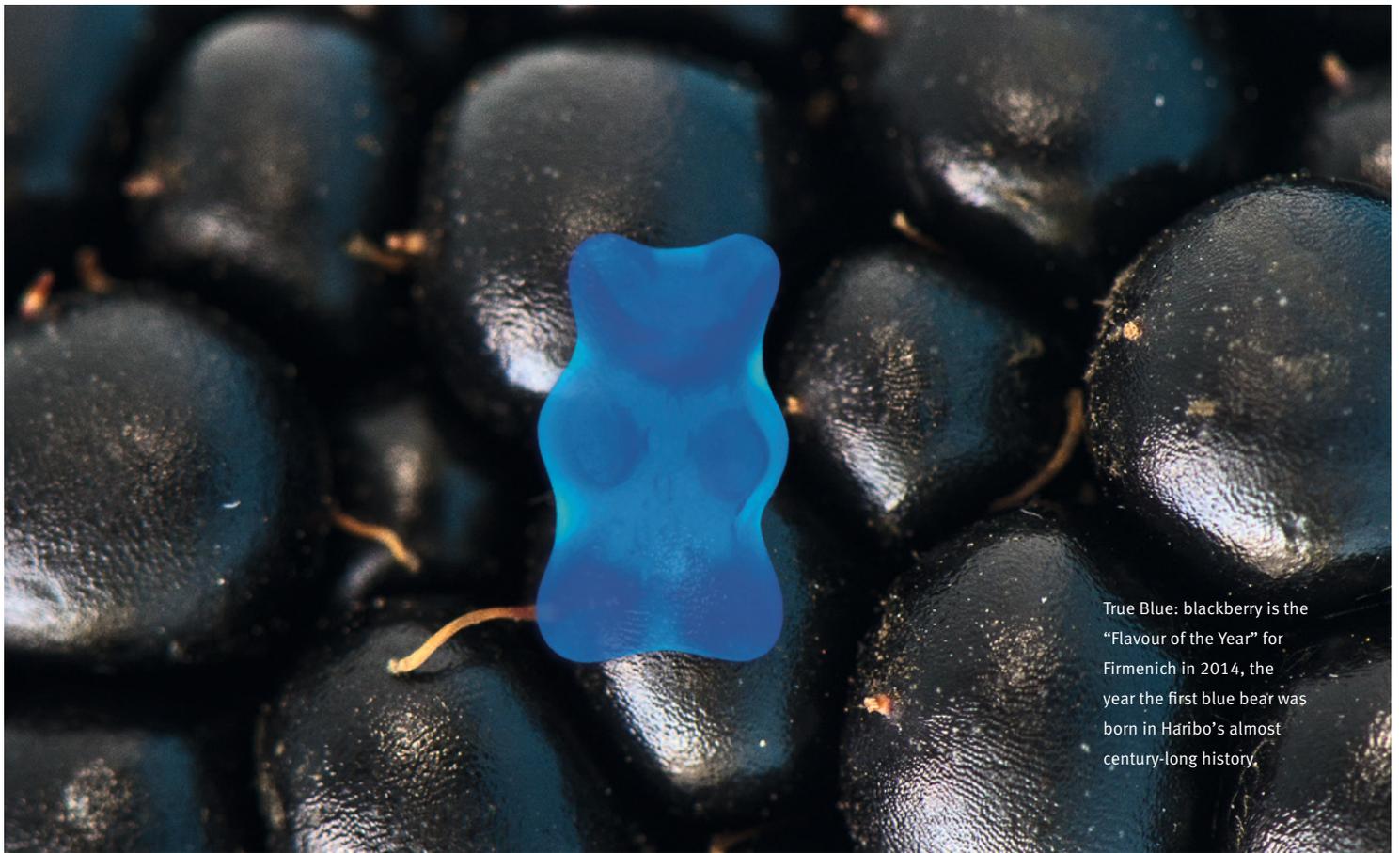
GOOD TASTE CAN BE ACQUIRED

They say "there's no accounting for taste". Architecture has its own famous answer: "good taste can be acquired". An architect's judgment is not about whether he or she personally likes a building. What counts is how good the concept is. This applies to questions such as: what is the idea behind the building? What functions does it perform for the sake of the project? How does it fit into its architectural context? How well-developed is the local infrastructure? Answering these questions requires careful prior analysis of the surrounding area and the project's goals and plans. Not all lay-people find it easy. Today, we use computer simulations, known as renderings, to look at a blueprint. But these renderings are images, not plans and processes. The architect has the difficult task of convincing the client that changes to the visualised plans may be necessary. The term "good taste" is a bourgeois one that presupposes an aesthetic environment, a high level of civilisation and a consensus about what is beautiful. There are regions in which this consensus is still

palpable. For example in the region of the Bregenz Forest, where the mayor of a village would laugh at you if you said that instead of repeatedly painting a timber wooden frame it should be replaced with an industrial aluminium frame. In many areas however, this consensus has been lost, because society is more heterogeneous. Indeed, many architects also demand the right to individualistic expression. At the same time, however, they know that it is nice to have a certain harmony between buildings. This creates a paradoxical situation. That's why I'm in favour of a certain consensus but it should also be possible for this consensus to be broken by special buildings. After all, a village church is allowed to look different to the farmers' houses.



The raspberry is considered the “queen of the berries” and it remains as popular as ever. Its colour, from bright red to pink, symbolised the new “carefree” at interior design fairs in 2014. This new bowl from the Kastehelmi series by the Finnish design house Iittala captures the trend.



True Blue: blackberry is the “Flavour of the Year” for Firmenich in 2014, the year the first blue bear was born in H&R’s almost century-long history.



For his doctorate at the Technical University of Chemnitz, **Dr. Nikolai Alexander Mader** investigated the value of style in real estate. Today, he works as an investment manager in the field of institutional property investment.

TASTE AND THE PRICE PEOPLE WILL PAY FOR IT

Buildings as part of the perceived environment almost obligatorily address people’s aesthetic sensibilities. They either like or dislike the built environment. Although not all people share the same taste, clusters of preferences towards certain constructed environments can be identified. For example, far more people choose classical construction styles over post-modern or deconstructionist aesthetics. Taste is something emotional. For example, people tend to dislike large, unembellished surfaces on individual buildings. Facades must be decorated with cornices or ledges to underline joints. Windows with clearly visible frames are considered aesthetically pleasing. This preference also relates to a building’s context. It has been demonstrated that people prefer harmonious groupings. They prefer ensembles or rows of houses to be similar but not monotonous. Prime examples would be a row of timber-frame houses or Wilhelminian-style facades. Since it usually costs extra money to design buildings like this, questions have to be asked: are

residents willing to pay more for this and whether that willingness was enough to compensate for the extra costs, making style affordable in the first place. High-profile real estate purchases by HNWI (High Net Worth Individuals, put simply: millionaires) demonstrate quite clearly the huge willingness to pay for extravagantly designed properties. My representative survey showed that this does not apply solely to HNWI: aesthetically designing buildings can be a profitable undertaking in many cases. From this we can deduce a clear recommendation when conceiving development projects to pay closer attention to the aesthetics of alternative style elements and their effects on potential profits or construction costs.

→ current “European Champion of the Weisswurst” is a butcher from Swabia, not Bavaria and the world champion pizza baker is from Australia. Johnny (not Giovanni!) Di Francesco from Melbourne beat the Italian competition on its home turf in 2014. At the same time, it makes sense to stay regional, and making sense makes a profit.

We are only beginning to understand the structure of these markets of the senses. “In future, we will buy fewer and fewer products and services that are only of simple practical value,” writes the Zukunftsinstitut (Institute of the Future) in Frankfurt. It argues that a regional product already has an additional idealistic value that transmits a feeling of familiarity, of home. It also serves the market of the

“Many people describe as beautiful what other people think is beautiful.”

Friedrich Thießen, economist at TU Chemnitz

senses, which the Zukunftsinstitut describes as “ethical consumption”. By choosing a regional product, consumers express their objection to long-distance transportation and their commitment to the environment. This market of the senses, focusing on “body & pleasure”, is paving the way for products such as Neuronade. The “brain drink” is said to wake you up like energy drinks and coffee but is supposed to be healthier. It is based on the bitter-tasting Indian

brahmi herb. Thanks to modern flavour manufacturing, it tastes like fruit tea. You can’t ignore taste either. The same goes for taste in construction. In 2010, the news magazine “Focus” conducted one of the few market surveys on the topic. One of the questions it asked was: what style would you build a new house in? Every second respondent answered “modern”. Is that to be believed? The economist Friedrich Thießen, who has carried out a range



Prof. Thomas Hummel researches and teaches at the ENT clinic of the University of Dresden and is head of the interdisciplinary centre “smelling and tasting”.

WITHOUT TASTE LIFE WOULD BE BLAND

As a doctor, my understanding of taste applies to sensations in and around the mouth. The sense of taste is an extremely stable system which, by means of our well-known nervous system, can pass on salty, sweet, sour, bitter and umami impressions to the brain. The taste “umami” was described in Japan as early as 1908 and translates as “meaty” or “hearty”. One of its triggers is glutamic acid. The senses of taste and smell complement each other in assessing a food or drink. Individuals have different levels of talent when it comes to taste. Furthermore, our taste preferences change in the course of life. As we grow older, we develop a taste for the bitter – most children, on the other hand, find espresso, beer or certain raw vegetables simply disgusting. Taste is also rather subjective. The old adage that “there’s no accounting for taste” applies just as much to food as it does to fashion or interior design. Yet the sense of taste is crucial to social behaviour. Because it’s nearly always present. It can happen, after an operation on the tonsils or a tooth, that a person’s sense

of taste is impaired: sweet things taste salty or sour, for example. That’s an unpleasant experience for the affected person because he or she suffers from a loss of social skills. Relationships – from breakfast with the family through the business lunch to the dinner date – live off shared pleasures. In addition to money and sex, food is one of life’s great rewards. An impaired sense of taste can make life literally bland and even lead to depression. Some victims change their eating habits and prefer tasteless foodstuffs. There are a range of therapies for these dysfunctions, which, luckily, are seldom chronic. In many cases, the symptoms disappear after a few months.

→ of studies at the Technical University of Chemnitz on the relationship between real estate design and prices people are willing to pay, says, “It’s a social phenomenon: many people describe as beautiful what other people think is beautiful.” If a broad audience is presented with a range of facades, clear and large-area forms usually take second place to highly structured, decorative surfaces. The most popular are classical or cosy. In this context, taste seems subjective and emotional. It manifests itself in private life, where brand names, publicity and common sense are not the guiding lights. Not in what people say, but, at the end of the day, in what they do.

WOOD AROMAS

CHIPS, VANILLA AND RASPBERRIES

There is only one spice more expensive than vanilla from the vanilla orchid: saffron. Yet despite its high price, demand for vanilla flavours and fragrances for drinks, sweets, and perfumes remains unchecked. That was already the case in 1864, when the chemist Wilhelm Haarmann first manufactured synthetic vanilla using coniferin, the bark juice of conifer trees – it was a breakthrough for the flavour and fragrance industry. Otherwise, “global vanilla production would barely meet demand from Germany,” according to the German Confederation of the Flavour and Fragrance Industry (DVAI). The wood component lignin, a by-product of paper manufacturing, has also been used as a raw material for vanillin. This led to the rumour that the flavour and fragrance industry was “making raspberry flavouring out of wood chips,” which the manufacturers firmly denied. Today, the most important source of vanillin is clove oil. Naturally, manufacturers are keen to make sure that the exact recipes and formulas remain closely-guarded secrets.



Psychologist, brain researcher and advisor to the Gruppe Nymphenburg consultancy group, **Hans-Georg Häusel** became one of the leading experts in neuro-marketing with his bestseller “Think Limbic – Die Macht des Unbewussten verstehen für Marketing, Management und Motivation” (The Power of Unconscious Comprehension for Marketing, Management and Motivation). His books describe how emotionally and unconsciously some purchasing decisions are made – and demonstrates to the reader how he can nevertheless only buy things that are important to him.

IN THE BEGINNING THERE WAS TASTE

According to the latest findings in brain research, the oral sensations of sweet, sour, salty, bitter and umami can be linked to emotional correlates: sweet, for example, stands for harmony and care, sour for dominance etc. But taste is also related to aesthetics in general. Shapes, colours and words all have emotional meanings. Expressed in a simplified way, corners and edges speak to a part of the brain in which dominance plays a role; country houses represent balance, while new combinations of materials and unusual shapes appeal to the area responsible for stimulation and thrills. We carried out many investigations for our Limbic® system, especially with regards to packaging and construction styles. They repeatedly confirmed the following thesis: all people have emotional systems but they are expressed to varying degrees – depending on personality – in purchasing decisions. Why do we speak of good taste rather than a good sense of hearing when we admire someone’s nice new house? Presumably, it has to do with

the fact that our emotions are descendants of taste. The primordial experience of the world by the first single-cell creatures was acquired through appetite based on the reward system. This information was transmitted via chemical sensors. It was not until much later in the evolutionary process that eyes and ears came into being.



Aroma industry insiders say rhubarb is on the way up. The colour is part of the larger trend toward rose gold, currently being set by watches designed by Michael Kors or Marc Jacobs.

Customize It



DIY skis as a status symbol: customers who make their own skis want more than just a product, they want a lasting experience.

After the status symbols come the markets of the senses. Why it can be deeply fulfilling to spend a whole weekend planing two planks of wood. Why you can design your own sneakers on the Internet. And the source of this desire for a customized product.

BY Clemens Niedenthal

There is a beautiful film by George Lucas. No, not one of the “Star Wars” series. Before he became perhaps the most famous director in the world, he shot “American Graffiti”, a film about young Californians, their desires and dreams – and their cars: lowered “Hot Rods” painted black. Pre-war models, usually from Ford, which were remodelled in the 1950s to become icons of the young. They were called “Custom Cars” when they appeared as modelling sets just two or three years after their initially cursory but ultimately dominant appearance on the streets of America.

It was the first time that the term “customizing”, the individualisation and refinement of an industrial product, found its way into our everyday culture.

After Status Comes Sense

The idea of re-interpreting, adding value to and re-appropriating a product was not new. One merely has to mention jeans, the trousers of the gold-diggers and steelworkers which would soon be worn by rock ‘n’ rollers, then by young people and eventually by the whole world. Social developments in both morals and fashion can always be described through the changing meaning of a society’s products.

In the same sense, the trend researcher Eike Wenzel has identified a palpable desire for individual things in the 21st century. His thesis is that the trend towards customization follows two



“Custom Car”: the hot rods of the 1950s and the related model car sets were instrumental in the establishment of the term “customizing”.

constants. On the one hand, people whose habitual consumer behaviour has reached the point of saturation tend to rave about this new desire for individualism. The customized product, perhaps even one made by the consumer himself, becomes interesting when normal consumption threatens to become boring. The revival of the DIY or handmade product was noticeable from New York to Munich, from Vienna to Paris, especially among young, well-educated academics. For example, knitting was no longer an economic choice but simply a way of distinguishing oneself from the crowd.

On the other hand, the product must have long-since established itself in the mainstream and have become



Since 1999, consumers have been able to design their own Nike shoes by means of an online configurator. The product line is called "ID" – for "identity" as an expression of individualism.



boring for trendsetters if consumers are going to want to customize it. Eike Wenzel: "When Vertu launched its line of exclusive mobile phones on the market about ten years ago, it

product." Sneakers are a different matter altogether. Everybody wears them, all over the world. A German government minister was sworn in while wearing them; Oscars have been presented by

in front of the Solebox in Berlin or the Alife in Manhattan. Since 1999, Nike has even offered an online configurator. Consumers can customize the colours and designs of the season's trendiest models – gaining, at the very least, the illusion of wearing a unique shoe.



"We find it rewarding to have produced things rather than just bought them."

Eike Wenzel, trend researcher

was already doomed to failure. Cell phones and then smartphones were a dynamic and fascinating product segment in which new and cool devices were constantly becoming available. Neither the well-informed businessman nor the smart trendsetter needed a supposedly distinguished or exclusive

actors in sneakers; Mark Zuckerberg founded his Facebook company in them. It is just this omnipresence that prepared the market for an increasingly discerning sneaker culture. Limited editions were sold in just a handful of shops, making them exclusive – real "sneaker freakers" camp out for nights

In this context, Eike Wenzel speaks of "markets of the senses". And he means not just services, like an hour's yoga in the morning or a climb to a mountain peak at dawn. "Classic status symbols are focussed outwards. They are supposed to announce to the world the status of their owner: be it a big car, an expensive watch, a handbag with a big logo." But on the markets of the senses, things focus inwards. "The consumer", says Wenzel, "receives a special reward when he has involved himself in the process of consuming." Be that because he attended a barista course to go with his new espresso machine or because the lettuce was grown in the home-made,



Work that makes sense: the Tyrol-based ski manufacturer Spurart stands not only for fine hand-made skis, it also offers seminars at which participants can make their own.

raised vegetable bed. What's known as curated consumption, of the kind promoted by concept stores such as the Colette in Paris, also lives off this effect: the customer is given the feeling of being genuinely creative, merely by the shop he or she selects.

Anyone who wishes to experience a market of the senses can do worse than visiting the Spurart workshop in Innsbruck. Enthusiastic young people with high expectations – students, tradesmen, doctors, and advertising executives – are united for a single weekend by a common desire: they want new skis, but they do not merely wish to buy them, they wish to build them. Under the guidance of an expert. There's a helping hand even for the most difficult working steps. But in the end, they will all swish down Innsbruck's local mountain, the Patscherkofel, on their custom-made skis. Propelled by a product with which they share a moving history.

SPURART

MAKE YOUR OWN MARK

Spurart is a small, independent ski manufacturer from Innsbruck in Tyrol. So far so unusual – you can count the surviving firms that build small numbers of Alpine skis and snowboards on one hand. But Spurart goes a step further: it lets other people make the skis – the customers themselves. For 690 euros, customers can attend a three-day course, whereby they can take home skis that they built themselves under expert guidance. These weekend seminars are even booked out in high summer. Company founder Michael Freymann got the idea when he realised that his customers were just as interested in the way his skis, consisting of a wood and glass fibre core with a real wood veneer, were built by hand in small numbers as they were in the unique and intuitive skiing characteristics. "People want to make things with their hands again and to experience things in the making." Customers of Spurart don't just want to buy skis, they want to make their own mark.

The Perfect Touch

Often, it is the “touch of wood” that gives a wine its characteristic flavour. Traditionally, wine is matured in oak barrels but nowadays, scientists such as Tim Rypstra from South Africa are developing alternatives. A conversation about veneer and wine, sustainability and the taste of oak.

INTERVIEW BY Till Schröder



The South African wood scientist Tim Rypstra is developing a procedure to impart a “touch of wood” by immersing oak veneer into quality wine.

MORE: Professor Rypstra, describe the forest where the timber for a perfect “touch of wood” grows?

Tim Rypstra: Generally, any forest should be sustainably managed. Conservation of timber supplies has always been the driving force behind our innovative concept. From a technical perspective, most trees should belong to the few acceptable species, be around 150 years old, have a straight stem and a height of 20 to 35 metres.

MORE: A wine traditionally acquires its wood flavours when it matures in barrels. But this quality is increasingly being achieved using stainless steel tanks. Are the days of the wooden barrel numbered?

Tim Rypstra: No, barrels will still be used for a specific wine market segment. As the demand for wines and wood flavours in wine increases, fewer wines will see the inside of a barrel. To reduce oak costs, various products

called Alternative Oak Products (AOPs) have been developed and are used in casks, older barrels and tanks etc. AOPs differ in size and shape and are immersed into the wine as powders, chips, slats, cubes, sticks, balls, rods or staves (the bent components of barrels). Liquid extracts have also been developed. The wood often comes from oak logs not suitable for stave manufacture or from wood left over from barrel manufacturing.

MORE: Does it always have to be oak?

Tim Rypstra: The original function of a barrel, as a container for storage and transport of products, still dictates the specifications for the best wood. Oak has been used for wine cooperage for over 2,000 years. Various other timbers like chestnut and acacia have been and are still used. But oak established itself because it is strong, leak-free and durable. And it apparently does not contain unhealthy compounds. Over the years, winemakers and





Progress over tradition: since the political changes of the nineteen-nineties, many South African winemakers have turned to new methods.

consumers have grown accustomed to its complementary flavour function in winemaking. The flavour characteristics of particular species are oak's main function today. Oak flavour chemistry is determined by cooperage specifications for barrel staves and heads as well as manufacturing processes. Criteria include species, origin and part of the tree (i.e. heartwood), grain, the type and length of drying and toasting.

MORE: The grain?

Tim Rypstra: Grain can provide the cooper with information on the age, rate of growth, and environment of the tree. To the wood scientist it is an indication of various chemical, anatomical and physical attributes. For example, sessile oaks grow predominantly in central and north-eastern France on barren, clay and siliceous soils, which results in a tight grain, typically with 5 to 10 annual growth rings per cm. Chemically, this

type of wood has a rather low amount of extractable ellagitannins. The methyl octolactone and eugenol content is higher than in wood from other regions. Physical properties such as porosity are similarly affected. Limousin types of oak have wider and regular grain, are less porous and contain more extractable polyphenols.

MORE: Connoisseurs often claim to be able to identify oak-matured wine by its vanilla and nougat tones. How would a wood scientist describe the flavour (or flavours) of wood in a wine?

Tim Rypstra: The most important flavour contribution to wine is made by two oak lactones which have a coconut like aroma. Aldehydes (particularly vanillin) produce a vanilla flavour, phenolic ketones augment vanillin aroma, volatile phenols such as eugenol have spicy, clove and carnation aromas, guaiacol is smoky and medicinal, and furanic derivatives taste like toasted

bread. Over two hundred volatile components of oak extracts have so far been identified and their aroma and flavour properties investigated. But for more details you should ask my colleague Charl Theron. He is the oenologist in our team.

MORE: Apparently there are many approaches to making the perfect AOP. What's yours?

Tim Rypstra: My other colleague, Jan Swart, and I, we asked ourselves the very basic question of how an oak tree should be turned into a product that could fully and rapidly impart wood flavours to wine in a predictive and consistent manner – and in the process, produce as little waste as possible to conserve our timber supplies.

MORE: And how did you solve that challenge?

Tim Rypstra: Staves have specific shapes and sizes. They have large radial surfaces to prevent leaking. Our answer →

→ to the above question is a patent that says the logical solution for a premium AOP is the rotary cutting (peeling) of the heartwood veneer from the oak log at an optimum range of thicknesses. Rotary peeling produces flat sheets with a large extractable surface area.

“Barrels should no longer be purchased according to tradition and romance, but according to whether their wood flavour suits a specific cultivar or vineyard.”

Tim Rypstra, scientist

Very little waste is generated during production as yields up to 80 percent can be obtained.

MORE: Your project is considered a paradigm shift in AOP production. Why?

Tim Rypstra: As a result of the variability in wood properties and barrel making processes, no two barrels will produce the same taste. Our internationally patented process addresses the first phase of the wood flavour addition system: the cutting of the tree. The similarity of the rotary peeled veneer sheets also positively affects the subsequent drying, toasting, and extraction process. In other words, the organoleptic differences between AOP elements are reduced.

MORE: The flavour is affected by the grain, shape and size of the veneer?

Tim Rypstra: The optimum thickness and large surface area of rotary peeled veneer can ensure that the extracted flavours are consistent and predictable.

MORE: But is it not part of wine culture that wines always taste different, depending on their vintage or the barrels they matured in?

Tim Rypstra: Wine is made from natural products, namely wood and grapes. The inherent variables in these two components is accepted and has to be managed by the winemaker. The challenge, and at the same time, the

opportunity, is to work with more consistent, repeatable and predictable wood flavours.

As winemakers mainly want to focus on viticultural and oenological qualities, an increasing number of winemakers want more predictable wood extracts. That means that barrels should no longer be purchased according to tradition and romance, but according to whether their wood flavour suits a specific cultivar or vineyard.

MORE: When you take a walk in the woods and see an oak tree, do you immediately think of the flavour it could give to wine?

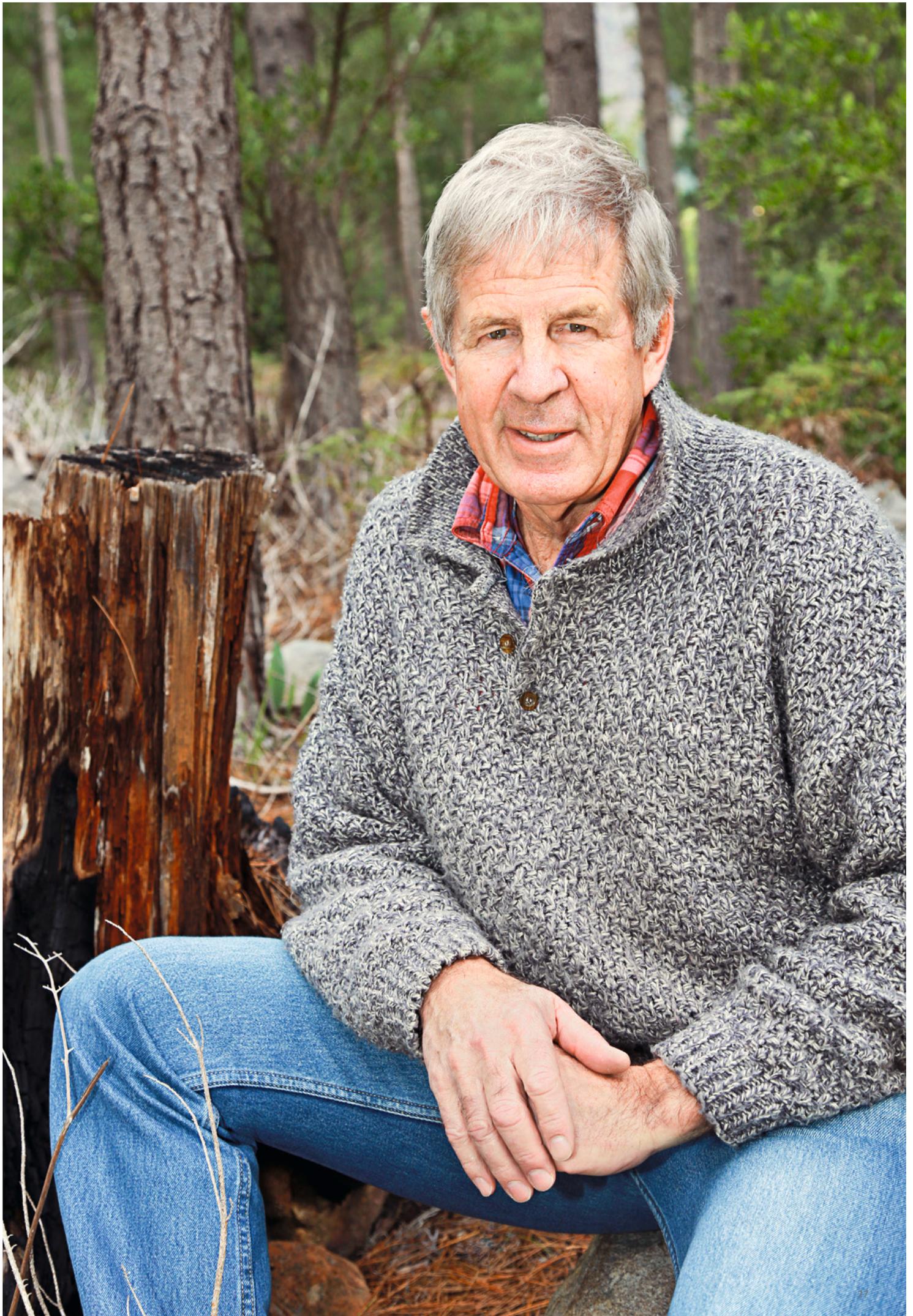
Tim Rypstra: No, not at all. I love nature and enjoy spending time outdoors. That's why I am keen to establish a technology that promotes more sustainable forests and wood supplies – a touch of wood that is FSC and PEFC compliant and that contributes to the reduction of our carbon footprint.

MORE: Thank you for the interview.

PORTRAIT

TIM RYPSTRA

Wood scientist, emeritus associate professor at Stellenbosch University in Stellenbosch (RSA), works alongside wood anatomist Jan Swart and oenologist Charl Theron developing Alternative Oak Products (AOPs). Under controlled conditions, they give wine that “touch of wood” it traditionally acquires while maturing in an oak barrel.





E_SOLUTIONS

“My two sons’ favourite toys
are trucks, cranes and trains.
They got it from their mum.”

Anastasiya Nuzhdina, head of trading goods warehouse, Shuya (RU)
Job or Vocation? (Pages 30 to 33)

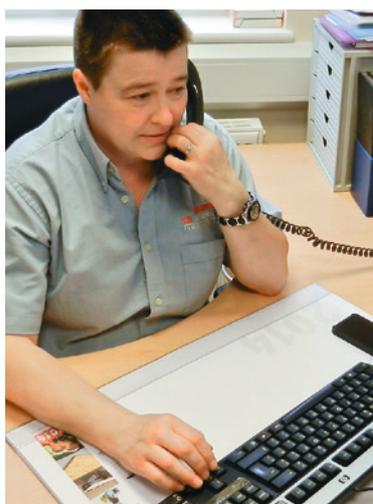


Faces of the Company

LUCIAN BARBACARU

Team Leader Public Relations, Radauti (RO)

A year after he took up his job as PR manager at the plant in Radauti, Lucian Barbacaru got his first stern test: a visit by the Romanian Prime Minister was one of the young team leader's most outstanding experiences with EGGER. Barbacaru discovered his passion for public relations early. He studied the subject at university, worked part-time as a journalist and was one of the few students who got a chance to work at the PR department of the Romanian Senate. The country's economy is growing strongly, and Baracaru's workload accordingly. "That's what makes work so interesting", he says, "every day brings a new challenge."



HELEN SINTON

Timberpak Operations Manager England, Leeds (UK)

"I'm more the type who gets stuck in wherever I'm needed most", says Helen Sinton, manager of two plants belonging to EGGER's own recycling firm, Timberpak. And she means it literally. Since she is responsible for eleven HGVs ("Heavy Goods Vehicles"), the quality manager did extra training to become a transport manager, too. And Helen Sinton would not be Helen Sinton if that did not include getting a license to drive the HGVs. But her real strength lies in quality assurance. "I started at EGGER checking the quality of raw material deliveries. Now my team and I have to maintain these same standards ourselves."

MATHIEU BRUNELLE

Team Leader Process Engineering, Rion-des-Landes (FR)

"I find technical solutions to save costs and make my colleagues' work easier", is how Mathieu Brunelle describes his job at the EGGER plant in Rion-des-Landes (FR), not far from the southern French Atlantic coast. His solutions are also good for the environment. For example, he makes sure that the steam from the two driers is cleaned before it is released into the atmosphere. In this case, Brunelle, an industrial engineer, opted for an electrostatic process. For cleaning the industrial water, he installed a system that flocculates impurities. And the father of a young daughter has plenty to do in his spare time, too: his next big project is refurbishing his house in the foothills of the Pyrenees.



Job or Vocation?

For most people, working to pay the bills is a necessity. But as their prosperity grows, people want more from their jobs. And not everybody is looking for the same thing.

BY Andreas Busche and Till Schröder

“Pleasure in the job puts perfection in the work”, wrote the philosopher Aristotle more than two thousand years ago. Some things never change. A company’s well-being – and that of society as a whole – is more dependent than ever on happiness at work. In Germany, according to a survey by the Gallup Institute, unmotivated employees who “inwardly give their notice” cost from 98.5 to 118.4 billion euros per annum. Meanwhile, futurologists agree that individuality and a high degree of employee motivation are becoming mainstays of modern companies. Independence, flexibility and a sense of responsibility make the difference.

The future has begun. The working world of 2020 is orientated towards diversity and individualism.

These are characteristics that can be learned. “Employees with low qualifications will also have to receive training in future, learn how to reflect about themselves, their talents and their abilities, go on advance training courses and take a more active role in shaping their own working lives,” recommends the “Future Jobs” study by the employment agency DIS. The agency stands for a culture in which people can find the professional option that suits them perfectly. A similar vision is painted by the study “Lebensstile für morgen” (Lifestyles

for Tomorrow) by the Institute of Futurology run by trend researcher Matthias Horx, who says the majority of people in western societies are enjoying ever-increasing freedom to shape their own lives. “The challenge no longer lies in attaining new levels of liberty, rather in filling existing liberties with a sense of meaning.”

People’s biographies are no longer strictly divided into the three separate phases of education, working life and retirement. Modern CVs are more likely to follow a “multigraphy”, with overlapping phases (combining child-care and career), time-outs, continuations and repetitions (new marriages and new families). Futurologists have been observing these trends amongst the avant-garde whose lifestyles are being copied by more and more people. They include creative young people who grow up with the positive experience that “big things can come from small ideas” through social media networks and mature non-retirees who are spreading a “new and positive image of ageing” and assuming social responsibility by forming a “knowledge pool”. They share a positive basic attitude and individuality. Each and every company is also individual, as is each branch of the economy. So what of working life in 2020? In the following pages, five EGGER employees demonstrate the diversity of tomorrow’s working world.



MORE TIME FOR WHAT'S REALLY IMPORTANT

Jörg Grauer (log yard, Brilon, DE) cut down on the amount of shifts he has to work by opting for part-time employment.

When his sixth child was born, trucker Jörg Grauer switched to the vehicles used by EGGER to move chips, shavings and timber around the log yard at the plant in Brilon (DE). That was 18 years ago. He was doing full-time shift work and could handle the cranes at the shredder just as well as the Volvo wheel loaders or the Liebherr excavators. Today, Grauer's children are pursuing their own professions and at 51, he has five grandchildren and works part-time. He is happy to accept the restrictions that entails: "Money is not everything. Health is more important." He knows what he is talking about. In 2008, while building his own house, he fell from the eight metre high roof – and lived to tell the tale. It took some

time before Grauer was back to his old self. But, together with his employer, he found a new solution. Since then, his working life has no longer been dominated by the constant chopping and changing from early to late shift and back. He takes four days off after every turn. Occasionally, he jumps in for colleagues. But for him, the main thing is enjoying more time for himself. "It's great that EGGER supports this approach." He likes to relax by fishing in the lake. His wife is pleased because they get to spend more quality time together. Even his 26 chickens in the backyard are happy – along with the neighbours, family and friends he supplies with eggs.



A FLEXIBLE RESPONSE

Commuter Thomas Kuncinger (Technology Centre, Unterradlberg, AT) uses EGGER's flexitime programme.

"When I'm at the wheel of my car in the morning, that's when I have time to prepare for my working day." And Thomas Kuncinger has plenty of time. The chemist, who lives in Vienna, drives 90 kilometres every day. "Pure travelling time each way is about 45 minutes, and I usually use that to make phone calls. Commuting never bothered me. My main motivation has always been to find work that does not involve too much routine. In return, I'm happy to accept a long commute." Kuncinger works at the Technology Competence Center for Chemistry at the plant in Unterradlberg, where his tasks include advising external service providers from the research sector. He spends a lot of time on the road. "Driving is not a passion of mine," he insists, "the car is simply a necessity." As a husband and father Kuncinger also has to organise his private life well. Because his wife also works. EGGER's flexitime programme also allows him to take his son to nursery when needed. "Without the flexibility it would be impossible for me to do this job." There's no question of moving his family from Vienna. So Kuncinger is glad to be able to combine the advantages of city life with the pros of a varied profession.

MAN OF THE WORLD

Michael-Bernd Wehmeyer, (Edging Sales), who lives in Brilon (DE), is at home all over the world.

When Michael-Bernd Wehmeyer speaks of home, he could mean anywhere. This much-travelled man is no stranger to airports, taxis and exotic countries. And "workplace" does not necessarily mean "his desk" to him. His office fits into a briefcase. The frequent flyer logs into the company network from his laptop – so his workplace is wherever in the world he has Internet access. As international sales manager for EGGER edging, Wehmeyer has worked in Iran, Australia and Turkey in the last five years. In 2010, EGGER took over the majority stockholding of the Turkish edging manufacturer Roma Plastik. Wehmeyer chaired numerous discussions on location to bring the edging up to EGGER's demands. "At the moment, I cannot imagine working nine to five every day in an office," he says. "As soon as I've got a project going, I need to move on." But home has a special meaning for a globetrotter. "In my job," says the family man, "it's really important to have an anchor in life."





BOSS AND MOTHER

Anastasiya Nuzhdina (Logistics, Shuya, RU) organises the trading goods warehouse and her family.

Since Anastasiya Nuzhdina joined the company in 2008, it has assumed a special place in her heart. “My sons Ivan and Ilya are also big fans of EGGER,” says Anastasiya, a trained simultaneous translator. “Their favourite toys are trucks, cranes and trains.” Anastasiya Nuzhdina started working in the warehouse in Shuya (RU) as an assistant but was promoted to warehouse manager within two months. Shortly afterwards, Ivan was born, followed by Ilya three years later. She was back at work within six months of each birth. She is living proof that part-time employees can hold management positions. “Without work, I cannot sit still for a minute.” But she occasionally has to. Half a day’s work, explains Anastasiya Nuzhdina, “means four hours of work and 30 minutes to nurse the baby.”

OPPORTUNITIES FOR THE FUTURE

Jenna Wiseman (Human Resources department, Hexham, GB) is helping to design the working world of the future.

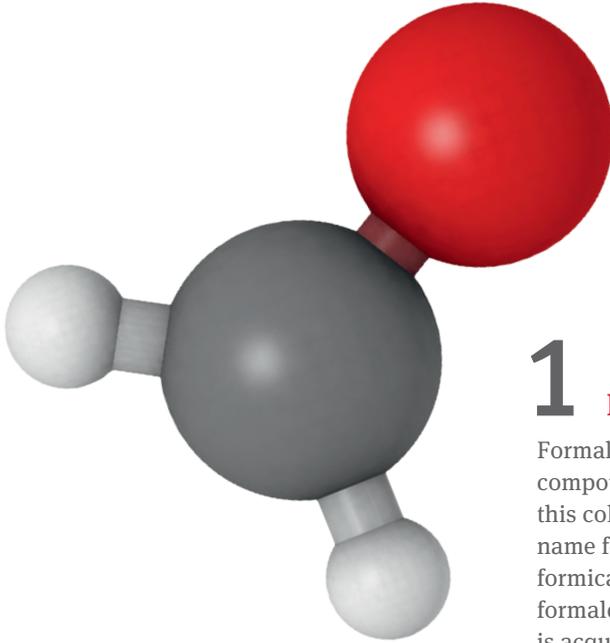
Jenna Wiseman has only just begun working in her profession but she already embodies the future of EGGER and is helping to shape it. The 22-year-old spent two years working in EGGER’s Human Resources department while she completed her degree. Today, she is involved in recruiting new employees. So when Jenna successfully graduated in 2013, she was already very familiar with workflows in the Human Resources department. Her first project included helping to introduce the new online application system. Anyone who asks her about her own personal experience will hear nothing but glowing praise for her employer. “The timber industry hardly has a reputation for being glamorous but EGGER offers a huge range of opportunities for professional development.” Jenna knows that a company has to move with the times to survive in the competition for new employees. “We are already much more pro-active than a few years ago. Today, we have a precise idea of what characteristics new employees should bring with them and how to approach them.”



5 THINGS ABOUT

Formaldehyde

This colourless gas is the subject of heated debate around the world. But few really know what they are talking about.



1 IN THE BEGINNING

Formaldehyde was the trivial name for the organic compound methanol. The chemical formula for this colourless, pungent-smelling gas is CH_2O . The name formaldehyde comes from the Latin word formica (ant) because formic acid is created when formaldehyde is oxidised. Formaldehyde itself is acquired by oxidising methanol. More than 40 million tonnes of Formaldehyde are produced every year; about half of that is for the timber industry. The colourless gas has been the subject of heated debate worldwide. Only a few actually know what they are talking about.

2 IN THE LABORATORY

Manufacturers have succeeded in drastically reducing the formaldehyde content of timber materials in recent years. Safety limits and testing methods vary from country to country. The European standard E1 stands for emissions of less than 0.1 ppm (parts per million) by chipboards, MDF and OSB boards. Testing is performed in the European test chamber (see photograph). In the US, American testing procedures are used, with the result that the CARB 2 standard can be stricter than its European counterpart for some materials and more lenient for others. Japan has the strictest regulations, known as the **** standard. This measurement is performed in a glass container called a desiccator and is expressed in milligrams per litre. The standard corresponds to roughly 0.03 to 0.04 ppm in European terms.





3 IN GLUE

Because of its positive characteristics (consistency, transparency, easy to manufacture and global availability), there is basically no alternative to formaldehyde right now. Technically mature formaldehyde-free glues such as diphenylmethane diisocyanate (PDMI), duromere and thermoplastics, on the other hand, are only available or usable on a limited basis. Formaldehyde-free rawboards, for example the highly popular building material OSB, require extra work, resulting in higher costs.



4 IN CONSUMER PRODUCTS

At low concentrations, formaldehyde poses no danger to health; this threshold is called the “safe level”. As an ingredient in many chemical compounds, the gas is used to manufacture paints, medicine, plastics and adhesives but also in textile processing, disinfection and fertilisation. In the timber processing industry, it plays a major role as an ingredient of synthetic resins and glues. It is also to be found in household cleaning agents, soaps, shampoos and even in baby wipes.

5 IN NATURE

Formaldehyde is a natural ingredient in many foodstuffs. For example, pears contain up to 60 milligrams of CH_2O per kilogramme and shellfish up to 100 milligrams. Around the world, bacteria produce about a billion tonnes of the gas every year. Human beings also produce about 50 grams each of formaldehyde per day as a by-product of our aerobic metabolism. Therefore, we carry a low concentration of the gas in our blood and breath.



IN THE LABORATORY

Tried and Tested



Research and development even goes into the liquid with which moisture-resistant chipboards are marked to distinguish them from other boards.

The measuring device spots what the eye can't see. Chemists and technicians in all 17 EGGER plants keep a watchful eye on quality. Their headquarters are in the TechCenter in Unterradlberg (AT).

BY Till Schröder



The technology center was the second building after the Radauti plant that EGGER constructed using its own products and with a certified, modular methodology. It was opened in 2011.

There's a loud crack as a steel bearing the size of a golf ball slams into a piece of laminate on the concrete floor of the laboratory. Markus Aufegger, who is responsible for quality management at the plant in Wismar (DE), picks up the laminate board, runs his finger along the narrow mark left behind by the impact and furrows his brow. He is surrounded by measuring devices, chemical equipment and other apparatus for further hardness tests. For hours, wheels for desks have been rolling over a piece of floor in a kind of cage. Aufegger's colleagues note the results carefully. "Even the most intensive use should leave no trace within the guarantee period," says Aufegger. Just in case there is a complaint, the products have been tested and precisely described.

Change of scene: in Gagarin, Russia, a control room employee enters Margarita Vasileva's laboratory with a piece of chipboard. She regularly tests the density, swelling and solidity of the boards. The results of her work help the production manager to optimise the plant settings, from the chip-cutting machines through the drying tunnel and gluing machine to

the press. Vasileva's assistant puts on her protective goggles, takes a test tube with some chips from the board and carefully adds acetylacetone. Then, she uses a photometer to establish the formaldehyde content – a simple but, according to the Fraunhofer-Institut, extremely specific way of measuring the formaldehyde content in the production process frequently, quickly and accurately.

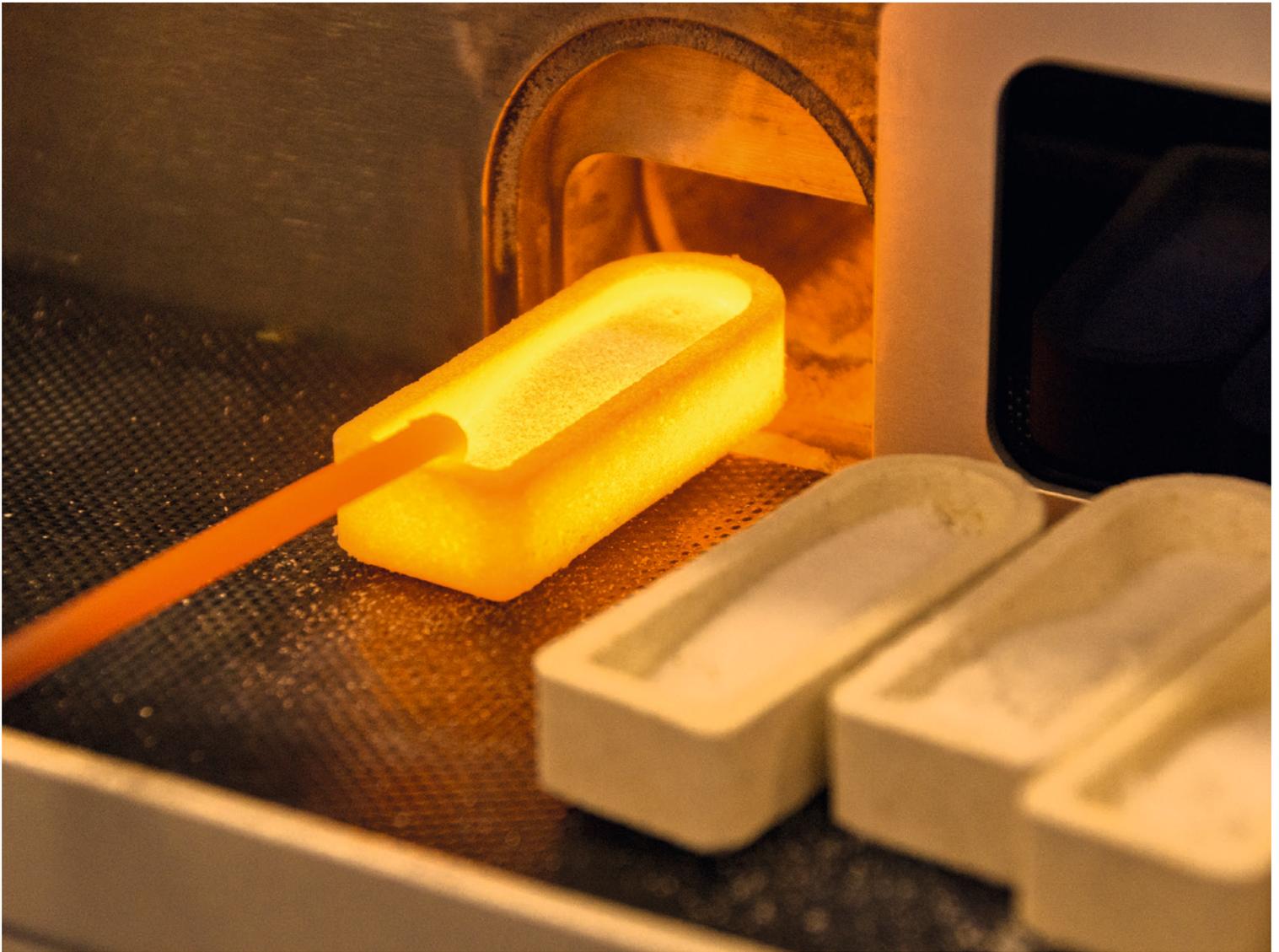


“The challenge lies in the sheer scale: the difference between laboratory conditions and industrial production.”

Andreas Geyer, head of CC Chemistry

Checks, tests and protocols make up the daily routine in the laboratories at all 17 EGGER plants. That also applies to the laboratory on the ground floor of the TechCenter in Unterradlberg, where EGGER has been producing chipboards since 1970. Nevertheless, the headquarters of the EGGER





Laboratory kiln: additives are heated up to determine their sulphur content.

The acetylaceton test allows the formaldehyde content to be measured quickly and efficiently. It is part of the regular routine at EGGER's laboratories.



The high-pressure reactor in the foreground is used to test new materials at temperatures of up to 60 degrees Celsius.



→ Competence Center boasts considerably more elaborate equipment than the plant laboratories. It is here that ideas take shape in pre-determined processes and are nurtured until they are ready to go on the market as fully-fledged products. A high-pressure reactor is at their disposal for adhesive development, allowing new formulas to be mixed under pressure and at high temperatures. A spectrometer determines the composition of new raw materials according to their infra-red fingerprints. All commonly found emissions can be tested in specially built testing chambers. And the team can also try out whether a robust board can be produced using a new kind of wood – for example, one of the quickly growing species in the company’s own short rotation forestries – or using a new glue formula. They have all the necessary equipment: including a resin mixer and laboratory press.

The CC was given a new home in 2011, an award-winning modular constructed building. The employees’ computer screens display the formulas currently being prepared at the resin plants in Hexham (UK), Wismar (DE) and Radauti (RO). “We outsource the basic research,” says Andreas Geyer, head of the chemistry division. The CC is closely networked with universities, institutes and research projects. Clever chemists, technicians and lawyers accompany the innovations and communicate with info brokers, who keep EGGER up to date regarding new patents registered by competitors.

A glance at current projects suggests a better future is already within reach, with ever-lighter boards. Boards made using fewer, more environmentally-friendly resources, whose laminations are more realistic, more scratch-resistant, equipped with “AntiFinger-Print” technology to reduce smearing, reinforced with ceramics or that can be used to generate electricity thanks to their transparent, self-adhesive photovoltaic foils. Reducing emissions also remains a priority. “New adhesive

systems” is the title of a new project. One of the visions is to make boards using not glue but modified timber components such as lignin, cellulose or tannin. “That involves breaking down the wood using enzymes,” says Andreas Geyer. “It’s a fascinating concept but the sheer scale of it is a challenge.” He reels off the numbers: Unterradlberg produces an average of 2,000 cubic metres of boards every day. A cubic metre corresponds to 650 kilogrammes, of which 50 – 60 kilogrammes are accounted for by glue. “The enzymatic procedure is too small for quantities like this.” The prospects seem better for the “Biofilms” project, which involves the cultivation of bacteria and fungi that break down wood ingredients responsible for the fleeting organic substances in the material.

The jury is still out on what makes realistic wood decors into patented patterns

But being technically possible and economically viable is not enough: a product also has to be given the necessary patent protection. The technicians also take care of the complex issue of “compliance” the need to maintain products’ conformity with existing standards, laws and thresholds. And finally, the lawyers argue over what they casually call “brand issues,” asking themselves whether a competitor can be proven to have copied one of EGGER’s decors, for example “Arlington Oak”. “Debates about design protection are heating up in the business,” explains Gerold Schneider, EGGER’s IP manager. IP stands for “Intellectual Property” and that includes things like the decor patterns. Where does nature stop or where does a decor’s “specific pattern” start? “The jury is still out on a lot of these cases,” says Schneider. Furthermore, the correct legal term for a design patent has been “registered design” since 2014. No matter how much the end products at EGGER’s laboratory work are a matter of taste, they also have to be legally watertight.

THE STORY

THE UNTERRADLBERG PLANT

EGGER has been producing chipboards at its plant in Unterradlberg, near St. Pölten, since 1970. Today, the plant employs some 360 people. Annual production is about 40 million square metres of laminated chipboards.

In 1978, the EGGER brewery moved there from its original location at Kufstein.

In 1988, the beverages manufacturer Radlberger was founded as a separate company. Like the brewery, it’s a subsidiary of the EGGER group.

In 2011, the Competence Center moved into the Techcenter on the grounds of the Unterradlberg plant.

E_NATURE



“There is no point in telling a forest-owner to ‘do something with your woods!’ if he can’t find anybody to take care of them long-term.”

Lars Schmidt, managing director of wald wird mobil.de, Göttingen (DE)
Change is the Mother of all Invention (Pages 42 to 43)



Living Sustainably

REAL TREES

www.echtwald.com

There are hardly any virgin forests left in Europe. However, Germany can now boast “real forests”. The foundation “Echtwald” sees itself as both trading brand and arts project. In order to “improve the quality” of forests, the foundation bought two plots in the Black Forest, which it then turned into mixed forests as nature knows them, allowing a greater diversity of flora and fauna. The Baden-based wine-grower Konrad Salwey also supports the project by basing his entire operation on native produce: the wood for the barrels in which he matures his wine, made by a cooper in the French region of Burgundy, grows in the nearby Glottertal. “Echtwald” is also on the bottle labels, helping the wine to make it onto the shelves of renowned designer stores.



PRINTED TREES

www.studio-wessendorf.de

In one of Berlin’s most modern parks, Park am Gleisdreieck, stands a suitably contemporary wooden hut that houses public lavatories and a small newspaper kiosk. Designed by architects Grischa Leifheit and Jörg Wessendorf, one of the pavilion’s stand-out features is its raw timber appearance. But no giant redwood had to be sacrificed to build this little house: the oversized grain is merely a façade, printed on weatherproof high-pressure laminate – a reference to the natural raw material.



GREEDY TREES

www.baumwunder.de



It always looks like a victory for nature. But these overgrowths whereby trees absorb nails or other foreign bodies is merely a self-healing trick. The amateur photographer Olaf Willenbrock has been documenting such growth for 25 years, to show the world “how carelessly people treat nature.” But his pictures always tell a story, too – like the one about the fruit farmer from Görsbach in Thüringen: allegedly, he locked a bicycle on the edge of a cherry orchard to fool thieves into thinking he was always there. The orchard has long since become a thing of the past: all that remains is that mischievous deterrent of old.



Change is the Mother of all Invention

The timber market is changing. It's all there in the numbers, no matter how abstract they might seem. But it's easier to understand the stories of people who approach change in a positive manner – and develop projects and business ideas.

BY Kaspar Heinrich



Before the harvest comes the crop: that's one way of describing the approach taken by the director of inspections at ThüringenForst, Albrecht Glaser. He wants to use the Internet to reconnect forest owners with their woods. After all, that's the only way to ensure that the forest is actually managed. His platform, waldbesitzer.de, went online in 2014.

Christel Happach-Kasan also works on the relationship between humankind and Mother Nature and sustainable forestry. She is chairwoman of the Schutzgemeinschaft Deutscher Wald (Society for the Protection of German Forests). Every year, her organisation

awards a prize for the "Forest of the Year". The award-winners are what's known as "small forest owners" who own just a few hectares of woods. "We want to draw attention to the fact that sustainable forestry is possible even in small units," says Happach-Kasan.

These initiatives come at a special time: recent years were marked by a significant increase in demand for timber and a continuous rise in prices. In certain regions, this development may appear to have weakened or even gone into reverse, but the global trend knows only one direction. At the end of 2013, the GSPI index for the global market price for saw log

reached its third-highest value since its introduction in 1995. "The sharpest price rise was in North America, Northern Europe and the Baltic States," according to the Wood Resource Quarterly. And there is no sign of the trend turning. As a renewable raw material, timber is one of humankind's great hopes for the future. In this light, projects such as those of Glaser and Happach-Kasan teach us to value forests highly. At the same time, the shortage of timber mobilizes interesting entrepreneurial approaches which turn into new opportunities. In the following pages, we present some trend-setting projects that help forest owners find their woods and exploit their value.



LOOK AFTER THE SMALL PIECES OF TIMBER

Timber transport company manager Mario Reineke has specialized in short timber. With growing success

For some transport companies, it was too much piecework; for Mario Reineke it became a profitable business niche. For two years, he has been in charge of the timber transport company R uthers in the North Rhine-Westphalian town of Brakel, which now has four large trucks. When Reineke, a services engineer, took over at the company, he was working as technical director of two hospitals. By chance, he learned that Karl-Heinz R uthers wanted to pass on the management of his family business. He introduced himself – and persevered. His business idea: to specialise in shorter branches and trunks up to 1.80 metres long to meet growing demand. “We used to transport for just two sawmills, now we have a much broader range of clients,” says Reineke. “Our area of operation has grown multiplied.”

EGGER is one of the five wood processing companies Reineke delivers to. When he started, he was responsible for an area with a radius of 60 to 80 kilometres. Today, the drivers’ rounds take them as far as 150 kilometres away, for example to a forester in Bad Gandersheim. He takes care of 130 private forest owners, of whom some own less than a hectare of woods. “In the past, property like that was largely neglected,” says Reineke, “at most, a few spruce might have been felled to make perimeter fences.” Today, wood-processing companies are grateful for entrepreneurial initiatives that secure their supplies because there is a limit to the extent to which they can buy directly from small owners. However, more and more forest owners are responding to the rising prices and joining organisations that professionally market their timber. “The pooling of resources makes our job easier,” says Reineke, “we have more professional contacts now, such as forest managers who know their stuff.” Reineke is proud of his new company. In December 2012, the founder of R uthers passed ownership of it to him. At the same time, Reineke learned to drive trucks. The services engineer still has two occupations: but he knows he’ll have to make a decision soon: because the demand for shorter timber continues to grow.



www.ruethers-holz.de



IF YOU GO DOWN TO THE WOODS TODAY

Navigation systems for forest tracks are a growing business. Thomas Sbukowski has been familiar with them for over a decade

Some forest owners might be loath to admit it but it’s true: he who seldom visits his property can have trouble finding it at all. Even professionals complain about life on the forest tracks: “You cannot imagine how much time is wasted in trucks looking for wood in the trees,” says timber haulier Michael Eickelmann. He says hours upon hours can be wasted when a trucker looks for a patch of forest on the basis of maps or

verbal descriptions. The Logiball company recognized this problem as far back as 2005. Using the data held by NavLog, co-founded by EGGER as a member of the technical advisory board, Logiball refines forest satnavs so that they no longer merely feature roads and house numbers but also increasingly accurate locations of forest tracks and log piles. “Foresters and private forest owners across Germany have told us which tracks are

suitable for the transportation of timber,” says product manager Thomas Sbukowski. That’s what makes the crucial difference to a road-based satnav: the system does not just work with GPS data because the coverage can get lost beneath the forest canopy, where precision can be reduced to a range of five metres from fifty metres. Steep slopes with two or three tracks at different elevations can also confuse GPS-based systems. The forest satnavs complement GPS with traditional orientation techniques: local knowledge and map-reading skills. Logiball has to update the data packages continuously because a forest is a living and dynamic place: new turning and storage areas are created every year. And some of the information given to Logiball by forest owners can be highly subjective: “For example, if someone makes it up a 30-degree slope here in summer”, says haulier Eickelmann wryly, “then he thinks the track can be used all year round.” Still,

it’s worth the effort. The forest satnav is definitely a good addition to timber logistics. Because a driver’s local knowledge is often restricted to a single region, while the timber industry needs hauliers who can find their way anywhere.

www.logiball.de



HELPING FOREST OWNERS SEE THE WOOD FOR THE TREES

A big forest doesn’t necessarily mean a big timber yield. In the eastern German state of Thüringen, Lars Schmidt has been using the Internet to turn passive wood-owners into active foresters

The state of Thüringen is also known as “Germany’s green heart”: there are 0.22 hectares of forest for every resident, almost double the national average. Today, Thüringen’s forests are a major economic factor, employing 40,000 people and yielding 200 million euro in annual taxes – making it a paragon of timber mobilisation. And it was done in the face of sometimes difficult conditions. In the early nineties, the transition from socialist planned economy to market economy had only just begun: private owners had in effect been dispossessed and the state was in charge of the forests. Property claims to about 30,000 of a total of 500,000 hectares have yet to be resolved. Furthermore, the property is largely held in small lots. The average piece of forest property has an area of just 0.9 hectares. In order to activate passive forest owners and inject additional timber into the market, the authorities opted for Public Private Partnerships (PPP). The idea was that state foresters and the private timber industry would get together to find small forest owners and persuade them to engage in sustainable forestry. The non-profit

company wald-wird-mobil.de, founded in 2006, runs a platform with computer-aided customer relationship management (CRM) and a “forest exchange” for plots of land. “It’s another form of mobilisation,” says Lars Schmidt, manager of both wald-wird-mobil.de and the Bundesverband der Säge-und Holzindustrie (German Lumber Industry Federation). “Through buying and selling, a passive forest can be turned into an active forest.” The project is currently being recalibrated: “There is no point in telling a forest-owner to ‘do something with your woods!’ if he can’t find anybody to take care of them long-term,” says Schmidt. That’s why the next step is to prioritise attention to private forest owners. The aim is to bring professionalism to forestry co-operatives so that they can accommodate as many small owners as possible. Given its unique situation, Thüringen could prove to be a guiding light for the rest of the country. It’s hoped that successful strategies can also be applied in other federal states.

www.wald-wird-mobil.de

Natural Quality





Portugal and Spain dominate the global trade in cork.

But the market is undergoing a creeping transformation that is changing the demand for this natural product.

BY Patrick Fink

Apart from what they are made of, what does a cork floor that cushions footsteps have in common with the cork that seals a wine bottle? It is highly likely that the cork comes from Portugal, or to be precise: from the Alentejo region, where more than 80 percent of the country's cork forests are located. In terms of global reserves, little Portugal accounts for a third of the forests. Its significantly larger neighbour, Spain, is home to another 27 percent of global cork forests, which means that about sixty percent of the world's cork trees are to be found on the Iberian peninsula.

Most of the trees are already several decades old. The cork oak (*Quercus suber*) can live for up to 250 years – and for 150 of those years the cork can be harvested every nine to twelve years. In regions like Alentejo, forestries have perfected cork harvesting while maintaining their ancient traditions. The bark of the evergreen broadleaf is stripped laboriously by hand, using an axe. An oak can yield some 45 kilogrammes of cork in a single harvest. The rule of thumb for quality is as follows: the smoother the bark, the better the quality of the cork. However, the entire harvest can be exploited, because cork can be put to the most diverse uses.

This sustainable use of the cork forests also manifests itself elsewhere. Since the trees do not have to be felled for cork harvesting and are not raised in plantations, the forests provide perfect habitats for a range of flora and fauna. Even endangered species such as the Spanish imperial eagle or the Barbary stag find safe havens

there. An increasing number of cork foresters are having their sustainable methods certified. In Portugal alone, more than 15,000 hectares of cork forests have been certified by the Forest Stewardship Council (FSC) – and the trend is pointing upwards. In recent years, a re-forestation programme supported by the EU has resulted in a growing area covered by cork oak. More and more eucalyptus trees are also being planted. Although not native to Portugal, they are spreading so rapidly that they now cover a greater area than cork oak or pine trees.

A large part of the harvested cork is processed in the countries where it is grown: that improves the ecological balance sheet even further.

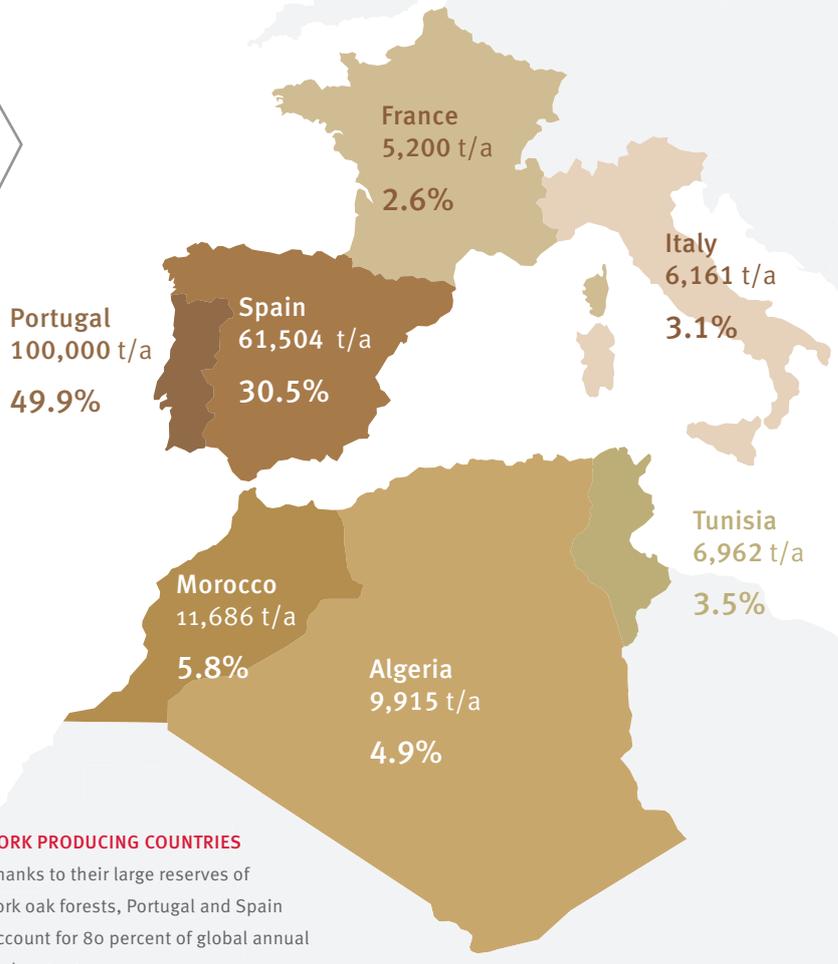
The majority of the cork harvested in Portugal is processed in the country. This branch of industry is largely made up of small and family-owned businesses with a small number of employees. More than 200 businesses have set up their production plants around the northern city of Aveiro alone. Thanks to the town's harbour on the Atlantic, the goods can also be shipped out directly. Two thirds of this flexible and lightweight material goes into the manufacturing of bottle corks. It almost goes without saying that these are mainly exported to the big wine-growing countries, France, Italy and the US.

On the other hand, nearly a quarter of annual cork output is used to produce cork floors, wall panels and insulation boards. This building material, with its high insulating value and fire-retardant qualities is in especially



FACTS AND FIGURES

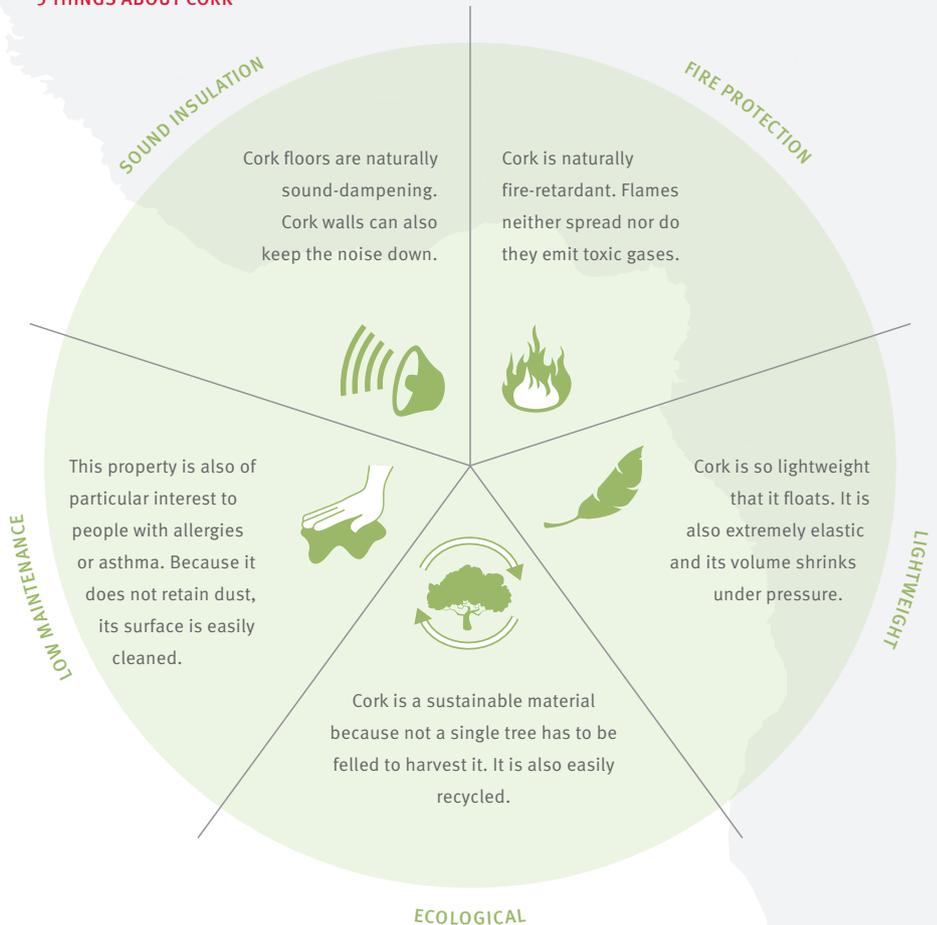
The cork oak is native to the Western Mediterranean region. Some 300,000 tonnes of cork are produced in South-western Europe and Northern Africa. The cork industry plays an important role, especially in Portugal. The country exports cork worth more than 800 million euro per annum, that's more than two percent of the country's overall yearly exports. Only in the two crisis years of 2009 and 2010 did exports fall beneath the 800-million-euro threshold. Between 25,000 and 30,000 people are employed in the cork harvesting and processing industries. But Portugal is not the only important player on the cork market. Here's a look at some key figures.



CORK PRODUCING COUNTRIES

Thanks to their large reserves of cork oak forests, Portugal and Spain account for 80 percent of global annual cork output.

5 THINGS ABOUT CORK



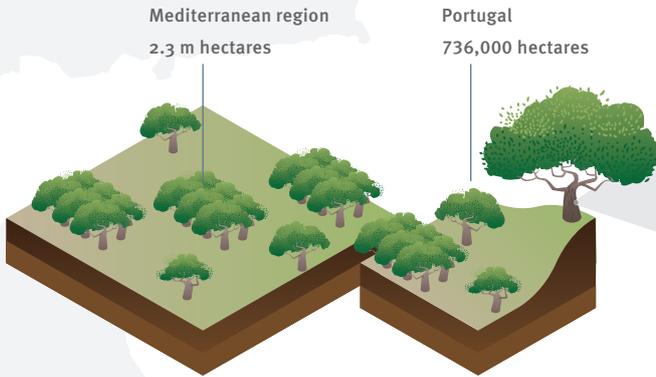
→ high demand in Germany, the United States and Russia. Together, these three countries import about half of the cork produced for construction and industrial purposes in Portugal. These companies mainly use cork left over from the harvesting and production processes but also recycled material. Because cork can be reused almost in its entirety.

Winemakers, on the other hand, are increasingly turning to alternative methods of sealing their bottles.

The cork market has been going through structural changes for some time now because more and more winemakers are going without cork to keep costs down. For table wines, for example, a growing number of wine drinkers have begun to accept synthetic corks and aluminium screw tops. Producing these materials uses more energy than traditional cork but they remain more cost-effective. The cork producers, meanwhile, argue that this development is good for cork reserves – at the same time, more and more of them are seeking out new business fields such as floors made of recycled cork like EGGER's cork+ technology.

THE CORK OAK

Cork oak forests cover over 2.3 million hectares in the Mediterranean region. Of these, some 736,000 hectares are in Portugal alone. Cork oaks can live for up to 250 years. After about twenty years, their bark can be harvested for cork every nine to twelve years. However, once a tree is over 150 years old, cork can no longer be harvested.

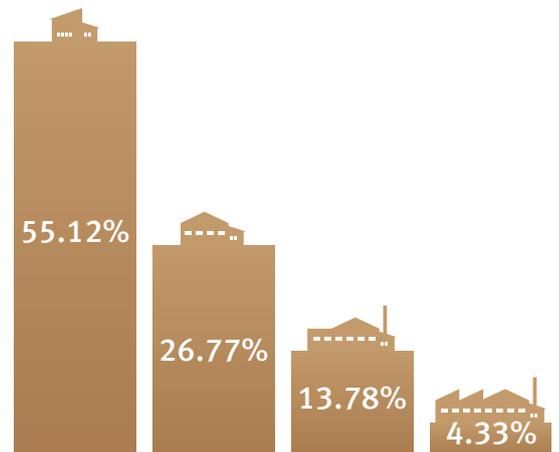
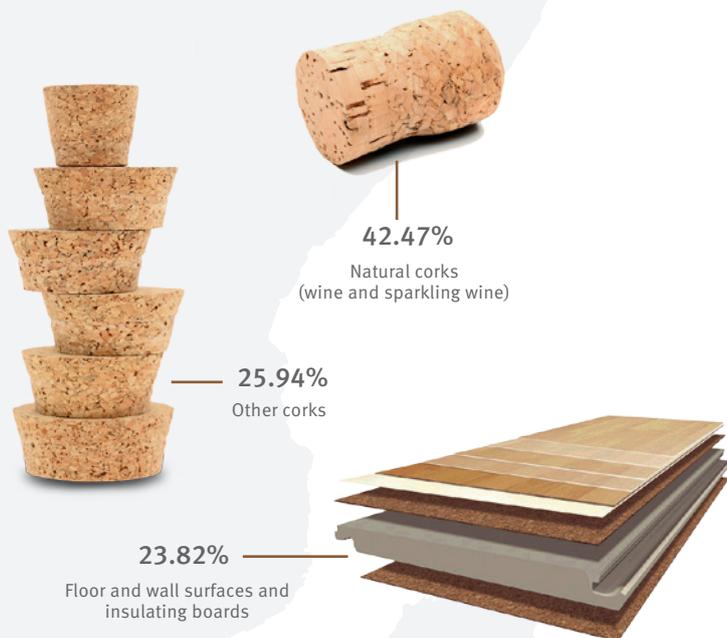


HARVESTING

The cork is peeled off using an axe. Both the bark and some layers beneath it are removed in the process. The exposed, reddish surface is then clearly marked to indicate when the next harvest can take place.

USE OF THE RAW MATERIAL

Natural corks for quality wines are removed from cork barks using special hollow knives. Leftovers are processed into pressed corks for medium-quality wines. In addition to the manufacturers of bottle corks, the construction and timber industries are among the major customers for cork. They use recycled cork to produce insulating materials and floor surfaces.



BUSINESSES

The cork industry is dominated by small and family-owned businesses with fewer than 20 staff. Medium-sized enterprises with up to 100 employees and large companies with more than 100 employees make up a much smaller proportion. The majority of the businesses are located in the North of Portugal.

Sources: Portuguese Cork Federation (APCOR), German Cork Federation

PICTURE PUZZLE



Tree-Huggers' Corner

Small surface, big impact? This edition's tree-hugger achieved his greatest successes with wood – back in the 1980s. By the time he retired at the tender age of 26, the wooden racket was a thing of the past – among professionals at least. Nevertheless, when he came out of retirement years later to show the world once again what he could do, the legendary eight-time grand slam-winner did not just dig out his famous headband. While the competition was long since using graphite to whack the ball over the net, the Stockholm-born star, now a successful businessman, was not to be separated from his beloved wooden racket. “I had never played with anything else. I knew that if I was to have any success that I would have to use a different racket. But I thought, ‘why change?’”

What's the sportsman's name? Send the solution to **MORE@egger.com**. Correct answers will go into a draw for a clic shelving unit made of Eurolight boards by EGGER. The closing date for entries is 30th November 2014. There is no right to redress through the courts.

The picture puzzle in MORE 04 featured a yellow hat and long nose sticking out from behind the tree. The character we were looking for was Pinocchio. Many thanks to all those who took part. The winner, Sabine Leiter from Leutasch (AT), received the EGGER stool “Gleichdick”, produced by designer Sebastian Schubert. Sebastian Schubert gefertigten Hocker “Gleichdick” von EGGER.

- _ Publisher** FRITZ EGGER GmbH & Co. OG
Holzwerkstoffe
Weiberndorf 20
6380 St. Johann in Tirol
Österreich
T +43 50 600-0
F +43 50 600-10111
info-sjo@egger.com
- Project Management Martina Haager
- _ Concept / Design** PLAYFRAME GmbH
Agentur für Markenkommunikation
www.playframe.de
- Creative Director Volker Pook
Art Director Vicky Tiegelkamp
- _ Editing / Design / Production** Raufeld Medien GmbH
www.raufeld.de
- Editor-in-Chief Till Schröder
Art Director Daniel Krüger
- _ Photography** Gerd Metzner/Raufeld Medien (cover, p. 12, 15, 16, 19), EGGER (inside cover, p. 29, 31–33, 34, 37, 38, 49), Jesper Anhede (p. 4), Jörg Hempel (p. 6), Uwe Walter/Autostadt Wolfsburg (p. 8), LignoTUBE (p. 11), Institute of Computational Design der Universität Stuttgart (p. 11), QC (p. 11), Coca-Cola (p. 12), Wilfried Dechau/Architekturzentrum Wien (p. 14), Iittala (p. 15), Haribo (p. 16), Nikolai A. Mader/privat (p. 16), Agata Szymanska-Medina (p. 17), Hans-Georg Häusel/Nymphenburg Consult (p. 18), Marc Jacobs (p. 19), SPURart (p. 20, 23), Getty Images (p. 21), Nike (p. 22), Eike Wenzel/ITZ (p. 22), Hennie Rudman/Stellenbosh Center for Photographic Services (p. 24–27), molekuul.be/Fotolia (p. 34), EpicStockMedia (p. 35), Matthias Kabel (p. 35), Mariusz Blach/Fotolia (p. 35), Ralf Niederer (p. 36–38), Till Schröder/Raufeld Medien (p. 38), Thorsten Arendt/Echtwald (p. 41), Christo Libuda/Lichtschwärmer (p. 41), Olaf Willenbrock/baumwunder.de (p. 41), Dani Vincek/Fotolia (p. 42), Ronald Schmidt/Rüthers (p. 44), Thomas Sbkowski/Logiball (p. 44), Lars Schmidt/wald-wird-mobil.de (p. 45), depositphotos (p. 46, 49), by-studio/Fotolia (p. 49), Harry Schnitger (p. 50), Picture Editor: Gerd Metzner
- _ Printing** Friedrich VDV Vereinigte Druckereien- und Verlagsgesellschaft, Linz
www.friedrichvdv.com
- _ Date of Publication** September 2014
- _ Notes** Please send your comments and suggestions to **MORE@egger.com**

MOR

www.egger.com