

MORE FROM WOOD.



EGGER Group customer magazine

06



Investing in growth

The ability to grow is rooted in a company's genes.

It is a fundamental success factor.

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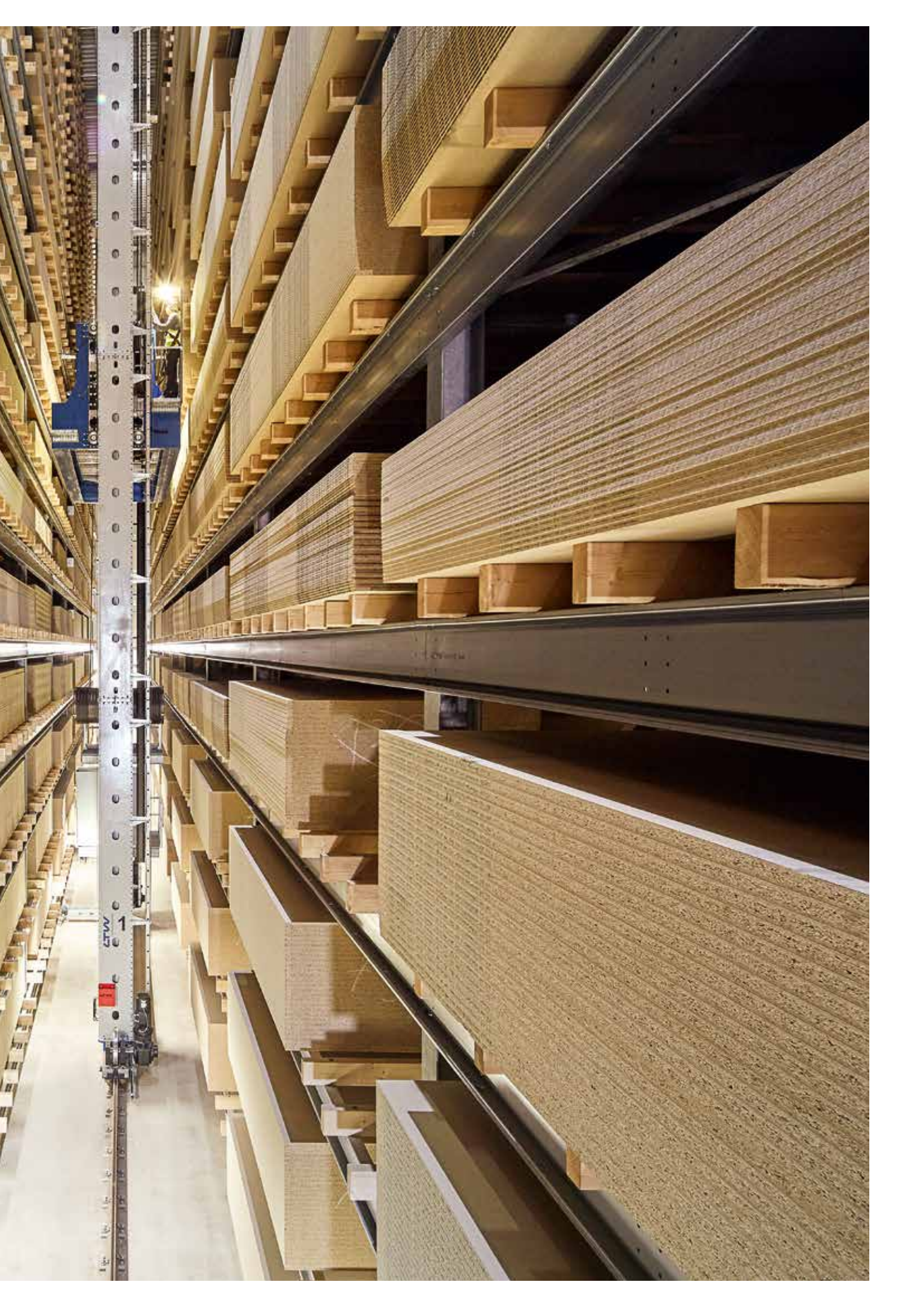
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LOGISTICS BENEFITS FROM GROWTH

The EGGER product range is widening, customer requirements are growing and through sophisticated logistics there is the possibility to become more flexible and to react quicker. This has been demonstrated at the new high-bay warehouse in St. Johann in Tirol (AT) which started operations in December 2014. Approximately 700 m³ of planed timber (80×170×2,000 mm), 2,250 tons of steel and almost 5,000 m³ concrete were used in the construction of the 34 m high building. The warehouse is fully automatic on all 18 levels and can store up to 32,000 m³ of wood-based materials. It also brings the benefits of reducing traffic and CO₂ emissions. With this investment, EGGER has underlined its commitment to the St. Johann location.



ONE OF THE MOST IMPORTANT FACTOR FOR THE GROWTH OF A COMPANY IS THE ENJOYMENT EMPLOYEES GAIN IN THEIR ROLES.



These days, growth isn't just about becoming bigger and bigger. As the complexity of our world is increasing a company and its employees must be able to handle this. They have to increasingly make independent decision, work in flexible teams and have more responsibility for their results. There is also a shift to "entrepreneurial employees" where co-operation and networking replace bureaucracy. One of the most important factor for the growth of a company is the enjoyment employees gain in their roles. As these employees are likely to be more passionate about the business and have a vested interest in its success.

Growth and **change** are the key topics of this MORE issue. Digitalisation and its current effects can be felt in all areas of life, including manufacturing. These radical changes must be embraced to take advantage of growth opportunities through innovation.

However, the questions remain the same. What is the best way to design a process? How much can we grow within existing structures? What must be changed to ensure future success? And how do we preserve our identity whilst we grow?

Practitioners and scientists focus on the principles and goals of growth, but also question its value. We speak to the economics professor Hermann Simon, who tells us: "Growth is not an all encompassing answer" – and reveals the strategies of medium-sized global market leaders, who generally grow faster than their larger competitors. And Klaus Grewe, who is currently supervising the construction of the new London Crossrail project, explains how he still makes it on time for his children's birthdays thanks to intelligent planning. From the EGGER team, we hope you enjoy our magazine.

EGGER Group Management

A stylized, handwritten signature in black ink.

Walter Schiegl
(Production/Technology)

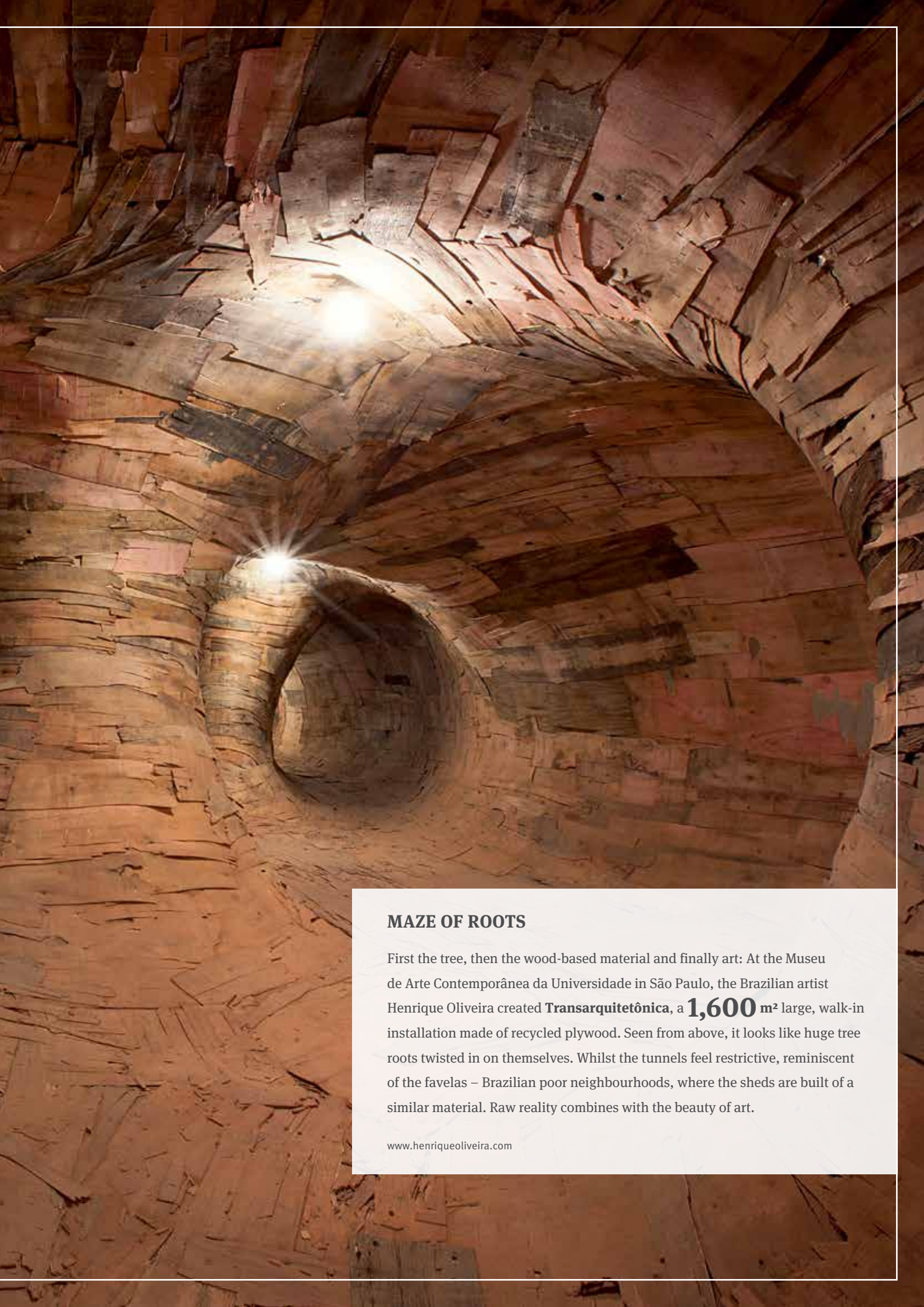
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Ulrich Bühler
(Marketing/Sales)

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Thomas Leissing
(Finance/Administration/Logistics)





MAZE OF ROOTS

First the tree, then the wood-based material and finally art: At the Museu de Arte Contemporânea da Universidade in São Paulo, the Brazilian artist Henrique Oliveira created **Transarquitetônica**, a **1,600 m²** large, walk-in installation made of recycled plywood. Seen from above, it looks like huge tree roots twisted in on themselves. Whilst the tunnels feel restrictive, reminiscent of the favelas – Brazilian poor neighbourhoods, where the sheds are built of a similar material. Raw reality combines with the beauty of art.

www.henriqueoliveira.com



EXCLUSIVELY UNDER ITS OWN NAME

With the new **EGGER laminate flooring 2015 – 2017** collection, EGGER for the first time, has launched a range for professional fabricators under its own name. With the motto "Always up to date", the range combines service decors and innovations, including the moisture resistant aqua+ technology, *UNIfit!* installation and the LONG longboard. The collection with **70 decors** was adapted for the markets with 11 regional variants and was launched in September 2014 at the Estrel Festival Centre in Berlin.

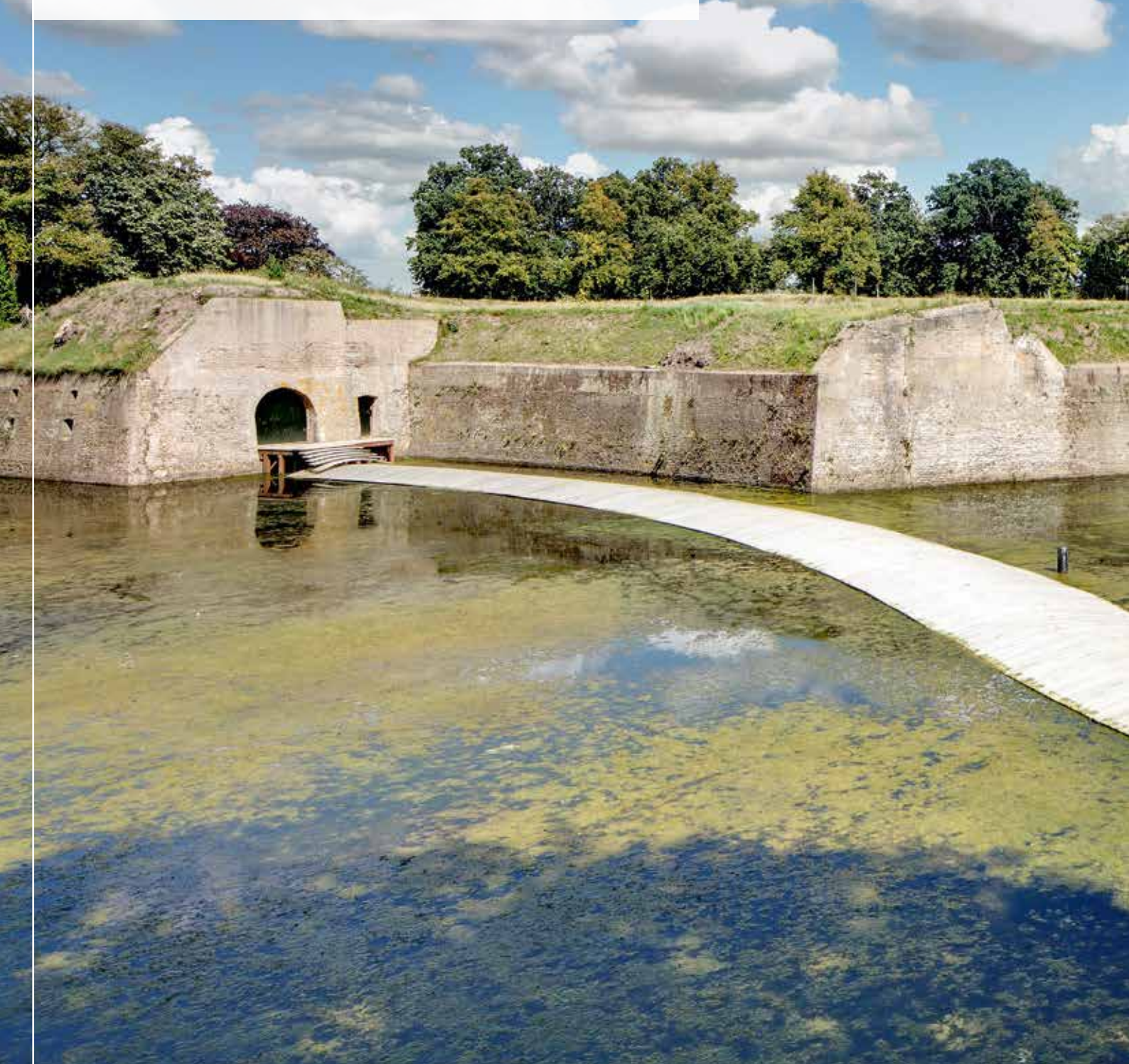
www.egger.com/laminate-flooring



FLOATING BRIDGE

The Ravelijn fortress in Bergen op Zoom (NL) was built in the 18th century. Back then, it could only be reached by boat but now you can walk to it. RO&AD Architecten built a **80 metre** long path made of resistant Accoya boards, supported by air-filled polyethylene pipes. The convex construction is not only slip-resistant and steady but it blends into the historical landscape thanks to its wooden character. This is also why it doesn't have a railing. However, the moat is only one metre deep.

www.ro-ad.org







E_INSPIRATION

"Better to be a hero in the end
than liked by all in the beginning."

Klaus Grewe, Project Manager
Desire and reality (pages 18 to 21)



Ideas for tomorrow

RETRACTABLE BALCONY

www.alirezataghboni.com

Until now, facades have been two dimensional and immobile. This is no longer true, since the nextoffice architects from Teheran built the three-storey Sharifi-Ha house in the Iranian capital. The architects were searching for the best solution, where the climate has cold winters and hot summers. Depending on the season and space requirements, residents can simply expand or retract a room. If retracted, there is one extra room and if expanded, there is a large balcony. The mechanism functions like the principle of a revolving stage in a theatre.



SINKING INTO WOOD

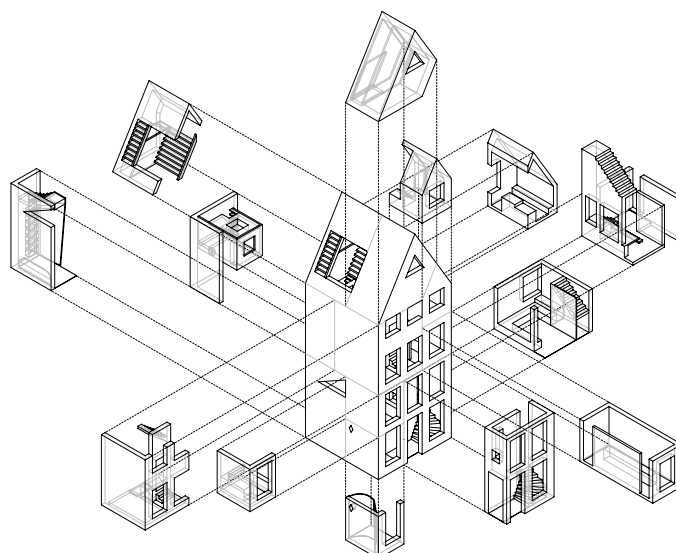
www.wood-balance.com

How soft can a hardwood bench be? "Like a pillow", says Edgar Seckinger. He is the Black Forest carpenter who has spent three years gluing thousands of little square blocks with fleece and specially produced foam. The result is a mobile seating surface made of wood, which adapts to the body's shape. It looks and feels comfortable and means ash, beech and oak are no longer hidden under pillows. Seckinger has applied for a patent for his invention and one chair is expected to cost about €700.

PRINT-OUT HOUSE

<http://3dprintcanalhouse.com>

Hans Vermeulen wanted to print out a house – but no 3D printer was large enough for an entire building. Therefore, the Dutch architect commissioned a suitable printer. On an Amsterdam construction site, his "Kamer-Maker" now prints out the layered modules which by 2017 will become five floors, including a printed roof and the supporting structure. Even the US president Barack Obama was present on site to inspect the construction method, which saves on transport emissions and waste. The printed material currently consists of bioplastics based on rapeseed oil. However, the leading DUS Architects office continues to experiment with printable wood fibres that harden into MDF-like building materials.



FOCUS ON GROWTH

OVERVIEW OF THE TOPICS

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Quantity and quality depend on each other. With an increase in size, adaptation is required. Just like a grown-up does not look like a giant baby, so the outer shell of a matryoshka doll becomes more detailed the larger it becomes.

Growing pains

A company must grow. However, organisations and business models cannot be enlarged in a simplistic manner, like a photo. Upheavals are part of the process. So what is the best way to grow?

AUTHOR Till Schröder

Growth can produce enjoyment and in turn enjoyment ensures growth – at least the Finn Ikka Paananen is convinced of the connection. And he has reason to. Because his company Supercell, which he founded in 2010 with five partners, has grown at a record-breaking pace. In 2003, Forbes even suggested that it might be the fastest **growing** company of all time. In 2012, the Finns placed their products – two free apps – in Apple's iTunes store. One of which, the game "Clash of Clans", is today played worldwide by millions of mainly 10 to 12-year-olds on their iPads. They get to establish a village, expand it and make the fictitious money needed for this by attacking other villages. However, they must wait days before the requested buildings are erected – unless they speed up the construction by investing real money. Thanks to the impatience of the players, Supercell made \$118 million during the first quarter of 2013. Their revenue is \$2.4 million per day. Speaking about his success, Ikka Paananen commented about the success: "Those who want to make money, should not think of money. Instead think of enjoyment!"

Stories like this demonstrate the power of digitalisation. However, not everyone should measure themselves in this way.

And anyway what is growth in fact measured by?

Is the new business model scalable?

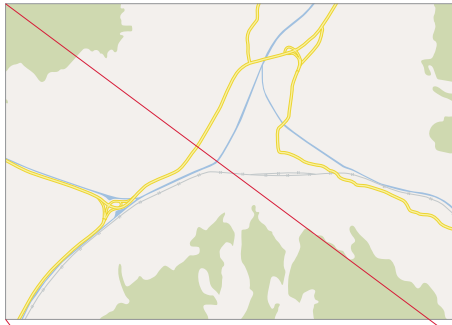
This is the decisive question asked before every investment. We speak of **scaling**, when a body or an organisation grows true to scale without changing the base structure. For example, a cube remains a cube, irrespective of how large it is. Its surface is squared, its volume is cubed - this is a scaling principle long known in physics and provides an ideal example of linear growth. However, in nature nothing is endlessly scalable. Natural scientists and philosophers speak of a scaling problem and have turned this into a separate research area.



**"Scaling is good.
But reorganisation
sometimes leads to
faster growth."**

Claudia Crummenerl, consultant with Capgemini

If, for example, a human were to be scaled down to the size of an insect, they would no longer be able to walk. This →



Scalable: An Internet card contains in miniature a lot of information which it only discloses once enlarged. The enlargement takes place according to established rules of vectors, which make it scalable.



→ is because the bond between the soles of the feet and the ground would be so great in relation to the body weight, that it would be impossible to lift the feet off the ground. Therefore, as a mental exercise, to survive in miniature size, it would be necessary to adapt the walking style to tiptoeing. For similar reasons, the body would need to be spherical with straw-like legs.

Conversely, in nature there are shapes which cannot exceed a certain size. For example, trees do not grow beyond the heights of the giant Californian sequoias, because with increased height the water pressure in the capillaries significantly increases. Furthermore, the trunk would have to be very thick in order to resist the pressure of strong

winds. Scientists explain the growth limit by the fact that the effort for a tree to grow beyond the species height exceeds the benefit. It just isn't worth it for the tree to keep growing. Nevertheless, growing is in the very nature of living organisms.

This also applies to enterprises. Scaling is only one type of growing, the linear one. "If, for example, an employee or a department does something that can be repeated, the process becomes faster and faster. This is growth in the sense of scaling", says Claudia Crummenerl. She is head of the Leadership and Development division of the business consultants Capgemini Consulting. However, scaling is not always sufficient. "Reorganisation is faster". A process

must be organised, or a department must be restructured, so that the entire company can continue to grow. This is required by the natural lifecycles of products and services. A successful market launch will initially show a steep increase in sales. However, that rise only lasts until the domestic market is saturated. For this reason, a smart company constantly takes precautions, develops new products or moves production and marketing to a foreign market at the right time. Under certain circumstances, such measures may imply significant changes for individual employees.

A productive culture of change is not a given everywhere, the psychological resistance is high in certain places.



Pixelated: Contrary to vector graphics, raster graphics cannot be scaled up in a simplistic manner. Something that looks razor-sharp when small, may have too few pixels when large.



" Big Data provides opportunities for new business models. However, it is not easier to find the needle in the haystack because the stack is growing. "

Dirk Hecker, Fraunhofer Alliance Big Data

Because sometimes this can mean dissolving departments, reorganising and removing outdated processes. It may happen that the workplace is then barely recognisable. Depending on your point of view, changes may seem threatening or inspiring. Growth and the change it effects should therefore be well organised. For this reason, change management is now considered to be a key success factor.

The flow of data offers many opportunities for growth – if there is control of the data

For more than 10 years, Capgemini has been researching the readiness for change management. One finding from the 2014 global survey, supervised

by Claudia Crummenerl, was that change requires teamwork. The ideal is a team that includes a charismatic visionary leader, an efficient manager for implementation and an attentive controller for assessing results.

Growth and change influence each other. The same applies to markets and society. A prominent example is the increased amounts of data due to digitalisation. The sensor data of computer-operated machines and electronic devices have made a significant contribution. We are speaking about the "Internet of Things" and "Industry 4.0". According to a study commissioned by the American hardware and software manufacturer EMC in April 2014, the global amount of data will increase tenfold by 2020,

from the current 4.4 billion GB to 44 billion GB. "In particular the Internet of Things and the related growing spread of wireless technologies, intelligent products and software-based business models contribute to the fact that the digital universe will double every two years", states EMC.

The processing and utilisation of this amount of data is called **Big Data** and more than any other topic is a trademark of new markets. "Big Data provides opportunities for new business models. However, it is not easier to find the needle in the haystack because the stack is growing", says Dirk Hecker, CEO of Fraunhofer Alliance Big Data, which consists of 24 Fraunhofer institutes. They assist companies with their search

→ for the golden needle in the haystack of growing masses of data. "For example, a car manufacturer could become a supplier of reliable, precise weather reports, if it processes sensor data regarding outside temperature and the windshield wipers speed from all vehicles sold." However, one of the examples he most loves to talk about is Rolls-Royce. The aircraft turbines produced by the British traditional enterprise are fitted with sensor systems which transmit operational data in real-time. This speeds up maintenance work, which has a positive impact on costs via the downtime periods of airplanes. For this reason, more and more turbine manufacturers request sensor systems from Rolls-Royce. And in this way, Automation and Control is turning into a lucrative new business area for the engine builder. Employees with previously unknown qualifications and talents are the fertile

ground for growth through Big Data. The new specialists must be experts in their new field. At the same time, they must look beyond the boundaries of their field and put together things that no-one has put together before – such as car manufacturing and weather report. They should also know something about data architecture and be shrewd analysts. Last but not least, good communication between experts and managers is essential for success. Without it, knowledge and ideas cannot flourish into scalable business models. This corresponds to the findings of the Fraunhofer Alliance, which has started to train its own Data Scientists. The seminars are also attended by managers, so they can learn from the Big Data experts.

Growth doesn't only mean increasing in size. Growth is also reflected in a larger number of possibilities for developing a





Procedure: A product can be created under laboratory conditions. However, can it be transferred into the real world? A great deal of development work is usually needed to reach that level.



"The company must concentrate on its core competence and develop it further."

Kai Reinhardt, consultant

product or a service. The more possibilities, the more complex it becomes. Something is typically considered to be complex if it consists of an unmanageably large number of elements which influence each other, for example a global market with many actors. The behaviour of a complex system cannot be predicted with precision. The height of a sand pile with sand dripping on its peak grows continuously – until it suddenly slides. The moment cannot be calculated as too many factors influence the grains of sand. This also characterises growth in an increasingly complex world. There are surprising upheavals. However, this does not put an end to growth, quite the opposite. Just like the sand pile continues to grow following the slide, new potentials can arise from upheavals in the economic world.

The high art of growth: understanding change, but remaining true to oneself.

In order to recognise opportunities for growth, despite increasing complexity, companies must focus on the developments surrounding them. Otherwise it leads to a subtle alienation, which is what the economist and consultant Kai Reinhardt calls "disruption". "It occurs when companies are too busy with their internal life that they forget to focus on changes outside", he says. However, paying proper attention to the outside does not mean constantly adjusting to change. Complex situations require a strict distinction between the important and unimportant as well as concentrating on the essential. This distinction is only achieved by those who are aware of their strengths. "A company must concentrate on its **core competence** and develop it further", Kai Reinhardt recommends. Each field is subject to its own laws and there is only one thing that makes them all the same: growth brings enjoyment.



Desire and reality

Is there a size beyond which projects become uncontrollable? Klaus Grewe manages large-scale projects – and keeps everything under control. For this reason, he is in high demand. Here we discuss coming in below budget and underestimating preliminary planning.

INTERVIEW Till Schröder

MORE: You once said that – irrespective of whether it is about building a house, a railway station, a stadium or a tunnel – all projects have something in common. It's always about time and money. Is it really always the same?

Klaus Grewe: Yes. There is also a third dimension. Do you want to treat yourself to something or not? But this usually fails because there is not enough money and time.

A predefined budget clearly shows how much you want to treat yourself. However, many large projects exceed their budget. Where do you say "stop" so that this doesn't happen?

Without a predefined budget it's not possible. But the question is how is the budget put together? Is it a wish budget or does it rely on careful preplanning? I put a lot of effort into a detailed breakdown and derive the budget from this. It usually ends up higher than the wish budget, but can still be maintained.

This seems to have been the other way around in the case of certain large-scale public projects. A fantasy amount was established at some point, somewhere, do not ask me where. The public is happy with this amount, instead of critically assessing it and wanting to have the airport or the concert hall for exactly that price.

Many projects in Germany do it right. The smaller they are, the more precise they are in planning, including the risks and budgets. An SME can say to the builder in advance: If you want to have a wooden scaffold, it will cost €120,000 – even if I know that you only have €60 000 at your disposal. This is the price.

The larger the project, the more complex – is this assumption correct?

Project management is more complex today than it was before, but for a different reason. Today, there is barely any more building taking place on greenfield sites, construction ground



Klaus Grewe learned how to organise on the building site. His largest project in Germany was the main railway station in Berlin. Today, he lives and works in London, where he manages the Crossrail construction project.

1



2



1 The Farringdon railway station is the centrepiece of the €16 billion Crossrail project, which Klaus Grewe is currently managing in London.

2 Klaus Grewe surveys the building site.

→ has usually been developed. You must take into account more third-party factors, such as the building of a railway station in a city centre. Of the €16 billion in the budget of our current London Crossrail project, €5 billion is intended for apportionment costs. Traffic, water, wastewater and energy supply must be rerouted. For this reason, the steps for building in compacted space are huge. For Crossrail, we cooperate with many authorities. The preplanning reaches all the way to considering whether all partners involved in their respective city areas have enough money to execute their tasks. The schedule must also take into account special conditions. For example, in a London shopping street we are only allowed to install ten metres in one go. Then we close the ditch, before we open the next ten metres.

What role does communication have in these projects?

It is one of the greatest risk factors. This is why we think through all the processes in advance. Who does what, when and how? We verify in advance all interdependencies and establish the hierarchies in flowcharts. The following is also vital: determine how it should be done and then speak to the relevant people.

Those who want to be modern, love flat hierarchies and networking. Do you feel this cultural change in project management as well?

Yes, this new culture can be felt in projects where there are lots of parties and authorities. It is becoming more cooperative, more of a partnership in all directions. The USA leads in this regard, as well as Japan, Switzerland and the

" I am busy with the things that come my way. You have to think in advance. It's quite simple. "

Klaus Grewe, Project Manager

Scandinavians. In Austria, projects benefit from open communication.

Project management is usually the task of the builder. He then delegates this role to the architect in large-scale projects. Does this work?

The builders of large-scale projects today are often institutions, such as pension funds. They don't have departments for managing such projects. Therefore, it makes sense for them to transfer their builder rights to third parties. But an architect is clearly in charge of the design. At the international level, it has long been the tradition to transfer project management to specialists who are large enough to handle complex projects. Jacobs, who I work for, has 71,000 employees, of which 3,000 work in London alone. This makes it possible to put together teams that can handle large projects like an airport. In Germany on the other hand, the largest project management company has about 2,000 employees. They are good, but not large enough yet.

The size of a team is often only calculated after the project is awarded. In brief, this would be similar to a workshop with three employees being awarded the contract to fit out a large city hall. Which strategy do you recommend in this situation?

If you work beyond capacity you make mistakes. But if the contract is already awarded, I would recommend establishing a group, together with the competitors, and employ someone to manage the project. This must be reflected in the price. For this reason, the project manager should ask the question:

do I get paid for this? It's worth setting higher prices in the beginning – this works out much better compared to the cost of lawyers, if the builder and company start to squabble.

Aren't you forced by the market to submit a low price?

This is a bad decision. Mistakes will be made, because there is simply not enough in the budget to deliver the project. I believe in the motto: better to be a hero in the end than liked by all in the beginning. The prices must correspond to the work – and not the wish. However, solutions can always be found. This is why today we apply networked thinking and better communication.

You not only manage a €16 billion project, but also have the time to pick your three children up from school. How do you manage this?

I am busy with the things that come my way. If your team begins by focusing intensively on one project for three months, they can foresee the issues that may arise with the authorities. I wouldn't think the same way privately, but of course work spills over. When I plan my time, I also think of my family. It is my call and I manage this. So, if I want to be at my child's birthday on Friday at 5 pm and the evening before I have sent important documents to the Prime Minister, I call on Friday around noon to ask whether there are still open questions. In this way, I avoid a situation where the authority calls on Friday at 4.30 pm, shortly before I'm planning to leave. You have to think in advance. It's quite simple.

THE PERSON

KLAUS GREWE

studied carpenter and has an exceptional talent for organising large-scale projects. When building the 100 buildings for the Olympics 2012 in London, he brought it in below budget. Klaus is currently managing the €16 billion Crossrail project, a rail connection across London. He is also a member of the Reform Committee Large-Scale Projects of the German Federal Government.

Making Waves

Sound systems continue to develop and are become smaller and smaller through digitalisation. The missing volume is supposedly included in the sound impression. However, trained ears prefer large speakers with high quality wood-based materials.

AUTHOR Clemens Niedenthal

In 1982, Michael Jackson's "Thriller" was released, becoming the most successful album in music history. In 1982, Phillips started selling the first CD players. And, in 1982, a group of scientists led by the electrical engineer Karlheinz Brandenburg at the Fraunhofer Institute for Integrated Circuits in Erlangen (DE) came up with a digital code. This went on to change the face of music reproduction and the very nature of music - even if it took another couple of decades for the MP3 to become mainstream.

electronics manufacturer Busch-Jäger has even shrunk a hi-fi loudspeaker to the size of a standard socket. "The trend for a minimal yet elegant interior has also reached audiophiles", comments Claus-Marco Dieterich. "Solid hi-fi systems with loudspeakers the size of refrigerators were a status symbol, now it's chic to get your music from an iPad." According to the cultural theorist, these are related: "Just as the MP3 is a volatile medium, most consumers are even more unpredictable in their listening habits.

2013, about 80 % of Europeans no longer spent any money on music, be that CDs or virtual music files.

The renaissance of good sound

Dieter Kratochwil, in Brilon, Sauerland (DE), has not noticed this crisis. For 25 years, his company Audio Physic has been building high quality loudspeakers – for €1,500 or even €15,000 a pair. His loudspeakers are elegant, even cosy. They are not small, this would not be possible. "In the end, natural sound develops in a sound space. Without it, there is no musical quality". Dieter Kratochwil is not one to press a button to digitally add the missing basslines. Dieterich, the cultural theorist and records fan, agrees: "Nobody would ever think of replacing a Steinway grand piano with a funfair piano and then say we will do the rest on the computer." A popular material for building loudspeakers is MDF. Dieter Kratochwil takes boards from boatbuilding, as they have a higher density and are therefore resistant to vibrations. In the end, any really good loudspeaker should only provide neutral music reproduction. And its body should be perfectly quiet.

" Solid hi-fi systems with loudspeakers the size of refrigerators were a status symbol, now it's chic to get music from an iPad. "

Claus-Marco Dieterich, cultural theorist

Over the past 10 years music has become miniaturised with devices becoming smaller, thinner and more elegant. They are now really very beautiful. The

It now seems to be more important for the tablet's miniature loudspeaker to look better than it sounds." This is confirmed by recent figures. In



1 The first tube amplifiers were so simple that the box had to serve as a resonance space, similar to a violin or guitar body, in order to additionally reinforce the sound. Today, high sound quality still requires (sound) space, which consists of a housing made of multi-layered laminated MDF. And if its outside is square for optical reasons, the inside must still be organic. No right angles are allowed, as they could break the sound.

2 The counter-concept is represented by loudspeakers, which, without a resonating box, fit in any standard socket, like the room sound system "AudioWorld" from Busch-Jäger.



E_SOLUTIONS

"Hidden champions double their turnover approximately every seven years. The growth driver is globalisation, therefore, it is a case of scalability."

Hermann Simon
Rooted growth (pages 34 to 37)



We are EGGER

DETLEV MATERNA

Elements Production, Bünde (Germany)

"Detailed planning/system optimisation" says the business card of the man who makes sure that the machines work in the Bünde (DE) plant for furniture components. As a roofer, Detlev Materna knows about wood, as a mechatronics engineer, he knows about software and systems. No wonder that his 2003 application at EGGER was successful. Back then, he wanted a safe job, today, he stays thanks to trust: "I don't have to constantly ask my boss and not everything is questioned." He programmes the laser edge technology system for a seamless transitions from edge to surface, he trains employees and removes electronic or mechanical faults. In private, he likes darts and cards. His son used to be a cart racer and even competed against Michael Schumacher.



ULRIKE SATTLER

Flooring Marketing, St. Johann (Austria)



When Ulrike from Cologne first started at the EGGER headquarters in 2010, she was surprised when an Austrian colleague asked to hang a picture of her car on the wall. It turned out to be the the striking mountain range, Wilde Kaiser, in St. Johann in Tirol (AT). Since then she has mastered the local dialect, as well as the launch of the laminate flooring Collection 2015 – 2017. And is currently presenting the new products and marketing tools at trade fairs and events in various countries. She enjoys the diversity and independence of her task and at the same time is never far from skiing, hiking or mountain biking.

EVGENIJ LYJUROV

Plant Management Sales, Gagarin (Russia)

The qualified teacher was managing the sales team when EGGER took over the chipboard plant in Gagarin (RU). The switch brought many changes with new rules and new opportunities. "Now that I am working for an international company, I know all the trends in decors and surfaces." In the meantime, with his position as Plant Manager Sales, Evgenij makes many decisions across a range of areas. Good communication and working conditions are as important to him as the best possible service and quality. He particularly values the variety offered in his role and even had a surprise not long ago when a former business partner and friend became a colleague. Alois Scherer is today head of impregnation at the EGGER plant Gifhorn (see also page 26).





THE GIFHORN PLANT

Brilliant perspectives

The demand for EGGER laminate is increasing, leading to investment at the Gifhorn location. The new continuous double belt press now manufactures high gloss surfaces. The requirements for further growth are now in place.

AUTHOR Meike Wöhlert



Birdseye view and birdsong:

You only get a really good viewpoint of the EGGER Gifhorn plant from above. If you drive along the B4, every now and then you catch a glimpse between the passing trees. The rest of the plant is surrounded by forest and grassland.



Monika Wiora, Head of Sales, knows every corner.

The white protective cover hides an engraved steel band, the grooves provide the surface texture for the laminate.

Light brown cows are chewing on long straws. The houses are made of bricks and the street is called "Im Weilandmoor" as it passes by a forest of pine and birch. Until you reach the plant gates, there is little to suggest that you have just arrived at the largest laminate producer in Germany.

The EGGER Kunststoffe GmbH & Co. KG is located in the North German Gifhorn area between Wolfsburg and Braunschweig. This is where, using the world's first continuous laminate press, Dekoflex was manufacturing melamine edges 40 years ago. Since 1997, the company belongs to the EGGER Group and today 33 million m² of laminate can be produced each year on seven Hymmen double belt presses with the

CPL procedure (Continuous Pressed laminates). All together, this output would cover almost 4,000 football fields.

In front of the reception building, next to the German and Austrian flags, there is a flag with the black and red EGGER logo. The glasses worn by Monika Wiora are also black and red. The Plant Manager Sales has been working in Gifhorn since 1993 and likes to personally show visitors around. She and her plant management colleagues Andrea Oldenburg-Zillig (Finances/Management) and Matthias Veile (Technology/Production) have twice invited the whole of Gifhorn to an open-doors day. There was a lot of interest. The first time, there were 500 and the second time there were 700 guests. Few people are probably aware

of how often they come across laminates in their everyday life. Irrespective of whether you go into a shop, an office, a medical practice, a hotel or even into your own kitchen – laminate is always there. It protects and embellishes tabletops and worktops, cupboard fronts, doors, frames and windowsills.

Similar to all EGGER plants, visitors receive a glowing neon vest at the reception. This is a requirement and makes a lot of sense with so much heavy forklift traffic in the Gifhorn location. Like the yard in front of the warehouse, where the containers are located. They house offices and are proof of the many building projects that have taken place. In recent years, the Gifhorn plant has undergone significant growth.





Prior to impregnation with phenolic and melamine resins, the base paper is stored in a hall that is at least five metres high. Later, it becomes the core for the laminate. The more impregnated layers, the thicker the resulting product.

" When it comes to doors, we have strongly supplanted foil, but also veneer. "

Monika Wiora, Plant Manager Sales

→ Since 2007, the plant has commissioned in parallel with edging. In 2012 there were 220 employees, two years later there were 300. "We are bursting at the seams", says Monika Wiora who is proud of the success, even if it leaves little time left to catch one's breath.

In 2014, EGGER invested €15 million in a lamination facility with a re-cooling zone and an impregnation system which increased the lamination capacity by six million m². A new hall was built for the 30 m long facility and a part of the yard was moved. The 4 m press area, where resin impregnated paper layers

are glued together is twice as long as facilities without a re-cooling zone. The new lamination facility does something that is truly innovative, it first heats the material during the continuous pressing and then immediately cools it under pressure. In this way, high-gloss laminates can also be manufactured with the continuous press procedure, which are now in high demand. Plant manager Wiora identifies "a lot of potential" particularly in the Russian and East European markets.

Whether matt or gloss, Gifhorn produces goods, almost exclusively, for the furniture industry and specialised retail. Only door laminates are prefabricated and are available from stock in 90 decors and three formats. In the meantime, the door industry is one of EGGER's most important customer groups. "When it comes to doors, we have strongly supplanted foil", explains Monika Wiora, "but also veneer."

Laboratory manager Horst Kretschmer checks the goods that will be processed further inside the plant.

All decor images must pass a comparison test, both with the predelivery and the EGGER standard.



The ZOOM collection includes intense uni colours through to natural woodgrains.

Laminates from Gifhorn are delivered to 50 countries, including Japan and Australia, and from other EGGER warehouses to another 30 countries. However, this is not enough for the plant manager: "The world is larger than 80 countries." She is particularly interested in South America and the Middle East.

Until loading time, the goods remain in the dispatch warehouse, rolled or cut to size, according to the customer's request. Wrapped up in protective film and loaded with boards, the pallets fill huge metal shelves, which reach almost to the ceiling of the 5.90 m high hall. Next door, in the raw materials warehouse, there are the thick roles of base paper, which are the core element of the laminate following impregnation. EGGER offers approximately 800 different laminate decors. The ZOOM collection is renewed every four years and ranges from intensive uni colours to natural woodgrains, along with stone,

metal and leather decors. According to Monika Wiora, white continues to be the most popular colour for uni decors, sometimes with a yellow hue or bluish cool.

The laboratory manager Horst Kretschmer and his team check the incoming goods, which are then processed further inside the plant. He compares the colours and patterns of the decors with the predelivery and the EGGER Group standard. Kretschmer's practiced eye recognises deviations better than some colour measuring devices. What happens if a blue shade is too strong, or a nuance is too light? "Then there must be a complaint about the paper", says the laboratory manager without hesitation. EGGER makes no compromise when it comes to quality. If Kretschmer approves it, the decor paper goes into the impregnation channel to bathe in a resin mixture.

THE PRODUCT

WHAT ARE LAMINATES?

Laminates are decorative and robust surfaces used in furniture and interior design. Decor and core papers are impregnated with curable resin and pressed under high pressure and heat. The resin-impregnated papers are rolled off onto the continuous pressing laminate line (CPL). They are between 0.15 and 1.20 mm thick and are usually bonded onto chipboard, MDF and HDF boards. Applications range from doors to furniture fronts and worktops all the way through to shipbuilding and trade fair construction.





From the press into the hands of Mariusz Przybyl: The employee must work fast when stacking the cut laminates. EGGER offers approximately 800 decors, including many woodgrains.

THE STORY

In 1975, Dekoflex was founded in Gifhorn (DE). Three employees manufactured the world's first melamine laminate endless edging strip. In 1992, the company was renamed EGGER Kunststoffe GmbH & Co. KG. Today, the company is the largest laminate manufacturer in Germany. 33 million m² laminates can be produced annually on the 60,000 m² plant surface – a surface which corresponds to 4,000 football fields. Approximately 300 employees generate an annual turnover of €85 million.

→ The melamine containers are located in the same hall as the impregnation machines, the liquid phenol for the core paper is kept in tanks in a separate air-conditioned area. After the laminates are dried with hot air they are left on spindles to await further processing in an intermediate warehouse. The presses run 24 hours a day, seven days a week.

Monika Wiora warmly greets everyone, stops and shakes hands and asks how everything is going.

Before she used to know everyone, but not anymore, due to the rapid growth. In order to cover the growing demand for workers, the company also works with temporary employment agencies. Mariusz Przybyl ended up working at the new press via a recruitment agency. The continuous roll of 0.6 millimetre laminate reaches him. The machine cuts

it and Mariusz Przybyl then places them upright and stacks them the way the customer has asked. Monika Wiora asks Przybyl how long he has been working for EGGER. "One month," says the man from Poland, and immediately adds: "I would love to stay here." The plant manager nods encouragingly. "We are happy to keep those who work well."

The quiet operation of the new facility stands out in comparison to the older presses. Most of the noise is generated during the seaming and the edge cutting. It is significantly quieter in the next but one hall as the steel band is currently being replaced. The price of the engraved bands, which gives the textured finish (or structure) to the top layer, starts at €150,000. Certain orders also require the use of lacquer-coated and embossed structure paper. It is even quieter in the last production hall as the



When replacing the steel band for a new order, concentration is required as one band costs €150,000.

machine is being cleaned. So out in the yard and over to the laboratory.

Horst Kretschmer gets involved again at the end of the production process. The laboratory manager tests the properties of completed products, which must be in line with the European standard EN 438. It is no coincidence that this area looks like a test kitchen. Heat tests, scratch resistance tests, a bath in water vapour - the laminates have to go through all of them. Depending on the application, they must also endure different loads, horizontally more than vertically. After all, a door receives less stress than a worktop, a writing desk more than a furniture frontal. Thickness, texture and overlays increase the resistance of surfaces with high abrasion. Shop counters are a real challenge. "One thing that really affects a surface is money," explains Monika Wiora.

Material wear is also very high in the hospitality industry. It should be taken as a compliment when reputable hotels choose EGGER laminates to equip their spaces, from the reception and the bar, through to the bedrooms – like the trendy ibis Styles in Vienna (AT), the Hampton by Hilton in York and the Marriott Residence Inn in Edinburgh (both UK). The large choice of low maintenance decors is an additional advantage in these cases.

Customers also take aesthetic considerations into account. For example, gloss worktops are becoming more and more popular, particularly in Eastern Europe. The production of high-gloss laminates has only just started in Gifhorn, so there won't be much time to take a break in the near future.



Woodgrains in bathrooms and kitchens are becoming more and more popular.

Pushing the boundaries with innovative laminate

With an increasingly natural look, they are low maintenance and more versatile than ever. Laminate can dictate trends, set standards and has conquered new fields of application, from the bathroom to the ceiling.

AUTHOR Meike Wöhlert

When the Italian star architect and designer Roberto Palomba mentioned during an interview that he had just fitted 400 homes in Orlando, Florida with laminate flooring, it was one of the highest accolades for the laminate industry. After all, Palomba, who usually builds Italian villas with natural stone floors, represents timeless elegance and the highest quality. The new image

of the versatile floor covering is not a coincidence. "Laminate has almost 40 years of development history", says Anke Wöhler from the association of European Producers of laminate flooring (EPLF). "Now it is a very mature product." It continues to improve with every new collection and the result, according to Wöhler is that: "Decors look incredibly real." Three-dimensional textures

provide natural surfaces as the grain looks more authentic thanks to sharper print images. A high quality laminate floor is almost indistinguishable from parquet. However, when moving out of a rented home, it can be dismantled without leaving a mess. In this way, it fits perfectly into a society that is becoming more and more mobile. Because of this, laminate is now entering into new market segments and fields of application.

While previously laminate flooring stopped at the kitchen or bathroom door, innovative technologies now make it possible to use laminate floors in wet rooms. A cosy residential environment can be created with moisture resistant products: on one side open cooking, eating and a living area, on the other side the calm oasis of the bathroom and bedroom. Woodgrains are particularly suitable here thanks to their calming effects. It also frees bathrooms from their existence as a sober wet cell; design hotels have shown us the way. It also relegates cold feet, which were typical for tiles back in the past. However, in shops, restaurants, hallways and in homes, moisture resistant laminate flooring is above all - practical. Specifically developed HDF coreboards

and an extra robust protective layer prevent the swelling of edges and provides resistance to high stress.

"Long and wide" is the second large floor trend according to Anke Wöhler of EPLF. Extra long laminate boards for large surface installation can make even a factory floor look cosy. The new XL formats with the click system create a country house atmosphere, which allows even large city inhabitants to bring a piece of nature into their home. Quality products can be recognised by a synchronised surface with an authentic look and a decor that does not repeat itself along the entire length.

Clarity and naturalness are in particular high demand for interior design, according to the Association of European Producers of laminate flooring. In particular woodgrains on laminates are now more calm and reserved than in previous years. Cracks and knots on the surface are not as marked. From the point of view of colour, current collections have a tendency towards lighter natural tones in grey, light beige, cream, warm light grey or matt white. The designers of laminate flooring closely observe these trends, take them and implement new decor images.

NEW COLLECTION

The EGGER laminate flooring 2015 – 2017 collection has met with great interest since its launch in autumn 2014. In particular the time-saving, comfortable UNI/fit! click system and the moisture resistant aqua+ technology are very popular with professional fabricators.

www.egger.com/laminate-flooring

Thanks to the diversity of patterns, laminate also functions as a creative design element. Wall and ceiling coverings are also experiencing a comeback. Although they were recently still considered to be old-fashioned, people are once more becoming aware of their benefits. Damaged walls no longer need to be renovated, nor does old wallpaper need to be removed. At the same time, covered walls protect against wear and tear, in a hotel as much as in a child's bedroom. But wall panels made of laminate can do even more, such as separate living areas, or give a note of elegance to an average room. They look refined, without costing a fortune.

1



2



1 In a small space, wall and ceiling panels help to separate living areas.

2 Whether a wood or a stone decor: laminate ensures a natural look both horizontally and vertically.

A photograph of Hermann Simon, a middle-aged man with grey hair, smiling and leaning against a large, moss-covered tree trunk. He is wearing a blue jacket over a plaid shirt and blue jeans. His arms are crossed. The ground is covered in fallen autumn leaves. In the background, there is a green lawn and some trees with yellowing leaves, suggesting an autumn setting. A red banner is at the top left, and the title 'Hidden champions' is at the bottom left.

TALKING WITH HERMANN SIMON

Hidden champions

Drawing pins, musical organs or henhouses - the successful products of middle-sized global market leaders are as diverse as their industries. However, they have one common characteristic: you barely know them.

INTERVIEW Meike Wöhlert

MORE: Prof. Simon, you call yourself a forest person. Why?

Hermann Simon: I grew up in a forested village in Eifel. Directly behind our yard, there is a grove with 500-year-old oaks, a unique natural monument. It was my favourite playground.

Many years later, you came up with the term "hidden champions", and wrote three books about it. How do you explain this to someone who has never heard of it before?

These are medium-sized companies, which on the one hand, are global market leaders and on the other hand are entirely unknown. Of course, "hidden champions" sounds like a contradiction. Perhaps that is why the term has imposed itself worldwide.

Can you name three typical examples?

Flexi has 70 % of the global market share of flexible roller dog leashes. Baader is the world's number one for fish filleting systems, with 80 % of the global market share. Global market leader Gottschalk produces 12 million drawing pins per day. They are all headquartered in Germany. And if I might add a fourth,

the Austrian company Frequentis is the global number one for secure communication, as used for example in air traffic.

Why do you consider hidden champions, in your various books on the subject?

These companies usually generate 90 % of their turnover in foreign markets, only a few large companies can manage this. In addition, they enter new markets with their own subsidiaries. Many of them have more than 50, some even more than 100 foreign branches. Despite their medium size, they are real multinationals. Since approximately 2010, hidden champions employ more employees abroad than on the domestic market.

How do you explain the above average number of hidden champions in the German-speaking area?

On the one hand, the German-speaking area, unlike France or England, was not a national state until well into the 20th century, but instead a group of smaller states. Companies that wanted to grow had to quickly become international. A second reason is due to the diverse

historical competences. As such, in the Black Forest there was a centuries-old tradition of watchmaking. The watchmaking industry has disappeared today, but the precision mechanics competences were transferred to new fields. Today, there are approximately 450 medical technology companies in that area, primarily making surgical instruments. There are dozens of such clusters, such as the 39 measurement technology companies in the old university town of Göttingen, which are in fact offshoots of the Göttingen Mathematics Department. For centuries, it had the most famous mathematicians in the world. A third important reason is the dual vocational training system. You can't find such qualified specialists anywhere else in the world.

Are hidden champions particularly well represented in certain industries?

No, this is specific to the German-speaking areas. Hidden champions cover an incredibly wide range of fields. It reaches from buttons to potting soil and henhouses to backsheet films for solar modules.

→



Economics professor and poet:

"Planted centuries ago, to stand strong
in the face of danger, the pride of
Hasborn are, and have always been,
the prettiest oaks in all the land ..."

The grove inspires poetry in
Hermann Simon.

***" One who wants to win the 100 m race and the
marathon will fail at both. "***

→ **Are hidden champions unknown primarily because they often act in the B2B environment, or do they consciously cultivate their anonymity?**

Both. Most hidden champions do not advertise their success. This is a tried and tested recipe for not attracting new competitors. But it also has something to do with their concentration on the business. The bosses of hidden champions are plough horses, that is, horses that pull the plough, and not show horses, constantly performing in the circus and in front of the press. In addition, many products remain invisible to the consumer. Who knows who makes the piston rings or the sensors in the car? Who knows the suppliers in the building industry who provide the wood or the building

materials? The visible surface of end products is only a small part of the economy.

How do you become a hidden champion?

First of all, by wanting to. Ambitious goals set by companies are the basis and the energy that drives the employees of hidden champions. Second, hidden champions concentrate on their core competence. You can only reach world-class with focus. One who wants to win the 100 m race and the marathon will fail at both.

Not only specialisation, but also production depth is above average in the case of hidden champions. Does this "We'll do it ourselves" approach make sense in every case?

Outsourcing was very fashionable over the past decades. But not for the hidden champions! If it's about their core competence, they outsource nothing. Uniqueness and superiority can only be created internally; what you buy on the market is also available to others. However, it is noteworthy that hidden champions intensively outsource when it comes to aspects that do not fall under their core competences. They often do not have their own tax or legal department, because they are of the opinion that others can do it better.

Many are headquartered in the provinces. How do they nevertheless manage to become attractive to international high-skilled specialists?

This is one of the main problems of hidden champions. On the one

hand, the rural location promotes the loyalty of employees, but it also makes recruitment more difficult – in addition to the fact that the company and its products are not well known. My advice is to concentrate HR marketing on the region. There is talent everywhere. But you have to find it by cooperating with schools, regional universities, through traineeships, and then you have to ensure their commitment to the company. Internationally, however, their own presence on the foreign markets has an impact. Many hidden champions employ young talent in their foreign locations, and send them to the central location after a few years. In this way, they develop their own international managers. I think this is a very good approach.

Hidden champions are characterised by low fluctuation and few sick days. Many are family businesses with a stable management team. How important is continuity for their success?

I think continuity, stability and loyalty are the most underestimated success factors. This starts at the top. If the bosses of hidden champions remain for an average of 20 years at the top, then this is probably the most significant difference from large corporations. There the average term of office is only 6.1 years. Hermut Kormann, the former CEO of the multiple world market leader Voith, has said: "The longevity of the strategy follows from the constancy of the strategists and their term of office." This continuity transfers to the employees. Fluctuation is extremely low at 2.7 % per year; the German average is at 7.3 %, the Austrian one at 9 %. On the one hand, low fluctuation is a proof of high employee satisfaction, and, on the other hand, an important productivity factor. Because anyone who leaves the company takes with him or her experience, know-how and the relationship with the customer. Low fluctuation is even more important than low sick leave.

You said earlier that ambitious goals are a central driver for a company's employees. Does the status of world market leader contribute to identity formation?

Yes, definitely. Anyone would prefer to identify with a company at the top of the rankings than with a struggling one. The boss of a hidden champion once told me: "The identity of our company is defined by our leading position on the world market." 3B Scientific, world market leader for anatomical teaching aids, says: "We want to be and remain the global number one." Employees identify with such goals. And they are highly motivated to work towards reaching such goals.

How important is innovation if you are already a world market leader? Sometimes, a good idea seems to last forever, see Pustefix ...

Innovation is a requirement to become and remain number one. We should not be fooled by seemingly simple products such as soap bubbles. Behind them, there is often a lot of continuous improvement of their chemical composition, their manufacturing processes, their functionality or in the logistics/supply chain. The innovations of hidden champions are characterised less by large breakthroughs – they happen only relatively rarely but rather by continuous improvements. Stihl, world market leader for chainsaws,

had more than 40 innovations on one saw in one year. None of them was revolutionary, but together they created an advantage that is hard to overcome.

The focus of this MORE issue is on scalability, the relationship between size and growth. Is structural growth a requirement to remain world market leader in the long term?

Most hidden champions have experienced strong growth over the past decades. They double their turnover approximately every seven years. The growth driver is globalisation, a classic case of scalability, which requires significant additional investments and usually a rise in employee numbers (unlike the case of software). But there are also counterexamples. An interesting one is the organ manufacturer Klais, a 125-year-old company. Its top organs are found in the world's most famous concert halls and cathedrals. Klais has exactly the same number of employees as it did 100 years ago, 65 exactly. A second case is Achenbach Buschhütten, world market leader for aluminium rolling mills. Their employee numbers are even lower than before. This has to do with switching from a production to an engineering company. Value creation is very different today from what it was 30 years ago. Growth is not always an all encompassing solution.

ABOUT THE PERSON

HERMANN SIMON

The economics professor, business consultant, successful author and founder of Simon-Kucher & Partners is today one of the world's most sought-after speakers. His topics are globalisation, growth and innovation. He analyses the recipes for success of world market leaders, for whom he coined the expression "hidden champions". His latest book, "Price matters: everything you need to know about prices", outlines the latest findings of price psychology.



E_NATURE

"We wanted to create a staircase
that feels like a cosy room ..."

Sam Dufaux, architect
Alluring staircases (pages 46 to 49)

Sustainable living

SITTING IN THE SUN

www.soofa.co

"You don't only use your mobile phone to make phone calls, so why should our benches only be used to sit on?" A valid question, asked by the mayor of the technology metropolis Boston. His answer is called "Soofa", a bench for two to three persons made of wood and metal. It has no backrest, but it has solar cells, which supply energy to an integrated recharge station for electronic devices. These collectors are so powerful, that recharging works even at night and in winter. In addition, the benches also measure noise level and air quality. There are now seven such soofas in Boston and requests for 120 locations. There are plans to expand the project to other cities.



FIGHTING FIRES

<http://dm9jaymesyfu.com>

Millions of people in developing countries cook and produce heat with open fires in wooden houses, not far from wooden furniture and fuel material. They often don't stand a chance if a fire starts. Extinguishers on site could prevent more damage, but they are too expensive for most inhabitants of poor neighbourhoods. For this reason, the Philippine creative agency DM9 JaymeSyfu developed a simple Pocket Fire Extinguisher, a plastic bag with vinegar and a baking powder capsule. In the case of a fire, the capsule is pressed and its shell breaks. It extinguishes small fires – and therefore prevents large ones. Cost: one dollar. The idea won the Bronze Lion at the advertising festival in Cannes 2014.

FOREST BATHING

www.shinrin-yoku.org

Previously, a walk in the forest was not always so healthy – gangs of robbers, bears and wolves, ... Today, the forest is an oasis of well-being, particularly in Japan. A new trend is called "Shinrin-yoku", in English: "letting the atmosphere of the forest work on you" or simply "forest bathing". The healing effect of the Shinrin-yoku has now also been proven scientifically. A walk in the forest lightens the mood, lowers blood pressure and activates cancer killer cells. The latest studies even establish a connection between the heart rate and trees in front of the window. Apparently, even wooden furniture has a calming effect.



Fascination with wood technology



Wood and high-tech: Young wood specialists deepen their engineering knowledge with practical experience.



Wood is a building material steeped in tradition – and the basis for a highly developed and complex technology. A career in this future-oriented industry starts more and more frequently in universities, institutes and technical colleges.

AUTHOR Meike Wöhlert

"When you want to build a ship, do not begin by gathering wood, cutting boards and distributing work, but awaken within men the desire for the vast and endless sea." When the French thinker Antoine de Saint-Exupéry wrote these beautiful lines, he forgot one little thing: If you want to build a wooden ship, you need to know a lot about wood. The same applies to sustainable buildings and wood-based materials. For this reason, technical colleges and universities across the world offer study programmes focusing on wood technology and processing. In Europe alone, an almost unmanageable number of education and research institutes are vying for the best brains. The map on pages 42 and 43 will give you an idea of the density.

What is the origin of this boom? Since chipboard revolutionised the industry in the 20th century, the demand for specialists has increased steadily. And, since the renewable material wood is increasingly seen as an environmentally friendly alternative used in more and more sectors, in particular in construction, it has developed into a true career springboard. Companies that process wood are actively searching for employees with technical and economic know-how. They cooperate with colleges specialising in wood for research and teaching and offer holiday jobs and traineeships. Career fairs take place every year in the large education

institutes, allowing graduates and their future employers to assess each other. EGGER is one of them. The Tyrolean family business has long been active internationally, just like certain colleges. Those who want to make it on the global labour market now have many opportunities to complete their master's degree in English. For example, the Bern College for Architecture, Wood and Civil Engineering in Biel (CH) together with the Rosenheim College (DE) are offering a "Master of Science in Wood Technology", but the University of Eastern Finland also has a "Master's Degree Programme in Wood Materials Science." Such diplomas offer good perspectives for a management position in the wood industry across the world, from manufacturing to product development and quality management.

In France, prospective wood engineers usually choose between two educational institutions: the more scientifically oriented Ecole Supérieure du Bois in Nantes or the Ecole Nationale Supérieure des Technologies et Industries du Bois in Épinal, which concentrates on wood and furniture engineering. In Great Britain, the Forest Products Research Institute of the Edinburgh Napier University has made a name for itself. Under the motto "Transforming Trees", the Scots are aiming to transform resources from European forests into high-quality products as sustainably as possible. →



WHERE DOES WOOD RESEARCH AND TRAINING TAKE PLACE?

This map – without claiming to be exhaustive – provides an overview of the current abundance of wood research and training. And those looking for employees might find someone on the recruitment website for wood specialists.

www.holzjob.eu

→ The preoccupation with the environment is also a focus of education in Scandinavia. The Swedish University of Agricultural Sciences in Uppsala is concerned with the ecological optimisation of processes and products in the forestry and wood industry. At the Finnish Aalto University close to Helsinki, where wood technology is part of the Chemistry department, the research focuses on the possibilities for using the renewable resource cellulose. Scandinavia has plenty of resources, Finland is even the country with the highest density of forests in Europe. More than three quarters of its surface is covered by forests.

If you want to know exactly how large the wood resources of a country are, you will obtain an answer from the University of Hamburg (DE). The good research reputation of the interdisciplinary programme in wood industry is also due to the close exchange with the renowned Thünen Institute. The Vienna University of Natural Resources and Life Sciences (BOKU, AT) is number one when it comes to applied wood research and the development of new materials, such as wood plastic composites (WPC) and foamed products made of natural fibres. The tradition-oriented Swiss turn out to be particularly innovative.

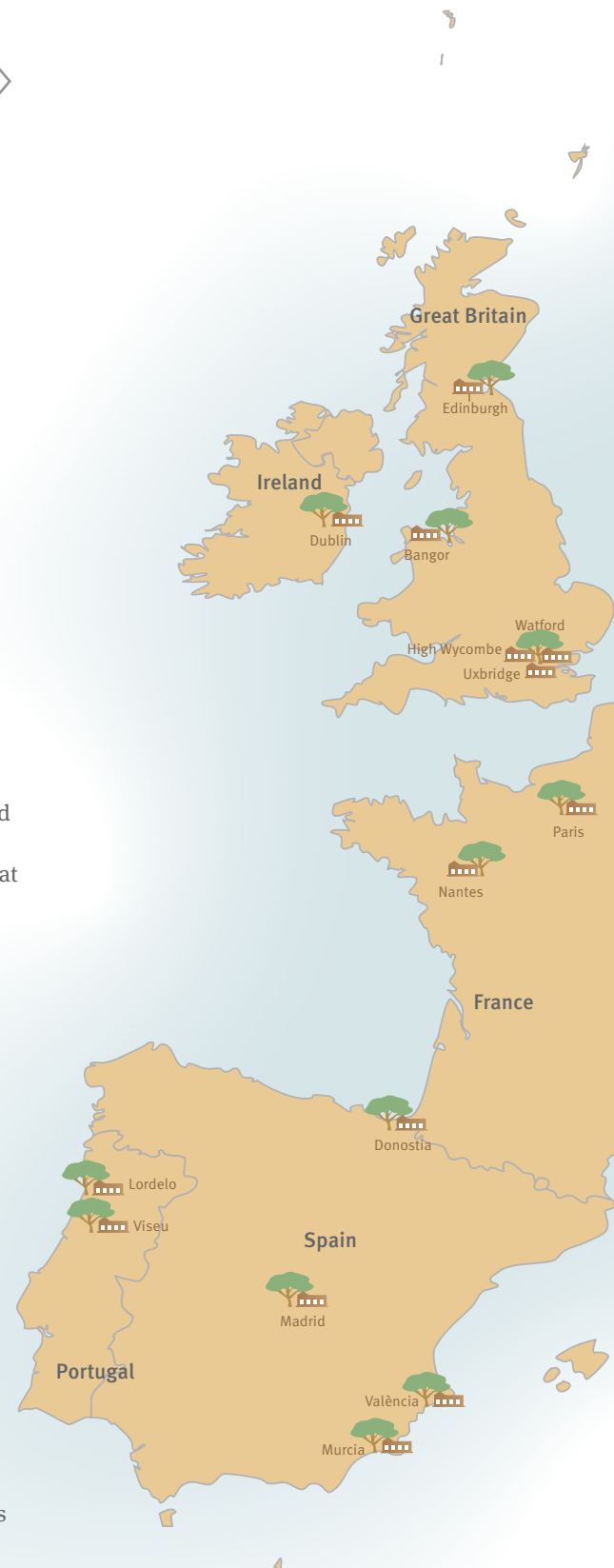
Last year, the Swiss Federal Institute of Technology Zurich (ETH) built the House of Natural Resources: a fire and earthquake-proof wood construction erected by using methods developed at the ETH.

Eastern Europe also has numerous wood colleges, from the Mendel University in the Czech Brno (Brünn) to the University of Western Hungary in Sopron. In Braşov, Romania the Transilvania University has been operating a department of wood technology since 1959; the syllabus even includes ecological furniture design. The similarly practice-oriented programme at the Faculty of Mechanical and Chemical Wood Technology at the State Forest University in Moscow is however rather oriented towards the needs of the traditional wood processing and paper industry.

But the classic among wood institutes is the Rosenheim Faculty of Wood Technology and Construction. It has been training technicians since 1925 and engineers since 1953. Within the industry, a diploma as a wood technology engineer simply means "the Rosenheimer".

In the meantime, it has also

started to offer differentiated training opportunities; through the years, they have been adapted to the needs of the economy and constantly expanded, most recently to include an interior design programme. The Holztechnikum Kuchl





(AT) is also greatly valued thanks to its practical slant. The private educational institution close to Salzburg consciously offers a job guarantee to young people with an affinity for wood. Obviously, it is right to do so, whether as a junior

employee or as a manager, there are Kuchl graduates in numerous European countries and even in Canada – they can be found in material production, in sawmills, the furniture industry, in wood construction and in retail.

This should be fully expected according to Saint-Exupéry's views. After all, the French poet and pilot also said the following true sentence: "Your task is not to foresee the future, but to enable it."

FIVE THINGS ABOUT

farmed wood

The need for wood is on the rise, the competition is getting tougher when it comes to procurement. Are short-rotation coppices a solution?



1 THE TREE SPECIES

Short-rotation coppices (SRC) are agriculturally operated cultures of fast-growing trees. Agroforestry systems combine the cultivation of these trees with crops or pasture farming. SRCs provide wood for many years and even decades, after which the rootstocks must be renewed. The cultivation is short-term, this means with short harvesting intervals (rotation periods) of two to ten, at most twenty years. Poplars are mainly cultivated in North America and India, in Europe, in addition to poplar, there is also willow, alder, ash, aspen and black locust tree. In China and Ethiopia, there is mainly bamboo, Brazil and Australia are successfully working with eucalyptus.

2 THE BACKGROUND

The demand for wood is growing across the world. On the one hand, the energy use as a "green" heating material that is promoted in some places has fired up the demand for pellets. On the other hand, wood, as an environmentally friendly material, is more popular than ever. New technologies make it possible to use this material in an increasing variety of ways. Agroforestry systems are also interesting for developing countries and for the reforestation of rainforests. In those cases, the cultivation of wood in short-rotation coppices or agroforestry systems can revegetate wasteland, prevent erosion and create jobs. Given that such approaches improve the shortage of raw material, they contribute to maintaining existing forests.



3 THE USE

For the wood processing industry, sustainably securing its raw material is of great importance. In addition to SRC test areas in France, Germany and Austria, EGGER also has its own farmed wood areas in Romania. Poplars are primarily cultivated there on former wasteland. More than one million trees have already been planted since 2008. The harvested logs can be used after a few years for OSB boards. What remains is used as biomass to generate energy. Until now, the experience has been very positive. Farmed wood grows again after harvesting and the yield even increases from harvest to harvest.



5 THE RISKS

As compared to one-year agricultural cultures, SRCs afford relatively high investments with a long production cycle. The mixed cultivation of various tree species can reduce pests and diseases. Species with high water needs should be excluded from dry areas.

4 THE OPPORTUNITIES

Despite reservations about monocultures, the most recent studies regarding farmed wood projects in Germany concluded that they contribute to the ecological rehabilitation of areas. It has been proven that they increase the nutrient content of the soil. The use of fertilisers is not only lower as compared to many crops, the soil is also allowed to rest longer in a SRC. In this way, it offers many plant and animal species, such as the whitethroat (photo) new habitats. People and the climate also benefit, because every newly planted tree produces oxygen and stores the greenhouse gas carbon dioxide.



Alluring staircases



1 The staircase in the Brazilian Livraria Cultura bookshop.

2 An expression of flat hierarchies: the wide staircase in the New York Wieden + Kennedy advertising agency (right).



2

In earlier days, staircases in churches, villas, official institutions and palaces were backdrops to grand entrances – but in modern times they have often shrunk to functional spaces. Now they are being rehabilitated as modern sites of social networking. The most important material used for this is wood.

AUTHOR Jan Ahrenberg

Good Goethe! The staircase of his home in Weimar was designed by the poet himself. But this should come as no surprise – the universal scholar always yearned for higher ground. He even sacrificed two rooms in his desire for an uplifting and comfortable ascent. When visitors today approach the ceiling with the winged messenger of the gods Iris at the last level, they imagine themselves very close to Mount Olympus.

The elevation of the staircase as an expression of social and cultural ascent is not coincidental. Through the centuries, staircases were an important architectural part of the self-presentation of powerful builders – after all, extravagant staircases limited the space for living and working. Not everyone could afford that. And, for a long time, it looked like modern, efficiency-oriented

industrial societies wanted less and less luxury grand staircases.

"In the modern era, elevators sealed the decline of the staircase", says Daniel Zwangslleitner of the Institute for Scalology of the OTH Regensburg. "Certainly, aesthetics were no longer the focus of design, but DIN requirements," says the staircase scientist. Something that used to serve for representative purposes was downgraded to an unadorned functional space for emergency evacuations. Leading architects, such as the Dutchman Rem Koolhaas, even saw the staircase as a "discontinued model". A hasty judgment: "In particular companies which motivate their employees through an individual work atmosphere and wish to commit them to the company are now once more focusing on staircases →

" The staircase invites customers to stay and spend some time and turns the shop into a social space. "

Marcio Tanaka, architect of the Brazilian agency MK27

→ as design element", observed Daniel Zwangsléitner. Planners are concerned both with health matters – climbing stairs makes you fit – but also with breaking the hierarchical layers of the building and therefore promoting exchange between the departments. The staircase functions as a symbol of the flexible, networked and creative knowledge society.

A prime example of this is located in the trendsetting metropolis New York: Sam Dufaux of the local Work Architecture Company designed for the renowned advertising agency Wieden + Kennedy

a grand staircase which makes the company philosophy perceptible to the senses. "The staircase captures the informal spirit of the agency and gives it a tangible form", explains Sam Dufaux. The intentionally monumental construction, with an 8 m diameter and with steps which are at the same time opportunities to sit, is a forum that invites the exchange of thoughts – whether employees spontaneously sit down for a discussion, or the entire agency gathers for special occasions. "We wanted to create a staircase that felt like a comfortable room", says Dufaux, "which is why we opted for walnut wood. A very noble wood with a beautiful look."

For the same reason, the architects of the Brazilian agency MK 27 provided the cultural bookstore Livraria Cultura in São Paulo in 2013 with a wide staircase measuring almost 20 m made of robust, local Perobinha wood (lat. *Aspidosperma polyneuron*). "We wanted to offer a large, flexible

Meeting point and theatre area: Atrium of the International School Seeheim-Jugenheim with a staircase that offers 400 seats.





Inhabitable in every way: The Dutch architect Haiko Meijer used plywood for his project "Het Traphuis". It provides the modern construction with alluring warmth.

space, suitable for lectures, concerts and events", says Marcio Tanaka, who was heavily involved in the design. The staircase not only connects the two levels of the 2,500 m² shop, but also offers a casual sitting opportunity for people and during events a location that offers the best view. "It invites customers to stay and spend some time and turns the shop into a social space, in which people meet, read or participate in a cultural event", explains Tanaka.

The use of the staircase as a traffic route and meeting place goes back thousands of years, such as the theatres of the ancient Greeks. In this respect, it is no surprise that planners of cultural and educational institutions are rediscovering the advantages of large

staircase elements. Now that there is a "trend towards open educational facilities", as the Darmstadt architect Angela Fritsch has found.

Ancient Greeks used the staircase as a traffic route and as a place for the audience.

In 2012 Fritsch built a staircase with space for up to 400 pupils for the new building of the International School in the southhessian Seeheim-Jugenheim. "The builders wanted a place outside the classrooms where pupils could learn to speak in public," explains Fritsch. However, during breaks and free periods, they also use the staircase as a common area. Sitting boards made of dark stained oak give

warmth to the concrete, so that pupils enjoy being there.

And in residential construction? The Dutch architect Haiko Meijer from the Groningen agency Onix appears to be an heir of Goethe: His 2013 family home "Het Traphuis" in Almelo is designed as a seemingly endless staircase, where each of the ten floors is only 75 cm higher than the previous one. "In this way, we have created a flowing transition, which widens the space," explains Meijer. "The staircase becomes part of the living area, it is an ornament, a piece of furniture, a work of art and a structural element." And this restores the staircase to what it used to be for centuries: not a functional transition, but an inviting location.

PICTURE PUZZLE



Treehuggers wanted

Victor, Anton, and Emil come from southern Sweden, just like Astrid Lindgren's carving children's book hero *Michel from Lönneberga*. The three brothers focused on toys when they took over their father's basket factory in 1908. They renamed the factory, putting together the first two letters of the Swedish word for "siblings", the first letters of their family name and of the town where the company is located. In 1930, the trademark appeared for the first time on two toy trucks. The next generation achieved global success: In the 1950s, Anton's son Lennart launched a wooden track system. The family business has now become a corporation, but the train continues to do its

rounds in children's rooms across the world. The joy of natural wood is timeless and borderless.

What is the family name of the inventors of the wooden track? Send it to **MORE@egger.com**. The winner will receive a birdhouse made with EGGER material. The deadline is 30 June 2015. The decision is final.

The picture puzzle in MORE 05 showed a wooden racket, three tennis balls and a headband for Björn Borg. Thank you for your answers. The winner Tommy Palm from Forserum (SE) received a *clic!* shelf made of EUROLIGHT boards from EGGER.

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