

inSites

Unlocking Insights from the World of Placemaking

No. 4

CLOSING THE LOOP

Sustainable materials for a holistic circular economy



umdasch

THE STORE MAKERS

INTRODUCTION

Where trends meet spaces

inSites is the new online format from umdasch The Store Makers. It deals with developments, trends and innovations in the creation of spaces. The name says it all: the format aims to provide in-depth insights into different places (sites) – be it retail spaces, offices, food courts or other exciting meeting spaces. inSites shows what moves the placemaking industry: it uncovers backgrounds, sheds light on complex topics and focuses on the people who work every day to make spaces more functional, aesthetic and sustainable – in short: better.

inSites is green in 2024

Sustainability is the main theme running through 2024 inSites, with everything revolving around the umdasch Sustainability Guide. This was created by the Store Makers after the umdasch exhibition at EuroShop 2023. Under the motto “Plant an idea”, visitors to the most important industry event for the retail sector were invited to record their ideas for a sustainable point of sale on the umdasch Sustainability Tree.

Many exciting and valuable contributions were collected, from which a comprehensive guide with six sustainability focal points was created – with the most important resource at the centre: people. Because successful, sustainable spaces can only be created through joint action.

Your Store Makers from umdasch wish you inspiring reading!

EXECUTIVE SUMMARY



The fourth edition of umdasch’s online format inSites focuses on the topic of ‘materials’ in shopfitting and interior design and explores the question of which sustainable materials are currently available and what influence they can have on interior design.

In the chapter ‘[Sustainable Materials](#)’, you will discover what creative impulses are possible with environmentally friendly materials. In ‘[Recycling/Upcycling](#)’ you can read about innovative recyclates and the unique materials that can be created from waste. To find out how umdasch The Store Makers source sustainable materials, read the ‘[Sustainable Sourcing](#)’ chapter. Product certificates are designed to help you identify sustainable products. As it is easy to lose track of the wide range of products on offer, the ‘[Certifications](#)’ chapter will show you what is important to make the right choice.

Finally, the importance of recyclable materials and [circularity](#) in sustainable interior design is highlighted.

UMDASCH SUSTAINABILITY GUIDE

The Way to Sustainable (Retail) Environments

The six focal points do not stand alone, but are interlinked. Follow the lines in the guide to see which topics influence the area of materials. These lines will lead you to the individual sub-chapters of the Trend Paper.

(STORE) DESIGN



Refurbishment/Reuse
Energy-Efficient Lighting

ENERGY



Energy-Efficient Building Operation
Renewable Energy
Green Digital Signage

DIGITALISATION



Building Information Modelling (BIM)
Digital Solutions and Products

MATERIALS



Sustainable Materials
Recycling/Upcycling
Sustainable Sourcing
Certifications

BUILDING STOCK



Sustainable Building Solutions
Reduction of Emissions
Use of Existing Building Stock

SUPPLY CHAIN



Packaging
Logistics
Transparency, Integrity, Compliance

ECO-DESIGN

ENERGY
TRANSITION

DIGITAL
INNOVATIONS

CIRCULARITY

RENOVATION

COLLABORATION

PEOPLE

SUSTAINABLE MATERIALS

Materials Matter — SUSTAINABLY STUNNING SOLUTIONS



SWANTJE DONATH
SHOP CONSULTANT
UMDASCH THE STORE MAKERS

In a world that is increasingly focused on environmental awareness and resource conservation, environmentally friendly materials are at the forefront of research and development. They play a crucial role in minimising the environmental footprint of construction projects and store designs, and make a significant contribution to promoting a sustainable economy. But what are the characteristics of sustainable materials and what is the trend?

Materials can be ‘sustainable’ for different reasons, as Swantje Donath, Shop Consultant at umdasch in Duisburg, explains: “Sustainable materials can be renewable or recycled. They can be vegan or come from species-appropriate animal husbandry. They can be resource-conserving, recyclable, fairly produced or energy-saving, low-emission or healthy to live in. In short, sustainability has many dimensions and there is no ONE sustainable material that ticks all the boxes. Context determines how sustainable a material is. Factors such as lifetime, location and type of use play a key role.”

Swantje Donath emphasises the importance of sustainable materials in design and interiors: “They not only protect the environment, but also play a decisive role in the appearance and atmosphere of a store, contribute to the quality of the stay and can underline the brand message.” See what this looks like in a contemporary interior design concept:



SUSTAINABLE MATERIALS

Sample store



1 Shelf and slats made from 'Honext' recycled paperboard: The shelf and slats of the room divider are made from 100% recycled paperboard. This eliminates the need to cut down trees and extends the useful life of the recycled wood fibre as a raw material.

2 Hemp Furniture 'Hemp fine' by Vepa: Armchair and bar stool built according to the principles of circularity, with a seat shell made of hemp fibre remnants and organic resin without chemical additives. The shell can be shredded and transformed into a new chair.

3 'Malakio' composite shell tabletop: The tabletop is made from an ecological composite material made from mussel shells. The shells are crushed, ground into powder, moulded with a mineral binder and dried. The manual production process is virtually energy free. The small, shimmering mother-of-pearl particles are visible on the surface of the material.

4 Furniture panelling made from recycled leather 'Buxkin': The counter is upholstered in a tactile, ribbed, leather-look material made from 60% recycled leather and 40% natural latex, bonded to a jute backing. The material has an elegant yet simple look and is also acoustically effective.

5 Table arch in recycled steel: The steel arches are both a decorative element and a functional unit. They create a lighting level at the consultation table and are used to supply power and data via the floor. As a result, ceiling lighting can be reduced to a minimum and the interior design concept remains as flexible as possible.

6 'Silent Fibre' sound insulation made from peat: The back panel is covered with an ecological, printable acoustic panel made from peat fibres. This renewable raw material is skin-friendly, recyclable, biodegradable and excellent at absorbing sound.

7 Cork flooring: Cork flooring is a sustainable alternative to wood, with many benefits including impact sound insulation, thermal insulation, fire resistance and water resistance. Available from a range of manufacturers, including wood-look finishes.

8 Pendant light made of PET felt 'Fost Bulb' by De Vorm: The lampshade of the pendant light is mainly made of recycled PET felt, a sustainable and durable material made from recycled plastic bottles. The shape and material of the lampshade also insulate against noise.

SUSTAINABLE MATERIALS

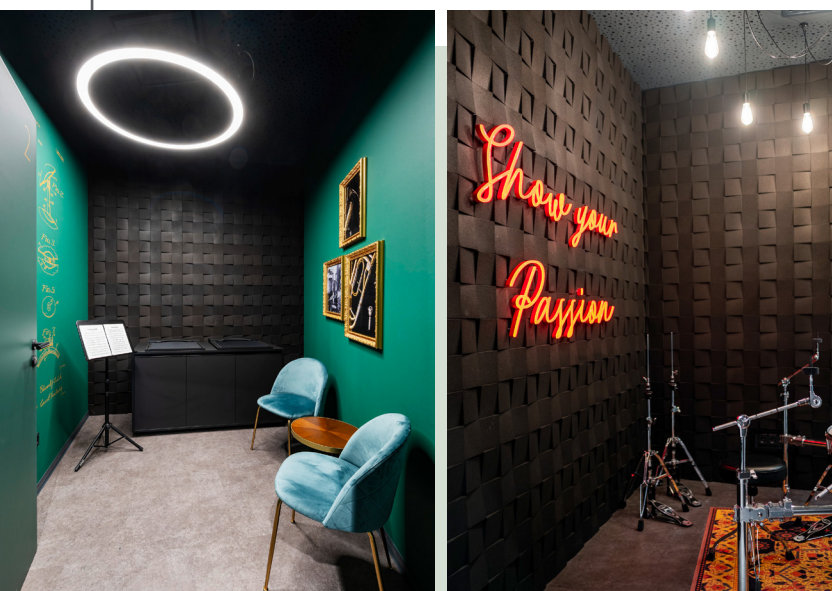
Green material trends

The number of sustainable materials and building materials continues to grow and material trends are evolving. The following three trends are particularly illustrative of this change.

Wood is and remains a perennial favourite among sustainable materials, scoring highly for its positive carbon footprint. However, due to the long growth period of trees, dwindling growing areas and the effects of climate change, wood is increasingly becoming a limited building material. Reclaimed wood offers an alternative that helps conserve resources through reuse. An innovative approach to wood processing is 3D-printed wood (e.g. from the supplier Aectual). This material is made from wood waste, binds CO₂ and is fully biodegradable. It can also be reused and re-printed after use, making it even more sustainable.



Sustainable woods such as silver fir, spruce and fragrant Swiss stone pine were used by the umdasch shopfitting professionals at [Bründl Kaprun](#) for the furniture in the store. © Bründl Sports / Joachim Grothus; Design by blocher partners



Cork is a renewable and recyclable raw material. The cork oak trees are not cut down, only the bark is removed. Cork is lightweight, sound and noise absorbing, heat insulating and fire resistant. An innovative development of this material is genetic cork – natural, three-dimensional panels made from cork agglomerate, which are given a completely new formal, aesthetic and artistic language through generative design algorithms and advanced digital manufacturing processes.

At the [Thomann music store](#), the umdasch designers used Muratto cork elements, which not only fit perfectly into the store concept, but also fulfil a functional purpose in the rehearsal rooms thanks to their sound and noise insulation.

SUSTAINABLE MATERIALS

These examples show that “new materials”, i.e. newly developed materials, for example through 3D printing, are revolutionising the market for sustainable materials. They consist of recycled material/waste, are infinitely recyclable, conserve resources, generate hardly any production waste and are usually created by processing an ecological low-tech material using an innovative high-tech process.

Materials knowledge at umdasch

The umdasch designers are naturally passionate about sustainable materials, which is reflected in various initiatives, as Swantje Donath explains: “In order to provide our clients with the best possible support in the area of sustainable shop and interior design and to promote the use of sustainable materials, we at umdasch offer a series of sustainability workshops.”



Manufacturer Aectual supplied the stunning 3D-printed facade made from recycled marine debris for the Tiffany’s boutique at Singapore’s Changi Airport. © Shutterstock: Sorbis

Curious to know more?
Book a sustainability workshop with umdasch now at swantje.donath@umdasch.com

 WORKSHOP 1 – BASIC Online, 2 hours	 WORKSHOP 2 – ADVANCED Live, 3 hours	 WORKSHOP 3 - CUSTOMIZED Live, 4 hours
<p>SUSTAINABILITY IN RETAIL</p> <p>Criteria of a sustainable store design SDG's & eco design</p> <p>Added value through sustainability Sustainability & CI</p> <p>Sustainable material Current trends and examples</p> <p>Best practices Innovative sustainable stores</p>	<p>SUSTAINABLE CONCEPT</p> <p>What options do I have? Between cradle to cradle, BREEAM & Co</p> <p>How do I proceed? Project process and requirements</p> <p>Brand identity & sustainability Examples, incl. digital integration</p> <p>Furniture, floor and more Sustainable materials and their usage</p>	<p>CUSTOMIZED WORKSHOP</p> <p>Individual potential analysis Sustainable opportunities, suggestions</p> <p>Vision and Target Development of an individual roadmap</p> <p>Customer Experience Brand & sustainable store experience</p> <p>Look & Feel Development of an individual look and feel</p>
<p> Including: online- presentation Material box „sustainable trends“</p>	<p> Including: Live presentation Large material demonstration Access to the ECOlib material database (1 week) Material box „ favourite samples “(sent afterwards)</p>	<p> Including: Live presentation Access to the ECOlib material database (1 month) Presentation look and feel (sent afterwards) Material box „ individual samples “(sent afterwards)</p>

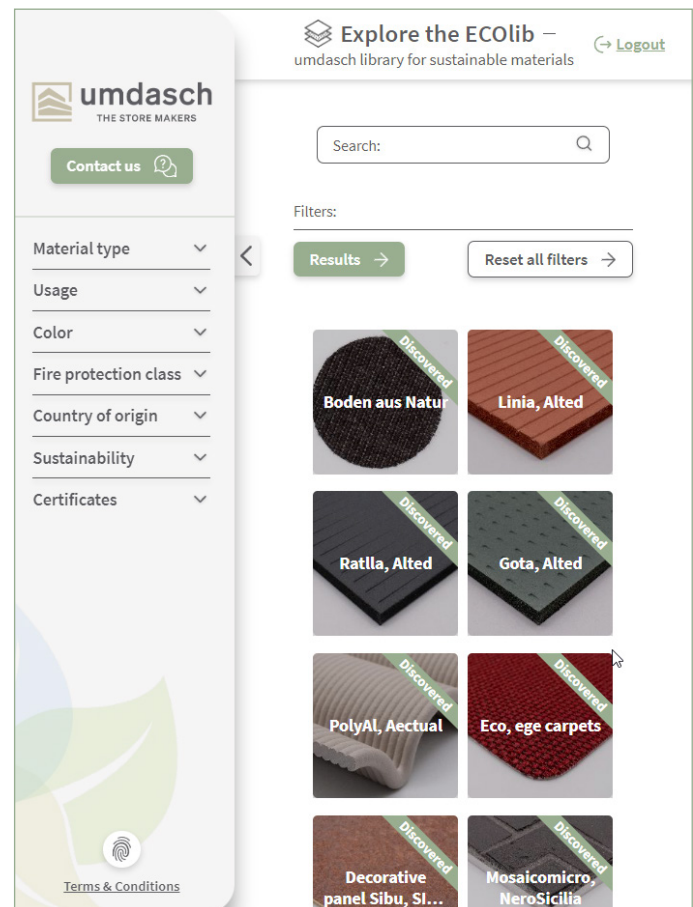
“Many customers want to make their store more sustainable, but don’t know how or where to start. In our workshops, we can develop tailor-made ideas and approaches,” says Donath.

The three umdasch workshop packages are tailored to the individual needs of clients and provide a comprehensive overview of sustainable practices in retail and interior design.

SUSTAINABLE MATERIALS

Another centrepiece of umdasch The Store Makers' sustainability initiatives is the digital materials database ECOLib. This platform contains several hundred environmentally friendly materials, including details on manufacturers, material properties and sustainability factors. "ECOLib helps us design and plan stores by pooling the expertise of our designers from all umdasch locations and making it easier to select suitable materials. However, it is not only used for internal knowledge exchange, but is also made available to customers as part of consulting projects and workshops," says Swantje Donath of the platform, which she helped to develop.

While the inclusion of materials in the ECOLib database is an important step, what ultimately counts is their practical applicability. This is why umdasch The Store Makers carry out extensive material tests. "Experience with the processing and suitability of the materials is either gathered directly from specific projects or through targeted material tests," explains Donath.

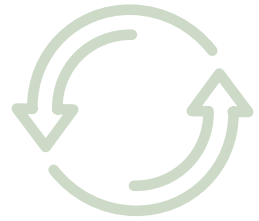


At the umdasch Innovation Hub in Duisburg, Germany, the Store Makers regularly test new materials for their processability and quality to gain important experience.

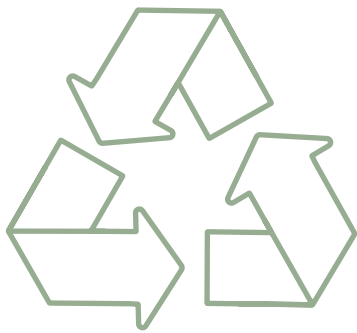


RECYCLING/UPCYCLING

DESIGNED FOR CIRCULARITY: FROM WASTE TO WONDER



Global resource use has more than tripled since 1970, from 30 to 106 billion tonnes.¹ These figures call for a radical rethink towards a circular economy. From plastics and packaging to old clothes, almost everything can be recycled and used to make exciting new materials. Recycled materials can make an interesting visual statement, especially in retail and other spaces.



IN A NUTSHELL

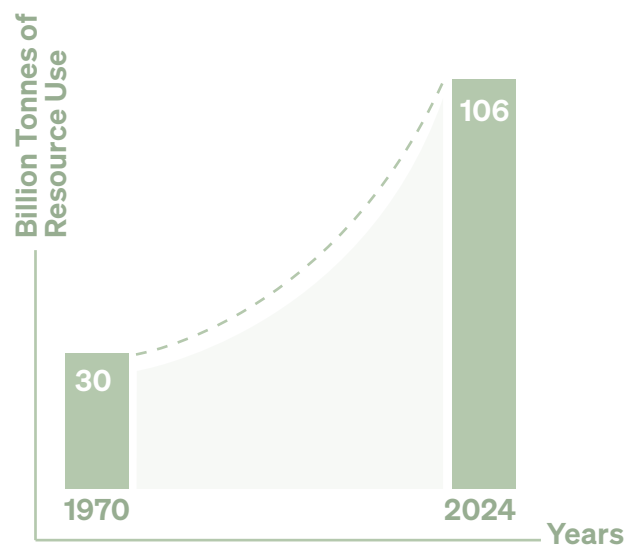


The concept of the circular economy consists of the biological and the technical cycle.

The biological cycle refers to materials that can be composted and thus returned to the environment without polluting it (e.g. chipboard or MDF boards made from wood fibres).

The technical cycle, on the other hand, includes materials that are not biodegradable but can be reused, repaired or recycled several times (e.g. PET bottles, steel).

Source: [Umweltbundesamt](#)



Source: [UNEP](#)

The EU produces 2.1 billion tonnes of waste each year. According to EU targets for 2030, 60 per cent of the everyday waste collected and treated by local authorities must be reused or recycled.² This offers great potential for recycled materials, explains Ursula Schütze, Shop Consultant at umdasch Leibnitz: “Recycling has become a huge market. It is most sustainable when a material goes through the cycle several times – be it biological or technical.”

¹Source: [UNEP](#)

²Source: [European Parliament](#)

RECYCLING/UPCYCLING



At EuroShop 2023, umdasch used sunflower seed hulls from supplier Organoid to present its plant-based meat substitutes with sunflower protein – that’s good storytelling!



In the Solution Area at EuroShop 2023, umdasch exhibited a Basixx Light shelf made from The Good Plastic Company’s recycled material Polygood. Polygood sheets are made from a variety of plastic waste sources, from refrigerators and disposable cutlery to electronic equipment, packaging materials and industrial waste.

Ursula Schütze confirms that recycling is also becoming increasingly important in the daily work of a designer: “Recycling is an exciting topic for us shop consultants in the design process. It means being actively committed to reducing waste, reusing existing resources and focusing on resource-efficient design.” Demand from retailers and customers is also clearly noticeable: “Recycled materials are now increasingly being requested by our customers and suggested by us in the design process. Fortunately, more and more of our suppliers are jumping on the bandwagon and increasing the recycled content in their materials,” says Schütze.

“The individual story that results from the origin of the different waste sources of the materials gives each piece its unique character and allows for a variety of storytelling possibilities,” says Ursula Schütze, citing one of the advantages of recycled and upcycled materials. In addition, recycled materials are comparable to new products in terms of hygiene, durability and wear resistance –

MORE INFORMATION

IN INSITES NO. 1



Read more about refurbishment and recycling in store design in inSites issue No. 1.

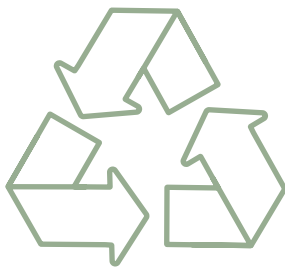


With the recycled material, Chocolate Factory’ from the manufacturer “Plasticiet”, umdasch has brought a lot of colour into the store of Bründl Sports Kaprun! The plastic panels are made from old chocolate moulds and therefore consist of 100% recycled material – each piece and each pattern is unique. © Bründl Sports / Joachim Grothus

RECYCLING/UPCYCLING

with the big plus that they also conserve resources and thus protect the environment, says the designer.

Recycled materials can take different forms, as Ursula Schütze explains: “We distinguish between fully recycled materials, which are made from 100% secondary raw materials, and partially recycled materials, which are made from (production) waste. In addition, there are reused materials, i.e. used materials that are processed into new materials without complex processing. They should not be confused with recycled materials, which are made from used materials through intensive processing. Whichever recycled material you choose, any reuse is better than a new material.”



IN A NUTSHELL



In recycling, raw materials can be upgraded through upcycling or downgraded through downcycling. Recycling means collecting waste products and partially reusing them or using them as raw materials for new products.

Recycling often results in a loss of quality of the original material, which is known as “downcycling”. However, some materials can be recycled with no loss of quality or even with an increase in quality, which is known as “upcycling”
Source: [APA](#)

“The individual colours and textures make each recycled product special and offer new, interesting design ideas and unique surfaces.”



URSULA SCHÜTZE
SHOP CONSULTANT
UMDASCH THE STORE MAKERS

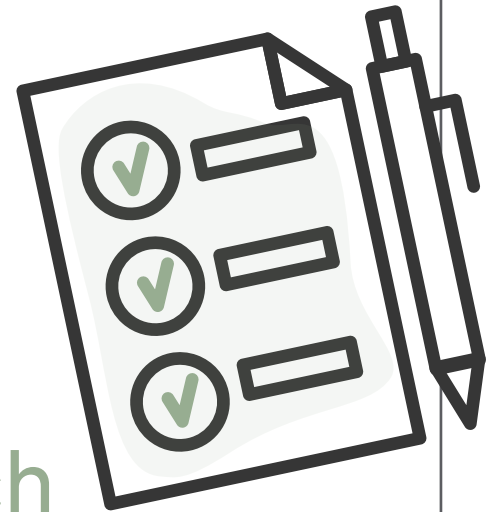


Solid Textile Board is a textile fibre board made from recycled cotton from the fashion and textile industry, industrial laundries and textile remnants – umdasch used the material to great effect in the ÖGNI-certified [Bründl sports](#) store. © Bründl Sports / Joachim Grothus

SUSTAINABLE SOURCING

On the green shopping list::

Sustainable materials procurement at umdasch



Sustainable procurement means systematically integrating environmental and social considerations into all procurement activities. In the following interview, Edin Music, Senior Procurement Manager at umdasch in Leibnitz, explains how this affects the work of the umdasch Store Makers in practice and which aspects in particular need to be taken into account when procuring sustainable materials.



EDIN MUSIC
SENIOR PROCUREMENT MANAGER
UMDASCH THE STORE MAKERS

How important is sustainable procurement for umdasch?

↳ Sustainable procurement is a central part of our corporate strategy at umdasch. This includes the careful selection of suppliers, the use of recycled materials, the reduction of packaging materials and the optimisation of transport routes to reduce CO₂ emissions.

How is this reflected in the day-to-day work of the procurement team?

↳ In the Procurement team, we look not only at cost and quality when selecting suppliers, but also at sustainability practices. We give preference to suppliers who offer certified sustainable materials and are committed to environmental and social standards.

SUSTAINABLE SOURCING



Coop wanted to build its new megastore in the Centre Bahnhof Biel (CH) entirely from European solid wood without any surface treatment and not from panel material. The Store Makers' task was to produce furniture from rough-sawn spruce boards that deviated from the standard thickness and were therefore more difficult to source. A new and welcome, but also sustainable challenge for the umdasch procurement team.

The team works continuously to improve sustainable sourcing processes through regular reviews and audits of the supply chain and the implementation of new technologies to promote sustainability. Particular attention is paid to selecting environmentally friendly and recyclable materials that can be used multiple times in the cycle.

The demand for sustainable materials is growing. Is this reflected in the supply?

↳ Absolutely! Raw material producers are working hard to increase the supply of unconventional and sustainable materials. However, the level of complexity in research and production is greater as they have to meet stricter standards.

What are the challenges of sourcing sustainable materials?

↳ At umdasch The Store Makers we work extensively with wood. We check that the wood comes from sustainably and legally managed forests and meets the required certificates (e.g. FSC and PEFC) and environmental standards (e.g. the EU Timber Regulation or the EU Deforestation Regulation, which will apply from 2025). Through ongoing contact with our suppliers, we ensure that our partners and their supply chain comply with our requirements. In some cases, this is done directly on site to be 100% sure that regulations are being met. We also try to avoid tropical timber in favour of European timber and work with our customers from the design stage to use natural materials such as solid wood rather than panel materials.

SUSTAINABLE SOURCING

What role does logistics play?

↳ Efficient logistics strategies are essential to minimising our ecological footprint. This includes working with logistics partners who use environmentally friendly transport methods and optimising supply chains to avoid unnecessary transport. For example, by coordinating delivery dates on a daily basis, we can combine deliveries from our partners to our warehouse. This in turn reduces the number of journeys. We also try to reduce transport distances and storage space by informing our customers of the dimensions of the products – just a few centimetres can make a difference to the packaging or mean that an extra lorry has to be sent.

Speaking of packaging, what does umdasch pay attention to in terms of sustainability?

↳ Depending on the product, we try to save packaging raw materials by reducing and optimising the amount of packaging that is necessary but not too extensive. In our logistics centre in Hasendorf (AT) this is supported by a new flatbed cutting plotter. With this new machine, packaging is cut precisely to fit the products before transport to the customer, significantly reducing unnecessary packaging.



The London boutique of luxury handbag brand [Aranyani](#) showcases fine accessories on marble and other stone slabs. As sustainability is one of Aranyani's core values, the stones had to come from ethically responsible sources in the UK. The Store Makers mastered the procurement of suitable specimens from regional quarries in the UK with flying colours. © ARANYANI

CERTIFICATIONS

GREEN CERTIFICATE LABYRINTH

YOUR GUIDE THROUGH THE VARIETY OF MATERIAL CERTIFICATES

More and more property owners, companies and retailers are striving to make environmentally conscious choices when designing spaces for their employees and customers. But while sustainability certificates, eco-labels and certification marks are designed to help identify and promote the use of responsible materials, their diversity and complexity can be challenging.

“It is difficult to determine the most relevant certificates because they assess different criteria,” says Katrin Cuxart Fernandez, Shop Consultant at umdasch The Store Makers.

In addition to the extensive certifications for buildings (e.g. BREEAM, DGNB, LEED – see inSites issue 1 for details), there is also a large number of certifications for products and materials, as Cuxart Fernandez explains: “You should look at the context and check that both environmental and social aspects are taken into account.” It is important to note that a certification is not an automatic quality feature of a product, as Cuxart Fernandez explains: “You have to be sceptical about vague terms to avoid falling into the trap of greenwashing. New labels are supposed to create trust, but they are often opaque and awarded according to very different criteria.



Products can be sustainable without an official label. Many small businesses cannot afford expensive certification, but can still produce high quality, environmentally friendly products.”

To help you find your way around, we give you an overview of the most common sustainable materials certifications.*

MORE INFORMATION




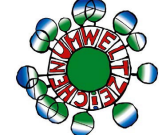

IN INSITES NO. 1



Further information on certifications in store design can be found in inSites issue no. 1.



*No claim to completeness

CERTIFICATIONS	DESCRIPTION	PRODUCTS	CRITERIA	
	FSC® – Forest Stewardship Council	The wood used in FSC-certified products comes from responsibly managed forests.	Wood and wood composite products	Ten FSC principles focusing on legal and sustainable forest management, respect for land and labour rights, protection of the environment and biodiversity, and participation and benefits for local communities.
	PEFC® – Programme for the Endorsement of Forest Certification Schemes	Stands for responsible and environmentally sound forest management and timber production.	Wood and wood composite products	Proof of the preservation or improvement of the ecological, economic and social functions of the forest.
	CARB 2	California Air Resources Board regulation to prevent the emission of formaldehyde into the air.	Wood and wood composite products	Certification means that the product emits such low levels of formaldehyde that it is considered safe.
	Blue Angel	The German government's eco-label for environmentally friendly products and services.	Furniture, wood-based materials, paper, wall paints, textiles, electronics, etc.	Resource-conserving production, sustainable production of raw materials, avoidance of harmful substances, durability, reparability, etc.
	EU Ecolabel	Labelling of environmentally friendly products and services for consumers.	Textiles, furniture, paints and varnishes, flooring, etc.	Reducing environmental impact from raw material extraction to end-of-life, meeting quality and social criteria.
	The Austrian Ecolabel®	Independent label of the Austrian Federal Ministry for Sustainability and Tourism.	Products (construction & housing, paper, shoes, etc.), tourism (restaurants, hotels, campsites), education (kindergartens, schools)	Different criteria for each category.
	Sentinel Haus®	Knowledge and market leader in healthy living.	Furniture, paints and varnishes, floor coverings, flooring adhesives, insulation materials, wood-based materials, etc.	No hazardous substances or at least compliance with limit values, safety data sheet and proof by tests and test sheets.
	Cradle to Cradle Certified®	Global standard for products that are safe, recyclable and responsibly manufactured.	Building materials, interior fittings, furniture, consumer electronics, textiles and clothing, etc.	Performance in five categories: Material Health, Material Reutilisation, Renewable Energy Use, Water Stewardship and Social Responsibility.
	Nordic Swan Ecolabel	The Nordic countries' official eco-label, which takes into account the environmental impact of a product over its entire lifecycle.	Furniture, textiles, paper, televisions and projectors, paints and varnishes, etc.	Different criteria for each category.
	Energy Star®	US EPA labelling programme to promote the energy efficiency of products.	Computers (monitors), dishwashers, heating and cooling appliances, etc.	The criteria vary according to the category, but are always based on energy efficiency.

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CONCLUSION

Circularity: Crafting the Future

August 1st marked Earth Overshoot Day – the day when the Earth’s annually renewable resources and natural services are used up. This alarming trend shows us the urgency of transforming our economy to circular principles in order to operate more sustainably and protect the environment.

Circularity, or the circular economy, is the central principle for continuously reusing resources and closing material loops. Instead of a linear model of produce, consume and discard, we need to find ways to return raw materials to the production process after they have been used. This approach not only reduces waste but also conserves the planet’s natural resources.

Sustainable materials play a key role in this process. They are designed to go through the material cycle several times without losing quality. The practice of recycling and upcycling, where waste products are transformed into valuable new materials, illustrates how innovation and sustainability can go hand in hand. Certifications help to prove the origin and environmental friendliness of materials, increasing their credibility and transparency.

In their role as designer, shopfitter and general contractor, the umdasch Store Makers have the opportunity to make a significant impact on this change. By consistently using sustainable materials and integrating ecological principles into the design from the outset, we can create store concepts that are aesthetically pleasing, environmentally friendly and long-lasting. Our commitment to sustainable sourcing and the implementation of circular principles in production are essential to promoting closed-loop material cycles.

The transition to a circular economy offers not only environmental benefits, but also economic and social opportunities. Together, we can realise the vision of a circular economy and create a sustainable world.

MEDIA OWNER AND PUBLISHER

umdasch Store Makers Management GmbH
Josef Umdasch Platz 1 | 3300 Amstetten | Austria
presse@umdasch.com | www.umdasch.com

AUTHOR

Katrin Fischer

GRAPHIC DESIGN

Denise Siegl

PROOFREADING

Mark Faithfull / Katrin Fischer

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