SUSTAINABILITY

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What we do today changes the world of tomorrow.

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That is why sustainable management is an important maxim for our entrepreneurial activities. This applies to all areas of our company: to product development and design, to production and transformation processes, to logistics, administration and finance.

Sustainability is another word for responsibility.

The responsible use of resources is a must for us in our responsibility for future generations. We have already achieved a great deal on our way to CO_2 neutrality in recent years. But there are still many steps ahead of us. Some of this involves meticulous detail work, while in other areas it means changing habits. Examples include avoiding unnecessary travel, doing away with environmentally harmful product packaging, or using alternative materials. Sustainable action is always the responsibility of the individual. At VARIO, we take this responsibility seriously every day. For our environment, our customers, our employees and our company.

You have our word on that.

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Matthias Kurreck

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We have the goal of leaving no CO₂ footprint.

And with that, we set out on the path:

From old to new

Avoiding instead of throwing away.

Longevity instead of ex and hopp.

Reducing distances.

We do not use everything we get our hands on.

We only manufacture what is needed.

Commitment because we want it.



From old to new

In order to produce in the most resource-saving way possible, we use recycled materials and renewable raw materials. E.g. wood.

Chipboard and MDF, that doesn't sound environmentally friendly – but it is: here, waste wood and waste products such as wood trimmings, branches, sawdust and sawdust are processed into high-quality board material and given a second life.

Our packaging material is largely made of recycled cardboard and is also recycled after multiple uses.

All plastic components of our furniture are coded to allow recycling by type. After a long furniture life, who still knows which materials were used in its manufacture?

Old stuff?

We are currently developing a recycling system for discarded VARIO products: we take back the furniture, separate the components and parts according to type and return these valuable elements to the material cycle.



Avoid instead of throw away.

Our principle:

Avoid production waste in the first place.

e.g. wood waste:

Thanks to a combination of sophisticated optimization software and manual readjustment, we produce significantly less waste during the cutting of wood-based materials than is usual in the industry.

What is left over is recycled by type or converted into thermal energy.

e.g. lacquers

Our products are mainly coated with powder lacquers. This means - in addition to a resistant, durable surface: no solvents and maximum material utilization.

And no lacquer residue.

e.g. packaging

We do not use elaborate cardboard boxes and often only use cardboard edge protectors. Sometimes we also wrap our furniture in reusable blankets for transport.

This means little packaging waste. And in addition, small packaging volumes enable efficient utilization of delivery vehicles.



Longevity instead of ex and hopp.

A large part of our products have what it takes to become classics due to their timeless design. That alone is a reason to use a piece of furniture for generations.

If the quality is also right, there is no reason to part with your furniture.

And if something does break? We have long-running product series to be able to replace wearing parts. So repair instead of throwing away. Even after decades.

What if the use changes? When developing our system furniture, we attach great importance to changeability. This makes it possible to repurpose, convert and add to instead of buying new.

BiroEinricht www.vario.co



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Reducing distances.

We produce in the center of Germany, an ideal prerequisite for short distances.

From here, our delivery vehicles always start out efficiently loaded and, thanks to sophisticated logistics, optimally utilized to our customers. True to the motto: no empty runs!

For overseas deliveries we rely on shipping and we avoid special transports.

Components that we cannot produce ourselves we obtain from suppliers in our vicinity.

Everything we need comes from Germany or from the European neighborhood.



We do not use everything we get our hands on.

We test all the materials we use for their safety and compatibility beforehand. To conserve natural resources, we work with high-quality and durable materials. We do not use raw materials and materials whose existence is threatened.

Wood and wood-based materials

Wood is a renewable and CO2-neutral material. The wood-based materials we use come exclusively from sustainable European forestry. In the case of wood-based materials such as particleboard and MDF, in addition to waste wood, residues from the wood processing industry such as branches, shavings and recycled wood are also processed. All board materials come from a certified plant in the centre of Europe and meet emission class E1E05. We only order PEFC-certified material.

Steel

The metallurgical processes used to produce crude steel require very high temperatures and are therefore very energy-intensive. In the steelmaking process, the so-called blast furnace route, CO2 is released as a result of the process, because blast furnaces do not currently function without coke and carbon. But the steel-producing companies also want to produce CO2 neutrally by 2045. From an ecological point of view, however, steel is already an excellent material because it can be recycled without any loss of quality and, above all, it guarantees a long product life.

Aluminium

Aluminium is a very durable material. Unlike steel, it has a lower melting point. This saves primary energy when casting, extruding or welding aluminium. In addition, aluminium can be recycled in a comparatively energy-efficient way. The recycling process requires about 95 % less energy than the production of primary aluminium.

Plastics

The thermoplastics polypropylene and polyamide are the most commonly used plastics in our country. Thermoplastics can be completely recycled. For this purpose, we label all plastic parts. This allows them to be separated by type and easily fed into the recycling loop. We are also testing the use of recycled plastics for components.

Lacquers and adhesives

We use powder coatings to coat metal surfaces. These do not contain any solvents. Powder coating enables us to achieve surfaces with excellent properties and maximum material utilisation. For painting narrow surfaces and for sporadic repainting of plastic and metal components, we use paints with a low solvent content. They are applied using a spray booth with floor extraction and dry filters that fall below the threshold value for solvent consumption of the 31st BImSchV. We use white glue and hot-melt glue as adhesives. Both are solvent-free and therefore harmless to health.



We only manufacture what is needed.

With our state-of-the-art production facility and flexible logistics, we are able to manufacture only those products that are actually needed.

Or to put it another way: our production is order-based and not stockpiled.

This is good because we do not produce anything that is not wanted. And every order is perfectly tailored to the individual requirements and wishes of the respective customer.

We don't have to do that – but we do it because we think it's good.

We are a founding member of the Unternehmensnetzwerks Klimaschutz

We are aware of the challenges of climate change and would like to make an active contribution to achieving climate protection goals. The Unternehmensnetzwerk Klimaschutz is an IHK platform that develops a Germany-wide offer for companies and multipliers who want to actively contribute to climate protection and continuously improve their climate protection know-how.



We think that's good!

That's why we joined the Unternehmensnetzwerk Klimaschutz as a founding member.



We support sustainable education projects

GemüseAckerdemie is dedicated to imparting knowledge to children and adolescents. The focus is on vegetable cultivation.

The project, headquartered in Berlin, has been operating nationwide since 2014 with 160 permanent employees and 400 garden experts. The aim of the programme is to teach children how to grow vegetables and how nature works. More than 100,000 children have participated so far. This year alone, 600 schools and 260 day-care centres from Germany, Austria and Switzerland participated.

We are happy to join in!

That's why we helped to equip the Acker.co headquarters with furniture.



We are home to several bee colonies on our company premises and have good honey harvests.

The extinction of species and insects is something we have to take initiative against. So we asked our beekeeper friends for free hives and initially got an intact, active economic colony and a so-called scion colony. In the meantime, there have been a few more colonies.

The preservation of bees is a matter close to our hearts!

As a company, we can and want to contribute something to this. We hope this is just the beginning.

VARIO DESIGN COMPETITION 2022 "Sehnsuchtsort Büro"

Encouraging the next generation: we invest in the ideas of the future.

A climate-minded and environmentally committed generation will soon be in charge. They also call themselves the Last Generation. To ensure that they are not really the last generation, we need to listen more to the young. They are our future. We want to give room to new ideas with our annual design competition.

A lot is going to change in our industry, too, and who can contribute more than the young? In our company, a strong team of young people is currently being formed, who are young and wildly involved in decision-making processes.

We give the needs of this generation a platform -

for a sustainable future.



Jobbike

Even though we in the Frankfurt area know what motorways are, we want to encourage our employees to move in an environmentally friendly way. That's why we offer every employee low-cost access to a company bicycle.

As an employer, we lease bicycles that our people can use not only to get to work but also for private purposes. Fuel prices have risen dramatically and the fitness club costs something too.

This could pay off – **also for the environment.**



We need light and heat

And we try to get that as energy-efficiently as possible. We use 100% green electricity – unfortunately we cannot yet produce it ourselves. We are planning to modernise our air-conditioning and ventilation systems and to install LED lighting throughout the building.

We still have something to do - **but you also have to have goals!**

Input-output analysis

To ensure maximum resource and material efficiency and to create sustainable cycles, we look at our production under input-output criteria. This gives us an overview of the material and energy flows in the company. The input-output analysis helps us to control production efficiently and to identify deviations.

Year	Chipboard [t]	MDF [t]	HPL/CPL [t]	Metals [t]	Plastics [t]	Paint and varnish [t]	Thinners [t]	Adhesives [t]	Water [m³]	Gas [kWh]	Electricity [kWh]
2010	2.089,1	137,4	53,4	661,8	93,2	2,7	0,6	3,5	629,	1.187.819	926.636
2012	2.233,8	67,1	140,8	805,2	87,8	2,4	0,6	2,8	607	1.096.333	955.286
2013	2.097,0	76,2	16,4	696,1	85,9	1,7	0,6	3,2	696	1.237.880	959.553
2014	1.902,5	64,8	18,6	509,2	69,3	1,0	0,6	2,4	650	981.320	767.629
2015	2.377,2	87,6	24,9	856,1	86,4	2,1	0,6	3,5	967	1.123.532	931.640
2016	2.109,7	79,5	26,8	779,6	87,2	1,8	1,2	1,7	790	868.269	931.640
2017	1.884,4	71,2	22,3	894,3	72,3	1,6	0,6	1,8	688	716.892	1.038.899
2018	1.780,4	101,9	23,6	912,7	70,5	0,9	0,3	2,0	673	696.242	979.616
2019	1.882,8	69,0	22,5	953,4	74,8	0,3	0,2	2,1	808	1.211.160	958.469
2020	1.415,3	91,6	2,5	711,4	55,6	1,6	0,6	0,8	535	613.695	844.104
2021	1.180,0	45,2	4,8	487,3	42,8	0,9	0,2	1,1	507	462.988	708.145
2022	1.162,5	78,6	1,2	589,6	32,9	1,0	0,3	0,7	571,0	658.746	701.045

Input:

We have been able to greatly reduce the use of **varnishes** and **thinners** in recent years.

The **adhesives** used are both white glue and hot melt. They are based on thermoplastics and are therefore completely harmless.

We use 100% green electricity.



Output:

Year	Wood-based materials [t]	Paper [t]	Plastic waste [t]	Metal waste [t]	Electrical waste [t]	Thinners [t]	Old varnishes [t]	Waste water [m³]	Mixed recyclables [t]	Construction and demolition waste [t]
2010	411,8	33,9	2,4	5,0	0,1	0,6	n.n.	629,0	19,7	n.n.
2012	465,5	36,0	2,8	5,9	0,1	0,6	n.n.	607,0	19,7	n.n.
2013	433,0	35,3	2,9	5,5	0,1	0,6	n.n.	696,0	14,7	n.n.
2014	333,5	32,1	2,9	8,4	0,2	0,6	n.n.	650,0	15,7	25,0
2015	572,5	41,9	3,1	6,0	0,2	0,6	n.n.	967,0	18,5	6,0
2016	517,6	40,2	2,7	24,2	0,0	0,6	n.n.	790,0	32,0	12,6
2017	544,3	39,4	2,3	17,8	0,9	0,6	n.n.	688,0	29,0	20,4
2018	428,3	37,4	2,6	16,9	1,1	0,4	0,8	673,0	22,6	13,4
2019	381,1	37,8	2,3	10,4	0,6	0,0	0,0	808,0	15,7	10,6
2020	332,8	36,0	2,0	7,8	0,5	0,6	0,7	505,0	13,1	12,4
2021	267,2	23,5	1,3	8,3	0,0	0,0	0,0	507,0	12,2	10,8
2022	270,1	27,9	2,0	9,9	0,6	0,0	0,0	571,0	12,2	6,7

Through the combination of optimisation software and manual post-optimisation, VARIO achieves a very good waste rate when cutting the wood-based panels, which is significantly below the industry average.

The **wood-based panel waste** is converted into thermal energy by incineration.

The waste is separated by type as far as possible and can thus be returned to the material cycle. The generation of **mixed waste** is to be reduced even more in the future.

The environment is changing – and so are our methods.

In order to assess and improve sustainability, we consider the direct environmental aspects as well as the indirect environmental aspects of our business activities. This results in measures that we implement to achieve our environmental goals. The catalogue of measures determines the annual environmental programme.

The environmental aspects are considered under the following criteria:

	Criterion	Description
1.	Damage potential for the environment under normal conditions	What is the impact of the environmental aspect under consideration on air, water, soil and consumption of resources under normal conditions?
2.	Risk potential for the environment in the event of an emergency	What is the impact of the environmental aspect under consideration on air, water or soil in the event of an emergency?
3.	Compliance with legal requirements	Are legal requirements not complied with or can (future) legal requirements not be complied with?

Each criterion is evaluated on the basis of its relevance on an A, B and C scale. Effective measures that have already been implemented are included in the evaluation and downgrade the relevance accordingly.

A = highly relevant

B = moderately relevant

C = weak or not relevant

If an environmental aspect is rated B two or three times, a measure must be initiated. If an environmental aspect is rated A one or more times, an immediate measure must be initiated.



Environmental aspects included in the analysis:

Direct environmental aspects	Indirect environmental aspects				
Energy consumption, electricity	Product development, material selection				
Energy consumption, heat	Product development, modular design				
Energy consumption, fuel	Purchasing, supplier selection				
Emissions from energy consumption	Shipping, packaging				
Soil sealing	Shipping, transport optimization				
Drinking water consumption	Final inspection, avoidance of complaints				
Material consumption	Use phase of the products				
Waste, non-recyclable	Recyclability				
Waste, recyclable					
Emissions, noise					
Emissions, dust					
Storage of hazardous materials					



Certified and secured

We ensure that all laws and regulations are complied with and incorporated into our management system. The Environmental Management Officer regularly checks that our legal register is up to date and passes on any changes to the project managers and employees.

The design of an office workplace is subject to a wide range of legal and normative obligations due to occupational health and safety. We implement these requirements in our product systems and have this confirmed by independent GS tests (tested safety). In addition, we inform our specialized trade partners about upcoming changes in standards and provide advice.



Materials Compendium

Components	Materials	Raw materials used, recycled content	Production process waste products, emissions	Environmental relevance during the use phase	Disposal after the use phase
Board material for table tops and furniture components	Wood material Chipboard	84-86 % coniferous wood from thinning operations, sawmill residues and recycled wood 8-10 % urea resin 4-7 % water < 1 % kerosene wax emulsion	Production takes place under pressure and heat and is harmless to health. The environmental pollution (air, water, soil, sound) is well below the limit values.	Relevant limit values are clearly undercut. E.g. formaldehyde: 0.1 mg/m ² h (the limit value E1 according to EN 717-2 is 3.5 mg/m ² h)	1. Material recovery 2. Thermal recovery
	Wood-based material Medium-density fiberboard (MDF)	approx. 82 % coniferous wood from thinning operations, sawmill residues approx. 11 % urea resin 5-7 % water < 1 % kerosene wax emulsion	Production takes place under pressure and heat and is harmless to health. The environmental pollution (air, water, soil, sound) is well below the limit values.	Relevant limit values are clearly undercut. Ex. formaldehyde: < 0.1 mg/m ² h (the limit value E1 according to EN 717-2 is 3.5 mg/m ² h)	1. Material recovery 2. Thermal recovery
	Compact board (HPL solid core)	approx. 60 % paper approx. 40 % resin (melamine and especially phenol formaldehyde resins)	Production by pressing imp- regnated papers under heat. Harmless to health. The environmental pollution (air, water, soil, sound) is well below the limit values.	Relevant limit values are undercut.	1. Material recovery 2. Thermal recovery
Coating of wood materials	Decor paper (coating takes place at the board manufacturer)	approx. 60 % decor paper approx. 40 % melamine formaldehyde resin	Production of coating by pressing impregnated papers under heat. Harmless to health.	The relevant limit values are undercut. The coating of the wood- based materials reduces their omission output	As coated wood materials: 1. Material recovery 2. Thermal recovery
	CPL (coating takes place at the factory)	57 % Paper 42 % Resin (melamine and phenol-formaldehyde resins) 1 % additives PVAC white glue	The environmental pollution (air, water, soil, sound) is well below the limit values.		
	Wood veneer (coating takes place at supplier)	Medium-hard to hard noble wood logs from Europe and North America. Condensation adhesive (aqueous solution) with < 2 % urea formaldehyde	Production of veneers with the use of heat. Coating takes place under pressure and heat. The production process is safe for health.	The relevant limit values are clearly undercut. Formaldehyde: max. 8 / mg 100 g Corresponds to emission class E1. The guideline value for interiors of 1 ug/m ³ is complied with in all cases.	As coated wood materials: 1. Material recovery 2. Thermal recovery
Narrow surface coating of board materials	PP edge banding	Polypropylene is produced entirely from petroleum. Color pigments: organic and inorganic color systems. EVA hot-melt adhesive (ethylene vinyl acetate) for applying the edge bands.	Production of tapes by extrusion. Coating takes place under pressure and heat. The production process is safe for health.	The coating of the wood-based materials reduces their emission output. No plasticizers are used in the PP edgebands.	As coated wood materials: 1. Material recovery 2. Thermal recovery
	ABS edge band	Acrylonitrile Butadiene Styrene from up to 100% production waste. Color pigments: organic and inorganic color systems. EVA hot-melt adhesive (ethylene vinyl acetate) for applying the edgebands.	Production of the tapes by extrusion at approx. 200° C, odor-forming styrene is released. Coating takes place under pressure and heat. The production process is safe for health.	The coating of the wood- based materials reduces their emission. No plasticizers are used in the ABS edges.	As coated wood materials: 1. Material recovery 2. Thermal recovery
	Wood veneer	Medium to hard noble wood logs from Europe and North America. EVA hot melt adhesive.	Production of veneers with the use of heat. Coating takes place under pressure and heat. The production process is safe for health.	The coating of the wood-based materials reduces their emission.	As coated wood materials: 1. Material recovery 2. Thermal recovery

Components	Materials	Raw materials used, recycled content	Production process waste products, emissions	Environmental relevance during the use phase	Disposal after the use phase
Table frames	Aluminum	approx. 10 % primary	Extrusion at approx. 500° C	Harmless	Material recovery
Fittings	(metallic)	aluminum approx. 90 % secondary aluminum	for 1 kg of primary aluminum, approx. 13-15 kWh of energy is consumed.		
			Production is harmless to health.		
	Steel (metallic)	Steel approx. 45 % recycled content	Casting temperature at approx. 1600° C	Harmless (if no rust inhibitors are used)	Material recovery
			Further processing by rolling, drawing, forging, etc.		
Furniture trim Handles	ABS / Polystyrene (thermoplastic, organic)	Acrylonitrile Butadiene Styrofrom	Injection molding at approx. 200-250° C	Harmless (if heavy metal free pigments	1. Material recovery 2. Thermal recovery
End caps Floor glides Handles		up to 100 % production waste	Odor-forming styrene is released.	are used)	
Profiles Cable ducts		Color pigments: organic and inorganic color systems.	The production process is harmless to health.		
	Polyamide (PA) (thermoplastic, organic)	Diamine, dicarboxylic acid	Injection molding at approx. 220° C The production process is harmony to boolth	Harmless (if heavy metal free pigments are used)	1. Material recovery
		from up to 100 % production waste			2. mermanecovery
		Color pigments: organic and inorganic color systems.	harmless to health.		
	Polypropylene (PP)	Propene	Extrusion or injection	Harmless (if heavy metal free pigments are used)	1. Material recovery 2. Thermal recovery
	(thermoplastic, organic)	completely produced from crude oil, very high recycling content	molding at approx. 300° C The production process is harmless to health.		
		Color pigments: organic and inorganic color systems.			
Surface color coatings	PUR lacquers	Poly-isocyanates, acrylates, polyesters approx 10 % bardener	Spraying process	Initial TVOC concentration	Thermal recovery
(all urying)	Low abrasion values		Body and eye protection is required during processing.	The values decrease during	
		25-40 % solvent content	Respiratory protection is	the use phase, especially in the first 24 hours	
			required if the GefStoffV limits are exceeded.	Harmful for allergy sufferers.	
Color coatings of	Powder coatings	Epoxy-polyester	Powdering process	Harmless	Thermal recovery
(stove enamelling)	Medium abrasion values	about 10 % recycling content	Powder is baked at approx. 200° C.	No solvents are used.	
			Production waste is processed for reuse.		

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