

# Sustainability

OUR MOTIVATION. OUR CONTRIBUTION.

+ Automation

+ Working environment

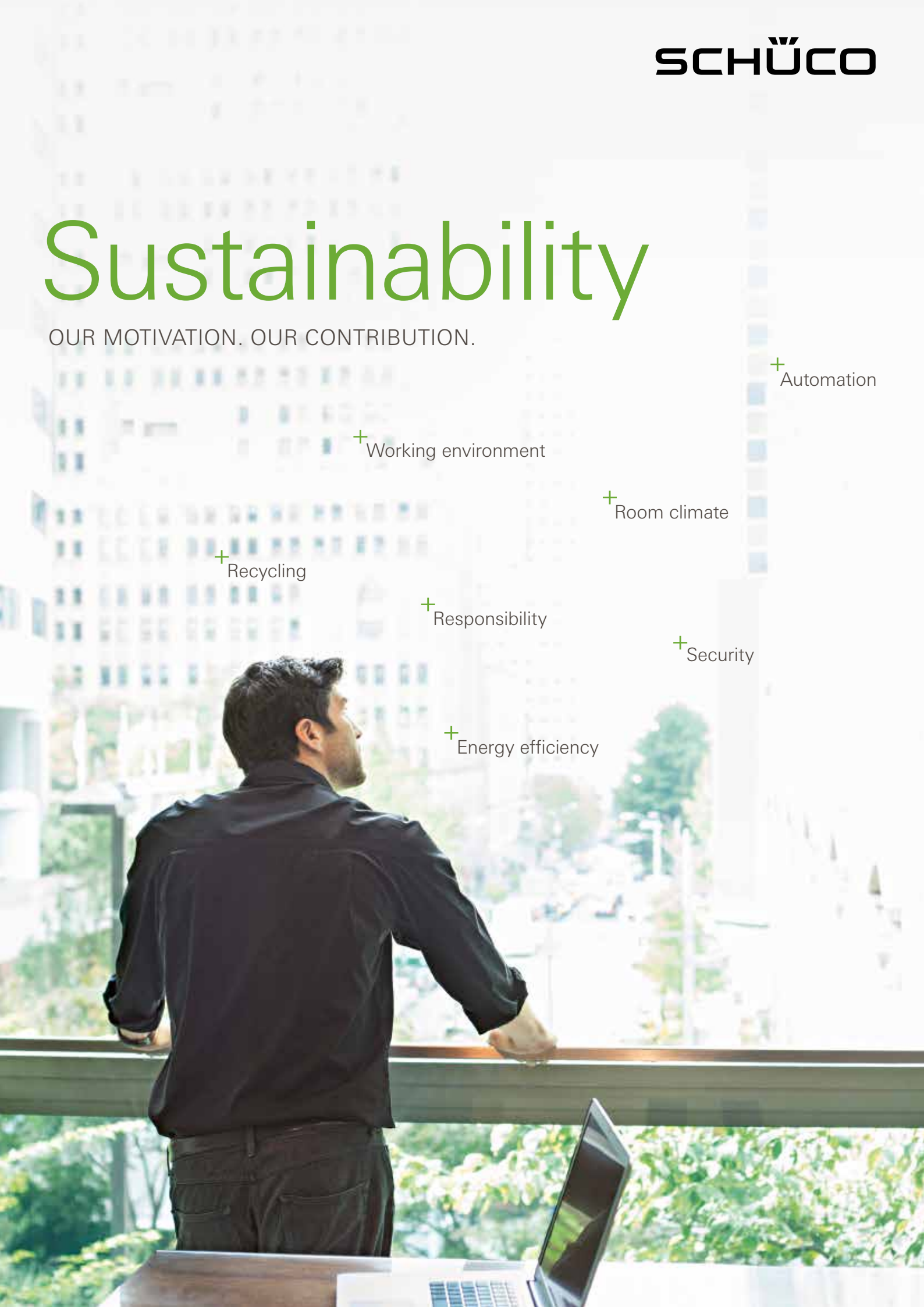
+ Room climate

+ Recycling

+ Responsibility

+ Security

+ Energy efficiency



# About Schüco

The name Schüco stands for innovative window, door and façade systems that meet the highest requirements in terms of design, comfort and security. Together with metal and PVC-U fabricators as well as electrical partners, architects, developers and investors, we create building envelopes that focus on people and their needs in harmony with nature and technology. We offer pioneering products and solutions for newbuilds and renovations designed to meet specific user needs in all climate zones. We support everyone involved with a comprehensive range of services throughout the construction process. All over the world. And always with the aspiration of developing the very best sustainable products and solutions.

## International profile

80 countries

In more than 80 countries around the world, Schüco sets standards with pioneering products and outstanding service.

## Our partners

12,000

architects, developers, installers and investors all over the world work together with Schüco and use our products.

## Annual turnover

€1.430 billion

The turnover achieved by Schüco worldwide in 2015.

## Emissions at Schüco

-60%

Altogether, the emissions at all German locations have been reduced from 74,292 tonnes of CO<sub>2</sub> to 29,717 tonnes within three years.

## Paper consumption at Schüco

2.3 million

sheets of paper for copying and printing were saved at Schüco Germany in 2014.

## Fuel consumption

6.4%

The reduction in the specific fuel consumption of the Schüco lorry fleet in 2015 compared to 2013.

## Waste management at Schüco

86%

of the waste from the Bielefeld location is recycled.

## Schüco Technology Center

7800 m<sup>2</sup>

The usable area of the Technology Center, which is accredited as an independent manufacturing laboratory in nine areas.

## Training

61

The number of different specialist seminars and training courses offered by Schüco for customers and partners.

# Contents

## Impressum

### Publisher

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www.a-lab.no

Page 17:

TRILUX GmbH & Co

Page 20:

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### Print

Kunst- und Werbedruck  
Bad Oeynhausen

### Paper

This magazine has been  
printed on 100% recycled  
paper (Circle Offset Premium  
White) which is certified  
with the "Blue Angel" and  
the EU-Ecolabel.

Cover: 300 g/m<sup>2</sup>

Inside: 150g/m<sup>2</sup>



## Megatrends

Global developments which  
determine how we live, think  
and act for the long term.

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# Cities are the future

Megatrends are global developments which have a long-term impact on our lives. They are catalysts for social, political and technological change and alter the way entire generations think as well as their requirements for the world which surrounds them – particularly against the background of unabated global urbanisation and developments within the context of Neo-Ecology and New Work. This is especially the case for a company such as Schüco too, which conducts business in the construction industry and which can use its products to co-determine how sustainable solutions for the future might look.



MEGATREND  
Silver Society

MEGATREND  
Urbanisation

MEGATREND  
Health

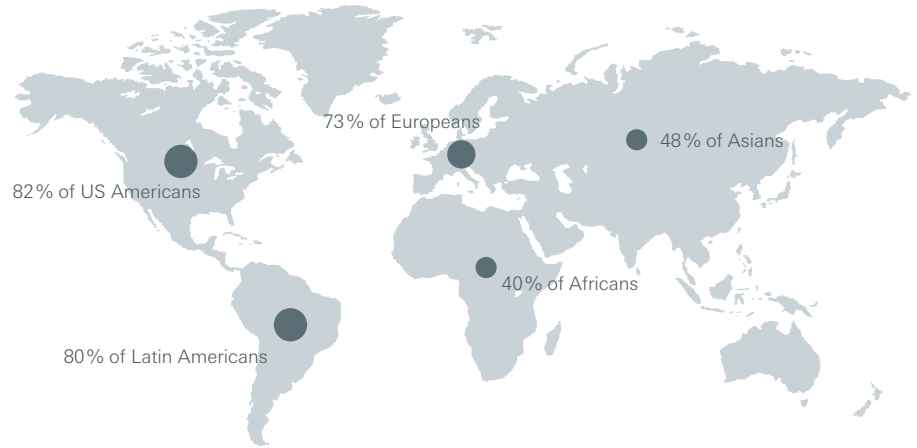
MEGATREND  
Neo-Ecology

MEGATREND  
New Work

MEGATREND  
Security



TaunusTurm construction site, Frankfurt am Main, Germany



Living in cities: Percentage of city dwellers on each continent.<sup>1</sup>

## Urbanisation

### The dynamic of cities

As a style of living and cultural form, cities are on the up. For the first time, over half of the world's population today lives in cities – and the trend of urbanisation continues, particularly in emerging and developing countries, but also in highly-developed industrial nations. This means that the city as a living space must become more diverse, more interconnected, more ecological, more liveable and in every respect more sustainable. So too must its buildings.

## Neo-Ecology

### The redefinition of growth

Globalisation, climate change, a scarcity of raw materials and consumers' ever increasing environmental awareness and sense of responsibility are ensuring that future company growth can only be generated through a balance between economy, ecology and social responsibility. The typically "green" issues will therefore become the new economic issues. This will also be the case for the construction industry, which must provide solutions for sustainable buildings.

## Health

### The awareness of a life in balance

The health megatrend has long since penetrated all areas of life and consumption, as well as the

world of work under the name "corporate health". Society has developed a new understanding of health: it is no longer just the opposite of illness, but represents a life in balance. This aspect is also playing an ever greater and increasingly important role in the construction industry and poses new challenges for architects, developers and manufacturers in particular in addition to investors. Today, all buildings in which people work or live are supposed to offer visual, thermal, hygienic and acoustic comfort in equal measure. This relates to traditional healthcare facilities, office and educational complexes right through to production plants.

## New Work

### The merging of work and private life

Our society is going through a period of change from an industrial society to an information-based society. New company structures and workspaces are emerging – the home is no longer just the home, but increasingly the workplace too. In the same way, traditional models for work/life balance are a thing of the past. The boundaries between work and private life are becoming more and more blurred. This means that the structural requirements for office buildings have to correspond more and more to those of the private sphere with its provision for comfort. Conversely, private buildings also require the interconnectivity and infrastructure of an office building.

# 76%

## OF CHIEF EXECUTIVES

around the world are in agreement: success in future must not only be measured according to profit figures, the aim must be to create social values.<sup>2</sup>

Source: See <https://www.zukunftsinstitut.de/dossier/megatrends> (accessed 19 May 2016).

<sup>1</sup> UN study on population development (2014).

<sup>2</sup> <http://www.pwc.de/de/pressemitteilungen/2016/schaffung-gesellschaftlicher-werte-wird-teil-des-unternehmererfolges.html> (accessed 19 May 2016)

<sup>3</sup> <https://www.zukunftsinstitut.de/artikel/immobilien-2040-studie-die-stadtwirtschaft-von-morgen/> (accessed 19 May 2016)

<sup>4</sup> <https://www.zukunftsinstitut.de/dossier/megatrends> (accessed 19 May 2016)

<sup>5</sup> [http://www.ibp.fraunhofer.de/de/Presse\\_und\\_Medien/Presseinformationen/pm\\_10-03-2015-literaturstudie-europaeisches-raumklima.html](http://www.ibp.fraunhofer.de/de/Presse_und_Medien/Presseinformationen/pm_10-03-2015-literaturstudie-europaeisches-raumklima.html) (accessed 19 May 2016)



# 75%

of the energy required worldwide is used by cities, which in turn produce 80% of greenhouse gases. However, in terms of area, they only cover 2% of the earth's surface.<sup>3</sup>

## Security

### The emergence of a new culture of security

In future, the world in which we live will be characterised more than ever by two factors: the extensive networking of the world and the shift of responsibility away from the state towards companies and individuals. In addition, acts of terrorism and political crises are causing profound uncertainty within society. Innovative security concepts are sought-after in private and public life. For the construction industry, building certifications and sustainable security systems are the key issues which on the one hand will enable a reliance on mandatory standards, and on the other will ensure the best protection possible against unauthorised access, fire, environmental catastrophes or even assassination attempts.

## Silver Society

### Shaping a new quality of life

Demographic change is a global challenge. Furthermore, we are ageing differently and are considered old later. With regard to planning and urban development policies, it is necessary

to promote and safeguard people's health and wellbeing. This can be achieved, for example, with buildings that have a positive influence on the users through their visual, thermal, acoustic, ergonomic and hygienic qualities, and are durable and profitable at the same time.

## Schüco and megatrends

### The solutions for today and tomorrow

The debate on megatrends is not just an incredibly fascinating issue, it is in fact a fundamental aspect of sustainability-oriented company strategies which are specific to the construction industry. After all, how can we know which products will be relevant tomorrow, without knowing what life will look like tomorrow?

Working with megatrends is hence one of the key issues for Schüco in its corporate strategy and product development. We want to provide solutions that are one step ahead not only today, but also tomorrow and the day after. Ever better, ever more sustainable, ever further.

# 25%

## DEMOGRAPHIC DEVELOPMENT

1 in 4 people in Germany today is already over 60 years old.<sup>4</sup>

# 90%

People from industrialised societies spend 90% of their lifetime in closed buildings.<sup>5</sup>

# Sustainability is not a trend – it's an approach

Interview with Andreas Engelhardt,  
CEO and Managing Partner

“Sustainability in the construction sector means designing, constructing and operating a property in such a way that it is ecologically, economically and socially future-proof.”

Megatrends are changing the world – slowly, but fundamentally and for the long term. What does that mean for architecture and urban planning and therefore for Schüco? How do megatrends such as Urbanisation, Neo-Ecology or New Work influence building for the future? Which parameters will play a role?

#### What do the megatrends mean for a company like Schüco, whose products are used all over the world?

First and foremost that, now more than ever, buildings – and therefore our solutions – must not only fulfil the most stringent requirements in terms of design, comfort and security, but also in terms of sustainability. Today, buildings cause a staggering 40% of the CO<sub>2</sub> emissions in Europe. This means that the energy efficiency of buildings must be massively improved. Schüco has already been highly committed to this for many years. Saving energy, reducing CO<sub>2</sub> emissions and using material resources carefully are both essential and self-evident aspects of our work. The use of highly recyclable raw materials, which contribute to conserving natural resources through reutilisation, plays an important role in this area. For example, our aluminium systems are almost 100% recyclable.

#### Schüco calls this approach “360° sustainability”. What is behind it?

With our “360° sustainability” approach, we are rising to the challenge of offering systems for economical and future-proof buildings that conserve resources – from planning to implementation and right through to dismantling. Our partners should know that they are also working together with the industry’s trailblazer in terms of sustainability, which provides outstanding products and solutions for sustainable buildings and takes on social responsibility.

In our Principles, we define our aspiration to be the best by far. For us, that applies to every area. Of course, this aspiration must also be reflected in our attitude towards the topic of sustainability. In this way, we set a clear objective and provide guidance both internally and externally. Reference is also made to certifications, which buildings can receive by using Schüco products, and our products, which help to achieve the 2° goal of the United Nations. They provide architects, developers and other partners with arguments for their future-oriented solutions whilst highlighting our market-leading role.

## 40%

OF CO<sub>2</sub> EMISSIONS

in Europe are caused by buildings.





In conversation with Andreas Engelhardt

Schüco is a member of the recycling organisations A/U/F (Aluminium and the Environment in Window and Façade Construction) and Rewindo, an association of the leading German manufacturers of PVC-U profiles. As a founding member of the international Aluminium Stewardship Initiative, ASI, which advocates the promotion of sustainability in the value added chain for aluminium, Schüco is the only company in the construction industry to support this goal to date. Schüco is also a member of the 2° Foundation, along with our parent company Otto Fuchs KG, in order to limit climate change together with other companies.

To put it simply, sustainable action is an important part of our corporate policy and an element of the strategic focus of Schüco. And that is not a new development; it has been the case for many years. Not only in relation to our products and the careful use of energy and other resources, but also outside of our company.

**So Schüco also fulfills its corporate responsibility outside the company. What is behind this commitment and what specific projects are there currently?**

The reason for this commitment can be summed up very quickly: environmental protection and security, economic success and social responsibility

are of equal importance for Schüco. We want to send out signals to society and serve as a role model here by assuming responsibility as a company – as with the current effort to support the people fleeing war, starvation and poverty. It is the social obligation of each and every one of us to help these people and to welcome them to our country. And it is even more of an obligation for an international company such as Schüco to position itself in this matter and provide assistance, whereby integration should surely be the top priority.

**How will things develop from here in the construction industry?**

Buildings do not just have an impact on our lives for a short period. Rather, buildings that are constructed today accompany us and our children for decades. This is why sustainability and energy efficiency will play a dominant role across the globe. Only those with the right answers now and in the future will continue to be successful. And we want to be right there at the forefront – not just as we are today with the outstanding energy values of our windows and façades and with our Cradle-certified recyclable products, but also with future solutions which are yet to be discovered. For an approach that Schüco lives and for a sustainable tomorrow.

# 360°

**THE 360° SUSTAINABILITY APPROACH OF SCHÜCO**

encompasses the whole lifecycle of a product from the initial decision through to design, manufacture, installation and use, and on to the possibility of dismantling the products and feeding them back into the closed recycling process.

Our employees worldwide

# 4,630

Our employees strive every day to further develop the outstanding reputation that Schüco has built up over the 60 years since the company was founded, and live according to our approach. Our approach is characterised by the pursuit of top performance, a sense of responsibility and ethical principles.



# For built-in environmental awareness:

## Energy efficiency



SCHÜCO REFERENCE PROJECT  
STATOIL HEADQUARTERS,  
OSLO, NORWAY

0.18 W/m<sup>2</sup>K

U-VALUE OF FAÇADE SURFACES

Facts about the building:

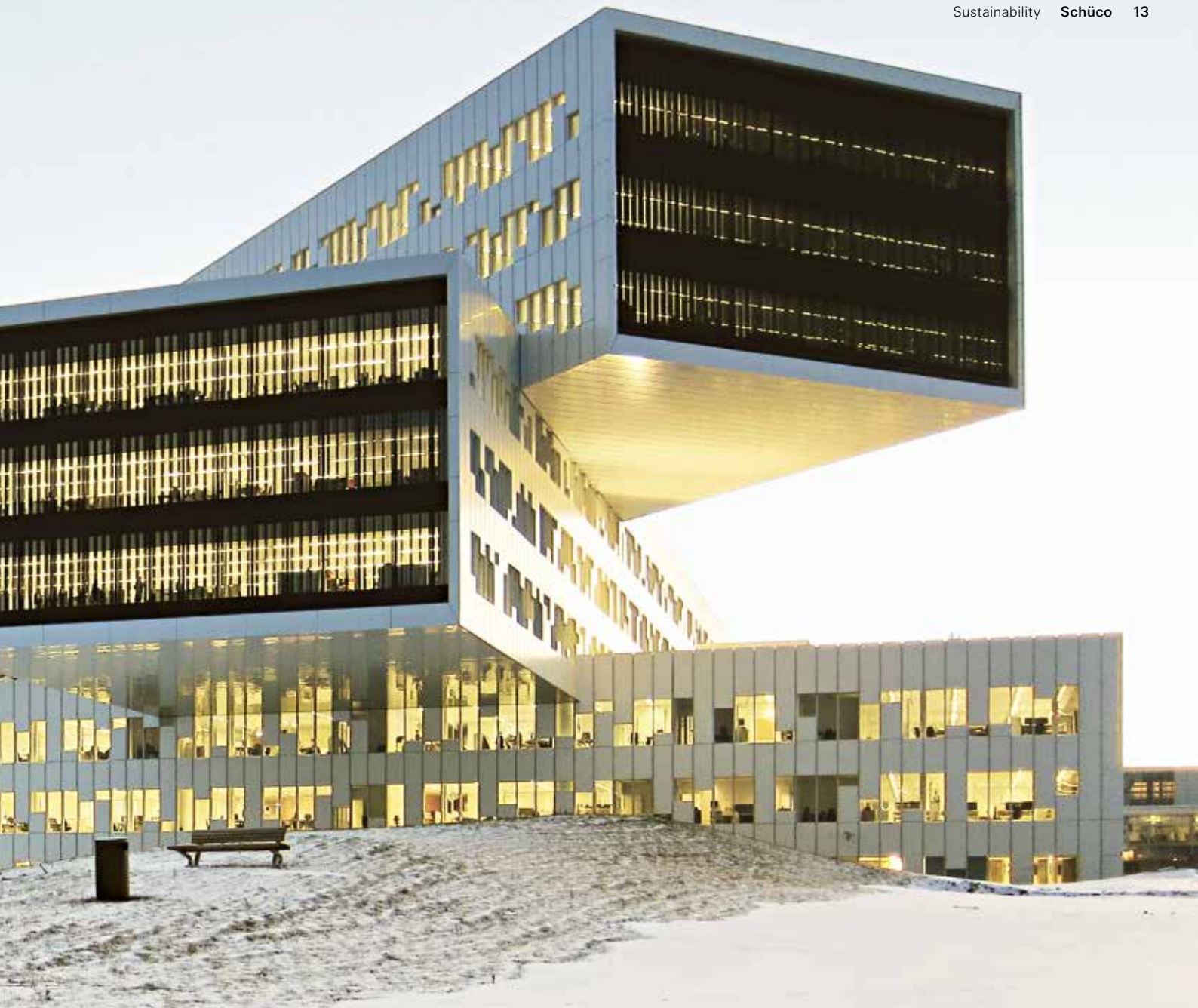
- Prefabricated façades and customised standard parts from Schüco
- U-value of glazed areas: 0.6 W/m<sup>2</sup>K
- With 65% glass areas and 35% closed panels, an optimum balance between daylight and heating through solar radiation is achieved



### Façades with an excellent energy balance

In Europe, buildings consume around 40% of the energy generated. The construction and utilisation of buildings are also the main causes of greenhouse gas emissions. Legislators are responding with stricter regulations, while clients and architects are rightly demanding new, ecologically sound products. In Europe, for instance, from 2021 all new buildings must be nearly zero-energy buildings. This means that buildings must have a very low energy balance. Maximum energy efficiency is required for the façade, so that the permissible, low energy requirements can be largely covered by renewable sources. For decades, Schüco has been developing products and systems for the building envelope which contribute towards conserving the environment and climate and which meet future, stricter guidelines today. Architects, developers, installers and clients are supported by Schüco in setting new standards in terms of ecology as well as design.

In order to achieve the high standards for nearly-zero energy, buildings must first and foremost be well insulated. Our window systems fulfil these strict certification criteria and have excellent thermal insulation. However, Schüco has also designed intelligent, harmonised solutions in the area of automation and ventilation, such as controlled ventilation, flexible solar shading and economical external LED lighting. They optimise the energy balance of buildings so effectively that they are sustainable. Particularly when they are networked.



**Statoil headquarters, Oslo, Norway**  
BREEAM-certified as Very Good  
Schüco systems: unitised façades

### Energy-efficient thermal insulation and ventilation

Schüco windows enable a significant part of the energy costs to be saved through efficient insulation. Thanks to state-of-the-art technology, this can be up to 80% in renovations, for example. Fully mechatronic window fittings facilitate energy-efficient, time or sensor-controlled ventilation. Decentralised ventilation systems also minimise ventilation heat loss through heat recovery tailored to suit requirements. If these systems are integrated into the building management system, the potential for saving energy can be further optimised, for example, by means of centrally-controlled “natural” night-time cooling.

# –80%

Schüco windows allow savings of up to 80% of energy costs due to efficient insulation.

# From old to new – again and again and again: Recycling



## Sustainable materials management

50%

of the global consumption of raw materials can be attributed to the construction industry.<sup>1</sup>

60%

of waste generated in Germany can be attributed to the construction industry.<sup>2</sup>

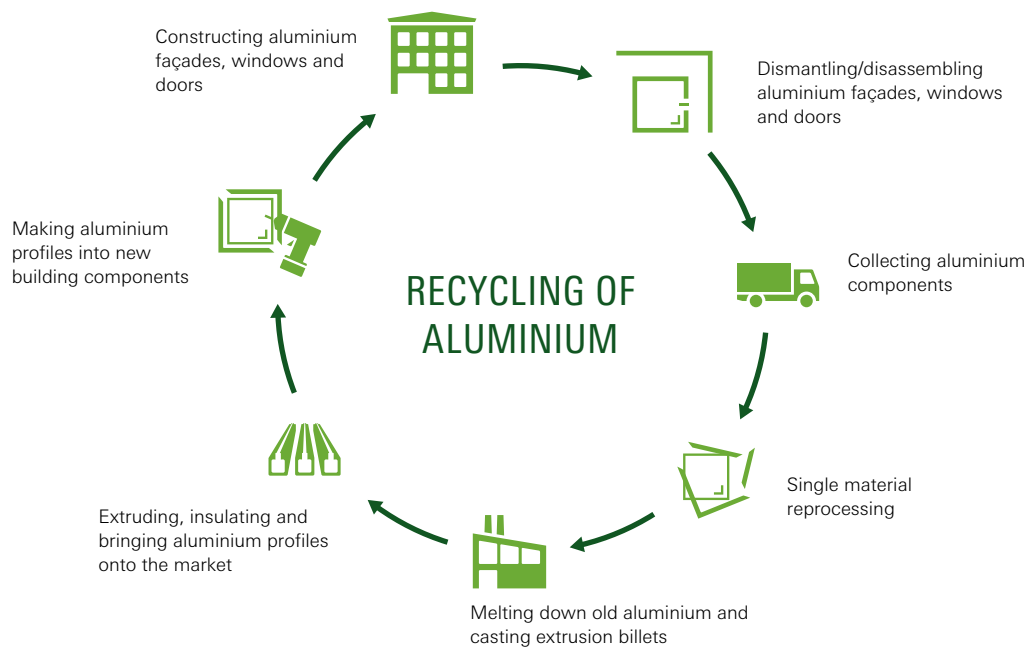
98%

of old aluminium windows are fed back into the recycling process.<sup>3</sup>

<sup>1</sup> <http://www.unep.org/sbcil/>

<sup>2</sup> German Federal Office of Statistics, waste balance, Wiesbaden, various years.

<sup>3</sup> A|U|F 2/2016, [http://www.a-u-f.com/fileadmin/redaktion\\_auf/content/PDFs/2016-02\\_AUF\\_Praesentation.pdf](http://www.a-u-f.com/fileadmin/redaktion_auf/content/PDFs/2016-02_AUF_Praesentation.pdf) (accessed 19 May 2016)



The A|U|F e.V. promotes the sustainable disposal and recycling of dismantled building components and profiles from windows, doors and façades made of aluminium, so that the material can be reused.



Rewindo is the association of leading German manufacturers of PVC-U profiles with the aim of increasing the recycling of dismantled windows, roller shutters and doors made from PVC-U, and fostering economies which use resources efficiently.

Further information:  
[schueco.de/materialstudie](http://schueco.de/materialstudie)

The challenges of the future lie in our ability to employ resources and materials in a reliable yet ecologically and economically sensible way. In the construction industry as well, high quality recycling and recirculation into a closed recycling process are becoming more and more important. It is already evident today that the global rise in demand for construction materials will become ever more difficult to meet. At the same time, huge quantities of building-related waste are still having to go to landfill. And the disposal of non-recyclable materials is becoming more and more expensive and difficult. Today's landfill is tomorrow's special waste (and rightly so).

When it comes to recycling, Schüco is a pioneer within the industry. And not just as a member of A|U|F and Rewindo – far beyond that, too. Take the sustainability assessment for window and façade units, for example. The aim of this market study was to answer the following question: in terms of sustainability, does it make a difference if frames are made out of aluminium, PVC-U or timber? The result:

#### Aluminium and PVC-U are on a par with timber

As materials for window and façade units, PVC-U and aluminium should not shy away from comparisons with timber, which is widely regarded as “environmentally friendly”. On the contrary. When considered across their entire service life – from manufacture and use right through to recycling – the assessment shows that in accordance with the recognised sustainability criteria of the German Sustainable Building Council (DGNB), the materials are virtually equal.

Aluminium has an extremely high recycling potential. It has long-term durability and does not corrode.

In the construction industry, over 98% of old aluminium windows and façades are fed back into the recycling process and re-processed. Through members like Schüco, the A|U|F initiative ensures suitable, product-specific return and recycling processes. A|U|F collection partners are therefore represented all over Germany. There are similar return structures for PVC-U windows. Rewindo has already been working for over ten years on recycling dismantled PVC-U windows. For this, recycled PVC is used at the core of the new extrusion profiles.

#### Planning ahead for sustainability

Responsible architecture takes sustainability into account as early as the design and planning stages, and thus also considers the subsequent opportunities for recycling. As far as possible, the aim is to completely re-process windows and façades and feed them back into the recycling process.

# Working better and healthier: The working environment

## Building envelopes influence the working environment



Surface/inside temperature



Solar shading and anti-glare protection



Exposure to natural light



Intelligent automation



Air quality



Noise and acoustics



Security and functionality



Anti-bacterial surfaces



Tested for harmful substances (TÜV/SHI)





Optimum working conditions ensure the best possible results. This sounds so obvious, but is far from a matter of course. As early as the 1960s, American researchers at the Buffalo Organization for Social and Technological Innovation (BOSTI) found that, with the ideal working environment in terms of temperature, air quality and lighting, people's productivity and job satisfaction can be increased by 15%. There is also a clear link between room climate and health. Central factors here are the regular supply of fresh air by means of optimum ventilation, and effective solar shading in conjunction with transparency and the greatest possible degree of natural light penetration. This increases people's well-being and improves concentration and performance levels.

#### **Future Office**

Schüco is working on concepts for the Future Office. This includes specific ideas and approaches for relevant topics such as the provision of natural light, solar shading, air quality, anti-bacterial surfaces, sound insulation, temperature and automation. In addition to these factors, security and optimum functionality at the workplace of the future are also in the plans for the Future Office.

#### **Intelligent automation, optimised climate control**

Today, the networking of building functions is one of the key factors for efficient and sustainable building management. The main aim of building automation with Schüco systems is to make a tangible and sustainable improvement to the quality of our living and working environments. The range includes keyless entry systems, window and sliding systems which can be operated without any effort, and user-specific control and regulation of the solar shading, which contributes to the optimum use of natural light whilst minimising requirements for air conditioning.

#### **Audibly quiet, healthy air supply**

Sound reduction windows keep disruptive traffic noise outside and make a major contribution towards limiting the noise emitted from buildings. The decentralised Schüco ventilation systems with heat recovery which are integrated into the windows are another option for improving the room climate. They prevent draughts and keep insects at bay, whilst also guaranteeing a clean, healthy air supply free from particulates, pollen and other allergens thanks to integrated filters.

The Center for Virtual Engineering (ZVE) of the Fraunhofer Institute in Stuttgart is a positive example of a working environment which provides a good supply of natural light and optimum anti-glare protection through the façade and window units installed.

# +15%

With optimum temperature, air quality and lighting, productivity and job satisfaction can be increased by 15%.

# Our effective model: 360° sustainability



**Schüco**  
**BIM** compatible

Building Information Modelling (BIM) is the digital tool for the planning and realisation of construction projects as well as the operation of buildings.

The 360° sustainability approach of Schüco comprises the whole lifecycle of a product from the design and manufacture, installation and use, through to the possibility of dismantling the products and feeding them back into the closed recycling process. Digital models enable information to be exchanged and shared between all the partners involved in the construction process, allowing implementation of the project to move forwards seamlessly.

#### **Digital sustainability with BIM**

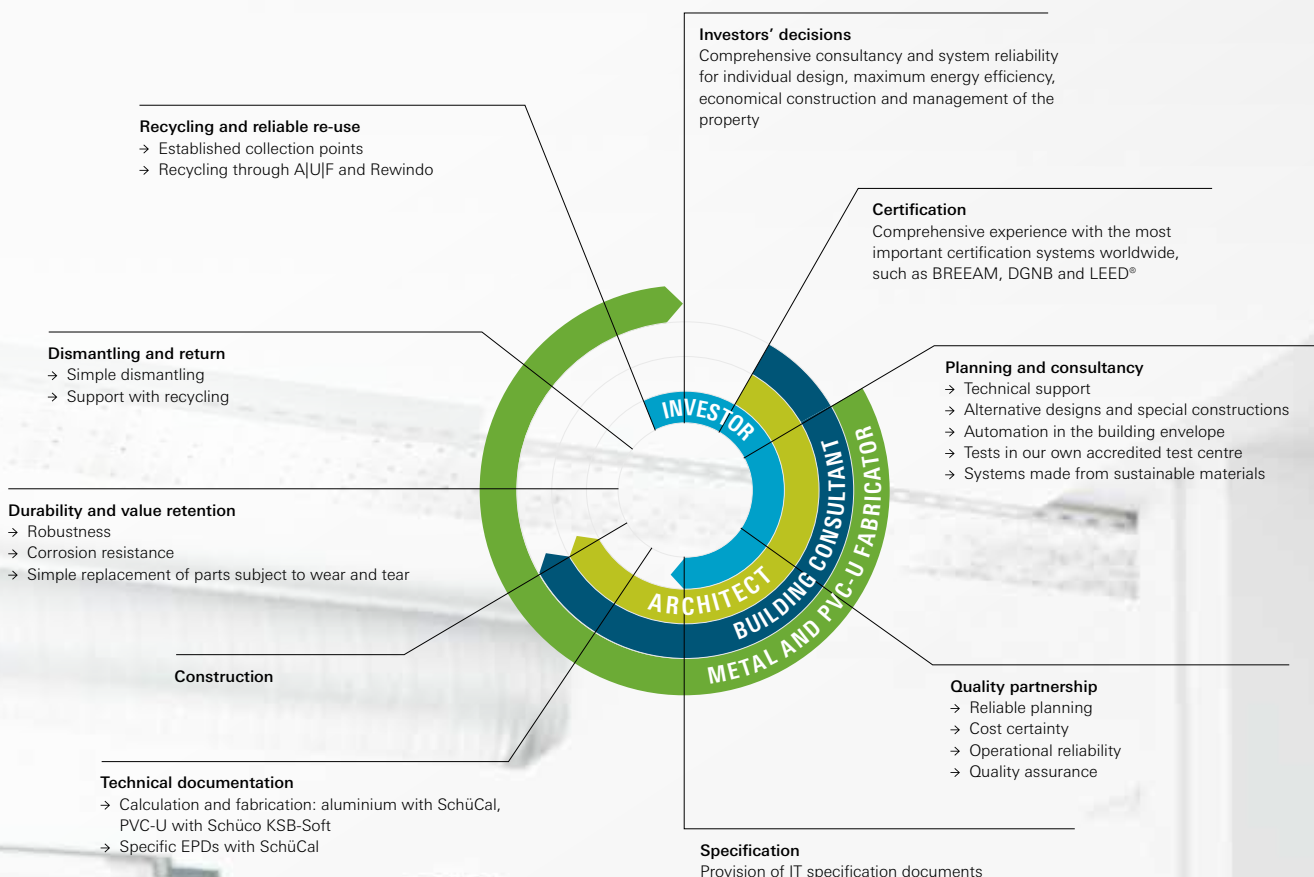
One of the services Schüco offers its partners, architects and developers is the Building Information Modelling (BIM) tool for planning and implementing building projects. It supports its users with intelligent interfaces and design objects which can be individually combined.

BIM is the best method for allowing the potential of a building to be viewed holistically. With this, questions pertaining to sustainability (such as the energy performance of the planned building) can be explored, multiple model versions can be created and calculations (using sunlight and shade analyses) relating to energy consumption and CO<sub>2</sub> emissions as well as initial cost estimates can be verified and compared much earlier than with traditional planning methods. BIM therefore helps to save costs whilst also increasing the level of quality and sustainability.

#### **Thinking about the future sooner**

The use of computer-aided methods provides many possibilities for strategically linking together individual processes, taking advantage of synergies as well as detecting problems early and developing strategies for solving them.

## 360° cycle of sustainability for Schüco and its partners



# Awarding systems: Building certifications



Alliander headquarters, Duiven, Netherlands:  
BREEAM Outstanding certification  
Schüco systems: FW60+ façade



Building certifications from the market leaders BREEAM, LEED® and DGNB are being demanded more and more frequently by investors and building consultants – especially for commercial buildings. An important basis for this are suitable product systems with the requisite documentation and proof of the holistic design and evaluation of the buildings.

From 2021,

all new buildings must be nearly zero-energy buildings in accordance with an EU directive on the overall energy performance of buildings (EPBD).



**Siemens City, Vienna, Austria:** LEED Platinum® certified.  
Schüco systems: windows, doors, façades, security



## OVERVIEW OF THE MOST IMPORTANT CERTIFICATIONS

### BREEAM® BREEAM

Building Research Establishment Environmental Assessment Method. The British sustainability certificate was developed in 1990. Certifications: Outstanding, Excellent, Very Good, Good, Unclassified  
[www.breeam.org](http://www.breeam.org)



### LEED®

LEED® – Leadership in Energy and Environmental Design is the ratings system of the U.S. Green Building Council (USGBC). LEED® is a globally uniform, regionally relevant and locally applicable green building programme which has been placing demands on the planning, building, operation and maintenance of sustainable buildings since 1998.

[www.usgbc.org](http://www.usgbc.org)



### DGNB

German Sustainable Building Council, on the market since 2008. The DGNB certificate is awarded to newbuilds in platinum, gold and silver. Existing buildings can also be certified in bronze.

[www.dgnb.de](http://www.dgnb.de)

Verified Schüco systems are ideal for the best possible ratings in building certification. Resistant materials, low maintenance and a small number of replaceable wear parts ensure the durability of the Schüco systems and therefore lay the economic groundwork for sustainable buildings.

In terms of ecology, Schüco systems score points for their energy efficiency, outstanding recycling properties and user friendliness. When fitted with photovoltaic units, they can even generate energy. Schüco also offers systems that optimise exposure to daylight, ventilation and shading, thus taking into account the human-related aspects of building certification and increasing comfort for the users.

Furthermore, Schüco supports architects, investors and fabricators with detailed documentation for the design and product selection. As a special service, specially developed software tools are also available to make it easy for the user to create the documentation, which is very complex in part. The SchüCal construction software generates environmental product declarations, U value calculations and Declarations of Performance, amongst others, at the touch of a button.



### Centre for Virtual Engineering at the Fraunhofer IAO, Stuttgart, Germany:

DGNB certificate in platinum, Schüco systems: AWS 102.NI, AWS 70.HI, AWS 75.SI, FW 50+. HI, FW 60+.HI, CTB on AWS (windows, façades, solar shading, security), completion 2012

# Continuous added value: Cradle to Cradle

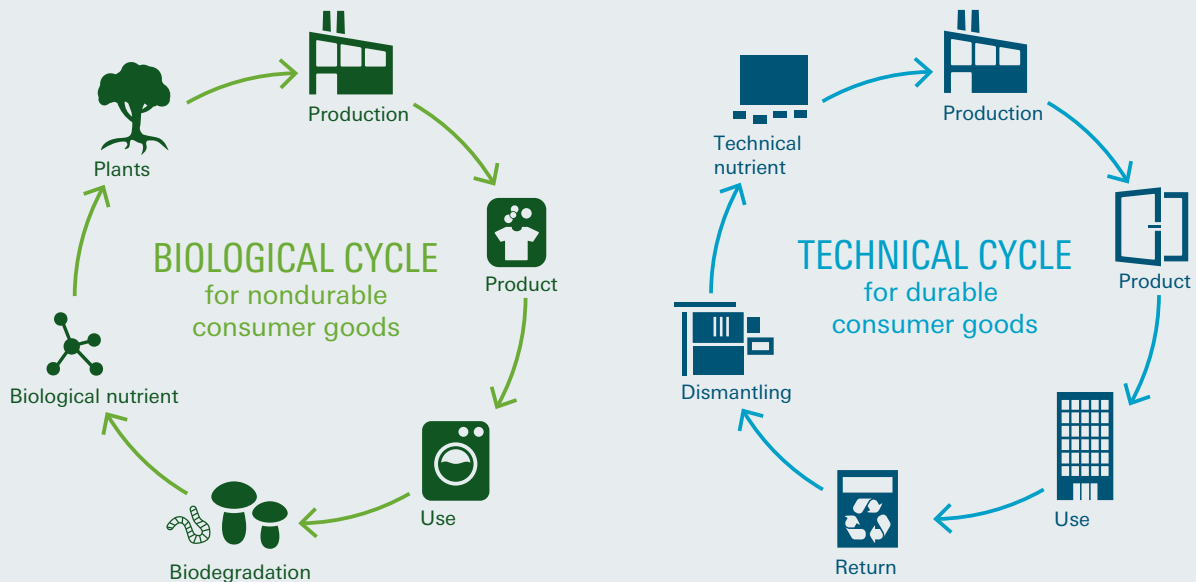
It is already foreseeable today that the rising global demand for construction materials will become ever more difficult to meet. At the same time, increasingly large quantities of building-related waste are having to go to landfill. Developing and implementing alternative solutions for this is a, if not THE, central task of all companies in the construction industry. A promising approach in this context is "Cradle to Cradle".



Cradle to Cradle stands for continuous material cycles and positively-defined materials which are healthy for humans and the environment.

With the Cradle to Cradle design concept, or C2C for short, products and production processes are developed in such a way that no further waste accumulates or requires disposal in future. Technical materials are valuable resources and are fully recycled at a consistently high quality level following the usage phase of the products. Contents are systematically tested for potential harmful substances. The aim is to have consistently useful products for people and nature. C2C thereby paves the way for a new economic system in which innovation, quality and creativity are the focus. Today, several thousand products around the world which have been developed according to this principle are already demonstrating that this can work.

## The Cradle to Cradle principle



Schüco products are durable consumer goods and are therefore part of the technical cycle of C2C.



Schüco FWS 50.SI

**AWARD-WINNING**  
**FAÇADES: FWS 50.SI**  
**WINDOWS: AWS 65NL, AWS 75.SI\***

# 2016

This year, these Schüco products were awarded the Cradle to Cradle Silver certificate.

### Well thought-out from the start

Buildings which follow the C2C design principle are constructed to be flexible and easy to convert, as potential subsequent adjustments are taken into account even in the early planning stages. All installed materials are easy to remove, can be sorted by type and fully recycled by means of appropriate material selection. Together with a consistent, modular design, added value is thus generated which is tangible for the user from day one. Buildings into which C2C products are built fulfil the standards of tomorrow today and function as a valuable raw materials stock. This also means that these properties maintain their value better than conventional buildings and provides a basis for alternative business models.

### Cradle to Cradle at Schüco

For us, Cradle to Cradle is a logical component of sustainable action. To this end, we are also working intensively to develop, test and certify C2C products. After all, a C2C certificate provides developers, architects and clients with independently tested security when selecting materials.

### Potential for recycling with windows and façade units

Aluminium windows are ideal for high-grade recycling and are therefore preferred in C2C buildings. The reason: aluminium has long-term durability, is weather-resistant and is recycled to a high level, as the quality can be retained during processing, and old windows can be simply made into new profiles again in future.

# Beyond products: How we live sustainability



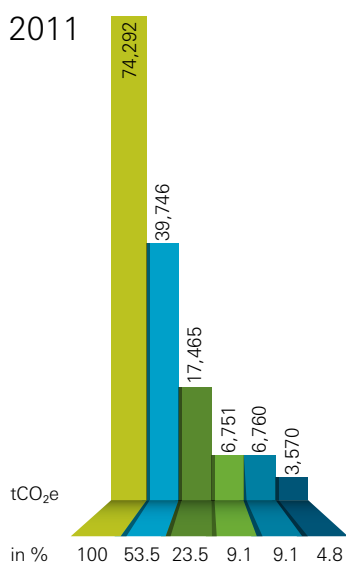
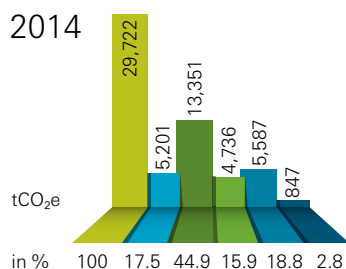


CO<sub>2</sub> REDUCTION AT SCHÜCO  
BETWEEN 2011 AND 2014

–60%

Schüco reduced its CO<sub>2</sub> balance by 60% in three years.

- Total
- Building use
- Transport and logistics
- Business travel
- Journeys to and from work
- Paper consumption and printing



Socially responsible behaviour through future-oriented sustainability – this is an essential part of the company philosophy at Schüco. In terms of climate protection, this means utilising resources efficiently and cleanly and above all completely avoiding climate-damaging pollution. With this creed in mind, Schüco has committed itself to actively reducing the company's CO<sub>2</sub> footprint as well as to specific climate protection projects.

#### Total commitment to reducing CO<sub>2</sub>

A 60% reduction in our CO<sub>2</sub> footprint in three years – that is what we achieved at our German office and production sites between 2011 and 2014. As a result, we have reduced the carbon footprint of our company considerably. With this milestone on the path towards greater sustainability through the prevention of climate-damaging emissions, Schüco is once again highlighting its role as a trailblazer in the industry in matters of climate protection.

For the most part, this active contribution to climate protection owes its success to the use of green electricity and district heating. Alongside these, however, a large number of optimised processes also contributed to the success. These include, for example, a reduction in business travel through the use of video conferencing technology, the acquisition of a completely new fleet of low-consumption lorries and new software in transport logistics in conjunction with driver training as well as improvements to printing processes and paper consumption.

#### From the lorry fleet to the swift recycling of leftover PVC-U

The keys for the new Schüco lorry fleet were officially handed over on 11 June 2014. 58 state-of-the-art Mercedes-Benz lorries for long-distance and short-distance were leased for five years and have been on the road for the three Schüco locations of Bielefeld, Wertingen and Weißenfels ever since. The modern lorries are much less of an environmental burden: more than 60 tonnes of CO<sub>2</sub> are saved in Bielefeld alone every year. In addition, Schüco has had the new lorries fitted with an intelligent transport management system, which allows all logistics processes to take place without the need for paper – and in real time, too. As a result, empty trips are reduced, while the direct navigation helps to avoid detours. All of this reduces fuel consumption and in turn cuts CO<sub>2</sub> emissions.

Schüco is also well underway with the recycling of the leftover PVC-U which accumulates in the production of windows and façade units. Some of this is already ground down at the plant to make PVC-U granules and reused.

The exploitation of further potential is planned for the near future in order to reduce the carbon footprint further. Here there is a particular emphasis on the energy-efficient renovation of company buildings and on raising awareness of the individual energy and resource consumption of employees.

**BIKE LEASING AT SCHÜCO  
IN BIELEFELD**

290x

bike leasing contracts for environmentally-friendly transport

**Climate Protection working group**

With committed employees from all areas, the Schüco Climate Protection working group is dedicated to actively promoting climate protection within the company. Here, effective measures for climate protection within the company are identified and implemented – such as parking spaces with charging stations for electric cars and bike leasing, which allows employees to lease up to two e-bikes, for example, in order to be carbon neutral even on longer journeys. This initiative has proved a great success for Schüco: within a year, 290 leasing contracts were concluded. With special conditions, the appeal is increased even further. In addition, the employees can buy their e-bike under favourable terms once the leasing contract has expired. Overall, the model is considerably more cost-effective for the employees than a direct purchase.

**Schüco Climate Day**

Parallel to the opening of the UN Climate Conference in Paris in late November 2015, Schüco held its own climate forum in the form of the Climate Day. At the heart of this second Climate Day was a discussion surrounding sustainable development in connection with the definite achievement of climate goals through the use of Schüco windows and façades. The sustainable properties of the Schüco products and the identification of potential areas for improvement within the company also formed part of the discussion.



Thomas Lauritzen, Head of Corporate Coordination, moderated the Schüco Climate Day.

120x

In 2015/2016, Schüco is financing a beginners' German language course for around 120 refugees.



## Schüco Climate Day



The Aluminium Stewardship Initiative (ASI) was brought into being in 2012 to promote sustainability and transparency in the aluminium industry.



The 2° Foundation is an initiative founded by Chief Executive Officers, chairmen and family businesses in Germany. It's goal is to restrict average global warming to a temperature increase of 2°C.



Participants in the Schüco Climate Day learned more about the environment and climate protection at Schüco through presentations, promotions and workshops.

### ISO certifications

In order to meet the highest standards in terms of quality, environmental protection and energy management, Schüco follows the requirements of the international standards for quality (DIN EN ISO 9001), environmental (DIN EN ISO 14001) and energy management (DIN EN ISO 50001 as well as DIN EN 16247) as part of the integrated management systems.

### Training

The future-oriented approach of Schüco constantly places new requirements on employees and partners. Continuous development is therefore essential in order to survive and thrive in a competitive international market. This is the only way to enable processes to be tailored even more precisely to markets, partners and customers. Consequently, Schüco offers a range of options for enhancing personal and specialist skills.

In addition, Schüco supports customers and partners with a comprehensive training programme for aluminium, steel and PVC-U systems, fire protection systems and software products. With our specialist training courses, we also open the door for longer-term qualifications and regional network events. Through our cooperation with Deutsche Bahn (German railways), participants can travel to and from the training courses throughout Germany in an environmentally-friendly and carbon-neutral manner.

### Aluminium Stewardship Initiative (ASI)

As a founding member and currently the only company representing the construction industry, Schüco has been involved in the Aluminium Stewardship Initiative since 2014. In this pioneering role, we are supporting the promotion of sustainability and transparency in the aluminium industry.

### 2° Foundation

Alongside our parent company, Otto Fuchs KG, Schüco is a member of the 2° Foundation, an initiative run by German company chairpersons, managing directors and heads of family-run companies who wish to realise the 2° goal of the United Nations. The business leaders want to support political efforts to establish market-based conditions for climate protection and stimulate German companies to find climate protection solutions. The foundation is set up to encompass all sectors and supports or carries out projects and initiatives itself. At a national and international level, it functions as a climate ambassador and lobbyist.

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**SCHÜCO**