

**‘If nature  
had a  
choice’**

**PROGRESS THROUGH SUSTAINABILITY**

**SympaTex®**



# Sustainability meets Performance

100% SUSTAINABILITY  
WITHOUT COLD FEET?

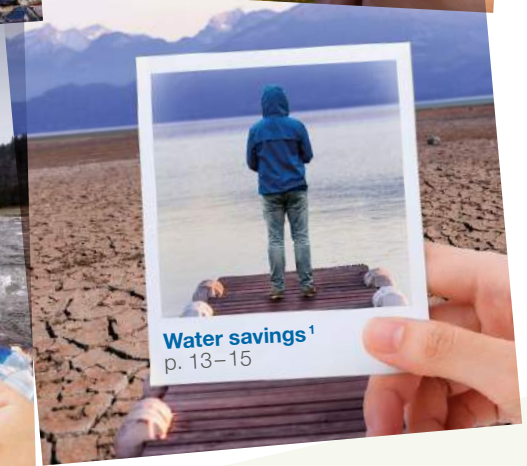
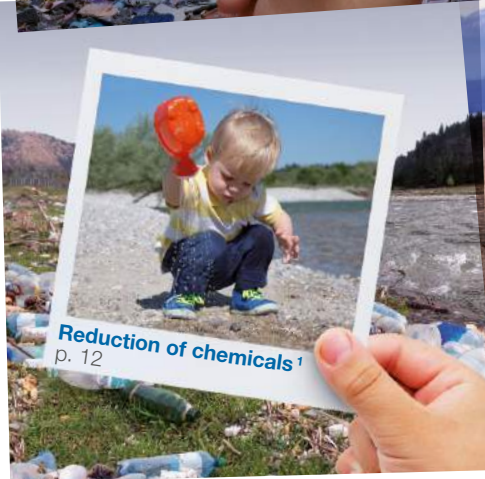
Tomorrow's outdoor and work clothing will be functional, stylish – and 100 percent sustainable. We don't view that as a paradox, not even today. By setting an example, our goal is to firmly establish an environmentally responsible mindset within the textile industry and demonstrate that sustainability and high customer expectations can perfectly complement one another.

Thanks to a holistic, well-thought-out design and manufacturing approach, our products already offer viable solutions for addressing the most pressing consumer demands and environmental requirements. As a result, Sympatex is contributing undisputed pioneering work when it comes to the harmonious interplay between sustainability and performance. Follow our example, collaborate with us or copy our ideas!

## Radically sustainable – without compromising?

Producing perfect functional apparel requires no materials that are harmful to our health or the environment. The proof is in our Sympatex membrane, a completely skin- and environmentally friendly technology that contains no PTFEs and no PFCs, thus making it fully recyclable – and since 2017, 100 percent climate neutral.

We nevertheless have no reason to shy away from performance comparisons. Dynamically breathable, waterproof, windproof, robust and durable, for 30 years our technology has been the benchmark for the sport and outdoor industries, as well as for the challenges of daily working life.



## There can only be one ...

The raw material that we use is polyester (PES), the only synthetic that enables the manufacture of unmixed functional textiles, which are essential for an efficient recycling process. PES also boasts the lowest ecological footprint.

Because the production process uses less water and fewer chemicals and reduces CO<sub>2</sub> emissions, PES furthermore allows us to manufacture our membranes while addressing all of the key ecological challenges. Last but not least, PES is 100 percent recyclable. It already represents 80 percent of the synthetic materials used by our industry. And just like a PET bottle, it can easily be fed back into the textile loop.

<sup>1</sup> Ecological core factors according to BCG study 'Pulse of the Fashion Industry' (2017)



# Closing the loop: 100% circular by 2030

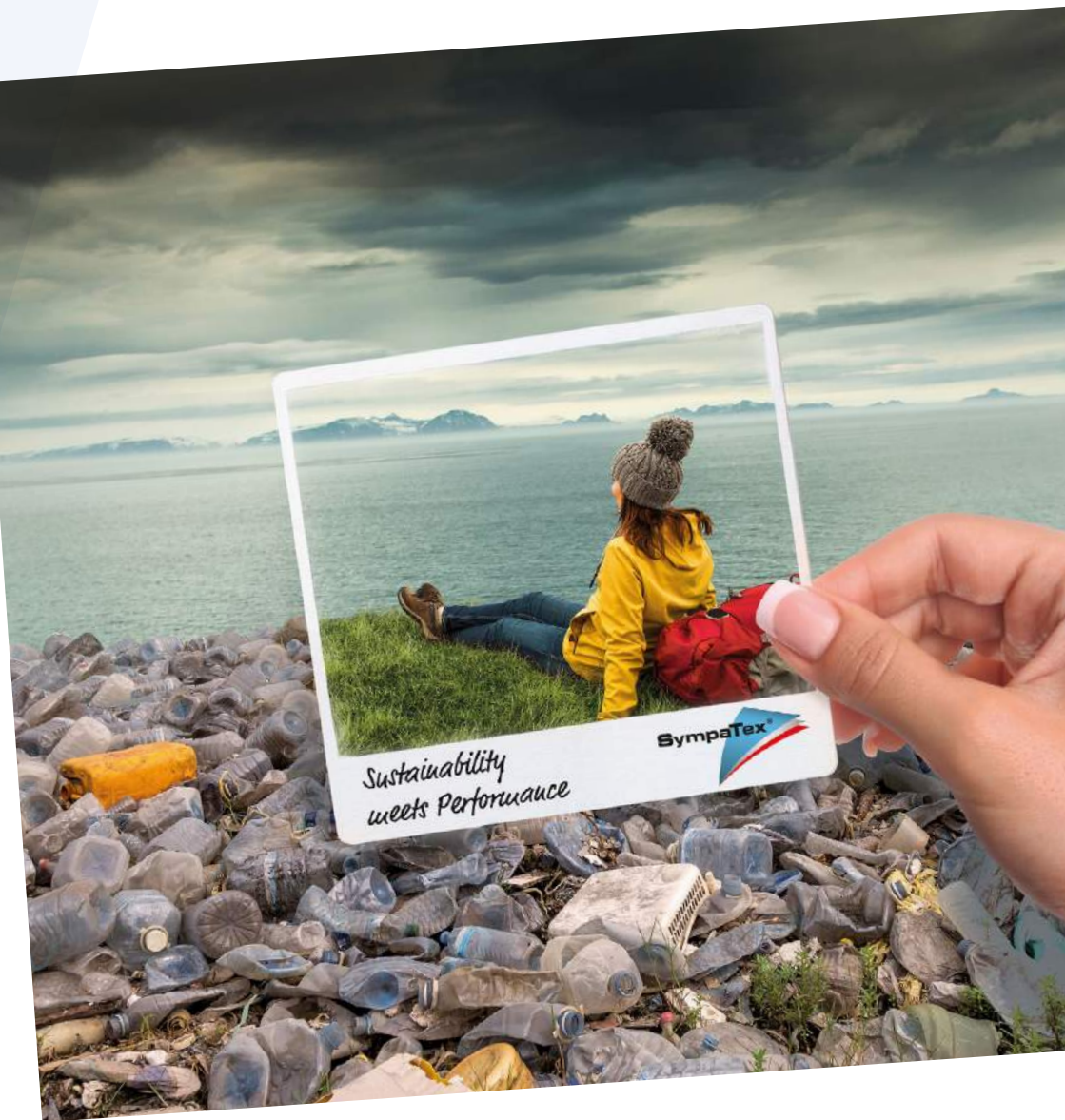
## ECONOMIC GROWTH WITHOUT DAMAGING THE ENVIRONMENT?

A little better is not enough. That's why our goal is zero waste, from raw material to finished product, by 2030. We have already proven that it's possible to completely close the textile loop for functional apparel by working together with our partners. For a clean environment – for us and all those who come after us.

## HOW WE GET THERE:

- As of 2020, all of our business areas will offer laminates made from closed-loop recycled materials.
- By 2025, 50 percent of the raw materials for our functional laminates will originate from the closed textile loop and be recyclable.
- By 2030, we will only offer products made from closed-loop materials.





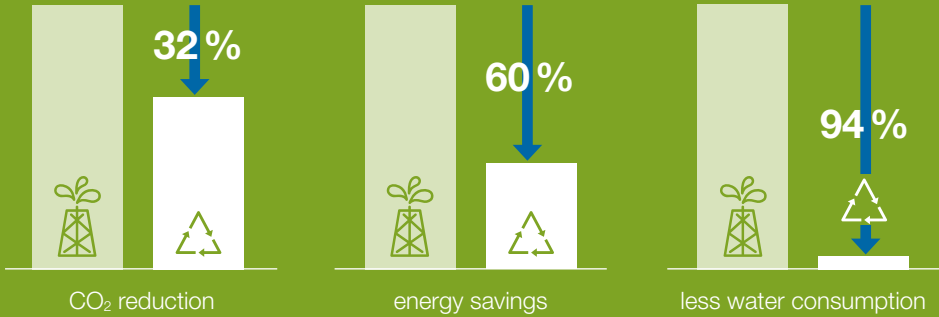
*Sustainability  
meets Performance*





## DID YOU KNOW THAT ...

1 kg of polyester yarn – recycled  versus crude oil based 



# Constant dripping wears away a stone: we're increasing the percentage of recycled materials

## HOW CAN WE MAKE USE OF THE RAW MATERIALS IN WASTE?

Responsible disposal is just as important as manufacturing sustainable products. This is especially true for the textile industry, because each year we place more than 100 billion pieces of clothing into circulation. In Germany alone, more than 1 million tons of used clothing ends up in the trash bin or is disposed of via third countries without any controls.

It's imperative that we turn waste into raw materials for our own industry! Our functional jacket 4.0, which we made from 32 PET bottles, shows that this concept can work. The jacket consists of 100 percent recycled laminate, a membrane from 100 percent polyether-ester and 100 percent recycled outer and inner lining fabrics made from GRS or bluesign® certified polyester fibres. Even the zippers and buttons are polyester-based, allowing complete unmixed recycling at the end of the jacket's life cycle.

The functional children's shoe that we developed, which is manufactured from recycled materials (up to 90 percent), is also sustainable, including the shoelaces. The outer fabrics, plus the inner linings from GRS or bluesign® certified polyester fibres, were produced from recycled PET bottles. Even the soles consist of recycled materials (up to two-thirds). When it comes to recycling, national borders do not matter to us. With that in mind, we created the

wear2wear ([www.wear2wear.org](http://www.wear2wear.org)) consortium together with several partners. This network covers the entire recycling loop and enables us to utilise state-of-the-art manufacturing systems across Europe to produce new functional textiles from used clothing. The wear2wear consortium is currently working with the French government as part of the FRIVEP project to return clothing worn by French government workers to the textile loop.

As more companies and organisations participate, the consortium will be able to accelerate its efforts to make sustainability an inherent part of the textile industry. That's why wear2wear is open to all those who want to follow our lead in taking responsibility for the environment and committing to a closed textile loop.

We overcame another major hurdle in 2019 by investing in UK-based Worn Again Technologies as a pioneer partner. The company's polymer recycling technology separates and reprocesses not only mono-textiles, but also commonly used cotton and polyester blends.

# We maximise the recyclability of the end product

## WHAT WILL AN ECONOMICALLY PROFITABLE TEXTILE LOOP LOOK LIKE IN THE FUTURE?

Recyclable products are an important building block if we are to meet our responsibility to the environment in the future. We are leading by example: our membranes and laminates can be recycled just like a PET bottle.

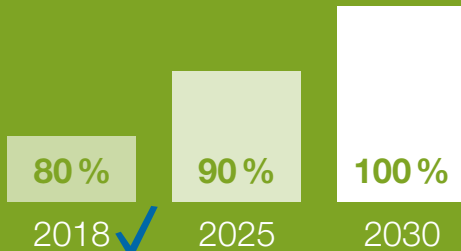
**Waste-free production:** thanks to pre-consumer recycling, the disposal of production waste belongs to the past since we return it directly back to the production loop! The result is that we utilise 15 percent fewer materials and save energy.

**Post-consumer recycling:** products made from unmixed materials are much easier to recycle than those made from textile blends. We ensure grade purity by utilising recycled polyester outer fabrics and linings, thus making recycling economically feasible. Most of the commodities that we utilise for our primary materials currently stem from recycled PET bottles. By 2030, we will take 100 percent of the recycled polyesters from the closed fibre2fibre textile loop.

## RECYCLED MATERIALS PURCHASING:

Two-thirds of our raw materials will originate from recycled products by 2025, increasing to 100 percent by 2030. Our plan is to use 100 percent recycled polyester for the outer fabrics and linings by the year 2025.

## GRADE PURITY OF OUR PORTFOLIO





# PTFE has no business being in the textile and fashion industries

## PTFE RELEASES LIFE-THREATENING ACIDS WHEN BURNT

When clothing articles that contain PTFEs are burnt, traceable amounts of hydrofluoric and hydrochloric acids are set free. While the industry does not deny this, it hides behind the claim that modern incinerator plants prevent these substances from being released into the environment. In light of the export of waste and textiles to third and developing countries, this is merely a theoretical, self-serving declaration that in reality only occurs in special cases.

## PTFE-BASED LAMINATES CANNOT BE RECYCLED

The EU circular economy package and the resulting national laws promote the manufacture of recyclable products and the assumption of product responsibility by the distributor.

Like PU-based materials, PTFE membranes are permanently bonded with the textiles using a lamination process. Because this mix of materials cannot be reused, the clothing articles end up in landfills or they are incinerated.

## WHY SHOULD OUR INDUSTRY BAN THE USE OF 'EVERLASTING CHEMICALS'?

Discussions surrounding the use of fluorochemical-based DWR technology in our industry have diverted attention away from the fact that many functional clothing articles still contain membranes based on the same chemistry. This includes the use of PTFE (also known under the Teflon® brand), despite the availability of high-performance, polyester and polyurethane alternatives that do not have these drawbacks.

## HARMFUL FLUORO-CHEMICALS ARE STILL BEING RELEASED INTO THE ENVIRONMENT WHEN MANUFACTURING PTFE

The 2019 Hollywood movie *Dark Waters*, current discussions in Holland revolving around contaminated soil and blood tests among children all provide indisputable evidence that in the production of PTFE/Teflon®, the chemical industry has been releasing chemicals into the environment for more than 30 years, which the European authorities recently classified as 'substances of very high concern' with respect to the corresponding health risks. Traces of PTFE can meanwhile be detected in the blood of every human.



## Climate protection – a generational responsibility

### HOW CAN WE MINIMISE CLIMATE EMISSIONS DURING THE ENTIRE PRODUCTION PROCESS?

It all boils down to the membrane material! In this case, the facts speak for themselves. Because of the energy-saving manufacturing process, the Sympatex membrane already boasts a significantly lower CO<sub>2</sub> footprint than other membrane materials. And we continually work on the manufacturing process to drive this number down even further.



Jackets –  
**50 %**  
CO<sub>2</sub> reduction<sup>1</sup>



Gloves –  
**60 %**  
CO<sub>2</sub> reduction<sup>1</sup>

## How can we jointly stop climate change?



As one of the signatories of the UN Fashion Industry Charter for Climate Action, we made a commitment to continually reduce harmful greenhouse emissions along the entire supply chain and to become completely climate-neutral by 2050.

This is an urgently-required step given that the textile industry is already causing nearly 10 percent of the world's industrial CO<sub>2</sub> emissions today. This represents an increase of 35 percent in the past 10 years alone. And if we don't act fast enough, by 2050 we will have to bear a quarter of the industrial responsibility for climate change and fall short of the 2 degree goal.<sup>2</sup>

<sup>1</sup> Compared to PTFE membranes    <sup>2</sup> Quantis Report „Measuring Fashion‘ (2018)

# 2030: we will already be net positive

## HOW CAN YOU OFFSET UNAVOIDABLE CLIMATE EFFECTS?

In its 2016 global risk report, the World Economic Forum classified global warming as mankind's greatest existential risk with the highest probability of occurrence.<sup>3</sup>

With our climate-neutral membranes and laminates, we will fight against climate change. We have already taken steps to significantly reduce our 'carbon footprint' over the past few years. Our next goal is to drastically reduce greenhouse emissions across the entire supply chain (Scope 1–3) by 2030.

In order to be completely climate-neutral, in 2017 we began to offset the remaining CO<sub>2</sub> amounts through internationally certified climate protection projects in partnership with ClimatePartner. We also offer this service to our customers. Join us today! By working together, we can easily and quickly offset the CO<sub>2</sub> footprint of your textiles, an entire clothing article or shoe in a certified manner.

## GREENHOUSE GAS REDUCTION (SCOPE 1–3)

**2017–2030: further 30 percent reduction**

**2025: offset 50 percent of the remaining Scope 1–3**

**2030: Sympatex is net positive**

## HOW LARGE IS THE CARBON FOOTPRINT OF YOUR CLOTHING?

The Sympatex eco-calculator measures the ecological footprint of every linear metre, from raw material extraction to customer delivery. This allows our customers to offset unavoidable CO<sub>2</sub> emissions by supporting climate protection projects and thus receive a certificate that can be applied to the product.

<sup>3</sup> Risk Report, World Economic Forum (2016)



## How can the manufacturing chemicals be processed so that they are safe for people and the environment?

Sympatex laminates are non-toxic. We have been dealing with the issue of how to manage harmful substances for many years and among functional specialists in the textile industry, we have served as a trailblazer in this area. We test our membranes, as well as all of our laminates and tapes, in line with the OEKO-TEX® STANDARD 100 appendix 4. In 2017, we even began to test the membranes and some of the laminates in line with appendix 6.

Since 2008, we have been a bluesign® partner and also committed to the bluesign® standard continuously. In 2020, we worked with one of our laminate partners to certify the company's production facility. As a result, we contributed to 50 percent of the certification process costs.



## Non-fluorocarbon DWR impregnation is sufficient

### HOW CAN WE HELP OUR INDUSTRY BAN THE USE OF POTENTIALLY CARCINOGENIC 'ETERNAL CHEMICALS'?

There is no justification for the use of PFC-based chemicals in textile manufacturing. Not for the membrane, and not for the water-repellant coating. The better ecological choice is our Sympatex membrane made from perfectly safe polyether-ester. Our non-PTFE and non-PFC membrane contains no per- and polyfluoroalkyl substances (PFAS), which the European Chemicals Agency and others have classified as a 'substance of very high concern'.

In collaboration with our partner Rudolf Chemie, for more than 10 years we have been offering BIONIC-FINISH® ECO, an environmentally friendly, non-fluorocarbon DWR impregnation that we continue to enhance and develop.

# Minimal water consumption and water-saving technologies

## HOW CAN WE MINIMISE WATER CONSUMPTION?

We are working hard to reduce our (traditionally low) water footprint to a minimum and eliminate industrial processes that contribute to contamination of this resource. We also support the use of water-saving technologies at our suppliers.



-50 %  
H<sub>2</sub>O

By investing in water-saving technologies, we use 50 percent less water to manufacture a 100 percent polyester Sympatex membrane compared to the manufacture of a commercially available PTFE membrane.



# Jet dyeing saves water

According to estimates from the World Bank, textile industry colouring processes are responsible for roughly 20 percent of the worldwide industrial water contamination.

In 2018, we introduced a new line of jet dyed laminates. This coloring technology proves that performance and sustainability are not mutually exclusive.

How does it work? With this environmentally friendly process, the coloring pigments are applied while the fibres are being spun. Compared to conventional methods in which the finished material is dyed, jet dyeing uses up to 75 percent less water and reduces the amount of chemicals by as much as 90 percent.



# How can we prevent plastic waste from contaminating water?



Around one-third of the microplastic that is released into the environment stems from washing synthetic textiles<sup>1</sup>. To help address this problem, together with partners we created the Plastic Leak Project to determine which approaches could eventually minimise the amount of microfibrils during the washing process and the entire life cycle. The result: compared to a non-laminated textile material, the lamination process already reduces the amount of released microplastic particles by 50 percent.

Another study that we participated in under the leadership of Quantis showed that the vast majority of the microplastic that finds its way into our waters is caused by the improper disposal of textiles. We want to avert this by recycling textile waste into a valuable raw material that can be reused.

Further projects aimed at minimising the risk of plastic are currently underway and will promptly flow into our product development process.

**'OUR EXPLICIT GOAL IS TO IDENTIFY TECHNOLOGIES THAT WILL REDUCE THE AMOUNT OF FIBRES INTRODUCED INTO THE ENVIRONMENT FROM OUR LAMINATES DURING THE WASHING PROCESS BY 85 PERCENT COMPARED TO TODAY'S CONVENTIONAL POLYESTER TEXTILES.'**

Dr. Rüdiger Fox

## Transparency is the precondition for sustainability

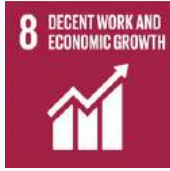
without transparency. Today, creating transparency in the textile supply chain is an obvious necessity. That's why we have begun efforts to make our supply chain public. By instituting social checks and balances with each other, our industry will be in a position to quickly identify and stigmatise the 'black sheep'.

This requires no complicated block chain algorithms, which only lead to considerable administrative effort and consume massive amounts of energy. The only thing we need to do is re-establish trust in our ability to act honestly and lay our cards on the table.

## HOW CAN WE DEVELOP CONFIDENCE THAT OUR WORDS WILL BE FOLLOWED BY ACTION?

We are convinced that the establishment of a sustainable closed supply loop is not possible

<sup>1</sup> Primary Microplastics in the Oceans: a Global Evaluation of Sources, authors: Julien Boucher, Damien Friot



# Changing the world for the better. Sympatex is a B-Corp company.

**HOW CAN WE ADEQUATELY MEET OUR CORPORATE SOCIAL RESPONSIBILITIES TO ALL STAKEHOLDERS?**

**We belong to the top 10 percent of all B-Corp companies in the category 'environment'.**

Economic success is not everything. As a B-Corp company, we fulfil the highest standards for audited social and ecological performance, public transparency and legal responsibility. We are proud to be a member of a worldwide network of companies that have redefined corporate success for themselves and moved issues such as transparency, environmental protection and social responsibility to the forefront.

'This award not only honours our commitment to closing the textile loop in the apparel industry together with all of our market partners, but serves as a testament to our approach and spurs us to continue to overcome all of the major hurdles in order to be able to put together a sustainable functional textile industry in concert with our partners. We can't settle with just The Best For The World. We want to be Good Enough For The World.'

Dr. Rüdiger Fox



## **Sustainability is a journey that ends without leaving any traces.**

### **WHAT IS GENUINE SUSTAINABILITY?**

Sustainability is more than just an attempt to wipe out any traces that one leaves behind. It also means taking concrete measures to ensure that you leave absolutely no footprints behind in the future.

## **How can we serve as a role model for sustainable corporate leadership?**

With the B-Corp 'Best for The World Award 2019' in the category 'environment', we find ourselves in the company of the world's top ten percent. This award relies on a multistage audit to evaluate not just a product or a service, but the overall impact of the company.



### **OUR KEY ACHIEVEMENTS:**

- Our membrane has contained no 'eternal chemicals' for 30 years now.
- We are pioneers in the manufacture of non-PFC functional laminates.
- We are the first company to offer functional laminates with a fully balanced CO<sub>2</sub> footprint.
- We are a founding member of Oeko-Tex® Standard 100 and have been certified since then.
- 2020: introduction of the first laminate made from f2f (fibre to fibre) recycling.
- Our apparel portfolio will be 100 percent PTFE- and PFC-free as of 2020.
- Closing the loop: we will completely close the textile loop by 2030.



# Our partners: achieving more together

## HOW CAN WE STRENGTHEN OUR EFFECTIVENESS THROUGH PARTNERSHIPS?

We rely on partnerships and collaboration.



United Nations  
Climate Change



PLASTIC  
LEAK  
PROJECT



Recycled Polyester  
(rPET) commitment of



**Rather than some new, short-lived trend, sustainability represents a fundamental change in the general conditions for economic success. What thus far have been considered ‘externalities’ will one day be part of every business model.**

## **HOW MUCH TIME DO WE REALLY HAVE?**

What is important is not what led to our past successes, but what will be expected of us tomorrow. This will require the consistent application of sustainability in all four core areas. And this is something we must prepare for today. Sympatex thus began yesterday to support brands through continuous innovations, in order to have the right solutions for tomorrow.



# It's in your hands!

#IYH #closingtheloop

#sympatex #NoPFC

#NoPTFE #recycling

#ItsInYourHands



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