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In this edition, we've embraced Al-generated imagery to ignite conversation and reflect on Al's burgeoning role in sustainable fashion. While aware of the ethical dilemmas surrounding Al, we consider both its positive and negative potential. Researchers at Erasmus University Rotterdam are thoroughly investigating Al's practical uses and envisioning a responsible future.

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Sustaining Sustainability

in worldwide fashion

he impact of the fashion industry on our world is disastrous. We keep replacing clothes and textiles that are nowhere near their end of the lifecycle, causing a massive overproduction and waste mountains by an industrial system linked to water pollution, colossal CO₂ emissions, greenwashing and social inequality. The system must change, which proves to be a tall order – tall but not impossible. Erasmus University Rotterdam (EUR) can play a significant role in this respect, throwing into battle scientific knowledge and a pioneer's mindset.

The fashion industry and our university share more than just a complex nature; we both possess a wealth of knowledge about the fashion and textile world. By uniting our strengths and working together on multiple levels, we can strive for a future of more durable fashion and textiles, improved social policies at primary brands, and enhanced transparency and reliable advertising. This potential for collaboration is not just promising; it's the path to a brighter future.

The mission of Erasmus University Rotterdam is 'to create positive societal impact'. We want to realise changes for the better, collaborate with others, and seek sustainable answers to the issues of our time. From an actor studying society and bringing knowledge towards it, we have become an actor in the midst of society. Engagement has become a core task next to and often in conjunction with research and education. Sustainability is central to all of our activities.

The challenges in the fashion and textile industry are huge and very complex. It is one of the most polluting industries in the world. The European Commission calls for change. The introduction of new regulations in the coming years will significantly impact the industry. With numerous value chains intertwined, changing one element will inevitably influence other parts of the chain. So, it is very challenging to drive for a positive change toward a Just Fashion Transition. This transition requires knowledge of consumer markets, consumer behaviour, transition knowledge, sustainable business models, (fair) pricing, production chains, innovation, ecosystems, and more. And it is exactly this knowledge that our academics can provide.

Combining the knowledge of our societal partners and the strength of our multiple scientific disciplines will create an approach that might be the answer to today's societal issues. With our shared knowledge, we can derive a holistic and transdisciplinary research and action agenda—an agenda by which we—fashion businesses, sustainability advocates, citizens and academics alike—can join forces and tackle the complex and wicked problems of the Just Fashion Transition together.

As EUR we support the research on fashion sustainability. The importance and impact of education and research in our society are huge. In the complex world of fashion and textiles, mapping global developments is crucial to fully understand and effectively address the industry's challenges.

Margo Strijbosch & Ellen van Schoten







Quiz Unlock Fashion Secrets

Start your fashion journey, search for the answers in the articles and master fair fashion.

What percentage of collected textiles is resold within the Netherlands?

a 5%

C 45%

b 25%

d 65%

What sustainable practice does Vivienne Westwood implement to manage leftover materials?

Your answer:

What brain region is associated with feelings of reward, pleasure, and motivation that fashion brands target?

a Amygdala

C Ventral Striatum

b Prefrontal Cortex

d Hippocampus

How many new clothes does the average Dutch person buy in a year?

a 10

C 35

(b 25

d 50

In which country must all large fashion brands label each product showing its social and environmental impact?

a The Netherlands

C Germany

b France

d Norway

Fashion Revolution

eet Brigitte Stepputtis, the Global **Head of Couture at Vivienne** Westwood, a brand renowned for its groundbreaking fashion. Vivienne Westwood is one of the last independent global fashion companies in the world, at times thought provoking, this house has always been about more than just producing clothes and accessories. Vivienne Westwood has been at the forefront of fashion rebellion since the 70s, transforming punk into mainstream and constantly challenging norms. Activism is in their DNA. This interview explores how Vivienne Westwood is revolutionising fashion, from transforming bridal wear to utilising tech for innovation and to limiting waste. Delve into Brigitte's journey within the bridal collections and glamourising conscious fashion on the red carpet.

Catalyst for Change

Controversy often breeds change. Vivienne Westwood, a rebel at heart, has long used controversy as a catalyst for revolutionising fashion. From her provocative 1977 "Destroy" T-shirt, challenging societal norms and dictatorships, to her bold political statements, Westwood has always pushed boundaries. According to Brigitte, "Vivienne used fashion as a vehicle for activism – to protest for human rights issues, freedom of speech and to promote the global problem of climate change."

"Vivienne started very consciously ten, fifteen years ago with her activism," Brigitte recalls. This shift led



Brigitte Stepputtis

Learn the technical background because it helps you to create differently.





to radical decisions, like reducing the number of collections and incorporating some limit-waste practices. The brand has embraced a quality-over-quantity mantra, ensuring every piece created is a timeless investment that outlives fleeting trends. "Old garments are quite sought after on the secondary market," Brigitte explains.

Lasting impact is also their focal point for initiatives, like the 'Ethical Fashion Initiative', "For the last 13 years, we have been producing an accessories line in Kenya in collaboration with the International Trade Centre – a joint body of the United Nations and the World Trade Organisation – which currently supports the work of thousands of artisan micro-producers from marginalised African communities. Born out of this, since 2015, our products have been manufactured through a local social enterprise, Artisan fashion, which specialises in the production of accessories with community groups of artisans. Originally set up by EFI, Artisan Fashion is now a completely independent and successful business due in part to our continued collections produced with them, which support 2,600 artisans. From the last report, 54% of all the artisans employed by Artisan Fashion are women and 55% of artisans were able to put savings towards school fees, while 100% improved their skills through on the job training. The last collection consists of 30% repurposed materials, such as deadstock found on local Mitumba markets, and was produced with 92% renewable energy, consisting of a mix

of wind, geothermal, solar and hydro power. The project was designed not as a charity but as a working business model ensuring fair wages. "We wanted it to be a business that lasts," Brigitte explains, highlighting the project's enduring success.

Glamourising 'Green' Fashion

Brigitte Stepputtis oversees the couture service and bridal collections at Vivienne Westwood. Her journey from a tailor to creating couture is marked by the pursuit of craft. "Learn the technical background because it helps you to create differently," Brigitte advises aspiring designers, emphasising the importance of mastering the craft's intricacies. Her role at Vivienne Westwood goes beyond design; she also works with the brand's responsibility team. Collaborating with the likes of Red Carpet Green Dress, Westwood highlights conscious fashion as a larger part of the fashion conversation, supporting the glamourisation of red carpet gowns made from organic textiles or upcycled vintage pieces to be worn on the red carpet at the Oscars.

Celebrity custom projects play a significant role in Vivienne Westwood's promotion of lower-impact fashion. For the 71st Cannes Film festival, Hollywood actress Thandie Newton wore a Vivienne Westwood couture gown to the premiere of 'Solo: A Star Wars Story'. As part of Eco-Age's Green Carpet Challenge, the gown

was hand-crafted in the London atelier from Global Organic Textile Standard (GOTS) certified champagne gold 'peau de soie', finished with upcycled Swarovski crystals. Most recently the house designed looks for Taylor Swift's/ The Eras tour. During the performance, Taylor wears a custom Vivienne Westwood Couture draped corseted dress in white recycled taffeta. Taylor's custom dress is delicately inscribed with the lyrics, 'I love you, it's ruining my life' from her single, 'Fortnight'.

Bridal

One of the most exciting innovations at Vivienne Westwood is the transformation of bridal wear. Traditionally, wedding dresses are worn once and stored away, exemplifying true wastefulness. Vivienne Westwood challenges this norm by offering a service to transform wedding gowns into cocktail dresses or other wearable pieces.

Prioritising quality and longevity in the design of each gown, the bridal couture team at Westwood offers a service to transform bridal gowns post-wedding, with the aim to limit waste and give each Westwood gown a "new life." Through a selection of offcut luxury fabrics, deying processes, silhouette alterations, embroidery, beading, appliqué, and bespoke finishings, all handcrafted in the London atelier, bridalwear can be transformed into a timeless look for all occasions.

This initiative not only aims to extend the lifecycle of bridal attire but also aligns with the broader goal of reducing fashion waste. Despite the brilliance of this concept, Brigitte notes, "It's surprising that not many clients are using this service yet," highlighting the potential for greater impact as more people embrace alternative fashion practices.

For Vivienne Westwood, working towards better solutions for bridal is not only about looking forward to preferred materials but also about looking back to traditional, smaller-scale means of garment manufacture. Nurturing this truly bespoke craftsmanship, Westwood aims to help support and sustain traditional craft and skilled workmanship, and the communities around them. The bespoke, made-to-order, and bridal collections are designed, sampled, and hand-crafted locally in England, working with traditional tailoring techniques – combined with historical and experimental pattern cutting.

What's more wasteful than making an expensive garment for one day only?

Fashion Practices 3.0

With the introduction of tech innovations into fashion design, Vivienne Westwood is making strides with programmes like Clo 3D, offering the opportunity to create digital mock-ups of clothes and accessories, thus potentially minimising waste and expanding the creative possibilities. "The sample turnaround time is reduced from 37 days to 27 hours. This technology streamlines the design process, and these innovations help to reach the goals we aim to achieve, proving that technology and creativity can work hand in hand to reduce certain impacts."

The company's commitment extends beyond innovative products to comprehensive waste management strategies. The brand often reuses and repurposes leftover materials, ensuring overstock from seasonal fabric orders is as low as possible. "We try to look after our own waste because, obviously, there are fabrics left over with each collection," Brigitte explained. Where possible, these materials are reintroduced into new designs, used as linings, or form the basis for the limited- edition World's End Collection. Additionally, Vivienne Westwood collaborates with organisations like Progetto Quid, which gives a second life to unused materials while employing marginalised communities. Such initiatives underscore the brand's holistic approach to reduce their impact.

According to Brigitte, the term 'sustainable' is increasingly facing scepticism due to rampant greenwashing in the industry. To combat this, transparency about production processes has become paramount. "The stories behind the garments need to be captured," she asserts. The brand plans to implement QR codes for each bridal gown, allowing clients to see the craftsmanship

and effort that goes into every piece. This practice not only enhances transparency but also serves as an educational tool, fostering a deeper appreciation for sustainable fashion.

Couture for a Cause

Activism is at the core of Vivienne Westwood's DNA. Employees are actively encouraged to participate in demonstrations, protests, and environmental initiatives by getting time off to do so. This commitment extends to organized events with keynote speakers in stores, supporting grassroots campaigns, charities and NGOs through projects and campaigns, and staff volunteering programs, most recently a campaign to support Rewilding, with staff volunteering on a project to reintroduce beavers into the wild.

Buy less, choose we

Fashion Future

Since 2021, Vivienne Westwood Italy has been part of the Monitor for Circular Fashion, a multistakeholder initiative promoting best practices for circular business models. Looking to the future, Brigitte envisions greater collaboration within the industry. "I would like our bridal line to have an orange fibre satin," she says, highlighting her desire to push the boundaries with one of the newest innovative fabrics made from citrus juice by-products. These collaborations could be experimental grounds for scaling up new technologies and creative ideas.

Read more



Brain Bargains

Seductive Science

very click, every scroll, and every moment you spend browsing your favourite online store is no accident. It's all part of a calculated effort by fashion brands to harness powerful neuroscientific techniques to influence your shopping behaviour. Alex Genevsky, a renowned neuroscientist and psychologist, has illuminated how our brains react to these expertly crafted digital environments. By tapping into the ventral striatum—a key area in the brain associated with feelings of reward, pleasure, and motivation—marketers are not just selling clothes but offering bursts of happiness. As you navigate sales and limited-time offers, your brain lights up with the prospect of scoring a deal, often nudging you toward that impulsive buy. But are we merely pawns in savvy online retailers' vast digital marketing game? Let's dive into the cunning world of neuromarketing in fast fashion.

The science of temptation

As we navigate flashy online shopping sales, an invisible process is at play, one that Genevsky's research helps to demystify. It's a battle between our conscious decisions and our brain's deeper inclinations. Companies target the ventral striatum, a brain region stimulated by pleasure from activities like gambling, eating, or sex. While we might think we're resisting temptation, our brain waves often tell a different story, lighting up with excitement at the sight of a sale, silently urging us to 'buy, buy, buy!' These neural responses, especially in the nucleus accumbens, predict consumer preferences with surprising accuracy, often before consumers consciously decide.

Genevsky's work in neuromarketing has unveiled how sophisticated these strategies are becoming. Using neuroforecasting—a technique that reads these subtle brain signals—marketers are now predicting not just individual reactions but the buying behaviours of entire markets with astonishing accuracy. This method is proving alarmingly effective, revealing that often, our brains are steps ahead of our conscious thoughts, making us ready to purchase even when we think we're still deciding. This fusion

of neuroscience and marketing is transforming the landscape of consumer behaviour, making it crucial to understand the forces at play in our everyday decisions.

The delight of a deal

In the ever-evolving landscape of fast fashion, companies deploy sophisticated strategies to captivate consumers' wallets. Central to these tactics is the art of price psychology. Brands leverage dynamic pricing strategies, prominently displaying discounts to evoke a sense of achievement and satisfaction from securing a bargain. These strategies stimulate the brain's reward circuits, like the pleasures derived from gambling or eating, and fabricate a compelling narrative of scarcity.

Alex Genevsky

Our brain makes
decisions about products
seconds before you're
consciously aware of it.

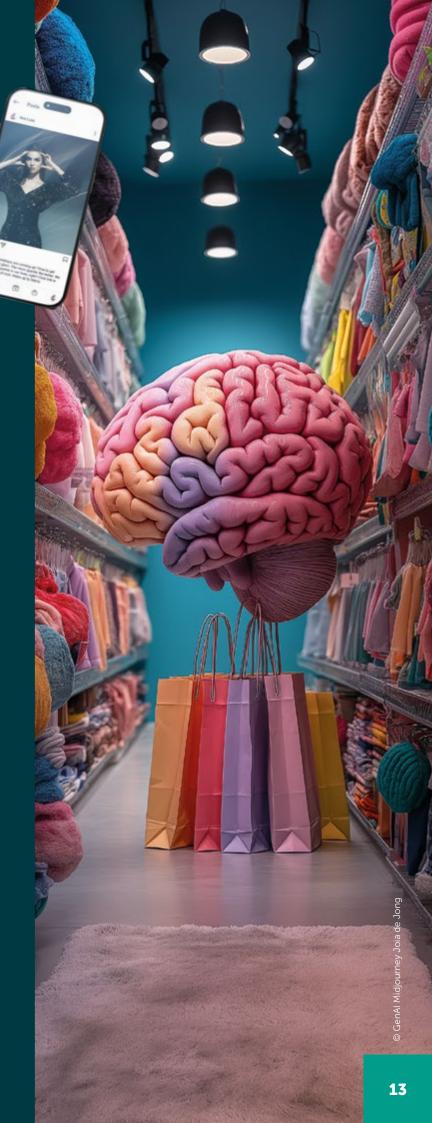
Tick tock, TikTok

Another potent tool is creating a sense of urgency. In the fast-paced world of fashion, the clock is always ticking. Brands insert countdown timers and signal limited stock with messages like "only a few left," crafting a buying environment where hesitation feels like a high-stake loss. This strategy accelerates purchases and often pushes consumers to choose quickly, sidelining thorough deliberation for the thrill of the grab. But it's not just about watching the clock.

Simultaneously, social media influencers' pulsating beats and persuasive power cannot be understated. Fast fashion brands harness social media platforms to forge a pseudopersonal connection between consumers and influencers, who often promote products as must-haves. This blend of urgency with the personal touch of influencers crafts a compelling narrative in which buying fast is not only a norm but a necessity to stay relevant and connected.

Moving towards just and ethical fashion

It's time for a major shift in how we approach fashion. The fast fashion industry doesn't just manipulate our brains into buying more; it also exploits workers and devastates the environment. Child labour and unsafe working conditions are rampant, while textile waste is polluting our planet. Genevsky's research highlights how neuromarketing techniques powerfully influence our choices. Still, these tools in the wrong hands can drive overconsumption and support harmful practices. To counter this, stay informed and critically evaluate your purchases. Support brands that prioritize ethical practices and sustainability. By becoming informed consumers and supporting ethical brands, we can drive the fashion industry towards a more just and sustainable future. It's time to use our collective power to make a difference, ensuring that our fashion choices reflect our values and protect people and the planet.



EUR is making Fashion Impact

Circularity in the city

Amanda Brandellero

bonds

Fashion is omnipresent in our cities. Amanda Brandellero researches circularity in European Urban Communities: "What we see in many cities are emerging forms of social innovation, where people come together to share skills, resources, tools, materials – repairing and extending the life of materials and clothes. These are inspiring convivial spaces, but also vulnerable ones – due to pressures from zoning or commercial rent. What we are also seeing is the need to reintroduce certain craft and repair skills in formal and advanced education – these skills are an essential part of responsible citizenship". Collaborating with the Municipality of Rotterdam, WDKA, Codarts, and Hogeschool Rotterdam, Brandellero is helping to establish a hub for sustainable practices in Rotterdam in Cultuur&Campus Putselaan. This initiative not only extends the life of materials but also strengthens community





Fashion in media

Ana C. Uribe Sandoval

Ana C. Uribe Sandoval, winner of the Erasmus University Rotterdam Education Prize, engages her students in critical discussions about the role of fashion media. They explore how fashion media and media conglomerates create trends and the potential for fashion organizations to act as activists. With students, Uribe Sandoval predicts and imagines what the fashion media system's future can look like with the support of carefully designed research. New in our time is the central role of influencers in defining what is fashionable and what are interesting corporate practices. According to Uribe Sandoval, consumers need to be empowered to redefine fashion on their own terms and make them assess brands based on their social



Fashion Business History

Ben Wubs

Fashion isn't just about trends; it's a mirror reflecting societal shifts and historical currents. Ben Wubs examines the historical fashion production shifts illuminating today's sustainability challenges. He reflects, "Before World War II, apparel manufacturing in the West had also been done under bad social conditions in sweatshops in Berlin, London and New York, but since the relocation of the production networks since the 1960s, most consumers had not asked themselves why they could buy clothes so cheaply. The big fashion retailers, who profited most, did not tell them either." By understanding these historical dynamics, Ben Wubs argues, we can better navigate the ethical complexities of modern fashion, fostering a more informed and sustainable



Treeless magazine

Inspired by nature's zero-waste ethos, EUR has created this 100% treeless magazine. Crafted from agricultural by-products like wheat straw, bagasse, and cotton rags, <u>our paper</u> cuts environmental impact by 47% compared to paper made from trees and by 29% against recycled paper. This magazine helps achieve sustainability goals and enhances a sustainable image.



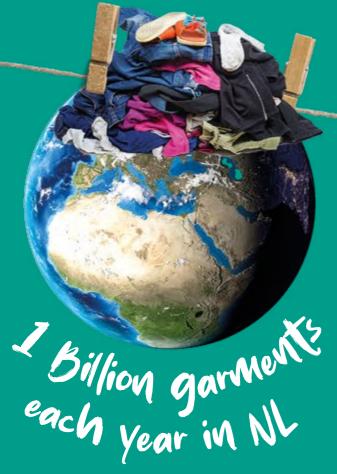
Just Fashion Transition Atelier

Led by Mariangela Lavanga

Just Fashion Transition Atelier is a collaborative initiative uniting academics, researchers, policymakers, designers, artists and the broader community to transform the fashion industry systemically. During our gatherings, we host keynotes, showcase innovative projects, and invite collaboration to drive meaningful change. We aim to foster partnerships that create positive societal impact, challenging the status quo and paving the way for a more sustainable and just fashion future. Join us in shaping a fashion industry that values ethics, sustainability, and equity for all. Your expertise and vision are crucial in co-creating the transformative solutions our industry needs. Let's collaborate to redefine fashion, making it a force for good.

Together, we can make a lasting impact. lavanga@eshcc.eur.nl

What can we do? Make a difference



Heavy Footprint

Global clothing demand drives significant environmental strain. As middle incomes rise, disposable fashion becomes common, increasing greenhouse gas emissions. In the Netherlands alone, nearly 1 billion new garments enter the market annually, with each person buying an average of 50 new items.

Buy fewer than 5 new items a year and choose vintage clothing to lessen your impact.



Reality Check

Labels like 'Made of Recycled Plastic' often cover up the true problem of continuous plastic production. What's often called recycling is actually downcycling, which turns waste like PET bottles back into (micro)plastics that continue to pollute our planet.

Choose reusable or recycled. Select garments made from one or two materials and minimal non-fabric details. Avoid fleece.

Label Literacy in Fashion

Check clothing labels for sustainability clues; items like 'recycled cotton' or 'recycled polyester' use fewer resources. Look for credible certifications such as GRS, RCS100, and RCS Blended.

Choose garments with clear, reputable certifications to support sustainability.

of the world's largest fashion brands haven't publicly committed to a Just **Transition strategy**

fashionrevolution.org

Less than 5% of a T-shirt's retail price covers labor costs. The Fair Wear Foundation reports that out of €29 for a T-shirt made in India, only 18 cents go to the worker. Raising wages to a living wage would barely affect the overall cost.

Sign the petition for a fair wage at goodclothesfairpay.eu



How long do we use...



Trousers/sweaters



Workwear 2 years



Carpets 10 years



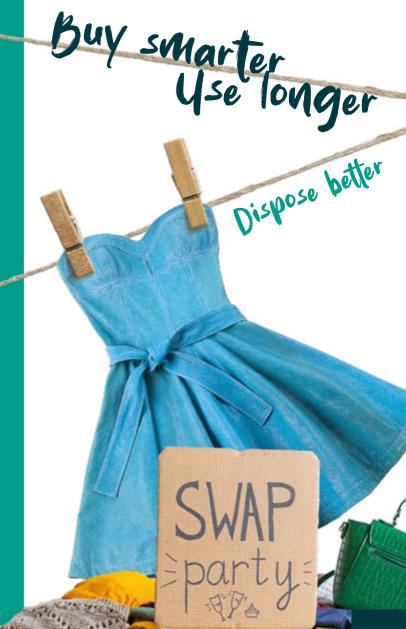
6 years

Sources: <u>Milieucentraal</u>, <u>Circle Economy</u>, <u>Fashion Revolution</u>, <u>Fair Wear Foundation</u>

Start here

People think that sustainable fashion is spending money on sustainable brands and wearing shapeless linen in earthtones. Sustainable fashion is actually something else and more:

- 1. Buy only what you need, take your time
- 2. Choose timeless design and quality
- 3. Opt for second-hand, borrow, or rent
- 4. Choose reusable or recycled
- 5. Pass on, swap, or sell
- 6. Repair broken clothes, restore them Transform items into new outfits
- 7. or something else (e.g. rags)
- 8. Wash less and with care
- 9. Submit for reuse and recycling
- 10. Dispose only as a last resort



Just Fashion Transition

rowing up in a small Italian town, Mariangela Lavanga experienced an upbringing that was a world away from today's fast fashion frenzy. "In my childhood, we didn't know the term 'fast fashion.' Clothes were cherished and mended, not discarded," she reflects. Without an abundance of new clothes, she and her sisters became creative. "The thrill of our weekly market days, finding treasures among secondhand clothes, and the excitement of breathing new life into them fueled our creativity." This early exposure to sustainable living profoundly influenced Lavanga, steering her from economics to the intersection of culture, creativity, and fashion.

"When I first encountered a fast fashion store in my late teens, it was a revelation," Lavanga says. "The sheer volume of affordable clothes was astounding, yet it also sparked questions about sustainability and consumer culture." These experiences led her to delve into the under-researched niche the sustainability transition of fashion and textile within academia. Now, as an Associate Professor of Cultural Economics and Entrepreneurship at Erasmus University, Lavanga focuses on the urgent need for sustainable practices in fashion, highlighting the role of cultural and creative industries in driving systemic change.

The Dark Side of Fashion

Today's fashion industry is at a critical juncture, urgently needing to address the detrimental effects of its overproduction and overconsumption practices. Trendy new clothes are churning out at lightning speed and rock-bottom costs and prices. This led to massive increases in volumes, resulting





in the industry's most pressing issue: their colossal carbon footprint. "The environmental impact of fast fashion is staggering," Lavanga explains. "From water-intensive cotton farming to the use of toxic dyes and the sheer volume of clothing that ends up in landfills, the industry desperately needs a transformation."

But it's not just the planet that's suffering. Behind those bargain prices are garment workers enduring harsh conditions. "The human cost of the fashion and textile industry cannot be ignored," Lavanga emphasizes. "Many workers face long hours, meager pay, and unsafe environments." The relentless push for cheaper clothes keeps these unfair practices in place, showing a clear and urgent need for sweeping change. By addressing these urgent challenges head-on, Lavanga's work aims to bring the fashion industry and consumers into a greener future.

Mariangela Lavanga

We need to reduce the absolute volume of garments and textiles consumed.

Transformation time

Lavanga is on a mission to accelerate the sustainability transition of the fashion and textile industry. Her research dives deep into the industry's challenges and proposes transformative solutions. From combating environmental unsustainability and overproduction to improving poor labour conditions, Lavanga emphasizes the need for substantial and systemic changes. What happens now is that many initiatives propose incremental changes like improving transparency and labelling, substituting recycled fibres, take-back schemes, and textile recycling. However, we need more: "We need to reduce the absolute volume of garments and textiles consumed and find a new orientation for the industry," she argues.

This new orientation demands that we redefine our priorities, moving away from growth towards

human and ecological well-being. Lavanga and her colleagues from the Institute of Sustainable Futures (University of Technology Sydney) and Lund University have developed the concept of the "Wellbeing Wardrobe", as a tool to champion fairness, establish limits, create new indicators, ensure just governance, and initiate equitable exchange systems. "Our goal is to challenge the fast fashion paradigm and promote practices that are not only sustainable but also socially just," Lavanga asserts. Imagine the implementation of eco-conscious design mandates, the halt of textile waste exports, the assurance of fair wages, and the promotion of clothing exchanges and repair services.

Emphasizing the importance of local production and sustainable materials, Lavanga states: "Textile ecosystems need to be local and regenerative, reducing the carbon footprint and promoting sustainability from the ground up," she states. Through the Horizon Europe project 'FABRIX', Lavanga and the consortium partners wish to strengthen local, regenerative textile ecosystems by mapping textile and garment producers in cities like Rotterdam and Athens. "We are creating a digital platform to foster collaborations and accelerate circular fashion production," Lavanga explains. This approach calls for robust collaboration between various stakeholders to transform the industry.

Collaborating for real change

Lavanga champions a transformative approach to fashion production and consumption by bridging the gap between academia and industry. Her work goes beyond theory, offering tangible solutions that embed sustainability and ethics into the industry's core. "The future of fashion lies in our ability to innovate sustainably and equitably," she asserts, envisioning a fashion world that values both people and the planet.

Lavanga stresses the power of collaboration: "The industry is highly fragmented in terms of knowledge, expertise, and geography. To drive real change, we must foster collaboration." She acknowledges that while it's easy to talk about working together, true collaboration demands trust and a willingness to share resources. "It's about having the humility to recognize that we can't keep reinventing the wheel. We need a coordinated effort, with open-source expertise and shared innovations," she explains, inspiring hope for a united industry working towards a common goal.

Mariangela Lavanga

The role of a fashion designer is evolving.

According to Lavanga, academia has a vital role to play in the industry's transformation due to its independence. "For a genuine transition, education, research, and industry must work hand in hand," she emphasizes. This philosophy is evident in her various initiatives designed to boost collaboration across the textile and clothing production sectors. For example, in the FABRIX project, "We're mapping local producers, supporting them in making different production choices and offering funding to small and medium enterprises to spur sustainable collaborations. It's all about accelerating circular fashion in these urban centres," Lavanga elaborates.

She is now developing the Just Fashion Transition Atelier. In this physical space, academia, policy, and industry understand each other's roles and power of influences, and work together on accelerating the transition. This dynamic space encourages collaboration by allowing the sector and policymakers to present challenges for academia and education to tackle headon. Her initiatives serve as testbeds for circular fashion practices, promoting the reuse, recycling, and upcycling of materials to minimize waste. Lavanga's vision of a collaborative, open-source approach is vital to driving the systemic changes needed for a sustainable and just fashion industry. To achieve this transformation, we must also focus on educating the next generation of professionals in the fashion and textile industry.

Educating tomorrow's professionals

The future of fashion rests on the shoulders of transformative education. According to Mariangela Lavanga, the key is to start by educating our professionals. In Rotterdam, Erasmus University Rotterdam leads the change by running several courses around fashion in its Masters programs at Erasmus School of History, Culture and Communication, as well the first academic Minor Fashion Industry in the Netherlands. The Minor is interdisciplinary and open to students of any faculty at Erasmus University, TU Delft and Leiden

University. Lavanga keenly observes, "Over the years, we noticed a shift among our students in the minor, they are increasingly considering the environmental and social impacts of the fashion and textile industry." In the Minor, students are learning about cultural, economic, business history, and media perspectives in fashion; they dive into crucial issues such as climate change, biodiversity loss, and social justice. The minor teaches students to balance social and environmental impacts in fashion, seeking holistic solutions. Alumna Jana van den Bergen reflects, "Sustainability is about innovation and a mindset change. We need new processes and an openness to adopt these technologies."

"The role of a fashion designer is evolving," Lavanga notes. "Designers today need to advocate for sustainable practices within large companies. Our students are trained to support designers in accelerating the sustainability transition of their practices. This comprehensive approach equips students to challenge traditional practices and pioneer non-exploitative methods of fashion production, distribution and consumption. Good practices are emerging, but we must amplify these efforts and ensure they're not overshadowed." That's why the Municipality of Rotterdam, in particular, Rotterdam Circulair, is a crucial collaborator in both their education and research programs, further embedding these values within the community. The last crucial step is to persuade the consumer to choose what is best for the planet.

Your power in fashion

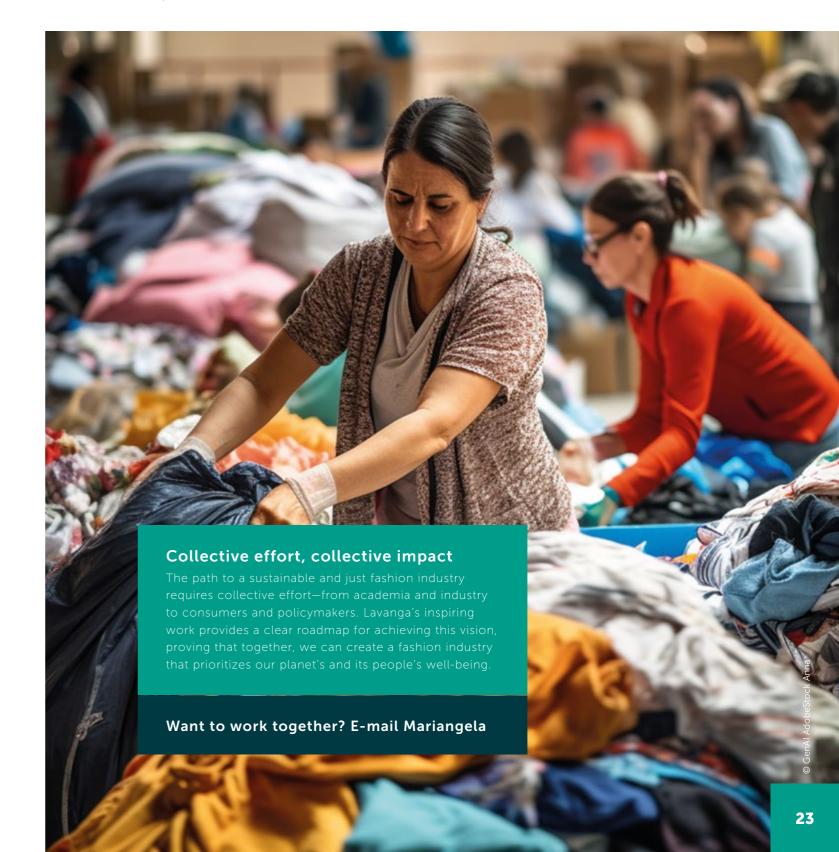
Imagine if every time you shopped, you were making a difference. Mariangela Lavanga emphasizes that consumers too hold power to drive the fashion industry toward sustainability. "Consumers need to be aware of the full lifecycle of their clothes," Lavanga asserts. Your choices may also push brands to adopt greener practices and promote ethical standards.

Currently, the fashion industry lacks stringent regulations, allowing brands to produce and sell harmful products with minimal repercussions. Lavanga advocates for robust guidelines that ensure more brands and consumers adhere to sustainable practices. Stricter rules could help you make more informed, eco-friendly choices. The path is long and complex, but it is an exciting time of transfomative and innovative change, in both

production and consumption.

Social media, too, is a powerful tool. While platforms like Instagram and TikTok often promote fast fashion, they can also be harnessed to spread awareness about sustainable fashion. Lavanga believes social media can inform users about better materials, ethical brands, and the environmental impact of their choices. "We must harness the power of social media to educate and inspire consumers towards sustainable fashion," she emphasizes.

Your conscious choices and support for sustainable brands can drive the industry towards more ethical and environmentally friendly practices. "Every purchase is a vote for the kind of world we want to live in," Lavanga concludes, highlighting your power to foster meaningful change in the fashion industry. By being informed and mindful, you can lead the way to a more sustainable and just fashion world.





educing carbon emissions and creating a more sustainable future is one of the main challenges and targets of the European Union (EU). The impact of these efforts on the fashion and textile industries, with their large carbon footprint, is significant. All existing and new EU regulations and directives will heavily impact these industries. Many directives and regulations within the EU are already in force or will come into effect soon – either for the entire European market or within certain EU member states.

An outline of EU legislation

EU legislation comprises regulations and directives. Regulations are binding laws across all EU countries, while directives set minimum legal standards for member states to incorporate into their national laws. A regulation becomes binding across all EU member states directly; adjustments or additions can be made afterwards in secondary laws. Each member state must transpose a directive into national law within a fixed deadline.

New regulations and directives, part of the European Green Deal, aim to address climate change through plans like the EU Circular Economy Plan (CEAP) and the EU Strategy for Sustainable and Circular Textiles (SSCT). These cover the entire lifecycle of textile products, from raw material sourcing to waste disposal. We present the most relevant recent EU legislation for apparel and textiles.

Regulations and Directives at a European level

Ecodesign for Sustainable Products Regulation (ESPR). Extending the energy-focused Ecodesign directive to textiles by mid-2025 will make products more durable, recyclable, maintainable, and energy efficient.

Corporate Sustainability Reporting Directive (CSRD). Requires larger companies to demonstrate their sustainability and financial health.

Extended Producer Responsibility Directive (EPR). Makes producers responsible for the full lifecycle of textile products, from design to the post-consumer stage.

Unfair Commercial Practices Directive (UCPD).

Provides guidelines for voluntary environmental claims by companies.

Corporate Sustainability Due Diligence
Directive (CSDDD). Compels larger fashion and
textile brands to map their environmental and

social impacts and take measures to ensure sustainability in all its forms throughout the production and distribution processes.

Directives at National level

Apart from the main textile legislation, important legislative steps are taken in several EU countries. Under the Dutch Extended Producer Responsibility for Textiles (2023), all fashion and textile producers active in the Dutch market are responsible for the entire product lifecycle, from proper waste collection to reuse and recycling. This regulation applies to apparel and household textiles

In France, the Anti Waste Law for a Circular Economy (2023) will compel the textile industry to reduce waste, create systems for collecting and recycling waste, and improve the longevity of their products. Under the French Climate & Resilience Law, all large fashion brands must label each product showing its social and environmental impact.

Finally, the Norwegian Transparency Act (2022) and the German Supply Chain Due Diligence Act call for transparency, respect for human rights, decent working conditions throughout the supply chain and reliable consumer information.

The right moves at the right time!

The fashion and textile industry carries a substantial environmental impact, compelling the EU to accelerate its efforts to reduce it. Complying with existing and forthcoming EU climate and textile regulations poses a significant challenge for many apparel and textile brands. Not only must they comprehend the environmental impact of their products throughout their lifecycle, but they must also adhere to relevant EU legislation. It is imperative to gather essential data, formulate the right strategy, and ensure swift implementation to meet these requirements.

Setting New Standards

he fashion industry is a major climate offender, generating 4% of worldwide greenhouse gas emissions. In the Netherlands, as elsewhere, the shift to circular textiles is overdue. Wilma van Hunnik from the Ministry of Infrastructure and Water Management emphasizes the government's pivotal role in this transformation. "The government should lead, collaborating closely with producers, consumers, and researchers," she states. Rampant consumption and the diminishing quality of clothing mean we wear items briefly and discard them too soon. "On average, a person in the Netherlands purchases about fifty articles of clothing and four pairs of shoes annually— that is a lot knowing that the limit of what our planet can handle is five clothing pieces per year." Wilma notes. To combat this, the government proposes a new plan to change the textile industry. The upcoming years are about pushing toward sustainable consumption and circular fashion practices.

The government as catalyst

The government aims to establish a circular system—where resources are reused continuously, minimizing waste. "Circularity means transforming old back into new, creating a loop that ideally never ends," explains Wilma van Hunnik. The product standards being crafted at the European level are at the heart of this transformation. For instance, "We want every new garment to contain a portion of recycled material or be designed to be easily recycled or reused. We aim to set robust quality and circularity standards for every garment," Wilma notes. Other measures are needed as well to make sure that market prices for the most polluting items that are now often the most cheap reflect their environmental impact accurately. Fiscal and pricing strategies are crucial in achieving fair pricing that aligns with the true production and disposal costs. We need to foster a sustainable fashion industry that benefits consumers and the planet alike.

Changing practice

One of our primary goals isn't just to recycle more or set rules for clothing production—it's about making and using less in the first place. "Every day, ads and influencers tempt us with the latest styles, making it hard to resist buying," explains Wilma van Hunnik. Clothes are everywhere, often cheap enough to buy without a second thought. The government is working to change this pattern by reshaping production practices and consumer habits, for instance, by asking companies to make clothes in ways that are better for the planet and urging all of us to think twice before we buy. Wilma also talks about the crucial need for more transparent labels on clothes that show their true environmental cost to combat greenwashing. "With honest labels, everyone can choose clothes that are good for the planet, avoiding those that just claim to be,"

Combatting over-buying

Consumers face relentless temptations to make purchases, driven by constant incentives in physical and online stores. Rapid delivery and free returns have become the norm, feeding the cycle of overconsumption. As policymakers, we must look at how we can counteract this trend. "We need a united front here in The Hague, involving various agencies and ministries," Wilma asserts. It is promising that many people want to deal with the climate more consciously. They want to make the right choices, and we must make that easier for them by providing better information. For example, we would like to see a mandatory European label, like that of washing machines and electrical appliances, so that you can see how circular or polluting a piece of clothing is based on colours or

Wilma van Hunnik

We simply need to start by ensuring there's less junk.

Fostering consumer awareness

Since initiating textile policies in 2020, the government has continued enhancing the framework for circular textiles. "We are striving to engage all stakeholders—government bodies, businesses, academia and consumers—to foster a collective movement toward circularity," says Wilma. However, the consumer is only the final piece of the puzzle. Of course, we are also investing in raising consumer awareness. For example, we inform visitors on-site about waste disposal sites and finance the environmental information office Milieu Centraal. However, more than awareness is needed: the entire system and infrastructure must be geared towards doing the right thing, or it will miss its goal. Currently, the government is pushing forward legal frameworks that compel producers to take responsibility for their products post-consumption, aiming for a 75% reuse and recycling rate in 2030. This policy is likely a game-changer because it will ensure that fashion companies will take the complete journey of their garments into account. It's all a work in progress, but we, as a government, aim to be on top of it.



Circular Sex Solutions?

very year, <u>Circle Economy</u> measures how circular the world is. Hilde van Duijn and her team look at several aspects to get the complete picture. Which materials are going around in the world? How do we use them? Which part is renewable, made of fossil fuels, or recycled? When we started measuring, the world was 9.1% circular. This rate will increase with the growing focus on circularity over the years. However, in 2021, it decreased to 8.6%, and in 2023, even more. This decline is a red flag, signalling the urgent need for initiatives to extend the use of our products or recycle. The real problem is that our consumption rates are increasing, so we are still moving in the wrong direction.

Follow the lifecycle

One of the spearheads in circularity is the used textiles cycle. The question is: How do we use textiles, how long do we use them, and what happens after we dispose of these materials? In this regard, we first need to determine the average lifespan of textiles. For most clothing like trousers and sweaters, it is six years. However, textiles are more than just clothing: consider carpets (lifespan of ten years), bed linen (lifespan of six years), and so on. We use all these materials, and at some point, we dispose of them, preferably by putting them in a textile bin, bringing them to a secondhand shop, or reselling them. However, today, in the Netherlands, 50-55% of all discarded textiles end up in household waste, with only one destination: combustion. Although the municipalities in the Netherlands have a system to collect textiles from households, this percentage has remained unaltered over the past few years. So, only 45% of the discarded textiles are collected. Apart from that, the Netherlands also imports a lot of discarded textiles, mainly from Germany.

What happens to collected textiles?

The secondhand textile circuit is a big business. When you donate your textiles, they will probably not be donated to someone else but sold repeatedly in the Netherlands or elsewhere. We are a vast transit hub, especially in the Rotterdam area. Of all used textiles collected and imported, 81% will not be reused or downcycled in the Netherlands but go abroad.

Although our national sorting facilities employ passionate people who try to find the most profitable and best destination for our textiles, only 5% of all the collected textiles will be resold in the Netherlands, simply because no one is willing to buy these items secondhand. Another 54% will be sent abroad to be reused, and 31% will not be suitable for sale because the items do not have value in the secondhand market. One of the reasons is the low price of so-called 'fast fashion,' making it unattractive for people in most countries to buy it secondhand.



According to a study we did in collaboration with the Dutch Ministry of Infrastructure, 55% of the textiles collected in the Netherlands are not sorted here but abroad. For instance, it shows that we send many of our secondhand textiles to Poland and other countries, such as Pakistan or Ghana. Moreover, what is the 31% of textiles that we deem non-rewearable? They become wipers or will be refurbished. 20% will be downcycled and then burned and turned into energy.

Recycling comes at a price

Sorting with a circular perspective is a massive struggle because it is hard to find secondhand markets, partly due to a faster pace of consumption, lower quality, and increasing collection rates. We find more low-value textiles in the collection bin leading to a negative sorting business case. The average purchase price does not help to get the used textiles into a sorting facility. The cost of sorting labour is exceptionally high and keeps increasing. And then there are the transport costs. Therefore, we need to find new destinations for lower-value textiles that could be recycled. A recent study pointed out that 74% of all non-rewearable textiles could be recycled with the proper infrastructure. Some of those textiles could be recycled mechanically, hybridizing them and turning them into new yarns. Unfortunately, the more significant part would rely on chemical recycling, which requires a unique infrastructure that has yet to exist at a sufficient scale.

The retail practice is unruly

The retail practice embraces these developments but needs help. Loop.a Life, a well-known trendy fashion brand working with textiles sorted by fibres (a highly innovative technology), had to file for bankruptcy earlier this year. Another forerunner, Renewcell, was struck by the same fate despite the enthusiastic support from H&M Group and the Swedish government. The representative organization of textile sorters in the Netherlands has been ringing all the alarm clocks, saying that if nothing changes, we must start incinerating textiles. It is a chicken and egg situation. On the one hand, textile sorters need to invest in the right technology to sort for recycling. On the other hand, there are no recyclers because they need help finding the necessary feedstock for their facilities.

The role of policy

This situation has been happening for a while, so we must accelerate. Governments could play a critical role here. The Dutch government has set ambitions and targets about circularity. They demand, for instance, that more than 50% of textile products in Dutch markets contain at least 50% sustainable materials, of which 15% are postconsumer recycled. However, there needs to be infrastructure to meet these targets. More than relying on the industry alone will be required: if you find textiles with a recycled claim in stores today, they are probably made of recycled pet bottles, which is not recycling but downcycling of materials. You can turn a bottle into a shirt but not recycle it anymore.

The fashion industry must change, and we must know what to do. Now, we urgently need to find the right combination of policies, create the infrastructure for redirecting investments, enhance true industry collaboration not only in a European setting but on a broader global scale, involve all parties, and make the whole debate around circularity more inclusive. The good news is that change is possible. We should not only talk about suppliers or waste in Ghana but also talk with them and ensure that those voices are heard in whatever we develop.

Consumer's responsibility

Finally, what can we do as consumers? People think sustainable fashion is spending much money on sustainable brands, sustainable collections of fast fashion, or wearing shapeless linen in earth tones. Not so! Rather than buying new stuff, it is about wearing our clothes and valuing what we already have. It is about secondhand shopping and going for the sustainable option. It is about mending clothes, washing with care, and washing less. Making something new out of our old clothes or swapping clothes is what we, as consumers, can attribute to sustainable fashion.



Society Visionaries Visionaries



Primal Soles

Innovative circular cork material

Primal Soles takes a serious step towards a more sustainable future, crafting cork insoles that not only provide natural comfort but also contribute to a circular economy. Instead of the traditional cheap, synthetic shoe insoles with no concern for the product life cycle, Primal Soles uses only sustainable materials, prioritizing both natural comfort and the environment. Additionally, after each use, the soles are grinded up and reintroduced into the production process, creating a closed-loop system that minimizes waste and maximizes circularity. This way, Primal Soles makes a conscious effort to be more in balance with our natural planet, continuously living up to their claim 'designed with the end in mind'.

Erdotex Group

Collection and sorting of used textiles

Specializing in the collection, sorting, and reuse or recycling of post-consumer textiles, Erdotex Group stands out with its unique competence. With over 30 years of experience, this family business efficiently offers a wide range of nearly 400 end products with continuous sorting quality. With their recycling practices, discarded textiles can be used as raw material for new textiles, maximizing the life cycle of every piece that passes through their factories. This is more crucial today than ever, as textiles are increasingly made for shorter lifespans and fashion trends change more quickly. Erdotex's carefully sorted streams, distributed globally, contribute to longer textile lifecycles and a more sustainable earth.



Oxious Talent Factory

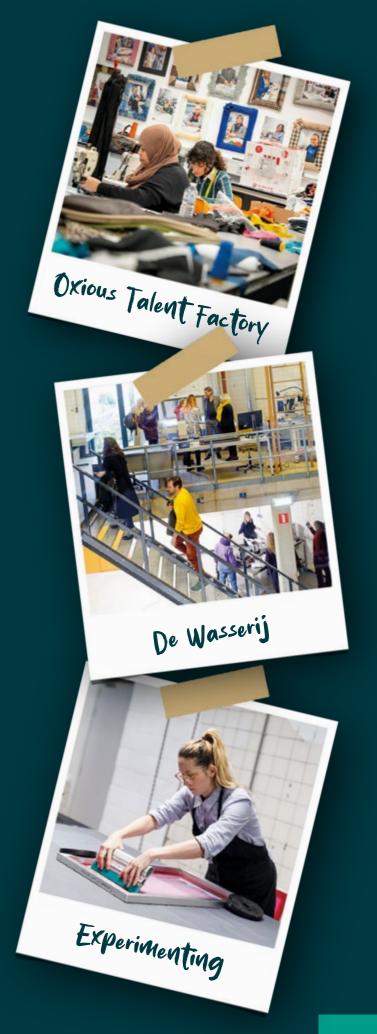
Garment factory

Oxious Talent Factory, a visionary initiative by the sustainable textile brand Oxious, operates as a professional large-scale garment factory in Rotterdam. This project merges Oxious's commercial expertise with the community-driven social sewing workshops of Talent Fabriek 010, active across various Rotterdam neighbourhoods. Committed to addressing social and ecological challenges, Oxious Talent Factory leverages innovative business models to make significant impacts. Its dual mission focuses on ecological sustainability—aiming to reduce textile waste and prevent the destruction of materials—and social empowerment—striving to provide jobs for one hundred people currently marginalized from society by 2027. The dedication of Oxious Talent Factory has not gone unnoticed. In 2022, the company was awarded the prestigious B Corp Best for the World certification, underscoring its commitment to high social and ecological standards. This award proudly positions them among the most impactful businesses globally.

De Wasserij

Fashion innovation hub

De Wasserij is at the forefront of addressing the environmental and social challenges posed by the fashion industry. Through its unique hub, it fosters collaboration, knowledge exchange, and innovation among passionate professionals. This creative space provides everything that shakers & movers in the industry need, while also offering an enriching experience for fashion enthusiasts. The hub now consists of about 50 residents changing the fashion game. Here, they and other interested parties can experiment in a fully equipped 250 m2 creative lab with state of the art textile technologies. Think of sewing machines, laser cutters, vinyl plotters, screen printing and much more. In addition, De Wasserij offers space for exhibitions and popups, as well as an activities programme for professionals and fashion lovers. De Wasserij fosters a community that envisions our next fashion steps and actively experiments with them.



Impact Now Business models for change

magine making a sustainable impact today—not someday, but right now. Where do we begin? This burning question confronts eager students, faculties, and forward-thinking companies alike. Meet Taslim Alade, a lecturer at the Rotterdam School of Management (RSM, Erasmus University's business school) and a seasoned expert in sustainable business practices. The Department of Business-Society Management at RSM offers a groundbreaking six-week Sustainable Business Models elective course within its Global Business and Sustainability Master's program. This elective course, led by Taslim, combines academic rigour with real-world application, partnering with major companies. He's not just theorizing about change; he's orchestrating it, and now, he's ready to share these powerful insights with us.

Let's break it down: what exactly is a sustainable business model? It's more than a typical business model. A sustainable business model meets a company's objectives while enhancing economic, social, and ecological outcomes. In the fashion industry, this means creating systems that not only recycle or reuse materials but also make sustainable choices throughout the value chain, which requires a multifaceted approach. Such as: ethical sourcing and production, eco-friendly manufacturing processes, slow fashion movement, transparency and traceability. This multifaceted approach also requires a multidisciplinary approach.

Embracing multidisciplinarity

For businesses and academia alike, embracing a multidisciplinary approach is not just beneficial; it's essential. Consider the consumer education and engagement in the fashion industry: Insights should come from more than just marketers and ad agencies. A psychologist, for instance, can reveal how consumers can emotionally connect and purchase a sustainable product or service, providing a deeper understanding of engagement strategies. We gain a richer, more comprehensive view of challenges by integrating diverse perspectives, each acting as a unique lens. This multidisciplinary approach enhances our solutions to innovate and solve complex problems, which aligns perfectly with SDG 17's emphasis on partnerships. Building on this collaborative foundation, let's see how our Sustainable Business Models course brings these concepts to life.

Putting theory into practice

The Sustainable Business Models (SBMs) course sets the standard for impact-driven education. First, we equip our students with methods to apply SBMs theories to various sectors. Then, we develop impact-driven SBMs for business cases within organizations. We also focus on enhancing students' personal competencies to take leadership roles in designing SBMs. In today's uncertain job market, this course provides students with firsthand experience, establishing themselves as self-employable individuals by offering sustainability services to companies.

The partnership among students, faculties from Erasmus University Rotterdam, Impact at the Core, and external stakeholders was pivotal in co-creating and implementing knowledge for the success of this impact-driven education. Armed with their newfound expertise, students enhanced the business models of companies. In return, the companies provided real-world scenarios for the students

Use challenges to reach higher levels, like an eagle in a stormy sky

Taslim Alade



a dynamic learning environment for immediate societal impacts, tangibly

Our course has not only been educational Rotterdam: To create positive societal crafting and executing an impactful ambitious feat that promises to redefine

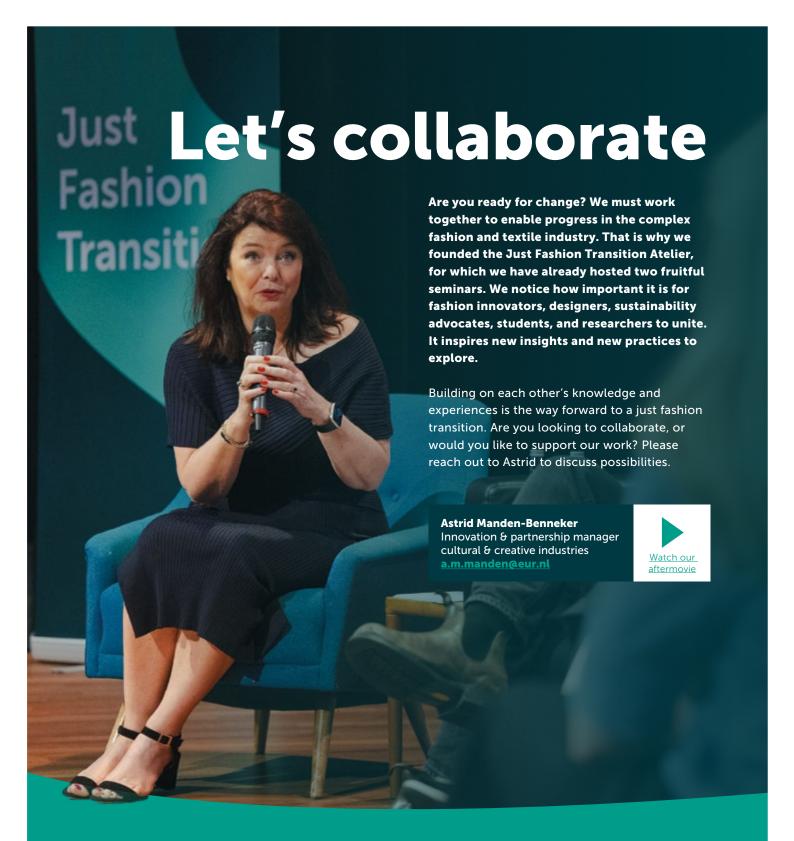
Accelerating Impact-Driven Education

More universities and companies must the UN's Sustainable Development Goals. By fostering more initiatives that allow

The key to success

Achieving a sustainable business model (SBM) is an ongoing process that offers to transform the global economy to benefit the planet, people, and communities. It may seem complex at times, but as a to provide possible pathways to solve these complex

- **1. Partnerships:** Setting a standard for responsible and through partnerships across sectors and communities.
- 2. Unbundling Challenges: By breaking down sustainability challenges, contexts, and desired goals monitor the progress on how previously unsustainable approaches were improved over time. This applies to changing business models for a more sustainable
- **3. Embracing Challenges:** Use challenges as opportunities to achieve greater sustainability and to rise. Rather than being discouraged by societal issues or wicked problems that hinder the achievement of



Arts, Culture, and Creativity Community

Just Fashion Transition is the first topic launched under the new Arts, Culture, and Creativity Community (A3C) umbrella at Erasmus University Rotterdam. The A3C community strives to make this research and education more visible, encourages transdisciplinary collaboration, targets a holistic view, and builds on external partnerships.

www.eur.nl/A3C

Colophon

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