

ESG Report 2023



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MANAGEMENT / REVIEW

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MESSAGE FROM THE CEO

Milestone moments came thick and fast in 2023. For the first time, we saw our next-generation turf systems rolled out in the real world as Soccer, American Football, and Hockey fields, laying the groundwork for major product launches in 2024 and beyond. These new designs, which have circularity built into their very fabric, epitomize TenCate's approach to sustainability and how we have embedded ESG in our business strategy.

The tagline of this report is "Play On, Today & Tomorrow," which captures the importance of what we do. Our synthetic turf products facilitate sport, play, and leisure, benefiting everyone from professional athletes to children kicking a ball around. These benefits include better health, enhanced social interaction, and stronger communities, as well as pure enjoyment of course. Compared to natural grass, synthetic turfs offer many more "playable hours" thanks to their ability to withstand all weather conditions and unlimited, intensive use.

We are committed to ensuring that our positive impact continues to grow. At the same time, we are extremely mindful that we are a manufacturer of polymer-based products. We are constantly thinking about how to improve the way we manufacture our products, how to minimize the waste we generate, and how to preserve the value of our raw materials so that they can be used again and again. Our ambition: 100% circularity.



Michael Vogel
CEO of TenCate

That is why we are finding innovative ways to limit our environmental impact, without compromising on the quality of our products. Years of research, prototyping, and rigorous testing have led to our next-generation turfs, which are vastly more sustainable than they were just a few years ago. For example, our "nonfill" products require no polymeric or organic infills, nor do they require sand as ballast for stability, leading to a massive reduction in vehicle movements and associated CO₂ emissions. Our single-polymer products allow us to harvest the applied polymers fully at the end of the product's functional life, allowing us to regenerate these polymers to virgin-like qualities for reuse, rather than downcycling or even landfilling these products.

In 2023, we completed the first installations of Pure PT and Pivot™, as our nonfill product is called in Europe and the United States respectively. These were proud moments as I saw how the work of my talented



TenCate's new zero-water Hockey turf, Pure EP, at a Hockey club in the Netherlands.

colleagues had paid off. Many customers have now recognized the benefits of this product. Another proud moment came when we installed our new zero-water Hockey turf, called Pure EP, at a Field Hockey club in the Netherlands. Elite Hockey is played on irrigated fields to enhance the speed at which the sport can be played. Of course, at a time of global water scarcity, this is not a sustainable use of water. Pure EP offers the same playing properties as “wet” fields, saving millions of liters of water but also offering countries that have little water the opportunity to be competitive in the global elite level of Hockey. Again, market acceptance has been very encouraging, which makes us very optimistic about the prospects of the product.

“Design to recycle” is always at the forefront of our minds when we design new products. We do not want our products to end up in landfills or to be incinerated.

That is why our single-polymer technology is a game changer. But the full benefit of the products that we are launching today will not be felt until they reach their end-of-life phase, more than a decade into the future. Today, we are dealing with the question of how to dispose of complex, multi-polymer legacy products. Therefore, TenCate has formed recycling partnerships in Europe and the United States to ensure that legacy products are also disposed of properly.

We are fortunate to have almost 3,000 people working for us – from Australia and New Zealand to the Far East, Europe, the Middle East, and North America. Whether they are developing products, manufacturing yarns, making turf or installing fields, our people share the same level of passion for what we do. And we all share the same sense of pride when we see people enjoying sports, play, or leisure on our surfaces.

“Design to recycle is always at the forefront of our minds when we design new products.”

For more than three centuries, TenCate has adapted and evolved to meet the needs of its customers, pursuing opportunities in an ever-changing market. Today, with a business strategy designed to amplify our social impact while minimizing our environmental impact, we are again adapting – while always putting our customers first. Looking back at everything we achieved in 2023, I believe we are on the right track to ensure that all people who use TenCate's products can “Play On, Today & Tomorrow.”

Michael Vogel, CEO

HIGHLIGHTS FROM 2023

REVENUE IN 2023

€ **1.26 billion**



We extended our innovation partnership with PSV, the Dutch Premier League Football Club, until 2026. The Fieldlab that we have at PSV's Herdgang Academy allows us to test our latest products, to collect vast amounts of data, and to get invaluable feedback from players, as well as the coaching and medical staff. This allows us to continuously push the boundaries, always with the next generations of turf in mind.

HOURS OF PLAY POWERED

> **350 million**



In March we extended our long standing partnership with the Johan Cruyff Foundation to support the Foundation in providing sport and play surfaces all over the world. It is incredibly rewarding to see the number of Cruyff Courts increase every year and to see the joy on the faces of people using them.



The first installation of Pure EP, our zero-water Hockey turf, was carried out in June. MHC Weesp, a Hockey club just outside Amsterdam, became the first in the world to have a full-sized Hockey field based on TenCate's dry (non-irrigated) artificial turf technology.



In June, our yarn manufacturing plant in Dubai became Gold Certified by UL Solutions, achieving a 96% landfill diversion rate. In 2023, TenCate's diversion rate for all its manufacturing plants combined reached 88%, or 9.808 metric tonnes, a rate which is continuously increasing as our tireless efforts bear fruit.

WASTE DIVERSION RATE

88%



In 2023 we began the rollout of our non-infill turfs for use in Soccer, American Football, and – in future – other sports. The first Pure PT pitch, as the product is called in Europe, was installed at AS 80, a soccer club in Almere in the Netherlands. In the US, where the product is marked as Pivot™, we completed our first installation in Shiloh, Arkansas in July. The player feedback has been fantastic and we expect strong uptake in 2024.



We conducted our first global employee engagement survey, (GEES), to get feedback from our employees from all parts of the company and all over the world about topics that matter most to them. Positive feedback is great, but we are even more interested in the feedback about how we can further enhance our employees' engagement and job satisfaction.

PARTICIPATION RATE

77%

EMPLOYEE NET PROMOTER SCORE (ENPS)

49



Because our non-filled turf systems weighs significantly less, we can reduce transport emissions from installation and disposal. Instead of the 200+ metric tonnes of materials and 40 vehicle movements required for a conventional synthetic soccer pitch, our next generation non-infill products require only 30 metric tonnes of material and less than 6 vehicle movements.



In September the European Union banned the sale of intentionally added microplastics, with a transition period of 8 years. For our industry, this impacts the use of polymeric infills such as SBR. TenCate supported the ban from the onset. We have been working on developing alternative turf systems for several years. Pure PT and Pivot™, our non-infill turfs, are a direct result of this.

ABOUT TENCATE

TenCate is a global group of market-leading companies that jointly create the most innovative, high-quality synthetic turf for Sports and Outdoor Living. We create a positive social impact by facilitating sport, play and leisure, benefiting everyone from professional athletes to children playing for their local sports teams. Our products contribute to people's health, social interaction and wellbeing.

OUR HISTORY

TenCate was established in the Netherlands in 1704. From our roots in the textile industry, we have repeatedly reinvented ourselves, staying at the forefront of innovation. We were one of the first entrants to the synthetic turf market in the 1960s, developing products that accelerated the adoption of synthetic turf in sports such as Soccer, American Football, and Field Hockey.



The early 21st century has been an era of significant growth for TenCate. Synthetic turf has become a key part of sports infrastructure all over the world as the benefits of the products, such as 24/7 usability coupled with savings of water, fertilizers, pesticides and maintenance have become apparent. We also expanded into the Outdoor Living sector, constantly innovating to develop landscape turfs that are hardly discernible from natural grass.

TENCATE TODAY

From humble beginnings in Nijverdal, the Netherlands, where we are still headquartered, we are now a truly global company spanning the entire value chain from yarn and backing manufacturing, through turf manufacturing, installation, maintenance and recycling. Thanks to the work of the almost 3,000 employees across our 36 companies, we sold our products in more than 60 countries in 2023, in the process generating € 1.26 billion in revenue.

OUR AMBITION

Our ambition has not changed: to provide the market with the most innovative, highest quality products while positively impacting the wider community. While we have always had sustainability as a key pillar supporting our strategy, 2023 saw us take major steps in becoming a truly circular company.

With the launch of products like Pure PT / Pivot™, a Soccer and Football product that does not require infill of any kind, and Pure EP, a water free elite Field Hockey surface, we are entering the next generation of synthetic turf. Our OneNDA technology, currently

being introduced into a wide range of play and leisure applications, has also started to enable the manufacture of fully circular, single polymer products. Alongside this, we are focused on achieving Zero Waste to Landfill in our operations – all with the objective of maximizing the re-use of scarce resources.

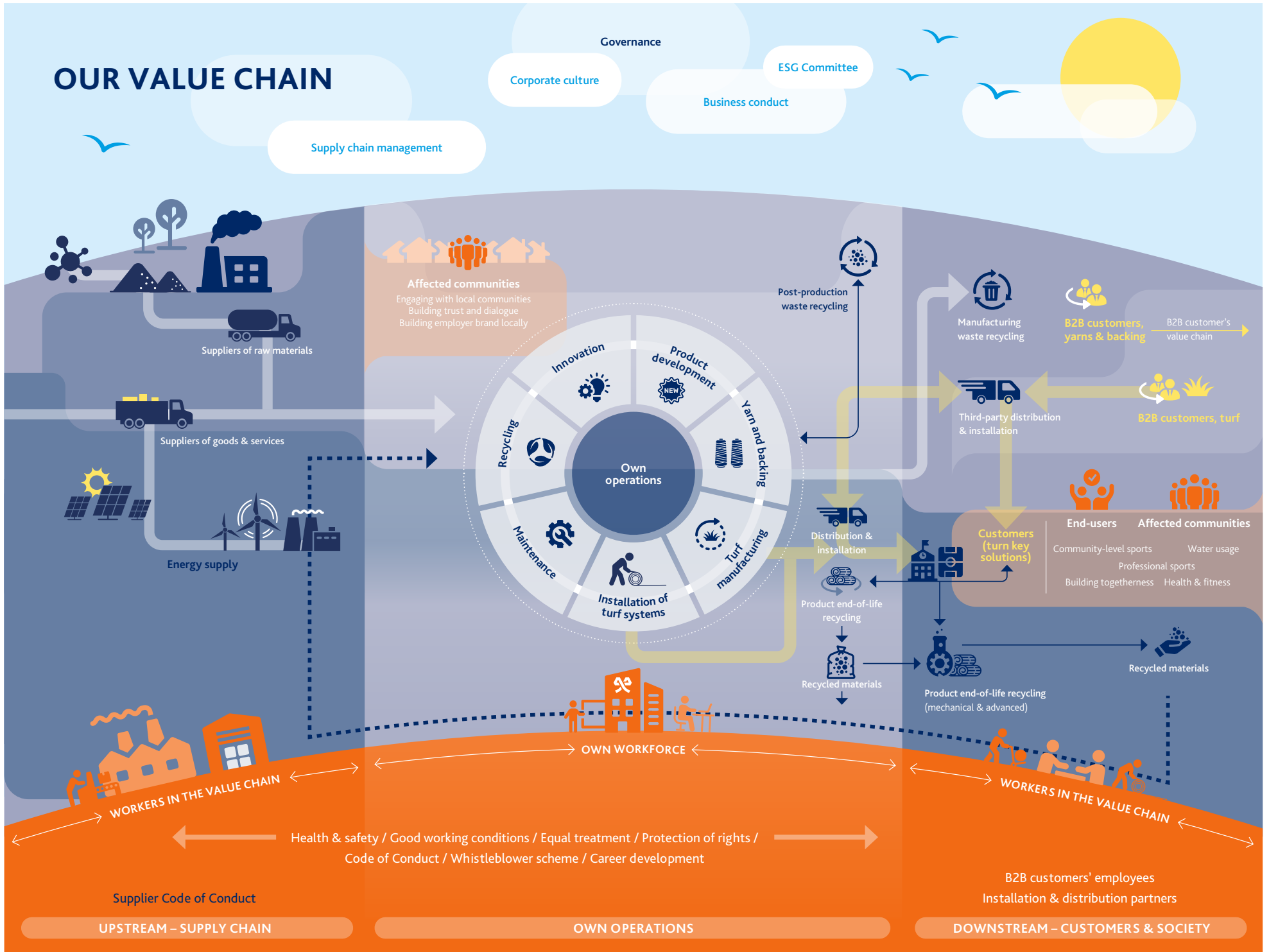
OUR OWNERSHIP

TenCate Grass Group B.V. is an independent, private company. At the end of 2023, the majority shareholder was Crestview Partners. Leonard Green & Partners, a leading US-based private equity investment firm was in the process – completed in 2024 – of acquiring the majority shareholding in TenCate.

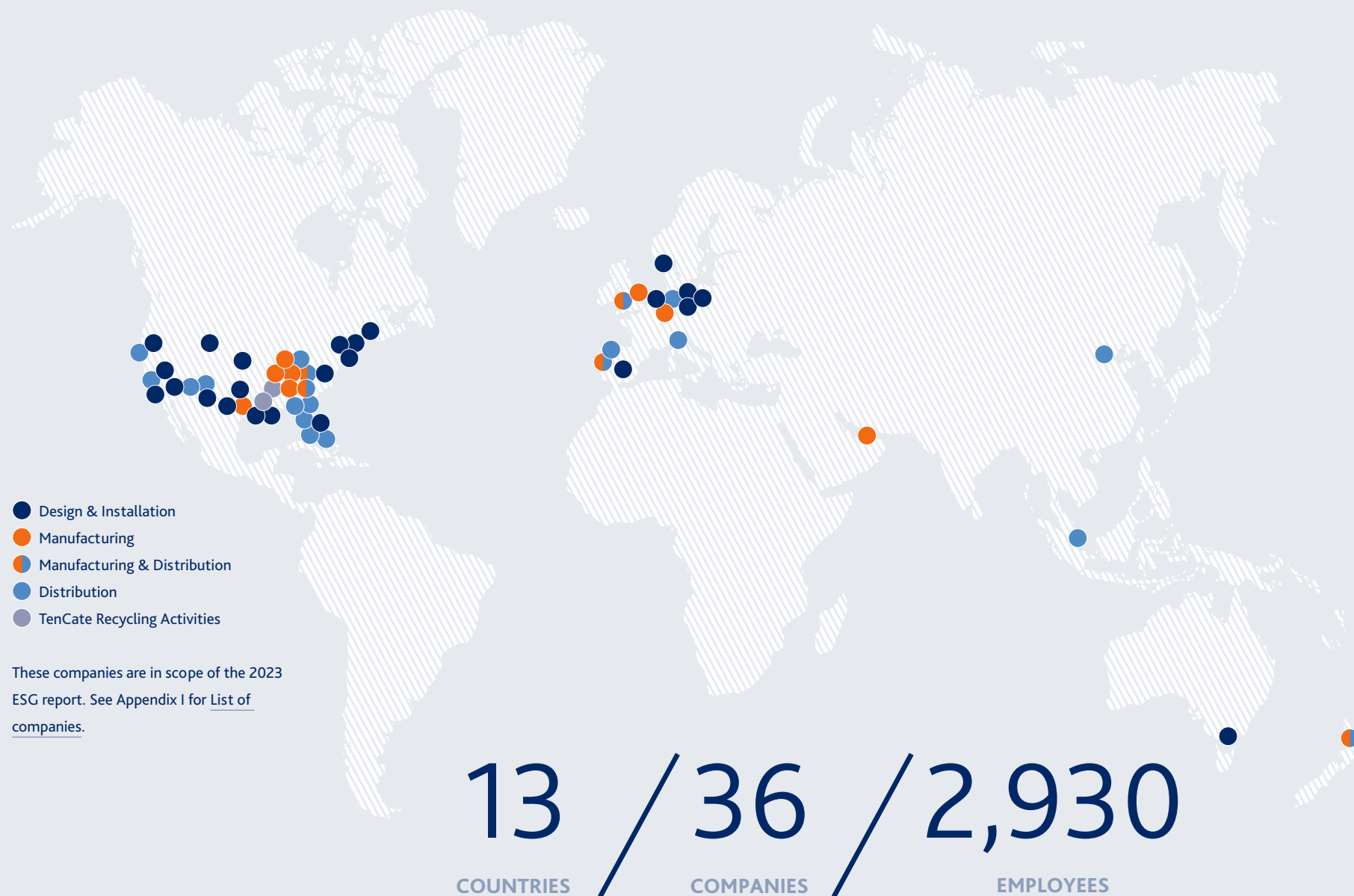
OUR VALUE CHAIN

TenCate has a vertical integration strategy. We cover all steps in the value chain, making us a fully integrated company. This includes research & development, manufacturing of yarns and backing, production of turf, distribution, installation and maintenance, and end-of-life recycling. Our approach allows us to stay close to customers, understand their needs, and rapidly turn those needs into new products.

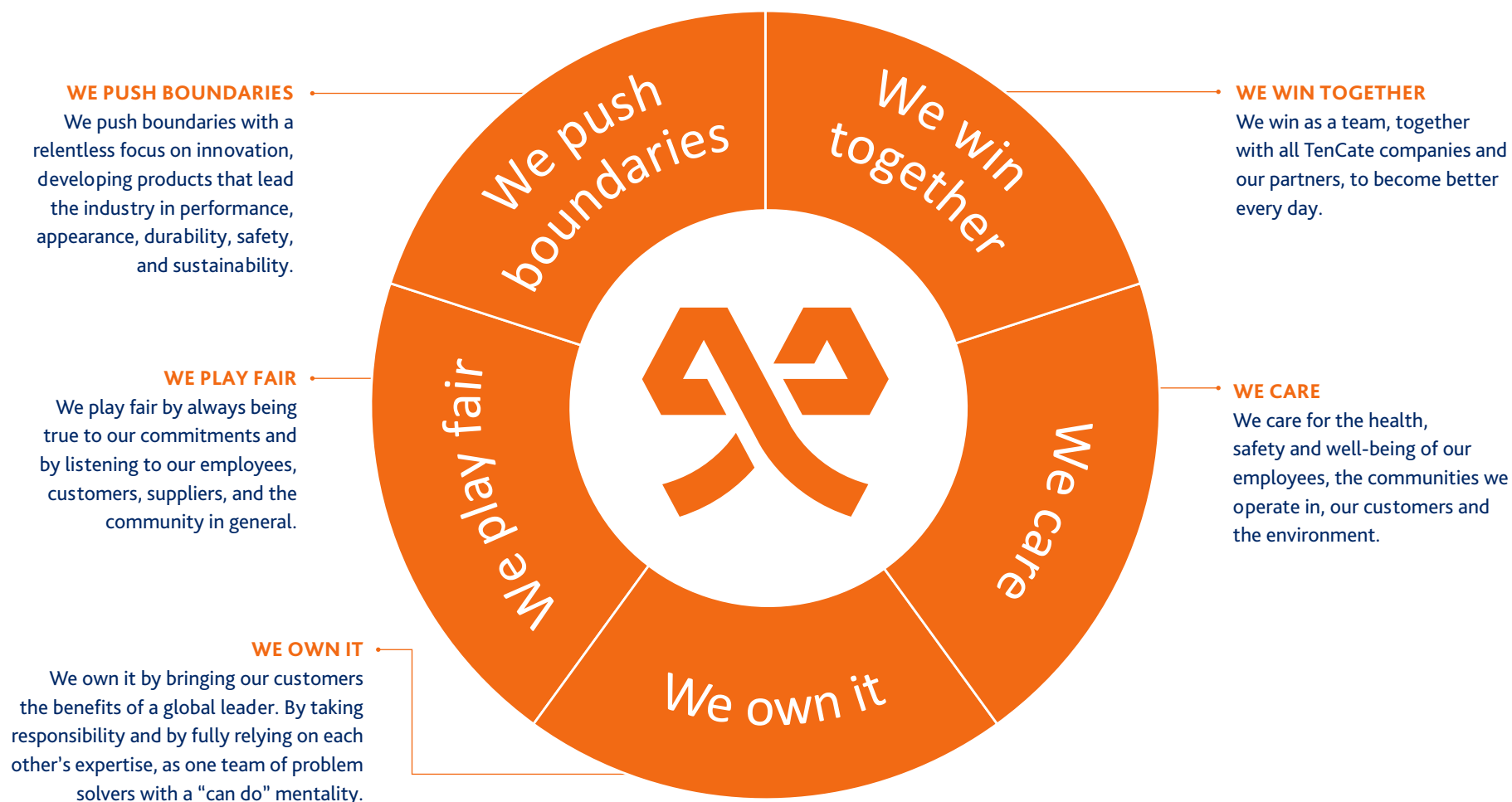
OUR VALUE CHAIN



OUR COMPANIES & LOCATIONS



OUR SHARED VALUES

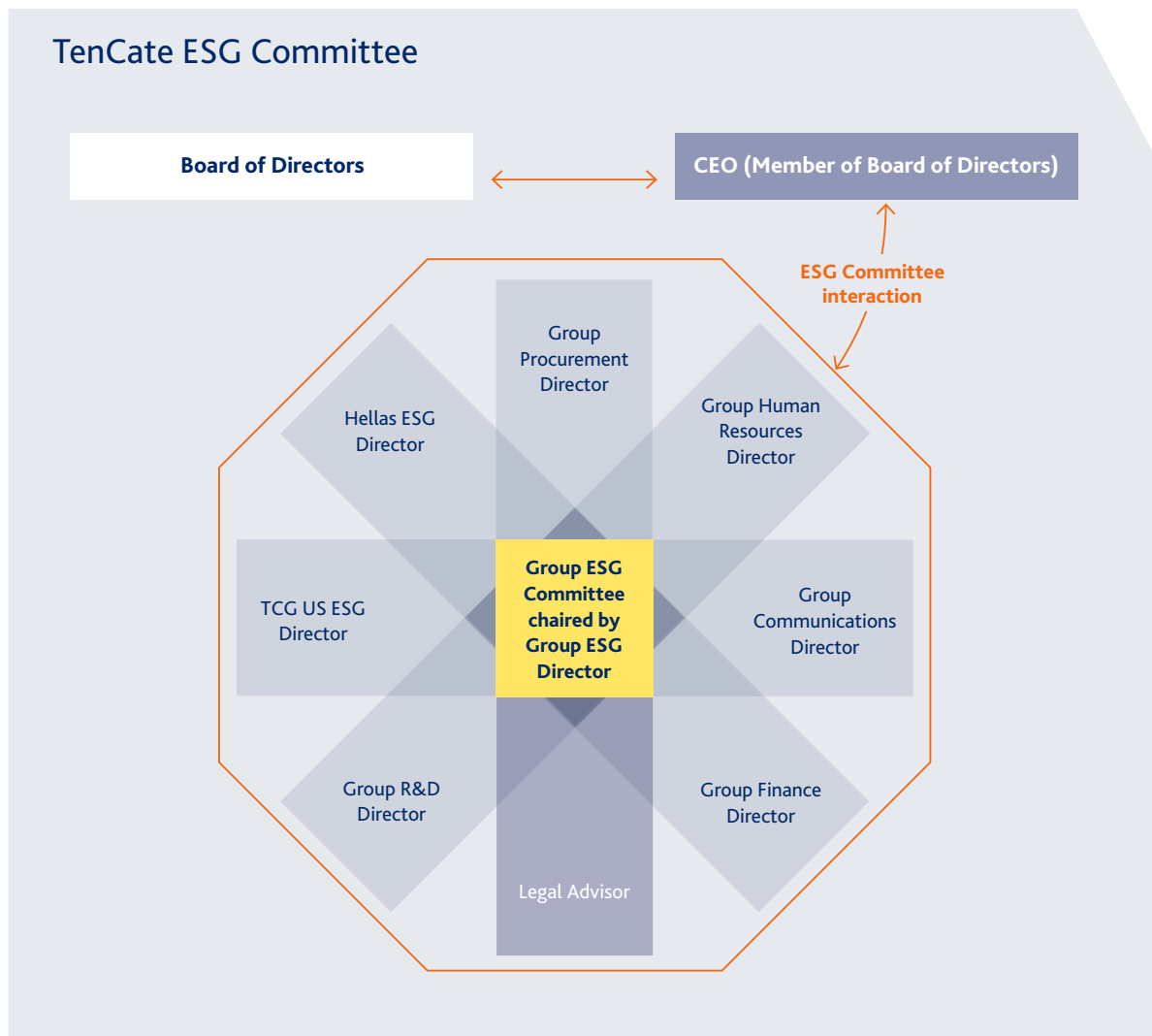


ESG GOVERNANCE

The ESG Committee, which is led by the Group ESG Director, comprises key representatives from various departments, thereby ensuring that all functional areas are represented in decision-making.

The Committee guides our decision-making processes and ensures that ESG considerations are embedded throughout our operations. It organizes materiality assessments; reviews and validates implementation plans; establishes working groups; proposes initiatives and policies; and assesses and monitors risks associated with ESG factors. The Committee liaises closely with the CEO, who is also a member of TenCate's Board of Directors.

TenCate's ESG Committee meets regularly, with three official meetings in 2023. In addition, members of the Committee interact regularly between meetings to ensure that progress is made. Individual members of the Committee take responsibility for specific working groups in their areas of expertise, such as HR and Procurement.



OUR STRATEGY

In this section, we set out our strategy within the context of wider trends in the synthetic turf industry, customers' priorities, environmental concerns, and the regulatory sphere.

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Our strategy / INVESTING IN PEOPLE

Context

TenCate's workforce consists of almost 3,000 employees, who contribute every day towards the success of our company. Our workforce is split across 36 companies in 13 countries, with the highest number of employees located in the United States, the Netherlands and the United Arab Emirates. The environments in which our employees work differ greatly, as do the employment laws and regulations in different locations.

Our strategy

We seek to create a safe, diverse and inspiring environment in which our people can excel, develop themselves and pursue a career based on their skills and aspirations. We ensure that our companies have the autonomy they need to manage their own workforces and tailor their strategy to the local labor market, laws and regulations, and the needs of their employees. Our companies have robust training programs and processes in place to ensure employees' health and safety. We have a Code of Conduct at group level. For more, see the chapters [Working at TenCate](#) and [Health & safety](#).



Our strategy / PURSUING 100% CIRCULARITY

Context

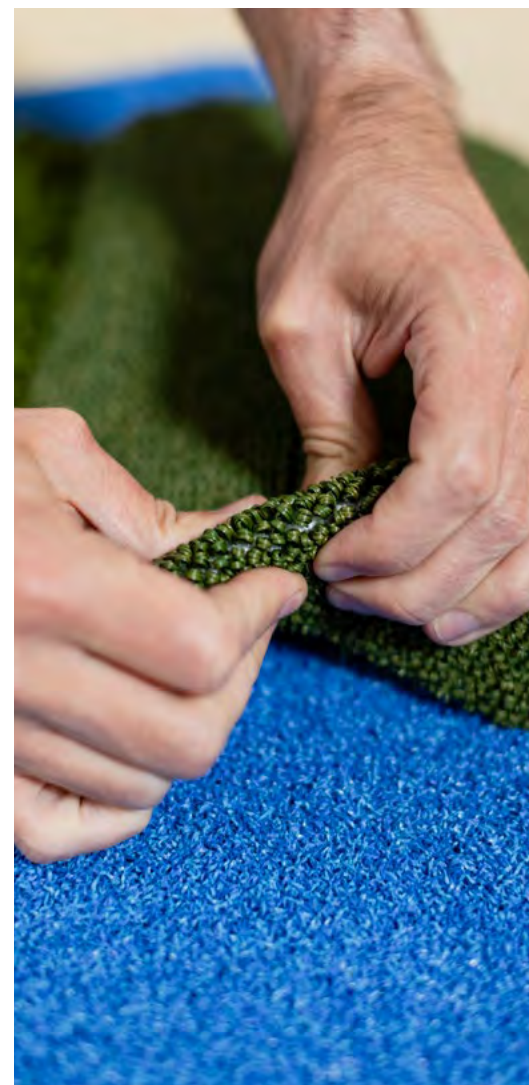
Circularity is an ambition across many industries, including our own. Companies are seeking ways to make their products part of the circular economy, a system that maintains the value of products, materials and resources in the economy for as long as possible, thereby minimizing the generation of waste. Synthetic turfs generally reach end-of-life after eight to twelve years, depending on the intensity of usage. In the past, landfilling and incineration have been common disposal strategies. This is not sustainable.

Currently, many polymer-based products can only be 'downcycled', but the plastic recycling industry is developing fast – and companies such as ours are finding ways to reuse recycled materials. This is supported by advances in product design that will allow for greater recyclability at end-of-life.

Our strategy

Our ambition is to reach 100% circularity, whereby the value and quality of the raw materials in our products is maintained – meaning that, through recycling, the materials can be reused again and again in high-quality applications. Our objective is to fully ingrain design-to-recycle into our product development process, to make downcycling and disposal a thing of the past. In conjunction, we are determined to enhance our customers' satisfaction with the functional properties of our products.

To achieve this, we have invested heavily in research and development, including by establishing the Center for Turf Innovation (CTI) in the Netherlands as a hub for research, development, and collaboration. We nurture a culture of innovation across the entire group. Projects that were initiated five years ago have now reached the end of the R&D pipeline and are being rolled out. We have developed new technology, called OneDNA, that enables us to make fully circular, single-polymer products. We are also launching our non-infilled turf system, branded Pure PT and Pivot™ in Europe and the United States respectively, and our zero water Field Hockey product, branded Pure EP. For more information, see our chapter on [Circularity & innovation](#).



Our strategy / ADVOCATING FOR SYNTHETIC TURF

Context

On a daily basis, thousands of people can be found on synthetic turf products manufactured by TenCate, playing sport or engaging in recreational activities. In many countries, most young Football or Field Hockey players may never have played their sport on natural grass. However, many people do not realize the benefits that synthetic turf can bring as an alternative to natural turf.

Our strategy

We emphasize the high quality of our turf, highlighting that it can surpass natural grass in many respects, and we always seek to exceed the expectations of our customers. Synthetic turf provides for a durable, consistent, all-year, all-weather surface. It is this intensity of usage that makes synthetic turf an attractive option for space-constrained inner cities, water-scarce and drought-prone regions, parts of the world where freezing temperatures mean that natural grass simply does not grow, and sports clubs where pitches are in constant use – to name just a few use-cases. In terms of maintenance, artificial turfs do not require pesticides, fertilizer, watering or mowing, all of which have their own environmental impacts.

The positive impact on individuals and society is explored in our chapter [Consumers & end-users](#).



Our strategy / PROMOTING NEXT GENERATION TURF

Context

Until the recent TenCate breakthrough, the non-filled turf systems on the market had several limitations – and people's perceptions may still be driven by their past experiences, most notably around grip, or the lack of it. Legacy issues also include hard and uncomfortable surfaces, low durability, and yarn going flat. On the other hand, conventional infilled turf systems also have many drawbacks. These include the impacts of materials commonly used in the infill layers. For example, sand is abrasive, and rubber infill is covered by the incoming EU ban on the sale of products with intentionally added microplastics.

Our strategy

Our non-filled product (Pure PT / Pivot™) represents the next generation of synthetic turf. At the same time, we are mindful of the fact that many customers will still prefer infilled turf systems, and that adoption may take time.

Our strategy is to continue to perfect our non-filled products and to make these readily available to the market at large, clearly communicating their benefits to our customers. Concurrently, we will continue to improve the performance of our infilled systems, all with the intention of giving the customer a great product to play on while making these products as sustainable as we possibly can (see our chapters on [Circularity & innovation](#) and [Microplastics](#)).



Our strategy / SAVING WATER

Context

Climate change, population growth and migration are putting a lot of stress on scarce water resources. Synthetic turfs are a great water-saving solution compared to natural grass – except when it concerns Field Hockey. At the elite level, but also at lower levels, Field Hockey is commonly played on “wet pitches”. Pitches are irrigated before matches and at half time with thousands of liters of water. Wet pitches play fantastically, but from a sustainability and water availability perspective, this is not tenable. It is also very expensive.

Our strategy

For years, we have considered how to provide a playing surface that plays like “wet”, yet does not require water. In 2023 we completed our first installations of Pure EP, which goes a long way towards doing exactly that. We will keep working at perfecting this “zero water” product, but it already provides clubs, schools and municipalities with a great alternative.

Aside from its environmental and financial benefits, Pure EP has the secondary effect of expanding access to the game – especially in water-scarce regions. We believe Pure EP can help elite Field Hockey nations, whose players are affected by water constraints in their countries, to continue to be serious contenders again at a global level. For more, see our chapter [Circularity & innovation](#).



Our strategy / REDUCING EMISSIONS

Context

It is critical that all manufacturers find ways to reduce greenhouse gas (GHG) emissions and limit global warming. We consider this the “right thing to do”. In addition, rules and regulations are coming in that will oblige companies – including ours – to measure, set targets, report, and reduce GHG emissions.

Our strategy

We have a two-pronged strategy to reduce our emissions. Firstly, we are developing new products that require much less energy to manufacture, transport, install and maintain. Secondly, we are continuously adjusting and optimizing our manufacturing operations and finding innovative ways to reduce energy consumption. For more information, see our chapter on [Climate change & energy](#).



Our strategy / COMMITTING TO SUSTAINABILITY

Context

Sustainability is a growing priority worldwide, becoming a central theme for companies to consider and embed into their business models. The negative impacts of climate change and non-renewable resource consumption – on both the environment and society – pose significant risks to companies, affecting their long-term viability. More widely, we have also seen the growth of the concept of ESG.

Regardless of political uncertainties, sustainability is a topic that matters to the public, to national and local authorities, and to many other stakeholders. In fact, our view is that the public is the biggest and fastest changemaker.

Our strategy

We are confident that pursuing sustainability is the only choice for the future of our business, as well as for the future of society and the planet. Our sustainability strategy is driven by a commitment to serving the needs of our customers and making positive impacts on the lives of customers, users, employees and all workers in the value chain. We seek to minimize our negative impacts on the environment, for example by increasing the circularity of our products. We are fully committed to our sustainability strategy in the long term.



Our strategy / PURSUING EXPANSION & INTEGRATION

Context

To manufacture a synthetic turf, resin is turned into yarn and backing. Yarn and backing are then turned into turf. The turf is distributed, installed, maintained, and – finally – recycled at the end of its functional life. Different types of companies get involved at each phase of the lifecycle of a synthetic turf product, and all of them have a critical role to play.

Our strategy

We have pursued a strategy to span the entire value chain. By being very close to customers, we best know what the customer requires. We can feed that back through the value chain to ensure that we develop those products that the customer requires. In addition, we can ensure the quality of the product when it arrives in the marketplace. This also enables us to bring developments to the market very quickly.

In 2023, we reinforced our vertical integration model via acquisition, acquiring six new companies over the course of the year. Our acquisition strategy is focused on identifying companies that are very competent, are entrepreneurial, have great track records, and fit into our culture – which is a culture of collaboration. Once a new company has joined our group, we pay particular attention to retaining its strengths, but then support the company in areas in which it may not have been as strong. Of course, new companies that join the group also start representing our TenCate product portfolio. Without exception, and over many years, this strategy has worked very well.



Our strategy / FACILITATING END-OF-LIFE RECYCLING

Context

End-of-life disposal of synthetic turfs is seen as a major concern by customers. "Legacy products", such as those currently being replaced by next generation turfs, are complex to recycle and turn into new, recycled products. This is a challenge faced by companies across the industry, as well as companies in many other sectors.

Our strategy

End-of-life recycling is now a key pillar in our strategy. In recent years we have entered into recycling partnerships in Europe and the US, including both chemical and mechanical recycling initiatives. For more information, see the section on waste in the [Circularity & innovation](#) chapter.



Our strategy / ENSURING SUSTAINABLE SUPPLY CHAINS

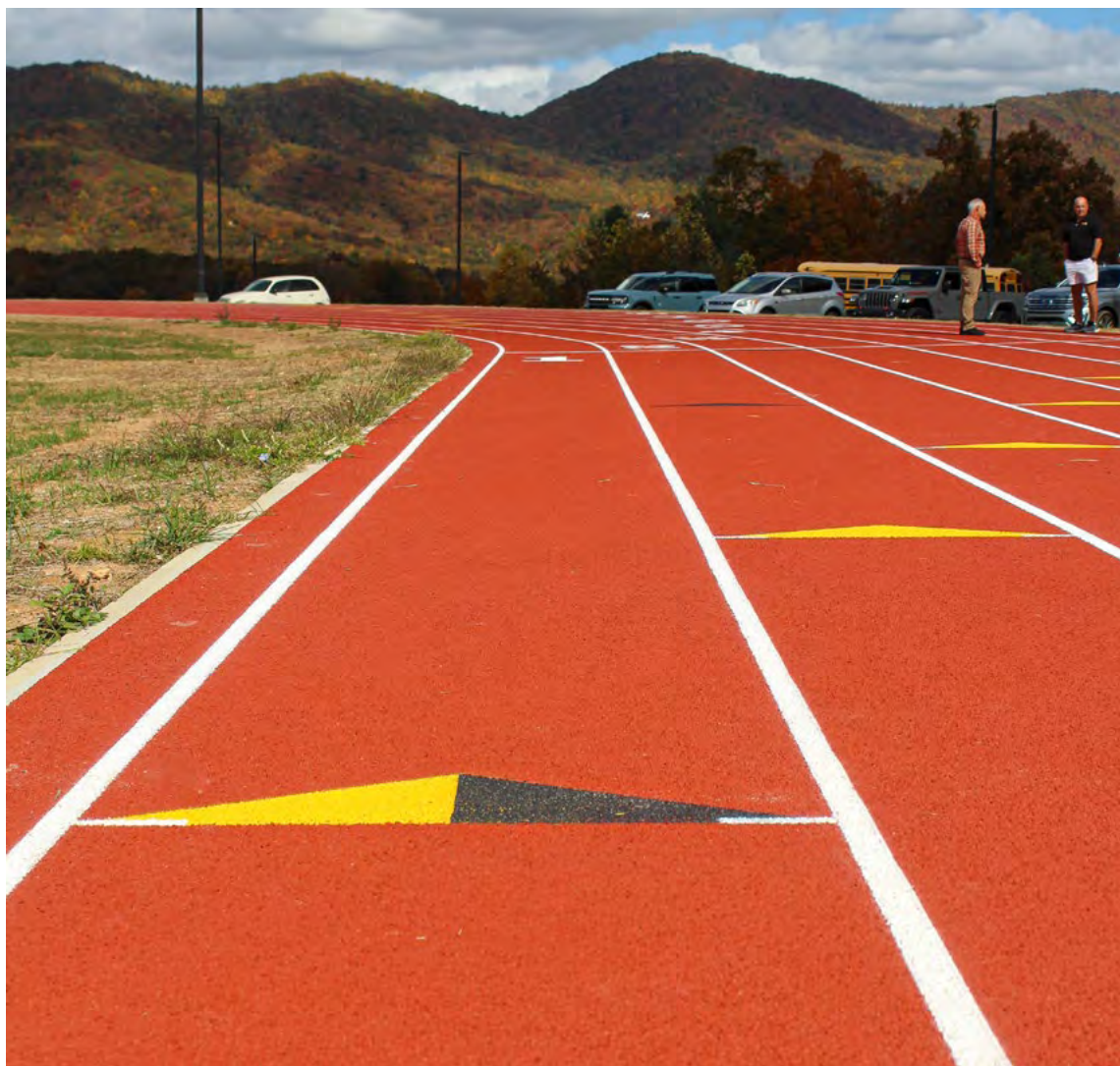
Context

In the synthetic turf industry, we rely on a complex network of suppliers, ranging from raw materials suppliers (upstream in our value chain) to end-of-life recycling partners (downstream). Globally, the Covid-19 pandemic made clear just how crucial supply chain management is to companies and consumers alike. There is now increasing awareness that companies bear responsibility for making sure supply chains are sustainable, and that they hold their suppliers accountable for their ESG practices.

Our strategy

We have a robust supply chain. We minimize potential impacts of disruptions to the supply chain by dual- or triple-sourcing. By manufacturing close to our markets in Europe and the US, we cut down on the risk of global supply chain disruption. Where disruptions do occur, we keep open lines of communication with suppliers and customers. In this way, we can keep our customers supplied at all times.

We are in the process of screening our suppliers on their ESG performance across a range of indicators. This allows us to make more informed procurement decisions, taking ESG into account. It also encourages good practice among suppliers. For more information, see the Supply chain chapter.



Q&A WITH THE GROUP ESG DIRECTOR



Nikoleta Konstantinidou
Group ESG Director, TenCate

How is TenCate preparing for compliance with the Corporate Sustainability Reporting Directive (CSRD)?

This ESG report is a significant milestone on our journey towards CSRD compliance. While TenCate is not in scope of CSRD until the 2025 financial year, the best way to prepare is to begin the process as soon as possible – so that we can see what information we can already share, as well as the gaps we still need to bridge. For a global company such as ours, with subsidiary companies all over the world, the challenge

is especially complex. It is critical to align as soon as possible and to establish the right structures and mechanisms to capture the data we need.

The first big step was to begin our double materiality assessment (DMA) in 2023, guided by the European Sustainability Reporting Standards (ESRS).

We identified TenCate's material topics, as well as our impacts, risks and opportunities (IROs), and gathered data to meet the ESRS disclosure requirements – all of which are presented in the following pages of this report.

How does CSRD feed into TenCate's approach to ESG?

For us, this goes beyond a compliance exercise. We see this as an opportunity to align our approach to ESG across the company. We shall use the results of the DMA to focus our efforts on the areas where they will have most impact.

Gathering data for this report has shown us areas of which we can be proud, where our projects and initiatives are already yielding results. But the process has also highlighted areas where we can improve, including by setting out clearer procedures and policies to guide future actions.

As we pursue sustainability, we also want to be transparent. We welcome the chance to share more information about TenCate's performance and explain

how ESG is embedded in our overall strategy, as well as to help people to understand where the company is heading. Now, within the company, we can focus on the topics most material to our work – as well as addressing risks and seizing opportunities.

“Gathering data for this report has shown us areas of which we can be proud, where our projects and initiatives are already yielding results.”

How do you tackle the challenge of managing ESG across the whole TenCate group?

What we try to do is to identify common issues at group level, then initiate actions that can be taken locally, and then see whether successful actions can be replicated or adapted at other locations. With ESG, it's not something where one solution fits all. Also, we are a growing company, so we are looking at how to successfully integrate new companies that join the group. ESG integration has the same level of importance as, for example, financial integration.

Even if you have good policies and strategies, it is ultimately the people who create the positive results, and that is definitely true at TenCate. We have been fortunate that, across the group, ESG is seen as an important and integral part of our activities.

Rather than being experienced as a 'burden', it is seen as an opportunity to use resources efficiently, to minimize waste, to provide our people with opportunities to achieve their ambitions and to be fully compliant in everything we do.

“We have been fortunate that, across the group, ESG is seen as an important and integral part of our activities.”

How will TenCate's ESG reporting evolve?

It is quite difficult to answer this, but let me try! Firstly, ESG – and particularly CSRD reporting – is still maturing. Developing guidelines and directions is one thing, but making them practical and effective across many industries is understandably difficult. We are probably dealing with these challenges just as other companies are. Therefore, we actively seek interactions with other companies in other industries, to see how they deal with these challenges, and offer our solutions as well of course.

Secondly, we are looking at how to efficiently collect the right data at group level to meet ESRS disclosure requirements, to formalize our policies, and to set time-bound, outcome-oriented targets. Having this information available will also support decision-making across our company.



Finally, carrying out our first-ever DMA gave us better visibility and more engagement with respective stakeholder groups. Of course, we all have to find our way with the DMA process – but this is just the start of establishing a structured procedure and approach to capture their information inputs.



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DOUBLE MATERIALITY ASSESSMENT

We prepared for CSRD reporting by initiating a double materiality assessment (DMA) process in 2023. A DMA looks at the same topic through two lenses: is it financially material to the business? And what impact is the company having on the environment and society more widely? It brings together the financial and non-financial perspectives, creating a clear picture of the topics that matter.

We decided to carry out a DMA because we wanted to proactively be ready for the upcoming legislation, even though it will not apply to TenCate until the 2025 financial year. This offers two advantages.

Firstly, identifying the topics that are material to TenCate allows us to identify the information and data that we will need to collect and disclose, so we are on the front foot with reporting compliance when 2025 arrives. In preparation for CSRD, we are now improving our data collection process by implementing a new ESG consolidation and reporting tool and platform and putting mechanisms and training in place to successfully capture the data required.

Secondly, through the DMA we have gained greater understanding of our impacts, risks and opportunities, enabling us to identify the topics that we should prioritize in our overall business strategy – so we can achieve the greatest impact.



ENRICHING OUR EXISTING UNDERSTANDING OF MATERIALITY

TenCate previously identified a list of material topics that we explored in our ESG Update for 2022. Although this served as a good starting point when it came to longlisting potential topics for the DMA in 2023, we also considered it critical to enrich the list by looking at the topics, sub-topics and sub-sub-topics outlined by the ESRS, and seeing what should be considered under the new concept of 'double materiality'.

This involved evolving our approach from the single materiality dimension to the double materiality dimension. For our previous materiality assessment, we used the sector-specific Materiality Finder tool published by the Sustainability Accounting Standards Board (SASB). This identifies issues that are likely to be material, on an industry-by-industry basis. We complemented this by looking at the Global Reporting Initiative (GRI) standards, to see what would be relevant to our company, and we conducted an internal

survey and had discussions with internal stakeholders across the US, Europe and the Middle East.

By comparison, the double materiality assessment we began in 2023, which we carried out with the support of a third party, was a much more extensive process. It involved many more stakeholder consultations (both internal and external) with a wider range of people and groups.

The DMA also involved in-depth consideration of the financial materiality of different topics, as well as a process to identify TenCate's impacts, risks and opportunities.

OUR DMA PROCESS

The purpose of the 2023 DMA was to identify actual and potential negative and positive impacts TenCate has on people and the environment, and to identify financial risks and opportunities to the company that warrant mitigation. In this way business can prioritize their actions linked to ESG material topics.

A sustainability matter is "material" when it meets the criteria defined for impact materiality, or for financial materiality, or for both. For our DMA, we followed the European Financial Reporting Advisory Group (EFRAG) guidelines.

Scope of the sustainability statement

This is a group-level report for TenCate Grass Group B.V., encompassing all subsidiary companies in scope for the ESG Report 2023 (see [Appendix I](#)). If any information (quantitative or qualitative) does not relate to TenCate as a whole, but relates only to one TenCate company or region, this will be explicitly disclosed.



STEP IN THE PROCESS

DETAILS

- | | |
|---|---|
| 1. Establish a steering committee at the TenCate group level to monitor the progress of the DMA and act as the approval body in different stages of the process. | DMA steering committee membership: the CEO, CFO, Group Finance Director and Group ESG Director. |
| 2. Create working team for the DMA. | The working team included the members of the ESG Committee , as well as invited representatives from a) human resources and b) TenCate's biggest global operational companies. Members of the working team were allocated different responsibilities per E, S and G topics, based on their expertise and knowledge. Our subject matters experts were invited to participate in a series of workshops. |
| 3. Prepare the value chain analysis and identify stakeholders who should be consulted and included in the process. | A depiction of our value chain can be found in the chapter About TenCate . Details of the stakeholder groups, and how we engaged with each of them, can be found later in this chapter. |
| 4. Identify potentially applicable material topics (longlist). | This drew on the previous materiality assessment, as well as the recently published ESRS guidelines. For each topic identified as potentially being material, we also longlisted which sub-topics and sub-sub-topics should be included, based on TenCate's business segments and industry sector. |

STEP IN THE PROCESS

DETAILS

- | | |
|--|---|
| 5. Engage with internal stakeholders about the longlist of potentially applicable material topics. Identify impacts, risks and opportunities (IROs) for each. | <p>The working team held internal workshops and received feedback from internal stakeholders. We conducted interactive impact materiality assessment workshops for each ESRS topic.</p> <p>The ISO certification process is complete or underway at many of our manufacturing plants. Some of our companies have therefore already identified IROs relating to occupational health and safety (for ISO 45001 certification) and/or environmental management (for ISO 14001 certification) and have developed plans to mitigate risks and negative impacts. We drew on these as we identified our IROs at a group level.</p> |
| 6. Engage with external stakeholders via a survey and interviews. | <p>We wanted to understand our external stakeholders' perspectives on the shortlisted topics. The questionnaire covered three areas:</p> <ul style="list-style-type: none"> • Which longlisted topics should be considered material, and why? Participants were invited to consider both financial and impact materiality. • What is the relative importance of the sub-topics and sub-sub-topics for each potentially applicable material topic? • What are the risks and opportunities related to the potentially applicable material topics? |

STEP IN THE PROCESS

DETAILS

7. DMA Steering Committee incorporates internal and external opinions, creating scores for financial materiality and impact materiality. Validation of short list of topics.

The Steering Committee assessed and scored each of the topics based on a) the internal evaluation process for impact and financial dimensions per topic, and b) evaluation of external stakeholder consultations, covering both impact and financial materiality.

In addition, our Group Finance team assessed the financial impacts, using a 1-5 scale to evaluate the magnitude of the impact and the likelihood of longlisted material topics based on the EBITDA and free cash flow.

The scoring parameters used (1-5) are based on the requirements of ESRS:

- Impact materiality: scale, scope, irremediability, likelihood (based on whether an impact is direct/indirect, positive/negative and actual/potential).
- Financial materiality: financial magnitude of risk/ opportunity, likelihood, and the nature of the financial effect.

When considering whether an impact/ risk was short-, medium-, or long-term, we defined "short" as less than 1 year, "medium" as 1-5 years and long as more than 5 years. Materiality thresholds were established by the DMA Steering Committee.

STEP IN THE PROCESS

DETAILS

8. Final validation of the material topics, sub-topics, and sub-sub-topics.

The materiality matrix (see [page 34](#)) was filled out, showing whether each topic met the thresholds for impact materiality and/or financial materiality. This enabled us to finalize TenCate's material topics.

The DMA Steering Committee, alongside other ESG Committee members, further evaluated and finalized the sub- and sub-sub-topics for each material topic.

IDENTIFYING AND ENGAGING STAKEHOLDERS

For the purpose of carrying out our DMA, as well as assessing our impacts, we divided our stakeholder groups into whether they are internal or external. Guided by the definitions set out in the ESRS, we also considered whether they are a) affected stakeholders or b) users of sustainability statements.*

All stakeholder groups were included in our DMA survey, and some members of these stakeholder groups were also interviewed.

Stakeholder group	Type (ESRS definition)	How we engage with this stakeholder group	How their feedback was captured in the DMA
CUSTOMERS External	Affected	We carry out both formal and informal reviews of our customer relationships and our customers' project requirements. Our sales representatives regularly receive feedback from customers about their needs and priorities. We also engage with certain groups of customers at key conferences, exhibitions and industry events – as well as via our customers' due diligence processes – and we provide feedback to their ESG information requests. For more, see our chapter on Consumers & end-users .	We sent the DMA questionnaire to key customers.
LOCAL COMMUNITIES External	Affected	We have constant communication with local authorities in the areas in which we operate. We also ask company leadership to pass on feedback they receive from local communities. Our employees take part in local initiatives to support the community. Where applicable, we hold public meetings and consultations about developments at our manufacturing plants. For more, see our chapter on Affected communities .	We circulated the DMA questionnaire to local authorities. In doing so, we sought the input of affected communities via credible proxies that have insight into their situation.
INVESTORS AND INSURANCE COMPANIES External	Users of sustainability statements	We engage with investors, including when they carry out ESG reviews or via investor calls and questionnaires, and periodic investor updates. We engage with our insurance companies during the risk assessment process.	We sent the DMA questionnaire to members of this stakeholder group.

* Using the definitions set out in ESRS 2 3.1, all TenCate's affected stakeholders could potentially also be considered users of sustainability statements.

Stakeholder group	Type (ESRS definition)	How we engage with this stakeholder group	How their feedback was captured in the DMA
EMPLOYEES Internal	Affected	We ensure regular opportunities for feedback including via: • team meetings • open forums with the CEO, managing directors and company presidents, and other business leaders • performance and development discussions • safety meetings and training sessions We also completed a group-wide employee engagement survey in 2023. At a senior level, we have executive meetings such as our International Management Meetings. For more, see our chapters on Working at TenCate and Corporate governance.	For the DMA, employees considered as part of this stakeholder group include those employed at both the group and local levels. The stakeholder group also includes members of the ESG Committee and the DMA Steering Committee, as well as senior leadership including the CEO and CFO. Members of these committees were closely involved in the DMA process.
SUPPLIERS AND CONTRACTORS External	Affected	We keep an open dialogue with our suppliers, including during the contract agreement process and while the contract is effective. We gather data on their ESG performance and practices. We ensure their awareness of the Supplier Code of Conduct and the terms and conditions. For more, see our chapters Supply chain and Workers in the value chain.	We sent the DMA questionnaire to a selection of key suppliers.
PEERS AND INDUSTRY External	Users of sustainability statements	We benchmark against our peers and competitors, including against recognized sustainability leaders. We are active participants in industry associations, for example via technical working teams within ESTC, and through joint research projects. We also engage with our peers at key conferences, exhibitions and industry events.	We circulated the DMA questionnaire to members of this stakeholder group, including business associations and sports governing bodies.
GOVERNMENT / POLICY-MAKERS External	Users of sustainability statements	We engage with policymakers and other government figures at conferences, exhibitions and industry events. We carry out regular reviews of voluntary and regulatory ESG-related requirements. We share feedback on any public consultations.	We circulated the DMA questionnaire to members of this stakeholder group.
PRODUCT END-OF-LIFE PARTNERS External	Affected	We have entered into joint initiatives and projects with product end-of-life partners in Europe and the US. For more, see our Circularity & innovation chapter.	We circulated the DMA questionnaire to members of this stakeholder group.
(SOCIAL) MEDIA & NON-GOVERNMENTAL ORGANIZATIONS (NGOS) External	Users of sustainability statements	Through a communications agency, we monitor media and social media coverage of TenCate, the synthetic turf industry, and key sustainability issues. We publish news on our own website. We engage with NGOs via partnerships to support the community.	We sent the DMA questionnaire to relevant NGOs.

DOUBLE MATERIALITY ASSESSMENT – OUTCOME

This matrix shows the topics that were assessed to establish their materiality, both in terms of impact materiality (the x-axis) and financial materiality (the y-axis).

Fifteen potentially material topics, drawn from the ESRS list of topics and sub-topics, were considered during the DMA. Three were ultimately determined to be non-material, while the rest were determined to be material and are therefore covered in TenCate's Sustainability Statement for 2023.

**ENVIRONMENTAL**

- 1 Climate change
- 2 Energy use
- 3 Pollution management & prevention (microplastics)
- 4 Chemicals (substances of concern)
- 5 Water management
- 6 Biodiversity
- 7 Circularity

SOCIAL

- 8 Working conditions and rights of own workforce
- 9 Health & safety of own workforce
- 10 Diversity, equity, and inclusion of own workforce
- 11 Working conditions and right of workers in the value chain
- 12 Affected communities (non-consumer) (positive)
- 13 Consumer and end-users

GOVERNMENT

- 14 Supply chain management
- 15 Corporate governance

MATERIAL TOPICS

This table shows which of the topics, sub-topics and sub-sub-topics listed in the ESRS were ultimately identified as material. To aid understanding of

the materiality matrix, the left column shows the terminology we used during the DMA process to identify material topics, and how these pair with the ESRS-defined topics.

TERMINOLOGY USED IN MATERIALITY MATRIX	ESRS	ESRS TOPIC	SUB-TOPIC	SUB-SUB-TOPIC
Climate change	E1	Climate change	Climate change adaptation	n/a
			Climate change mitigation	n/a
Energy use			Energy	n/a
Pollution management & prevention (microplastics)	E2	Pollution	Microplastics	n/a
Circularity	E5	Circular economy	Resource inflows, including resource use	n/a
			Resource outflows related to products and services	n/a
			Waste	n/a
Working conditions and rights of own workforce	S1	Own workforce	Working conditions	Adequate wages
				Social dialogue
Health & safety of own workforce				Health and safety
Diversity, equity, and inclusion of own workforce			Equal treatment and opportunities for all	Gender equality and equal pay for work of equal value
				Training and skills development
				Measures against violence and harassment in the workplace
				Diversity
Working conditions and rights of own workforce			Other work-related rights	Child labor
				Forced labor
				Privacy

TERMINOLOGY USED IN MATERIALITY MATRIX	ESRS	ESRS TOPIC	SUB-TOPIC	SUB-SUB-TOPIC
Working conditions and right of workers in the value chain	S2	Workers in the value chain	Working conditions	Adequate wages
				Social dialogue
				Health and safety
			Equal treatment	Gender equality and equal pay for work of equal value
				Training and skills development
				Measures against violence and harassment in the workplace
				Diversity
			Other work-related rights	Child labor
				Forced labor
				Privacy
Affected communities (non-consumer)(positive)	S3	Affected communities	Communities' economic, social and cultural rights	Land-related impacts
			Communities' civil and political rights	Freedom of expression
				Freedom of assembly
				Impacts on human rights defenders
Consumer and end-users	S4	Consumers and end-users	Information-related impacts for consumers and/or end-users	Access to (quality) information
			Personal safety of consumers and/or end-users	Health and safety
			Social inclusion of consumers and/or end-users	Access to products and services
				Responsible marketing practices
Supply chain management	G1	Business conduct	Management of relationships with suppliers including payment practices	
Corporate governance			Corporate culture	
			Protection of whistle-blowers	
			Corruption and bribery	Prevention and detection including training
				Incidents

Three topics were evaluated during the DMA but did not meet the threshold for either impact or financial materiality. As can be seen in the bottom-left quadrant, these topics are water management, biodiversity, and chemicals (substances of concern).

1. Water management

This topic was not found to be material for our own operations due to limited water usage in our manufacturing facilities and low financial impact. Our Dubai facility, which is located in a region with a high risk of water stress, already implements water recycling and internal reuse processes to increase water quality discharges according to local requirements. Both the impact materiality score and financial assessment score were low for this topic.

2. Biodiversity

We – and our value chain partners – manufacture and install our turfs in line with national and local building codes and construction criteria. These criteria may in the future include biodiversity assessment studies. In addition, our manufacturing facilities are responsible for acquiring the required operational permits from the municipalities/states in which they operate. Our stakeholders have evaluated this topic as medium to low during the external engagement process.

3. Chemicals (substances of concern)

TenCate has already proactively implemented measures to ensure compliance with national legislation. All products and components comply with the following norms for product safety in Europe and the USA (ASTM and CEN and REACH, TSCA and Prop 65). Our products and components are tested and validated against all these criteria and legislative requirements to ensure compliance. Records are kept and are available to our clients upon request. The financial impact was assessed low to medium.

IMPACTS, RISKS & OPPORTUNITIES

For each topic, the impacts, risks and opportunities (IROs) can be found at the beginning of the [Environment](#), [Social](#) and [Governance](#) chapters.



OUR COMPANIES' CERTIFICATIONS

This section outlines the certifications and validations our manufacturing companies are either pursuing or have already achieved. These relate to topics across the Sustainability Statement and can be referred to in conjunction with relevant disclosures.

OUR POLICY

TenCate has a policy guiding the implementation of management systems in its manufacturing facilities, including those for Quality, the Environment and Safety. The benefits of these systems are significant. They facilitate our continuous improvement.

Where third-party certification or validation is available, we consider whether pursuing this certification or validation will benefit our business by amplifying positive- and minimizing negative impacts.

The decision to pursue certification or validation is taken at a group level and implemented at a company level. We have established dedicated local teams that are responsible for the implementation of each system in each company given the wide range of regional and national requirements. The Managing Directors or Presidents of our companies are responsible for the supervision of the systems.



Overview – certifications at our manufacturing companies

FACILITY	ISO 9001- QUALITY	ISO 14001- ENVIRONMENT	ISO 45001- HEALTH & SAFETY	ZERO WASTE- TO-LANDFILL UL CERTIFICATION	ISCC PLUS	SMETA AUDIT
TenCate Thiolon Middle East LLC	In preparation	In preparation	In preparation	✓ Gold 2023	✓ 2023	Taqdeer Award 4-stars 2023
TenCate Thiolon BV*	✓	✓	In preparation	Certification procedure started	✓ 2023	✓ Only 3D
TenCate Thiolon USA	✓ 2023	✓ 2023	✓ 2023	✓ Gold 2024	In preparation	n/a
Archon Fibers LLC	In preparation	In preparation	In preparation	In preparation	✗	n/a
Challenger Turf Inc	✓ 2023	✓ 2023	✓ 2023	Awaiting results	In preparation	n/a
Spears Industries LLC	✗	In preparation	✗	In preparation	✗	n/a
Ace Sports Turf Landscaping LLC	✗	In preparation	✗	✓ Gold 2024	✗	n/a
TigerTurf UK*	✓	✓	✓	In preparation	✗	✓ 2 pillars
TigerTurf NZ*	✓	✓	✓	In preparation	✗	✓ 4 pillars
Roxie Polymers LLC	In preparation	In preparation	✗	In preparation	✗	n/a
GrassRoots Surfaces Inc *acquired 2023	In preparation	In preparation	In preparation	In preparation	✗	n/a

* SMETA audit is only applicable for companies selling products according to FIFA's standards.

ISO MANAGEMENT SYSTEMS

The International Organization for Standardization (ISO) develops and publishes international standards. The three systems that we are focusing on are ISO 9001, ISO 14001 and ISO 45001. These standards provide a framework for organizations to design and implement the relevant management system and continually improve.



Quality management system (ISO 9001:2015)

The purpose of a quality management system is to ensure an organization can meet customer requirements and strive to exceed customer expectations in terms of quality. The ISO 9001 standard helps our companies to achieve the intended outcomes of this system.

Environmental management system (ISO 14001:2015)

The purpose of an environmental management system is to guide how an organization takes proactive measures to minimize its environmental footprint, complies with relevant legal requirements, and achieve its environmental objectives. The system encompasses areas including resource usage and waste management.

Occupational health and safety management system (ISO 45001:2018)

The purpose of an occupational health and safety management system is to enable an organization to systematically assess hazards and implement risk control measures, leading to reduced workplace injuries, illnesses and incidents.

ZERO WASTE TO LANDFILL

We continuously aim to reach zero waste to landfill (ZWtL) across our manufacturing operations. We are pursuing validation of our companies' landfill diversion rates from an independent third party, UL Solutions, a product safety and certification organization.

To achieve validation, our manufacturing companies must bring their waste management practices in line with UL 2799A, the UL Solutions Standard for Environmental Claim Validation Procedure (ECVP) for Zero Waste Classification. The scope of this Standard is material flows that are not part of an organization's final product, i.e., the waste generated during their manufacture.

Companies require at least 90% diversion from landfill – through methods other than waste-to-energy – to achieve a Zero Waste to Landfill (ZWTL) designation. The designations are Silver (90-94% diversion rate), Gold (95-99%), and Platinum (100%).



ISCC PLUS CERTIFICATION

ISCC PLUS certification is a voluntary scheme that covers bio-based and circular (recycled) raw materials, including plastics. It is focused on the traceability of raw materials within the supply chain. To receive an ICCS certificate, a company must be able to demonstrate complete traceability across the value chain.

SMETA AUDIT

A SEDEX Members Ethical Trade Audit (SMETA) encompasses audits of labor conditions and occupational safety, as well as environmental standards and ethical business practices. It uses a methodology based on the Ethical Trading Initiative (ETI) Base Code, as well as other related requirements. An auditing team assesses the extent to which a company meets the SMETA criteria, including by carrying out in-person visits.

2. ENVIRONMENT/

Impacts, risks & opportunities	42
Circularity & innovation	45
Climate change & energy	62
Microplastics	65

IMPACTS, RISKS & OPPORTUNITIES

We have identified impacts, risks and opportunities (IROs) related to TenCate's material topics in E1, E2 and E5. On the right, we provide a short summary of how we are managing our IROs, with more details available further in this chapter.

E1 | Climate change

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Product innovation, enabling climate adaptation solutions. ● ● Negative Emissions from own operations. ● ● Emissions in value chain, from production/processing and transportation of raw materials. ● ●	💡 Opportunities Increase the use of renewable energy in manufacturing to improve LCA scores and generate new revenue. Develop non-filled synthetic turf technologies to increase resource efficiency and reduce emissions, creating new market opportunities. Develop recyclable synthetic turf to reduce raw material emissions and unlock new revenue streams. Develop innovative products such as water-free Hockey turf to address climate challenges and open up new markets. ⚠️ Risks Market readiness delay could hinder the implementation of innovations. High innovation costs may reduce short-term uptake and impact. Policies and laws related to carbon emissions taxes and Environmental Product Declarations could increase compliance and operating costs.	We have initiated comprehensive measures to manage our greenhouse gas emissions. Our innovative next-generation turfs offer benefits in terms of durability, end-of-life recycling, microplastics, energy consumption and playability. We have developed new water-free Hockey pitches, which will reduce water usage and facilitate play even in harsh climate conditions – an example of a climate change adaptation solution. We are participating in the EU initiative to develop common LCA standards in the synthetic grass industry. Environmental management systems (ISO 14001) are being implemented across our yarn and turf manufacturing entities.

E1 | Energy

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Negative Energy use from non-renewable sources in own operations (manufacturing, distribution and installation). ●●	💡 Opportunities Increase renewable energy use to improve LCA scores and generate new revenue. Develop recyclable synthetic turf to open new markets and revenue streams. ⚠️ Risks Limitations in equipment/processes may hinder energy efficiency improvements. Volatile energy prices and increased demand may raise operating costs.	Continuous monitoring of energy consumption throughout the production process enables TenCate to identify areas of inefficiency and implement targeted improvements. We have a range of energy efficiency projects, including projects to efficiently streamline vehicle moments and minimize fuel consumption. Our non-filled products, and our OneDNA technology, enable reduced energy consumption during both manufacture and use.

E2 | Pollution management & prevention (microplastics)

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Managing, monitoring and reducing microplastics pollution in the value chain. ●●● Negative Microplastics use in turf systems (as infill) and secondary microplastics generation during product use. ●●●	💡 Opportunities Invest in research to understand and mitigate microplastic impacts from turf, leading to new products / technologies and market opportunities. ⚠️ Risks Microplastic generation may complicate regulatory compliance and pose legal risks.	We are rapidly transitioning to turf systems that do not use microplastics as infill. During the transition period towards the EU ban on intentionally added microplastics, we are leading the market towards compliance. We have designed new turf systems with a much lower rate of wear and tear, reducing the generation of secondary microplastics.

E5 | Circular economy

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Product innovation, leading to products that are more circular (i.e. more easily recyclable into high-quality raw materials). ●●● Transitioning to using more recycled polymers reduces dependency on non-renewable resources. ●● Facilitating end-of-life product recycling, ensuring resources are retained within the system for reuse. ●● Negative Waste generation from manufacturing. ●●	💡 Opportunities Commitment to circularity and advanced recycling can differentiate the company and enhance reputation, providing a competitive advantage and opening new revenue streams. Advanced recycling of difficult-to-recycle polymers can maximize resource efficiency and create new economic opportunities. Waste minimization and resource efficiency could lead to savings and operational excellence improvements, in conjunction with positive environmental results. ⚠️ Risks Transitioning to sustainable alternatives requires significant up-front research and material validation. The lack of standardization in end-of-life waste management can lead to an inconsistent quality of recycled material being incorporated into turf products, which may affect functional performance. Downcycling of difficult-to-recycle polymers may result in a loss of material value and economic opportunity. Implementing waste management strategies can introduce complexity and increase costs and operational inefficiencies. Location-based challenges and regional legislative differences can complicate waste management and recycling efforts.	We have a well-established, well-resourced R&D department focused on developing yarns, backing components, turf systems and technologies along circular principles, taking into account lifecycle impacts. E.g., OneDNA technology enables single-polymer turfs. We have entered into partnerships for product end-of-life recycling, including both mechanical and advanced recycling, and we continue to look for additional recycling opportunities. We are using waste materials for innovative products. E.g. EcoLoop system and EcoCept shock-pad. Waste protocols (Zero Waste to Landfill UL 2799) are being implemented across our yarn and turf manufacturing entities. Group waste diversion rate reached 88% in 2023.

CIRCULARITY & INNOVATION

Circularity is central to TenCate's business strategy. Through our long-term investment in innovation, we are creating new products and technologies, so that we can embed circularity from a product's very beginning and facilitate the reuse of plastics. We aim to reduce and divert waste from our own manufacturing operations, and we are also addressing product waste at end-of-life by engaging in partnerships in Europe and the US to facilitate recycling of legacy synthetic turf.

What we use, what we create

INFLOWS

Manufacturing

- Plastics (polymers)
 - Virgin plastics in the form of base resin, derived from oil
 - Recycled plastics from TenCate's own waste, or purchased from upstream suppliers
- Colored pigments
- UV stabilizers
- Antioxidants

Distribution and installation

- Polymeric infills
- Natural/organic infills
 - Sand. Where possible, we use recycled sand. If not, we use newly quarried sand.
 - Other organic infills such as cork and olive pits.

TenCate's inflows do not include any critical raw materials or rare earths.

OUTFLOWS

Products

- Yarns and backings
- Turfs, turf systems

Used for

- Sport and play applications (e.g., Soccer fields, American Football fields, Hockey fields, and community pitches)
- Outdoor Living applications (e.g., gardens, communal spaces)

We are in the process of compiling the required ESRS quantitative metrics for this topic, covering resource inflows and outflows, and will present more data in our 2024 report. To support this, we are harmonizing our IT platforms and enterprise resource planning (ERP) systems across the group.

Use of recycled materials in our products

We make a range of bespoke products using recycled content. We can a) blend recycled content into the process (e.g., post-industrial or post-consumer waste), and/or b) source recycled resins – to use as a proportion alongside virgin resins. These blends are validated to ensure that the longevity and quality of the finished product is equivalent to 100% virgin materials.

Efforts to expand the use of recycled materials are high on our agenda, and we have frequent conversations with our suppliers and other players in the industry to accelerate the developments. At present, we face two challenges that prevent us from rolling out the use of recycled materials in a more systematic way:

- The market and supply chain for recycled resins are not yet mature enough to guarantee access to the same quality resin, with the same composition, on a continuous basis in the quantities we require. For sports turfs, there are codes and standards we must meet, set by sport governing bodies. These requirements have very tight tolerances that cannot be guaranteed with the variations inherent in the blended recycled resins. We are working with these organizations to support the implementation of recycled materials within the regulatory frameworks.

POLICIES & TARGETS

Business strategy

Circularity is integral to TenCate's business strategy. We understand that circularity is essential for both sustainability and financial performance, and we have observed that many of our clients share our vision and really value this approach. For instance, local authorities in Amsterdam prioritize recyclability when procuring turf for public spaces. We expect this interest to grow. This necessitates significant short-term investment in innovation, which will yield considerable benefits for the planet and TenCate as a company.

Policies

Around the world, our companies have policies governing their material use, waste management, and resource use – as well as environmental policies. These policies are tailored to meet local and regional regulations and other criteria. Most of our companies are already ISO certified, and others are in progress (see [page 39](#)). All our manufacturing sites will become certified in the future.

At the group level, we intend to formalize our commitment to circularity and resource use into written policies, in line with the common vision and ambition we are already pursuing. In terms of waste management, we initiated a group-wide policy to pursue Zero Waste to Landfill certification.

Targets

We have a voluntary target for every TenCate manufacturing facility to achieve a minimum 90% waste diversion rate. This is the figure needed to

achieve Zero Waste to Landfill (ZWtL) Silver validation according to the UL 2799 protocol. Our target is to achieve this at the 11 manufacturing sites listed on [page 39](#), which includes a breakdown of certifications per company.

ZWTL TARGET (END 2024)

per site

90%

ZWTL RESULTS (END 2023)

average across manufacturing sites*

88% with energy recovery**

* This data includes all manufacturing companies in the TenCate group, excepting one company that was acquired in December. Data from 11 companies are included.

** Energy recovery refers to waste sent to the thermal processing unit that generates useable heat, electricity or fuel for export as energy. Without energy recovery included, this figure is 86%.



In pursuing ZWtL, our focus has been on addressing waste at our largest facilities, enabling us to make change at the scale required. The figures for our three largest facilities, which accounted for 68% of the total waste generation from TenCate's manufacturing companies in 2023, are:

TenCate Thiolon Middle East LLC

This number is UL 2799 ZWtL validated for 2022 data, during 2023

96%

TenCate Thiolon USA

This number is UL 2799 ZWtL validated for 2023 data, during 2024

95%

TenCate Thiolon BV

Data for this site has not been externally audited

92%

Average

94%

TenCate is in the process of developing specific, time-bound targets for enhancing circular product design elements such as durability, dismantling, reparability, and recyclability. Additionally, we will set targets for increasing the circular material use rate, minimizing the use of primary raw materials, and ensuring sustainable sourcing and use.

CIRCULARITY THROUGH PRODUCT INNOVATION

Early efforts

In 2012, we launched our first product with circular properties. Marketed as "MX", this premium turf is woven rather than tufted, which eliminates the need for large quantities of non-recyclable adhesive because the fibers are held in place by the strength of the weave and a small quantity of polypropylene dispersion coating. This product design makes it easier to recycle the materials in the end-of-life phase so that they can be reused in new products and form part of the circular economy. Our MX product lines remain popular around the world.

Additionally, we developed an innovative elastic layer called EcoCept® which makes use of mixed recycled plastic agglomerate to form the basis on a base layer. In 2018 we started to use recycled end of life turf (RTA) into this layer. EcoCept® continues to be a product

regularly used around the world in place of traditional e-layer shockpads.

Breakthrough

Our circularity ambitions have dramatically increased in recent years. Led by the team at our Center for Turf Innovation (CTI) in the Netherlands, we started looking into different options for materials and designs. Our ambition: to create a fully circular product.

With the development of our OneDNA technology, which is now being implemented in products for the first time, we are turning ambition into reality. Using this technology, we can make turf systems from one single polymer, polyethylene (PE). That includes the primary backing, the yarns and the coating. If a product only contains PE, it is possible to recycle at very high quality, creating PE that can be recirculated in a wide range of new products.



Our next generation turfs, such as Pure PT (Europe) / Pivot™ (US), can be made out of the OneDNA technology. These next-generation turfs, which are now coming to market, are already an improvement in terms of end-of-life recyclability, even without the implementation of OneDNA: because they do not require an infill layer, they are composed solely of polymers and are therefore far easier to recycle at end-of-life.

From drawing board to reality

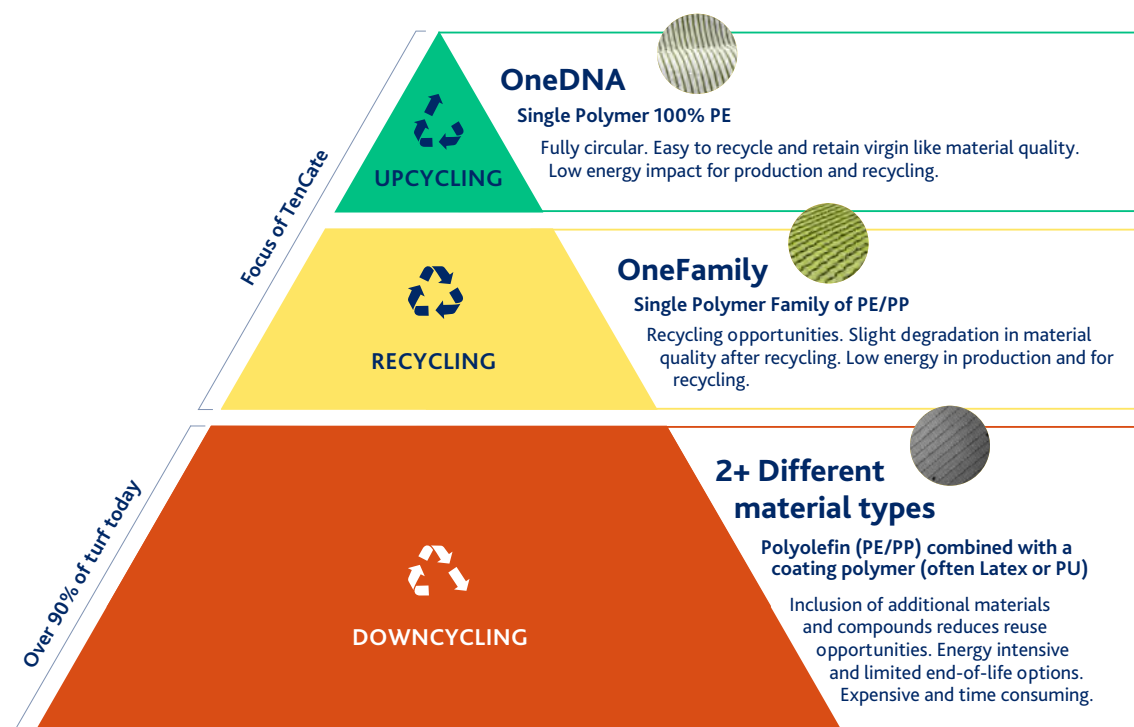
Since we created the first prototypes in 2019, we have been through a rigorous process of research & development (R&D), testing, refining, due diligence, and validation. We thoroughly tested our designs at our labs at the CTI, before testing a shortlist of designs in the “real world” at our field lab in PSV Eindhoven.

During this process, we collected extensive feedback from players and other potential users (see chapter [Consumers & end-users](#)).

Indoor testing facility at the CTI

To give us a better understanding of player-surface interaction, our surfaces are thoroughly tested in our innovation labs. In Nijverdal, we have an indoor testing facility that comprises 3,000 square meters with the latest state-of-the-art testing and manufacturing technologies. We invite top-level players to test our latest developments, simulating real game situations. By observing them when running, kicking, turning, and sliding, we can research how our turf can positively impact their performance.

Designed for circularity



NEXT GENERATION NON-FILLED TURF SYSTEM DESIGN

Face yarns

These are often called the 'pile' yarns. These are designed to replicate the natural grass blades.

Rootzone fibers

These fibers are designed to replace the infill of legacy turf systems that include rubber or other polymeric infills. They are typically texturized to give them more volume and to ensure they act like the rootzone of natural grass. They help players with grip and comfort.

Primary backing

This layer is the fabric that is used to tuft the fibers and to make the turf carpet. This layer is complex, involving many different manufacturing steps to provide support and stability to the turf.

Secondary backing

An adhesive, generally Latex or PU, is applied to the backside of the turf to adhere the tufted fibers to the primary backing. New technologies are currently being launched by TenCate for the same purpose, which includes film lamination and fixation.



USING NATURAL AND ORGANIC INFILLS

Turf systems can use granulated materials known as 'performance infills' to enhance the playing characteristics and experience for users.

Polymeric infills like styrene butadiene rubber (SBR) are widely used and have been since the early 2000s. However, these are being replaced by alternatives, in order to mitigate the environmental impact of microplastics and comply with incoming legislation.

TenCate now has a wide range of alternative infill materials, such as cork or olive pits. These options offer benefits in terms of both performance and sustainability. However, they require more intensive maintenance which can be costly and they may not be suitable for all climates – particularly those with extreme weather.

In the right locations and applications, we consider natural infill systems as complementary to our next-generation non-infill turf solutions, enabling us to better serve our global customer base.



PUSHING BOUNDARIES TO CREATE INNOVATIVE, HIGH-QUALITY SYNTHETIC TURF SOLUTIONS

OLIVE PITS

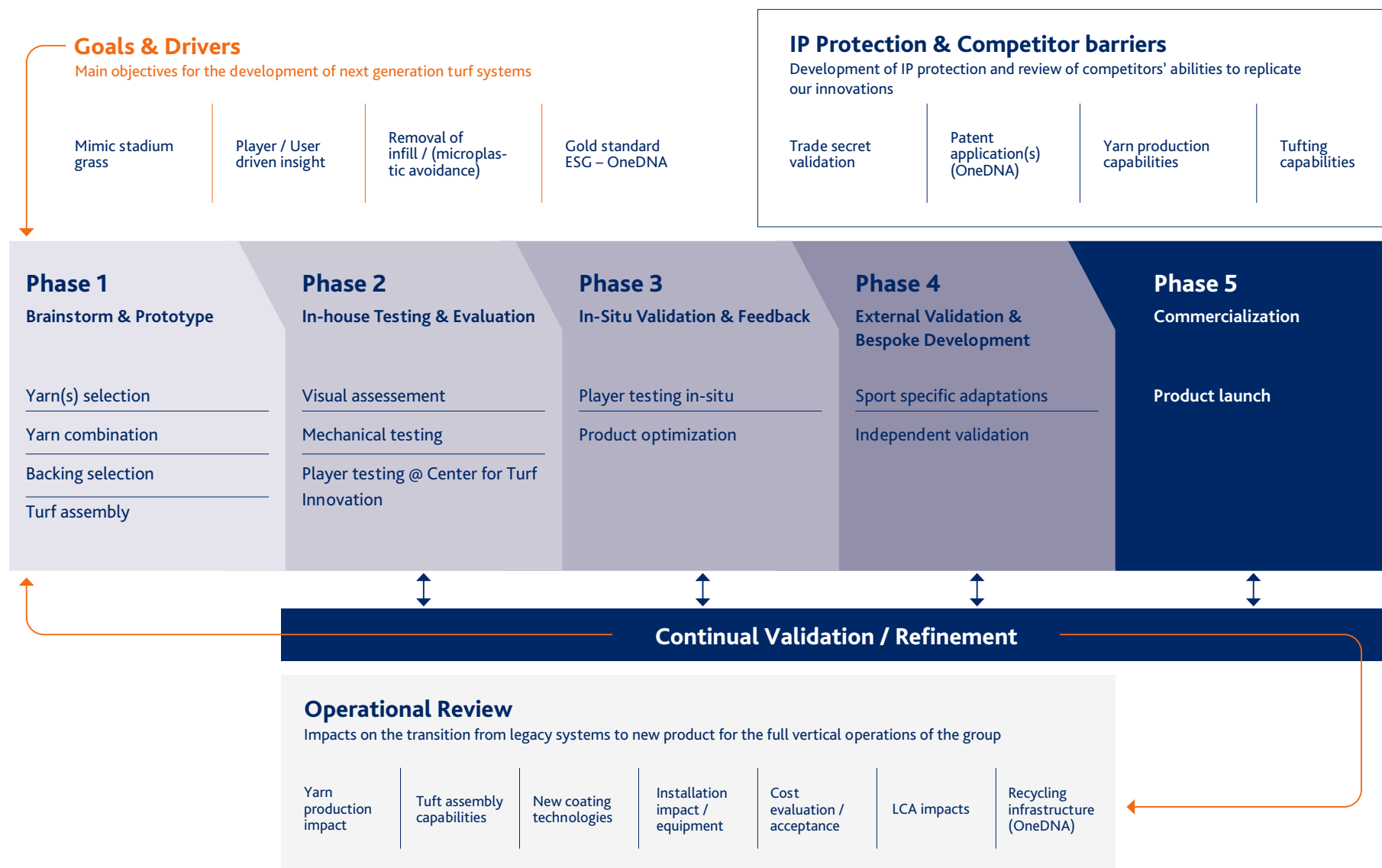
Crushed and rounded olive pits are produced to provide a natural infill for turf systems. The pits are strong, natural and provide good performance for a wide range of applications.



CORK

Waste from the production of cork is granulated into an infill for turf. Like olive pits, the material is natural and can be used within the turf system.

TenCate Development Process



Real-world installations in 2023

Our nonfill turf, marketed as Pure PT in Europe and Pivot™ in the United States, was installed in 2023 on a small number of sports pitches ahead of a planned rollout in 2024. For our OneDNA technology, we opted to bring this to the Outdoor Living segment first, through a partnership with LimeGreen.

LimeGreen

We have partnered with LimeGreen to enable them to use our intellectual property (IP), incorporating OneDNA technology into products in the Outdoor Living space. The company, which is Netherlands-based, has also begun franchising its ONE-DNA™ products across France, Germany and the USA.



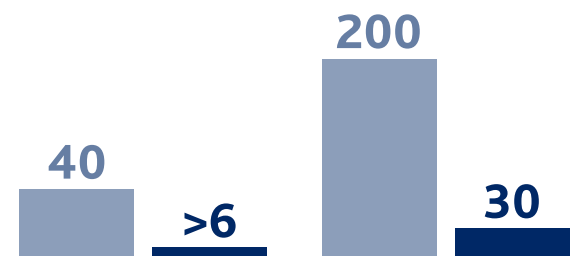
Reduced weight, lower emissions

One advantage of our nonfill turf system, as compared to infill turf systems, is that it weighs far less. While the product may require greater quantities of yarn, the impact is more than offset by the fact that heavy materials (e.g., sand and rubber) are no longer required as part of the turf system.

A conventional synthetic Soccer pitch requires over 200 metric tonnes of materials and over 40 vehicles movements; the non-filled product, PurePT, requires only 30 metric tonnes of material and less than 6 vehicle movements. That means fewer vehicles on the road carrying heavy materials for installation or disposal of our products.

Vehicle movements

Metric tonnes of materials



- A conventional synthetic Soccer pitch
- Pure PT / Pivot™

Durability

The longer a surface lasts, or the more it can be used before needing replacement, the more sustainable the system becomes. Our innovations focus on enhancing durability and longevity.

TenCate is actively participating in the European Union (EU) Product Environmental Footprint Category Rules (PEFCR) process, in order to develop a common Life Cycle Assessment (LCA) methodology. This was initiated by the European Synthetic Turf Council (ESTC), with the aim of creating a standardized LCA process to measure and validate products' environmental impact, including their durability and carbon footprint. This process is ongoing, with drafts made public in 2023 for consultation.

Based on data from TenCate and our industry peers in Europe, the life expectancy of the average or "representative product" was estimated at eight years. This number can be used as a basis for a lifecycle assessment process (LCA), once finalized.

We estimate the durability of our conventional turf systems to be eight to ten years, slightly above industry averages. The exact number of years each turf lasts will, of course, depend on how heavily the product is used, its application, and the environment in which it is installed.

However, our lab tests at the CTI, and all our projections and models, indicate that our non-filled turf systems will last at least 25-30% longer due to reduced wear and tear between different materials – amounting to approximately 12-15 years of use.

Our non-filled turf systems will last at least 25-30% longer.

Maintenance and lifetime extension

Maintenance is important to circularity because it extends a product's lifetime, increasing the time before it must be replaced. In the same way, it also benefits the customer.

We regularly repair our products post-installation, either through our own installation companies or through a third party. An established rating system is not available for reparability of synthetic turfs, but we do have established processes and protocols to carry out patch repairs, which is especially helpful so we can repair heavy-traffic areas (e.g. around a goal) without needing to take out the whole pitch.

PREVENTING WASTE GENERATION DURING MANUFACTURING

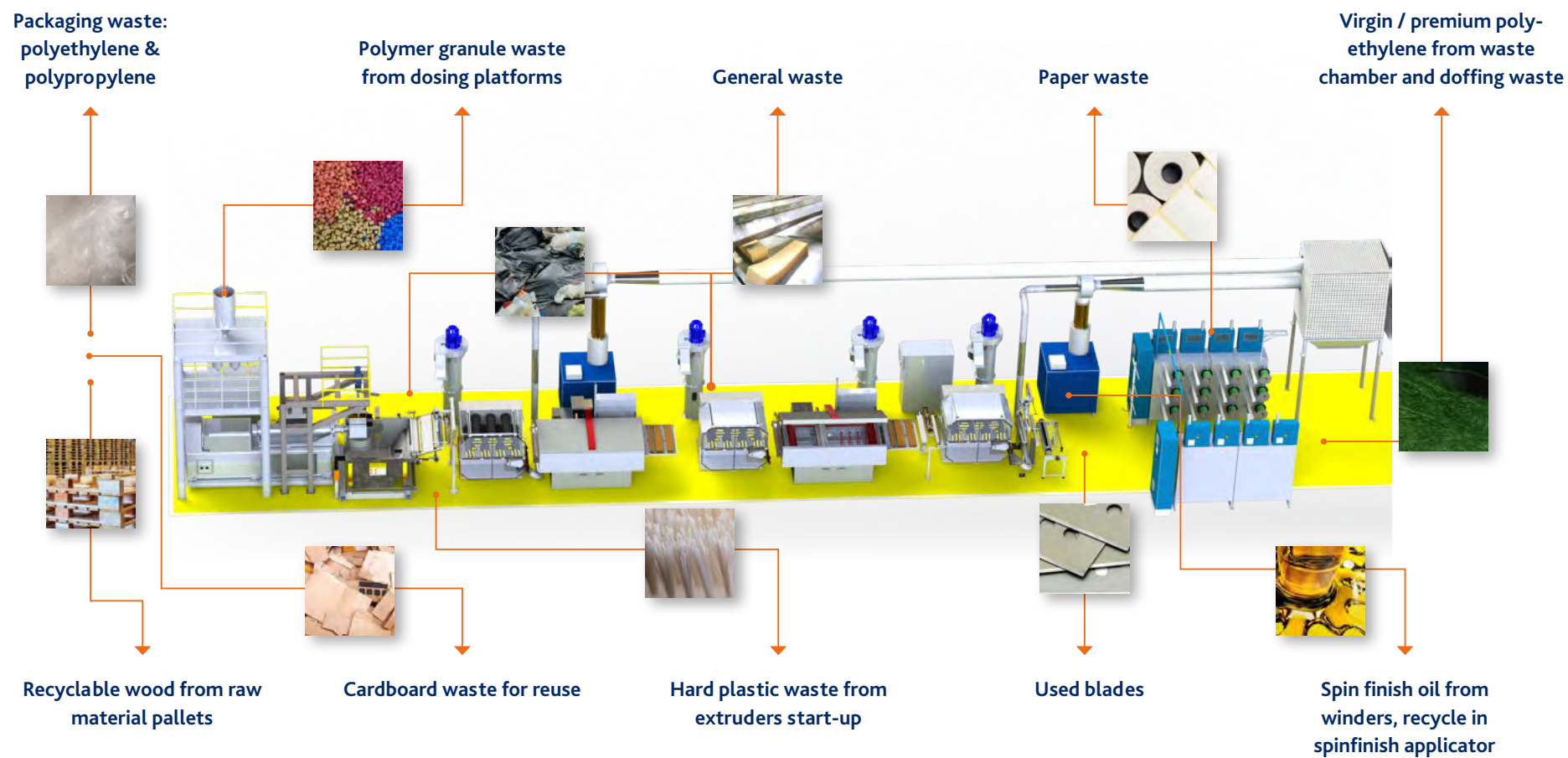
Our yarn extrusion facilities have invested in machinery and technology to recycle plastic waste from the manufacturing process in a closed-loop system. This internal recycling approach combines both financial and sustainability benefits, allowing us to reuse self-generated waste in our operations while also saving money.

Previously, the initial polymer output from the extruder – before it reached the correct temperature, flow, and quality – would go to waste, as would the last polymer after the extruder had been switched off. This accounted for approximately 10% of material waste.

Now, we have machinery that can collect these polymers and transform them into polyethylene resins, which we reintroduce into our production process – cutting waste by over 50%. This does not compromise the quality of our products. This process has been validated via an ISCC Plus audit, providing external verification. First implemented at our company in Dubai over a decade ago, this process has since been adopted by other TenCate yarn manufacturers, including our Dutch and USA site in 2022.



Example of waste stream management



Some of our companies have also been exploring waste-to-value from their operations. For example, the team at Hellas Fibers has developed EcoNailer, a nailer board used in the turf installation process to secure

the synthetic turf in place. This product is derived from recycled yarn and waste resin, combined with other types of post-consumer waste. In 2023, Hellas Fibers produced a total of 719,330 feet (219,000 meters) of EcoNailer.

WASTE GENERATED

	METRIC TONNES	PERCENTAGE
Total weight of waste generated	11,113.42	n/a
Total weight of waste diverted from disposal, by recovery operation type		
Preparation for reuse	410.11	4%
Recycling	9,180.64	83%
Other (combusted with energy recovery)	217.39	2%
Total	9,808.13	88%
Weight of waste directed to disposal, by waste treatment type		
Incinerated, with energy recovery	217.39	2%
Landfill	1,305.28	12%
Other disposal operations	n/a	n/a
Total amount and percentage of non-recycled waste	1,522.67	14%
Composition of waste*		
General and municipal waste	1,508.00	14%
Metals and electronics	80.68	1%
Paper	1,175.52	11%
Plastic	7,172.59	65%
Wood	1,113.38	10%
Other	63.25	1%

* These figures cover TenCate's manufacturing companies (both yarn and backing manufacturing companies, and turf manufacturing and distribution companies). Design and installation companies are not included.

DOWNSTREAM VALUE CHAIN: RECYCLING USED PRODUCTS

We are determined to reduce our products' environmental impact across their entire life cycles, including their end-of-life disposal. As far as possible, we want to enable this disposal to take the form of recycling – so that the materials that make up our products can ultimately make their way into new products.

Compared to how we manage waste in our manufacturing facilities, we cannot always control what customers do with our products once they reach the end of their functional lives. These products may only come back out of the ground more than a decade after they leave our factories. We also know that a one-size-fits-all approach is not appropriate, as waste disposal practices and regulations will differ from country to country and state to state.



Context: the challenge of recycling legacy products

Conventional synthetic turfs are made up of a range of different materials such as polyethylene, polypropylene, and latex or polyurethane. These products are made to be extremely robust and long-lasting, so they are not easy to separate. The technical challenge is to harvest these materials in a useful form, and without consuming unsustainable amounts of energy during transport and processing.

However, there are two tangible things we currently do to facilitate end-of-life recycling:

1. DESIGNING FOR RECYCLABILITY

We have developed products that are more easily recycled, and that produce more versatile and higher-quality materials once recycled.

At the start of the innovation process, we set ourselves the challenge of making our products easier to recycle at the end of life, while not losing the advantages of longevity and quality. While we will continue to use plastics derived from fossil fuels, we opted to explore how to use them in a circular way and maintain their value. The result of this investment in innovation is our new nonfill products, as well as our OneDNA technology that can be used to create single polymer turf systems.

2. RECYCLING THROUGH PARTNERSHIPS

We partner with others to offer avenues and options for recycling of our turfs once they reach the end-of-life stage. For some of these initiatives, early steps in the recycling process take place in-house at TenCate.

There are a wide range of viable options for recycling which have been successfully implemented in regions around the world. Broadly the two types of recycling we are facilitating are as follows:

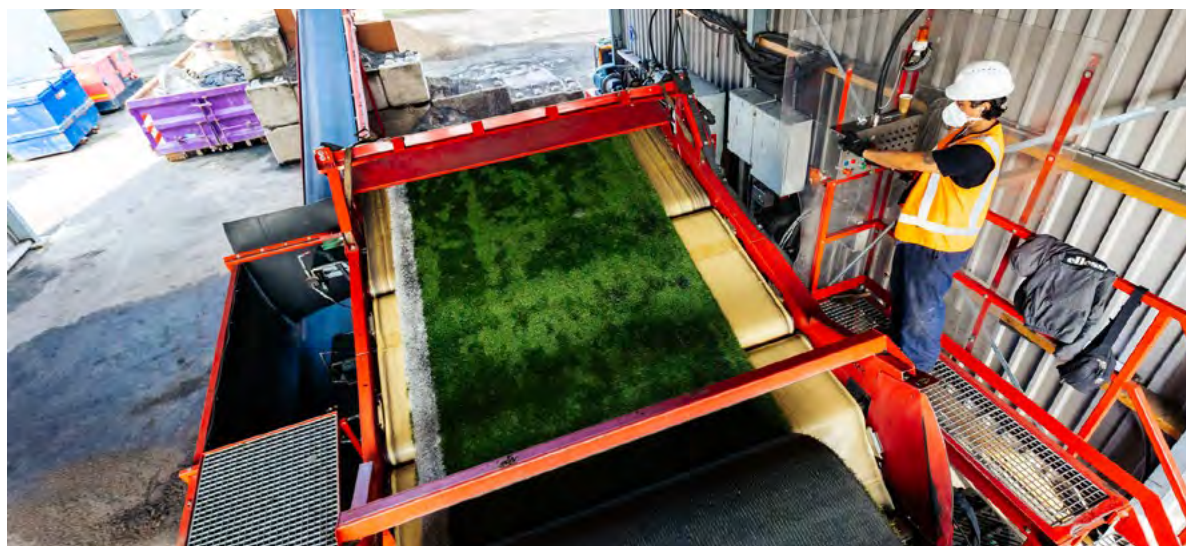
Mechanical recycling

In 2018, we initiated and formed a coalition of industry peers and competitors to explore ways to recycle our legacy products and ensure they could be recycled once removed from the ground. We collaborated with GBN, a Netherlands-based recycling company that works with a variety of materials and minerals from construction. Together, we developed a joint

recycling initiative, with coalition companies becoming shareholders. The recycled materials produced are sold on the open market.

Through mechanical recycling, infills like sand and rubber can be extracted, cleaned using various technologies, and reused in other applications.

For the turf itself, including its backing, the mechanical recycling process primarily results in agglomeration or "downcycling." This process produces a relatively rigid, granular material of lower quality and functionality than the original, limiting its range of uses. However, many companies have found ways to utilize its properties, such as its uniformity. For instance, at TenCate, we mix these granules with recycled car tires to create a shock-absorbing layer (EcoCept®) that can be installed as an alternative to infill in our turf systems.



Advanced Recycling (US)

In 2022 we launched a first-of-its-kind synthetic turf recycling program in the US, "TenCate Turf Recycling Solutions", as a joint program with ExxonMobil and Cyclyx International. This initiative uses advanced recycling techniques to reclaim materials for reuse.

As with mechanical recycling, the first step is to separate and condition the turf. We then send it to our partners, who chemically recycle them into high-quality, virgin-like plastic resins. We have the option to purchase these resins again for our own products, or ExxonMobil can sell them to the open market.

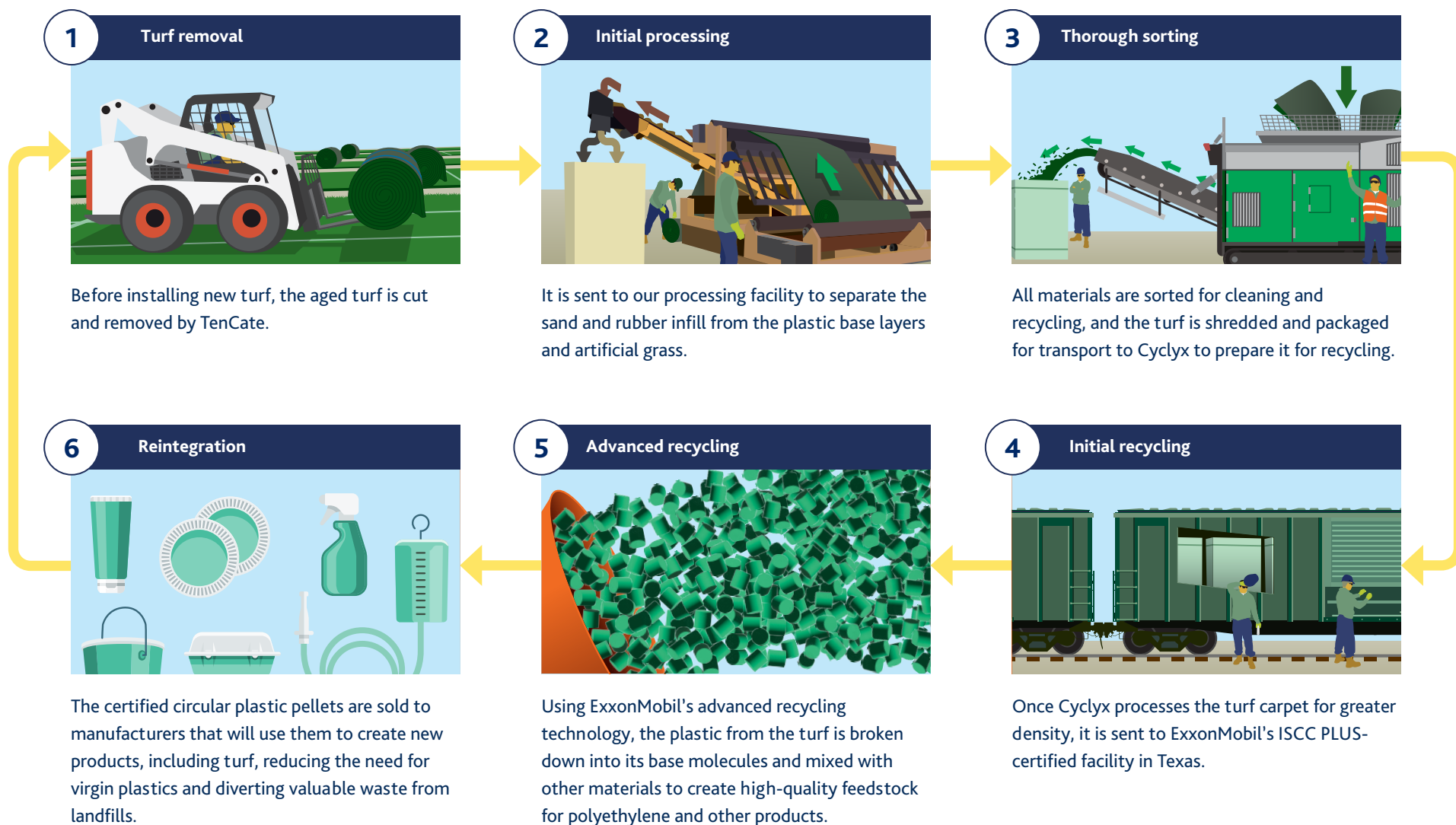
Outside of this initiative in the US, chemical recycling is not yet widely adopted due to its complexities and its energy consumption. There is rapid innovation in this space as the technology matures, and we wish to support this development by working with our partners. We are working on a diverse range of options in this fast-evolving area and will continually review as we move forward.

Local initiatives

Wherever there are more regional recycling projects, we try to support those. Sportex in Scotland is an installation company we have supplied to for many years, and they recently set up a recycling initiative. We loaned them some machinery and expertise and licenses to utilize some of our technologies in recycling for the UK market.



How TenCate Turf Recycling Solutions (US) works



ZERO WATER HOCKEY TURF

Unlike natural turfs, synthetic turfs do not need water for their upkeep. The big exception is Hockey turf. Field Hockey, especially at the elite level, is played on wet turf – and over the course of a match, 20,000 liters of water must be added to the pitch so that players can dive and slide at speed, in pursuit of a ball that glides along the surface.

Using such quantities of clean water is not sustainable, especially in regions that are increasingly experiencing water shortages. It also adds to the cost of the field (an irrigation system must be installed) and its operating costs. In 2018, the International Hockey Federation (FIH) challenged the synthetic turf industry develop turfs with good playability that do not use significant quantities of water.

At TenCate, we have led the charge by developing a product called Pure EP, which mimics the experience of playing wet – while playing dry. After a five-year development process, the first Pure EP field was installed at the Mixed Hockey Club in Weesp in June 2023 – a significant milestone for TenCate. The field was certified by the International Hockey Federation (FIH). By the end of the year, we had installed three additional Pure EP pitches in the Netherlands.

We plan a further rollout in 2024 ahead of a full launch in 2025. This limited rollout allows us to gather real-world data and make adjustments to our design, as needed. We also plan to incorporate our OneDNA technology into this product line, which will make it 100% recyclable at end-of-life.

Benefits of Pure EP

Our goal in creating Pure EP was to retain all the desirable qualities of a wet field, ensuring that the game would not be inadvertently altered by the introduction of a dry product. We recognize the incredible speed and skill exhibited in the game, and we acknowledge that any slowdown could significantly affect the enjoyment of both players and fans.

“Pure EP is not a mere incidental improvement built upon the existing status quo. It represents a fundamental and innovative leap, introducing a completely different design principle.”

Dr. Colin Young, Global Director R&D

The benefits of this development can be seen from two sides:

1. Water conservation

When Pure EP is installed *instead of a conventional “wet” Hockey turf*, this saves immense volumes of clean water, reducing pressure on supplies of this resource. It also means the field can still be used in times of drought and water use restrictions. The player's experience remains very similar to that of playing on a wet field.

2. Equitable access to sports

When Pure EP is installed *instead of a conventional “dry” Hockey turf* (e.g., one containing sand), players can experience what it is like to play “wet”. This not only offers advantages to amateur players who may otherwise have to play on a “dry” or sanded field, but also supports the development of the game in resource-poor countries where access to water – and therefore to the “wet” fields used at the elite level – is limited.



Countries including India, Pakistan, South Africa, and Australia have a huge legacy and interest in Field Hockey. However, these countries experience serious water shortages that have hindered them from developing the game at the grassroots level, ever since wet fields were introduced. One of our big drivers for developing this is to make sure that this field can be used globally in places where there is limited water, so that everyone has access to the sport and the social benefits it can bring.

DEVELOPMENT OF PURE EP

5 years of research & development to create revolutionary zero-water field hockey turf.

**EQUITABLE ACCESS TO SPORTS**

Supports development of the game in countries where water is scarce.



DRIVING INNOVATION / FROM R&D TO REALITY

ROLLOUT BEGINS

First Pure EP pitches installed in 2023, demand strong for 2024 and beyond.



SAVING 20,000 LITERS
OF WATER PER MATCH

WATER CONSERVATION

Reduces consumption of valuable natural resource.

PLAYER EXPERIENCE

Mimics the experience of playing "wet" without need for water.

TenCate history of Hockey turf



<1900

THE SPORT OF FIELD HOCKEY

was originally played solely on natural grass



1966

AFTER THE INVENTION

of synthetic turf in the US, the first major installation is at the Astrodome in Houston, Texas



1976

AT THE MONTREAL SUMMER OLYMPICS

Hockey teams compete on synthetic turf



1980s

INNOVATIONS IN TURF SYSTEM DESIGN

Sand is included within turf fibers, supported by improved yarn and turfing technology



1990s

INTRODUCTION OF WATER-BASED FIELDS

changes the game at the elite level, as playing "wet" becomes the elite surface preference



2000s

ITERATION AND IMPROVEMENT

of synthetic Hockey turfs, including switch from nylon to polyethylene



2020s

GROWING AWARENESS

of environmental and sustainability impacts of water-based Hockey fields



2023

INVENTION OF PURE EP, TenCate's zero-water Hockey turf

CLIMATE CHANGE & ENERGY

As a manufacturer of plastic-based products, we are keenly aware of our responsibility to reduce our greenhouse gas emissions, cut our non-renewable energy usage, and minimize our impact on the environment. We are pursuing a strategy focused on product innovation and operational optimization.

PLANS AND STRATEGIES

Plans for climate change mitigation and adaptation

We are proactively adjusting our strategy and business model to help limit global warming and to move towards a sustainable economy, and we intend to formalize this as a transition plan during 2024-2025. However, we have not yet conducted physical risk and transition risk evaluations, as per Task Force on Climate-Related Financial Disclosures (TCFD). Our formalized transition plan for decarbonization, climate change mitigation and adaptation is under development.

There are two dimensions we feel it is important to consider so we can fulfil the promise of *"Play On, Today & Tomorrow"*.

Dimension 1: Product design

How can we design our products so we can continue to make a positive social impact in a changing climate, while reducing the impact of our products on the environment throughout their lifecycles?

How can our turfs – considering their ability to withstand heatwaves, freezing conditions, heavy rainfall and drought – play into wider climate change adaptation strategies?

Dimension 2: Operations

How can we reduce and mitigate the emissions generated during the manufacturing and installation of our turfs? How can we address financial risks related to the cost of energy and oil-based raw materials? And how can we reduce emissions from transportation?

Also of significance is our vertical integration strategy, which means that – within the TenCate group – we have companies engaged in manufacturing, distribution, design, installation, and recycling. We complement this by procuring locally where possible; and by working with third-party companies, such as distributors and installers, where needed. This approach has already allowed us to create regional manufacturing hubs, especially in the United States (US) and the Netherlands, significantly reducing emissions from transport and logistics across our value chain.

Policies

The ISO 14001 certification process is complete or underway at many of our manufacturing sites. In 2023, five of TenCate's 11 manufacturing companies (see [ISO certifications table](#)) were ISO 14001 certified, meaning they had suitable policies in place for environmental management (including aspects such as climate change mitigation and adaptation, energy efficiency, renewable energy use and waste management). The remaining companies are pursuing ISO certification in 2024.

Targets

- So far, energy use reduction targets have primarily been set at the company level. At the group level, we have set internal energy efficiency targets for our four yarn manufacturing facilities. We anticipate being able to share specific targets in future reports.
- In 2023, we calculated our scope 1 and 2 greenhouse gas (GHG) emissions. Using these as a baseline, we intend to set timebound, outcome-oriented targets in 2024.

- We began calculating scope 3 emissions for the first time in 2024, with the intention of disclosing our scope 3 emissions in 2025 and adding the targets for scope 3 to our GHG emissions reduction strategy.

WHAT WE DID IN 2023

Dimension 1: Product design

We took major steps in 2023 in terms of:

- Embedding circularity in our product lines, so we can "close the loop", including by developing our OneDNA technology so we can produce single-polymer turfs.
- Minimizing the resources that our customers need to use during the product's lifecycle (e.g., water for Hockey fields).
- Developing products that cut out the need for intentionally added microplastics as infill.
- Developing products that use thermal fixing instead of energy-intensive latex fixing – significantly reducing energy consumption and greenhouse

gas emissions. We estimate that, compared to the conventional artificial turf with latex or polypropylene-coated backing, producing non-infilled turf requires 90% less energy.

- Developing turf systems with a significantly lower weight, requiring fewer vehicles to transport and thereby generating fewer emissions.

Further details can be found in our [Circularity & innovation chapter](#).

Dimension 2: Operations

Across the group, many of our TenCate companies – including the yarn companies consuming the largest amounts of energy – have developed and implemented plans to increase their energy efficiency. Efforts began before 2023 and are ongoing. We are able to share some highlights from across the group, below.

- **Thiolon BV** (Netherlands) and **Thiolon USA** (also known as Polyloom) are cutting out an energy

consuming pre-compounding step, moving instead to in-line dosing at our yarn extrusion facilities. The switchover is complete in the Netherlands. In the US, two lines switched in 2023, with the remaining two due to switch over in 2024.

- In 2023, **Hellas US** installed 10-megawatt solar panels at headquarters, as well as electric vehicle charging stations in the parking lot.
- **Thiolon ME** (Dubai) now uses solar energy to pre-heat the water for the steam baths and to power the Heating, Ventilation and Air Conditioning (HVAC) systems.
- **Hellas US** is using a platform called Samsara to monitor fuel purchases, consumption and idling in real time. This data will allow the company to gain an accurate picture of its fuel efficiency and introduce improvements. Similarly, in 2023 **Thiolon BV** implemented an energy saving system, Optivolt, to improve energy efficiency in the manufacturing of yarns and backing.
- LED lighting has been introduced at **Thiolon BV**, **TigerTurf UK**, **TigerTurf NZ** and **Polyloom**.
- **Weitzel Sportstättenbau** covered 100% of its electricity consumption via renewable sources, while **TigerTurf UK** reached 87%.
- **CSC** is being audited for CO₂ Performance Ladder certification. The Ladder is an instrument to certify companies' climate action, and CSC is being certified for level five (the highest level). A company with a CO₂ Performance Ladder certificate demonstrates the will and ability to do business sustainably by structurally reducing CO₂ emissions. This may also be taken into account during tendering processes.



ENERGY CONSUMPTION AND GHG EMISSIONS	2023 (MWH)	2023 (GJ)
Energy consumption*		
a. Direct energy consumption (GHG scope 1)	171,588	617,718
Fuel consumed for own generation (diesel)	8,338	30,018
Other fuel consumed (natural gas, liquified petroleum gas, propane, diesel and gasoline for vehicles, kerosene)	163,250	587,700
b. Indirect energy consumption (GHG scope 2)	137,249	494,095
Purchased electricity, heat, steam, cooling	136,736	492,251
Self-generated electricity from renewable energy sources	512	1,844
c. Total direct and indirect energy consumption (a+b)	308,837	1,111,813

GHG EMISSIONS IN METRIC TONNES	2023
Direct GHG emissions (scope 1)	
Total scope 1 GHG emissions	44,842
Indirect GHG emissions (scope 2)	
Location-based	54,517
Market-based	56,874
Total scope 1 and 2 GHG emissions	
Total Location-based	99,360
Total Market-based	101,716

E1-6 - GHG EMISSIONS INTENSITY	METRIC TONNES/EUR
Total scope 1 and 2 GHG emissions Location-Based per net revenue	0.000079
Total scope 1 and 2 GHG emissions Market-Based per net revenue	0.000081

* Scope 3 emissions are not available for disclosure for 2023. Data from two TenCate-owned companies, Safina LDA and Celebrity Greens LLC, are excluded for 2023.

MICROPLASTICS

What are microplastics?

The ESRS defines microplastics as being pieces of plastic 5mm or less. There are increasing concerns about the presence of microplastics in different environments, such as rivers and oceans, and about their impact on the environment and potentially human health. Microplastics may be:

- Unintentionally produced and released through wear and tear of larger pieces of plastic, or
- Intentionally added to products for specific purposes.

RAW MATERIALS

Resin, the raw material for the manufacture of yarn and backing, is sourced in the form of granules. These may be smaller in diameter than 5mm, hence can be considered a microplastic. Migration into the environment is minimal to none, as the logistics process is very controlled – including shipping, trucking, staging in silos, and internal transport through blown lines.

POLYMERIC INFILLS FOR USE IN TURF SYSTEMS

Polymeric infills are commonly used as performance infills for turfs, making them "intentionally added microplastics". Styrene-butadiene rubber (SBR) infill was, and still is, the most frequently used – while other materials such as TPE and EPDM are also sometimes used in turf systems. SBR consists mostly of recycled car tyres, which was previously considered an ideal

way to provide car tyres with a second functional life. As a material input, SBR is highly functional, cheap and widely available.

Over time, the disadvantages of polymeric infills, including SBR, have become apparent. Friction causes the granules to gradually break down, resulting in smaller particles. These granules and particles end up migrating from the field via wind and rain, as well as via players' shoes and clothing. The migration of such microplastics into the environment is very difficult to control, hence the recent EU decision to ban the sale of products with intentionally-added microplastics from 2031 (see box on [page 67](#)).

We are currently investigating how to overcome the challenges of measuring secondary microplastics generation, and how to consolidate data on microplastics use at a group level, so that we can share quantitative metrics in future.

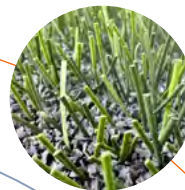
Before the topic 'microplastics' rose to prominence on the environmental agenda, TenCate had already embarked on its strategy which is defined by three 'R's: **reduce, replace, and remove** (see next page).

We tailor this strategy according to the situation. For example, if a tender from a local municipality specifies a rubber infill, we may place a bid that meets the requirements, while also outlining and advocating for the more sustainable solutions that we can offer.



**REDUCE
REPLACE
REMOVE**

**TAKING
ACTION ON
MICROPLASTICS**



REDUCE

- We can reduce the volume of microplastic infill in our turf systems adding a shock pad which means that less infill is required;
- Where rubber infills are used, we can advise our customers on how to enhance containment to prevent the infill from migrating off the field via shoes and clothing.



REPLACE

We can apply organic materials such as cork, wood or olive pits instead of polymeric infills.



REMOVE

We can remove the need for infills of any kind entirely, with our new non-filled turf systems.

Microplastics ban in the European Union

The ESRS defines microplastics as being pieces of plastic 5mm or less. There are increasing concerns about the presence of microplastics in different environments, such as rivers and oceans, and about their impact on the environment and potentially human health. Microplastics may be: After several years of research and public consultation, the European Union (EU) legislated to ban intentionally added microplastics. This ban, announced in September 2023, begins with an eight-year transition period after which it will be illegal within the EU to sell products with intentionally added microplastics.

TenCate actively supported this legislation. We still meet customer demand for turfs with include the use of polymeric infills, e.g., SBR. However, we are also encouraged by the dramatic decrease of the use of polymeric infills, especially in the tendering phase. We will continue to educate the market on the benefits of non-filled turf systems and those containing organic infills.

UNINTENTIONAL GENERATION OF MICROPLASTICS

Now that intentionally added microplastics is dealt with on a legislative level (in the Europe) and the use is decreasing overall worldwide, we are increasing our focus on unintentionally generated microplastics.

Turf is subject to wear as it is being used. We have dedicated significant resources and in our research laboratory towards prevention of wear, delay of wear, and de-engineering the drivers of wear. Our laboratory is fully equipped to simulate all types of wear so that we can assess potential solutions.

A key finding is that our non-filled turf systems have very low wear. These non-filled systems do not require sand, which is commonly used as ballast, and is extremely abrasive. With our 100% non-filled systems, our early findings suggest that wear is approaching negligible levels. Apart from minimising unintentionally generated microplastics, we expect the functional lifetimes of turf systems to increase by between two and four years.

ELIMINATING PFAS FROM PRODUCTION PROCESSES

Concerns have recently grown about the health and environmental impacts of exposure to PFAS, a group of chemical compounds (per- and polyfluoroalkyl substances) that are known as "forever chemicals" and that have been in use in consumer and commercial products for eight decades.

Synthetic turf does not use a PFAS holding agent for achieving functional properties typically associated with PFAS use, such as water and dirt repellency and heat abatement. In our production process, we use process aids – which in general terms can be deemed a 'lubricant'. PFAS is an ingredient in typical process aids. In 2023, we started to discontinue the PFAS holding process aids under the leadership of a dedicated task force. The transition is scheduled for completion in 2024.



Notably, the particular PFAS used in the relevant process aid is not deemed dangerous nor subject to restrictions. However, we took the strategic decision, out of an abundance of caution, to transition away from using any PFAS in our production.

Our PFAS usage is not encompassed under the material topic "microplastics". It relates to the topics within E2 Pollution that were not identified as material topics in our DMA. We therefore share this information not as part of any CSRD-related disclosure requirement, but because we want to voluntarily disclose the progress we have made on a pollution-related issue that is important to some of our stakeholders.

3. SOCIAL/

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IMPACTS, RISKS & OPPORTUNITIES

We have identified impacts, risks and opportunities (IROs) related to TenCate's material topics in S1, S2, S3 and S4. On the right, we provide a short summary of how we are managing our IROs, with more details available further in this chapter.

S1 | Working conditions and rights of own workforce

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Providing above-standard salaries. ● ● Open communication and collaboration between employees and management. ● ● Ensuring no child and forced labor in the value chain. ● ● Ensuring employees' personal data is protected. ● ●	💡 Opportunities Better understanding of employees' perspectives, e.g., via work councils and engagement surveys, can lead to strong workplace culture and communication. Paying above-standard salaries can boost employee satisfaction, engagement, and productivity, while reducing turnover. ⚠️ Risks Insufficient wages can hinder talent attraction and retention, impacting productivity and competitiveness, especially with inflation. Variations in social dialogue structures across countries may lead to decreased employee engagement if issues are not effectively addressed. Non-compliance with labor laws and privacy regulations can result in legal penalties, fines, and reputational damage.	Where possible, we offer wages above minimum wage and/or (if applicable) above wages specified by collective labor agreements (CLAs). We offer employee benefits tailored to different countries and locations. We completed a global employee engagement survey in 2023. The results are now being evaluated and will inform our HR strategies going forward. We have a Code of Conduct for all employees. This includes our policy on child and forced labor. We have a data protection policy, and we include data privacy agreements with third party companies where necessary.

S1 | Health & safety (own workforce)

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Implementation of occupational health and safety systems in the workplace. ●● Negative Occupational health and safety incidents. ●●	💡 Opportunities Implementing and analyzing occupational health and safety systems can identify improvement areas, prevent incidents, and enhance workplace safety. A safe workplace boosts employee morale, well-being, and productivity. ⚠️ Risks Unsafe conditions can harm employee well-being, decrease morale, and increase compliance costs. Poor performance in occupational injuries and illnesses could trigger reputational risk and damage the license to operate.	We are implementing occupational health and safety systems in the workplace, including by pursuing ISO 45001 at all our facilities. Steps we take to ensure safety include comprehensive and continuous training; providing personal protective equipment; risk and hazards identification; and incident root case analysis. We are tracking and monitoring the effectiveness of our efforts to ensure employee safety. This includes alignment efforts across companies in the TenCate group.

S1 | Diversity, equity and inclusion of own workforce

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Promoting gender equality, equal pay, and a culture of diversity and inclusion. Ensuring all employees feel valued and respected, boosting morale, engagement and job satisfaction. ●● Providing training and skill development opportunities, leading to increased competency, productivity and job satisfaction in the workforce. ●● Implementing measures against violence and harassment, creating a safe and secure work environment. ●●	💡 Opportunities Emphasizing gender equality and equal pay can attract diverse candidates and improve retention. Regularly enhancing training programs can meet evolving workforce and business needs. Emphasizing gender equality and equal pay can attract diverse candidates and improve retention. ⚠️ Risks Gender disparity can perpetuate stereotypes and limit advancement opportunities for female employees. Inadequate training can create skill gaps, hindering performance and competitiveness. Measures against violence and harassment may incur up-front costs, impacting the budget and resources.	We are inclusive of employees of different ages, valuing what they bring to our company. We pursue gender diversity, including in our leadership. At the c-suite minus one level, 25% of our employees are female. At a local level, our companies organize training and skills development opportunities for employees. A global policy is under development. Our employee Code of Conduct prohibits violence and harassment in the workplace. Global anti-harassment trainings will be included in the new compliance training scheme starting in 2024.

S2 | Working conditions and rights of workers in the value chain

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive ESG screening favors suppliers that ensure proper working conditions, equal treatment, and respect for workers' rights. Taking ESG factors into account in supplier selection therefore ensures positive impacts for workers in the value chain and incentivizes positive behavior by employers. This can also improve workers' performance across the value chain. ●●	💡 Opportunities TenCate can discuss relevant topics with its suppliers and ensure awareness about relevant new compliance legislation. ⚠️ Risks Non-compliance with human rights laws and labor regulations can lead to legal consequences. Regulations vary between countries and states, raising the risk of inadvertent non-compliance.	We have a Suppliers Code of Conduct that sets out our expectations. We use the Assent ESG screening platform to evaluate suppliers across 10 areas. These include Human Trafficking & Slavery, Labor Rights, Human Rights, Diversity & Inclusion, Organizational Commitment, and Data Protection.

S3 | Affected communities (non-consumer)

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive New turf installations and manufacturing developments bring economic and social benefits to nearby affected communities. Provision of spaces for sports and recreational activities can create positive benefits at a local level, creating a forum for social interactions that promote a sense of belonging and cohesion. ● ● The presence of sports pitches within a community can encourage active lifestyles and help combat issues such as obesity and related health problems. ● ● Negative The construction and operation of synthetic turf manufacturing sites may generate vehicle congestion and noise pollution. ●	Opportunities Investing in community development, such as sports and recreational facilities, strengthens community ties. Minimizing potential disturbances to local communities enhances reputation and social relationships.	We strictly follow all laws and regulations, including building and construction codes. We are also proactive about reducing potential negative impacts of our operations, e.g., from vehicle movements. Our companies participate in social dialogue with local communities when needed, e.g., regarding expansion plans for a manufacturing site. We participate in open dialogue with the communities and municipalities to understand stakeholders' perspectives and provide feedback or information when necessary. By enabling and promoting sports activities through the installation of synthetic turf fields, we contribute to improving the overall health and well-being of the community. We engage in social partnership initiatives to create a positive impact in the community, e.g. via the Johan Cruyff Foundation.

S4 | Consumers and end-users

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Providing access to quality information enables consumers to make informed decisions about the company's products and services. ●● Ensuring that products comply with safety regulations and standards, including those specific to certain regions, sports or applications. ●● Products create opportunities for community gatherings, sports events, and social activities. ●● Committing to follow all relevant regulations demonstrates a commitment to transparency in marketing practices. ●●	💡 Opportunities Open dialogue and access to information promote transparency, trust, and long-term customer relationships. Educating communities about artificial turf benefits encourages participation and promotes social inclusion. Developing responsible marketing policies demonstrates commitment to ethical standards and integrity. ⚠️ Risks Misinterpretation of information can lead to misconceptions about product features and risks. Lack of universal safety standards for artificial turf can cause regional inconsistencies and consumer confusion. Improper installation or maintenance of artificial turf may pose health and safety risks. Absence of internal marketing policies can result in legal violations, penalties, and reputational damage.	We cultivate open dialogue with customers and provide quality information that ensures trust and confidence in our offerings, helping consumers choose products that best meet their needs and preferences. We make the safety of our products a top priority. We test and validate against product norms, standards and regulations. Records are available to our clients upon request. TenCate is shares best practises on installation with own workforce and contractors to eliminate the danger of improper installation techniques and poor maintenance practises. Through our products, we facilitate community engagement and interaction. Our marketing and compliance teams monitor the different marketing compliance regulations across the group and we are in the process of aligning our policy on responsible marketing practises.

WORKING AT TENCATE

Our people are key to TenCate's success, and all our companies have measures in place to support and protect employees. We aim to be a responsible, inspiring, and empowering employer, where people of all backgrounds are welcomed and able to thrive. Our Group HR team plays a supportive role for the 36 TenCate companies around the world. This includes managing the group-wide Code of Conduct, which contains our policies on human rights and whistle-blower protection.

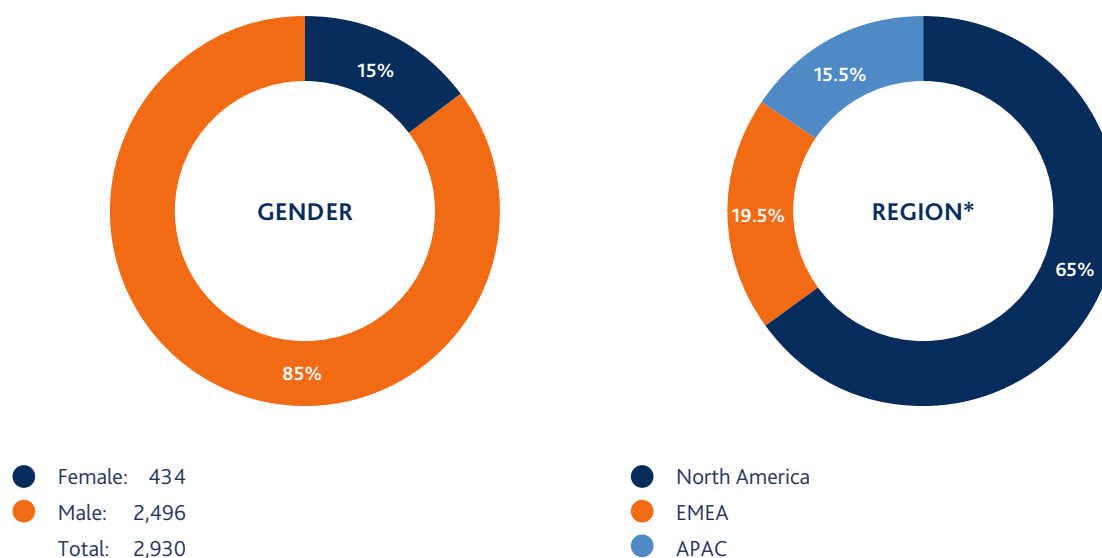
ABOUT OUR WORKFORCE

A breakdown of the characteristics of our workforce according to the definitions set out in ESRS S1-6, S1-7 and S1-9 is provided here. The numbers reported are taken from the end of 2023.

The category "own workforce" encompasses both employees and non-employees.

- Employees have an employment contract directly with a subsidiary of TenCate. This contract is either permanent or temporary (see below).
 - A permanent contract is between a subsidiary of TenCate and an employee, for an indefinite period of time (in principle ending at the official pension date). The employee is on the payroll.
 - A temporary contract is between a subsidiary of TenCate and an employee, for a definite period of time of two years or less. The employee is on the payroll.
- Non-employees in our workforce are either agency workers or self-employed contractors. Agency workers will have an employment contract with an employer other than TenCate. Self-employed contractors will have a contract directly with TenCate.

CHARACTERISTICS OF TENCATE'S OWN WORKFORCE



* For 2023 we have shared aggregated data for the regions in which we operate, rather than specific countries.

EMPLOYMENT TYPE	FEMALE	MALE	TOTAL
Employees	434	2,496	2,930
Permanent	426	2,210	2,636
% of permanent employees within our own workforce	15%	75%	90%
% of female/male employees who have permanent contracts	98%	89%	
Temporary	7	37	44
% of temporary employees within our own workforce	0.24%	1.26%	1.5%
% of female/male employees who have temporary contracts	2%	1.5%	
Non-employees	1	249	250
% of non-employees within our own workforce*	0.03%	8.49%	8.53%

AGE DISTRIBUTION OF OWN WORKFORCE*	FEMALE	MALE	TOTAL
Under 30 (excluding 30)	79	579	658
% of people under 30 within our own workforce	3%	20%	22%
Between 30-50 (including 49)	239	1,277	1,516
% of people between 30-50 within our own workforce	8%	44%	52%
Over 50 (including 50)	116	640	756
% of people over 50 within our own workforce	4%	22%	26%

* This data excludes agency workers at Thiolon NL BV.

EMPLOYEE ENGAGEMENT

As a responsible employer, TenCate identifies and carries out the actions needed to respond to any negative impacts on our own workforce, including mitigation and remediation where necessary. To get direct feedback from as many employees as possible, we have our global employee engagement survey (GEES), which aims to reach every single employee. This was carried out for the first time in 2023 and will be repeated annually going forward.

The GEES, conducted on our behalf by an independent third party, gathered information from all our subsidiary companies in order to provide management with an aggregated global view of our employees' perspectives on TenCate.

77%

of all employees participated in the GEES

We achieved an employee Net Promoter Score (eNPS) of 49. Both these metrics are comparatively high, both in our industry and for an organization as large as ours. It was very encouraging to see that our results were well above the peer group used as a benchmark – which consists of employers with a similar industrial profile, and employers with a similar number of employees. We aim to build on these results in the years to come and to achieve third-party certification as a World-class Workplace in 2024 – an “excellence-in-employership” label awarded by to high performing organizations based on the opinions of employees.

GENDER DISTRIBUTION AT TOP MANAGEMENT LEVEL

	FEMALE	MALE	TOTAL
c-suite*	0 (0%)	4 (100%)	4
c-suite minus one**	14 (25%)	43 (75%)	57

* At the end of 2023, this category included the TenCate group CEO, TenCate group CFO, CEO and President of TenCate Americas, and CEO of Hellas Construction USA.

** At the end of 2023, this category included leadership that reports directly to the c-suite.

Following up on the GEES

Each subsidiary company was presented with its own survey results, including the three aspects on which it had achieved comparatively high and low scores.

Each company subsequently developed an action plan to build upon its strong performance areas and address weaker performance areas. Leadership, HR, managers and supervisors at the respective subsidiary companies are responsible for implementation of these action plans. Before the next global GEES in November 2024, each TenCate company will present its progress to its own workforce.



One of the overall findings from the survey is that our employees want more information about our group and its performance. In 2024, we are therefore focusing on improving group-level internal communications, e.g. by conducting webinars with updates from our CEO.

Employee turnover

Increasing employee engagement, and thereby minimizing turnover, is key to achieving both our social and our strategic ambitions. We aim to reduce

employee turnover as much as possible by providing meaningful work, ample training and development opportunities and a safe and supportive working environment.

CONDUCT AND WHISTLE BLOWING**Code of Conduct**

TenCate's Code of Conduct sets out the values and principles we expect all our employees to uphold and the behaviors we expect them to display. It covers a range of topics in areas including sound business practices, health and safety, the environment, and company property. We will publish an updated Code of Conduct in 2024.

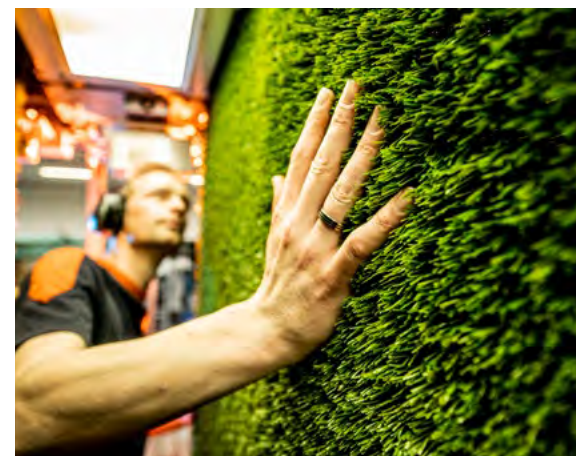
Our Group Compliance Officer, Group HR, and our companies' HR staff, are responsible for this policy (the Code of Conduct) and for the implementation of procedures in conjunction with the adopted internal mechanisms.

Group-wide policies and procedures to collect quantitative data related to ESRS S1-17, "incidents, complaints and severe human rights impacts", are currently under development, as are policies and

procedures to collect data related to employee turnover. These will be implemented during 2024.

Whistle Blower Scheme

All employees must report any breach, or suspected breach, of the Code to the Group Compliance Officer or a regional Counsellor. We also have an internal Whistle Blower Scheme through which employees can, confidentially, make a report. Where required by local legislation, our companies also have external channels employees can use for whistleblowing. If, after investigation, a breach is found, sanctions may be taken against the employee(s) in question, as appropriate to the seriousness of the offence. Employees who make reports in good faith will face no disadvantages or retaliation as a result. More details can be found in our Code of Conduct.

**Human rights**

Our Code of Conduct also contains TenCate's statement on human rights. We acknowledge the provisions of the Universal Declaration of Human

Rights and respect both the International Labour Organization Declaration and the Ethical Trading Initiative Base Code on Fundamental Principles and Rights at Work. Specifically, we attach great importance to the elimination of forced and child labor, freedom of association and compliance with guidelines on working time and minimum pay.

Privacy

Privacy emerged as one of the most important topics for our workforce in our 2023 GEES. As stated in our Code of Conduct, TenCate is committed to respecting the privacy of all individuals. Our data protection policy includes privacy clauses corresponding to the relevant legislation in the countries where we operate.

We ensure that our data management practices comply with legal and contractual obligations, in line with the Global Data Protection Regulations, and where necessary, we include data privacy agreements in our contracts with third party companies.



WORKING CONDITIONS

Health and safety

With our products manufactured and installed by our people and our partners, health and safety are our top priority. We have stringent measures in place at all TenCate companies and sites to prevent accidents and support the well-being of our workforce. See the chapter [Health & safety](#) for more details.

Rights and freedoms

We also follow all relevant local and regional legislation on workers' rights and freedom of association. In the European Union (EU), we have no agreements with employees for representation by a European Works Council, Societas Europaea Works Council, or Societas Cooperativa Europaea Works Council. Globally, all our employees are paid an adequate wage in line with applicable benchmarks.

PERCENTAGE OF EMPLOYEES COVERED BY WORKERS' REPRESENTATIVES

Netherlands	100*
US	5.23
Global percentage	Data not available for 2023

** This data excludes TenCate's design and installation companies.*

Training and skills development

The TenCate group has been expanding fast, and all our companies are investing in training and skills development. While we do not currently have a group-wide platform to track the average number of training hours per employee, or the percentage of employees who took part in regular performance and career development reviews, we are now seeking



better insight into how training and skills development is carried out across the group and exploring how this data can be collected.

Given the diversity of activities within TenCate, training is to a large extent carried out at a company level. However, we will start to expand group-level training provision, where we have identified a need or opportunity. In 2024, we intend to start implementation of a global learning management system (LMS), beginning with compliance training for relevant employees in 2024 (see chapter [Corporate governance](#)) and will then enrich the LMS environment with additional training sessions on further topics.

For more information about our approach to health and safety training in particular, see the chapter on [Health & safety](#).

Equal pay

For 2023, we are not able to share quantitative data for ESRS S1-16, "Remuneration metrics (pay gap and total remuneration)". We are taking steps to ensure we can identify and report our remuneration data in future and disclose whether we have a gender pay gap.

Diversity and Inclusion

As a market leader and global organization, TenCate aims to build a diverse and inclusive workforce. We believe this is key to ensuring a creative and engaging work environment for our people, in turn supporting and enhancing the success of our company. We recognize that diversity and inclusion are important issues for our workforce – as shown by the results of our 2023 GEES – and we are developing a dedicated policy covering diversity, equity & inclusion. Inclusive recruitment will also be covered in this policy.

In the meantime, our approach to these topics is laid out in our Code of Conduct. We do not tolerate any form of discrimination on the grounds of race, gender, religion, life principles, political preferences, age, disabilities, sexual preferences or other non-performance-related factors. Any form of aggression, harassment, bullying, or intimidation – whether physical, verbal, written or sexual – is unacceptable at TenCate. Employees who experience or witness undesirable behavior of this kind can reach out to our regional Counsellors, who are trained to respond to questions and complaints related to interpersonal matters.



The team at Hellas celebrating International Women's Day 2023

HEALTH & SAFETY

The health and safety of our workforce is of paramount importance, and a matter of daily practice. The objective is to minimize the risks and the incidence of work-related injury and illness. This requires us to continuously strengthen the policies and measures we use across the group.

HEALTH AND SAFETY MANAGEMENT SYSTEMS

All of our companies have a health and safety (OHS) management system in place. As a result, all the people in our workforce are covered by an OHS management system that is based on legal compliance requirements (at a regional, national, and state level) and relevant standards or guidelines.

A number of our companies are ISO 45001 certified. ISO 45001 is an International Organization for Standardization (ISO) standard for OHS management systems, with the goal of reducing occupational injuries and diseases and ensuring safe working conditions. Achieving this certification requires a third-party audit of each company's OHS management system. Further information about our companies' progress towards achieving ISO 45001 certification can be found on [page 39](#).

Our policy is to pursue ISO 45001 certification for 8 of the 12 manufacturing companies in the TenCate group. We believe ISO 45001 is an appropriate standard for these companies due to their size and the activities they carry out.*

	PERCENTAGE	NUMBER
Own workforce covered by an OHS management system	100%	2,930
Own workforce covered by an OHS management system certified by ISO 45001	18%	531

In 2023, two of our manufacturing companies in the United States, Challenger Turf Inc and TenCate Thiolon USA, successfully completed their first ISO 45001 audits and earned this external certification. This brought the total number of certified manufacturing companies to four, with a further four scheduled to be certified in 2024. At these two newly certified companies, 20 individuals have been trained as internal ISO auditors, enabling a culture of proactively searching to mitigate unsafe practices to quickly spread across the workforce.

TARGET: 8 MANUFACTURING COMPANIES ISO 45001 CERTIFIED BY END OF 2024

Own workforce at 8 manufacturing companies in scope*	1,198
Own workforce at 8 manufacturing companies in scope already covered by an OHS management system certified by ISO 45001	44%

ISO 45001 is not always the appropriate certification for our design and installation companies. For these companies, we continue to work with third party service providers to help us manage workplace safety and trainings.

OCCUPATIONAL INJURIES

TenCate has a universal reporting mechanism that our companies use to log recordable incidents, adhering to all relevant legislation in the various locations where we operate. This system enables us to monitor and investigate health and safety performance across the group. Our companies also have policies relating to accident prevention and near-miss investigation.

* The following manufacturing companies are out of scope for ISO 45001 certification in 2024: Ace Sports Turf Landscaping LLC, Roxie Polymers LLC, Safina LDA, and Spears Industries LLC.

In addition to the data shared above, we are taking steps to ensure that in future we can also track and report on the number of cases of recordable work-related ill health, and the number and rate of recordable work-related accidents. We are in the process of aligning our safety recording processes, which will allow us to share data in line with ESRS disclosure requirements, as well as tracking and comparing performance across the group.

HEALTH & SAFETY ACROSS THE GROUP

Our subsidiary companies cover a wide range of activities across the value chain. They also perform their activities in a wide range of jurisdictions, encompassing differing health and safety regulations. The overarching policy is that our subsidiaries must adhere to the highest national, regional or state health and safety standards, including ISO certification where applicable.

Behaviors and culture

Our culture of prevention and commitment to enabling and promoting safe behaviors will form the foundations for our new global approach. Our safety mindset is already key to the high standards we achieve across our sites, but as we develop and implement our group-wide health and safety management framework, we will take the opportunity to embed strong safety values and practices even more deeply into our DNA.

We are pleased at the feedback we received from employees in the 2023 GEES survey, with 93% of our workforce agreeing with the statement "I feel safe while doing my work". Based on analysis by the third-party company that carried out the survey, TenCate scored 8.7 on this question against a peer-group benchmark of 7.5 (see next page).

LOST-TIME INJURIES

Lost-time injuries (LTIs)

METHODOLOGY / DEFINITION

NUMBER*

A lost-time occupational injury is an incident that results in time lost from work.

60

Days lost to:

- **work-related injuries**
- **fatalities from work-related accidents (n/a)**

Lost days are counting from the next day of the incident that employee is not able to work due to an occupational injury.

1,274.26

LTI frequency rate

Number of LTIs that occurred in 2023 divided by total hours worked x 200,000.

1.8

Fatalities resulting from work-related injuries and ill health

0

Fatalities of other workers working on TenCate's sites

0

** These disclosures cover TenCate's employees, unless otherwise specified.*



"I feel safe while doing my work."

Employees' responses to the statement

80%

Agree, and 60% strongly agree

8.7

TenCate Group score

+12% above the benchmark

Health and safety at Hellas

Our US company, Hellas, provides provides safety trainings at every manufacturing or installation crew member's onboarding at HQ, covering Hellas's health and safety handbook. The company also regularly provides on-site training on topics such as heat-related safety, equipment operations, CPR and first aid. In 2023, internal health and safety audits were conducted at 450 job sites. Hellas's Midwest Operations and Sports Lighting have gone one and two years, respectively, without a single OSHA recordable incident.*

* Occupational Safety and Health Administration (OSHA) is part of the United States Department of Labor.

In 2023, our manufacturing sites in the Netherlands set a good example for embedding good practice on a day-to-day basis, introducing a series of safety-related programs and values for workers on site. Several of these initiatives are part of the onboarding process, helping new joiners ensure their own and others' safety from day one.

In the US, meanwhile, the daily Toolbox Talks led by supervisors at our manufacturing sites are an important channel for engaging with employees on specific safety topics. Employees are also encouraged to raise examples of (potentially) unsafe practices and to discuss how to address them.

Safe behaviors are also essential on the road, as our teams travel to job sites. To enable and encourage responsible driving, our Hellas company deployed fleet-tracking software across all company vehicles in 2023.

Training

The conditions and environments in which our employees perform their duties differ greatly. Recognizing this, we take into account the different needs of, and risks facing, our different worker groups in different locations. Regardless of location or experience, health and safety training is an ongoing process for our manufacturing and installation teams alike. In 2023, our companies continued to provide trainings on topics including fire safety, first aid CPR and AED, height safety, BT lifting, VCA safety, and the 5S productive work environment (Sort, Set in order, Shine, Standardize, Sustain).

In Texas, for instance, we provide multiple-day trainings and refresher courses for people installing our products outdoors in high temperatures. We combine instructions and awareness with the practical protection our workers need, such as sun hats and sunscreen, three-liter bottles of water with added electrolytes, and shorter working days in hot weather.

In Dubai, meanwhile, we use a points system – linked to various benefits – to encourage our workers to complete the trainings hosted on our online learning management system (LMS). Developed specifically for our Dubai manufacturing workforce, the LMS offers bitesize training modules that are designed to fit within the duration of the bus journey from their accommodation to our manufacturing site, making this a convenient way for workers to refresh their knowledge of good health and safety practices. This system has been so successful that we are now working to transfer these modules to our new global LMS, which we aim to launch in 2024.

Standardization via a new framework

TenCate has grown rapidly in recent years, adding numerous subsidiary companies to the group. While health and safety performance is exemplary across the group, in 2024 we will initiate the following activities:

- Standardize health and safety reporting across the group, including using consistent and internationally accepted definitions for reporting on health and safety;
- Set health and safety targets per subsidiary across the group;
- Implement a best practice forum in which companies performing substantially similar activities can publish their best practices for other companies within the TenCate group to benefit from. This will be augmented by health and safety webinars to increase the effectiveness of the uptake of best practices.



WORKERS IN THE VALUE CHAIN

A huge variety of people across the world work in TenCate's value chain, which stretches from the extraction of the raw materials used to make our turf, all the way to end-of-life recycling.

We believe it is important that all workers in our value chain are assured of positive and safe working conditions, equal treatment, and protection of their rights.

ABOUT OUR VALUE CHAIN WORKERS

As illustrated in our [value chain](#) visualization, our value chain includes upstream and downstream activities that sit outside of our own operations.

Upstream, workers in the value chain include those working with our suppliers of:

- Raw materials, e.g., polyethylene, polypropylene, fossil energy, and water.
- Manufactured materials, e.g., manufactured artificial turf compounds, vehicles, packaging and construction materials.

Downstream, workers in the value chain include those working at:

- Installation companies outside of the TenCate group.
- Waste management services outside of the TenCate group.

The disclosures in this chapter relate primarily to those working in the upstream value chain. This is where we are more able to affect working conditions and ensure workers' rights are protected.

POLICIES AND COMMITMENTS

TenCate's policies to ensure the wellbeing of workers in the value chain are set out in our Supplier Code of Conduct, as well as in our terms and conditions. Suppliers are asked to agree to the Code as part of the wider "General Purchase Conditions and General Conditions for work" they agree to in their contracts with TenCate. Both documents are publicly available on the TenCate website.

In some cases, suppliers may request to work under the terms of their own Code. We may accept this if their Code is robust – including, for example, commitments to working conditions and treatment of workers that are in line with TenCate's own approach.

The Code includes commitments to respecting the personal dignity, privacy, and rights of individual employees; ensuring employees are not harassed or discriminated against; ensuring that their working hours comply with applicable laws; ensuring that employees are compensated properly for overtime; and allowing workers to join trade unions.

Health and safety is also covered in the Code, which includes provisions specifying what suppliers should provide to their employees, such as adequate lighting, ventilation, drinking water and personal protective equipment.

Human rights and forced labor

As part of our human rights policy commitments for workers in the supply chain, we require suppliers to acknowledge the provisions of the Universal Declaration of Human Rights (UDHR), and to respect the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work. As our partners in business, our suppliers are asked to uphold "the highest standards of ethical behavior and compliance with all legal requirements."

The Code states that TenCate "specifically attaches great importance to the elimination of forced and child labor" and requires that suppliers avoid any form of child, forced, or compulsory labor. Human trafficking is implicitly included in this statement.

TenCate does not operate in any contexts or geographies where there is a risk of child labor or forced labor in the value chain.



WORKING CONDITIONS AND RIGHTS – TRACKING AND SCREENING

We have implemented an ESG screening platform, Assent, and are in the process of populating it with data from our suppliers across the globe. This data will give us more insight into how our suppliers assure positive and safe working conditions and equal treatment, and how they guarantee and respect their employees' rights. It will also allow us to consider these factors in procurement decisions.

Through the Assent platform, we ask our suppliers to report information on topics including human trafficking and slavery, labor rights, human rights, diversity and inclusion, data protection, and organizational commitment. The platform will show us which suppliers are tracking their data and sharing information transparently, and which suppliers are ultimately top performers in these areas.

By using this screening tool in future to assess our suppliers, we will stimulate suppliers to improve their performance and become more competitive. We acknowledge that, if we choose not to use certain suppliers because they perform poorly in our ESG screening, there is a risk that our production costs may increase. However, we believe that the treatment of workers in our value chain reflects on us as a responsible company. We also believe that well-treated, satisfied employees perform at a higher level, leading to positive impacts for TenCate.

IMPACTS, ENGAGEMENT, AND REMEDIATION

In 2023, we did not engage with value chain workers or their representatives about any positive or negative impacts that are likely to affect them, nor did we

take their perspectives into account in decision-making. The transition to greener and climate-neutral operations is not something we specifically consider in terms of impacts on workers in the value chain. We also did not have a remediation process in place for workers in the value chain to raise their concerns or needs.

We previously set a target for 100% of suppliers to have completed ESG screening by 2024. While we did not meet this target on schedule, we have made progress, as can be seen in our Supply chain chapter. By gathering ESG data about our suppliers, including their employment practices, we can make procurement decisions that encourage and reward responsible employers across the value chain.



AFFECTED COMMUNITIES

As a company, we have an impact on our customers and the people who use our products for sport and play, and – more widely – on the communities whose lives may be affected by our products and our operations.

WHO ARE OUR AFFECTED COMMUNITIES?

When we talk about 'affected communities' and how this relates to our company, we are talking primarily about:

1. People living near manufacturing sites, as well as those working and spending time in close proximity, whose lives may be affected by our operations.
2. People living near our installed products, whose lives may be affected by the presence of sports or outdoor living installations in their communities.



PEOPLE LIVING NEAR TENCATE'S MANUFACTURING SITES

We are mindful that constructive relationships with people living near our manufacturing sites can bring business benefits, such as stable and conflict-free operations and easier local recruitment because of our good reputation as an employer. Minimizing potential disturbances to local communities maintains TenCate's good reputation and ensures we can continue to operate smoothly, with positive social relationships.

For people living near TenCate's manufacturing sites, and also for local communities near where we are installing our products, the main negative impact that we try to mitigate is from traffic, i.e., congestion, noise, and pollution.

We minimize and mitigate our impacts via **prevention**, **mitigation** and **innovation**.

Prevention

- Where possible, we prevent impacts from arising via our choice of site location. Most of our sites are located outside built-up or urban areas. However, sometimes a site may have been encroached by nearing urban development, in which case mitigation becomes relevant.

Mitigation

- Where sites are located in urban or congested areas, we plan our logistics to minimize or prevent congestion.
- We plan our installations to avoid disruption to local communities, including having protocols to prevent pollution during installation.
- We are increasingly investing in electric vehicles for our fleet, where the recharging infrastructure makes this a viable option. This reduces air and noise pollution.

Innovation

- A significant benefit of our non-filled products is that they do not require heavy materials for infill, such as sand. This greatly reduces the number of trucks needed to deliver raw materials and transport our products for distribution or installation, thereby preventing congestion and emissions.

We seek to create a positive impact in the communities in which we operate, not just for our employees but also for their families, friends, and wider communities, for example by supporting local initiatives.

How GeoSurfaces creates a positive impact in the local community

GeoSurfaces is a TenCate company that designs, installs and maintains premium sports surfaces in Louisiana, North Carolina, Massachusetts and other US states. The company is dedicated to supporting sports at a grassroots level through sponsorship and donations – with a particular focus on promoting the development of officials and coaches. This creates a positive impact in the communities where GeoSurfaces operates. For example, in 2023,

- GeoSurfaces sponsored the Big South Track and Field Championships Coaches Meeting at Winthrop University; the NCAA Regional Cross Country Coaches Social in South Carolina; and the Clemson High School Showcase – among many other events.
- Through the Junior Officiating Program (JOP) with USA Track & Field (USATF), the company held eight classes to certify young officials, bringing in experienced officials as mentors. The company contributed USD 1,000 towards the cost of books for new JOP officials.

PEOPLE LIVING NEAR TENCATE'S INSTALLED PRODUCTS

The social benefits related to end-users of our products are covered elsewhere in this report, but there are also benefits that spread out into the wider community. For example:

- By providing inclusive spaces for sports and recreational activities, and through our partnership with the Cruyff Foundation (see [page 93](#)), we enable communities to come together, promoting a sense of belonging and social cohesion. This is one way that we facilitate freedom of expression and freedom of assembly.
- A person living near a sports turf installation may realize there is an opportunity to engage in sport,

e.g. by joining a local amateur team, when they may not otherwise have done so.

- When populations are fitter, they are healthier – reducing the burden on healthcare systems.

ENGAGING WITH AFFECTED COMMUNITIES

Our companies engage with the communities in which they are active. Each company's approach to community engagement is tailored to its main activities, the needs of specific projects, the needs of the local communities, and applicable regulatory requirements (e.g. applying for permits). We keep an open dialogue with local authorities, who can represent the rights and views of affected communities in their areas. While TenCate does not have any specific channels in place for affected



Presents for children and parks for the community

Each year, our US-based company Hellas participates in local initiatives that provide Christmas gifts for children in the community. In 2023, staff at Hellas Headquarters worked with the Salvation Army's Adopt an Angel program to fulfill the wishes of 15 "Angels," who are children from families falling below the federal poverty threshold. Staff who chose to participate picked an ornament from the Hellas Christmas tree that contained a present wish list. Most children wished for toys and clothes. Hellas's Office Administrator Jessica Herrera, who organizes the gift-giving programs, says: "The holidays are about sharing our joy, so it is only natural for us to look to the community at large, and especially children, as we extend our holiday cheer."

Employees at Hellas Fibers also make a positive impact on the local community – and the environment – by caring for a local park, Keebler Park, near Dadeville, Alabama. Employees frequently take part in activities such as removing invasive species, opening the tree canopy, and performing general cleanup. On Earth Day 2023, volunteers participated in a two-day event organized by the city to beautify the park and prepare it for planned renovations.



HUMAN RIGHTS

Our overarching human rights commitments are set out in our Code of Conduct, which acknowledges the provisions of the Universal Declaration of Human Rights (UDHR). We follow local laws and regulations to ensure human rights are respected, and to engage with affected communities. These laws and regulations would provide or enable remedies for human rights impacts, were TenCate to breach the rights of affected communities.

communities to raise their concerns or needs and have them addressed, we and our companies are open to being contacted directly and will attempt to resolve any concerns or needs that arise.

In March 2024, TenCate agreed to a 20-year lease for a new factory that is set to be built in Nijverdal in the Netherlands. Throughout the process we engaged with the municipalities and others at a local level to ensure

that our long-term commitment in Nijverdal can create a positive impact in the community.

Regarding the second category of affected communities (people living near our installed turfs), engagement is led by our customers, e.g., municipalities, sports clubs or schools. For those engagements, we can play a supportive role by providing technical information about our products.

CONSUMERS & END-USERS

We strive to build trust and credibility with our customers, acting with honesty, integrity, and transparency. We sell products in more than 60 countries, creating a positive social impact for a huge range of consumers and end-users.

WHO ARE OUR CONSUMERS AND END-USERS?

Sports

- We primarily sell directly to organizations such as municipalities, schools, and sports clubs. We either install the products ourselves or sell our products to third party customers, who in turn install our products. End-users of our products range from school children through to members of professional sports organizations.

Outdoor Living

- We primarily sell to installers, distributors, DIY chains and garden centers. A variety of consumers then purchase our turfs, including private individuals and commercial businesses, and use them for a wide range of applications – such as landscaping and play.

Manufacturers

- A significant proportion of our customer base consists of other manufacturers, who purchase the components needed to manufacture a turf product, such as yarn and backing. Ultimately, the types of consumers and end-users reached by these manufacturers are similar to those reached by TenCate.

Based on our understanding and knowledge, all consumers and/or end-users who are likely to be materially impacted by our business are included in the scope of our disclosures. TenCate has no specific targets related to managing impacts and risks related to consumers and/or end-users.

INFORMATION FOR CUSTOMERS

We ensure our customers have access to high-quality information about our products, so that they can a) make informed purchasing decisions, and b) have all the information they need about the product they have purchased.

TenCate's customers depend on accurate and accessible product-related information to avoid potentially damaging use of the products. We therefore ensure they have access to high-quality information about how to use and maintain the product, including information about personal safety. This information is provided directly by TenCate, including, when applicable, information independently validated by certification laboratories.

What information do we share?

All our turf products are accompanied by a product declaration sheet, including technical information about its properties, e.g., its color, weight and material composition. Similarly, if we are selling components to a company that will turn them into turf, we will share its specifications with the buyer.

Typically, a turf system will come with an operations and maintenance manual, including instructions on what to do, what not to do, and how to maintain the product, as well as who to contact if there is a problem.



Further information varies by region as well as the type/purpose of the turf, but we always ensure we communicate relevant information and abide by any legislation or standards applicable to the local market. In particular:

- If a turf system has been independently tested to a relevant standard set by a sports governing body or federation (e.g., standards set by FIFA or the FIH), that test report will be made available to the buyer. These standards are driven primarily by function and performance.
- We manufacture and install our products to relevant standards, as required. This includes not only ISO standards (set by the International Organization for Standardization) but also regional or country-specific standards. In Europe, our products carry the "Conformité Européenne" CE mark that indicates that the manufacturer or importer affirms the product's conformity with European health, safety, and environmental protection standards, while in the US we meet standards set by ASTM International.
- We collect all relevant data for our products, including across our supply chain, to ensure our products are chemically compliant (e.g. for REACH or Prop 65). This data is available to our customers upon request.
- We readily and transparently provide information to customers who require or request further information about the environmental impact of our products and the different options for mitigating this impact.
- We attempt to make our information as clear and streamlined as possible, especially in the landscape

market. Providing too much information or complex technical details may overwhelm consumers and hinder their ability to make informed decisions.

- When a TenCate Sports turf system is installed, the customer must sign a document to say they have received the information, read it, and understood it. They will also have access to an account manager at TenCate who they can contact with any questions.

Safety for children

One vulnerable group that we particularly consider, in terms of safety, is children. Around the world, there are strict regulations that we must follow when manufacturing and installing our product in playgrounds. One example here is "critical fall height": if a child falls off playground equipment, the turf needs to be able to protect them from a head injury. We meet these strict standards whenever we design a turf system for a children's playground.



Children at a primary school in England enjoying playtime on a newly installed OneDNA turf product

Lifecycle assessments

Over the last few years, we have carried out detailed lifecycle assessments (LCAs) of our products (both components and systems), including the projected lifecycles of our new product lines. LCAs, which calculate the environmental impact of products or services throughout their entire lifecycle, enable potential customers to make evidence-based decisions.

At present, however, there is no cross-industry standardization of LCAs. For example, some companies may factor in the end-of-life impacts of their products on the environment, and some may not, leading to hugely varying numbers. This limits the benefits for consumers, as they cannot easily compare the environmental impact of products from different companies.

Since 2021, as funders and members of the European Synthetic Turf Council, we have been driving the process of establishing a common agreement on how LCA should be calculated. The Council made strong progress in 2023 towards establishing Product Environmental Footprint Categorization Rules (PEFCR), with outcomes set to be published in 2024. Assessed products will be given a PEFCR rating. Although this EU-wide initiative is voluntary, we anticipate PEFCR rating will become widespread, enabling potential customers to make informed procurement and purchasing decisions.

ENGAGING WITH CONSUMERS AND END-USERS

The interests, views and rights of TenCate's consumers fundamentally inform TenCate's strategy and business model, and we are proactive about aligning our business strategy with their needs.

While we have not set out a specific, structured process to govern our engagement with this key stakeholder group, our relationships with our customers, and our methods for capturing feedback, mean that their perspectives are critical for informing our decisions and activities. The most senior person within TenCate with responsibility for ensuring there is engagement with consumers and end-users, and that their views and needs are represented, is the Chief Executive Officer.

Direct relationships

Much of our engagement is organic, based on ongoing relationships with our customers. For example, most of our B2B clients will have an account manager with whom they are in regular contact, and we have an open dialogue about our products and services.

“From an R&D point of view, I want to speak to end users – players, people using the turfs – and find out what they like what they don't like, and then use that to derive next generation products or improve current products.”

Dr. Colin Young, Global R&D Director

Many of our clients are municipalities, and we regularly engage with them on their needs and priorities, which

enables us to offer them particular products that meet their needs. For example, local authorities in Amsterdam communicated several years ago that they wanted to reuse the city's old fields in its new fields, making them more sustainable. We developed a product, EcoCept, that makes use of agglomerated materials from our end-of-life turf recycling partnership with GBN (see chapter [Circularity & innovation](#)).

The challenge we do face is that our relationship with the products' actual end users is rarely direct, especially for sports turfs: a Soccer player is unlikely to be involved in procurement of the pitch, or aware of its sustainability credentials. However, we can gauge their experiences and needs indirectly via our customers, such as sports club owners or hardware stores. The buyers represent their end-users and their needs. In certain circumstances, we do also engage directly with end-users, especially during research & development (R&D) for new products – as explored below.

Engaging with consumers and end-users during R&D

2023 was a big year for developing and piloting new products, as we reached the end of the R&D pipeline with several new product lines. At our Center for Turf Innovation and in real-world pilot installations, we invited people to play on prototypes and give feedback, which we then incorporated into the development process.

In developing our non-infill product range, our single-polymer OneDNA technology and our zero-water Hockey turf, we listened closely to the needs of different groups of customers in the markets that we serve globally. At the same time, we wanted to be proactive – driving the market, anticipating future needs, and considering what else might be possible.

While not all consumers and end-users prioritize sustainability in their purchasing decisions at present, we anticipate that its importance will only grow in

PSV Eindhoven

PSV and TenCate have been working closely together to further develop and optimize the Soccer training fields at PSV Campus De Herdgang in the Netherlands. Under this mutually beneficial agreement, which in 2023 was extended for another three years, we are given the latitude to collect real-world data, experiment and innovate as part of the 'Fieldlab'. Members of the PSV Academy play and train on high quality TenCate pitches, including next generation turf, while we improve our understanding of the players' needs and collect valuable feedback.



the coming years. Our strategy involves continuing to produce "conventional" turfs while simultaneously introducing and promoting our next generation product lines.

Closer to consumers

Since 2016, TenCate's strategy has been focused on vertical integration. This allows us to understand customers' needs and perspectives more deeply and is a major contributor to our continued growth and success.

"The opportunity PSV is giving us by allowing us to test new developments in practice is incredibly valuable. We learn most from the direct feedback of players and staff. This ultimately enables us to develop new, innovate, high-quality turf, which positively impacts the performance of the players."

Michael Vogel, CEO

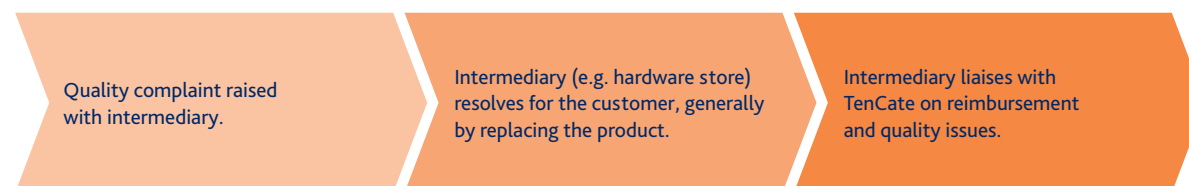
Within our own operations, we now have a range of companies across the value chain – including manufacturers of components (yarn and backings), turf manufacturers, distributors, and installation companies.

Our distribution and installation teams regularly ask for feedback from customers, gathering information about what went well and what didn't go well, as well

Process example – how complaints are resolved for customers (Sports)



Process example – how complaints are resolved for customers (Outdoor Living)



as their experience of the product so far. For big projects there will be a project debrief, and data is also collected at a company level about customer satisfaction. Our engagement efforts are locally led with global support. Having local partners and our local installers that we that we work with is critical, because they are the ones that are really in tune with their local market.

We assess whether we are having a positive impact for consumers and end-users by liaising closely with our customers. As our new product lines roll out, in future we will also be able to gain insights via sales data.

Working with customers to resolve product issues

In our materiality assessment and our overall business, we have not identified any negative impacts on consumers and end-users that are widespread or systemic.

Negative impacts are more likely to be related to individual incidents, such as incidental product defects. While we do have robust quality control processes, a small number of quality problems are still reported. Our priority is to ensure that the client gets what they want, so our policy is to remedy the situation for the customer as quickly as possible and then look at what went wrong and how to stop it happening again. As a general approach, *we run towards our problems rather than away from them*. If a product is not complying with our own standards or industry standards and norms, then it will be replaced or otherwise remedied.

If a quality control issue is reported and confirmed, TenCate will investigate to ensure there are no wider problems and that the issue does not recur for other customers.

No specific policies are in place to protect individuals from retaliation when they engage with us or our partners about complaints. This is because retaliation is not a concern for consumers and end-users in the synthetic turf market. Consumers and end-users can also easily use the available channels to raise concerns, with clear points of contact.

CREATING POSITIVE IMPACTS

The positive impacts we create with our products are promotion of health, social connection and enjoyment.

Outdoor Living

We help create welcoming spaces that all people can enjoy together. Access to synthetic turfs enables our customers to create beautiful environments that are low maintenance.

Sports

Our synthetic fields are playable 24/7 in all weathers - hot, cold, wet, dry – meaning there are more opportunities to practice, compete and play compared to grass fields. This benefits amateur and professionals alike, across a range of sports. It means more children and more adults doing more sport, more often, in safe and pleasant environments.

The health benefits of exercising and keeping active are well documented, and it is critical that the upcoming generation of children is given the opportunities to stay fit and healthy – especially in the face of rising childhood obesity worldwide, which can contribute to serious health issues now and in the future. We also know that engaging in sports and play can promote social cohesion and even lead to reductions in youth crime.

By facilitating community engagement and interaction, TenCate contributes to the creation of inclusive environments where individuals from diverse backgrounds can come together, build relationships, and foster a sense of belonging.

We always look for ways to add value for consumers and end-users of our products. For example, if we are making and installing a Hockey or Soccer field for a school, we may also suggest upgrading a playground space from asphalt to turf.

Partnering with the Cruyff Foundation

TenCate has a long-standing partnership with the Johan Cruyff Foundation, dating back nearly two decades. Together, over time, we have jointly realized 227 Cruyff Courts in more than 20 countries. The primary purpose of this partnership is to positively contribute to improved social outcomes – especially for children, including those with disabilities. The Cruyff Foundation's values and ambitions align closely with our own, making this partnership a natural fit with clear synergies. We are grateful for the opportunity to support the Foundation's growth and make sure that children have a safe, high-quality place to go out and play. In March 2023, we renewed our partnership for another three years, during which time we will build 70 more fields.



The Johan Cruyff Foundation is a non profit organisation with an impact around the globe. Founded by the legendary Dutch Football player Johan Cruyff in 1977, its purpose is to provide opportunities for children, especially children with disabilities, to be active in sports and play. Through the installation of 'Cruyff Courts' globally, which includes necessary equipment and infrastructure such as goals, fences and lighting, the Cruyff Foundation has provided spaces for over 200,000 children to participate in sports and play.

The Foundation identifies where there is a need for a facility, and we follow their lead - supporting their efforts by providing information, products and donations. Our approach is collaborative rather than transactional, involving close engagement to find solutions. For example, if the Foundation says it has a project in South Africa where five kickaround areas are needed, TenCate can draw on its network and industry knowledge to bring suppliers on board and realise the project as quickly as possible.



4. GOVERNANCE /

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IMPACTS, RISKS & OPPORTUNITIES

We have identified impacts, risks and opportunities (IROs) related to TenCate's material topics in G1. On the right, we provide a short summary of how we are managing our IROs, with more details available further in this chapter.

G1 | Business conduct

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Strong corporate culture, leading to a sense of shared purpose. ●● Transparent whistle-blower policy and process. ●● Robust anti-corruption and anti-bribery policies and processes. ●●	💡 Opportunities A positive corporate culture boosts employee retention, productivity, trust, and financial performance. Protecting whistle-blowers can prevent legal disputes and financial losses. Building a reputation for ethical practices strengthens relationships with suppliers, customers, and employees. ⚠️ Risks A negative corporate culture can lead to legal actions, fines, and reputational damage. Mismanaging whistle-blower concerns can result in legal actions and financial losses. Involvement in bribery and corruption within the value chain can cause reputational damage and financial losses.	Our Whistle Blower Scheme sets out a clear procedure for employees. We have an employee Code of Conduct and a Suppliers Code of Conduct, with clauses encompassing anti-corruption and anti-bribery. We monitor the compliance of our trade relationships with global sanction regimes and regulations, and act accordingly when needed. Our subsidiaries have employee handbooks with additional local regulations and company rules. Our updated Global Business Ethics compliance trainings are planned for 2024.



G1 | Supply chain management

IMPACTS	RISKS & OPPORTUNITIES	MANAGEMENT
Positive Selecting suppliers that perform well in TenCate's ESG screening process a) ensures positive impacts in the value chain, and b) incentivizes supplier base to improve ESG performance in future. ●●●	Opportunities Influence suppliers positively by prioritizing those aligned with sustainability goals. Risks Limiting supplier options based on ESG criteria may negatively impact supply chain continuity, operations and fulfilment of customer orders.	We are using the Assent ESG screening platform to collect data and evaluate suppliers. We have robust systems for managing procurement and ensuring timely payments to suppliers. In our supplier selection, we have measures in place to ensure that our operations and ability to deliver on contracts is not negatively affected.

CORPORATE GOVERNANCE

TenCate's global success is underpinned by strong corporate governance, with an effective leadership structure that promotes accountability. For employees, our approach allows for a balance between local autonomy and shared identity, and we have clear processes and rules set out in our Code of Conduct.

GOVERNANCE AT TENCATE

The Board of Directors has the ultimate decision-making authority over the company.

Strategy development, implementation thereof and the day-to-day management of the company are the responsibility of the Executive Board consisting of the Chief Executive Officer, the Chief Financial Officer and the Chief Executive Officer of the Americas.

TenCate has a decentralized structure. Managing Directors and Presidents are responsible for managing the respective subsidiaries. They are ultimately supervised by a member of the Executive Board.

On a functional level, the Executive Board is supported by functional Directors in the areas of Finance, Human Resources, Information Technology, ESG and Procurement.

Specifically with regards to ESG, an ESG Committee is in place in which all functional areas and main regions are represented. For more information about the ESG Committee, see the chapter [About TenCate](#).

CORPORATE CULTURE

TenCate is a global organization that operates across the full value chain. We are proud of the huge diversity in the people we employ. We have grown at a remarkable speed over recent years. Even against this background, we can truly say that that we all share the same passion for what we do, the products that we make and the benefits our products provide to our customers.



We value the openness inside our company and the feedback that our employees give us. We were very encouraged by the feedback we received from our first Group Employee Engagement Survey, conducted in 2023. The results, including the areas in which we can improve, motivate us to continue to nurture our culture and our employees' engagement.

At TenCate, we share the same values. There are five values that we work towards every day, as listed on [page 11](#).

ANTI-CORRUPTION AND ANTI-BRIBERY

TenCate has mechanisms for identifying, reporting and investigating concerns about unlawful behavior, as well as behavior that contradicts the stipulations of our Code of Conduct.

The Code of Conduct includes a section entitled "anti-corruption and anti-bribery: avoiding offering, granting, demanding, and accepting advantages." This sets out the rules regarding giving and receiving gifts, as well as promising or granting money "in order to obtain improper advantage." Employees are directed to

consult the Compliance Officer if they are in any doubt. The Code also covers related topics such as conflicts of interest, sponsorship and donations, and money laundering.

Aside from this guidance in the Code, TenCate does not yet have a specific written policy on anti-corruption or anti-bribery. In 2024 we will create a new, specific policy that will cover anti-corruption and anti-bribery, in addition to the updated Code which is under development. This policy will be supported with specific trainings for all relevant employees.

In all the regions in which TenCate operates, we have specific persons whom employees can contact regarding any concerns or issues, including regarding corruption and/or bribery, as explored further in our chapter on [Working at TenCate](#). TenCate has a designated Compliance Officer who can be contacted about breaches in the financial and economic fields, as well as Regional and Group Counsellors that can be contacted about breaches in the interpersonal sphere.

The Compliance Officer will discuss with the employee which course of action they wish to take, including the option to contact an independent external investigator to assess the issue and facilitate an investigation. If this option is pursued, the outcome will be reported to the Compliance Officer, who will also report to the CEO and the Board of Directors. This allows any potential incidents to be investigated promptly, independently and objectively by an investigator separate from the chain of management involved in the matter.

Some anti-bribery and anti-corruption training was provided to relevant categories of employees in 2023, for example during introductory awareness sessions for new joiners where this topic is relevant to their function. During 2024, TenCate is planning to launch a series of business ethics and compliance trainings, utilizing a third-party education and training platform. This will include anti-corruption and anti-bribery training.

WHISTLEBLOWING

A description of TenCate's Whistle Blower Scheme is set out as an addendum to the Code of Conduct. It sets out what employees should do if they want to report a suspicion of abuse, what their supervisory manager or Counsellor must do to record receiving this report, how the person who receives the report must inform the CEO, how the CEO will initiate an investigation, and the timeline for the employee to be informed of the standpoint of the CEO, including any measures to which the reporting has led in certain outlined situations, there is also a provision in the Scheme for the employee to subsequently escalate the issue to the Board of Directors [previously Supervisory Board, as in Code of Conduct].

All employees, including senior leadership, commit via the Code of Conduct to ensuring that employees who follow the procedures and report a suspicion of abuse "in good faith" will "in no way be disadvantaged" in their position as a result of making a report. In 2023, no specific procedures were in place to protect employee whistleblowers against retaliation.

The risk of retaliation is also minimized by the procedure outlined in the Whistle Blower Scheme, which specifies that the employee to whom the suspicion of the abuse has been reported must treat the report confidentially, and that if information must be provided to an external person or entity, "The name of the employee will not be mentioned and the information will be provided in such a way that the anonymity of the employee will be safeguarded as much as possible."

ANTI-CORRUPTION AND ANTI-BRIBERY METRICS

NUMBER

The number of convictions, and the number and monetary amount of fines, for violation of anti-corruption and anti-bribery laws.	0
The total number and nature of confirmed incidents of corruption or bribery.	0
The number of confirmed incidents in which TenCate's own workers were dismissed or disciplined for corruption or bribery-related incidents.	0
The number of confirmed incidents relating to contracts with business partners that were terminated or not renewed due to violations related to corruption or bribery.	0

No specific workforce training was provided regarding whistleblowing in 2023.

FAIR COMPETITION

TenCate's policy is set out in the Code of Conduct, specifying that the company and its employees "will refrain from behavior that obstructs or discourages fair competition" and will "acquaint themselves with information about competitors only by legal means."

In June 2023, the European Commission (EC) carried out an unannounced inspection at two TenCate locations in the Netherlands.

As the EC specifies, an unannounced inspection is a preliminary investigatory step into suspected anti-competitive practices and "does not mean that the company is guilty of anti-competitive behavior." TenCate is co-operating fully with the investigation and is not aware of any wrongdoing.



SUPPLY CHAIN

A well-managed supply chain is critical to TenCate's financial and sustainability performance. We make it a priority to ensure ethical and responsible behavior across our entire value chain.

ESG SCREENING

TenCate is strengthening how it manages relationships with suppliers by instituting a process to track and score suppliers, both existing and new, on a variety of metrics, based on their answers to a variety of sustainability-related questions. These questionnaires cover 10 separate areas and include detailed questions about suppliers' policies and practices.

Supplier questionnaire topics:

- Climate impact
- Resource use
- Product stewardship
- Human trafficking and slavery
- Labor rights
- Human rights
- Diversity and inclusion
- Resilience
- Data protection
- Organizational commitments

We identified 206 suppliers who together represent approximately 85% of our spend. In 2023 we made progress towards completing the ESG screening with these suppliers. As shown above, 56% have now engaged with the screening process.

STATUS	CONTEXT	NO. AND % OF SUPPLIERS
Completed	Suppliers that have completed TenCate's ESG screening	55 (27%)
Responded	Suppliers that have submitted at least one questionnaire	56 (27%)
In progress	Suppliers that have begun at least one questionnaire	5 (2%)
Not responded	Suppliers that have not responded so far	90 (44%)
Total		206

During 2024-2025, we will increase the number of key suppliers in scope to approximately 300, to include the key suppliers of newly acquired companies.

Once the process of collecting this data is closer to completion, we will be able to use our suppliers' answers and scores to support our procurement decisions and set specific Key Performance Indicators for our supply chain, using the risk scores calculated in each of the 10 areas. ESG scores will be balanced against other considerations relating to quality, availability of alternative suppliers, and supply chain security.

The process is primarily based on suppliers' self-reported data, supplemented by tracking media

coverage of any ESG-related incidents related to that supplier. We carry out media screening for 1,000 of our suppliers, representing around 95% of total spend.

Although no audits of suppliers' sites were carried out in 2023, TenCate explicitly reserves the right to audit its suppliers in future: the Supplier Code of Conduct states that "Suppliers are required to cooperate with TenCate's direct audit or through a third-party auditing firm utilized by TenCate."

In addition, for our waste management suppliers in the US and Dubai, we are mandated to carry out in-person inspections under the terms of the advanced recycling partnership and the Zero Waste to Landfill (ZWtL) validation scheme, respectively.

Ensuring timely payments to suppliers

Our payment terms are presented in our "capex purchase terms and conditions", which are publicly available on our website. In addition, we apply the agreed payment terms on the contracts with every supplier, respecting the applicable local regulations.

While we did not measure the average time taken to pay an invoice at the group level in 2023, we follow our policy of paying our suppliers in a timely manner. In addition, we have a large number of small suppliers for whom timely payment is very critical, which we respect in our payment practices. There are no open legal proceedings for late payments.

Anti-corruption and anti-bribery

TenCate has a Supplier Code of Conduct that sets out fundamental principles and rules that suppliers must observe as binding provisions. The Code states that each TenCate manager must emphasize the importance of ethical conduct and compliance in their actions, training, and leadership, specifying: "Suppliers do not engage in or tolerate any form of corruption, bribery, extortion, or fraud. Suppliers shall not offer any gifts or other benefits to TenCate employees that could improperly influence the TenCate employee."

We also consider whether our suppliers have their own anti-corruption and anti-bribery policies that are in line with our approach. "Organizational commitments" is one of the 10 topics assessed as part of TenCate's new supplier screening tool.

The Supplier Code of Conduct does not explicitly set out information about how to address allegations about corruption and bribery, should they occur. These would be handled by TenCate on a case-by-case basis.

TenCate also monitors and ensures the compliance of its trade relationships with globally sanctioned regimes, as well as with any new regulations.

A reliable, secure supply chain

We minimize potential impacts of disruptions to the supply chain by having a second and third source of

materials across our supply base, wherever possible. As we manufacture close to our markets in Europe and the US, using many local suppliers, we cut down on the risk of disruption across global supply chains. Throughout our operations, we also work collaboratively to handle any disruptions that do occur by keeping open lines of communication, exploring alternatives and keeping our customers informed.





APPENDICES /

Appendix I: List of companies

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Appendix II: Emissions accounting & reporting methodology

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APPENDIX I: LIST OF COMPANIES

COMPANY NAME	LOCATION	ACTIVITY TYPE
Applied Landscape Technologies	Montville, New Jersey - USA	Design & Installation ●
Academy Sports Turf	Englewood, Colorado - USA	Design & Installation ●
Ace Sports Turf Landscaping	Chatsworth, Georgia - USA	Manufacturing & Distribution ●
Athletic Fields of America	Montville, New Jersey - USA	Design & Installation ●
Challenger Turf	Dalton, Georgia - USA	Manufacturing & Distribution ●
CSC Sport	Zeewolde - The Netherlands	Design & Installation ●
Evergreens UK Group	Rutland - United Kingdom	Manufacturing & Distribution ●
GeoSport Lighting	St. Gabriel, Louisiana - USA	Design & Installation ●
GeoSurfaces South East	Mooresville, North Carolina - USA	Design & Installation ●
GeoSurfaces	St. Gabriel, Louisiana - USA	Design & Installation ●
GeoSurfaces North East	Woburn, Massachusetts - USA	Design & Installation ●
GrassRoots	Chatsworth, Georgia - USA	Manufacturing & Distribution ●
Greenfields	Dayton, Tennessee - USA	Distribution ●
Greenfields	Nijverdal, The Netherlands	Distribution ●
Greenfields	Singapore	Distribution ●
Hellas Construction	Austin, Texas - USA	Design & Installation ●
Hellas Construction	Carlsbad, California - USA	Design & Installation ●
Hellas Construction	El Paso, Texas - USA	Design & Installation ●
Hellas Construction	Frisco, Texas - USA	Design & Installation ●
Hellas Construction	Glendale, Arizona - USA	Design & Installation ●
Hellas Construction	Miami, Florida - USA	Design & Installation ●
Hellas Construction	Wichita, Kansas - USA)	Design & Installation ●
Hellas Fibers - Archon Fibers	Dadeville, Alabama - USA	Manufacturing ●
Hellas Recycling Center	Dadeville, Alabama - USA	TenCate Recycling Activities ●
Hellas Textiles - Spears Industries	Chatsworth, Georgia - USA	Manufacturing & Distribution ●
OPSA	Madrid - Spain	Design & Installation ●

COMPANY NAME	LOCATION	ACTIVITY TYPE
Polygreen	Colombara - Italy	Distribution ●
PST Sportsanlegg	Kristiansand - Norway	Design & Installation ●
Roxie Polymers	Liberty Hill, Texas - USA	Manufacturing ●
SGW Florida	Ft Lauderdale, Florida - USA	Distribution ●
SGW Florida	Doral, Florida - USA	Distribution ●
SGW Florida	Miami, Florida - USA	Distribution ●
SGW Florida	West Palm, Florida - USA	Distribution ●
SGW Florida	Orlando, Florida - USA	Distribution ●
SUE Sports United Europe	Braga - Portugal	Distribution ●
Synthetic Grass Warehouse	Anaheim, California - USA	Distribution ●
Synthetic Grass Warehouse	Dallas, Texas - USA	Distribution ●
Synthetic Grass Warehouse	Fresno, California - USA	Distribution ●
Synthetic Grass Warehouse	Phoenix, Arizona - USA	Distribution ●
Synthetic Grass Warehouse	San Francisco, California - USA	Distribution ●
TenCate Polyloom USA	Dayton, Tennessee - USA	Manufacturing ●
TenCate Thiolon Middle East	Dubai - United Arab Emirates	Manufacturing ●
TenCate Thiolon	Nijverdal - The Netherlands	Manufacturing ●
TenCate Turf Recycling Solutions	Baton Rouge, Louisiana - USA	TenCate Recycling Activities ●
TigerTurf NZ	Auckland - New Zealand	Manufacturing & Distribution ●
TigerTurf UK	Kidderminster - United Kingdom	Manufacturing & Distribution ●
TigerTurf AU	Melbourne - Australia	Design & Installation ●
Valley Precision Grading	Rancho Cordova, California - USA	Design & Installation ●
Weitzel Sportstättenbau	Sternberg - Germany	Design & Installation ●
Weitzel Sportstättenbau	Tornesch - Germany	Design & Installation ●
TenCate Thiolon (Beijing) Co.	Beijing - China	Distribution ●
SLN Sportstättenbau	Tornesch - Germany	Design & Installation ●
CG&B	Henderson, Nevada - USA	Design & Installation ●
ATT Sports	Berlin, New Jersey - USA	Design & Installation ●
Safina	Cortegaça - Portugal	Manufacturing & Distribution ●
Celebrity Greens	Scottsdale, Arizona - USA	Distribution ●

APPENDIX II: EMISSIONS ACCOUNTING & REPORTING METHODOLOGY

This appendix describes the calculation boundaries, methodologies, assumptions and key references used in the preparation of the financial year 2023 inventory of scope 1 and scope 2 greenhouse gas emissions in the TenCate value chain.

Emissions of our company are calculated using methodologies consistent with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, with reference to the additional guidance provided in the GHG Protocol: Scope 2 Guidance as appropriate. The GHG Protocol was developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

ORGANIZATIONAL AND OPERATIONAL BOUNDARY

In order to consistently measure the emissions throughout company, we defined the organizational boundary and the operational boundary included in our GHG Accounting based on the Operational Control Approach as defined by GHG Protocol, accounting for 100% of scope 1 and scope 2 emissions from operations over which TenCate as a group or one of its subsidiaries has operational control, but not for emissions from operations in which TenCate owns an interest but does not have operational control.

GHG INVENTORY

The GHG Footprint of TenCate includes all the gases covered by the Kyoto Protocol (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆) in metric tonnes and in tonnes of CO₂ equivalent. We disclose figures for all applicable gases based on our activities.

As per the GHG Protocol, we account for and report our GHG Footprint according to "scopes" definitions.

Scope 1 emissions

Scope 1 encompasses GHG emissions from sources that are owned or controlled by the reporting company. Direct GHG emissions are principally the result of the following types of activity undertaken by TenCate:

- Stationary combustion: combustion of fuels in stationary equipment such as boilers and air conditioning equipment.
- Mobile combustion: combustion of fuels in transportation vehicles such as automobiles and trucks.

Scope 2 emissions

Scope 2 emissions are considered indirect emissions from the generation of purchased electricity and steam consumed within the operational boundary of TenCate.

- The purchased electricity is consumed by our manufacturing plants, warehouses and administrative buildings.
- The purchased steam is consumed by one of our manufacturing plants.

According to the GHG Protocol's scope 2 Guidance, we calculated scope 2 emissions following both the Location-Based and Market-Based approach.

CALCULATIONS METHOD AND ASSUMPTION

The calculation was carried out using the following formula:

GHG emissions = Activity data * emissions factors

To align all the different units of measure, we converted all the energy data in GJ through the calorific value of each fuel.

Being a global company, activities data are collected with different units of measure, therefore further conversions have been applied to harmonize the calculations.

For refrigerant gas emissions, the Global Warming Potential of each gas has been multiplied by the mass of gas refilled.

In some cases, we applied the Expenditure Approach to estimate fuel consumptions for our vehicles: the consumption has been calculated by dividing the annual expenses for a certain type of fuel per the average price of that fuel in FY 2023 in that specific country.

When data were not available, we estimated the correspondent consumption based on the square meters squares of the buildings and manufacturing plants, taking the average consumption in cubic meters of gas and kWh of electricity per meter square from national dataset statistics.

EMISSION FACTORS

Scope 1 emissions

USA

- For natural gas and propane, emission factors from EPA (Environmental Protection Agency) were used.
- For refrigerant gas losses, Global Warming Potentials are also taken from EPA; when not available, emission factors from The California Air Resources Board are taken (with reference to AR5 IPCC).
- For vehicles' fuel, such as diesel and LPG, emission factors from the EPA were used. For gasoline, emission factors from the EPA were used alongside an internal methodology for estimating an average based on the vehicle's type and its year of manufacture.

Europe, Middle East and Oceania

- For natural gas, propane, diesel and kerosene emission factors from DEFRA (Department for Environment, Food and Rural Affairs) were used.
- For vehicles' fuel such as diesel, LPG, CNG and gasoline emission factors from DEFRA (Department for Environment, Food and Rural Affairs) were used.

Scope 2 emissions

From electricity purchased from the grid:

USA

- For the Location-Based approach, emission factors from EPA eGRID 2022 were used.

- For the Market-Based approach, 2023 eGreen Residual mix (2021 Dataset) emissions factors were used; when suppliers emission factor are available in the Electric Company Carbon Emissions Electricity Mix Reporting Database, these factors were used.

Europe

- For the Location-Based approach, emission factors from Association of Issuing Bodies (AIB) 2022 Production Mixes* were used.
- For the Market-Based approach, emission factors from Association of Issuing Bodies 2022 Residual Mixes were used; when suppliers emission factors are provided, these factors were used.

These factors have been used also to account for emissions from purchased steam.

These factors have been used also to account for emissions from electrical vehicles: as a conservative approach, we only used the Market-Based emissions factors, being the most precise available for the country where we have fleet of electrical vehicles.

UK

- For the Location-Based approach, emission factors from DEFRA (Department for Environment, Food and Rural Affairs) were used.
- For the Market-Based approach, emission factors from Association of Issuing Bodies 2022 Residual Mixes were used.

* The physical electricity imports and exports outside of the Residual mix calculation area are not included in these figures. <https://www.aib-net.org/facts/european-residual-mix/2022>

Middle East

- For the Location-Based approach, emission factors from International Energy Agency 2022 Generation Mixes were used.
- For the Market-Based approach, emission factor from Dubai Electricity & Water Authority (DEWA) 2022 were used.

Asia-Pacific (APAC)

Emission factors from International Energy Agency (IEA) 2022 Generation Mixes were used for both Location-Based and Market-Based approach due to availability of the dataset.

GLOSSARY**Emission factor**

A factor that converts activity data into greenhouse gas emissions data (e.g. kg CO₂-e emitted per GJ of fuel consumed, kg CO₂-e emitted per kWh of electricity used).

CO₂ equivalent (CO₂-e)

The universal unit of measurement to indicate the global warming potential (GWP) of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis.

GHG Footprint

Amount of carbon dioxide (CO₂) emissions associated with all the activities of a person or other entity (e.g., building, corporation, country, etc.). It includes direct emissions, such as those that result from fossil-fuel combustion in manufacturing, heating, and

transportation, as well as emissions required to produce the electricity.

Activity data

A quantitative measure of a level of activity that results in greenhouse gas emissions. Examples of activity data include kilowatt-hours of electricity used, quantity of fuel used, output of a process and floor area of a building.

The Market-Based approach

A method to quantify the scope 2 GHG emissions of a reporter based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with contractual instruments, or contractual instruments on their own.

The Location-Based approach

A method to quantify scope 2 GHG emissions based on average energy generation emission factors for defined geographic locations, including local, subnational, or national boundaries.

Organizational boundary

The extent to which a company has ownership or operational control.

Operational boundary

The sources of emissions within the organizational boundary. It defines the scope of direct and indirect emissions for operations that fall within a company's established organizational boundary.

Operational control

A company has operational control over an operation if the former or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.

REFERENCES

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