

CLIMATE ACTION PLAN

Enabling low carbon mobility
TCFD Report

This document, prepared in accordance with the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), summarizes relevant stakeholder information related to Mundys' commitment to climate change. In addition to detailing CO₂ reduction targets and key decarbonization actions undertaken, the document presents how the issue of climate change fits into the broader context of governance, managing risks from rising temperatures, and identifying opportunities from the transition to a low-carbon economy.

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INTRO DUCTION

The transport of people and goods is one of the activities having the greatest impact on the social and economic development of territories and communities. However, the transport sector is also one of the largest sources of greenhouse gas (GHG) emissions, due to fossil fuels that remain the dominant source of energy consumption in transport. This sector contributes for more than 16% of global GHG emissions¹, making it the third-largest contributor after energy and buildings.

At Mundys we are committed to actively support the energy transition of the transport industry. To this end, we set for ourselves the ambitious target of reaching net zero for our own direct emissions by 2040 (scope 1 and 2) aligned with a 1.5° pathway, 10 years earlier than required under the **Paris Climate Agreement**. This will involve changing our own processes and activities towards increasing the use of **renewable energy**, improving **energy efficiency**, boosting the circularity of processes through **the reuse and recycling of materials**. On the other hand, **we want to contribute to the decarbonization of the sector**, by leveraging infrastructures that make the transition towards a low carbon mobility possible (e.g. electric mobility, alternative fuels, new transport modes), by implementing solutions that facilitate the exchange between transport modes for people and goods, by leveraging **digital technology solutions** and thus making mobility **smarter, safer, seamless and sustainable**.

This document represents our first stand-alone TCFD report and it integrates the information in the Integrated Annual Report and the CDP framework disclosure, in order to provide to stakeholders a comprehensive set of information on our commitment in respect of climate change.



Arteris

Abertis

Brazil

WHO WE ARE

We are an enabler of sustainable mobility. We manage motorways, airports and offer mobility services all over the world.



~20,000
employees



48
concessions in 11 countries



24
countries with tolling services



MOTORWAYS

~9,400
km
toll motorway



AIRPORTS

5
airports
managed



MOBILITY SERVICES

600
cities
client base
in 4 continents

9.4
m
on-board
units



RAILWAYS

15.5 %
stake in Getlink



² Mundys agreement to acquire Yunex announced in January 2022 with the closing of the transaction expected by September 2022.

KEY FACTS



Sustainability corporate governance

key to implement our sustainability strategy



Decarbonization strategy

with ambitious 2025, 2030 and 2040 targets articulated in over >150 defined action points



Management of climate-related risks and opportunities

based on multiple climate scenarios



Target on scope 1 and 2 emission

aligned to a net zero 1.5° pathway

Renewable energy targets

Target on scope 3 emission

Upstream & Downstream the value chain

NET ZERO ambition @2050

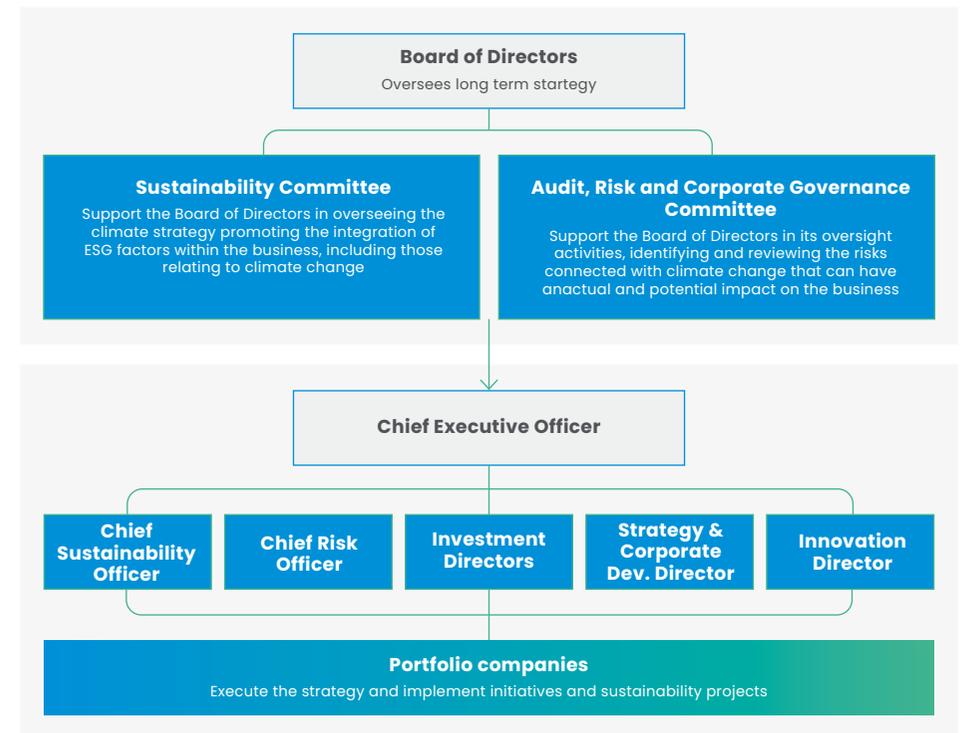


CLIMATE GOVERNANCE

STRUCTURE

Active corporate governance is key to advancing the climate strategy and fulfilling the company's responsibilities to all its stakeholders. Oversight for sustainability is exercised by the Board of Directors, including the approach to climate risks, opportunities and lobbying.

Our sustainability governance reflects our **strong commitment** to leadership of ESG (Environmental, Social, Governance) topics at both **Board** and **executive management level**. We also believe that transition to a low-carbon economy will happen if we truly engage our people across the entire organization in this major transformation, as well as the stakeholders in the value chain.



ACCOUNTABILITY

Governance of sustainability involves the following parties:

Board of Directors (BoD)

is the highest body responsible for climate related strategy, it defines the long-term strategy to deliver sustainable value. It approves the Sustainability Plan and monitors progress vs milestones, ambitions and targets, and the company's impact on the environment, including climate change aspects.

The Sustainability Committee (SC)

supports the Board of Directors in overseeing the climate strategy, promotes the broader integration of ESG factors within the business, verifies the progress against targets set out.

The Control, Risk and Corporate Governance Committee (CRCGC)

supports the Board in its oversight activity, identifying and reviewing the ESG risks - including those connected with climate change - that can potentially impact the company's business.

Mundys' Chief Executive Officer

is responsible for crafting the ESG agenda and supervises its execution supported by business functions.

The Management at Mundys and its subsidiaries

have undergone significant changes in 2020 with the creation of new roles within the main portfolio companies to lead aspects that will play an increasingly crucial role in implementing the overall ESG strategy, including climate change.



Components Meetings Attendance Independence Gender diversity

BoD	15	22	96%	80%	40%
SC	4	6	88%	100%	75%
CRCGC	4	16	94%	100%	50%

In 2021, the Board joined two induction sessions on the topics of integrating ESG into strategy and on the topic of climate change and energy transition. Experts from Ca' Foscari university, SDA Bocconi School of Management and the current Italian Minister of the department of infrastructure and sustainable mobility (MIMS) led the sessions.

Oversight of ESG topics by the Board is a good governance practice that Mundys fosters for its investee companies as well, by requiring the approval of ESG plans and targets by the Board at all main subsidiaries. Board committees overseeing ESG topics, including climate change, are already established within all the key subsidiaries and they are progressively expanding across the portfolio. Executive management committees are also in place in all key subsidiaries.

REMUNERATION

Executive compensation is linked to sustainability and climate-change KPIs

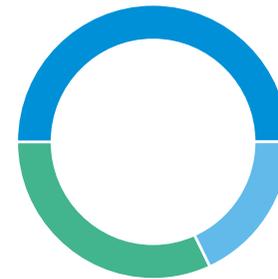
As of 2021, Mundys thoroughly updated its remuneration policy to tie it firmly to the business strategy. A significant portion of executive remuneration is linked to the achievement of sustainability objectives, alongside financial and operational metrics.

The inspiring principles of our remuneration policy³ are:

- **Transparency** – by offering clear and transparent information on the remuneration system;
- **Value** – by fostering the creation of long-term, lasting value;
- **ESG** – by promoting a sustainable development model for shareholders and other stakeholders.

Incentive remuneration for Mundys’ CEO, executives and managers is since 2021 linked to ESG performance, making up from **20 to 26% of annual incentive** and from **30 to 45% of long-term incentive** (target to max award). Milestones of our ESG plan, including **emissions reduction targets, are vesting conditions of the long-term incentive award.**

In order to foster management accountability on sustainability performance across our portfolio, Mundys promotes the adoption of remuneration guidelines inspired by international best practices by its subsidiaries. Among the main elements of these guidelines there is the requirement of linking at least 10% of annual incentives and 20% of long-term incentives to ESG targets, including climate change targets consistent with the Climate Action Plan. ESG-linked remuneration schemes are in place for subsidiaries making up >95% of revenues.

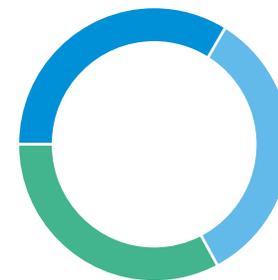


ANNUAL INCENTIVE

ESG priorities for the given year

In 2022, they focus on ESG progress as assessed by stakeholders (trust & reputation, ESG rating)

- Economic-financial objectives
- Strategic-operational objectives
- Sustainability objectives



LTIP

3-year targets on:

- CO₂ emissions reduction
- Increase of renewable energy consumption
- Gender balance
- Reputation with stakeholder
- Safety

- Absolute TSR
- Relative TSR
- Sustainability objectives

³[Mundys' Remuneration Report](#)

LOBBYING & PARTNERSHIPS

Mundys is committed to cooperate with public decision-makers to contribute via our industry knowledge, assets, experience and innovation capabilities to the development of policies that accelerate **decarbonization of the transport industry**, thereby contrasting climate change **in line with the Paris Agreement**.

Our lobbying activity is carried out by cooperating in the elaboration of structural interventions to ensure a **just, affordable and lasting transition**, considering its impact on the workforce and communities where we operate.

We **act transparently** by contributing to think tanks, speaking platforms, events, dialogue with stakeholders and by guaranteeing that all coalition building activities with associations, private players or third parties are aligned with our commitment towards contrasting climate change in line with the Paris Agreement.

We **foster alliances**, initiatives and projects with third parties, including national and international climate platforms, to promote innovation as a leverage to progress in the decarbonization of the mobility sector.

We **support the Paris Agreement on climate change** and are part of the Race to Zero campaign.

More on our approach to responsible lobbying [here](#).

Partnerships

The partnership between the **SDA Bocconi School of Management** and Mundys has resulted in the creation of "Mobius", the Smart Mobility Lab focusing on mobility users, set up to study and research new forms of integrated mobility (discover more [here](#)).

We collaborate with market players operating in similar or adjacent sectors to leverage synergies to enable a sustainable mobility. To this end, **Aeroporti di Roma** collaborates with **Enel X** to implement an innovative storage system by reusing electric vehicle batteries (discover more [here](#)).

Signatories of the Pledge have the opportunity to share access to technologies, best practices, and innovations in supply chain enhancements. They are also able to create joint action, collaborating with fellow signatories, to address the most critical climate challenges. Mundys joined the **Climate Pledge in 2021** (discover more [here](#)).



STRATEGY

RISK AND OPPORTUNITIES

Our Climate Action Plan (CAP) is a multi-year program of initiatives to achieve science-based GHG emissions reduction targets, manage climate-related risks and leverage the opportunities coming from the transition to a low-carbon economy. Our plan will underpin the decarbonization of the mobility sector and it is part of the broader long-term sustainability strategy of Mundys.

The execution of the CAP involves **investments which are accounted for in the multi-year financial plans of subsidiaries**. For our regulated business, the financial soundness of key initiatives was tested to provide a positive return within the term of the concession, also considering the benefits deriving from access to sustainable finance and potential savings deriving from increasing cost of carbon. Mundys adopts a policy to invest responsibly and sustainably (discover more [here](#)) its capital resources consistent with the commitment to contribute to the creation of a new standards of mobility, focused on people's needs and capable of creating a positive social, environmental and economic impact for the communities where we operate.

To this end, investing in assets with a **potential to bring a positive contribution to the fight to climate change** is an important element when assessing investment opportunities, as well as a strategic improvement lever for all assets under management.

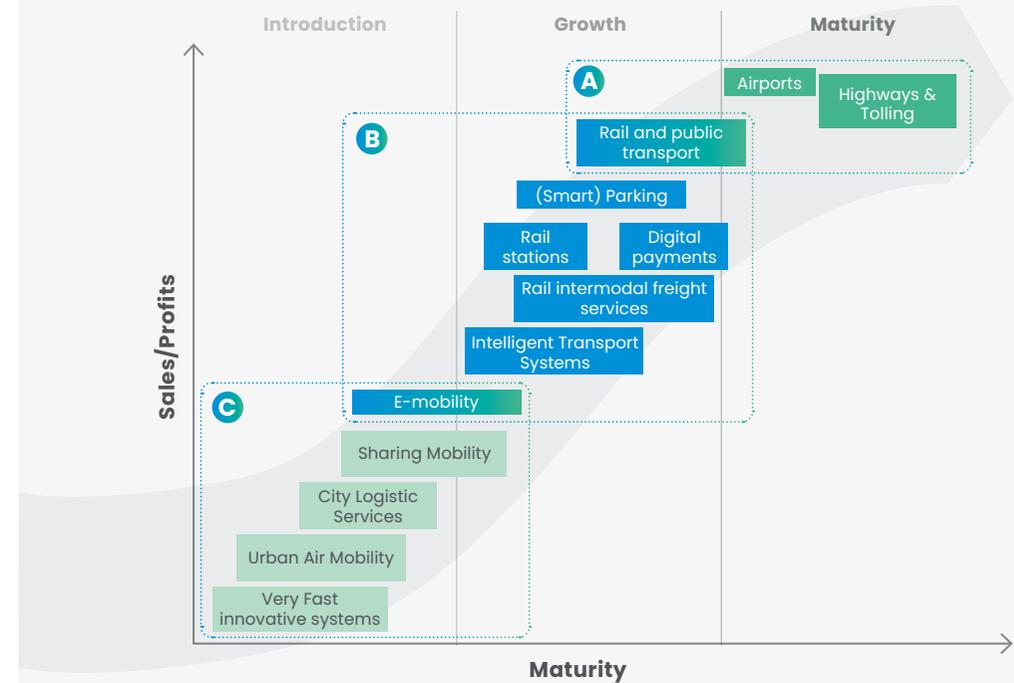
In line with the TCFD recommendations, we perform a Climate Change Risk Assessment (CCRA) to identify, analyze and evaluate major climate-related risks and opportunities, accounting for different time horizons and considering different climate change scenarios. Mundys has implemented a **climate change risk assessment methodology** at the holding company level which is integrated into the Enterprise Risk Model (ERM).

The CCRA is focused on two main categories of risks:

- Transition risks deriving from the transition to a low-carbon economy, which include policy and legal risks, technology risks, market risks, and reputational risks; and
- Physical risks impacting our assets, which can be event driven (acute) or longer-term shifts (chronic) in climate patterns.

The following timeframes have been considered:

- Transition risks and opportunities: 2025 as a short-term horizon, to appreciate changes due to new regulatory and market impositions, and 2040 as long term;
- Physical risks: 2030 as medium term, to appreciate variations in the natural and atmospheric environment, and 2040 as long term.



DIFFERENTIATED INVESTMENT APPROACH

- A Growth in Core Business**
 - Continue investment in core assets
 - Enable new growth through new technological solutions
- B Building new lines of business**
 - Enlarge and diversity actual portfolio fostering its resilience
 - Develop new technological solutions to upgrade current assets
- C Chase emerging market trends**
 - Ride emerging market trends, and be ready to scale emerging market opportunities

PHYSICAL RISKS

The following climate-related physical risks have been identified:

Acute physical: risks correlated to extreme weather events with potential negative impacts on the business in terms of revenues, business continuity, operating and reconstruction costs (damage, procurement, insurability). In particular, Mundys' assets operating in the North of Italy, Spain, France, Latin and Central America are particularly exposed to meteorological events that occur with greater frequency and intensity such as cyclones, storms, floods.

Chronic physical: Mundys' assets are exposed to risks related to heatwaves, sea level rise, the rise in the mean surface temperature, and the changes in precipitation that might cause damages to the infrastructures, impacting their operating performance and result in traffic interruptions.

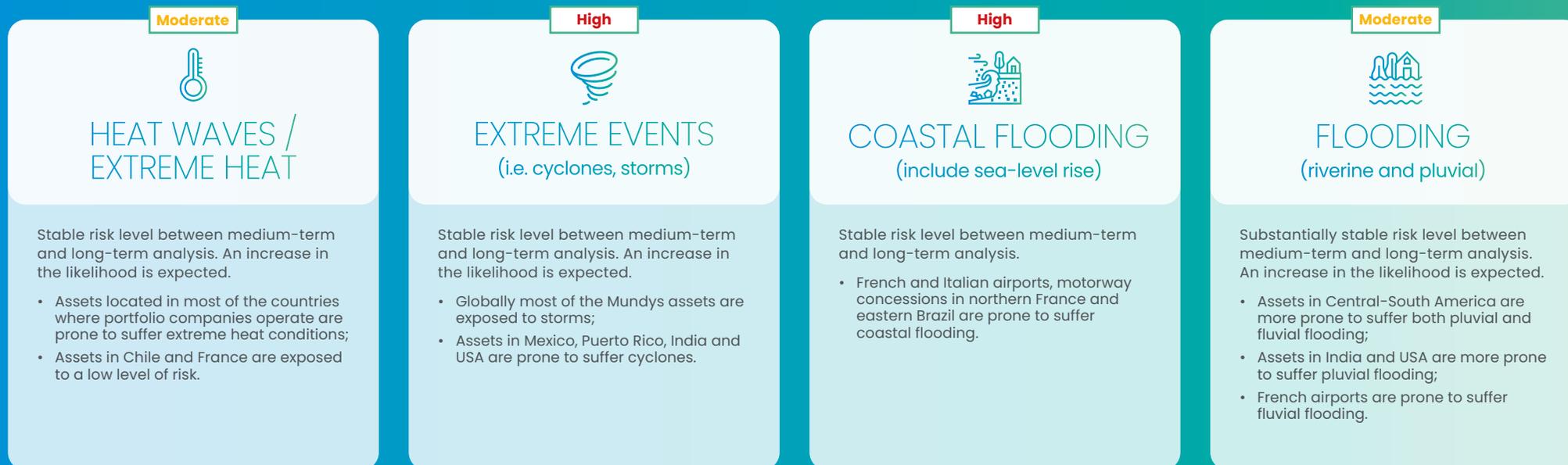
30 unitary assets / points selected for the analysis:

- all the 5 airports
- at least 1 representative point for each country
- analysis performed by using a third-party proprietary climate data tool
- more representative points for the assets located in the regions prone to suffer the most critical events
- climate change scenario used: RCP 8.5 (BAU) and RCP 4.5 (RCP 2.6 scenario is w.i.p.)
- two different time horizons: medium-term (2030) and long-term (2040)



Sanef
Abertis
France

PHYSICAL RISKS⁴



MANAGEMENT RESPONSE ACTIONS

Main actions include the definition of specific capex plans to boost the resilience of our assets and the transfer of those risks on the insurance markets to cover both direct/ physical damages and business interruption. Mundys' management performs physical risk assessments and scenario analysis.

Legend level of risk:

- High** The impacts are relevant, and an effort is required by the management with possible consequences on Company's strategy and objectives. The event has occurred, or it is highly likely to occur.
- Moderate** The impacts are relevant, and an effort is required by the management. The event is likely to occur.
- Low** The impacts can be managed without relevant consequences also throughout the routine operating activities. The event is unlikely to occur.

⁴To perform the impact analysis two scenarios have been taken into account, a scenario known as "Business as Usual" RCP 8.5 leading to high greenhouse gas concentration levels, and an intermediate scenario RCP 4.5 (aligned with a global 2-3 degrees pathway) where total radiative forcing is stabilized before 2100 by adoption of a range of technologies and strategies for reducing greenhouse gas emissions. This choice goes in the direction of **analyzing a situation under less protective conditions** in case of global policies adopted do not lead to expected benefits or lead to limited positive impacts. Furthermore, a best-case analysis under RCP 2.6 scenario is underway.

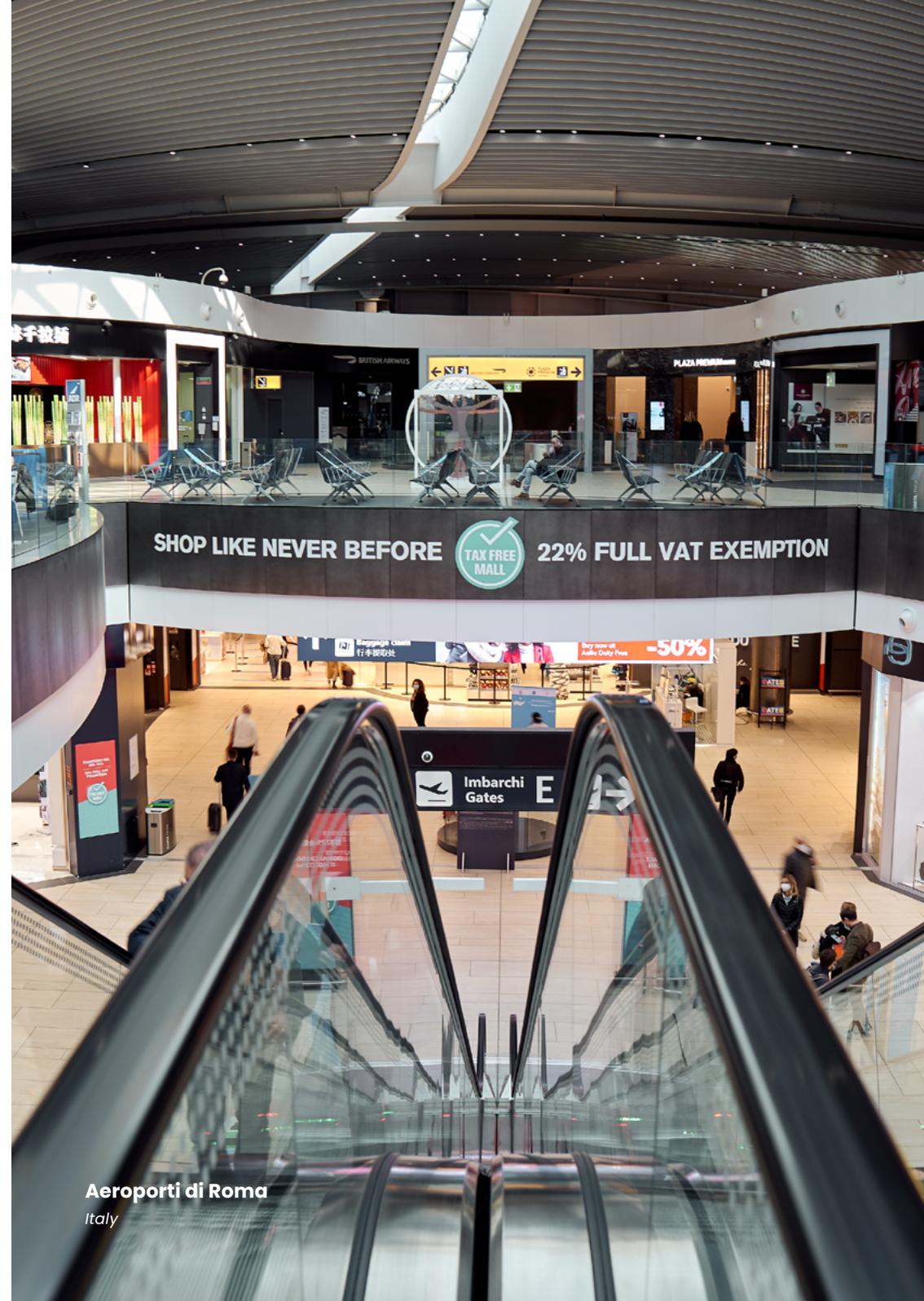
TRANSITION RISKS

The following climate-related transition risks have been identified:

Current and emerging regulation: Mundys may be exposed to risks related to violations of rules and regulations, also linked to climate change, that might result in sanctions, financial losses and negative impacts on its reputation. The evolving landscape of more stringent carbon taxes, emissions cap&trade schemes, operational compliance (e.g. related to material usage or process) might directly impact operating costs.

Market and technology risks: the ecological transition (EV mobility, alternative sustainable fuel, etc.) may require further investments in R&D, capital allocation for new technologies and modernization of infrastructures (e.g. installation of EV charging stations). The currently changes in mobility patterns towards more sustainable solutions could have limited consequences on traffic and a related reduction in revenues.

Reputation: the failure to meet internal and external stakeholder's expectations towards climate change (e.g. appear unable to reach net zero emissions, or an excessive negative impact on the environment) may affect the reputation with consequences on company's value, ability to attract investments and access to financial markets and talents. Also, the increased client and end-customer interest in environmental and climate change is leading to a potential shift in demand to alternative low carbon services.



TRANSITION RISKS⁵



Legenda level of risk:

- High** The impacts are relevant, and an effort is required by the management with possible consequences on Company's strategy and objectives. The event has occurred, or it is highly likely to occur.
- Moderate** The impacts are relevant, and an effort is required by the management. The event is likely to occur.
- Low** The impacts can be managed without relevant consequences also throughout the routine operating activities. The event is unlikely to occur.

⁵Risks assessed by assigning several scenario indicators:

- Scenarios considered: Stated Policies Scenario (STEPS), Sustainable Development Scenario (SDS)
- Several scenario indicator data sources: i.e. IEA World Energy Outlook (IEA WEO), IEA Energy Technology Perspectives (ETP) (the scenario analysis with IEA Net Zero 2050 is w.i.p.)
- Two different time horizons: short-term (2025); long-term (2040)

OPPORTUNITIES

2030 New Mobilty Scenario

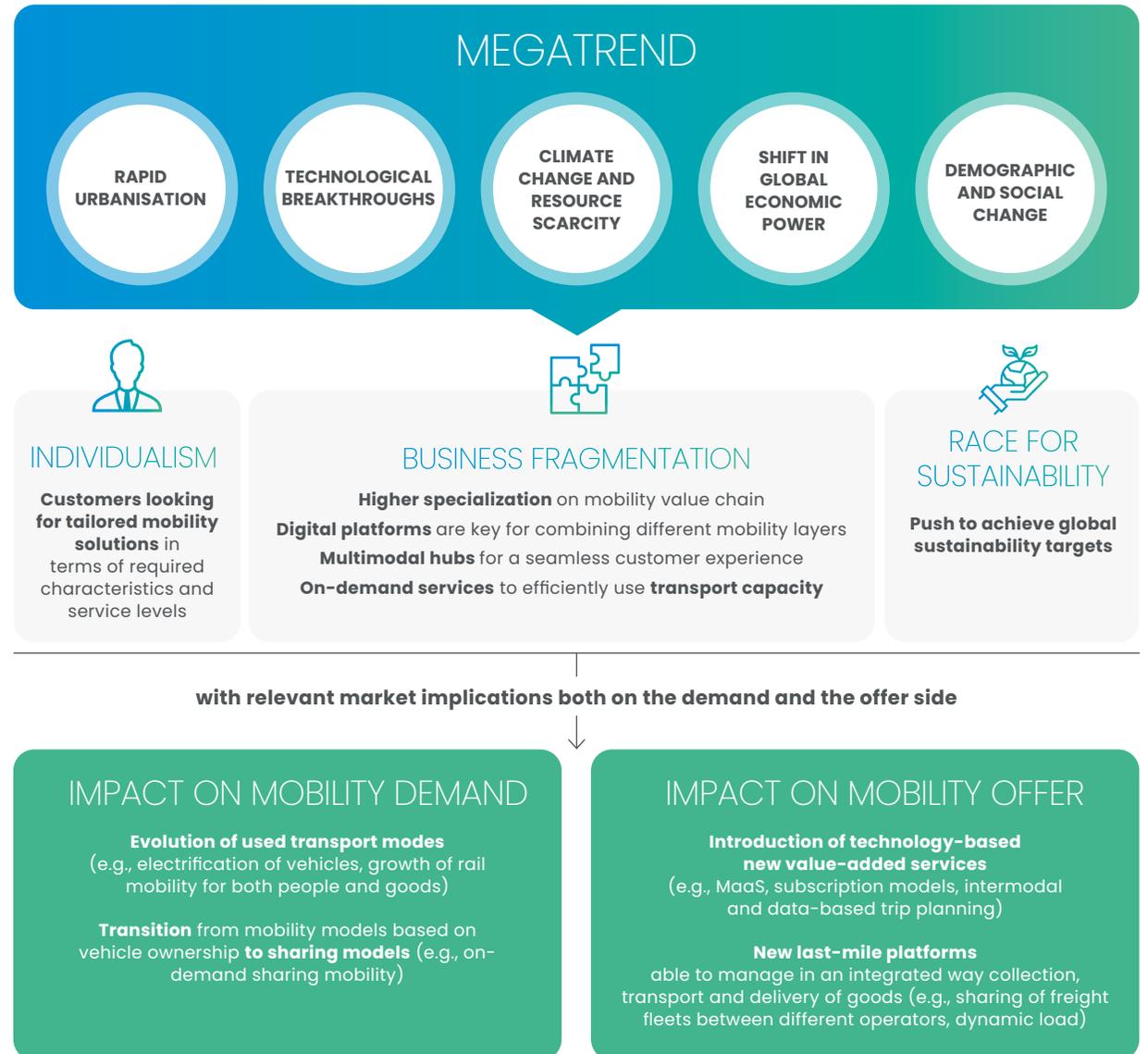
In the fight against climate change, we are promoting the transition of the transport sector towards low-carbon mobility through a conscious, practical and forward-looking approach to reduce our own carbon footprint as well enabling our value chain carbon footprint reduction. Such transition offers new business opportunities to exploit.

Social, economic and technological megatrends⁶ are impacting the mobility landscape, generating the need to integrate, in an efficient and sustainable way, a complex network of both physical and digital infrastructure within the ecosystem.

We think of a blend of physical infrastructures, services and technologies making mobility increasingly sustainable, smart and seamless, safe and accessible to the widest number of people from the first to the last mile.

⁶ European Commission, Sustainable & Smart Mobility Strategy, Putting European transport on track for the future: EU policy target.

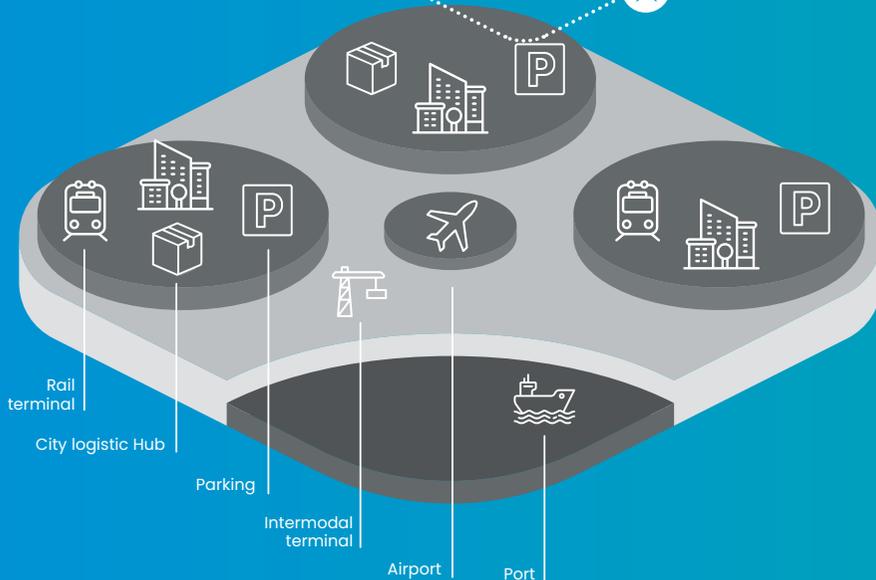
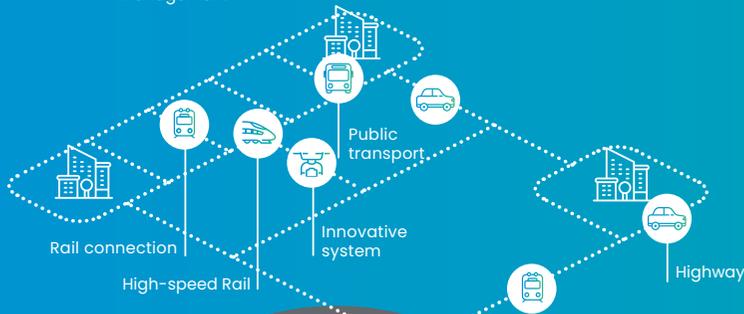
Social, economic and technological megatrends are impacting the mobility context shaping a new reference scenario...



OUR AMBITION IN THE MOBILITY ECOSYSTEM

In such scenario, we position ourselves as an integrated and pivotal player, enabling smart interaction between different layers of the mobility ecosystem and making travel journey more sustainable and in line with new user expectations.

Multi-layer Mobility Ecosystem



ENABLING TECHNOLOGIES

Technologies and platforms enabling efficient and customer-centric use of the network

Mundys Key Assets



MULTIMODAL LINKS

Connections among different nodes and hubs

Mundys Key Assets



MOBILITY HUBS

Centers of traffic generation

Mundys Key Assets



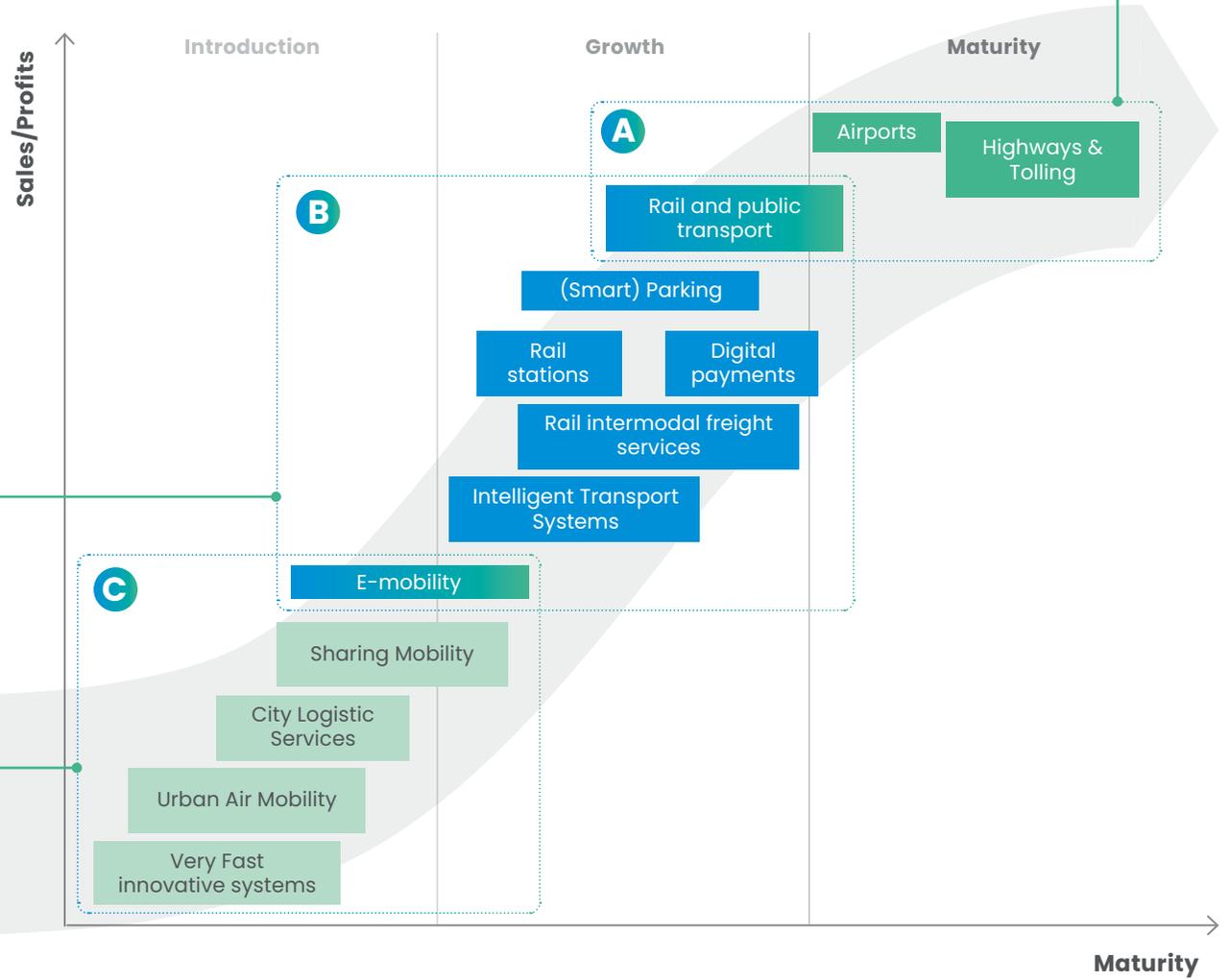
Investment Strategy: priority markets and ESG contribution

We have chosen to adopt a structured approach to guide investment decisions and the management of our asset portfolio, combining attractive returns with a positive social and environmental impact, in line with the primary goal of creating long-term value for all our stakeholders.

We will continue to invest in our core sectors by leveraging our experience and competence to develop innovative product / services that will enable and accelerate the sector decarbonization, such as, for instance, the EV's charging points

Businesses with a potential to contribute positively within 2030 to the decarbonization of mobility are central in our investment radar screen.

We have an interest in highly innovative emergent sustainable mobility services and systems that will drive decarbonization after 2030



TOWARDS LOW CARBON MOBILITY

A

Decarbonization solutions and services on our core assets

In our core asset, leveraging our experiences and competences, we will develop innovative product/ services that will accelerate transport decarbonization.

⁷ 2020 IEA data on [Ourworldindata.org](https://ourworldindata.org)

SUSTAINABLE MOTORWAYS Our network & services



Global road transport is responsible for about 12% of world GHG emissions⁷ and the **transition to sustainable transport patterns is a necessity as well as an opportunity to be seized**. This transition requires incentive of public policies and the support of smart infrastructure that can monitor emissions and enable low-emission vehicles.

To date, the main **sustainable road transport solution** is represented by **electric vehicles**, which are increasing their market penetration from year to year. These vehicles require an adequate charging infrastructure and they also pave the way to many related opportunities, such as dedicated lanes, and future technologies, as dynamic electric vehicle charging.

Other opportunities, however, are gaining momentum as a solution to the range limitations of electric vehicles. Examples are **biofuel/HVO-powered transport**, more efficient for heavy-duty vehicles.

Such solutions must also be contextualized in different geographies. For example, in South America the adoption of such vehicles is very low and they are unlikely to be widespread in the coming years. This paves the way for alternative opportunities, such as offering low-emission fuels as an alternative to traditional fuels.

At the same time, **new technologies are opening adjacent opportunities to support the decarbonization** of the sector. Examples include materials used to build CO₂ absorbing infrastructure, smart highway, efficient lighting systems, dynamic systems to incentivize specific vehicles or specific times of travel, smart systems to reduce traffic congestions and improve vehicle flows, and installation of technology to enable future self-driving cars, which can efficiently improve traffic flows and reduce congestion.

Our motorway's operating companies are bringing to light several initiatives that directly or indirectly participate in the decarbonization of road transport. For example, **SANEF**, France motorway management company part of the Abertis Group, is installing electric charging stations every 80 kilometers across its network of 1,807 km, with more coming in the next years.

SUSTAINABLE AVIATION FUELS (SAF)

Airports and our ACA4+ certifications



Aviation transport is responsible for generating approximately 1.9% of world GHG emissions⁸. Low-carbon aviation fuel, known as **Sustainable Aviation Fuel (SAF)**, is produced from biomass and waste resources and has the potential to provide the same performance of petroleum-based jet fuel. Depending on the feedstock and technologies used to produce it, SAF can dramatically reduce life-cycle greenhouse gas emissions compared to traditional jet fuel. According to recent research by Deloitte (discover more [here](#)), by 2050, an emission reduction of 75% in long-haul flight and 60% for light aircraft and short-haul flights can be achieved through the use of alternative fuels. Potential future alternatives include also electrically powered aircraft and the use of green hydrogen (i.e., produced through the use of renewable energy).

Our Airports, recognized among the 10 **most sustainable airports in the world**⁹, are playing an increasingly active role in this field. Their commitment is to make SAF available on site to airlines companies, in an efficient, low-cost and low-environmental-impact manner. During the past year, collaborations were also launched with energy companies for the use of biofuels for ground handling of airport vehicles, started with a first supply of about 30,000 KG of blended SAF for Aeroporti di Roma.

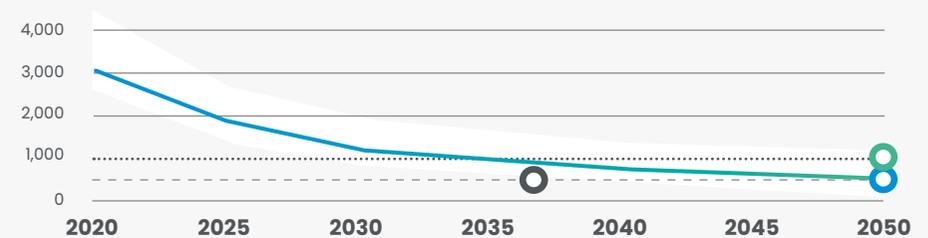
Traffic management efficiency could also be an opportunity to reduce the environmental impact of the aviation industry. As so, the EU's **SESAR**¹⁰ programme, in which ADR is involved (discover more [here](#)), aims to organize air traffic in the best possible way to make it **more efficient, competitive, safe and less hazardous to the environment**. The expected results are a reduction in air traffic management costs, fuel consumption, CO₂ emissions (by 10% compared to 2004 data) and flight time, and an increase in the operational efficiency for airspace users, reducing delays and increasing the aircraft capacity.

⁸ 2020 IEA data on [Ourworldindata.org](https://ourworldindata.org).

⁹ Airport Carbon Accreditation (ACA4+ "Transition" certification), an initiative launched by ACI Europe;

¹⁰Single European Sky Air traffic management Research.

SAF production is expected to scale up rapidly in the coming decade due to developments in its production and commercialization. A McKinsey (discover more [here](#)) analysis suggests that while current SAF costs are high in relation to kerosene cost, they will lower over time and could reach breakeven between 2030 and 2035.



- Conservative cost-reduction case**
Reference case with low renewable costs
Aggressive cost-reduction case
- 2036:** Synthetic jet fuel becomes cost competitive with fossil fuel, aggressive cost-reduction case, without diesel tax
- 2050:** Synthetic jet fuel becomes cost competitive with fossil fuel, conservative cost-reduction case, with diesel tax
- 2050:** Synthetic jet fuel becomes cost competitive with fossil fuel, reference case, without diesel tax
- Average fossil-jet fuel price including excise tax
- Fossil jet fuel at \$70-75/barrel Brent crude-oil price

MOBILITY SERVICES

Accessing to new urban sustainable mobility and Telepass



Services to mobility are enablers of low carbon mobility, making infrastructure smarter and more efficient. The electronic toll service provided by **Telepass**, for example, allows to reduce traffic congestion on motorways and, as consequence, significantly decreases the carbon emissions from vehicles, as shown by a study carried out by Università Ca' Foscari di Venezia ([click here](#) to learn more about). Moreover, Telepass offers affiliated car parks which allows to its clients to minimize the time and use of their vehicles to find an available parking space, therefore avoiding waste of fuel and connected CO₂ emissions.

Mobility services are also able to **foster the use of new, environmentally friendly, forms of mobility** by enabling people to take advantage of them in a **smart and simple way**. Regarding electric mobility, technology must allow drivers to easily access charging points and ensuring a secure payment method. Telepass has already grabbed this opportunity by offering the Ricarica Elettrica service, which allows charging point's reservation and payment services. In addition, Telepass also offers visibility, access and payment for different forms of low-impact urban and shared mobility, such as, electric scooter, bike and motorbike, as well as the purchase of tickets for public transport.

At the same time, **new environmental friendly and customer centric services** are being added to the offering such as, as an example, Wash Out, the Telepass' delivery car wash service that allows booking a wash for a vehicle directly on the spot where it is parked. The innovative aspect of this service is represented by the ecological product used, which do not require the use of water and do not produce discards on the ground.



Wash Out

Telepass

Italy

B

Opportunities towards a low carbon mobility

Businesses with a potential to contribute positively within 2030 to the decarbonization of mobility.

INTELLIGENT TRANSPORT SYSTEM
Sustainable Urban Mobility and Yunex Traffic

YUNEX
TRAFFIC

Over the last years the focus to further drive demand for smart traffic solutions has significantly increased: the Green Deal and Next Generation Fund have set out a sustainable roadmap for Europe and the pressure on cities to control pollution, congestion and carbon emissions has grown. As sustainability becomes an increasingly pressing issue, **congestion needs to be tackled in order to successfully reduce emissions from road vehicles**. To this end, **Intelligent Transport Systems (ITS)** could be part of the solution as reported by the EU research report [Action Plan for the Deployment of Intelligent Transport Systems in Europe](#). With the aim of playing a leading role in promoting an increasingly smart, seamless and sustainable mobility, Mundys has entered into an agreement to acquire Yunex Traffic, a leading global operator in the ITS sector, whose traffic flow and urban mobility management infrastructures and platforms are already used in over 600 cities across 4 continents (Europe, Americas, Asia, Oceania). Thanks to **Yunex Traffic**, we will actively contribute to solving social and environmental challenges, **improving safety, making cities more livable and enabling decarbonization of urban road transport**. The Intelligent Traffic Management platform provided by Yunex Traffic can help cities and municipalities to optimize the use of the network capacity through AI based **real-time traffic data analysis and dynamic traffic routing engine-based algorithms** that correlate heterogeneous data like level of pollution, road works or incidents. Yunex Traffic also offers solutions for complex congestion charging projects, with toll fare calculated dynamically depending on time of day, air quality or traffic situations and setting incentives for more environmentally friendly and capacity-oriented traffic behavior. Utilization of smartphones, video and On-Board Units (OBUs) allow convenient charging procedures for the end user. With such solutions, it is also possible to reliably **detect and prioritize traffic participants at intersections**: by prioritizing public transport or sustainable modes of transport (e.g., bikes), cities could reduce CO₂ emissions and keep urban traffic flowing more smoothly, increasing punctuality and reliability of these modes of transport. Yunex's comprehensive portfolio includes also hardware and software solutions related to smart intersections: its traffic light Sitraffic One is the world's first solution for the complete "1-Watt intersection", the most **energy-efficient** traffic light, with 85% energy efficiency of standard 230V LED technology.



Rail Transport

Electric high-speed rails represent a **carbon-neutral mean for short/middle-haul travel routes**. Thanks to **renewable energy** supply, rail transport has the potential to be the most widespread decarbonized mobility solution. As an alternative to traditional carbon-intensive transport modes, rail represents the best available **opportunity to connect mobility hubs** (e.g., airports) **rapidly and with low carbon impact**.

The Net Zero Emissions Scenario pathway requires a fast shift from carbon-intensive modes to rails. Nowadays, rail is one of the most energy-efficient transport modes, responsible for 9% of global motorized passenger movement and 7% of freight but only 3% of transport energy¹¹ use. Indeed, most of passenger rail transport activity takes place on electric trains and in **Europe they account for 80% of the total**¹².

¹¹ [Rail – Fuels & Technologies – IEA](#)

¹² [The Future of Rail – Analysis – IEA](#)



Smart Parking

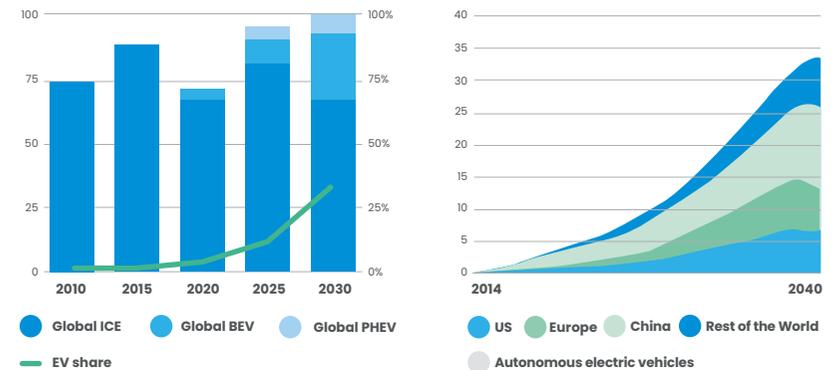
Smart parking represents a market with growth potential, driven by urbanization and development of sharing mobility and more generally **mobility nodes and inter-modality**, enabling mobility flow efficiency.

Investments in **smart parking business could trigger relevant synergies** with other opportunities (e.g., e-mobility charging, traffic management, passenger stations).



E-Mobility

Electric vehicles (EVs) play a critical role in meeting the environmental goals of the Paris Agreement to **reduce carbon emissions in the transport sector** and several countries are implementing policies and fiscal incentives for fostering the transition from Internal Combustion Engines (ICE) to EVs. The EV's market has made great strides thanks to the suitable environment created by this context also driving Original Equipment Manufacturers' (OEM) investments in new electrified models from R&D and the shift in consumers' behavior and preferences.



Deloitte's study (discover more [here](#)) shows that EVs sales will rise 31.1 million by 2030 while a recovery from COVID-19 will see ICE vehicles sales growing, up to 2025, and then declining.

The 2040's forecast of Wood Mackenzie (discover more [here](#)) underlines a steady growth in terms of number of electric vehicles sales until 2038 with a slight decrease in 2039 and 2040.

As result of the evolving EVs market, both **charging infrastructure** (topic covered in the following pages) **and services** are necessary to **support the growing demand**. Regarding services, opportunities are coming from in digital payment methods as app-based front-end solutions, mobile website front-end solution and Internet of Things technologies.



Future highly-innovative services

Highly-innovative emerging sustainable mobility services and systems that will drive decarbonization after 2030.

URBAN AIR MOBILITY Sustainable eVTOL



Guided by the desire to be a pivotal player in the mobility ecosystem, with a particular focus on sustainability and innovation, we have an interest in the **innovative and disruptive sector of the Urban Air Mobility (UAM)**. Urban Air Mobility refers to new sustainable air transport enabled by eVTOL, vertical take-off aircrafts for a series of market use cases, such as air taxi, inspection services, freight transport, agriculture support, etc.

Urban Air Mobility is one of the latest forms of sustainable mobility, able to represent a **real alternative for the future of urban mobility** allowing, through autonomous aircrafts with electric propulsion, **faster transfers, reduced environmental impact and beneficial effects on urban traffic and congestion**. After the initial investment in 2021 in the eVTOL manufacturer Volocopter, being among the others the most advanced in official certification process of the aircrafts, we fostered cooperation between Volocopter and Aeroporti di Roma to start a project to evaluate potential air taxi services in Rome, foreseeing a path to launch commercial operations by 2024. Recently we have again confirmed its commitment to Urban Air Mobility with a new initiative: Urban Blue, a sustainable mobility project launched in 2021 that envisages the establishment of a company owned by Aeroporti di Roma and Aéroport Nice Côte d'Azur, together with Venice and Bologna airports, for the development/realization and management of **vertiport infrastructures for the take-off/landing of electric vertical take-off aircrafts**. Our ambition is to position as an end-to-end provider of Urban Air Mobility infrastructures and services for **the future cities multi-modal hubs**.



Sharing Mobility Services

Shared mobility solutions are shifting consumer preferences away from vehicle ownership toward **newer forms of transportation and services**, which can bring many advantages to the community as they help decarbonize and decongest transport networks. They offer an alternative to traditional mass transit and provide new forms of transport for the first and last mile connecting to public transport.

In recent years, new modes and services have emerged, such as **pooled ridesharing, peer-to-peer car sharing, shared electric scooters, autonomous taxis** (so-called robo-taxis).



Very Fast Innovative Services

Ultra high-speed terrestrial transportation represents an **innovative and challenging opportunity for inter-city mobility**.

The best-known example of this next-generation mode of transport is represented by Hyperloop, a concept launched in 2013 by Elon Musk. The hyperloop is an ultra-high-speed vehicle, which accelerates gradually via electric propulsion through a low-pressure tube. Such mean of transport is a fast and environmentally sustainable system which could be available to many.



City Logistic Services

The rise of e-commerce is increasing the number of deliveries in cities, resulting in rising road congestion. Contrasting this will require more efficiency in freight and servicing. Consolidation centers can increase the efficiency of goods delivery and help reduce traffic and air pollution levels in city centers. There could be opportunities to **combine delivery and personal mobility solutions, as well as make logistics more responsive and efficient**. Autonomous freight systems could also enable a shift to night-time servicing.



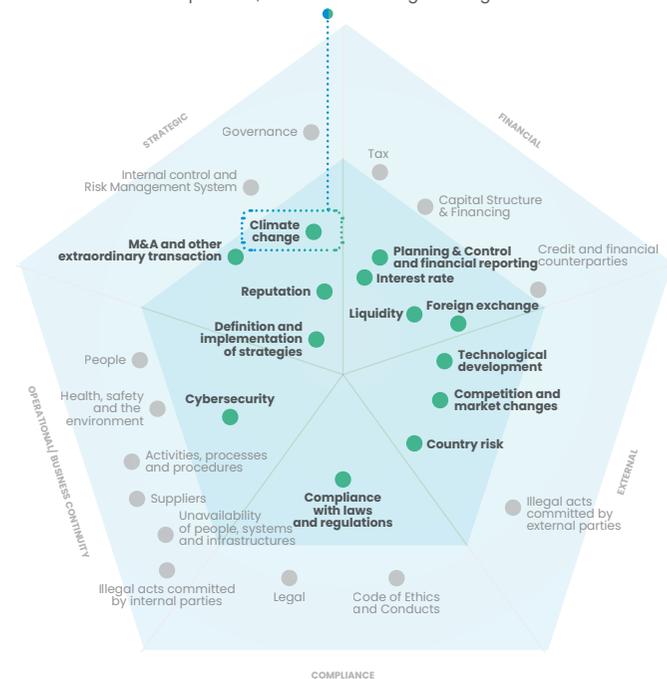
RISK MANAGEMENT

RISK MANAGEMENT GOVERNANCE

In June 2020, Mundys' Board of Directors approved the new guidelines and the Enterprise Risk Management (ERM) Policy, which were then adopted by the main subsidiaries. These guidelines are periodically updated in line with best practices (COSO ERM framework), laws and regulations (e.g. Corporate Governance Code), in order to include methodological improvements that can generate value for the group companies. Climate change risk assessment is described in the section Climate Governance of this report.

CLIMATE CHANGE IS A STRATEGIC RISK AND SO INCLUDED IN THE ERM

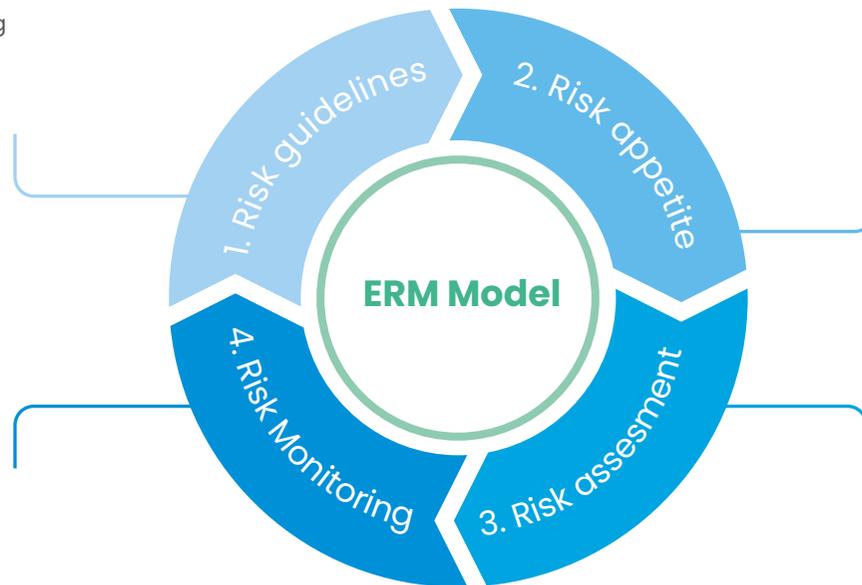
Strategic risks may adversely affect the achievement of mission, strategic goals, perception of the organization's reputation, and climate change strategies



ENTERPRISE RISK MANAGEMENT PROCESS

Within each main subsidiary, the ERM model entails that (i) the companies' BoDs play a central role to ensure the correct managing of the main risks aligned with the risk appetite statement, and (ii) the Control & Risks committee (where present) and the Risk Officer oversee the ERM process itself, according to the guidelines set.

Mundys updates and circulates among subsidiaries the ERM methodological guidelines.



Definition of the Risk Appetite from Mundys and its subsidiaries and approval by the respective Boards of Directors.

Ongoing risk monitoring including key risk indicators and risk tolerance thresholds, in order to monitor changes in risk exposure. In the event of exceedance of these thresholds, it is required to define adequate action plans and report to the CEO, Control & Risk Committee and BoD.

All risks are identified and assessed based on qualitative and quantitative metrics. Any risk exceeding the related appetite level is reported to the CEO, Control & Risk Committee and BoD, and constantly monitored. In order to bring these risks within the related level of risk appetite, it is required to implement corrective actions.



METRICS & TARGETS

GHG EMISSIONS METRICS, TARGETS AND ACTIONS

On November 11, 2021, the Board of Directors, with the favorable advice of the Sustainability Committee, approved an ambitious multi-year plan to reduce emissions by setting **interim science-based targets with the goal of achieving zero direct emissions by 2040** or earlier. Mundys committed to the Science Based Target initiative (SBTi) and submitted its targets. According to information provided by the SBTi, review of such target is expected to take place in the second half of 2022.

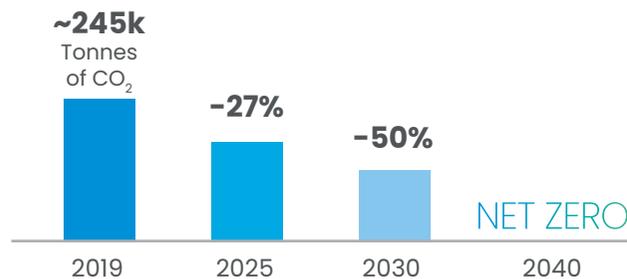
GHG EMISSION TARGETS

Scope 1 & 2 reduction targets

To deliver on our **Scope 1 and Scope 2 net-zero ambition**, we have established a decarbonization plan with short-, medium- and long-term milestones, considering the pre-pandemic scenario and thus using 2019 as baseline year. To achieve the 2040 net-zero ambition, by 2030 we aim to reduce by 50% our 2019 direct emissions, which accounted for approximately 245.000 tons of CO₂e¹³. About 57% are related to emissions from fossil fuel for stationary and mobile sources and 43% are related to electricity and thermal energy consumption to operate our assets. This **absolute reduction target** follows a trajectory consistent with the Science Based Target initiative for the 1.5°C scenario and put us on a pathway to fulfill our commitment to be net-zero by 2040, 10 years earlier than the objectives of the Paris Agreement.

Our decision to align our ambition to 1.5° C scenario also reflects the recent communications by IPCC, which stresses that 1.5° C scenario should be the only one to be considered for the future to keep global warming at level that will trigger a sustainable future for the generations to come.

NET ZERO BY 2040 – SCOPE 1 + 2



A fundamental milestone to achieve the reduction of direct emissions is represented by renewable energy consumption. We aim to increase electricity consumption from renewable sources to 77% within this decade.

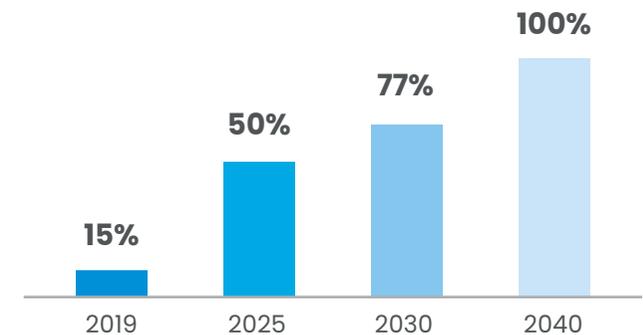
We are aware that some activities currently powered by fossil fuels will have to be replaced by electricity, therefore, while the consumption of fossil fuels will be reduced, there will be an increase in electricity demand.

That is the reason why Mundys will act both by increasing the energy efficiency of its processes to reduce energy demand and by building its own generation plants from renewable sources and obtaining certified renewable energy on the market.

Our goal is **100% of electricity consumption from renewable sources** by 2040 at the latest.

100% RENEWABLE ELECTRICITY BY 2040

% of electricity consumption from renewable sources



Off-setting activities were not considered in the definition of the target, and the associated decarbonization action plan.

¹³ 2019 data including emissions related to discontinued concessions excluded in pro forma values used as part of setting the target baseline.

Scope 3 reduction targets

We are conscious that transition towards a low-carbon economy requires **cooperation along the value chain** and we are eager to play an active role in teaming up with stakeholders to engage in joint efforts to decarbonize the transport industry.

Our ambition is to be net-zero by 2050 for scope 3 emissions as well and we are committed to develop a full science-based net zero action plan across the portfolio of our activities, by building and further expanding on our current scope 3 2030 reduction targets.

To begin our scope 3 reduction journey with a forward looking whilst pragmatic approach, we started to focus on two key emission hotspots, upstream and downstream our value chain. While we are fully aware that these will not be the only hotspots to abate, we are also conscious that it is key to begin taking action soon, starting from the emission hotspots where we can play influence immediately.

For scope 3 emissions, reference was made to the GHG protocol “Corporate Value Chain Accounting and Reporting Standard” which identifies 15 categories of indirect emissions, upstream and downstream of the organization along the value chain.

Through actions to reduce indirect emissions, the aim is to reduce the physical intensity of emissions upstream and downstream of the value chain by 22% by 2030. As far as emissions upstream of the value chain are concerned, the main reduction pathway concerns businesses in the motorway sector and is linked to the procurement of materials and products, which will have to be gradually oriented towards materials with lower life cycle emissions.

On the other hand, as far as emissions downstream of the value chain are concerned, which concern airport activities, the target of a 22% reduction in the intensity of indirect emissions by 2030 concerns the sustainable accessibility of goods and people to airport terminals. These two hotspots collectively cover more than 80% of total manageable scope 3 (about 1.4M tons of CO₂e). Scope 3 emissions do not include downstream emissions related to the use of transport infrastructures, i.e. emissions from motorway traffic and/or aircraft sources (characterized by the consumption of aircraft during take-off, landing, approach, boarding or origin-destination cruising phase) as they depend on transport mode and not on a direct use of the infrastructure. Mundys has no influence (or limited) over that. However, we believe we can play an enabling role in the transition towards a low-emission mobility, through the adaptation of our infrastructures so that they can facilitate the transit of zero-emission means of transport, with technological innovation and the development of new mobility services.

Purchased goods and services represents the hotspot for scope 3 mandatory emissions for motorways. This cluster includes emissions related to purchased materials mainly associated with road infrastructure development, maintenance and operation, as well as those related to planned expansion works, which will be dealt with separately given the time gap between when the materials are purchased and the time the new piece of infrastructure goes into operation.

In 2019 these emissions amounted to approximately **579 thousand tons of CO₂e** over around 73 billion of kilometers travelled by vehicles on the network.

Given that consumption of materials is linked to the length of the road network as well to its usage, we adopt an intensity-based target related to highway traffic. Indeed, performance is measured by tons of CO₂e per million kilometers traveled by vehicles on the network and it considers projected traffic growth to 2030. The concessions life and the planned expansion capex until its term is also taken into consideration.

**-22% BY 2030
ON PURCHASE
GOODS AND
SERVICES**

Motorway Sector
Scope 3 physical
intensity target



Downstream transportation category represents a hotspot for the airport segment mandatory scope 3 emissions performance. The category provides for emissions related to the accessibility of passengers and goods at the airports.

In 2019 these emissions amounted to approximately **582 thousand tons of CO₂e** over 63.9 million passengers accessing the airport infrastructures.

As for motorways, we adopt an intensity-based target related to airport passenger traffic. The performance is measured in terms of Kg of CO₂ per passenger, and it considers expected traffic growth to 2030 from a 2019 baseline. Indeed, it must be noted that airport passenger traffic projections are mostly affected by the impacts of the Covid-19 pandemic which has caused so far, a decrease of respectively 75% and 68% of airport passenger in 2020 and 2021 vs 2019. Expectation is that the recovery for the airport segment will be slower than that of the highway business.

**-22% BY 2030
ON DOWNSTREAM
TRANSPORTATION**

Airport Sector Scope 3
physical intensity target



MAIN EMISSIONS REDUCTION PATHWAYS¹⁴



¹⁴ Baseline year 2019 – target year 2030

KEY ACTIVITIES TO ENABLE REDUCTION OF INDIRECT EMISSIONS

We plan investments to enable the reduction of indirect emissions along the whole value chain:

- the **reduction of materials' consumption and products used** in maintenance and construction work, including through recovery practices;
- the **procurement of goods and services** with lower life cycle emissions;
- the **installation** at Fiumicino airport of around **500 EV charging points** by 2025 to encourage electric mobility (around 100 airside and 400 landside);
- the **improvement of rail accessibility to the airport terminal**, with an increase in the number of trains and a decrease in tariffs;
- the **improvement of bus accessibility** and **cycle connections**;
- the **development of initiatives to raise awareness** among airport operators for the supply of certified **green energy** and the **use of BEVs and HEVs** with incentive policies.

Pioneer

AIRPORT SUSTAINABILITY SECOND LIFE BATTERY STORAGE

Developed in collaboration with Enel X and co-funded by the European Union through the Innovation Fund¹⁵, the PIONEER project (discover more [here](#)) involves the design, construction, start-up and operation of a system made up of **second-life batteries** from the automotive sector **for the storage of excess power produced by a 30MW solar photovoltaic plant**. The project will be developed at Rome Fiumicino International airport and the energy stored will **cover evening peak-demand**, while also **providing flexibility services to the grid**.

An additional innovative feature relates to the **development of equipment able to check the state-of-health of the batteries** before their connection to the system. The energy storage system will have a rated capacity of 5MW/10MWh.



¹⁵ Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them

GHG EMISSIONS METRICS

The following table presents the progress in 2021 vs 2019 with respect to the targeted emission reduction planned

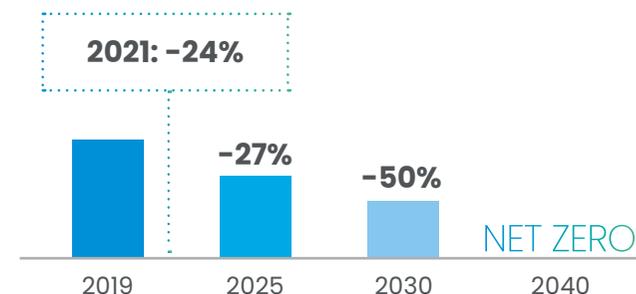
	2019 ¹⁶	2020 ¹⁷	2021	Delta% 21-19
Total Scope 1 emission	140,921	130,581	115,186	-18%
Scope 2 emission (LB)	79,855	63,757	74,501	-7%
Scope 2 emission (MB)	106,415	85,532	71,676	-33%
Total Scope 1 + 2 (LB) emission	220,776	194,338	189,687	-14%
Total Scope 1 + 2 (MB) emission	247,336	216,113	186,862	-24%

	2019 ¹⁶	2020 ¹⁷	2021	Delta% 21-19
Upstream emissions	757,610	1,006,966	734,437	-3%
<i>of which Purchased materials for road maintenance</i>	<i>579,368</i>	<i>854,658</i>	<i>572,884</i>	<i>-1%</i>
Downstream emissions	628,093	200,295	269,723	-57%
<i>of which Airport accessibility</i>	<i>582,097</i>	<i>157,879</i>	<i>221,100</i>	<i>-62%</i>
Total Scope 3 emission	1,385,703	1,207,251	1,004,160	-28%

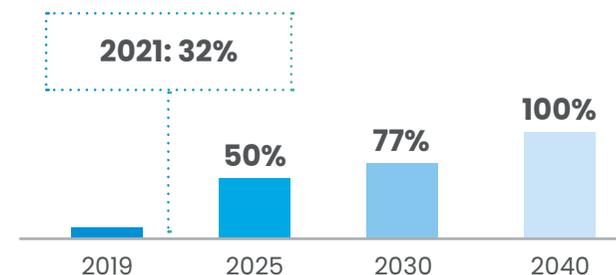
¹⁶ 2019 data including emissions related to discontinued concessions excluded in pro forma values used as part of setting the target baseline;

¹⁷ 2020 results were significantly impacted by Covid-19 pandemic

PERFORMANCE 2021 SCOPE 1 E 2



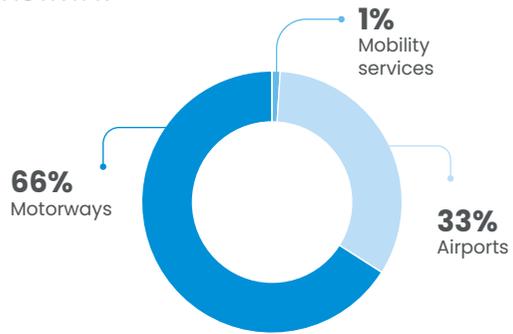
PERFORMANCE 2021 SHARE OF RENEWABLE ENERGY



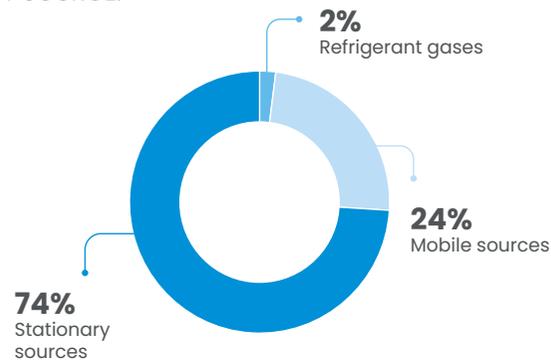
GHG EMISSIONS BREAKDOWN

Scope 1 & 2

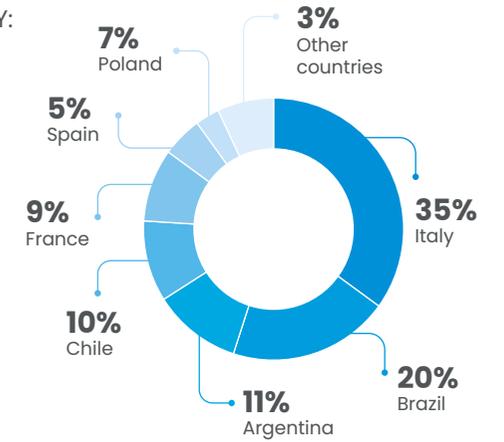
BY ACTIVITY:



BY SOURCE:

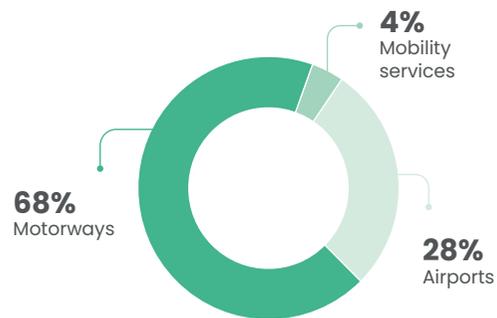


BY COUNTRY:

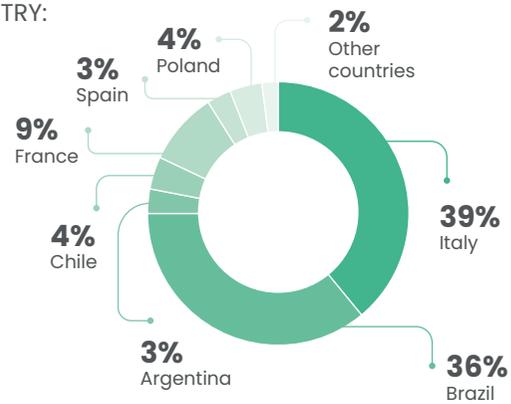


Scope 3

BY ACTIVITY:



BY COUNTRY:



CLIMATE CHANGE WITHIN A BROADER AMBITION

Mundys has set an ambitious science-based sustainability plan which is assessed by all the leading international rating providers.



ESG RATINGS

	SCALE	MOST RECENT	vs SECTOR AVERAGE
ISS ESG	D- / A+	C	>
MSCI	CCC / AAA	BBB	>
FTSE4Good	0 / 5	3.8	>
CDP <small>DRIVING SUSTAINABLE ECONOMIES</small>	D- / A	B	>
SUSTAINALYTICS	40+ / 0	14,5 (Low Risk)	>
REFINITIV	D- / A+	C+	>
Moody's ESG	0 / 100	59	>

ESG INDEXES



MEMBERSHIP



mundys
Improve moving life