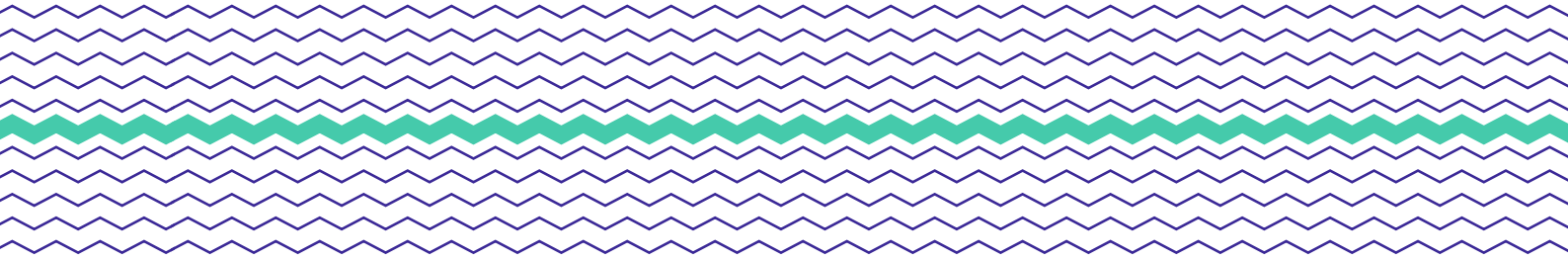
RATP GREEN BOND

Allocation and Impact Report

JULY 2025

RATP GROUP



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RATP Group

The world’s third-largest urban transport operator

Present in 16 countries across 5 continents, and providing over 4 billion daily journeys worldwide, RATP Group is a first-class player in urban mobility. Backed by its expertise in multimodal transport options, and a wide range of complementary skills, ranging from urban services (real estate, telecoms, logistics, new forms of mobility, energy, among others) to security, passenger information and ticketing solutions, as well as infrastructure management, the Group designs, implements, and ensures the daily operation of robust, efficient solutions, and innovative services for decarbonised mobility that drives a sustainable and more human-focused city.

5
areas of expertise

- Mobility
- Urban services
- Infrastructure management
- Security
- Other services

Over 73,500
employees with close to a quarter based internationally

4.1
billion journeys
provided globally in 2024

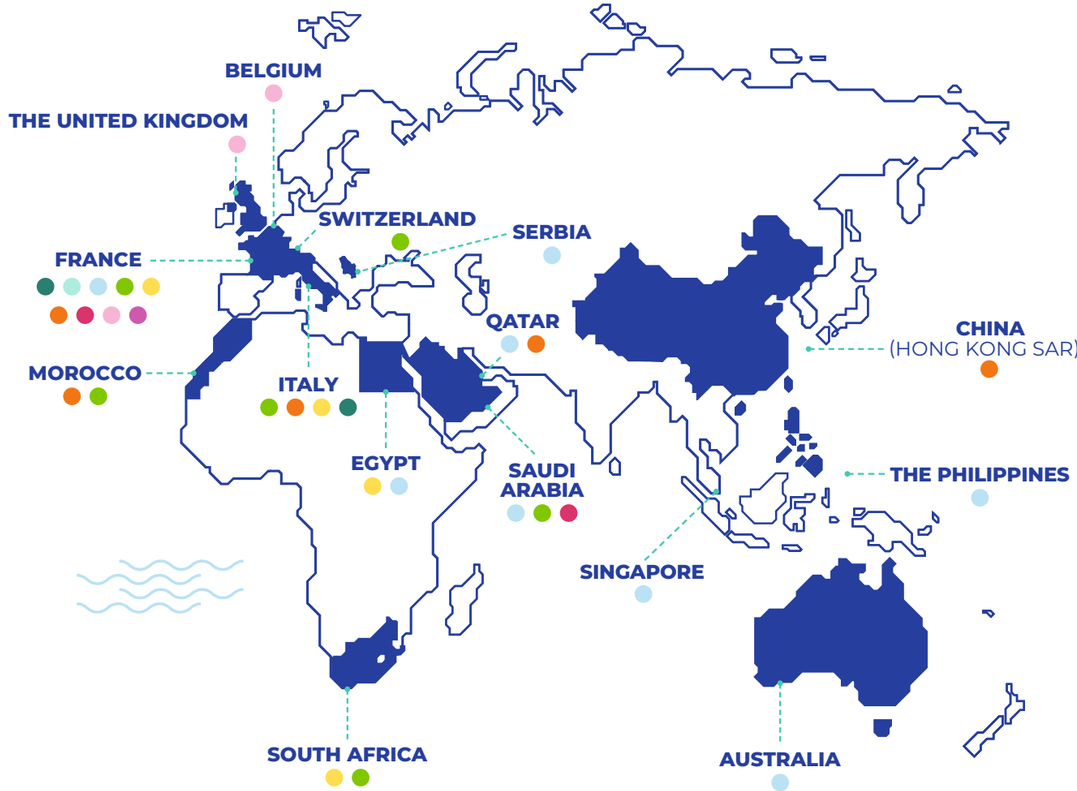
Over 100
ongoing service contracts
worldwide

9
transport modes

- Metros
- Rail
- Trams
- Urban and intercity buses
- Sightseeing buses
- Demand-responsive transport
- Ropeways
- River/maritime shuttles
- Autonomous vehicles

4
modes operated in partnership

- Bikes
- Carpooling
- Car sharing
- Smart car parks



Business model

RATP Group conducts its business in the mobility, urban services and infrastructure management sectors. Every day, the Group ensures its passengers' safety and provides additional services (ticketing systems, retail space management in transport facilities, lifts and escalator maintenance, to name a few). Its business relies on a wide range of expertise and a broad network of stakeholders.

MOBILITY

€5.734 billion in consolidated revenue

Resources

Île-de-France Mobilités (transport authority)
Operating and investment earnings, contractual incentives (bonus/malus, profit-sharing from passenger revenue and from ticket validation, and so forth)

Local authorities, organisations and other transport authorities
Specific or custom earnings from transport services

Government, regional authorities and the European Union
Investment subsidies (co-funding)

Additional resources
Advertising revenue, commercial leases, fines, and so forth

RATP EPIC is the long-standing operator of the multi-modal network in the Île-de-France region, which is one of the densest in the world.

Subsidiary dedicated to the development and operation of new urban mobility markets in the Île-de-France region (operating in a competitive environment).

Subsidiary dedicated to the development and operation of transport networks in France and abroad through approximately one hundred subsidiaries (competitive environment).

Clients

- Transport authorities
- Passengers
- Advertisers

Services provided

- Multi-modal transport
- Activities in stations
- Retail outlets

Areas of expertise and spending

Employees
Salaries and training, to only name a few, for bus and train drivers, maintenance workers station staff, and so forth

Suppliers
Energy, chartering, materials, intellectual services, and so on

State and local authorities
Taxes and levies

URBAN SERVICES

€42 million in consolidated revenue

RATP SOLUTIONS VILLE — **RATP Solutions Ville** is the Group subsidiary in charge of urban services, which serves cities and regions. Five areas of activity: telecommunications, real estate, energy, urban logistics, new forms of mobility.

Resources	Business sectors	Structures	Contractual framework	Partners	Clients/ Partners	Contractual framework
RATP Solutions Ville relies on the Group's expertise and assets: social housing, commercial buildings and infrastructure	Telecoms	RATP CONNECT	Services, studies and project management assistance, and operations management	Connect Grand Paris with **Caisse des dépôts**	Société du Grand Paris	Co-development of real estate
	Real estate	RATP REAL ESTATE		Rehabilitation of the AP-HP headquarters with Apsys and BNP Paribas Real Estate	Assistance Publique Hôpitaux de Paris	Concessions/public service delegations
	Energy	RATP HABITAT	Housing management		Ville de Paris	
	Urban logistics	RATP LOGISTICS	Occupancy agreements based on public calls for tenders			
	New forms of mobility	RATP CAPITAL INNOVATION	Acquisitions of equity interests	Fraîcheur de Paris with **Engie group**	Ville de Paris	

Structures can take part in new city projects

INFRASTRUCTURE MANAGEMENT

€1.179 billion in consolidated revenue

Resources

Transport authority regulated activities
Île-de-France Mobilités (transport authority)
- Operating and investment earnings for the maintenance of the long-standing network (multi-year contract)
- Earnings for the preparatory stages and maintenance of the *Grand Paris Express* (GPE) network (dedicated agreement)

Société des grands projets
- Statement of maintenance needs and associated checks (dedicated agreement)

Unregulated activities (income split 50% with the transport authority)
- Advertising revenue
- Management agreements for commercial property
- Telecom licence fees for the use of infrastructure

Government, *Société des grands projets* and local authorities
Investment subsidies (co-funding)

Others
- Property redevelopment

RATP INFRASTRUCTURES

Infrastructure management on the long-standing RATP railway network
- Manages infrastructure facilities, upkeep and renewal (metro stations, train stations, tunnels, art works, and so forth)
- Guarantees safety, interoperability and public service continuity

14 lines + 2 alternative lines
323 stations
223 km of track

2 lines (A and B)
66 stations
118 km of track

Over 70 equipment families

Management of the technical aspects of lines, projects and installations on the Grand Paris Express public transport network

UPON COMPLETION:
1st automated network worldwide
4 lines 200 additional kilometres
68 new stations

Clients
- Transport authorities
- Transport operators
- Passengers
- *Société des grands projets*
- Advertisers
- Business owners

Services provided
- Network servicing and maintenance
- Network development and upgrading
- Infrastructure upgrading
- Preparation for the new technical management of the *Grand Paris Express* network

Areas of expertise and expenses engaged

Employees
Salaries and training, among other things, for project owners, maintenance operators, engineers, project managers, support staff, and so forth.

Suppliers
Equipment and services.

State and local authorities
Taxes and levies.

SECURITY

€166 million in consolidated revenue

The teams at RATP Sûreté[1] guarantee passenger safety, the protection of staff, assets and equipment, and the prevention of delinquency and anti-social behaviour in complex environments, such as multi-modal networks, confined spaces and dense passenger traffic.
RATP Sûreté also made the prevention of violence and sexual harassment on public transport a priority.
The unit, which is operated as a monopoly, receives a fixed-sum remuneration as part of its multi-year agreement with Île-de-France Mobilités.
To stay in step with the opening to competition, a new pay-per-service economic model[2], regulated by French transport regulatory authority ART, came into force in 2023

ADDITIONAL SERVICES

€19 million in consolidated revenue

RATP SMART SYSTEMS
Design, integration, operation and maintenance of ticketing, multi-modal information, operating assistance systems and Mobility as a Service (MaaS)

RATP TRAVEL RETAIL
Marketing and management of commercial spaces in transport facilities

RATP MAINTENANCE SERVICES
Lifts and escalator maintenance and installation of security systems (airports, hospitals, large complexes, and so forth)

1. RATP Sûreté is an internal security service that hires GPSR-approved (network safety protection group) agents who are certified, armed and invested with specific prerogatives including the right to evict — 2. Offer open to transport operators, transport authorities and transport service operators.

A long-term commitment to Corporate Social Responsability

Mobility is an essential lever in responding to the growing societal and environmental challenges that tomorrow's cities will face. As a privileged partner in regions across France, RATP Group actively commits every day to developing safer, more inclusive, eco-friendly and human-focused cities.

Significant commitments

1996
Established first permanent exchange forum with approved passenger associations

1999
Signed International Association of Public Transport (UITP) charter for sustainable development

2003
Joined UN Global Compact

2006
Implemented first energy policy

2009
Implemented first sustainable development policy, and formed a CCA (*Comité consultatif de l'accessibilité*, accessibility advisory committee)

2011
Adopted first code of ethics

2014
Published first Group CSR report

2015
Signed CSR charter on Grand Paris (Greater Paris) contracts

2017
Updated sustainable development policy and issued first green bond

2018
- RATP awarded Afnor CSR-committed certification ("confirmed" level)
- RATP Group joined Transparency International's Forum of Committed Companies

2019
Issued second green bond, and established new code of ethics, code of business conduct and anti-corruption code

2021
Unveiled RATP Group driving purpose inside and outside the company, and defined action principles

2022
Renewed CSR-committed certification, with RATP awarded "exemplary" level; RATP's climate commitments approved by the Science-Based Targets initiative (SBTi); launched Group energy efficiency plan; signed Ecowatt and Ecogaz charters; and signed the City of Paris' Tree Charter and Climate and Biodiversity Pact

2023
Established new Group CSR policy and governance, established new energy policy, launched water saving plan, signed charter in favour of off-site construction and charter on building energy efficiency

2024
- Launched internal/external communication campaign on Group CSR commitments, and the Académie de la Transition Écologique (Ecological transition academy), which aims to train and raise employee awareness of environmental concerns
- Issued third green bond, signed an agreement on quality of life and working conditions, and renewed the "exemplary" level Afnor CSR-committed certification

Our CSR policy

In June 2023, the Group Chairman reviewed and validated the Group CSR policy. The aim of the review was to more closely align the policy with the Group's driving purpose, and include the Chief Executive Officer's strategic priorities as well as a number of internal and external expectations and requirements.

The Group CSR policy focuses on three strategies:

Be a major player in mobility and sustainable cities	Accelerate the ecological transition of our business activity	Assert our corporate and social responsibility
Provide multi-modal, accessible and safe mobility options	Contribute in reaching carbon neutrality goals	Prevent occupational risks and promote management that encourages staff commitment
Act in favour of environmental health	Conserve resources and protect biodiversity	Contribute to the economic vitality and solidarity of regions
Contribute in improving quality of life and urban resilience to climate change	Roll out eco-design across our business activities	Ensure fair business practices in our value chain

Extra-financial assessment

In December 2024, Afnor renewed the Group's CSR-committed certification, confirming its continued "exemplary" level, the highest level in the benchmark, which the Group has held since 2021.

The certification, which RATP Group had first obtained in 2018, already distinguished the Group as the first global public transport operator to have attained the "confirmed" maturity level on the very first assessment, given its wide reach.

RATP Group remains the only organisation in its sector to have been bestowed the honour, which underscores its deep commitment to social, environmental and societal issues.

Contribute in reaching carbon neutrality goals

As RATP Group is located within cities, it does everything in its power to limit its environmental footprint and contribute to the ecological transition. The Group regularly explores new solutions to save energy, conserve resources, support the circular economy, and combat climate change. By opting to travel on the metro, RER or tram, passengers generate 50 times less CO_2 than an individual car.

The transport sector is the second-largest global contributor to greenhouse gas (GHG) emissions from energy combustion, after power generation. Through its mass transit operations, which reduce energy consumption by individual passenger, and the predominance of electrified transport modes, RATP Group plays a major role in reducing energy consumption and CO_2 emissions in this sector.

As part of a continuous improvement process in its energy and climate efficiency, RATP has set itself an ambitious target to reduce its energy-related GHG emissions by 43% in scopes 1, 2, and 3 by 2027, using 2019 as the baseline year. This commitment, validated by the Science Based Target (SBTi) initiative, confirms that RATP's climate objectives are in line with the most ambitious trajectory of the Paris Agreement, which aims to limit global warming to 1.5°C.

1st network
in the world to be **fully** equipped with LED lighting in its RER and metro stations

1st multimodal network
worldwide to be ISO 50001-certified across its areas of activity

72%
of the fleet consists of hybrid, electric or biomethane buses, including **1,000** electric buses and **1,300** biomethane buses out of a fleet of **4,800** buses at the end of 2024

Close to 5,000
bike parking spaces across the RATP network at the end of 2024

Quantifying our environmental footprint

To ease the transition to carbon neutrality, RATP Group is focusing its efforts on reducing its greenhouse gas (GHG) emissions, and developing services with a low carbon footprint.

In 2005, RATP conducted its first Bilan Carbone® (carbon assessment), an exercise that is updated every three years to track progress, and guide its climate action plan. The assessment measures the amount of GHG emissions that are generated directly and indirectly by the company's activity (Scopes 1, 2 and 3). Based on 2024 data, global emissions reached 723,000 tonnes in CO_2 equivalent (tCO_2e). The most significant GHG emission item for RATP is energy, which represents 39% of overall emissions (scopes 1, 2 and 3).

RATP wishes to reduce its direct and indirect emissions. Apart from emissions arising from energy consumption, the most significant items include capital goods (32%) and purchasing (17%). Improving the quantification of scope 3 emissions remains a priority.

RATP is also stepping up the measurement of its carbon footprint at project level, with a dual objective: integrating carbon criteria into investment decisions, and identifying low-carbon solutions.

Science-Based Target initiative (SBTi)

In November 2022, RATP's climate commitments were validated by the Science-Based Targets (SBTi) initiative. This certification recognises RATP's commitment to the most ambitious level of the Paris Agreement – capping global warming at 1.5°C. To achieve this, RATP has undertaken to achieve the following by 2027:

- Reduce scope 1, 2 and 3 GHG emissions and energy by 43% from 2019, or scope 1, 2 and 3 GHG emissions and energy by 45% per passenger.km from 2019;
- Guarantee that 70% of purchases are from SBTi-committed suppliers.

By the end of 2024, the following results were obtained:

- A 29% reduction in GHG emissions from energy consumption compared with 2019, or 32% based on the CO_2e per passenger.km indicator;
- 41% of purchases were from committed suppliers and/or validated by the SBTi, or have science-backed climate commitments.

Decarbonising purchases

To limit its indirect emissions (scope 3), RATP is deploying an ambitious responsible purchasing strategy, supported by a specific road map that is dedicated to decarbonising its purchasing practices. An in-depth analysis has identified 24 priority purchasing categories, selected on the basis of their financial weight and their impact on greenhouse gas (GHG) emissions. These categories are now systematically subject to carbon criteria in calls for tenders.

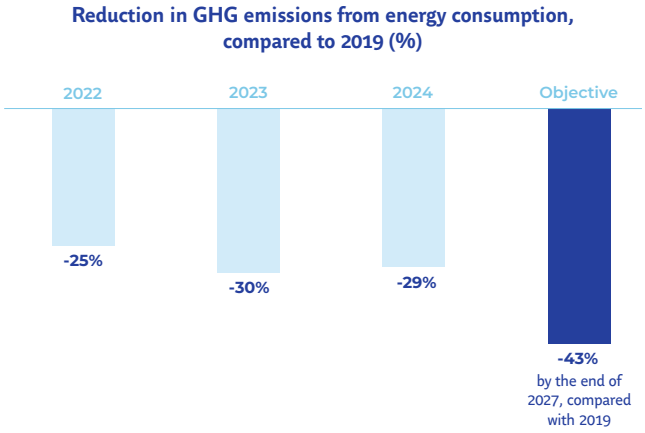
An energy efficiency plan backed up by the energy-saving plan

Public transport modes, by their very nature, consume a low quantity of energy per passenger. As such, a journey by metro or RER requires eight to ten times less energy than the same journey by private car. RATP is committed to continuous improvement, and endeavours to further optimise the energy efficiency of its networks.

In 2017, RATP became the first multimodal operator to receive ISO 50001 certification for energy management across its activities, marking a significant step forward in its energy efficiency strategy. The certification was renewed in 2023, confirming the Group's ongoing efforts in this area.

In 2023, RATP also adopted a new energy policy with an ambitious goal that seeks to reduce energy consumption by 15% from 2019 (proportionate to service offering, measured in car.km) by the end of 2029.

Key indicator



This indicator assesses the company's overall carbon efficiency on scopes 1, 2 and 3, with regard to energy consumption.

In 2024, RATP's total greenhouse gas emissions from energy consumption (measured in tCO_2e) fell by 29% from 2019, and by 30% from 2023. These changes are mainly due to increased transport services (up 11% from 2023), notably in connection with the Olympic and Paralympic Games Paris 2024. They are also the result of changes in the carbon content of electricity consumed in France, as its emission factor has risen from 52 gCO_2e/kWh in 2023 to 58 gCO_2e/kWh in 2024, due to fluctuations in the electricity mix, influenced by the availability of nuclear power, renewable energy production and electricity demand.

The RATP Green Bond issuance, dedicated to low-carbon and sustainable transport, is an opportunity to emphasize the Group's strategy in terms of sustainability and climate change. It also enables RATP to diversify its investor base, through a more action-oriented dialogue with Socially Responsible Investors. Moreover, the RATP Green Bond will encourage other public transportation providers to fund rail investments and other low-carbon and sustainable transport investments, while complying with the highest standards of the Green Bond market. The RATP Green Bond also encourages project management teams to integrate the carbon and energy criterion at an earlier stage in the design phase.

03 - OUR GREEN BOND PROGRAM

RATP is rated in compliance with standards from the French state on the following terms

- Strategic importance as the owner and infrastructure manager of urban transport in Paris
- Strong state support – 100% state-ownership
- Legally protected from events such as insolvency and bankruptcy procedures by virtue of its EPIC status (industrial and commercial public undertaking)
- Resilient budgetary performance and medium-term debt stabilization

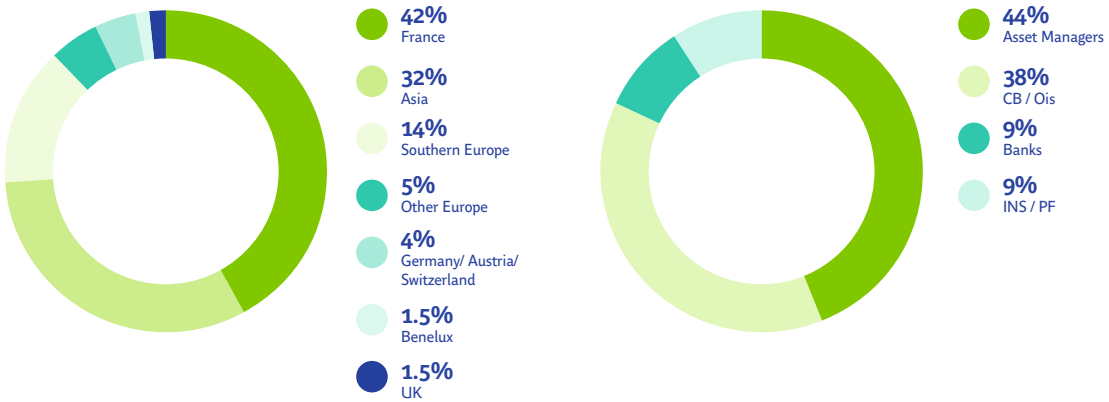
Aligned with the Green Bond Principles

The Green Bond Principles

Main characteristics of the 2024 operation

ISSUER	RATP
RATING	Moody's: Aa2 (stable) Fitch: AA- (stable)
ORDER BOOK	€5.1 billion
FINAL SIZE	€500 million
ISSUE DATE	2024-04-16
SETTLEMENT DATE	2024-04-23
MATURITY DATE	2034-05-25
PRICE/REOFFER YIELD	99.513% / 3.307%
COUPON	3.25%
SPREAD	OAT + 30 bps

Geographical and typological distribution of investors



Projects financed by the 2024 Green Bond - Summary

Massy train maintenance centre renovation

Adaptation of the maintenance site to accommodate the new rolling stock MI20 on the RER B

Category: Public transport infrastructures maintenance and renovation.

€107 million
financed by the bonds

26%
refinancing

Estimated avoided emissions
130 $ktCO_2e$

Metro line 6 upgrades

Adaptation of rail infrastructure on metro line 6 to accommodate the mid-life rolling stock of line 4 and modernization of the control system

Category: Public transport infrastructures maintenance and renovation

€118 million
financed by the bonds

46%
refinancing

Estimated avoided emissions
138 $ktCO_2e$

Major track maintenance on RER and metro networks

Renewing the networks' assets to maintain service quality and rail safety

Category: Public transport infrastructures maintenance and renovation

RER network

€140 million
financed by the bonds

38% refinancing

Estimated avoided emission
512 $ktCO_2e$

Metro network

€135 million
financed by the bonds

33% refinancing

Estimated avoided emissions
11 $ktCO_2e$

04 - ALLOCATION OF BORROWED FUNDS

Allocation report at project level

	Total amount of proceeds Target 2024	Total allocated amount in 2024 and %
Massy train maintenance centre renovation 26% Refinancing	€107M	€44.31M 41%
Metro line 6 upgrades 46% Refinancing	€118M	€91.06M 77%
Major track maintenance on RER network 38% Refinancing	€140M	€101.72M 73%
Major track maintenance on metro network 33% Refinancing	€135M	€77.06M 57%
Total Inaugural green bond	**€500M**	**€314.15M 63%**

All projects financed by the 2024 Green Bond belong to category 1 : Public transport infrastructures maintenance and renovation.
The previous Green Bonds of 2017 and 2019 have been totally allocated. The Vaugirard project, belonging to Category 1, has been totally allocated in 2024. All the information relating to 2017 and 2019 Green Bonds is available in the sustainable finance section of the RATP website.

05 - DESCRIPTION OF PROJECTS FINANCED BY BOND PROCEEDS

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Project: Massy train maintenance centre renovation

The Massy works are part of a larger project preparing for the arrival of new rolling stock to boost transport capacity for passengers on RER line B, where ridership has consistently, and significantly, increased since the 2000s.

The Massy site is the main repair and maintenance centre for RER line B trains. The site requires substantial upgrades to be able to accommodate and carry out maintenance on the new RER line B rolling stock, as the line carries over one million passengers daily on average. The new train model, MI20, is set to replace the current MI79 and MI84 trains, which have run on the line until present, and which are nearing end of life.

The project, which is to be implemented without altering RER line B's existing service quality, represents a technical challenge as works must be completed while keeping the site operational.

Financing for the works, which began in 2021 and will end in 2028, came overwhelmingly from 2024 Green Bonds. Three buildings, the oldest of which dates to 1969, will be demolished and rebuilt, leading to increased heat efficiency. These works are just one part of a larger renovation at the Massy site. The aim of these eco-designed buildings is to be certified under the French High Quality Environmental standard.

The investment project is also an opportunity to improve staff working conditions and safety, by facilitating maintenance work.

Major sustainable benefits

- Optimised building and equipment energy efficiency.
- Upgraded lighting through the installation of LEDs.
- Improved staff working conditions and safety through roof access to train maintenance, reducing strain and accident risks.
- Better quality of life in the workplace with more comfortable temperatures, changes to natural and artificial lighting, and workstations offering greater user comfort.

KPIs

Amount of 2022/2027 works financed by Green Bonds:

€107 million

Project-generated GHG emissions between 2021 and 2067:

25 $ktCO_2e$

GHG emissions avoided with the project between 2021 and 2067:

130 $ktCO_2e$

© RATP - Rémi Everard

Project: Metro line 6 upgrades

This project is part of an overall metro network upgrading programme, which began with the automation of metro lines 1 and 4, and upgrades to metro lines 3, 5, 9, 12, and 13, which involved creating upgraded CCPs and rolling out new train driving systems. The transport system upgrading programme is closely coordinated with rolling stock replacement programmes. Metro line 6 upgrades are tied to the replacement of trains in their end-of-life phase.

Upgrades to Paris metro line 6 reshape rail infrastructure to accommodate more modern rolling stock that formerly operated on metro line 4, prior to automation on the line. As a perfect demonstration of circularity on the network, this project repurposes mid-life rolling stock and upgrades railway signalling equipment, as well as the train control and monitoring system. The project is an opportunity for RATP to demonstrate its highly specialised, and environmentally friendly, engineering expertise, notably through the recovery of traction energy from rolling stock to improve the line's energy efficiency.

Major sustainable benefits

- Improved passenger service quality by providing greater comfort and safety. Upgraded infrastructure and rolling stock make traffic more seamless and support an expanded service offering like that provided on automated lines. Moreover, refurbished MP89 trains enable better crowd distribution and boast newer equipment and on-board video surveillance.
- Safer train travel through the implementation of continuous speed monitoring.
- Resource conservation by replacing end-of-life rolling stock with mid-life rolling stock available on the network.
- Improved energy efficiency on the metro line.
- Improved air quality, as these trains are designed to prioritise electric braking over mechanical braking, which is a source of particle emissions.

KPIs

Amount of the 2022/2027 project financed by Green Bonds:

€107 million

Project-generated GHG emissions between 2017 and 2045:

5 $ktCO_2e$

GHG emissions avoided with the project between 2017 and 2045:

138 $ktCO_2e$

© RATP - Thierry Anselot-Caundle

Project: Major track maintenance on RER and metro networks

Major track maintenance on RER and metro networks aim to maintain existing rail network infrastructure in optimal operating condition, to continue to sustainably guarantee service quality and passenger safety. Conservational upkeep of these assets means regularly taking preventive action to replace track parts.

To that end, maintenance works are conducted yearly on RER lines A and B, as well as on all metro lines. Approximately 33,000 metres of tracks are replaced annually on the RER network, and 20,000 metres on the metro network, as well as an average of 33 pieces of track equipment. Heavy-duty track maintenance works also include the replacement of ballasts, sleepers, fastenings, and sumps for water removal.

Funding for RER and metro track works undertaken between 2022 and 2027 is derived from 2024 Green Bonds. Respectively, the bonds amount to €140 million and €135 million.

Major sustainable benefits

Efficiency is a must, with operations planned based on the state of assets.

- Support for the circular economy by recovering and reusing dismantled non-hazardous materials for concrete sleepers, rails, and ballasts. Incorporation of recycled materials into track equipment parts, and of low-carbon concrete for sleepers. Gradual addition of CSR clauses to supply and construction contracts.
- Resource conservation, by optimising water use at construction sites. Necessary washing of new ballasts undertaken on a closed circuit at the Sucy and Massy sites and, in ballast pits, by spraying, which uses less water. Monitoring of water consumption per km of upgraded track implemented.
- Diesel work trains replaced with electric trains to reduce the carbon impact of works.

KPIs

Amount of the 2022/2027 RER track works financed by Green Bonds:

€140 million

RER project-generated GHG emissions between 2022 and 2057:

68 $ktCO_2e$

GHG emissions avoided through the RER project between 2022 and 2057:

512 $ktCO_2e$

Amount of the 2022/2027 metro track works financed by Green Bonds:

€135 million

Metro project-generated GHG emissions between 2022 and 2072:

30 $ktCO_2e$

GHG emissions avoided through the metro project between 2022 and 2072:

11 $ktCO_2e$

06 - METHODOLOGY FOR ASSESSING THE CARBON IMPACT OF PROJECTS

RATP, with support from consulting firm I Care by BearingPoint, implemented a methodology for calculating the carbon impact of Green Bond-financed projects. This methodology is notably based on ADEME's[1] (the French ecological transition agency) QuantiGES method for quantifying greenhouse gas emissions generated by a project or an activity.

Methodological principles

Green Bond-financed investment projects help build an optimised, reliable, and modern public transport service that discourages the use of more carbon-intensive transport modes and prevents greenhouse gas (GHG) emissions over time. However, as with any project, implementation is itself a source of GHG emissions. Calculating a project's carbon impact requires comparing GHG emissions generated by the project against those that it helps avoid over its life span, in other words, the **"net carbon impact".**

Scope of included GHG emissions

Regardless of whether they are direct or indirect, GHG emissions across the **entire value chain** are included, as much from construction and operations as from investments' end of life. This notably includes upstream (for example, materials manufacturing) and downstream (waste treatment) GHG emissions. The scope of relevant impacts is defined by using a maximally exhaustive **consequence tree.**

Any element that directly or indirectly generates GHG emissions is called an **emission source.** For every emissions source, business-related technical data is converted into GHG emissions, by using **emission factors** from a variety of sources, in particular ADEME's Base Empreinte (Footprint Database).

Every project is examined according to a unique **time frame** that aims to be representative of the investment's life span without major changes.

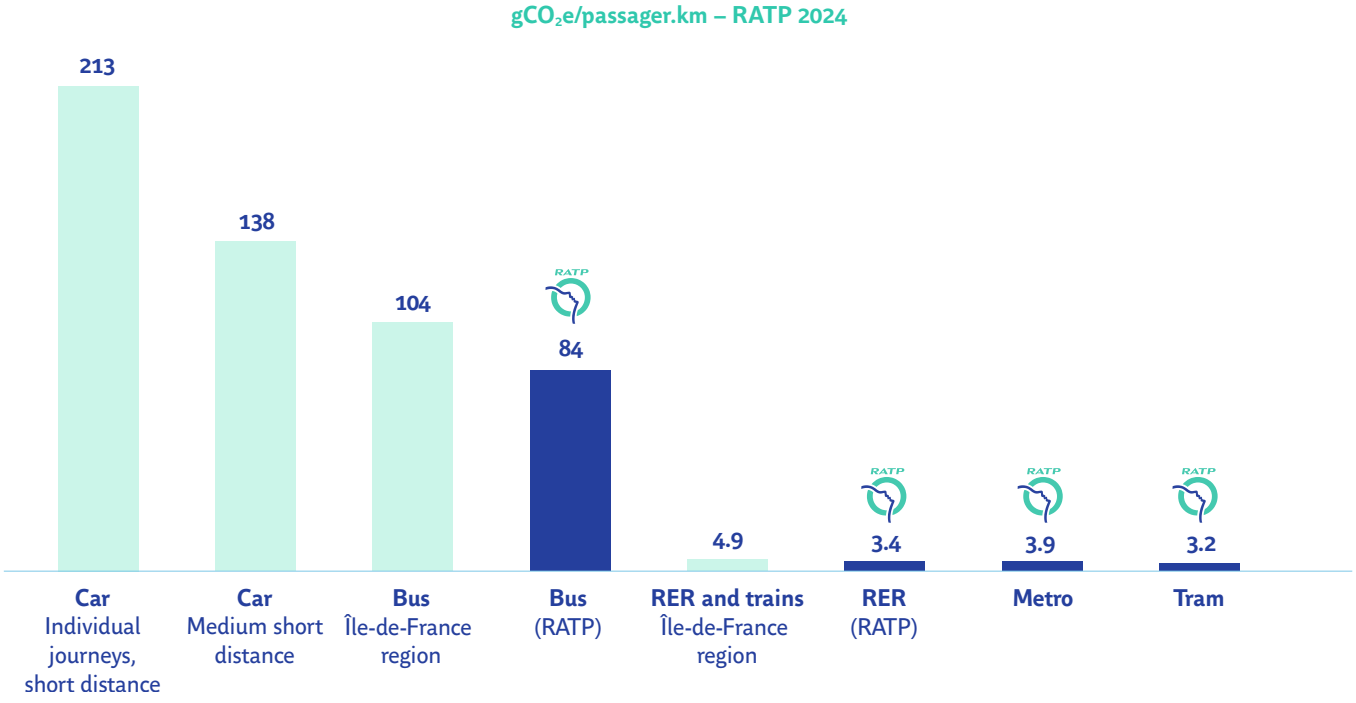
Avoided GHG emissions

GHG emissions that were avoided with the project are calculated based on a **baseline scenario,** which is a hypothetical scenario in which the project was not implemented. Two types of emissions are studied for the baseline scenario:

- **Additional emissions generated by the absence of investment**, such as higher energy consumption in an unrenovated building.
- Emissions related to **modal shift changes.** As financed projects seek to maintain optimal transport service, their absence results in disrupted service, leading passengers to use alternative forms of transport (other routes on the public transport network or private cars, which result in different emissions). The below graph shows the differences in GHG emissions among various transport modes.

[1] QuantiGES Method "Quantifier l'impact GES d'une action de réduction des émissions" V3.2022, ADEME (in French)

CO_2e emissions per passenger.km – RATP Île-de-France network



GHG emissions generated by the project scenario and the baseline scenario are compared to determine avoided emissions. Nevertheless, Green Bond-financed projects are not the only factors ensuring good transport performance, so **weighting** is applied to emissions that were avoided through variations in the modal shift.

Focus on the modal shift and weighting

A study specific to every project was carried out to project how passengers would change transport modes (what is known as the modal shift) in the case of the baseline scenario. These projections take into account **expected changes related to urban development, improvements to transport service, and major factors including the arrival of the Grand Paris Express network, which will provide a practical alternative to private car use.** They also factor in progressive decarbonisation of private cars over the coming decades.

To measure avoided greenhouse gas emissions, two modelled situations are compared:
– One in which the project is implemented,
– And the baseline scenario in which no project is implemented.

The studied baseline scenarios assume, over time, total service suspensions on some lines, or significant deterioration of traffic speed, and thus of transport service, compared to the project scenario. However, Green Bond financing covers only some of the investments required for overall service continuity on relevant transport routes. For example, investments to upgrade rolling stock will be necessary to maintain high service levels over the period in question.

To more precisely reflect the specific effect of Green Bond-financed projects, a **weighting ratio** is applied. This ratio adjusts the project's impact on the modal shift and avoided emissions, according to the real share of financing provided by Green Bonds. The applied formula is as follows:

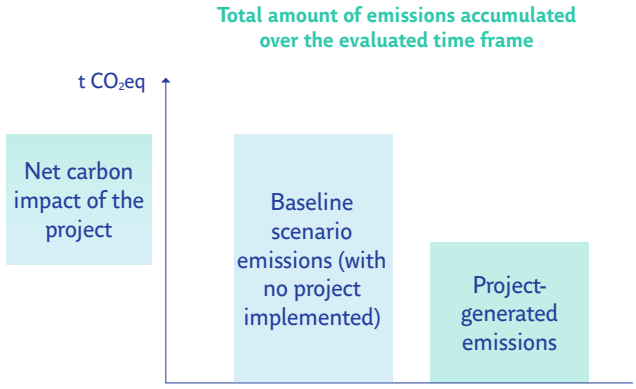
$$\frac{\text{Amount financed by the Green Bond issuance}}{\text{Total investment costs relative to the line's rolling stock and infrastructure}}$$

For every project, the ratio is calculated then applied to avoided emissions related to the modal shift.

Net carbon impact

A project's net carbon impact corresponds to the difference between GHG emissions resulting from the project (generated emissions), emissions tied to the baseline scenario, and variations from the generated modal shift.

Diagram showing the calculation of a project's carbon impact



Limits of the study

Although calculations aim to be exhaustive, some small emissions sources are not included. Moreover, emissions factors and data are sometimes subject to variable uncertainty. The study's assumptions and models are also subject to uncertainty, as they sometimes project distant time frames, and include occasionally radical baseline scenarios.

Project 1: Massy maintenance centre renovation

Key points

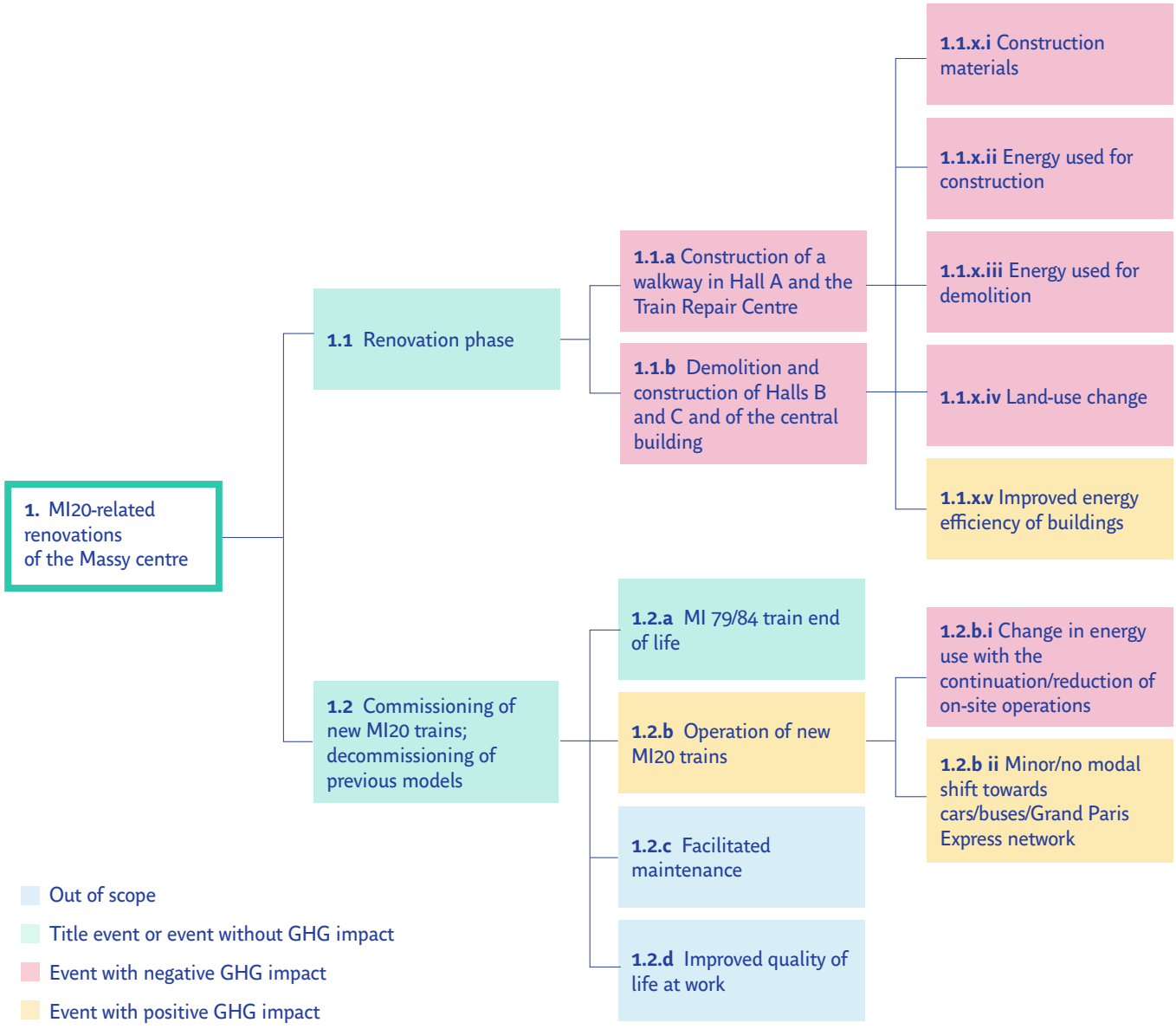
Project description	Renovation of the Massy train maintenance centre and train repair centre prior to the commissioning of the new RER line B rolling stock (MI20), in anticipation of the existing rolling stock's end of life.
Project goals	– Ensure that RER line B **runs properly** (1 million passengers daily) • Rolling stock is nearing end of life and must be replaced • The Massy maintenance centre is essential, and must be suited to the new rolling stock in order to carry out maintenance – Improve the ***heat efficiency*** of buildings, and quality of working life for on-site staff.
Nature of Green Bond-financed work	The renovation project includes 3 work phases for 3 building lots. The Green Bond finances phase 2 works: – Renovating the Massy train maintenance centre – Renovating the train repair centre
Carbon impact assessment time frame	**2021-2067** *From the beginning of renovations works at the Massy centre to the end-of-life phase of new MI20 rolling stock (factoring in an average train life span of 40 years).*
Weighting of the modal shift's impact	**3.5%** *Proportion of the investment financed by the Green Bond as compared to total investment in the project scenario (investments in upgrading the Massy centre + the purchase of the new MI20 rolling stock, as well as its refurbishment at half-life to ensure 40 years of operations).*

Project consequence tree

Project consequence tree for the Massy renovation

Source: I Care

The below diagram illustrates the project's impact chain over its entire life span. The red and green boxes correspond to factors used to calculate carbon impact.



Minor renovation work (insignificant impact), existing rolling stock end of life (which would have occurred with or without the project), and the end of life of renovated buildings (outside the time frame) are not factored into in the study's scope.

Project-generated emissions

Sources of project-generated emissions (red boxes in the consequence tree) are detailed in the below table:

Emission source	Activity data		Emission factors	
	Source	Uncertainty	Source	Uncertainty
Construction				
Construction materials	Impact assessment	5%	Ex-ante LCA and BEGES[1] – essentially the INIES database[2], corrected when necessary, after comparison with ADEME's Base Empreinte®	5 to 50%
Construction energy	Estimations based on CEREMA studies and impact assessment	50%	CEREMA studies, impact assessment	50%
Land-use change	Difference between hall areas before and after work	5%	Base Empreinte® (assumptions on the initial soil typology – grassland)	70%
Operations				
Energy - Site operations	Heat study of post-construction consumption	5%	Base Empreinte®/impact assessment	5%
Energy - Rolling stock maintenance	RATP expert assumptions	50%	Same as site operations	5%

[1] GHG emissions assessment
[2] Benchmark environmental and health data in the construction sector

Baseline scenario

In the baseline scenario, the **project has not been implemented,** i.e., renovation work has not taken place. The chain of events that follows was established with the support of project experts. In a situation where phase 2 of the Massy site renovations does not take place, the following is assumed:

- Rolling stock is replaced no matter what happens, as the existing structures are nearing end of life.
- The site has not been renovated to accommodate new rolling stock and is thus unable to carry out maintenance.
- Maintenance cannot be completed at RER line B's second maintenance centre (inadequate capacity), nor can it be done at RER line A maintenance centre (overly complex connections between lines).
- The new rolling stock is poorly maintained and breaks down frequently.
- In the short term, the RER line and the Massy site function normally, as existing rolling stock remains in circulation.
- In the medium term (2028-2030), as new rolling stock gradually replaces existing stock, breakdowns on new rolling stock lead to a 50% reduction in traffic.
- By 2030, **RER line B would completely shut down.**

This scenario may seem radical, but it is based on the essential role that the Massy site plays in RER line B's daily operations.

As a result, GHG emissions related to the baseline scenario are as follows:

- **Construction phase:** no works, no GHG emissions
- **Operations phase:** the site is operational until RER line B's estimated closure in 2030. The energy tied to rolling stock maintenance decreases as existing rolling stock is decommissioned, while energy from site operations remains unchanged.
- **Modal shift:** With the reduction in service, and subsequent closure of RER line B, passengers use other transport modes to get around. According to the above assumptions, the rest of the public transport network would absorb a significant share of these shifts, notably with the cwommissioning of the Grand Paris Express network beginning in 2030, but private cars, which emit substantially more GHG, remain a significant alternative.

Baseline scenario predictions:

- Between 2021 and 2028, RER line B will run, with no modal shift effect between the project and the baseline scenarios.
- In 2028, the service offering on RER line B will see a 50% reduction.
- In 2030, RER line B will fully shut down (0% service), remaining closed until 2067.
- Operational decline will be linear between 2028 and 2030.

To assess the modal shift between 2035 and 2067, a 1% growth rate[3] is assumed across transport modes.

[3] Source: STIF 2001 - Evaluations socio-économiques et financière des projets de transports collectifs : méthode de calcul, paramètres et conventions (in French). *« A central scenario, calculated using an average annual growth rate of 0% in Paris and 1% outside Paris for 30 years ». A 1% growth rate is used, as the majority of RER line B stations are outside Paris*

Synthesis of results: Net carbon impact

25 $ktCO_2e$	**Total project-generated emissions between 2021 and 2067** *Including construction: 53% (essentially materials)* *Including operations: 47% (essentially site operations)*

+ 2 $ktCO_2e$	**Emissions generated in the baseline scenario,** for site operations until 2030, taking into account a drop in activity as of 2028
	+
+ 153 $ktCO_2e$	Emissions generated in the baseline scenario (without the Massy maintenance centre renovation project), by modal shifts[4]
	=
155 $ktCO_2e$	**Total baseline scenario emissions**

130 $ktCO_2e$ avoided	**Net carbon impact of the project between 2021 and 2067**

[4] Results weighted according to the share that can be attributed to the Massy project (see above sidebar "Focus on the modal shift and weighting").

Project 2: Metro line 6 upgrades

Key points

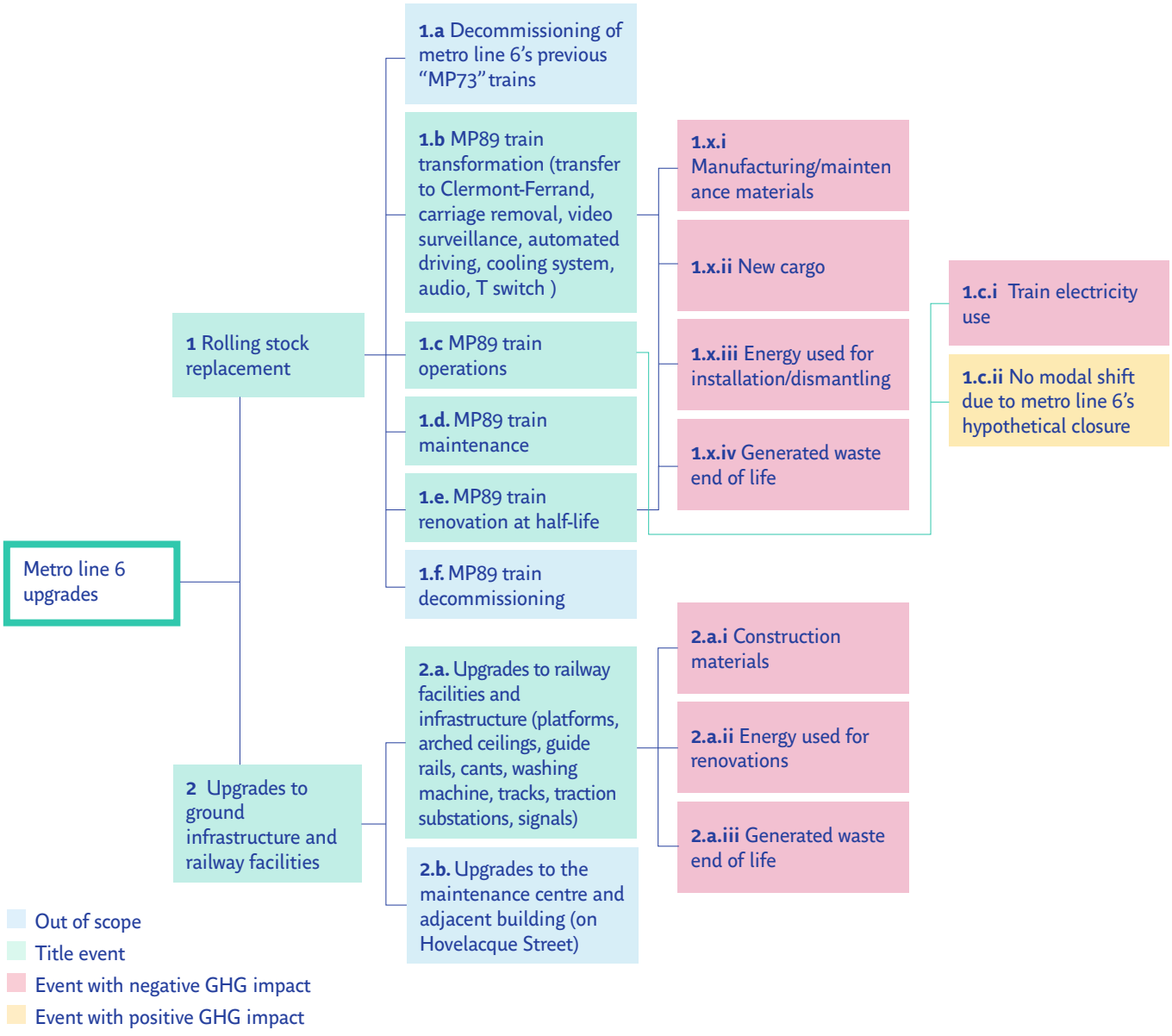
Project description	Adaptation and upgrades to rail facilities and infrastructure on metro line 6, to accommodate newer MP89 trains from Paris metro line 4, which are renovated for reuse on metro line 6.
Project goals	– **Maintain the metro line 6 transport offering:** existing trains are incapable of meeting the required rate of production and their upkeep has become costly – **Reuse** half-life rolling stock (from metro line 4, following its automation) – Recover energy from rolling stock traction, improving the metro line's **energy efficiency**
Nature of Green Bond-financed work	– Platform adjustments – Adaptation of the washing machine – Rail replacement – Track replacement in tightly curved sections – Add a new traction substation
Carbon impact time frame	**2017-2045** *From the beginning of works to reused trains' end of life (20 years).*
Weighting of the modal shift's impact	**41%** *Proportion of the investment financed by the Green Bond as compared to the total investment in metro line 6 upgrades.*

Project consequence tree

The below diagram illustrates the project's impact chain over its entire life span. The red and green boxes correspond to factors used to calculate carbon impact.

Project consequence tree for metro line 6 upgrades

Source: I Care



The steps related to rolling stock replacements—although not financed by a Green Bond—are inextricable from metro line 6 upgrades and are therefore included in the scope of the carbon impact assessment. However, end of life of existing trains (MP73) and reused trains (MP89), which would have occurred with or without the project, is not taken into consideration, nor is the renovation of the maintenance workshop and adjoining building, which is related to, but not directly incorporated into, this project.

Project-generated emissions

Sources of project-generated emissions are detailed in the table below:

Emission source	Activity data		Emission factors	
	Source	Uncertainty	Source	Uncertainty
Construction				
Construction materials	RATP documents RATP expert comments	5 to 50%	Base Empreinte, INIES database, provisional GHG emissions assessment for train upgrades	10 to 100%
Construction energy	RATP documents RATP expert comments	35 to 50%	Base Empreinte, INIES database, provisional GHG emissions assessment for train upgrades	5 to 80%
Cargo (Transformation and renovation of trains in Clermont-Ferrand)	Provisional GHG emissions assessment for train upgrades RATP expert comments	50%	Provisional GHG emissions assessment for train upgrades	50 to 80%
Construction waste	RATP expert comments	20%	Base Empreinte	20%
End of life	Same as construction for relevant items	5 to 50%	Base Empreinte INIES database	10 to 50%

Baseline scenario

In the baseline scenario, the **project has not been implemented,** i.e., adaptation and upgrade works have not taken place on metro line 6, and trains have not been replaced. The scenario is based on the following rationale:

- Existing trains (MP73) will reach end of life by the end of 2025 and must be replaced.
- Even if the selected trains had not previously been used, all newer train models would require renovations and upgrades to the metro line's rail infrastructure and facilities.
- These works are therefore essential for continued operations on metro line 6.

→ In the absence of Green Bond-financed work, metro line 6 would be required to **fully close** as of 2026.

In the absence of works, the baseline scenario generates **no GHG emissions.**

As for the **modal shift,** following a metro line 6 closure in 2026, the vast majority of passengers would use another route on the public transport network, notably the RER and Grand Paris networks. However, it is estimated that a large share of passengers would use private cars, which emit significantly more GHG.
New planned public transport offerings, notably the Grand Paris project, were included in modal shift assessments.

Synthesis of results: Net carbon impact

5 $ktCO_2e$	**Total project-generated emissions between 2017 and 2045** *Including construction: 94%* *majority cargo, followed by construction materials*
0 $ktCO_2e$	Emissions generated in the baseline scenario, for line operations, between 2017 and 2045
	+
143 $ktCO_2e$	Emissions generated in the baseline scenario (without the renovation project), by modal shifts[5]
	=
143 $ktCO_2e$	**Total baseline scenario emissions**
138 $ktCO_2e$ avoided	**Net carbon impact of the project by 2045**

[5] Results weighted according to the share that can be attributed to the metro line 6 upgrade project (see above sidebar "Focus on the modal shift and weighting").

Project 3: Annual heavy-duty RER maintenance

Key points

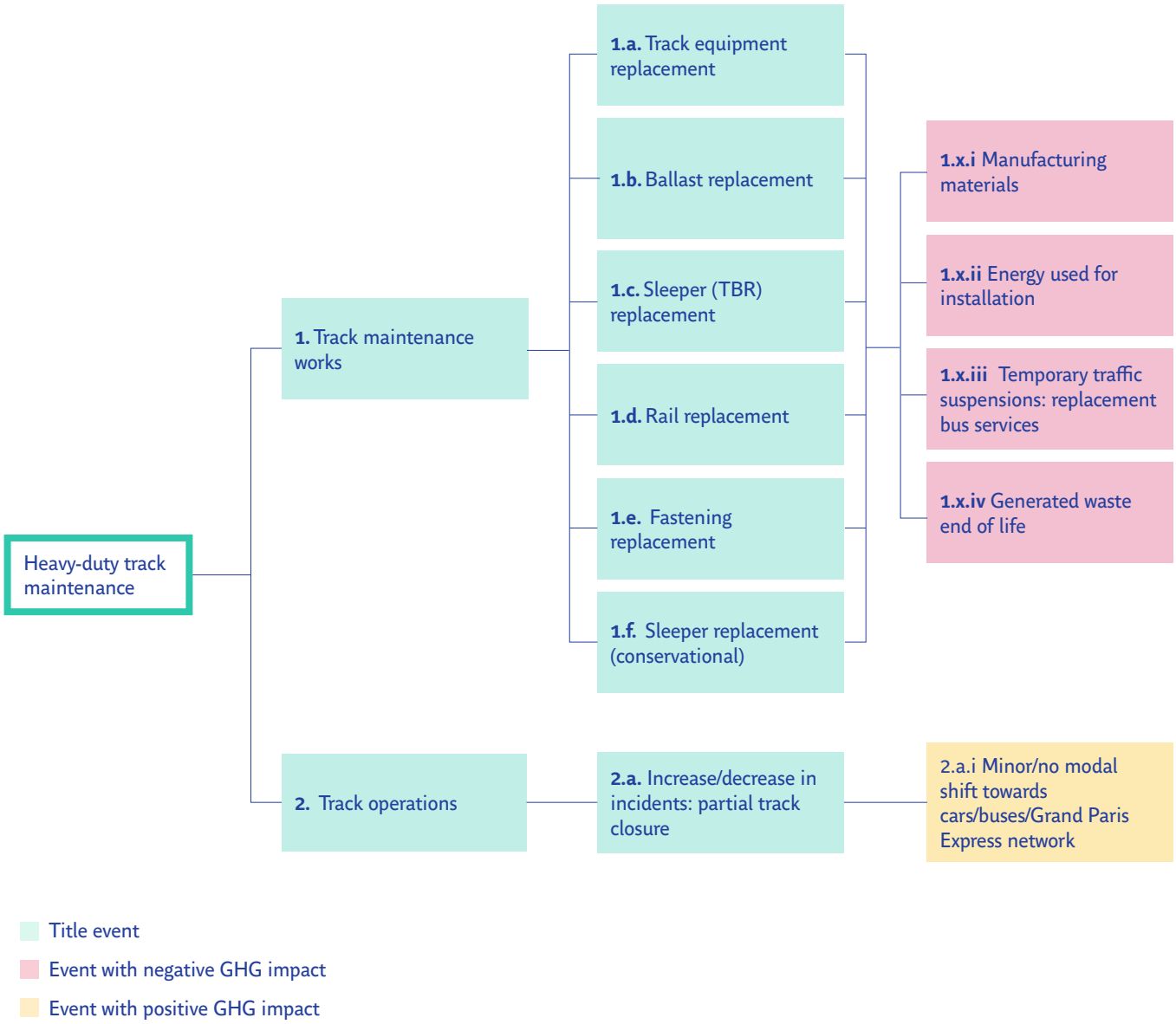
Project description	Annual heavy-duty track work on RER lines A and B over 6 years (2022-2027)
Project goals	– Conduct **preventive maintenance** on tracks to prevent incidents – Guarantee **service quality** and **safety** on RER lines A and B (2 million passengers daily)
Nature of Green Bond-financed work	– Track replacement: rails, ballasts, sleepers, and fastenings – Replacement of track equipment (approximately 15 pieces of equipment replaced every year) *Areas in which replacements are made depend on the state of the tracks and vary from year to year. The Green Bond covers maintenance over a 6-year period.*
Carbon impact time frame	**2022-2057** *From the beginning of works to upgraded components' end of life (30 years).*
Weighting of the modal shift's impact	**14%** *Proportion of the investment financed by the Green Bond as compared to the total investment necessary for service continuity on RER lines A and B over this period.*

Project consequence tree

The below diagram illustrates the project's impact chain over its entire life span.

Project consequence tree for heavy-duty track maintenance on RER lines A and B

Source: I Care



Works may require temporary traffic suspensions on the network, in which case replacement bus services will run. The calculation of the scope considers this outcome.

Project-generated emissions

Sources of project-generated emissions (red boxes in the above consequence tree) are detailed in the table below:

Emission source	Activity data		Emission factors	
	Source	Uncertainty	Source	Uncertainty
Construction				
Construction materials	RATP documents and studies (Modelling of a linear metre of RER track)	20 to 50%	Base Empreinte	N.A.
Construction energy	Estimation in accordance with Ecoinvent assumptions	50%	N.A.	N.A.
Modal shift due to temporary traffic suspensions	Estimate of previous years' replacement bus services	N.A.	RATP	N.A.
End of life	Same as construction materials	20 to 50%	Base Empreinte	N.A.

Baseline scenario

In the baseline scenario, the project has not been implemented, i.e., annual heavy-duty maintenance works on metro tracks have not been conducted. The resulting chain of events has been developed with assistance from RATP experts. The baseline scenario is based on the following rationale:

- As the works are preventive, existing rolling stock will continue to run normally for several years.
- Over time, track equipment will age without upkeep, and speed limits will become necessary for trains to run safely.
- At lower speeds, trips will take longer, and trains will run less frequently.

→ In the short term, from 2022 to 2027, the transport offering will remain stable.
→ In the medium and long term, from 2027 onwards, metro lines will be subject to speed limits that will reduce service.

Without works, the baseline scenario will generate **no emissions.**

As for the **modal shift,** when factoring in connections on RER lines A and B, a substantial number of passengers will likely turn to the rest of the metro and train network, as well as the Grand Paris Express network once it is commissioned. Nonetheless, cars will remain a significant, and much higher-emitting, alternative.

Synthesis of results: Net carbon impact

68 $ktCO_2e$	**Total project-generated emissions between 2022 and 2057** *Including construction: 72% (essentially materials)* *Significant share of steel*
0 $ktCO_2e$	Emissions generated in the baseline scenario between 2022 and 2057
	+
581 $ktCO_2e$	Gap in modal shift-generated emissions between the project and the baseline scenario [6]
	=
581 $ktCO_2e$	**Total baseline scenario emissions**
512 $ktCO_2e$ avoided	**Net carbon impact of the project by 2057**

[6] Results weighted according to the share that can be attributed to heavy-duty RER track maintenance works (see above sidebar "Focus on the modal shift and weighting").

Project 4: Annual heavy-duty metro maintenance

Key points

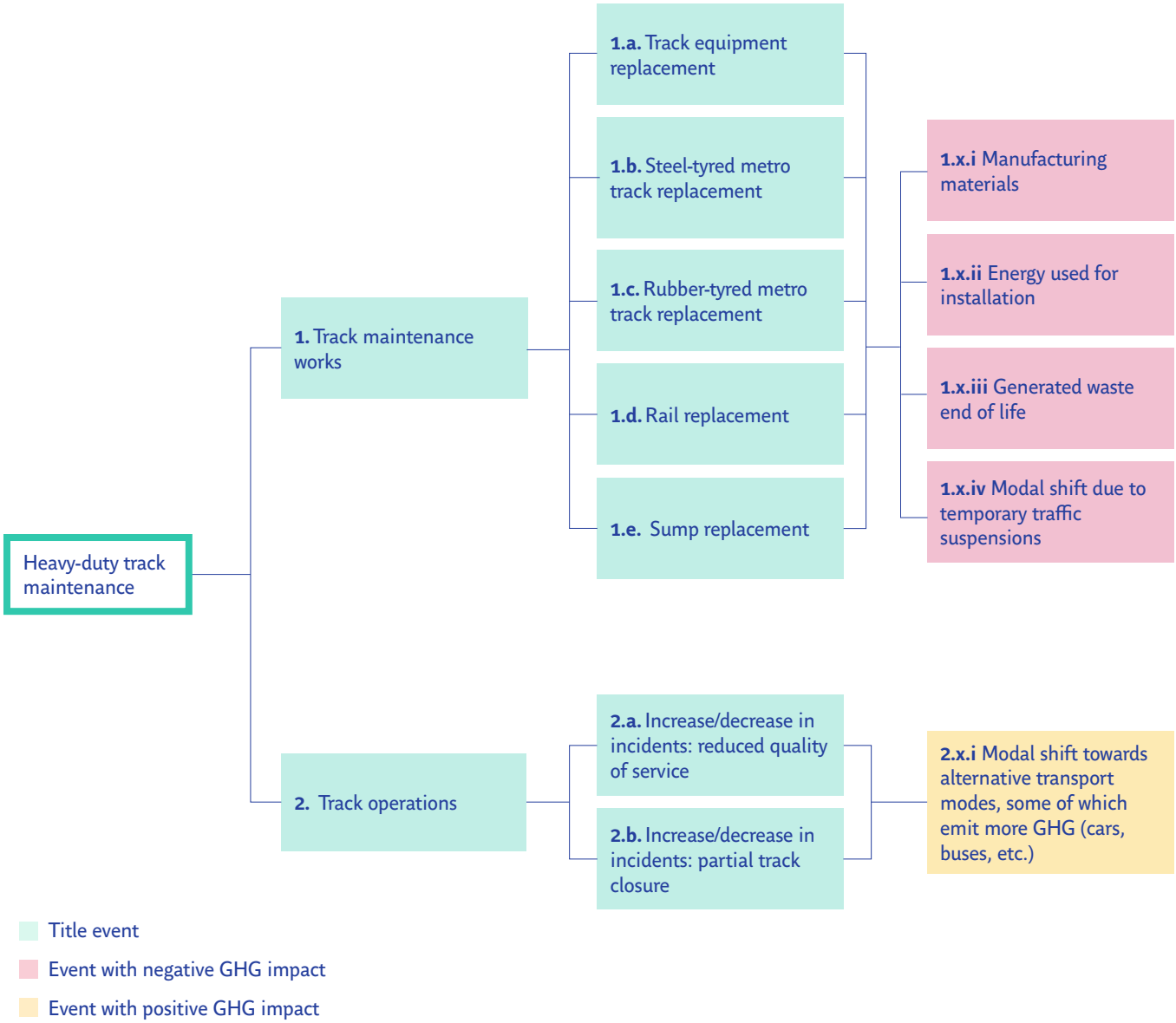
Project description	Annual heavy-duty track works on all metro lines over 6 years (2022-2027)
Project goals	– Conduct **preventive maintenance** to prevent incidents – Guarantee **service quality** and **safety** on the Paris metro network (over 1.5 billion passengers yearly)
Nature of Green Bond-financed work	– Track replacement: rails; ballasts; sleepers and fastenings (steel-tyred metros) or guide rails; running tracks and insulation (rubber-tyred metros) – Replacement of track equipment (approximately 18 pieces of equipment replaced every year) – Replacement of sumps (2 to 3 per year) *Areas in which replacements are made depend on the state of the tracks, and vary from year to year. The Green Bond covers maintenance over a 6-year period.*
Carbon impact time frame	**2022-2072** *From the beginning of works to upgraded components' end of life (maximum 50 years)*
Weighting of the modal shift's impact	**1.4%** *Proportion of the investment financed by the Green Bond as compared to the total investment necessary for service continuity on the metro network over this time period, combined with the share of the network subject to works (11%).*

Project consequence tree

The below diagram illustrates the project's impact chain over its entire life span.

Project consequence tree for heavy-duty metro track maintenance

Source: I Care



Works may require temporary traffic suspensions on the network, in which case replacement bus services will run. The calculation of the scope considers this outcome.

Project-generated emissions

Sources of project-generated emissions (red boxes in the consequence tree) are detailed in the below table:

Emission source	Activity data		Emission factors	
	Source	Uncertainty	Source	Uncertainty
Construction				
Construction materials	RATP documents RATP expert comments (Modelling of a linear metre of both steel- and rubber-tyred metro track)	20 to 50%	Base Empreinte	N.A.
Construction energy	Estimation in accordance with Ecoinvent assumptions	50%	N.A.	N.A.
Modal shift due to temporary traffic suspensions	Estimate of previous years' replacement bus services	N.A.	RATP	N.A.
End of life	Same as construction materials	20 to 50%	Base Empreinte	N.A.

Baseline scenario

In the baseline scenario, the project has not been implemented, i.e., annual heavy-duty maintenance works on metro tracks have not been conducted. The resulting chain of events has been developed with assistance from RATP experts. The baseline scenario is based on the following rationale:

- As the works are preventive, existing rolling stock will continue to run normally for several years.
- Over time, track equipment will age without upkeep, and speed limits will become necessary for trains to run safely.
- At lower speeds, trips will take longer, and trains will run less frequently.

→ In the short term, from 2022 to 2027, the transport offering will remain stable.
→ In the medium and long term, from 2027 onwards, metro lines will be subject to speed limits that will **reduce service.**

Without works, the baseline scenario will generate **no emissions.**

Regarding the **modal shift**, as the metro network overwhelmingly serves the City of Paris, a substantial number of passengers will likely turn to the rest of the network, notably RER lines but also bus and tram routes. Nonetheless, cars will also be part of the modal shift.

Synthesis of results: Net carbon impact

30 $ktCO_2e$	**Total project-generated emissions between 2022 and 2057** *Including construction: 71% (essentially materials)* *Significant share of steel*
0 $ktCO_2e$	Emissions generated in the baseline scenario between 2022 and 2072
	+
41 $ktCO_2e$	Gap in modal shift-generated emissions between the project and the baseline scenario[7]
	=
41 $ktCO_2e$	**Total baseline scenario emissions**
11 $ktCO_2e$ avoided	**Net carbon impact of the project by 2072**

[7] Results weighted according to the share that can be attributed to heavy-duty metro track maintenance works (see above sidebar "Focus on the modal shift and weighting").

ATTESTATION BY ONE OF RATP EPIC STATUTORY AUDITORS

Report of the statutory auditor on the verification of a selection of information disclosed in the green bond impact report

Year ended December 31st 2024

Executive Management of RATP EPIC,

In our capacity as Statutory Auditor of RATP EPIC (the **"entity"**), we have undertaken a limited assurance engagement on the following information (the "Information"), in relation with the Green Bonds issuances on June 22nd, 2017, June 13th 2019, and April 16th 2024 presented in the Green Bond Impact Report (the **"Report"**), available on the company's website:

- the allocation, as of December 31st, 2024, of funds raised by the entity through the Green Bonds issued on June 22nd 2017, June 13th 2019, and April 16th 2024 (the **"Issuances"**) contained in the Report,
- the projects financed by the Issuances and identified as eligible by the entity (the **"Eligible Projects"**).

The Information has been prepared in the context of the **"Green Bond Framework"** (the "Framework") defined by the entity, and available on the entity's website[1].

Conclusion

Based on the procedures we performed, as described under the «Nature and scope of procedures» paragraph, and the evidence we obtained, nothing has come to our attention that causes us to believe that the Information is not prepared, in all material respects, in accordance with the Framework available on the entity's website.

Preparation of the Information

The absence of a commonly used and generally accepted reporting framework or of a significant body of established practices on which to draw to assess and measure the Information allows for different, but acceptable, measurement techniques that can affect comparability between entities and over time.

Consequently, the Information needs to be read and understood together with the Framework

Responsibility of the entity

Management of the entity is responsible for:

- selecting or establishing suitable criteria for preparing the Information,
- selecting the Eligible Projects regarding the eligible criteria,
- preparing the Information in accordance with the "Framework",
- designing, implementing, and maintaining internal control over information relevant to the preparation of the Information that is free from material misstatement, whether due to fraud or error.

Responsibility of the Statutory Auditor

Based on our work, our responsibility is to provide a report expressing a limited assurance conclusion on the fact that the Information is free from material misstatement, whether due to fraud or error, and has been prepared, in all material respects, in accordance with the Framework.

[1] https://ratpgroup.com/fr/medias-et-publications/finance/finance-durable/

As we are engaged to form an independent conclusion on the Information as prepared by management, we are not permitted to be involved in the preparation of the Information as doing so may compromise our independence.

It is not our responsibility to:
- Challenge the eligibility criteria as defined in the Framework, and, in particular, we give no interpretation on the final terms of this Framework,
- Form an opinion on the effective use of the funds allocated to the Eligible Projects after such funds were allocated,
- Form an opinion on the impact indicators published in the Report.

Applicable professional guidance

We performed our limited assurance engagement in accordance with the professional guidance issued by the French Institute of statutory auditors (Compagnie nationale des commissaires aux comptes "CNCC") applicable to such engagement and international standard ISAE 3000 (revised)[2].

Our independence and quality control

Our independence is defined by the provisions of Article L. 822-11 of the French Commercial Code and the French Code of Ethics for Statutory Auditors (Code de déontologie) of our profession. In addition, we have implemented a system of quality control including documented policies and procedures aimed at ensuring compliance with applicable legal and regulatory requirements, ethical requirements and the professional guidance issued by the French Institute of Statutory Auditors *(Compagnie Nationale des Commissaires aux Comptes)* relating to this engagement.

Means and resources

Our work was carried out by an independent and multidisciplinary team including specialists in sustainable development and corporate social responsibility.

Nature and scope of procedures

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Information is likely to arise.

To assess this risk, we took into account the entity's internal controls on the preparation of the Information in order to design appropriate assurance procedures, and not with the purpose of expressing a conclusion as to the effectiveness of the entity's internal control system.

The procedures we performed were based on our professional judgment. In carrying out our limited assurance engagement on the Information:
- We identified and conducted several interviews with the persons responsible for the collect of the Information, with the Directions in charge of overseeing the collect of the Information and, where appropriate, with those responsible for internal control and risk management procedures,
- We assessed the suitability of the procedures used by the entity to report the Information with respect to their relevance, completeness, reliability, neutrality and understandability, taking into account, where appropriate, best practices within the sector,
- We verified the existence of internal control and risk management procedures implemented by the entity,
- We verified the consistency of the Information with the accounting records and underlying data,
- We reviewed the processes used for data collection, aggregation, processing, monitoring and control, in particular the procedures relating to the allocation of funds as of December 31st, 2024,
- On the basis of a representative sample of expenses:
  - verify the eligibility of these expenses with regard to the eligibility criteria defined in the Framework,
  - verify the concordance of the amounts of the expenses as of December 31st, 2024, with the accounts and the data underlying the accounts,
- verify that the amount of funds allocated to projects is less than or equal to the amount of these projects as of December 31st, 2024.

The procedures performed in a limited assurance review are less in extent than for a reasonable assurance opinion in accordance with the professional guidance of the French Institute of Statutory

[2] ISAE 3000 (Revised) - Assurance Engagements Other Than Audits or Reviews of Historical Financial Information

Auditors *(Compagnie Nationale des Commissaires aux Comptes),* a higher level of assurance would have required us to carry out more extensive procedures.

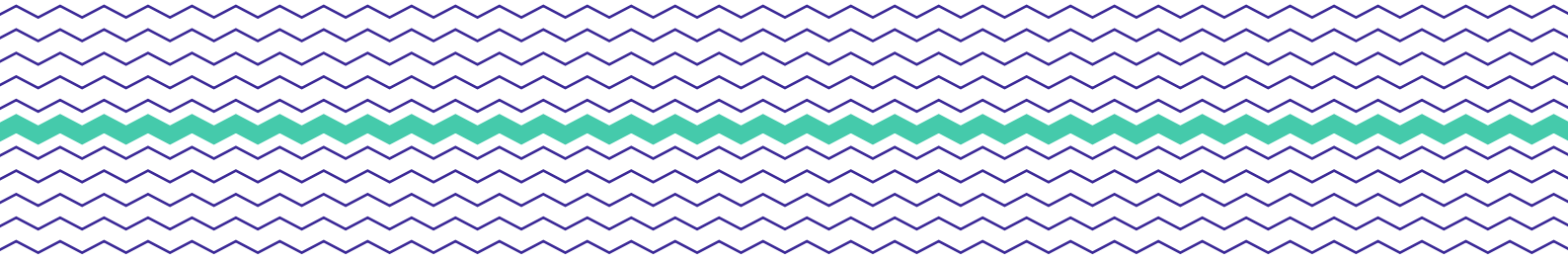
This report has been prepared within the context described above and may not be used, distributed or referred to for any other purpose.

Paris la Défense, July 18th, 2025

KPMG S.A.

Stéphanie Millet
Partner

Brice Javaux
ESG Expert



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