



The Hitachi Rail Corporate Social Responsibility and Sustainability Report 2021

This report seeks to both open and continue dialogue and engagement with our Stakeholders through comprehensive information disclosure.

The report is based on the disclosure requirements of the GRI Sustainability Reporting Standards (GRI Standards) and our experience on materiality analysis promoted during the last years.

In creating the report and referring to the industry disclosure standards, Hitachi Rail answers to both our clients and the needs of the travelling public – giving concrete knowledge of company solutions and commitment as a climate change innovator.

The report covers

Period. The main period covered is fiscal 2020 (April 1, 2020, to March 31, 2021)

Note. Some information on activities in April 2021 and after is also included.

Company perimeter. This edition covers Hitachi Rail's global activities, including Japan business.

Social data. The boundary of data indicated under each indicator. Reporting Cycle.

Published every year as an annual report.

Date Published. November 2021

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The Corporate Social Responsibility and Sustainability Report 2021 of Hitachi Rail, in its second edition, has been prepared in accordance with the “GRI Sustainability Reporting Standards” of the Global Reporting Initiative, using the “in accordance – core” reporting option. In order to ensure the quality of the Report, Hitachi Rail follows the reporting principles for defining report content and quality in accordance with the GRI Standards, which provide a set of criteria to select the information to be included in the report and the related representation methods.

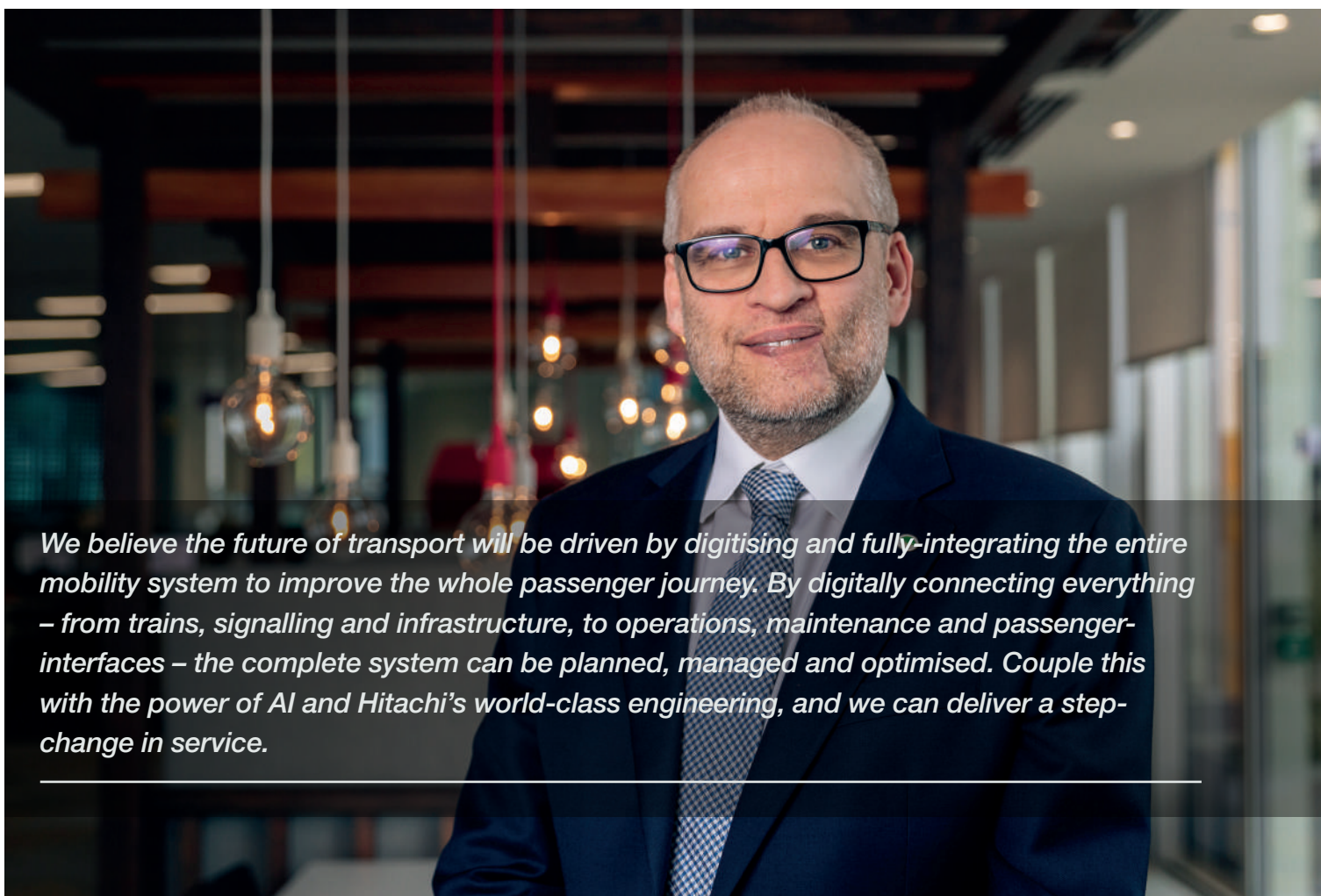
Chief Executive Officer

We believe we need to think differently about transport in the 21st century.

The world's growing population, particularly in cities, and the indisputable challenge of climate change, has seen Hitachi put sustainability at the heart of its business strategy.

We are committed to becoming a climate change innovator. Creating net zero, sustainable solutions to decarbonise transport around the world. Where railways are not already electrified, we are designing and building new battery and hybrid trains and trams to cut diesel emissions. Elsewhere we are delivering whole new sustainable railways to help protect the environment now and for a net-zero future.

We believe the future of transport will be driven by digitising and fully-integrating the entire mobility system to improve the whole passenger journey. By digitally connecting everything – from trains, signalling and infrastructure, to operations, maintenance and passenger-interfaces –



We believe the future of transport will be driven by digitising and fully-integrating the entire mobility system to improve the whole passenger journey. By digitally connecting everything – from trains, signalling and infrastructure, to operations, maintenance and passenger-interfaces – the complete system can be planned, managed and optimised. Couple this with the power of AI and Hitachi's world-class engineering, and we can deliver a step-change in service.

the complete system can be planned, managed and optimised. Couple this with the power of AI and Hitachi's world-class engineering, and we can deliver a step-change in service. Passengers can enjoy new levels of reliability, capacity and connectivity – meaning faster, smoother and easier journeys – but also a smart mobility system that works together as one. The goal is to make public transport the first preference for travel; the attractive option whether travelling within cities or long distance. By putting the passenger first through connected mobility, we are moving people away from cars and planes and onto trains. We want every passenger, customer and community to enjoy the benefits of more seamless, sustainable mobility.

Hitachi recognises that tackling climate change is fundamental to our moral and corporate mission. For that reason, we've signed up to the UN Sustainable Development Goals and committed to achieving ambitious 2050 decarbonisation targets.

We're taking this seriously. Earlier this year, the Hitachi Group announced that it is committed to achieving carbon neutrality at all its business sites by 2030 and across the company's value chain by 2050.

Committing to net-zero means Hitachi Rail's own business must reduce its environmental footprint. I'm pleased that in this year's report we have delivered significant reductions against the previous period. Our greenhouse emissions are down 30.5%. We also know we have more to do.

Making a difference to climate change is not easy, and it will take a huge collective effort from all of us, but it is a challenge we must rise to. Hitachi is in the unique position of having technological leadership to innovate the experience of the whole system and at the global scale to implement major change. This places a particular responsibility on us to tackle the problems of our time head-on – and inspire the next generation of transform mobility – now and for a net-zero future. - for the benefit of the next generation.

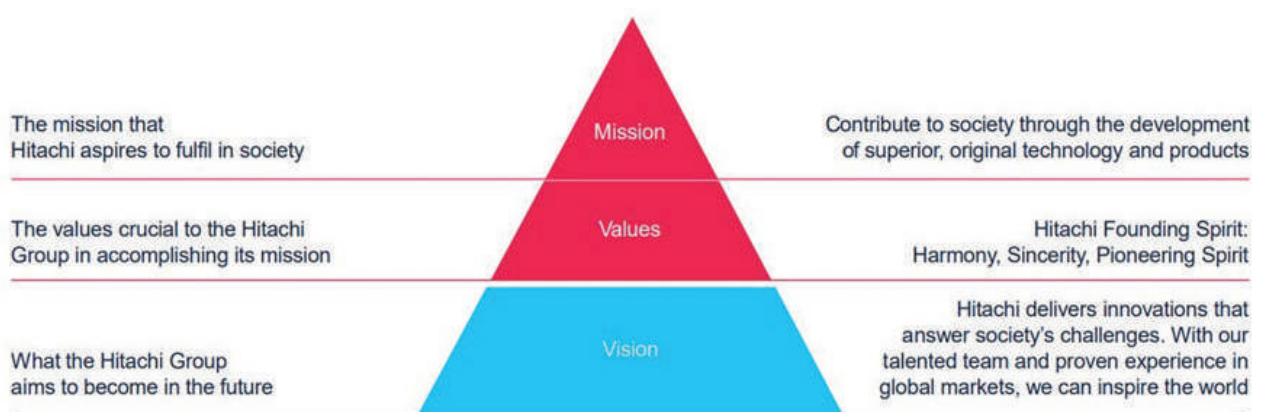
Andrew Barr

*Hitachi Rail Group CEO,
Vice President and Executive Officer, Hitachi Corporate*

Hitachi Group Identity



**The Vision has been created based on the Mission and Values.
It is an expression of what the Hitachi Group aims to become in the future as it advances to its next stage of growth.**





We are Hitachi Rail

A fully integrated, global provider of rail solutions.

With a rich 100-year+ history of innovation in mobility across the world, and a track record of performance and safety, as a business we continue to grow.

The purpose is to contribute to society through the development of superior, original technology and products that power sustainable connectivity.

Hitachi Rail draws on the wider Hitachi Group's market-leading technology and R&D capabilities, to strive for industry leading innovations and solutions.

12,000 +

Dedicated and diverse employees

38

Countries across three continents

11

Manufacturing sites globally

100

Year rich history of innovation in mobility

18 billion

Journeys completed annually on average, using our technology

Introduction

Hitachi Rail's mission is to transform mobility so that every passenger, customer, and community can enjoy the benefits of seamless and sustainable journeys.

We are experts in every part of the railway, from building products of the highest quality, to delivering connected solutions that improve transport services worldwide.

Our global scale and experience mean we can deliver every aspect of a railway for our customers from manufacturing trains, to delivering the signalling infrastructure, to ticketing, maintenance, and operations.

Customers are increasingly looking for partners and suppliers that can provide integrated solutions with a full-service offering. Last year, to leverage the whole capabilities of the Group, Hitachi Rail completed full integration of its global organisation, thus allowing it to offer customers a full suite of rail products, services, and solutions based on common standards and processes. Hitachi Rail is present in 38 countries, with around 12,000 employees working on projects or at manufacturing and maintenance sites across six continents.

Delivering for the passenger is at the heart of our business, with more than 18bn journeys completed worldwide every year using Hitachi Rail's technology.

We have seen that one of the consequences of Covid-19 is that customers around the world have accelerated their desire to decarbonise and digitise their transport systems.

To cater to those needs, Hitachi Rail is pursuing a strategy of pioneering sustainable, digital connectivity. The approach focuses on delivering high-quality rail products and connecting transport systems digitally so that passengers and customers can optimise journeys to make trains and mass transit systems the first choice for travel.

The Company is focused on decarbonising our business too. Hitachi Rail is committed to reducing the carbon footprint of our business sites to zero by 2030. Through our procurement approach, we are working with our supply chain partners to embed sustainability into their businesses to achieve carbon neutrality by 2050.

Hitachi Rail aims to become a climate change innovator, offering sustainable transport and a business that protects our environment now and for a net-zero future.



Materiality Analysis

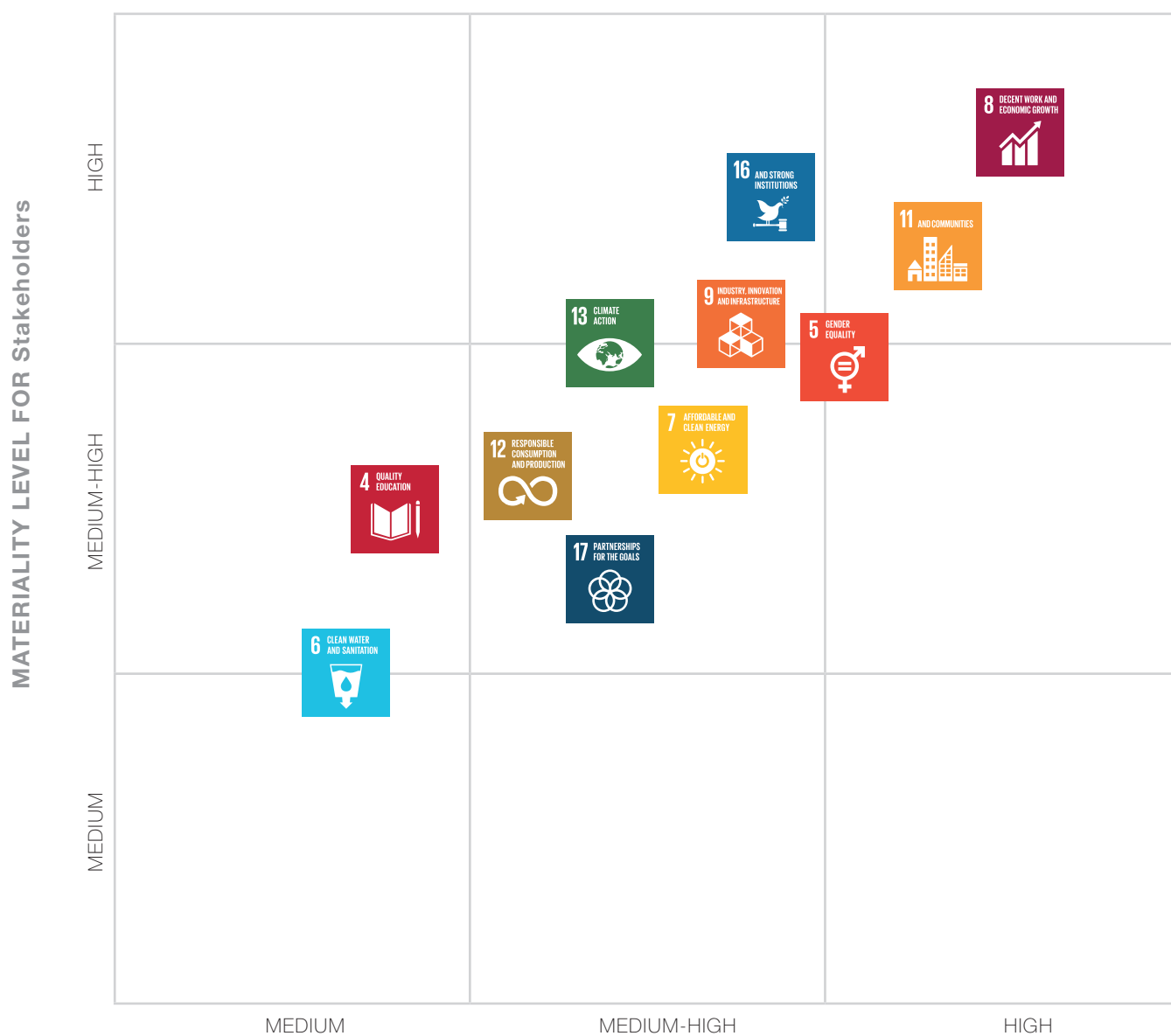
To define which sustainability topics are considered material, Hitachi Rail has conducted a new materiality analysis. These topics were updated to take into consideration the GRI Sustainability Reporting Standards published in 2016-18 by the GRI (Global Reporting Initiative).

The topics analyzed were then associated with the Sustainable Development Goals and the respective Targets.

Hitachi Rail has reached out and performed a Stakeholders engagement initiative in order to give the chance to both its employees and external Stakeholders to assess the company's priorities in terms of Sustainability, Welfare, and compliance with SDGs targets. The analysis has been developed with an online tool and in full compliance with GRI standards and guidelines.

SDGs Materiality Matrix

MATERIALITY LEVEL FOR HITACHI RAIL





Sustainability Governance

The Sustainability Steering Committee

The SSC has the task of directing the strategic business guidelines for governance practices for sustainability and corporate social responsibility (CSR). SSC gives the mandate to the specific organisational group unit (SHEQ/R&D) to implement and to achieve the objectives of continuous improvement, environmental protection and social respect, in the interest of the various Stakeholders and communities in which the business is delivered. The Committee (SSC) reports directly to the Chairman and CEO of Hitachi Rail and works in partnership with Hitachi Ltd.'s Sustainability Promotion Division (SusD).



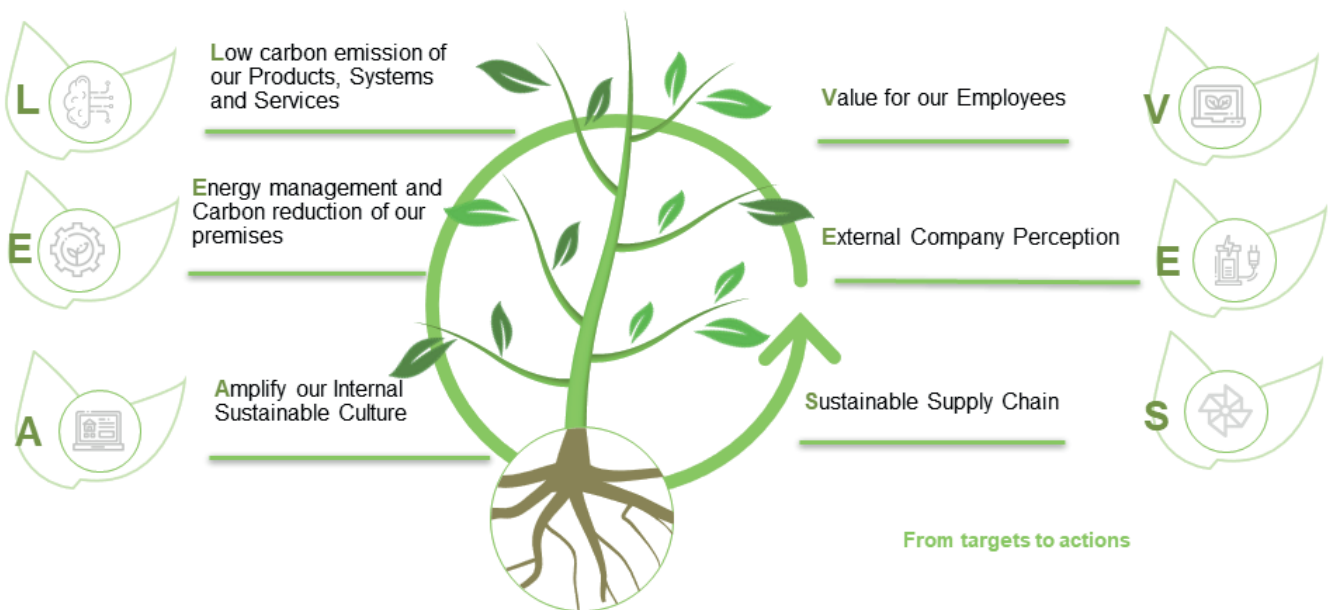
Delivering a sustainable, safe and high-quality railway business

Hitachi Rail set targets based on achieving emission reductions through direct action both within operations and throughout the value chain for manufacturing high quality products, solutions and Operations, Service & Maintenance. Recently the Hitachi Group announced its commitment to being carbon neutral at all of its sites by 2030 and an 80% reduction in CO2 emissions across the company's value chain by 2050. We are supporting these goals through our Decarbonisation Strategy:

- Mobility as a Service: Making already sustainable Rail travel even more attractive by integrating Hitachi Rail's services with other modes of transport using data from the Internet of Things;
- Creating new electrified railways or powering trains with batteries, and Decarbonising our industrial footprint in line with UN's Science-based targets.

Hitachi Rail contribution to Net-Zero

Key elements of Sustainability strategy to be developed with several Company Stakeholders



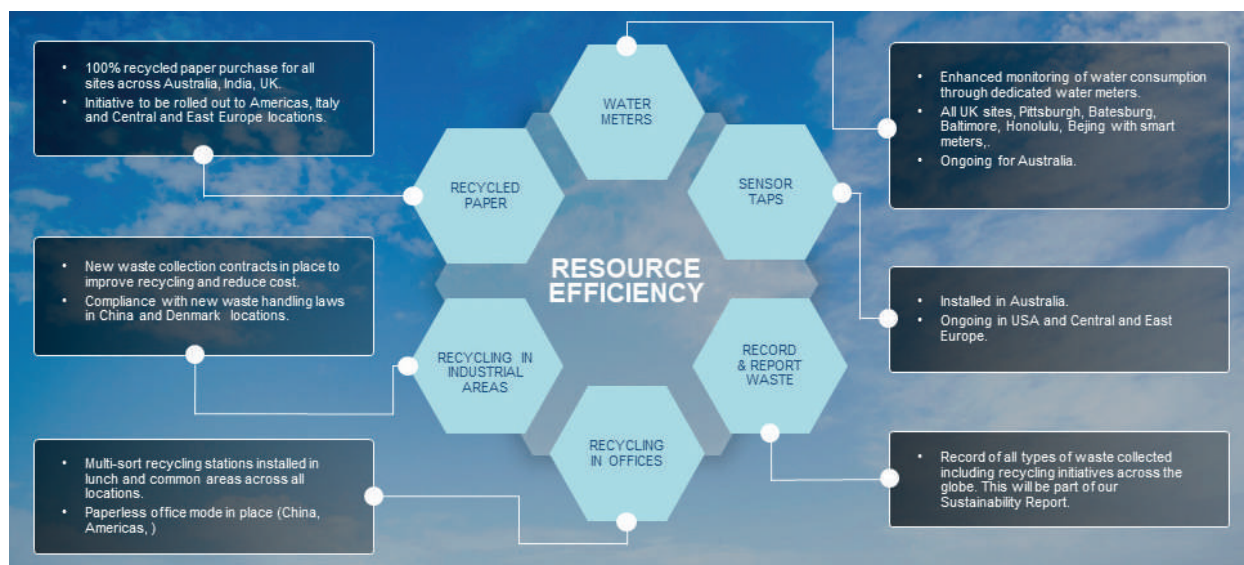
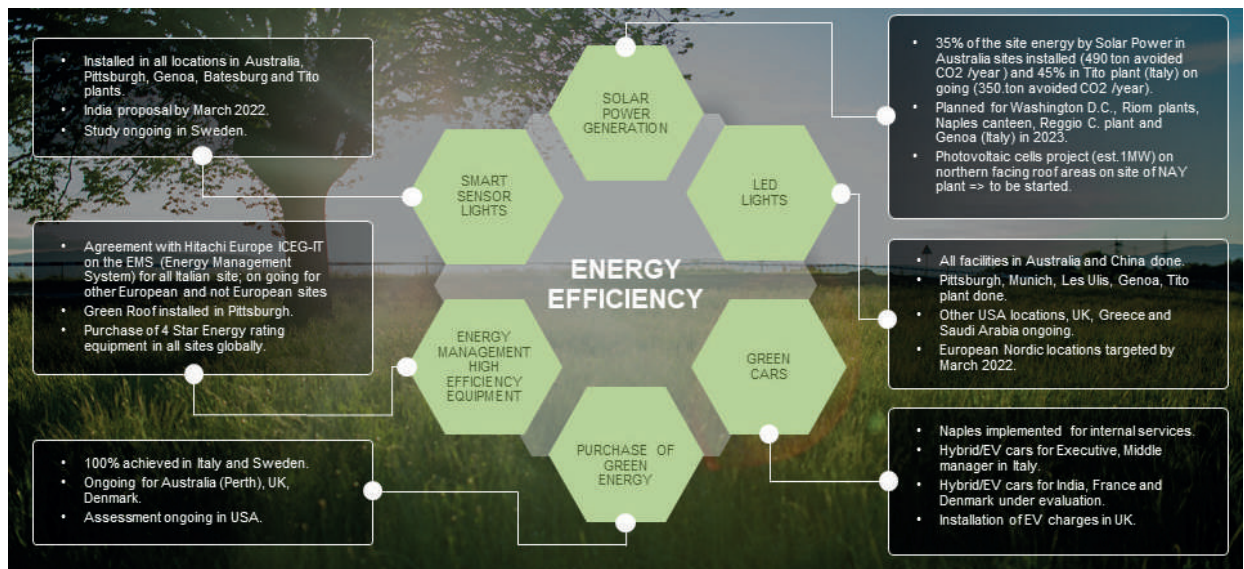
Ethics and Integrity

A woman wearing a black cap and safety glasses is looking upwards in a factory setting. She is holding a large red clipboard. The background is dark and industrial, with various pipes and structures visible.

Code of Ethics

The Hitachi Group Code of Ethics is a crucial pillar of Hitachi's Group Compliance Program, providing rules, values and principles that are required to be followed by employees, executives and directors, and third parties engaging in business with Hitachi Rail. The same rules, values and principles are also intended to assist officers and employees in making business decisions and acting in alignment with Hitachi's Group Identity. The management of Hitachi Rail continuously confirms the commitments and ethical responsibilities, setting an example and promoting a culture of ethics that allows Hitachi to preserve a good reputation amongst our clients, partners, Stakeholders and our community.

Sustainable Facility



Environmental

Carbon Management System (CMS)

Hitachi Rail adopted a Carbon Management System (CMS) which enables the planning, implementation and measurement of targets for the reduction of greenhouse gas emissions. An efficient carbon management policy enables the Company to decrease consumption and reduce energy costs, thereby improving its bottom line and offering the possibility of investing the savings. The CMS has been developed in line with the relevant international standards.

This system enables the company to perform:

- Analyses of actual emissions produced.
- Monitoring and reporting on emissions.
- Comparisons between historical data and forward-looking analyses.
- An assessment of the impact of products, in terms of emissions over their entire life cycle.
- Economic/environmental impact analyses in relation to current regulations on emission reduction to determine assets' potential value-at-risk.
- The measurement of the effectiveness of emission reduction projects.
- Communication on Hitachi Rail's emission reduction performance to the Stakeholders, including media, investors, rating agencies and other organisations.

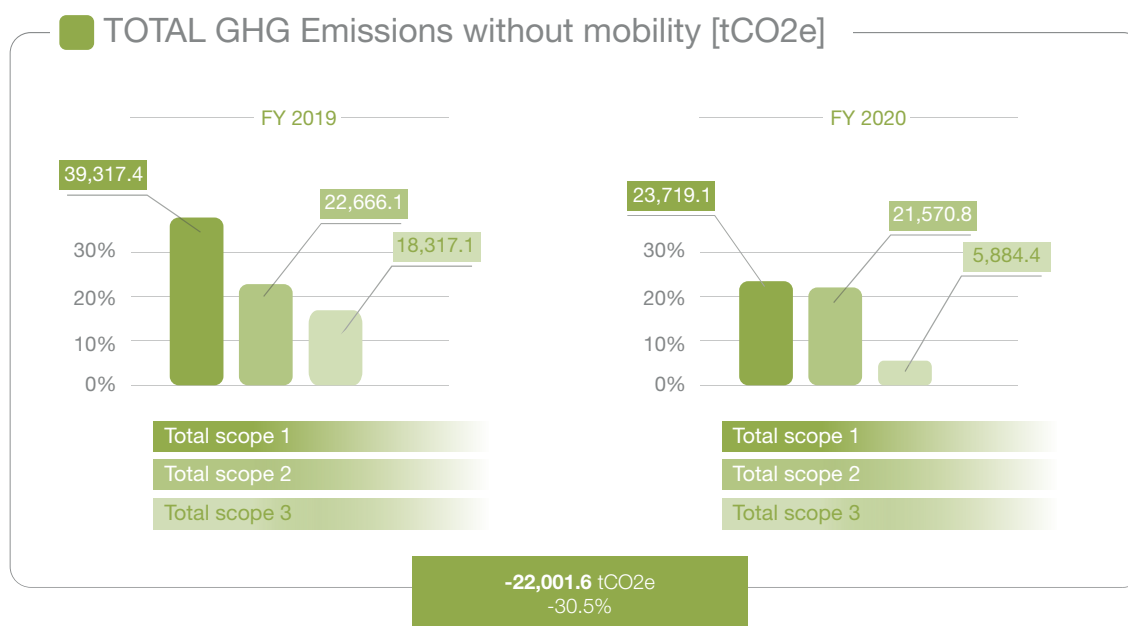
Within its organisation, Hitachi Rail has appointed an Energy Manager responsible for providing guidance and carrying out activities and projects with respect to energy savings at all of the company's operating sites.



Direct and indirect greenhouse gas emissions

Total emissions - direct and indirect - of GHG fell in absolute value from 80,368 tCO₂e in the year ended 31.03.20 to 46,905 tCO₂e in the year ended 31.03.21, with a reduction of 33,463 tCO₂e (-41.6%). However, we must be consistent in comparing the data and refer to what the management action can determine by affecting GHG emissions. For this reason, each period's contingency effect must be neutralised; in this case, the relevant periods overlap with the Covid-19 pandemic. This reduced the mobility of people, and therefore the production of polluting. This phenomenon is typical of the situation in the period under review and is not comparable with the previous one. For this reason, the reference data must be stripped of the effects described. The reduction in emissions is therefore lower, equal to -30.5% (- 22,001.6 tCO₂e) as indicated below.

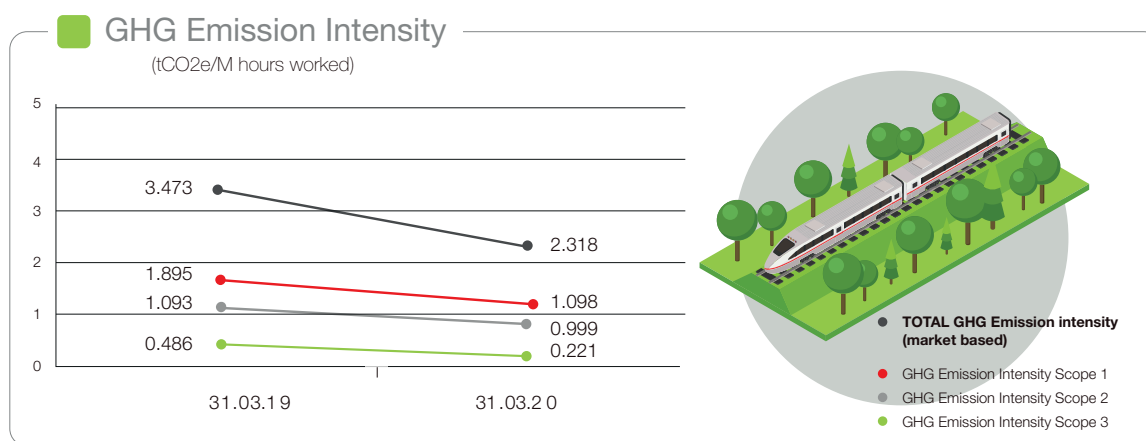
The sustainable cycle in the Sustainability report



- Consumption of fuels: -49.3%
- Production of waste: -65.5%
- Use of materials: -67.6%

* Without pandemic effects: The drastic reduction of flights (-86% of total air kilometers) is due to the restrictions required by the spread of the Covid-19 pandemic.

In the year ended 31.03.21 all GHG emission intensity indicators, which measure tonnes of CO₂e per thousand hours worked fell compared the previous year, due to the reduction of emissions in absolute terms and the increase in hours worked of 4.1%.

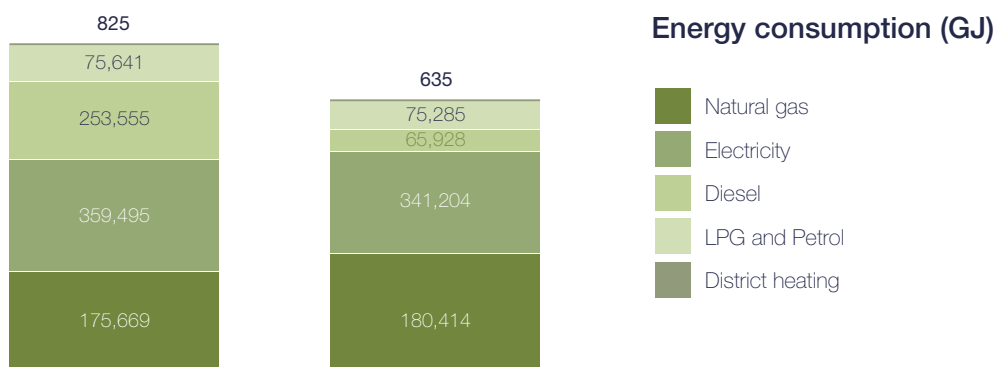


Logistic - GHG emissions

GHG EMISSIONS DUE TO TRANSPORT OF GOODS (tCO ₂ e)	
on road	21,926.8
by sea	13,371.1
by plane	16,553.5
TOTAL	51,851.4

Energy consumption trends

In the year ended 31.03.21, total energy consumption - natural gas, electricity, diesel, LPG and Petrol, District heating - amounted to 663,466 GJ, down 23.3% compared to the previous year. This reduction was mainly due to the lower consumption of Diesel, -187,627 GJ (-74.0%), of Electricity, -18,291 GJ (- 5.1%), compared to an higher consumption of Natural gas, + 140,244 GJ (+3.0%); these changes mainly affected the production sites. The energy consumption trend of the two-year period at the production sites and train maintenance centres and office sites is illustrated in the following table.





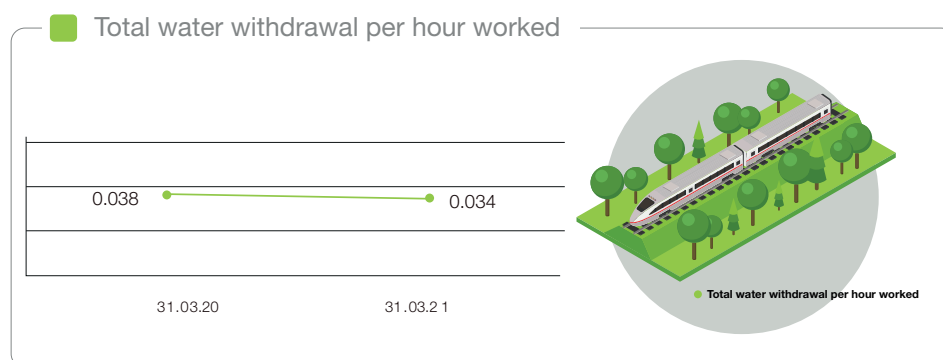
Renewable energy

Hitachi Rail invests in solar and other forms of renewable energy at our business sites and plants. New plans are under definition and will be launched at the beginning of the fiscal year, including further challenging decarbonisation goals. The company will accelerate these efforts, aiming to raise the share of renewable energy in its total electricity consumption. The company recognises that achieving Sustainable Development Goal 7 (SDG7) will benefit billions of people all over the world, using its products and transportation solutions. In the following tab, electric energy consumption is divided by type of site and the % which derives from renewable and nuclear sources.

Water management

The sustainable management of water during withdrawal and use favours the maintenance and improvement of the use of this precious resource, ensuring less waste and a reduced environmental impact. The company is aware that it can continually improve water use by reducing pollution, eliminating waste and fighting the release of chemicals and hazardous materials, halving the percentage of untreated wastewater and substantially increasing recycling and safe reuse. Hitachi Rail's core business does not critically highlight the use of this resource. However, the commitment in the control and management of this resource is always very high, even in related indirect activities. The data show a reduction of the water withdrawn equally to 38,681.7 cubic meters (-5.0%). The KPI – Total water withdrawal per hour worked shows a reduction of 9.7% also due to a slight increase in hours worked.

WITHDRAWAL OF WATER	PRODUCTION SITES AND TRAIN MAINTENANCE CENTRES		OFFICES		TOTAL	
	31.03.20	31.03.21	31.03.20	31.03.21	31.03.20	31.03.21
Water drawn from public main [mc]	326,324.5	264,109.4	107,258.4	79,813.8	433,582.9	343,923.2
Water drawn from wells [mc]	344,490.0	395,637.0	289.0	120.0	344,779.0	395,757.0
TOTAL	670,814.5	659,746.4	107,547.5	79,933.8	778,362.0	739,680.2

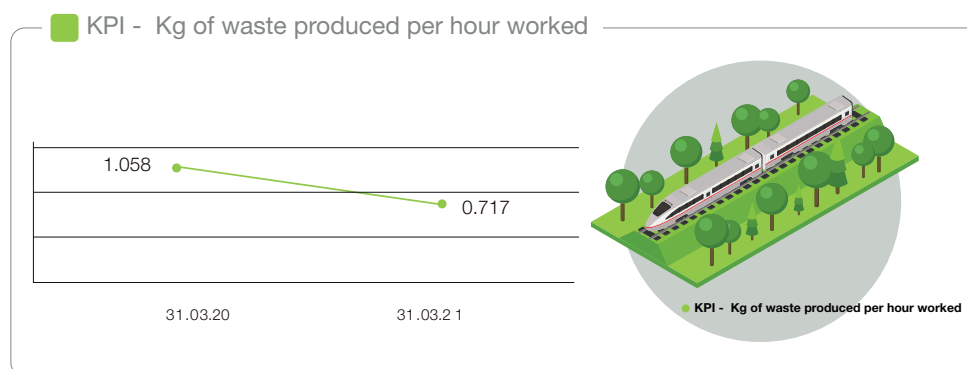
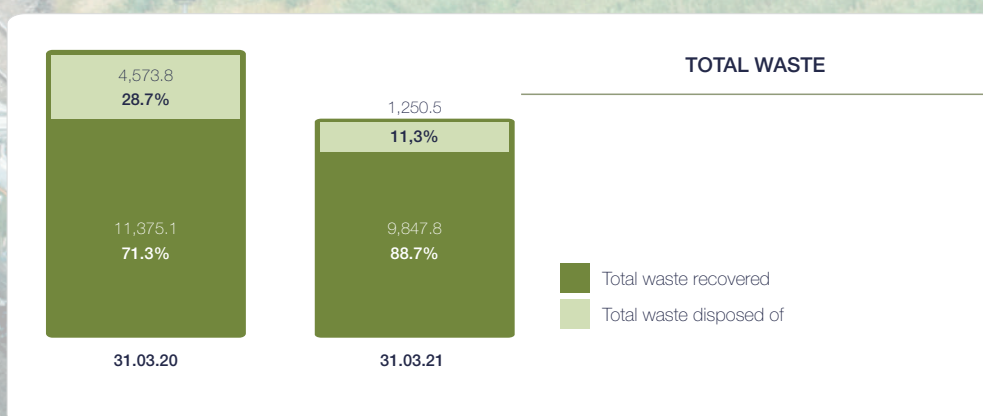


Waste and effluents

The production of waste is an environmental aspect that is assessed and measured at all Hitachi Rail sites and offices together with the analysis of work sites and construction of civil and technological products. Hitachi Rail's policy is to reinforce the principle of re-use, recycling and recovery of waste. All its sites have waste collection areas based on the type of waste and site layout. External specialist companies collect and process hazardous and non-hazardous waste. The most prominent waste at production sites relates to paper, cardboard and wood packaging, metal and end of life equipment. The following table provides details on the waste produced at the production sites and offices, with the fractions sent to recovery and disposal specified.

WASTE PRODUCTION	PRODUCTION SITES AND TRAIN MAINTENANCE CENTRES		OFFICES		TOTAL WASTE	
	31.03.20	31.03.21	31.03.20	31.03.21	31.03.20	31.03.21
Non-hazardous [t]	10,540.6	9,609.5	4,399.4	802.1	14,940.0	10,411.5
% recovered	90.9%	91.7%	28.7%	87.0%	72.6%	91.3%
% disposed of	9.1%	8.3%	71.3%	13.0%	27.4%	8.7%
Hazardous [t]	1,005.4	679.9	3.6	6.8	1,009.0	686.8
% recovered	52.6%	48.9%	54.8%	88.3%	52.6%	49.3%
% disposed of	47.4%	51.1%	45.2%	11.7%	47.4%	50.7%

In the year ended 31.03.21, total waste production amounted to 11,098.3 tonnes, down 30.4% compared to the previous year. The percentage of recovered waste goes from 74.3% to 91.9%. The KPI – Kg of waste per hour worked shows a reduction of 32.3% also due to a slight increase in hours worked.



WATER DRAINAGE	PRODUCTION SITES AND TRAIN MAINTENANCE CENTRES		OFFICES		TOTAL	
	31.03.20	31.03.21	31.03.20	31.03.21	31.03.20	31.03.21
Total volume of domestic or sanitary waste water [m³]	213,570.0	172,276.0	26,025.2	27,059.0	239,595.2	199,335.0
Total volume of industrial waste water produced on site [m³]	75,496.0	1,890.0	-	-	75,496.0	1,890.0
TOTAL	289,066.0	174,166.0	26,025.2	27,059.0	315,091.2	201,225.0

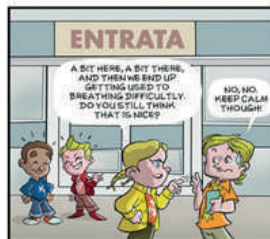
Social

CSR&S e-learning

Hitachi Rail believes that the impact on culture and training for the issues of sustainability and corporate social responsibility must be continuously cultivated. Sensitivity, personal progression on the issues of climate change, and the ways in which each of us can contribute directly, are a precious value both for individuals and for the whole community and company. For this reason, with respect for cultural diversity and engagement, Hitachi Rail has also become a promoter and innovator in internal training. After an internal communication process, the company presented the first global new e-learning course on UN Sustainable Development Goals.

Think responsibly, act sustainably

The aim of this call on our heritage, our spirit of collaboration and our technology to do better for generations to come is for a new 'human-centric' society, which grows like a child, that discovers a world in continuous evolution and also the world that previous generations have left. For this reason, Hitachi Rail will continuously explain the meaning of fundamentals of Sustainability, SDG and CSR. The course is available in four languages, for all Hitachi Rail employees. It has an intriguing and engaging approach that leads to the deepening and discovery of the needs and commitments for a real change in the way of thinking and living.



HITACHI
Inspire the Next

**THINK RESPONSIBLY
ACT SUSTAINABLY**

Mobility

Covid-19 has had a devastating impact on travel. 2020 saw a dramatic reduction in business travel thus decreasing volumes and transactions. Despite the reduction in travel, progress was still made in terms of digitalisation during 2020. Hitachi Rail has finalised the implementation of self-booking tools in France and the United States. Furthermore, it has been preparing to implement these tools in Australia for the next fiscal year. When travel increases this will make our process more efficient and sustainable.

MOBILITY OF PEOPLE	Unit	FY2018	FY2019	FY2020	Var % FY19-20
TOTAL short haul flights	Km	29,392,124	26,149,323	5,079,878	-81%
TOTAL long haul flights	Km	62,216,059	61,043,029	6,934,071	-89%
TOTAL	km	91,608,183	87,192,352	12,013,949	-86%

Hitachi places high importance on Sustainability. Priority is given to green hotels in the hotel directory and to environmentally conscious airlines. Even in fleet management, the Company gives priority to sustainability: this year it has started a pilot project in Italy with the new car policy focusing on green cars (hybrid and electric), green benefits, incentives for those who choose green cars and next year each Hitachi Rail site will be provided with electric charging points. Travellers' safety and security is a fundamental theme heightened more so by the pandemic. All travellers are covered by health insurance and provided with necessary assistance for the understanding and assessment of risk related to the social, political and health situations in all countries. This ensures the immediate protection and safety of employees.



Social Innovation

Social Innovation starts with an idea – one simple thought that has the power to change the world. Hitachi Rail's Social Innovation, through a unique co-creation business paradigm, has always set itself the goal of creating technological innovation to improve people's quality of life and achieve a sustainable society, helping to solve global social and environmental issues and achieving the Sustainable Development Goals (SDGs) set by the UN for 2030.

Hitachi Rail devotes constant attention to innovation, in order to identify and create advanced technical solutions and develop products of the very highest quality, safety and environmental standards.



A team dedicated to innovation

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In January 2019, Hitachi Rail created a team explicitly and exclusively dedicated to the theme of innovation, with a development plan covering the next few years, aimed at building a group of people working on innovation projects with dedicated budget and resources.

The team and its activities are built around a clear definition of the concept of innovation, given in *The Little Black Book of Innovation* by Scott D. Anthony:

“Blueprinting is an idea to seize that opportunity, and implementing that idea to achieve results: no impact, no innovation.”

This definition highlights how, in Hitachi Rail, innovation is based on a structured process that requires a rigorous approach, relevant needs and requirements, clear objectives and a well-defined set of activities to achieve them. Starting from the customer need, Hitachi Rail identifies a business opportunity that can be fulfilled.



The best solutions (ideas) are identified, and alongside with them new technologies and competences required for their development are acquired, according to the logic of 'open innovation,' finally, the prototypes of these new solutions are developed to demonstrate their effectiveness in fulfilling the need. This creates a positive impact on the business and the community.

The following figure summarises the domain of the innovation team and where it is located – away from current solutions and business. As a result, it becomes a collector of opportunities, ideas and skills, delving into new technologies. The final objective is to create prototypes of new products and solutions that, transferred to the engineering and development departments together with the related new skills, can enrich the company's product portfolio of tomorrow.

The Innovation team gives priority to those projects that best meet the sustainability requirements and the most innovative needs of Hitachi Rail's customers and their own customers.

From this process, two important framework projects were created: "Zero Infrastructure" and "Services for Mobility (S4M)."



The “Zero Infrastructure” framework encompasses projects aimed at eliminating parts of the physical infrastructure such as servers and power and telecommunications cables alongside railway lines. This will allow Hitachi Rail to provide solutions with less equipment and consequently that consume less. In the case of physical equipment still needs to be powered, green alternative sources of energy are used together with batteries and capacitors. In addition to being greener, this solution also reduces the cost of operating and maintaining the railway.

The projects within the “Zero Infrastructure” framework are:

- study and design of alternative green power sources to power the signalling systems along the line.
- Study and design on the use of cloud computing in signalling and automation systems, including the implementation of Verification and Validation laboratories on the Cloud.
- Use of wireless communications to connect the signalling systems installed along the line with the central station.



Hitachi Rail is now collecting and analysing data regarding people flow on AMT buses in Genoa (Italy). This information will be used to support a flexible and seamless use of public means of transportation, increasing their attractiveness. During FY 2021 this pilot project will be completed, delivering a relevant application in the field of S4M, and will be extended to other means of transportation and further clients, to actively promote a sustainable mobility.

The Zero Infrastructure program can be regarded as addressing some of the most relevant SDG such as Goal 9, building resilient and sustainable infrastructures reducing waste, use of raw materials, energy consumption and, indirectly, use of land by reducing the need at our clients' sites for dedicated space for our equipment. The S4M program on the other hand mainly focuses on Goal 11, by making transport systems more attractive, reliable, convenient and safe for passengers.



A partnership established with HTT (Hyperloop Transportation Technologies) will allow Hitachi Rail to test the applicability of high speed railway signaling systems in an innovative context, contributing to the implementation of the “fifth mode of transportation”. Hyperloop systems are largely powered by alternative sources of energy, and this cooperation will foster the adoption of the Zero Infrastructure paradigm by providing a real use case for an innovative signaling and communication architecture for ERTMS.

In FY20 the Innovation Team also launched a pilot crowdsourcing initiative (HInnova Pilot) asking our colleagues from the UK and Italy to propose innovative ideas; in FY21 Proof Of Concept of the winning ideas, selected by a panel of senior experts in the RSBU, will be implemented by the Innovation Team. This initiative encourages the active participation of our colleagues, fostering a corporate culture of innovation, exploiting our company’s intellectual potential and encouraging the sharing of ideas. In FY21 the initiative will go Global, including colleagues from all geographic areas, and focusing explicitly on the RSBU’s strategic innovation pillars, built around the concepts of safety, availability, accessibility, convenience and sustainability.



This Sustainability Report has been prepared
by Hitachi Rail Global CSR & Sustainability department.

For information, please contact:

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