Co-creating a Global India, Improving Quality of Life



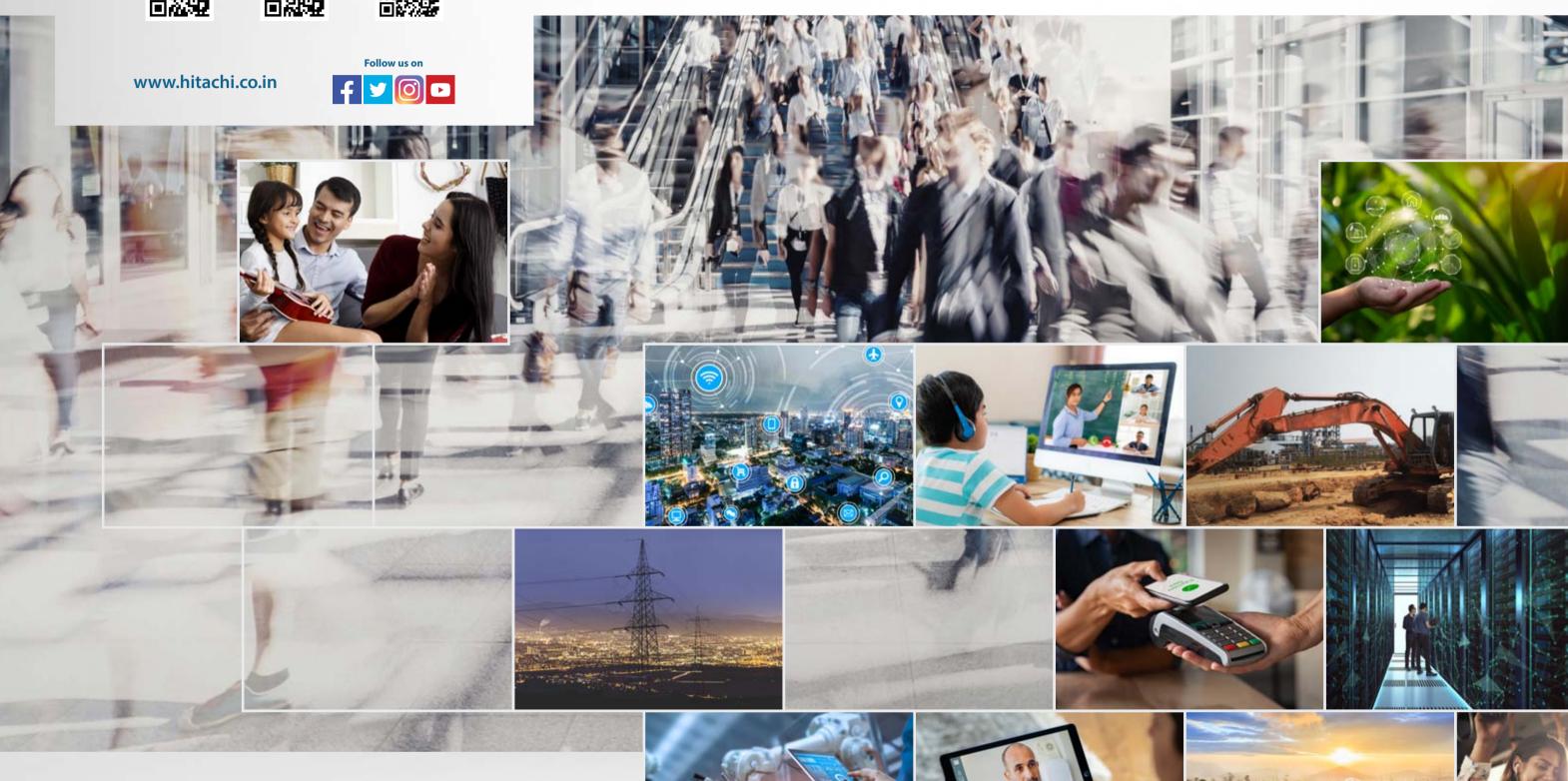














The dynamic business environment around us is transforming rather precipitously, embracing resilience on how businesses are operating creating a unified ecosystem of contributing to build a sustainable universe. Hitachi has been collaborating with stakeholders to envision a future that is not only inured to address challenges we may anticipate but also offer technologies and solutions that are malleable to business uncertainties, we may envisage in the future.

During the three-year 2021 Mid-term Management Plan ('21 MTMP), Hitachi has been focusing on five key business sectors i.e. Mobility, Smart life, Industry, Energy, and IT, creating a framework for future growth through its Social Innovation Business solutions. These solutions are built upon the expertise in OT x IT x Products focusing on opportunities for 'Co-Success' by 'Co-Innovating' and exploring solutions to address social and corporate challenges.

Hitachi through its digital technologies fostered for more than 110 years, is swiftly progressing towards becoming a leader in this digital journey. The key business sectors, fueling the growth trajectory are supporting in the evolution of society, cruising on the path to a technological revolution, and Hitachi is collaborating in fortifying this mission.

Hitachi has focused on pursuing collaborative creation with customers while also enhancing the Social, Environmental, and Economic Values. The amalgamation of GlobalLogic's digital expertise is deliberated towards Hitachi creating a profound digital ecosystem resting on the solid foundations of LUMADA enabling an opportunity to accelerate the digital transformation manifolds. When we look at India as a region, the Collaborative Creation of Hitachi, Hitachi ABB Power Grids, Hitachi Astemo and GlobalLogic demonstrates our prominence and commitment towards the

Indian market allowing us to contribute colossally to meeting the customers' needs utilizing the agile processes through our innovative digital technology.

Our 'co-create' innovative solutions in fields ranging from social infrastructure to cloud services, leverage on our combined development capabilities in mission-critical systems will further patronage digital landscape of India, thereby contributing towards a thriving Digitally Empowered future. A partnership nurtured for over eight decades have grown leaps and bounds not only touching millions of lives but also helping build a resilient India.

Synergizing the technological expertise with our stakeholders and partners, we are endeavoring towards building a strong foundation that enables Hitachi's sustainable growth, contribute to people's happiness, improve people's quality of life, and enhance the corporate value for customers by emphasizing the core areas of **Environment, Resilience, and Security & Safety.** Each of these core areas define what Hitachi endeavors to achieve by leveraging digital technologies. In the area of Environment, Hitachi will combine OT, IT, and Products to support social infrastructures characterized by a shift towards electric power. Our allegiance towards building a greener planet is reflected through Hitachi becoming a Principal Partner for Conference of Parties (COP26) event at Glasgow. For Resilience, Hitachi will use digital technologies to support sustainable public services and corporate activities and to enhance Security & Safety, Hitachi will use diagnostic, treatment, e-Healthcare integrated with digital technologies to support optimum personal care. We will attain growth by scaling business on a global level through a more reflective contribution in these areas.

Advancing on our belief of "Hitachi Social Innovation is POWERING GOOD" and utilising our digital technologies we will continue to deliver new value by solving the societal challenges that exists in different parts of the world.

Kojin hallis

Kojin Nakakita

Vice President and Executive Officer Regional Strategies (APAC), Hitachi, Ltd. Chairman, Hitachi Asia Ltd. & Hitachi India Pvt. Ltd.

India, an epitome of unprecedented growth is progressing rather expeditiously. The confound paradigm shift has impacted the business, globally and in India. The ever-growing progressive business environment is migrating towards disruption involving businesses and society at large.

As the business landscape transitions into a combination of digital natives and businesses well into their digital transformations will need to dominate set of new technologies - DARQ: Distributed Ledger Technology, Artificial Intelligence, Extended Reality and Quantum Computing. **DARQ that will open unimagined new pathways into the future.** This technological evolution and revolution will support to resurrect the businesses architecture foreseeing strategies from a triple attribute acquire leadership position in the respective business domain, optimize Capex and Opex to achieve industry benchmark driven profitability and business sustenance.

In today's multifarious environment businesses must augment horizontal capacities that can be utilized across varied business pillars venturing into the dynamic areas that are going to lead the augmentation of economies including Energy Storage, Artificial Intelligence, Green Hydrogen, and Environment helping reduce the carbon footprints. India is going to drive its leadership position across varied verticals and Hitachi is going to partner at every ensuing phase of this journey committed to bring in a change for an empowered society, by developing distinctive innovations and progenerating in creating value through Environment, Resilience, Safety and Security with Social Innovation Business.

Hitachi India is creating a sustainable society combining its strengths in OT, IT and Products. Hitachi India has been mounting its business offering solutions in Energy, Payments, Infrastructure, Urban Transport, Information Technology, e-Governance, e-Education, e-Health, Agriculture helping India become one of the firmest developing economies in the world. An array of these solutions is distinguished in their respective field representing new realities of the horizons. This is where Hitachi India can play a role of leading this progressive migration. In the realm of DARQ, Hitachi India is resurrecting its solutions primarily in the OT & IT space, that is being built indigenously but with a profound capacity of taking it not only to India but also globally. In the realm of New India, Hitachi India's proficiencies in the OT & IT space will get redefined to support building a vigorous Digital Framework and Environment.

The nation's rising economy and burgeoning opportunities have earned India a place as one of the indispensable emerging markets. Over the next decade India has the opportunity to show the rest of the developing world its rising international profile, how open, democratic societies can achieve high growth and share prosperity, and how it promises to change the world around us.

Understanding the dynamism of India as a potential market and the capabilities which lies within India to take up leadership position in the world, Hitachi India with its advanced solutions is going to partner in its endeavour which are going to be distinct in realising a New India and building a sustainable future of India. Hitachi India encompasses capabilities and capacities in industries like mobility, automotive, digitalisation, power & energy, artificial intelligence, information technology.

Our recent acquisition of Hitachi ABB Power Grids, Hitachi Astemo, GlobalLogic will anachronize India's digital transformation and further contribute to realizing a sustainable society. These collaborations are going to reinvent what we call the Connected Customer Ecosystem aligned with the Government's recently announced infrastructure programme, called "Gati Shakti", which will support boost productivity of industries, giving an opportunity to compete globally and augment the economy by creating new avenues of future economic growth.

Among increased investments, government support, engineering development and a skilled workforce, digital technology is one of the critical levers for accelerating the transition to green hydrogen - especially artificial intelligence of things (AloT) - a combination of artificial intelligence and internet of things technology that enables the optimization and automation of systems through enhanced data management and analytics. Exquisitely aligning with the Prime Minister's National Hydrogen Mission with a target to become energy independent by 2047, Hitachi India is creating AI control technologies aiming to create a sustainable hydrogen value chain enabling zero emissions achieving a decarbonized society supporting the nation in moving to a gas-based economy and shaping the country as a hub for hydrogen production.

Hitachi India's core ethos is concentrated around improving the quality of people's lives and Sustainable Development Goals (SDGs) which is inherent acumen in our business with solutions integrated to Powering Good and building an enterprising India and society at large. Through synergizing our Vision and Mission with the Government of India initiatives, we will realize an India that is going to lead Technological Disruption in the future.

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Bharat Kaushal

Managing Director, Hitachi India Pvt. Ltd.

Achieving a **Sustainable Society** through **Social Innovation Business**

The evolution of technologies such as the Internet of Things (IoT) and Artificial Intelligence (AI) are transforming enterprises and people's lives. Concurrently, societies are facing unprecedented challenges globally as they are becoming more advanced, complex and diverse. Collaborating with stakeholders, we are committed to promoting the Social Innovation Business by developing a common understanding of issues and help resolve by leveraging Hitachi's strengths in OT (Operational Technology) x IT x Products.

A New Business Plan to Make Hitachi an Innovation Partner for the IoT Era

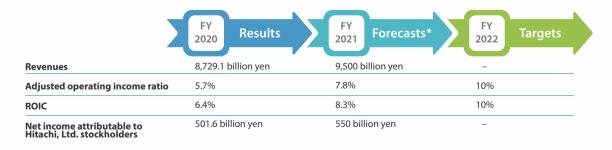
Hitachi's Strengths

Delivering innovations to customers and society through fusion of OT, IT, and products / systems



2021 Mid-term Management Plan Targets

Delivering innovations to customers and society through fusion of OT, IT, and products / systems



* As of September 2021

Improving the **Quality of Life** and **Providing New Value for Customers**

Under the 2021 Mid-Term Management Plan, we will operate business to create three value propositions for customers: Improving Social value, Environmental value and Economic value. Hitachi has identified five areas

where its solutions can help increase the customers' Social, Environmental and Economic Values: Mobility, Smart Life, Industry, Energy and IT.

Hitachi's Business Vision

Ensure sustainable growth and profitability through the Social Innovation Business

Improve Quality of Life Add value for customers

Social Value Environmental Value Economic Value

Resolve social and management issues by focusing on three key areas





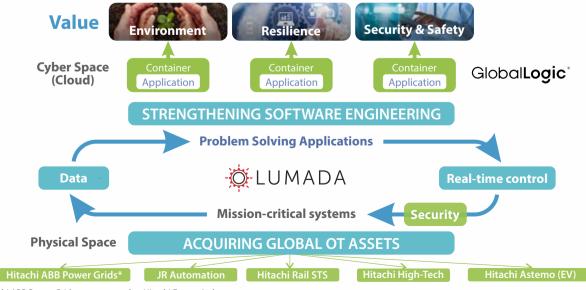


Provide OT x IT x Products as a Package



Evolution of Lumada and Social Innovation Business

Use business domain knowledge, co-creation, and digital technologies to resolve social and management issues



^{*} Hitachi ABB Power Grids now renamed as Hitachi Energy Ltd.

Hitachi's Strengths 4

The Founding of **Hitachi**

Unwavering Focus on the Monozukuri Spirit



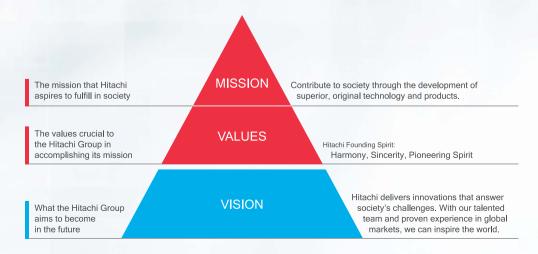
Namihei Odaira

Hitachi was founded in 1910 in Hitachi, Ibaraki Prefecture, by Namihei Odaira. Even during his school days, Odaira fretted over Japan's early reliance on imported technology and products. He wanted Japan to become self-reliant in its industrial development, and that became his overriding mission. At university, he studied electrical engineering, and in 1906 joined the Hitachi Mine, where he was responsible for the construction of facilities and equipment, which included a power station and a smelter. In addition, Odaira repaired electrical mining equipment, while continuing to study and gain expertise in the production of electrical equipment. He built a power generator waterwheel and a transformer, and then succeeded in developing a five-horsepower electric motor. In November 1910, Odaira founded Hitachi. In those days, being self-reliant instead of depending on imported products meant taking on many challenges. One by one, Odaira overcame those challenges through a single-minded determination to improve quality, cultivate technology and engineers, and provide reliability that gained customers' trust. That belief lives on in our Mission: Contribute to society through the development of superior, original technology and products.



Hitachi Group Identity

The Hitachi Group Identity articulates the MISSION, VALUES, and VISION that are shared by the Hitachi Group worldwide. Bonded by this Identity, the Hitachi Group is able to demonstrate outstanding teamwork that transcends the boundaries of geographical regions and business fields. Throughout its 100 year history, the Hitachi Group has passed on its Mission and Values to generations of employees and external stakeholders. The Vision has been created based on the Mission and the Values. It is an expression of what the Hitachi Group aims to become in the future.



History

Chronology of Hitachi in India

Hitachi's presence as a business partner in India has a long history that goes back all the way to 1933, when Hitachi began exporting fans for household use. Over the years Hitachi has expanded its range of operations to meet the emerging needs generated by India's economic growth. Today, India is one of the most important regions for Hitachi, and it aims to make a contribution to the development of Indian society through Social Innovation Business.

- **1933** Began exporting household fans, which became Hitachi's first major business in India.
- 1935 Inauguration of the Bombay (Mumbai) Office, Hitachi's first overseas office.
- 1953 Delivery of the first steam locomotive to Indian



The order placed by India was for the type of WG class steam locomo shown in the photograph. For Hitachi, it was a great opportunity that helped the company form a deep and lasting business relationship with India.

- 1954 Inauguration of the New Delhi Office.
- Inauguration of the Kolkata Office and the Bengaluru (Bangalore) Office.
- Delivered five Francis turbine waterwheels for the Bhakra Power Station.



A 150,000 HP Francis waterwheel and casing being installed. The orders for these products generated a dramatic rise in Hitachi's exports

Delivered three DC 3,000 V 3,600 HP electric locomotives to Indian Railways.



This is one of the DC 3,000 V 3,600 HP electric locomotives that enjoyed extensive service in India. Two years later. Hitachi followed up by delivering the first of seven DC 1,500 V 4,050 HP electric locomotive

1961 Delivered first thermal power plant equipment. Inauguration of the Chennai Office.

- **1977** Delivered the first public telephone exchange.
- Manufacturing of color picture tubes was started.
- 1996 Establishment of Hitachi Koki India.
- 1997 Establishment of Hitachi India. Outsourcing of offshore software development was
- 2000 Acquired Capital of Telco Construction Equipment.
- Establishment of Hitachi Home & Life Solutions
- 2004 Establishment of Hitachi Data Systems India.
- Establishment of Hitachi Metals India Pvt. Ltd.
- 2008 Establishment of Hitachi Lift India.
- 2010 Acquired Capital of Flyjac Logistics. Establishment of joint-ventures with BGR Energy
- 2011 Acquired Capital of Sierra Atlantic. Acquired Capital of Hi-Rel Electronics. Establishment of Hitachi NeST Control Systems. Hitachi India R&D Centre was opened. Establishment of Hitachi Chemical India.
- 2012 Establishment of Hitachi Automotive Systems (India).
- 2013 Acquired Capital of Cumulus Systems. Establishment of Hitachi High-Technologies India. Establishment of Hitachi Solutions India.
- Acquired Capital of Prizm Payment Services. Acquired Capital of Micro Clinic. Acquired Capital of RPS Vikas and Garima Vikas (renamed - HNV Castings Pvt. Ltd.).
- 2015 Establishment of Hitachi Terminal Solutions India. Hitachi Solutions Acquired Ignify. Acquired Capital of Ansaldo STS S.p.A.
- 2017 Establishment of Hitachi Vantara India Pvt. Ltd.
- 2018 Formed Hitachi MGRM Net Limited.
- Forms Joint Venture with SBI SBI Payment Services
- 2020 Acquired ABB Power Grids. Formed Hitachi Astemo, and renamed 7 entities in
- Acquisition of GlobalLogic India Pvt. Ltd.

(As on December, 2021)

Hitachi's Network in India

Making Valueable Contribution in a Variety of Fields of India's Infrastructure

NEW DELHI | NOIDA

- Hitachi India Pvt. Ltd.
 Regional Headquarters Information Systems / Social Infrastructure Systems / Railway Systems
- Hitachi Lift India Pvt. Ltd. Elevators and Escalators
- Hitachi Systems Micro Clinic Pvt. Ltd. IT Services & Solutions
- GlobalLogic India Pvt. Ltd.
 Digital Product Engineering & Software Engineering Services
- Hitachi Astemo Gurugram Powertrain Systems
 Pvt. Ltd.
 Powertrain and Safety Systems

GURUGRAM | MANESAR | NEEMRANA

- Hitachi High-Tech India Pvt. Ltd. Various Components and Instruments
- Hitachi Metals (India) Pvt. Ltd. Metal and Amorphous Metal Products
- HNV Castings Pvt. Ltd.
- Ductile Iron Automotive Castings (Manufacturing Unit)
- Hitachi Astemo Rajasthan Brake Systems Pvt. Ltd.
 Automotive Braking Parts
- Hitachi Astemo Haryana Pvt. Ltd. Automotive Braking Parts
- KEC Automation Systems India Pvt. Ltd.
- GlobalLogic India Pvt. Ltd.
 Digital Product Engineering & Software Engineering Services

PUNE

- Cumulus Systems Pvt. Ltd. Software
- Hitachi Astemo Brake Systems India Pvt. Ltd. Automotive Braking Parts
- Hitachi Astemo Aftermarket Pune (India) Pvt. Ltd.
 Automotive Aftermarket
- Hitachi Astemo FIE Pvt. Ltd. Powertrain and Safety Systems

The Hitachi Group is stepping up the expansion of its presence in India. This reflects the increasing importance of the region in Hitachi's business operations generated by the steady economic growth that is projected to continue in the future.

• Sales Service Manufacturing Sales Service

*Subsidiary of equity-method associate

AHMEDABAD

- Hitachi Hi-Rel Power Electronics Pvt. Ltd.
 Power Electronics Products
 (UPS / Drives / Solar Inverters / Air Compressors / Railway Inverters)
- Johnson Controls-Hitachi Air Conditioning India Ltd.*
 Air Conditioners and Refrigerators

MUMBAI | NAGPUR

- Hitachi Vantara India Pvt. Ltd. IT Solutions and Services
- Flyjac Logistics Pvt. Ltd.* Logistics
- GlobalLogic India Pvt. Ltd.
 Digital Product Engineering & Software
 Engineering Services

HYDERABAD

GlobalLogic India Pvt. Ltd.
 Digital Product Engineering & Software
 Engineering Services

BENGALURU

- Hitachi Rail STS India Pvt. Ltd.
 Manufacturing / Engineering of Mainline & Mass-Transit Signalling
- Tata Hitachi Construction Machinery Company Pvt. Ltd.

Construction and Mining Machinery

- Hitachi Terminal Solutions India Pvt. Ltd.
 Manufacturing / Development / Maintenance and Service of Equipment for Financial Institutions
- Hitachi Energy India Limited Energy Solutions
- GlobalLogic India Pvt. Ltd.
 Digital Product Engineering & Software
 Engineering Services

CHENNAI

- Hitachi Solutions India Pvt. Ltd.
- Global Systems Integrator and Cloud Solutions Provider for Microsoft Business Applications — (ERP, CRM, BI), AI/ML, Purpose built accelerators including Location Intelligence Systems, Investment Banking, Insurance, Loyalty Management Solutions, eCommerce Suite
- Hitachi Payment Services Pvt. Ltd.
 Secure, innovative and comprehensive cash and digital payment solutions
- Vantec Logistics India Pvt. Ltd.* Logistics
- Hitachi Astemo Chennai Pvt. Ltd. Automotive Parts

(As on December, 2021)

Co-creating a **Global India**, Improving **Quality of Life**



Hitachi India, aligned with the group's vision of an environmentally and economically prosperous future is steadily contributing towards the Government's endeavors. The significant presence of its Social Innovation Business across IT, Mobility, Industry, Energy, Smart Life among others encompasses vital sectors like **Payments**, **e-Education**, **Agriculture**, **Healthcare**, **Water**, **Power Distribution** & **e-Governance**.

Today, the Government, policy makers, businesses, and societies are unanimously striving to achieve sustainable growth by an increase in adopting climate-resistant technologies.

Hitachi India, a multitudinous solution collaborator to the world's leading and developing economies is now at the epicenter of this movement by recapitulated its vow to deliver environmentally sustainable solutions. Hitachi India is accomplishing a pivotal role in minimizing the carbon footprint in India by intensifying the convergence of its credible OT* x IT capabilities to accelerate transformation in various sectors.

Consequently, steering the country towards achieving the Sustainable Development Goals (SDGs) as envisaged by the United Nations.

A case in point is the Indian Railways, one of the largest and busiest Rail networks in the world is on a modernization caper to meet the challenges of the new and economically vibrant India. By offering its fully integrated Rail Solutions Hitachi India is making the urban and long-distance commuting more efficient, faster, safer and a seamless experience which is at par with the best in the world.

The extraordinary success of the Government's 'Digital India' vision is bringing irrevocable changes from the grassroot level and upwards. Coupled with the nation's economic dynamism, the digital payment landscape is being metamorphosed digitally. Hitachi India's OT* x IT dexterity while partnering in the Government's vision of 'Financial Inclusivity' is interminably elevating the sector to global robustness.

In the vast spectrums of e-Education, Agriculture, and Healthcare Hitachi India is partnering in the systemic digital transformation of the processes and organizations. This is invigorating the Government's vision of building a knowledge-based economy and smart agriculture that would optimize resources, yield in conjunction with helping farmers to adapt to the changing climate.

ICT enabled digital solutions by Hitachi India is bringing equanimity in access to quality healthcare to the remotest parts of the country. The group's Collaborative Creation approach is amplifying the efficiency of some of the leading healthcare institutions in India.

In the critical domain of Energy and Power Distribution, Hitachi India is helping the nation multifariously. By accentuating the role of clean renewable energy to meet the rising demands of a young nation sustainably and optimizing performance of the distribution network, it is considerably diminishing the carbon footprint of the nation.

Business Areas in India

Synchronously, in the sphere of water and e-Governance, the group's OT* x IT solutions are optimizing the use and distribution of scarce potable water while impacting the lives of millions by enhancing the experience of delivering essential public services digitally.

Together, these seemingly disparate yet interlacing solutions by Hitachi India are perennially enhancing the Social, Environmental and Economic values of the country, society, and businesses. In the process the group is sagaciously contributing towards strengthening India to meet its SDGs, improve the Quality of Life of citizens and build a human-centric Global India.

* Operational Technology



A Hitachi Day in India

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The Hitachi Group is active across a wide range of business sectors. From this technology and experience built up over many years come the synergies that feed new innovation.

Segment Constitution (FY2020*)

Hitachi Group's Consolidated Revenues and Segment Constitution

Revenues Composition Ratio (%)

Revenues by Segment 8,729.1 billion yen (FY 2020)



IT | Energy | Industry | Mobility | Automotive Systems | Smart Life | Others

13% 10% 14% 8% 8% 5%

Mobility | Automotive Systems | Smart Life | Hitachi Metals | Hitachi Construction Machinery | Others

* Note: Figures for each subsegment include intersegment transactions

Co-creating a Global India

Business Areas in India

10



Envisioned as a pivot to enhance the Quality of Life in myriad ways, Information Technology (IT) has emerged as the interminable universal thread that is helping deliver digital solutions across boundaries, regions, and strata. It has incessantly unified, enabled, and accelerated the evolution of countries, governance, societies, and businesses, aiming towards building a low-carbon-footprint world.

OVERVIEW

In India, invigorating the nation's pursuit to become a leading world economy, Hitachi is leveraging interfusion of its credible OT* x IT competencies to synergize with the Government's vision of inclusive and environmentally cohesive development. Consequently, as a proven technology partner to the nation, Hitachi India has established itself as a leading contributor in building a Global India and transforming millions of lives every day.

Information & Telecommunication Systems – Reinforcing Nation's digital transformation

India, analogous to the world is speedily gravitating towards digitalization. To help the nation reap the benefits of this transformation, Hitachi India is laying a robust OT x IT foundation. Its multifaceted IT solutions are tenaciously supporting the social infrastructure imperative to the functioning and optimization of the contemporary business and social environment.

As a leader in secured Cash and Digital Payment solutions in India, Hitachi is assuredly catapulting the country's financial and economic stature. The burgeoning footprints of its White Label ATMs and Cash Recycling Machines are supporting the Government's vision of financial inclusivity, consequently empowering both the banks and the citizens. Synchronically, its advanced and comprehensive digital payment solutions are enhancing the transactional experience for both merchants and customers.

IT integration of schools, and institutions by Hitachi India is intertwining transformation in education with equanimity in learning and opportunity across the nation. Furthermore, the IT resurrection of Public Service Delivery is changing the lives of millions, thereby making them technologically sustainable.

Concurrently, Hitachi India's ICT, IoT, and AI enabled solutions are optimizing performances of Power Distribution Networks, digitalizing business operations equipped with Big Data Analytics capabilities, ushering Industry 4.0 solutions in manufacturing along with amplifying mobility experience.

Cumulatively, Hitachi India's IT led solutions are significantly enhancing the Values and Quality of Life of citizens.



Hitachi India Pvt. Ltd.

Information & Communication Technology Systems Division











Company Website:

https://www.hitachi.co.in/

Hitachi Payment Services Pvt. Ltd.

Hitachi Payment Services is recognized for its technological prowess and customer - centric approach. Its exhaustive range of cutting-edge payment solutions are equally empowering financial institutions, merchant aggregators and customers precipitating Social Innovation and foundation of a robust payment infrastructure.

Furthermore its ATM Services, Cash Recycling Machines, ATM Software Platforms, White Label ATM under cash platform and POS Solutions, Internet Payment Gateway Solutions, Toll & Transit Solutions, Digital Payment Platform (Bharat QR), Risk Management & Analytics, Reconciliation & Settlement Services, Merchant Services and Card Issuance Solutions under digital platform are invariably augmenting security, reliability, and innovation in the nation's Payment sector.

Initiatives Transforming India's Financial Landscape

SBI Tie-up

To accelerate Digital Payments in India, State Bank of India (SBI), the nation's largest commercial bank and Hitachi Payment Services entered into a JV to build a state-of-the-art card acceptance and future-ready digital payment platform. The JV, SBI Payments offers a comprehensive suite of payment options to customers and merchants focusing on the roll-out of a nationwide card acceptance infrastructure, quick response (QR) code acceptance, Unified Payments Interface (UPI), mass transit sector and e-commerce businesses.

Toll & Transit Solution

Hitachi Payment Services' electronic toll collection and transit payment solutions for Metros seamlessly blend the convenience of travel with secured payments. Customers can now conveniently make payments for metro tickets as well as passes through a contactless Rupay prepaid card or the NCMC card, thereby ensuring cashless and elevated travel experience.

Hitachi Money Spot ATM

With the aim to accelerate the financial evolution of society, Hitachi is leveraging its widely acknowledged OT x IT expertise to offer banking services primarily to rural and semi urban dwellers in India through Hitachi Money Spot ATMs. Thereby, supporting the Government's financial inclusion initiatives like the Jan Dhan Yojna and Direct Benefit Transfers that are incumbent on improved access-to-cash infrastructure for optimum socio-economic development.





OSBI Payments



Driving Digital Transactions Through Robust Payment Infrastructure

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IT Information & Telecommunication Systems 12

^{*} Operational Technology





■ Cumulus Systems Pvt. Ltd.

As the outcome of robust digitalization, businesses are rapidly transforming into data-driven enterprises. But, the big surge in data is posing an enormous challenge to the organizations to efficiently store, access, process, and interpret the deluge of information. This will help them gain meaningful insights to make informed decisions, optimize resources and bring agility to the processes.

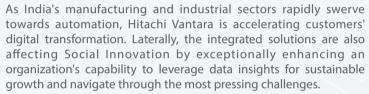
Cumulus Systems through its cross-domain storage performance management platform called MARS (Measure Analyize Recommend Solve) offers robust data management techniques. This leads to leveraging the true potential of data in accelerating the decision-making process and business growth.

The company engages in providing End-to-End Software Development Lifecycle involving –

- Business & Requirements Analysis
- Solution Architecture & Design, Development, and Testing
- Deployment and Production Support

Along with providing Consulting Services, Cumulus also has Domain Expertise in e-Commerce, Payment Gateway Integration, Customer Relationship Management (CRM), Auction Houses, Infrastructure & Security and Accounting.

Hitachi Vantara India Pvt. Ltd.



By steadily magnifying its presence in India, Hitachi Vantara's data-driven solutions are now better poised to enhance Social, Environmental, and Economic Values of the nation, the customers, and the society.



Hitachi Terminal Solutions India Pvt. Ltd.

The Government's thrust on financial inclusion, the nation's growing economic stature, and bustling population are spiking the demand for innovative banking solutions. Hitachi Terminal Solutions India Private Limited is leveraging the group's proven OT x IT virtuosity to deliver digital commerce to banking solutions. Its advanced recognition and handling technologies present innovative solutions to both operators and the end-users.

Aligned with the Government's vision of an 'Aatmanirbhar Bharat', Hitachi is steadily expanding its 'Make in India' capabilities to manufacture ATMs that can resolve customers' and society's challenges in the realm of banking. With a focused approach on strengthening banking infrastructure and penetration in small cities, towns, semi-rural and rural habitations, Hitachi Terminal Solution is bringing Social Innovation through its revolutionary Cash Recycling ATMs and Next-Generation ATMs that are empowering banking institutions and citizens unequivocally.

Additionally, Hitachi is coalescing its multitude capabilities to evolve a microfinance product particularly for farmers to support their agricultural activities.





■ Hitachi Systems Micro Clinic Pvt. Ltd.

Hitachi Systems Micro Clinic is architecting a comprehensive digital transmutation of organizations through its extensive offerings of IT services and solutions across Digital Workplace, Cloud Solutions, Managed Services, Security, and Data Centre Solutions. Our robust solutions and services are helping customers overcome unprecedented challenges and streamline processes to meet complex IT demands arising as an outcome of the increasingly dynamic and competitive environment. By instituting agility in enterprises and Governments Hitachi amplifies their ability to adapt to the evolving scenarios and optimally realizing their Social, Environmental, and Economic Values.

■ Hitachi Solutions India Pvt. Ltd.

Hitachi Solutions is a global business application consulting firm and trusted provider of vertical industry solutions built on Microsoft Dynamics 365, Microsoft Azure, and Microsoft Power Platform.

It's revolutionary/new-fangled innovation, Location Intelligence Solution (LIS), help organizations drive effective data-driven sales. By embedding the Route Optimization feature, these solution enhance sales route planning, which contributes to depreciation in CO_2 emissions. Thus, integrating social and environmental responsibilities into the business.

Co-creating a better tomorrow with customers







Security Solution:

Cloud Services



Activities in INDIA

Hitachi Payment Services

Presently, the company through its impressive network of over 63,000 ATMs (inclusive of 27,000 CRMs), 5,800 White Label ATMs and 1.35 Mn POS devices (inclusive of Mobile POS and QR) under management* is steadily bolstering the nation's vision of a financially empowered society.

Hitachi Vantara

Hitachi Vantara is helping customers achieve unprecedented outcomes by tapping the full potential of their data. Committed to solving the most pressing societal and business challenges, the company is leveraging the immensely diverse portfolio of Innovation, Development, and Experience across Hitachi Group Companies to deliver data-driven solutions for commercial and industrial enterprises in India. Consequently, supporting them to establish new revenue streams, gain competitive advantages, minimise costs, enhance customer experiences and deliver Social and Environmental values. Visit us at www.hitachivantara.com

Hitachi Terminal Solutions

With over 22,000 cash recycling ATMs installed, Hitachi Terminal Solutions India Private Limited is India's leading cash recycling ATM manufacturer in the country. By the end of the decade, the company hopes to turn India into an export hub for cash recycling ATMs, in addition to serving the local market.

HCS (JP) Touchless Technology

COVID-19 has made using public infrastructure assets, including CRM machines, more challenging. Hitachi Channel Solutions (JP) has developed touchless solutions that enable devices to be operated without coming in physical contact.

Next-generation ATMs

Hitachi is designing next-generation ATMs based on advanced technology platforms, such as artificial intelligence and machine learning. These ATMs would be available for a longer period and could even reach far-flung regions without interruption.

Hitachi Solutions

Hitachi Solutions is cognizant of the importance of digitally transformed organizations. It harnesses the power of the latest Microsoft Dynamics 365 Solution stack and seamlessly integrates them into businesses. As a global consultancy firm working across the private and public sectors, Hitachi Solutions specializes in userfriendly business applications based on the Microsoft cloud. It is one of the select companies in India that can manage the entire Microsoft environment including Business Applications, Azure data, IoT, Data Science, Al, and the modern workplace.













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^{*} Numbers as on August 2021



Reinvigorating Governance, Education and Healthcare— IT spurs foundation of a New India

■ Hitachi MGRM Net Ltd.

In the preceding 20th century, the advent of Information Technology or IT stands out as the biggest disruptor, the undulations of which will continue to change our lives constantly for centuries to come. As the foundation of digital evolution across the world, and in India too, IT is catalyzing a paradigm shift in the vital areas of Governance, Education, and Healthcare.

Hitachi India has been a significant contributor to the robust IT infrastructure in India. Today, it is empowering people and the Government by accelerating the roll-out and implementation of e-Governance initiatives. Summarily, IT is not only emerging as an enabler but as a national integrator that is facilitating in providing essential public services to the remotest and the most growth-deprived regions of the country.

While the central and state governments are taking a leap towards citizen-centric governance through digitization of the Public Service Delivery System, the horizons of Education and Healthcare too are transforming through ICT based e-Governance Platforms.

Through Hitachi MGRM Net the group is coalescing its Information and Communication Technology (ICT) capabilities with Data Analytics to support not only the Government but some of India's leading institutions to build an inclusive Connected Citizen Ecosystem. Its M-Star™, a Master e-Governance Platform is an integrated digital platform that drives Social Innovation through comprehensive Governance solutions with Human Lifecycle Approach.

For a vibrant and economically maturing country like India, quality education lays a strong foundation for a resilient future. Hitachi MGRM Net M-Star™ e-Governance platform resides on a very advanced analytics engine by combining sound user security solutions. It brings a fine blend of expertise, data, and intelligence to facilitate real-time tracking of performance and

a holistic development of students that helps in initiating appropriate support when it's needed the most.

Integrating all academic and administrative divisions within an educational institution, M-Star inherently juxtaposes individual and organizational accountability with greater parent participation. The outcome is a responsive, data-based inclusive learning environment for the child that works at a granular level towards nurturing individual talents. Consequently, ensuring a burgeoning pool of skills for a growing India.

e-Education models bolstered by Hitachi India's credible IT solutions have also contributed towards optimizing the learning curve of students in the remotest parts of the country with significant reduction in input costs in relation to physical repositories.

This has invigorated the Government's vision of 'Equal Opportunity to All' as quality education is no more confined by physical or material boundaries. Since the year 2020 with the declaration of pandemic, globally, e-Education has established itself as a norm rather than an extension of formal education.

In Healthcare too Hitachi India through Hitachi MGRM Net is fully aligned to the Government's vision of 'Quality Healthcare for All'. Galvanized by efficient IT network across the country, the M-Star™ Telemed platform is a distinguished solution that simultaneously enables and empowers Comprehensive Patient Care through virtual and personalized communication with qualified health practitioners. The data-synchronized platform intelligently customizes and equips health & wellness resources to collaborate and benefit both the medical fraternity and society at large.

By delivering innovative digital solutions through its illimitable IT dominance, Hitachi India is enhancing Social, Environmental, and Economic values of the nation, society, and customers while improving Quality of Life – a beacon of a Sustainable, Aatamanirbhar Bharat, i.e., a self-reliant nation.



Strengthening India's Healthcare System with Telemedicine

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Passing on a Prosperous Planet to Future Generations

Hitachi India's Environmental Vision states that "Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in a collaborative creation with its stakeholders."

With this extraordinarily empowering declaration of intent, Hitachi India is rapidly converging its interminably bolstering OT* x IT solutions through a single digital strand to amalgamate reduction in carbon footprint and amplify sustainability.

Hitachi India is leveraging its environment-friendly solutions to usher in Social Innovation Business for sustainable development of the nation and the world.

To make this vision a reality, Hitachi India while aiming to achieve carbon neutrality is aligned with the group's visionary global environmental strategy of co-creating solutions for its customers and society. By leveraging its unique OT* x IT solutions, the group aspires to enhance the Environmental values in the areas of Mobility, Energy, Water, Healthcare, Manufacturing and Construction among others.

The three-pronged strategy of Hitachi India Environmental Innovation 2050 primarily focuses on achieving Decarbonized Society, Resource Efficient Society and Harmonized Society with Nature.

Decarbonizing the present consumption-centric society is a mammoth undertaking. Hitachi India's varied transformational solutions consisting of digitizing City Gas Distribution, Power distribution solutions, Recyclable Energy solutions, efficient urban transport and transit solutions, Al-IoT-Data Analytics equipped Industrial solutions, Power Electronics products inclusive of Solar Inverters and ICT enabled solutions for institutions, are significantly contributing towards Decarbonizing Society.

By facilitating enhancement of resource efficiency of society in the usage of critical yet depleting natural resources like water, Hitachi India through its Intelligent Water Solutions and Water Environment Solutions are contributing towards mitigating the growing gap between demand and supply while rejuvenating the sources.

Furthermore, Hitachi India is committed to minimize the impact on Natural Capital. It classifies the group's activities across the value chain into two –

1) Negative impact activities like emission of greenhouse gases and chemical substances into the atmosphere along with the generation of waste materials and

2) Positive impact activities such as providing products and services that contribute towards ecosystem preservation besides undertaking social contribution activities to protect the environment through the preservation of biodiversity and ecosystems.

Hitachi India is undertaking initiatives to minimise its 'Negative Impact' and maximise its 'Positive Impact' through constant innovations in its solutions and achieve a Harmonized Society by contributing towards creating a lower-carbon society and cleaner environment for a sustainable future for all citizens.

In this way by coalescing its extensive solution capabilities Hitachi India is actively partnering in the Government's vision of a Carbon Neutral India.

Source: (1) - https://www.hitachi.com/environment/vision/nature.html

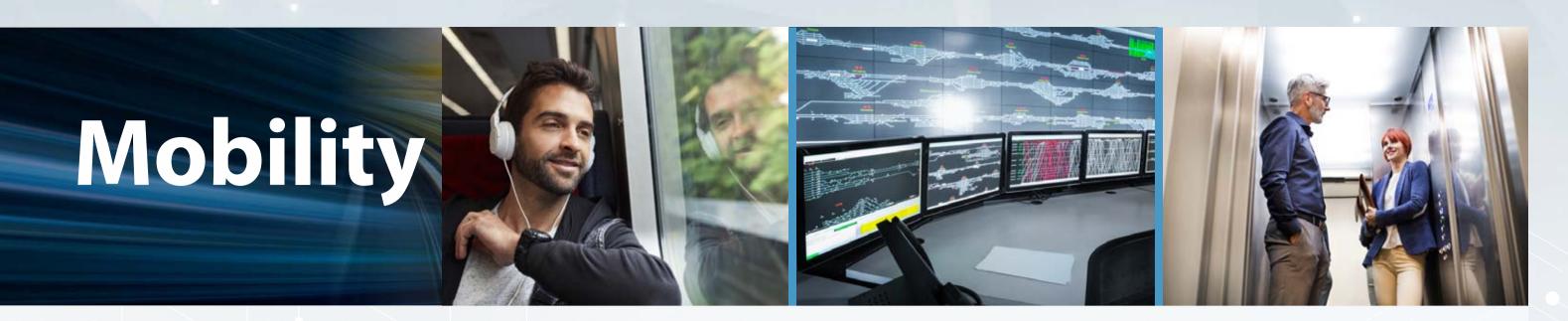
* Operational Technology



Building a Prosperous,
Sustainable Planet, Together!

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15 | IT Information & Telecommunication Systems | 16



Railway System

The New Face of Railways -**Transforming Mobility** Infrastructure

India, the second most populated country in the world is asserting its position among the leading economies globally. The consequent modernization is resulting in the proliferation of urban spaces, population influx, and amplified movement of people. Cumulatively, they are escalating a need for more efficient, seamless long-distance and urban mass transportation that also meets the Government's vision of a carbon-neutral society.

Hitachi Rail is leveraging the group's venerated OT* x IT proficiency to initiate a paradigm shift in the way India progresses.

* Operational Technology

OVERVIEW

Hitachi Rail is a fully integrated and global provider of rail solutions across Rolling Stock, Operation, Services & Maintenance, Digital Signalling & Systems, Turnkey and Components.

Enhancing customer satisfaction and advancing passenger experience is at its centre to co-create and offer an impressive array of solutions to its customers.

Aligned with the vision of building an environmentally sustainable future, Hitachi Rail's bevy of innovations across its operative focus areas are enhancing customers' Social,

Environmental, and Economic values concurrent to improving Quality of Life. While harnessing the global and domestic market trends, its growing ensemble of cutting-edge products, systems and solutions leveraging battery, electric and hybrid technologies are not only minimizing vehicular congestion and enhancing commuter comfort but, conjointly is steering Railways to a massive reduction in its carbon footprint.

■ Hitachi Railway Systems

Rolling Stock

Harnessing over 100 years of Hitachi's credible record of delivering mass transit solutions, the exhaustive line-up of Hitachi Rail encompasses all mass rail transit modes from energy-efficient urban commuting solutions to high-speed long-distance trains operating at exhilarating speeds of up to 360kph, enhancing commuters' experience considerably.

Emerging as a key strategic contributor in the evolution of Shinkansen Bullet Train vehicles in Japan, Hitachi Rail has magnified its veritable safety and delivery record for rolling stocks. The company supports a full portfolio of solutions across Commuter, Tram, Driverless, Monorail, High-Speed Rail, Intercity, Battery at a

Pursuing the vision of enhancing Social, Environmental, and Economic values of the customers and Improving Quality of Life, Hitachi Rail, designs, develops, and manufactures a comprehensive range of modular components for Railways as well.



Traffic Management Systems & Turnkey Signalling and Train Control Systems

Leveraging Hitachi's exceptional OT* x IT capabilities, and cutting edge digitally-enabled Traffic Management System which is designed to seamlessly synchronize and operate intricate vast operations at Railway hubs and stations. The solutions empower station staff to impart critical as well as routine information and take timely decisions. In the occurrence of any anomaly in the rail operations, Hitachi's systems swiftly modify the processes to meet the intended timetable.

In the instance of severe diagram collapse, Hitachi's system proactively surmounts such disruptions by interlinking updated train operations and automated passenger information with current line information. Concurrently, the system status is consistently monitored to facilitate instant recovery in case of a collapse or any untoward incident with a robust warning mechanism.

Hitachi's proven Traffic Management System, Signalling & Train Control System in ERTMS/ETCS, Satellite Positioning, Communication Based Train Control (CBTC) for Automatic, Driverless & Unattended Train operations solutions coalesce all aspects of signalling and systems solutions. Thus, delivering market-leading solutions in India and globally that are augmenting safe and better ride comfort as well as shortened and dynamic train headway to increase overall network capacity.

Thereby, optimizing resources and improving Quality of Life.

Operation, Service & Maintenance Solutions

Hitachi Rail has extensive experience in delivering best-in-class services designed to maximise product life cycle, support customer's operations readiness processes and enhance the customer experience with innovative, digital solutions.

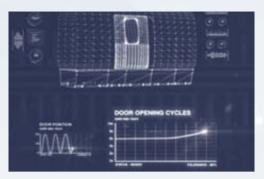
We provide innovative solutions across a range of services from Service & Maintenance (S&M) both for rolling stock equipment and legacy signalling installations, as well as our Operation & Maintenance business, which includes turnkey operations, signalling infrastructures, vehicles, buildings and facilities. Our global experience across both passenger and freight systems enables us to anticipate our customers' needs, offering a wide range of high quality, reliable services, leading to a high-quality passenger experience.





^{*} Operational Technology

Digital Products and Services



Hitachi is committed to equip users and customers with a full 'Service for Mobility' solution. Its bouquet of Digital Products and Services for Railways is engaged in co-creating solutions that can solve real-time operational challenges and considerably enhance the commuting experience for the passengers.

By focusing on three key areas – human flow application, smart security and smart ticketing, the solutions ensure that passenger journeys are seamless, integrated and enjoyable.

Activities in INDIA



The distinguished projects Hitachi Rail and Hitachi Rail STS India have been associated with are as follows

Dedicated Freight Corridor Corporation

A dedicated partner to the Government's ambitious project, Hitachi is co-creating solutions for two prestigious sectors –

- End-to-end signalling and telecommunication system for the crucial 915 km Rewari (Haryana) to Vadodara (Gujarat) corridor spanning 31 stations. The corridor has a unique feature to connect and interchange with mainline tracks running concurrently.
- Installation of Automatic Train Protection based on ETCS system of Train Protection and Warning System (TPWS) for 1337 km. A Rewari-Haryana-JNPT-Mumbai line connecting 43 stations, the system will be deployed on-board on the first 200 electric locomotives.

Indian Railways

- High-speed Rail Services
- Hitachi Rail STS India (HSTS) is a pioneer in mainline signalling and telecommunication. It has digitally synchronized an estimated 976 stations with computer-based electronic

interlocking system. This includes Kharagpur with an astonishing 800 routes.

- HSTS significantly contributed to the completion of the distinguished project of re-signalling of the existing corridor of 410 km long electrified route from Kanpur to Ghaziabad, is one of the busiest sections of Indian Railways.
- Additionally, HSTS has delivered Train Protection Warning System (TPWS) to Chennai sub-urban MRTS network and to Gatiman Express trains from Delhi to Agra.

Urban Transport including Mass Rail Transit (MRT), Light Rail Transit (LRT) and Monorail Systems

- For Mumbai metro Line 2 & 7 Hitachi India is delivering end-toend solutions, products and services for high voltage, energy efficient propulsion system along with TCMS for driverless or Unattended Train Operations.
- Successfully implemented MRTS, LRT/Monorail projects by providing Communication Based Train Control (CBTC) signalling and telecommunication for Noida Metro and Mumbai Monorail.

Projects on Track

- Navi Mumbai Metro's turnkey package for "The City and Industrial Development Corporation of Maharashtra" (CIDCO).
- Signalling and telecommunication package for Kolkata Metro Rail Corporation (KMRC).

To meet Global India's mobility aspirations, Hitachi India is actively seeking to bring its state of the art Japanese and European technologies of the urban transport MRTS, Metrolite and Monorail opportunities in the pipeline across India, thus empowering the society.





Noida Metro: Fulfilling the Dreams of Millions with Seamless Connectivity



On the Path to Progress - The Rise of Smart Mobility in India



Transforming Urban Mobility in India

Scan / Click to read more



| Elevators & Lift

OVERVIEW

India's stratospheric growth is manifesting in the rapid expansion of its urban areas are not only territorially but vertically as well. The evolving urban structures and the Government's push to minimize carbon footprint is creating a niche for innovative vertical and lateral transit systems that are efficient, comfortable, and tenacious.

Hitachi Lift India Pvt. Ltd. with its end-to-end bespoke products and service solutions is well-poised to address the new challenges of modern urban structures, public spaces, and transit hubs.

The group is universally acknowledged for its manufacturing, delivery, installation, and maintenance of

- High speed albeit energy-efficient elevators for upscale skyscrapers that conform to global safety standards and
- State-of-the-art sidewalks, escalators, moving walkways for an exceptional transit experience.

Hitachi Lift India endeavors to impart a safe and seamless transit experience to millions of people navigating today's modern structures. Leveraging its collaborative creation capabilities, Hitachi is delivering customized solutions adhering to the customers' needs in India. The products through their robust built, optimized performance and design, support the Government's vision of a low-carbon-footprint society.

Adorning some of the large-scale office buildings and commercial spaces in the country, Hitachi's elevators are designed to facilitate comfortable passenger transportation by adopting a Destination Floor Reservation System (DFRS) which assigns elevator immediately to passengers on registering destinations in the lobby then indicating the assigned elevator. With the help of Future Reference-Trajectory Control, Hitachi Lift India aims to minimize waiting time by predicting future travel needs from learned operation patterns.

■ Hitachi Lift India Pvt. Ltd.

Envisaging a new future in Transit Systems

Founded in 2008, Hitachi Lift India Pvt. Ltd., a Hitachi Group Company, is backed by the group's over 110-year-old credible urban solutions proficiency. Today it is regarded as one of the foremost solution providers of vertical transits and sidewalks globally and is steadily increasing its footprint in India with a strong operational presence across Delhi-NCR, Mumbai, Bengaluru, Chennai, Pune, Hyderabad, and Ahmedabad.







Activities in INDIA



Hitachi is in the process of executing 49 units of elevators and escalators (22 elevators in the office block that has already been delivered, 23 elevators & 4 escalators) in the hotel & convention centre of the country's largest twin branded hotel in Bangalore. The prestigious project is a partnership of Embassy Group and Hilton the state-of-the-art project constitutes of a 5-star Hilton hotel and 4-Star Hilton Garden Inn. The bespoke high-speed elevators are accorded the Highest Energy Efficiency class rating.



19 Mobility



Water

As the world awakens to a colossal depletion of natural resources in pursuit of growth and burgeoning population, resolving acute scarcity of potable water has taken center stage globally. Innovative use of OT* x IT has emerged as the key to a strengthened future.

* Operational Technology



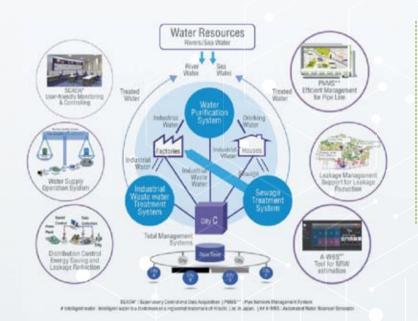
OVERVIEW

Since its founding, Hitachi has keenly pursued resolving society's myriad challenges through collaborative co-creation. Leveraging its comprehensive technological prowess in physical and digital space the group's Intelligent Water Environment Solutions are enhancing Social, Environmental, and Economic values of customers. By synergizing new vistas for optimization, conservation and equitable distribution of this natural resource is vital to all known forms of life Hitachi Social Innovation Business is Powering Good.



Creating value for new Water Environment Solutions by fusing these technologies

Hitachi Intelligent Water System



Explore Hitachi's Intelligent Water Environment Solutions





Piped Network Management System Water Distribution
Control System

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Pipe Network Management System

The system can make water service work efficiently by locating system-accumulated customer information on maps to realize safe and secure water environments by using a variety of simulation functions.

Water Supply Operation System

Forecasts water demands based on temperature, weather, and other factors and sets water intake and supply plans.

Water Distribution Control System

Control of distribution pumps and control valves under optimum conditions using hydraulic analysis.

Water Leakage Management System

Estimates leakage area within District Metered Area (DMA) based on Hitachi's original algorithm with collected data for effective leakage management.

Automated Water Balancer Simulator (A-WBS)

Tool for automatic estimation of NRW and volumetric real losses. Uses data compensation techniques to solve issue of uncertain and missing metered data.

The Hitachi advance water ICT solution

Contributes to efficient operation and energy saving and energy creation for realization of low energy consumption and low carbon society.

Contributes to efficiency gains for operators in managing water leakage, as well as higher earnings due to reduction of leakage by our proprietary simulation analysis.

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Delivering Solutions to the meet world's water needs

A globally recognized name in water solutions, Hitachi Aqua-Tech Engineering is assisting governments, societies, and businesses to optimize their water resources through their OT* x IT enabled customized water management solutions. In the process of improving Quality of Life, augmenting sustainability and contributing to meet the country's SDGs.





Hitachi Agua Tech Engineering





Company Web Page: https://hitachi.co.in/social-innovation-business/social-infrastructure/industrial_solutions/water-environment-solution

Global Iconic Projects

Swimming Pools

Bio-Pond

Water Playground

Hitachi Aqua-Tech provides a comprehensive one-stop solution from Concept and Design to Build and Maintain. Over the years, Hitachi Aqua-Tech has been the market leader setting benchmarks or innovation, quality workmanship and reliability often exceeding our clients' expectations

Biological filtration keeps natural ponds clear ar

biologically clean. Our proprietary MARSystem ha

been installed in hundreds of ponds and are still

working after being more than 10 years in operation

Playing with human senses, Hitachi Aqua-Tech driven to create joy, excitement and promot self-discovery and social interactions through ou

water play park concepts. We take pride in creating

fun-filled and safe playgrounds that are gua

to keep children occupied all day.





For centuries, water has been used as a form of relaxation and ancient healing for the body & mind. Hitachi Aqua-Tech provides an array of possibilities in design and building of Hydro massage spas and pools for wellness centres and hospitals.



Water Feature Systems



Water Elements bring life to the Architecture and Landscape. Whether as the main or supporting element, water impresses, enhances and fascinates - a fact well illustrated by the

Proposed Water Features and Pools in India









Transforming India's leading City Gas Distribution Network: **Building a Low Carbon Society**

Digitally Empowering City Gas Distribution in India

Alarmed by the precipitous depletion of the natural resources around the world, the Governments, societies, and businesses are vying for cleaner and greener energy sources. The abundance and the unmatched quality of gas as the least polluting fossil fuel available (1) is the prime motivator for the Government of India to build a Gas-based Economy.

Hitachi India, an innovation partner to the Government is leveraging the group's OT* x IT capabilities to deliver comprehensive IoT enabled Lumada platform solutions. The digital transformation is optimizing operative capabilities of expanding City Gas Distribution (CGD) networks.

The distinguished solutions entail

- Establishing Integrated Command and Control Centre for CGD
- Real-time data acquisition from Remote location of Sectionalizing Valve (SV), City Gas Station (CGS), CNG station using secure Wireless Network/GPS/GPRS over deterministic protocol.
- Increasing Safety with remote operations.
- Using Clean energy like solar to power remote locations.
- Common OT* x IT framework is aiding customers in the digital transformation of the complete CGD value chain.

Cumulatively, Hitachi India's cutting-edge data-centred Lumada solution suite is empowering CGD service providers to impart safer, reliable, economical, and efficient green energy solutions to people. In doing so it is enhancing the Social, Environmental, and Economic values of the customer and improving the Quality of Life of citizens.

* Operational Technology

Steel

<u>O LUMADA</u>

The Government of India is set on a farsighted vision to modernise India's Social Infrastructure. Given the gargantuan scale the endeavour will need a surfeit of steel and other forms of metal components and raw materials. Hitachi India, as a global technology leader is helping the steel and metal industry in India to optimise its efficacy and resources to deliver high-quality products through the amalgamation of cutting-edge automation systems and digital solutions. Combined with the group's traditional knowledge base of steel processes, penchant for quality and innovation, Hitachi offers end-to-end transformational experience to customers.

INTEGRATED COMMAND CONTROL CENTER

Industrial IoT Platform

OVERVIEW

For over a decade the Process Automation Engineering Group (PAEG) of Hitachi India Pvt. Ltd. has established its leadership in co-creating innovative technological solutions for process industries like steel & metal. Ushering bespoke Industry 4.0 solutions by leveraging its Next Generation IIoT-PAC controller concurrent with digital solutions, Hitachi India is revolutionizing customers' operational and maintenance practices as well. Thus, reducing downtime and maximising efficiency while enhancing the Environmental and Economic values of the customers.



· Co-creating innovative Citizen Centric Solution

- · Integrated OT* x IT Digital Platform
- · Safe, Secure & Optimized Operation
- · Impactful real-time data insights
- · Asset Optimization
- · Integration with Hitachi Payment Gateway services
- * Operational Technology

The solutions being offered are-

- 1) One-stop-shop for industrial automation projects (new and revamping) for steel processing lines and standalone applications
- 2) Highly inclusive engineering services along with after-sales support and maintenance services
- 3) Control solutions (Level 1 & Level 2)
- 4) Infuse digital & IIoT solutions into traditional electrical control systems spurring performance and profitability of businesses.
- 5) Hitachi provides seamless connectivity between physical systems and cyber systems through IoT ready Next Generation HX Hybrid controller. This allencompassing digital architecture empowers organizations to secure advantage of connected systems and Edge Computing.



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Power Electronics Products

OVERVIEW

As a credible partner to India's technologypropelled growth, Hitachi India is amplifying the contribution of non-polluting renewable energy sources in the nation's energy mix to meet the rising demand. Persistently leveraging its vast capability to coalesce OT* x IT for the greater good, Hitachi Hi-Rel Power Electronics Private Limited is co-creating avant-garde solutions, which are supporting customers including the National Grid to harness the unbounded renewable power of the Sun and illuminate the lives of millions. The products endorse the Government's 'Make in India' and 'Power for All' visions while contributing to achieve a carbon-neutral society. Consequently, enhancing Values along with empowering the society, the businesses and improving the Quality of Life of citizens.

* Operational Technology

■ Hitachi Hi-Rel Power Electronics Pvt. Ltd.

At the forefront of Social Innovation in India's power sector, Hitachi Hi-Rel Power Electronics Private Limited, a Hitachi Group Company, is widely considered as a numero uno manufacturer and provider of Industrial UPS, IT & Infra UPS, medium & low voltage variable frequency drives, grid-tied solar inverters, air compressors, and railway inverters. Thereby, helping in bringing the nation's dream of clean and green power to realization.

Hitachi Hi-Rel is recognised for delivering solutions encompassing mission-critical applications for Refineries, Petro-Chemicals, Power Generation, Steel & Metals, Process Industries, and Critical Data Processing Applications. Thus, it's highly mechanized manufacturing facility at Sanand near Ahmedabad, Gujarat (India) is addressing challenges of a wide array of vital industries. By delivering end-to-end solutions, robust service network, on-time deliveries, and uptime of the product, the company scores high on customer satisfaction. Consequently, establishing a dominant position in global markets like South East Asia, Middle East, Africa, and Brazil.









Activities in INDIA



In India by beckoning its digital fusion capabilities, Hitachi Hi-Rel is partnering with India's progressive growth while ensuring a low carbon-footprint society.

It's recent induction to the 3 GW club recapitulates its commitment to enhance the Nation's Environmental values while building a resilient and self-reliant renewable energy future.

Hitachi Hi-Rel is concurrently enhancing Social, Environmental, and Economic values of leading organizations and institutions across sectors. They include Rashtriya Chemicals & Fertilizers Limited (RCF) - a distinguished name in fertilizer and chemical industry, Indian Railways - India's lifeline and Bharat Heavy Electricals Limited (BHEL) India's largest power generation equipment manufacturer.









A Nation's Dream - Po 'Power for All' Ro

Powering India: Renewable Projects and Challenges

Boosting India's Solar Energy Potential for Achieving Green Energy Economy

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■ Hitachi Energy India Limited

Hitachi Energy in India (listed on the National Stock Exchange of India Limited (NSE) and BSE Limited (BSE) as POWERINDIA, Scrip code 543187) is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain.

From traditional power to expanding green energy and balancing new demands like EVs, our technologies facilitate a safe, reliable, and efficient integration, transmission, and distribution of bulk and distributed energy. Our solutions contribute seamlessly to the Government of India's vision of **Power for all, 450GW of renewables by 2030 and EV goals.**

Continuously investing in pioneering technologies, in the past year alone we launched solutions that can transform the way we produce, consume, and interact with power. **Grid eMotion™** portfolio including cash charging technology that can top up the bus battery in seconds as passengers board and deboard; the evolved Digital Enterprise software solution, amalgamated into Hitachi's Lumada ecosystem. We also launched **EconiQ™**, our eco-portfolio to have a smaller carbon footprint, reduce dependence on greenhouse gases. As a climate-conscious company, Hitachi Energy India announced its ambition to become **carbon neutral in its own operations by 2030 on May 26, 2021.**

We have been making in India for over six decades and today have 16 manufacturing units across five locations and 17 sales offices supporting customers plan, build, operate and maintain sustainable power infrastructure.

CSR objectives of Hitachi Energy India:

The company is committed to a sustainable and inclusive development of the community's social capital through active engagement.







Highlights of activities in 2021:

- We partnered with a convoy of private and government hospitals to support Covid-19 relief efforts.
- To enable a higher patient intake, we funded medical infrastructure ramp-up for CV Raman and Prakriya hospitals, facilitating makeshift care units with over 100 extra beds (including those for intensive care).
- The Company is also facilitating the supply of critical equipment such as infusion pumps, defibrillators, ECG machines, crash carts, and neo-natal resuscitation kits and more.
- For the last-mile delivery of Covid-19 vaccines, we have partnered with a nonprofit organization, C-CAMP, for funding R&D and deployment of portable refrigerated containers.
- We are also funding medical/surgical support to under-privileged children through NGO 'Child Help foundation'.
- By partnering with Sikshana, we sponsor the education of 80 high school girl science students.





Harnessing Hydropower to Boost India's Renewable Energy Capacity

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Rapid Digitalization and proliferation of digital technologies have unlocked new avenues to lead a smarter and better life and benefit from new ways of living. An amalgamation of credible and innovative OT* x IT solutions, Smart Life brings more efficiency, economy, productivity, integration, and sustainability in society.

* Operational Technology

Automotive Systems

India is emerging as one of the leaders in manufacturing and a rapidly burgeoning automobile market. Discerning customers and the Government's global thrust towards a low-carbon-footprint society is propelling manufacturers to adopt technologies and components that are efficient, durable, and environment friendly.

OVERVIEW

On January 1, 2021, Hitachi Automotive Systems, Ltd., Keihin Corporation, Showa Corporation, and Nissin Kogyo Co., Ltd. concluded management integration to form Hitachi Astemo, Ltd., a leading provider of mobility solutions to the automotive industry. Hitachi Astemo will make the world a better place by providing mobility solutions that are more environmentally sustainable, with enhanced safety and comfort. By combining the world-class technologies of Keihin's powertrain business, Showa's suspension and steering businesses, and Nissin Kogyo's brake

system business with Hitachi Automotive Systems' global strengths in its three core businesses of powertrain systems, chassis systems, and advanced driver assistance systems, the integrated company will be a technological leader and a worldwide mega-supplier to the mobility industry.

Hitachi Astemo in India

Hitachi Astemo products and services are aligned with Government Policies of Safety, Health, and Environment and add value to customers with a vision of climate resilience. Hitachi Astemo is aiming to achieve a comfortable mobility society with a focus on Environment and Safety, through its 7 companies spread across various geographies in India. They are Hitachi Astemo Chennai, Pvt. Ltd., Hitachi Astemo After Market Pune, Pvt. Ltd., Hitachi Astemo Brake Systems India, Pvt. Ltd., Hitachi Astemo Gurugram Powertrain Systems, Pvt. Ltd., Hitachi Astemo FIE, Pvt, Ltd., Hitachi Astemo Rajasthan Brake Systems, Pvt., Ltd., and Hitachi Astemo Haryana, Pvt., Ltd.

Brake Systems

The products under the brake systems are developed with a focus on Environment (Less weight, lower emissions, and Increased fuel efficiency) Safety (Road safety and Cyber security in a connected car). These systems contribute towards reduction in emissions and increase in safety of end-users leading to enhancing the quality of citizen's life. The product category includes designing, developing,

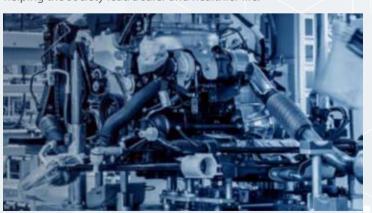


Company Web Page:
https://www.hitachi.co.in/about/hitachi/directory/
group_companies/hitachi-automotive.html

manufacturing, and supply of automotive brake parts and components comprising Disc Brakes, Drum Brakes, Automatic Parking Brakes, Brake Hoses, Brake Rotors/Drums, Aluminum Castings(brake & non-brake castings), and Fluids. The companies offering brake systems components include – Hitachi Astemo Brake Systems India Pvt. Ltd. which is located in - Chakan & Jalgaon (Pune), and Manesar (Haryana), and Hitachi Astemo Rajasthan Brake Systems Pvt. Ltd. is situated in Neemrana (Rajasthan).

Powertrain and Safety Systems

In the Powertrain and Safety Systems business the strategy is to develop new winning core technologies and products which contributes towards achieving mobility with strong focus on environment and safety, aligned with emission standards – Bharat Stage-6 (BS-6) /Corporate Average Fuel Economy-phase 2 (CAFE-2) norms. Powertrain Products like High energy Ignition Coil offers improved fuel efficiency of a car, stereo camera, and Electronic Control Unit (ECU) provides enhanced safe driving and cyber security to a car in a connected environment. The future focuses on environmentally sustainable products with reduced weight, lower emissions, and increased fuel efficiency, enhanced safety, and cyber security in a connected car. Hitachi Astemo Chennai, Pvt. Ltd. (located in Chennai- Tamil Nadu) and Hitachi Astemo Gurugram Powertrain Systems, Pvt. Ltd. (Location), and Hitachi Astemo FIE, Pvt. Ltd. (Location), profoundly offers innovative products that will result in minimizing the emissions and increasing the safety of end-users, helping the society lead a safer and healthier life.





Aftermarket

Certified as IATF16949 organisation, Hitachi Astemo Aftermarket Pune India Pvt. Ltd. with its comprehensively established Value Chain supports the Entire Product Life Cycle of Automotive Mechatronics products like Ignition Modules, Mass Air Flow Sensors, Exhaust Gas Pressure Sensors, Blow Fan Regulators, Pump electric Modules, Differential Pressure Sensors, etc. from Concept - Build - Deliver. The company is 100% EOU (Export Oriented Unit) established in 2004 to support Global Automotive Tier I's for their OE and Aftermarket requirements of various Hitachi Astemo Group Companies across the world.

Activities in INDIA



Recognized for its exhaustive product portfolio, Hitachi Astemo takes pride in a stellar list of customers that include various market leaders like Maruti Suzuki, Mahindra, Toyota, Renault-Nissan, Honda India, Ford etc. with exports to Japan, Europe, Brazil, Mexico, Turkey, Malaysia, and France. The global standard products like ZOHe AST low drag disc brake and Automatic Parking brakes, Valve Timing Control, High Energy Ignition coil, Electronic Throttle Body, Central Gateway ECU, and Stereo Camera are contributing towards enhancing the Social, Environmental, and Economic values of the society.



Helping India drive green

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27 Automotive Systems 28



Smart Life and Eco-friendly System

OVERVIEW

For a better life and a better world

Hitachi's hi-tech range of home appliances comprises of room air conditioners, refrigerators, and air purifiers among others. Designed to improve Quality of Life and optimize performance, the products consistently deliver improved optimization and demonstrate energy efficiency. Hitachi's hi-performance products bring seamless living and working experience to homes, offices, and community spaces.



Arcelik Hitachi Home Appliances B.V.* (AHHA) has been established on July, 2021.

■ Johnson Controls-Hitachi Air Conditioning India Ltd.* **Manufactures Air Conditioners / Trading of Refrigerators and Air Purifiers**

* Subsidiary of equity-method associate

Hitachi High-Tech India Pvt. Ltd.*

Hitachi Hi-Tech focuses on resolving customers' challenges by leveraging its core technologies in 'Observation, Measurement and Analysis.' It offers various type of analytical instruments that have the ability to contribute to 'Make in India' initiative of Govt. of India. We also aim at enhancing the accuracy and quality of analysis in the process from R&D to manufacturing, hereby contributing to the Social, Environmental, and Economic values.

* Hitachi High-Tech has been integrated into Hitachi's Smart Life sector since FY2020.





I Construction Machinery

India is on a mission, to become a global economic power witnessing multifaceted growth that is spurring the expansion of urban areas and a definite need to modernize Social Infrastructure, Irrigation, Mining, Agriculture among others. With the Government of India's emphasis on a carbon-neutral society, the need for technologically advanced, efficient, and robust construction machinery equipment is on the rise.

OVERVIEW

Delivering end-to-end global standard construction solutions

■ Tata Hitachi Construction Machinery Company Pvt. Ltd.

Tata Hitachi Construction Machinery Company Pvt. Ltd. is recognized for its innovative, high-performing, fuel-efficient and durable Construction Equipment, which is a robust confluence of Operational Technology and Information Technology.

Tata Hitachi Construction Machinery Company Pvt. Ltd. is partnering with the nation and the customer to build a New India.

Aligned with India's Sustainable Development Goals (SDGs) under the United Nations Development Program (UNDP) and a priority to achieve a carbon-neutral society, Tata Hitachi is working towards large-scale product and process CO₂ reduction by increasing the use of renewable energy, lowering product fuel consumption, enhancing product efficiency, and augmenting the use of electric equipment technology.







Digitalizing Machine Inspection for **Uninterrupted Mining Operations**

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Manufacturing and Sales of Construction Equipment







As of September, 2021

^{*} Subsidiary of equity-method associate

Metals

OVERVIEW

Production of Original Materials and Components with Key Role in Innovation (High Functional Materials & Components)

High functional materials play an essential role, serving as the seeds that nurture new innovations. Examples of such materials include metals such as amorphous metals that can be used to build transformers and inductors that are small, light, and highly efficient. In addition to this, Hitachi manufactures wire and cable products such as cables used in rolling stock, and chemical materials such as anode material for high-capacity lithium-ion batteries having excellent discharge load characteristics. These materials are all based on original technologies built up by companies in the Hitachi Group, and are widely praised for their originality and innovation.



Amorphous Metals

■ Hitachi Metals (India) Pvt. Ltd.*

Design, manufacturing, and sales of Amorphous METGLAS® / Nano-Crystalline FINEMET® Soft Magnetic Electronic Cores / Sales & Services – High Grade Metal Products / Automotive Components / Local warehousing of specialty steel / Tool Steel / Amorphous Metals / Cable Products

* As of December, 2021



HNV Castings Pvt. Ltd.

Manufacturing of Ductile Iron Castings



Activities in INDIA



As a part of Hitachi's Social Innovation Business initiative, Hitachi Metals (India) Pvt. Ltd. believes in the concept of multilateral collaboration between multiple organizations, minds and insights; effecting materials and ushering engineering-driven transformation in business efficiencies, governance, and consumers' lives, which is truly demonstrated in the company's Energy Efficient Amorphous Metal for distribution transformer business. Hitachi Metals (India) Pvt. Ltd. is a sales and marketing center and provides high grade metals products and materials, magnetic materials & applications, functional components & equipment, wire, cable & related products for expanding sales of Automotive, Infrastructural Steel & Allied Industries, Electronics and Energy Saving Products and Materials. Hitachi Metals (India) also has a manufacturing setup for design, manufacturing & sale of Amorphous METGLAS® and Nano-Crystalline FINEMET® Soft Magnetic Electronic Cores. The company aims to become the world's leading high-performance materials company by contributing towards future innovations in the field of energy, infrastructure and automotive by continuously challenging ourselves to meet the ever-evolving society needs.

HNV Castings Pvt. Ltd. is a manufacturer of ductile iron castings for applications in the automotive industry, with plants in Palwal (Haryana) and Neemrana (Rajasthan).





As the world is changing rapidly, the society is seeking suitable resolutions for its evolving challenges. Since its founding Hitachi's Social Innovation Business has strongly relied on the group's robust Research & Development capabilities to deliver solutions with an agility that adapts to the evolving societal and business environments.

With the vision to emerge as a global innovation leader enhancing Social, Environmental, and Economic values, Hitachi Research & Development (R&D) aims to create a sustainable and human-centric society supported by an open innovation ecosystem.

In India, aligned with the Government's 'Digital India' and 'Make in India' initiatives, Hitachi R&D by interlacing the group's vast OT* x IT solutions are significantly contributing towards the vision of a carbon-neutral society.

By stimulating innovation through Data Analytics, IoT, Al enabled solutions, Hitachi R&D's global centres of excellence aims to transform sectors in entire Hitachi's operative business spectrum. Its research initiatives envision to solve rising challenges in water systems, energy management systems, smart city solutions encompassing digital transactions, cyber security, mobility, and much more.

As Hitachi focuses on enhancing Social, Economic, and Environmental values the R&D group actively supports the endeavour by developing the world's leading technologies across energy, control, material, mechanics, systems, electronics, digital technologies, and healthcare.

Today, these solutions are continuously becoming a part of people's everyday life. At the back of Hitachi's varied solutions, the R&D group has contributed in the digital delivery of public services, seamless and low-polluting urban commuting and transit, optimizing water, energy and power distribution, e-Education, e-Healthcare, manufacturing, Railways, recyclable energy, payment systems and many more.

Established in 2011, the Indian centre of Hitachi Research & Development (R&D) is actively working with partners and customers to improve the Quality of Life of citizens and empower them exponentially.

Today, with digitalization as the common thread, the R&D centre is engaged in developing a wide spectrum of technologies - growing as one of the leading R&D centres and contributing towards a sustainable society.

31 Others Research & Development 32

^{*} Operational Technology

Corporate Social Responsibility



In line with the Hitachi Group Corporate Credo of contributing to the society through the development of superior, original technology and products, we strive to realize a sustainable society by integrating social and environmental expectations of the Indian society with our management practices and CSR Initiatives.

Skill Development – Ginou Prashikshan

Healthcare professionals COVID-19 **Skill Enhancement Program (CSEP)**

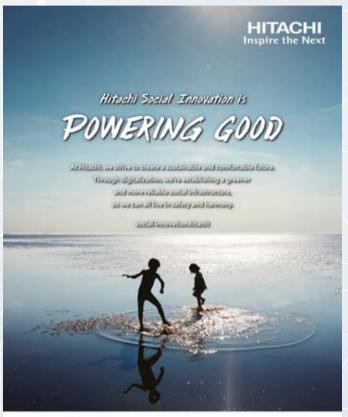
Hitachi India's program envisages to provide skill training to the aspirational candidates in the trade courses of Assistant Electrician and Data Entry Operator. As part of Hitachi India's continued support towards the Indian society during the COVID-19 pandemic, announced COVID-19 Skill Enhancement Program (CSEP) to certify 4,598 Medical professionals. This initiative was aimed at standardization of COVID-19 related deliveries across locations and in augmenting and building the capabilities of the existing overstretched medical staff. To enable livelihood opportunities to the unemployed rural youth, 115 candidates were trained in two centers in Bengaluru, Karnataka and Delhi. Hitachi India partnered with Don Bosco Tech Society to contribute towards Government of India's initiative of Skill India Mission. Under this initiative two trades – Assistant Electrician and Data Entry Operator were conducted by selected training partner from NSDC's recognized partner list, Don Bosco Tech Society, who imparted trainings to the 115 youth in rural and urban areas of Bengaluru, Karnataka and Delhi. Altogether, 77.1% (youth candidates) candidates got placement upon successful completion of the course.

Education – Ujjwal Mirai

Atal Innovation Mission (AIM) including Self-Employment and Talent Utilization (SETU) is the Government of India's endeavor to promote a culture of innovation and entrepreneurship. Hitachi India's program is aligned with Niti Aayog's vision to 'Cultivate one Million children in India as Neoteric Innovators.' The objective was to serve AIM as a platform for the promotion of the world-class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities, particularly in technology driven areas. Through this initiative for second year Hitachi India Pvt. Ltd. provided access to technology and expertise in 2 Kendriya Vidyalaya School and 1 Government School in Delhi to reach out to more than 3000 children. The program enables fostering of creativity and imagination among the Government school children and inculcate design thinking, problem-solving, and adaptive learning skills amongst them. Upon successful completion of the second year, approx. 60% of students demonstrated improved learning outcomes in digital Literacy, robotics, coding and software. These students also created science prototypes as a part of the literacy project.

BRAND COMMUNICATION MESSAGE









PRINCIPAL PARTNER FOR COP26



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To learn more about how we are powering good, visit:

https://social-innovation.hitachi/en-in/









