



Building India – Japan Partnership

1st Japan – India Business Seminar 2021

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India-Japan Economic Overview



The bilateral trade between India and Japan for FY 2019-20 totaled USD 16.85 billion



India's exports from Japan amounted to USD 4.5 billion while India's import from Japan amounted to USD 12.43 billion



Japan ranked 12th among the major trading partner countries in the year 2019-20



1,441 Japanese companies were registered in India as of October 2018



Japan is a key ODA partner for India supporting India's efforts for accelerated economic development in priority areas like power, transportation, environmental projects and projects related to basic human needs



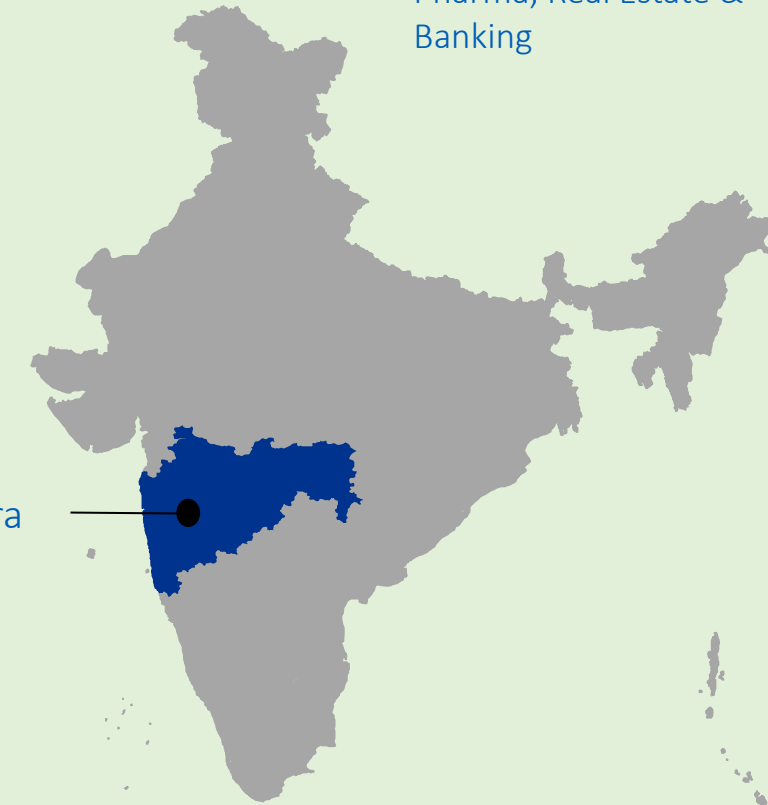
Startup-India and Japan Innovation Network (JIN) have signed a MoU in June 2018 on innovation collaboration with a focus on SDGs (Sustainable Development Goals) connecting two start-up eco-systems

JN Port is located in Mumbai, Maharashtra; which is the biggest and the most attractive investment destination in India with robust policies, mature infrastructure and skilled manpower.

23%

Of the FDI from Japan in India is focused on Maharashtra (2000 – 19)

Major sectors attracting FDI include Telecom, Steel, Pharma, Real Estate & Banking



Maharashtra

21%

Of the exports from India to Japan are from Maharashtra (2019–20)

Industrialization based on port linkages

Key Synergies

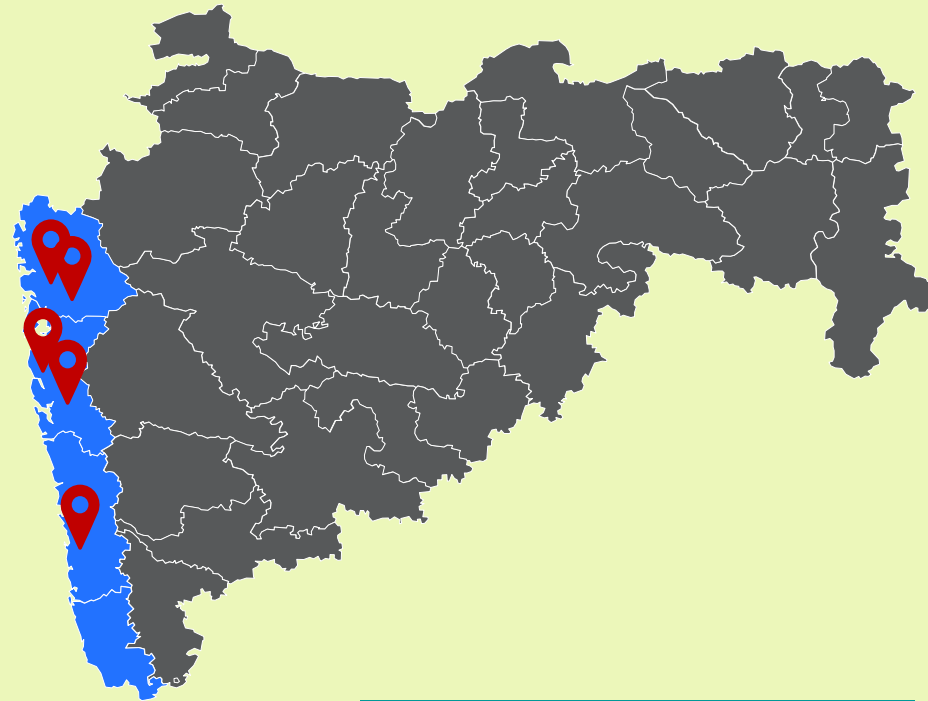
Dedicated land earmarked for plug & play to meet investment demand

Gov sponsored port connectivity will work in tandem with the state's plans

Will spur the development of Coastal Economic Zones and port linked industry clusters

MIDC will build logistics capacity and connect port linkages to industrial demand

The State's Coastal Plug & Play Locations



- Bulk Drug Park – 4,900 acres
- Dighi – 15000 acres
- Khalapur – 1000 acres
- Additional Taloja – 700 acres
- Watad – 2270 acres



Government of India Support

Port Connectivity



Rail Connectivity

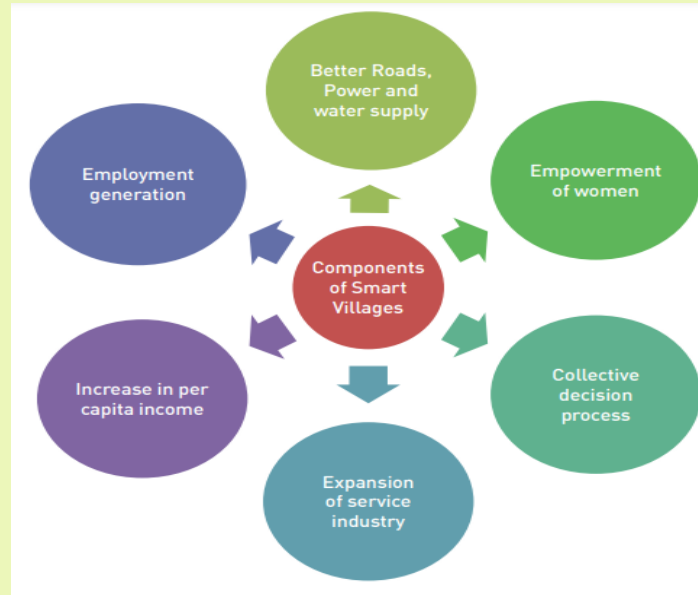


Road Connectivity



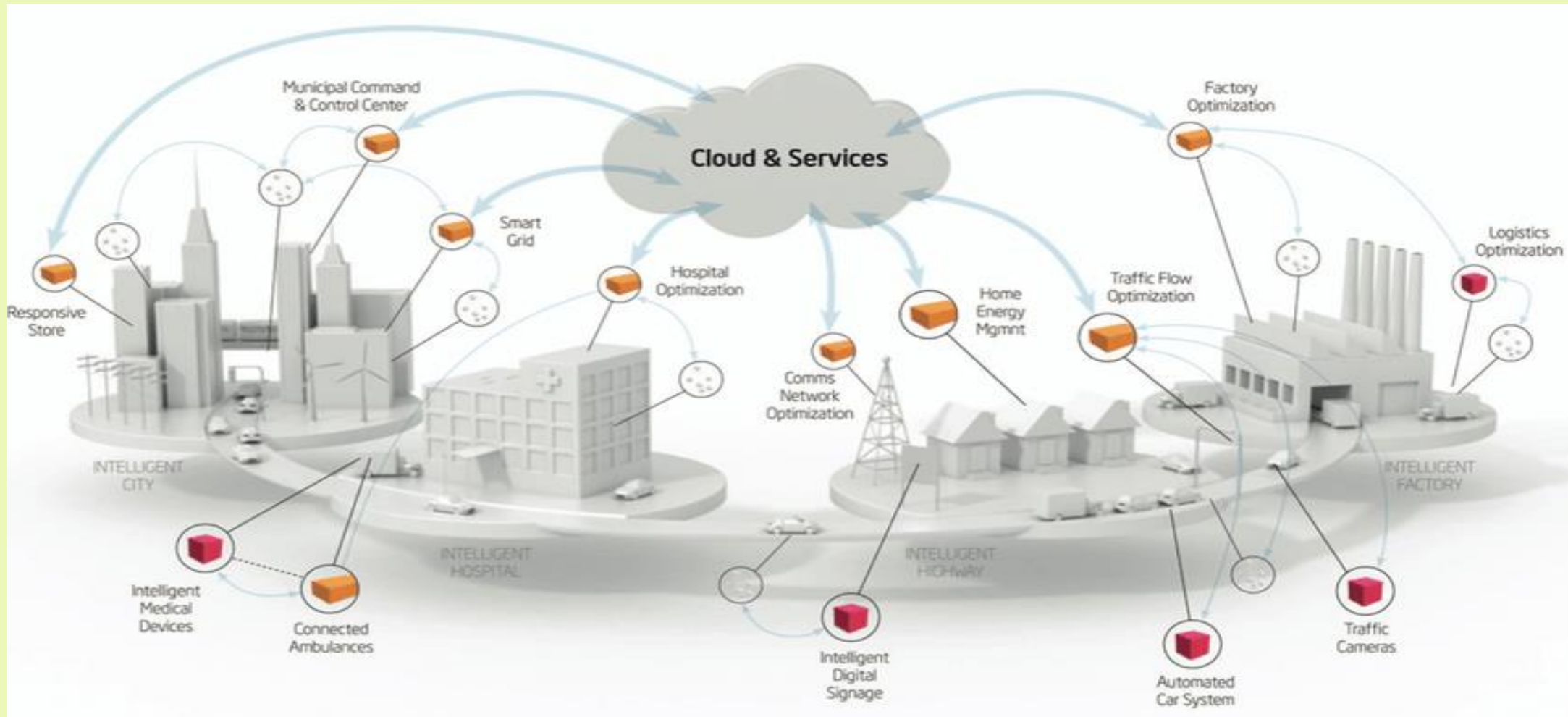
Smart City – Opportunities in India

Govt is developing 100 smart cities across the country



- **Water supply systems** (monitoring and leak detection through SCADA, minimizing distribution losses and revenues through smart metering)
- **Urban transport** (integrated traffic management systems, smart parking, green transport)
- **Energy efficiency** (reducing energy consumption in municipal buildings, street lighting, and water supply)
- **Urban planning** (transit-oriented development, automated building permission systems)
- **Environment** (Monitoring systems - ambient air quality, water quality in rivers and other water bodies, soil quality in industrial estates)
- **Solid Waste Management** (GPS enabled monitoring of waste bin levels and clearances and movement of waste collection vehicles)

IOT Operations in a Smart City



Opportunity for Smart Cities around DMIC



- A Dedicated Freight Corridor connecting NCR-Delhi region to JNPT and Dighi Port with a Length of 1,483 km between Delhi and Mumbai aimed at developing Industrial Nodes across 6 states in India.



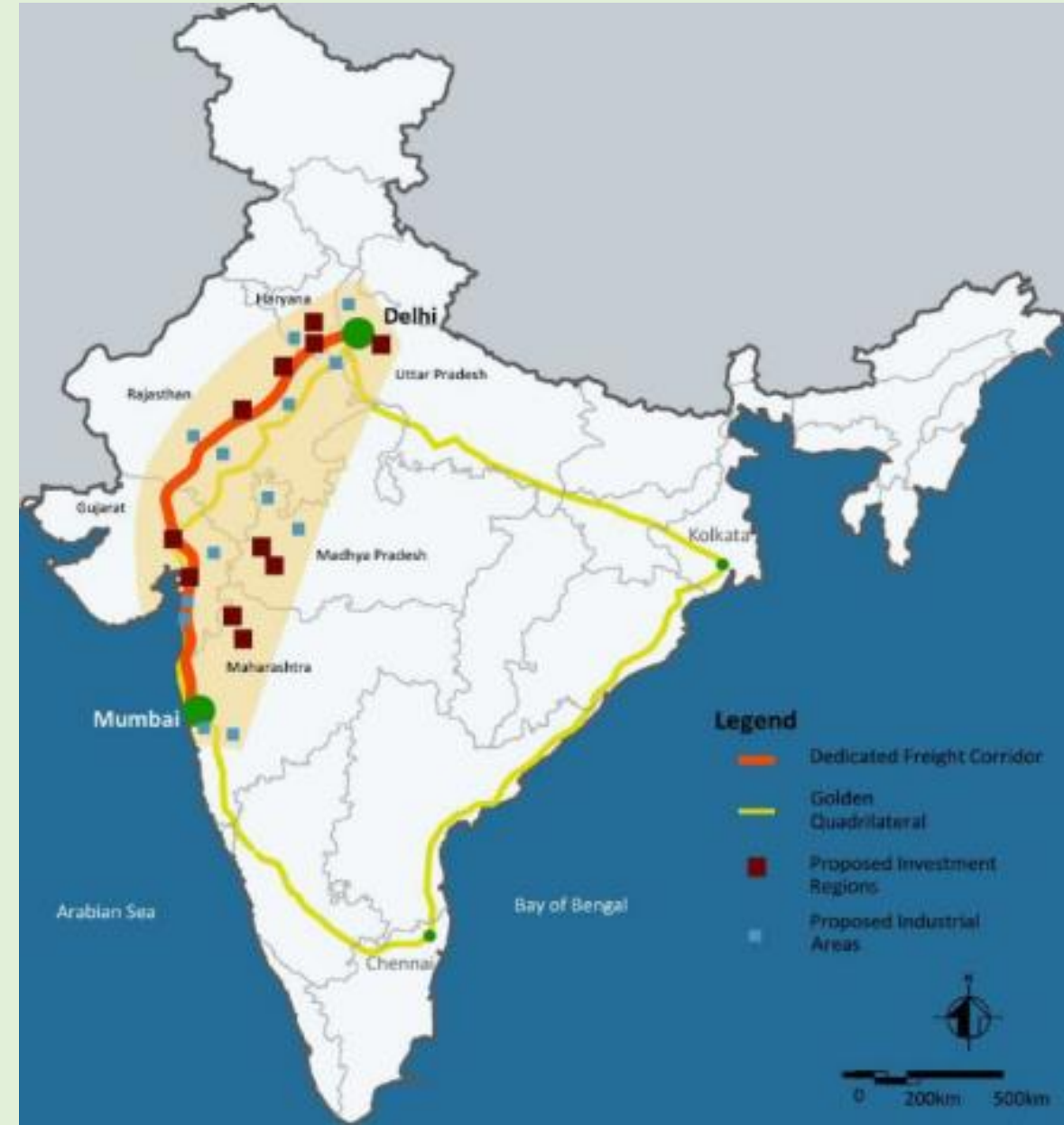
- The Delhi-Mumbai Industrial Corridor (DMIC) passes through Rajasthan 39%, Gujarat 38%, Maharashtra 10%, Haryana 10%, NCR of Delhi 1.5%, Uttar Pradesh 1.5%.



- Major expansion of infrastructure and industry- clusters, rail, road, port and air connectivity in the states along DMIC planned.

DMIC

Aims to develop new industrial cities as 'Smart Cities' by converging next generation technologies across infrastructure sectors.



Food Processing & Cold Chain in proximity of JN Port



Sector Overview

Share in GSDP (%)	7%
Share in Industrial GSDP (%)	15%
Share in India's Output (%)	14% (Meat)
	11% (Marine)
	19% (Fruits and Vegetables)
	13% (Oil)
	16% (Dairy)
20% (Processed food items)	
Share in India's Exports (%)	15%*

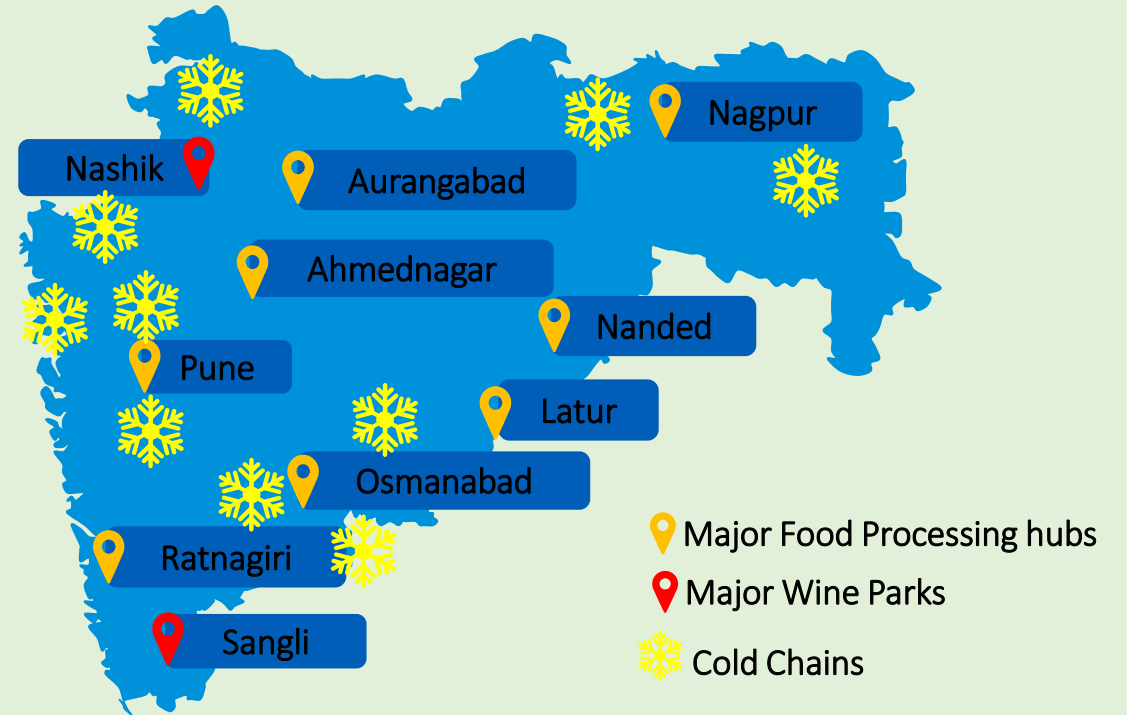
Product based Clusters

Fruits	Nashik, Ahmednagar, Pune, Satara, Solapur, Osmanabad
Jaggery processed foods	Kolhapur, Pune, Satara
Fruits Processing	Pune, Aurangabad
Pulses Processing	Nagpur, Jalgaon
Prepared Foods	Dhule, Beed
Bakery Products	Mumbai, Jalna, Jalgaon
Beverages	Nashik, Raigad, Solapur
Fisheries	Thane, Raigarh, Ratnagiri, Sindhudurg
Milk	Pune, Satara, Sangli, Nashik



2 Dedicated Institutes

- Central Food Technology Research Institute (CFTRI), Mumbai
- Marathwada Agriculture University, Parbhani

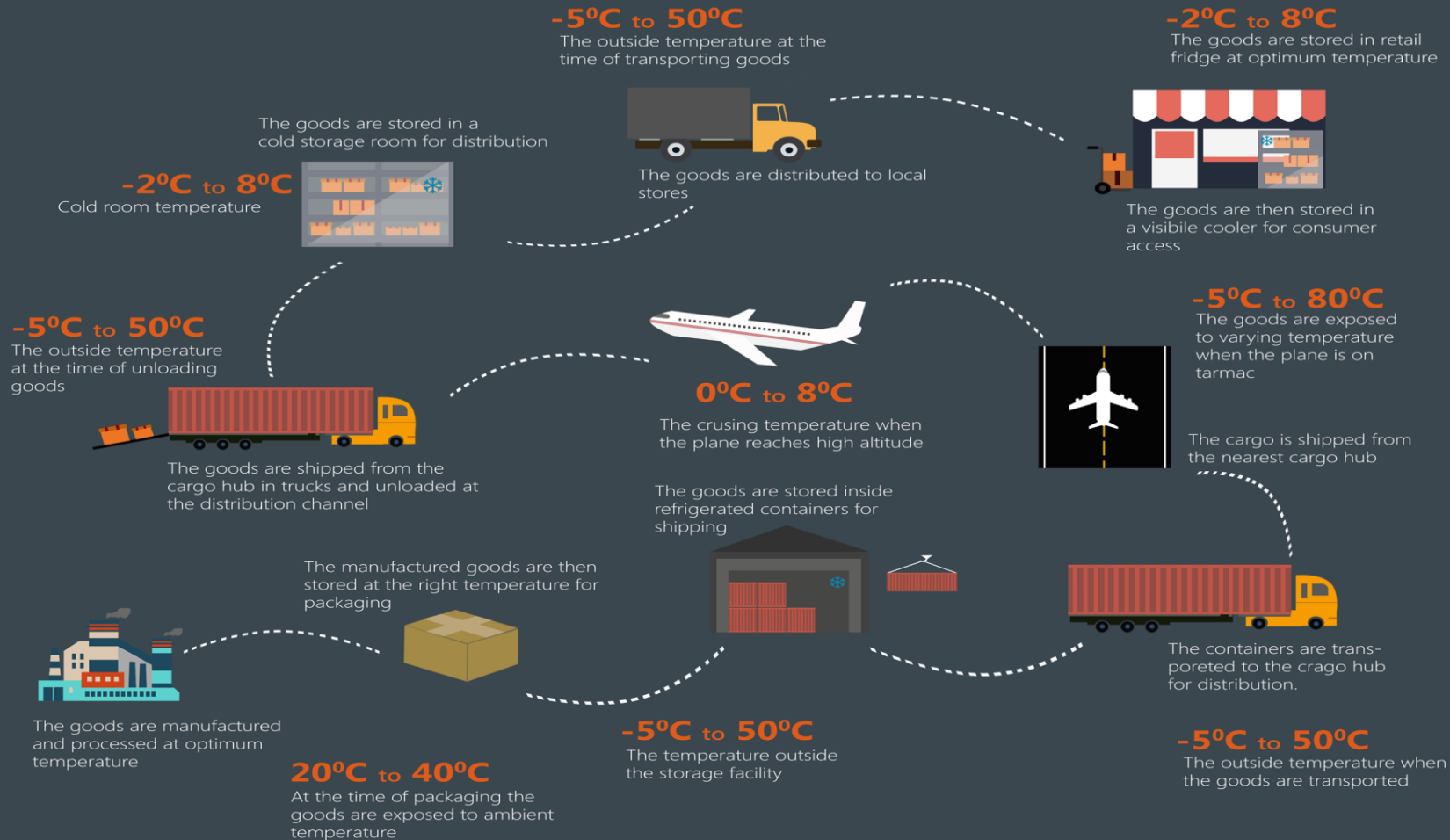


Major Food Processing Players



Food processing and Cold Chain Logistics

WHY TEMPERATURE MONITORING IS IMPORTANT WHEN SHIPPING COLD CHAIN ASSETS



230B \$

The market size of Cold chain logistics and storage

Highly Temperature sensitive assets in cold chain logistics



Ice Cream, Meat Products, Frozen Food, Dairy Products, Pharmaceutical goods

20%

cold chain goods are wasted at the time of shipping

4 - 15 days

Average logistics time from manufacturing to store

Areas of Cooperation between Japan and India



Industry 4.0 (AI, 3D Printing, Internet of Things, Robotics and Nanotechnology, among others)



Electronic Systems Design & Manufacturing (ESDM) & Semiconductor Fabrication (FAB)



Electric Vehicles (Manufacturing, Infrastructure & Servicing)



Promotion of Integrated Data Centre Parks (IDCP)



Aerospace and Defence Manufacturing



Information Technology (IT) & IT enabled Services (ITeS)



Biotechnology, Medical & Diagnostic Devices



Agro & Food Processing (secondary & tertiary processing units)



Smart Cities, Logistics & Warehousing including Ports Development



Textile Machinery Manufacturing



Sports and Gym Equipment Manufacturing



Nuclear Power plant equipment manufacturing



Mineral / Forest based Industries



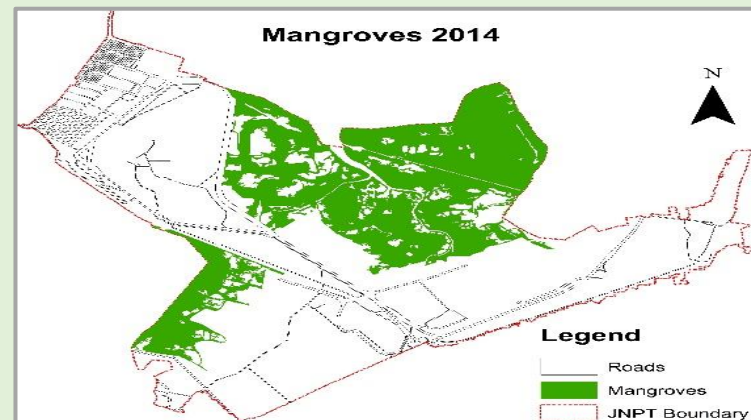
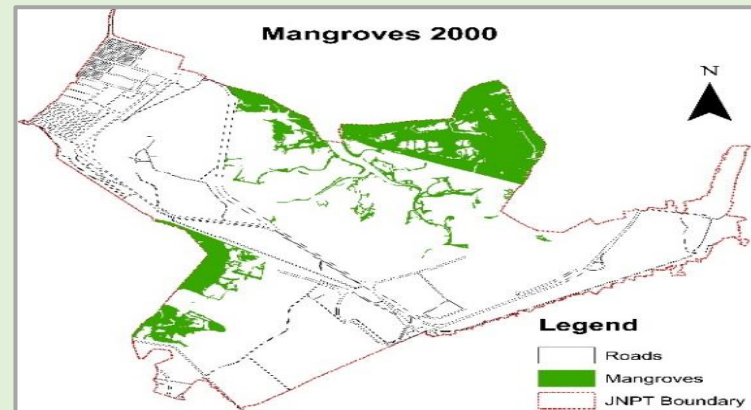
Green Energy/ Bio Fuel Production

Initiatives taken by the Indian Port Sector on Sustainable development

- Increase in share of renewable energy to > 60%
- Adoption of multi- clean fuels (Electric, CNG, LNG) for vehicles in the port ecosystem
- Shore to ship electricity to vessels (tugboats, coastal vessels and EXIM trade vessels)
- Electrification program for material handling equipment in the ports.
- Establishing LNG bunkering stations at ports
- Efficiency enhancements through ship-tracking and smart-lighting at ports
- Adoption of modern practices on dust management at Bulk handling ports
- Building sewage treatment plants and developing oil spill response plans
- Water conservation techniques by deploying atomizers / mist canons
- Development of green belt cover at ports including mangrove, mudflats etc.
- Adherence for green shipping of vessels
- Sustainable dredging disposal mechanism for promotion of waste to wealth

JN Port Initiatives on Sustainable Development

Increasing Spread of Mangroves



Inter Terminal Tractor Facility

Centralised Parking Plaza

Comprehensive SWM Project

Electric Cart

Multi- Purpose Utility Launch

Roof top Solar System

Usage of e-RTRGCs

Usage of LED in Port areas

Oil Spill Response Facility (OSR)

Sewage Treatment Plant

Ambient Air Quality Monitoring

Thank You!