

# Logistics Parks- Initiatives to attract private sector investments in Railway Infrastructure

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[Longest Railway bridge](#) (4.6 km) built by RVNL in 28 months

Why are we talking about  
Logistics Park  
now?

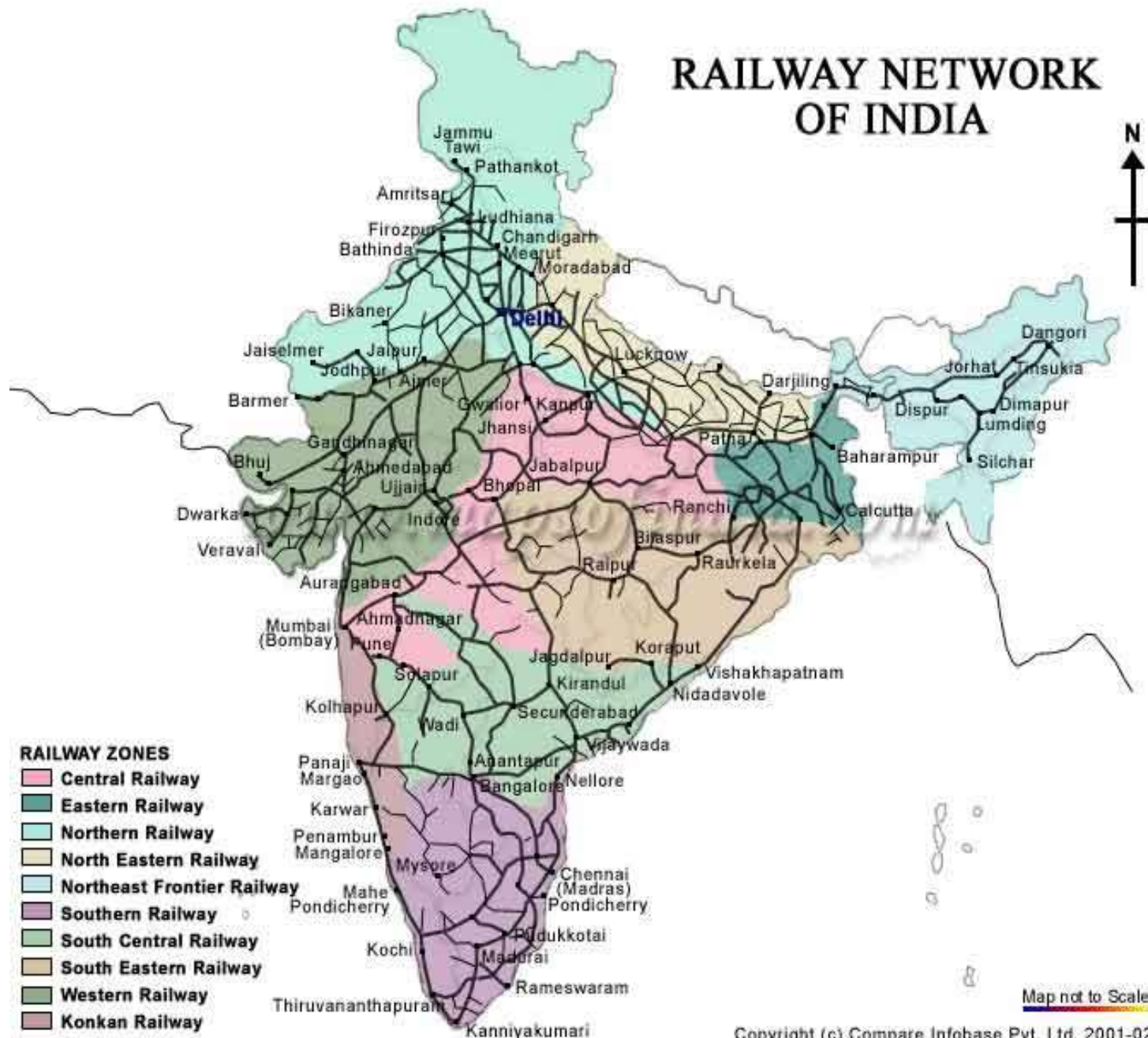


# Twelfth Plan Capacity Augmentation Network

- Eastern and Western Dedicated Freight Corridors (3300 km)
- New Lines – 4000 km
- Doubling – 7653 km
- Gauge Conversion – 5500 km
- Electrification – 6500 km
- Upgrade speed on existing lines
- Develop High speed Corridors
- **New terminals and terminal development**



# Railways – 2<sup>nd</sup> Largest Network in Asia



**To cater to the increased demand, IR needs to augment its infrastructure in the following areas:**

**1. Track capacity**

**2. Terminal Capacity**

**Flow of Value (Goods & Services)**

**Flow of Information**

*procurement*

*outsourcing and  
conversion*

*distribution*

*stock and sell*

*usage and  
consumption*

**Supplier**

T

**Manu-  
facturer**

T

**Branch/  
CFA**

T

**Wholesaler/  
Retailer**

**Customer**

*inbound logistics*

*order processing, production  
planning scheduling & despatching*

*outbound logistics*

*customer service*

T= Transporter

**Flow of Information**

**Flow of Finance**

# GLOBAL TRENDS in LOGISTICS

*Increasing outsourcing: 3PL and 4PL*



# GLOBAL TRENDS in LOGISTICS

***More efficient physical infrastructure - economies of scale in transportation container ships , freight aircrafts, containers, trucks are becoming bigger.***

***So the need for bigger freight terminals !***

***To derive the benefit of economies of scale***



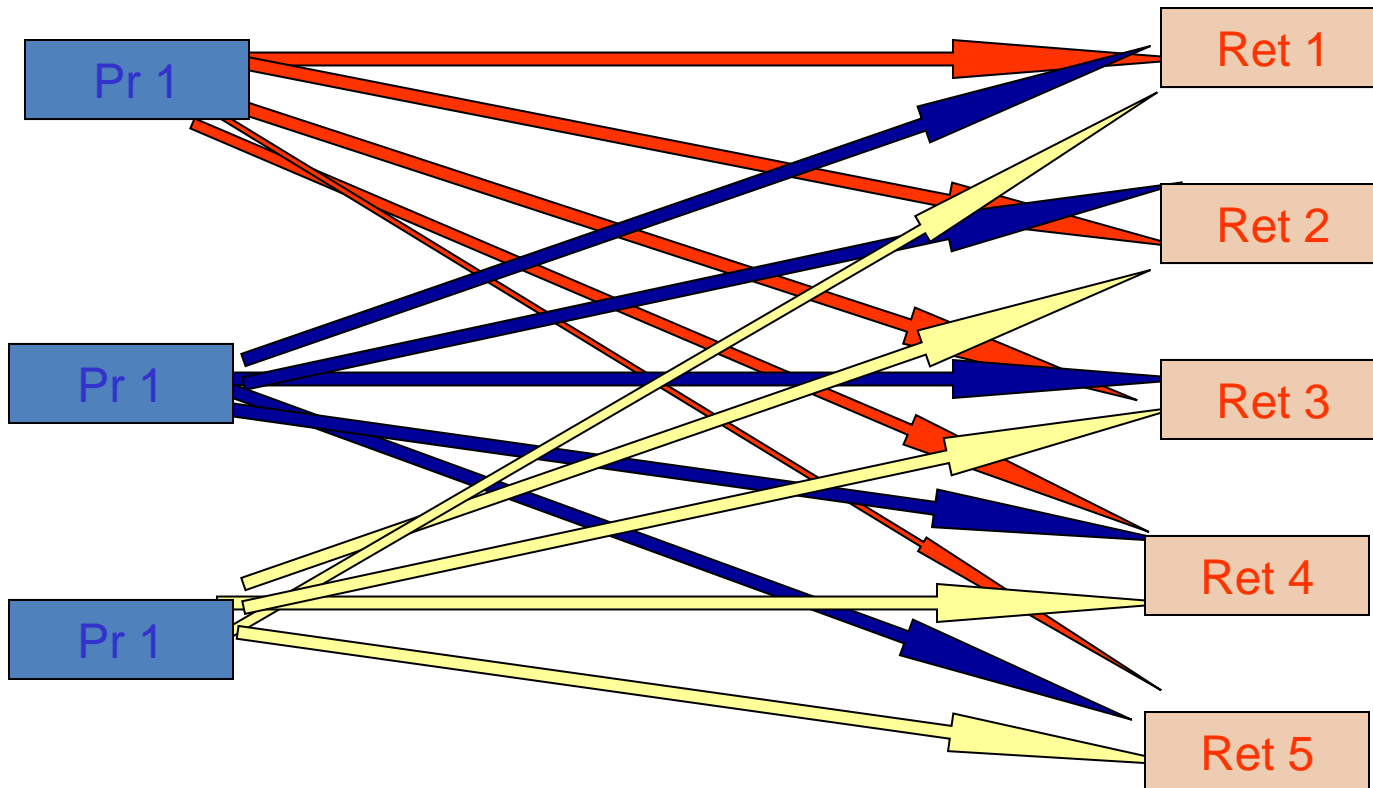
# External Forces Driving Change

- ***New technology trends: explosion of information:*** *the adoption and use of new technologies by consumers will grow rapidly e.g. Internet, RFID*
- ***Regulatory trends: new rules, new compliancy***  
*:growing emphasis on corporate social responsibility, governments will enact more regulations*
- ***Globalisation*** *leading to emergence of modern logistics concepts for cost reduction.*

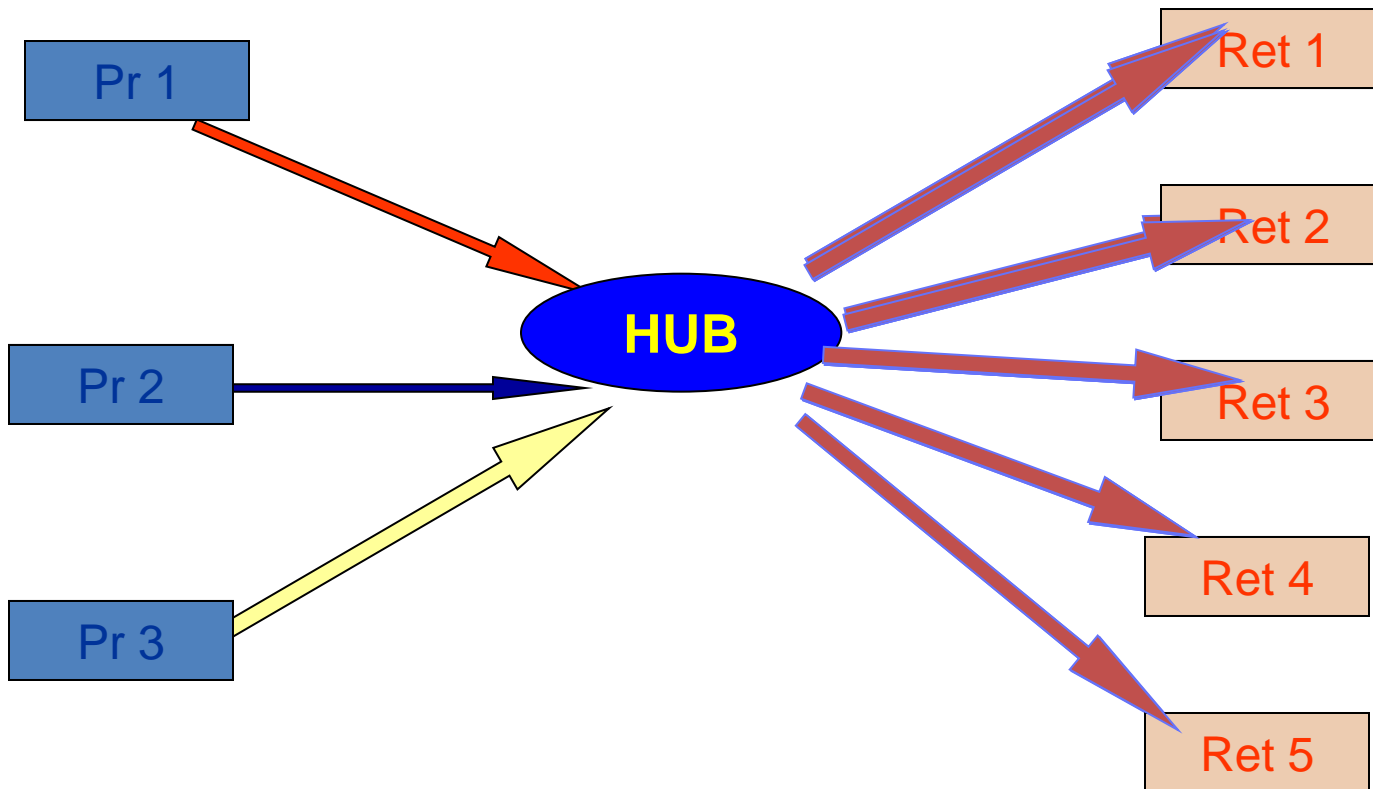
# Survival Techniques

- **Information sharing** — *driving the collaborative supply chain*
- **Collaborative warehousing**
- **Collaborative distribution** (*including home delivery and pick-up*)
- **New ways of working together in the physical supply chain** : (*including management of required investments, capabilities, organisational resources and design, incentives and measures, social regulations like working hours, etc.*)

# Collaboration – hub to minimize distribution costs



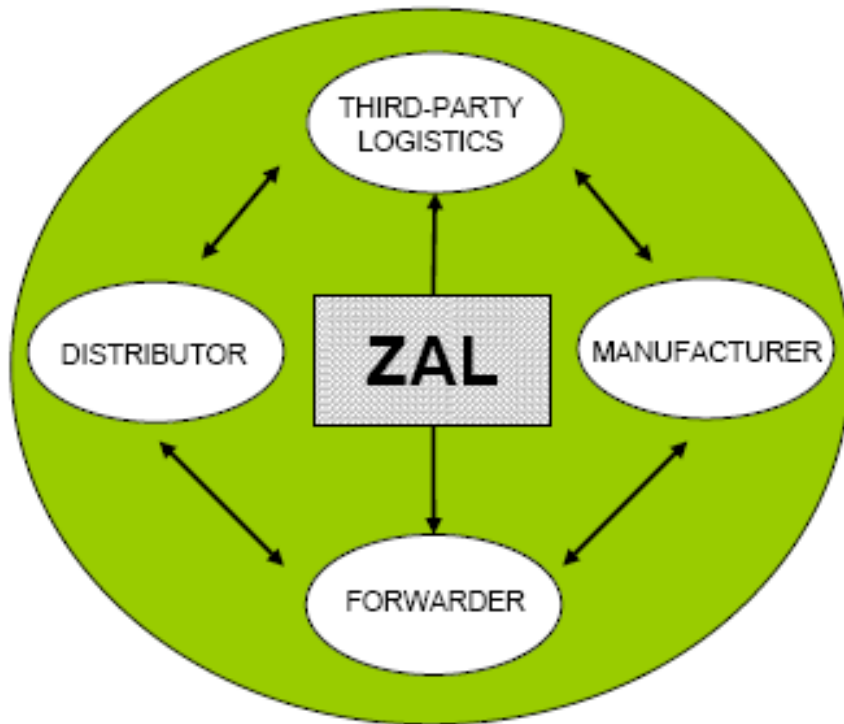
# Collaboration – hub to minimize distribution costs



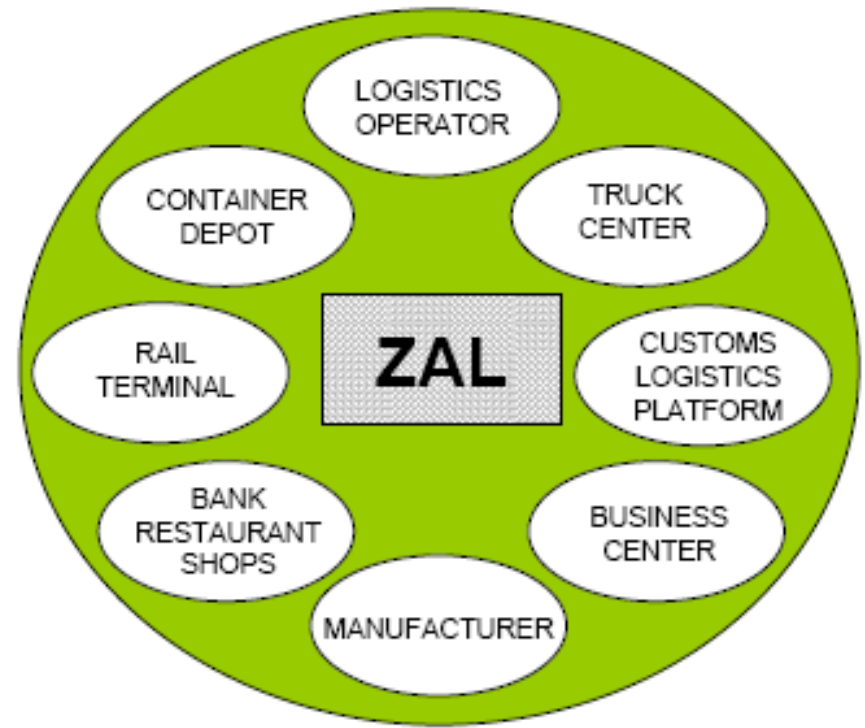
For distributing from 50 suppliers to 100 retailers nearly 97% transportation moves can be reduced- the reduction in transport moves is from 5,000 moves to 150

# MULTI-MODAL LOGISTICS HUBS

A LOGISTICS PLATFORM  
CONCENTRATION OF COMPANIES...



AND CONCENTRATION OF SERVICES



Zones of Logistics Activities

# What is a Logistics Park?

- A hub where all the activities relating to transport, logistics and goods distribution – both for national and international transit – are carried out, on a commercial basis, by various operators.
- It is different from rail side warehouses with container terminals.
- The Logistics Park concept is based on:
  - Territorial planning alongside infrastructure rationalization
  - Improvement in transport quality
  - Inter-modal development
  - Reduction in logistic cost

# SCOPE OF BUSINESS ACTIVITIES

A Multi-modal logistics hub (also called a distripark or a logistics park), is planned to carry out the following activities :

- **Distribution logistics .**
- **Consolidation/de-consolidation.**
- **Transshipment.**
- **Warehousing (conventional/ cold storage / product specific).**
- **Inter-modal transportation.**
- **Allied activities like manufacturing, industrial and commercial activities ( hotels, banking, food parks, entertainment )**

**These logistics hubs develop into self contained commercial districts providing common user facilities.**

# ESSENTIAL REQUIREMENTS

- **Integrated transportation terminal providing intermodal choice.**
- **Good rail/road connectivity-close to national highways/ main rail routes.**
- **Proximity to /connectivity with air ports and sea ports.**
- **Providing interfacing connectivity.**
- **Manufacturing zones either within or in close proximity of the logistics hubs.**
- **Liberal taxation regimes to attract potential customers/entrepreneurs /investors.**



# ESSENTIAL COMPONENTS

- Large area of land at suitable location.
- Rail terminal.
- Air cargo complex.
- Intermodal container terminal.
- Warehousing including temperature controlled storage.
- Value addition facilities like storage, re-processing, packaging, unitisation , labeling etc.
- Food processing zones.
- Open stock yards
- Ancillary facilities like it parks, health/recreation, hotels, business centers etc.

**LOGISTICS HUBS WILL ACT AS NUCLEUS OF GROWTH WITH SINGLE WINDOW LOGISTICS SERVICES AVAILABLE NEXT DOOR.**

# Advantages

## Customer Benefits

- Customized service for warehousing and distribution needs of customers .
- Less working capital
- Eliminating the need for multiple stops.
- Option of convenient inter modal transport
- Quality improvement
- Rationalisation of service supply with increased flexibility.
- Option of retail chains

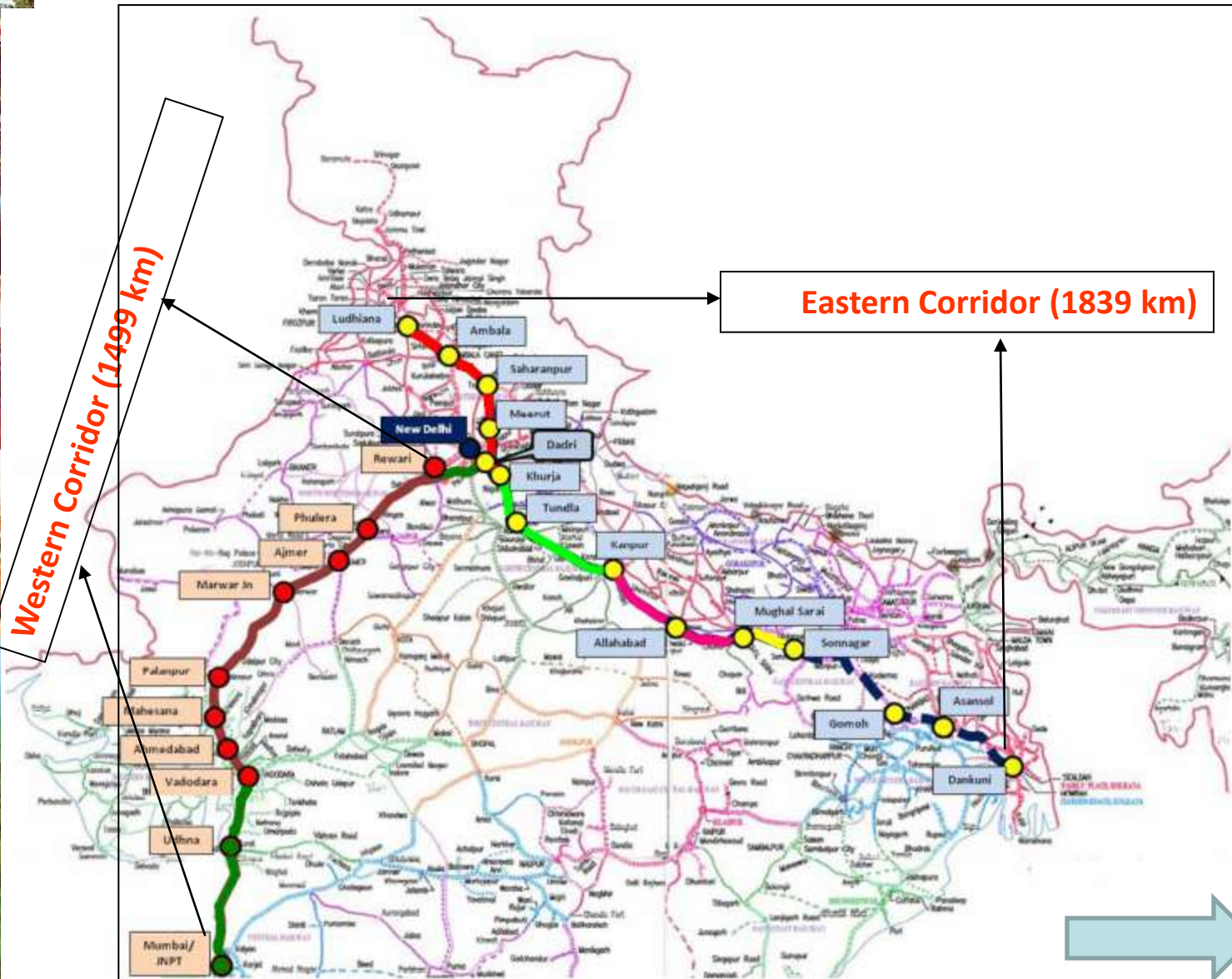
Reduction in logistic cost.

# Advantages

## Community Benefits

- Reduction in overall traffic congestion and pollution in the city area .
- Single window facilities to trade for growth of region and industry.
- Concentrated logistics development allows for more focused management of environmental issues.
- Consolidation and hence diversion of traffic to environment friendly fuel efficient rail system.
- Additional jobs by attracting companies interested in expanding or relocating transportation, distribution and warehousing facilities to one central site.

# Dedicated Freight Corridor



**Western Corridor (1499 km)**

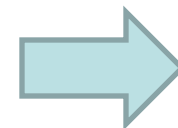
**Eastern Corridor (1839 km)**



# Future Dedicated Freight Corridors



- East-West (Kolkata-Mumbai)
- North-South (Delhi-Chennai)
- East Coast Corridor (Kharagpur-Vijayawada)
- Southern Corridor (Chennai-Goa)



# Logistics Hubs along DFC

- Prima facie near Ludhiana, Gurgaon, Jaipur, Ahmedabad, Navi Mumbai.
- An inter spacing of about 400 kms.
- Minimum 100 hectare of area.
- Approximate cost of general infrastructure including inter-modal terminal and rail handling yard, but excluding cost of land and logistic unit about Rs. 175 crores.
- Common user facility.

# Relevance of Logistic park

- Reduction in parcel size of traffic, due to consolidation
- Induction of multi links in supply chain , high logistic cost .
- Congestion in and around cities.
- Diminishing share of rail in white goods and non bulk traffic.
- Ideal opportunity to reap the benefits by developing rail linked logistics hubs (parks) on alignment of DFC.
- Venture for growing field of RORO and Auto-car Carrier business.

# A road map

- The *Private Public Partnership* (PPP) is the most widespread and efficient organizational structure for companies managing Logistics Parks.
- The choice of the PPP model is linked to financial, infrastructure and planning reasons.
- Jointly developed by State Government and Ministry of Railways.
- A proven multi-modal operator preferably from Government sector to work as nodal agency for development and management of terminal.
- Specialized warehouses with logistic services and utility/business by private parties on PPP model.



# Role of Government

- Land acquisition.
- Land and Road connectivity.
- Basic infrastructure support like electricity, water, local transport etc.
- Tax incentives like tax holiday, service tax rebate etc to encourage shift .
- Encouragement for Industrial cluster adjoining the logistic park.

# Role of Nodal Agency

- Creating the common infrastructure and the integrated services including rail infrastructure inside the terminal.
- Management of Inter modal Terminals.
- Arrangement on PPP model for warehouses, CFSs , utility centers etc.
- Administrative, financial, commercial and operations management of the Logistics Centre
- Upkeep and management of common property

# CHALLENGES

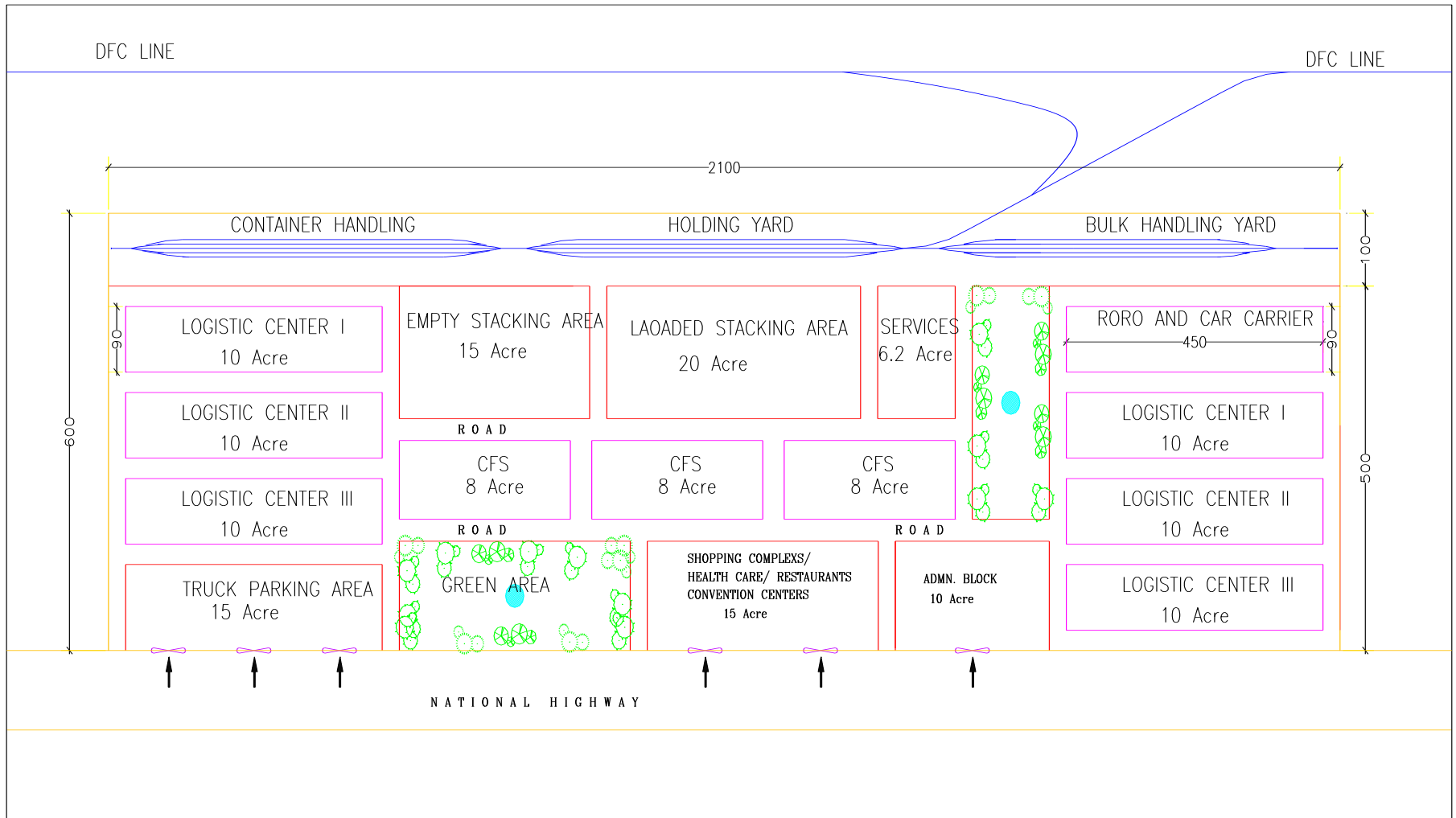
## Infrastructure related -

- Robust growth in Economy - but Indian infrastructure lagging behind.
- Economy needs a stronger Infra engine to give it a multiplier effect

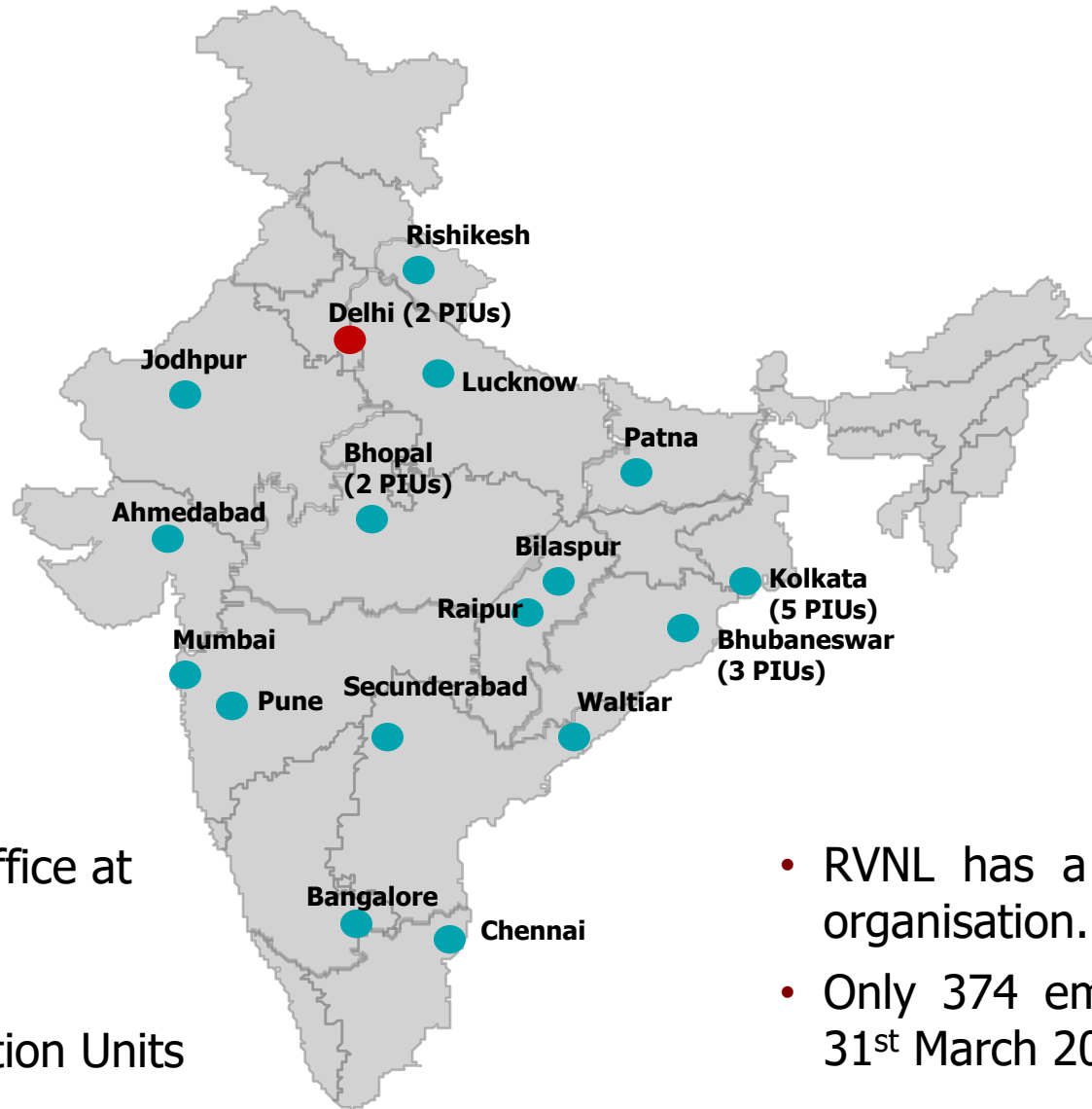
## Planning related -

- Comprehensive Planning- allocation of specific area/region for Logistic Park in Master Plans.
- Expenditure on development of Logistic Parks could be rationalized.
- While the industry with immense growth potential develops- investments could be gainfully utilized.

# LOGISTICS PARK



# Rail Vikas Nigam Limited



- Corporate Office at New Delhi
- 25 Project Implementation Units

- RVNL has a lean and thin organisation.
- Only 374 employees as on 31<sup>st</sup> March 2013

# Rail Vikas Nigam Limited

## Background

- ❖ Government of India launched National Rail Vikas Yojana in 2001, to bridge the infrastructure deficit, Ministry of Railways decided to move from a project approach to a program approach, in line with Government of India's policy
- ❖ It was decided to create a PSU under MOR to source funds from the domestic market as well as from Multilateral and Bilateral Funding Agencies for financially viable projects & their execution on fast track.

# Rail Vikas Nigam Limited

- ❖ RVNL was incorporated as a PSU on 24.01.2003, 100% owned by MoR
- ❖ The Company Board was put in place in **March 2005**.
- ❖ Empowered to act as an Umbrella SPV to undertake project development, resource mobilisation etc. directly or by creating project specific SPVs or by any other financing structure found suitable.
- ❖ Extra Budgetary Resource mobilisation through a mix of equity, and debt from banks, financial institutions, multilateral agencies like Asian Development Bank and bilateral agencies, etc.

# Highlights / Achievements

- ❖ Constructed [longest railway bridge](#) (4.62 km) along with navigational clearances in Vallarpadam-Idapally New Line project in period of 28 months.
- ❖ [2<sup>nd</sup> Mahanadi Bridge](#) (2.1 Km) under ADB Funding completed ahead of schedule (33 months).
- ❖ Completion of 358 km of 3<sup>rd</sup> line projects such as [Aligarh-Ghaziabad](#), Palwal-Bhuteshwar, Tiruvallur- Arakkonam, sections of 3rd line of Bina-Bhopal, Panskura-Kharagpur projects, etc
- ❖ Completion of [Gauge conversion](#) projects of Bhildi-Samdari, Rewari-Ajmer, Cuddalore – Salem, Thajavur- Villupuram, Bharuch-Samni-Dahej, etc
- ❖ Completion of [Doubling Projects](#) of Gooty-Renigunta, Villupuram-Dindigul, etc
- ❖ Constructed [longest subway](#) under the Railway tracks in India – 87 m long subway under 12 running tracks by Box Pushing Technology in Chennai.



# Highlights / Achievements

- ❖ Civil work of construction of [Diesel Loco Component Workshop](#) at Dankuni has been completed in a record time of 2 years by RVNL.
- ❖ Extension of 66 Km [Metro Rail projects](#) at Kolkata started in a record time.
- ❖ [DMU factory](#) at Haldia completed in **15 months**.
- ❖ Adopted PSC girder span of **45.0 m** with 30T axle load [weighing 650 tonnes](#) for the first time on Indian Railways.
- ❖ Innovative tendering system adopted by RVNL.

# Business Model

Planning, development, resource mobilization & execution of Railway related projects on fast track, as a client company for & on behalf of MoR:

- Projects to be executed by RVNL are assigned by the Ministry of Railways (MoR)
- Projects of other Ministries and Public Sectors assigned on nomination basis.
- Powers have accordingly been delegated to RVNL to facilitate project execution.

# **Business Model** contd...

- RVNL Budget is largely dependent on the Budgetary allocations by the Ministry of Railways.
- Projects are also being funded by IRFC, ADB loan through MoR.
- Extra budgetary resource mobilization through formation of project specific SPVs.

# Project length completed upto March 2013

S. NO.	Plan Heads	Completed (Km)
1.	New Line	194.0
2.	Gauge Conversion	1590.2
3.	Doubling	1196.4
4.	Railway Electrification	1871.0
	<b>Total</b>	<b>4851.6</b>

In addition, RVNL completed 939 km of RE works as part of doubling/GC/NL projects.

[List](#)

# Project length completed in 2012-13

S. No.	Plan Heads	Targets 2012-13 (Km)	Achievement 2012-13 (Km)
1.	Doubling	265	267
2.	Railway Electrification	300	301
	<b>Total</b>	<b>565</b>	<b>568</b>

- ❖ In addition, RVNL completed 238 km of RE works as part of doubling projects.
- ❖ **One Third of Doubling** completed by Indian Railways is being done by RVNL since last 3 years.
- ❖ **One Third of Railway Electrification** completed by Indian Railways is being done by RVNL since last 3 years.

# Resource Mobilisation through PPP

- ❖ RVNL has created the following SPVs:-
  - Kutch Railway Company Limited. (commissioned)
  - Bharuch Dahej Railway Company Limited. (commissioned)
  - Krishnapatnam Railway Company Limited (partly commissioned)
  - Angul Sukinda Railway Limited. (under construction)
  - Haridaspur Paradip Railway Company Limited. (under construction)
  
- ❖ RVNL is now in the process of creating SPVs for Rewas Port and Dighi Port.

# New Policy on PPP projects

- A new policy has been framed by Ministry of Railways on 10th December 2012 called “Participative models in rail connectivity and capacity augmentation projects” .
- This policy permits:
  - **Non-Government Railway Model;**
  - **JV Model for operationally necessary/bankable sanctioned Railway projects;**
  - Railway Projects on BOT awarded through Competitive Bidding;
  - Capacity Augmentation (Doubling/Third Line/Fourth Line, etc.) with funding provided by customer; *and*
  - **Capacity Augmentation (Doubling/Third Line/Fourth Line, etc.) – Annuity Model**

# Vision for the Future

- ❖ Greater role in capacity augmentation and creation of rail infrastructure on Indian Railways.
- ❖ Extra budgetary resource mobilization.
- ❖ Execution of challenging projects such as hill railways, Mega Bridges etc.
- ❖ Construction of approx. 750 kms of project length every year.
- ❖ Increase in annual project expenditure progressively to Rs. 5000 cr.
- ❖ Diversification into construction of Metro rail projects, factories & workshops, rail projects other than Indian Railways, other than rail projects



# Vallarpadm-Idapally Project



- 4.6 km long bridge on back waters of Cochin.
- Longest Rail Bridge in the Country.
- Constructed in record period of 28 months.
- Involved launching of 33 pre-cast 'U' girders of 20 mtrs span and 200 pre-cast 'I' girders of 40 mtrs span with alignment having curvatures up to 4 degrees.
- Awarded "Pre-stressed Concrete Structure of the year 2010" by Indian Concrete Institute.
- Essar Steel Excellence Infrastructure project award in Railway Infrastructure Category in April 2011.



# Projects with RVNL

- Projects completed as on 31<sup>st</sup> March, 2013 37
- Projects on hand 70
  - Projects in progress 33+4 part (1 Doubling+3Metro) Projects  
(including projects partially commissioned)
  - Projects adversely affected/held up due to land acquisition, law and order & other issues 07
  - Metro projects where work not possible due to various reasons 3 part
  - Projects under planning, development & tendering 26+1 part  
(recently transferred)

# Factors affecting progress of projects

- Fund allocation by MOR
- Priority of MOR
- Approval of plans & drawings from Railways
- Grant of traffic restrictions during construction by Railways
- Permission for Non Interlocked working by Railways
- Forest clearance
- Land acquisition
- Licenses for mining of earth, blanketing & ballast
- Local law & order problems, such as projects in [Naxal affected areas](#)
- Number/length of bridges
- Duration of working season
- Topography of the project area
- Site specific technical issues

# Time Lines for execution of a Project

Activities	Time required	Cumulative time required
Transfer of Project		D
Project Planning	2 months	D+2 months
Final Location Survey (FLS) tender invitation & finalisation	4 months	D+6 months
FLS execution	8-12 months	D+14 months
Preparation of BOQ, Detailed Estimate & sanction	2 months	D+16 months
Invitation of works tender and its finalisation	4-5 months	D+21 months
Completion of work (depends on various factors)	4-5 years	About 6 years

The process of land acquisition and forest clearance also affect the timeline.



# Vallarpadam Bridge- Longest Railway Bridge in India



# 2<sup>nd</sup> bridge over river Mahanadi – 2.1 km long



# Aligarh-Ghaziabad 3<sup>rd</sup> Line project



# Ajmer Rewari Gauge Conversion Project





# Bhildi-Samdari Gauge Conversion



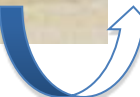
# Villupuram Dindigul Doubling Project



# Longest Subway in India (87 m) under running tracks by Box Pushing at Arakkonam



# Diesel Loco Component Factory at Dankuni



# DMU Factory at Haldia





**Joka-BBD Bagh Metro Line**



# Joka-BBD Bagh Metro Line – launching of segments



# Launching of 43.846M PSC box girder weighing **650 tons** on **River Mahanadi**, BR NO.134 in Haridaspur-Paradeep new line project





**Bridge No-134 on Mahanadi in Haridaspur-Paradeep  
new BG line with 43.846M PSC box girder weighing  
650 tons**



# INTERNATIONAL EXPERIENCE

**PLAZA- Platform  
Logistica-  
Zaragoza, Spain**

**Total area of  
1283 Ha**

A- Controlled green spaces for public use		220
B- Equipped areas for uses of interest		84
C- Areas of Activity		500
	C-1 Commercial Area	44
	C-2 Business Park	20
	C-3 Airport Intermodal Logistics Area	15
	C-4 Industrial Logistics Area	320
	C-5 Railway Intermodal Logistics Area	67
	C-7 Integrated Business Centre	8
	C-8 Services Area	10
D- Road Network and car parks		174
E- Reserved land		174
	Railway Reserve	11
	Reserve for future growth	56
F- Infrastructures		34
G- General Railway Systems		202

# PLAZA-Zaragoza, Spain



# PLAZA-Zaragoza, Spain



# PLAZA-Zaragoza, Spain



# PLAZA-Zaragoza, Spain



# PLAZA-Zaragoza, Spain



Zaragoza occupies a central place for six metropolitan areas in south-west Europe (Bordeaux, Toulouse, Bilbao, Madrid, Valencia and Barcelona).

## International Corridors:

- Mediterranean axis
- Atlantic axis on the Irún – Bohemia border.
- North-South axis from Bordeaux to the Valencian Country, passing through Zaragoza.



# PLAZA-Zaragoza, Spain



**PLAZA, a new generation advanced intermodal centre for transport and logistics platform**

The Logistics Platform at Zaragoza operate for means of transport by road, railway and air.

PLAZA is situated at an equidistant point from the main eastern Spanish ports (Barcelona, Tarragona and Valencia) and from the Cantabrian coast (Santander, Bilbao and Pasajes), which in principle makes it an ideal **location of dry ports.**

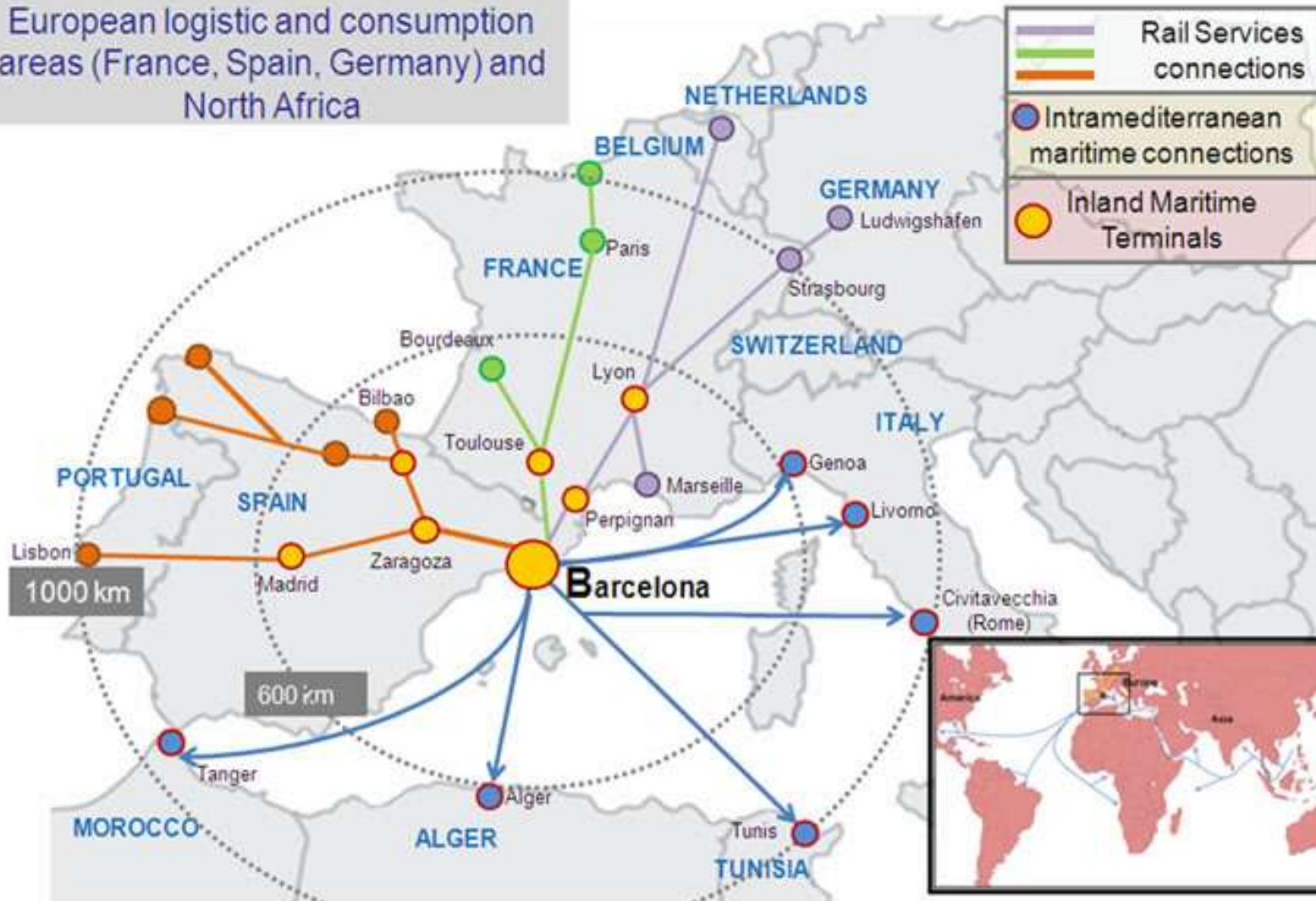


# PLAZA-Zaragoza, Spain



Port de Barcelona

From Barcelona to the main European logistic and consumption areas (France, Spain, Germany) and North Africa



# INTERNATIONAL EXPERIENCE

## PTP DISTRI PARKS- PORT OF TANJUNG PELEPAS , MALAYSIA:

- Total Land Area- 1,000 acres.
- Total warehousing space- 40,000 sq.m.
- International distribution park.
- Conventional warehousing zone.
- Short term warehousing zone.
- Light/medium/heavy industries.
- Food plaza/ business centre.
- Air cargo complex. JOHAR SENAI AIRPORT ( 40 kms ) and Singapore's CHANGI INTL. AIRPORT (60 kms.) in close vicinity.
- Adjacent to port terminal (separate geographical area)
- Rail and road terminals.

# INTERNATIONAL EXPERIENCE

## INTERPORTO CAMPANO-ITALY :

- TOTAL LAND AREA- 45,00,000 sq.m.
- **Intermodal terminal- 2,25,000 sq.m.**
- Wholesale distribution centre-10,00,000 sq.m. Used by 326 enterprises and turnover of 5 billion euro.
- **Warehousing zone of 2,60,000 sq.m.**
- Refrigerated warehouses- 2,00,000 cu.m.
- **Air freight intermodal hub.**
- Dedicated rail terminal.
- **Service centre-4,50,000 sq.m.- Expo centre/meeting halls/ multiplex theater/ hotel etc.**
- Direct access to main highway , Napoli airport and sea port.

# INDIAN EXPERIENCE

## MIHAN PROJECT, NAGPUR/MAHARASHTRA :

- Total land area- 3,310 hectares.
- Rail / road terminal- 200 hectares.
- SEZ including IT park - 1,300 hectares.
- Warehousing zone of 2,60,000 sq.m.
- International hub airport – 1,200 hectares.
- Manufacturing and value added units- 990 hectares.
- Other facilities like health city, intl. School, hotels, entertainment, residential area etc – 610 hectares.
- Rail / road terminal will have interface of rail and road transport, warehousing space including cold storage , truck parking, open stock yards and transport oriented trade.

# PTP DISTRI PARKS-

Strategically located at the intersection of the  
**East – West International  
trade lanes**



# PTP DISTRI PARKS-



