Fast Track to Reform

Policy and Execution for enabling MultiModality

Released at:

PHD Global Rail Convention 2014

Indian Railways: Towards New Horizons

March 28, 2014

JCurve is a business advisory, operations, and investment company, headquartered in India. We enable foreign and domestic organisations to navigate local business environments, and operate in new markets and verticals to achieve exponential growth.

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PHD Chamber of Commerce and Industry, established in 1905, is a proactive and dynamic multi-State apex organisation working at the grass-root level and with strong national and international linkages. The Chamber acts as a catalyst in the promotion of industry, trade and entrepreneurship. PHD Chamber, through its research-based policy advocacy role, positively impacts the economic growth and development of the nation.

PHD Chamber is more than an organisation of the business community, as it lives by the chosen motto 'In Community's Life & Part of It' and contributes significantly to socio-economic development and capacity building in several fields.

PHD Chamber's geographical span covers the 12 States of Bihar, Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Jharkahnd, Jammu & Kashmir, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand and the Union Territory of Chandigarh.

PHD Chamber has a direct membership of over 1,600 corporate entities and serves more than 45,000 indirect members through 150 Association Members and 8 Secretarial Affiliates. The membership covers trade and industry.

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Supported by:

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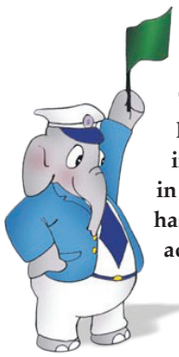
Foreword



This is an exciting time for transport logistics in India. Even as we head into our national (general) elections in the next fortnight, the government has been making some strong moves to address the infrastructure and policy bottlenecks in this sector.

A target of Rs. 100,000 crore has been set for generating investments through PPP during the 12th Five Year Plan period. An investment of Rs.10,000 crore has been committed from ports, large mines and other industries.

The Pitroda report on moderisation of railways informs that Indian Railways requires funding of Rs. 560,000 Crores in the five years starting 2013, and it is clear that much of this funding will have to come from the private sector.

Recently, the Department of Industrial Policy and Promotion (DIPP) has proposed to allow 100% FDI in high-speed train systems, suburban corridors, high-speed tracks and freight lines connecting ports, power installations and mines.

To encourage private participation in railways, the Cabinet Committee on Infrastructure has proposed five models under the PPP format. Both, flexibility and innovation will be key to attracting and sustaining private sector interest and investment in this space.

Under the 12th Five Year Plan, more funds have been allocated to the railways than roads and highways- this is a first.

This is a step in the right direction, to correct the imbalance of freight traffic distribution among road, rail and waterways. Despite long distances and a large share of bulk material, which could more economical to move by rail and waterways (inland waterways or coastal shipping), India's freight depends excessively on road transport. This of course escalates our carbon footprint through increased energy consumption and emissions.

Logistics infrastructure, and Railway infrastructure in particular- freight trains, passenger trains, railway stations, freight terminals, MRTSs, industrial corridors, freight corridors, et cetera- is essential to sustaining and catalyzing economic growth.

As a result of inadequate transport infrastructure, India spends almost 14 per cent of GDP on logistics, which twice as much as what mature economies spend. The hidden costs (theft and damage, higher inventory holding costs, facilitation and transaction costs) greatly inflate this logistics spend.

The effect of this deficient infrastructure is especially relevant in these times of low economic growth and high inflation (both, key issues in the upcoming elections). Food inflation, for instance, could be contained through the mitigation of the ~30 million tons of farm produce that is lost due to a poor food supply chain, each year.

It is vital, however, that we have the framework of legislative infrastructure to support physical infrastructure. This is reflected in the title of our report, where policy and execution represent the software (policy and legislation) that support the hardware (physical infrastructure) to build the capacity and transport networks we need.

We hope this report will contribute to the ongoing discussions and policy developments related to the development of India's logistics infrastructure—an imperative for economic revival.

An electronic version of this report may be downloaded from *www.jcurve.in*.

Bharat R Joshi
CEO, JCurve

Sunaina Kashyap
Senior Associate

Mrida Joshi
Director

Contents

Dr. Montek Singh Ahluwalia
Deputy Chairman, Planning Commission

No. DCH/11/2014/CD-208

एम. एस. आहलुवालिया
MONTEK SINGH AHLUWALIA

सत्यमेव जयते

उपाध्यक्ष
योजना आयोग
भारत
DEPUTY CHAIRMAN
PLANNING COMMISSION
INDIA

MESSAGE

I am pleased to know that PHD Chamber is organizing PHD GLOBAL RAIL CONVENTION-2014 – "Indian Railways: Towards New Horizons" on March 28, 2014 at PHD House, New Delhi.

Indian Railways has successfully completed 160 years of operation last year. It plays a dominant role in the economy of our country, and has currently envisaged Major Plans for upgradation & modernization.

This convention will provide a great platform for the companies, domestic and international, to share and showcase their latest technologies, and foster profitable partnerships.

I am sure that the PHDCCI would continue to strive hard with the same mission & vigour to achieve its aims & objectives.

My best wishes for the success of the Convention.

(Montek Singh Ahluwalia)

जारी किया गया
ISSUED

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2

Sh. Vijay Chhibber
Secretary, Ministry of Road Transport and Highways

सचिव
SECRETARY
भारत सरकार
GOVERNMENT OF INDIA
सड़क परिवहन और राजमार्ग मंत्रालय
MINISTRY OF ROAD TRANSPORT & HIGHWAYS

सत्यमेव जयते

विजय छिब्बर
VIJAY CHHIBBER

MESSAGE

I am happy to be a part of the PHD GLOBAL RAIL CONVENTION-2014- "Indian Railways: Towards New Horizons" being organised by PHD Chamber of Commerce and Industry on March 28, 2014.

Indian Railways play a leading role in carrying passengers and cargo across India's vast territory, having the largest Rail Network in Asia and the second largest Rail Network in the world.

Nearly all the freight that railways carry could be carried by one or more of the other modes of transport, but railways have a particular role to perform. They can convey a much wider range of freight types than other modes, simultaneously being faster and more universally available.

Intermodalism and multimodalism are ways by which railways can further increase their market reach. The land transport networks, Inland linkages between road, rail and seaports together with logistics services and facilities need to be further developed.

Improvements in both capacity and connectivity between different modes of transport, Road Transport, National Highways, ICDs and freight terminals can result in more efficient handling of containerized cargoes, thereby reducing transportation costs and providing transport opportunities for inland areas.

I hope this Convention will yield a plethora of thought provoking solutions in this area and I wish the Convention a grand success.

Vijay Chhibber

March 11, 2014

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Dr. Vishwapati Trivedi
Secretary, Ministry of Shipping

डा० विश्वपति त्रिवेदी
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सत्यमेव जयते

सचिव
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नई दिल्ली-110001
SECRETARY
MINISTRY OF SHIPPING
GOVERNMENT OF INDIA
Transport Bhawan, 1, Parliament Street
New Delhi-110001

MESSAGE

All the major modes of transportation in our country are currently envisaging major improvements in their capacity and connectivity infrastructure and I am glad that PHD Chamber is organizing the PHD GLOBAL RAIL CONVENTION-2014-"Indian Railways: Towards New Horizons", which is a very timely endeavour.

Evacuation of cargo from the port and its movement to the port areas have to be smoothly synchronized so that the inter-modal network could function smoothly. The need of the hour is to create a multimodal network of integrated facilities that can substantially reduce the huge costs related with any logistics operation.

Proposed enhancements in Rail- Road & Port connectivity and with the major growth projects of Private Freight Terminals, Inland Container Depots (ICDs), CFS, Warehousing and other related activities in the pipeline, will result in more efficient handling of containerized cargoes, thereby reducing transportation costs and providing transport opportunities for inland areas of our country.

I wish this Convention all the success and hope that the conclusions present measures that can help enhance the speed of implementation and efficiency of various transportation connectivity projects across the country, benefiting all stakeholders.

(Dr. Vishwapati Trivedi)

Sh. Arunendra Kumar
Chairman, Railway Board

ARUNENDRA KUMAR

सत्यमेव जयते

अध्यक्ष, रेलवे बोर्ड
एवं
पदेन प्रमुख सचिव, भारत सरकार
रेल मंत्रालय
रेल भवन, नई दिल्ली-110 001
CHAIRMAN, RAILWAY BOARD
&
EX-OFFICIO PRINCIPAL SECRETARY,
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAIL BHAVAN, NEW DELHI-110001

25-3-2014

MESSAGE

It is heartening to note that the PHD Chamber of Commerce is organizing PHD GLOBAL RAIL CONVENTION-2014 on March 28, 2014.

This convention comes at an opportune moment as the Indian Railways embark on what promises to be a remarkable and notable journey that will change the way that this sector is viewed. New initiatives to encourage private investment in Rail Infrastructure are on the anvil.

The Indian Railways is working towards:

- *Creating value and improving the quality of rail services*
- *Expansion and modernisation of the Rail network*
- *"Sweating" our assets by improving efficiency and productivity in operations*
- *Technology upgradations and improvements.*

To keep the impetus going Indian Railways is in the process of creation of high end railway infrastructure and operations by forging partnerships with both private and international sectors.

Indian Railways has also achieved a significant milestone when it recently entered the one billion tonne select club in freight movement joining a select few countries.

I wish the organizers all the success for this convention.

(Arunendra Kumar)

Sh. RK Gupta
Managing Director, DFCCIL

डेडीकेटेड फ्रेट कोरीडोर

आर.के.गुप्ता, आई.आर.एस.ई.
प्रबन्ध निदेशक
R. K. Gupta, I.R.S.E.
Managing Director

डेडीकेटेड फ्रेट कोरीडोर कॉर्पोरेशन ऑफ इण्डिया लि.
भारत सरकार (रेल मंत्रालय) का उपक्रम
Dedicated Freight Corridor Corporation of India Ltd.
A Govt. of India (Ministry of Railways) Enterprise

MESSAGE

It is a pleasure to be part of the PHD GLOBAL RAIL CONVENTION-2014- "Indian Railways : Towards New Horizons" being organised by PHD Chamber of Commerce and Industry on March 28, 2014.

Indian Railways, the "Life line of our Nation", is the most important part of the Indian transportation infrastructure, both for the Passenger as well as for Freight Movement.

With the emphasis on quantum jump in enhancing its capacity through Dedicated Freight Corridors across the country, Indian Railways is moving in the right direction to improve its customer orientation and meet market demands more effectively.

Dedicated Freight Corridors (DFC) is poised to be among the biggest industrial development projects in India, which will immensely boost public and private sector investment in the states. With the introduction of world class technologies and major logistics development around DFC corridor, the industrial growth in the country shall get the much needed boost and help the economy as a whole.

Conventions like the PHD Global Rail Convention are good efforts to bridge gaps and give further impetus to such projects.

I wish this convention all the success.

(R.K. GUPTA)

New Delhi
March 19, 2014

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Sh. Sharad Jaipuria
President, PHD Chamber

PHD CHAMBER

PROGRESS HARMONY DEVELOPMENT

Estd. - 1905

SHARAD JAIPURIA
President

11th March 2014

MESSAGE

PHD Chamber of Commerce and Industry is pleased to present the PHD Global Rail Convention-2014;" Indian Railways: Towards New Horizons".

Indian Railways is the world's largest railway system under a single management, simultaneously being the largest employer in the world. Indian Railways has currently envisaged exponential growth projects and Public - Private Partnerships, joint ventures and revamping of policies which are aimed at benefiting the end user as well as delivering modern, high quality, state-of-art technology in the required areas.

The high potential of this industry and the current progressive projects will present the Indian Railways with a new lease of life towards its mission of transforming itself into a perennial money-maker and also provide better, efficient, safe and cost effective services as per the requirement of the end users.

I am confident that this convention and the deliberations will prove to be a valuable experience to all the participants and act as a catalyst in formalising viability of the ongoing processes & policies.

The convention is also a useful platform for both national and international industry to share the progressive practices, understand the latest developments and discuss practical and financially viable solutions best suited for the Indian scenario.

Let me also extend my deep appreciation to all our supporters who have helped in making this convention a great success.

Sharad Jaipuria

CSR IMR
India-My Responsibility

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Sh. Saurabh Saniyal
Executive Director, PHD Chamber

MESSAGE

The Lifeline called Indian Railways being the largest rail web in Asia have always played a very significant role in the development of the economy of our society.

Given the vastness of our country and the breadth of its coverage, Indian Railways is the major mode of transportation for both passenger transport for both the rural & urban population. At the same time the rapid growth of Indian economy has also created a huge demand for additional capacity in our Rail freight transportation. This burgeoning demand has led to the creation of major rail infrastructure projects, which in turn will immensely boost public and private sector investments.

PHD Chamber of Commerce and Industry has been playing a very significant role in working towards the growth of the Indian Industry through its various activities. The PHD GLOBAL RAIL CONVENTION-2014-"Indian Railways: Towards New Horizons" is focusing being organized by PHD Chamber of Commerce and Industry on March 28, 2014 is another step in that direction.

I am confident that the convention focussing on end to end solutions, technical updates, effective policies and their implementation and learning from the progressive practices of other International Rail networks will certainly prove to be a valuable experience to all the participants.

With Urbanization on a phenomenal upswing this paper being brought out by PHD Chamber presenting the various aspects of the Railway sector with suggested measures is extremely relevant.

I wish the Convention a grand success and look forward to welcoming you.

Saurabh Sanyal

Introduction

Once the largest in the world, India's formidable railways network has been overtaken by China's over the last two decades. Of the total network size of about 65,000 km only about 13,000 km has been added since independence (66 years ago). Its reported that only 1,750 km of new lines were added from 2006 to 2011, compared to 14,000 km by China.

As of January 2014 Indian railways employs more than 1.4 million, with around 7,500 stations delivering affordable travel to almost 30 million passengers daily (over 10 billion annually).

Approximately 2.8 million tons of freight is moved daily (over 975 million tonnes annually). With Indian Railways about 70% of its total revenues (in 20011-12 Rs. 686.2 billion from freight and Rs. 304.6 billion from passengers).

However, lack of investment in new railway infrastructure over the years has also given rise to more serious serious concerns such as safety, slipping service levels, dated trains and terminals- both, passenger and freight.

Inflated freight prices have been subsidising passenger services, at the cost of losing some business to road transport. Consequently, road transport as a share of freight traffic has increased to about 60 percent in India compared with about 44 percent in the United States and 22 percent in China, as per estimates. This is undesirable and unsustainable.

India needs to increase use of rail, and realise the potential of coastal shipping and inland waterways. If not addressed, Indian Railway's share in freight would decline to 25 per cent from the current 36 per cent as against almost 50 per cent rail share in countries of similar geographical scale.

Having liberalised sectors including retail, civil aviation, pharmaceuticals, telecommunications and defence to foreign investors in the recent past, the government has now expressed intent to open private participation in rail.

At the time of going to press, the Ministry of Commerce and Industry has sought approval of the Election Commission of India to proceed with its proposal to liberalize the FDI policy in railways. Only after the Election Commission approval will the cabinet decided on the matter, as the model code of conduct is in effect on account of the upcoming general elections.

This is a welcome move, as private sector know-how can also unlock the IR's potential of monetizing its significant asset base. Redevelopment of real estate in and around railway stations, for instance, can drastically improve service levels while enhancing revenues.

A railways regulator in the for of the RTA (Rail Tariff Authority) announced in the Railway Budget last month is a much awaited step, but there is some consternation in the larger ecosystem over the final form and role of this body. With clarity, and examples from regulatory bodies that have worked well, these concerns can be swiftly be addressed.

Encouraging steps are being taken in related areas, too. The Rakesh Mohan panel recommendation to ease India's cabotage law would help enhance domestic mobility for Indian cargo while also inducing competition-led efficiency and contributing to a reduction in the stress on road transport.

A renewed focus on modern network design, multimodality and private participation is the way forward. This participation, whether through PPP or other means, are essential if the railways are to fund modernization and expansion plans.

Recent initiatives of the government and policy makers are laudable, and we hope that this momentum will be sustained.

Policy approach plus swift execution of policy is needed through transparent and time bound processes. A Town Hall approach has worked well in other sectors, and might do well here.

Executive summary

This section outlines some of the major issues and points of discussion around railways and transport infrastructure in the country. These issues span physical assets as well and policy and legislation.

India continues to transport a majority of goods via roads including bulk materials like steel, cement and coal. A moderate shift from road to rail can help India save almost one per cent of its total commercial energy consumption.

A structured development in road and rail infrastructure, improvement in multimodal connectivity and modification in procedural arrangements will allow a smooth flow of traffic over multiple modes.

Containerization is critical to achieving multimodality and intermodality. Collateral benefits of containerization include standardization of equipment, skills and specifications. Increased containerization will reduce accidents,

More investments in multimodal transport infrastructure, and a more robust railway backbone can, in turn, support growth and competitiveness of the economy as a whole.

Example: about 96% of international cargo is carried on foreign flag vessels, and if these shipping lines could be serviced by Indian ports for consolidation, aggregation and transshipment, India would no longer lose business to foreign transshipment ports, such as Colombo. Better rail transport means better connectivity to ports, thus also to other overseas markets and more competitive Indian exports.

Plans to introduce double stacked container trains, especially of freight corridors, are perfectly poised to fulfill demands of new panamax sized vessels that will hopefully call Indian ports with increased frequency, and drive these economies of scale.

Dated and unfavourable policy and prevailing legislation inhibits container movement by rail and transfer of road traffic to rail. It can be argued that in some cases it has even reversed the trend, sending cargo back on roads despite the fact that road transport is more economical only up to 300-400 km in India (as opposed to about 70 km in the United Kingdom) after which its cheaper to transport freight by rail.

Railways have recently changed rates for some bulk commodities (example coal) by changing the slabs for distance. Whereas previously rates went up say every 20 kms now they go up after much bigger distances. This was necessary with long distance rates rising drastically, resulting in some coal movements to have stopped altogether. Rates increases thus can have overall harmful economic effects, affecting the broader ecosystem around logistics and industry.

Legislation and policy implementation will be critical in ensuring that finite physical infrastructure- freight corridors, ports, ICDs, railway yards, logistics hubs, etc. are able to perform at optimal levels of utilization and efficiency.

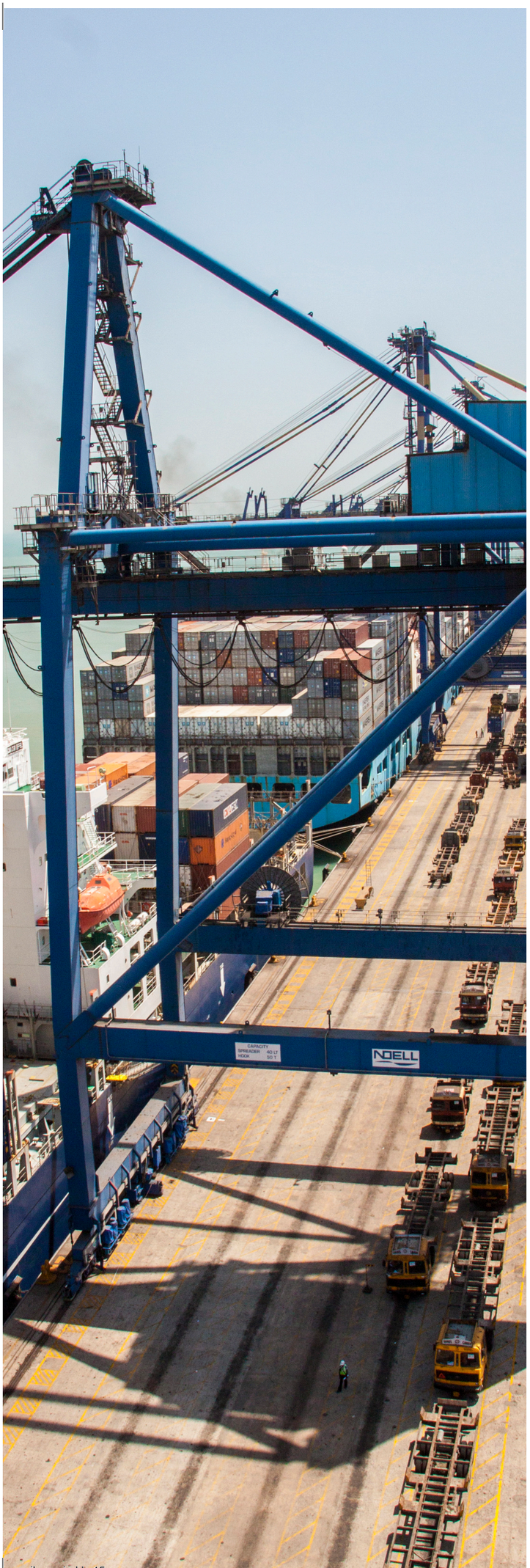
Project approvals are often lengthy and convoluted, and can cause time and budget overruns. Land acquisition, especially with the introduction of the new Land Acquisition Act, have made it even more cumbersome, expensive and legally precarious to set up green field projects. Its unfortunate that often land is the largest input cost for infrastructure, and other, projects.

During the five-year period upto April 2012, the railways only saw 4 percent of the USD 16 billion investment targeted through public-private partnerships. Despite the opening of new sectors recent overall FDI inflows were down 15 percent (to USD12.6 billion) from a year earlier.

Despite the governments positive step to allow private players in the container rail and terminal operations, the requisite infrastructure in terms of common Inland Container Depots (ICD) or Domestic Container Terminals (DCT) is lacking. This is in no small part due to the difficulty to acquire land to construct ICD's/ DCT's, while the available unused railway sidings are entangled in bureaucratic complexities.

Example: If the government expedited the allocation of unused railway sidings to private players, enabling them to compete with state run services, it would enable healthy competition with trade efficiencies and also help to shift movement of trade from road to rail.

In the present scenario few modern, common-user, integrated and multi-modal logistics facilities exist resulting in cargo being fragment over several modes, locations and sub-scale facilities, not allowing container



logistics to flourish to its full potential for both the service providers and service users. Therefore there is a need for the government to take an initiative to develop rail integrated mega logistics parks in strategic locations throughout India.

Port traffic which bears the maximum burden of high haulage charges, as most of the freight trains connect one port or the other. A pricing and price increase mechanism would help rail transportation compete with road transport.

Example: A prescribed upper limit on the extent of revision in haulage charges over and above the number of revisions that are already a part of the rail concession, to protect against discretionary increases.

Service tax which is applied to carriage of goods in containers on rail also inflates the haulage rates. Removal of this service tax application would certainly help- along lines of a similar exemption granted to goods moved on rail through other than in containers in 2009.

The application of service tax on top of already high haulage charges has made carriage of goods in containers on rail a difficult choice for traders as well as domestic distributors, slowing down the pace of shift from road to rail.

Multimodal Transport Act is a necessary piece of legislation, but needs to be clarified and simplified, especially on matters relating to liability.

Government of India has undertaken multiple high impact projects - increasing length of railway lines, PFT, AFTO, RTA, DFC, DMIC, High Speed Rail corridors, etc. These initiatives have been detailed in a separate section, later in this report.

Expected FDI policy

And significant PPP projects

If approved, the policy to allow FDI and private sector participation in railways is expected to attract USD 10 billion in the next five years. This is expected to further add to the momentum created by freight and industrial corridors in the area of infrastructure creation.

The policy still awaits formal clearance and clarity on issues including scope private investment i.e. Rail Operations or infrastructure creation and maintenance; role of Indian Railways i.e. owner of infrastructure or facilitator; etc.

The broad contours of the policy might emerge to be on the following lines.

A. Ministry of Railways has received approval from Cabinet Committee on Infrastructure on the policy to encourage private participation in building rail connectivity and capacity augmentation. Five models have been proposed as per the policy:

   i. Non-Government private line model – Under this model, connectivity to ports and mines can be developed by facility owner/concessionaire as a Non-Governmental private railway line. While the full investments will be made by such facility owner/concessionaire, Indian Railways will pay user charges equivalent to private line's apportioned share of 95% freight computed on the basis of inter railway financial adjustment rules net of operation's cost and other charges.

   ii. Joint Venture- The connectivity to ports, mines and logistics parks can be developed by formation of a joint venture in which IR or its PSUs will also participate. Funding will be done by these strategic stakeholders.

   iii. Capacity augmentation through funding by customer- The rail connectivity can also be augmented by taking full or part funding from major users of the line. Indian Railways will payback such advance through freight rebate till the funds provided is recovered by the project beneficiary with interest at the rate equal to the prevailing rate of dividend payable by railways to

general exchequer.

iv. BOT- The connectivity can also be strengthened by constructing long railway corridors by concessionaire through competitive bidding. The concessionaire will be paid user charges equivalent to 50% of the apportioned freight as per inter railway financial adjustment.

v. Capacity augmentation to annuity model- Connectivities can also be augmented through competitive bidding where Indian Railways take a fixed annuity every year.

The above policy framework will encourage ports, mines, cluster of industries and logistics parks to strengthen rail connectivity.

B. The following projects have been implemented by Ministry of Railways under Public Private Partnership:

i. Pipavav-Surendernagar Gauge conversion project.

ii. Hassan-Mangalaore Gauge conversion project.

iii. Gandhidham-Palanpur Gauge Conversion Project.

iv. Bharauch-Dahej-Gauge conversion project.

v. Obullavaripalli-Krishnapatnam new line project.

C. A target of Rs. 100,000 crore has been set for generating investments through PPP during the 12th Five Year Plan period. An investment of Rs.10,000 crore has been committed from ports, large mines and other industries. The break-up is :

i. Ports: Rs 4,000 crore (Dhamra, Dighe, Jaigarh, Rewas, Astranga, Hazira, Tuna)

ii. Coal : Rs 5,000 crore (63km Bhupdeopur –Mand , 70km Adani line of Persa Kante mines in Chattisgarh and 122 km Gevra-Pendra Project in Chattisgarh, NTPC commitments for certain coal projects under customer funded)

iii. Iron Ore: Rs 900 crore (Kirandul line with NMDC)

D. Currently the following sanctioned projects are being implemented through PPP route:

i. Angul-Sukinda new line – The project is likely to be completed by December, 2015.

ii. Haridaspur-Paradip new line- The project is likely to be completed by December, 2015.

iii. Bhupdeopur-Mand Colliery New Line - The project is likely to be completed in next five years.

iv. Gevra Road -Pendra Road - The project is likely to be completed in next five years.

v. Palanpur – Samakhiali double line – The project is expected to be completed within 13th Five Year Plan period.

F. In principle clearances have been given for the projects in the table below, under the new Participative models.

	Subject	KM	Cost (Rs crore)	Route/Model
Port Connectivity Projects				
1	New Bhubaneswar station to Astrangra Port New line, Odisha	75	1310	Non-Governmental Railway (private line model)
2	Inda Port, Dighi Port New Line, Maharashtra	42	770	Joint venture with RVNL.
3	Digni - Jaigarh Port New line, Maharashtra	35	771	Joint venture with KRCL
4	Bhadrak-Dhamara Port New line, Odisha	64	760	Non-Governmental Railway (private line model)
5	Sayan/Kin -Hazira Port New line, Gujarat	47	734	Non-Governmental Railway (private line model)
6	Gandhidham-Tuna Port New line	17	142	Non-Governmental Railway (private line model)
7	Hamrapur-Rewas port New line	26	349	Joint venture with RVNL.
8	Bhimnath- Dholera Rail Link (New Line)	27.6	252	NGR Model (JV of DMIDC & Govt. of Gujarat on 50:50 basis will be formed)
9	Electrification of Lalitpur-Udaipura section (JHS Div. of NCR)	27.6	44	Customer funded (Model 6.4 of Participative Model)

Government initiatives

A selective list

PPP in Container Rail Operations:

Privatization of container rail operations has lead to increased investment in rolling stock and locomotives, which is expected to further lead to a significant increase in containerized domestic traffic on Indian Railways and improvement of service levels. Further integrated value added solutions are being rolled out including, double stacked container trains, triple stacked trains (being experimented with, for automotive industry), first and last mile connectivity, track and trace, etc.

Automobile Freight Train Operator Scheme:

This policy allows for private ownership and operation of trains designed to transport automobiles. Transport of automobiles is a sophisticated field, and this policy will further drive cost, through streamlining operations and concessions from IR.

Private Freight Terminal-Revamped Policy:

The revamped PFT policy based on the suggestions of private players is a revenue-sharing model, where the private player has to share 50% of the cargo-handling revenue with railways for five years. The terminal operators can handle all cargo, except outward coal, coke and iron ore and seems like a lucrative business opportunity for logistic companies.

DFCCIL

Though the recent plans of the Dedicated Freight Corridors being built by Indian Railways with international agencies are a step in this direction and will surely change the freight industry as freight carriage by rail becomes faster and more economical.

DMIC

A USD 90 billion mega infra-structure project - Delhi- Mumbai Industrial Corridor (DMIC) is underway, enveloping the 1483 km Western DFC (Dedicated Freight Corrdor), also being built at a cost of almost USD 9 billion. DMIC incorporates 7 Smart-Cities, 9 Mega Industrial zones, 3 ports, 6 airports; a six-lane intersection-free expressway, a 4000 MW power plant, a high speed freight line, 6 Logistics parks/ transshipment zones and 6 Free Trade Warehousing Zones (FTWZ).

LDB

Container cargo in India is growing rapidly. However, transportation is mainly concentrated on road transport, which is higher in cost. This leads to significant impact on transportation cost being high.

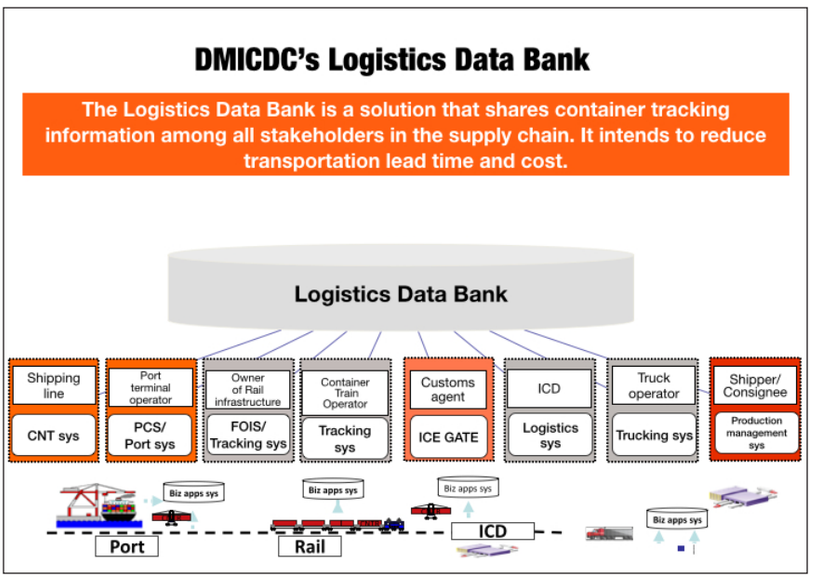
It is important to promote rail transport, which has advantage of "Mass transportation". Modal shift from truck to rail can substantially reduce transportation cost. A strong IT solution is indispensable for achieving Modal shift from road to rail transport, besides the physical infrastructure created by DMICDC and DFC.

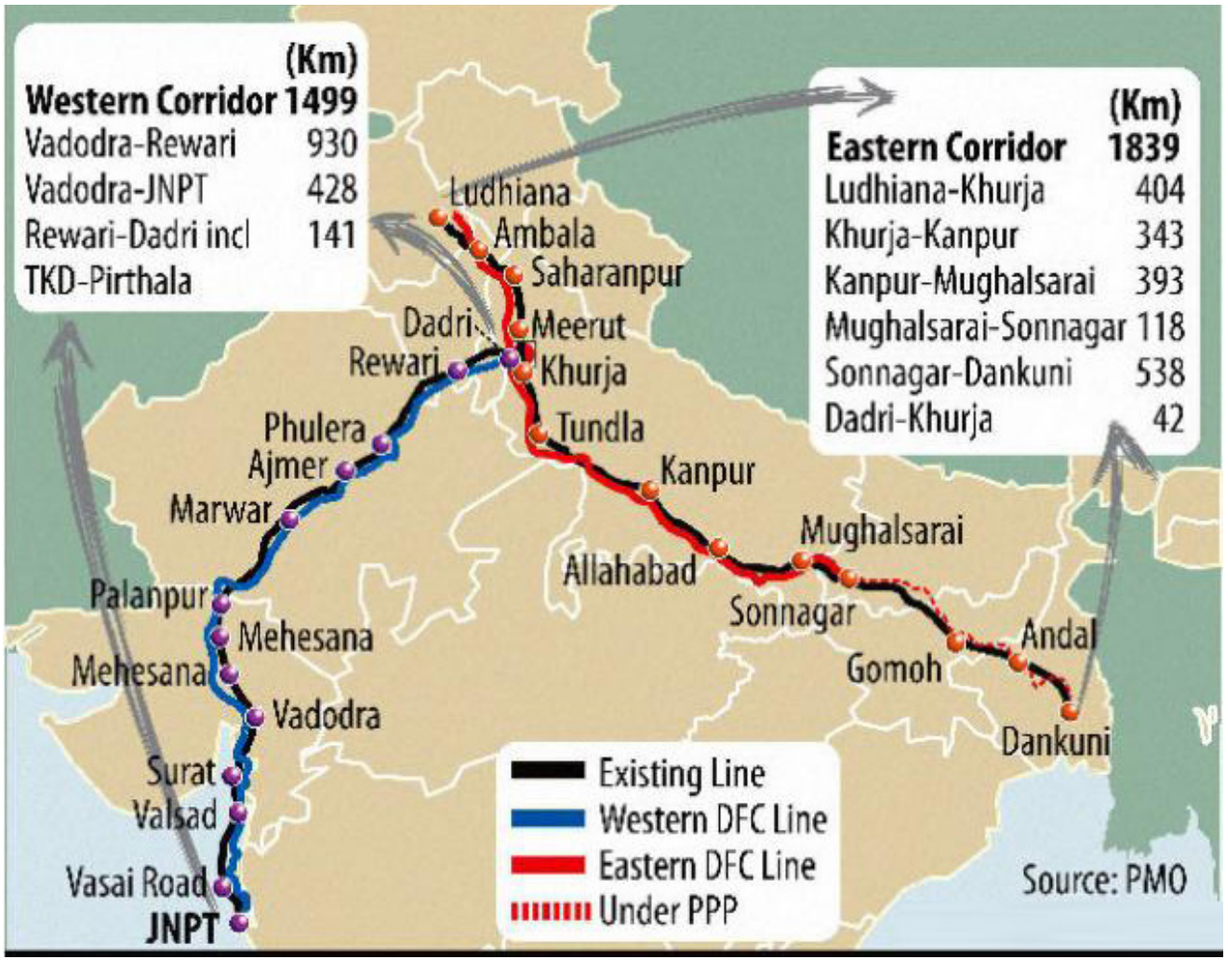
Logistics Data Bank is a solution that shares the container tracking information among all the stakeholders in the supply chain. It is aimed at reducing transportation lead time and cost.

It demonstrated the advantages of such a system and how it can streamline the operations and bring in efficiencies.

LDB will generate visibility for containers during transit.

The visibility would bring in more transparency and open up competition among each logistics operators to provide better services to end-customers i.e. export/import related companies.





Competitive environment would help reducing lead-time and transaction cost for export/import process

This cycle, or spiral (Visibility - Competition - Inculcating Best Practices –Benchmark - More Competition - New Benchmark), would work in a continued manner.

Mass Rapid Transit-Urban & Long Distance (LRTS-Metro/ High Speed Rail/ Mono Rail):

The High Speed Rail provides for fast and frequent rail travel, while requiring much less land for construction as compared to expressways and highways. A two line HSR is generally equivalent to eight lane highways for creating capacity for passenger transport.

Monorail can also be a supplement for highly successful Metro as it can be easily built and can run through congested areas and on narrow roads where Metro corridors cannot be constructed or dedicated bus tracks cannot be laid.

In the current times where there is terrible shortage of supply to meet passenger transport demand, developing High Speed Rail & Monorail Network in the country will be the right step towards sustainable development.

Indian Rail Wagon Leasing Market & PPP models:

Decision of the Indian Railways to ease norms in the wagon leasing scheme, allowing firms to procure and lease wagons to other businesses along JV/ PPP models, is aimed at giving a boost to this industry. The new revise norms allow the leasing company to purchase wagons from container train operators, special freight train operators, Automobile freight train operators and end users. It also allows a company to Import wagons and lease them to private container operators and the railways.

Project Uni-gauge:

More recent networks of metre and narrow gauge are currently being replaced by broad Gauge under this project.

Rail Tariff Authority (RTA):

Railways is in the process of setting up Rail Tariff Authority (RTA) which will aim at leveling the tariff for both the freight and passenger fares from time to time taking into account the input cost and volatile market conditions.

Modernization, Up- gradation & Enhancement of existing Rail Infrastructure:

Presently most of Indian Railways high–density and major freight corridors are facing severe Capacity constraints requiring huge capacity enhancement plans. Also, freight transportation costs by rail are much higher than in most countries as freight tariffs in India have been kept high to subsidize passenger traffic.

Recommendations

India's logistics costs amount to about 14 % of GDP as a result of the challenges and constraints listed above. If the economy is to perform better, there has to be a concerted policy effort to create capacity through the provision of more infrastructure so as to create more effective markets, more effective legislation that governs the physical infrastructure and a more effective process to plan and bring on stream capacity ahead of demand and not lagging it. The down stream effects of these efficiencies will benefit every stakeholder as it will liberate resources for social and other requirements as well as creating greater cost efficiencies.

In this section, we have listed the most frequently suggested recommendations across stakeholder groups.

PPP Initiatives

This will hopefully be addressed in the new policy that is currently under review, but still warrants a mention.

Develop PPP models in various areas of Railways to attract private investment to augment core capabilities related to:

- Stations and Terminals
- Signalling
- High speed rail corridors
- Safety- through latest technology
- Elevated rail corridor
- Private freight terminals
- Track maintenance
- Leasing of wagons
- Loco and coach manufacturing units
- Captive power generation
- Renewable energy projects (solar, wind etc.)
- Merchandizing

MMLPs (Multimodal logistics parks)

A master plan should be devised to eliminate duplication of cost and effort among various government bodies. For instance, along a stretch that is covered by an industrial corridor, freight corridor, and has presence of other government or railway PSUs, non-competing infrastructure should be designed and built.

Else, it would further exacerbate the problem of having clusters of over capacity, with large sections elsewhere, that are underserved.

For sizeable projects, governmental agencies may partner in a consortium approach.

Regulate with care

The need for an independent railways regulator is accepted by all stakeholders. And the constitution of the recently mooted Rail Tariff Authority (RTA) has been welcomed unanimously.

However, a word of caution is in order. Its difficult to achieve balance in regulation, especially price regulation, and requires constant evolution and study. The Tariff Authority for Major Ports (TAMP) holds an important lesson. Twenty years ago, a regulator was very necessary, as in the absence of competition, there was a real risk of abuse of power by ports. Now the charter of TAMP is being questioned, as there's a case for allowing a market based pricing structure for ports. It is argued that this would, encourage efficiencies in all ports, will encourage the further development of an effective market in port pricing and thereby enhance competition which will be to the benefit of service providers and the Indian consumer.

Globally, there have been examples of regulators adapting to a changing environment. Ofgem, the British utilities regulator evolved role from price regulation (in a monopolistic market) in its early days, to presently ensuring free and fair competition, leaving pricing of power and gas to the market (which is no longer a monopoly).

International benchmarking

Across the spectrum of rolling stock, terminals, specialized logistics hubs and supply chain architecture, the IR should partner with or enable private participation with category leaders globally.

A CoE (center of excellence) approach may be considered to test new ideas, or create reference projects with first time investors in India.

These CoEs can be a powerful means for designing strategy and execution of the same. Through inherent flexibility of this model, the structure and and scope may

Skilling, and training and development

The lack of skilled human resources are a huge impediment in creation of infrastructure and scaling up of operations. Attrition, spiraling HR costs and unavailability of employable manpower are taking their toll on the transport and infrastructure sector.

Operators and drivers for transport and material handling equipment, supply chain engineers, logisticians and warehouse managers are all part of the talent pool that needs to be developed expeditiously.

The CoE (Center of Excellence) approach outlined above, could be expanded to ensure skilling, certification and standardization of skills required in the sector. CoEs can play a vital role in building this talent pool by assessing skills gaps, building training

infrastructure, developing certification programmes, and attracting international best practices through involvement of foreign partners and private sector.

Bids – looking beyond L1

Internationally, the experience of governments and private sector project owners has demonstrated the

inadequacy of using a bidding system where the lowest (e.g. in terms of cost), or highest bidder (e.g. in terms of revenue).

Even in tenders/ auctions that have a techno-financial bid, an inordinate consideration is placed upon the financial bid. For instance, a technologically superior bidder will not be awarded the job, even if marginally more expensive.

In far too many cases, the L1 (lowest bidder), after being awarded a contract will be unable to deliver satisfactorily.

Other methods, including the Swiss challenge, Dutch auction, Vickrey auction, Negotiated price auction, and other methods that may be developed through consultations with stakeholders.

Review of projects

Along the lines of Cabinet Committee on Infrastructure (CCI) chaired by the Prime Minister, a similar framework internal to the Ministry of Railways may be introduced to monitor progress of projects.

Railways may use a system of grading low, medium and high priority to various projects and follow their progress accordingly.

Time bound finalization of tenders, escalating projects to CCI when required, and empowering officials with increased powers to expedite projects, should all be part of the charter of this framework.

Capacity building of indigenous firms

Indian firms must be strengthened to be able to participate in system supply, concession and services for IR, and gradually overseas markets. Through PMA (preferred market access), offset conditions, consortium approach with Indian member, PUC, technology transfer, etc an opportunity can help increase local production and domestic manufacturing and make India a hub for technology, equipment and services export globally.

Other measure include developing Indian standards, critical vendors and protocols for Railways, strengthening RDSO (Research, Design & Standards Organization) to build local capabilities, upgrading existing railway R&D facilities and enhancing university interface with Railway laboratories and academic/ R&D institutions.

Initiatives such as the Trans Asian Rail link being enabled by UNESCAP open unprecedented opportunities for Indian Railways and private sector suppliers to export their knowledge and products to new markets.

Pre-Qualification of IR suppliers

Suppliers approved by RDSO for purchases by Indian Railways, should be granted pre-approval for supply of the same products to Metro Corporation and other existing and new agencies.

These vendors may also be empanelled with other railways and related bodies, subject to approval of new products and solutions, if any.

High Speed Passenger Train Corridors

Though the capex for these projects is sizeable, there is a strong case for faster intercity travel and better connectivity on the following corridors:

1)Ahmedabad - Mumbai (with speeds upto 350 kmph).

(2) Delhi-Chandigarh-Amritsar (450 km); (3) Hyderabad-Dornakal-Vijayawada-Chennai (664 km); (4) Howrah-Haldia (135 km); (5) Chennai-Bangalore- Coimbatore-Ernakulam (850 km); (6) Delhi-Agra-Lucknow-Varanasi-Patna (991 km)& (7) Ernakulam-Trivandrum (194 kms).

Stations & Terminals

Modernize 100 major stations out of the total 7083 stations immediately.

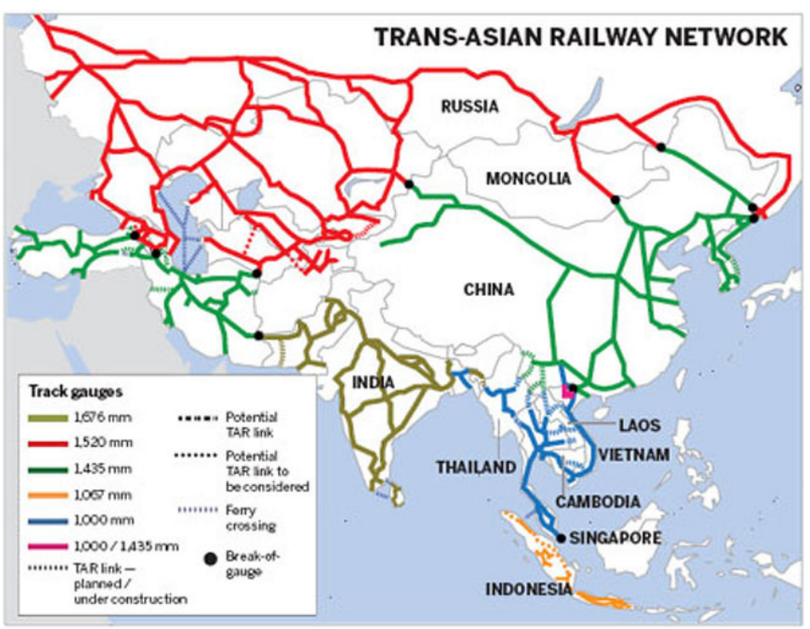
A total of 770 stations should be targeted for redevelopment in the next 10 years.

Develop 34 multi-modal logistics parks at identified locations to provide integrated transport infrastructure facilities for users.

Modernize existing Railway Freight Terminals-Take up top 50 terminals.

Enhance customer amenities and services at stations and on trains, with special provisions for physically challenged passengers

The above efforts would lead to substantial revenue generation, improved management & customer services as well additional traffic due to new logistic parks & modern terminals.



Information and Communication Technology (ICT)

Set up Real Time Information Systems (RTIS) to provide real time information at stations and on running trains

Set up Radio Frequency Identification (RFID) tracking system for wagons, coaches and locomotives to enhance wagon management and real time monitoring

Projects such as the LDB (Logistics Data Bank) may be extrapolated to other corridors, and more sophisticated applications may be explored.

Review CRIS (Centre for Railway Information System) and integrate it into IP-based ICT agenda

Leverage and expand Railtel optical fiber network

Introduce e-file to computerize Railway files and expedite decision making

Introduce Mobile ticketing & commerce for a variety of Railway applications

Upgrade & Integrate Railway websites and use social media creatively for customer feedback, consumer education and social messages

This would lead to improvement in wagon utilization and availability by 10%; efficient tracking of trains, locomotives and cargo; enhancement of communication services (voice, data & video services) and improvement in quality of passenger services. Further, it would provide across the board benefits to both customers and railways. Customers will benefit from improved on board information, station security, safety, services and facilities while railways will benefit from resource mobilization using innovative business models and safety and security of its passengers and assets.

Customs and Excise

The role of Customs and Excise is rapidly increasing in complexity and scope, given newer technology and risks faced by international and domestic trade. However, modern risk management systems, security systems and Information Technology offer an unprecedented efficiency and transparency in the supply chain.

Legislation is often complicated, drafted in older times where transport and logistics was managed very differently, as were issues around custodianship and fiscal risk. Laws, and enforcement thereof, that have not been constantly updated, create liability for all stakeholders in the supply chain, including Indian Railways.

For instance, abandoned import containers (already in tens of thousands across the country) are a large and growing problem. Expeditious handling and disposal would free up capacity, container inventory, infrastructure (at ports and rail yards), and bring revenue to government and operators. Legislative infrastructure has the ability augment and support finite physical infrastructure.

Safety

There exists tremendous potential for IR to use some of the initiatives suggested in this section, including PPP and international benchmarking, to improve safety metrics in while enhancing capacity and thereby better asset utilization levels on the Indian Railway system.

This can be achieved undertaking upgradations, such as automatic block signaling, ultrasonic flaw detectors, TPWS (Train Protection Warning System), Train Management System (TMS), eliminating unmanned level crossings, Anti-Collision Device, Centralized Train Control Systems, Integrated Security Systems, etc

Funding

(Source: Sam Pitroda Report 2012, and 12th FYP)

Mobilize total investment requirements of Rs. 5,60,396 crores for the proposed modernization initiatives.

Railway sub-group of XIIth five year plan has estimated additional requirement of Rs. 4,42,744 crores for various other investments proposed to be undertaken during the 12th FYP and not covered under modernization incentives. Table 2 (see Annexures) provides a summary of the total investment required (both for modernization and recommended by the 12th plan sub group of Railways)

Outline an investment of Rs 8,39,000 crores, during the XIIth FYP, which includes Rs 3,96,000 crores of modernization plan investment recommended by us. It is a quantum jump from investment levels of Rs 2,03,000 crore in the XIth plan and Rs 84,000 crore in the Xth plan.

Based on the discussion with various stakeholders the Committee recommend the funding pattern given in table 3 (see Annexures). [The main sources of funds for IR are internal generation (revenue surplus), gross budgetary support (on which IR currently pays an annual dividend of 5%) and extra budgetary resources comprising market borrowings, bonds and PPPs.]

Follow the following funding pattern and bridge the gap of Rs. 16,469 crores from the following sources:

a. Disinvestment in Railway PSUs (Public Sector Units)

b. Re-densification/ commercialization of surplus land in existing railway colonies in different locations. A few pilot projects could be immediately explored.

c. Commercial exploitation of railway schools and hospitals, without displacing any of the priorities from the point of view of IR employees. Management contracts (on the basis of revenue sharing) could be tried for some of the larger hospitals/ schools with a view to achieve significant up gradation of standards.

d. Modernization surcharge from passengers on a per passenger km basis

The above initiatives should help attract investment, enable resource mobilization, growth and expansion of railway capabilities.

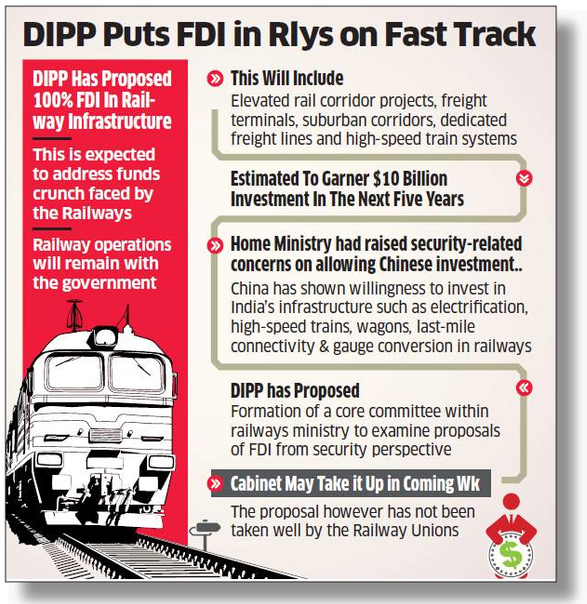
Annexures

THE ECONOMIC TIMES

Cabinet likely to consider FDI in Railways next week

NEW DELHI: The department of industrial policy & promotion (DIPP) will push for a decision on foreign direct investment in railways next week before the general elections are announced after putting in a mechanism to address concerns raised by the home ministry.

The DIPP has proposed that a core committee within the Railways ministry should examine all proposals of foreign direct investment (FDI) from the perspective of security before giving a final clearance.



Without singling out Chinese investment, the department has recommended in its final Cabinet note that the proposed committee vet all FDI proposals. The move comes after the home ministry had pointed out that FDI from China in railways might pose a danger to national security and Chinese investments should not be allowed in border areas such as Jammu & Kashmir and northeastern states.

"The security concerns raised are valid. We have addressed them to the best of our ability and asked for an internal core committee to look at all investment proposals, rather than singling out Chinese investment," said a senior DIPP official, who did not wish to be named. "It should likely be taken up next week by the Cabinet," he added.

The committee will ensure railways projects with private or foreign investments are not detrimental to overall national interests, he added.

The DIPP has sent the note to the Cabinet, seeking approval to allow 100% FDI in railway infrastructure such as elevated rail corridor projects, freight terminals, suburban corridors, dedicated freight lines and high-speed train systems. The proposal could be taken up next week before the elections are announced and the model code of conduct kicks in.

As per the proposal, the core committee will comprise officials with technical and security expertise to examine each proposal. FDI proposals in railways will not have to go to the Foreign Investment Promotion Board (FIPB) since the sector is recommended for the automatic route. The final Cabinet note has also incorporated railway lines and sidings in the definition of infrastructure that will be open to foreign investment.

China is interested in investing in India's railways, among other infrastructure sectors, as per the fiveyear trade and economic planning cooperation report by the Chinese working group submitted to the Indian government. China is keen to fund electrification, high-speed trains, wagons, last-mile connectivity and gauge conversion in India's railways.

The proposal is part of the FDI reforms' drive revived by the government last year that led to raising of FDI caps in some sectors, along with changing of entry route to automatic. A decision on easing restrictions on FDI in construction and housing is also pending with the Cabinet.

While the DIPP has received comments on FDI in e-commerce, opening up of e-commerce is unlikely within the tenure of this government.

Business Standard

FDI in railways:Comm Min seeks EC approval

The Ministry of Commerce and Industry has sought approval of the Election Commission of India to move ahead with its proposal to liberalise the overseas investment policy in railways.

The Cabinet can take a decision on the matter only after the Election Commission's approval.

"As the model of conduct is in force on account of the upcoming general elections, the government has sought the Election Commission's approval on the matter," sources said.

The Department of Industrial Policy and Promotion (DIPP) under the ministry has proposed to relax the foreign direct investment (FDI) policy in certain railway sectors.

The DIPP proposes to allow 100% FDI in high-speed train systems, suburban corridors, high-speed tracks and freight lines connecting ports and mines.

The objective is to attract more FDI into the country and help the Indian Railways modernise sectors where India is yet to develop the requisite technology.

FDI will not be allowed in existing passenger and freight network operations. At present, there is a complete ban on FDI in railways, except in mass rapid transport systems.

According to the proposal, foreign companies would be allowed to pick up 100% stake in the special purpose vehicle that will construct and maintain rail lines connecting ports, mines and industrial hubs with the existing network.

However, the Home Ministry and the Department of Economic Affairs had sounded a note of caution, citing security concerns, especially regarding investments from China.

The Home Ministry maintained in its observations that Chinese investments should be viewed with caution.

The DIPP may also seek the Election Commission's approval to relax FDI norms in the construction sector. The DIPP has proposed easier conditions for developers to exit, among other changes.

Funding pattern and route map as per Pitroda Report

Table 1: Total investment requirements for Modernization

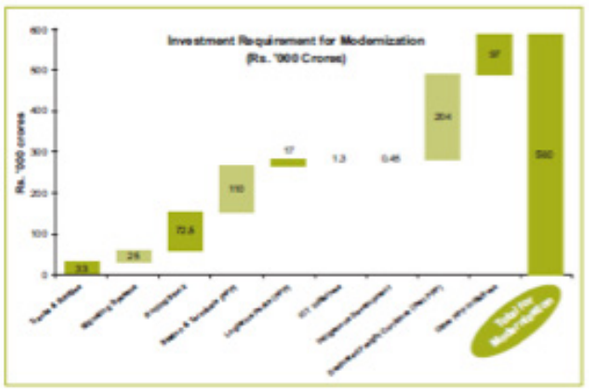


Table 2: Summary of Total Investment Requirements

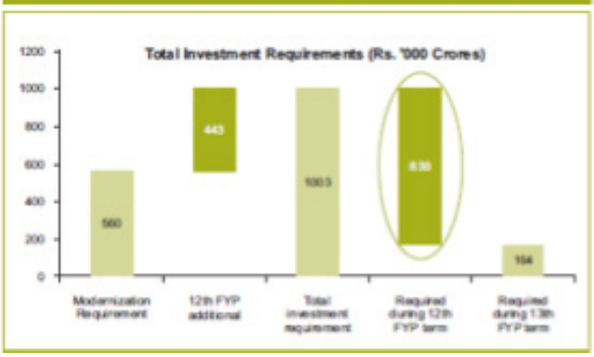


Table 3: Sources of funds to raise the amount of Rs. 8, 39,140 crores required in the next 5 years:

Sources of Funds (Rs. in Crores)		
S. No.	**Sources of funds**	**Rs. in crores**
1.	Gross Budgetary Support	250,000
2.	Internal Generation	201,805
3.	Leasing/Borrowings	101,000
4.	PPPs	229,024
5.	Dividend rebate	24,000
6.	Road Safety Fund	16,842
	Total	822,671

Table 4: Gap in Applications & Sources of Funds:

S. No.	Gap in Application and Sources of funds	Rs. in crores
1.	Total investment requirements	839,140
2.	Sources of Funds	822,671
	Gap to be funded	16,469

Annexure III (Routes A and B)

Section-wise route kms for routes A & B

Route A			Route B		
S. No.	**Section**	**Kms**	**S. No.**	**Section**	**Kms**
1	Mumbai-Nagpur-Howrah	1667.10	1	Jammu-Moradabad-Patna-Kolkata	2304.00
2	Delhi-Mumbai	1438.00	2	Chennai-Ernakulam	710.00
3	Delhi-Chennai	2009.00	3	Mumbai-Chennai	1181.00
4	Delhi-Howrah	1450.00	4	Chennai-Dindigul	426.00
			5	Bandikui-Agra Fort	180.00
			6	Secunderabad-Manmad	816.00
			7	Secunderabad-Dhone	297.00
			8	Chennai-Bangalore	467.00
			9	Delhi-Jaipur-Palanpur-Ahmedabad-Baroda	1021.00
			10	Kharagpur-Vijayawada	1121.00
			11	Howrah-Nirakia-New Jalpaiguri	399.00
			12	Allahabad - Jabalpur- Bhusaval	910.00
			13	Delhi-Ambala-Kalka	264.00
			14	Ambala-Jalandhar	188.00
			15	Gudur-Tirupati-Katpadi	410.00
			16	Kazipet-Secunderabad-Wadi	317.00
			17	Guntur-Nandyal-Gunfakal-Bellary	599.00
			18	Delhi-Ambala-Kalka	260.00
			19	Ghaziabad-Saharanpur	160.00
			20	Nadikude-Pagadipati	149.00

Annexure III (Routes A and B)

Glossary

AFTO	Automobile Freight Train Operator
BOT	Build Operate transfer
CFS	Container Freight Station
CRIS	Centre for Railway Information System
DCT	Domestic Container Terminal
DFC	Dedicated Freight Terminal
DFCCIL	Dedicated Freight Corridor Corporation of India Limited
DIPP	Department of Industrial Policy & Promotion
DMIC	Delhi Mumbai Freight Corridor
DMICDC	Delhi Mumbai Industrial Corridor Development Corporation
FDI	Foreign Direct Investment
GPS	Global Positioning System
HSR	High Speed Rail
IR	Indian Railways
ICT	Information and Communications Technology
ICD	Inland Container Depot
IP	Internet Protocol
JV	Joint Venture
LDB	Logistic Data Bank
LHB	Linke Hofmann Busch
LRTS	Light Rail Transit System
RTA	Rail Tariff Authority
RFID	Radio Frequency Identification
MRT	Mass Rapid Transit
NHDP	National Highway Development Project
PSU	Public Sector Units
PCU	Passenger Car Unit
PPP	Public Private Partnership
PFT	Private Freight Terminal
RDSO	Research, Design & Standards Organisation
RTIS	Real Time Information Systems
TPWS	Train Protection Warning System

Acknowledgements

Fast Track to Reform- Policy and Execution of MuliModality is the result of proprietary and secondary research conducted by JCurve's Logistics and Infrastructure team. We owe a debt of gratitude to all the individuals and organisations who provided their invaluable support in the creation of this report.

This study has benefited enormously from the valuable inputs provided by policy makers, key stakeholders and government officials in various ministries in the central and state governments, including, Indian Railways, The Planning Commission, CRWCL, DMICDC, DFCCIL, Ministry of Shipping, Ministry of Road Transport and Highways, UN ESCAP and the PMO. We are thankful to all of them for readily sharing their experiences and insights for this report.

In addition, perspectives and comments received from various industry leaders and practitioners across the logistics infrastructure value chain have enriched this effort.

This effort would not have been possible without the commitment and efforts of the PHD Chamber's secretariat; especially Mr. Yogesh Agarwal and Ms. Bhavna Singh, who have been working tirelessly towards the aims of the railways committee. We would like to specially thank the members of the Railway Committee, chaired by Mr. Sandeep Agarwal.

Finally, we would like to thank Mr. Andy Malhan at TSA Effects, who designed the report, and Mr. Anshul Malhotra at Swan Press for their invaluable support.

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