

# **East Coast Maritime Business Summit**

**Conducted by  
Gateway Media Private Ltd  
On 23<sup>rd</sup> January, 2015 at Visakhapatnam**

**Cargo Track: Vibrant Hinterland and  
Rising Cargo Volumes**

**BY  
P. RAYCHAUDHURY  
Executive Director (T & S)  
Steel Authority Of India Limited**

# Indian Business Scenario

- A glimpse into various industrial sectors are highlighted:
  - India's nominal GDP could grow to a rate of 8-9% over next decade.
  - By 2025, India's crude steel production is expected to increase to 300 MT.
  - The demand for cement in the country is expected to double.
  - Other sectors like Agriculture, textiles, organised retail is expected to grow.
  - India's industrial energy consumption is expected to double by 2020. In this scenario, the country will need to mine and transport 2 billion tonnes of coal by 2030. Further, around 30 per cent of total transported coal will have to be imported through ports.
  - Overall export-import (EXIM) cargo at Indian ports is projected to increase to around 2,800 MMT by 2020 from approximately 890 MMT currently
  - Thus, to sustain and drive economic growth, the movement of goods will require a vastly superior service sector and physical logistics infrastructure.
  - It is perhaps an opportune time to dive deep into certain specific developments — those in the pipeline as well as those that must be focused upon in the near future — that could potentially overhaul the way India moves, stores and delivers.

# Indian Logistics Scenario

- Indian logistics industry is currently plagued with poor infrastructure, high costs, government regulations etc.
- Indian transportation and logistics industry is poised at a crossroads along its growth trajectory. Rising investment, rapidly evolving regulatory policies, mega infrastructure projects in recent times have driven the Indian logistics market.
- The annual logistics cost in India is estimated to be 14% of the GDP.
- Large portion of logistics cost is accounted for by the unorganized sector and a small portion, is contributed by the organized sector.
- The industry is growing at a fast pace and if India can bring down its logistics cost from the present level to 9% of the GDP (level in the US), that may lead to huge savings, making Indian goods more competitive in the global market.

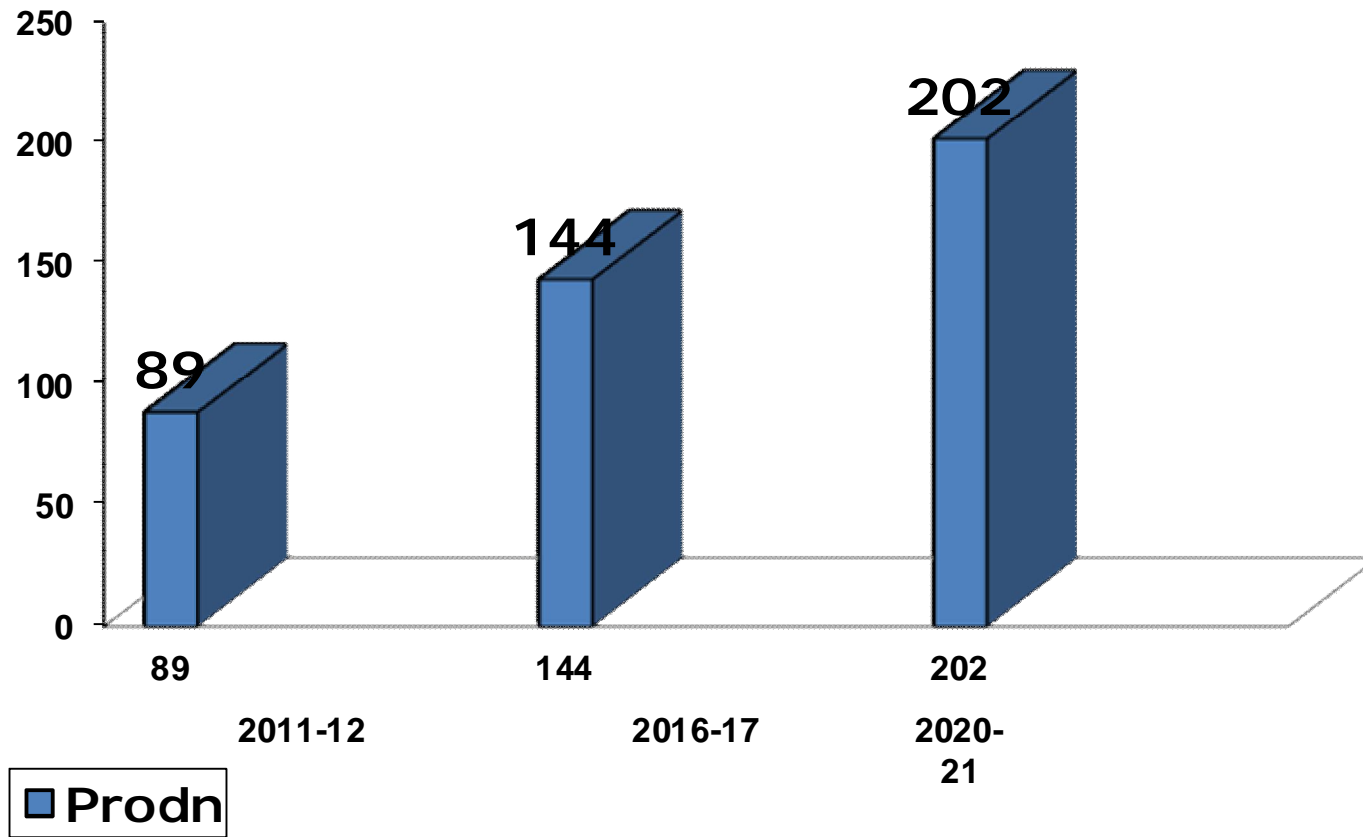
# Indian Steel Sector

- The long-term goal of the national steel policy is that India should have a modern and efficient steel industry at par with world standards
- With economy recovering, majority of the planned brownfield expansion are going to materialize but Green Field Expansion is uncertain.
- Per capita consumption low (66 kg in 2012-13) and can go up to 115 kg by 2020)
- Challenges facing Indian Steel Industry:
  - ❖ Raw material availability
  - ❖ logistics constraints in movement of raw materials and end products

## Ranks in Steel Production

	2013		2012	
Country	Rank	Crude Steel Production	Rank	Crude Steel Production
		(MT)		(MT)
China	1	779	1	731
Japan	2	111	2	107
USA	3	87	3	88
India	4	81	4	77
Russia	5	69	5	70
S Korea	6	66	6	69
Germany	7	42	7	43
Turkey	8	35	8	36
Brazil	9	34	9	34.5
Ukraine	10	33	10	33

## Estimated Steel Production Growth in India (Mt)



## Raw Material Scenario

- Most of the Indian Steel company imports coking coal as Indian coal is not of good quality.
- The coking coal import to go up manifold due to capacity addition of steel mills.
- Many companies are trying to acquire mines abroad to have raw material security.
- Large quantity of thermal coal is being imported to bridge the shortfall of domestic supply.
- India's requirement of iron ore is mostly met through domestic supply. However due recent ban on mining, Iron ore is also getting imported.

# Coal

- Fourth largest proven coal reserves (coking coal reserves are less- about 15%)
- Indian coal has high ash content, low calorific value.
- Private sector participation is currently restricted to captive coal mines
- India produced 560 million tons of coal in 2013-14 as against demand of 740 million tons(third largest coal producer- CIL– 460 million tons)
- Total coal import in 2013-14: 180 mt
- Most of the imported coal came from Indonesia, Australia, and South Africa.
- Increase in import in FY15 to about 200 mt. Growth of Coking coal will be marginal
- As per the 12th Plan documents, coal demand-supply gap is estimated to further rise to 185 MT in 2016-17.
- Import of coal to increase to 300 Mt by 2020
- India imported 36 mt coking coal in 2013-14 and may remain flat in current year
- The coking coal import to go up due to capacity addition of steel mills
- Many companies are trying to acquire mines abroad to have raw material security



# Iron Ore

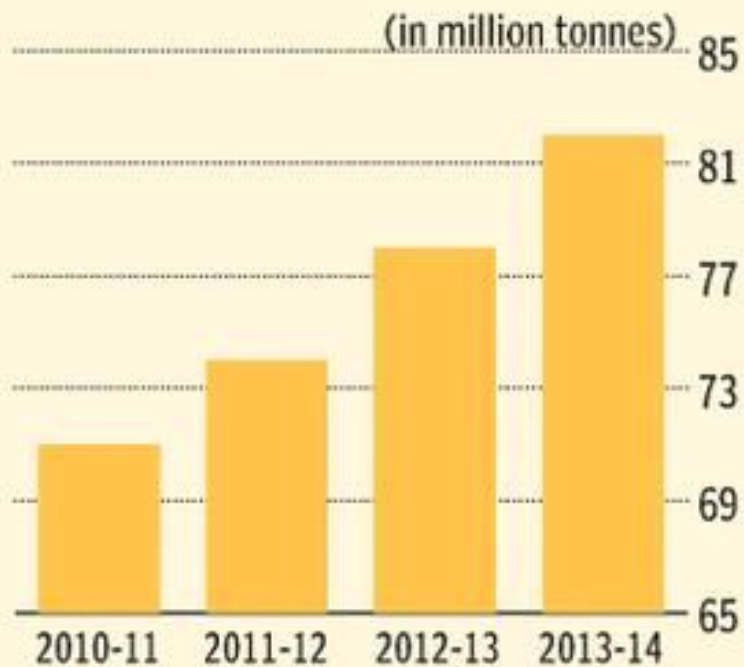
- India's iron ore production has come down to an all-time low of 144 million tonnes (MT) in FY'14 from the peak level of 218 MT in FY'10.
- The production is expected to drop further to a level of 90-95 MT in current fiscal. India has been forced to import iron ore from countries like Australia, Brazil and South Africa.
- Miners' body FIMI also estimated that the country might end up importing around 15 MT of iron ore in current fiscal and become a net importer with just 8-9 MT exports.
- The country plans to import about 45 million tonnes of iron ore in the next three years.
- TATA and JSW are importing iron ore in the current year following the domestic cutback in production.
- Domestic iron ore availability has been the most prized advantage of the steel makers in India. The paucity of supply and consequent imports might mar the prospect of many firms, hitting the prospect of having 300 MT capacity by 2025 from around 100 MT now.

# Iron Ore

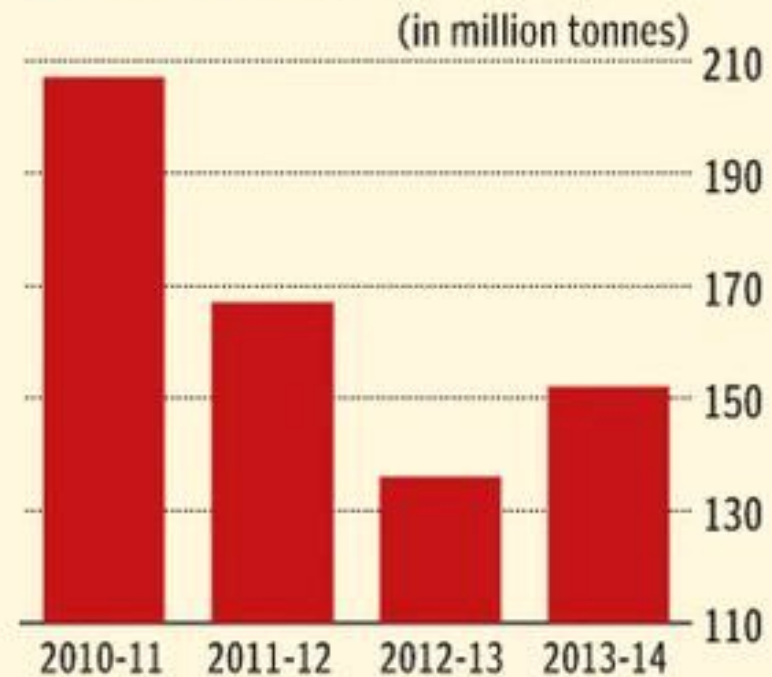
## Iron ore shortage

While India's crude steel production has increased, production of iron ore, a key input has fallen

■ Crude steel production



■ Iron ore production



Source: Ministry of Steel



# **Developments & Issues in Logistics**



## Logistics & Infrastructure Scenario for Steel Industry in India

- Major dependence on Indian Railway as most of the plants are located in hinter land.
- Bulk commodities like iron ore , Coal, fluxes, move almost by rail.
- Presently above 50% of the domestically produced steel moves by rail.
- Preference for movement is by rail as it is economical & environmentally friendly.
- Roads and highways in the vicinity of iron ore mines are narrow and require up-gradation.
- Coastal movement in India is not well developed.
- Limited ports to handle larger cape size Vessel.
- Bottlenecks in evacuation from the ports.
- Inland waterways in a nascent stage.
- Infrastructure development being accorded priority by Government and industry.

## Port Sector

- India's ports serve as gateways to international trade and facilitate 90 percent by volume and 70 percent by value of India's external trade via maritime traffic.
- Country's long coastline spans across 7,500 kilometers (kms) with 13 major ports governed by the Centre and about 176 non-major ports, of which only 60 are operational.
- Indian port market has witnessed significant growth over the last decade, growing from 368 MMT in 2000–01 to 898 MMT in 2011–12 at a CAGR of 8.5 percent.
- Cargo traffic at non-major ports increased at a CAGR of 13 percent over a CAGR of 2 percent at major ports in last few years; its share increased from 28 percent to 39 percent, clocking 338 MMT in total traffic versus 560 MMT at major ports.
- Cargo traffic across India's ports is expected to touch 1,304 MMT by 2016–17 at an accelerated CAGR of 8 percent.
- **Maritime agenda: Vision 2020**
  - GoI plans to augment total port capacity of 3,200 MMT and cater to expected cargo traffic of 2,500 MMT by the end of 2020-21.
  - The public-private partnership (PPP) is expected to play an important role in the ports sector, particularly in the development of non-major ports. The development of two new major ports, one each on east and west coasts, are expected to reduce the above optimum capacity levels at existing ports.

# Railways

- Rail freight grown at around 7 percent over the past five years and touched 1 billion ton mark in 2013-14, with a 31 percent share of total freight movement across all modes of transport. This is in stark contrast to its share of 89 percent in 1951.
- While traffic on rail has grown many fold, rail track length has only grown 1.4 times during the same period. Trunk routes constitute merely 16 percent of the network and transport more than 50 percent of total traffic, resulting in major congestion and a low average speed of km/hr for freight trains.

## **Actions required**

- Capacity creation: In addition to the Western and Eastern DFCs, there is a need to create adequate freight-carrying capacity within the Indian rail network.
- The Indian Railways also needs to establish and improve connectivity with ports and road networks.
- India's rail infrastructure suffers from chronic under-investment, due to which its potential for freight movement remains largely untapped.

## Waterways

- Water as a mode of cargo movement contributes only 8 percent by volume of India's cargo movement. Despite its potential as a cost-effective and environment-friendly mode of transport, its share in the modal mix continues to lag behind other developed countries.
- Domestic shipping offers significant advantages over road and rail transport in terms of fuel and cost savings. Fuel consumption for every ton-kilometer of freight shipped is only 15 percent of that by road and 54 percent of that by rail. Emissions are also far lower than that in rail or road transport. From a cost perspective, shipping costs 21 percent of that by road and 42 percent of that by rail.
- Coastal shipping and inland waterways transportation (IWT), the two significant modes of domestic shipping, both offer game-changing opportunities in the Indian context especially to meet the demand for bulk transportation to nearby areas and along the coast vis-à-vis other modes of transportation.

## Development of Coastal Shipping/ IWT

- Inherent advantages- environment friendly, cheaper and can ease traffic congestion.
- In spite of India's long coastline over 7500 km, share of coastal shipping is precariously low
- Modal share of waterway transport in India is a mere 0.15% as against 32% in Bangladesh
- **Constraints:** absence of institutional mechanism, high tariffs in ports, poor connectivity, high bunkering costs, no separate berthing facility
- Non-availability of both way traffic creates imbalance
- Only major ports give rebate.
- Requires policy changes and incentives from Government (Priority berthing, Bunker etc)
- Integration of coastal shipping and inland waterway transport may be promoted
- **Steel Companies desire to explore this option seriously**



## Inland Waterways Transportation (IWT)

- Growing at 7.2 percent over the past five years, IWT cargo traffic was estimated at 79 MMT in 2011–12. India falls short in the share of IWT at 0.5 percent as compared to China at 8.7 percent, the US at 8.3 percent and Europe at 7 percent.
- India is home to large stretch of navigable inland waterways- five National Waterways (NWs) — NWs 1, 2, 3, 4 and 5 — spanning approximately 4,400 km have been outlined as potential inland waterways at the Ganges and Brahmaputra rivers, the West Coast Canal, the Godavari and Krishna rivers, and the East Coast Canal, respectively.
- IWT is gradually showcasing its advantage over road and rail especially for bulk transportation (coal and cement) and project-related over dimension cargo (ODC). The following are among some flagship examples that partially or fully employ IWT as a cost-effective transport option:
  - Coal for thermal power plants on Ganga and Brahmaputra
  - Movement from Kolkata to Tripura via Ashuganj and within Assam
  - Iron-ore shipments in the Goa region
  - Transportation of coal for National Thermal Power Station (NTPC) — Farakka project

# Initiative taken by Government of India

- Government of India is addressing the infrastructure investment requirements in XII FYP (projected 1 Trillion Dollars - 10% of GDP).
- FDI investment under automatic route allowed upto 100% (Port, road, Industrial Park, mining & Green Field Airports :100 % ), which does not require any prior approval either by the Government or RBI.
- Key infrastructure initiatives in PPP undertaken like Haridaspur-Paradip new railway line project etc
- Development of roads have been given priority.
- Attention has been given to develop production capacity of raw material and its efficient evacuation from mines to plants.
- New policy unveiled to promote coastal movement and IWT framed.

# Expectations of Industry

- Upgradation of port infrastructure mainly Draft, handling facilities, port connectivity, Railway movement capacity
- Road transportation facilities to grow significantly
- Availability Railway rakes for seamless evacuation
- Development of coastal movement including inland water ways to supplement rail-road movement
- **Commissioning of new projects in various sectors as per schedule**

## Expectations of Steel Industry

- **Augmenting fleet** of BOST, BRN wagons which are used for steel loading.
- **Specialised wagons for steel despatch** for transportation of long rails, wide plates and HR/CR Coils.
- **First / Last mile connectivity** to steel plant and captive mines/ports
- **Augmentation of the rail line capacity** in the high density iron ore / steel plant belts in eastern region .
- **Competitive freight rates**
- **Freight rate rationalization** for coal/coke with low loadability.
- **Scheduling of freight trains**
- **Electrification of rail route** as mix of electrified & diesel traction routes slowing movement.
- **Review of existing PPP schemes** - Existing schemes for Wagons Leasing, Sidings, Private Freight Terminals, rail connectivity projects (R3-i and R2C-i) to be made more attractive to PPP partners.

# Rationalisation of Inbound-Outbound Logistics Issues

- Userfriendly loading time depending on the product type
- Committed forecast of empty /type of wagons
- Remove incidences of unfit, oversize, unclean & mixed wagons in rakes
- Periodic assessment of tare weight to offset any deviation due to ageing

# Rationalisation of Inbound-Outbound Logistics Issues

- Regular calibration & maintenance of in-motion weighbridges
- Offer cargo security at par with road transport
- Upgrading FOIS for real-time cargo tracking
- Implementation of all projects on time
- Availability of suitable rolling stock
  - for increased demand of domestic movement
  - for movement across borders for land exports
- Foldable covers for wagons carrying bulk/break bulk cargo
- Meet requirement of new ports through movement of empties till stabilization

# Rationalisation of Inbound-Outbound Logistics Issues

- Other logistic issues :
  - Improve speed of freight trains
  - No en-route stabling of rakes for load adjustments
  - Improved interfacing at exchange yards
  - Consider committed delivery time for critical inputs
  - Providing multipoint rakes for steel dispatches
  - Paperless transactions (including issuance & dispatch of RR through electronic mode)

## **SAIL Vision 2025 : Strategy for Key Input Materials**

### **Major Raw Material – consumption & requirement**

Unit: Million  
Tonnes

	<b>Actual 2012-13</b>	<b>After Ongoing Expansion</b>	<b>2025-26</b>
<b>Hot Metal (HM)</b>	<b>14.27</b>	<b>23.46</b>	<b>50.33</b>
<b>Raw Materials Requirement</b>			
<b>Iron ore</b>	<b>22.60</b>	<b>39</b>	<b>83</b>
<b>Limestone</b>	<b>3.30</b>	<b>5</b>	<b>11</b>
<b>Dolomite</b>	<b>2.90</b>	<b>4</b>	<b>9</b>
<b>Coking Coal</b>	<b>12.60</b>	<b>21</b>	<b>46</b>
<b>Total RM</b>	<b>41.40</b>	<b>69</b>	<b>149</b>

*Source : TEAM ANALYSIS*

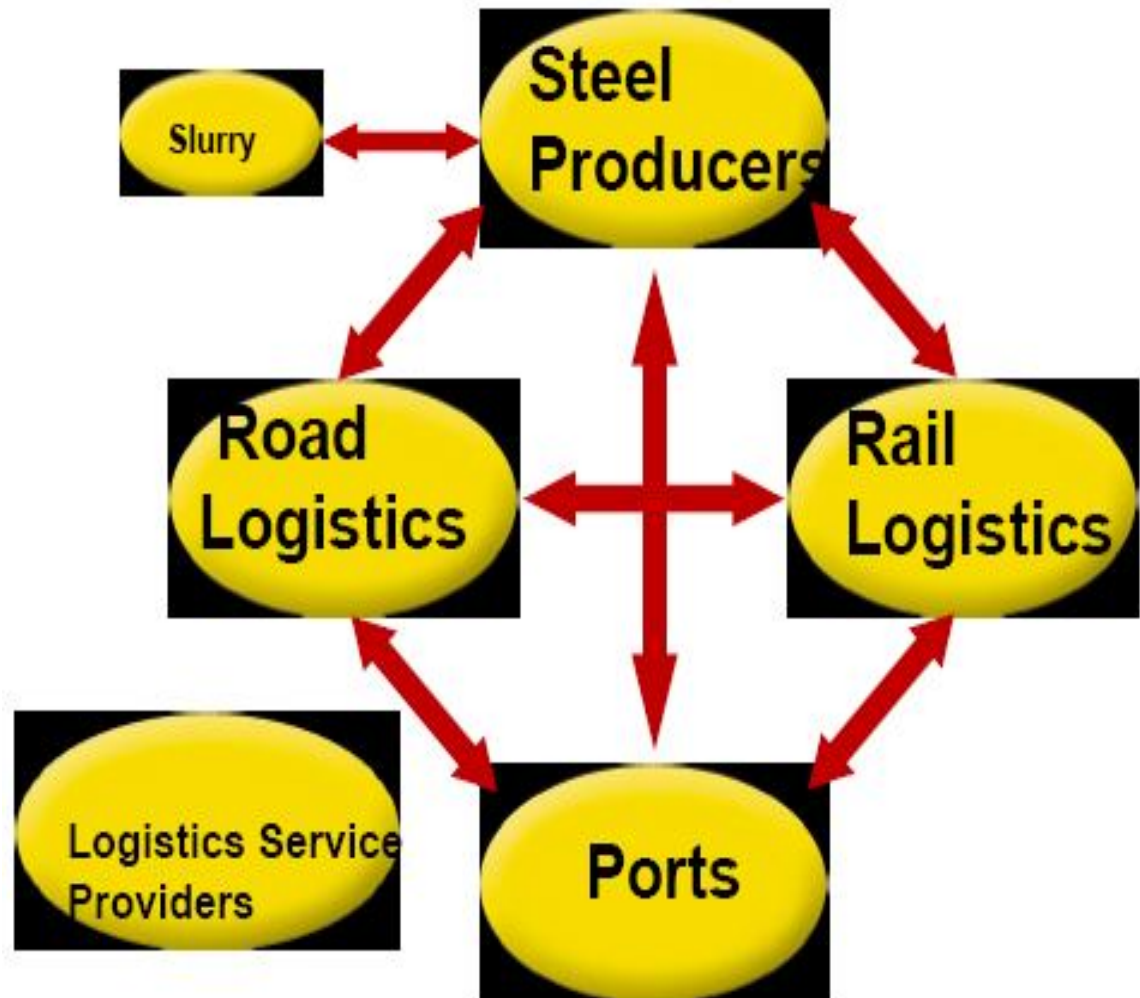


# The Way Forward

- Maintaining economic growth with existing port/ logistics infrastructure may not be possible.
- There is huge demand for better infrastructural facilities
- Of late, the logistics infrastructure has received some attention both from industry as well as policy makers which needs to be taken forward.
- More PPP projects might be an effective rational approach to quickly build facility and also bring in efficiency

## Key Success Factor

Integration and partnership across members of logistics value chain



## Key Success Factors

- Synergy through integration across members of logistics value chain for effective growth
- Confident of a Win - Win situation



**Thank You**

