

TITAGARH RAIL SYSTEMS LTD.

Investor Presentation

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1. Company Overview

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Titagarh Rail Systems Limited¹ (TRSL) is a Comprehensive Rail Mobility Solution Provider in India



1997	4		One of the largest wagon manufacturers in the country
Year of Establishment	Manufacturing Facilities ²		
30,000 MT	250 Coaches per year		Market leader with 25-30% market share in India (total tenders from FY20 to FY23 for wagon manufacturing)
Steel Foundry Capacity ²	Passenger Rail Systems Capacity ²		Private company in India that manufactures both freight and passenger coaches ⁴
8,400 Wagons per year	₹ 2,780 cr.		
Manufacturing Capacity ²	FY 23 Revenue		Wide geographical presence through factories in India and in Italy through its associate company (Firema)
22.1%	13.9%	5/	External credit rating of A+ Stable (Long term rating) by CRISIL
FY 23 ROCE ³	FY 23 ROE ³		External credit rating of AF Stable (Long term rating) by CRISIL
₹ 28,212 cr.	Promoters (44.97%)		Selected Partnerships/Consortiums include ABB, BHEL and RKFL. Select Associates include Firema
Order Book ⁵ as of Sep-23	Shareholding as of Sep-23		
Note: 1) Formerly known as Titagarh Wagons Limited (TWL) 2) As of Sept-23	3) 4) 5)	Current Bor i.e. Carbon	d numbers; Return on Capital Employed (ROCE) = EBIT / Capital employed = (PBT + Finance Costs) / (Total Equity + Non- rowings + Current Borrowings + Deferred Tax Liability); Return on Equity = NPAT / Average Shareholder's Equity steel, aluminum and stainless steel coaches ISL's share of total order of ₹ 13,326 cr. to be executed through joint ventures/consortion partners

Vision, Mission and Values







Titagarh's Journey So Far



Note: Journey as of respective financial year ending (March 31)

1) EMU: Electric Multiple Unit; MEMU: Mainline Electric Multiple Unit

2) In 2022, Govt of Italy along with financial investor acquired stake in Firema, resulting in TRSL's stake in Firema reducing to 49.7%

Key Business Segments



Freight Rail Systems (FTRS)





Market leader in wagon manufacturing with 25-30% market share (total tenders from FY20 to FY23). Received largest order placed by Indian Railways in the last ten years in May 2022

FY23 Revenue	₹ 2,251 cr.
Sept-23 Order Book ¹	₹ 14,342 cr.
Installed Capacity ³	8,400 wagons/year
Foundry Capacity ³	30,000 MT of Liquid Metal

One of the largest wagon manufacturers in the country

Source: CARE industry research

1) Includes TRSL's share of the wheel set order of ₹ 6,300 cr. which will be executed by TRSL and RKFL JV

2) Includes TRSL's share of ₹ 7,026 cr. for maintenance of Vande Bharat which will be executed by the TRSL and BHEL consortium

Passenger Rail Systems (PRS)



Home-grown Player in the Passenger Rolling Stock segment in India

FY23 Revenue	₹ 529 cr.
Sept-23 Order Book ²	₹ 13,870 cr.
Rolling Stock Capacity ³	250 coaches/year
Propulsion Capacity ³	2,400 motors/year, 200 convertors/year
Ongoing projects includ	de Pune Metro, Bangalore Metro, Vande Bharat.

Surat Metro, Ahmedabad Metro and development orders for propulsion

3) As of Sept-2023

Manufacturing Facilities & Engineering Center





Strong Governance is the Key Pillar





Mr. J. P. Chowdhary

Executive Chairman

Mr. Anil Kumar Agarwal

Director – Finance and CFO

Non-Exec. Director

Director



Mr. Saket Kandoi

Director – Freight Rail

Systems and COO

Whole Time Directors

Mr. Umesh Chowdhary

Vice Chairman and **Managing Director**

Mr. Pritish Chowdhary

Director – Marketing & **Business Development**



Mr. Atul Joshi

Independent Director

Independent Director

Mr. Krishan Kumar Jalan

Mr. Manoj Mohanka

Independent Director



Independent Directors

Mrs. Nayantara Palchoudhuri

Independent Director



Mr. Sunirmal Talukdar



Mr. Sushil Kumar Roongta

Independent Director





Independent Director



Mr. Saurav

Joint CFO & **Group Finance** Controller



Key Managerial Personnel



CS & Chief

Mr. Dinesh

Compliance Officer





Independent Director















Environment, Social and Governance (ESG)





Focus on Energy Efficiency

- Solar Power Plant of 2 MW capacity
- Light sensitive switches have been installed to reduce consumption
- Installed variable frequency drive in overhead cranes to reduce consumption
- Signed a power purchase agreement with Fourth Partner Energy to procure 4.8 MW of solar power
- Maintaining the Environmental Management
 System to ISO 14001 Standard



Social Development

- Titagarh pledges to carry out its CSR vision to educate the underprivileged youth and empower it for generations to come
- Titagarh has supported Annamrita, Kolkata (in FY23) to provide mid-day meals to young children studying in primary schools
- Also, supported South Kolkata Hamari Muskan (in FY23) to provide children, youths and mothers safe spaces with basic amenities, who are part of red-light community



Governance

Committed to Highest Governance

- More than 50% of the Board of Directors are independent
- Board of Directors with diversified skills and experience
- PWC and Salarpuria have been jointly appointed as Statutory Auditor

Awards and Recognitions



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Titagarh Quality Certificates

- Certification of IRIS awarded which could open doors to international markets & partnerships
- ISO 9001:2015
- ISO 14001:2015
- ISO 9001:2008
- ISO 14001:2004
- ISO 3834:2006
- BS OHSAS 18001:2007

- Certificate Level CL1 according to EN 15085-2:2007 for welding of railway vehicles & components
- Certificate of Approval for QMS (2014 & 2015) issued by Indian Registered Quality Systems (IRCLASS)
- ASME U Certificate
- G 105 Certificate
- Defence Industrial License
- Registration with RDSO, MOD, DRDO & OFB



Titagarh Italy Quality Certificates

- ISO TS 22163:2017– Railway applications Quality management system
- UNI EN ISO 9001:2015
- UNI EN ISO 3834 Part2 System Certificate for welding process
- UNI EN 15085-2 CL1 Process Certificate for welding process, CL1 certification level
- UNI EN ISO14001:2004
- BSOHSAS18001:2007

- Competence Management System certified in conformity with Trenitalia organizational communication COCS 30.5/DT and Trenord Procedure P096
- ECM Certificate Entity in Charge of Maintenance in conformity with Directive 2004/49/EC and Regulation (EU) No.445/211
- Laboratory for static and dynamic mechanical tests on railway rolling stock structures, Certified by Italcertifer







2. Business Segments

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Freight Rail Systems (1/2)





30,000 MT Liquid Metal

Installed capacity at two facilities -Titagarh and Uttarpara

- Market leader in wagon manufacturing with 18-22% market share in India (total tenders from FY12 to FY23) and 25-30% (total tenders from FY20 to FY23)
- One of the largest wagon manufacturers in the country
- Planned capacity enhancements to capture robust sector demand
- TRSL received largest order placed by Indian Railways in the last ten years in May 2022
- Over two decades of experience in design and manufacturing wagons for various purpose such as container, mining products, aggregates, fuel, cement and bagged products
- Approved source for Indian Railways for various kinds of rolling stock and its components
- Focused on margins through efficient working capital management, backward integration and supply chain management



1) Includes TRSL's share of the wheel set order of ₹ 6,300 cr which will be executed by TRSL and RKFL JV

2) Consolidated financials

Note:

Freight Rail Systems (2/2)



Freight Rolling Stock



Flat Wagons







Car Carrying Wagons





Special Purpose Wagons Brake Van



Tank Wagons



Box Wagons











Forged Wheel Set¹



Cast Bogies

Couplers



Draft Gear



Loco Shells



CMS Crossing



Note: 1) Forged Wheel Set manufacturing through JV with RKFL

Passenger Rail Systems (1/2)

16



EMU: Electric Multiple Unit; MEMU: Mainline Electric Multiple Unit 3)

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Note:

Includes numbers of TFA, Italy which ceased to be a subsidiary w.e.f 8th Sept 22 and become an associate thereafter

Passenger Rail Systems (2/2)





Semi High-Speed Trains ¹



High Speed Train



EMU² Train Sets



Passenger Rolling Stock

Urban Metro Rail

Propulsion & Electrical Equipment



Light Rail Transport



Multiple Units

Body Shells and Bogies

Propulsion System



Traction Motors



Auxiliary Power Supply



Electronic Equipment



Traction Converters and Power Electronics



Monitoring System



Hardware and Software



2) EMU: Electric Multiple Unit

Note:

1)



Passenger Rail Systems – Current Projects



Pune Metro



- Manufactured India's first
 Aluminium body metro train
- 3 cars configuration with volume of 34 trainsets
- Powered by 25KV

- Delivered 23 trainsets till H1FY23
- Expected delivery of remaining trainsets
 in H2FY24

Bangalore Metro



- Designed by CRRC-Nanjing and manufacturing at TRSL factory, Kolkata
- 6 cars configuration with volume of 36
 trainsets
- 1st 16 trainsets are driverless (CBTC-Communication Based Train Control) & remaining trainsets are semi-automatic
- Powered by 3rd rail 750V DC
- The first 2 trainsets shall be manufactured & delivered from CRRC Nanjing, China
- Then remaining 34 trainsets will be manufactured by TRSL and will be delivered by Aug 2025

Vande Bharat



- Consortium of BHEL & TRSL will do the supply and maintenance of 80 semi-high speed (160kmph) trainsets (1,280 coaches)
- Fully Make-In-India project with 16 cars (8 motor cars & 8 trailer cars), each alternate trailer car is powered through 25KV
- The first 2 prototype trainsets will be delivered within 24 months i.e. Jun 2025
- Then 12 trainsets in first year post delivery of prototype, 18 trainsets in second year & 25 trainsets from year 3 onwards

Surat & Ahmedabad Metro



- The Surat Metro is 3-Car configuration with 24 trainsets
- The trainset will be with GoA¹ 4 operations and is powered by 3rd rail 750V DC
- The Ahmedabad Metro is 3-Car configuration with 30 trainsets
- The first prototype trainset of Surat & Ahmedabad Metro will be delivered within 70 weeks i.e. Oct-24 & Dec-24
- Then remaining 23 trainsets of Surat Metro within 110 weeks and 9 trainsets of Ahmedabad Metro within 94 weeks

First prototype delivery date





ivery uale

Key Order Updates

Vande Bharat			
Supply (A)		₹ 9,600 cr.	₹ 120 cr. * 80 train sets ₹ 120 cr. is the L1 price
Maintenance (B)		~ ₹ 13,500 cr.	35 years @ 4.1% p.a. of the supply price
Contract Value (A+B)		₹ 23,100 cr.	
Titagarh's Share		~51%	
Price Variation		Applicable for both supply and maintenance	

- Consortium BHEL & TRSL has been awarded tender for the supply and maintenance of 80 trainsets (1,280 coaches)
- Execution Timeline The first 2 prototype train is to be delivered within 24 months i.e., by June 2025. Then 12 trains in first year post delivery of prototype, 18 trains in second year and 25 trains from year 3 onwards
- **Manufacturing** For **initial 8 trainsets**, the manufacturing and assembly at TRSL facility in Uttarpara and final commissioning will be done at the **ICF facility** in Chennai **balance 72 train sets** manufacturing will be at **TRSL factory in Uttarpara** and a part of final assembly, testing and commissioning will take place at ICF facility in Chennai and any capex that needs to be incurred at the ICF facility will be reimbursed by IR.

Forged Wheel		
Guaranteed Offtake	~15.40 Lakhs wheels over 20 years	
Contract Value	~₹12,600 cr. For guaranteed off-take	
Titagarh's Share	~49%	
Total Capacity	2.28 lakhs wheels/year	

- Consortium RKFL & Titagarh has been awarded tender for manufacturing of forged wheels with guaranteed offtake of ~80,000 wheels p.a. by IR for 20 years
- Execution Timeline The contractual delivery of the wheelsets is expected to commence in 36 months from the Letter of Award (i.e. commence from April 2026)
- Manufacturing It will be a greenfield project with a capacity of 2.28 lakh wheels per annum. Surplus production will be used for captive consumption, third party sales and export.

3. Industry Overview

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Industry Growth Led by Higher Infrastructure Spend and Government's Policy Support



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- Capex allocation of ₹ 2.9 lakh cr. for FY23-24 towards Rail
- Development of the logistics and warehousing industry (Govt. announced 25,000 km of new highways through the PM Gati Shakti National Master Plan for expressways)

- The Government of India aims in launching 400 Vande
 Bharat train (16 coaches) in the next 3-4 years and 1,000
 mini-Vande Bharat train (8 coaches) in next 3-4 years
- India currently has 750 Km of operational metro lines with over 2,500 metro coaches being deployed
- As of October 2023, about 874 Km of metro lines have been operationalized across 20 cities
- The metro network, including regional rapid transit systems (RRTS) is proposed, to be expanded to 1,700 Km across 27 cities by 2025 and subsequently to 50 cities

wagons in FY22 (incl. replacement)

Passenger Higher **Rolling Stock** Infrastructure Growth Spend by **Drivers** Government • Indian Railway is striving to achieve a share of 45% from the current 26% through a combination of capacity enhancement works Fourth Wagons Growing Indian Railway network with and lowering of cost to customers by FY30 largest and 452 projects of total 49,323km in different Growth **Strong Industry** Annual freight target expected to increase stages of planning/sanction/execution growing Driver from 1,500m tonnes to 3,000m tonnes by **Tailwinds** rail Indian Railways is the fourth-largest FY27 and 3,600m tonnes by FY30 railway system in the world behind the network Wagon demand is expected to increase to US, Russia, and China 5.4 lakh wagons by FY31 from 3 lakh

Strong Thrust on Railway Infrastructure



01

In the Union Budget FY23-24, the government has allocated ₹ 2.9 lakh cr. towards railways which is the highest ever allocation and an increase of 15% over previous year's allocation

02

High Speed Rail corridor (HSR) have been allocated capex of ~₹ 5.1 Iakh (FY26-31) with allocating 12 high speed rail corridors with train speeds exceeding 250 km/hour have been proposed by the government, spanning approximately 7,200 Km

03

The 508 Km Mumbai-Ahmedabad corridor has been taken up for construction at an expected capital expenditure of ₹ 1.1 lakh cr. and is expected to be fully operational by CY27

04

There are currently 2 DFCs in India - the Western and Eastern freight corridors spanning 3,360 km and As on March 2023, 2,734 km of lines have already been commissioned under the **DFC and the Western and Eastern DFC is expected to be fully commissioned by June 2024**

05

Total 452 railway projects (183 New Line, 42 Gauge Conversion and 227 Doubling) of total length of 49,323 km and costing **~₹ 7.33 lakh cr.** are in different stages of planning/sanction/execution, out of which **11,518 Km length have been commissioned and an expenditure of ~2.35 lakh cr. has been incurred up to March 2022**



Capital Outlay of ₹ 2.9 lakh cr. for the Indian Railways in the Union Budget 2023-24 (₹ bn)¹



Government has introduced various schemes such as DFC, NLP, GPWIS, PM Gati Shakti & GCT, LWIS, AFTO, multi-modal logistics parks, etc., to boost railway infrastructure and share of railways in freight traffic

Freight Rail Systems Growth Drivers

Indian Railway, for the first time, aims to **increase the freight traffic** by rail from existing **26% to 45%** by FY30, under the NLP, tendering has seen a multi-fold increase in the last two years

Annual freight target expected to increase from 1,400m tonnes to **3,000m tonnes** by FY27 implying an increase in the wagon fleet from current ~3.0 lakh **to ~5.4 lakh** by FY31

Railway freight traffic measured in net tonne kilometers (NTKM) is expected to **double** from 903 bn NKTM in FY23 **to 1,695 bn NKTM** by FY27

Indian Railways is expected to **procure around 1-1.2 lakh incremental** wagons between FY22 and FY26, representing a market opportunity of ₹ 35,000-40,000 cr. over the period

A mix of **fresh demand and replacement demand for wagons** which have reached economic life of 30-35 years

Indian Railways is expected to source additional rolling stock to cater to rising volumes as India is emerging as one of the major exporters of coaches and rakes In April 2022, a tender for procurement of 90,000 wagons over the next three years was released by Indian Railways, which is more than cumulative procurement done over the previous 10 years

Indian Railway Wagon Procurement demand (lakh units)



Passenger Rail Systems Growth Drivers



Vande Bharat

- As of July 2023, a total of 50 Vande
 Bharat trains have been incorporated into the railway network
- The Government of India aims in launching 400 Vande Bharat train (16 coaches) in the next 3-4 years and 1,000 mini Vande Bharat train (8 coaches) during the same period
- The estimated opportunity size in the next
 3 to 4 years is ₹ 48,000- 52,000 cr. for
 Vande Bharat and ₹ 60,000 to 65,000 cr.
 for mini Vande Bharat trains



Metro

- The government targets to increase the total operational metro rail network by >2x
 - to 1,700 km over the next 3-4 years
- This expansion will entail procurement of 2,000-2,500 metro rail coaches over the next 5-6 years, implying a market size of ₹ 32,500 cr. over this period
- The government is also proposing Metro Lite and Metro Neo lines which are suitable for smaller cities with lower peak traffic
- Currently, ~2,500 coaches have been deployed in the operational metro lines roughly costing 32,500 cr.

IR is expected to procure 8,000-9,000 incremental passenger coaches between FY22-26

Selected List of metro projects under Appraisal/Approval

Name of Project	Stretch (Kms)
Remaining three corridors of Delhi Metro Phase-IV Projects	44
Nashik MetroNeo	33
Nagpur Metro Phase II	44
Pune Metro Phase 1A	4
Thane Integral Ring Metro	29
Pune Metro Rail Project extension Line from Swargate to Katraj	5
Gorakhpur MetroLite Project	15
Extension of Noida-Greater Noida Metro Rail	15
Kochi Metro Phase 1A	2
Kochi Metro Phase II	11
Jammu MetroLite	23
Srinagar MetroLite	25
Delhi - Panipat RRTS Corridor	103
Delhi-Gurugram-SNB	107
SNB Urban Complex	33
MetroNeo project in Dehradun	22
Metro Rail from HUDA City Centre to Cyber City	29
Chennai Metro Phase II	119
TOTAL	663

4. Financial Performance

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Consolidated Financials Performance (1/2)



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Note:

1) Consolidated includes Firema which was deconsolidated w.e.f 8th Sept 2022

2) Includes ₹.7026 cr. amount of order for maintenance of Vande Bharat which will be executed by TRSL and BHEL consortium

Consolidated Financials Performance (2/2)



27



FY23

H124

Return on Capital Employed³ and Equity⁴



 Consolidated includes TFA which was deconsolidated w.e.f 8th Sept 2022
 NWC days = Avg Trade receivable days + Avg Contract asset days + Avg Inventory Days – Avg Trade Payable days. For financial year 365 days have been considered and for half year 183 days has been considered

FY22

FY21

Note

Return on Capital Employed (ROCE) = EBIT / Capital employed = (PBT + Finance Costs) / (Total Equity + Non-Current Borrowings + Current Borrowings + Deferred Tax Liability). H124 numbers are calculated on a LTM basis (i.e. P&L numbers are from Sep 2022-Sep 2023 and B/S numbers are as of Sep 2023 basis) Return on Equity = NPAT / Average Shareholder's Equity; H124 numbers are calculated on a LTM basis (i.e. P&L numbers are from Sep 2022-Sep 2023 and B/S

Return on Equity = NPAT / Average Shareholder's Equity; H124 numbers are calculated on a LTM basis (i.e. P&L numbers are from Sep 2022-Sep numbers are an average as of Sep 2023 basis)

5. Future Strategy

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Titagarh Edge – Mobility for Billions Globally

Well Positioned to Leverage Sector Growth

Leadership in Freight Rolling Stock

- TRSL is one of the largest **wagon manufacturers** in the country
- 25+ years of experience in design and manufacturing wagons for various purpose such as container, mining products, aggregates, fuel, cement and bagged products
- Approved source for Indian Railways for various kinds of rolling stock and its components
- Focused on margins through efficient working capital management, backward integration and supply chain management

Strong Development and Design Competency



Customised design capabilities as per client's need



Expert engineers committed to design advanced products



Modern day Passenger Rolling Stock

Technology

Titagarh Firema, Italy, has 25+ years of

address the large & growing business of

experience is **pioneering** modern day

Strategic agreement with ABB, to

propulsion equipment business incl.

tech transfer of GoA¹ 4 (Driverless

capabilities in India to support the

growing Indian passenger rail market

Additional capacity is being created to

cater to robust demand for both metro

3

leveraging low cost capabilities and

Strengthening of engineering

synergies from Firema

and trainsets/coaches

metro) TCMS

commuter railway technologies

Strong industrial manufacturing and execution capability



One stop destination for comprehensive mobility solutions





Transforming Business to Future Potential



Backward integration	Rail equipment value chain	Forward integration	
Components	Rolling Stock	Services	
Forged Other Passenger Electrical / Wagon Propulsion Electronic Others Components System Systems	Wagons EMU Train Urban High/ Metro Semi-High Others Systems Speed	Re-design Maintenance Repair / Face-lift Others	
 Forged Wheelsets Consortium with RKFL for manufacturing of forged wheels with guaranteed offtake of 80k wheels by IR for 20 Years Setting up a factory to manufacture 228,000 wheels Surplus production to be used for captive consumption, third party sales and export Passenger Propulsion Systems Developed with Firema's help and already delivered the first traction motor (awaiting RDSO approval) Agreement with ABB to supply propulsion systems for metro rolling stock projects in India railways The agreement includes complete transfer of technology of the GoA 4 (Driverless metro) TCMS from ABB to TRSL Aims to localize the entire propulsion manufacturing in India by FY25 Electrical / Electronic Systems / Others Cabinets, Cubicles, Cable harness and others including Doors, Interiors, Seats, Lightings, CRF, Air brake pipes, etc. 	 Freight Rolling Stock Well positioned to capitalize on the growing opportunities arising from the increased government expenditure especially on wagons procurement Tie up with global players for tech support for new age wagon and to get a major portion of the IR's tenders Grow export share for Freight Wagons, Casting and other Components Passenger Rolling Stock Private manufacturer of passenger rolling stock in India with capabilities in aluminum, stainless-steel and carbon steel coaches that is well capitalized to capture growth Explore the possibility of exporting passenger trains, metros, etc. leveraging the cost advantages and TFA's capabilities 	 Comprehensive maintenance of the 80 Vande Bharat trainsets (for 35 years) that will be manufactured by the consortium with BHEL Build team for handling various AMC contracts, as most of the contracts going forward are expected to include AMC Huge opportunity from potential privatization of wagon maintenance 	

Shipbuilding, Bridges & Defence (SBD)



Past





1,000 Ton Fuel Barge

- TRSL diversified into shipbuilding through merger with 25-year-old Corporate Shipyard and currently licensed for warship manufacture by the Government of India
- Products include oceanographic research vessels, naval vessels, passenger ships, tugs and inland water transport vessels
- SAGAR ANVESHIKA shipyard to build and deliver complex vessels
- Acquired a facility asset and infrastructure of Precision Shipyard of 8.8 acres land in Falta, West Bengal to expand Ship Building business, which gives access to infrastructure on the south side of the Howrah Bridge while complementing the existing facility
- - Bailey Bridge



Matiere X Bridge

- A Central Quality Assurance Establishment for Ministry of Defence
- Products include Metal Canopies, Metal Canister, and Integrated Field Shelters for Indian Army and Indian Air Force. It is also manufacturing different mobile shelters, used in protection and communication purposes
- Manufactures Bailey bridges in India
- Collaboration with French partner **Matiere**, to offer steel modular bridges, panel bridges and unibridges
- Application granted of an Defence Industrial License for manufacturing of ML 6 Ground Vehicles and components including Armoured Vehicles
- Association with Indian Air Force for supply installation of Integrated Field Shelters

Plan of Action

- Currently merged into FTRS segment as the overall size and existing order book is not material to the Group
- Huge business potential for all the three products. However, in order to tap the market focussed management team, strategic business partner may be needed along with whom the business can be further grown
- Accordingly, board in its meeting held on November 8, 2023 constituted a committee of directors to identify a strategic or JV partner for the SBD business
- The pending orders are being executed as per the contractual milestone
- No capital allocation is being currently made to this business

Summary / Key Takeaways





