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Transformation of Indian railways–a story of change, challenges and visionary leadership

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Abstract: The success or failure of an organization hinges on the leadership qualities of its leaders. Effective leaders assist their subordinates in finding solutions to their challenges. Leadership in Indian Railways involves bringing together resources, formulating strategies, organizing, and controlling activities to achieve set objectives. Additionally, the leaders within Indian Railways are responsible for selecting goals, deciding on actions, and motivating people to carry them out. In essence, leadership in Indian Railways is a management function focused on setting goals and inspiring people to work towards achieving them. Leaders in Indian Railways guide their teams by setting clear objectives and helping subordinates navigate the best path to achieve these goals. Indian Railways leadership can be seen as the art or process of influencing people to work willingly and enthusiastically towards the accomplishment of group goals. The key elements of leadership within Indian Railways include power, a deep understanding of people, the ability to inspire followers, and the leadership style and work environment created within the organization.

Keywords: *Indian Railways, Leadership, Productivity.*

1. Introduction

Railways were first introduced in India in 1853, with the inaugural line running from Bombay to Thane, covering a distance of 33 km. In 1951, the rail systems were nationalized under a single entity, Indian Railways, which has since become one of the largest railway networks in the world. Indian Railways operates both long-distance and suburban services across a multi-gauge network, including broad, meter, and narrow gauges. It also manages locomotive and coach production facilities at various locations across India, with systems in place to identify trains based on their gauge, power source, and type of operation. Its services span nationwide, while also offering limited international services to Nepal, Bangladesh, and Pakistan.

Indian Railways is a state-owned enterprise that is organized as a departmental undertaking of the Ministry of Railways of the Government of India and operates India's national railway system. As of 2024, it manages the fourth largest national railway system by size with a track length of 135,207 km (84,014 mi), running track length of 109,748 km (68,194 mi) and route length of 69,181 km (42,987 mi). As of August 2024, 96.59% of the broad-gauge network is electrified. With more than 1.2 million employees, it is the world's ninth-largest employer and India's second largest employer [1].

Indian Railways runs various classes of express, passengers and suburban trains. In 2023-2024, it operated 13,198 trains on average daily covering 7,325 stations and carried 6.905 billion passengers [1]. Indian Railways also operates different classes of rail freight transport. In 2023-2024, it operated

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11,724 freight trains on average daily and transported 1588.06 million tonnes of freight [1]. Indian Railways operates multiple classes of rolling stock, manufactured by self-owned coach-production facilities. As of 31 March 2024, Indian Railway's rolling stock consisted of 327,991 freight wagons, 91,948 passenger coaches (including multiple unit coaches) and 10,675 electric, 4,397 diesel and 38 steam locomotives [1].

2. History of Railway in India

The history of rail transport in India dates back to the mid-nineteenth century. The first railway line was introduced in 1853, connecting Bombay to Thane. British engineer Robert Maitland Brereton played a key role in expanding the rail network starting in 1857. By June 1867, the Allahabad-Jubbulpore branch line of the East Indian Railway was operational. Brereton was instrumental in linking this line with the Great Indian Peninsula Railway, creating a combined network of 6,400 km (4,000 miles), making it possible to travel directly from Mumbai to Calcutta. This route was officially opened on 7 March 1870 and became an inspiration for Jules Verne's novel *Around the World in Eighty Days*. At the opening ceremony, Viceroy Lord Mayo expressed the desire to expand the railway network throughout the country, aiming for a uniform system.

By 1875, British companies had invested around £95 million in Indian guaranteed railways. By 1880, the network had expanded to about 14,500 km (9,000 miles), largely radiating from the major port cities of Mumbai, Madras, and Calcutta. By 1895, India had started manufacturing its own locomotives and, in 1896, sent engineers and locomotives to help build the Uganda Railways.

In 1900, the Great Indian Peninsula Railway (GIPR) became a government-owned company. The network expanded to present-day Assam, Rajasthan, and Andhra Pradesh, and various independent kingdoms began developing their own rail systems. In 1905, an early Railway Board was formed under Lord Curzon, operating under the Department of Commerce and Industry. This marked the first time the Railways started generating profits.

In 1907, nearly all railway companies were nationalized, and the following year, the first electric locomotive was introduced. With the onset of World War I, the railways played a crucial role in supporting British operations outside India. However, after the war, the rail network was left in a state of disrepair.

By 1920, the railway network had expanded to 61,220 km, prompting Sir William Acworth to advocate for central management. Based on the East India Railway Committee chaired by Acworth, the government took over railway management and separated its finances from other government revenues.

Between 1920 and 1999, India experienced an economic boom, with the railways covering 41,000 miles of track, having a capital value of about £687 million. The railways carried over 620 million passengers and approximately 90 million tons of freight annually. However, the Great Depression caused economic hardship for the railways over the following eight years. The Second World War further crippled the network. Starting in 1939, around 40% of the rolling stock, including locomotives and coaches, was sent to the Middle East. Railway workshops were converted into munitions factories, and many tracks were dismantled to support the British war effort. By 1946, all rail systems were fully nationalized.

In 1950, there were about 42 different railway companies operating about 55,000 km (34,000 mi) tracks across the country [2]. These railway companies were amalgamated in steps to form a single entity named as Indian Railways [3]. In December 1950, the Central Advisory Committee for Railways approved the plan for re-organizing Indian Railways into six regional zones with the Southern (14 April 1951), Central (5 November 1951), and Western (5 November 1951) zones being the first to be created [4-6]. In 1952, fans and lights were mandated for all compartments in passenger trains and sleeping accommodations were introduced in coaches [7]. The first diesel locomotive used in India was fabricated by North British Locomotive Company in 1954 [8].

In 1986, computerized ticketing and reservations were introduced [9]. In 1988, the first Shatabdi Express was introduced between New Delhi and Jhansi [7]. Two years later, the first self-printing

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ticket machine (SPTM) was introduced in Delhi [10]. In 1993, air-conditioned three-tier and sleeper were introduced [7]. In 1995, Chennai MRTS became the first operational elevated railway line in India [11]. Centralized computer reservation system was deployed in Delhi, Mumbai and Chennai in September 1996, coupon validating machines (CVMs) were introduced at Mumbai CSMT in 1998 and the nationwide concierge system began operation on 18 April 1999 [7].

2.1. 2000- Present

The Indian Railways website went online in February 2000. Indian Railways Catering and Tourism Corporation (IRCTC) was incorporated in 1999 and online ticketing was introduced on 3 August 2002 through [12]. In 2015, the first Compressed Natural Gas (CNG) powered trains were rolled out [13]. Since 1925, the Railway budget was presented before the Union budget till 2016. The central government approved the merger of the Rail and General budgets from 2017 [14]. On 31 March 2017, Indian Railways announced a target of electrifying the entire rail network would be electrified by 2023 [15]. In March 2020, Indian Railways announced a nationwide shutdown of passenger service to combat the COVID-19 pandemic in India with the freight operations continuing to transport essential goods [16-18]. The railways resumed passenger services in a phased manner in May 2020 [19].

Starting in the 2010s, various infrastructure modernization projects have been undertaken including high-speed rail, [20, 21] redevelopment of 400 stations, [22] doubling tracks to reduce congestion, [23] refurbishing of coaches, [24, 25] Global Positioning System (GPS)-enabled tracking of trains [26] and modernization of locomotives [27, 28]. In 2018, a semi-high speed self-propelled train-set capable of reaching speeds of over 160 km/h (99 mph) was rolled out from ICF and the Vande Bharat Express was launched in 2019 [29, 30]. Indian Railways announced plans to become a net-zero carbon emission railway by 2030 and has implemented rainwater harvesting at stations, [31] reforestation along the tracks, [32] introduction of solar-powered trains, [33] installation of solar and wind power generation facilities, [34] and sustainable LED lighting at all the stations [35]. Indian railways removed all unstaffed level crossings by 2019 with staffed level crossings being replaced by bridges [36]. Other safety projects include the extension of an automated fire alarm system to all air-conditioned coaches and GPS-enabled Fog Pilot Assistance System railway signalling devices [37]. In 2020, Indian Railways allowed the operation of private passenger trains for the first time with the first train flagged off from Coimbatore in June 2022 [38].

3. Organizational Structure

3.1. Railway Zones

Indian Railways is organized into several zones, which are further subdivided into divisions. The number of zones increased from six in 1951 to eight in 1952, nine in 1952, and finally to sixteen in 2003, with the current total being eighteenth. Each zone consists of a number of divisions, each with its own divisional headquarters, resulting in a total of seventy-three divisions across the network.

Each of the eighteenth zones is managed by a General Manager (GM), who directly reports to the Railway Board. The zones are divided into divisions, each overseen by a Divisional Railway Manager (DRM). The DRM is responsible for the management of several operational branches, including engineering, mechanical, electrical, signals and telecommunications, accounts, personnel, operations, commercial, and safety. These divisional officers handle the operation and maintenance of the railway's assets. At the local level, Station Masters are in charge of individual stations and are responsible for managing train movements within their station's territory [39-41].

4. Human Resources

Staff in Indian Railways are classified into two main categories: gazetted employees (Group 'A' and 'B') and non-gazetted employees (Group 'C' and 'D'). Recruitment for Group 'A' gazetted employees is handled by the Union Public Service Commission (UPSC) through exams it conducts. On the other hand, recruitment for Group 'C' and 'D' employees is managed by the Railway Recruitment Boards,

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which operate under the Railway Recruitment Control Board (RRCB). Training for all employee categories is provided through six centralized training institutes, which share the responsibility of staff development.

As of 31 March 2024, Groups A & B constitute 1.4% of the total workforce, while Group C (into which Group D merged before 2020) accounts for 98.6%. [7]. 80% of Group-A employees are recruited through Indian Railways Management Service with remaining through promotions [42].

Group B employees are recruited by departmental promotional exams of Group C employees. Recruitment of Group C employees are through exams conducted by the Railway Recruitment Control Board (RRCB) and Group D staffs are recruited by zonal Railway Recruitment Cells (RRC) [43]. Indian Railways operates seven centralized training institutes and 295 training centers. It also provides housing, healthcare and education facilities for staff [7]. On International Women's Day 2025, Indian Railways deployed an all-women crew to operate the Vande Bharat Express for the first time [44].

5. Rail Transport in India & International Links

5.1. Existing Rail Links

- Nepal**:** The rail link between India and Nepal currently faces a break-of-gauge issue. However, a gauge conversion is underway as part of the Uni-Gauge project to standardize the track system.
- Pakistan**:** India and Pakistan share the same broad gauge. The Thar Express runs between India and Pakistan, connecting India's Jodhpur to Karachi in Pakistan. Another well-known international train, the Samjhauta Express, operates between Lahore (Pakistan) and Amritsar (Attari, India).
- Bangladesh: India and Bangladesh also share the same broad gauge. The Maitri Express, which started in April 2008, connects Dhaka (Bangladesh) and Kolkata (India) via the Gede-Darsana route. In addition, a freight train service operates between India's Singhabad and Petrapole to Bangladesh's Rohanpur and Benapole. A second passenger link between Agartala, India, and Akhaura Upazila, Bangladesh was approved by both governments in September 2011 [45-48].

5.2. Under Construction/Proposed Links

- Bhutan**:** Railways are currently under construction between India and Bhutan, and they will use the same gauge system.
- Myanmar**:** A rail link from Manipur, India to Myanmar is under construction.
- Vietnam**:** In April 2010, Shashi Tharoor, the former Union Minister of India, announced that the Indian government was considering a rail link from Manipur, India to Vietnam via Myanmar.
- Thailand**:** A potential rail link to Thailand exists, though its realization depends on the rebuilding of the Burma Railway [45-48].

6. Future Plan for High-Speed Rail in India

6.1. Proposal to Introduce 250-350 km/h Trains

As of 2025, India does not have any operational high-speed rail lines capable of supporting more than 200 km/h (125 mph). Currently, the highest speed is achieved by Bhopal Shatabdi Express and Bhopal Vande Bharat Express on the Tughlakabad–Agra section and the regional Namo Bharat services with peak operational speed of 160 km/h (100 mph).

The Indian Ministry of Railways presented a vision for high-speed rail development in the Vision 2020 white paper, which was submitted to the Indian Parliament on December 18, 2009. The plan aims to introduce regional high-speed rail services that will operate at speeds between **250-350 km/h**. These high-speed trains will connect major commercial, tourist, and pilgrimage hubs across the country.

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Seven corridors have already been identified for technical studies and the potential establishment of high-speed rail networks. These corridors are:

- Mumbai - Ahmedabad
- Delhi-Chandigarh-Amritsar
- Pune-Mumbai-Ahmedabad
- Hyderabad-Dornakal-Vijayawada-Chennai
- Howrah-Haldia
- Chennai-Bangalore-Coimbatore-Trivandrum
- Delhi-Agra-Lucknow-Varanasi-Patna

The high-speed rail routes will be designed as elevated corridors to minimize the impact of land constraints and the existing pattern of habitation in these areas.

6.2. National High-Speed Rail Corporation (NHSR)

To oversee and execute these high-speed rail projects, the Indian government plans to establish a corporation called National High-Speed Rail Corp (NHSR). This corporation will be responsible for the tendering, pre-feasibility studies, contract awards, and execution of the high-speed rail corridor projects. The NHSR will be led by a team of four railway officials. All high-speed rail projects will be implemented using the Public-Private Partnership (PPP) model on a Design, Build, Finance, Operate, and Transfer (DBFOT) basis.

6.3. Current Situation and Future Outlook

India has one of the largest railway networks globally, but it currently lacks high-speed rail lines capable of supporting speeds above 200 km/h (124 mph). While several high-speed corridors have been proposed, none have been fully implemented as of now. Currently, the fastest train in India is the Bhopal Shatabdi**,** which reaches a top speed of 150 km/h (93 mph).

The proposed high-speed rail corridors are part of India's long-term plan to modernize its railway infrastructure and improve connectivity across the country with fast and efficient services.

6.4. Current Effort to Increase Speed to 160-180 km/h

In 2009, Indian Railways launched non-stop point-to-point Duronto Express trains for the first time, marking a significant step toward modernizing passenger services. The goal is to enhance the speed of passenger trains to 160–180 km/h on dedicated conventional tracks.

Speed Increase Plans: In 2024, the railway minister stated that the Indian Railways would implement a combination of strategic investments aimed at boosting speeds to 160 km/h and above. These investments include upgrading tracks, bridges, signaling systems, and introducing new train-sets. The proposal aims to cut down travel time for passenger trains by 20-25%, making it possible to operate trains like Shatabdi Express on long-distance trunk routes and between metropolitan cities.

6.5. Approach to High-Speed Rail

Indian Railways is taking an incremental approach toward high-speed rail. This includes gradually improving existing conventional lines to support speeds up to 160 km/h, while planning for the development of new lines capable of supporting speeds exceeding 200 km/h using state-of-the-art technology**.**

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6.6. Key High-Speed Strategies

- Dedicated Tracks for Passenger Trains: The plan includes building dedicated tracks for passenger services, separate from freight and suburban traffic. This will enable express trains to operate at their maximum speed without interference from slower trains.
- Upgraded Infrastructure: Existing tracks will be upgraded with heavier rails and more precise geometry to support speeds of 250-300 km/h. Automated inspections will ensure that the tracks meet the required safety and operational standards for high-speed travel.
- Improved Coaches and Locomotives: Coaches capable of operating at speeds of 160-180 km/h will be developed with stainless steel bodies, crash-worthy designs, and fire-retardant materials. Electro-pneumatic brake systems will be incorporated for enhanced safety. Locomotives with outputs of 9,000 to 12,000 horsepower will be designed to haul 24-26 coach long trains at speeds between 160–200 km/h.

6.7. Technological Advancements & Research

Indian Railways has partnered with IIT Kharagpur for research aimed at achieving speeds of 200 km/h**.** The research will focus on:

1. Speed Improvement
2. Carrying Capacity (heavy haul)
3. Advanced Materials
4. Signaling and Maintenance for Safety

This project is expected to be completed by the end of 2015 and aims to enhance the railways' ability to operate at higher speeds with improved efficiency and safety.

6.8. Costs & Project Execution

The estimated costs for building high-speed rail lines in India are around ₹700-1000 million per km (approximately $15-22 million/km). For example:

- The Mumbai-Ahmedabad route (500 km) would cost around $13 billion**.**
- Passenger fares for high-speed trains would need to be priced around ₹30 per km (approx. $0.4/km) for profitability.

The Mumbai–Ahmedabad High Speed Rail Corridor (MAHSR), or Mumbai–Ahmedabad HSR, is an under-construction high-speed rail line, which will connect Mumbai, the financial hub of India, with Ahmedabad, the largest city in the state of Gujarat. When completed, it will be India's first high-speed rail line, with a top speed of 320 km/h (200 mph) [49-51].

6.9. Potential High-Speed Rail Lines

The future high-speed rail lines in India, envisaged to run at speeds of 250–350 km/h, will be constructed on elevated corridors to avoid issues with trespassing and encroachments. These routes will be crucial for improving regional connectivity while reducing travel time across the country.

- Mumbai-Nagpur Link: Maharashtra's proposal to link Mumbai with Nagpur as part of a broader state development plan, costing an estimated ₹60,000 crores.
- Chennai-Bangalore-Kochi Corridor: This project includes plans for high-speed trains connecting these major cities, along with a connection to Mysore.

6.10. Project Execution and Funding

To operationalize bullet trains, a dedicated body, the High-Speed Rail Authority of India (HSRA), will be created under the 12th Five-Year Plan (2012–17). The state governments have agreed to fund 50% of consultancy costs, with Japan funding a significant portion of the construction costs for dedicated freight corridors.

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Several feasibility studies have already been completed for various high-speed routes, including Delhi-Agra-Lucknow-Varanasi-Patna, Ahmedabad-Mumbai-Pune, and Chennai-Bangalore-Kochi corridors.

6.11. Costs of Construction and Profitability

The estimated cost for high-speed rail construction in India is around ₹700-1000 million per km**,** aligning with the cost of constructing similar lines in other countries, like China. For example, the Mumbai-Ahmedabad route (500 km) is expected to cost approximately $13 billion. To generate a profit, passenger charges are projected to be ₹30 per km (approximately $0.4/km) [53].

7. Strategic Steps for Organizational Growth

Indian Railways is undergoing a shift towards cost-efficiency through strategies like:

- Downsizing to reduce the number of employees.
- Outsourcing non-core activities like catering, parcel services, and advertising.
- Product Innovation**,** such as introducing double-stack container trains to increase cargo capacity and reduce operational costs.

These strategies, along with modernization efforts, are expected to play a pivotal role in **economic** growth and the enhancement of India's transport infrastructure**.**

7. Conclusion: A Modernized Vision for Indian Railways

To meet the needs of social and economic development in the 21st century, Indian Railways is focused on modernizing its operations and infrastructure. This includes leveraging new technologies, increasing capacity, and ensuring safety while meeting the transportation needs of the nation. By improving rail efficiency, reducing energy consumption, and enhancing environmental sustainability, Indian Railways can significantly contribute to the nation's GDP and foster inclusive growth.

8. Safety: A Key Priority for Indian Railways

Safety is central to the operations of Indian Railways and is recognized as the safest mode of mass transportation in the country. The railway system prioritizes safety across all its operations, with the ultimate goal of achieving an accident-free system. To ensure this, Indian Railways continually monitors safety performance and takes preventive steps based on trends and incidents. The management consistently reviews safety measures at every level to maintain high standards.

Indian Railways is committed to minimizing accidents, as safety is seen as the key performance indicator (KPI). The institution has integrated safety into all business strategies, ensuring that no compromise is made when it comes to protecting the lives of passengers and railway workers. The safety of railway users is considered a non-negotiable priority, and all staff members, from frontline workers to maintenance personnel, undergo rigorous training to avoid accidents.

9. Manpower: The Backbone of Indian Railways

With a workforce of nearly 1.2 million employees, manpower is the most valuable asset of Indian Railways. Managing such a large and diverse workforce presents challenges, particularly in terms of maintaining high motivation levels and ensuring a stress-free environment across various categories of staff.

Indian Railways places significant emphasis on training and skill development to meet the varied requirements of its workforce. Frontline staff undergoes continuous training to ensure safe and efficient operations. Furthermore, there is a focused effort to improve the skills of staff involved in maintenance activities, as they play a crucial role in preventing accidents.

This improvement reflects the effectiveness of training and the increased focus on safety.

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10. Corporate Mission: Modernizing and Expanding Capacity

Indian Railways' corporate mission is to become a modern railway system with sufficient capacity to meet the nation's growing transportation needs. This must be achieved while maintaining financial viability and providing value to society at large. In order to realize this mission, Indian Railways is committed to technology upgradation and creating a world-leading railway equipment industry, not just relying on borrowed technologies but becoming an innovator in its own right.

11. The Turnaround of Indian Railways

Until recently, Indian Railways was a loss-making organization that faced potential bankruptcy. However, a dramatic turnaround occurred after 2004, when the railway leadership made a fundamental shift in mindset, Indian Railways has significantly improved its financial standing [52].

The turnaround was driven by the realization that Indian Railways is not just in the business of railways, but in the business of transportation. To thrive in the competitive transportation industry, Indian Railways had to offer superior value to customers across all modes of transport.

This shift in perspective allowed Indian Railways to embrace new business models, innovative public-private partnerships (PPP), and resource mobilization strategies, positioning itself for long-term sustainability and growth.

12. Leadership: The Key to Success

The success of Indian Railways' transformation is attributed to strong leadership and a willingness to embrace the future. The leadership understood that overcoming the challenges facing the system would require bold decisions, innovative thinking, and strategic investments. By focusing on safety, growth, and leveraging core assets, Indian Railways has emerged as a critical engine of national growth.

12.1. Strategic Goals and the Path Forward

The leadership of Indian Railways recognizes that the path to future success will require continued focus on the following:

- Safety and Growth: Ensuring that safety remains at the core of every operation while pursuing growth through high-speed rail, modernized services, and enhanced infrastructure.
- Capitalizing on Core Assets: Indian Railways must harness its vast network and assets to create new revenue streams and improve efficiency.
- Mobilizing Resources: Effective resource mobilization and a clear vision for modernization will be critical in achieving the ambitious goals for the future.

13. Conclusion: A Modernized Indian Railways for the Future

The transformation of Indian Railways over the past decade has been nothing short of remarkable. Through strong leadership**,** a commitment to safety, and strategic modernization, the Indian Railways has positioned itself as one of the most valuable organizations in the country. With the potential to contribute an additional 1.5–2% to India's GDP, Indian Railways is poised to become a major driver of economic growth and social development in the years to come.

As it continues to modernize and upgrade its systems, Indian Railways has proven that with the right mindset and leadership, it is possible to overcome challenges and **reinvent** itself for the future. Embracing new technologies, increasing efficiency, and ensuring the safety of passengers will remain at the heart of its mission, as it works towards building a modern, sustainable, and globally competitive transportation system.

Leveraging new opportunities would, however, require generational change with bold vision, clarity and various new initiatives to look beyond day-to-day operations towards building next generation technologies, network, system and processes necessary to significantly enhance safety,

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productivity, efficiency and quality. At present, Railways' Leadership has a unique window of opportunity, which must be capitalized with a sense of urgency to transform railways to deliver timely benefits to the people and the nation.

Railways are recognized as the safest mode of mass transportation and Safety has been recognized as the key issue for the railways and one of its special attributes. All business strategies emanate from this theme and strive to achieve Accident-Free System. Safety is, therefore, the key performance index which the top managements need to monitor and take preventive steps based on trends of accidents which are the manifestations of some of the unsafe practices on the system.

Safety is of paramount importance to Indian railways. Highest priority is accorded to safety and the rail mode in India continues to be the safest means of transportation for public. No compromise is tolerated in Safety of Rail users and all levels of management keep reviewing the Safety performance from time to time.

Manpower is the most valuable asset on Indian Railways which is highly labour intensive with a work force of nearly 1.2 million. It is a challenge to create and maintain high motivation level and stress-free environment for this large workforce encompassing several categories of staff. Skills of manpower suiting varied job requirements are suitably developed requiring adequate attention in training institutions.

Indian Railways' Corporate Mission is to be Modem Railway System with sufficient capacity to meet country's transportation needs, at least cost to society while maintaining financial viability. Technology Up gradation and making Indian Railway Equipment Industry a world Leader in its field- a net generator of new technologies, instead of a constant borrower-can go a long way in ensuring this corporate mission.

Indian Railways' turnaround had required a fundamental shift in mindset. Indian Railways Leadership notes: "We are not in the business of railways; we are in the business of transportation–one of several modes of transportation, and the only way to survive and thrive in the marketplace is to offer superior and compelling value to your customers. "All the strategies were ascribed to the leadership qualities of Indian Railways.

14. Summary

Author has tried to simplify as much as possible the complex leadership of Indian Railways system with many challenges and varied perceptions. Author realize that the leadership of Indian Railways is very complex and requires political will, organizational/ management support, substantial funding, new direction, new thinking, mobilization of resources, innovative PPP and new business models, and a lot more. We strongly believe that through excellent leadership and proper modernization plan Indian Railways can add an additional 1.5 to 2% to national GDP and fuel growth and prosperity in the next decade. also believe that at this time Indian Railways must keep clear focus on Safety and Growth and multiple initiatives to capitalize on core assets, generate new revenue models, review current and new projects, focus on enablers and mobilize resources. Nobody disputes that, Indian Railways is the most important and probably the most valuable organization in India. Author thought back to that phase, 15 years ago, when the Indian Railways struggled to reinvent them. It was a time of change. And yet, a mere decade later, here was the same Indian Railways being feted by the world's media as the Organization who reinvented. Indian Railways saw the wisdom of embracing the future. The Indian Railways had gone through good times and bad times.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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