### **Advanced Special Award for TPM Achievement**

Bajaj Auto Limited

Motorcycle Division (MCD), Waluj Plant, Aurangabad, India



### 1. Organization Profile

### 1.1 Bajaj Group

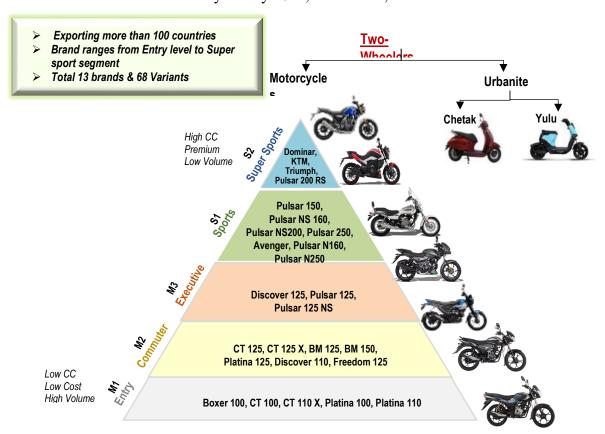
- Bajaj group was founded in 1926 by Shri Jamnalal Bajaj, India's freedom fighter and a strong disciple of Mahatma Gandhi. Jamnalal Bajaj's unflinching commitment to Gandhian values by serving the public, respect at all costs for his customers and his integrity are the basic tenets that powered the Bajaj Group since its inception.
- Bajaj Group is amongst the top 10 business houses in India. Its footprint stretches over a wide range of industries, spanning automobiles, home appliances, lighting, iron and steel, insurance, travel and finance.
- For many decades, the Bajaj group was headed by its Chairman Emeritus Shri Rahul Bajaj, a highly respected businessman, who was also known for his adoption of fair business practices and corporate governance. Mr. Bajaj was the Chairman of the Board of many companies. He was also elected to the Upper House of the Indian Parliament. Mr. Bajaj was a member and former Chairman of the International Business Council of the World Economic Forum, Geneva and a Member of Harvard Business School's Global Advisory Board. He also spear-headed the CSR initiatives of the Bajaj group. He was awarded with 'Padma Bhushan' award, the third highest civilian award by the Government of India.

### 1.2 Bajaj Auto Limited (BAL)

- Incorporated in 1945, Bajaj Auto Limited is a flagship company of the Bajaj group. It started sales
  and manufacturing of Scooters in India in technical collaboration with Piaggio of Italy and
  subsequently started making Scooters and Three-wheelers under its brand after the expiry of the
  agreement.
- BAL entered into motorcycles segment responding to the changes in customer's preference in India. Initially, BAL developed its motorcycles in technical collaboration with Kawasaki of Japan. Soon, it sets up its own R&D facilities in 2000. Since then, many home-developed and grown brands including the market leaders like the Pulsar range of motorcycles have been launched by BAL.
- Bajaj Auto is the world's third-largest manufacturer of motorcycles and the second largest in India. It
  is also the world's largest three-wheeler manufacturer. In December 2024, Bajaj Auto crossed a market
  capitalisation of more than ₹2.5 trillion (US\$28.90 billion), making it the world's most valuable twowheeler company.
- Bajaj brand is well-known across several countries in Latin America, Africa, the Middle East, South
  and South East Asia. Bajaj Auto Limited is among the FIVE Most Innovative Indian Companies
  and the only automotive company featured in the coveted list of Forbes World's Top 100 Most
  Innovative Companies of the Year.
  - (Announced on August 21, 2014 http://www.forbes.com/companies/bajaj-auto/)
- Bajaj Auto is India's 17<sup>th</sup> most valuable brand, according to the first-ever BrandZ TM Top 50 Most Valuable Indian Brands ranking (announced on September 19, 2018).
- The growth journey of the company is further continued, under the leadership of our Chairman Shri Niraj Bajaj and Managing Director Shri Rajiv Bajaj.

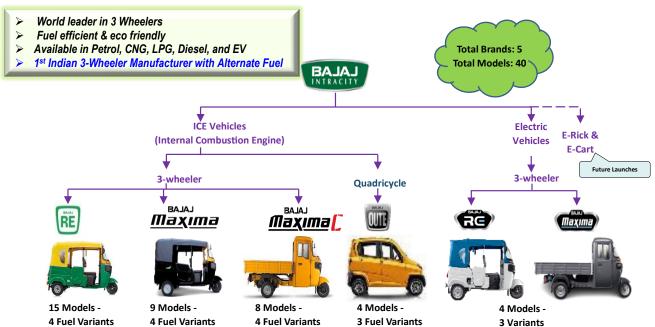
## **1.3 Product Range** Two-wheeler segment

• BAL has products in various segments of Two-wheelers starting from Entry to the Super Sport segment. To cater to the demands of domestic and global customers, Bajaj produces Pulsar, Boxer, Platina, CT, Avenger, Dominar, KTM and Triumph brand Motorcycles. Also, Chetak and Yulu brands of Electric vehicles. Recently in July 2024, "Freedom", World's First CNG Bike has been launched.



### **Three & Four-wheeler segment (Intracity)**

• BAL produces eco-friendly three-wheelers which are world leaders in fuel efficiency & reliability. BAL is catering to small commercial vehicle market with 5 brands and 40 models of three & four wheelers, offering a vast range of fuels like Petrol, Diesel, CNG & LPG etc. In April 2023 it has also launched an Electric three-wheeler.

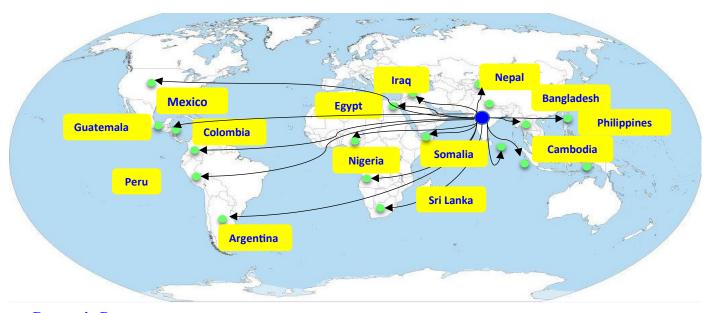


### 1.4 Business

### **International Presence**

- Bajaj Auto is India's No.1 Vehicle exporter by a huge margin. Today when consumers buy Bajaj Motorcycles and 3-Wheelers, they are buying world class products that are sold in over 100 countries. This explains the global acceptance of the BAL brand.
- BAL has a Global Footprint with leading Position and supplies to many developed countries like USA, Europe, Japan, and Australia also.

# INDIA'S NO.1 VEHICLE EXPORTER 2 OUT OF EVERY 3 VEHICLES EXPORTED CARRY A 'BAJAJ' BADGE



### **Domestic Presence**

• Bajaj Auto's dealer network is spread far & wide both in India and across the world, with more than 6560 service centres including 3690 authorize service outlets. It also has 540 exclusive & state-of-the-art 'Premium' showrooms for high-end Motorcycles.

### Domestic Network -

- 1,813 Dealers across <u>India</u>
- > 540 Premium showrooms for Sports Category
- > 6560 Service touchpoints for customers





### Key Features -

- Dynamic Impactful
- Interactive
- > Showcase of Technology Prowess
- Informative





### 1.5 Manufacturing Plants

• Bajaj Auto has 6 manufacturing plants in India, out of which 5 are in Western India at Pune and Aurangabad locations. One plant is at Pantnagar in Northern India. Corporate functions like R&D, Process Engineering, Machine Tool Division, Sales & Marketing, Materials, HRD & Finance are located at Akurdi (Pune). Recently Bajaj Auto has inaugurated its 1st Manufacturing Plant outside India in Brazil.

### Pantnagar Plant -

- ➤ Manufacturing of 2-Wheelers
- > Mass production with low operation cost

### Waluj MCD Plant -

- ➤ Manufacturing of 2-Wheelers
- > Caters to the major export needs

### Waluj CVD Plant -

- Manufacturing of Commercial Vehicles (Three & Four Wheelers)
- Flexible Manufacturing at Competitive Cost

### Bajaj Auto Ltd - Corporate Office Akurdi, Pune

### Chakan Plant 1

- ➤ Manufacturing of 2-Wheelers
- ➤ Manufacturing Laboratory
- ➤ Low Volume, High variety Products

### Chakan Plant 2

- Manufacturing of High-Performance bikes in Sports & Super Sports segment
- ➤ High Tech for high end bikes

### Akurdi - Chetak Plant

- ➤ Manufacturing of 2-Wheelers (EV)
- ➤ House of Green Mobility

# Pantnagar Plant Pantnagar Plant States and Union Territories Waluj Plant RAJASTIAN RAJASTIAN

Akurdi - Chetak Plant

### 2. BAL Waluj (MCD) Plant:

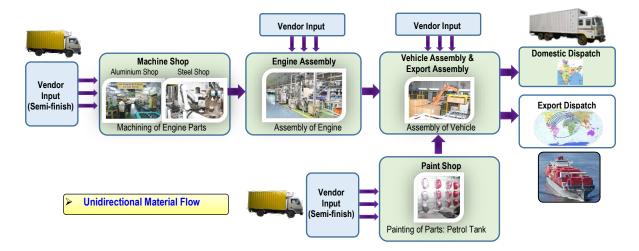
• Motorcycle plant was commissioned in 1990. MCD Waluj Plant caters to the major export needs of Bajaj auto & is also known as its Export Hub. At present, MCD Waluj plant manufactures motorcycles viz. Platina, Boxer, CT, Discover, Pulsar and Freedom to cater Domestic & Export demands.



- # Land area: 419,200 Sq. Mtrs
- # MCD area: 131,240 Sq. Mtrs
- # Capacity: 8,000 Vehicles/Day
- # Strength: 1365 (14% Women
- Employees)
- # Green Coverage: 75 %
- # Water Positive Plant

### 2.1 Production Processes

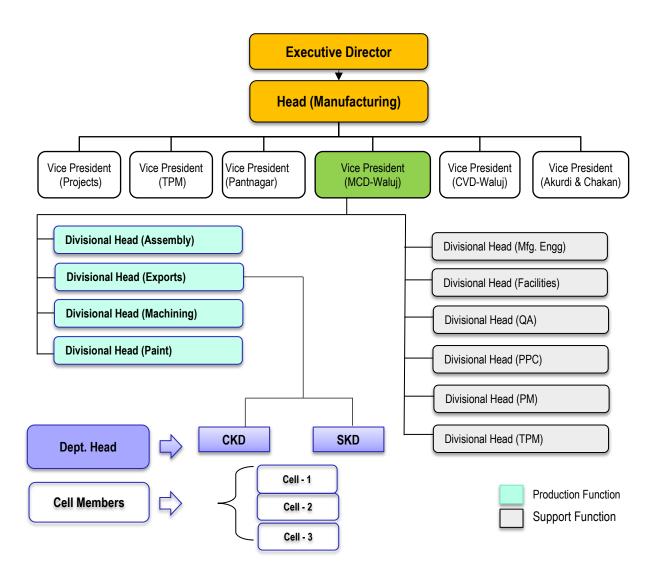
• Overview of production processes at MCD Waluj Plant is given below. Production flow is unidirectional and streamlined with compact layout.



### 2.2 BAL Waluj (MCD) organization structure

Staffing at BAL MCD W Plant

• Plant organization structure is based on the concept of Lean. This structure helps in collaborative working, focusing on strategic decision-making in line with the Organization's Vision and Mission.



### 2.3 Events & Awards

• The various key milestones in Bajaj Auto MCD Waluj journey are given below.



• Foundation Stone Laid for Motorcycle Plant at Waluj

1991

• First Motorcycle Rolled out

1994

• ISO 9001 Certification

1997

• ISO 14001 Certification



• OHSAS 18001 Certification



• Silver jubilee of Waluj Plant

2013

• Creation of TPM university

2019

2024

• Transition from OHSAS 18001 to ISO 45001



• Introduction of World's First CNG Motorcycle

### 3. Milestone on the Journey of Manufacturing Excellence

### 3.1 Background of TPM at Bajaj Auto Ltd

- Liberalization of the Indian BAL was a Scooter maker for 40+ years. 2-Wheeler industry in mid 80s. BAL was desperate to make an impact with Dramatic change in the Indian its own developed high-quality motorcycles. market in the mid-90s. A transition was necessary from age old BAL's profitability dropped Scooter maker to a high-quality, highdrastically by 2000. performance motorcycle maker. A strong need to change BAL's way of working This change had to be, 1. Oriented towards the **change of Mindset** before the **change of Action**.
  - BAL found TPM's "bottom up, analytical and investment light" approach as most appropriate methodology for us and adopted it since 2000.

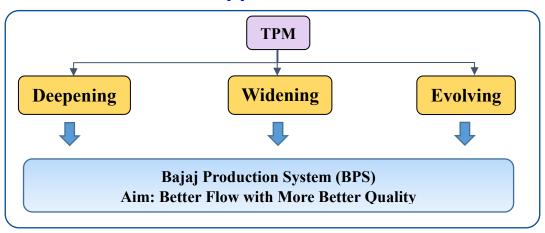
2. With a simple and clear framework that enables collective alignment.

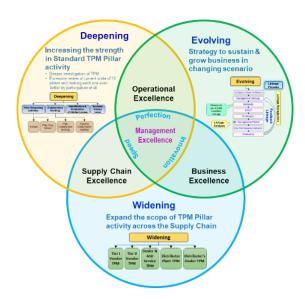
3. With a low gestation period as we were not left with much time.

### 3.2 TPM Activity

- 1. At BAL, continuous efforts are taken to make TPM "The Prime Mover towards Excellence" and to imbibe the TPM philosophy in its work culture. Manufacturing Excellence is the essential core philosophy behind all the activities internally and with suppliers.
- 2. TPM proved its effectiveness and resulted in good improvements in all the work areas (PQCDSME) with an approach of minimal or no investment.
- 3. After successfully challenging Excellence in TPM at all Plants, BAL decided to go "Deeply" and "Widely" in terms of the depth and scope of its TPM activities, to improve on its own losses and interface losses, with the involvement of interface functions such as Engineering, Research & Development (R&D), Component Development, Purchase, Sales & Service, IB, Finance, MIS (IT) and HR.
- 4. BAL has widened its TPM activity across the supply chain. Now our inbound supply chain partners (Tier-I & Tier-II vendors) and outbound supply chain partners (dealers and distributors) are also practicing TPM.
- 5. To sustain the achievements and improve further continuously, BAL has established the 'Bajaj Production System' (BPS). The systems and standards of BPS are meticulously followed by all.
- 6. For strengthening & sustaining standard TPM Pillar activity, we have adopted the "Bajaj Model for TPM" with Deepening, Widening and Evolving activity. To meet the company's vision, strategic goals and objectives are defined. For the achievement of these strategic goals and objectives, BAL has evolved linkage management system to establish a linkage between various resources, functions and management objectives. This has created a Win-Win situation amongst all stakeholders.

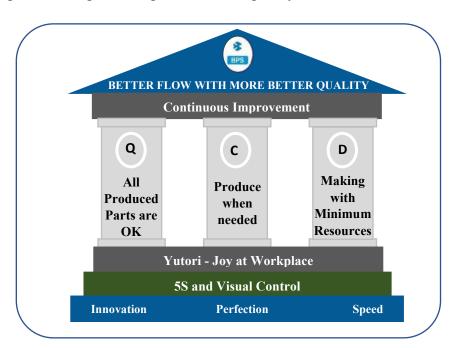
### **Bajaj Model for TPM**





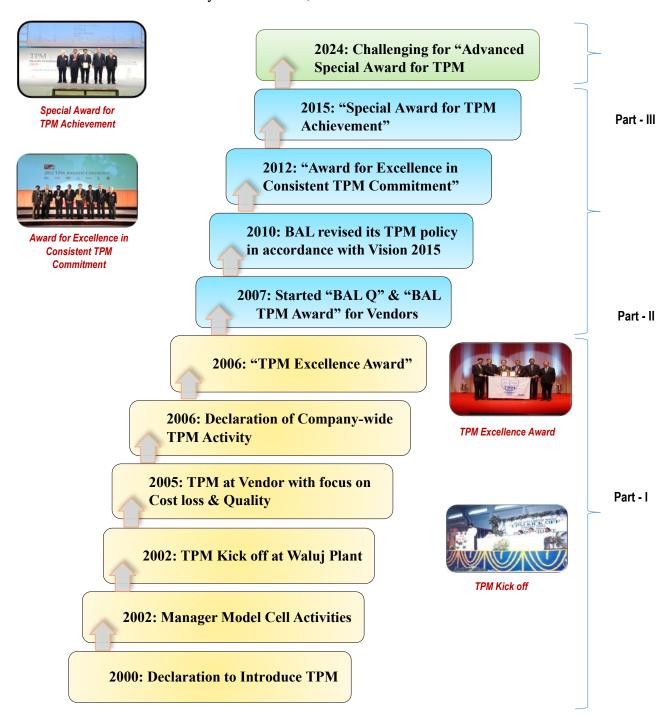
### 3.3 Bajaj Production System

• We follow the Bajaj Production System, intending to ensure **Better Flow with More Better Quality**. The target is to produce all products OK, as per demand with minimum resources. In doing so, we ensure joy at the workplace through Yutori practices. Feedback on the activities under Deepening, Widening & Evolving TPM is given to BPS regularly.



### **3.4** TPM Journey of Manufacturing Excellence:

• Since the decision to adopt TPM as a company policy for manufacturing excellence, BAL's TPM slogan has been "TPM - The Prime Mover towards Excellence". The table given below gives key milestones on this Journey of Excellence, achieved so far.



### 3.5 Support given for the growth of TPM:

- Around 86 companies have visited to BAL for understanding TPM practices in the last 3 Years.
- BAL has been Platinum sponsor for TPM National conferences for the last 6 years.
- By nominating our TPM experts, we are assisting CII (TPM Club) in conducting health check audits.
- Five "Know how" manuals published & given free of cost to CII (TPM Club) for circulation to Indian Auto Industries.
- Facilitation for CII & ACMA Delegation visit to our Plants as part of the TPM Learning Mission.
- "BAL-TPM Award" for 140 vendors and "BAL Q-Awards" for 389 vendors, reflect our efforts for TPM practice and recognition across the supply chain.

### 4. Benefits Achieved

### **4.1** Tangible business results

- BAL as a company embarked on the journey of Excellence through TPM since 2000 under the guidance of Mr. Sueo Yamaguchi from JIPM and later by Mr. Yoshio Yamazaki from JMAC.
- Table given below gives tangible business results achieved for major business parameters.

Category	Index (Calculation Formula)		Unit	Benchmark (Oct'02)	Actual Status (Dec'24)
P	Production Volume		Total Motorcycles (Number in Million)	0.67 (12 months)	1.10 (9 months)
	Production/Hour		Number	161	603
	Productivity (Output/Man)		Vehicle/Man/Day	1.04	5.48
	OLE (or Overall Plant Efficiency)		%	81.00	96.30
Q	Matured warranty cost (2 Years - Platina)		Rs/Vehicle	80	15
	In process Defect		Number of Phenomena	569	1
С	Conversion Cost		Rs/Vehicle	1116	429
D	Lead time (Silencer)		Hours	17	2.1
	Delivery Performance: Adherence to Sales Plan		%	96%	100%
S	Major Accident (Serious Accident Index)		Number	3	0
	Minor Accident		Number	47	0
M	Number of Kaizen/man/year		Number	1.50	12.62
Е	Resource Generation Solar		Lac Kwh	-	36.1
	Control of Pollutants	Paint Sludge	gm/Vehicle	450	118
	Carbon Neutrality	CO <sub>2</sub> Emission Reduction	Kg/Vehicle	-	16.2

### 4.2 Intangible Benefits

### **Employee involvement, participation and motivation**

- BAL firmly believes in TPM as a method that ensures the involvement of all employees from top to bottom.
- BAL employees including frontline workmen have embarked on this journey of TPM wholeheartedly. A few of our workmen are now working as faculty on the subjects of TPM and are teaching their counterparts at our vendor plants.
- BAL Employees participate in competitions every year organized by CII (Confederation of Indian Industries) at the Regional as well as National levels and QCFI (Quality Circle Forum of India) at the Chapter level, National level. Many Employees are Winners at the National levels.
- We at BAL believe that the most important indicator of employee involvement is Kaizen ideas generated and implemented by them towards the achievement of PQCDSME targets. Companywide cumulative Kaizens are more than 3,00,000.
- As a result of their involvement and benefits derived at the Company level, many frontline employees have generated excellent kaizens which have been nominated for State and National level competitions. A few of our employees have also received the highest award from the Prime Minister of India.
- Another good advantage that BAL got from the TPM movement is gender diversification. With all improvements done on ergonomics and Yutori, all operations have become female-operator-friendly. Now many lines/cells in BAL plants are run and managed by female employees.

### 5. Key to our Manufacturing Excellence

- ➤ **Productivity:** The company has set itself a vision to be amongst the leaders in motorcycles and small commercial vehicle business. To meet this vision, BAL will enhance its capacity TPM way by maximizing the efficiency (OLE) of existing resources through focused improvement themes like Lean Operations, before deciding on a new investment.
  - MCD Waluj Plant has developed Flexibility across all manufacturing cells and assembly lines, making them capable to produce variety of models and variety of packing modes (Domestic, SKU, CKD) catering to global needs.
- ➤ Quality: With a focus on Customer Delight, Quality would continue to be customer-defined and customer-centric parameters for BAL. Its products would be aimed at the highest performance and least cost of ownership. Through World Class Quality theme, we are focusing on Customer Satisfaction and Customer Delight.
  - MCD Waluj Plant focuses on producing World Class Products to cater to the needs arising from variety of demand from the customers spread across the Globe.
  - MCD Waluj Plant has been certified for ISO 9001:2015 for Quality Management Systems.
- ➤ Cost: BAL has adopted Life Cycle Costing (LCC) as a base for all its investments in the future and has aimed to create a benchmark for the industry. As a result, it has an aim to maintain its leadership of the highest EBIDTA in the industry.
  - MCD Waluj Plant aims to manufacture its products at Competitive Cost by following Cost Management System by working with Cross functional teams of Interfacing functions.
- ➤ **Delivery:** We are focusing on Flow improvement which has significantly benefited us to meet the demand of various markets (Domestic + Export). Implementation of Small Lot Production helps us to achieve optimum inventory levels and minimum lead time.
  - MCD Waluj Plant is producing in batch of 24 and aims to enhance capabilities to achieve further small lot production targets.
- Safety & Health: BAL has adopted the concept of "Yutori", which means "Joy at the Workplace". Three areas under Yutori, which are Body (Physical Happiness), Mind (Mental Happiness) and Soul (Spiritual well-being) focus on fostering a more positive and fulfilling professional experience for all employees.
  - MCD Waluj Plant has been certified for ISO 45001 for its excellent occupational health and safety practices.
- Morale: With the active participation and involvement of all employees, Bajaj has been able to inculcate a TPM culture for excellence and continuous improvements across all plants. Bajaj has been developing and retaining a diverse pool of talented and motivated employees. The Company has also taken many active steps to engage women's talent, contributing to enhancing women's workforce participation in the economy.
  - Waluj Plant has a unique concept of "TPM University" to improve capability of BAL employees and Stake holders like Vendor, Dealer, Overseas Distributor. Research facilities are created to solve complex issues which needs in depth study and also enhance capability of employees further.
- **Environment:** Environment protection, including pollution prevention, is being achieved at BAL by minimizing the generation of waste and conserving natural resources through the adoption of better and cleaner technology. We are also Focusing on Resource Generation by way of Rainwater Harvesting, Ground Water Recharge and the use of Solar Energy.
  - MCD Waluj Plant is focusing on reducing packing waste and developing Eco friendly packing materials to protect the environment. The plant has been certified for ISO 14001 for its environment protection practices being followed. Support is also provided by sharing Environment related improvements with our vendor partners.

We endeavour to make **TPM** as **The Prime Mover** towards Excellence and imbibe completely the TPM philosophy in our entire work culture. As '**Manufacturing Excellence**' is the essential core process behind all our activities, both in-house and at vendors, we will completely focus on leveraging these efforts to achieve business needs & win-win situation with our stakeholders.

### 6. Contact

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