## Advanced Special Award for TPM Achievement Bajaj Auto Limited Commercial Vehicle Division (CVD), 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.

## 1.2Bajaj Auto Limited (BAL)

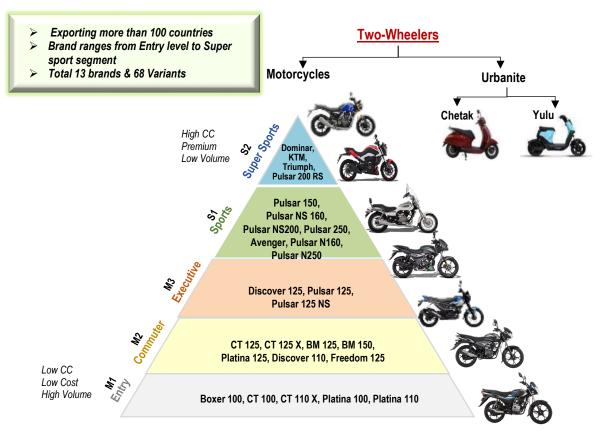
- Incorporated in 1945, Bajaj Auto Limited is a flagship company of the Bajaj group. It started sales and manufacturing of Scooters in India in technical collaboration with Piaggio of Italy and subsequently started making Scooters and Three-wheelers under its brand after the expiry of the agreement.
- 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 two-wheeler 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.

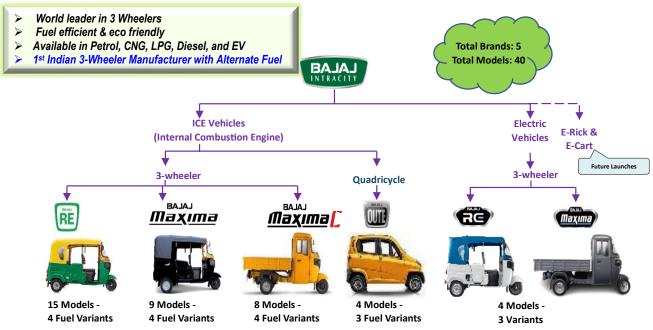
#### **Two-wheeler segment**

• 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)**

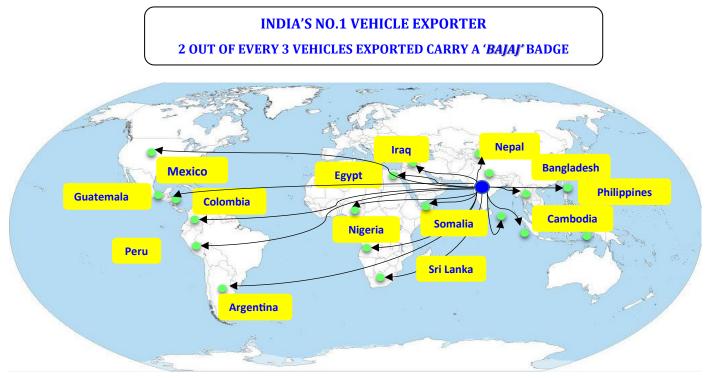
 BAL produces eco-friendly three-wheelers which are world leaders in fuel efficiency & reliability. BAL is catering to small commercial vehicle market with 5 brands and 40 models of three & four -wheelers, offering a vast range of fuels like Petrol, Diesel, CNG & LPG etc. In April 2023 it has also launched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



#### **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 India
- 540 Premium showrooms for Sports Category
- 6560 Service touchpoints for customers





#### Key Features -

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





• 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 -



House of Green Mobility

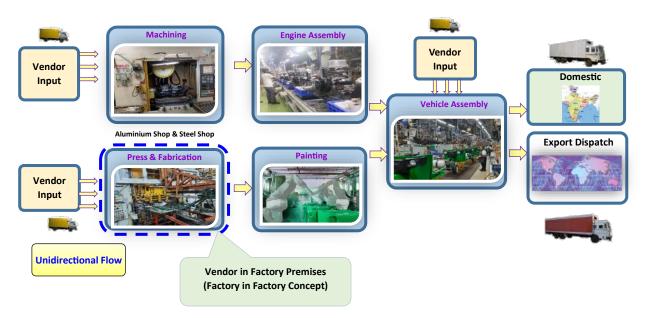
2. BAL CVD Waluj Plant

• The CVD Waluj Plant was established to cater the market demand in the Three & Four-wheeler segment. It intends to build its capacity for producing RE/Maxima Brand Passenger vehicles & Cargo carriers along with a Quadricycle named Qute to cater to market demands. This is the single Plant to cater entire Commercial Vehicle Demand.



# 2.1 Production Processes

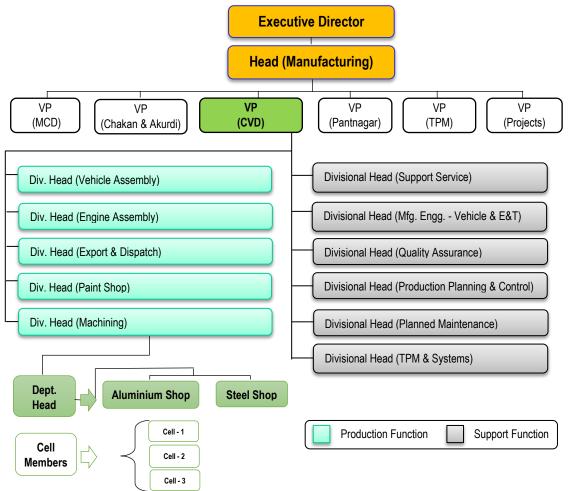
• An overview of production processes available at the CVD Waluj Plant is given below. This plant is established with a compact layout and a unidirectional and streamlined production flow.



# 2.2 BAL Waluj organization structure

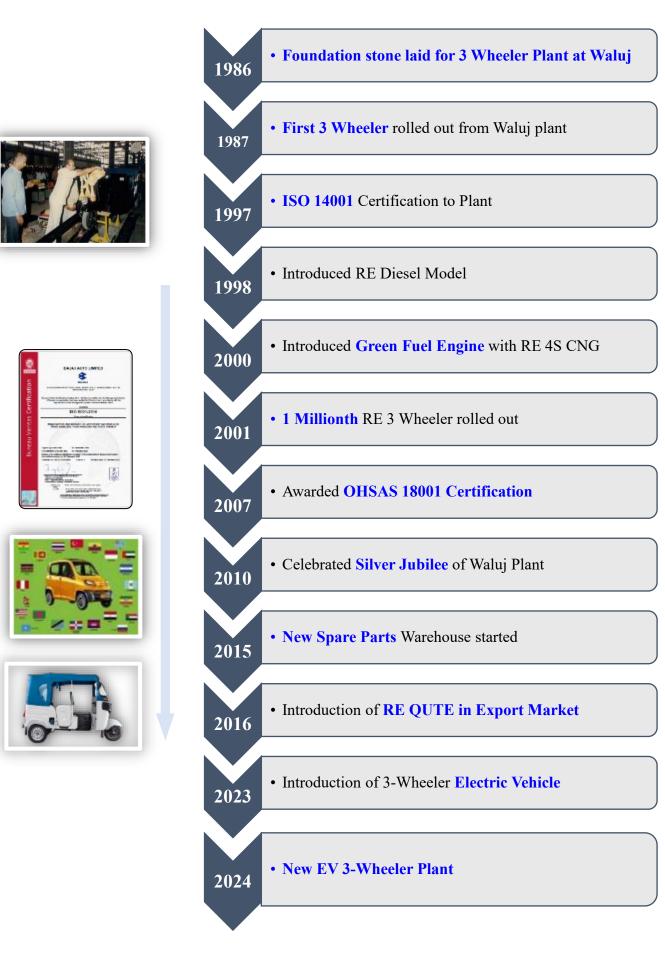
# Staffing at BAL Waluj Plant

• 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.



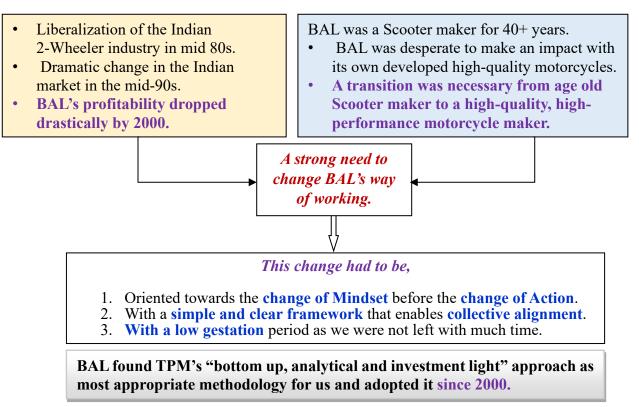
# 2.3 Events & Awards

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



# 3. Milestone on the Journey of Manufacturing Excellence

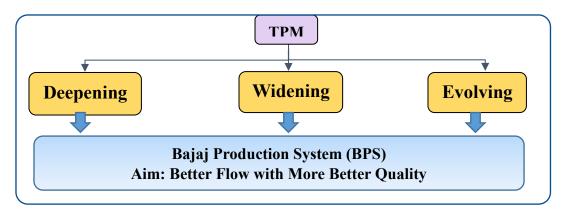
# 3.1 Background of TPM at Bajaj Auto Ltd

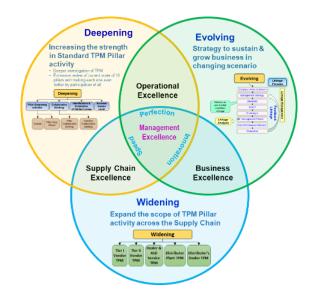


# 3.2 TPM Activity

- 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.

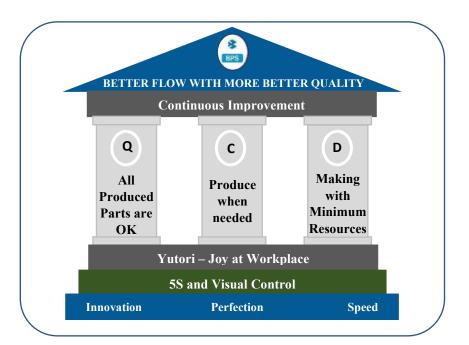
# **Bajaj Model for TPM**





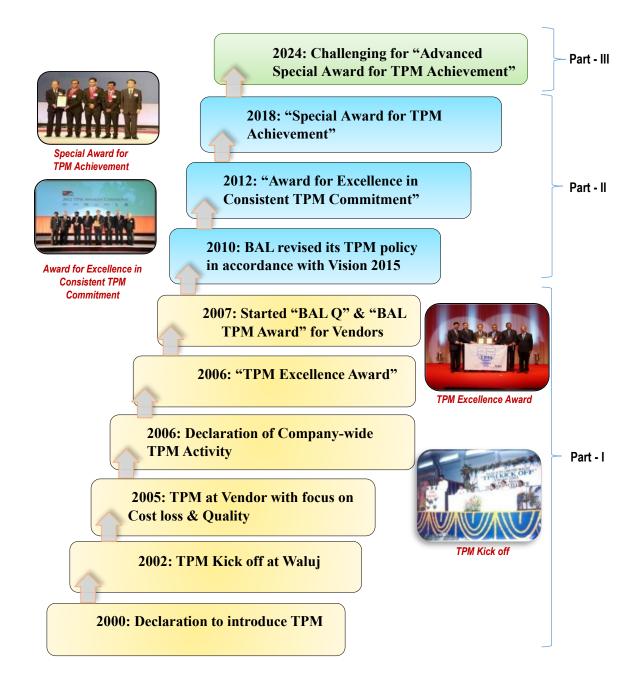
## 3.3 Bajaj Production System

• 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)
Р	Production Volume		Total Vehicles (Number in Million)	0.19	0.49 (9 months)
	Production/Hour		Number	50	223
	Productivity (Output/Man)		Vehicle/Man/Day	0.34	1.93
	OLE (or Overall Plant Efficiency)		%	77.5	96.4
Q	Matured warranty cost (RE 4S CNG- BS VI)		Rs/Vehicle	218 (FY-20)	154
	In process Defect		Number of Phenomena	2	2
С	Conversion Cost		Rs/Vehicle	2253	1005
D	Lead time within Plant (Crankcase)		Hours	57.60	9.2
	Delivery Performance: Adherence to Sales Plan		%	100	100
S	Major Accident (Serious Accident Index)		Number	1	0
	Minor Accident		Number	22	0
М	Number of Kaizen/man/year		Number	0.1	15.1
Е	Resource Generation Solar		Lacs Kwh		29.6
	Control of Pollutants	Paint Sludge	gm/Vehicle	690	130
	Carbon Neutrality	CO <sub>2</sub> Emission Reduction	Kg/Vehicle	65	16.4

# 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.

CVD Waluj Plant can produce more than one model at all our Cells due to continuous efforts on Flexibility.

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. Though World Class Quality theme, we are focusing on Customer Satisfaction and Customer Delight.

CVD 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.
CVD Walui Plant aims to manufacture at the Competitive Cost with its effective Lean Operations.

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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.
CVD Walui Plant is currently producing in Pulse of 24 and siming to make it to smaller Pulse.

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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.

CVD 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 TPM University to train the Bajaj as well as vendor employees and carry out research in the areas of production and processes.
- 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.

CVD Waluj Plant has been certified for ISO 14001 for its environment protection practices being followed across the supply chain.

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

Mr. Abhay Patki VP (CVD Waluj) Mobile: +91 9766600290 E-mail: aapatki@bajajauto.co.in

**Bajaj Auto Ltd- Commercial Vehicle Division (CVD)** Bajaj Nagar, Waluj, Chhatrapati Sambhaji Nagar (Aurangabad), Maharashtra Post code: 431136 Country: India.