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BrAINWARS 2025 ROUND 1 SUBMISSION

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Pune Emerges as the Most Cost-Effective Production Hub by 2027, Balancing COGS and Synergies

Situation

- Nexus, a car manufacturer, is launching production of its new model—'Voltaris Z' in India across three cities, with plans to acquire AutoAI.

- Entering a new market presents challenges including **location choice**, and assess post-acquisition **procurement synergies** of automotive startup, AutoAI.

Objectives

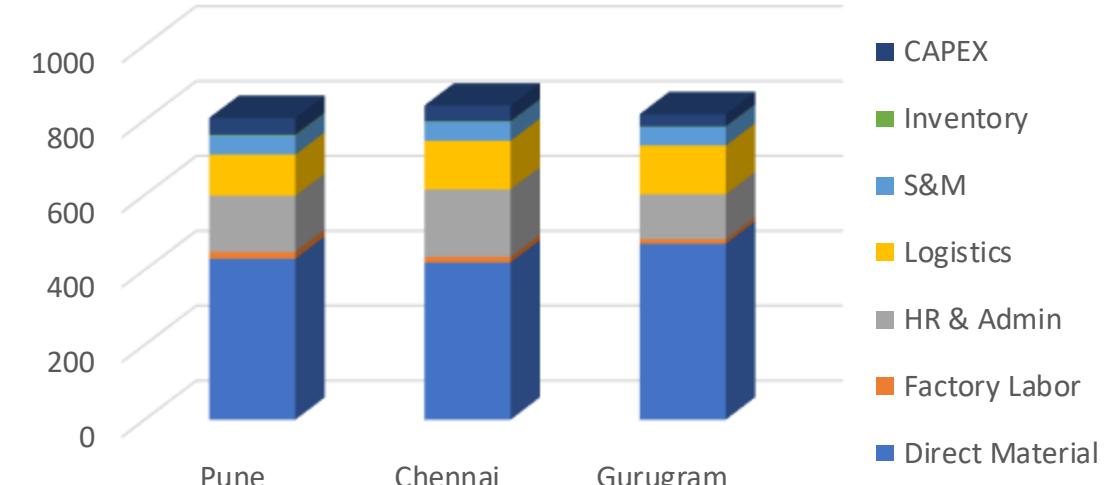
- Identify the **ideal production facility** location
- Minimize **overall costs**
- Leverage AutoAI's supply chain to **boost efficiency** and competitiveness.

COGS Overview Across Locations

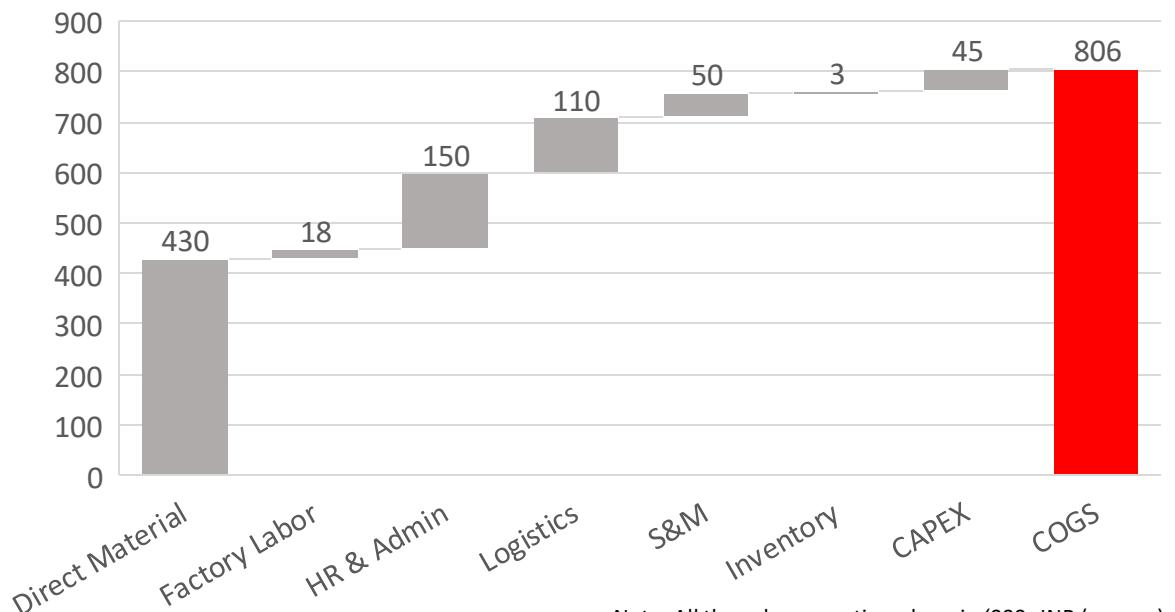
Pune: Best efficiency and supply chain alignment with the **lowest COGS** at **INR 806K/Car** and balanced costs across categories.

Chennai: Despite reduced material prices and middling inventory efficiency, the city has the **highest COGS** at **INR 839K/car** because of high HR/admin expenditures.

Gurugram: Low labor and inventory expenses contribute to a **moderate COGS** of **INR 816K/Car**, while high material costs have an impact on efficiency.



COGS Breakdown of Pune



Note: All the values mentioned are in '000s INR (per-car).

Why Pune is Nexus Motors' Best Bet for 2027: Lowest COGS, Strong Synergies, and Optimal Supply Chain.

Risk	Likelihood	Impact	Mitigation Strategy
Supply Chain Disruption	4	5	Leverage Auto AI's supplier network and diversify vendor base.
Labor Unavailability	3	5	Develop skill enhancement programs and secure local talent pipelines.
Regulatory/Compliance Changes	3	3	Monitor policy updates and ensure regulatory alignment proactively.
Material Cost Volatility	4	5	Establish long-term contracts with suppliers and to protect from price fluctuations.
Logistics and Transportation Delay	3	4	Implement real-time tracking and diversify transport partners.
CAPEX Overrun	2	4	Implement phased CAPEX with milestone-based reviews.
Inventory Holding Inefficiencies	3	3	Optimize inventory cycles using AI-powered demand forecasting.
Likelihood (1-5): 1 = Very Low, 5 = Very High Impact (1-5): 1 = Minimal Impact, 5 = Severe Impact			

Pune: Balanced expenses with the **lowest COGS at INR 806K/car**. Pune will be the **most economical site** due to assistance AutoAI synergies, which will further improve supply chain efficiency.



Gurugram: INR 816K/car, **moderate COGS**. Overall efficiency is decreased when labor and inventory expenses are low but material prices are high. Future cost efficiency is enhanced by AutoAI synergy.



Chennai: INR 839K per car is the **highest COGS**. It is the **least practical choice** since, even with reduced material costs, it has slower inventory turnover and greater HR/admin costs, which limit cost effectiveness.

Unlocking INR 11.8B+ in Cost Savings post-acquisition across Pune, Gurugram, and Chennai.

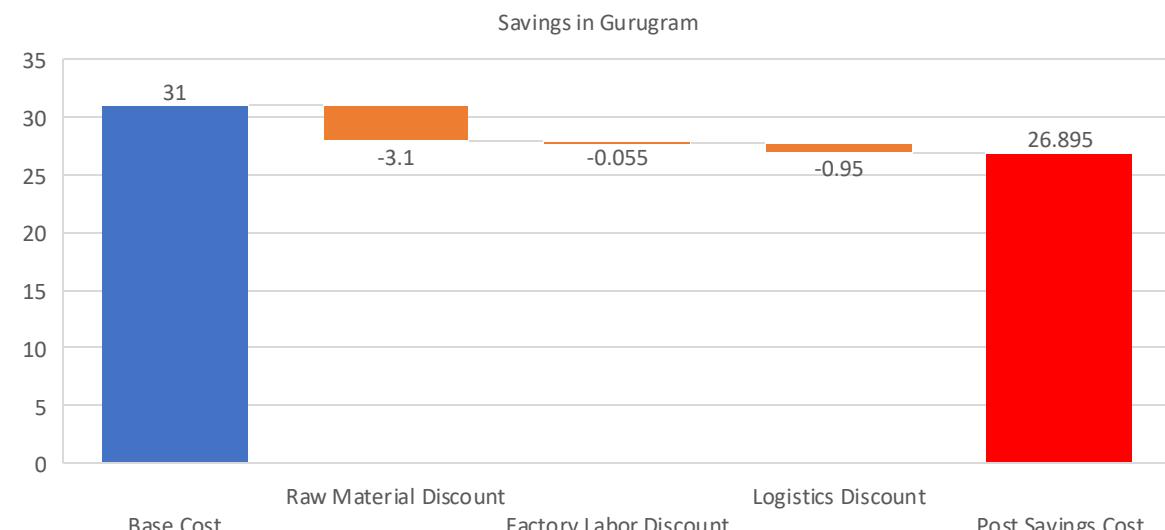
Recommendation: Pune presents an ideal combination of cost efficiency, manageable operational expenses, and advantageous post-acquisition synergies for Nexus Motors' production facility planned for 2027.

Key insights supporting this recommendation:

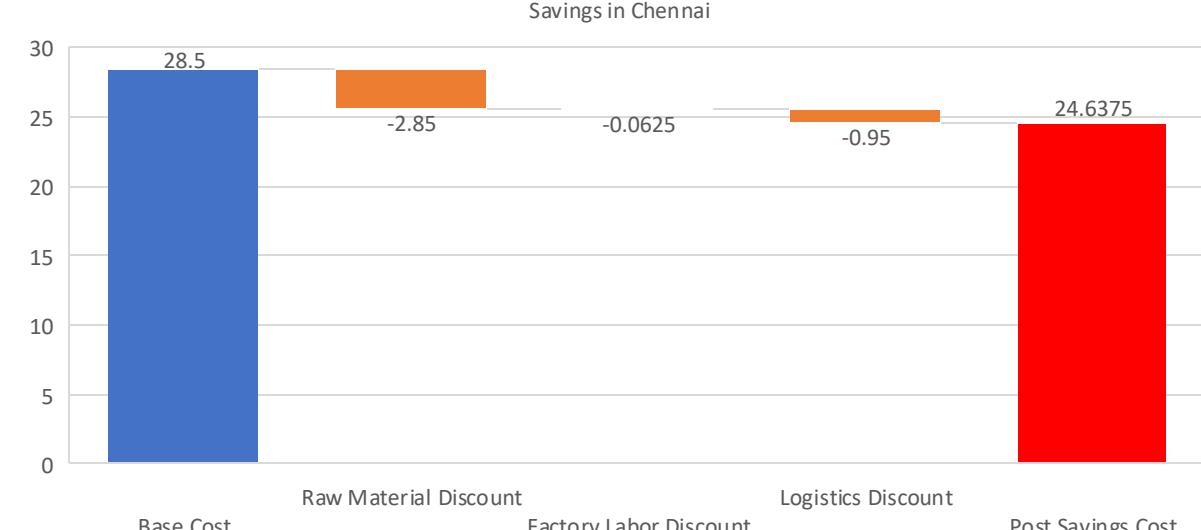
- **Pune** generates cost savings of **INR 3.82 billion**, which is comparable to Gurugram, yet it benefits from **lower cost of goods sold (COGS)** and **improved operational efficiencies**.
- **Gurugram** achieves savings of **INR 4.1 billion**; however, **elevated direct material and operational expenses** diminish its overall benefits.
- **Chennai** experiences advantages from procurement synergies, but **increased labor and administrative costs** negate potential savings.
- **Pune's** reduced inventory holding costs and optimized supply chain contribute to enhanced **long-term cost benefits** following the AutoAI acquisition.



Savings in Gurugram



Savings in Chennai



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THANK YOU!