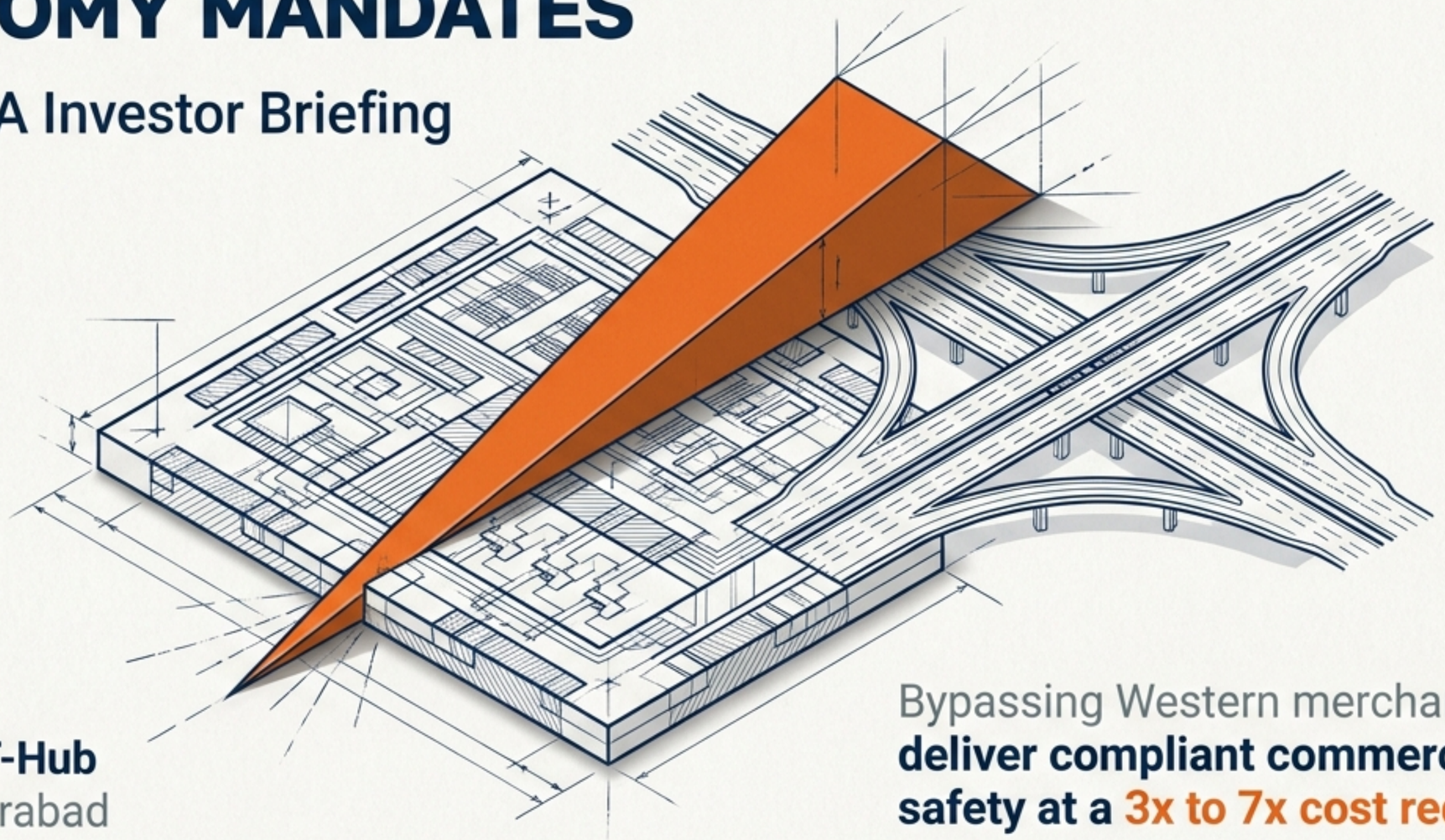
COMMERCIALIZING VERTICALLY INTEGRATED EDGE-AI SILICON FOR NON-DISCRETIONARY AUTONOMY MANDATES

Pre-Series A Investor Briefing

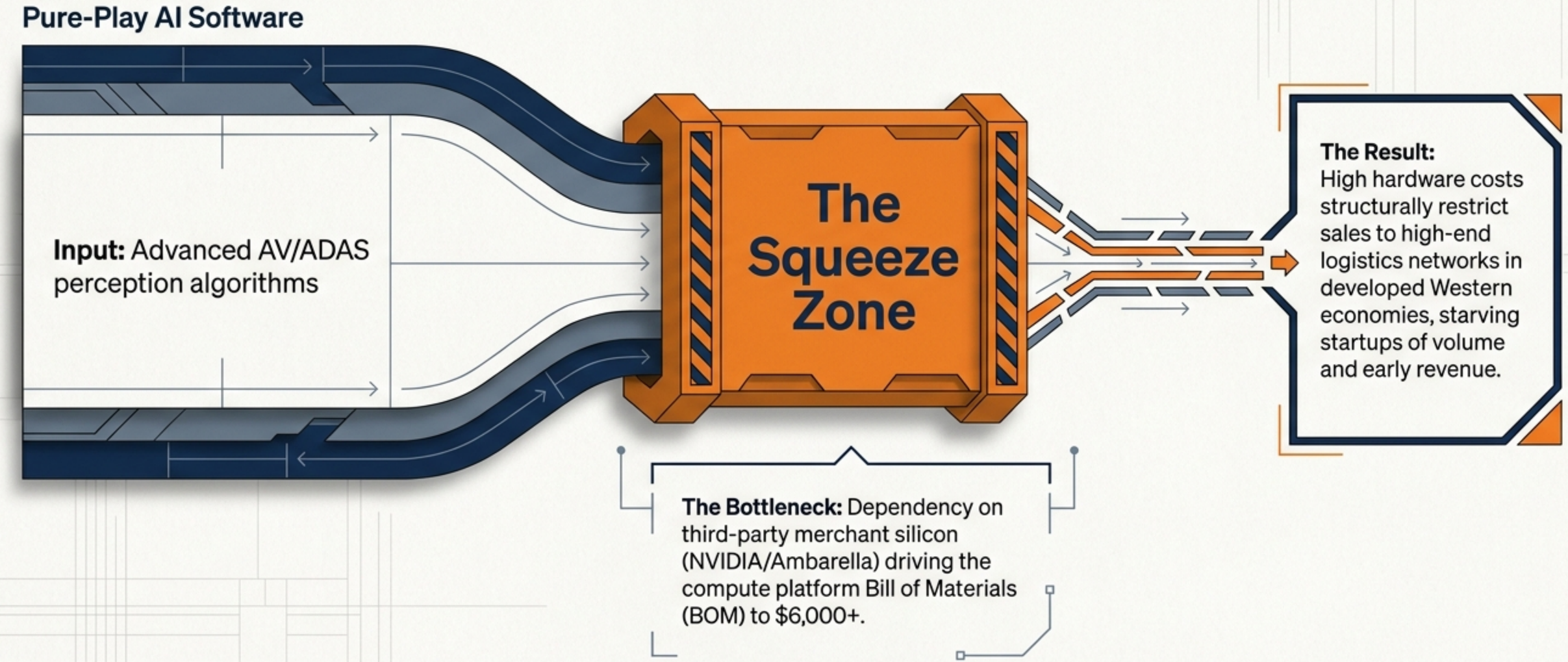


Incubated at **T-Hub**
Phase 2, Hyderabad

Bypassing Western merchant silicon to **deliver compliant commercial vehicle safety at a 3x to 7x cost reduction.**

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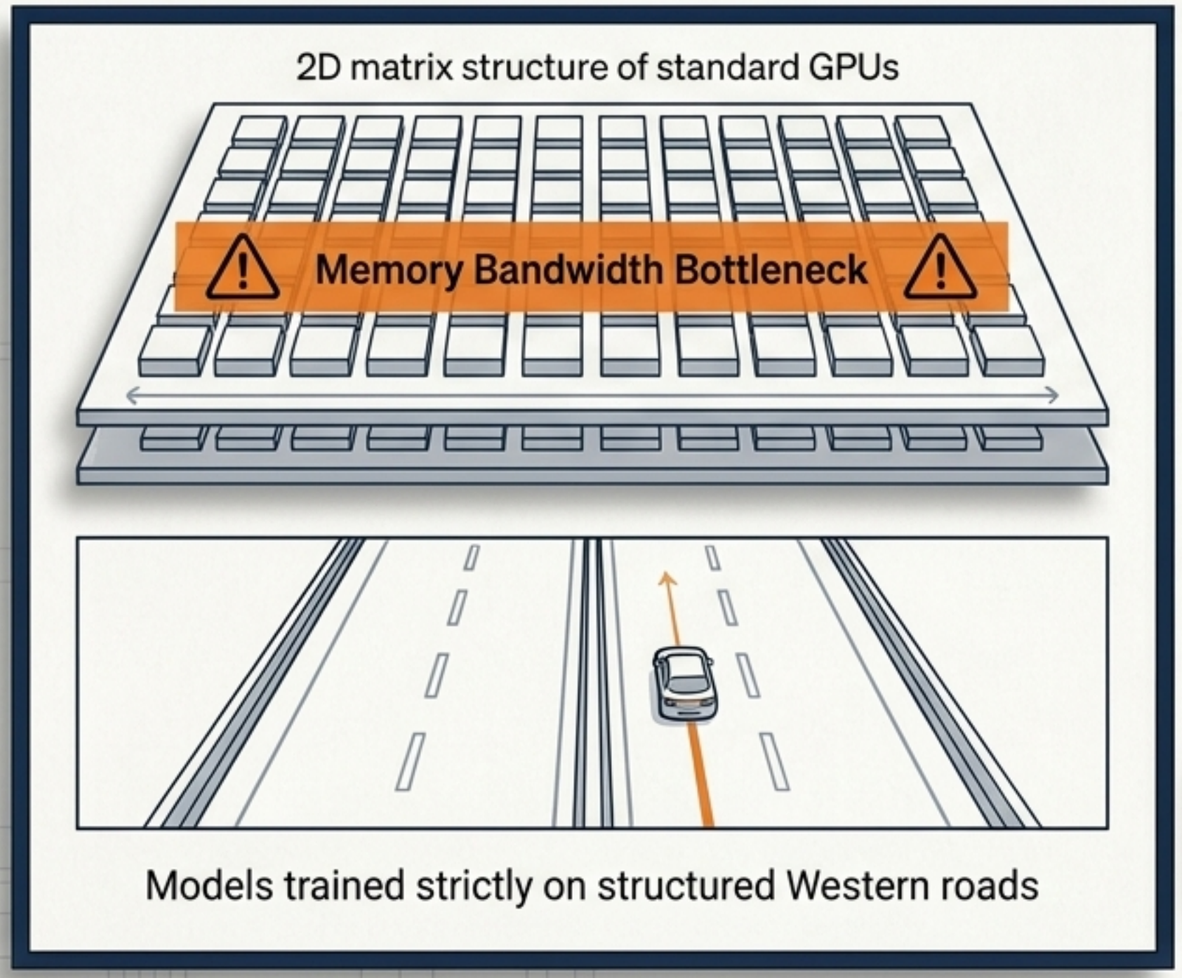
The Hardware Squeeze Zone



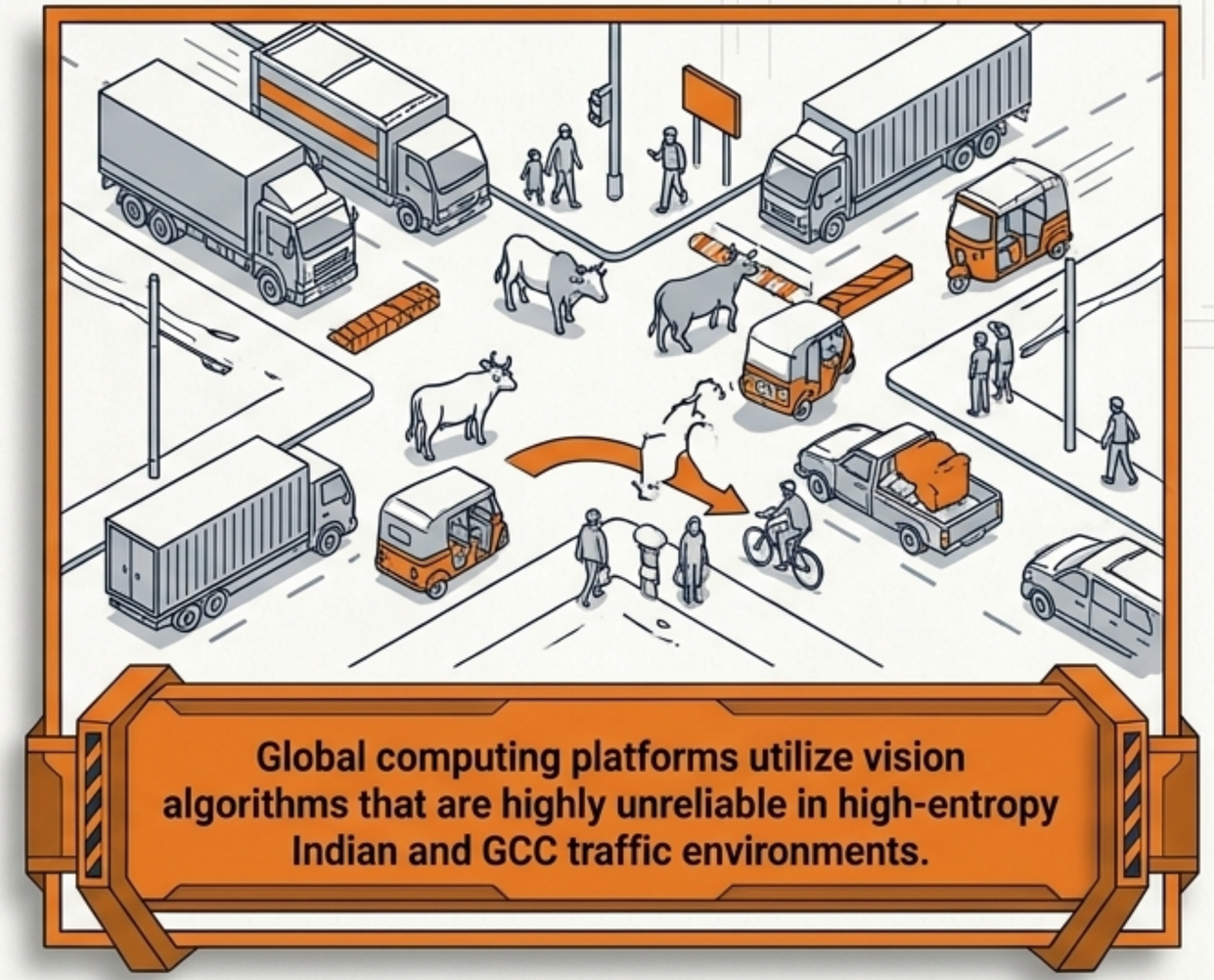
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The Local Data Failure and Power Bottleneck

Western Incumbents

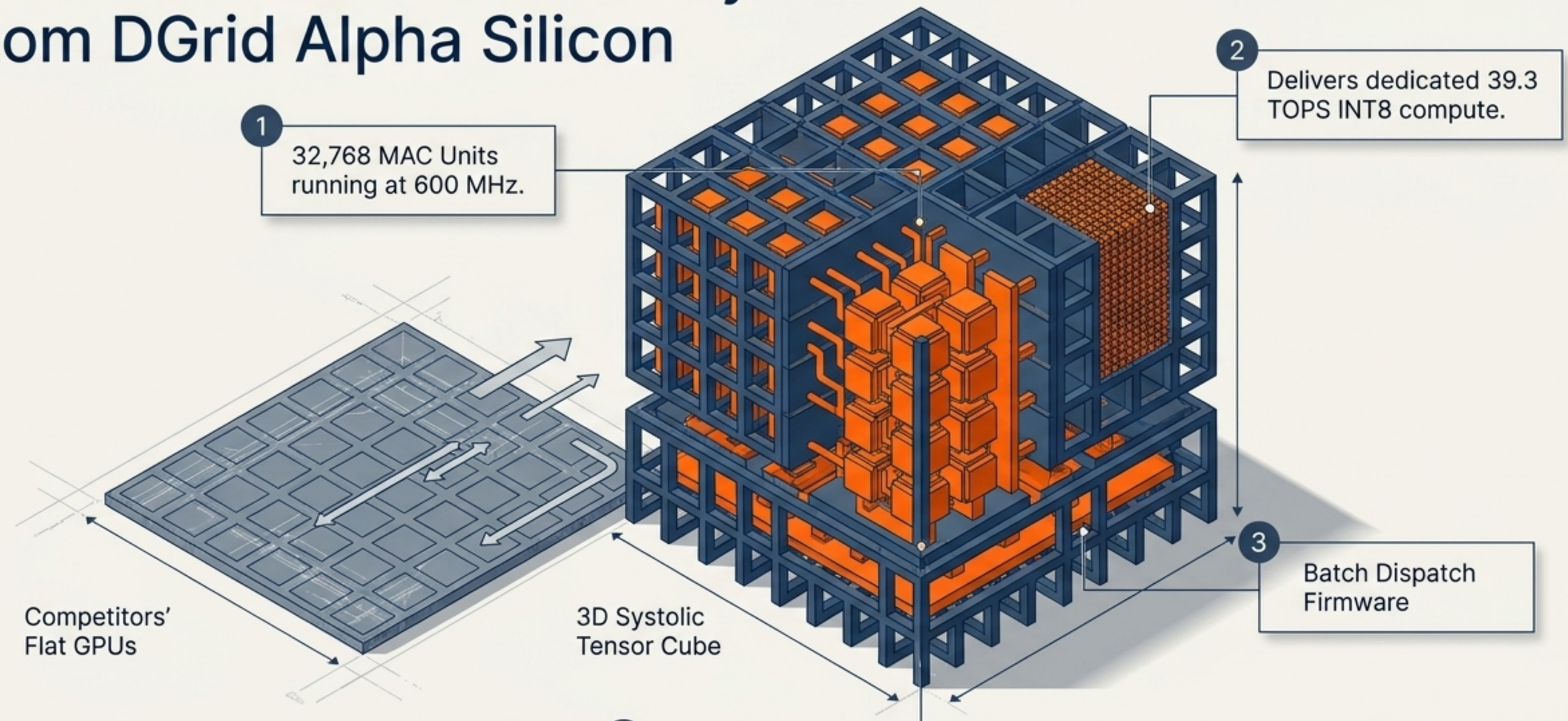


The Reality



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The Architecture of Autonomy: Custom DGrid Alpha Silicon



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The DGrid Alpha Combo-Die Deconstruction

A100 (ADAS/AI Processor):

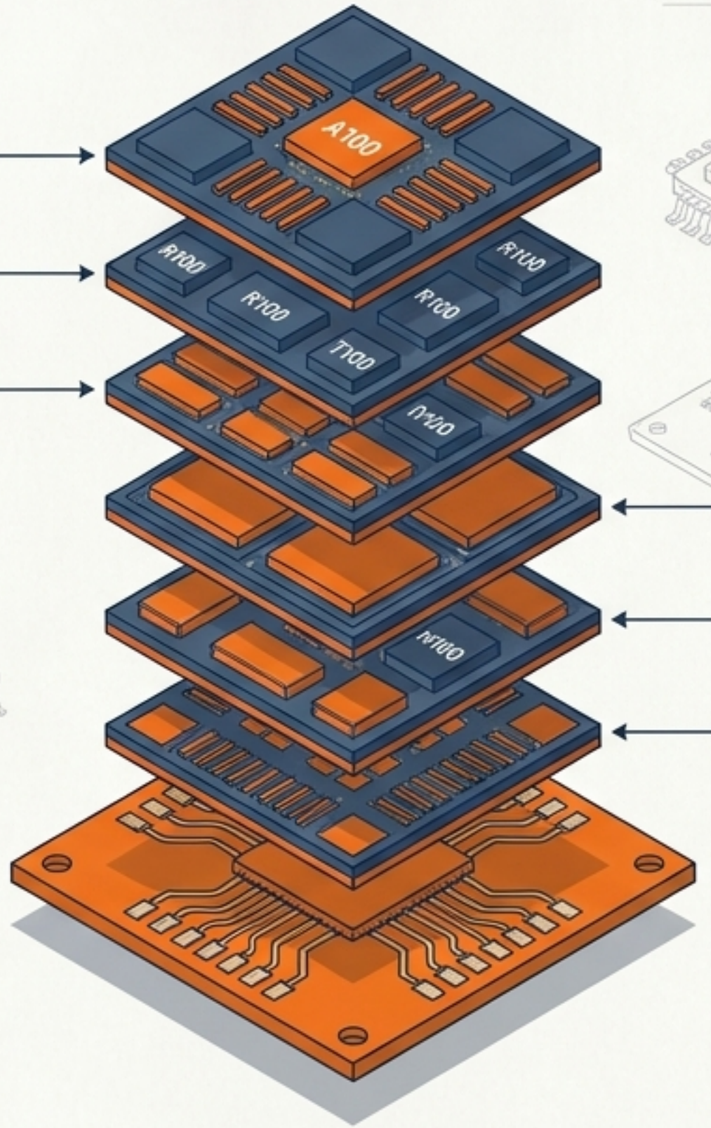
39.3 TOPS INT8 (YOLOv11 & VLA models at 40 fps).

R100 (Radar DSP):

Integrated 12-bit native ADC for 77GHz radar (eliminates external radar chips).

T100 (Thermal/LiDAR DSP):

Multi-sensor point cloud processing.



D100 (Secure Enclave):

Dual-core lockstep RISC-V for cryptographic vehicle security.

S100 (SDV Telematics):

Integrated AIS-140 real-time tracking gateway.

H100 (Health/Bio-ADC):

Processes steering torque and cabin biometrics for drowsiness.

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Selling Regulatory Survival, Not Luxury Features



The Mandate

Over 5 million commercial trucks (N2/N3) in India must integrate ADAS and driver drowsiness systems by 2026 to avoid operational suspension.

The Bottleneck

Competitors' $6,000 systems make fleet compliance economically impossible.

The Key

DeepGrid's custom 28nm silicon is the literal key unlocking this captive market, delivering compliant safety at a **3x to 7x cost reduction**.

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The Global Silicon Dependency Matrix

	Aurora	Kodiak Robotics	Gatik	DeepWay	DeepGrid Semi
Compute Model	Merchant Silicon	Specialized Merchant	COTS	Proprietary Co-design	**Custom In-House ASIC**
Core Processor	DRIVE Thor	CV3-AD685 (5nm)	Heterogeneous PC	High-Compute NPU	**DGrid Alpha Combo-Die**
Chip Dependency	Extreme	High	High	Moderate-to-High	**Zero Third-Party Dependency**
Compute BOM Cost	$6,000+	High Premium	Moderate-to-High	High Platform	**~$30 Compute Board**

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Domestic Competitor Mapping

Software-First (Minus Zero, Swaayatt, RoshAI)

Excellent algorithms, but structurally squeezed by expensive imported merchant silicon, keeping end-customer prices high.

Microcontroller/SoC (Mindgrove, Netrasemi)

Design efficient chips (TSMC 12nm/28nm), but lack the 39.3 TOPS deep-learning acceleration and specialized 77GHz radar processing (R100) required for real-time safety.

The DeepGrid Moat

DeepGrid is the **ONLY** Indian startup designing a **vertically integrated**, **single-die ADAS combo-die** tailored specifically for **commercial vehicle mandates** at a disruptive price point.

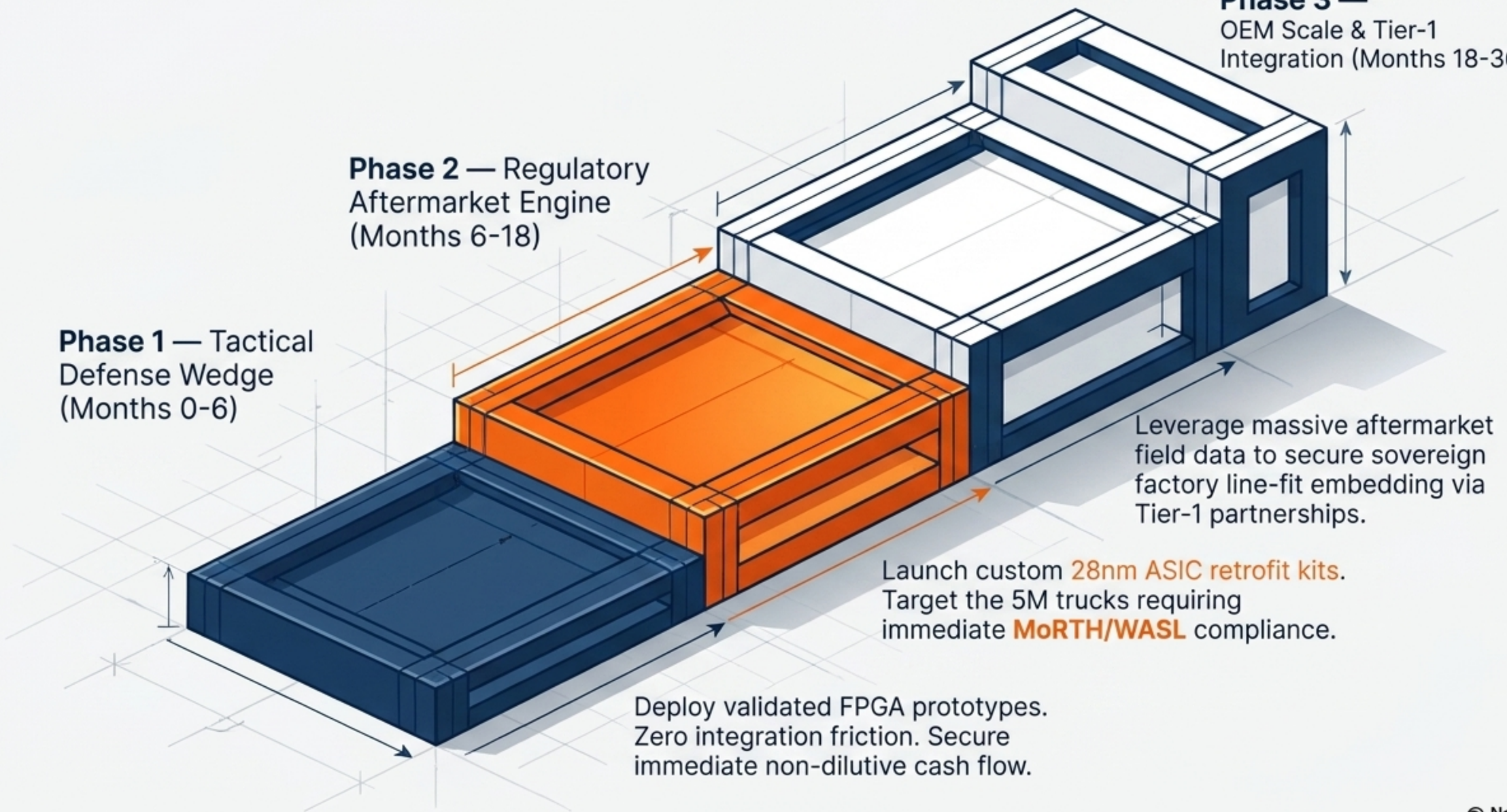
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The ICP Diagnostic Matrix: Minimizing Cash-Burn

Diagnostic Dimensions	Defense	Aftermarket Commercial Fleets	OEM
Regulatory Compulsion	Moderate	**Extreme**	High
Integration Friction	Low-to-Moderate	**Moderate**	Extreme
Price Elasticity	Low	**High**	Moderate-to-High
Sales Cycle	Short	**Moderate**	Long: 24-48 mo
ODD Entropy	High	**Extreme**	Moderate-to-High

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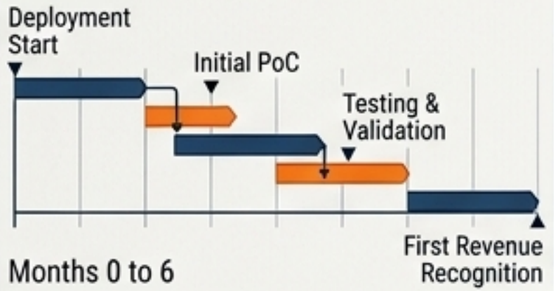
The 3-Phase Commercial Escalation



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Phase 1: The Tactical & Off-Highway Wedge

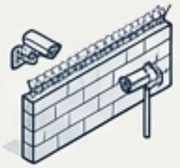
Timeline: Months 0 to 6



Target



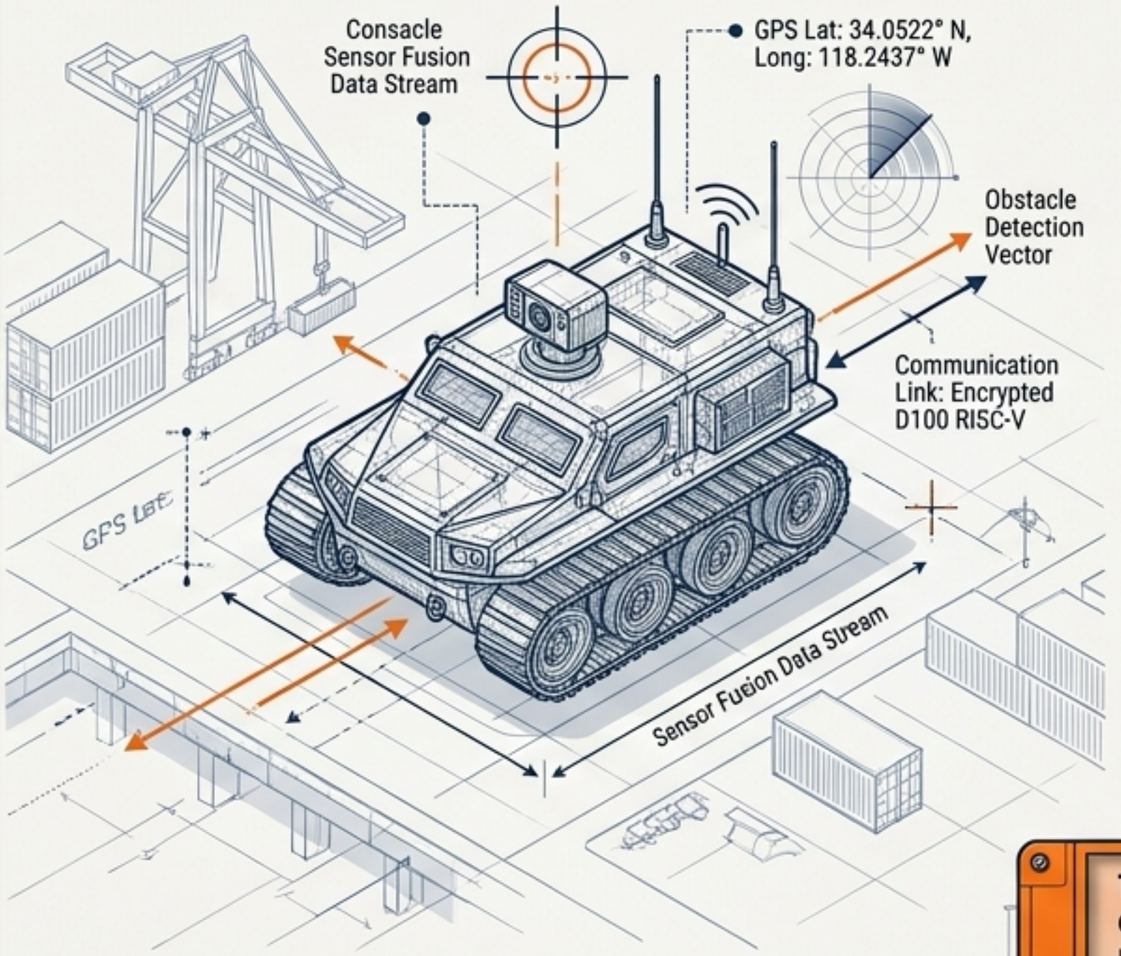
Unmanned Ground Vehicles (UGVs)



Border Surveillance



Automated Guided Vehicles (AGVs) in seaports



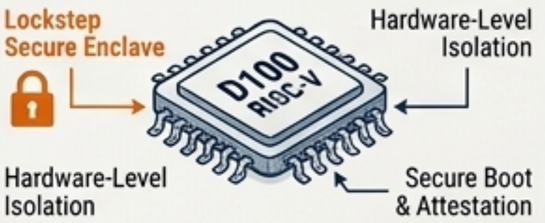
Action

Direct deployment of functional FPGA development boards (bypassing slow public road regulations).



The Hook

Prioritizes hardware-level cybersecurity via the D100 RISC-V lockstep secure enclave.

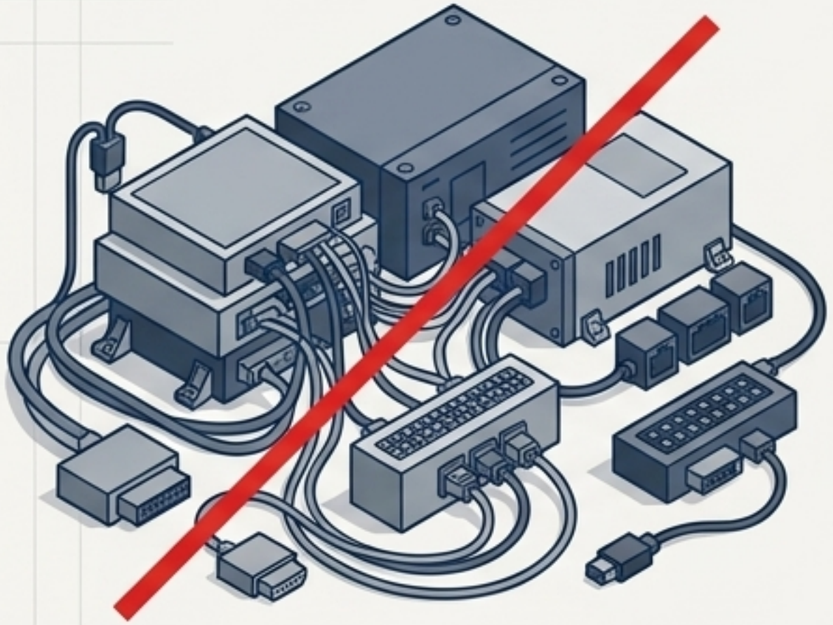


Traction: ₹1 Crore already generated in dual-use tactical defense contract revenue, extending runway and providing concrete PoC validation.

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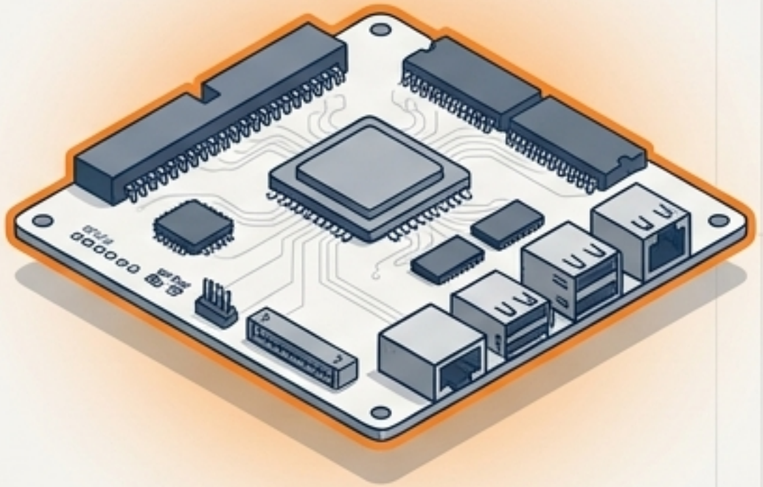
Phase 2: The Mandate-Driven Volume Engine

Imported Merchant Systems



₹8 Lakh - ₹18 Lakh

DeepGrid Custom 28nm ASIC Retrofit



₹2 Lakh - ₹2.5 Lakh

Timeline: Months 6 to 18.

Target: Medium/heavy trucks (N2/N3) facing rigid MoRTH GSR 184(E) and Saudi WASL penalties.

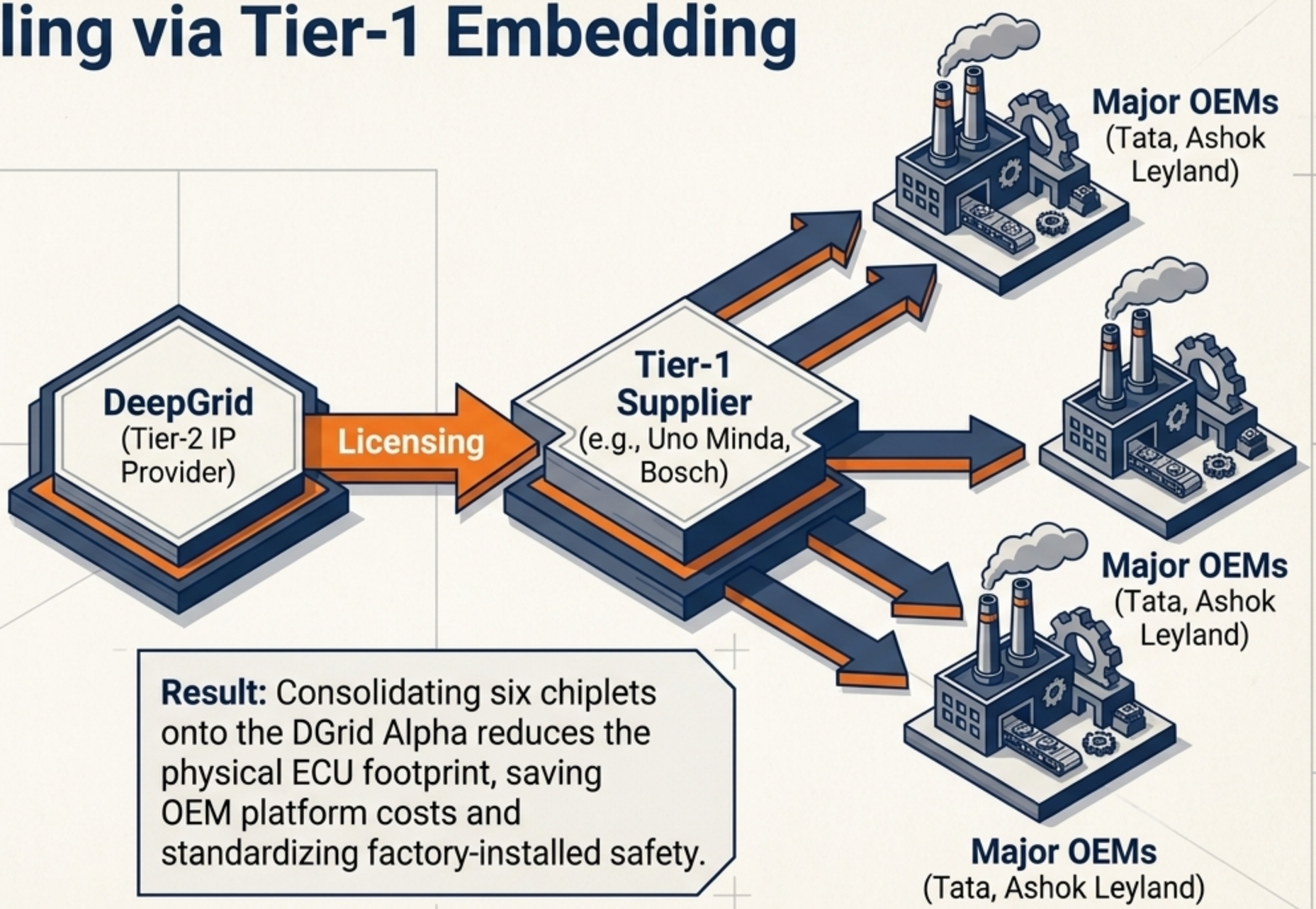
The Wedge: Undercut imported systems by up to **7x** while delivering fully homologated telemetry on a single board.

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Phase 3: Scaling via Tier-1 Embedding

Timeline: Months 18 to 36.

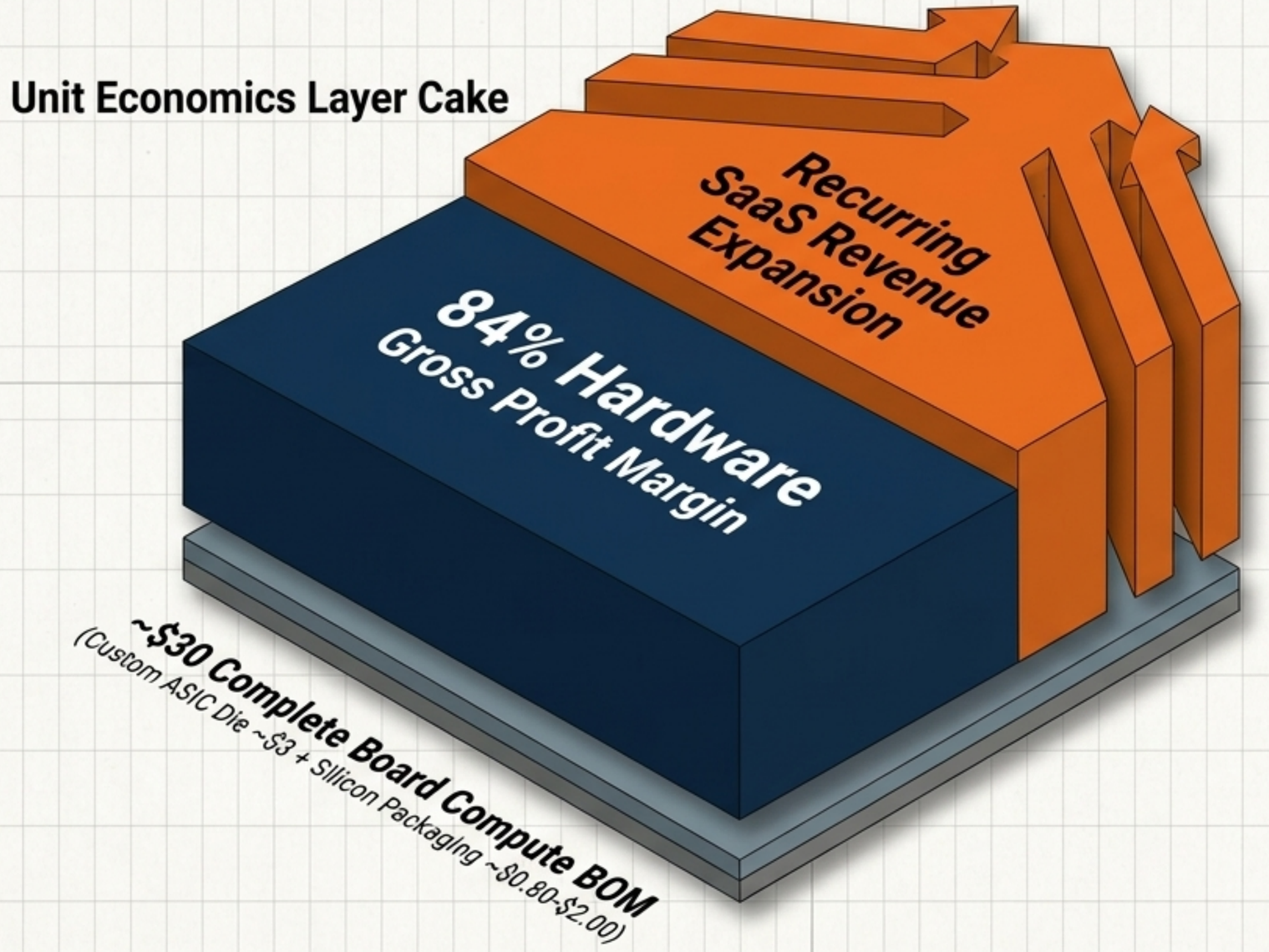
Strategy: Avoid dealing directly with slow, risk-averse OEMs. Partner with established Tier-1s who manage physical manufacturing, direct OEM relations, and warranties.



Result: Consolidating six chiplets onto the DGrid Alpha reduces the physical ECU footprint, saving OEM platform costs and standardizing factory-installed safety.

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Unit Economics: High Yields on TSMC 28nm



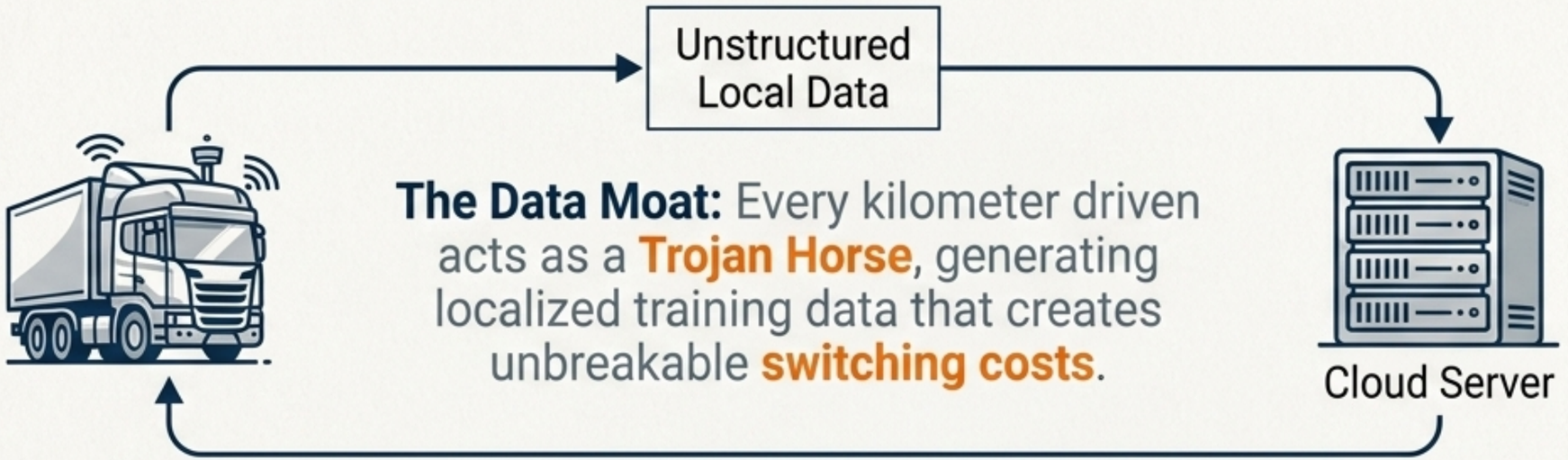
Retail/Retrofit Price:

₹2 Lakh to ₹2.5 Lakh

(~$2,400 to $3,000)

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Software Monetization: SaaS & The Sovereign Data Moat



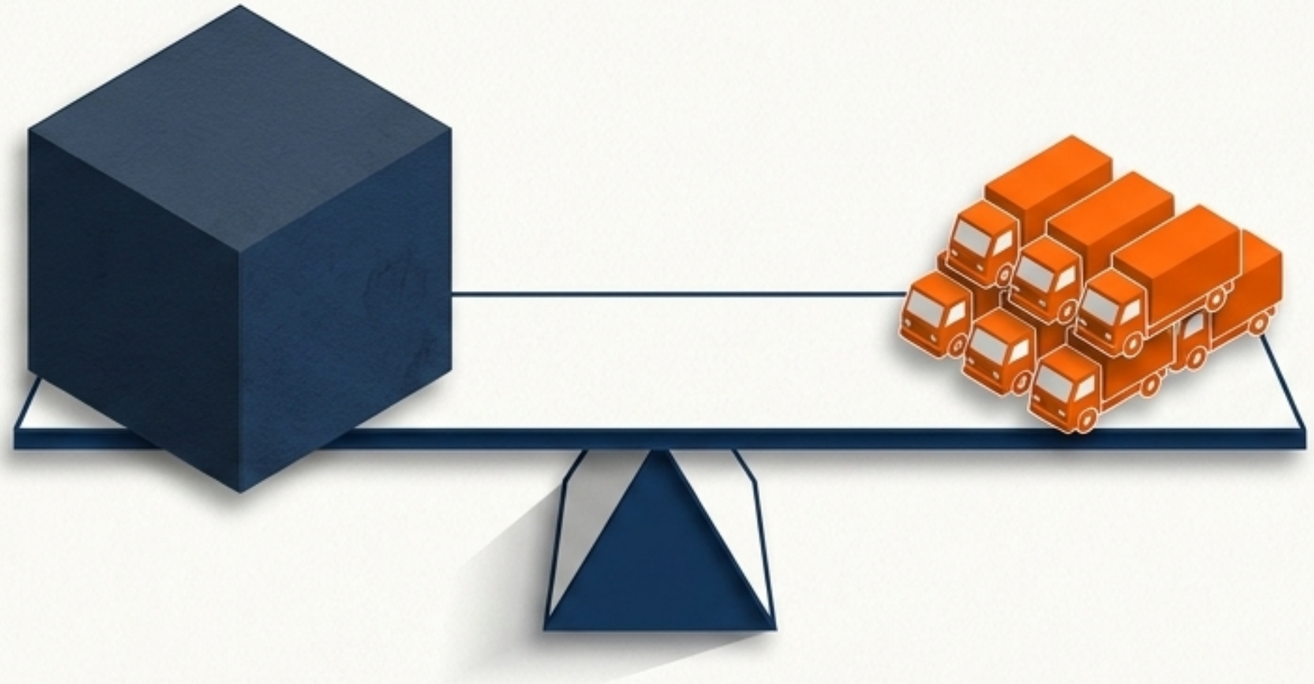
The Data Moat: Every kilometer driven acts as a **Trojan Horse**, generating localized training data that creates unbreakable **switching costs**.

Base Tier (₹10k/$15/mo)	Advanced Tier (₹15k/$35/mo)	Premium Tier (₹25k/yr)
• Automated compliance sync with Indian MoRTH / Saudi WASL portals, drowsiness logs.	• Fatigue tracking via H100 bio-ADC, Edge-based Visual-Language-Action (VLA) analytics.	• Active L2+ collision avoidance, adaptive speed parameters via secure OTA.

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Tape-Out Risk Mitigation: The Break-Even Fulcrum

$8M NRE Investment



Just 3,636 Retrofitted Trucks

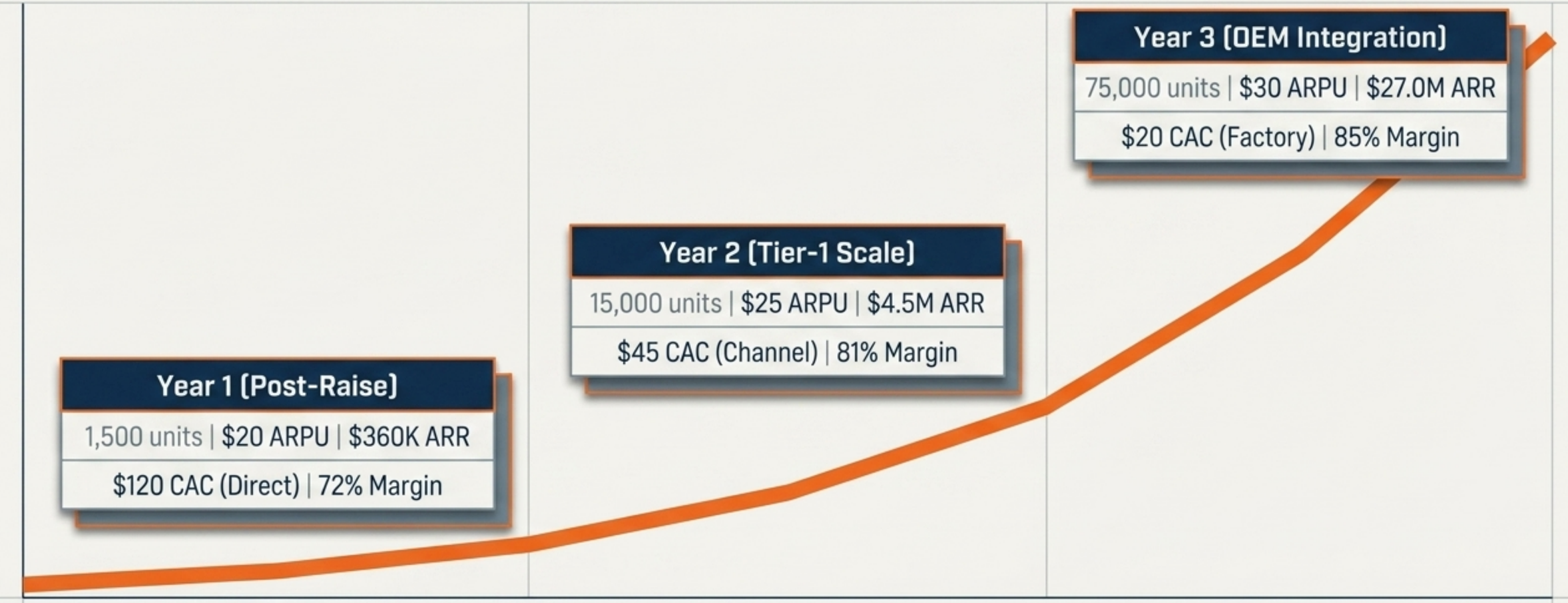
$$\text{Break-Even} = \frac{\$8{,}000{,}000}{(\$2{,}400\ \text{ASP} - \$200\ \text{Unit Cost})}$$

Result: **3,636 Units**

The Insight: This volume represents **less than 0.1% of active commercial vehicles in India.** The risk of the **mask layout and foundry shuttle fees** is **mathematically trivialized by the mandate-driven TAM.**

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Scaling Metrics & Financial Trajectory



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Leveraging Sovereign Capital Subsidies

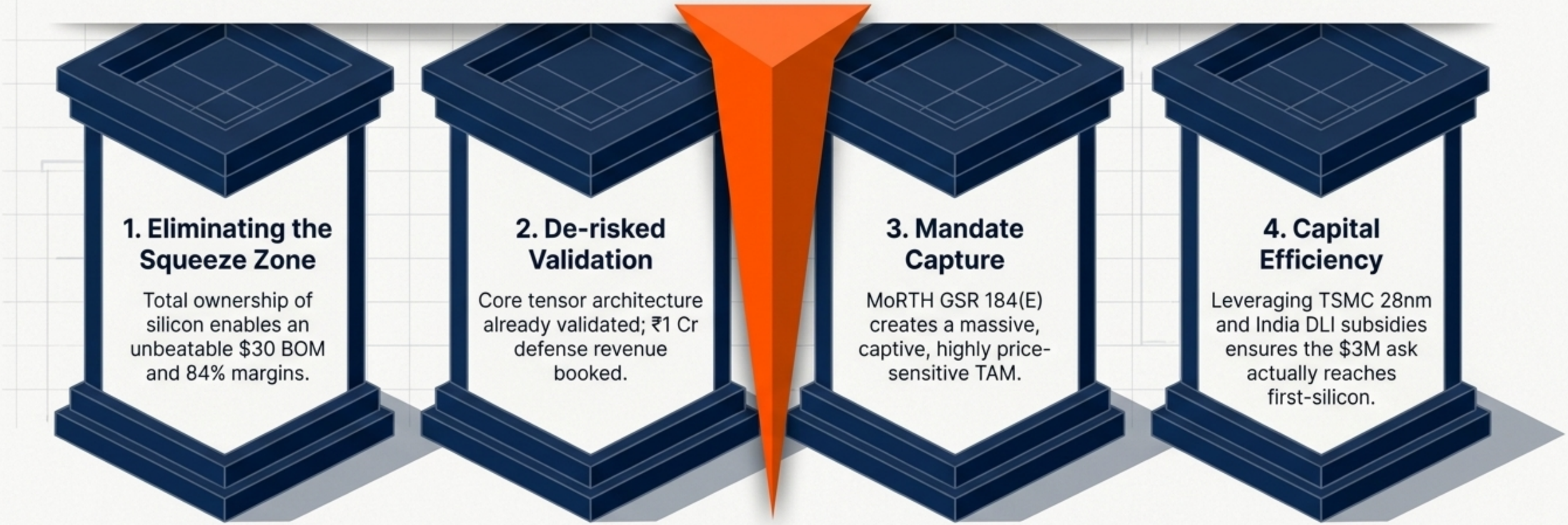


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The Pre-Series A Ask: Engineering the Sovereign Scale

Raising ₹25 Crore (~$3M)

To fund physical design compilation, EDA licenses, and a Multi-Project Wafer (MPW) tape-out on TSMC's mature 28nm node



1. Eliminating the Squeeze Zone

Total ownership of silicon enables an unbeatable $30 BOM and 84% margins.

2. De-risked Validation

Core tensor architecture already validated; ₹1 Cr defense revenue booked.

3. Mandate Capture

MoRTH GSR 184(E) creates a massive, captive, highly price-sensitive TAM.

4. Capital Efficiency

Leveraging TSMC 28nm and India DLI subsidies ensures the $3M ask actually reaches first-silicon.

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