Sponsorship & Strategic Partnership Proposal

Project: Global Finals - Bosch Future Mobility Challenge 2026

Team: Autonomists | **Institution:** Dharmsinh Desai University (Faculty of Technology)

Link to our official team page:- https://boschfuturemobility.com/autonomists/

---

1. THE MISSION

Our team of patent-holding engineers has been selected among the **Top 78 teams globally** to compete in the **Bosch Future Mobility Challenge (BFMC)**. This is not just a student competition; it is a global benchmark for autonomous vehicle technology. Having navigated the initial rounds and successfully secured a **Technical Partnership with Dassault Systèmes (SolidWorks)**, we are now entering the high-stakes "Real-World Integration" phase.

We are seeking **₹65,000** in funding or hardware support to bridge the gap between our current prototype and a podium-winning autonomous vehicle for the International Qualifications before **March 9th**.

---

2. ABOUT THE CHALLENGE (BFMC 2026)

The BFMC, hosted by Bosch, is an elite international competition where only the top engineering talent worldwide is invited to develop autonomous driving algorithms for a 1:10 scale platform.

- **The Scope:** 78 teams selected worldwide from hundreds of entries.
- **The Terrain:** A complex smart-city environment with traffic lights, pedestrians, 20+ road signs, highway, Millimeter precsion of parking, and multi-lane intersections.
- **The Stakes:** The finals take place in **Romania**, where winners gain global recognition and potential recruitment into top-tier R&D divisions or institutes.

---

3. THE "ELITE" TEAM PROFILE

Our team brings a rare combination of industrial research and academic excellence:

- **Dhyumaan Raval (Lead):** 1 Patent PUBLISHED & SSIP Grant holder (Autonomous Drones), Former VP of Spectrum, PRL Intern.
- **Meet Jain (Comm.):** 2 Patent PUBLISHED, 2 SSIP Grants, GATE 2025 AIR 1851, PRL Intern.
- **Harshid Rawal (Mapping):** 2 Patent PUBLISHED, 2 SSIP Grants, 2 Research Papers, PRL Intern.
- **Chintan Trivedi (CV):** 1 Patent PUBLISHED, 1 SSIP Grant, Engibrains Intern.
- **Saumy Patel (Mech):** Mechanical Lead, Soft Robotics Design Patent Applicant.

---

4. TECHNICAL PROGRESS & THE "DASSAULT" EDGE

We have adopted a **"Simulation-First"** engineering philosophy.

Current Status:

- **Software:** Lane tracking and traffic sign recognition models are currently in training.
- **State Machine:** We are building a modular brain code to handle complex decision-making.
- **The Dassault System:** We are officially supported by **Dassault Systèmes**. By using SolidWorks, we simulate every sensor mount and components. This partnership validates our engineering maturity.

---

5. THE UPGRADE: TECHNICAL JUSTIFICATION OF BOM

To succeed in the "Automated Parking" and "Tunnel Navigation" segments, our provided stock kit requires industrial-grade upgrades.

Component	Technical Justification
RealSense Depth Camera	Stock cameras fail in low light. For **Tunnel Navigation** and **3D Object Avoidance**, we need RGB-D (Depth) sensing to "see" distances accurately without relying on ambient light.
Raspberry Pi AI HAT+ 2	The RPi5's CPU is bottlenecked by vision processing. This HAT provides the necessary **NPU (Neural Processing Unit)** to run sign detection models at 30+ FPS, ensuring real-time response.
Magnetic Encoders	Essential for the **Automated Valet Parking** task. We need to track exact wheel angles and rotation to execute precise reverse maneuvers where GPS/Vision might be occluded.
Custom Power PCB	Reliability is our biggest hurdle. Stock power boards have failed (fried terminals). We are designing a custom **Power Distribution Board (PDB)** to ensure stable voltage for our high-power AI modules.
Flex Material Track	For the March 9th Qualifications, we must build a test track. By printing on **Flex Material**, we create a portable, foldable, and durable track that allows us to test and film in any environment efficiently.
High-Performance Battery	Our system is now "power-hungry." To support the AI HAT and Depth Camera simultaneously, we require a high-discharge battery that meets Bosch's safety standards.

---

6. SPONSORSHIP ROI: WHAT WE BRING TO THE TABLE

We are offering a partnership, not a donation. For **YOU**, this means:

1. **Global Brand Deployment:** Your logo on a vehicle competing on a world stage in Romania.

2. **Media & PR:** You will be tagged in our social media campaign as the "Engineering Catalyst" behind our journey.
3. **Talent Pipeline:** Direct access to a team of 5 engineers with 5 patents and space-research backgrounds; future leaders of the Indian EV, Robotics, Automation, Aerospace and AI industry.

---

7. TIMELINE & FINANCIAL SUMMARY

- **Current Phase:** Model Training, Lane Detection Algorithm, Automation, Accident Prevention, Autoparking, and Power Distrubution Board Design.
- **Qualification Deadline: March 9th, 2026.**
- **Total Budget Requirement: ₹65,000.**

We are open to **Direct Financial Grants** or **Component Sponsorship** (In-kind parts).

---

8. CONCLUSION

We have the patents, we have the software sponsorship from Dassault, and we have the skills from Dept of Space and other Research Projects. We lack only the final hardware to cross the finish line. We invite **YOU** to fuel this final sprint and join us in representing India at the Bosch Future Mobility Challenge.

Proof of Work:-
https://drive.google.com/drive/folders/146KcT2OiBIjkSKCzVXYyR_gw0mPG7v1y?usp=sharing