VIRTUAL PILOT DELIVERY SYSTEM

GROUP MEMBERS

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INTRODUCTION OF OUR PRODUCT

WHAT IS VIRTUAL PILOT DELIVERY SYSTEM?

01 A system where trained drivers control delivery vehicles remotely using real-time video feeds and a virtual steering wheel.

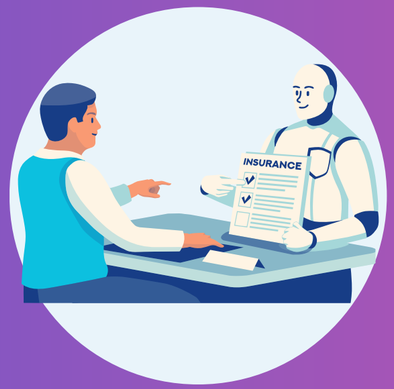
02 Enables drivers to operate vehicles from an office environment using a virtual control interface.

03 Applicable to trucks, vans, and bikes for last-mile delivery.

CHALLENGES IN LOGISTICS INDUSTRY

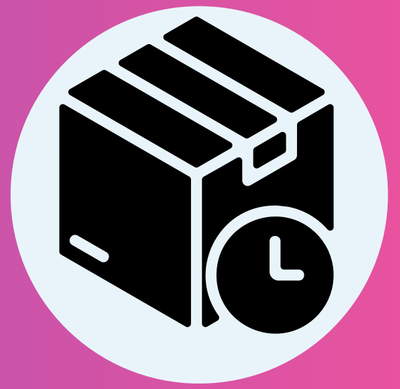
ACCIDENT

Traffic accidents cause financial losses and delivery delays.



AI NOT FULLY RELIABLE

AI may struggle with unpredictable real-world scenarios



DELIVERY DELAYS

Bad weather. And also traffic congestion and road closures cause delivery setbacks.

SOLUTIONS FOR THE CHALLENGES

REMOTE VEHICLE OPERATION

Drivers control vehicles from a secure office.

ENHANCED SAFETY

Removes tiredness and potential driving risks.

OPERATIONAL EFFICIENCY

Enables flexible shifts and reduces downtime.

PROJECT OBJECTIVES

OUR MAIN GOALS ARE:

01

IMPROVE ROAD SAFETY

Eliminates driver fatigue and on-road risks

02

INCREASE DELIVERY EFFICIENCY

Enables continuous operations without physical driver limitations

03

IMPLEMENT REAL-TIME MONITORING

Uses AI-driven safety features and real-time alerts

04

ENSURE LEGAL COMPLIANCE

Insist on transport regulations, safety standards, and cybersecurity protocols

PROJECT SCOPE

WHAT WE ARE BUILDING:

01 **Prototype with Toy Vehicle & Remote Driving System**

Developing a proof-of-concept using a toy vehicle.

02 **Drivers Can Control Vehicles from an Office**

Utilizing a simulated steering wheel and control system for realistic driving experience.

03 **Real-Time Monitoring & Security Features**

Implementing security measures such as access control and emergency stop mechanisms.

04 **Performance Testing: Virtual vs Traditional Driving**

valuating feasibility for commercial logistics applications.

REQUIREMENTS & MATERIALS OF OUR PRODUCT

HARDWARE:

01 Remote Control Car / Van (vehicle model for testing and implementation).

02 Camera for real-time monitoring and obstacle detection.

03 Battery, WiFi Transmission Module, and Sensors for remote operation.

REQUIREMENTS & MATERIALS OF OUR PRODUCT

SOFTWARE:

01 Remote driving interface with virtual steering and pedal controls.

02 AI-based obstacle detection system for improved navigation.

RACI MATRIX

Task / Activity	Project Manager (Lee Wei Qi & Foo Jia Yong)	Development Team (Lim Han Kee & Gerald Cheng Zhiyang)	Safety & Compliance Officer (Sia Shuang Qi & Teoh Yi Xian)	Stakeholders (Jonathan Looi Heng Wan)	Logistics Team (Ngeow You Hao & Tan Yu Hong)
Project Planning & Coordination	A	R	C	I	I
Prototype Development	C	A/R	C	I	I
System Integration & Testing	C	R	A	I	C
Regulatory Compliance & Safety Checks	I	C	A/R	I	C
Stakeholder Communication & Reporting	A	I	C	R	I
Logistics & Deployment Strategy	C	C	I	I	A/R
Final Implementation	A	R	C	I	I

WBS

Research & Planning – Study remote control vehicle tech

Prototype Development – Build & assemble system

Testing & Validation – Performance & security testing

Final Integration – Complete project documentation

TASK OF VIRTUAL PILOT

*Remote vehicle control
-delivery vehicles
- virtual driving console

*Real-time monitoring & AI-Assisted Obstacle Detection
-AI Vision

*Vehicle-to-infrastructure(V2I) Communication
-TrafficSense AI
-GPS

*Emergency Intervention Mechanisms
-immediate action
-control transfer

REQUIREMENT OF VIRTUAL PILOT

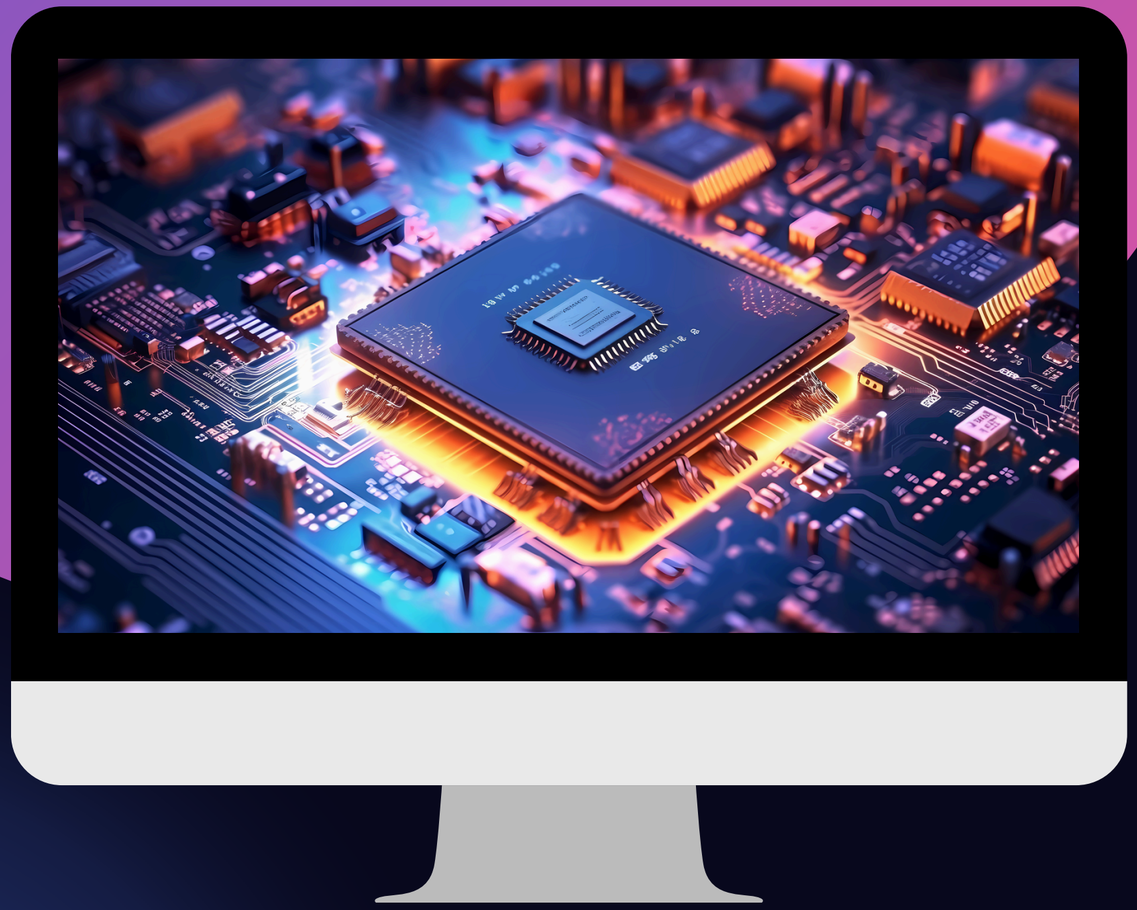
Research & Data Collection

Safety & Emergency Handling

System Development & Integration

OUR COST

Cost Component	Estimated Cost (RM)	Actual cost (RM)
Piezo Vibration & Pressure Sensor Module	10	5.19
Round Head LED Light	8	5.19
Toy car	20	30
Camera	30	0
Holder	30	10
Total	98	50.38



Conclusion

The Virtual Pilot Delivery System will shape the future by making logistics **safer, more reliable, and more accessible**. It will **reduce road accidents** by keeping drivers in secure locations, protecting lives while ensuring continuous deliveries. It will also **create new job opportunities,** allowing more people to work in logistics without needing to be on the road.

THANK YOU