



ECLIPSE SDV
HACKATHON
PORTO 2025

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Chapter III - 2025



ECLIPSE SDV
HACKATHON
BERLIN 2025





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The Plan

The Plan: From Disconnected to Unified

Initial Situation



Disconnected features & modules

Our Solution








Unified platform with communication backbone

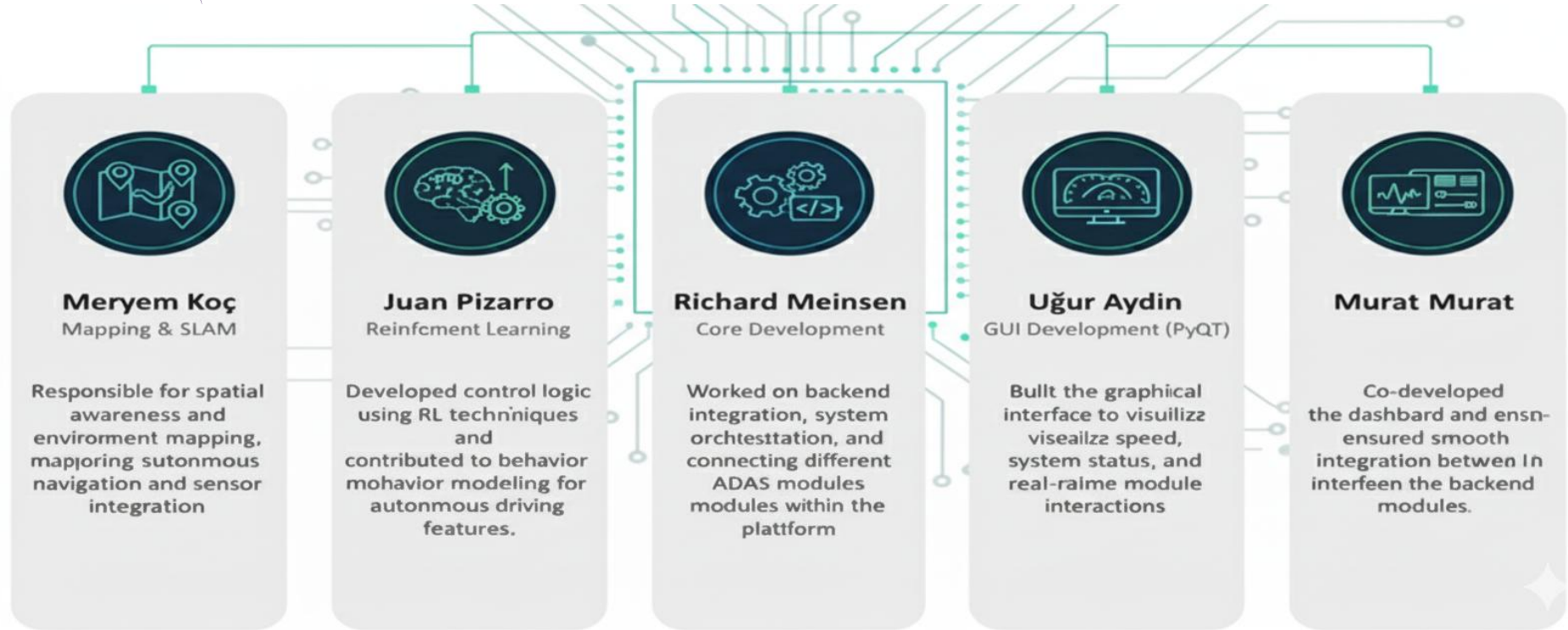
Idea Behind the Solution

Control Everything at Once

Plan to Solve the Challenge

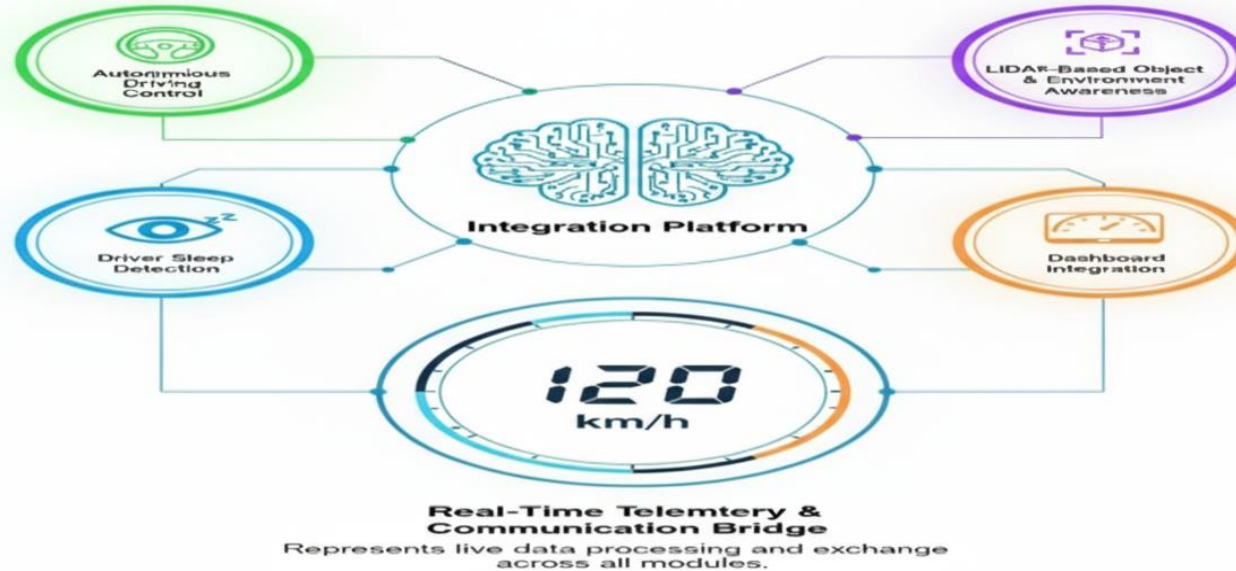
1.  Set up the system and simulation environment
2.  Connect and listen to CARLA data
3.  Integrate ADAS, GUI, and control modules
4.  Orchestrate workloads using uProtocol/MQTT and Ankios
5.  Visualize and test through an Android or PgTC Interface

Team and Structure



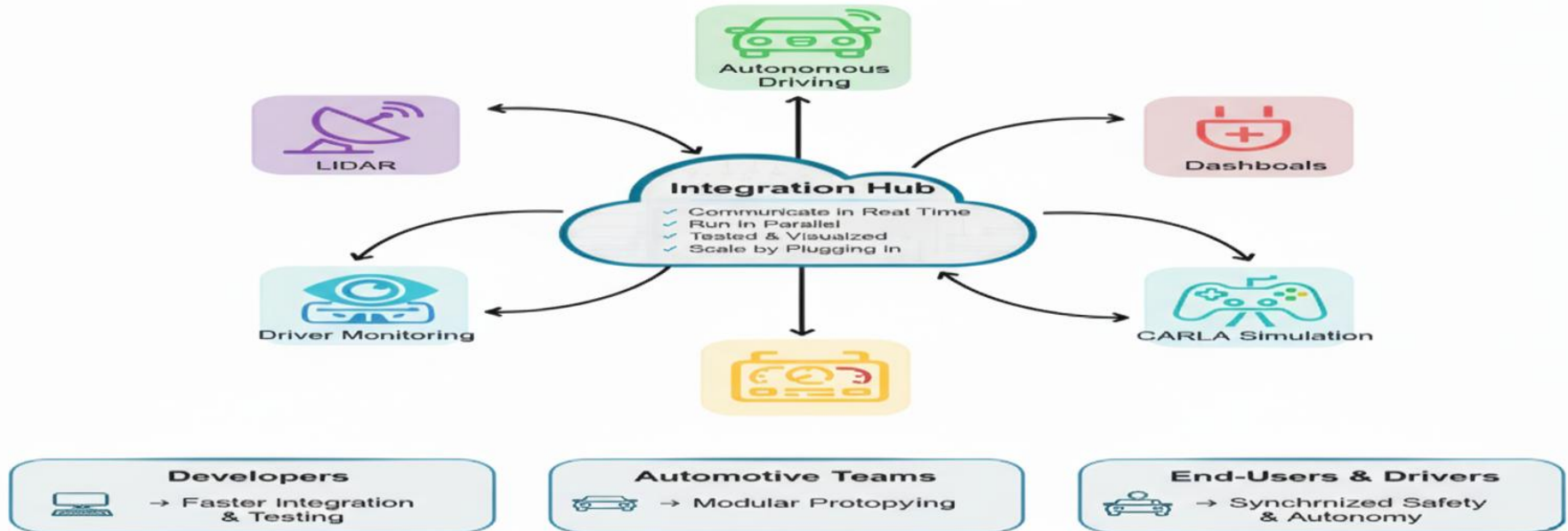
The Product / Service

The Product / Service



The Added Value






✓ Added Value of Our Solution



The Market & The Competition

Market Potential

Key Market Drivers:

-  Rising demand for Level 2–4 autonomous features
-  Government regulations on driver monitoring and safety standards
-  Growth of simulation-based development and testrol testing
-  Integration needs across sensors, software and control units
-  Expansion of electric and software-defined vehicles (SDVS)



Market Size & Opportunity



Driver Monitoring >15% CAGR



Our platform fits into the integration and orchestration layer of this ecosystem

Enables feature fusion, prototyping, validation, and automation across modules.

Sources: Fortune Business Insights, MarketsandMarkeds, Grand View Research

The Market & The Competition

Competitors & How We Differ



Business Model * Plan & Funds



Business Model

B2B Modular ADAS Integration & Simulation Platform

Target Customers

- Automotive RRD teams
- Simulation & Testing Companies
- Autonomy Startups
- Tier-1 Suppliers
- Universities & Research Labs
- SDV Ecosystem Tool Providers



Revenue Stream

Licensing / Subscription Model

- SAAS Access
- Different Tiers (Starter, Pro, Enterprise)



Customization & Integration Services

- Tailored Module Adaption
- Lidar, Sleep Detect
- Real-Time Dashboard + Orchestration Tools



Partnerships & OEM Collaboration

- Co development with Automotive Labs & Startups



Business Model * Plan & Funds



Business Model

B2B Modular ADAS Integration Platform

Phase 1

Phase 1 - MVP & Pilot Projects



Universities,



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sosems for testing & demos



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Phase 2

Developer & Startup Adoption



Modular
SDKs & APIS



Cloud-based
integration/testing
environment



Clowlased
tonment

Revenue Stream

Enterprise Integration



Yearly licenses to
support & simulation



Support
add-ons



OEM-specific
modules

Business Model * Plan & Funds

Required Funds & Use of Capital

✓ Initial Funding Need: €150K – €250K



- **Breakdown**
 - Module refinement (LIDAR, sleep, detect, autonomy, dashboard), Simulator integration improvements
 - API + SDK packaging
- **Team & Staffing**
 - Core developers, UI/UX & testing engineers, DevOps & integration support
- **Partnerships & Deployment**
 - Pilot installations with labs/startups, Hardware & simulator infrastructure
- **Legal & Licensing**
 - Website, documentation, demo videos, Conference and exhibition presence
- **IP protection, licensing agreements**
 - Company formation / compliance

✓ In One Sentence:

We monetize by offering a modular, scalable ADAS integration platform via licensing — through partnerships — starting with simulation and RRD teams, then expanding to OEM with initial funding need of €150–250K to productize and scale.

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Thank You slide

Thank your audience and encourage them to get in touch afterwards.





The Plan

Initial Situation: Different ADAS features, simulators, and control modules were disconnected, with no shared platform or communication layer to make them work together.

Our Solution: We built an integrated platform that connects ADAS modules, CARLA simulation, and control interfaces through a unified communication backbone and orchestration system.

Idea Behind the Solution: “***Control Everything at Once***” — instead of working on a single feature, we focused on enabling multiple ADAS functions to run in parallel, communicate, and be coordinated as one system.



The Plan

Plan to Solve the Challenge

1. Set up the system and simulation environment
2. Connect and listen to CARLA data
3. Integrate ADAS, GUI, and control modules
4. Orchestrate workloads using uProtocol/MQTT and Ankaaios
5. Visualize and test through an Android or PyQt interface



The Product / Service

We built a **modular ADAS integration platform** that combines several safety and automation features into a unified system:

- **Autonomous Driving Control**
- **LiDAR-Based Object & Environment Awareness**
- **Driver Sleep Detection**
- **Dashboard Integration for Real-Time Status Monitoring**

The speed visualization is not just a basic gauge — it represents the system's ability to **receive, process, and display live telemetry from the vehicle or simulator**. It acts as the **communication bridge** that proves data exchange across the modules (autonomy, sensing, and human interaction).



The Added Value

Added Value of Our Solution

Our platform doesn't just provide individual ADAS features — it **unifies them into a single, modular, and testable ecosystem.**

Instead of running LiDAR, autonomous driving, driver monitoring, or dashboards in isolation, our system allows them to:

Communicate with each other in real time

Run in parallel through a shared orchestration layer

Be tested and visualized in CARLA or physical interfaces

Scale by plugging in new modules without starting from scratch

This creates value for:

Developers → faster integration and testing

Automotive teams → modular prototyping instead of siloed systems

End-users & drivers → synchronized safety and autonomy features



The Added Value

Why Our Solution Is Better Than Existing Ones

Most current ADAS solutions are **feature-specific and isolated** — one team builds sleep detection, another handles LiDAR, another dashboard, another autonomy. They rarely run together unless there's a major integration effort.

Our advantage is:

1. **Multi-feature orchestration instead of single-use demos**
2. **Modular architecture** — new ADAS modules plug in easily
3. **Real-time visualization + sensor fusion**
4. **Built with open standards** (uProtocol / MQTT / Zenoh / Ankaaios)
5. **Simulation-ready** — instantly testable in CARLA and GUI



The Market & The Competition

Market Potential

The global ADAS and autonomous driving market is growing rapidly due to increasing safety standards and the shift toward intelligent vehicles.

Key Market Drivers:

Rising demand for Level 2–4 autonomous features

Government regulations on driver monitoring and safety standards

Growth of simulation-based development and testing

Integration needs across sensors, software, and control units

Expansion of electric and software-defined vehicles (SDVs)

The Market & The Competition

Market Size & Opportunity:

The ADAS market is projected to exceed **\$90B by 2030**

Driver monitoring alone is expected to reach **\$5B+ by 2028**

Simulation and digital twin platforms are growing at **>15% CAGR**

LiDAR solutions will surpass **\$6B in value** by 2027

Our platform fits into the **integration and orchestration layer** of this ecosystem—where companies struggle the most to connect separate modules into one coordinated system.

Instead of competing with a single ADAS feature, we enable **feature fusion, prototyping, validation, and automation** across modules.

Fortune Business Insights – “Advanced Driver Assistance Systems (ADAS) Market Forecast 2024–2032”

MarketsandMarkets – “Driver Monitoring System Market by Offering, Vehicle Type & Region – 2023–2028”

Grand View Research – “LiDAR Market Size, Share & Trends Report”

The Market & The Competition

Competitors & How We Differ

◆ 1. Tier-1 Automotive Suppliers

Bosch, Continental, Valeo, Magna

How we're different:

They build specific ADAS modules (lane assist, braking, radar, LiDAR), but lack an open modular integration/testing platform. We're focused on interoperability and orchestration rather than hardware manufacturing.

◆ 2. Tech Simulation Platforms

CARLA, NVIDIA DRIVE Sim, LG SVL Simulator

How we're different:

These platforms simulate environments, but **don't provide a unified feature orchestration layer**. We connect autonomous features, sleep detection, LiDAR, and dashboards into a working system on top of simulation.

The Market & The Competition

◆ 3. Telematics & Dashboard Companies

Pioneer, Harman, TomTom Automotive

How we're different:

They focus on visualization only. Our dashboard is tied to **real-time data exchange, automation logic, and safety modules**, making it part of the control loop – not just a display.

◆ 4. Standalone ADAS startups

Humanising Autonomy, Seeing Machines, Innoviz, Ghost Autonomy

How we're different:

Each typically solves **one** problem – e.g., sleep detection, LiDAR, sensor data, or autonomous control. We bring these modules together under **one communication and orchestration system**.

Our Competitive Edge in One Line:

“While others build isolated ADAS features, we make these features work together as one system.”



Business Model * Plan & Funds

Business Model – How We Generate Value & Revenue

We position our solution as a **B2B modular ADAS integration and simulation platform**. Our target customers are:

- Automotive R&D teams
- Simulation and testing companies
- Autonomy startups
- Tier-1 suppliers
- Universities and research labs
- SDV ecosystem tool providers

Revenue Streams

Licensing / Subscription Model

- SaaS access to the integration framework
- Different tiers (Starter, Pro, Enterprise)

Customization & Integration Services

- Tailored module adaptation (LiDAR, sleep detect, dashboard, control)

Simulation & Demo Packages

- CARLA-based integration bundles
- Real-time dashboard + orchestration tools

Partnerships & OEM collaboration

- Co-development with automotive labs & startups



Business Model * Plan & Funds

Business Model Implementation

Phase 1 – MVP & Pilot Projects

Collaborate with universities, labs, hackathons, and SDV ecosystems

Provide PoC deployments for testing and demos

Phase 2 – Developer & Startup Adoption

Offer modular SDKs and APIs

Launch a paid cloud-based integration/testing environment

Phase 3 – Enterprise Integration

Sell yearly licenses to OEMs and Tier-1 suppliers

Offer support contracts, simulation add-ons, OEM-specific modules



Business Model * Plan & Funds

Required Funds & Use of Capital

To move from prototype to market-ready platform, we estimate:

Initial Funding Need: €150K – €250K

Breakdown:

Product Development (35%)

Module refinement (LiDAR, sleep detect, autonomy, dashboard)

Simulator integration improvements

API + SDK packaging

Team & Staffing (25%)

Core developers

UI/UX & testing engineers

DevOps & integration support

Partnerships & Deployment (20%)

Pilot installations with labs/startups

Hardware & simulator infrastructure

Go-To-Market & Branding (10%)

Website, documentation, demo videos

Conference and exhibition presence

Legal & Licensing (10%)

IP protection, licensing agreements

Company formation / compliance



Business Model * Plan & Funds

In One Sentence:

We monetize by offering a **modular, scalable ADAS integration platform** via licensing and partnerships—starting with simulation and R&D teams, then expanding to OEM and Tier-1 deployment—with an initial funding need of **€150–250K** to productize and scale.