AirLink - EUROGIA2030

Agenda

01	AirLink	Why, project vision, positive impacts
02	Partners	Brief introduction of confirmed partners
03	Route overview	Possible route options of the automated service
04	Road overview	General overview of roads in Inverness area
05	Technical and legal feasibility	What partners need to comply with
06	Work plan draft	Summary on the project phases
07	Research institutions	Partner to be confirmed
08	Budget overview	What are the project's main expenses

Why?

A **new train station opened in February 2023**, a 15-minute walk from inverness airport.
The **implementation of an automated minibus service** could **improve connections** between the two stations and **create one large mobility hub**

AirLink

Project vision: develop an automated minibus service connecting Inverness Airport, Inverness railway station and the Ardersier town (possibility to extend the route).

The use of state-of-the-art CCAM services will **enhance sustainable connectivity between the airport and the surrounding areas,** and **improve general airport operations**

Positive impacts?

- **Improved Connectivity**: Facilitates transport links between Inverness Airport and remote areas
  Operational Efficiency: reducing human error and operational delays
- **Environmental Benefits**: Promotes the use of clean energy
- **Safety Enhancements:** Automated mobility is more reliable than traditional transport system
- **Business development:** boosting local economy, airport efficiency and general competitiveness

HI TRANS
THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP

Stagecoach

Operator of public transport busses. They own, maintain, and operate buses but do not manufacture them.

Partnering to provide operational and infrastructure support

ADASTEC

HITRANS

Regional Transport Authority managing PT for the Highlands and Island

Focuses on improving connectivity and sustainable transport in the region

Stagecoach

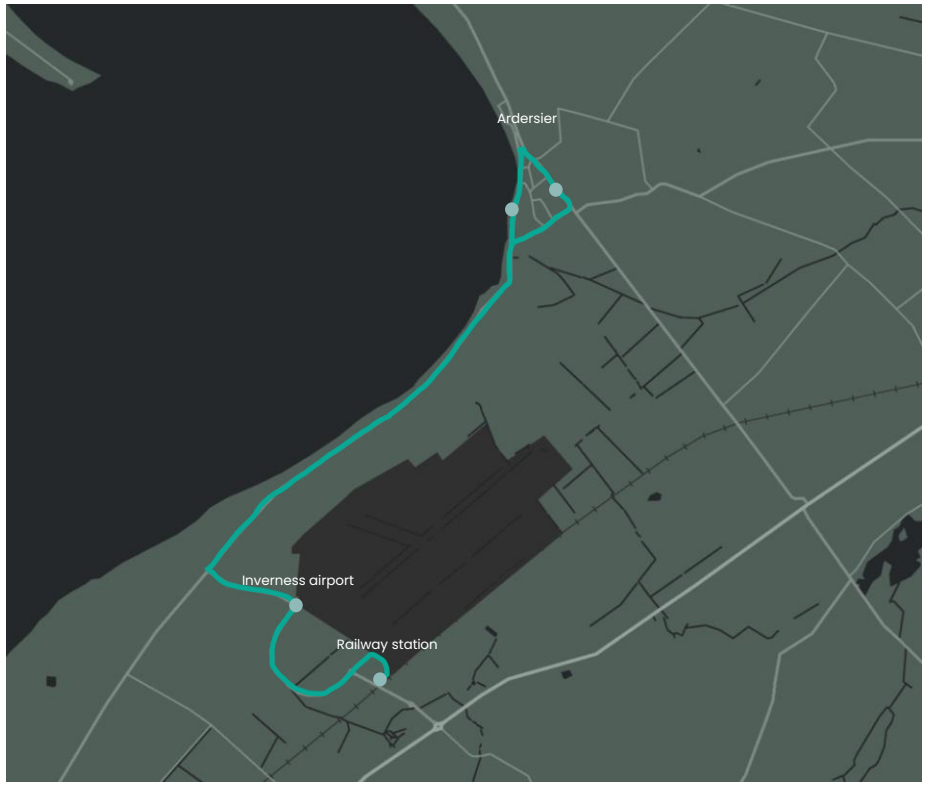
ADASTEC

Technology company specializing in automated vehicle solutions.
They will develop self-driving bus sofware and sensors to be implemented into a minibus purchased from KARSAN

Project partners confirmed

Route overview

- **Proposed Route**: Connect Inverness Airport with the railway station and Ardersier town, including potential stops along the way or integrating with a Demand-Responsive Transport (DRT) system.
- **Suitability for CCAM:** The route is ideal for implementing Connected and Automated Mobility (CCAM) services due to its flat terrain, minimal congestion, and straightforward road layout.
- **Infrastructure Considerations:** Although the existing road conditions are favorable, some infrastructure adjustments and detailed mapping will be necessary to support the deployment of the automated shuttle service.



Bus route

Possible stops: Inverness Airport and Inverness Airport railway station and Ardersier (2 stops)

E-jest minibus - Karsan

This is the vehicle that ADASTEC will purchase vehicle from Karsan company and equip it with advanced automated software and sensors in order to ensure full automation and cutting-edge functionalities.

Road overview

1

2

3

4

Technical feasibility

Detailed **site analysis** conducted to assess road conditions, traffic patterns, and necessary infrastructure upgrades.

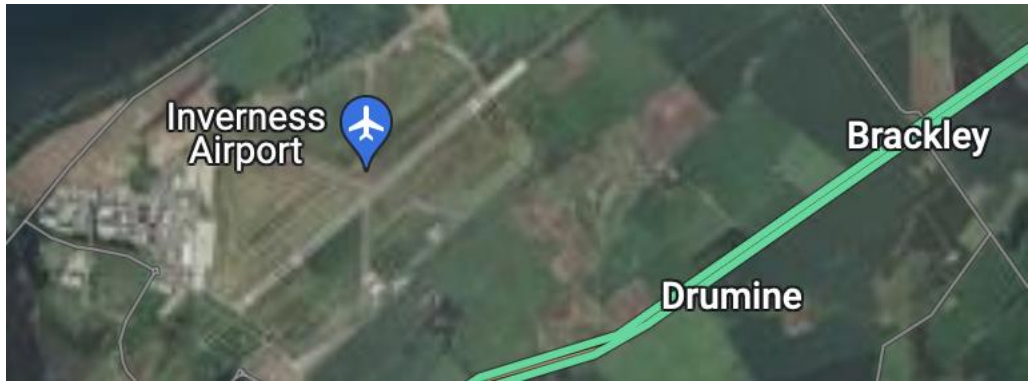
Planning includes **3D route mapping, sensor integration, traffic light networking and road signs.**

Automated Vehicles Act becomes law

Self-driving vehicles could be on British roads by 2026

Mark Moran

20 May 2024



Legal feasibility

When implementing an automated transport service in Inverness, it crucial to consider:

Automated and Electric vehicle Act 2018: setting the framework for insurance and roadworthiness requirements for CCAM, including the need for the vehicle to be approved

Automated Vehicle Trialling 2020: providing guidance on safety standards and testing procedures in order to grant public safety

Data protection Act 2018: in order to ensure all data gathered during the research comply with UK privacy laws

Work plan draft - phases

01 Phase 1: Planning and initial testing (with safety driver)

Establish local stakeholder groups, assess legal compliance, and prepare infrastructure for the automated minibus, culminating in initial pilot testing with safety operators.

02 Phase 2: Service Upscaling (substituting safety driver with remote management)

Upgrade the automated minibus to SAE Level 4, remove safety drivers, while ensuring continued regulatory compliance and operational readiness.

03 Public Engagement and Social Acceptance

Conduct surveys and engage with the public to assess social acceptance of the automated service, ensuring community involvement and support for the project.

04 Sustainability Assessment and Regulatory Streamlining

Analyse the impact on traffic and emissions, assessment before and after project implementation, and develop guidelines for future automated service implementations.

05 Project Management and Communication

Oversee project coordination, establish effective communication strategies, and promote knowledge transfer through events, publications, and digital platforms.

Denmark is the only country that allows the involvement of a research institution partner not directly linked to the involvement of an SME. As the consortium is almost complete, we are only looking for one university or research institution to join.

Main expenses:

Automated Vehicles Purchase

Infrastructure Adjustments

Technical development

Testing and Validation

Project Management

Training and Workshops

Communication

Budget overview

EC: Estimated Cost

Cost of acquiring automated shuttles equipped for initial testing and subsequent operational phases. **EC: €600,000**

Modifying roads and integrating traffic management systems to support automated vehicles. **EC: €300,000**

Expenses for design and development of software, integration systems, and initial prototype modifications. **EC: €200,000**

Expenses related to conducting extensive field trials to ensure safety and operational reliability. **EC: €250,000**

Costs for managing the project, including staff salaries, administrative tools, and regular partner meetings. **EC: €150,000**

Costs for training personnel, including drivers (if needed) maintenance personnel and emergency workers. **EC: €100,000**

Expenses for promoting the new service, community engagement events, production of information materials and management of public relations. **EC: €100,000**

Thank you!

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