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Report to Partnership Meeting 20 September 2024

Research and Strategy Delivery

Commercialising CAV Services in the Highlands and Islands

PURPOSE OF REPORT

To update Members on developments in the Commercialising CAV Services in the Highlands and Islands project that is being funded by Innovate UK.

BACKGROUND

The project is lead by University of Glasgow who coordinated our consortium which also includes Richmond Design and Marketing Group (Aurrigo), Darwin Innovation Group, Stagecoach North Scotland and HITRANS.

This feasibility study will address the unique nature of the Highlands and Islands region's health transportation problem by assessing a new CAV service for the NTC in the Inverness Campus. A second trial project will test a smaller CAV shuttle at Inverness Airport testing the opportunity for a dedicated service to connect passengers travelling to the Airport Terminal through Inverness Airport Rail Station.

The CAV service hold promise for increasing access through on-demand low-cost transport. This could alleviate some transportation challenges caused by the sparse population and challenging terrain of the H&I and contribute towards net zero by reducing reliance on carbon-emitting public transport and private cars. Our study will assess the feasibility of a demand-responsive, autonomous transport service in Scotland's Highlands and Islands that effectively matches the demand for health transportation, reduces CO2 emissions, maximises public and commercial value, and reduces passenger travel time. This will then inform our thinking on the potential to roll out the technology more widely as it matures with the long term goal being to understand its potential in more rural areas where public transport service provision is currently more limited.

Commercially, there is a need to develop new mass transit services that are viable and culturally aligned with regional practices and priorities, capitalising on the region's world-leading edge in renewable energy and contribution towards NetZero. The project aims to produce a business model for a CAV service that is feasible in technological and financial terms, socially responsible, and environmentally sustainable, using Adam Smith's Responsible Innovation Framework, developed by the University of Glasgow (https://technologyscotland.scot/new-toolkit-topic-15-added-to-product-design-scotland-toolkit/).

The Highlands & I is sparsely populated but has high social, economic, and community interconnection degrees. Involving community members throughout the project can have a significant impact; for example, through activities such as storytelling gatherings, the community

can identify challenges, aspirations, and opportunities and contribute meaningfully to creating strategies and policies to address them. Likewise, the region has a history of innovation---in food and drink, renewable energy, and education. Project Lead Partner – University of Glasgow – follow a responsible Innovation approach that extends this practice with the consideration of social, economic, and environmental considerations assessing the benefits of CAV technologies, ensuring that any suggested service is responsible, sustainable, and acceptable to the public. As such, the project casts new light on how community-engaged and community-driven innovation and citizen participation in transportation solutions can increase the likelihood of success. The project will also investigate public perceptions of CAVs by piloting a service over a short period to understand how the public reacts to the service.

PROJECT UPDATE

August 2024 saw the trials of the Aurrigo Auto Shuttle and Auto Pod take place representing a significant milestone in the delivery of this project.

The first service operated for one week from 19th August from Inverness Airport Rail Station along a 750 metre route to the Courtyard by Marriot Hotel. In total this was operated in Autonomous mode for 450 metres as vegetation and fencing prevented the full route to operate autonomously for this short trial. This service was operaed by the small Auto-Pod 4 with capacity for four people but this was limited to 2 passengers to allow for an operator and host to travel on the vehicle.

(Aurrigo's autonomous Auto-Pod in front of Inverness Airport)

The CAV service at Inverness Campus operated from Tuesday 27th August operating a longer route as detailed below from Inverness Campus via the National Treatment Centre on to Inverness Retail and Business Park.

The service was operated by the larger Aurrigo Auto Shuttle which has capacity for 10 people seated within the shuttle. The trial was delayed as the shuttle was vandalised in its secure

compound at the Campus over the previous weekend but was able to operate a day later on the Tuesday rather than the planned start on Monday 26th August.

(Aurrigo's autonomous Auto-Shuttle in front of UHI Inverness Campus)

BUDGET

HITRANS receive 100% funding based on the organisation classification within the UKRI programme. HITRANS budget allocation is £32,967.

RISK REGISTER

RTS Delivery
Impact – Positive
Comment – The CAV project supports several RTS objectives, particularly in the field of low carbon transport and Testing Innovation.

Policy
Impact – Positive
Comment – The CAV project contributes to developing Scotland's CAV Route Map.

Financial
Impact – Positive
Budget line and value – The CAV project attracts 100% funding support from Innovate UK.

Equality
Impact – Positive
Comment – The CAV project delivers environmentally sustainable accessible CAV pilot projects helping inform the long term vision for the technology.

RECOMMENDATION

Members are asked to note the report.

Report by: Ranald Robertson
Designation: Partnership Director
Date: 2nd September 2024