



Connected and Autonomous Mobility in Road Transport Response to Public Consultation

18 March 2021



Shannon Chamber Submission

- This document provides input from Shannon Chamber in response to the questions raised in the Public Consultation on Connected and Autonomous Mobility (CAM) in Road Transport.
- The responses follow the sequence of questions outlined in the above call.

1. What are the overarching guiding principles that should inform the roll-out of CAM in Ireland?

- The overarching principle linked to the roll-out of CAM technology should be increased road safety, through the reduction of car accidents and associated deaths.
- Other considerations informing the roll-out of CAM in Ireland should include what level of automation to strive for: Limited or full self-driving automation?
- Other guiding principles would include: energy consumption, pollution and congestion, increasing transport accessibility, road pricing and parking requirements, land use, demand forecasting, cybersecurity, law/regulation and ethical concerns.
- Connectivity is a major component of CAM with everything viewed as connectable and the data that each device on the network generates viewed as open and shareable (subject to and following GDPR guidelines and adequate security provisions). An open data network infrastructure will allow the physical road network of Ireland to be “software defined” i.e. new features and business models can be created into the future on pre-existing infrastructure.
- Road infrastructure will need to be upgraded to become ‘smart roads’.
- Questions that need to be asked related to CAM - Will the technology deliver safety benefits for society, and how? What time savings will CAM deliver? Will CAM reduce costs e.g. crash savings, travel time reduction, fuel efficiency, parking benefits?
- What support will be given to Research and Development for the development and testing of CAM technologies. Ireland, and Shannon via the Future Mobility Campus Ireland (FMCI), is well positioned to compete in this space. Government needs to support the development of this sector through providing capital and legislative support.

2. What do you see as the main areas that should be included in a national CAM strategy?

- The strategy should be equally applicable to both urban and rural environments ...any new multimodal transportation system should not create an urban/rural divide.
- As this will be a new mode of transport, public engagement will be essential to project a thorough understanding of the benefits of CAM – for Ireland, for the individual, for the road infrastructure etc.
- Involve all stakeholders in the development of any new CAM ecosystem...this will require substantial research and development support.
- There needs to be adequate and adaptive legislation in place to support the development and introduction of CAM.
- Alignment with the development and adoption of CAM in Europe is essential in terms of development and future introduction and usage.

3. In your opinion, what strategic goals should Ireland adopt for CAM? What are the outcomes to be achieved?

- Ireland has the technological capability to be a leader or at least a fast follower of European legislation in the adoption and roll-out of CAM.
- This will be dependent on creating an agile ecosystem to support innovation, research and development of CAM.
- Whilst initial piloting is essential to ensure safety standards, CAM must be integrated into Ireland's transportation system...moving beyond pilot projects.
- Create a common database for data (non-propriety) related to CAM e.g. Smart City data, open APIs etc.
- Certification – Ireland should be seen as the certification centre for autonomy for driving on the left side of the road in Europe (Brexit presents this opportunity).
- Customer acceptance is essential ...explain societal benefits, communication technologies, ethical issues, planning, standards and policy.

4. What do you see as the greatest opportunities associated with CAM in Ireland? How can Government facilitate these opportunities?

- Any new sector such as CAM has the potential to generate new inward investment and job creation in the CAM industry...and the spawning of many sub-tier elements as happened in Shannon in the 1970s.
- The technological capability of Ireland's industry base and linkages with third-level institutions will present opportunities for Irish companies to play a global part in this industry.
- This will lead to increased EU funding opportunities for companies of all sizes and organisations associated with the sector... opportunities for joint collaboration.
- The development of CAM and the optimisation of multimodal transportation systems will contribute greatly to Ireland attaining its sustainability targets.

The Government should provide sector-specific support to foster the development of CAM and cultivate cross-Departmental collaboration as the development of the sector rests within multiple Government Departments.

5. What do you see as the main barriers to the development and deployment of CAM in Ireland? How can Government best address these barriers?

Through our close linkages with the Future Mobility Campus Ireland (FMCI), Shannon Chamber is aware that barriers to the development and deployment of CAM include:

- **Legislation:** There is an urgent need for legislation to be put in place to allow the testing of autonomous/automated vehicles on public roads. Without this CAM cannot realistically progress as an industry in Ireland.
- **Dedicated funding sources:** A dedicated fund focused towards CAM, future mobility and transportation is required to have a more holistic approach on how we develop CAM and its deployment into the future.
- **The Department of Transport and other relevant bodies** need to be adequately resourced to support the development and deployment of this revolutionary mode of transport in Ireland.

6. What do you see as the greatest risks associated with the roll-out of CAM in Ireland? How can these areas of concern be mitigated?

- Consideration needs to be given to how driver-assisted vehicles and CAM might operate in a multi-modal transport system.
- Automated and autonomous vehicles must comply with strict safety standards.
- Security of data is an issue. Data generated in these systems must be shown to be secure, respecting GDPR and safe from malicious attacks.
- Lack of adequate support for the development of the sector could result in Ireland losing market positioning, hence the need for adequate and proactive support by Government to the development and adoption of these new technologies.

7. What do you see as the most pressing issues to be addressed in the immediate term (as opposed to a medium-term or longer-term perspective)?

- **Legislation:** Legislation to enable the testing of automated and autonomous vehicles on public roads is an immediate essential and critical to the development and deployment of CAM in Ireland. Until such time as legislation is enacted, the sector will not progress.
- **Funding support:** A dedicated fund to address CAM and Future Mobility in both urban and rural areas. Both rural and urban regions should be addressed as CAM has the potential to transform transportation for both rural and urban communities.
- **Cross-department body dedicated to CAM:** The successful development and deployment of CAM will require cross-Departmental input given its impact on land (Agriculture), Enterprise, Education (given the requirement for third-level institutions' involvement), Rural & Community Development, and Environment. Each of these stakeholder's input to the development of the sector is essential.

8. Any additional comments

CAM, when deployed, will transform Ireland's transport network. Like all new technological developments, speed is of the essence. Given the progress being made at Future Mobility Campus Ireland and the opportunities the development of this sector presents, not just for the Mid-West but for the entire sectoral eco system in Ireland, and the potential it offers to attract multi-tier investment to Ireland, Shannon Chamber would hope that no time is lost in moving to the next step in planning for the introduction of this revolutionary mode of transport in Ireland.

Shannon Chamber acknowledges that many complex challenges need to be overcome prior to progressing to full deployment, not least public acceptance, societal impacts, the nuances and complexity of communications technologies, ethical issues, standards and policy, software challenges such as system security and integrity, the challenge of streamlining and regulating many diverse vehicles with different operating constraints, and drivers understanding vehicles' capability and operating them safely.

The positive societal impact such as a safer transport system, a lower cost of transport and the opportunities it presents to those currently unable to drive due to disability or otherwise, is what renders the development and deployment of CAM in road transport a very promising undertaking, ensuring that Ireland is a leader in the roll-out of CAM nationally.

End

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