

Pause, Ponder and Pivot: The post Covid-19 future for Connected and Autonomous Mobility could be bright.

June 2020, Holly Marshall, Beep Consulting.

The Covid-19 global pandemic has significantly impacted the whole of the automotive industry and attitudes to transport and the environment. This naturally has affected connected and autonomous mobility (CAM) and is changing the shape of its future. This article considers the impact, the opportunities, and the threats to CAM and the associated eco-system. Lockdown restrictions have meant that automotive companies have been forced to pause manufacturing, autonomous vehicle living lab testing has ceased, global supply chains have been disrupted and software stand ups

are now, stilted, low energy sit downs. The broader impact can also be seen in car showrooms and in the slowdown in car sales, in contrast to booming bicycle sales. So extreme



has been the impact that much of the ecosystem will need government support as seen offered recently in France and Germany, to even survive into 2021.

However, it hasn't all been doom and gloom. Some have even seen the opportunity to use CAM technology to help in the fight against

the pandemic, have seen a rapid period of intense technological development and as a result, many would argue that the case for CAM has been further crystallised. Driven by new use cases, several CAM companies have been able to pivot their business models to meet urgent new market needs stimulated by Covid 19. For example, Autonomous and robotic vehicles are being used in China to transport medical supplies and food to healthcare professionals and to disinfect hospitals and public surfaces, with a view to reducing the spread of the virus. In addition, The Mayo Clinic in Florida is partnering with the Jacksonville Transportation Authority and NAVYA to use autonomous vehicles to transport test specimens from drive-through test sites to a processing laboratory, minimising human intervention. However, if only food and medicine could have been delivered autonomously at scale, indoor and outdoor space sanitisation managed by drone (see Aertos 120-UVC), and autonomous buses kept running without the risk to drivers, the dire situation our nation now finds itself in could have been so very different.



So, although the last six months has seen disruption on an unprecedented scale, what will the long-term impact of Covid-19 mean for the CAM sector?

With multiple cases having proved the need for CAM and new use cases emerging, the sector should see renewed energy and investment which should drive innovation and accelerate

development. To capitalise on this, however, not only does work around policy and standards need to accelerate, and the safety case

debate rapidly advance but CAM companies need to re-evaluate their business models to ensure relevance in this “new normal” world.

Some sub-sectors will further establish their relevance, such as autonomous vehicles in health care and logistics and this is evidenced already by the Chinese government’s further investment in Beijing-based Neolix and their driverless delivery capabilities. However, some may well need rethinking in the new world, where consumer attitudes have shifted as keeping safe, with green and clean sustainable growth, becoming the priority.

Public transport is one of the areas which has seen a sizeable shift in consumer attitudes. A recent poll by Savanta ComRes[1] found that once lockdown restrictions are lifted, Londoners expect to use the tube or rail network less, instead opting to walk, cycle or drive more. This however, assumes that the vortex the education system finds itself in manages to sort itself out, that workers can be persuaded away from the flexibility which working from home gives them and that they still actually have jobs to go to... Although, it’s expected that the prospect of a day without back to back Zoom calls for those that do have jobs, will be attractive enough for some at least to make the journey to work. Around one third of Londoners expect to increase their use of a car compared to before the pandemic. Given many young professionals have previously chosen not to own a car, this could be positive news for the automotive sector, especially electric vehicles. Given the strong environmental values of many millennials, EVs are likely to be popular, especially if affordability and charging infrastructure concerns are addressed adequately.

Not only are consumers expected to use cars more and public transport less in city centres, attitudes are also changing towards inter-city mobility, where the thought of sitting in close proximity to

strangers on a short haul flight is becoming increasingly unappealing. This shift in attitude could be an opportunity to accelerate development of autonomous mobility pods on defined routes (London to Birmingham, based on Zenic's CAM Tested UK likely to be one of the first routes) or Urban Air Mobility, AKA small passenger carrying drones which fly at lower levels than traditional aircraft. It goes without saying that this acceleration in CAM also needs to pull the rest of the underpinning eco system and global supply chains along with it, by continuing to support, invest and collaborate with exciting initiatives such as West Midlands 5G Road And Rail, NPL's National Timing Centre project, Zenic's ConVex, Spirent Communications evolution of their PNT testing and simulation platforms, O2's Project Darwin and Coventry's Project Sherbourne.



Although the opportunity for some CAM sub-sectors is clear, others which had validation before the virus will almost certainly need rethinking. Ride sharing, often considered the use case poster child for the autonomous vehicle market, could face adoption issues unless consumer confidence can be managed by strategies such as medical grade self-sanitising mechanisms, interior segregation and air filtering, or regular travel 'buddy bubbles'. These extra consumer

protections, whilst boosting confidence, may well decrease the viability of the business case for ride sharing.



Whilst it appears that the CAM industry of the future could be an essential tool in our virus-fighting armoury, and a key enabler in allowing society to function better than it has done in this first of many expected waves, we must pause, ponder and pivot. Delivering on these emerging opportunities will only be possible with a renewed focus on clean growth and smart city support from government to allow core parts of the ecosystem to survive through to the new year. Provided this support is given, that business models adapted, and there is a practical approach from policy makers, the future for CAM could be brighter than ever before.

NB For those of you surprised that no mention of skills and mass unemployment has been made in the context of CAM and the pandemic – I hear you. This is such a massive and complex area, it's going to form the subject of a future article. Watch this space.