Trust in autonomous vehicles

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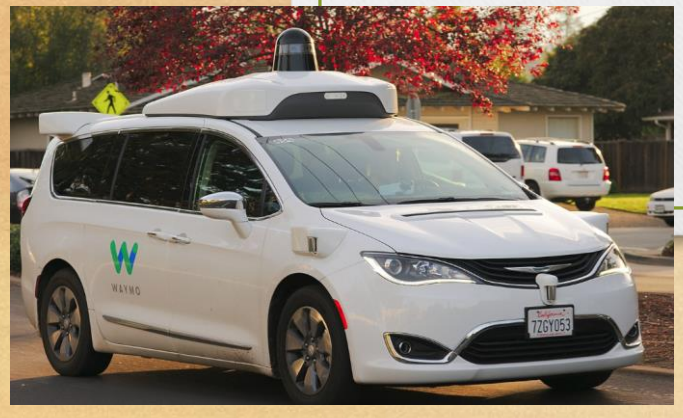
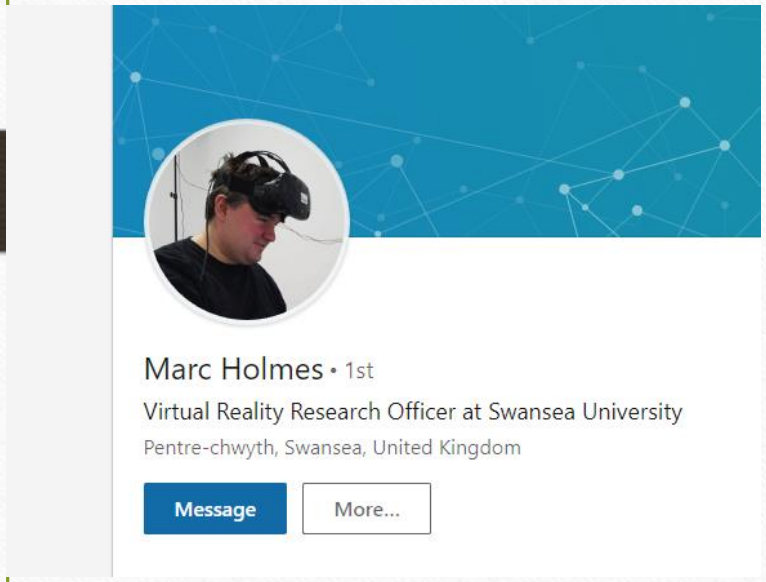
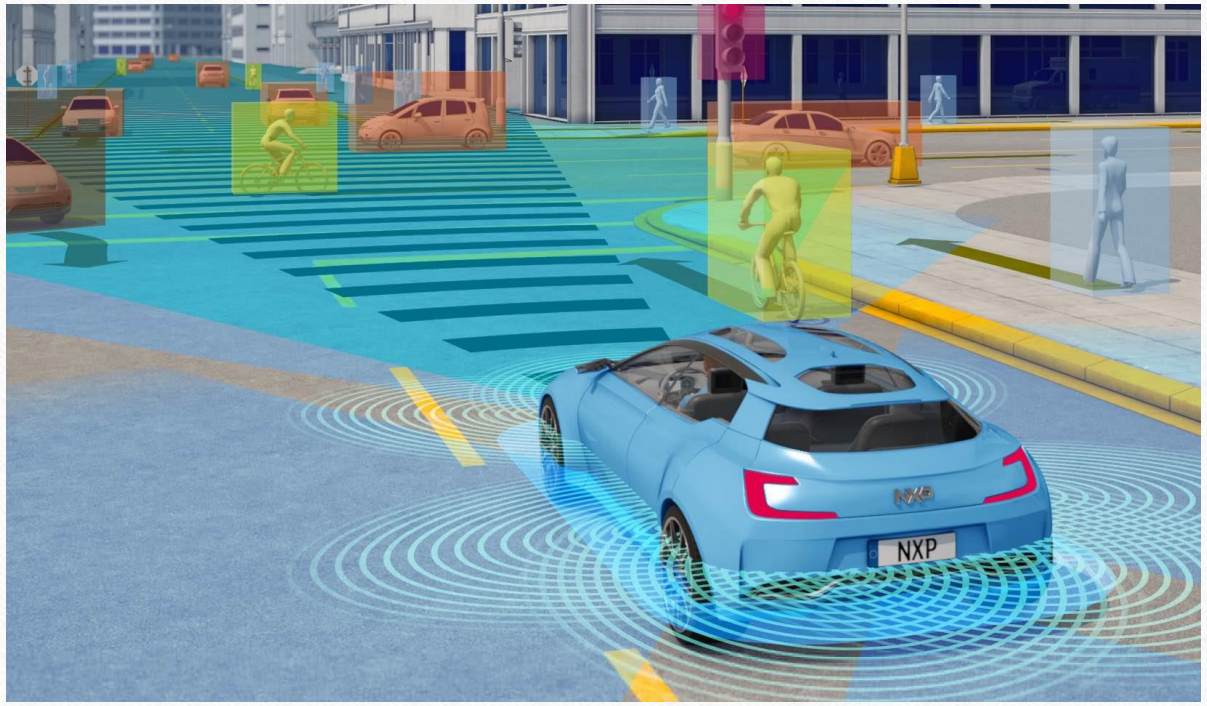


Collaborators – interdisciplinary



Swansea University
Prifysgol Abertawe

Sparsely populated pedestrian areas



Research question: How can the vehicle best communicate with pedestrians to increase trust?

How do we measure trust?

How do we measure trust?

Psychophysiology – Heart rate variability

Off-the-shelf trust questionnaires

Eye gaze

How does it solve a real world problem?

Trust and safety linked

claiming it would be launching space tourists on suborbital joyrides since 2004. (Number flown so far: Zero.)

All revolutionary new technologies need a reasonably long runway, but the providers of that tech also need to set reasonable expectations for how long that runway will be. And the automotive manufacturer's current predictions for self-driving cars are rosy, to say the least. Autonomy systems specialist Nvidia announced this year that fully self-driving cars (a.k.a. Level 5 autonomy) would be on the road by 2025, and Bosch declared it would hit Level 4 autonomy by the same date, according to a report in *Automotive News*. BMW claims Level 4 and 5 will be ready by 2021, and Audi and Ford think they'll reach Level 4 by 2020. Volvo has its Drive Me program rolling out now, but only in a test program of 100 vehicles in Sweden. But it's also selling its XC90 SUVs to Uber for its robo-taxi effort, which the ride-hailing company claims will bow by 2021.

How is it novel?

- No one else is doing this
- Autonomous vehicles are a new phenomenon

What is the impact and outcomes?

- **Understanding trust and safety issues of autonomous vehicles**
- **Digital technologies are the next industrial revolution?**
- **Builds towards Swansea's digital economy theme (CHERISH)**

Other impact…

City deal 5G network – £1.3 billion in investment

Impact case study with Welsh Government (Dion Curry)

Swansea Bays' future factories

Thank you!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