Media Release

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Report finds AI and Blockchain could transform Australia's transport sector

Curtin University-led research has found that applications of Artificial Intelligence and Blockchain Technology are set to revolutionise the transport sector in the coming decade and Australia needs to move quickly in order to capture the benefits.

The report, published today by the Sustainable Built Environment National Research Centre (SBEnrc) based at Curtin University, in collaboration with Griffith University and RMIT University, presents findings of an investigation into how these technologies can be utilised to enhance the transport sector, as well as get cities moving and functioning better.

Chair of the industry steering group for the research project, Dr Ken Michael, former Governor of Western Australia and Commissioner for Main Roads WA, said the researchers have identified significant technological initiatives which will call for a complete rethinking of how transport systems operate.

"From predictive traffic management to real time road user charging, this new wave of technology has the potential to create numerous opportunities right across the sector that were previously inconceivable," Dr Michael said.

Project leader Dr Charlie Hargroves, from the Curtin University Sustainability Policy Institute (CUSP), said that enormous amounts of funding will be committed to transport infrastructure and traffic management technologies in the coming decades and these decisions need to be well informed as to the capability of these revolutionary technologies.

"The report shows that the International Data Corporation anticipate that spending on Artificial Intelligence will reach US$57 billion by 2021 and according to the World Economic Forum by 2027 some 10 percent of global GDP will be Blockchain-based. It will be important for industry and government to understand the unique opportunities that these technologies present," Dr Hargroves said.

The report suggests that a key area that combines the technologies is road user pricing. As the shift to electric vehicles stands to reduce revenue from fuel taxes, the ability to calculate appropriate vehicle charges at particular times of the day across the transport network using AI, and then charge vehicles even very small amounts in real time using Blockchain Technology, presents both a valuable traffic management tool and a cost recovery mechanism.

Dr Hargroves said that the transport sector has been largely unchanged for many years and the decision making process is often better informed by what has happened in the past than what is likely to happen in the future.

"Australia needs to explore the potential of Artificial Intelligence and Blockchain Technology to identify opportunities for economic, social, environmental and political benefits," Dr Hargroves said.

CEO of SBEnrc Professor Keith Hampson said the report, which is a collaborative effort between the government, industry and academia, has important implications for the transport industry.

"This is great example of how industry-led research can deliver both academic and practical outcomes for the community," Professor Hampson said

The research team also included Professor Bela Stantic from Griffith University, Dr Darcy Allen from RMIT University, John Curtin Distinguished Professor Peter Newman from Curtin University Sustainability Policy Institute (CUSP), and Daniel Conley from the University of Adelaide.

Core members of SBEnrc include BGC, Government of Western Australia, Queensland Government, Curtin University, Griffith University and RMIT University and the research team worked with Project Partners the Fremantle Ports Authority.

The report is titled, '*Exploring the Potential for Artificial Intelligence and Blockchain to Enhance Transport'*.

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Notes to Editor:

About the SBEnrc

The Sustainable Built Environment National Research Centre (SBEnrc) is the successor to the CRC for Construction Innovation. Established on 1 January 2010, the SBEnrc is a key research broker between industry, government and research organisations servicing the built environment industry. SBEnrc Core Members include: BGC, Government of Western Australia, Queensland Government, Curtin University, Griffith University and RMIT University.

About Curtin University

Curtin University is Western Australia's largest university, with more than 56,000 students. Of these, about 26 per cent are international students, with half of these studying at the University's offshore campuses. The University's main campus is in Perth. Curtin also has a major regional campus in Kalgoorlie, and a campus in Midland, in addition to four global campuses in Malaysia, Singapore, Dubai and Mauritius.

Curtin is ranked in the top one per cent of universities worldwide, with the University placed 9th in Australia according to the Academic Ranking of World Universities (ARWU) 2020.

The University has built a reputation around innovation and an entrepreneurial spirit, being at the forefront of many high-profile research projects in astronomy, biosciences, economics, mining and information technology. It is also recognised globally for its strong connections with industry, and for its commitment to preparing students for the jobs of the future.

For further information, visit curtin.edu.au.

Media contacts:

Lauren Sydoruk, Senior Media Consultant, Media Relations, Curtin University
Tel: (08) 9266 4241   Mobile: 0401 103 373   Email: lauren.sydoruk@curtin.edu.au
Web: http://news.curtin.edu.au/media-centre/   Twitter: @CurtinMedia

Vanessa Beasley, Deputy Director, Media Relations, Curtin University
Tel: (08) 9266 1181   Mobile: 0466 853 121   Email: vanessa.beasley@curtin.edu.au
Web: http://news.curtin.edu.au/media-centre/   Twitter: @CurtinMedia