

Transport Systems Catapult

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The logo for Transport Systems Catapult, featuring the word "CATAPULT" in a bold, purple, sans-serif font.

Dear Nicola,

Re: The Shaw Report Consultation – Research & Development and Innovation

I write in response to *The Shaw Report – The Future Shape and Financing of Network Rail* specifically in respect of research & development and innovation within the rail industry.

The Paper and Terms of Reference are an excellent precis of the system and its challenges. Acknowledgment that any adjustment to future structure and financing of Network Rail must take account of whole system thinking is welcomed and vital. The forward looking work should consider the Rail Technical Strategy and seek ways of enabling Network Rail, and its partners in the system, to use new technologies and innovation to meet some of the challenges highlighted in the Paper. The complexity and diversity of incentives within the UK rail system have constrained the rail industry's ability to innovate and compared to the automotive and aviation sectors, UK rail is lagging significantly behind as was identified in the McNulty report in 2011.

It is my understanding that the £50m funding made available under CP5 (matched by industry) and the additional £52m channelled through Network Rail for Future Railway activities has been withdrawn (with the exception of approximately £28m that is already committed) following the Hendy review. This will clearly further limit the ability to introduce innovation to meet the growing demand on the rail system.

The Transport Systems Catapult is the UK's technology and innovation centre for Intelligent Mobility, harnessing emerging technologies to improve the movement of people and goods around the world. Established as a not for profit organisation, we are overseen by the UK's innovation agency, Innovate UK, with priority areas to support business growth, increase the UK's share of the global Intelligent Mobility market, and attract investment – creating jobs and generating long-term economic growth.

We help to sell UK capability on the global stage, while also promoting the UK as a superb test bed for the transportation industry. With a clear emphasis on collaboration, we are bringing together diverse organisations across different modes of transport, breaking down barriers and providing a unique platform for meeting the world's most pressing transport challenges.

Despite the Transport Systems Catapult's short time of existence, we are able to demonstrate how we have accelerated the implementation of the technology strategies within the automotive and aviation sectors. I enclose a booklet detailing a number of these initiatives such as the launch of the first UK public trial of autonomous technology, LUTZ Pathfinder, which recently received the Society of Motor Manufacturers and Traders (SMMT) Automotive Award for Innovation sponsored by The Times. Secondly, the aviation project, Departure Planning Information, which is realising up to £10m of fuel and efficiency savings following £750k investment of public money.

These successful partnerships have followed similar models whereby industry convenes a leadership group, in these cases The Automotive Council and Future Airspace Strategy group, and looks to the Transport Systems Catapult to accelerate implementation of their respective strategies.

Unfortunately, the Transport Systems Catapult has had limited success at helping to influence and accelerate innovation in the rail sector despite active engagement with rail industry forums such as the Technical Strategy Leadership Group (TSLG) and the Rail Delivery Group (RDG). We have, however, with the support of the Department for Transport successfully implemented a project to develop a major innovation fund as part of the franchising process that aims to stimulate new investments in innovation. The three elements of the project are to improve the procurement process, to fund innovation and build industry capability both in people and organisations which are essential to help meet the UK's ambition of securing a world class railway.

Launched in March 2015, the scheme went live with the East Coast franchise and is valued at £48m over the three pilot franchises of East Coast, Northern and Trans Pennine. In these pilot rail franchises, 1% of turnover is ring fenced towards innovation, helping to create demonstrators and de risk innovation. The target for the pilot is 4:1 return on investment as a portfolio, to encourage a strong but balanced approach to risk taking and innovation.

A neutral industry body, the Innovation Board, has been established (which I chair) to assist in selecting innovative projects that are in the best interest of the industry and customers. This forms part of the Rail Delivery Group and working with innovation partners, Future Railway, we aim to ensure that the right environment for innovation and subsequent successful adoption of new services, ideas and products is put in place.

The rail industry has a clear technical strategy which we feel we can play a role in helping to drive forward. As part of The Shaw review, I ask that you consider how Network Rail, and the wider rail industry, can work with innovation organisations such as ourselves to exploit a model that clearly works in other sectors to accelerate research & development and innovation. The Transport Systems Catapult has a proven track record and I strongly feel that the rail sector would benefit from our catalytic support in this area.

Please do not hesitate to contact me should you wish to discuss further, I look forward to seeing the recommendations you make as part of your wider review.

Yours sincerely,



Steve Yianni
Chief Executive Officer

Enc. IMPACT Booklet