

# Birmingham Centre for Railway Research and Education launches UKRRIN Data Platform to tackle data accessibility within the rail industry

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The **UK Rail Research Innovation Network (UKRRIN)** Data Platform has been launched by the **Birmingham Centre for Railway Research and Education (BCRRE)** that will create the largest single source of data, both historic and real-time, covering railway operations in the UK and internationally. This will provide researchers and innovators with a significant new opportunity to develop digital solutions that can transform the rail industry in the coming years.

The platform, created in collaboration with transport technology specialist **Zipabout**, was launched last week at the major Destination Digitalisation event. The BCRRE and Rail Alliance event attracted over 250 delegates to this first of a kind event. The event set out to address questions, concerns and barriers around accessing and applying data, what it means to digitalise the railway and the impact on industry.

As the lead academic partner for UKRRIN and host of the UKRRIN Centre of Excellence in Digital Systems (CEDS), BCRRE has developed the platform to offer the rail industry an opportunity to extract greater value from data, utilising a model designed by the CEDS team to support the manipulation, understanding and application of data within their research programmes.

The UKRRIN Data Platform is a place for UKRRIN partners to contribute their datasets specifically for research purposes, allowing users to easily connect complementary data sources to unlock new opportunities, and to gain deeper insight into wide-reaching questions. This data will come from a number of sources, e.g. trains, trackside sensors and infrastructure assets, as well as other railway sources, allowing partners to explore and analyse their real time and historic data, leverage big data technologies and use the platform's in-built data science capability.

Daniel Chick, Chief Technical Officer and co-founder of Zipabout, says: "The UKRRIN Data Platform presents a unique opportunity for academia and the industry and to come together and harness the power of big data in rail. As a strategic technology partner, we believe this new approach to secure data sharing across industry will massively increase the efficiency and reduce time to market for innovative research and development in the UK rail sector.

"The platform, which is supported by Kx, a leading time-series data analysis platform used widely in the financial sector, allows researchers to focus on the creation of bespoke applications deployed directly onto the platform, saving them valuable time and resources previously required to deploy and manage real-time and historic big-data sources.

"We are proud that our platform has been selected to support one of the largest single sources of data for rail research, and are excited to see the positive results that will be delivered through this new approach to secure data sharing across the industry."

Along with supporting the UKRRIN Data Platform, Zipabout in partnership with Kx and Amazon Web Services (AWS) has developed its own multi-source, big-data and communications platform that combines static, operational and behavioural data to better predict and manage the flow and capacity of transport networks.

Dr Richard Thomas, Industrial Fellow in Data Integration and Cybersecurity at the University of Birmingham said: "This specific data platform will help industry understand and exploit the value of their data, identify additional uses for the data, complement it with RSSB's Sandbox+ datasets and identifying the art of the possible, understanding the questions that can be answered with existing data, and to promote new ways of working.

"We recognised an increase in partners approaching us with problems that could be solved through data-driven techniques. We wanted to enable industry to understand what data they collect, and to develop a willingness to share that data with, and to consume data from other partners to identify answers to these problems.

"The hope is that as time goes on, and the platform becomes a trusted repository for more and more academic and industrial data sets, we are able to show what value applied research can generate. The platform will also provide an increasing number of toolsets and capabilities to industry established out of our research and development, allowing industry to do things with their data which would currently require a dedicated team of data scientists."

As part of this successful event, the University of Birmingham and **Siemens Mobility Limited** announced a

new, academic framework research collaboration; to deliver a pipeline of innovation for the rail industry, developing the application of fundamental research by working with a range of industry partners across the rail supply chain.

**BCRRE** The Birmingham Centre for Railway Research and Education is the lead partner in the newly-launched £92m UK Rail Research and Innovation Network (UKRRIN) and the University of Birmingham will also be home to one of UKRRIN's four Centres of Excellence, the Centre of Excellence in Digital Systems (CEDS). CEDS is delivering a step-change in rail transport through digital technology and has four key themes: Future Railway Operations and Control; Data Integration and Cybersecurity; Smart Monitoring and Autonomous Systems; and Introducing Innovation. The CEDS is becoming the 'go to' facility for the integration and verification of digital technologies across all of these themes and with the Introducing Innovation theme, is able to work from initial concept right through to market introduction. For up to date news and information please visit [www.twitter.com/bcrre](https://www.twitter.com/bcrre)

### **Zipabout Limited**

- Zipabout aims to transform the experience and delivery of every mode of transport by offering travellers information relevant to every stage of their journey, and delivering insights that will enable transport providers to make informed decisions.
- The Zipabout platform is a multi-source, big-data and communications platform that combines static, operational and behavioural data to better predict and manage the flow and capacity of transport networks.
- Zipabout offers invaluable knowledge and insight to policy-makers, transport operators and travellers through a range of innovative, easy-to-use products including its Passenger Connect platform.
- The Passenger Connect platform is a B2B2C real-time, two-way customer communication service that can provide travel information that is truly personal and relevant to each specific journey.