

UK Rail Research and Innovation Network

Academic Participation: How to engage with the network

Background

Industry has shown support for rail related academic research over the years through ongoing commitment to RRUKA, developed to bridge the gap between industry and academia.

The development of UKRRIN provides an opportunity to strengthen links with the supply chain and push ideas through to commercialisation. RRUKA facilitated a request for proposals that supported the HEFCE RPIF bid, on behalf of RSG, and the successful universities are all historical RRUKA members. The selection of centres of excellence/innovation centres has helped confirm which universities possess the skills and facilities that make them leaders in their field for the rail industry. Clear identification of where these key competencies are will help clarify the rail research landscape for both industry and academia.

Vision

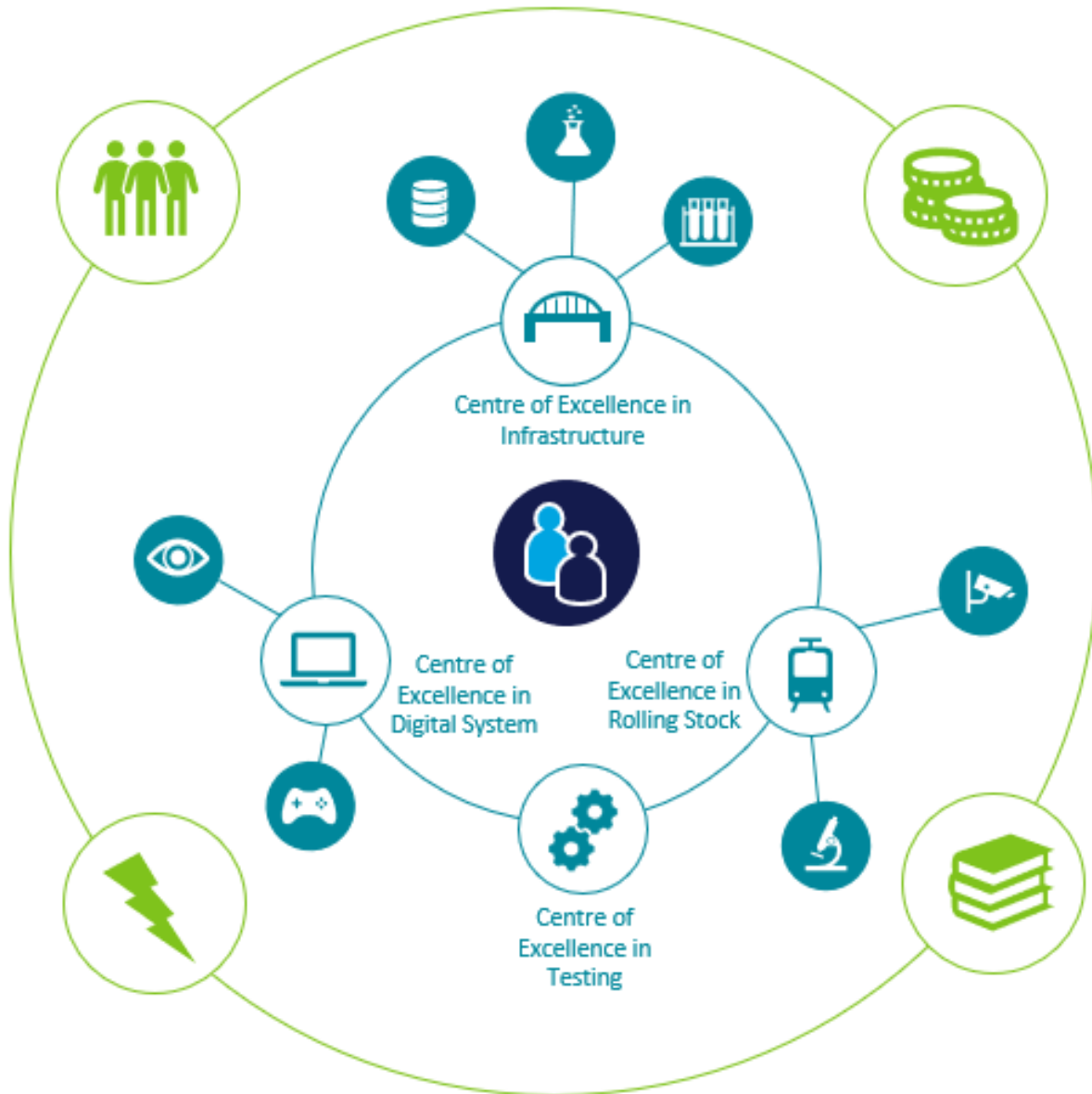
The UK Industrial Strategy supports the development of the network, stating “**the UK Rail Research and Innovation Network** will enable collaboration between the rail industry, universities, small and medium-sized business (SMEs), and infrastructure owners to deliver innovations for both HS2 and the existing network.”

The Rail Technical Strategy and the subsequent Capability Delivery Plan, that supports that strategy, recognises the need for the accelerated deployment of research and technology and highlights the roles of industry centres of excellence to support the testing of new systems and concepts to prove they are viable for real world operation.

The Rail Supply Group also recognise the ability of the UK universities and research centres in their strategy document, Fast Track to Growth, and have promised to “prioritise innovation in...five key technology areas across the UK by developing a network of new Centres of Excellence in collaboration with government, universities and business growth incubators.”

In response to these strategies the development of 3 new centres is now underway. With the support of RSG, TLG, key stakeholders and suppliers, a consortium of 8 universities led by University of Birmingham, has secured around £92m from the UK Government and industrial partners to undertake this activity.

The aspiration of all parties involved is to create a clear map of expertise and facilities relevant to the rail industry. The UKRRIN model focuses around the selected centres of excellence and includes partners and affiliates that are able to support delivery in selected areas.



Topic areas for partnership and affiliation

The Request for Proposals issued in 2016 that was used to identify the selected centres of excellence identified industry priorities in selected areas and mapped how the network could address these priorities.



Energy, whole-system thinking, innovations and people were considered to be areas that the wider network could address, particularly because challenges in these areas are often not rail specific and there are institutions considered to be centres of excellence in other industries that rail can learn from or leverage additional funding/ support/ expertise from by forming partnerships.

Areas for partnership and affiliation could include (but are not limited to):

- Human factors
- Artificial intelligence (machine learning, natural language processing, robotics)
- Transport economics
- Virtual reality
- People flow modelling

- Customer management
- Material technology
- Energy systems - power networks and smart grid
- Rail policy and strategy

Benefits

The rail industry is keen to engage with academic community in structured and informed way. The development of the UKRRIN Network will benefit industry, academia and the supplier community in the following ways:

1. Integrating the key elements of industry/ academic collaboration under one banner.
2. Providing an efficient and simplified means of:
 - a. Bridging the gap between industry, academia and the supplier community.
 - b. Promoting the activities of centres involved in rail research and innovation.
 - c. Keeping members informed about and engaged with industry plans and strategies.
 - d. Supporting research in finding a route to market.
 - e. Providing a clear map of test facilities and capabilities relevant to the rail industry.
3. Simplify the structure of collaborations to provide clarity to both the sector and external stakeholders.
4. Provide a single point of entry into the research, development and innovation activities of the rail sector for new players.

Process

Academic institutions are invited to put forward expressions of interest to become official member of the UKRRIN network, either as:

- **Affiliate member** - Offering access to cross-cutting skills to the network as a whole.
- **Partner to an existing centre** – Supporting delivery in core areas. As the partners will need to add value to an existing centre of excellence cluster, new partners will have to be agreed with the relevant university/ies.
- **New centre of excellence** – Core areas have already been identified and supported by industry. For a new centre to receive similar support a strong case will need to be built and sources of income will need to be identified.

Expressions of interest should outline:

1. Track record of research relevant to the rail industry.

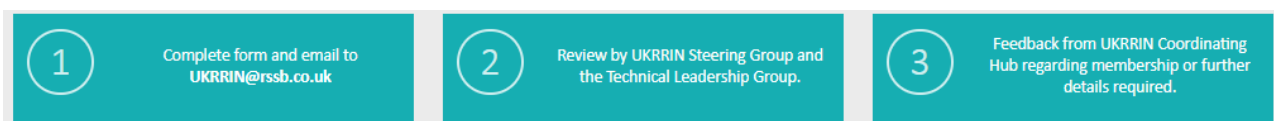
2. Existing staff in relevant area
3. Existing equipment and facilities
4. Vision for future development (particularly relevant for proposed new Centres of Excellence, who will need to provide additional information on proposed sources of funding / income).
5. Proposed membership level:
 - a. Affiliate – Proposed area of affiliation and alignment with industry needs
 - b. Partner – Proposed partner centre and outline of how expertise will support delivery of the centres’ objectives
 - c. New Centre of Excellence – Proposed theme for centre of excellence, evidence that there is no duplication with the work of centres that have already been selected / supported.

Expressions of interest should be 3 pages maximum outlining the points above.

Your expression of interest will not be shared with any other university without your permission.

Please send your expressions of interest to UKRRIN@rssb.co.uk with the subject heading ‘UKRRIN membership’.

When expressions of interest are received they will be reviewed by an independent panel of industry experts. Expressions of interest related to developing new centres of excellence will be reviewed by industry’s Technical Leadership Group and a full detailed proposal will be required if the decision is made to proceed.



What does membership mean?

It means:

- Support from the UKRRIN coordinating hub in 5 key areas: bridging services, link to industry plans, route to market, capability mapping, promotional activities.
- Raising the profile of your institution with key stakeholders in the rail industry, in government and in the supply chain.
- Access to dedicated engagement events with suppliers and industry.

Those selected to join the network will be expected to provide information and updates on their institution’s capabilities, facilities and skills and contribute to quarterly UKRRIN Programme Management Board meetings.

Timeline

First round of selection will proceed using the deadlines below to help form the network. After that the expressions of interest will remain open with regular updates to the network and an annual review of its composition.

April 2018	Expressions of interest open
May 2018	Review and selection process begins
June 2018	First round of members and affiliates announced
November 2018	UKRRIN Engagement day

Useful resources

UKRRIN website

www.ukrrin.org.uk

Rail Technical Strategy – Capability Delivery Plan

<https://www.rssb.co.uk/rail-technical-strategy/explore-the-capability-delivery-plan>

Rail Supply Group – Fast Track to Growth

<https://www.railsupplygroup.org/wp-content/uploads/2017/09/RSG-Brochure-Jan-2016.pdf>

UK Industrial Strategy: Building a Britain Fit for the Future

<https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future>