

UNIVERSITY OF  
BIRMINGHAM

BCRRE

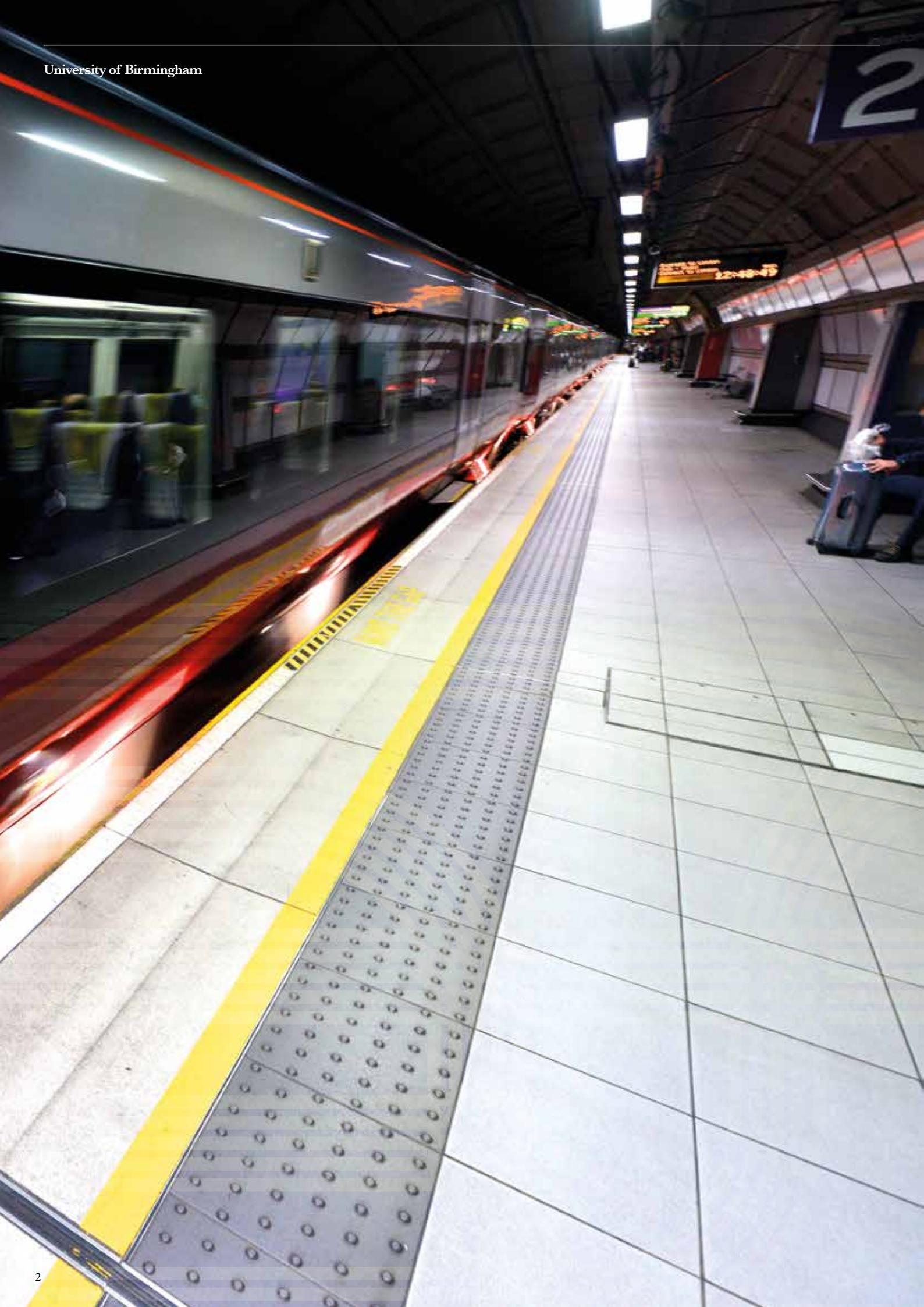
**BIRMINGHAM CENTRE FOR RAILWAY  
RESEARCH AND EDUCATION**

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**BCRRE 2025**

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Strategic Business Plan



# Introduction



## AT THE FOREFRONT OF TOMORROW'S RAILWAY RESEARCH AND EDUCATION

BCRRE 2025 is our plan for continuing our trajectory of sustainable growth, combined with maintaining and enhancing our world-class capabilities in railway research, education and innovation.

This strategic business plan is structured around three overarching objectives:

**1** Sustaining our position as a world leader in railway research and education

**2** Developing our capabilities

**3** Working with our partners to transform the rail R&D landscape



UNIVERSITY OF  
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# BCRRE 2025:

## Our **seven-year** strategic business plan

### EXECUTIVE SUMMARY



#### **Sustaining our position as a world leader in railway research and education**

Advancing our impact and reputation

Increasing our revenue and scale

Developing the people, tools and technologies  
for the railway of the future

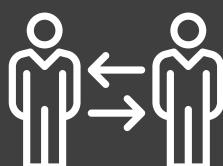


#### **Developing our capability**

Recognising and valuing our people and supporting  
their development

Building our skills, capability and experience  
to ensure we are world class in our fields

Leveraging the broader expertise of UoB and  
our partners to enhance our offerings



#### **Working with our partners to transform the rail R&D landscape**

Delivering the new Centre of Excellence in  
Digital Systems to time and budget

Leading the partnership of academic institutions  
to champion UK rail research and education on  
a global scale

Delivering step change in rail R&D to grow the  
profile and scale of UKRRIN

# Sustaining our position as a world leader in railway research and education

Now almost 50 years old, BCRRE has undergone strong recent growth and developed a reputation for world-class specialist rail research and education. Over the next seven years, it is our ambition to further build our position as a world leader in the global field of railway research and in the provision of higher railway education.

Our business model focuses on the delivery of research and education, and is supported by our Commercial and Professional Services team.

Our Research Group is responsible for delivering the cutting-edge research and development activity that drives BCRRE's profile and impact.

Our Education Group is responsible for planning, developing and delivering our world-class educational offering in railway, including the world-renowned MSc in Railway Systems Engineering and Integration (often simply described as "the Railway MBA").

Our Commercial & Professional Services (CPS) team is responsible for the development, project delivery and administration of BCRRE. This includes oversight of business development, stakeholder engagement, project management and corporate services functions.

Additionally, CPS leads our engagement with government and industry, ensuring that BCRRE is best positioned to continue our growth and development.

## BCRRE

### Commercial & Professional Services

#### Research

#### Education

Academic Research

Commercial R&D

Collaborative Projects

Business & Innovation Support

Academic Education

Training Courses

Bespoke Courses

- **Advancing our impact and reputation**



BCRRE has achieved significant recent success in delivering impactful research and developing a strong reputation for the quality of our research and education. This was recognised by the award of the prestigious Queen's Anniversary Prize for Higher Education.

Over the next seven years we will continue to build on this strong base by increasing even further our global impact and reputation, and we will seek to be explicitly recognised for this.

We will proactively seek industry partners to collaborate with in order to boost the volume of UK rail innovation activity. Our impact will significantly increase as we undertake increasing R&D activity with industry that will enhance our reputation.

Additionally we are committed to building our reputation in working with and supporting SMEs to develop their products and bring them to market. BCRRE will become renowned not just for R&D but also for boosting the UK rail industry capacity and capability to develop, deliver and deploy new technologies.

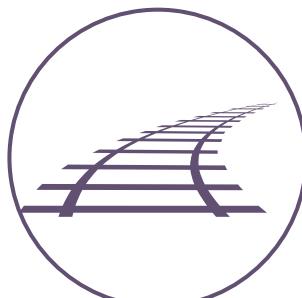
- **Increasing our revenue and scale**



In the last decade, BCRRE has seen rapid growth in terms of both revenue and staff.

As we move towards 2025, our ambition is to more than double our annual revenue and to continue to build our world-class capability in rail research and development. We will seek to expand our global reach and diversity by attracting students and staff from all backgrounds.

- **Developing the people, tools and technologies for the railway of the future**



Our success is not confined to our research and development activities alone.

The specialist rail education that we offer is also internationally renowned and over the next seven years we intend to further enhance the breadth of courses we offer and the ways we deliver them to all types of learners across the world.

# Developing our capability

In order to achieve our targets for ongoing sustainable growth, we will ensure that **BCRRE** has robust, effective governance and is a great place to work; a place where all staff, students, industry partners and customers are treated with respect and given due focus and attention.

Our people are what makes BCRRE such an inspiring place to work, research, teach, study and learn. Every member of staff matters and therefore we are committed to providing support, and learning and development opportunities for every single member of the BCRRE team. This, along with harnessing the expertise of other University colleagues and partners, will in turn enable us to grow our capabilities in order to continue leading the way in global rail innovation.

## • Recognising and valuing our people and supporting their development

As we progress towards our 2025 objectives, our people will become ever-more critical to our continued success and so we will design and implement a BCRRE staff learning and development programme focused on delivering:

### Leadership Development



- SLT members will work with the Advisory Board NEDs to develop leadership capabilities
- Additional leadership training will be developed to support staff who are already in, or aspire to achieve, leadership functions.

### Management Development



- Management training will be developed and delivered to all staff with line management functions
- We will also provide support programmes more widely for all staff to develop skills in people and process management.

### Coaching and Mentoring



- All staff will be offered the opportunity to receive coaching and mentoring
- More senior staff will be encouraged to provide coaching and mentoring to junior staff as required
- Bespoke Learning & Development
- All staff will be eligible to request appropriate L&D opportunities (including vocational and academic courses)
- Additionally we will encourage staff to join appropriate professional institutions (and potentially undertake CPD).

SLT = Senior Leadership Team

NEDs = Non Executive Directors

L&D = Learning and Development

CPD = Continuing Professional Development

- **Building our skills, capability and experience to ensure we are world class in our fields**

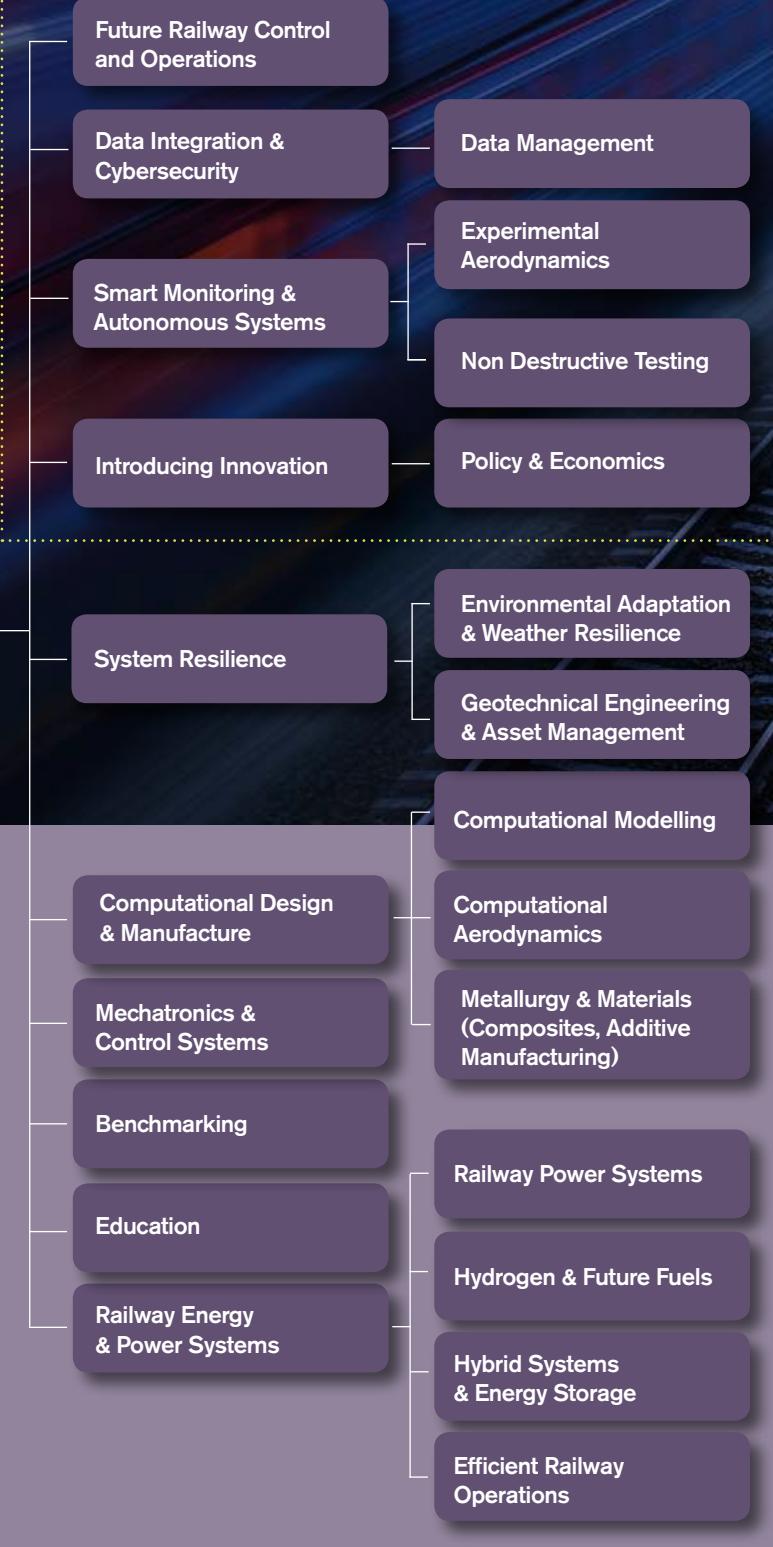
If we are to successfully deliver our seven-year strategic business plan, we must ensure that we have the right people with the right skills.

This will mean further enhancing our breadth of capabilities in order to offer the world-class R&D and innovation support activities the global rail industry will demand in the future.

BCRRE

To this end, we have mapped our current capabilities, as follows, and will use this as a basis for identifying skills gaps and corresponding strategic development:

### UKRRIN Centre of Excellence in Digital Systems



- **Leveraging the broader expertise of UoB and our partner to enhance our offerings**



The University of Birmingham has a huge amount of expertise that we can make much greater use of to significant mutual benefit.

A number of colleagues already work in fields that could significantly enhance our activities and help us to deliver our strategic plan. These include our colleagues in the School of Engineering, the Birmingham Energy Institute, the Business School and Birmingham Enterprise.

In addition, our membership of organisations such as the Railway Industry Association, the Rail Alliance, the Midlands Rail Forum and the Rail Supply Group, along with entities such as Midlands Engine and Midlands Innovation, gives us wider opportunities to collaborate and engage with stakeholders who can support our activities.

# Working with partners to transform the rail R&D landscape

In 2018, a report commissioned by the Railway Industry Association found that the UK rail industry:

- contributes **over £36bn annually to the UK economy** (a greater economic impact than the food, drink, tobacco, manufacturing, chemical and pharmaceutical industries);
- **provides around 600,000 jobs** (employing more people than the entire workforce of Birmingham);
- **generates £11bn annually** in tax revenue; and
- **generates £2.20 of income from every £1** spent on the rail network.

Clearly, the rail industry is of great importance to not just the UK but the global economy and society – both directly through its economic impact, but also indirectly through its role in connecting people, places and opportunities.

By undertaking rail research, development and innovation here in the UK, significant value is created in terms of the jobs, skills and productivity generated. The UK Government's Industrial Strategy has targeted innovation activity as a key priority and directly referenced the UK Rail Research and Innovation Network as a key opportunity to be supported for the benefit of the UK economy. The same can also be applied to the sector on a global basis.

BCRRE is determined to become a leading advocate for rail R&D and innovation activity and will actively champion investment in, and support for, high value rail R&D in the UK. We will also significantly increase our collaborative working with the rail industry to drive strong growth in rail R&D and innovation.

## • Delivering the new Centre of Excellence in Digital Systems to time and budget

As a key UKRRIN academic partner and host of the UKRRIN Centre of Excellence in Digital Systems, we aim to deliver significant impact and value, and thereby contribute to the continued success of UKRRIN. Our first priority is to develop and deliver this Centre of Excellence including the new building and facilities at our Birmingham campus in mid-2020.

## • Leading the partnership of academic institutions to champion UK rail research and education on a global scale

We are committed to growing UKRRIN both within the UK and also overseas in order to exploit better the UK's fantastic global reputation for rail R&D. With the global growth in railway use and investment, there are huge opportunities for UKRRIN to champion the role that UK railway research and education can play in enabling the development of railway networks across the world.

## • Delivering step change in rail R&D to grow the profile and scale of UKRRIN

As the UK rail network moves into a new phase of digitalisation in order to satisfy increased demand by delivering increased capacity and reliability, we have a real opportunity to increase the scale of investment in the country's R&D and innovation activity in order to develop and modernise the UK railway.

BCRRE, as part of UKRRIN, is well-placed to make a strong case for this boost in investment. The UK Government's Industrial Strategy prioritises economic growth with increasing jobs, skills, productivity and exports as key targets. The rail industry, supported by BCRRE, is well-placed to deliver all these priorities that can increase UK rail productivity and performance by delivering transformational innovations and accelerating its uptake.





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