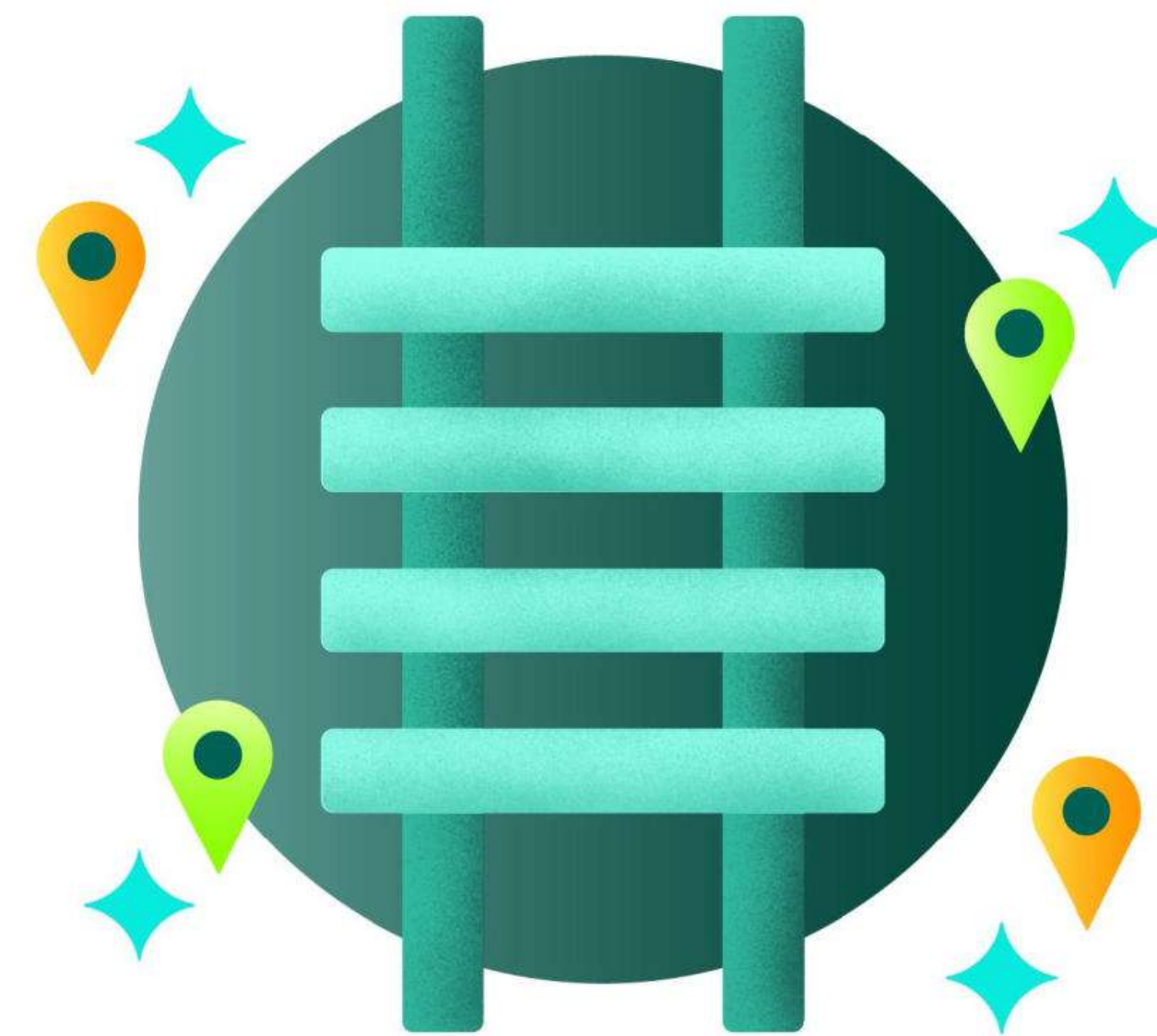# rsa spark

creativity changes tomorrow

RSA Spark is designed to help **everyone, everywhere**, find their creativity, **igniting ideas into action** to change tomorrow.

Table of contents:

Railway 200 & Beyond

How might we take inspiration from 200 years of railway success while innovating for an even brighter future?

NetworkRail

What might the future look like if we achieve this mission?

In the future, the entire railway system– train platforms, bridges, electrical and signalling systems, tracks, and surrounding land – shows how we can take care of our planet, create jobs, and make our communities stronger. Railways lead the way for how all infrastructure should be. Everything on the railway is designed to be environmentally responsible and built to last.
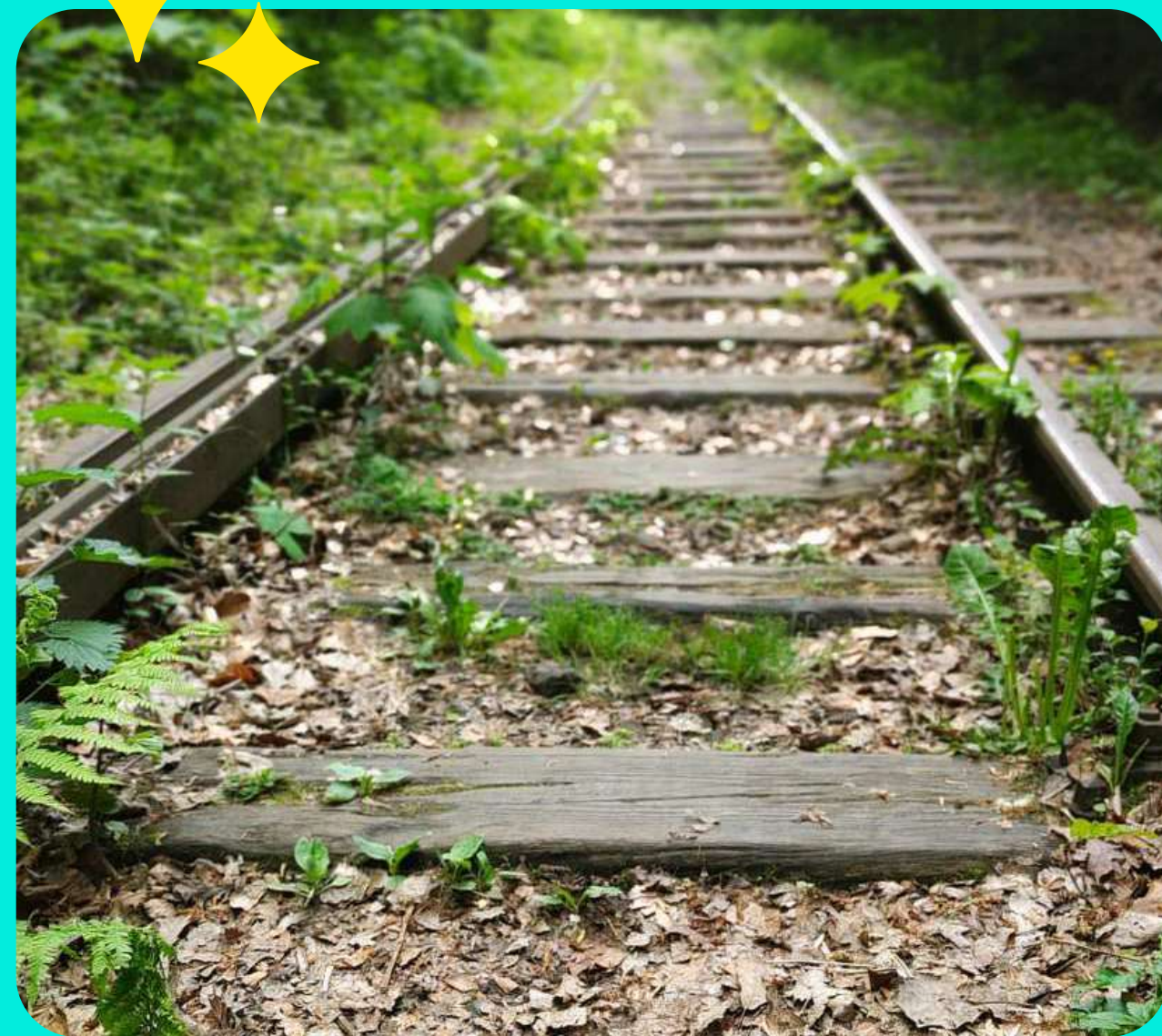
The railway estate produces clean energy and uses methods that help keep the air, water, and land healthy. It offers habitats that support plants and animals to thrive. The railway adapts to changing weather conditions though the adoption of new materials and construction techniques informed by data.

The railway isn't just good for the planet— it is good for our wallets too. The industry is using creative ways to make money, scaling existing ideas like renting out space under bridges for offices or setting up farmers' markets on unused land. They have also put into action new ideas – perhaps inspired by the circular economy or greater mobility. This creates local opportunities and keeps the railway running smoothly at less cost to taxpayers.

The railway also helps people in the community to learn new skills, and opens up careers to people from all backgrounds. Even more local people can work on the railway and be upskilled throughout their career.

The railway environment has become a lively centre of creativity and enterprise– reimagining what it means to travel. No longer just places to catch a train – here you can learn new things and enjoy events like art shows and workshops. They celebrate local history, protect our heritage and bring energy and new opportunities to our towns and cities.

Background to the brief

Railways inspire change around the world, from busy cities to quiet villages. They are not just about moving people – they are about creating lively, sustainable communities. As we approach the 200th anniversary of the first passenger service in 1825, we must consider how railways better meet the changing needs of future transportation.

This future is one where travelling is easier, better, and greener. The railway offers vast opportunities for social and environmental innovation.

People are travelling more for social reasons. Self-driving cars and telecommuting present new challenges. Railways can adapt by becoming more resilient and community focused.

The railway also supports our environmental and social goals. Railways offer many varied career opportunities across operations, engineering, customer service and safety, marketing and more. Beyond the trains themselves, railways can become greener, through the refurbishment of the existing estate, adoption of advances in material science, and the application of existing or new technology to maximise whole life cost.

Introducing more training and development, and adopting technology and other innovations, encourages companies and communities to work together, improving the upkeep and operation of railways. Open data across such a vast railway estate also allows for unique large-scale impact and meaningful change.

As the railway is integral to many communities – serving us as passengers, railway colleagues, and citizens – we should reimagine for the benefit of all people and nature.
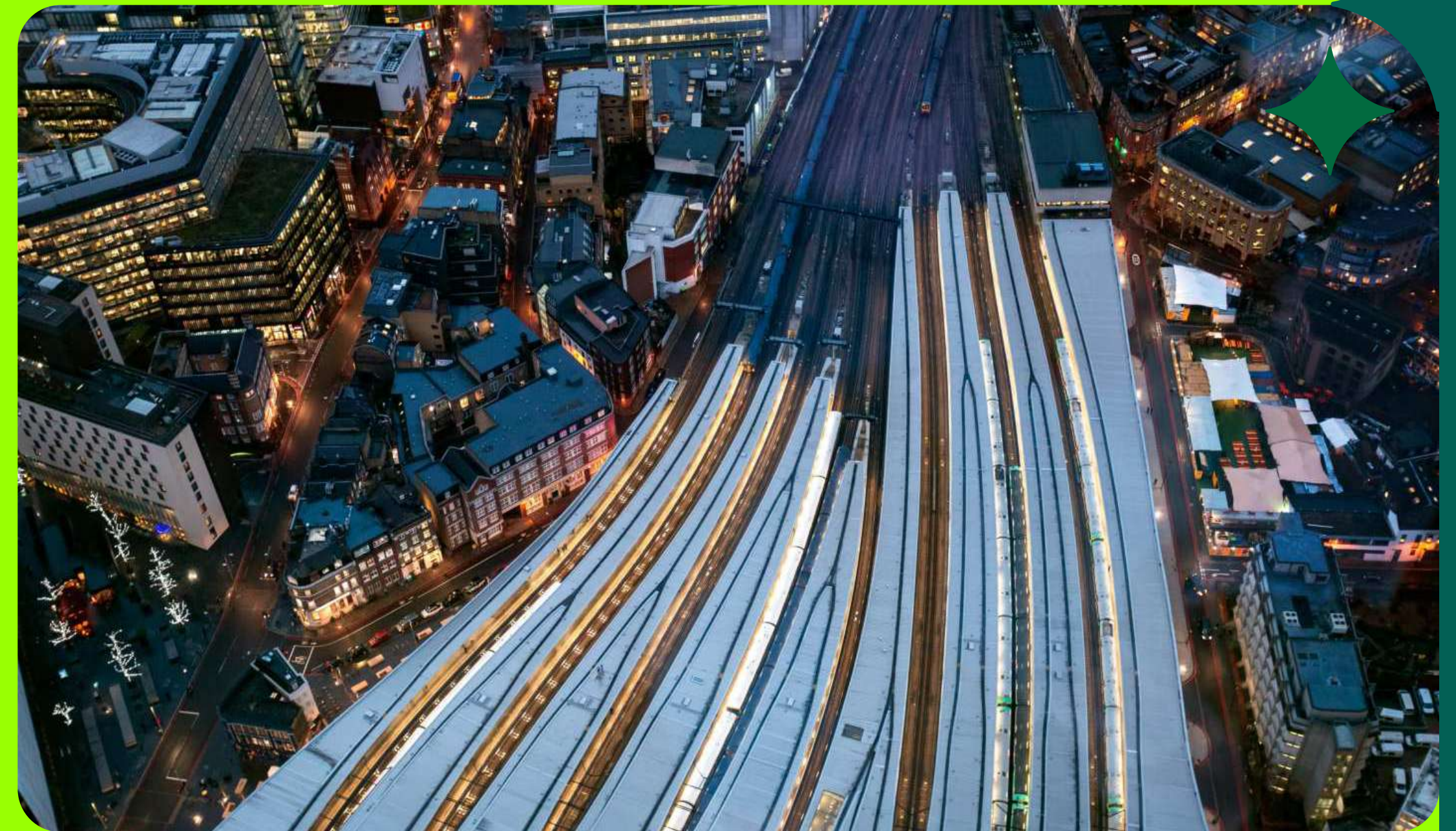
Inspiration for you when answering the brief

This mission brief calls for ideas celebrating the original vision of the railway as a way of connecting communities and, reimagines this for the next 200 years! Consider how local and railway heritage near you can play a part in your ideas and how you are helping the railway to meet the needs of modern-day users. Institutions like the National Trust in the UK are good inspiration– they balance commercial, cultural and environmental aspects with a strong brand that users love.

The availability of such a vast railway estate, with ever-improving real-time data to help map it, presents an exciting opportunity. How could your idea balance the local community's future needs and insight, with the possibility of replicating at scale across a whole country?

Your idea should also consider commercial realities. With lots of funding required for maintenance and many assets (such as buildings and land) under management, can the railway find new ways to make money?

Your responses should go beyond offering purely technological solutions – for example, avoid ideas such as an app to arrange food pick-ups from your local station. Parts of the railway estate that are not open to the public (for example, staff facilities) should also be considered out of scope for this brief.

Existing ideas include:

Netherlands:
The Railway Zone in Utrecht repurposes old railway yards into mixed-use developments with parks, housing, and commercial spaces, fostering community integration.

Utrecht railway warehouse converted to community hub. Photo: Sebastian van Damme.

Children participate in Raahgiri Day activities. Photo: Raahgiri Foundation website

India: The Raahgiri Day initiative in various cities, including New Delhi, temporarily repurposes railway-adjacent streets for community activities, promoting active lifestyles and environmental awareness.

Meet the mission partner
Network Rail

Network Rail is responsible for managing and maintaining Britain's railway infrastructure. Their role encompasses over 20,000 miles of track plus 30,000 bridges, tunnels, stations, and signalling systems. As a public-sector body, Network Rail focuses on enhancing safety, efficiency, and sustainability across the network. They oversee major projects, including infrastructure upgrades and renewals, ensuring seamless operations for passengers and freight. Network Rail plays a crucial part in driving economic growth, supporting our communities, and shaping the future of transportation in the United Kingdom.

Network Rail have previously partnered with the RSA's Student Design Awards. They are excited to set this Mission, as it sits within a wider cross-industry partnership set to celebrate 200 years of the modern railway. Starting in January 2025, Railway 200 will be a year-long UK campaign designed to celebrate rail's remarkable past, and its role today. It will also explore the railway's importance for a sustainable future, and its role in inspiring a new generation of young people to choose a career in rail.

NetworkRail

Share your idea!

We are excited to see your (team's) idea come to life and encourage you to share it with others via the RSA Spark Awards platform. By posting your idea, you will receive a digital badge and feedback from the Mission Sponsor and other innovators. You will also gain access to other opportunities including invites to meet the Sponsor sessions, our annual Festival and more!

To post your idea, go to the RSA Spark platform and make your way through the submission form (platform goes live January 2025).
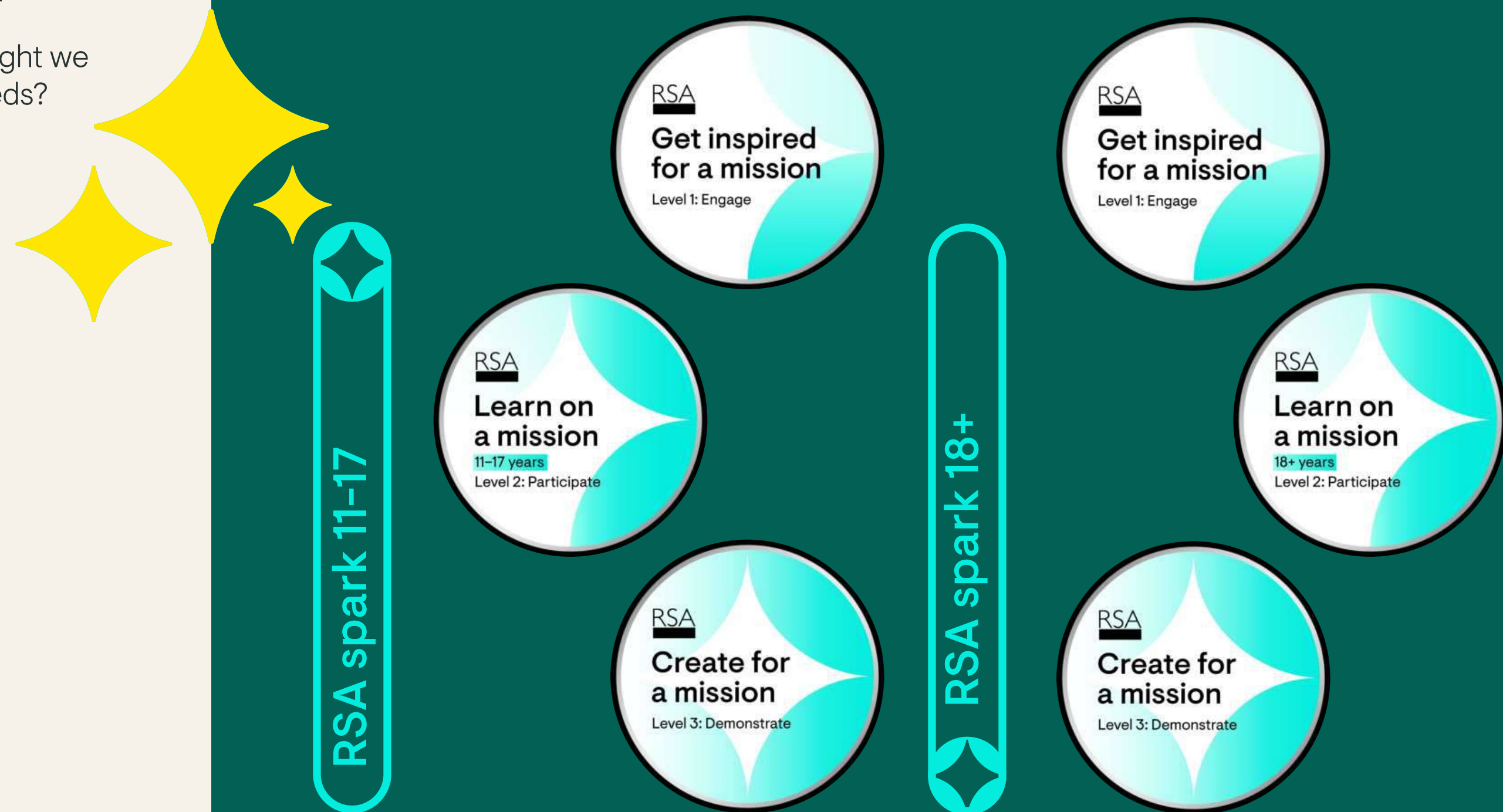
A submission invites you to upload:

✦ An introduction to you, your team and what inspires you to take positive action

✦ A more specific question you have been answering with your work e.g. how might we make the local health centre in Leigh Park better serve holistic community needs?

✦ The research and work you have done so far

✦ How you have listened to, and learnt from, others

✦ Your idea and how you think it could be implemented

✦ What impact you want to have and how you will track your progress

✦ What you want to do next and what help you would like

Get support and recognition

By participating in this Mission and submitting your idea to the RSA Spark platform, you could get the chance to have your work promoted as part of the Railway 200 campaign and receive invites to upcoming events with the Network Rail team.

All participants who want to be recognised for their learning can gain a 'digital badge' for working on this brief. A digital badge is an official way to show universities, employers, your team, friends and family that you have gained specific skills.

By participating in an RSA Spark learning journey you can receive three badges for each learning journey. These are at different levels depending on how your progress.

RSA spark 11-17

RSA
Get inspired for a mission
Level 1: Engage

RSA
Learn on a mission
11–17 years
Level 2: Participate

RSA
Create for a mission
Level 3: Demonstrate

RSA spark 18+

RSA
Get inspired for a mission
Level 1: Engage

RSA
Learn on a mission
18+ years
Level 2: Participate

RSA
Create for a mission
Level 3: Demonstrate

How to approach this brief

You can choose to respond to this brief individually or as a team. In responding to this Mission brief, you have an opportunity to tap into and grow 10 life skills or 'capabilities' that are key when innovating in ways that positively impact people, places and planet.

You can find out more about these capabilities here.

There is also more information about how to develop these capabilities within the RSA learning journeys. You can sign up for these learning journeys via the RSA Spark platform.

Examples of what you can consider and develop for each capability are provided in the table below.

Citizenship

- What makes you a great change-maker?
- Why are you passionate about this project?
- How is your approach making things better for people now and in future?
- Is your idea hopeful and exciting?
- How are you using materials in smart ways that care for the planet and all life?

Collaboration

- How will you get thoughts and ideas from people with different backgrounds to yours?
- Who is part of your team and how will you manage working together?
- Who is already working in this space that you can learn from and partner with?

Communication

- How are you using your voice – and the voice of others – to tell the story of your idea?
- How are you listening to other people?
- In what different ways can you share your thoughts and ideas (in writing, pictures, games...)?

Care

- How have you thought about and listened to people who might need the most help?
- What would animals, plants and other natural things make of your idea? How can you have them included?
- How will you listen and learn from people and nature in a kind way?

Composure

- Who might disagree with your idea and what would you say to them?
- Once you have an idea, have you shared it with people and asked them what they think?
- What's something that might be tough to do but that would make this idea even better?
- Am I asking big and important questions about the world?

Courage

- Who might disagree with your idea and what would you say to them?
- Once you have an idea, have you shared it with people and asked them what they think?
- What's something that might be tough to do but that would make this idea even better?
- Am I asking big and important questions about the world?

Critical Thinking

- Who might disagree with your idea and what would you say to them?
- Once you have an idea, have you shared it with people and asked them what they think?
- What's something that might be tough to do but that would make this idea even better?
- Am I asking big and important questions about the world?

Curiosity

- Who might disagree with your idea and what would you say to them?
- Once you have an idea, have you shared it with people and asked them what they think?
- What's something that might be tough to do but that would make this idea even better?
- Am I asking big and important questions about the world?

Creativity

- Who might disagree with your idea and what would you say to them?
- Once you have an idea, have you shared it with people and asked them what they think?
- What's something that might be tough to do but that would make this idea even better?
- Am I asking big and important questions about the world?

Change

- Did you test your ideas and make changes based on feedback?
- How will your idea keep changing over time so it becomes even better?

Toolkit

The Echigo-Tsumari Art Field, Japan

The Echigo-Tsumari Art Field transforms disused rural railway stations into art installations and cultural hubs, attracting tourists and revitalising local economies.

Rail Baltica, across Baltic countries

Rail Baltica introduced a sustainable railway connecting the Baltic countries. Their approach modernised transportation infrastructure to reduce carbon emissions whilst boosting trade and tourism.

Indian Railways Apprenticeship program

Indian Railways trains local communities through its apprenticeship program, offering hands-on experience in various sectors such as electrical work, engineering, and maintenance. It plays a crucial role in upskilling rural populations.

Link to resource: Indian Railways Apprenticeship.

The Built Environment

40% of global greenhouse gas (GHG) emissions come from buildings which, if left unchecked, might double by 2050. It is vital to explore ways to disrupt this.

Link to resource: https://www.architecture2030.org/why-the-built-environment/

The Evergreen Brick Works, Toronto, Canada

The Evergreen Brick Works in Toronto, a former industrial site adjacent to a railway, has been transformed into a community environmental center promoting sustainability and green living.

Indigenous trainee program, Australia

Queensland Rail in Australia runs an Indigenous trainee program aimed at upskilling local Indigenous people in rail operations, maintenance, and safety.

Link to resource: Queensland Rail Indigenous Program.

Regenerative Design

A report by Ellen MacArthur Foundation demonstrates the value of a circular economy that is regenerative by design.

Link to resource: https://rb.gy/ooze8w

Station F, Paris, France

Station F in Paris transformed a disused railway station into the world's largest start-up campus, turning railway infrastructure into a center for the digital economy.

Circular Economy Railway Project, Sweden

Sweden's Circular Economy Railway Project used recycled materials to build and repair railway infrastructure.

RESOLVE Collective, UK

RESOLVE is an interdisciplinary design collective that combines architecture, engineering, technology and art to address social challenges. They have delivered numerous projects, workshops, publications, and talks in the UK and across the world, all of which look toward realising just and equitable visions of change in our built environment.

Link to resource: https://www.resolvecollective.com/about

Resources for Foresight

Futures is an umbrella term for tools that are used to analyse emerging trends, anticipate their impact and build stories about possible futures.

Resource Link: https://www.nesta.org.uk/feature/innovation-methods/futurescoping/

About Railway 200: www.railway200.co.uk

Glossary

Mobility as a Service (MaaS): a digitally enabled approach aiming to make travel simpler, better, and greener, ensuring safety, sustainability, stewardship, and satisfaction for all.

Railway Estate: All the land and buildings owned by the railway company, including train platforms, bridges, and tracks.

Circular Economy: A system where we design products that create less waste, reuse and recycle materials, and last longer. Circular supply chains focus on using fewer resources and recycling so everything can be reused or repurposed, reducing waste and protecting the environment.

Taxpayers: People who pay taxes to the government, which is money used for public services.

Self-Driving Cars: Cars that can drive themselves without a human controlling them.

Telecommuting: Working from home using the internet, instead of going to an office.

Heritage: Things from the past that are valued and preserved, like old buildings and traditions.

National Trust: An organisation in the UK that protects and cares for historic places and natural beauty.

Real-Time Data: Information that is available immediately as events happen, without any delay.

Infrastructure: The basic physical structures and facilities needed for a society to operate, like roads, bridges, and railways.