



Regional Rail Revival Design Challenge 2050

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Overview

Following the success of our first Design Challenge with Bendigo Tech School in 2020, Regional Rail Revival has partnered with tech schools across Victoria to hold the first state wide Design Challenge 2050.

Bendigo, Ballarat, Geelong and Gippsland Tech Schools are all joining us for this year's Design Challenge 2050; a team-based competition for regional students.

We want to hear your ideas for the future! Regional Rail Revival is working now, or has been recently, in your area to make improvements to the way you, your friends and your family travel. Whether your idea is about the on-board experience, improving the way you get around the station or using smart and sustainable tech, we'd love to hear it.

Form a team, develop your idea and pitch it to some of the biggest players in rail travel! We'll give you lots of support along the way and you could win big prizes for your school.

Supported by their local Tech School, Rail Projects Victoria and their school and working in teams of three to six, students must produce and deliver the requirements outlined in Stages 1 and 2 of the challenge, with finalists meeting the requirements of stage 3.

Stage 3 is pitch final for shortlisted teams.

STAGE 1 Registration

Submit Team Registration + Project Brief by **27 October 2021**

STAGE 2 Entry Submission

Teams are required to submit the following by **15 November 2021**

- a video pitch presentation of your team's future rail innovation (up to three minutes) with all team members contributing.
- a written reflection on each stage of the project design process in which students evaluate what they contributed in their individual and team roles and how they have applied STEAM skills (maximum 500 words per section or 2 x single sided A4 pages including images).
- a prototype of your team's innovation. This can be a product, system or environment in a medium which helps demonstrate functionality. It could be a combination of physical model, computer-aided design model, app and mixed technology prototype.

The innovation themes are:

- *Technology or app-driven transport solution* e.g. helping passengers to plan their journey
- *Communications campaign* e.g. promoting safety by design
- *Product prototype* e.g. a revolutionary train seat
- *Building or system design* e.g. the railway station of the future

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Teams are encouraged to explore a creative solution for how to present their idea. The prototype and any accompanying presentation materials must be appropriately sized for ease of transportation in a car or on public transport.

STAGE 3 Pitch Final

Shortlisted teams attend a Pitch + Presentation workshop on **2 December 2021**.

Shortlisted teams pitch/present their entry at a live Pitch Final at the Gala Pitch Final Awards and Lunch on **6 December 2021** (Venue TBC).

At the Gala Pitch Final teams will pitch/present to an adjudication panel comprising senior staff from Tech School's and Rail Projects Victoria and other community stakeholders. Teams will answer questions from the panel. Winning teams will be announced at this event.

Your local Tech School will provide you with:

- Digital teacher/student support pack, including posters, Q and A sheet, rules, a timeline with key dates and templates for entries
- The Online Challenge Starter Day, **19 October 2021**, where we will explain the challenge in detail and students will participate in a series of preparatory workshops led by the Tech Schools, Rail Projects Victoria and industry mentors
- Prototyping workshops to support school teams develop solutions.

Schools need to:

- Provide a member of staff to coordinate student teams.
- Submit a completed Team Registration + Project Brief received by no later than **5.00pm, 27 October 2021**.
- Arrange your school program to allow for student participation in the Regional Rail Revival Design Challenge 2050 during Term 4.
- Support students entering Regional Rail Revival Design Challenge 2050 with the minimum suggested amount of guided learning hours in school.
- Work with the Regional Rail Revival Design Challenge 2050 partners to provide feedback and evaluation data to students.

Benefits

Innovation:

The Regional Rail Revival Design Challenge 2050 is designed along real-world principles, giving students an opportunity to develop an active learning project which can be added to their CVs or personal folios. Students learn about career pathways and gain insights into the enterprise skills needed for the future of work.

Work, life and enterprise skills:

The Regional Rail Revival Design Challenge 2050 is designed to inspire young people to develop their confidence and skills. These include collaboration, communication, project and time management, and analytical, research, creative, numeracy and literacy skills.

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Enhances curriculum with STEAM capabilities:

Regional Rail Revival Design Challenge 2050 complements a wide range of subjects including engineering, technology and ICT, science, mathematics, visual arts, visual communication and design, English, humanities and business. See challenge rubric with curriculum mapping (APPENDIX 2) for more detail.

Eligibility

Primary and Secondary Schools in years 4-6 in Gippsland, 7-10 in Geelong and 5-10 in Bendigo and Ballarat regions, as invited by their local tech school, are eligible to enter the challenge. The number of teams from each school that can be supported is limited and will be determined by your local Tech School in consideration of school size and available resources, fairness and equity.

Delivery methods

The Regional Rail Revival Design Challenge 2050 is designed to be delivered in school flexibly to suit your cohort of students and teams. We recommend a blend of guided and independent learning following the Online Challenge Starter Day on **Monday 19 October**.

Key Dates Timeline

Date	Time	Event
12 Aug	4.00pm – 5.00pm	Online Teacher info briefing
12 Aug	-	Starter Day registrations open
19 Oct	9.30am – 11am	Regional Rail Revival Design Challenge 2050 Starter Session for Secondary students
21 Oct	9.30am – 11am	Regional Rail Revival Design Challenge 2050 Starter Session for Primary students
27 Oct	5.00pm	Team Registrations Close
21 Oct – 5 Nov	4.00pm – 5.30pm	Online and after-school workshops that cover digital design skills for competition entries
30 Oct	9.30am – 2.30pm	Primary School design comp' workshop
15 Nov	5.00pm	Entry submissions due
22 Nov	-	Shortlisted entries announced
W/C 29 Nov	9.30am – 2.30pm	Pitch Workshop for shortlisted teams
6 Dec	12.00pm – 2.00pm	Gala Pitch Final and Lunch

*All dates subject to change

After the Starter Day, we would suggest schools arrange between one and two guided learning hours per week with two or three independent learning hours per week over the period of the challenge, depending on your student capabilities and availability. Schools with limited resources may access a limited number of mentoring workshops hosted by your local Tech School. Additionally, Rail Projects Victoria staff will be available for support at times to be advised.

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How to enter the challenge

1. Form your team of 3-6 students + mentor teacher and define your project brief.
2. Attend the Regional Rail Revival Design Challenge 2050 Online Starter Day on **19 October 2021**.
3. Register your team by completing the Team Registration + Project Brief by **27 October 2021**.
4. Develop your prototype.
5. Submit your prototype, pitch video and team reflection by **15 November 2021**.

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