

**Anglia Railway on
train Wi-Fi (c2c
Railway Limited &
Greater Anglia Trains
Limited)**

Preliminary Market
Engagement
Questionnaire

Introduction

This Preliminary Market Engagement Questionnaire (“PMEQ”) is to collect information to help inform any potential future tender for train to wayside data connections and associated on train systems. It is being conducted in line with PA2023 regulations and includes a corresponding UK2 notice.

Our passenger rolling stock fleet across Anglia Railway (c2c Railway Limited & Greater Anglia Trains Limited) consists of:

Company	Class	Number	ROSCO
c2c	357/0	46	Porterbrook
c2c	357/2	11	Angel
c2c	357/3	17	Angel
c2c	720/6	12	Porterbrook
GA	720/5	133	Angel
GA	745/0	10	Rock Rail
GA	745/1	10	Rock Rail
GA	745/3	14	Rock Rail
GA	745/4	24	Rock Rail

This PMEQ and its responses may be used to support a standalone procurement, a joint procurement, or a procurement via a framework agreement.

Please respond to this Preliminary Market Engagement by following this link:

<https://app.smartsheet.com/b/form/536e1f0ed97b4fd4bd2afb7984f8b478>

We recommend that you collate all your answers before attempting to upload, also any attachments should be named so that the file begins with the reference to the question being answered e.g. “C01 Cost Model.xls”

The closing date for responses to this PMEQ is **midday on 10 July 2026**

General

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Collate contact details for each organisation	G01. Please confirm contact details for a primary and secondary contact: <u>Primary Contact</u> • Name • Position • Email • Telephone <u>Secondary Contact</u> • Name • Position • Email • Telephone	Contact details for primary and secondary contact
Understand the interest of the responding organisation	G02. Please provide an outline of your general level of interest in this project	Summary of interest in the Project
Similar deployments	G03. Please provide details and any "off-the-shelf" case studies relating to any trials or deployment of dual 5g/LEO solutions you have deployed on trains or similar?	Case Studies

General 2

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Information required at tender	G04. What key information would you require from us for you to be able to present a full tender proposal in response to any future tender activity?	Written response
Alternative solutions	G05. Are there any alternative solutions you could offer that would deliver some or most of our desired outputs, but at a significantly lower cost?	Written response

Technical 1

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Site Appraisal Risks	T01. Please indicate any key technical risks which would prevent you from submitting a bid or significantly impact your ability to make a viable bid, and any measures which c2c and/or GA might undertake prior to a bidding process.	Details of key technical risks
Expectation of accreditation	T02. We may chose to require a supplier in any future tender to be accredited with the Rail Industry Qualification Scheme to deliver under the code "Rail Vehicles > Materials and Parts for Rail Vehicles > Monitoring, communication and safety devices > Data transmission devices" (E.K.10.4) Please indicate if the competence and accreditation requirements would prevent you from entering a bid or significantly impact our ability to make a viable bid. If potential future bidders choose to apply for, or maintain, any RISQS accreditation, they should not rely on this PMEQ when making any decision to do so.	Commentary around RISQS accreditation/ willingness to obtain

Technical 2

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Data Speeds	T03. We may wish to offer data speeds that can offer at least basic internet browsing and e-mail access to 60-80 people per carriage in peak travel times we estimate that this will require an average bandwidth of 0.8 gigabits per second. Please advise on the viability of this proposal along our route.	Please provide your assessment of our assumptions and whether this achievable via a proposed solution
Data Speeds	T04. We may wish to offer data speeds that can offer at least basic internet browsing, e-mail access and audio / video streaming to 90-120 people per carriage in peak travel times we estimate that this will require an average bandwidth of 1.2 gigabits per second. Please advise on the viability of this proposal along our route.	Please provide your assessment of our assumptions and whether this achievable via a proposed solution
Data Speeds	T05. Outline the technical implications of each proposed option (T03 and T04), referencing responses on passenger demand and target data speeds above. Your response should clearly compare options, covering: • Upfront capital costs (including hardware); • Scope, complexity, and cost of required modifications to rolling stock or assets; • Ongoing operational costs (e.g. bandwidth, connectivity, backhaul, service charges); • Ongoing maintenance and lifecycle costs; • Any other material cost or technical considerations. Present the information to enable clear comparison, highlighting key cost drivers, dependencies, and trade-offs	Written response

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General

Technical

Commercial

Basis of question	Question proposed	Expected response
IP addresses	T06. Please advise how your solution uses IPv4 and IPv6 - with a focus on ensuring ongoing availability of IP addresses throughout the lifecycle of any new solution.	Written response
Cyber Security	T07. Please advise the approach your solution takes to cyber security & provide further information in how specifically this relates the railways status as national critical infrastructure?	Written response
Data Delivery	T08. How would any solution offered differentiate between data sources and allow prioritisation of data source as if pricing differentials change over time?	Written response

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Technical

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Basis of question	Question proposed	Expected response
Data delivery	T09. A solution that promotes the minimum physical interaction with trains is preferred. Please advise if you have any solutions that would deliver this outcome?	Written response
Data delivery	T010. Please advise whether your proposed approach would use physical sims or e-sims - how does this choice impact on the reliability of your proposed solution? Could your proposed solution work with either? If e-sims, can they be updated remotely and if so by who? Also, if e-sims, please advise how many e-sims each unit can store at one time.	Written response

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Technical

Commercial

Basis of question	Question proposed	Expected response
Feasibility	T11. Are there technical solutions you could offer that would deliver our requirements? Please provide as much information about the proposed solutions as possible Please provide extra focus and detail on the response to this question	Written response/ case studies / other information
Constraints	T12. Please state any constraints, assumptions or other features about our rolling stock that would affect the installed performance or price of your solution.	Written response

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Commercial

Basis of question	Question proposed	Expected response
General	T13. Please provide your view on the suitability of different data transmission technologies for our application, for example 4G vs 5G vs Low Earth Orbit (LEO) or any other technology you wish to consider	Written response/ case studies / other information
Cybersecurity	T14. Please describe how access to onboard systems is controlled, including authentication and how remote access (e.g. for maintenance, updates or e-SIM management) is secured?	Written response
Cybersecurity	T15. Please describe how your solution monitors, detects and responds to cybersecurity threats or incidents?	Written response

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Commercial

Basis of question	Question proposed	Expected response
Cybersecurity	T16. Please describe how software updates are securely delivered and how vulnerabilities are managed throughout the lifecycle of the solution?	Written response
Cybersecurity	T17. Where your solution depends on third-party providers, please describe how cybersecurity risks are managed and assured?	Written response
Cybersecurity	T18. Please detail which cybersecurity standards, frameworks and best practices your solution complies with (e.g. ISO 27001, IEC 62443)?	Written response

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Technical

Commercial

Basis of question	Question proposed	Expected response
Cybersecurity	T19. Please describe any independent assurance activities undertaken (e.g. penetration testing, security audits) and whether results can be shared with the operator?	Written response
Maintenance	T20. Please outline any maintenance requirements for proposed solutions and whether you offer a managed maintenance service or if solutions can be maintained by third parties?	Written response
Futureproofing	T21. How could any solution be designed in order to ensure that it is futureproofed, as far as is reasonably practicable, so that it could be upgraded in response to future technological developments?	Written response

Commercial 1

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Cost model	CO1. Please provide indicative cost model(s) for any proposed solution(s)	Breakdown of installation and ongoing operation and maintenance cost for each proposed solution
Maintenance	CO2. Please outline any maintenance requirements for proposed solutions and whether you offer a managed maintenance service or if solutions can be maintained by third parties?	Written response
Commercial Approach Risk	CO3. Please indicate any commercial risks which would prevent you from entering a bid or significantly impact your ability to make a viable bid, and any measures which c2c might undertake prior to a bidding process.	Details of key commercial risks

Commercial 2

General

Technical

Commercial

Basis of question	Question proposed	Expected response
Risk Management	C04. Please describe what contractual mechanisms would exist between you and any Low Earth Orbit data provider to ensure continuity of service and that any government, company or individual could not make a unilateral decision to terminate or throttle the service.	Written Response

Feedback and Contact

Thank you for reading this PMEQ

Please note that participation (or non-participation) in this process will confer no advantage or disadvantage should we commence a formal procurement process.

As part of the preliminary market engagement activities, we're happy to receive feedback from providers on the content of the questionnaire.

Please send any feedback to procurement@c2crail.net