

**INFRASIG****East Coast ETCS Bid Support****Overview**

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Carillion was a civil engineering and construction company, involved in providing integrated solutions for a number of different industries. They were a key player in the delivery of some of the major rail renewals programmes and they entered with Bombardier Transportation into a joint venture as INFRASIG, in order to expand their market portfolio. As a result of this combining of signalling and rail renewals expertise, INFRASIG was in a strong position to bid for the ETCS implementation programmes being tendered by Network Rail.

INFRASIG's East Coast Mainline Phase 1B programme bid team were in the throes of developing their bid proposal when IPEX was initially approached to assist them with their approvals and authorisation ITT response. After delivering successfully the technical guidance and ITT responses for the approvals and authorisation aspects of the bid, IPEX was asked by INFRASIG to produce the Systems Engineering input, to peer review the output of key elements of the bid (including Cyber Security, Testing and Commissioning) and to review the output of INFRASIG's Specialist Systems Integration partner in the development of their own bid submission. As a commercial engineering advisor, IPEX was also asked to work with the commercial team on the risk register, costings and programme for the bid. After the bid submission was submitted to Network Rail, IPEX was invited to facilitate a workshop with the INFRASIG senior programme team to test the robustness of the Suppliers' JV Agreement against a number of 'crisis' scenarios to ensure that accountability and interface issues had been addressed.

**Our client's challenge**

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INFRASIG, as the combination of two global rail organisations, had a huge amount of expertise to bring to the bid team. However as they progressed through the bid production process they needed an independent expert to guide them in the areas of the bid where there were critical interface and integration issues between the two organisations and where novel areas needed to be addressed (i.e. UK rail interoperability with CCS TSI).

IPEX fielded a small team to assist INFRASIG in proposing an integrated approach to delivering the technical aspects of this programme for the bid and this activity included the production of Technical Responses for a number of the specific Client ITT requirements, key documents in support of the bid including the Safety and Authorisation Plan, the Systems Engineering Management Plan, the Configuration Management Plan and a proposal for the Technical Directorate organisation to ensure successful delivery of the engineering for the programme. IPEX was also requested by INFRASIG to act as peer reviewer for a number of technical and commercial bid documents produced by others to ensure that an integrated approach to the engineering of the delivery project had been taken including the Overall Technical Methodology, Test and Commissioning Strategy and the Systems Integration Plan.

**Our response**

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IPEX deployed a small team of industry leading Systems Engineering specialists with ETCS and commercial experience to work with the INFRASIG bid team members to provide expert guidance, attend workshops, produce and peer review key technical documents to assure the Bid Director that an integrated and robust approach had been taken for the ITT response (as far as the End Client is concerned) and that the bid itself had the necessary Technical Governance and oversight required for a Joint Venture submission.

After successfully delivering the Safety and Authorisation elements of the bid, IPEX was asked if they would take on part of the Technical Directorate role for the delivery team responsible for Systems Engineering and Safety and Authorisation and as a result had their involvement in the bid team expanded to cover all Technical areas of the ITT response. IPEX participated in the Final Bid Presentation to the Executive team and was asked to provide a short briefing to educate the Executive team on the importance of Systems Engineering and Safety and Authorisation to an ETCS delivery programme. As a result of our vital participation in the bid, IPEX was asked to return after the bid submission by the Senior Management Team to facilitate a workshop testing the robustness of the Joint Venture agreement, resulting in a final report that was delivered to the Executive team of Carillion.

**The value to the client**

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Since IPEX has worked on a number of complex programmes in the transportation sector in both a commercial and engineering capacity, has a detailed knowledge of Network Rail and the Supply Chain for CCS systems and has experience in the implementation of novel CCS technologies we were able to approach the bid with a holistic and integrated approach to ensure that the Client ITT requirements were met, that INFRASIG gained the confidence that interfaces had been addressed and that if successful, ultimately the technical governance requirements will be met for the delivery of the contract.