

ITT2B-Scenario: Transport Control System Engineering

Question

1. Background

- 1.1 As demand for public transport rises TfL needs to augment passenger capacity to meet this ever increasing demand. This increase in capacity necessitates a greater degree of automation and communication facilities to monitor and control services, ensuring the public are able to feel secure in our stations and rolling stock while travelling efficiently. In order to do this engineered systems are required to be developed integrating railway assets, procedures and people.
- 1.2 The programmes of work may cover development of new or renewal, extensions and upgrades to existing Railway Control Systems, integrating signalling, track, infrastructure, depots, rolling stock and stations.
- 1.3 At the heart of these changes are communications and train scheduling systems and ultimately control room staff, as such care must be taken to ensure that all aspects, including technical, physical and cognitive issues are considered and managed. It is essential that their capabilities and limitations are accounted for during system development to ensure safe and reliable system performance.

2. The Requirement

- 2.1 TfL is seeking specialist support to manage development, renewal, extensions and upgrades to Railway Control Systems. Working closely with programme teams the main requirement is to identify hazards and manage their associated risks into final delivery of Railway Control systems.
- 2.2 There is a need to develop Railway Control requirements and implemented solutions from Sponsor requirements, best practice, analysis of system functions, together with stakeholder input.
- 2.3 There is a need to prescribe solutions to risks consistent with the component(s) of the assets, procedures, people interactions to which they are routed.

3. Key Accountabilities

- 3.1 Managing Railway Control System delivery, ensuring adequate assurance is provided to the client for them to authorise system solutions into use.
- 3.2 Establish and maintain effective working relationships with programme team discipline engineers, end user representatives, other third party suppliers, and any other stakeholders.
- 3.3 Oversee planning processes and ensure appropriate milestones are identified; robust schedules are created and maintained in accordance with corporate requirements and systems. Ensure dependencies are understood and appropriately managed, both within the Programme and with other Programmes and activities across the business. Ensure milestone risks and issues are actively managed in accordance with TfL procedures and escalated in a timely manner where necessary.
- 3.4 Recommend an appropriate approach to change management in line with TfL's Business Change Framework. Develop and manage a comprehensive plan of activities to support delivery of the change, including impact assessment.

4. Response Content

- 4.1 In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) your response should include details of the following:
- Your overall approach to Railway Control System development and delivery
 - Proposed programme management structure and high level governance arrangements, and approach to tracking and reporting progress
 - Proposed resources, including profiles of key personnel giving evidence of appropriate skills, knowledge and experience
 - Your understanding of critical success factors (acceptance criteria)
 - Your view of typical key lifecycle risks and technical issues affecting successful delivery. How are these managed?
 - Your typical approach to integration planning, giving an example of the content of key planning documentation
 - Your typical approach to defining acceptance criteria
 - How you calculate the value of cost in order to justify intervention