22.11.2018

System for railway capacity management

Request for information

1 Description

This is an appendix to RFI concerning System for railway capacity management.

Please note: this is not a formal request for applications to tender nor does it form part of any tender process.

This is a Market Consultation process only concerning the possible purchase of software and/or services.

FTA is inviting market operators to engage in a technical and service dialogue with regard to the software described in this document.

This request for information initiates the technical and service dialogue. The technical and service dialogue consists of the questions in the request for information and possibly further discussions and the presentation of the market operator's products and services to FTA.

Replying to the request for information or participating in the technical and service dialogue is not binding on the market operator, and no compensation is paid for participation. The technical and service dialogue or the request for information related to it do not constitute a contract notice or an invitation to tender, and they do not obligate FTA to initiate the procurement. Responding to the request for information or failing to respond to it or participate in the technical and service dialogue or not participate in it do not affect the market operator's possibilities to participate or not participate in the actual procurement if one is carried out.

For taking part to dialog, please inform FTA representative, Mr. Teemu Sirkiä, by email (teemu.sirkia@liikennevirasto.fi) no later than 23.12.2018 and provide your comments/answers for requested information with the contact details which you prefer to be used in this matter.
Follow up and possible further discussions will take place during 1Q2019.

Market operator may choose to conduct the dialog either in Finnish or English.

2 Use case scenarios

Development of Railway Traffic Services unit has at least three different use cases in mind. These use cases are described below. The software may support one or several of the use cases.

1) Timetable planning for railway undertaking (RU)
   a. Planning a working timetable
   b. Running time calculation
   c. Requesting ad hoc capacity
2) Management of capacity for the infrastructure manager in both high-level (i.e. station – line capacity) and detailed-level (i.e. platforms, track section/block reservation level)
   a. Handling the capacity requests (annual and ad hoc)
   b. Identifying and resolving conflicts in the requests (meeting points in single-track lines)
   c. Multioperator environment (sharing some data between RUs but not everything)
3) Simulation (for IM)
   a. How the timetable structure behaves if some parameters are changed?
   b. Will there likely be delays or bottlenecks?
   c. Is the timetable structure viable?

3 Requested information

1) Please list your company references, where your solution is in use for a similar purpose.
2) Please describe how your solution handles the harmonization and management of timetables in situations that you have multiple operators requesting capacity for the line sections as well as in middle size to large terminal stations which have over 10 tracks, over 80 trains per hour and including shunting traffic (i.e. not all trains are turning on the station, but shunted for departing originally from this station)
3) Please describe how your solution can be integrated to various data sources, especially concerning the cases where system is not the master source for data, e.g. infrastructure model and restrictions due to infrastructure maintenance.
4) Please describe how your solution supports single-track lines with a high number of both passenger and freight trains.
5) Please describe what kind of conflicts your solution can automatically detect and how the information is visualized for the user (e.g. limited number of meeting points in single-track lines, the effect of the train length when choosing the meeting point, conflicts of using same track sections when arriving and departing)
6) Please describe how request and approvals of both long-term capacity and short-term capacity are handled in your solution.
7) Please describe how your solution handles annual timetable periods and which data is shared and which can be changed independently.
8) Please describe how detailed level capacity management is handled in your solution (platforms, track sections, block level capacity)
9) Please describe how your solution can handle reserving and managing different services located in yards.
10) Please describe how track work capacity and restriction management are handled in your solution.
11) Please describe the technical requirements for your solution. Does it require a specific software installed on the workstation or can it be used with a browser? Is it a single application or divided into different applications (which may be implemented with multiple technologies)?
12) Please describe how your solution is better than other similar products.
13) Please give some examples about usability and UI implementations/views for the following cases:
    a. Creating an ad hoc request as RU and giving the decision as IM
    b. Adjustment, combining, and visualization of track level reservations on stations
    c. Stabling track capacity management
    d. Detecting and visualizing the conflicting capacity requests
    e. Visualization of the allocated capacity (i.e. graphical timetable view)