IMPLEMENTATION OF A PUBLIC TRANSPORTATION NETWORK FOR QUEBEC CITY (TRAMWAY COMPONENT)

MANDATE
The Réseau de Transport de la Capitale (RTC), the organizing authority of transport on the agglomeration of Quebec, adopted their new 2018-2027 Strategic Plan by which they will make an in-depth transformation of their network. This result, among other things, in the implementation of a Structuring Transit Network (RSTC – Réseau structurant de transport en commun), which will include the following components:

- One tram line;
- Two fast-charging electric trolley lines (BRT type operated on a clean site);
- Several high-service bus routes (BRTs);
- One major and complete overhaul of the transit system.

The Tramway Line
The 23-km tramway line will include 35 stations (including 2 underground ones), 2 tunnels, 2 maintenance facilities. Tunnelling will facilitate interaction between the different modes of transport in these denser areas. It will include:

- Important, comfortable and sustainable infrastructures: stations, dedicated lanes, intermodal equipment and user information systems;
- Measures that ensure its reliability by giving it priority over other modes of transport;
- A high frequency, i.e. every 3 to 6 minutes on average. The maximum interval will be 15 minutes between 2 passes;
- High capacity and commercial speed.

DESCRIPTION
Design Phase (ongoing)
With a view to carrying out a pre-project design of the Québec City tramway system, enabling it to move on to the implementation phase by responding to the specific needs of the Québec City agglomeration, SYSTRA Canada is assisting the RTC and the City in the preliminary project design and to identify the methods and processes of maintenance and operation of the tram system.

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CLIENT
RTC (Réseau de Transport de la Capitale)
COUNTRY
Canada
YEARS
2019-2024
VALUE OF PROJECT
CA$3.3B approx.
TYPE OF SERVICES
Design, execution, operations

Project: 18-055
The purpose of the services is to ensure that the best design decisions are made, both in terms of the scope of the project and its cost and timeline. Preliminary design decisions for which consulting services are expected to cover all components of a tramway system.

SYSTRA’s mandate consists in the overall owner’s engineer role for the tramway system, and more precisely:

- Activities related to drafting of business plan, ridership, validation of mode (tram vs metro);
- Assisting in the obtention of the various regulatory approvals, including environmental approval;
- Drafting of the master schedule, including construction schedule;
- Drafting of preliminary operating plan;
- Definition of functional specifications of the tramway system;
- Development of preliminary design of the system;
- Drafting of reference concept design and associated specifications for upcoming procurement of D&Bs;
- Review of specifications the infrastructure package.
Execution Phase

During the execution phase, SYSTRA’s role will consist in:

- Technical and organizational assistance in the overall management of the execution phase (detailed studies, works, testing);
- Management of the integration and interfaces of the transport systems;
- Overall assistance in the commissioning of the system;
- Assistance in the future operation of the tramway by the owner.

Operation Phase

The operation of the new RSTC must promote integrated management of safe and efficient travel for the users. Therefore, the information on bus movement flows and detours, as well as events on the network, must be centralized to ensure the regulation, reliability, event management and safety of tramway operations, trambus, high-frequency trails and other types of bus travel in the agglomeration of Québec.

The project will bring about significant changes in many of the operational and security processes.

More specifically, SYSTRA Canada’s assistance will aim at:

- Enabling the acquisition of the skills required to control the operational performance of the new system;
- Integrating through integrated process all the operations necessary for the operation and regulation of the tramway, trambus and electric buses;
- Establishing the optimum operating procedures for overall management and integrate the operation of the system;
- Structuring, organizing and deploying a transition plan for the shift to operation;
- Ensuring and facilitating the integration of new modes of transport in operation;
- Establishing procedures related to the safety issues of the customers on board and the boarding platforms of the tram and trambus and to other users of public roads (pedestrians, cyclists and motorists);
- Analyzing current regulations and, if necessary, make recommendations for the required amendments or new legislation.