

VIAFast

Validation of VIAFast Benefits,
Equipment and Revenue

Consolidated Executive Summary

Prepared for Transport Canada
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1. Introduction

In May 2003, Deloitte & Touche, IBI Group and UMA Engineering were separately retained by Transport Canada to complete a review of various aspects associated with a proposed higher-speed passenger rail service within the Quebec City to Windsor Corridor ("VIAFast"), with

- IBI Group completing a validation of the "Environmental and Socio-Economic Impacts and Freight Capacity Issues" of VIAFast;
- Deloitte & Touche completing a validation of "Revenue and Ridership Forecasts, and an Assessment of Project Financing Options"; and
- UMA Engineering completing a validation of "Equipment and Infrastructure Options" associated with the VIAFast project.

As per the terms of reference for their respective assignments, each firm submitted separate reports detailing the findings, conclusions and options for further review and analysis associated with their particular area of review. In completing their respective analyses, each firm regularly consulted with one another to ensure consistency of findings. However, given the timeframe within which each study was completed, no consolidated summary of key findings was prepared.

The purpose of this document is therefore to provide such a *Consolidated Executive Summary* focusing on the consultant's consensus opinions regarding VIAFast, the key drivers which will most acutely affect and which therefore must be factored into any investment decision, and finally the consultant's considered opinions regarding how Transport Canada should approach and prioritize a plan for a strategic investment in VIAFast.

2. Summary of Consultant Reports

The purpose of this section of the Consolidated Executive Summary is to present a brief summary of the principal findings, conclusions and options for further review and analysis associated with each of the three consultant reports.

2.1 IBI Group

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Nevertheless,
there are no hard-and-fast rules to apply in the circumstances, and the range of possible benefits can legitimately be subject to broad interpretation.

2.2 *Deloitte & Touche*

The purpose of the Deloitte & Touche Report was to provide detailed assessment and due diligence review of the various passenger revenue and ridership studies prepared in support of the *VIAFast* proposal. The Deloitte & Touche report contained the following key findings:

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2.3 UMA Engineering

, four key issues will need to be addressed to ensure that the project can be completed within the defined schedule and costs.

- Regulatory requirements related to construction and maintenance safety standards and equipment specifications for railway operations at 200 km/h must be established by Transport Canada. This may impact the design criteria for the proposed equipment as well as the specific construction requirements for the infrastructure.
- Agreement must be reached between the different railways to establish operating requirements and define the costs associated with operating and maintaining the new and upgraded infrastructure.

- In addition, an appropriate acquisition process should be established in order to ensure that the proposed equipment will be developed to meet VIA's specific requirements within the defined schedule and estimated costs.

- The reliability of train service and travel times are two of the most important factors influencing the ridership levels projected for *VIAFast*. Therefore, additional study of the travel times being proposed by *VIAFast* should be performed in order to confirm that train schedules can reliably be achieved. Because it is possible to reduce delays by constructing additional infrastructure, obtaining a more precise train performance analysis is important in finalizing costs.

3. Key Drivers of the Investment Decision

Based on a series of roundtable discussions between the consultants, it was concluded that there likely exists three over-riding "drivers" that will most acutely impact upon the success which *VIAFast* could have in achieving its stated objectives. It is the considered opinion of the three consultants that any decision to invest in a higher-speed passenger rail service within the Quebec City – Windsor corridor should therefore seek to achieve the following objectives:

- maximizing reliability;
- minimizing equipment risk; and
- enhancing benefits.

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3.1 - Maximizing Reliability

Maximizing reliability is concluded to be one of the principal over-riding considerations respecting any investment decision in higher-speed passenger rail. Reliability can be thought of as relating to and being a function of the following factors:

- the ability to physically improve the corridor to allow for higher-speed passenger rail on a dedicated / semi-dedicated basis (i.e., the corridor itself can readily be modified to support a higher-speed passenger rail service);
- the ability to continually operate a higher-speed passenger rail service within the corridor (i.e., once operational, can VIAFast be operated with a high degree of confidence and with minimal interference from other traffic within the corridor);
- the ability to continually achieve intended / stated trip times (i.e., published departure and planned arrival times are continually achieved and passengers view these scheduled arrival times as the rule rather than as a target);
- the ability to generate the predicted ridership and revenue levels (i.e., the ability to provide reliable service, regardless of the posted trip times, is viewed to most positively impact system ridership and hence revenue levels); and
- the ability to continually achieve benefits (i.e., the effective operation of the system will require the joint and shared effort of all users of the corridor to ensure that passenger and freight diversion to rail can be maximized).

In order to maximize reliability of the proposed service, the following issues need to be addressed:

- Priority of passenger train service operating in the combined freight / passenger corridor must be assured. This can be accomplished by developing appropriate agreements between all of the railway parties and by constructing the proposed infrastructure.
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In order to maximize reliability and hence revenue, it will be imperative that train schedules include sufficient provision for contingencies that may occur as a result of (i) delays caused by meets with opposing passenger and freight traffic, (ii) conflicts with local rail transit and commuter operations, (iii) equipment problems, (iv) weather, and (v) station stops.

While it is not economically feasible to consider removing all of these "gauntlets", consideration should be given constructing additional infrastructure investment where it may have a positive impact on train service and reliability.

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3.2 Minimizing Equipment Risk

It is imperative that an appropriate acquisition process be established by VIA to ensure that the required equipment performance, estimated costs and production schedule can be achieved. To accomplish this, the following approach should be considered:

- This would allow operational discrepancies to be worked out, and would subject the equipment to actual operating conditions (as opposed to lab conditions), allowing VIA to validate its fuel consumption and maintenance requirements under actual operating conditions.
- The acquisition process should maximize the benefits of using lease / maintenance type agreements with the suppliers in order to establish guarantees, incentives and penalties related to reliability and performance requirements.
- Transport Canada safety requirements for equipment operating at speeds of 200 km/h and higher on shared freight/passenger corridors, must be established as soon as possible. This will permit appropriate design criteria to be established in order to enable the manufacturers to complete design and testing of their equipment in a minimum amount of time.

3.3 Enhancing Benefits

Enhancing the benefits can be achieved by:

- Maximizing ridership levels and therefore passenger revenues
- Reducing environmental emissions of CAC (Criteria Air Contaminants) and GHG (Greenhouse Gases) from passenger and freight transportation;
- Improving safety (i.e. reducing fatalities, injuries and property damage caused by collisions);
- Reducing delays from congestion;
- Optimizing land-take for transportation activity; and
- Minimizing other intrusions, such as noise.

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Maximizing revenue and ultimately making VIA more self-sufficient can be achieved by increasing ridership and yield. This in turn, however, is dependent on the other two key drivers.

The other benefits are broadly described as social benefits (i.e. environmental and socio-economic benefits in excess of costs, and other "quality of life" improvements).

4. Considerations for Strategic Asset Investment

Based on the foregoing, it is evident that if the goal of implementing higher-speed passenger rail service within the Quebec City – Windsor corridor is to maximize reliability, minimize equipment risk and enhance benefits, Transport Canada / VIA will face a conundrum in that:

Based on the foregoing, and because of a lack of current and reliable information from which to assess ridership and freight diversion potential, the consensus opinion of the consultants is that this group is unable to recommend a specific corridor or asset investment strategy which should be pursued. Moreover, opining on a specific corridor or asset investment strategy at the current time is difficult given the aforementioned gaps in ridership potential and as a result, such decision will likely need to be deferred until VIA, _____, can present a more comprehensive proposal.

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Additional benefits which could be realized from this strategy, if implemented as part of a regular service offering, include

- > allowing VIA to more firmly establish and plan for trip schedule adjustments, trip running times and frequencies;
- > allowing VIA to substantiate ridership assumptions;
- > allowing VIA to substantiate revenue / fare assumptions; and
- > providing a basis from which to evaluate future phases / implementation.

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