HOW THE CITY OF VANCOUVER USED TRAINFO TO UNDERSTAND INCREASED TRAIN VOLUMES IN THE CITY

TRAINFO Blockage Insights helped the City understand and respond to increased crossing blockages on a major commuter street.

CITY OF VANCOUVER

CASE STUDY SNAPSHOT

Customer:	City of Vancouver
Population:	650,000
Challenge:	Public complaints due to sudden increase in train volumes on Venables St
Solution:	TRAINFO Blockage Insights™
Results:	Accurate, real-time crossing blockage information Effective responses to public complaints; time savings

SUDDEN INCREASE IN TRAIN ACTIVITY ON VENABLES ST

In January 2017 the number of crossing blockages on Venables St in the community of Strathcona increased from one per month to 10 per day. The City struggled to respond to public concerns and political inquiries about the "Wrath of Strath" because accurate, timely, and reliable crossing blockage information did not exist.

Dramatic increase in train traffic through East Vancouver

Strathcona residents concerned CN line crosses many busy streets

CBC News · Posted: Jan 05, 2017 7:57 AM PT | Last Updated: January 5, 2017

The Venables St corridor is one of three major east-west arterials serving downtown Vancouver. During peak periods traffic volumes can reach 2,000 vehicles per hour entering downtown in the morning and exiting in the afternoon. For decades the railway crossing on Venables St was essentially abandoned; supporting about one train per month. However, in January 2017 the railroad operator suddenly changed its operations and began running multiple trains per day. The City was unable to prepare for this unexpected change and began receiving regular complaints from citizens and inquiries from public officials and community groups. The City needed strong data to objectively assess the situation, authoritatively respond to citizens and politicians, and develop a plan to address traffic delays.

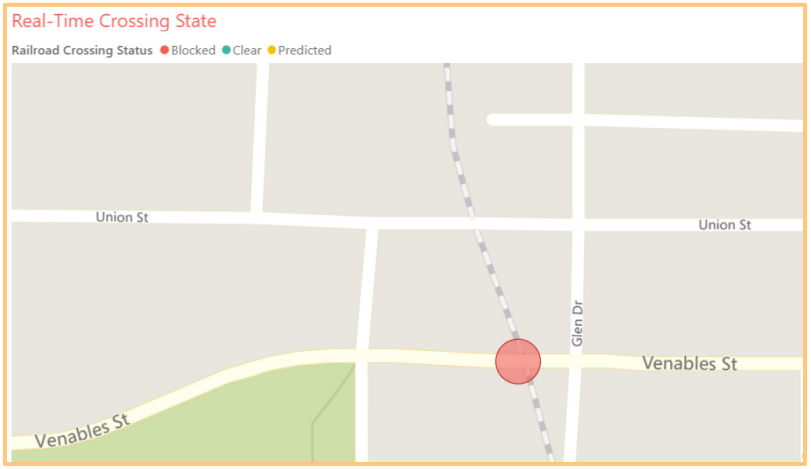
The City was challenged with numerous problems, including:

- **Lack of accurate, reliable, and timely information about crossing blockages**
- **Inability to confidently respond to public concerns and questions**
- **Risk of exaggerated claims by the public and media about traffic delays**
- **Demands for improvements to reduce traffic delays**

The City attempted to collect data with video and manual observation. These approaches were costly, often unreliable, unable to provide a complete understanding of the problem, and required significant time and manual effort to produce information for public consumption.

VANCOUVER IMPLEMENTS BLOCKAGE INSIGHTS™

TRAINFO Blockage Insights™ monitors rail crossings 24/7 using trackside sensors that are installed on public right-of-way. These sensors determine the exact time a blockage starts and ends and wirelessly transmits this data to TRAINFO's cloud server. TRAINFO provides information through an online data portal with a live map, interactive dashboard statistics, and downloadable files.



Live crossing blockage map for Venables St. Red means the crossing is blocked,

Step 1: Install the train detector sensor

City of Vancouver engineers contacted TRAINFO and explained their problem. Within 2 weeks the City received a train detection sensor and installation hardware from TRAINFO. City technicians installed the sensor on a light standard within 6 metres (20 ft) of the railway crossing. The installation process involved 15 minutes of preparation time at the signals shop and 1 hour in the field. It required 2 field staff, including an electrician to connect the light standard's power supply to the sensor, and a boom truck. Once installed, the City technician turned on the power and informed TRAINFO that the sensor was ready.

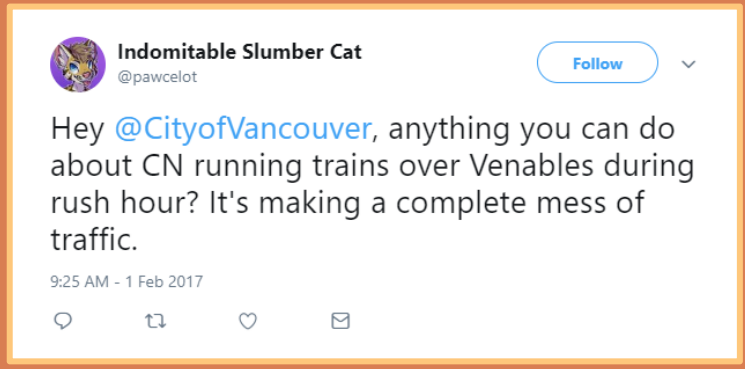
Step 2: Activate and calibrate the train detection sensor

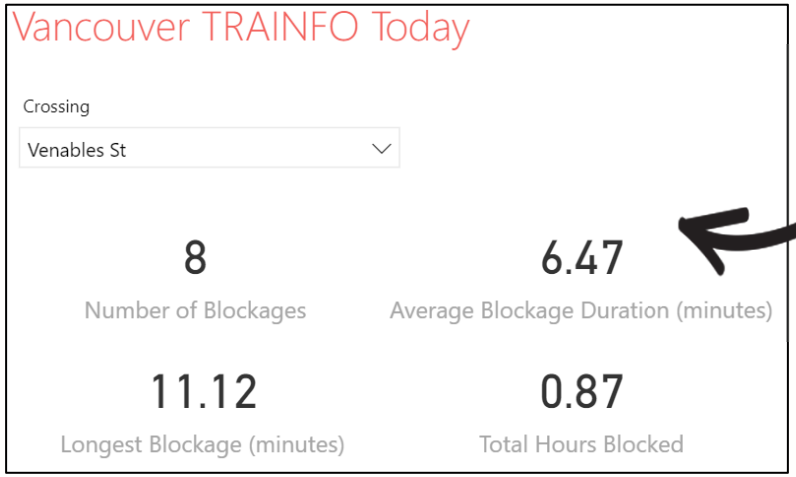
TRAINFO support staff activated the sensor's cellular communications and established the connection with its cloud server. Once connected, TRAINFO remotely calibrated the sensor over a one-week period and confirmed 99.99% crossing blockage accuracy (as verified by manual observations by the City).

Step 3: Access the online data portal

TRAINFO supplied the City with a username and password to access a secure online data portal. The data portal includes a live map showing the crossing's status (e.g., blocked, clear), an interactive dashboard with detailed historical statistics about blockage frequency and duration by time of day, and a downloadable file with the start and end time of each crossing blockage.

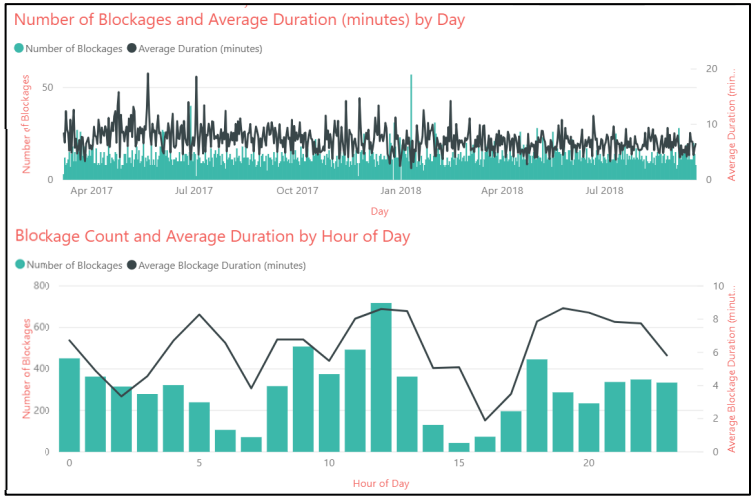
Train detection sensor installed on light standard next to rail crossing





Real-time crossing blockage summaries

Detailed historical crossing blockage statistics



TRAINFO HELPS CITY OF VANCOUVER RESPOND CONFIDENTLY TO CITIZENS & POLITICIANS

The City can now respond confidently to public complaints and inquiries from politicians and community groups. They have established authority over the issue which allows the City to control how the problem is described by the media and the public. Blockage Insights is saving the City thousands of dollars compared to video data collection and providing more accurate data to develop strategies to mitigate traffic delays.

TRAINFO Blockage Insights produced 5 main benefits for the City of Vancouver:

1. **Timely and accurate responses to the public.**
   The City can respond to specific requests for crossing blockage information within minutes and can refute any exaggerated or incorrect claims about when crossings are blocked.

2. **Cost and time savings.**
   The City can now produce detailed crossing statistics within minutes instead of days or weeks.

3. **Credibility and respect.**
   TRAINFO's crossing blockage information has allowed the City to claim authority over the issue. There are no longer any disputes about the magnitude of the problem.

4. **Message control.**
   The City's authority over crossing blockage information and ability to broadly share this information with citizens and media has eliminated exaggerated and false stories about the problem and gives the City power to address the issue rationally and objectively.

5. **Improved understanding for planning and implementing countermeasures.**
   Armed with reliable information, the City is developing strategies to effectively address crossing blockage delays, including implementing TRAINFO Mobility.

"TRAINFO Blockage Insights has allowed us to respond to public inquiries regarding crossing blockages with accurate and reliable information."

- Banafsheh Rahmani, Traffic Engineer
City of Vancouver

To find out how TRAINFO can help your city,

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