Customer story
City of Montréal

FUJITSU

Smoothing traffic flows with AI analysis

Montréal is deploying a Fujitsu smart city AI solution to analyze the traffic flow of around 2,500 traffic lights to make informed decisions, helping the city take quick and decisive action to proactively reduce traffic-related issues before they occur. The result is smoother traffic flows, less congestion, and reduced air pollution. It also helps the city plan service maintenance routes for snowplows and other vehicles much more effectively.

About the customer

Founded in 1642, Montréal and its agglomeration has more than four million citizens. It is the largest city in the Province of Quebec in Canada. Montréal has around 1.8 million residents, and the city employs more than 28,000 people. Set on an island in the Saint Lawrence River, traffic flow can be problematic due to limited entry and exit points.

Industry: Public sector | Location: Canada | People: 28,000 | Web: montreal.ca

"The Fujitsu solution enables us to improve our civic service through automation and machine learning, reducing service times, environmental impact, and costs of operations."

City of Montréal

Challenge

The city of Montréal wanted to streamline traffic flows in its port district and asked companies to submit proposals for an AI-enabled data analysis solution that could predict traffic flow based on data from thousands of sensors.

Solution

- Fujitsu AI-enabled data analysis platform

Outcomes

- Traffic flows more smoothly and journey times have reduced
- Lower emissions mean less air pollution
- Smarter route planning makes clearing roads of snow faster

Streamlining traffic in a modern urban environment

In common with every modern city, Montréal must manage increasingly congested roads. In particular around its port, where hundreds of tons of freight pass through daily. As part of a wider strategic push to embrace AI, the city invited vendors to propose solutions to some of the most pressing issues, including traffic.

Montréal itself is renowned as a hub for AI development so it made sense to explore how related technologies could transform the urban environment. After an exhaustive RFP process, the city chose Fujitsu as its AI partner, based on its deep experience, local presence, and competitive pricing.

The first project Fujitsu was engaged to tackle was to introduce AI-enabled, dynamic traffic light management. With more than 2,500 traffic lights in the port area alone, Fujitsu and the city of Montréal aimed to collect, store, and analyze 8GB of real-time data per day, generated by the sensors, cameras, and lights. This information would then be processed by an AI-enabled software platform to decide how best to streamline traffic flows and speed up journeys.

Introducing AI-enabled analysis

Fujitsu turned to its Paris-based AI Center of Excellence alongside a local team in Montréal to collaborate on a dedicated AI platform. The solution includes CCTV and image AI analytics to optimize processes; crowd detection and movement analysis; real-time traffic light synchronization based on traffic flow; and route optimization for city services such as snowplows and garbage trucks.

Working to a tight five-month timeframe, Fujitsu delivered the new AI solution as a pilot in the port district. It collects data from strategically located sensors and detectors, sends it wirelessly to a central database, then uses AI to crunch the data and predict traffic flows for the following 15 minutes. Based on these predictions, Montréal has a semi-automatic system that can adjust traffic light synchronization to smooth traffic flows.

The solution thus enables the city to better understand the flow of traffic, analyze the space taken up by vehicles, the density on the ground, and better plan how to improve and streamline the circulation.

Smoother traffic flows, less pollution

The new AI solution ensures Montréal can make informed decisions, helping the city take quick and decisive action to proactively reduce traffic-related issues before they occur. This in turn reduces travel times, congestion, fuel consumption, and air pollution.

Furthermore, the Fujitsu solution enables the city to plan its service routes much more effectively, potentially reducing snow removal operation time by up to an hour. That means that during Montréal's frequent snowy weather, sidewalks can be made safe and available more quickly.

"The Fujitsu solution enables us to improve our civic service through automation and machine learning, reducing service times, environmental impact, and costs of operations," says the city of Montréal.

Following the success of this port-area project, Montréal aims to extend it to cover the entire metropolitan region in the next twelve months. Given the inherent scalability of the Fujitsu solution, this extension is expected to be seamless. It is also looking at other projects where AI and Fujitsu can play a leading role.

2,200

service vehicles which can now be smartly managed

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