A REGIONAL ITS ARCHITECTURE
FOR PUBLIC TRANSPORT IN GREATER MONTRÉAL

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BACKGROUND
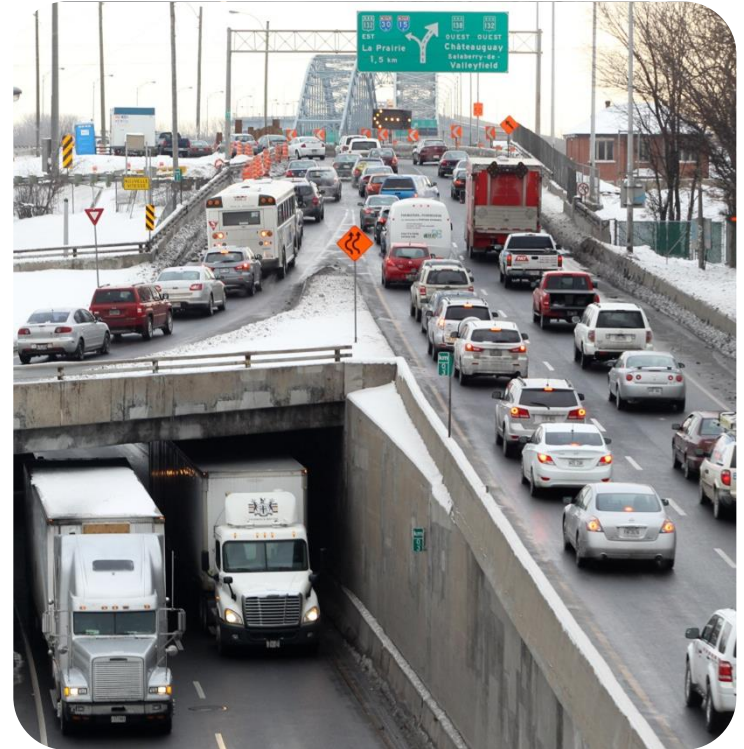
MOBILITY CHALLENGES AND ISSUES IN GREATER MONTRÉAL

BACKGROUND

MOBILITY: A METROPOLITAN CHALLENGE

Persistent road congestion

Precarious infrastructure

Limited funding

Complex governance

Growing customer expectations

PUBLIC TRANSPORT ISSUES

COMMON AND REGIONAL CHALLENGES

Service quality

Intermodality

Traveller information

Costs (capital / operating)
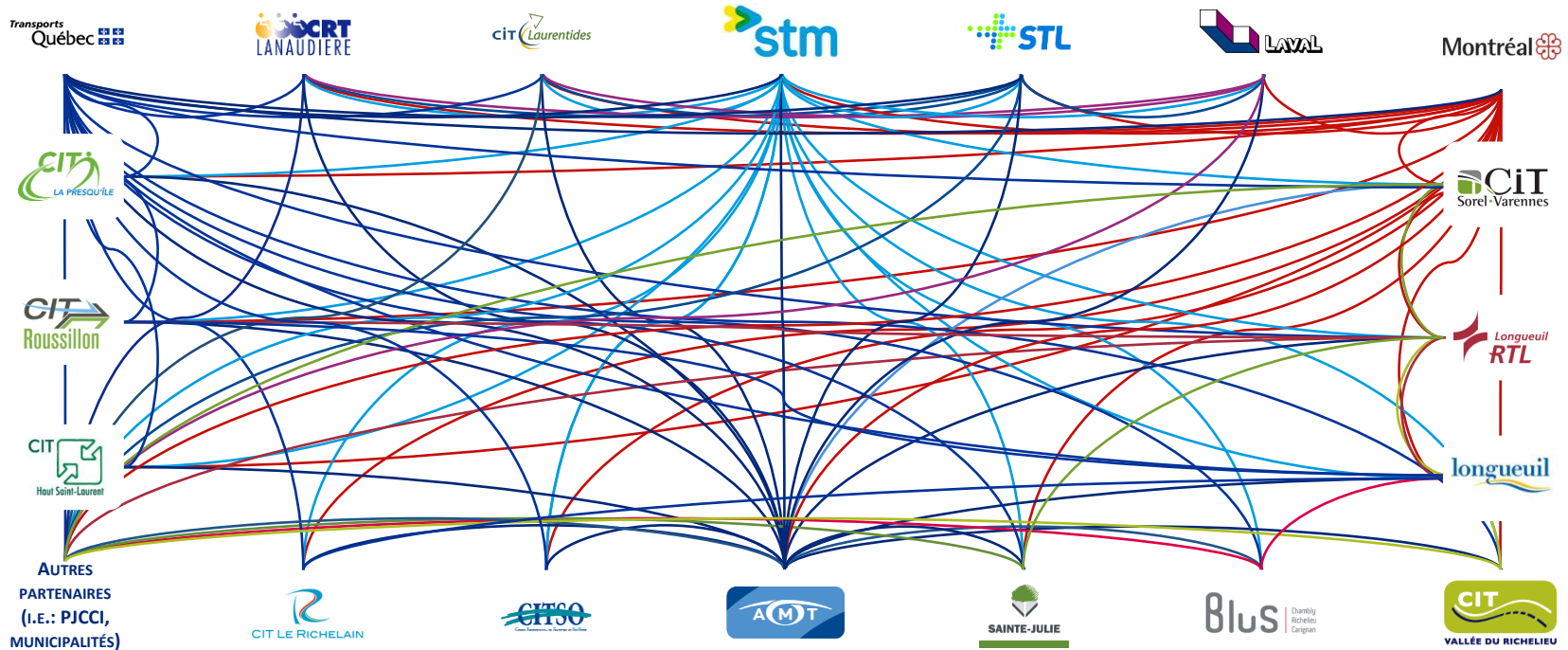
Fares / payment

Comfort / appeal

Transparency / sound management

Terminus centre-ville (downtown bus terminal)

COLLABORATION BETWEEN PARTNERS

A MAJOR CHALLENGE AND OPPORTUNITY

INTELLIGENT TRANSPORTATION SYSTEMS

ADDRESSING CHALLENGES THROUGH INNOVATION

How can we **maximize the contribution** of technology to **address mobility issues**, **increase cooperation** between transport actors and **optimize resources**?

APPROACH
TO AN INNOVATIVE REGIONAL ARCHITECTURE

OBJECTIVES

Improve **regional planning** and **collaboration between partners**
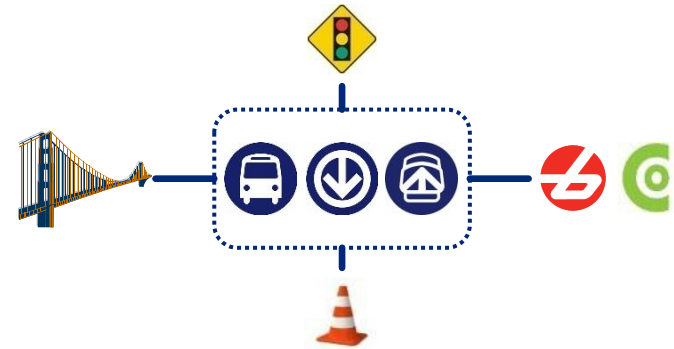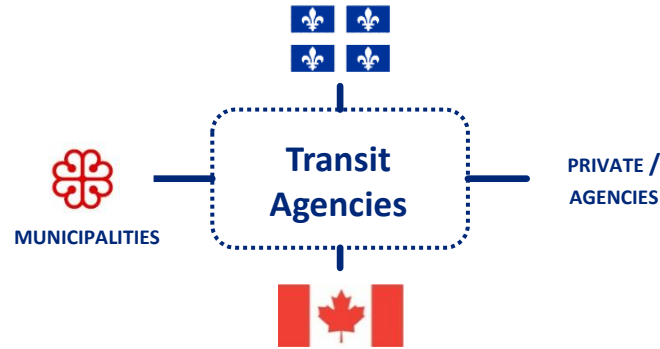
Optimize financial, human and technological **resources**

Stimulate innovation in public transport

ITS ARCHITECTURE FOR PUBLIC TRANSIT

REGIONAL PLANNING TO OPTIMIZE AND MOBILIZE

MUNICIPALITIES

Transit Agencies

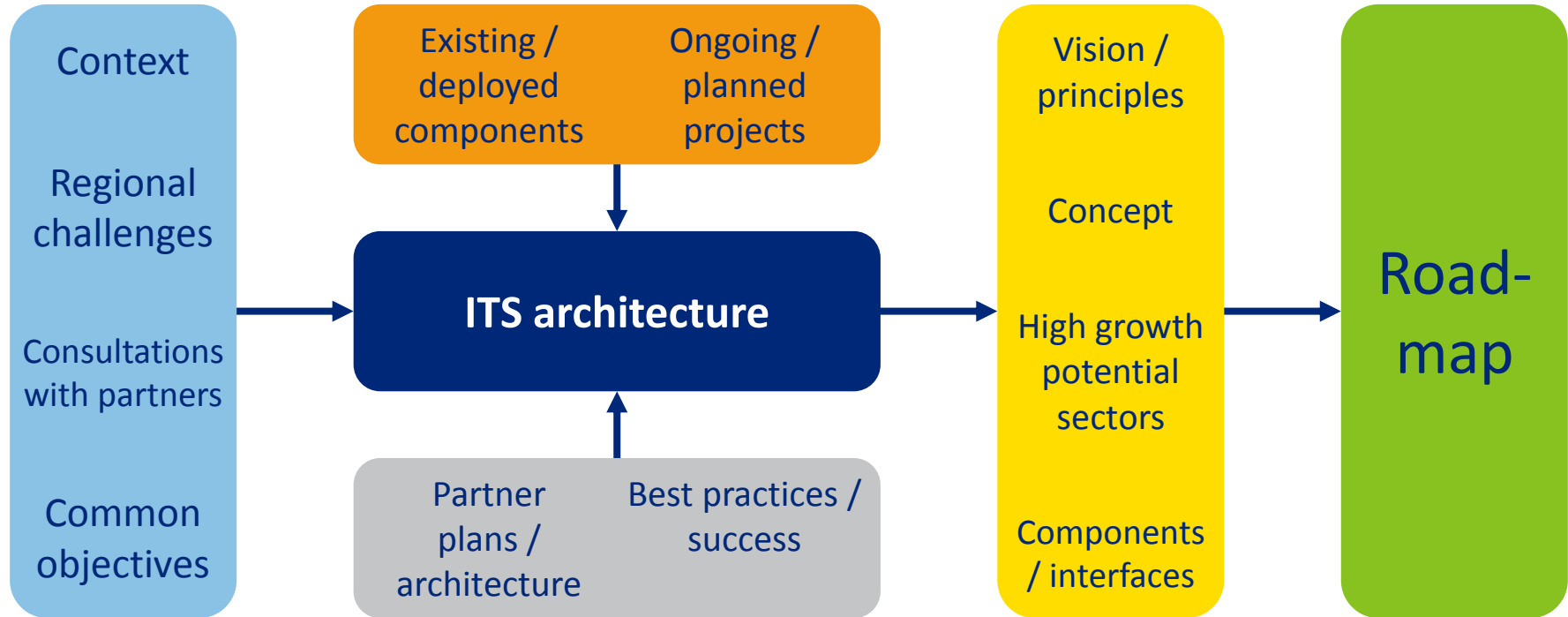PRIVATE / AGENCIES

HORIZON

2014 → 2021

2013

2014

VISION

ARCHITECTURE

ROADMAP

APPROACH

INGREDIENTS FOR AN INNOVATIVE METROPOLITAN ROADMAP

MAIN PARTNERS

A CONCERTED AND REGIONAL APPROACH

* Financial partner for the architecture process

VISION, TARGETS AND GUIDING PRINCIPLES
INNOVATION-DRIVEN MOBILITY STRATEGY

VISION

INNOVATION IS CHANGING THE WAY PEOPLE GET AROUND

Public transport is the most effective, rapid and user-friendly means to get around the metropolitan region. It transforms mobility.

Intelligent transportation systems are central to this transformation. They optimize the **customer experience**, improve **service quality,** promote **intermodality**, facilitate **the exchange of information** and reduce **costs**.

They **transcend** geographic, technical and institutional **limitations**.

They place the **customer** at the heart of the decision-making process.

GUIDING PRINCIPLES
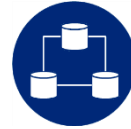
5 PILLARS OF INNOVATION FOR PUBLIC TRANSPORT

KNOW

History
Real time
Trends

INFORM

Quality
Relevance
Integrity

SHARE

Transparency
Interoperability
Community

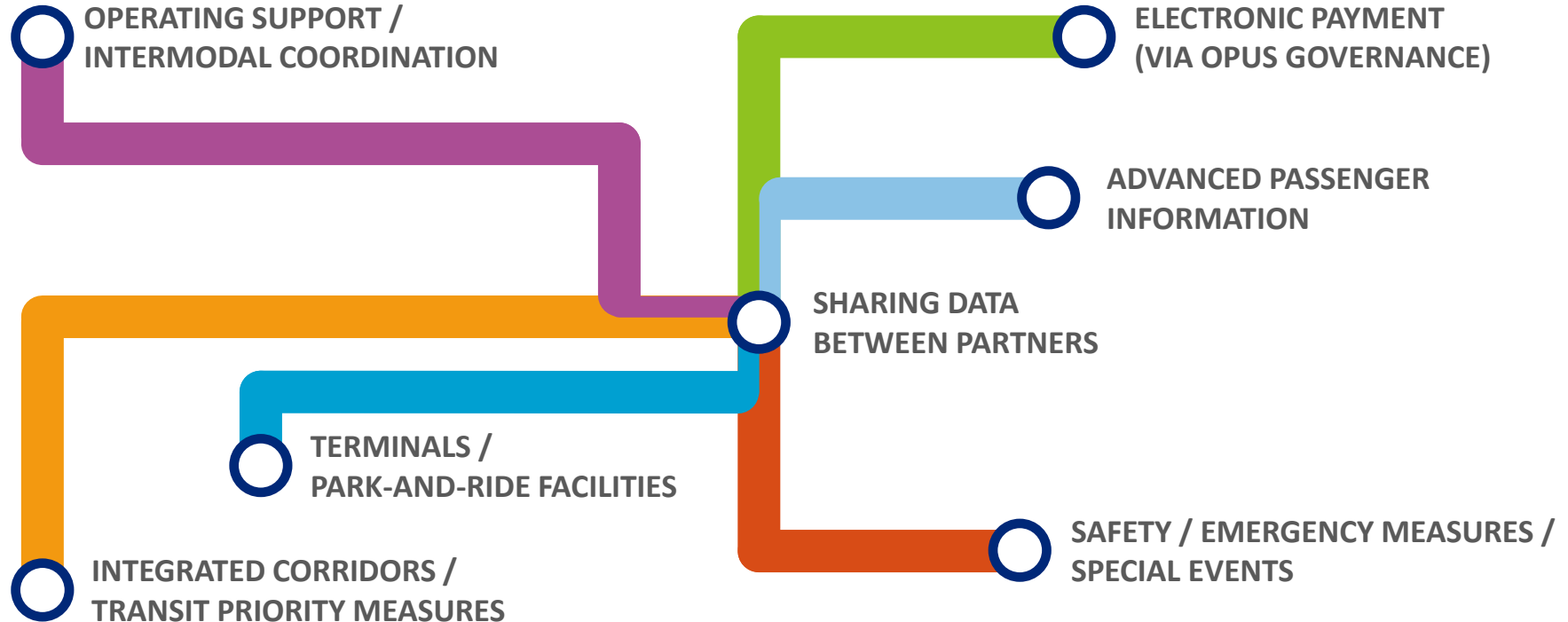**ACT**

Reaction
Prediction
Pro-action

OPTIMIZE

Resources
Processes
Services

IDENTIFIED HIGH-POTENTIAL TARGETS

MAXIMIZE THE BENEFITS OF INNOVATION

**OPERATING SUPPORT /
INTERMODAL COORDINATION**

**ELECTRONIC PAYMENT
(VIA OPUS GOVERNANCE)**

**ADVANCED PASSENGER
INFORMATION**

**SHARING DATA
BETWEEN PARTNERS**

**TERMINALS /
PARK-AND-RIDE FACILITIES**

**SAFETY / EMERGENCY MEASURES /
SPECIAL EVENTS**

**INTEGRATED CORRIDORS /
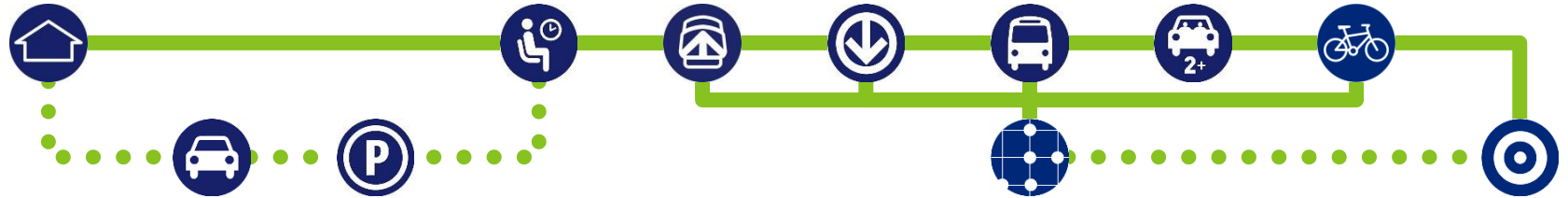TRANSIT PRIORITY MEASURES**

A CUSTOMER-CENTRIC VIEW OF INNOVATION

THE FUTURE TRANSIT TRIP

TRANSFORMING THE END-TO-END CUSTOMER EXPERIENCE

Plans multimodal trip ahead of departure

Easily buys transit fare and parking ticket

Is notified of service disruptions and available alternatives

Is notified of traffic obstructions and conditions

Is notified of available spaces at park-and-ride facilities

Through integrated mobile services

Is notified of available services and next departures

Is shown vehicle / car occupancy for optimal positioning

Knows time of arrival at destination

Benefits from active preferential measures and integrated corridors

Benefits from synchronized transfers

2014-2021 ROADMAP

12 PROPOSED MAJOR INNOVATION PROJECTS
TO TRANSFORM MOBILITY
IN GREATER MONTRÉAL

PROPOSED MAJOR PROJECTS (1/4)

1. Regional open data portal

2. Regional data exchange platform
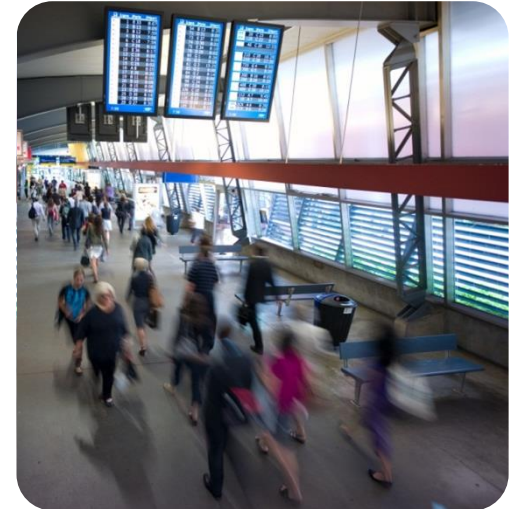

3. Regional and multimodal trip planner
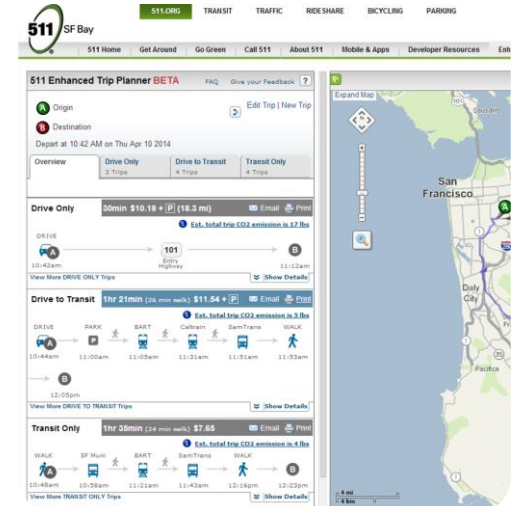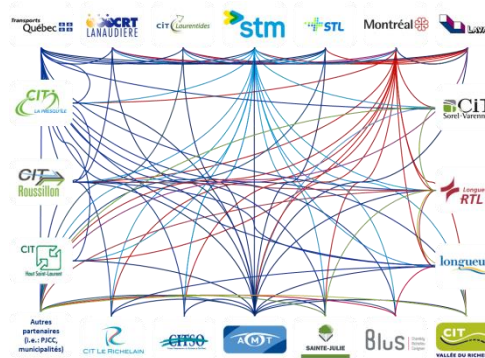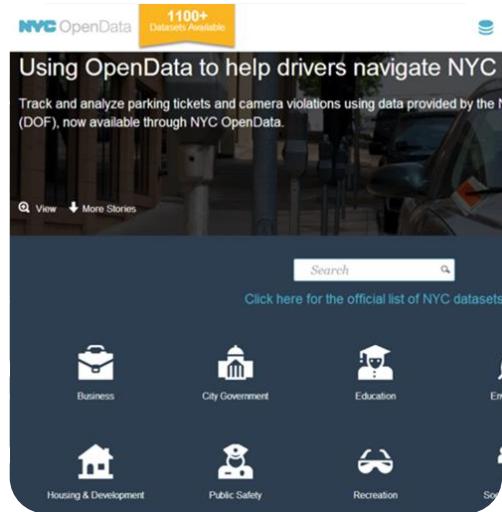
PROPOSED MAJOR PROJECTS (2/4)

4. Intermodal coordination assistance

5. Integrated management of park-and-ride facilities

6. Real-time management and traveler information at terminals

PROPOSED MAJOR PROJECTS (3/4)

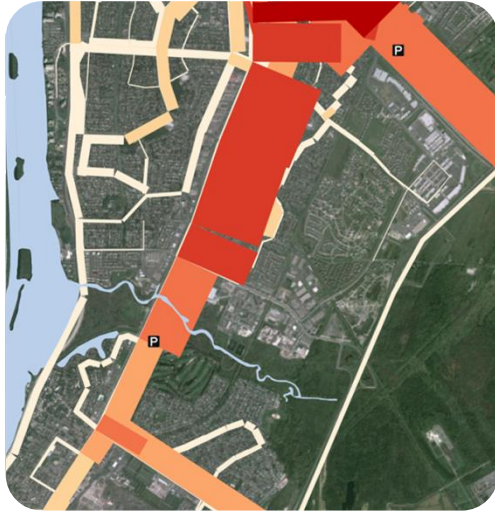7. Integrated Corridor Management and Transit Signal Priority

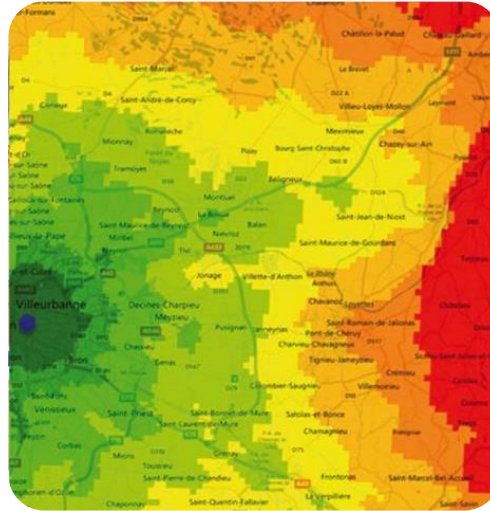8. Regional public transport user information service

9. Next-generation electronic ticketing (OPUS 2.0)

PROPOSED MAJOR PROJECTS (4/4)

10. Real-time ridership analysis

11. Ongoing microsimulations and predictions

12. Integration of ITS with major projects, heavy modes and partner projects

12 MAJOR INNOVATION PROJECTS

Regional open data portal

Regional data exchange platform

Regional and multimodal trip planner

Intermodal coordination assistance

Integrated management of park-and-ride facilities

Real-time management and traveler information at regional terminals

Integrated Corridor Management and Transit Signal Priority

Regional public transport user information service

Next-generation electronic ticketing (via OPUS 2.0)

Real-time ridership analysis

Ongoing microsimulations and predictions

Integration of ITS with major projects, heavy modes and partner projects

SUCCESS FACTORS

FOR A PROMISING METROPOLITAN ROADMAP

Consistent with the **vision** and **principles**

Metropolitan and **multimodal** range
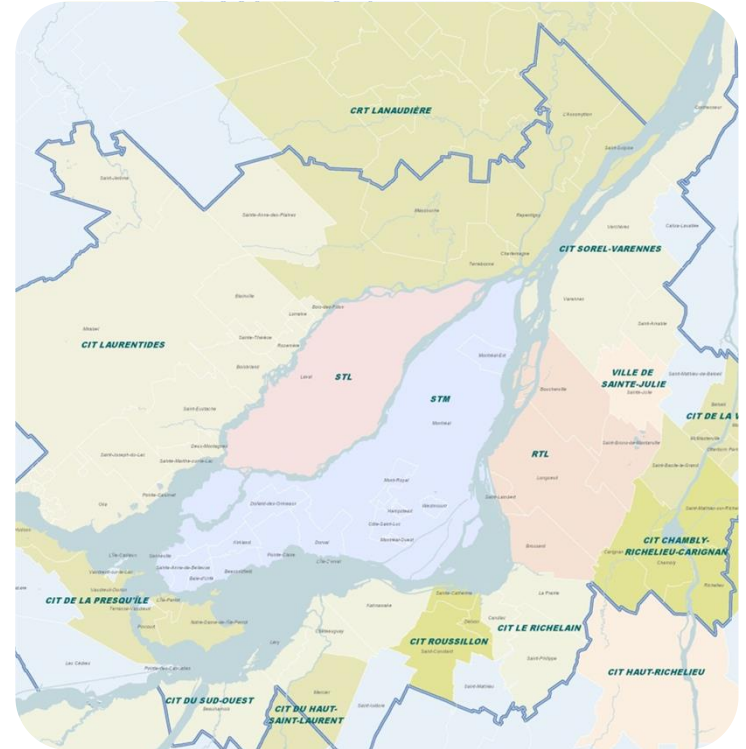
Respects the **roles** of partners

Customer-focused

Benefits as **many partners** as possible

Capitalizes on **existing components**

Optimizes **resources**

Stimulates **innovation**

NEXT STEPS

COMPLETE THE PROCESS AND BEGIN THE IMPLEMENTATION

Adopt and define areas for innovation

Formalize partner support

Identify conditions for success (financing, execution, governance, etc.)

Complete the roadmap (Q3 2014)

Submit the roadmap (Q4 2014)

Implement the roadmap (2015+)

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