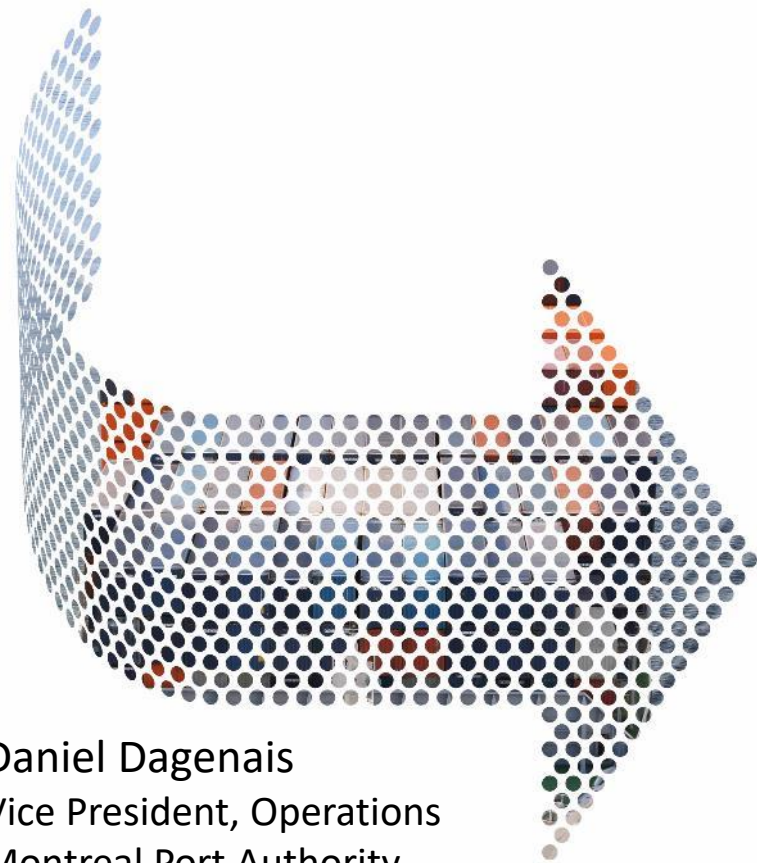




Daniel Dagenais
Vice President, Operations
Montreal Port Authority

April 4, 2017



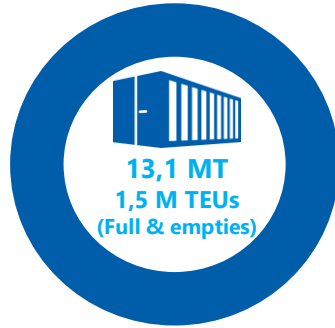
PORT  MONTRÉAL

A FORCE FOR GROWTH

**Using Technology to Stake Out a
Leadership Position**



AN **ECONOMIC** FORCE

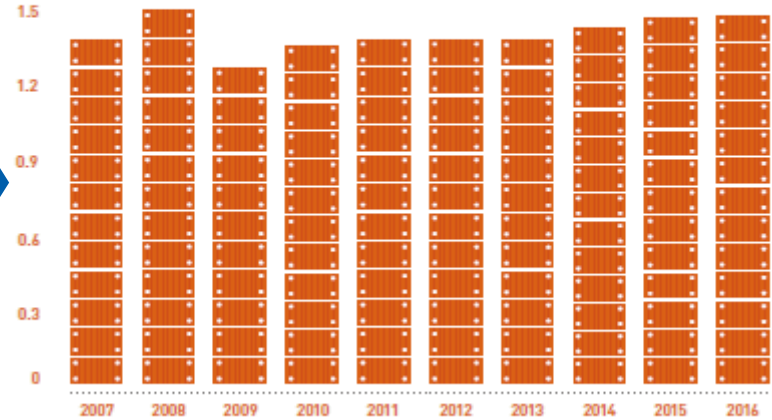


35,4 MT



CONTAINERIZED CARGO

(MILLIONS OF TEU*, FULL AND EMPTY)



* TEU = Twenty-foot Equivalent Unit

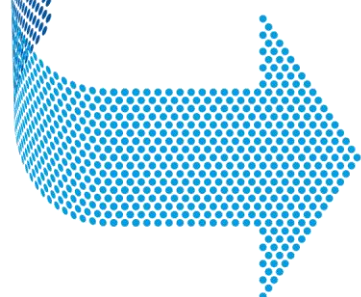


Hapag-Lloyd



2,000 + ships / year
60-80 trains / week
2,500 trucks / day

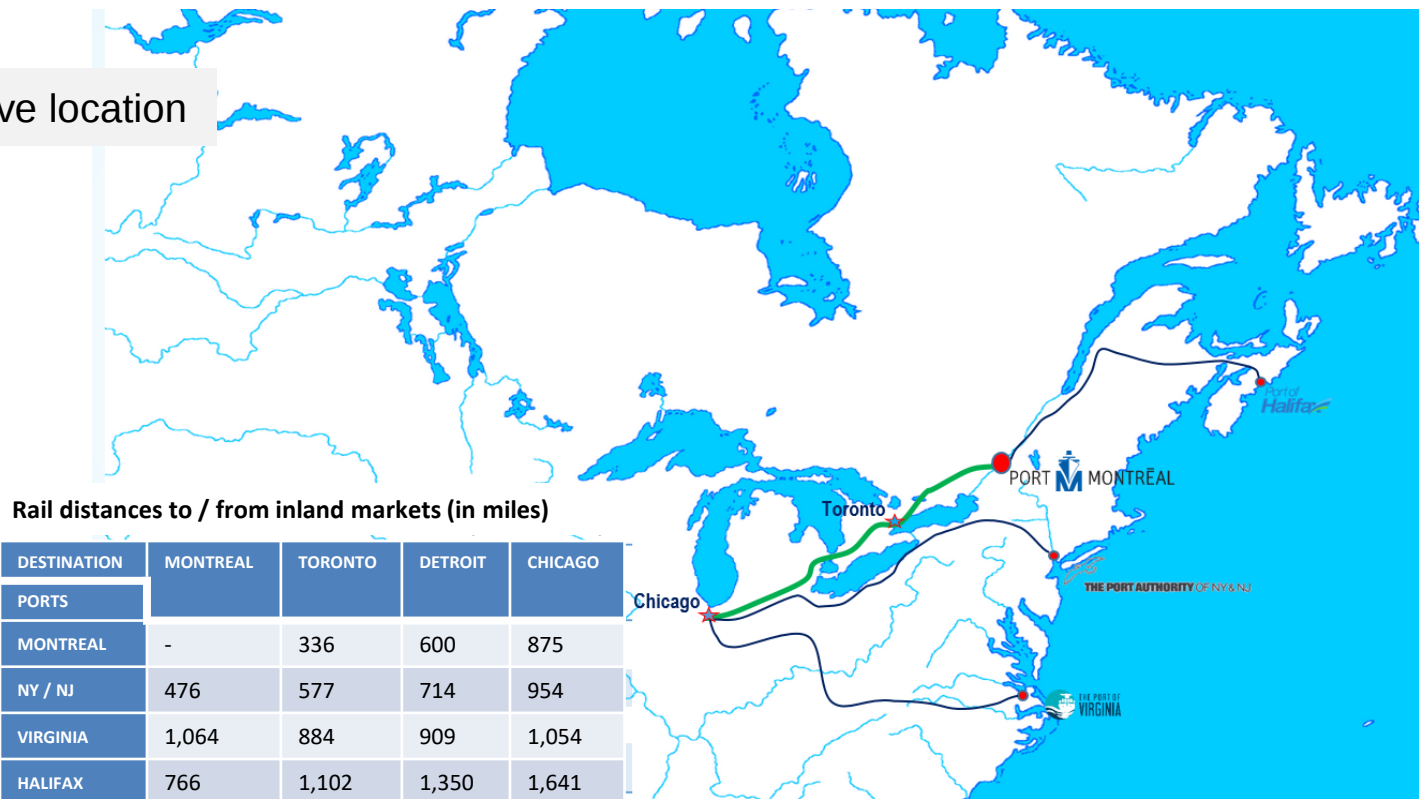


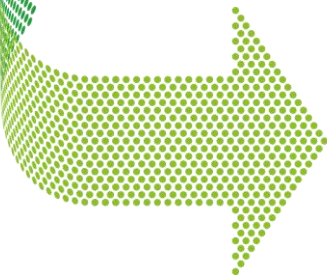


A LOGISTICS FORCE

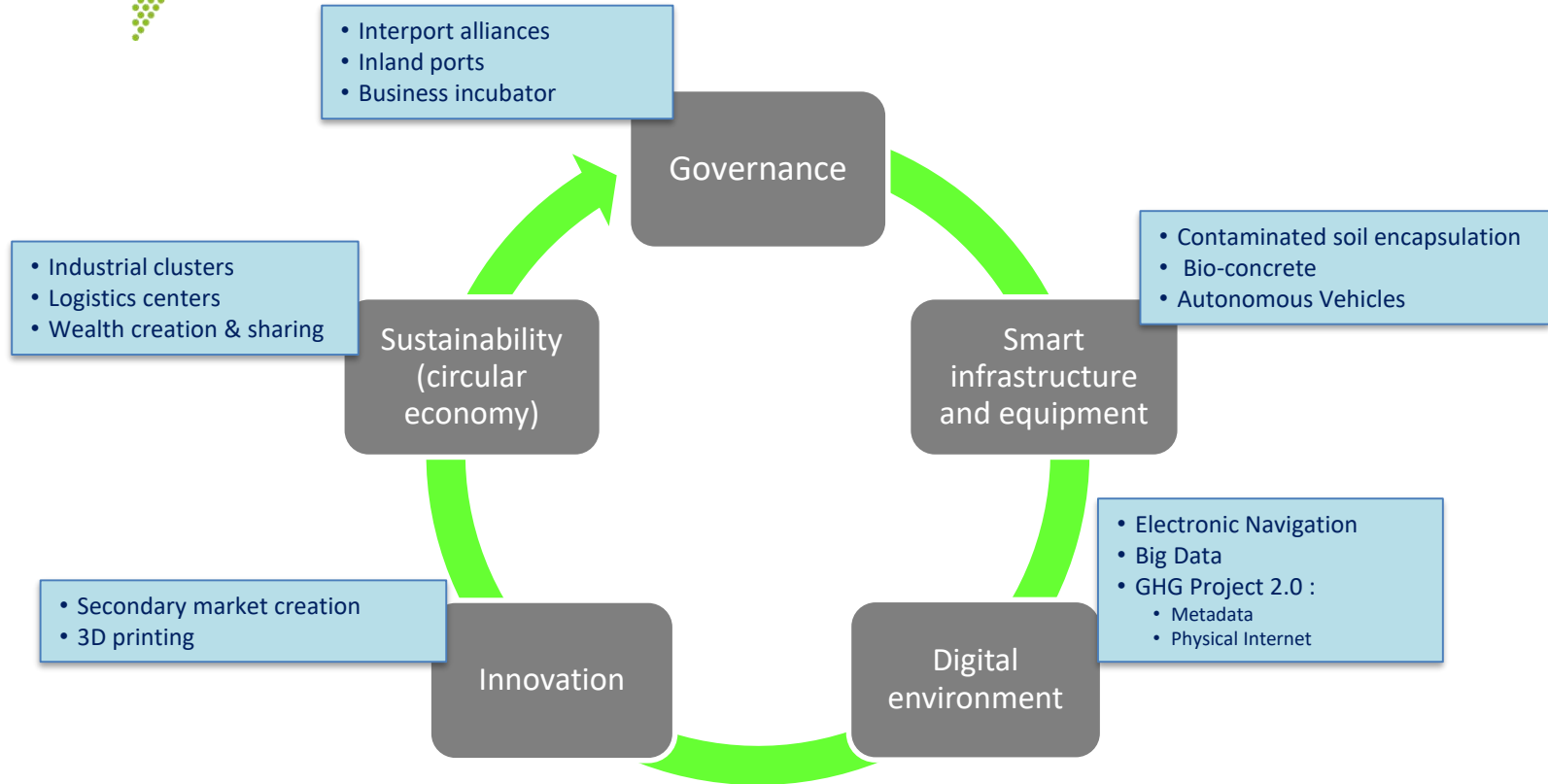
Strategic & Competitive location

- 2nd largest port in Canada
- 5th container port on East Coast
- River port behaving as ocean port
- Supply chains compete against each other more so than ports do...



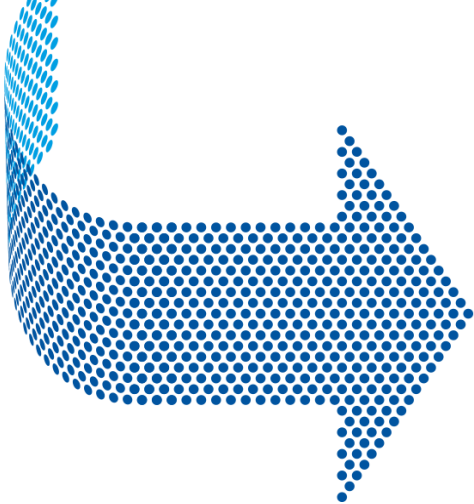


SMART PORT

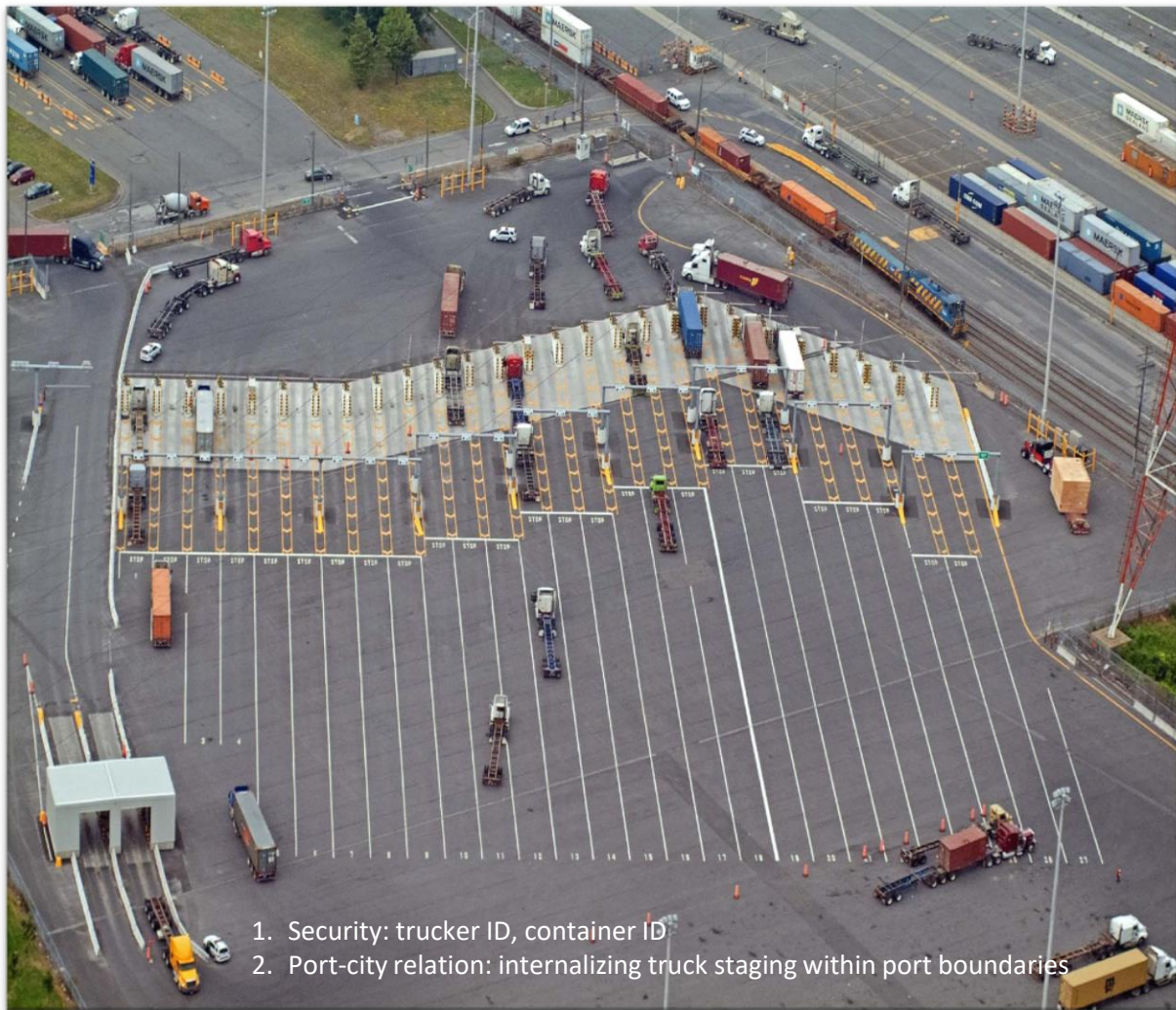


THE PROJECT





STATE OF THE PORT IN 2012



1. Security: trucker ID, container ID
2. Port-city relation: internalizing truck staging within port boundaries

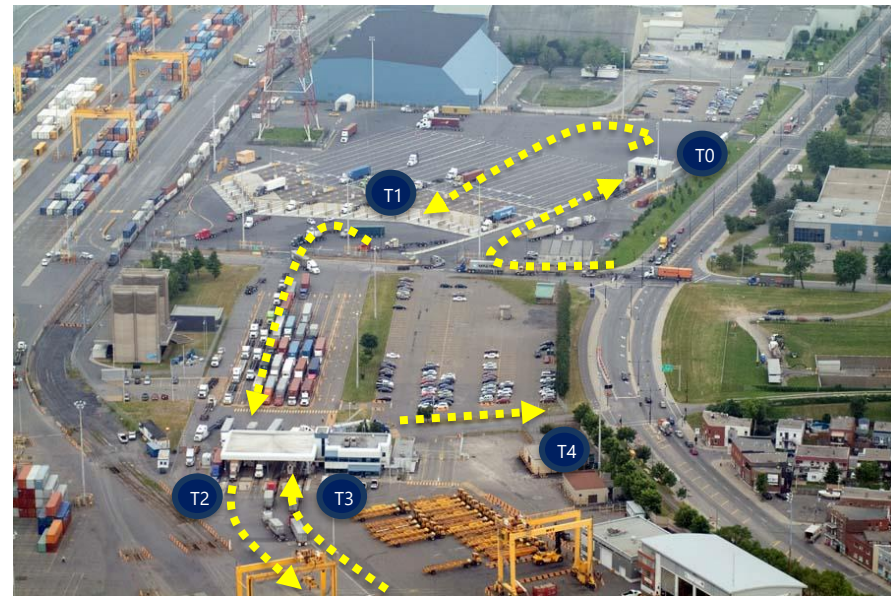
PROJECT OBJECTIVES

1
Objective is to reduce GHG emissions through route optimization methods.

2
Combining RFID and plate reading technologies to monitor the entire truck transaction within port territory.

3
Measure total truck processing times from entry to exit and relay wait times to truck drivers and dispatchers in real-time.

4
GHG reduction: routing optimization through behavioral changes to reduce truck idling and smoothen hourly peaks.



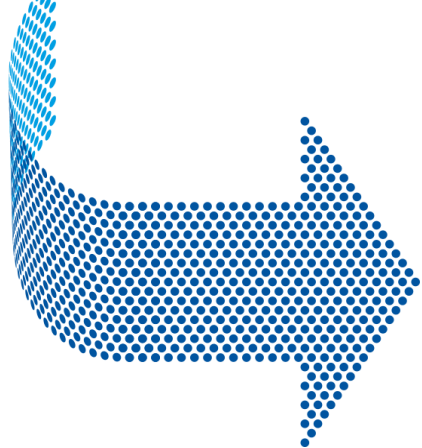
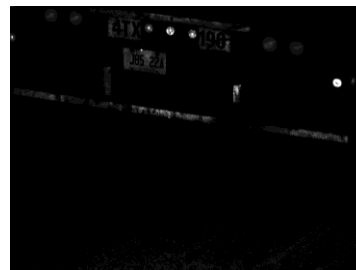
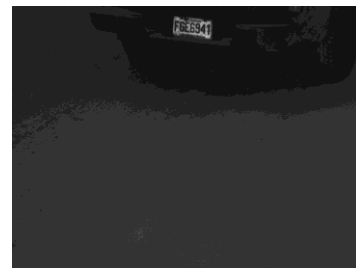
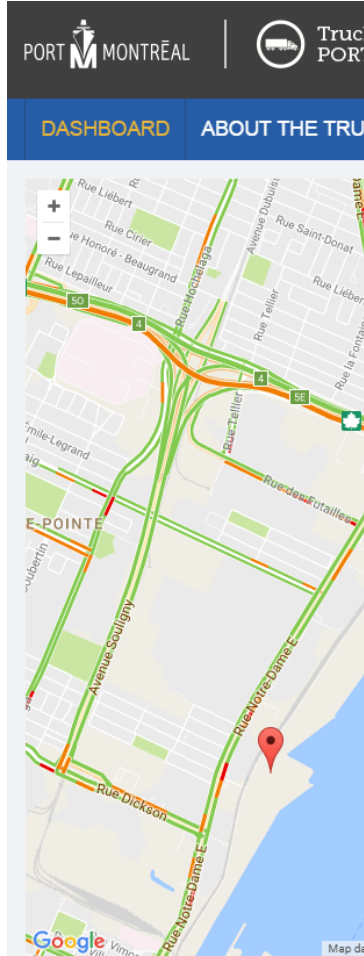


PLATE READING TECHNOLOGY

- Pilot testing (winter 2014-15)
- Pairing rate 80% à 98% depending on terminals



PORTAL LAUNCH OCTOBER 2016



<https://portmtltrucks.com/>



Greenhouse gas emissions

Current emissions: Low.

GES emission concentration

Calculated per truck crossing



- High: more than 160g CO2/KM
- Medium: from 120g to 160g CO2/KM
- Low : less than 120g CO2/KM

Calculating greenhouse gas (GHG) emissions per truck trip is based on how much time elapses between the various checkpoints on Port territory and how far a truck travels.

With these figures, we can measure the amount of fuel used by road transport at the Port of Montreal and, in turn, the greenhouse gas emissions.

We calculate greenhouse gas emissions when a truck is being driven and also when it's idling.

DOWN FRANÇAIS



90 120

min +

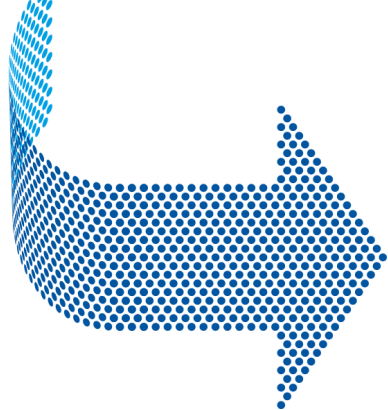
90 120



90 120

ions





TRUCKER ACCOUNT



PORT MONTREAL

Truck PORT

DASHBOARD

ABOUT THE TRUCK

<https://portmtltrucks.com/>

Edit alert

CAIS

Terminal:

Cast

Notify me at:

Greater Than

Minutes:

-

75

+

Repeat:

Sun

Mon

Tue

Wed

Thu

Fri

Sat

From:

06:00 am

To:

03:00 pm

Notify me by:

☐ Email

☒ SMS

CANCEL

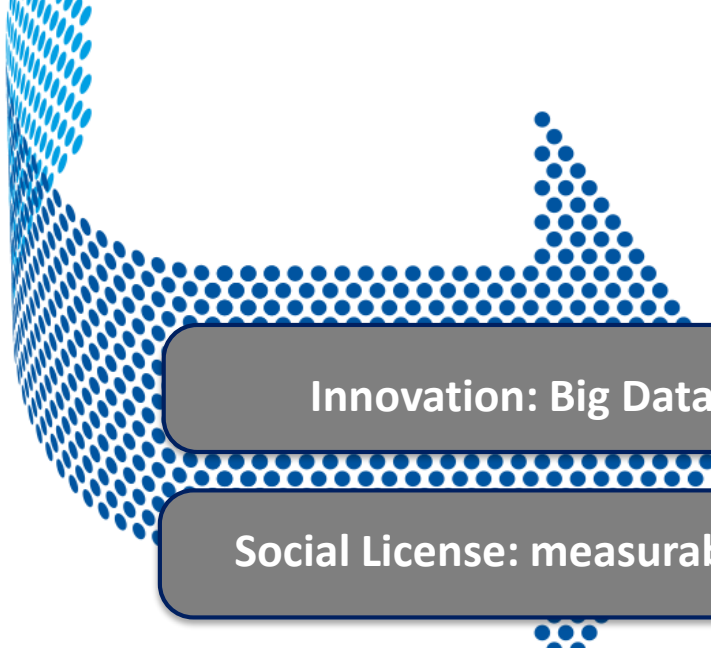
SAVE

120

120

120

120



TAKEAWAYS

Innovation: Big Data and real-time analytics. IT architecture

Social License: measurable air quality improvements for communities

Competitiveness: increased fluidity means a competitive supply chain



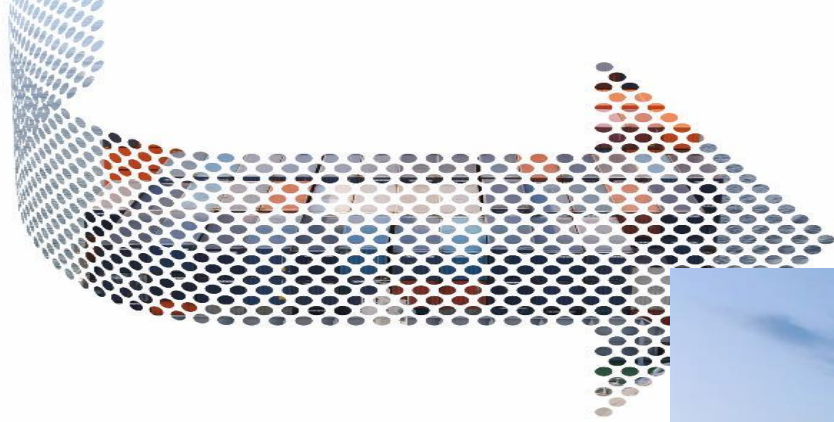
NEXT STEPS

Provide visibility outside port boundaries: Smart City ITS

Introduce container matchback program, create a market

Leverage networking capabilities, IOT

Predictive functions



PORT  MONTRÉAL

A FORCE FOR GROWTH

May 6th 2017

**Port of Montreal welcomes its first vessel at
its new cruise passenger terminal**

On YouTube: «New Passenger Terminal for the Port of Montreal»

