



Growing the New Michigan – Gateway to the Midwest



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Developed by McKinsey & Company with support from Business Leaders for Michigan staff

Michigan can leverage its strategic location, robust infrastructure, skilled workforce and developable land to become a Gateway to the Midwest

The asset

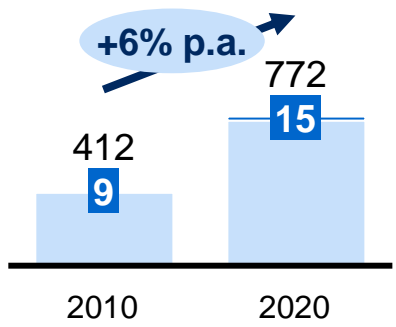
- Detroit is strategically located in the North American trade corridor with a robust infrastructure (airports, interstates, rail & sea)
- Michigan has a skilled workforce with significant knowledge in logistics & supply chain management
- However, Michigan lags behind nation in logistics and warehousing employment and activity
- Existing capacity to grow both air volumes and distribution/office space throughout metro area

Potential ways to leverage the asset

- Leverage southeast Michigan’s strategic location, robust infrastructure and developable land to position Detroit as a global freight and logistics hub for the Midwest and beyond
- Drive economic transformation, employment and competitive advantage through integrated development of **Aerotropolis, International Trade Crossing, Rail Tunnel** and **Multi-modal Rail Yard (e.g., Global Freight Gateway)** that will attract logistics and other transport related businesses (e.g. time sensitive manufacturing, e-commerce fulfillment)
- Potential to generate 60,000 jobs and \$10 Billion in economic development over 25 years if fully developed

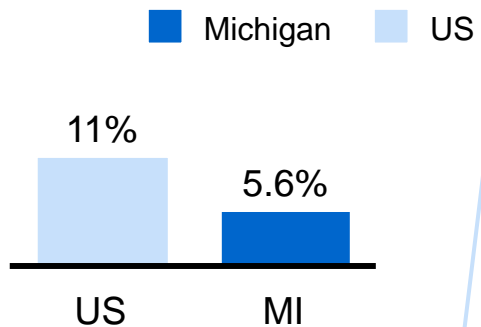
Logistics GDP

\$ Billions



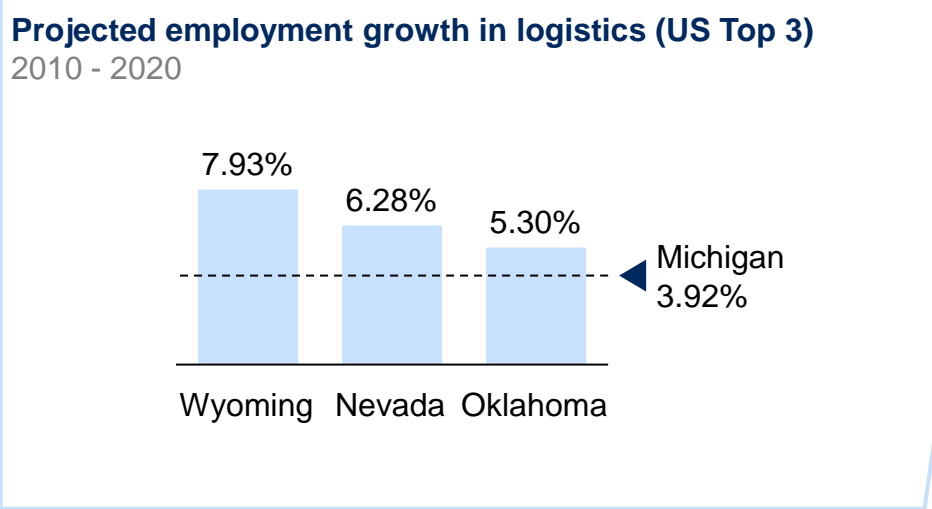
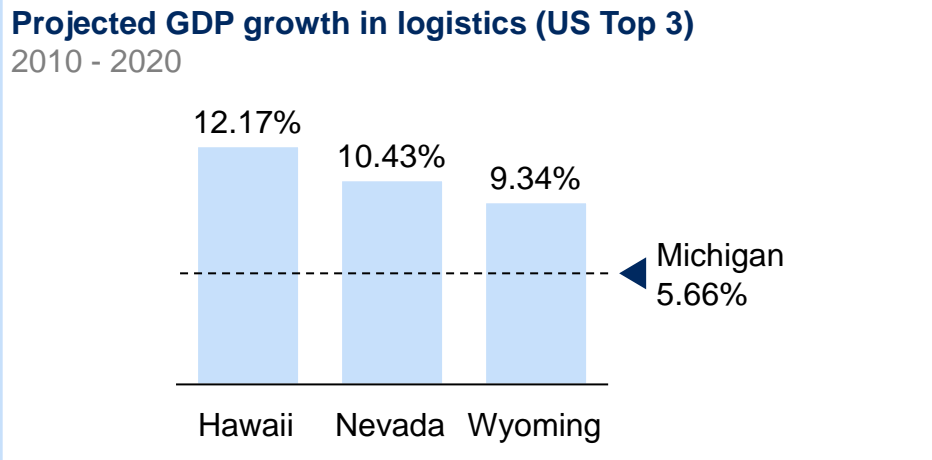
Growth in truck transportation and warehousing employment

Percent

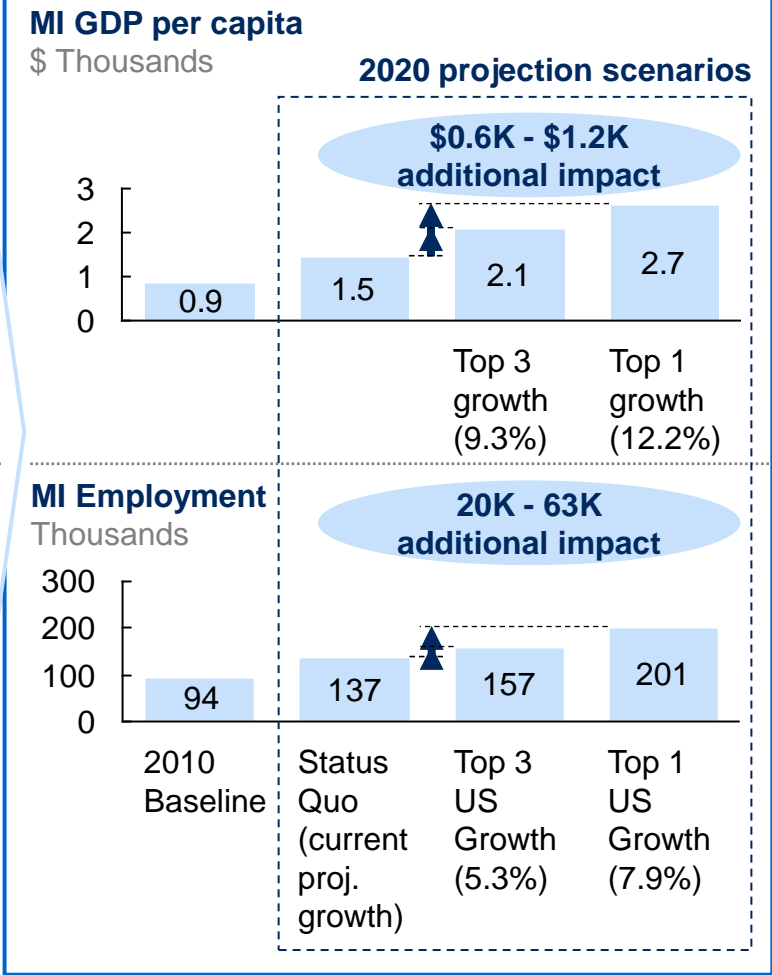


2020 Goal: Michigan should be a Top Three state in logistics

Today, top US states outperform Michigan in growing logistics



Michigan should aspire to reach top US state growth in logistics



Key considerations for becoming a Gateway to the Midwest

A Opportunity & aspiration

- US spends about \$1 trillion each year on infrastructure including roads, bridges and tunnels (~65%) as well as rail, air and seaport
- Create an integrated global freight gateway & distribution/logistics hub through development of:
 - ‘Aerotropolis’– a hub for aviation intensive businesses in area around Detroit Metro & Willow Run could bring \$170 billion in ongoing economic activity to the region
 - Improved rail and trucking infrastructure support logistics and distribution growth; Attract air-intensive (e.g. time sensitive manufacturing, e-commerce fulfillment, telecom, high value agriculture) and logistics businesses (e.g. 3PL, freight forwarding)
- Generate employment (~116k jobs) and develop surrounding communities (including commuter transit)

B Feasibility & case for action

- Skilled workforce with significant knowledge base in logistics and supply chain management
- 2 major airports (Metro and Willow Run) with additional runway capacity and 10k+ developable acres
- Access to interstate system
- Serviced by 4 of 6 Class 1 North American railroads
- Closest US water gateway to Midwest through Ports of Halifax and Montreal
- Ranked 5th nation for ‘logistics friendly’ by Logistics today
- 5th most valuable US port by dollar value and highest value land portal

C Potential Enablers

- Political acknowledgment of the value of investing in logistics infrastructure
- Development entity or corporation to offer consistent leadership, branding and vision; land infrastructure; and one stop shop for all state, county and local permitting
- Strong partnerships between local and state governments, citizens, and businesses to promote unified vision and attract anchor tenants
- Creative financing alternatives to provide funding for new organization, secure land for development and provide incentives to developers

A B Opportunity & aspiration – Michigan has strategic advantages and resources to grow logistics, warehousing and freight sectors

Michigan's strengths

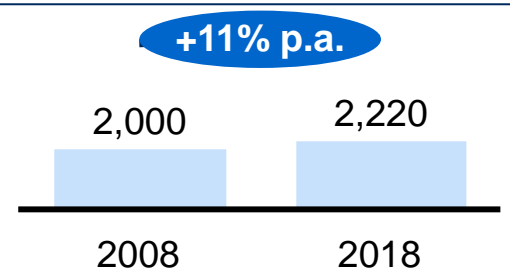
Michigan has strategic advantages and resources in transport and logistics ...

- Skilled workforce with significant knowledge base and research institutions in key sectors:
 - Logistics and supply chain management
 - Advanced manufacturing
- 2 major airports (Metro and Willow Run)
 - 5th largest runway capacity in US, which is underutilized (unlike most major hubs)
 - Operated by same authority
- Access to interstates and NAFTA highway
- Serviced by 4 of 6 class 1 North American railroads
- Closest MW gateway to ports of Halifax and Montreal by rail (e.g., lowest cost and lowest carbon footprint port of entry to EMEA¹)
- Ranked 5th nation for 'logistics friendly' by Logistics today
- 5th most valuable US port by dollar value and highest value land portal

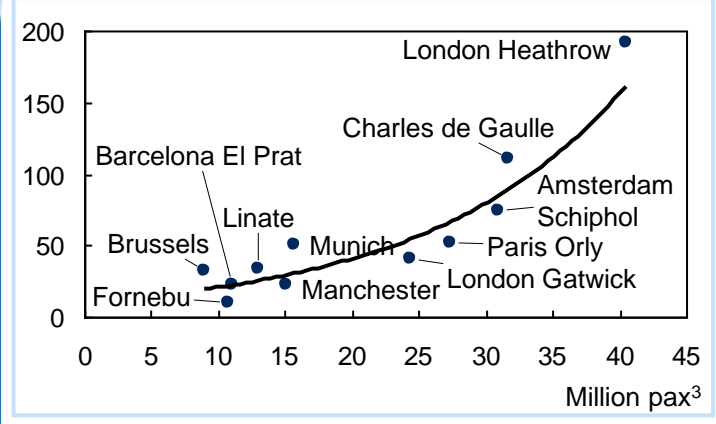
Opportunity

... which are rapidly growing sectors of the economy and drive employment

US truck transport & warehousing employment, Thousands



Number of jobs created by airports², Thousands



1 Europe, Middle East and Africa

2 Jobs created directly in or near the airport and related to airport activity

3 Per million passengers

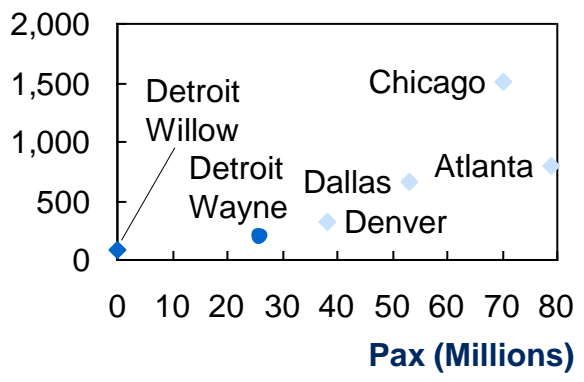
A B Opportunity, Aspiration, Feasibility & Case for Action: An Aerotropolis would leverage resources & infrastructure to drive economic growth

Opportunity & Aspiration

- Detroit airport is ranked 16th in all US airports by capacity, with annual economic impact of \$7.6B and job impact of 71K
- Position Detroit as an integrated global freight, logistics and business hub through coordinated development area surrounding Metro & Willow Run Airports
- Attract aviation-intensive businesses (e.g., time-sensitive manufacturing, e-commerce fulfillment, professional services)
- Solid fundamentals for development in warehouse and distribution market with additional opportunities to develop underserved markets, e.g. office, hotel space, wholesale merchandise marts

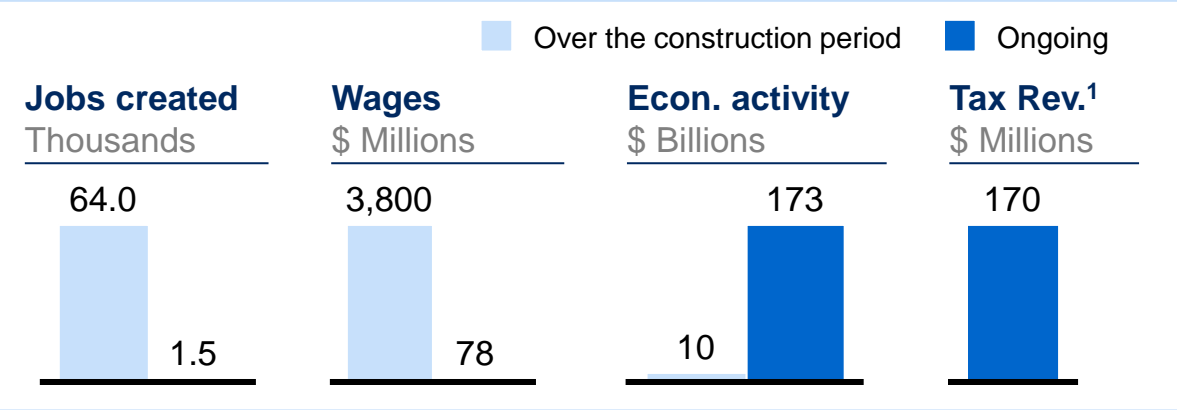
Feasibility

Freight (Thousands of tons)



- 2 airports with 11 runways, 5th largest runway capacity in US, currently underutilized
- 10,000-25,000 acres developable land around airports
- Better service levels, weather, and more capacity than regional competitors (e.g., Chicago)
- No major legal or regulatory impediments to development

Case for action: Economic impact



1 \$30M from Michigan Business Tax, \$67M in personal income tax, \$74M in property taxes

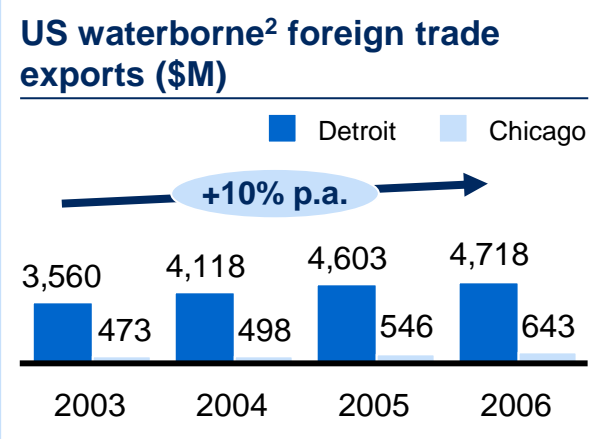
A B Opportunity, Aspiration, Feasibility & Case for Action: Create integrated freight hub leveraging Michigan's unique geographic access through waterborne traffic

Opportunity & Aspiration

- Closest route to Europe, S. America and Africa from Midwest
- One of two deep-water Atlantic ports that can accommodate post-Panamax (larger) container ships
- Should aspire to coordinate and integrate freight and logistics growth across modes-- rail, sea and road
- Establish Detroit as inland port for seaports of Montreal and Halifax-- a "Chicago East"
- Strengthen international trade crossing, which is currently second highest value port in US¹

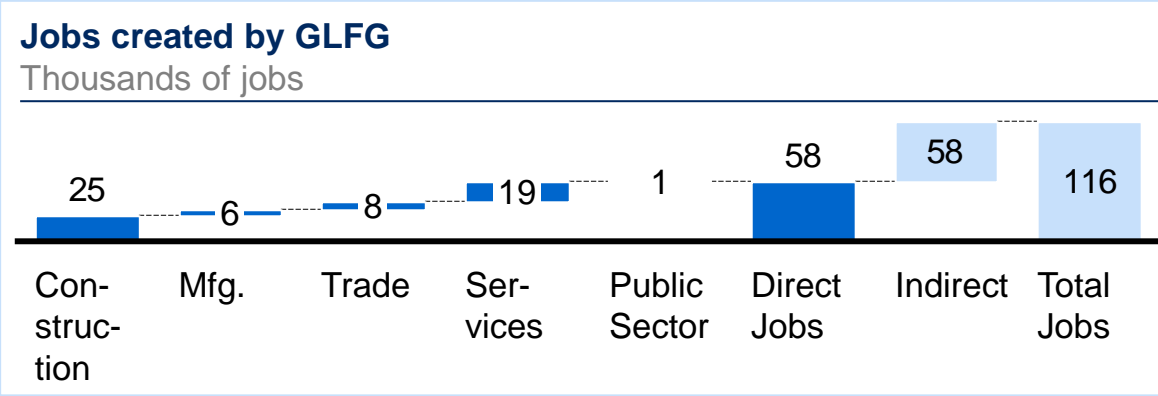


Feasibility



- Current border crossings can be improved and expanded
- Detroit is closest MW entry via rail to Port of Halifax
- Vacant land can be developed for inland port infrastructure, e.g., rail yards and DCs

Case for action: Economic impact



¹ Detroit and Port Huron; ² Exports carried by water from defined ports

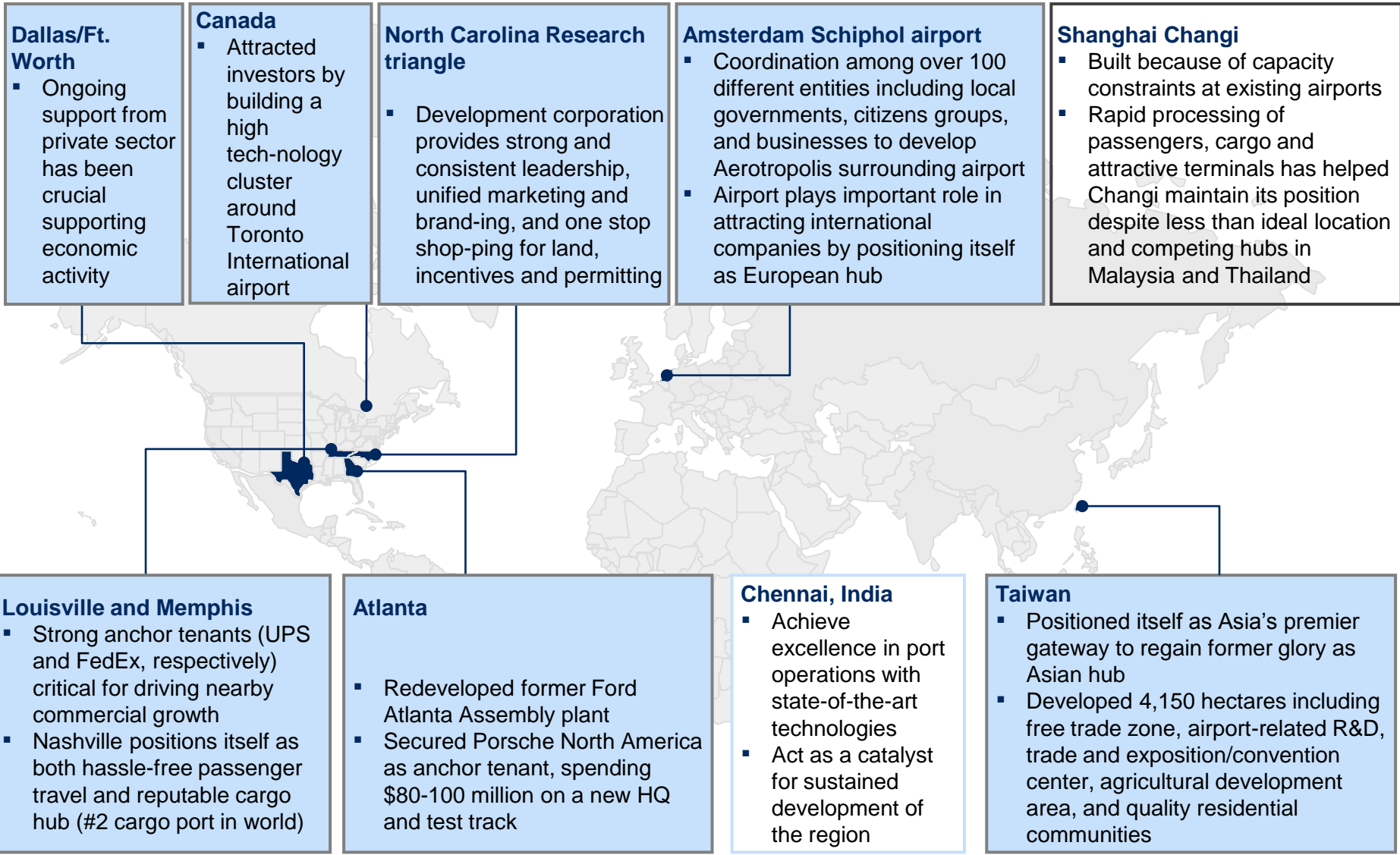
C Potential enablers – What needs to happen to successfully pursue the opportunity?

Stakeholders	Roles	Requirements	Key enablers	Case examples
Investors	<ul style="list-style-type: none"> Provide funding and resources 	<ul style="list-style-type: none"> Strong partnership with the other stakeholders 	<ul style="list-style-type: none"> Development of entrepreneurs Pro-growth culture across stakeholders 	<ul style="list-style-type: none"> Toronto international airport
Government	<ul style="list-style-type: none"> Prioritize and support development 	<ul style="list-style-type: none"> Provide strategic Strong coordination between local and state governments 	<ul style="list-style-type: none"> Competitive business climate A “productive” public sector 	<ul style="list-style-type: none"> Taiwan Amsterdam
Businesses	<ul style="list-style-type: none"> Anchor tenants and customers 	<ul style="list-style-type: none"> Attract and grow anchor tenants Support use of Detroit for shipping and logistics Help secure financing for new organizations 	<ul style="list-style-type: none"> “Frictionless” job markets –magnet for talent Business friendly regulations Capital availability 	<ul style="list-style-type: none"> DFW Atlanta Memphis, Louisville
Other stakeholders	<ul style="list-style-type: none"> Provide vision, target and coordinate development 	<ul style="list-style-type: none"> Develop strategic vision, marketing and assembly plan Provide skilled Create one-stop-shop for all state, county and local permitting 	<ul style="list-style-type: none"> Pro-growth culture across stakeholders Capital availability 	<ul style="list-style-type: none"> NC research triangle development corporation

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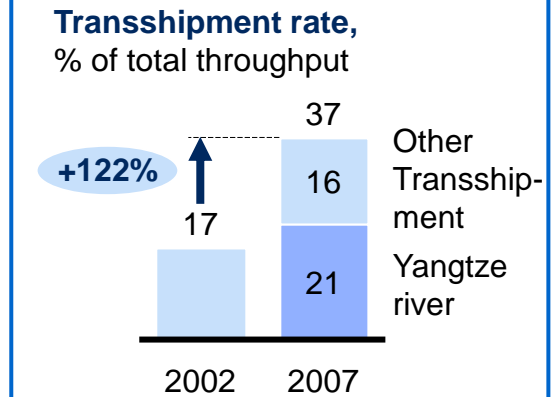
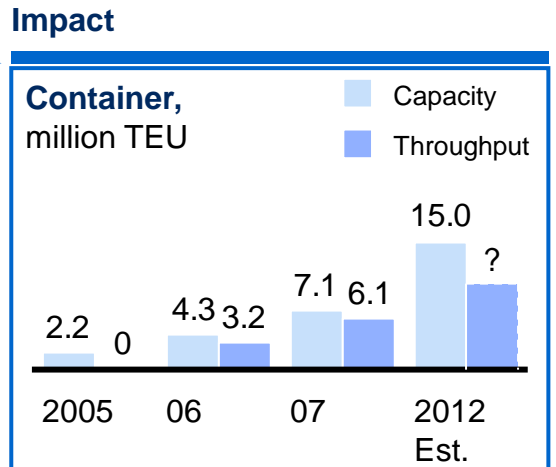
Enabler	Potential actions	Case examples
1 Centralized leadership	<p>Create a public-private partnership to coordinate intra-modal traffic and ensure all modes (e.g., air, land, rail, sea) complement each other</p> <p>Build the Aerotropolis and international rail infrastructure through a state bond issuance</p> <p>Encourage consolidation of the logistics sector to implement best practices and improve competitiveness</p>	<ul style="list-style-type: none"> NC development corporation
2 International partners	<p>Partner with international entities who have successfully executed similar efforts (e.g., Schiphol) to jump start the initiative</p>	<ul style="list-style-type: none"> Amsterdam
3 Anchor tenants	<p>Secure anchor tenants to ensure momentum and sustainability of the effort by promoting a long-term purpose</p>	<ul style="list-style-type: none"> Memphis, Louisville
4 Innovative business models and logistics solutions	<p>Promote interaction between universities and logistics firms to create innovative and state of the art logistics solutions</p>	<ul style="list-style-type: none"> Taiwan Canada
5 State support and incentives	<p>Advocate for incentives and provide support for the Detroit Aerotropolis and other airport related development</p> <p>Designate the area a free trade zone</p>	<ul style="list-style-type: none"> Shanghai
6 Business friendly regulations	<p>Provide targeted regulations that encourage converting unused land/ brown field sites into e.g. logistical storage centers</p>	<ul style="list-style-type: none"> Toronto international airport

Case examples parallel to Michigan



Shanghai successful through an aggressive growth strategy

Value driver	Strategic move of port/step to success
Regulation	<ul style="list-style-type: none"> In 2002, Central Government of China approved the construction of Yangshan port – an offshore deepwater port on the sea at the east of Shanghai. The 1st phase was completed in 2005 31 km long Donghai Bridge was built to connect Yangshan and landside of Shanghai Yangshan also got Free Trade Port status – one type of special custom area with the highest freedom level
Concessions/pricing model	
Operational Excellence	
Port efficiency & navigational ease	
Positioning in network of major lines	
Regional transshipment demand	<ul style="list-style-type: none"> Ports with JV or cooperative agreement with SIPG (Shanghai port operator) Chinese government invested heavily to ensure and improve the navigation condition of Yangtze River SIPG proactively invested in feeder ports along Yangtze river as well as feeder lines serving on the river to ensure Shanghai's hub status
Hinterland connectivity	
Portfolio optimization	
SEZ	
Industry cluster in port area	
Capacity headroom	



Key learning: Aggressive infrastructure construction and network expansion ensured Shanghai port's volume growth

Toronto International airport: Leveraging high tech to build a world class airport with thriving clusters

Case facts

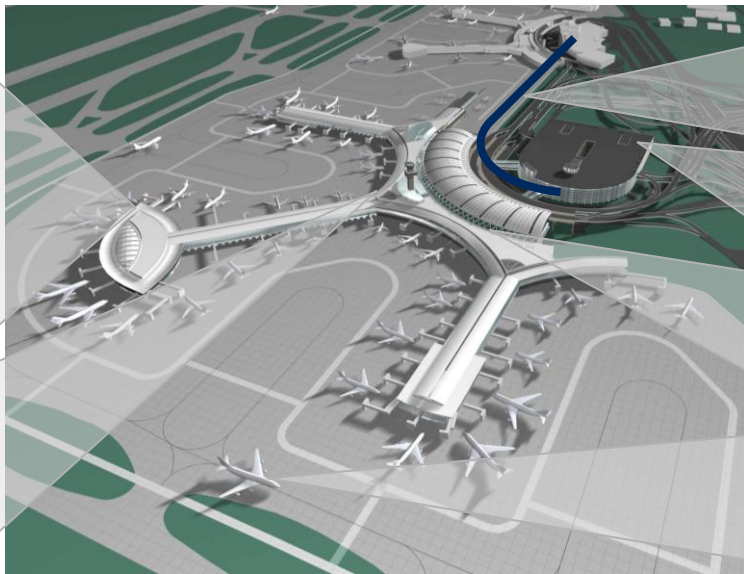
- Engaged high tech providers to transform Toronto International airport into a high technology supported logistics hub

The solution

- Built a new \$1.7B terminal to replace two aging terminals
- Developed fully integrated transportation system for rapid transition between multiple modes of transportation
- Improved infrastructure allowed for considerably higher passenger fee and landing fees

The project was completed by a consortium of architectural, engineering, contractor, and construction firms led by Armbro Group

Improved security systems/ technology



Rapid inter-terminal light rail



Smart parking lot



Improved baggage-handling technology



New air traffic information management system

The outcome

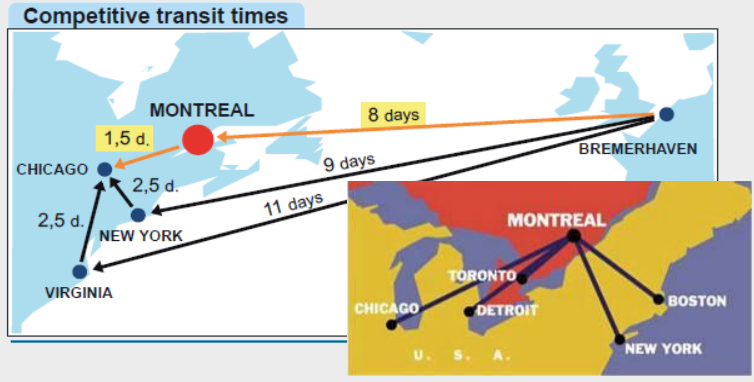
- Airport capacity was increased from 26M to ~50M passengers per year
- Significant reduction in flight delays and passenger curb-to-gate times
- Created a cluster of high tech economic activities surrounding the airport

Montreal wins traffic through leveraging it's strategic geographical position on Europe – North America route

- Value driver**
- Regulation
 - Concessions/pricing model
 - Operational Excellence**
 - Port efficiency & navigational ease
 - Positioning in network of major lines
 - Regional transshipment demand
 - Hinterland connectivity**
 - Portfolio optimization
 - SEZ
 - Industry cluster in port area
 - Capacity headroom

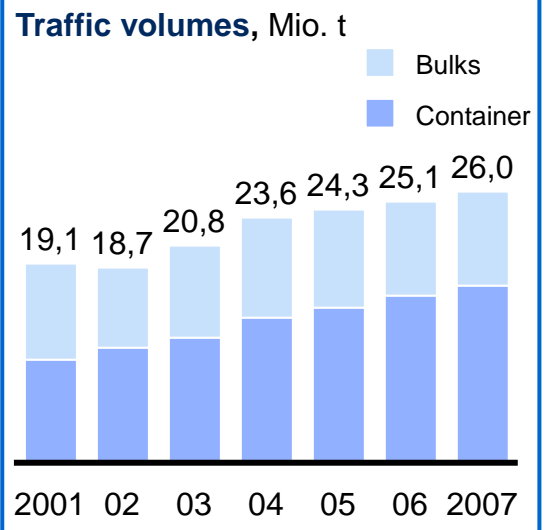
Strategic move of port/step to success

Shortest way to Toronto, Chicago and Detroit



- Montreal positions itself as "the preferred gateway to North American markets"
 - Effectively linked to yards of both transcontinental railways
 - It thereby leverages it's strategic position on the Europe – North America route
- Travel times **Bremen → Chicago**:
- Via Montreal:** 9,5 days
 - Via New York: 11,5 days
 - Via Virginia: 13,5 days
- Dedicated expansion and modernization

Impact



- Import/ Export trade balance – Montreal is one of the ports on the North America East coast with the highest balance between import and export

Key learning: Leveraging strategic geographic position resulted in expansion of traffic volume