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Getting from Here to There

Transportation Infrastructure in Northern Ontario, Part 3: The Hotspots in Need of Urgent Action

By: Julien Bonin

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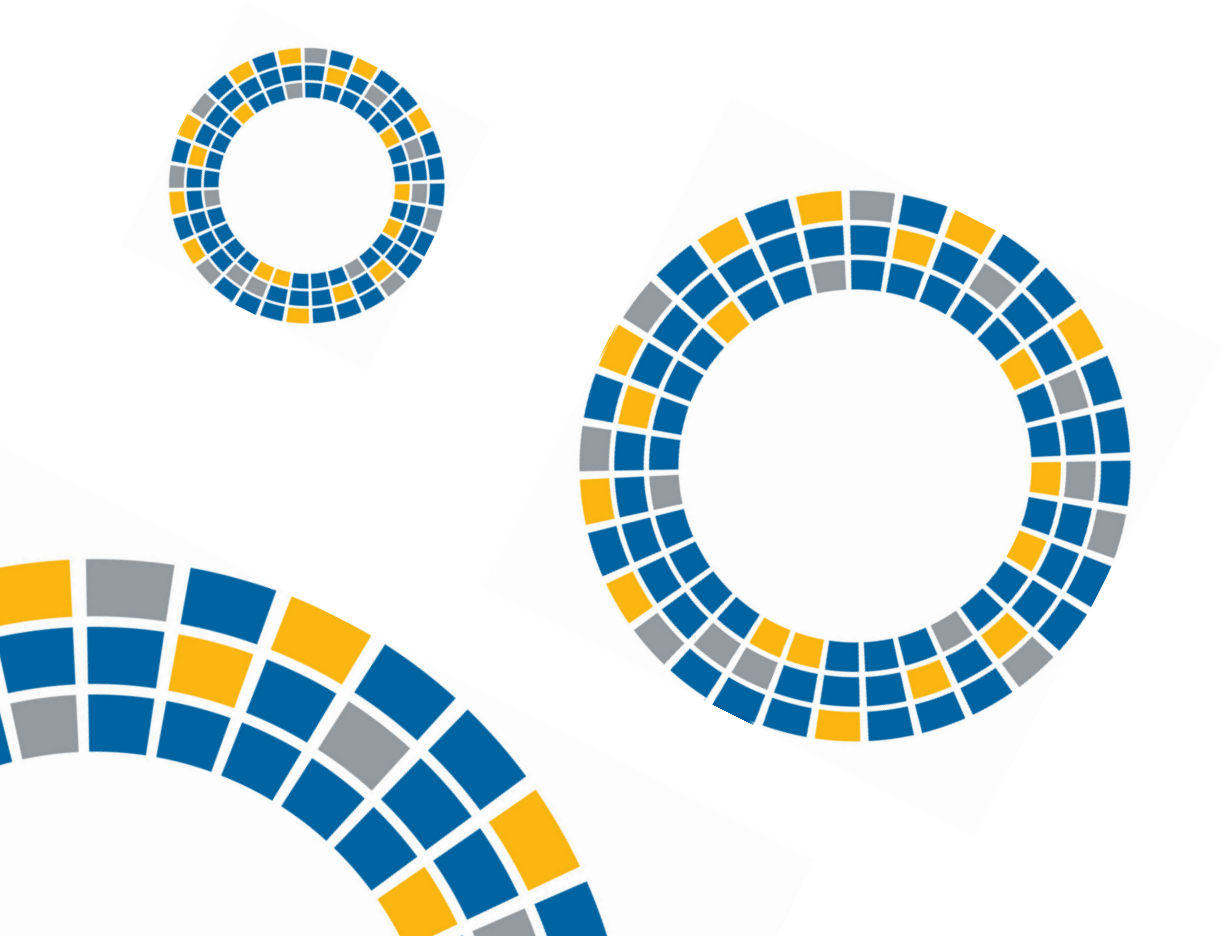
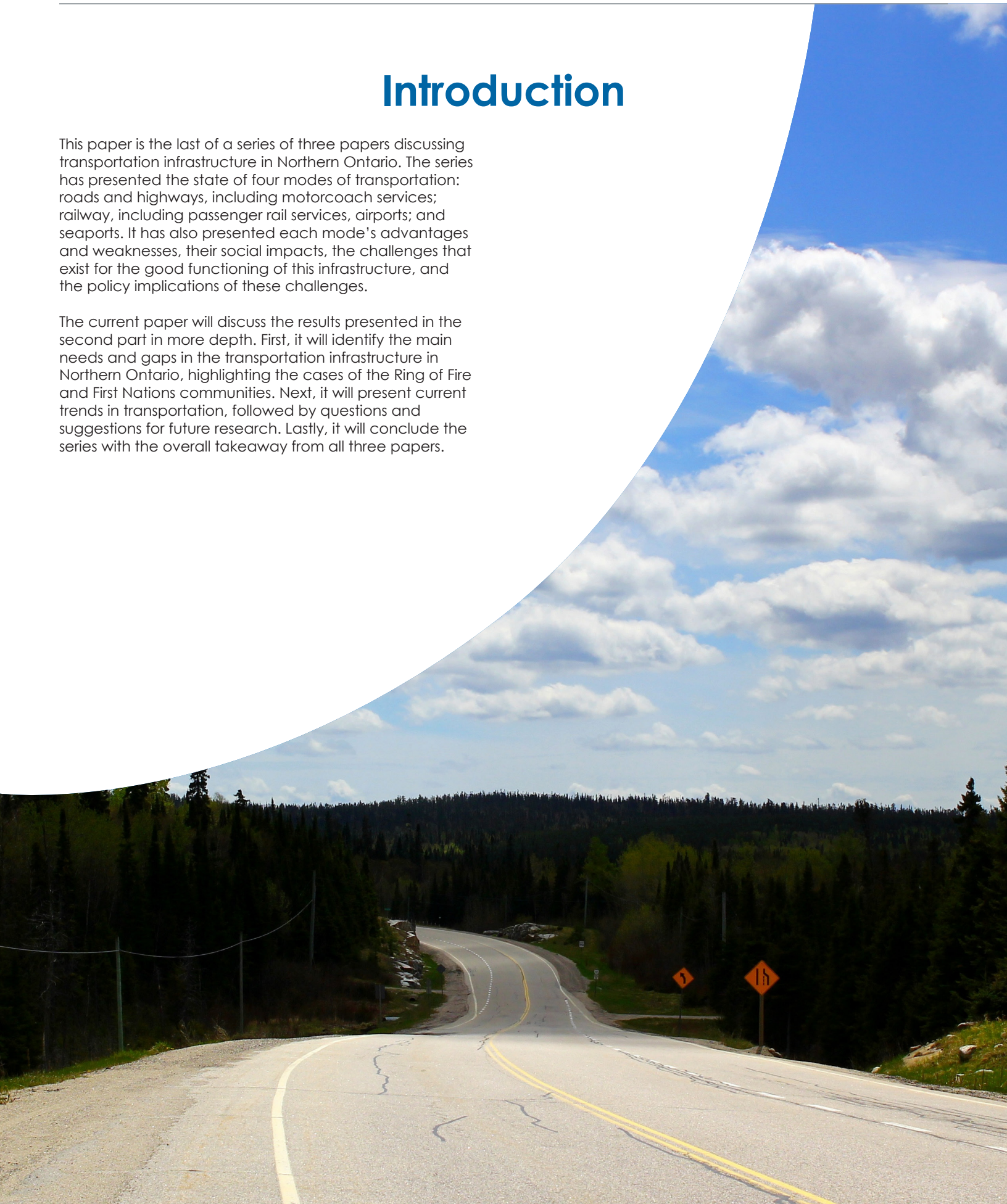


Introduction

This paper is the last of a series of three papers discussing transportation infrastructure in Northern Ontario. The series has presented the state of four modes of transportation: roads and highways, including motorcoach services; railway, including passenger rail services, airports; and seaports. It has also presented each mode's advantages and weaknesses, their social impacts, the challenges that exist for the good functioning of this infrastructure, and the policy implications of these challenges.

The current paper will discuss the results presented in the second part in more depth. First, it will identify the main needs and gaps in the transportation infrastructure in Northern Ontario, highlighting the cases of the Ring of Fire and First Nations communities. Next, it will present current trends in transportation, followed by questions and suggestions for future research. Lastly, it will conclude the series with the overall takeaway from all three papers.



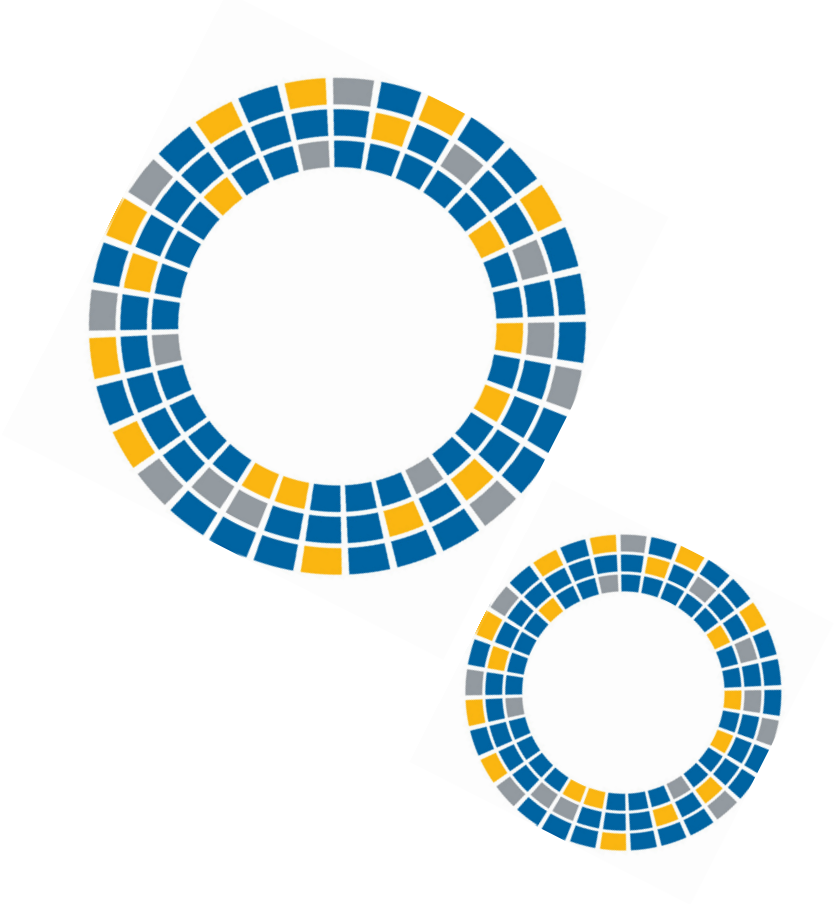
Discussion

The large geographic area of Northern Ontario often requires residents and industries to travel long distances to accomplish their activities. For residents, these activities can be work, education, healthcare services, shopping, and recreation, for example. For industry, they can be to access natural resources commonly found in remote locations, transport them to processing plants, and deliver the finished products to its markets, for example. The geography and low population of Northern Ontario pose a significant challenge to the transportation infrastructure. Every transportation mode in the region has gaps and inefficiencies that have an impact on the social well-being of residents and on the economic development of Northern Ontario. In the results section, the current transportation infrastructure was investigated to identify gaps and describe policy implications for each mode. In this section, the overall inefficiencies and transportation "hot spots" in Northern Ontario are identified and discussed.

Presently, the road and highway network is the most used transportation infrastructure in Northern Ontario. The road system is the primary method used by residents to travel between communities and by industry to access and transport their goods. Drake (2013) found that roads were the primary transportation method for mining, forestry, agriculture, manufacturing, and tourism. However, despite the region's reliance on roads, the network was found to be vulnerable to disruptions and closures because of the few connections between major routes and the lack of redundant roads. The vulnerability of the network is worsened by the harsh northern climate, especially during the winter months. During the winter, road closures are common in Northern Ontario because of unsafe road conditions or accidents, and, to make matters worse, there is often little option for detours.[1]

A vulnerable road network and lack of accessible roads have significant social and economic consequences. Datla et al. (2013) found snow and cold reduced travel for discretionary or recreation trips, especially in rural areas where longer trips were required. Individuals were less likely to undertake the additional risk of travelling during inclement weather to participate in social activities. This inability to travel leads to social exclusion or isolation, which has a negative impact on an individual's well-being and can increase dependency on social assistance programs (Litman 2003). Extreme weather conditions were found by Datla et al. (2013) to have a smaller impact on freight trucks (or commercial vehicles) because they are usually obligated to follow tight schedules. Yet, for the "just-in-time" approach, where performance and on-time delivery of materials and goods are critical, network disruptions or closures have severe consequences, such as delayed deliveries, increased freight costs, and cancelled business meetings, among many others (Jenelius 2009).

Road conditions in Northern Ontario need to be improved. Northern Ontario has very few twinned highways, and they are largely located on major connections to Southern Ontario or at the entrance of major cities such as Greater Sudbury, Sault Ste. Marie, and Thunder Bay. The region's major roads, King's Highways, including Highway 11 and Highway 17, consist mostly of paved two-lane roads. The majority of the region's roads have lower surface standards. Main roads in the region, such as Secondary highways, are not necessarily paved, and many Northern Ontario roads still have a gravel surface. The poor conditions and safety of the region's roads are a significant concern for its industry. Drake (2013) and Dirks (2013) found that additional passing lanes were a recommendation by the region's industry. As well, the IBI Group (2013) found that many commercial trucks simply bypass Northern Ontario and pass through the United States to Southern Ontario (in particular east-bound trucks). The lack of quality roads and a vulnerable network diminish economic opportunities in Northern Ontario.



[1] From November 11 to November 20, 2014, Highways 11, 17, 129, 400 were closed by the Ontario Provincial Police due to unsafe road conditions and no detour routes were provided.

Hot Spots Identification

In the second paper of this series (part 2), policy implications for each transportation infrastructure were presented. Greater financial investment from the government was identified as a method to improve each transportation infrastructure. However, in a world of limited financial resources, it is unrealistic that all transportation methods can receive the funds necessary to repair all the gaps. Additional factors are required to guide decision-making and transportation investment in Northern Ontario. The identification of transportation "hotspots" can provide guidance on where resources are better invested in Northern Ontario to improve transportation infrastructure.

For example, the Growth Plan for Northern Ontario identified the following municipalities as "strategic core areas":

- Greater Sudbury;
- North Bay;
- Sault Ste. Marie;
- Thunder Bay;
- Timmins.

According to the Growth Plan, half of the population in Northern Ontario lives in these cities. Thus, these cities were selected as economic "hubs that will benefit all of Northern Ontario" (Government of Ontario 2011). Therefore, the connections to and between these cities must be enhanced. Next, the connection to neighbouring regions such as Southern Ontario, Manitoba, and Quebec should be considered, followed by the proximity and connection to global markets. Other factors such as the development of significant economic opportunities such as the Ring of Fire, and the social responsibility of all levels of government to ensure that all residents have a basic right to mobility and access to necessary services need to be considered when making transportation investment decisions.

Transportation "hot spots" in Northern Ontario, along with key transportation investments, are identified using these criteria:

- Growth Plan for Northern Ontario strategic core areas
- Connections to neighbouring regions
- Connections to global markets
- Economic development
- Social responsibility

Accessibility within Northern Ontario is important. According to an IBI Group (2013) survey, 48 per cent of commercial truck trips are within Northern Ontario (Table 1), and the region's urban centres are important destinations for private vehicle travel. According to Transport Canada, activities such as health and social service, employment, shopping, and education are increasingly centralized in urban areas (Transport Canada 2006). Therefore, connections within Northern Ontario are significant and should not be overlooked. Table 2 identifies how the current five cities' strategic cores, as identified by the Growth Plan, are directly connected.

Table 1. Commercial Vehicle Survey – Statistics by Travel Flow Type

Trip Type	Truck Trips		Vehicle-km in Ontario			Commodity Value		
	Total	%	Total (km,1,000s)	%	Avg./Truck (km)	Total ($M)	%	Avg./Truck ($)
Internal to Northern ON	25,762	48%	3,860	16%	150	256	21%	9,934
Other from Northern ON	9,590	18%	3,680	15%	384	188	15%	19,633
Other to Northern ON	10,880	20%	4,520	18%	415	308	25%	29,300
Through trips	7,526	14%	12,800	51%	1,701	485	39%	64,456
Total	**53,759**	**100%**	**24,800**	**100%**	**461**	**1,237**	**100%**	**23,015**

Source: IBI Group (2013, 12).

The IBI Group survey states that connections between Northern Ontario and neighbouring regions are also "significant" (IBI Group 2013). Northeastern Ontario is strongly connected with Southern and Eastern Ontario, whereas Northwestern Ontario is strongly connected with Manitoba. In Table 2, 38 per cent of commercial trucks come from outside Northern Ontario.[2]

Table 2. Connection between Northern Ontario Strategic Core Centres

	North Bay	Sault Ste. Marie	Thunder Bay	Timmins
Greater Sudbury	Road Motorcoach Airplane Rail freight	Road Motorcoach Airplane Rail freight	Road Motorcoach Airplane Rail freight	Road Motorcoach Airplane Rail freight
North Bay		Road Motorcoach Airplane Rail freight	Road Motorcoach Airplane	Road Motorcoach Airplane Rail freight
Sault Ste. Marie			Road Motorcoach Airplane Sea	Road Motorcoach[3] Airplane Rail freight
Thunder Bay				Road Motorcoach[4] Airplane

Sources: author's own based on IBI Group (2013, 12).

[2] The study by IBI group (2013), however, does not provide information on Northern Ontario's connections with Québec.
[3] Motorcoach and rail freight require a transfer. Motorcoach in either Greater Sudbury or North Bay. Rail freight in North Bay.
[4] Motorcoach requires a transfer in either Greater Sudbury or North Bay.

Northern Ontario Transportation Hot Spots

Greater Sudbury, North Bay, Thunder Bay, and Sault Ste. Marie are identified as Northern Ontario transportation hot spots because they are located at key intersections and provide important connections between communities within Northern Ontario, along with connections to neighbouring and global markets. These hot spots are located where additional transportation investment is required.

Greater Sudbury and North Bay are located at key transportation junctions for road, rail, and air travel. These two cities provide the primary connections to neighbouring eastern and southern regions. Recently, the cities have focussed much of their transportation improvements on road linkages to Southern Ontario. The twinning of Highway 11 south to Barrie was completed in 2012, and Highway 69 has 80 kilometres between Greater Sudbury and Parry Sound still in the planning stage. All rail traffic to Eastern Ontario/Canada is transported south via Toronto, with both the Canadian National and Canadian Pacific transcontinental rail lines travelling through Greater Sudbury.[5] In addition, both cities have passenger air service to Toronto by either Air Canada Jazz or Porter.

The connections between other communities and regions, however, still need improvements. Transportation east is currently limited to Highway 17 via North Bay. The highway is a two-lane undivided road until Arnprior in the Renfrew District. There are calls to twin Highway 17 from Sault Ste. Marie to Arnprior. The Ontario Government stopped any twinning plans between Sault Ste. Marie and Mattawa until at least 2018 because of a lack of funds (CBC News 2013). Meanwhile, between Arnprior and Mattawa, local municipal officials continue to call on the province to twin Highway 17 because of safety concerns (Jay 2013). Municipal officials from communities such as Renfrew, Pembroke, and Petawawa state that the reputation of Highway 17 as a "death highway" has a negative impact on their communities (Jay 2013). With Canadian Pacific closing its rail line in the Ottawa Valley, local officials expect commercial truck traffic to increase on Highway 17.

North of North Bay, Temiskaming and Cochrane districts are important Northern Ontario centres for mining, forestry and agriculture. But connections and accessibility to the region remain limited. Stability for Ontario Northland is required to increase the rail service and improve industries' confidence in their ability to efficiently transport goods, and reduce reliance on Highway 11. Highway 11 is the primary link to the region. However, the link is vulnerable to closure, and additional passing lanes are recommended to improve safety. The region's agriculture sector can also be improved with greater transportation infrastructure. The Great Clay Belt in Northeastern Ontario has considerable potential (Ministry of Agriculture, Food and Rural Affairs Ontario 2013); however, the area remains underutilized (Côté 2013). Presently, the rail service lacks the necessary infrastructure, such as grain-handling rail connections, to service any growth in agriculture.

[5] Rail service on the Ottawa Valley Railway is only available to east Mattawa, Ontario and Temiscaming, Quebec.

Thunder Bay and Sault Ste. Marie are also identified as significant transportation hot spots for Northern Ontario because of their connections to national and international markets. Located on the Great Lakes – St. Lawrence Seaway, the cities have access to more than 100 ports and commercial docks in Ontario, Quebec, and the United States Great Lakes states. The seaway is also connected to 59 overseas markets (The St. Lawrence Seaway Management Corporation 2015 -2).

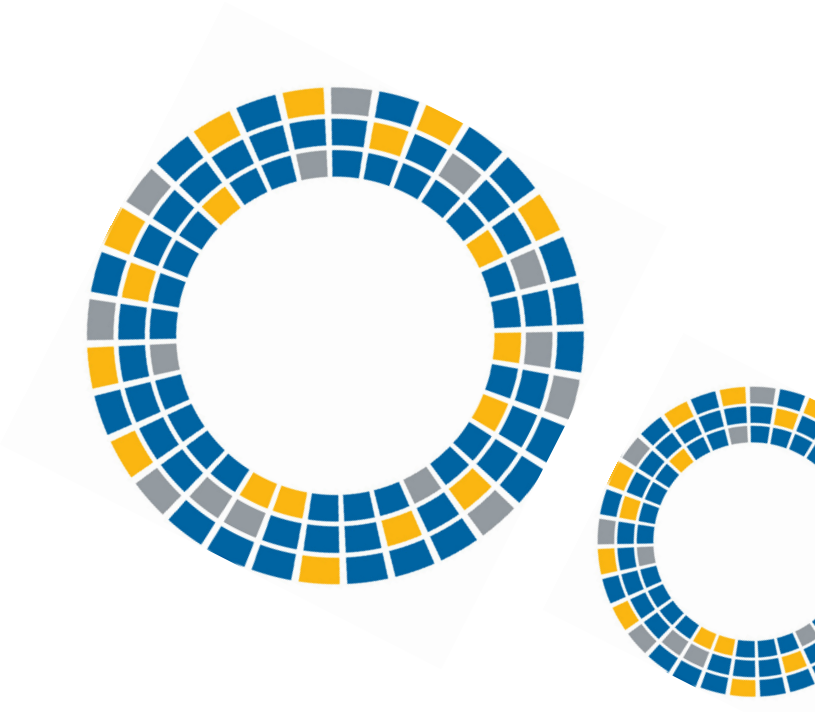
Thunder Bay is Western Canada's gateway to the Great Lakes – St. Lawrence Seaway. However, according to the Port of Thunder Bay, only 5 per cent of all shipments are not to/from Western Canada (Port of Thunder Bay 2015). The port is attempting to diversify its operation by promoting itself as a full-service port with multimodal capability (mobile harbour crane, storage and staging area, and intermodal yard). The port's advantages include direct access to other transportation infrastructures such as Canadian National and Canadian Pacific rail lines and Highways 11 and 17. Thus, the port provides rail and trans-Canada access, in addition to being close to an international airport. Thunder Bay, along with the rest of Northwestern Ontario, has economic connections to Manitoba. To improve the connection, the twinning of Highway 17 between Kenora and Manitoba is currently in the planning stage. However, the project has stalled, and construction has yet to begin.

Sault Ste. Marie is identified as a transportation hot spot. However, the Sault Ste. Marie's area is currently underutilized. The city is located in a strategic location at the juncture of three Great Lakes (Superior, Huron and Michigan) with connections to major North American transportation infrastructure. The city is connected by road by Highway 17 in Northern Ontario and Interstate Hwy 75 in the United States, several railway lines (Canadian National, Huron Central), and has an airport. The city is also located in close proximity to several United States markets, such as Chicago and Detroit. Currently, Sault Ste. Marie's commercial port infrastructure is privately owned and operated by Essar Steel Algoma and Purvis Marine. Essar Steel Algoma docks are connected to Canada National and Huron Central Railways and are reserved for company use; however, other companies can use them when not occupied. Purvis Marine Limited operates a former Transport Canada port that is equipped for petroleum products and oversized cargo from inter-lake vessels (Febbraro and Mitchell 2006). Febbraro and Mitchell (2006) discuss the potential of Sault Ste. Marie as a "significant multimodal freight-handling centre" (2). The authors state that with the increase in container shipment and trade with Asia-Pacific markets, congestion on Highway 401 and at the Southern Ontario border crossing at Windsor and Niagara, Sault Ste. Marie has significant potential to alleviate some of the congestion problems in these and other areas. Drake (2013) indicates the expansion of the Sault Ste. Marie port as a strategic priority for the Northern Ontario transportation infrastructure.

In September 2014, the City of Sault Ste. Marie, along with Essar Steel Algoma representatives, announced funding for the creation of the Port of Algoma, a deepwater port on Essar Steel Algoma property (Taylor 2014). The Port of Algoma was estimated to take ten years to build at the cost of $120 million. The port was estimated to generate $800 million in annual revenue for Essar Steel Algoma, in addition to providing countless benefits for numerous private companies. Manufactured products, along with natural resources such as aggregates or lumber, could have been shipped to global markets from the port.

At the moment, the Port of Thunder Bay is the only port authority in Northern Ontario, and only approximately 5 per cent of total shipments are to or from Northern Ontario. Therefore, the vast majority of Northern Ontario imports and exports shipped by sea are accomplished at a port outside the region. A port in Northeastern Ontario could potentially change the current travel dynamics for the region. Presently, the trend for the movement of goods for Northeastern Ontario is in a north–south direction towards Southern Ontario. The Port of Algoma could have increased travel in the east–west direction and increased opportunities for companies such as the Huron Central Railway.

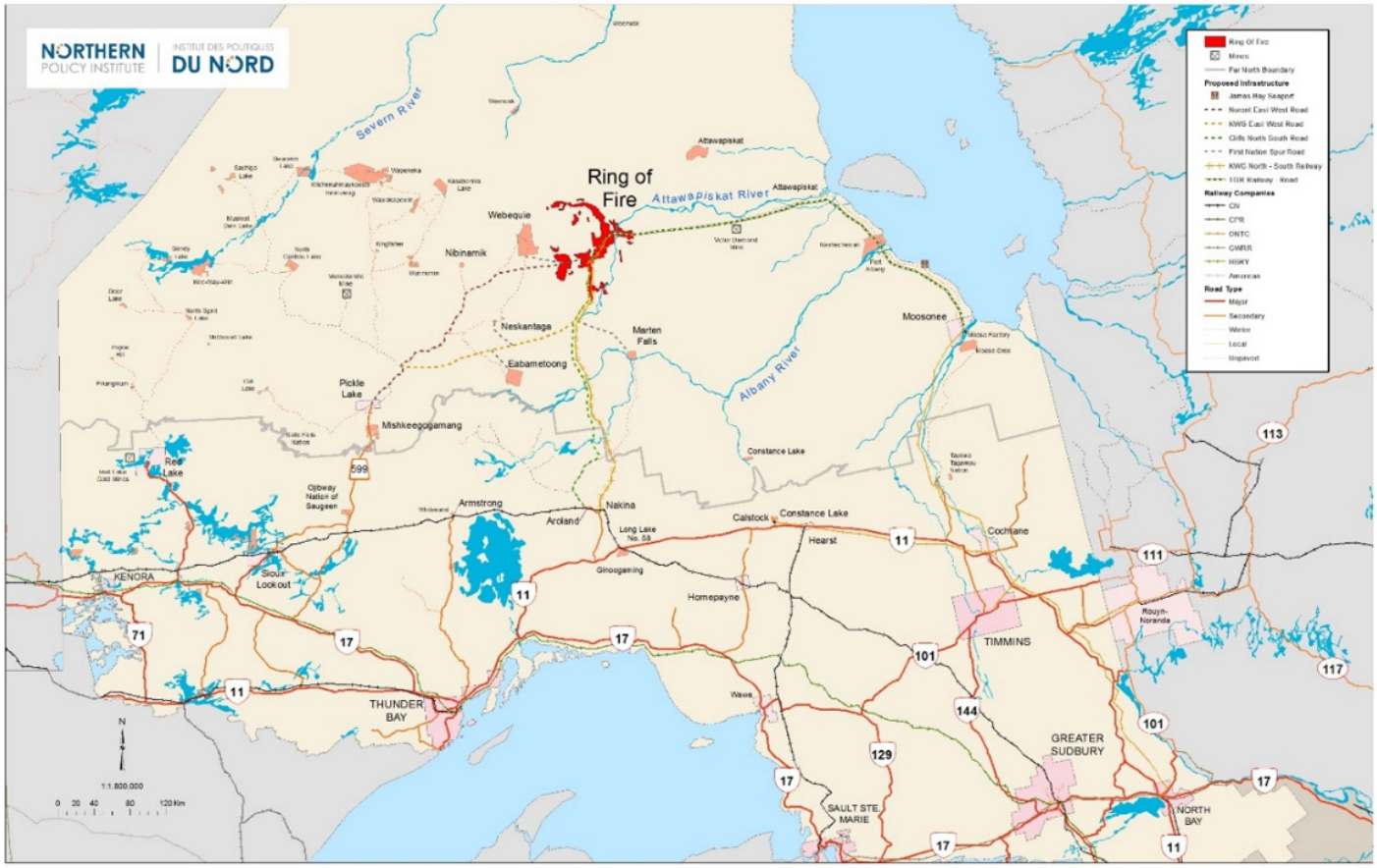
Timmins was selected by the Growth Plan as a strategic core area; however, it was not found in this study to be a transportation hot spot for Northern Ontario. The city is located away from the region's primary roads of Highway 11 and Highway 17. The survey by the IBI Group (2013) and by Drake (2013) suggests that most of the traffic generated to or from Timmins is internal to Northern Ontario for forestry, manufacturing, or gold mining activities. The city, however, was found to be a strategic hub for air transportation for the Far North, James Bay communities.



The Ring of Fire

The development of the Ring of Fire will play a vital role in the future of the transportation infrastructure in Northern Ontario. All modes of transportation realize the potential and the economic benefits of the project. Currently, there are several proposed transportation infrastructures (Map 1), including east–west roads via Pickle Lake, a north-south road from near Nakina to Highway 11, a railway to the Canadian National mainline at Nakina, and a north-east road or railway to James Bay and Moosonee. Given the automobile-dominant culture of Northern Ontario, it is probable that a road, at least a winter road, will be constructed to the site. The construction of a road to the Ring of Fire could have an important effect on nearby First Nation Communities.

Map 1. Ring of Fire and Current and Proposed Transportation Infrastructure



Source: author's own based on data from the Ministry of Northern Development and Mines of Ontario (2012, 2013).

Rail offers the potential to transport large volumes. However, the role of rail in Northern Ontario is declining steadily. A new rail line to the Ring of Fire could potentially revitalize the railway system in the area. Since any new transportation infrastructure to the region remains in the discussion stage, Canadian National and Canadian Pacific are not currently involved in the development of the Ring of Fire despite being the largest Canadian railway companies. TGR Rail confirmed in January 2015 a bid to purchase Ontario Northland rail operations and plans to extend the line along the James Bay coast to the Ring of Fire site (Gillis 2015).

While aircraft cannot be used to transport outputs from the base metals found in the Ring of Fire, air travel is important and could be a significant player in the development of the Ring of Fire. The Ring of Fire's exploration camps currently use airstrips (Ross 2013). Once production starts, the Ring of Fire mines could operate using a Fly-In/Fly-Out approach as in the case of the Musselwhite and Victor Diamond Mines in Ontario's Far North. An airport will be required to service the air charters used to transport workers to and from the site, in addition to transporting necessary supplies and providing access to health services.

Seaports will also have a role to play in the development of the Ring of Fire. A seaport will be used to transport outputs to foreign markets. We currently do not know which seaport is to be used. The existing seaports, such as Thunder Bay and Sault Ste. Marie are viable options. The Sault Ste. Marie port is privately owned and operated; however, the then-proposed Port of Algoma could potentially have been ready in time when production at the Ring of Fire begins. New seaports, such as the one on James Bay, have been discussed (Cowan 2012, TGR Rail 2015). Other potential options include using an established port outside Northern Ontario in Southern Ontario, Quebec, or even at Churchill, Manitoba.

First Nations

First Nations communities were found to be at an extreme disadvantage when it came to mobility and accessibility in Northern Ontario. The provincial and federal governments have a social responsibility to ensure that all citizens have access to the necessities of life and health care. First Nation settlements are often located in remote locations away from transportation infrastructures such as King and Secondary Highways and rail lines.

The lack of road access is significant in the Kenora District and the Far North of Ontario. Many First Nations communities in these areas are without all-weather roads and, during winter months, are only connected to adjacent communities by ice roads. For the remainder of the year, these communities are dependent on air transportation for all their needs (food, supplies, and access to services and health care). However, the conditions of many northern and remote airports require substantial upgrades, and many remote airports do not have the infrastructure (runway surface or length) required to be serviced by newer aircraft. If upgrades are not accomplished, a decline in service will occur, which will worsen the isolation and condition of these communities (Weber 2013). Upgrading the infrastructure for the airports in the Remote Airports Program would require significant investment from the Government of Ontario.

Disks (2013) discovered from discussions with First Nations and Métis that transforming winter roads to all-season roads was their top transportation priority. The development of the Ring of Fire could potentially have numerous benefits for First Nations communities, such as increased accessibility. The Ontario Government is prepared to commit up to $1 billion toward an all-season transportation infrastructure for the Ring of Fire (Government of Ontario 2014b). If correctly applied, this investment toward a transportation infrastructure could be expanded to connect such nearby communities as Webequie, Mishkeegogamang, Eabametoong, Neskantaga, Marten Falls, Attawapiskat, or Fort Albany. The construction of all-season road connections to a First Nation community would provide year-round access and make the airport expendable in these communities, as they would no longer be necessary. Consequently, the Government of Ontario could reduce the number of airports in the Remote Airports Program and focus investment on the Far North and isolated communities.

Current Trends in Transportation

Currently, the transportation infrastructure, in general, is improving according to travel behaviour and the flow of goods. For the road and highway network, the approach is focused on increasing accessibility and safety by upgrading current roads by either increasing the number of passing lanes or four-lane widening. Highway 11 between North Bay and Barrie is now complete (Young 2012), and current key projects include the four-lane widening of:

1. Highway 69 between Parry Sound and Greater Sudbury (underway);

2. Highway 11/17 between Thunder Bay and Nipigon (underway);

3. Highway 17 easterly at the Manitoba border (planning).

As work continues on these projects, discussions about other road upgrades have already begun. Discussions are underway on twinning Highway 11 from North Bay to Hearst (Drake 2013, Dirks 2013) and Highway 17 from Sault Ste. Marie to Mattawa (Drake 2013, Dirks 2013, CBC News 2013). The Ontario Government, however, has decided to postpone any further plans concerning Highway 17 until at least 2018 (CBC News 2013). However, interest and pressure for these projects will probably increase once the Highway 69 twinning is completed.

The ports in Thunder Bay and Sault Ste. Marie are taking the necessary steps to increase capacity and diversify operations to better service Northern Ontario. Airports are still in need of additional support, and the Airport Capital Assistance Program has strict regulations and is simply not sufficient for all of Canada.[6] Despite the financial strain, municipal airports are becoming key economic contributors to communities by being transformed into industrial business parks. The Parry Sound Area Municipal Airport is the only profitable municipal airport in Ontario despite not having any scheduled passenger service (Northern Ontario Business 2009).

Railways, on the other hand, are in a state of decline in the region as rail lines continue to be abandoned. Both Canadian National and Canadian Pacific abandoned their Ottawa Valley Railway that connected Northern Ontario to Eastern Ontario in favour of diverting all their eastern bound trains south through Toronto. Additionally, Ontario Northland railways remain in a state of uncertainty.[7] Industries are concerned by the restrictions and lack of intermodal facilities offered by rail companies in Northern Ontario (Dirks 2013).

The passenger service in Northern Ontario continues to be reduced as service is cancelled or in jeopardy. The service operates mainly as a social responsibility to provide access to remote and isolated communities or as tourist attractions. Passenger services such as Sudbury – White River and the Polar Bear Express remain in place to serve communities without a parallel year-round road. However, these communities are few today and mainly consist of small and isolated communities, private camps, and tourist lodges. Passenger service is declining because the service is costly and is no longer classified as necessary because of road access.

A weakness of transportation infrastructure in Northern Ontario is the lack of collaboration and communication between transportation modes, authorities responsible for them, community actors, governments (municipal, provincial, federal), industry, and the public. Transportation modes are competing with each other. However, Northern Ontario remains a relatively small market, and there is insufficient clientele and demand for competition. For freight, the lack of intermodal facilities results in a reliance on commercial trucks to fulfill their delivery requirement. Passenger service, private vehicles, motorcoach, passenger rail, and air travel are all competing for a small market. The low population density of northern communities makes it unprofitable and unrealistic to service all these transportation modes. As a result, passenger service for most rural communities is limited to private vehicles because rail and air services are not available, and motorcoach schedules are inconsistent.

[6] Airport Capital Assistance Program provides approximately $38 million for all of Canada (Weber 2013).
[7] In March 2012, the Ontario Government revealed its intention to sell Ontario Northland, however, in April 2014 announced that the company will remain in public hands. In October 2014, ONTC CEO announced his resignation. In January 2015 TGR Rail revealed its intention to purchase rail operations from Ontario Northland.

Future Studies

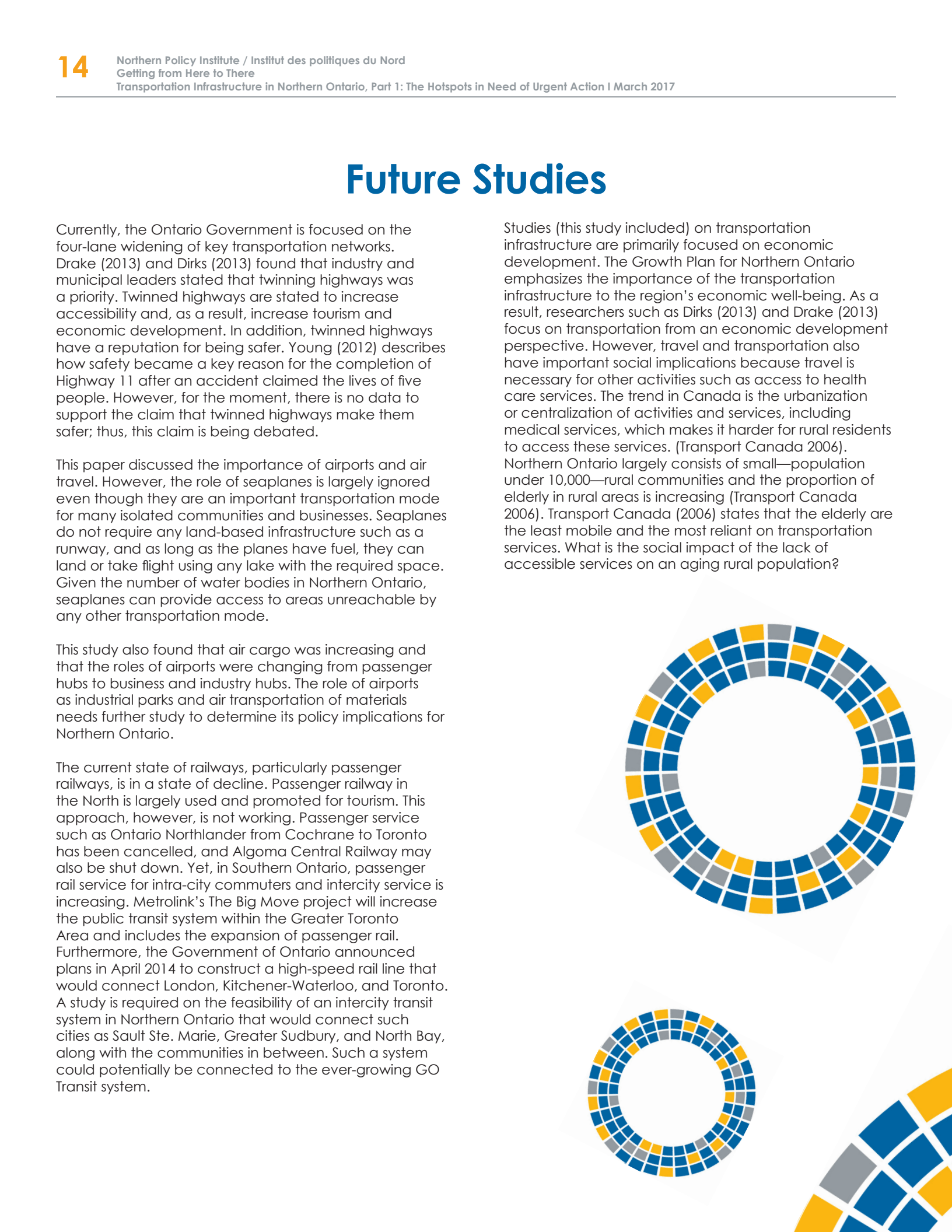
Currently, the Ontario Government is focused on the four-lane widening of key transportation networks. Drake (2013) and Dirks (2013) found that industry and municipal leaders stated that twinning highways was a priority. Twinned highways are stated to increase accessibility and, as a result, increase tourism and economic development. In addition, twinned highways have a reputation for being safer. Young (2012) describes how safety became a key reason for the completion of Highway 11 after an accident claimed the lives of five people. However, for the moment, there is no data to support the claim that twinned highways make them safer; thus, this claim is being debated.

This paper discussed the importance of airports and air travel. However, the role of seaplanes is largely ignored even though they are an important transportation mode for many isolated communities and businesses. Seaplanes do not require any land-based infrastructure such as a runway, and as long as the planes have fuel, they can land or take flight using any lake with the required space. Given the number of water bodies in Northern Ontario, seaplanes can provide access to areas unreachable by any other transportation mode.

This study also found that air cargo was increasing and that the roles of airports were changing from passenger hubs to business and industry hubs. The role of airports as industrial parks and air transportation of materials needs further study to determine its policy implications for Northern Ontario.

The current state of railways, particularly passenger railways, is in a state of decline. Passenger railway in the North is largely used and promoted for tourism. This approach, however, is not working. Passenger service such as Ontario Northlander from Cochrane to Toronto has been cancelled, and Algoma Central Railway may also be shut down. Yet, in Southern Ontario, passenger rail service for intra-city commuters and intercity service is increasing. Metrolink's The Big Move project will increase the public transit system within the Greater Toronto Area and includes the expansion of passenger rail. Furthermore, the Government of Ontario announced plans in April 2014 to construct a high-speed rail line that would connect London, Kitchener-Waterloo, and Toronto. A study is required on the feasibility of an intercity transit system in Northern Ontario that would connect such cities as Sault Ste. Marie, Greater Sudbury, and North Bay, along with the communities in between. Such a system could potentially be connected to the ever-growing GO Transit system.

Studies (this study included) on transportation infrastructure are primarily focused on economic development. The Growth Plan for Northern Ontario emphasizes the importance of the transportation infrastructure to the region's economic well-being. As a result, researchers such as Dirks (2013) and Drake (2013) focus on transportation from an economic development perspective. However, travel and transportation also have important social implications because travel is necessary for other activities such as access to health care services. The trend in Canada is the urbanization or centralization of activities and services, including medical services, which makes it harder for rural residents to access these services. (Transport Canada 2006). Northern Ontario largely consists of small—population under 10,000—rural communities and the proportion of elderly in rural areas is increasing (Transport Canada 2006). Transport Canada (2006) states that the elderly are the least mobile and the most reliant on transportation services. What is the social impact of the lack of accessible services on an aging rural population?



Conclusion

The current transportation infrastructure in Northern Ontario is largely dependent on the road and highway network. However, the road and highway network is vulnerable as it is highly dependent on a few King's Highways. Disruptions on a major highway in the region, such as the 2012 flood in Wawa, have a significant impact on the quality of life for residents and economic sustainability. Improvement of the road network has mostly been focused on connections to Southern Ontario with the twinning of Highway 11 and Highway 69. Remote First Nations communities currently under-serviced were identified as a significant gap in the road and highway network.

The lack of year-round road access for First Nation communities has resulted in a dependence on airports. Airports in remote areas in the Kenora District and the Far North of Ontario are used to connect isolated communities and transport goods and supplies. Meanwhile, in the more accessible southern region of Northern Ontario, airports are becoming key industry and business parks and promoted as important centres for economic development. Currently, there is insufficient funding available to perform necessary upgrades and enhance accessibility for municipal and remote airports.

Four key transportation hot spots—Greater Sudbury, North Bay, Thunder Bay, and Sault Ste. Marie—were identified. Sault Ste. Marie was found to be underutilized. The development of the Port of Algoma could have had a considerable economic impact on the city and could have changed the travel dynamics of materials and goods in Northern Ontario. The Ring of Fire will no doubt have a significant economic impact on Northern Ontario. However, the construction of the transportation infrastructure to access the site, if properly planned, could also have substantial social benefit for nearby First Nation communities.

The Growth Plan for Northern Ontario highlights the importance of a modern and efficient infrastructure for a robust economy. However, as discussed in Hall and Heather (2009), northern businesses suggest that distance and lack of affordable transportation alternatives have a negative impact on the economy of the region. The road network needs significant upgrades to increase its reliability. Capacity and safety (more passing lanes or twinning required), maintenance (improve the physical conditions of roads and bridges), and amenities (rest stops) for the well-being of drivers are some of the suggestions made by northern industries. The railway system is in a state of decline as uncertainties with Ontario Northland, and lack of intermodal infrastructure are negatively impacting the delivery of materials and goods. Flying in Northern Ontario is expensive, and aging airport infrastructure needs updating. However, a lack of government—municipal, provincial, and federal—support means insufficient funding. Deepwater ports are non-existent, which limits interaction with foreign markets. Finally, there is a lack of coordination between the different transportation, government, and industry players meaning no transportation investment priorities. Gill and Raynor (2013) recommend that Transport Canada should continue to assess its transport policy in a more comprehensive and multimodal approach rather than studying each transportation method individually.

Providing adequate transportation infrastructure for a complex region like Northern Ontario is extremely challenging. Northern Ontario consists of a large spatial geography with environmentally sensitive areas and a low population density, which results in high infrastructure costs (construction/maintenance) and low traffic volumes. Investment in a transportation project is a high cost/long-term commitment as the infrastructure usually has an extended life cycle; however, natural resources have finite life cycles and are highly variable to market conditions. Transportation infrastructure should also have a social purpose. For example, Bristow and Gill (2011) state that road access that connects a community to a greater region plays a crucial role in establishing the community's identity. Therefore, the decision-making process for Northern Ontario transportation projects must be different from what it is in more populated southern regions. A decision on whether to proceed with a transportation project cannot simply be based on using a cost-benefit approach.

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About Northern Policy Institute

Northern Policy Institute is Northern Ontario's independent think tank. We perform research, collect and disseminate evidence, and identify policy opportunities to support the growth of sustainable Northern Communities. Our operations are located in Thunder Bay, Sudbury, and Sault Ste. Marie. We seek to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts Northern Ontario, Ontario, and Canada as a whole.

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