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## Planning cities facing population decline: a study of shrinking cities in Canada

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Since the 1970s, many Canadian cities have been affected by periods of population decline. For some urban agglomerations these periods are passing phenomenon and growth resume shortly. For others, population decline is structural and persistent over long periods of time. Since urban planning is meant to organise growth, to what extent these demographic trend affects the perception of actors involved in urban planning and development? This research explores the way planners and urban leaders adapt to negative demographic trends in three Canadian shrinking cities: Thunder Bay (Ontario), Saguenay (Québec) and Saint-John (New Brunswick). Content analysis of planning documents and interviews with 40 local actors related to urban planning, economic development, and municipal administration in these three cities show that the objective to resume urban growth is persistent in the planning process, despite local and regional demographic context. The only exception is in Saint-John, where the city adopted a new municipal plan that puts forward a shrinking-oriented planning approach.

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From an urban planning perspective, demographic and economic growth are engines that drive a city's morphological transformation. Growth increases the need for land. It generates real estate development and new public infrastructure. Conversely, economic and demographic decline has little effect on a city's outline. Built assets adapt poorly to shrinking demand. As noted by Donald & Hall (2010), decline is often seen as failure by cities' leaders. Very few planning processes rely on accepted stagnant or declining demographic forecasts (Mayer & Greenberg 2001). As many academics argue, the lack of tools to deal with this situation bears witness to the need for a paradigm shift in planning (Schlappa 2016; Donald & Hall 2010; Baron et al. 2010; Nuissl & Rink 2005). New concepts have emerged in the

literature to face this situation. Among them, we can mention practices like decline-based planning, smart decline, qualitative development, or controlled development (Béal et al. 2017; Weaver et al. 2017; Donald & Hall 2010; Hollander & Németh 2011; Popper & Popper 2002). To what extent have these concepts reached urban planners? It is not clear. The non-acceptance and unawareness of downward demographic trend issues are often seen as the crux of the problem (Pallags et al. 2017; Schlappa 2016).

In Canada, there have been few studies on shrinking cities (Hollander et al. 2018; Hartt 2018; Donald & Hall 2010, Hall & Hall 2008). The case of Sudbury is probably the best known. It has been analyzed by Hall (2009), Leadbeater (2009) and Schatz (2010).

Demographic challenges are also addressed in the work of Leo & Anderson (2006) on Winnipeg and Lewis & Donald (2010) on Kingston. But these two studies analyze issues of slow growth only, since their targeted cities have not really been affected by population decline. The universe of shrinking cities in Canada has been tentatively set out by Leadbeater (2009) and Donald & Hall (2010). They both based their analysis on the same limited timeframe though, which corresponds to the 1996-2006 period. The work of Filion (2010) offers a larger view of urban demographic trends covering 1971-2006, but do not address planning challenges of shrinking cities.

In the same way as Pallags, Fschurz, & Said (2017) and following the work of Warketin (2012), our objective in this paper is to investigate the gap between the conceptual framework of urban and regional planning practice in the face of demographic decline and the policies implemented in Canadian shrinking cities. Is demographic decline taken into account in the planning process? Before we try to answer this question, we first identify the shrinking cities' universe in Canada for 2016. We do so by analyzing census data on Canadian urban agglomerations and metropolitan core cities from 1976 to 2016. That portrait of shrinking cities allows us to identify three urban regions for our qualitative analysis: Thunder Bay (Ontario), Saguenay (Québec) and Saint John (New Brunswick). We offer a comparative analysis of these three cases based on two different sources of information: their most recent official planning document; and a total of 40 interviews with local actors involved in urban planning and local development.

This article is divided into seven sections. The first section presents a theoretical definition of the concept of shrinking city and a discussion about the issues of planning in a context of population decline. The second part of the article presents the analysis of census data used to identify the set of cities qualified as shrinking cities in Canada in 2016. The third section presents the methodological framework. The fourth part gives an overview of

our three cases. The fifth presents the analysis of planning documents. The last two sections present the content analysis of interviews with local actors. They are followed by a short conclusion.

### The concept of shrinking city

The interest about urban population decline in academic literature has been increasing in recent years. Good overviews of the topic can be found in the works of Oswalt (2005), Baron *et al.* (2010), Pallagst, Wiechmann, & Martinez-Fernandez (2013), Wachter & Zeuli (2014) Weaver *et al.* (2017) or Neil & Schlappa (2016), as well as in a special issue of the *International Journal of Urban and Regional Research* (Vol.36, no.12, 2012). Despite this substantial academic work, the definition of the object itself - the shrinking city - is not always clear. As mentioned by Beauregard (2009), Olsen (2013) or Ganning & Tighe (2018), there is no consensual definition of *shrinking city*. It can affect a single city, a neighbourhood, or a whole metropolitan area (Pallagst *et al.* 2009). The rate of population decline or the period over which the phenomenon occurs also varies considerably from one study to another (Ganning & Tighe 2018).

Despite the acknowledgment of its multidimensional nature, the concept of shrinking city is often reduced to only one dimension in the literature: population decline. As many authors point out, this is partly due to the fact that urban economic indicators are generally correlated with population change (Weaver *et al.* 2017; Beauregard 2009). Although the population is the central indicator associated with shrinking cities, its importance and the length of the period of observation greatly influence the conclusions of the analysis. Some authors study planning issues at the neighbourhood level, while others consider that only using the regional scale can capture all aspects of population decline (Murgante & Rotondo 2013). The work of Wiechmann & Pallagst (2012) is a good illustration of the conceptual elasticity of shrinking cities as they target San Francisco (in the precise period of the

Internet crisis between 2000 and 2004) alongside Detroit, Cincinnati, New Orleans, and Flint in their typology of shrinking American cities.

In extreme cases, like in Detroit, Michigan (Rybczynski & Linneman 1999), or Dresden, Germany (Franz 2004), urban shrinkage takes physical forms through high vacancy, deteriorated housing stock, abandonment, and demolition. These examples are more exceptions than the rule though (Donald & Hall 2010; Ganning & Tighe 2018). New households can be created without adding new inhabitants (Haase *et al.* 2010). That is the case when the population is declining at a pace slower than the number of people per household (Ganning & Tighe 2018). Hence, in the multiple cases where urban decline is subtle, the physical aspect of the city is not necessarily affected. Hackworth (2016) and Hollander *et al.* (2018) also underline the fact that social and urban policies may slow shrinkage effects. For that reason, as they argue, we find less vacancy and abandonment in Canadian shrinking cities than in US shrinking cities.

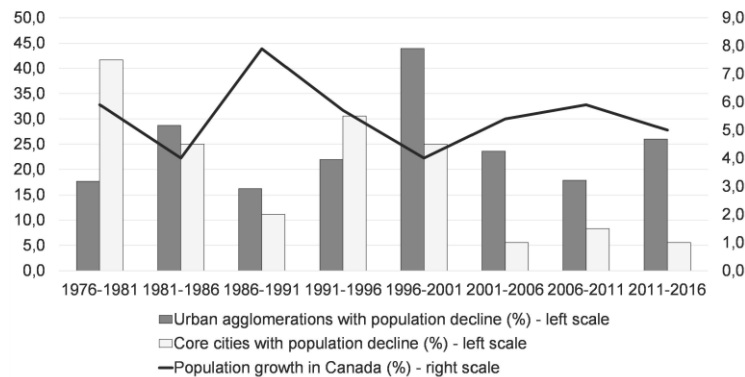
What we retain from the literature is that the concept of shrinking city refers to an urban area – a municipality or a regional agglomeration – experiencing population decline over a certain period of time. What remains imprecise though is what is considered as a city and what is considered a proper period of time. Donald & Hall (2010) use census agglomeration (including metropolitan areas) as a definition of cities for Canada, which have, by definition, a minimum population of 10 000 inhabitants. In the United States, most studies identified by Ganning & Tighe (2018) define a city as a census place or a municipality (not an urban region) and set the minimum threshold population at 50 000 inhabitants. They thus disregard smaller urban areas. Concerning the timeframe, some studies use very short periods of time, as short as three to four years, to appraise population decline (Wiechmann & Pallagst 2012; Hollander 2011), while others rely on longer periods of 40 to 50 years (Weaver *et al.* 2017; Popper & Popper 2002).

In a world where growth is a powerful benchmark for success, the challenge of implementing decline-oriented planning practices is twofold. First, the stigma-ridden notion of population decline is hard to address in the political arena (Bernt *et al.* 2014; Wiechmann 2009; Bernt 2009; Mayer & Greenberg 2001). Different contexts bring different reactions. As observed by Bernt *et al.* (2014), in some situation, local leaders may find it better to deny shrinkage and continue with what they know better instead of embarking in new planning strategies that they don't master well. Pallagst, Fleschurz, & Said (2017) identify four stages of perception of population decline: ignoring, observing without acceptance, certain acceptance, and acceptance. They conclude that the way shrinkage is perceived and accepted largely influences the choice of planning approaches in shrinking cities.

The second challenge is the knowledge of shrinkage-oriented strategies by planners. Since urban planning is by essence a discipline oriented towards growth management (Popper & Popper 2002), strategies that aim for a return to growth are the most common (Schlappa 2016; Hackworth 2014). These strategies, however, may worsen planning issues in shrinking cities by increasing the fiscal pressure on a population already dealing with oversized infrastructures (Hackworth 2014; Schatz 2013; Wiechmann & Pallagst 2012). Diminishing population densities, underused infrastructure networks, abandoned and decaying buildings, as well as diminishing fiscal revenues are therefore current challenges for shrinking cities (Weaver *et al.* 2017; Bernt 2009; Moss 2008). New concepts have emerged in the literature to face these situations (Weaver *et al.* 2017; Donald & Hall 2010; Hollander & Németh 2011; Popper & Popper 2002). Despite heterogeneity in these practices, some planning principles are often noticed, like planning documents that show acceptance of shrinkage or explicit goal for creative reuse of vacant spaces (Béal *et al.* 2017).

Little research has identified the reasons leading to the adoption of these

**Figure 1.** Percentage of urban agglomeration and core cities experiencing population decline at each census period (left) and Canada's population growth (right) 1976-2016.



smart-shrinking principles in declining communities (Pallagst, Fleschurz, & Said 2017). Schatz (2013, 2010) highlighted the key role played by a “constellation of actors” for Youngstown, Béal *et al.* (2017) mention the role of “degrowth coalitions”, while Bernt (2014) argue that planning documents are often late reactions to severe decay. Two early examples paved the way for a new planning approach in shrinking cities: the *Stadtumbau Ost* program in Germany and the *Youngstown 2010 Plan*. These are rare examples of planning principles adopted by a public administration which acknowledged the city's population decline as structural and unlikely reversible (Bernt 2014; Wiechmann 2009; Schatz 2013). They introduced the idea of reducing the city's spatial footprint at a scale compatible with a smaller population size. Those examples nonetheless consisted in a late reaction to patterns of demographic decline that were severe and ongoing for a long period of time and were mainly focused on demolition (Bernt 2014). As observed by Mayer & Greenberg (2001), it often takes a decade or more before a plan of action is developed in communities affected by serious economic downturn. Would it be the case in places where decline is more subtle?

### The universe of shrinking cities in Canada

Our definition of city is twofold. In the first place, we use the same definition as Donald & Hall (2010), which is based on urban agglomerations and metropolitan areas as they are defined by Statistics Canada. Census data in Can-

ada are produced every five years. Consequently, we have observations of population variation over eight periods of five years between 1976 and 2016. The major problem with census data on agglomerations and metropolitan areas, however, is that boundaries of these urban units change over time. It is easy to compare population data for one census to the previous one since border changes are taken into account for every five-year period variation. It is more difficult, however, to analyze change over more than two periods, which means over more than 10 years, since Statistics Canada does not automatically adjust historical data to the most recent urban agglomeration definition. That explains why former studies by Leadbeater (2009) and Donald & Hall (2010) have measured population decline of Canadian shrinking cities over a timeframe of 10 years only. Using a longer period requires to be aware of measurement errors due to border changes. We recall, however, that our objective is not to measure exact population change over time, but only to identify the universe of shrinking cities in Canada. There were 152 urban agglomerations in Canada in 2016, including 33 census metropolitan areas and 119 census agglomerations. Since some have appeared after 1981, disappeared and/or reappeared, we have deleted some units. Thus, we have a total of 123 urban agglomerations for all periods from 1981 to 2016, and we also have information for 96 of these urban agglomerations from 1976 to 1981. Prior to 1976 data availability was too limited. That is why we have set our timeframe from 1976 to 2016.

Our second definition of city is closer to what is commonly used in the United States (Ganning & Tighe 2018). It corresponds to the limits of the central core municipalities of metropolitan areas. To compute population change for these cities, we start from the 33 metropolitan areas included in the Canadian census of 2016, and we trace back municipal population changes for their core cities. Since we identified three metropolitan areas with a dual core, we have a group of 36 core cities<sup>1</sup>. The Canadian urban system has also been subject to many institutional reforms in the past decade, so that a similar problem arises with our definition of core cities as with our urban agglomerations. Several mergers have transformed municipal boundaries in the past decades. It is not easy to trace back what was a city's population in the past when its borders did not fit its 2016 delimitation. We have to consider that limitation in our analysis.

The bar graph in figure 1 presents the frequency of population decline among urban agglomerations and among core cities in Canada for every census period between 1976 and 2016. Three conclusions can be drawn from that graph. The first is that population lost in urban agglomerations is inversely correlated to national population growth (the line graph – right scale). When the population of Canada grows faster, there are less urban agglomerations experiencing population lost and vice-versa. This means that urban decline is affected overall by the national demographic trend. This conclusion does not seem to hold for metropolitan core cities though.

The second deduction from figure 1 is that the spectrum of shrinking cities in Canada is not necessarily growing. Population lost was more important in urban agglomerations and metropolitan core cities in the 1990s and around 1981 than they were after 2001. As Donald & Hall (2010) wrote about Canadian shrinking cities based on the 1996-2006 period, it is not surprising that their diagnosis was pessimistic. Their conclusions would have been different if they had worked on

Table 1. Frequency of urban agglomerations with population decline according to their population size, 1976-2016

		Population size in 2016				Total
		10,000-50,000	50,000-100,000	100,000-500,000	Over 500,000	
Total number of urban agglomerations	(n)	62	20	31	10	123
With at least one period of population decline between two census (1976-2016)	(n)	51	13	12	0	76
	(%)	82%	65%	39%	0%	62%
Total number of declining periods (1976-2016)	(n)	174	38	24	0	236
	(%)	37%	24%	10%	0%	25%
With a negative cumulative rate of population change (1976-2016)	(n)	16	3	1	0	20
	(%)	26%	15%	3%	0%	16%
With a lower population in 2016 than its estimated peak	(n)	33	6	6	0	45
	(%)	53%	30%	19%	0%	37%

Source: Computed with data on census agglomeration and metropolitan census areas from Canadian census of 1981, 1986, 1991, 1996, 2001, 2006, 2011, and 2016.

urban population decline between 2006 and 2016. From that, we also understand that for many cities, population decline is not necessarily an irreversible trend. The number of cities really struggling with structural population decline on a long-term basis is obviously smaller in 2016 than what was anticipated by Donald & Hall (2010).

A third conclusion drawn from figure 1 is that core cities were relatively more affected by the population lost prior to 1996 than urban agglomerations. This is probably due to a slowing trend in suburbanization and an acceleration of new incoming international migrants in major core cities after 1996. One explanation may be the population transition hypothesis of Bourne & Simmons (2003). According to them, until the 1970s Canada experienced a steady population growth due to a positive natural balance. But by the 1990s, the fertility rate has diminished significantly, and population growth was mainly sustained by international immigration. Since immigrants locate in larger metropolitan areas, and mainly in their core cities, they favour population growth in these larger cities to the detriment of smaller urban centers.

Elements of Table 1 support the population transition theory. As we can see, among the 76 Canadian urban agglomerations experiencing population decline at least once between two censuses from 1976 to 2016, none had a population over 500,000 inhabitants. The majority of these agglom-

erations (51) had a population between 10,000 and 50,000 inhabitants. In fact, for all indicators in table 1, the proportion of urban agglomerations affected by decline is decreasing with size. That means that small urban agglomerations are more exposed to the phenomenon of shrinking cities.

Table 1 presents four types of indicators of urban population decline that allows us to categorize urban agglomerations facing population decline. The first indicator encompasses the largest set. It is the group of urban agglomerations that have experienced at least one period of population decline between two censuses from 1976 to 2016. This group counts 76 urban agglomerations, which accounts for 62% of all Canadian urban agglomerations included in our study. This shows how urban population lost is not an exceptional event. It occurred at least once in most of the Canadian urban agglomerations since 1976. The second indicator is the number of periods characterized by population decline between 1976 and 2016 (out of eight census periods). For some urban agglomerations, population decline happened only once, while in others it is recurrent over eight periods.

The third indicator is based on the sum of population growth rates from 1976 to 2016. Since borders may vary over time, this indicator can be misleading for some agglomerations. It identifies urban agglomerations that are the most likely to have lost population from 1976 to 2016<sup>2</sup>. In Canada, 20 urban agglomerations are in this

position, which represents 16 % of all urban agglomerations. The last indicator identifies urban agglomerations that have experimented population decline before or after a period of population growth, and for which we observe a lower population in 2016 than their estimated peak population (or their population of 1976 if their estimated peak is during that period or before). We are aware that this measure is exposed to error due to border changes over time. That is why we use the term “estimated peak”. We have computed historical data by using growth rates for each period as if they corresponded to their geographical definition of 2016 disregarding border changes. By doing so, we find 45 urban agglomerations with a lower population in 2016 than their estimated peak population. They represent 37 % of all urban agglomerations. Among these urban agglomerations, twelve had a population over 50,000 inhabitants.

For the purpose of our study, we have chosen to tag as shrinking cities only the urban agglomerations with at least 50,000 inhabitants in 2016 that had, in that year, a lower level of population than their estimated peak population, and that experienced at least two periods of population decline between 1976 and 2016. These agglomerations are identified in Table 2. Since most of them peaked after 1976, only four show a negative cumulative rate of population change between 1976 and 2016. North Bay and Saint John reached their estimated

**Table 2.** Shrinking cities in Canada among urban agglomerations of over 50,000 inhabitants

Rank	Agglomeration	Prov.	Cumulative rate of population change		Population in 2016	Year of estimated peak population*	Number of declining periods 1976-2016
			From peak* to 2016 (%)	1976 to 2016 (%)			
1	Cape Breton*	N.S.	-23,1	-23,1	98,722	1976	8
2	Shawinigan*	Qc	-11,3	-11,3	54,181	1976	7
3	Sault Ste. Marie	Ont.	-10,1	-7,9	78,159	1981	5
4	Chatham-Kent	Ont.	-8,1	1,4	102,042	1991	4
5	Thunder Bay	Ont.	-4,0	0,2	121,621	1996	2
6	Sarnia	Ont.	-3,8	3,9	96,151	1991	3
7	Grand Sudbury*	Ont.	-3,7	-3,7	164,689	1976	3
8	Saguenay	Qc	-3,3	3,5	160,980	1991	3
9	North Bay	Ont.	-2,6	7,0	70,378	2011	4
10	Saint John	N.B.	-2,2	3,6	126,202	2011	4
11	Prince George	B.C.	-1,3	23,8	86,622	1996	2

Note: (\*) Since we have not looked at data before 1976, we cannot identify the true year of peak population for Cape Breton, Shawinigan and Grand Sudbury. They all start declining before 1976.

Source: Computed with data on census agglomeration and metropolitan census areas from Canadian census of 1981, 1986, 1991, 1996, 2001, 2006, 2011, and 2016.

peak population in 2011, which means that decline seems to be a recent phenomenon there. The last row of the table informs us, however, that they have experienced 4 periods of decline out of 8 between 1976 and 2016. In this case, even with an estimated peak population in 2011, we understand that population decline is an issue in these urban agglomerations. Border changes are minor between 1976 and 2016 for most of the urban agglomerations in Table 2. The exception is Chatham-Kent where geographical expansion has more than doubled the population of the agglomeration while the cumulative population variation based on census growth rates was only 1.4% over the period. Border changes happened before 2001, however, so that most of the population decline really occurred within the borders of 2016. In all other agglomerations, border changes account for less than 20 % of their population of 2016<sup>3</sup>. Measurement errors are therefore minor for these urban agglomerations.

Table 3 uses the same criteria to set the group of shrinking cities among metropolitan core cities of Canada. By doing so, we identify 7 shrinking core cities, which account for 19% of all Canadian metropolitan core cities. The majority of these core cities are the central node of a declining urban agglomeration identified in Table 2: Thunder Bay, Grand Sudbury,

Saguenay and Saint John. For all municipalities except Thunder Bay and Saguenay, the expected peak population is defined as 1976, which means it happened that year or prior to 1976. Montreal is exceptional in our list, since it is the only major core city of over 500,000 inhabitants experiencing population decline in Canada. The period of decline for Montreal started in 1966 and reversed in 1996. Even though it has resumed growth for 20 years, it has not recovered its 1976 population yet<sup>4</sup>. Saint John is the city in our list with the most severe population decline (over 20 %). Since census data shows that the average number of persons per household decreased from 3.4 to 2.3 during that period in New Brunswick (32 % decline), we can conclude that demand for housing kept growing there nevertheless. In this case, even if Saint John shows the most severe population shrinkage in Canada, we don't necessarily expect to observe housing abandonment there. As Hackworth (2016) and Hollander et al. (2018) have already highlighted, population decline is subtler in Canadian cities than in other parts of the world (the USA for instance).

For many cities in Table 3, our analysis is blurred by major change in municipal borders between 1976 and 2016. Saint John and Thunder Bay are the only cities where borders remained still from 1976 to 2016. Annex-

ation and mergers increased population by 80 % in Sudbury, 24 % in Saguenay, 165 % in Trois-Rivières, 58 % in Montréal and 26 % in St John's<sup>5</sup>. Population decline is not necessarily as straightforward as it appears in the Table for these cities. When matching our two lists of shrinking cities, we observe that four cities may be interesting to investigate as good cases of shrinking cities in Canada. These are Saint John (New Brunswick), Sudbury (Ontario), Saguenay (Québec) and Thunder Bay (Ontario). Since the case of Sudbury has already been analyzed by Hall (2009), Leadbeater (2009) and Schatz (2010), we have decided to focus our research on the three other cases.

### Methodology

To conduct our case studies, we gathered information about city planning from two different sources. The first source of information is the most recent planning document produced by each urban agglomeration or core city. In Thunder Bay, this planning document is the *corporate strategic plan of the City of Thunder Bay* (City of Thunder Bay 2015). In Saguenay, it is the *Development Plan of the City of Saguenay* (Schéma d'aménagement et de développement – Ville de Saguenay 2011). For Saint John, it is the *Municipal Plan*, called Plan SJ (City of Saint John 2011). The textual content analysis of

**Table 3.** Shrinking cities in Canada among metropolitan core cities.

Rank	City	Province	Cumulative rate of population change		Population in 2016	Year of estimated peak population**	Number of declining periods 1976-2016
			From peak* to 2016 (%)	1976 to 2016 (%)			
1	Saint John	N.-B.	-21,4	-21,4	67,575	1976	7
2	Grand Sudbury*	Ont.	-8,0	-8,0	161,531	1976	4
3	Saguenay*	Qc	-5,5	-3,7	145,949	1991	4
4	Thunder Bay	Ont.	-5,2	-3,2	107,909	1991	5
5	Trois-Rivières*	Qc	-3,4	-3,4	134,413	1976	5
6	Montréal*	Qc	-0,3	-0,3	1,704,694	1976	3
7	St. John's*	T.-N.-L.	-0,2	-0,2	108,860	1976	5

Note: (\*) Cities that have amalgamated during the studied period. (\*\*) Since we have not looked at data before 1976, we cannot identify the year of peak population for all cities that started declining before 1976.

Source: Computed with data on census agglomeration and metropolitan census areas from Canadian census of 1981, 1986, 1991, 1996, 2001, 2006, 2011, and 2016.

these documents was based on a grid inspired from the literature on shrinking-oriented planning (Hummel 2015; Popper and Popper 2002). The focus was put on two shrinking-oriented planning principles: 1) planning documents that show acceptance of shrinkage, 2) the formulation of an explicit goal that avoid the creation or stimulate the reuse of vacant spaces. These are the elements we were seeking in cities' planning documents.

The second source of information of our study is coming from semi-structured interviews with local actors involved in the planning process in the three cities. A total of 40 participants were met: 13 in Saguenay in 2013, 16 in Saint John in 2014 and 11 in Thunder Bay in 2015. Interviews of nearly 1 hour with each participant were held around May and June of each year, usually in their work place. Three categories of actors were interviewed: elected officials, economic development managers and urban planners. The goal of this selection is to ensure a diversity of opinions. The selection process was inspired by Hall (2009) and Schatz (2010), which allows a certain comparability of results. Notes taken during interviews by the researcher were subsequently submitted to a content analysis.

As population decline is subtle in Canadian shrinking cities, we expected to find planning documents that show little acceptance of shrinkage in the first place. As Pällagst, Fleschurz, & Said (2017) pointed out, low acceptance of shrinkage often leads to slow reaction to population decline and generally to

growth-oriented planning strategies. In this case, our interviews are used to link the stage of acceptance of shrinkage with the absence or the presence of shrinking-oriented planning strategies. In the case where we observe shrinking-oriented planning strategies, the content of our interviews also helped out finding what factors have contributed to the paradigm shift. Change in planning strategies may be a reaction to a local crisis, as observed by Bernt (2014), or impulse by local leadership, as suggested by Schatz (2013) and Béal *et al.* (2017). These elements guided the content analysis of our meeting notes.

### Cases overview

The City of Thunder Bay was created by the amalgamation of Fort William and Port Arthur in 1970. The city developed on natural resources, with an important contribution of lumber industries, pulp mills and mining. It also developed some port activities. The economy is now mainly sustained by its regional institutions (the University and the Hospital) as well as by the Bombardier rail vehicle production plant. Demographic decline in Thunder Bay is rather recent since the City reached its population peak in 1991 (and the CMA in 1996). Most recent data don't show any sign of a trend reversal. Since amalgamation, development has mainly occurred in the space between the two historical cores. This zone, called the Intercity, is mainly dedicated to commercial and industrial uses, with subsequent developments. Hence, the intercity ex-

pansion exacerbated in some way the decline observed in the two historical cores, especially in Fort William (Randall & Lorch 2007). Thunder Bay is also characterized by a high proportion of aboriginal population (nearly 10 %).

In Saguenay's metropolitan area, surrounding forests and the abundance of hydroelectric power attracted pulp and paper mills and aluminum industries (Proulx 2007). The first signs of an economic slowdown appeared in the 1980s. Since 2006, the City and its metropolitan region have experienced a reversal of its demographic situation. The population increased slightly in the City and in the metropolitan region between 2006 and 2016. The city of Saguenay is also characterized by two cores: Chicoutimi and Jonquière (merged in 2002). Although Chicoutimi stands as the central business district, there has been no intention to recentralize economic activities on the territory. Both cores have been affected by population decline between 1991 and 2006.

The City of Saint John grew as a global hub for shipping and shipbuilding. Its economy relies on oil refineries and pulp and paper mills (Marquis 2009). In 2003, the Irving shipbuilding plant closed down, significantly impacting the local economy. Despite a small recovery between 2006 and 2011, the city has been losing population steadily from 1976 to 2016. Surprisingly, its metropolitan area is not doing badly. The good performance of the metropolitan area is due to the dislocation of urban development to the north of the city in the suburb municipi-

palties of Rothesay and Quispamsis. The establishment of a local campus of the University of New Brunswick and a regional hospital in the northern part of the city may have contributed to the relocation of the population outside city borders.

### Principles of shrinking-oriented strategies in planning documents

In Thunder Bay, the 2015-2018 *Corporate Strategic Plan for the City* is clear on the potential and the objectives for the future: Thunder Bay is poised for growth. The strategic plan establishes a total of 21 goals, none indicates a paradigm shift or even a preoccupation about the current demographic situation. Thunder Bay promotes itself as a vibrant and innovative city. In the document, demography is treated with ambivalence. Recent population decline is attributed to a bad economic conjuncture that is now gone: “migration in Thunder Bay District may be due to the shifting demand for skilled employees as Thunder Bay region transitions to a knowledge-based economy” (p. 32). But, in the very next page, it admits that population may not fluctuate significantly in the future: “Thunder Bay Census Metropolitan Area (CMA) population has been stagnant over the last two years, and it is expected that it will not fluctuate significantly for the next 10 years” (p. 33).

The *Development Plan* of the City of Saguenay (2011) also shows ambivalence regarding demographic decline. On the same page, one paragraph states that “the city wants to project the image of a growing city offering opportunities for people, businesses and investors”, while the next one makes the observation that the “total population of the city has declined in recent years, and that the demographic projections suggest that population decline will continue in the coming years” (authors’ translation, p. 2-1). Despite a relatively honest diagnosis about its demographic situation, the vision and most of the objectives and orientations of Saguenay’s *Development Plan* are directed towards a return to growth.

The exception in planning documents comes from the *Municipal Plan* of Saint John (Plan SJ 2011). Referring to its *Technical background report*, the Plan acknowledges in a straightforward way the limited prospects for population growth: “The vast majority of projections – local, regional, provincial and national – indicate that the City of Saint John should prepare for continued population decline. While opportunities will arise to attract newcomers, from both within and outside Canada, it will be difficult to offset the anticipated decline associated with an aging population” (ADI Limited 2010, p. 24). Plan SJ also stresses the importance of denser development patterns and the subsequent optimization of municipal resources in response to population decline: “there are sufficient amounts of currently serviced land within the City to accommodate approximately three times the anticipated number of people expected to make the City their home over the planning period” (p. 13). It also states, “the City currently has more of some types of facilities and parks than a city of its size can efficiently support. As a result, funding for these spaces is spread too thin, meaning many parks and facilities remain in substandard condition” (p. 207). The Plan insists on the importance of “Ensuring [that] infrastructure is sized appropriately and life-cycle costs are wholly considered when making investment decisions that support development objectives” (p. 192). These statements can be interpreted as an explicit goal that avoid the creation or stimulate the re-use of vacant spaces.

Our text analysis shows that planning documents from Thunder Bay and Saguenay do not show explicit acceptance of shrinkage; neither do they mention any explicit goals that avoid the creation or stimulate the re-use of vacant spaces. In Saint John, on the other hand, the *Municipal Plan* displays the two principles of shrinking-oriented strategies set in our analysis grid. For that reason, we consider Saint John as an example of a city committed to shrinking-oriented planning strategies, but not Thunder Bay and Saguenay.

### The acceptance of population decline

Results of the discourse analysis are quite coherent with that of document analysis. In Thunder Bay and Saguenay, interviewed participants were mainly minimizing demographic decline. In Thunder Bay, one political actor went as far as saying that: “the loss of the population is not true [because] the censuses are not accountable”. This stage of non-acceptance was reinforced by the fact that “the city has physically grown” despite population decline. Most of the participants were aware, however, that their city was affected by a negative demographic trend. Many admitted for Thunder Bay that “the economy depends a lot on government transfers”, “the number of manufacturing jobs have dropped”, or that “the population initiated an outward movement to the outskirts of the city”. They found it difficult though to integrate this information into planning strategies. Most of them predicted that conventional strategies, like tax incentives and a good communication, would bring back growth. One actor in Saguenay said about population decline that: “these are things we don’t want to know. We say it. We take it. But we don’t like to talk about it”. Another participant added that: “it is not helpful anyway to promote these facts”. Thus, despite a certain acceptance, shrinkage does not translate into planning strategies. The importance of the city’s image has also been a recurring and underlying topic. As stated by one participant in Thunder Bay: “it is important to keep attracting investors, to keep a market big enough for them to think the investment will be profitable”. For these actors, the acceptance of shrinkage is armful for the city’s development.

In Saint John, the acceptance of population decline was less of a taboo. A political actor admitted that: “It is difficult to say it publicly, for sure.” But he also added: “At the same time, we can’t ignore it. To address the problems that it generates, we need to acknowledge it first”. At least one interviewee from each category of actors in Saint-John (elected officials, economic development managers and

urban planners) expressed the idea of moving to a new model of urban development with sentences such as: “I think it is a great thing to plan for more stable growth”, “growth doesn't necessarily mean good, I'd rather stay the same size than grow in a bad way” or “we don't need a second hotel; we need smaller projects”. From these testimonies, we understand that population decline is not only accepted by local actors, but it also reaches the sphere of planning. As one actor said: “If you recognize that your population is that size [while gesturing a small size], you will recognize that you have to do infill [instead of allowing new housing in unserved areas]”. That explains why we find elements of shrinking-oriented strategies in the planning document of Saint John, but not in the documents of two other cities.

### Factors contributing to the adoption of shrinking-oriented strategies

The process surrounding *Plan SJ* was described by one of the participants as “awakening” and “initiating”. Another described the plan as “the biggest thing in Saint John over the last 40 years”, emphasizing the significant community engagement that it had generated. Supporting decisions with credible data, demonstrating leadership and involving the community early in the planning process have been identified as the elements of success to gain public acceptance over *Plan SJ*. The leadership of the person who coordinated the implementation of the Plan was also cited as essential: “She's responsible for the type of plan that we got, for its comprehensiveness”, said one participant. “She had a lot of leadership”, said another. The credibility and the influence of planners in the planning processes thus appear as key factors. The planning department was also described as having relied extensively on the community's output. As an interviewee depicted it, “The citizens' committee was the head planner's consultant”. When asked to comment on the nature of the public's implication, a planner described the citizens' committee as “really engaged” and the community in general as “much more

educated on better planning practices”. This same interviewee added that there was a “momentum in the community” that allowed an honest discussion about new planning approaches for the city. One planner also described how they had to “educate” local actors early in the process and how they had to act as watchdogs of *Plan SJ* after its adoption. From this information, we understand that the city of Saint John was brought to plan for shrinkage by the leadership of planners and the involvement of the community. These governance interactions are similar to what Béal et al. (2017) and Schatz (2013) have observed in other places that have adopted shrinking-oriented planning strategies.

As stated by Bernt (2014), shrinking-oriented strategies often appear as a response to long-term and severe decay or in reaction to a major event. As our data and interviews suggest, this is also the case for Saint John. When asked to explain the reasons that motivated the new planning process, one interviewee underlined an important chronological fact. When the municipal council initiated *Plan SJ*'s project, it was guided by a willingness to prepare for and to capitalize on the anticipated growth that a second refinery announced by Irving Oil would generate for the city. “But this growth never happened”, he said. In 2009, Irving Oil cancelled its refinery project in the face of bad economic conjuncture. The background studies led to the realization that growth projections would be much lower than what was expected. The vision supporting the plan took a drastic turn. The same team continued to work on the plan but, as the interviewee said, “it was a total rewrite”. The cancellation of Irving Oil's project was cited by almost all interviewees as a major event that affected the community's morale. It forced local actors to take into account their demographic trend, showing over 20 % decline in local population over the past 40 years.

### Conclusion

Based on census data from 1976 to 2016, we have outlined in this article the universe of Canadian cities facing population decline. Among cities within this universe, we have chosen to analyze, in depth, three cases where population decline was considered significant: Thunder Bay (Ontario), Saguenay (Québec) and Saint John (New Brunswick). Our goal was to identify shrinking-oriented strategies in their most recent planning documents, and to find out what caused the adoption of these strategies (or their absence). Our definition of shrinking-oriented planning strategies was based on two criteria: the acceptance of shrinkage in planning documents and an explicit goal for a more efficient use of vacant or decaying spaces.

In Thunder Bay and Saguenay, we do not observe any shrinking-oriented strategies in planning documents. This is due to the fact that the level of acceptance of shrinkage among local actors in these cities is weak. Although most actors show a certain acceptance of the historic demographic trend, some still observe it without accepting that the situation may persist in the future. Following Pallagst, Fleschurz, & Said (2017), if population decline is not fully recognized and accepted by local actors, we don't expect to see any shrinking-oriented strategies in planning documents. That is what happened in Thunder Bay and Saguenay. Their planning strategies are rather seeking to resume growth. They are based on local marketing with the intention to attract new investments. Urbanized areas are still expanding, disregarding future demand or optimal use of existing infrastructure. They also rely on maintenance strategies such as the relocation of major public infrastructures like the Hospital, the University and the Regional Courthouse in Thunder Bay, and the harbour for cruise ships in Saguenay.

The situation is different in Saint John, where we observe a clear acceptance of population decline among local actors. Consequently, the main



planning document presents elements of shrinking-oriented strategies. It tries to optimize the use of existing infrastructure by restraining the expansion of the urban area. As observed by Béal et al. (2017) in France or Schatz (2010, 2013) in North America, the emergence of shrinking-oriented planning strategies in Saint John is the result of the leadership of local planners and the involvement of the community. It is also, as it was the case in Germany according to Bernt (2014), a response to a critical situation. Population decline in Saint John is critical among Canadian metropolitan core cities. We also observe that the process leading to the adoption of the new planning strategy occurred when the Irving Oil Company cancelled a major investment. The paradigm shift in their planning strategy was then a reaction to that event. Consequently, we think that the conditions leading to the adoption of a shrinking-oriented planning strategy in Saint John are not necessarily reproducible elsewhere in Canada. As Béal et al. (2017) have also pointed out, local context has a major influence in the choice of a planning strategy in the face of population decline.

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<sup>4</sup> The official population of the City of Montreal is higher in 2016 than in 1976 because of amalgamation. Considering fixed borders lead to the conclusion that population is lower in 2016 than in 1976.

<sup>55</sup> These changes correspond to the difference between the estimated population in 1976 computed with growth rates applied on the boundaries of 2016 and the census population of 1976. The city of Saguenay was created by the merger of two core cities (Chicoutimi and Jonquière) with other smaller municipalities in 2002. Since we have merged data from Chicoutimi and Jonquière from 1976 in our analysis, the impact of the merger with the surrounded municipalities only increased population by 26 % between 2001 and 2006 in our data.

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<sup>1</sup> Ottawa-Gatineau, Ste Catherines-Niagara Falls and Kitchener-Waterloo.

<sup>2</sup> Since data for 1976 is missing for 23 urban agglomerations, we consider the population lost from 1981 for these agglomerations.

<sup>3</sup> This percentage corresponds to the difference between the estimated population in 1976 computed with growth rates applied on the boundaries of 2016 and the census population of 1976.