Think "Futures," NOT "The Future"

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The Problem with the Status Quo

Many of us have been part of meetings that sound a little like ... "Population and employment indicators are doing well. We will need our new neighborhoods and the expanded water treatment plant online by year-end 2020."

While nothing is particularly wrong with using traditional indicators to plan for likely future needs in government, this formula certainly doesn't leave a lot of wiggle room – and it's the wiggle room that matters in today's uncertain world.

How do we create wiggle room or *flexibility*? We create it by thinking about futures, not "the future."

Climate change adaptation is bringing together the fields of strategic planning and emergency management in critical ways. The frequency and severity of extreme weather events happening around the world is being influenced by climate change. Six months into 2019, extreme spring flooding forced thousands from their homes in Ontario, Quebec and New Brunswick.[3] Early estimates rank the event as catastrophic, estimating insured losses alone will reach at least $25 million (just over USD 19 million).[4]

To the west, forest fires in Alberta forced residents of high level and surrounding communities from their homes for nearly two weeks in May, while emergency services battled blazes.[5] According to a July 9, 2019, update from the Government of Alberta, six active fires continued to burn in the area, and damages had been sustained to more than 334,000 hectares of land.[6]

Meanwhile resources for extreme weather events preparedness, response and recovery are being stretched thin and are often pitted against other priorities. Within this context, emergency managers, urban planners, asset managers, engineers, and public policy staff are being asked to plan for the future and create more resilient cities. The price of getting the plan wrong is extraordinary and often paid for through community hardship and suffering. What can we do to improve planning efforts? We can think about *futures*.

What Can We Do?

My interest in the concept of futures started in grad school and centres on anticipatory governance. Anticipatory governance is a process for futures planning that can accommodate uncertainty, complexity, and difficult trade-offs through interdisciplinary collaboration.[7,8] **The process focuses on three key concepts**:

- **Foresight** – looking ahead for factors that may influence the status quo in meaningful ways and create different paths or futures;
- **Flexibility** – creating a suite of options to manage positive and negative risks through incremental and transformational change; and
- **Feedback** – learning from data and adjusting decisions as needed.[9,10]

Anticipatory governance has been used to support military scenario planning, understanding applications for nanotechnology, and as a tool for climate change adaptation.

Today I'm in my dream job, managing the creation of the City of Saskatoon's corporate climate adaptation strategy and building capacity for futures thinking along the way. This project allowed me to introduce concepts from anticipatory governance to a wide range of leaders in the organization.

To begin, I gathered climate projection data specific to Saskatoon

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[2] The views expressed in this article are my own and do not necessarily reflect the views of the City of Saskatoon's Administration or City Council.

[3] Eschner, K. (April 30, 2019). Canada: extreme floods show climate threat as experts warn of further tumult. The Guardian.

[4] Contant, J. (May 10, 2019). How much does the eastern Canada flooding cost? Canadian Underwriter.

[5] Small, K., Bartko, K., & Vomiero, J. (June 3, 2019). High Level wildfire evacuees 'very thankful' to be returning home. Global News.

[6] Government of Alberta. (July 9, 2019). High Level Area Update.

[7] Fuerth, L. S. (2009). Foresight and anticipatory governance. *Foresight, 11* (4), 14-22.

[8] Quay, R. (2010). Anticipatory governance. *Journal of the American Planning Association, 76* (4), 496-511.

[9] Barben, D., Fisher, E., Selin, C., & Guston, D.H. (2008). Anticipatory governance of nanotechnology: Foresight, engagement, and integration. In E.J. Hackett, O. Amsterdamska, M. Lynch, & J Wajcman (Eds.) *The Handbook of Science and Technology Studies* (3rd Ed. 979-1000). Cambridge, MA: The MIT Press.

[10] Boyd, E., Nykvist, B., Borgström, S., & Stacewicz, I.A. (2015). Anticipatory governance for social ecological resilience. *AMBIO, 44*(1).

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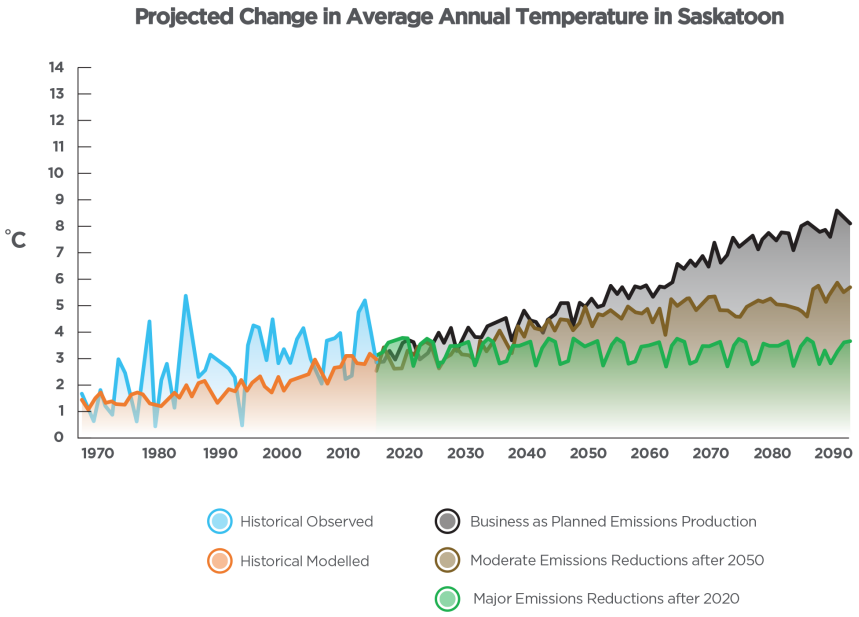
(Saskatchewan) through the Climate Atlas of Canada and the Canadian Centre for Climate Services.[11] Projection data for a variety of annual and seasonal temperature and precipitation variables were available across three emissions scenarios, including business as usual emissions production, moderate reductions after 2050, and major reductions after 2020. After a quick scan of the data, one thing was blatantly obvious. The severity of projected change in each variable hinges largely on the amount of emissions released into the atmosphere. This is how I started futures thinking with this team.

But it wasn't enough to just create a chart. We needed to make it visual. Using visualizations, like the example at the right for projected change in average annual temperature, our team sparked conversations about how emissions rates are creating the possibility of different futures in Saskatoon right now.

Using location-specific climate data and comparative visualizations, our team engaged more than 50 civic staff from across the corporation in a discussion about the aspects of desirable futures in Saskatoon and the possible risk projected climatic changes could create for civic operations. The outcome? A deeper understanding of how more intense and longer lasting heat, changing precipitation trends, and highly variable weather in shoulder seasons will impact civic operations, including emergency management.



Graphic adapted from Local Actions: Saskatoon's Adaptation Strategy (Part 1) Climate Projections and Possible Impacts. Report available in full at saskatoon.ca/localactions.

The next step? Using the prioritized risk listing as a jumping-off point to generate a list of options to build our organization's resiliency. On the emergency management side, this means understanding the likely differences in service demand between each possible future. For example, under a business as planned emissions scenario, the annual frequency of extreme heat days[12] could triple by 2050.[13] Under the moderate emissions reductions scenario, the projected increase is slightly lower moving from an average of 9 per year to 26 per year.[14]

With this information, our team is using scenario planning to merge the practices of anticipatory governance and emergency management. By encouraging the imagining of multiple futures, we are increasing readiness for many conditions and developing triggers to alert us to the need for added actions in a proactive way – while limiting the risk of over and under preparedness.

Ultimately, the City of Saskatoon's corporate adaptation strategy project benefited from using anticipatory governance practices through increased curiosity, interest in futures planning, and a desire to design strategic actions that create paths towards desirable futures.

A Call to Action

Many organizations and governments are talking about climate change adaptation and increased resiliency planning. In a highly uncertain world, we can no longer treat planning for the future like a simple math problem where population growth rates and the economic outlook allow you to "solve" for future needs. To really shape desirable futures, we must use this opportunity to reimagine the way we think about "the future" and improve how we plan for it by thinking *futures*. ▲

[11] Both Canadian sources are free to use and contain map-based climate projection data from 2020-2100. They are linked here: Climate Atlas of Canada and Canadian Centre for Climate Services.

[12] For Saskatoon, Saskatchewan, it is considered an extreme heat day when the temperature reaches 30p Celsius (86p Fahrenheit) or warmer.

[13] Climate Atlas of Canada. (2019).

[14] Climate Atlas of Canada. (2019).