Planning Vancouver Together

Horizon Scan Report Summary

Introduction

- This document summarizes the *Vancouver Plan* **Horizon Scan** report, which outlines emerging indicators of change. It helps inform **Scenario Planning** and the **Foresight** Methodology - tools the City of Vancouver is using to explore possible futures the city may face as part of Planning Vancouver Together - the citywide process to develop the *Vancouver Plan*.
- The **Horizon Scan** report was generated from a broad literature review and interviews conducted in spring 2020 with a range of participants from various sectors, including transportation, urbanism, governance, philanthropy, arts and culture, education, financial, retail, healthcare, resilience, sustainability and natural systems, social equity, and corporate sectors.
- This content will be shared with a wide range of stakeholders. It serves as an input into the next stage of the project, which will develop different exploratory scenarios to inform policy decisions for the *Vancouver Plan*.
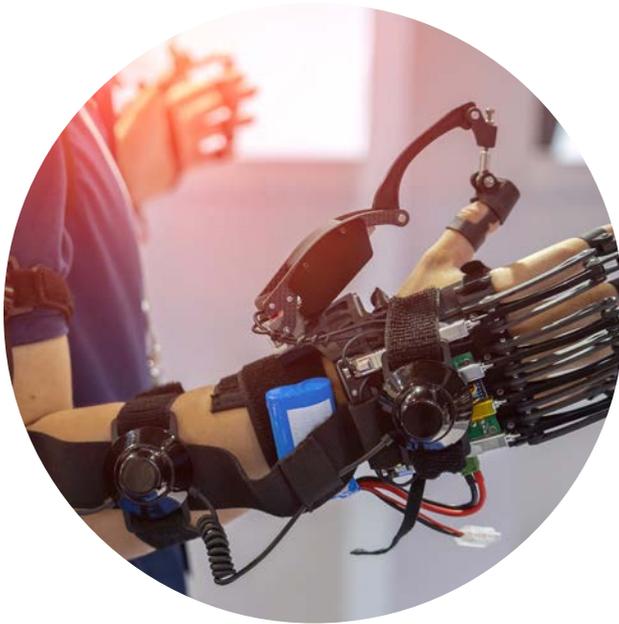- See the **Glossary** section below for additional definitions.

Drivers of Change

- Drivers of change are the slow moving, and deep forces that shape global and local conditions and operate over long time periods.
- Key drivers of change that will affect Vancouver's future include: Demographic changes, a diversifying population, Reconciliation with Indigenous peoples, infectious disease, global urbanization, rapid technological advancements, automation, seismic risk potential, and the climate crisis.

Shifts & Indicators

- Shifts reflect a change in direction from one state to another. Each Shift described below is supported by four Indicators that illustrate emerging issues for Vancouver.

Shift 1 - Who will we be?

Explores how we as individuals might be changed.

1) Indicator: Augmented Health

Genetic enhancement and wearable devices allow humans to overcome physical and cognitive limitations. Unequal distribution of health benefits across the population is of concern and ethical considerations of privacy, data ownership and personal agency are raised.

2) Indicator: Mental Health

Individuals face mental health strains further impacted by noisy, crowded living environments; environmental disasters experienced at home and around the world; violent attacks on innocent victims in mass shootings; food insecurity and migration; and, negative political posturing. This is of particular concern to those who have experienced previous trauma.

3) Indicator: Applied Artificial Intelligence (AI)

AI produces convincing "artificial humans" for use in a wide range of applications. This makes it increasingly difficult to authenticate verifiable information and opens the possibility of manipulation of content.

4) Indicator: Equity/Inequity

Systemic racism persists despite Vancouver's demographic shift toward a dominantly multicultural, multiracial population, highlighting the need for decision makers that are reflective of the general population in municipal affairs. Economic choices made by First Nations through land development will influence market and social outcomes.

Shift 2 - What will we do?

Explores how our interactions with others may be altered.

1) Indicator: Arts & Culture

Livestreaming of performing arts is becoming normalized at every scale, from big budget productions to individual performers broadcasting from their homes. Audiences unable to travel or with special needs may have their experiences enhanced. Touring as an income stream for artists may be reduced.

2) Indicator: Employment

Automation and digitization are fundamentally altering workplaces, replacing lower skilled, entry level jobs in manufacturing, transportation, service, and routine administration sectors. Lifelong learning opportunities are critical to support an evolving workforce.

3) Indicator: Education

Online learning is becoming a standard part of all levels of education, forcing families to ensure adequate space and equipment to work digitally and data plans for multiple users to access services remotely. For universities, online learning and improved digital experiences may pull students away from campuses and offer alternative learning pathways.

4) Indicator: Food

Food continues to be a critical element of Vancouver's green city initiatives, with innovative approaches reducing environmental impact. *Food insecurity* is a by-product of poverty and is connected to the unaffordability of life in the city.

Shift 3 - Where will we live?

Identifies possibilities of where interactions may take place.

1) Indicator: Remote Everything

The shift to online platforms for work, healthcare, education, and retail will see space requirement implications for offices, hospitals, schools, and shops. The need for adequate 5G network infrastructure will increase with this shift.

2) Indicator: Densification Dilemmas

The debate between people in favour of density and those opposed to it continues and is further complicated by environmental imperatives and the spread of infectious disease.

3) Indicator: Housing Models

Finding suitable housing types and transportation modes for the aging population will be critical, and the desire of many to continue to live in the same neighbourhood will necessitate more widely distributed traditional housing forms. Immigration will bring an increased number of young families, some of whom will be climate and economic migrants looking for affordable options.

4) Indicator: Regional Connections

Joint initiatives by cities/states along the western region of North America (also known as Cascadia), from high-speed rail investigation to earthquake preparedness, emphasize the geographic and cultural connectedness of place, even beyond our borders. International links to the Pacific Rim may be emphasized.

Shift 4 - How will things work?

Explores structural systemic changes to the city.

1) Indicator: Smart Cities

Predictive analytics have the ability to discern the unspoken before open disclosure has occurred. As a result, we live in a world of both systemic and voluntary surveillance. Massive quantities of data permit cities to efficiently track and guide beneficial behaviours, but potentially at the cost of loss of free democratic imperative.

2) Indicator:Supply Chains

The weaknesses in a global supply chain are brought to light during a crisis, whether a health emergency, environmental disaster, financial downturn or armed conflict. The notion of re-localization of critical goods and services reverses decades-long business imperatives to produce as efficiently and cost effectively as possible. Digitized production will enable more on-demand supply of goods.

3) Indicator: Transportation & Infrastructure

Moving people and goods through the city and around the world requires anticipation of emerging technology and deployment of capital investment for infrastructure in line with changing needs and attitudes. Sustainability measures require intensification to achieve carbon-neutrality. Autonomous cars, trucks and delivery vehicles will complicate the mobility mix in cities already struggling to manage multi-modal transportation pathways and public/private jurisdiction of key network elements.

4) Indicator: Waste

Vancouver's ambition to build a zero waste community, to value resources, and to support a *circular economy* by 2040 requires intensification and continued commitment as economic volatility and fear-based behavioural shifts impact policy.

Shift 5 - How will society change?

Explores the larger collective challenges we may encounter.

1) Indicator: New Economy

With the current pandemic, trends already in place have accelerated in the face of massive job loss and emergency government spending. There is worry that a weak recovery could devolve into economic depression over the course of the next decade.

2) Indicator: Governance

Technology has the potential to create more accessible and more accountable organizations using data capturing sensors, blockchain verification as well as social media monitoring. Participatory governance models that push the envelope beyond access to information to include collaborative citizen-government decision-making are enabled and embraced in some jurisdictions.

3) Indicator: Safety & Security

Civil unrest is mounting globally as income inequality, corruption, and inaction on climate change become intolerable, with dangerous street demonstrations erupting alongside peaceful movements. Verbal abuse and physical attacks on people of colour are part of a racist rhetoric that scapegoats non-white people for a wide range of perceived harms and is enabled by some leaders. Refugees and migrant workers are at particular risk.

4) Indicator: Climate Emergency

A global call to action for *Green Stimulus* to rebuild economies post pandemic has been raised by environmentalists, labour leaders and businesses alike, and will have long-term sustainability implications. Strategic investments in green infrastructure and expansion of well-paying jobs in associated industries are leading opportunities to boost innovation and accelerate de-carbonisation.

Glossary

Circular economy

An alternative to the traditional linear make-use-dispose economic model which instead keeps resources for use as long as possible, maximizes their value whilst in use, then recovers and regenerates natural systems.

Food insecurity

Inability to access a sufficient quantity of affordable, nutritious food.

Foresight

A method of preparing for the future by exploring potential alternative situations and assessing possible impacts and uncertainties that may arise if those situations occur.

Green Stimulus

A package of environmental-economic measures from the government.

Horizon Scan

Looking forward to emerging and less certain signals of change that may have large implications over time.

Predictive analytics

May include technical approaches such as statistical analysis, modelling, or data gathering, and more to analyze current or historical facts to make predictions about the future.

Scenario Planning in Foresight

A process to envision possible futures through a detailed study and exploration of trends and known drivers of change which can be compared and assessed. It is a way to assess risks, find opportunities, and build a shared vision for the future of the city.