Mobility Cube
A fun way to talk about cities
Project Description: “Street Wise”

The ‘cube’ is a tool that makes urban design policy accessible and memorable by distilling complex information into plain language, visualizations, and a tactile tool.

The ‘cube’ can be used in a variety of scenarios including a formal presentation, an informal conversation, and structured community engagement workshops. It can grow as additional ideas are put into the cube.

The contents of the ‘cube’ are directly reflective of urbanizing TOD areas in Coquitlam but ‘abstracted’ so that the tool can be broadly used in various contexts and situations.

The ‘cube’ is an urban design collaboration between Perkins and Will and Nelson\Nygaard jointly commissioned by the City of Coquitlam’s Planning and Engineering departments.
Making Policy Easy to Understand requires cooperation among various audiences.
Challenges

- Complex
- Little visualization
- Planning vocabulary

Opportunities

- Collaboration across departments
- Manageable scope
- Replicable for other municipalities
Burquitlam Lougheed Neighbourhood Plan Principles

1. Revitalizing Neighbourhood Centers
   - Creating vibrant and well-designed community destinations and landmarks;
   - Support open space networks by improving neighbourhood nodes;

2. Improve Community Amenities
   - Achieve high quality public realm;
   - Addition to the inventory of the parks, recreation, and cultural spaces;
   - Provide more public service and education centers;

3. Increase Transportation Choices
   - Transportation Demand Management to encourage walking, cycling and transit trips;
   - Well connected transportation network to make travel shorter, faster and more convenient;
   - Develop multi-modal network to enhance neighbourhood livability;

4. Provide Housing Options
   - Diversity of housing types, locations and forms;
   - Higher residential density;

5. Design on Human Scale
   - Safe, accessible, and attractive pedestrian and cycling routes;
   - High architectural excellence to complement the public realm and improve walkability;
   - Diversity of street frontage typologies and uses to support community demands;

6. Foster Sustainability (environmental, social, and economic)
Defining our Values

- Community feedback
- Internal evaluation (collaboration with Nelson/Nygaard)
- Best practices review
A Good Street Network Values

- Accessibility and Efficiency
- Livability and Meaning
- Inclusivity and Equity
- Resilience and Flexibility
- Sustainability
- Health and Well Being
A Good Street Network Strategies

1. Accessibility and Efficiency
   - Provide multi-modal access to the amenities, neighbourhood centers, and major transit nodes
   - Improve transit ridership experience by increasing transit coverage and frequency
   - Enhance neighbourhood connectivity and circulation to optimize travel distance and commute duration

2. Livability and Meaning
   - Provide a walkable, pedestrian and bike friendly street network
   - Deliver a dynamic streetscape to support a diverse range of community demands (including wide sidewalks, mid-block crosswalks, street furniture, weather protection, and lighting)
   - Enable streets as “places” to be in and invigorate a sense of belonging

3. Inclusivity and Equity
   - Support diversity in programs, user groups, and targeted demographics to accommodate all ages and abilities
   - Mandate universally accessible infrastructure
   - Promote public realm, mobility modes, and enhanced transit network that aim for a better sense of equity

4. Resilience and Flexibility
   - Enhance neighbourhood connectivity and circulation to optimize travel distance and commute duration
   - Enrich green infrastructure (including greenways) and access to green spaces and public realms
   - Set better infrastructure for future growth and increased transit capacities

5. Sustainability (environmental, social, and economic)
   - Provide a wide stock of housing and public realm contributing to affordability factors
   - Increase street canopy and access to neighbourhood green network
   - Provide better market demand that boosts neighbourhood’s economy
   - Enrich green infrastructure (including greenways) and access to green spaces and public realms

6. Health and Well Being
   - Improve safety for all user types with more eyes on the street and improved infrastructure
   - Prioritizing walkability and cycling while reducing the need to drive by making transit service more reliable and convenient
   - Implement way-finding strategies for pedestrians and cyclists
A Cube is the Perfect Object

Each cube side = one value
Same number of faces as our values

Connect values as one whole
Forms the bigger picture

Each card = one story
Container for more information
Layers of Information

street network plan → aerial → abstract future aerial

abstract future aerial → diagram base → strategy diagram

strategy diagram → strategy

Accessibility and Efficiency
Transit Ridership
Enhance neighborhood connectivity and reduce travel distance and commute duration.

Easier Movement
Closer to Transit
Close new major transit riders are gaining in core cities and suburban areas.妄想通勤距离和通勤时间与现有通勤路径和现有公交服务。
Context of Information

The illustrations on the cube and cards are an abstraction of the existing Burquitlam neighbourhood based on the changes that would happen in the future according to the Neighbourhood Plan.

Each face represents a key part of the neighbourhood diagrammatically, while being agile and versatile enough for further adjustments. They are derived from the unique challenges and conditions facing Burquitlam and even make discreet graphic references to that neighbourhood. However, they are also purposefully generic so as to be applicable in other neighbourhoods in the future.
Assembled Cube Builds a Tactile City
Easier Movement
More Ways to Move

A better street network means that there are more options to get to the places that matter most like community centres, parks, and transit stations.
Easier Movement

Closer to Transit

Areas near major transit routes are a priority for new streets bringing more people within easy walking or biking distance of stations or stops. Easier access to transit could mean more transit riders and improved transit service.
Easier Movement

Shorter Distances

A better street network means that distances are shorter between places.
More Curb Space

The street serves day-to-day needs such as food delivery and garbage pick-up for these new developments.
Nicer Places
Nicer Places

Walkable and Bike Friendly

Streets are not just for moving traffic; they also are places that support walking and biking for transportation and recreation.
Nicer Places

Streets are for Community
Wide sidewalks, street furnishings, small blocks, and lighting create opportunities for streets to be used as gathering spaces. Local streets and laneways may have temporary closures to support block parties or fun events.
Places People Enjoy

Wider sidewalks, boulevards, or sidewalk ‘bulges’ on streets can be places where neighbours meet and gardens grow. Streets are places that people enjoy.
All Ages and Abilities
All Ages and Abilities

Inclusive

Streets and sidewalks designed today improve the way all ages and abilities move around the community.
All Ages and Abilities

Equity
When a street network is enhanced, there are improved options to travel through the neighbourhood in a variety of ways - including on foot, bicycle, car share, or transit. These options are cheaper than a private vehicle meaning mobility is more equitable.
All Ages and Abilities

Safety

New investments in streets are for everyone including pedestrians and cyclists. New laneways, for example, can reduce the number of driveways crossed by cyclists resulting in safer networks.
More Options
More Route Options

A better street network is more resilient, providing more route options that disperse traffic through the neighbourhood and reduce local congestion.
More Options

Greenways and Green Streets

A better street network is not just comprised of traditional paved streets. In some cases, streets may contain a greenway or a green street.
More Options

Future Proofing

Opportunities to improve a city’s street network are limited. Get new public space now before new buildings are in the way.
More Options

Emergency Response

New streets mean multiple routes to get to places in an emergency.
Sustainability
Housing Options

A better street network enables more housing - and more kinds of housing - to be introduced to the neighbourhood.
Trees and the Urban Forest

Many of a City’s trees are located on streets. A broader street network is also an opportunity to enhance the City’s ‘Urban Forest’ and contribute to biodiversity.
Denser neighbourhoods rely on a better street network and also offer increased opportunity for commerce and jobs.
Green Infrastructure

Green infrastructure such as stormwater gardens and rain gardens exist within streets. These provide a more sustainable, ecologically responsible means to manage stormwater in the City and may contribute to pollinator habitat.
Health and Wellbeing
A Safer City

As the City grows, new housing that is directly facing the street - and streets surrounded by housing - contribute to a safer street and safer City.
Exercise is Good for You!

A better street network includes improved walking and biking routes. These modes of travel are good for you!
Where to Use the Cube

Presentation

Community Engagement

Discussion
Digital Cube

The cube could be presented digitally as well. A virtual cube or simple menu could present the six values with links to separate pages explaining the principles in more detail with illustrations and infographics.