Transport Accessibility

A quantitative measure
Saeid Adli

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“You cannot improve what you cannot measure.”

-Darren Hardy
Legend

PT
Jobs within 45min on Public Transport divided by Total regional jobs

- > 40%
- 30 - 40%
- 20 - 30%
- 10 - 20%
- < 10%
Results and discussion.

Why we use Accessibility?

How we measure Accessibility?

Results and discussion.
Why we use Accessibility?
Planning for Accessibility VS Planning for Mobility

- Level-of-service
- Volume-to-capacity ratios
- Travel times
- Efficiency of the system
- Road building
- Increasing capacities
- Focuses on the means without direct concern for the ends.

- Time/cost of reaching a destination
- Attractiveness of the potential destinations
- Brings in land-use policies into account
- Expanding mode choices and reducing the need to drive.
- Focuses on the ends rather than the means
Objectives: A sustainable transport system that...

- SAFETY: is a safe system, free of death and serious injury
- ACCESS: provides increased access to economic and social opportunities
- Environment: is resilient

Value for money: delivers the right infrastructure and services to the right level at the best cost

KEY strategic priorities

Supporting strategic priorities

- reduces the adverse effects on the climate, local environment and public health
How we measure Accessibility?
(Open) Data

How we measure Accessibility?

• General Transit Feed Specification (GTFS) for public transport data
• Open Street Map (OSM) for street network data
• New Zealand Census for demographic data
• TomTom traffic for historical traffic data
Accessibility Measure

How we measure Accessibility?

Drive | Cycle | Walk | Public transport
```python
In [5]:
    otp.service_area(
        in_gdf = in_gdf,
        id_field = 'stop_name',
        mode = "BICYCLE",
        breaks = [500, 1000], #in seconds
        date_time = dt,
        control_vars = {'maxWalkDistance':'400'},
    )

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Out[5]:

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</table>
```
Results and discussion.
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Quantifying accessibility helps to consistently measure, compare, and track objectives in transport plans and to obtain insights that could inform policy decisions.
Thank you all