

# Evaluating and Prioritizing Transportation Investments

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- input from David Kriger, David Kriger Consultants Inc., Ottawa
- with reference to HDR Corporation Ltd.

# Premise

- \* Sustainable transportation has many benefits, including:
  - Lower greenhouse gases (GHGs), Criteria Air Contaminants (CACs)
  - Less consumption of resources, including land, energy, ...
  - More efficient use of capacity (transit, ridesharing over SOV)
- \* Health benefits can result – e.g.:
  - Reduced smog → reduced incidence of asthma, ...
  - More walking, cycling → improved fitness, ...
- \* *Much discussion – but won't happen if can't be measured!*

# Two Examples

- \* Two recent measurement projects set the stage for assessing health, other co-benefits:
  - Outcome Indicators (TransLink, 2010)
  - Transit Business Case Template (MoT, 2009)
- \* Basis of each project:
  - Quantify impacts → focus on GHGs, CACs as basis
  - Be comprehensive in coverage and scope
  - “Tell the story” – use meaningful measures

# TransLink – Outcome Indicators – GHGs and CACs

- \* Purpose:
  - Develop measures to assess GHG and CAC impacts of new transit infrastructure, equipment
  - Develop reporting template to decision-makers; meet Federal ‘before-and-after’ reporting
- \* Part of TransLink’s corporate sustainability strategy
- \* Consultation-based approach to defining measures of importance

# Different Needs for Different Audiences

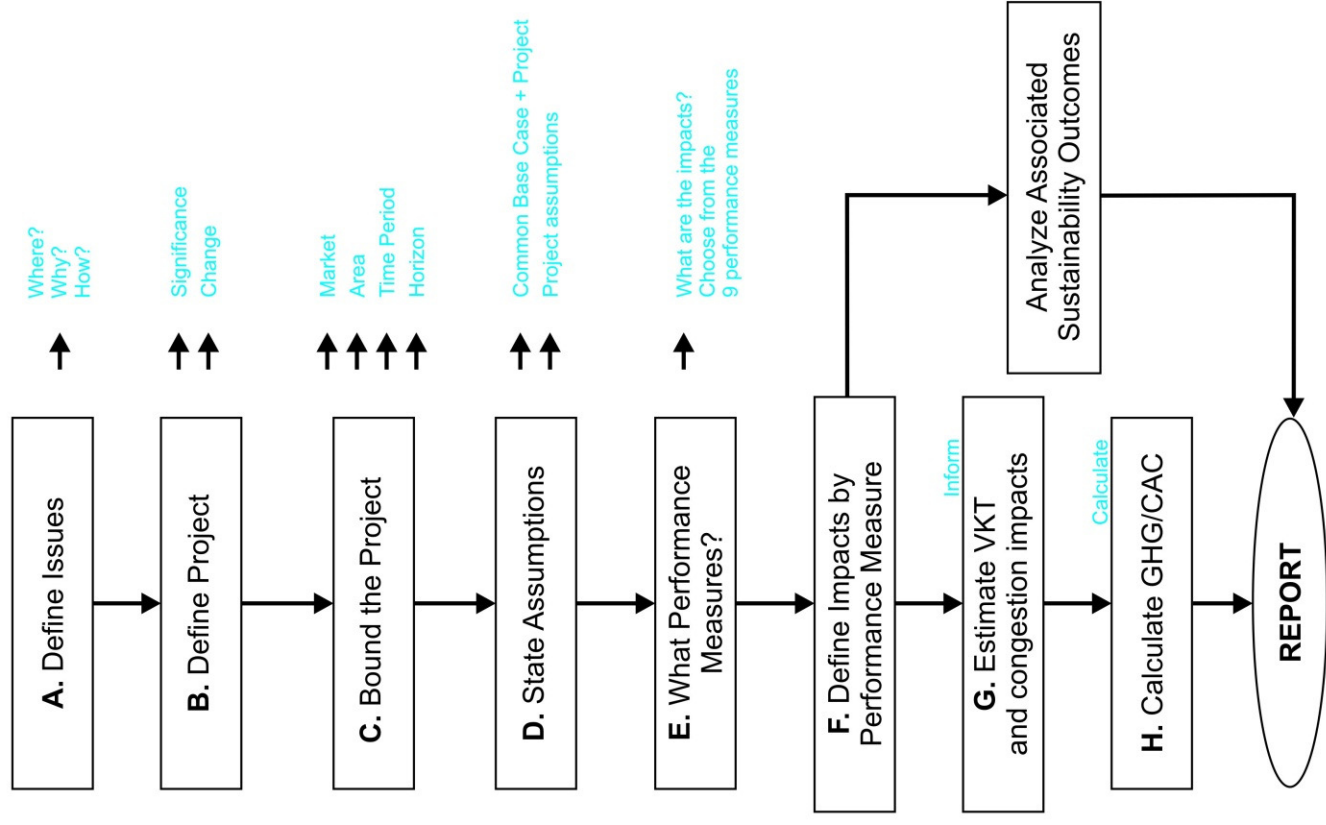
## ★ Nine performance measures:

1. Ridership
2. Modal Share
3. Public Transit Leverage
4. Public Transit Market Penetration
5. Use of Personal Vehicles
6. Auto Ownership
7. Land Use Mix and Form
8. Urban Density
9. Trip Travel Time

★ GHG, CAC impacts expressed for each

# Systematic, step-by-step process

Pilot-tested  
against TransLink's  
2008 purchase of  
69 new buses



# MOT – Transit Business Case Template

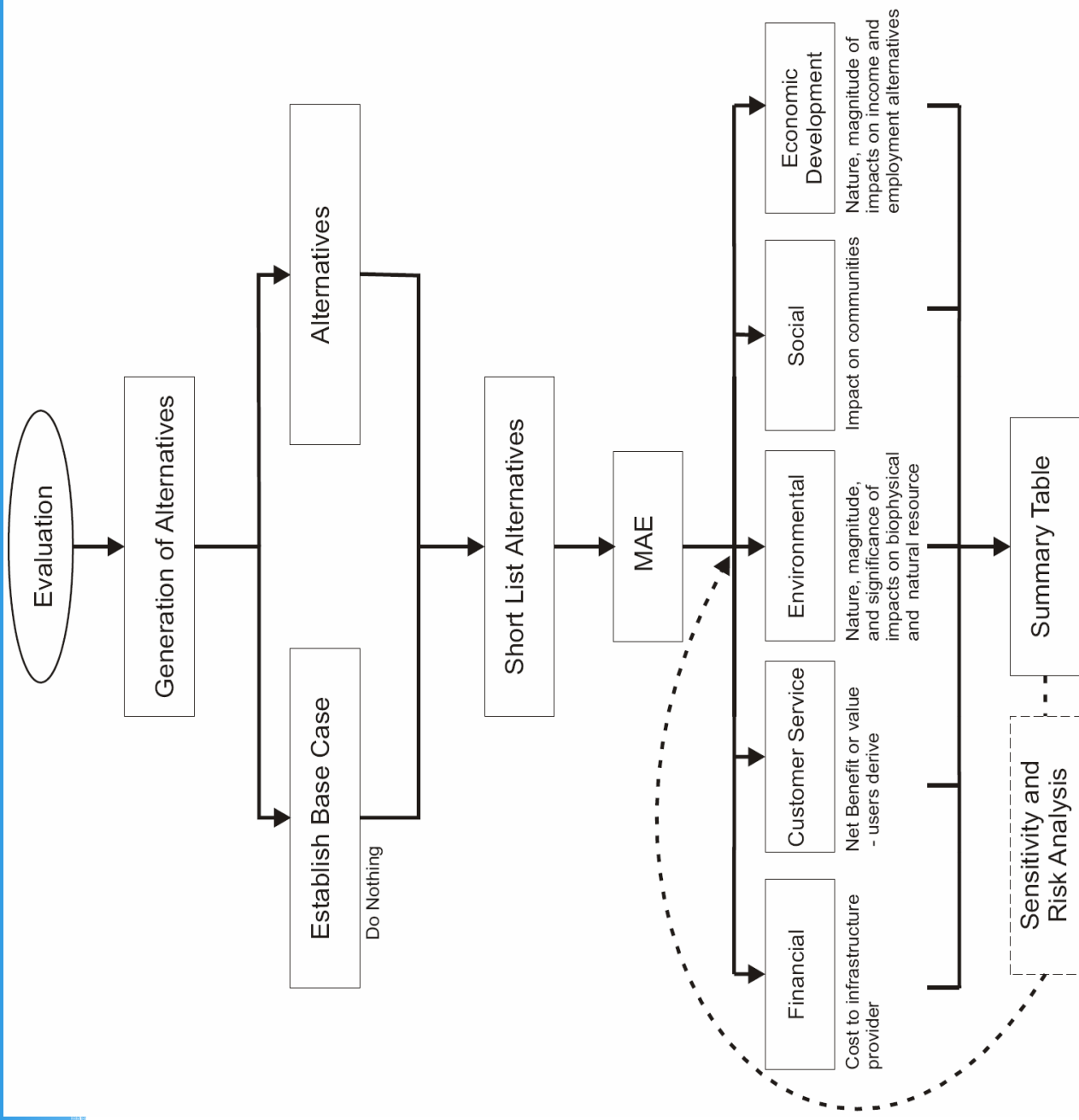
- \* Purpose: Develop consistency of applications tied to overall context and policies
- \* Expand to include 50+ programs:
  - Transit *plus* TDM, walking, cycling
  - Infrastructure *plus* equipment, awareness, education, ...
  - Large *and* small scale
  - Urban *and* rural
- \* Aim: promote sustainable culture
- \* Define problem and develop data / tools

# MOT – Transit Business Case Template

- \* MAE as basis:
  - Adapted cost-benefit analysis for transit programs
    - TransDec is basis – consistent with Federal government
  - Increased quantification of social and environmental accounts
  - Systematic step-by-step process:
    - Scalable to application (spatial, temporal)
    - Use available data, tools – build as go forward



# Project evaluation



NB: The dotted line is not a defined step of the process but is meant as a check for informative purposes.

**Diagram 3**

# Thank you!

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