

Richmond Regional
**Transportation
Planning
Organization**

SUPPORTED BY **PlanRVA**
THE REGIONAL
COMMISSION

Connect RVA 2045



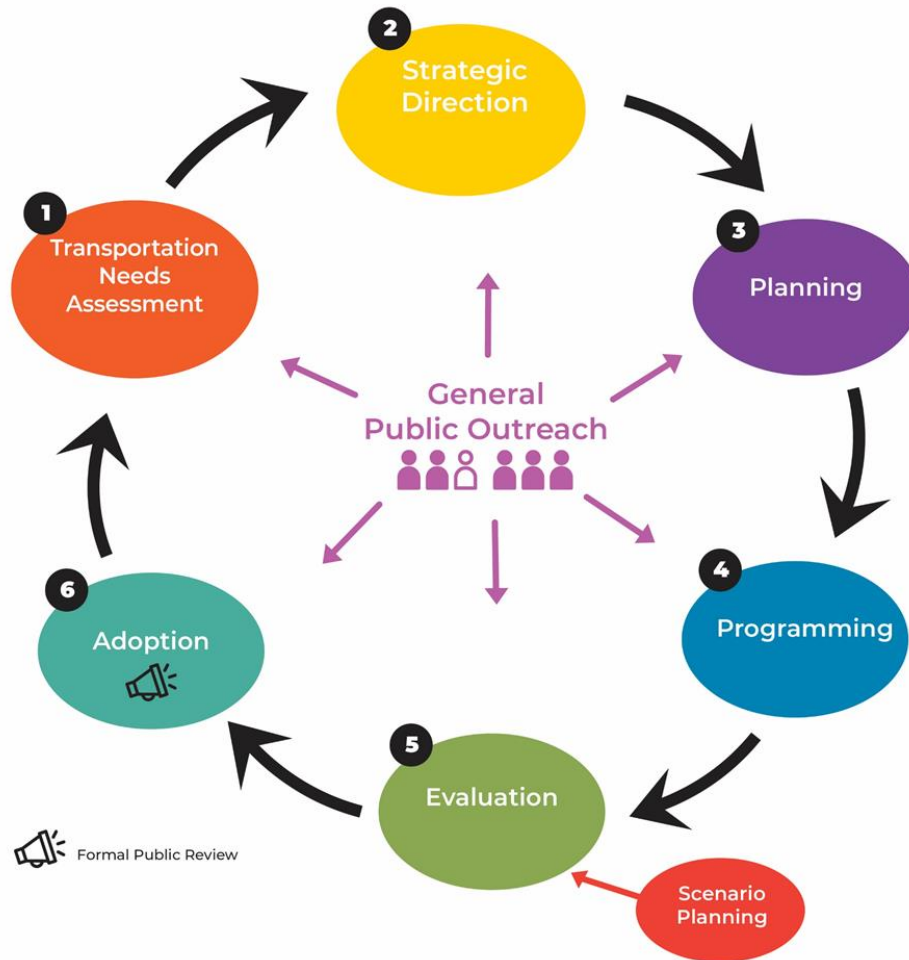
Advisory Committee Meeting

October 28, 2021

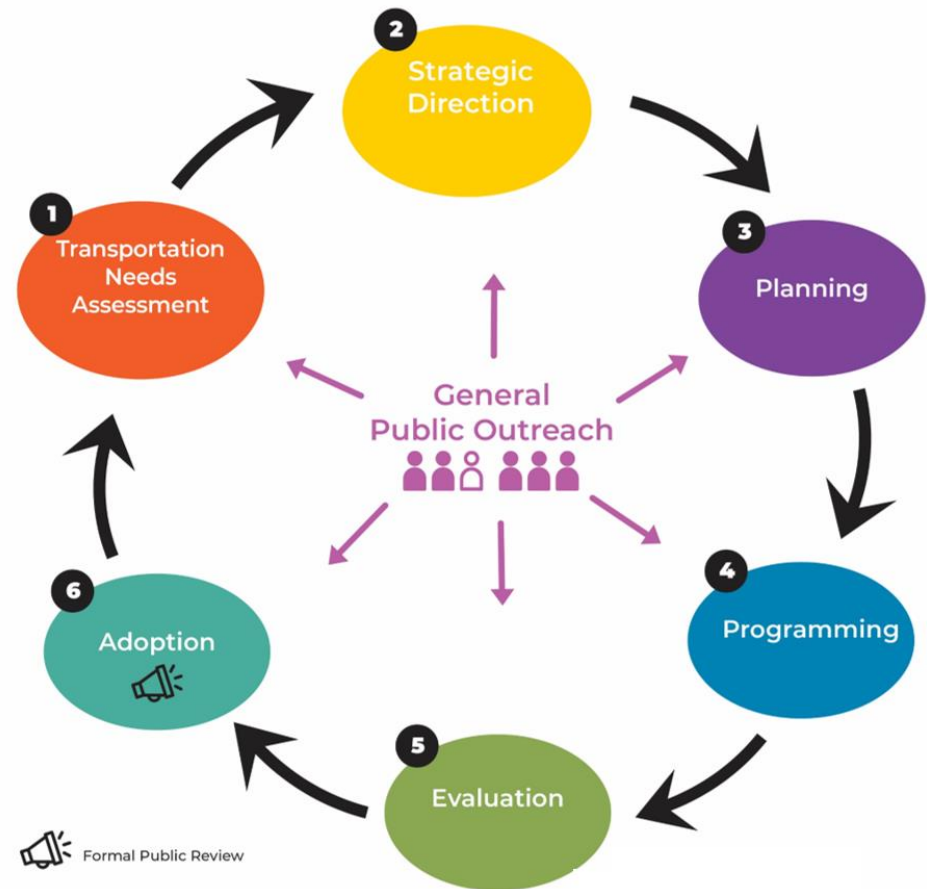
ConnectRVA 2045

Parking Lot Items

Scenario Planning

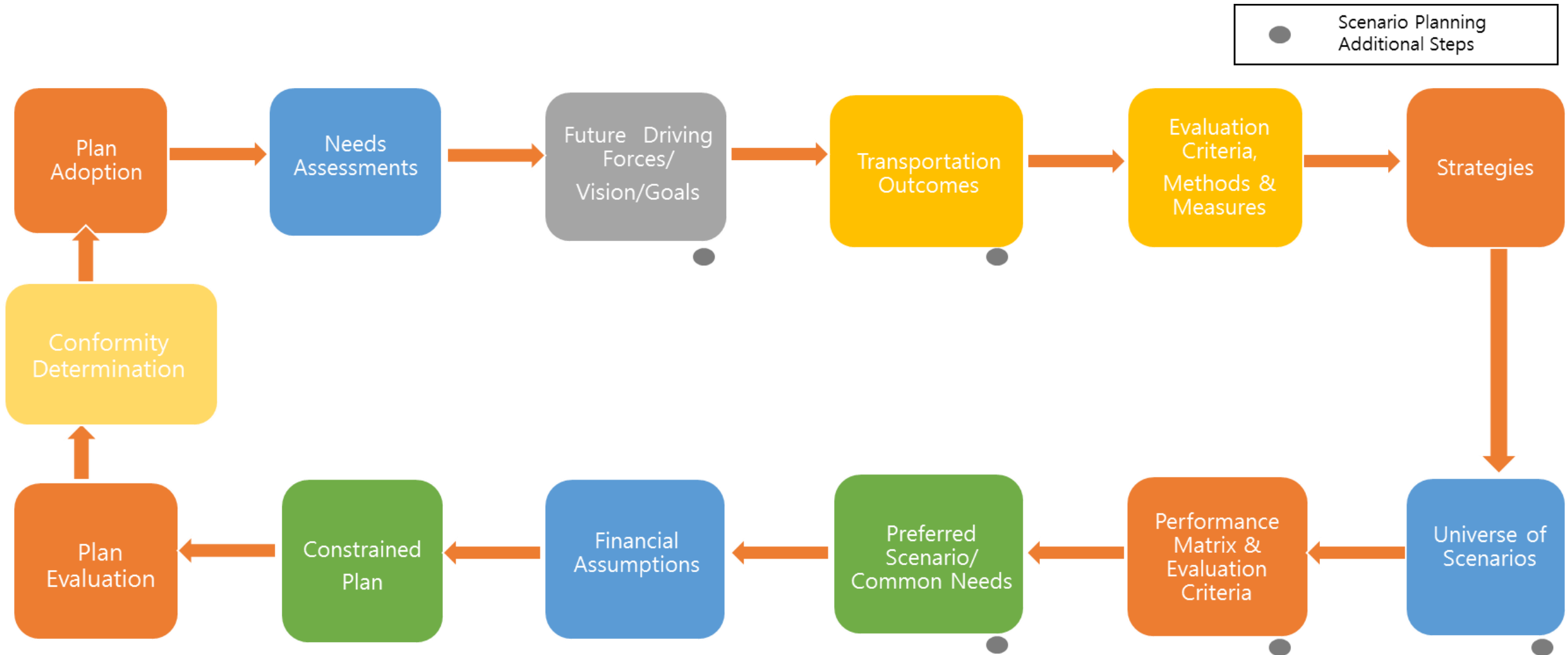


Original LRTP Process Flow



Modified LRTP Process Flow

Scenario Planning



LRTP Process Flow with Scenario Planning

Benefit-Cost Evaluation for Project Prioritization

- Only for Demonstration for ConnectRVA 2045
- Net present value of benefit (Individual Project Level)
- Benefit could be positive or negative
- Absolute Benefit of the Project (Not relative to any other project)
- Comparison with the approved Project Prioritization and Ranking.

Total Benefit

- Operational/Mobility Benefit
- Safety Benefit
- Environmental Benefit
- Access Benefit
- Quality of Life Benefit

Total Cost

- Project Cost (Construction +PE +ROW)
- Annual Maintenance Cost/ Annual Operational Cost

$$\text{BCA} = \text{Total Benefit} / \text{Total Cost}$$

Benefit-Cost Evaluation for Project Prioritization

Benefit Calculations

Operational Benefits

- Savings in Person Delays, Truck Delays and VMT

Safety Benefits

- Equivalent Property Damage only (EPDO) savings due to reduced fatal and severe injuries accidents.

Environmental Benefits

- Reduction or Increase annual tonnage of pollutants focused on VOC, NOx.
- Other NAAQS pollutants (Sox, CO, PM2.5, PM10)
- GHG Emissions (CO2, methane, fluorides).
- Environmental Burdens – soil erosion cost, floodplain mitigation cost, etc.

Benefit-Cost Evaluation for Project Prioritization

Benefit Calculations

Access Benefits

- Ease of Access (Impedance Benefit) – Both Access to Jobs and Access to Destinations (Destinations to be converted into Visitors Equivalent)
- Opportunities Benefit
- Access to Transit Benefit

Quality of Life Benefit

- Any other user and not user benefit not captured in the first four categories (health, social etc.)

Connect RVA 2045



Website

www.connectrva2045.org

Contact Information

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