

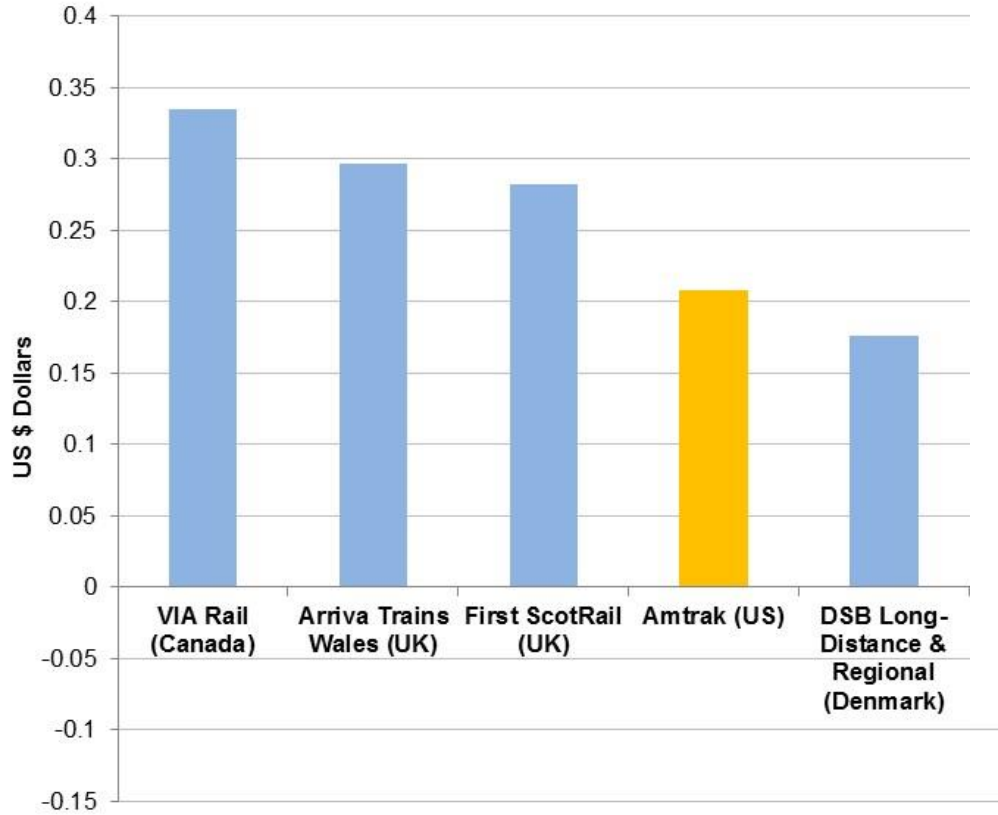


TRB National Cooperative Rail Research Program: Report 1 (NCRRP 07-01)

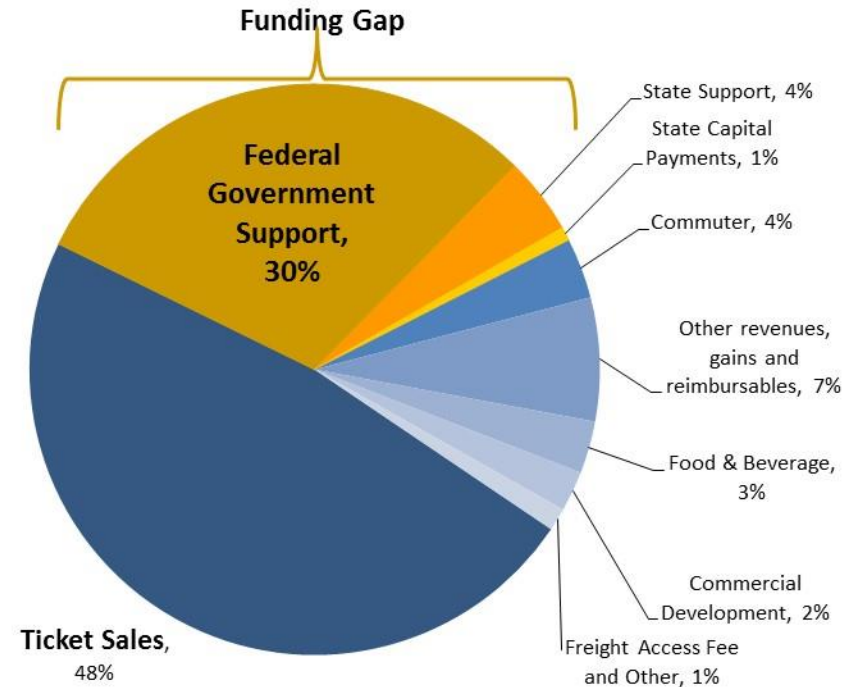
Alternative Funding and Financing Mechanisms for Passenger and Freight Rail Projects

Passenger Rail Generally Needs Public Funding Support

Subsidy Per Passenger-Mile, Intercity Passenger Rail



Amtrak Operating Revenue Source



Annual Report 2012 and Amtrak Monthly Performance Reports 2011-2012. DSB Denmark Annual Report 2012.

Source: CPCS Analysis of Amtrak Annual Report, 2012

Ditto for High Speed Rail Projects, which are *Very* Expensive

For example, California HSR project capital cost could be over \$75 billion...

But currently, only about \$5.9 billion in funding is available (\$2.6 billion from Proposition 1A and \$3.3 billion from ARRA funds and other US DOT sources).

Where will the funding come from???



Source of map: 2014 Business Plan (www.caHSR.ca.gov)

Commuter Rail Needs Public Funding Support

US Commuter Rail Cost Recovery Ratio



How to pay for rail projects
that have a funding gap?

Overview



Overview of NCRRP Report 1 Product and Key Messages

Alternative Funding and Financing Mechanisms

Framework to Identify Suitability of Alternative Mechanisms

Beyond Funding and Financing

“Tool box” on
alternative funding
and financing
mechanisms for rail
projects

Available on [TRB website](#)

NCRRP REPORT 1

**Alternative Funding and
Financing Mechanisms
for Passenger and
Freight Rail Projects**

Funding vs. Financing: Very Different Things

Funding refers to the sources of **revenue or other income** that can be used to pay for a project or service.

- Includes but not limited to:
 - Revenue streams from delivery of rail services, ancillary revenue
 - Other income from committed funding sources
 - Non-repayable government grants or subsidies

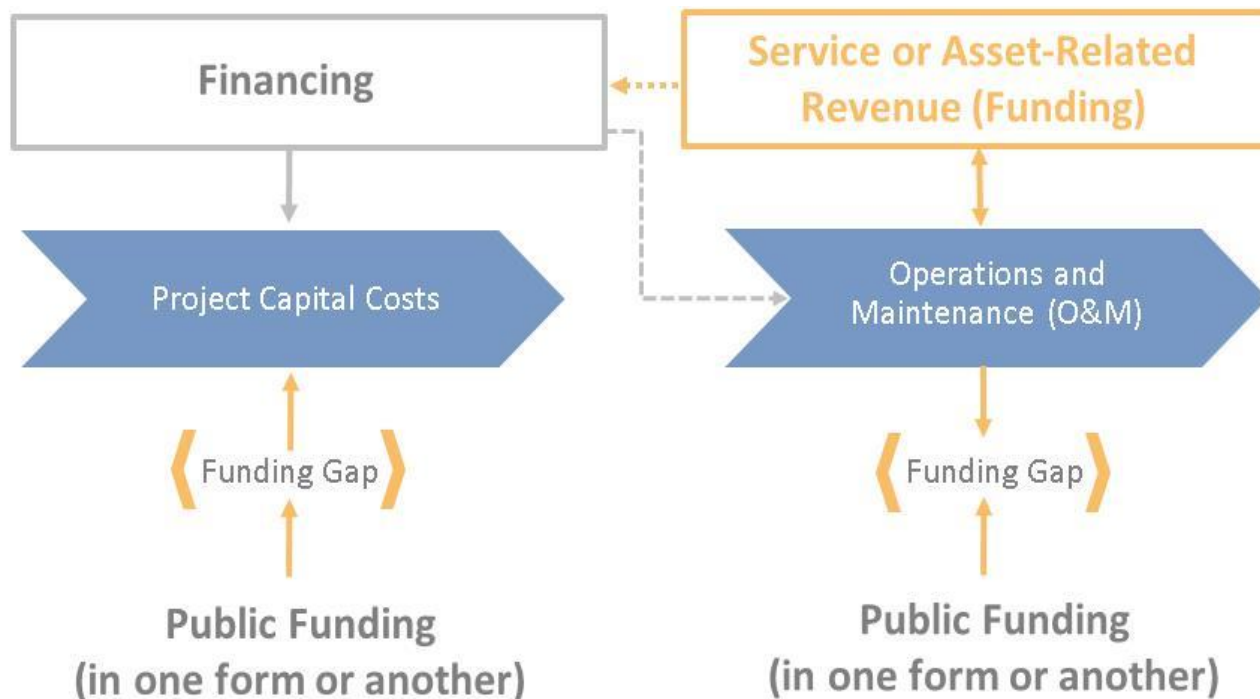
Financing refers to the financial tools that can be used to access money to pay for a project or service – based on income from revenue or other sources of income

- Includes but not limited to:
 - Various forms of debt, equity, capital leasing, etc.

Challenge When Revenue < Costs i.e. Funding Gap

There is but one solution to addressing a funding gap: **finding other sources of funding** (or reducing costs).

There exist opportunities to increase *service or asset-related revenue* to narrow funding gap (covered in this research), but public funding support also typically required, particularly for passenger rail projects and services.



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Financing Mechanisms

- Public-Private Partnerships (PPPs)
- Equipment Trust Certificates (available to private companies)
- Operating Lease (available to private and public companies)
- Finance or Capital Leasing (private and public companies)
- Bonds with Public Sector Backing
- Corporate Bonds (available for private entities)
- Mezzanine Financing (available to private and public entities)
- Short-Term Corporate Line-of-Credit Financing
- Sale of Stock (Ownership Stake)
- Tax / Investment Credits

Service or Asset-Related Revenue (Funding) Mechanisms

- Market Pricing to Maximize Fare Box Revenues (passenger) (\$\$)
- Premium Services to Increase Service Revenues (passenger) (\$-\$\$)
- On-Board and In-Station Retail Concessions (passenger) (\$)
- Track Access Charges (revenue for infrastructure owner) (\$)
- Selling or Leasing Access to Railroad Rights of Way (\$-\$\$)
- Commercial Property Development / Joint Development (\$-\$\$)
- Branding, Sponsorship and Naming Rights (passenger) (\$)

Project Capital Costs

Funding Gap

Public Funding (Capital Contribution)

Operations and Maintenance (O&M)

Funding Gap

Public Funding (Subsidies)

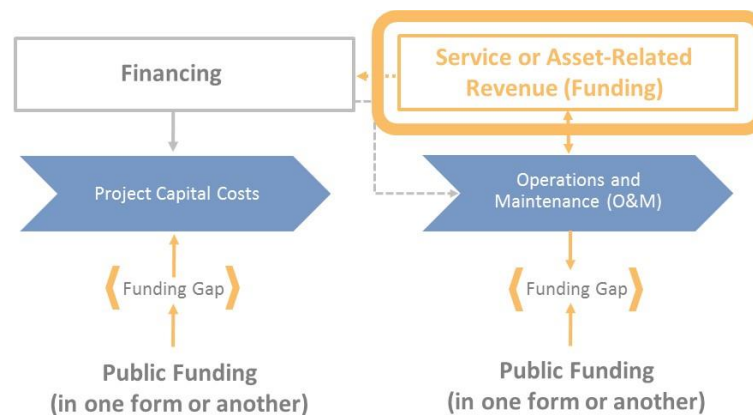
Public Revenue (Funding) Mechanisms

- Incremental Property Tax Revenues (\$\$)
 - Special Assessment District Fees (\$\$-\$\$\$)
 - Impact Fees Charged to Property Developers (\$\$)
 - Station Parking Charges (\$-\$\$)
 - Road Tolling / Congestion Charges (\$\$)
 - Heavy Goods Vehicle Charges (\$\$\$)
 - Gas Tax (\$\$\$)
 - Car Registration Plate Auction (\$\$-\$\$\$)
 - Motor Vehicle Registration Fees (\$\$)
 - Vehicle Mileage Based User Fee (\$\$\$)
 - Sales Tax (\$\$\$)
 - Payroll Taxes Used for Transport (\$\$\$)
 - Carbon Credits (Cap-and-Trade) (\$\$\$)
- (Value Capture)

Service or Asset-Related Revenue (Funding) Mechanisms

Opportunities to increase revenues from rail operation, project, or related assets themselves. These include:

- Market Pricing to Maximize “Fare Box” Revenues
- Commercial Property Development/ Joint Development (Stations)
- On Board or in Station Retail Concessions
- Branding, Sponsorship or Station Naming Rights



Part of Union Station Redevelopment Funded by Air Rights



Source: <http://www.usrcd.com/projects/active/21st-century/>

Starbucks on Swiss Railways (SBB)



Source: businessinsider.com

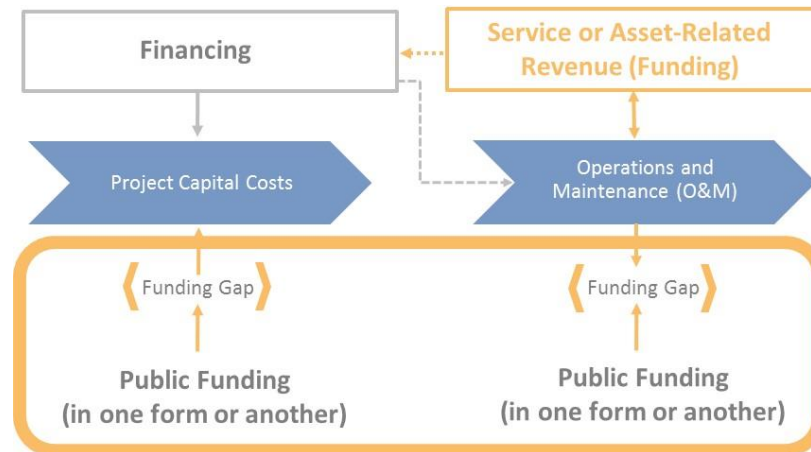


Source: nydailynews.com

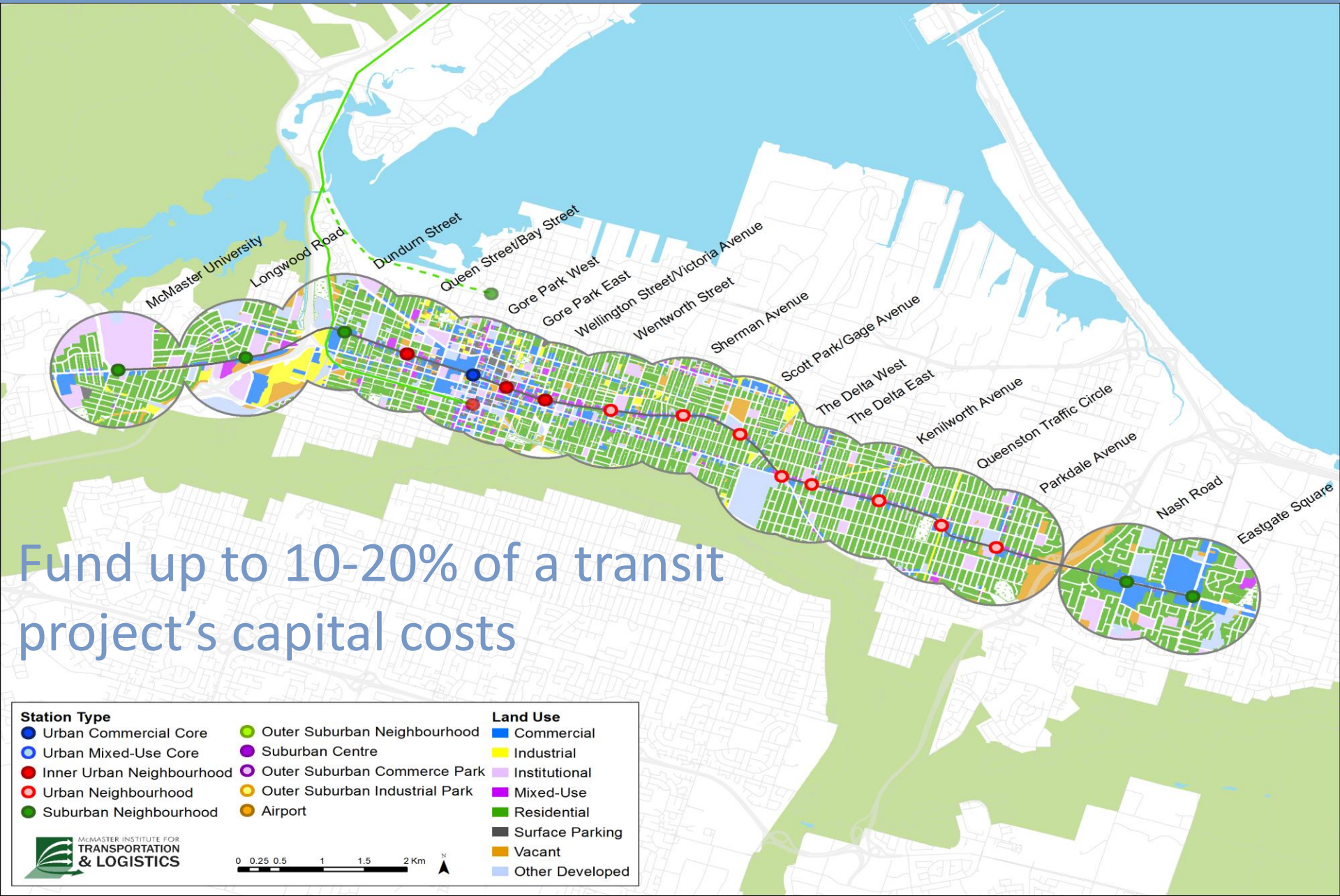
Public Funding Mechanisms (Grants, Subsidies, etc.)

The real question is: how to tap into new funding sources?

- Value Capture Mechanisms
- Station Parking Charges
- Road Tolling / Congestion Charges
- Personal Vehicle-Related Charges
- Sales Tax
- Dedicated Payroll Taxes for Businesses in Urban Centers
- Carbon Credits



Land Value Uplift Capture Mechanisms



Fund up to 10-20% of a transit project's capital costs

Congestion Charges



Source: Transport for London

Incremental Sales Tax Dedicated to Rail Projects

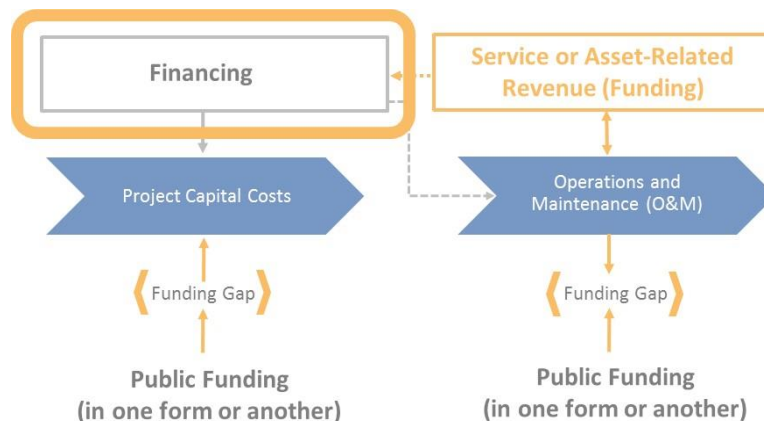
Virginia Intercity Passenger Rail Operating and Capital Fund (IPROC) funded by sales tax increase (0.3%-0.7%)



3. Financing Mechanisms

- Private sources of financing (e.g. commercial banks, investors, such as pension funds, hedge funds, common investors)
- Public sources of financing (e.g. state infrastructure banks, government loan program (TIFIA, RRIF, TABS, etc.)

The terms and cost of financing can vary greatly, depending on the creditworthiness of the project proponent or service provider, and the extent to which the financing has recourse to assets that are fungible (i.e. can be resold).



Rail Financing: Where to PPPs fit in?

PPPs are NOT a funding mechanism.

They are a project delivery mechanism, which typically include a financing component.

PPP Project Components	Typical Risk allocation (Salmon: Public. Blue: Private or part private)					
	Design	Construction	Financing	Operations/ Maintenance	Ridership/ Frequencies	Revenue
Design-Build (DB)						
Design-Build-Finance (DBF)						
Design-Build-Operate-Maintain (DBOM)						
Design-Build-Finance-Operate-Maintain (DBFOM)						
Franchising or concessioning of existing operations	NA	NA				

Overview

Overview of NCRRP Report 1 Products and Key Messages

Alternative Funding and Financing Mechanisms

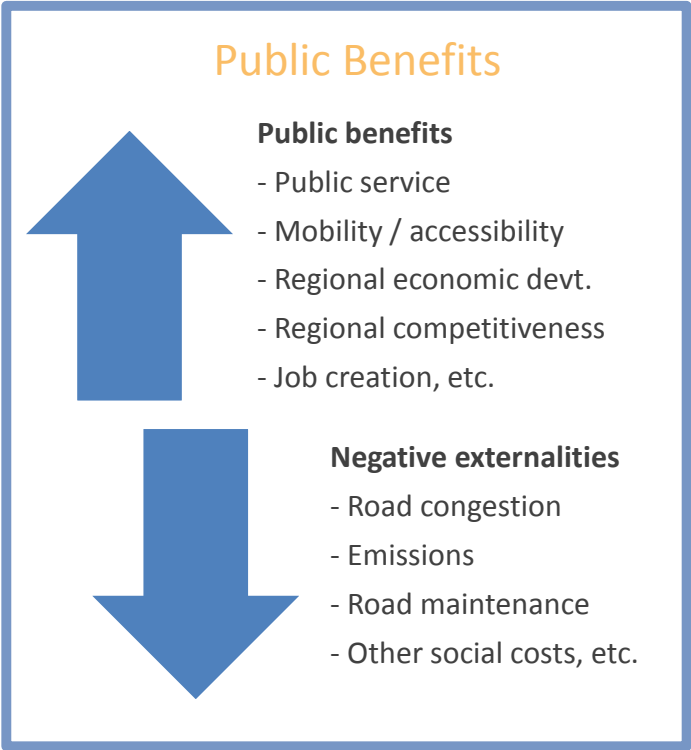


Framework to Identify Suitability of Alternative Mechanisms

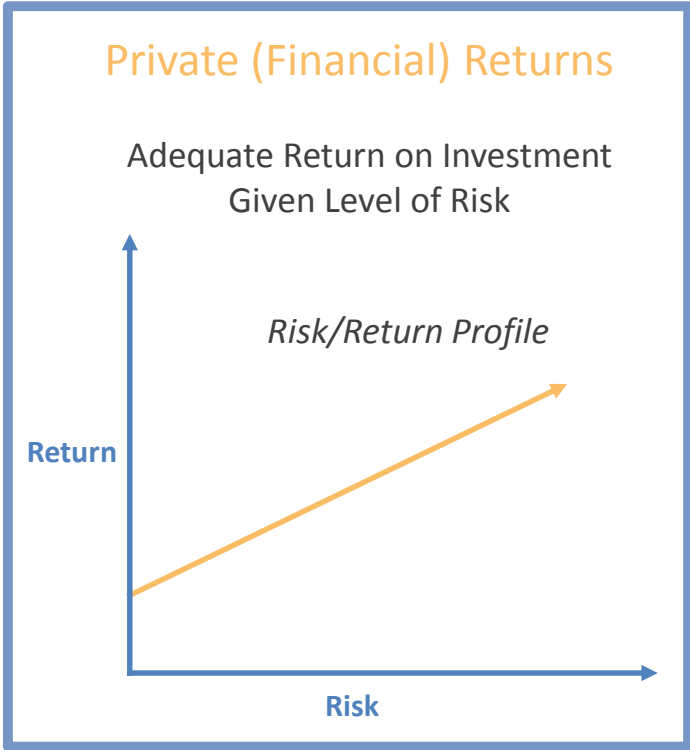
Beyond Funding and Financing

Key Consideration: What is the Project/Service Seeking to Do

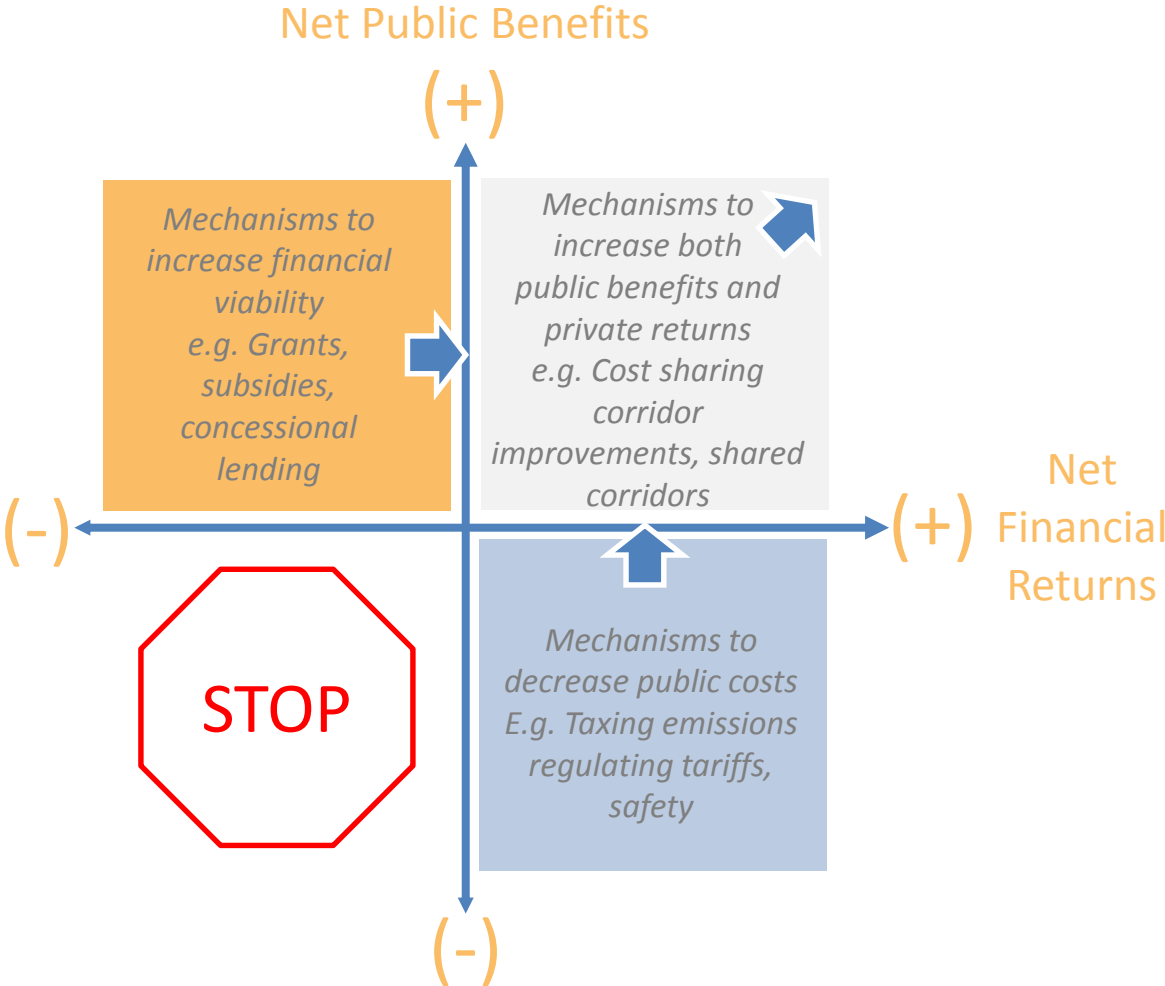
Suitability of mechanisms depends on extent to which project or service driven by a public vs. a private rationale



VS.



Mechanism to increase public benefits, financial returns



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Framework to Identify Suitability of Alternative Mechanisms



Beyond Funding and Financing

The Issue is not Financing. The Issue is (lack of) Funding.

Note: Rail project funding challenges are no different than those for most other unfunded infrastructure projects.

- Allocation of scarce resources across competing priorities
- Limited political appetite to use many available funding tools (e.g. tax, user charges)
- In a perfect world, one could generate funding from all future project benefits...and charge full cost for use of all infrastructure...but this is not a perfect world.

We have identified few new or previously unknown sources of funding for rail projects.

Approach to Project Evaluation, Policy Considerations

NCRRP Report 1 Research addresses the question – *how* to fund and finance rail projects? A perhaps more important question is – *why* should the public sector fund rail projects that have a funding gap?

Two opportunities to better address this in the US:

- Need for better, more systematic basis for assessing full range of rail project benefits and costs(e.g. in benefit-cost analysis)
- Need to anchor public funding for rail projects to broader transport policy objectives...(?)

What is the long term transport policy?

How to prioritize projects, funding? Need clear policy direction.



Encourage use of personal cars?

Maintain/expand highway capacity
Continue to subsidize roads



Encourage use of rail?

Build rail. Subsidize use of rail. High frequency.
Road user charges / Discourage air travel
Integrate rail in transport plans

Questions and Discussions



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Global management consulting firm (formerly consulting arm of CP (est. 1969))

- Focused on transportation sector - freight and passenger
- Strategy, economic analysis, finance and policy
- Multimodal

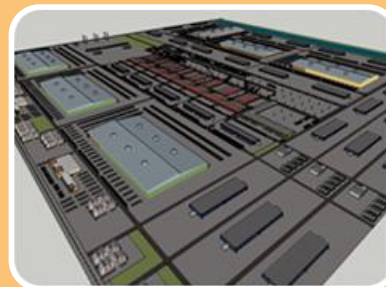
CPCS Countries of Work Experience (shaded) and Offices

Recent North American project experience:

Value Capture Funding Potential Study
NCRRP 07-01: Rail Funding & Finance
Benchmarking Passenger Rail Performance
NCFRP 43: Chassis Supply Models Study
Arizona State Freight Plan
Gateway and corridor studies (multimodal)
Market and competitiveness studies



Summary of Recent CPCS Experience



Freight Rail

100+ Strategy mandates

8 Transactions

\$3+ billion in deals

Port & Terminals

35+ Strategy mandates

30+ Transactions

\$5+ billion in deals

Multi-modal Transport

30+ Strategy mandates

Passenger & Transit

10+ Strategy mandates

3 transactions

\$3 billion in deals