

# **Financing and funding options for Sustainable Urban Mobility**

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**SUMPs Up Mobility Practitioners Webinar 7, 10 Dec. 2019**

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- 
- P Parking Tariffs Apply**
- Tariffs**
- | Category  | Rate  |
|-----------|-------|
| 1st Hour  | €1.00 |
| 2nd Hour  | €1.00 |
| 3rd Hour  | €1.00 |
| 4th Hour  | €1.00 |
| 5th Hour  | €1.00 |
| 6th Hour  | €1.00 |
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| 21st Hour | €1.00 |
| 22nd Hour | €1.00 |
| 23rd Hour | €1.00 |
| 24th Hour | €1.00 |
- How to Pay**
- Pay by phone**
- 6100
- TOPIC GUIDE
- # FUNDING AND FINANCING OF SUSTAINABLE URBAN MOBILITY MEASURES

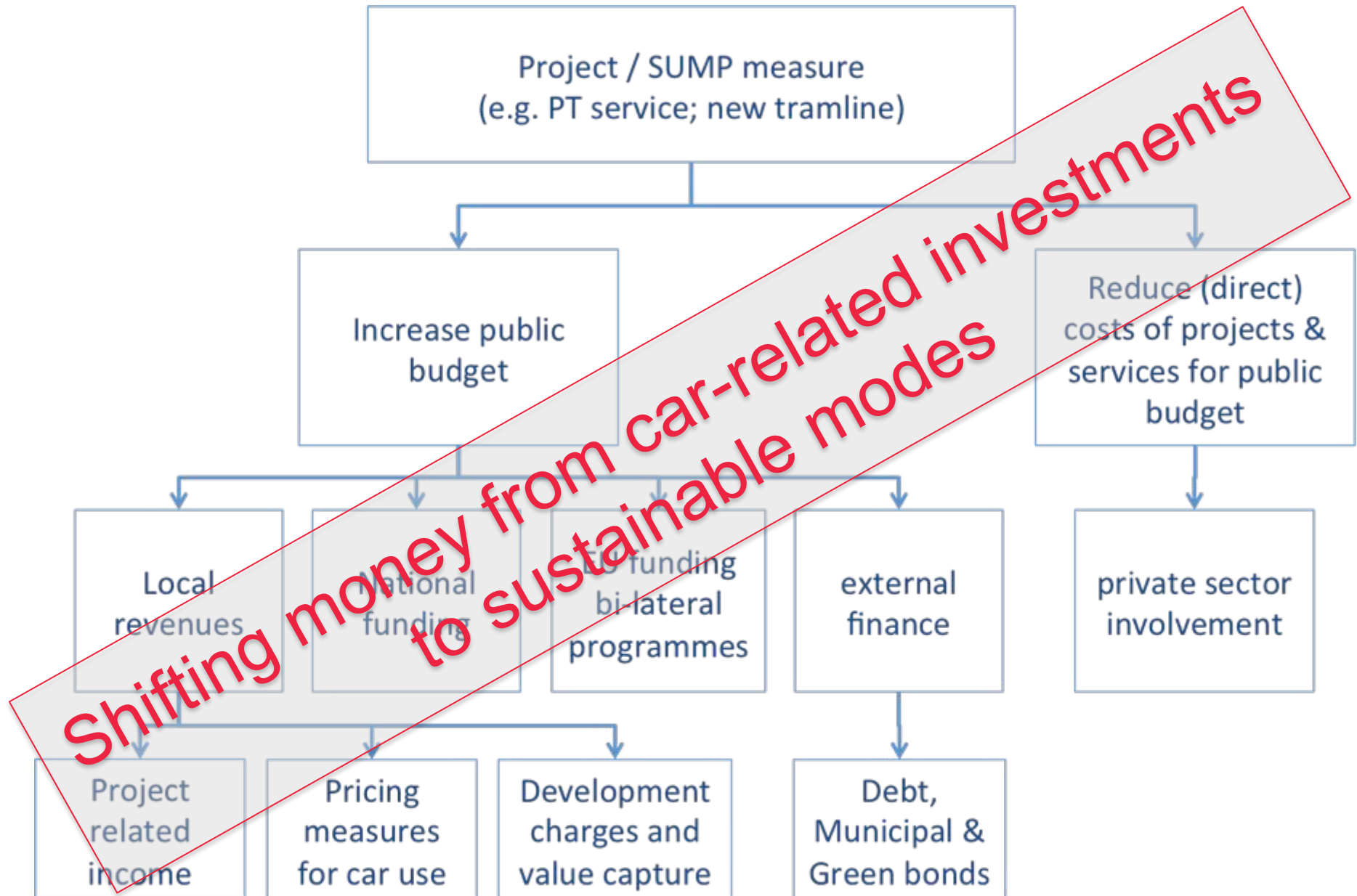


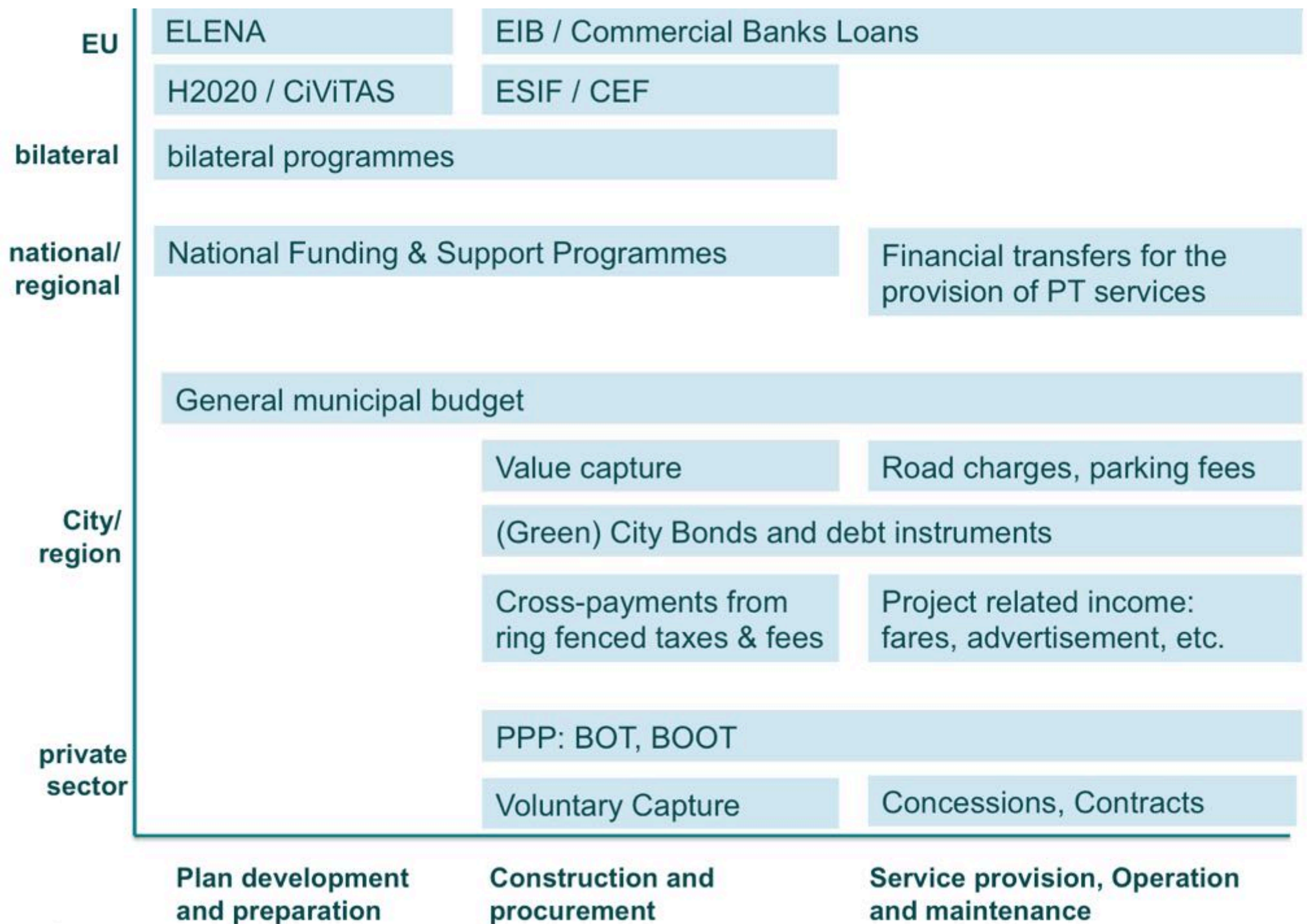
THE CIVITAS INITIATIVE  
IS CO-FINANCED BY THE  
EUROPEAN UNION

### Financing gap for sustainable urban mobility

- Mobility transition may save money in the mid- to long term, **but** requires upfront investments
  - Expenses beyond the provision of basic mobility functions – for growing cities
  - Diversity of costs– from building infrastructure to operating services and maintaining streets, tracks, sharing systems, vehicles,...
- 
- Variety of financing and funding solutions
  - Cities find it hard to identify adequate sources

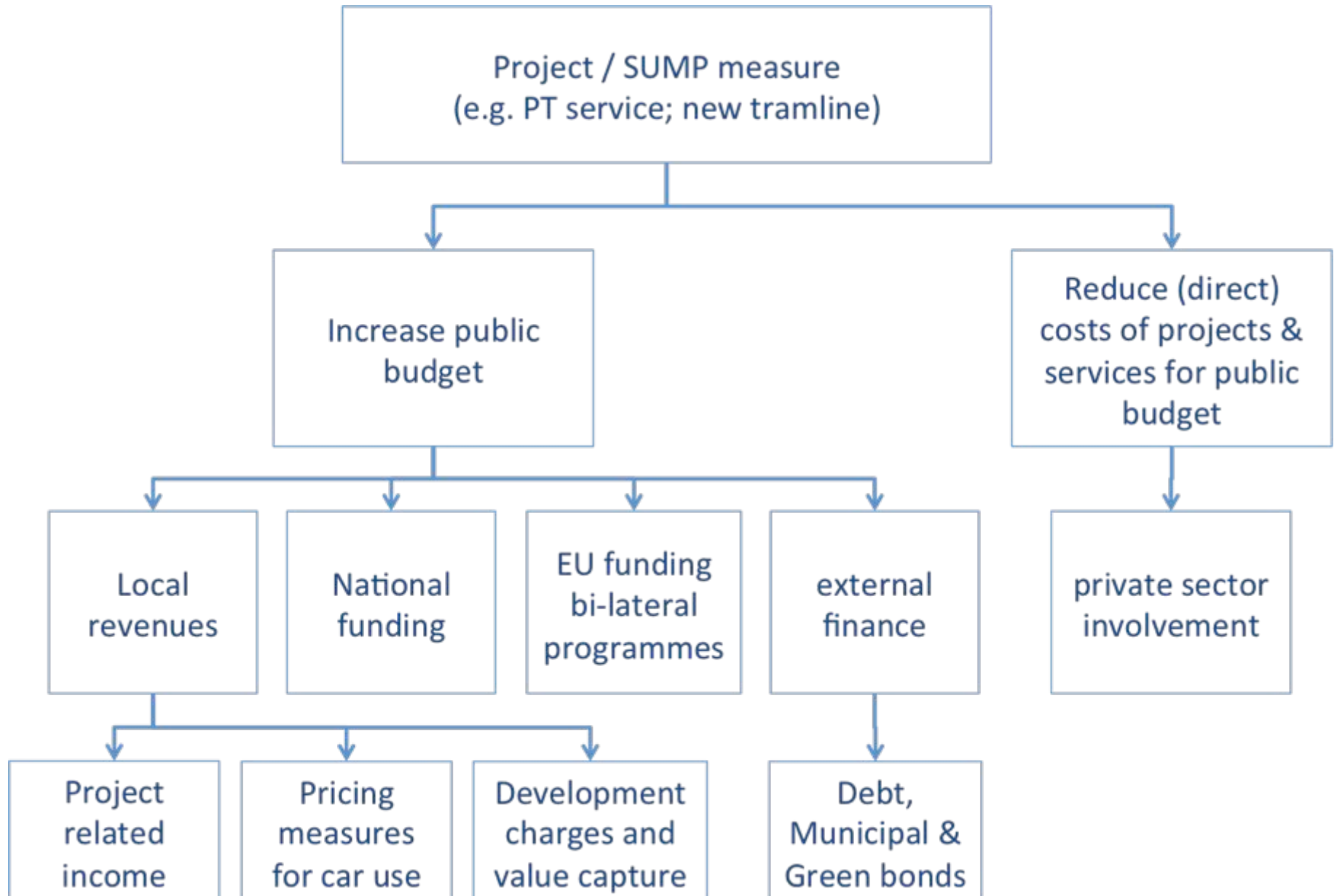


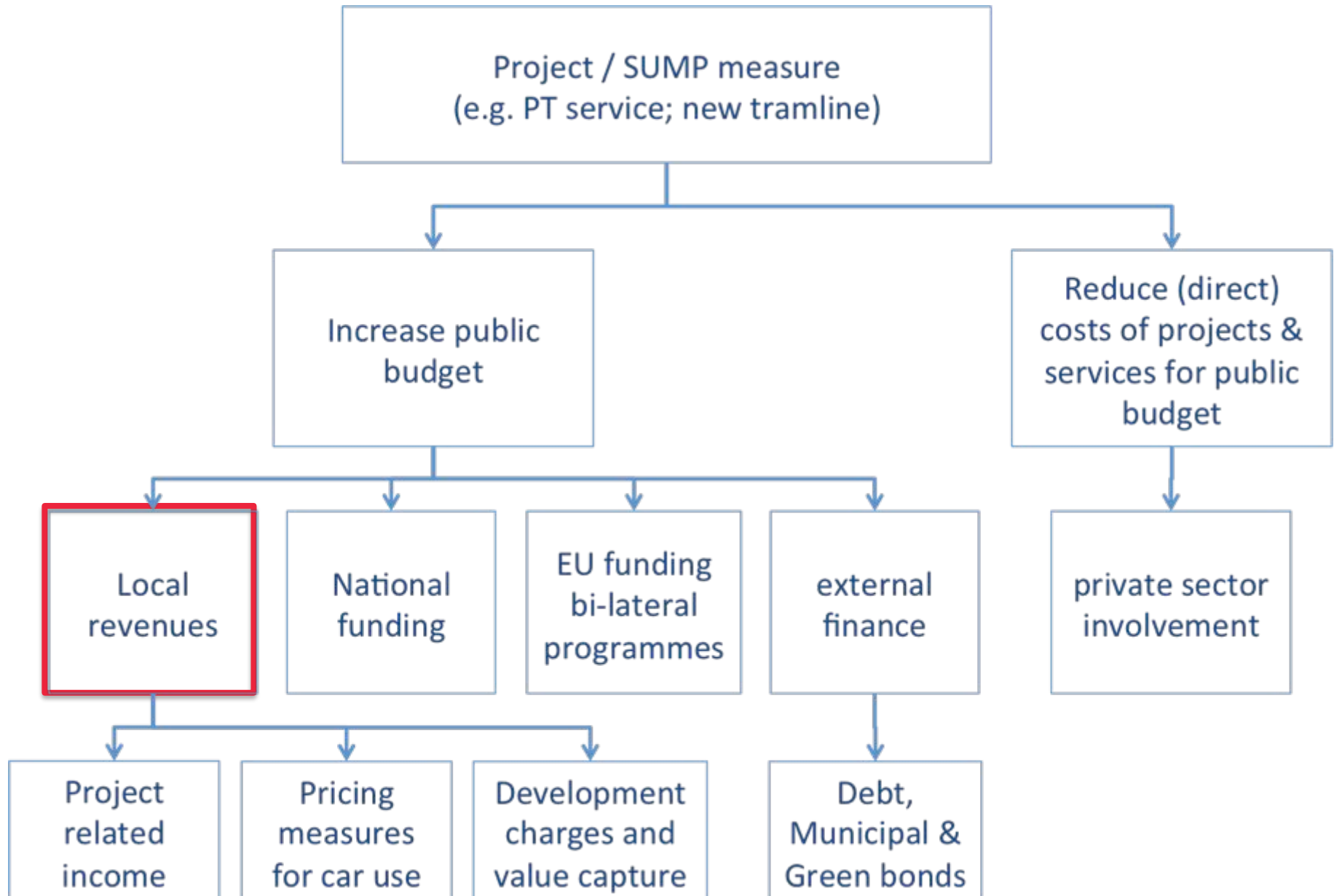






Funding	Financing
Amount of money provided by an institution to e.g. a city for a specific purpose, often under specific programmes.	Process of raising money for a specific purpose using debt or equity instruments.
Funding is often free of charge and not reimbursable	Providers of financing expect repayment of the money provided and an interest
Sources of funding are national and regional governments or EU institutions, i.e. most often public budgets	Sources of financing are banks (including the EIB and development banks), investment funds, and other investors

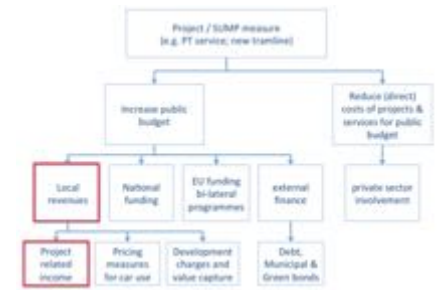






# Local Revenue Streams

## Project generated income



### Project generated income

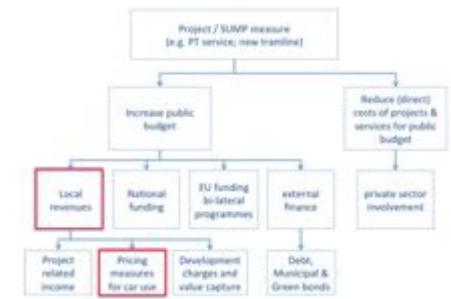
- Often related to public transport
- Fares, tickets sales
- Lease of advertising space in vehicle and at stations
- Commonly used
- Easy to understand why users should contribute

### BUT

- Trade-off between attracting passengers, social concerns and cost coverage
- Income generated only after start of service
- Uncertainty related to expected income

# Local Revenue Streams

## Demand management tools



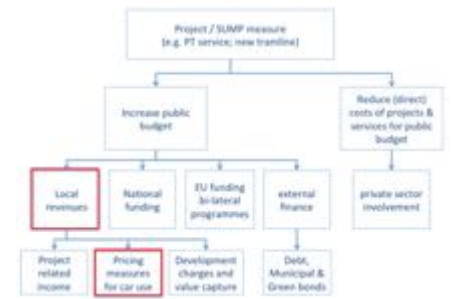
## Demand management tools: Parking management and road pricing

- aim at dis-incentivising private car use
- Rationale: internalising external costs of private car use
- Can form part of a push & pull approach, if revenues are used to improve alternatives (i.e. public transport or active modes)



# Local Revenue Streams

## Demand management tools



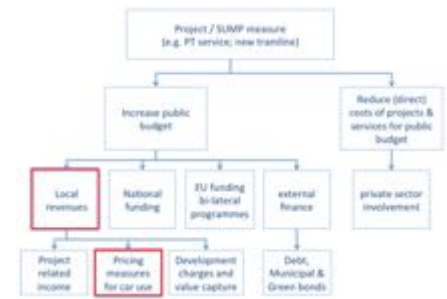
## Parking Management

- Relatively easy to implement:
  - legal competences to introduce parking management schemes
  - most parking spaces are publicly owned
  - moderate implementation costs
- Acceptance: residents may profit from reduced parking pressure
- Requires control and enforcement
- Adequate parking fees, exceeding PT fares
- Risk of relocating parking pressure to adjacent districts



# Local Revenue Streams

## Demand management tools



## Road Pricing / Congestion Charges

- Dynamic fees can
  - foster low carbon technologies
  - shift traffic load to off-peak periods

BUT:

- resistance from urban dwellers, shop owners, politicians
- High upfront investments
- Legal concerns:
  - Are cities allowed to raise these kind of charges?
  - Automated number plate recognition and data protection

→ Few examples in the EU: London, Durham, Stockholm, Gothenburg, Bologna, Milano, Znojmo, Valletta





# Local Revenue Streams

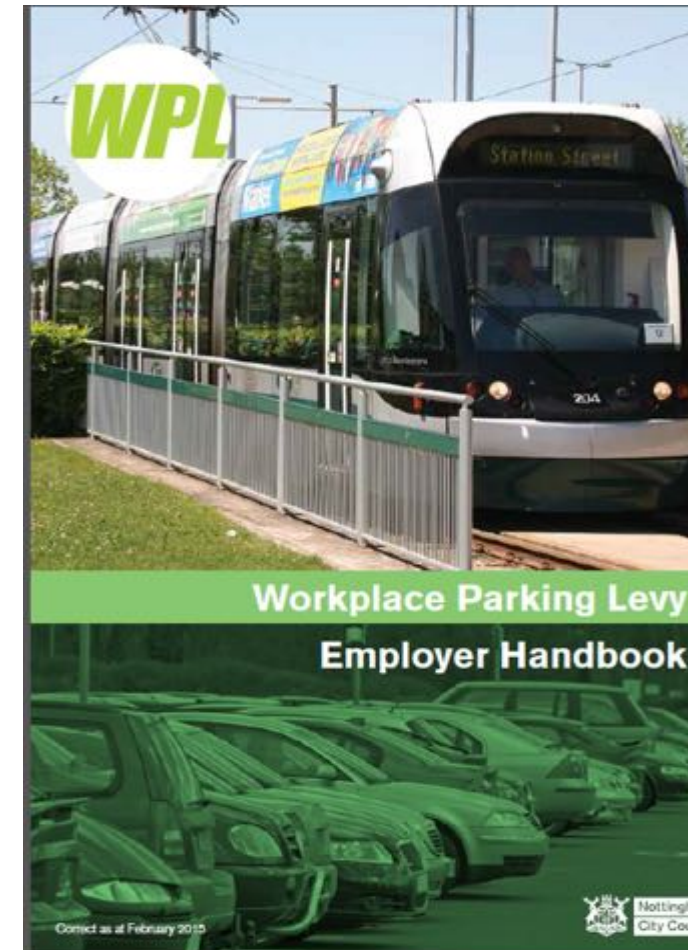
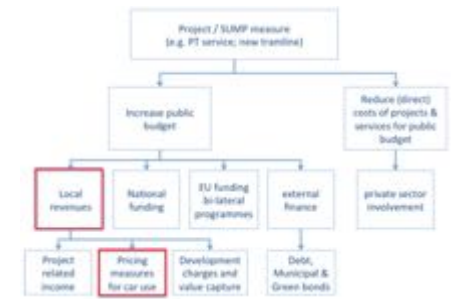
## Employers Contributions

### Employers Contributions

- Charges on employers (not: employees) to subsidise public transport
- May be based on different objects:
  - Workplace parking places
  - Number of employees
  - % of salaries paid by the employer

### Example: Workplace Parking Levy in Nottingham

- Levy on workplace parkings (ca. €430/a per parking place)
- Applies to employers with > 10 commuter parking places
- employers can reclaim cost of the from their employees
- ca. €10m p.a.; invested into the city's transport infrastructure, including 45 e-buses and extension of the tram network.



# Local Revenue Streams

## Employers Contributions



### Example: Dienstgeberabgabe in Vienna

- Fixed levy on employees: 2€ per employee and week
- exemptions for elderly employees, employees with mental and physical handicaps, part-time employees, employees of public authorities, etc.
- Income is ring-fenced for the extension of Vienna's Metro



Photo: Wiener Linien (Vienna)



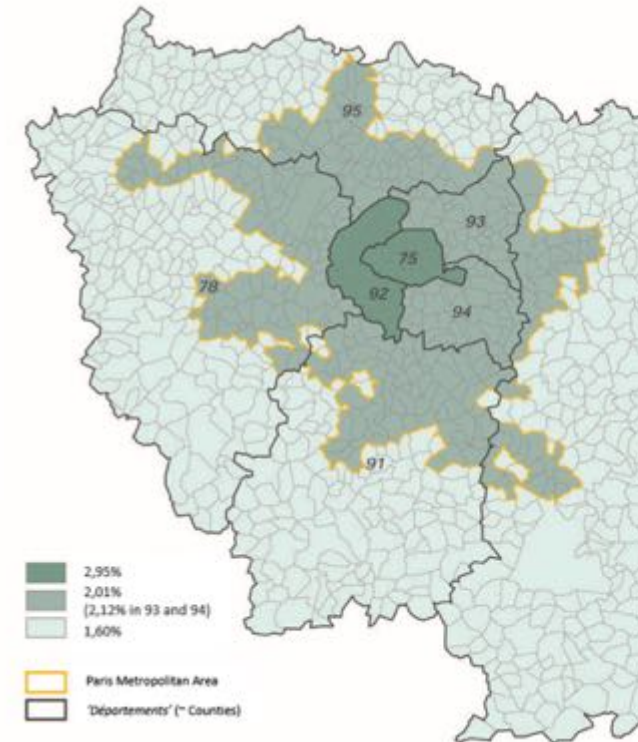
# Local Revenue Streams

## Employers Contributions



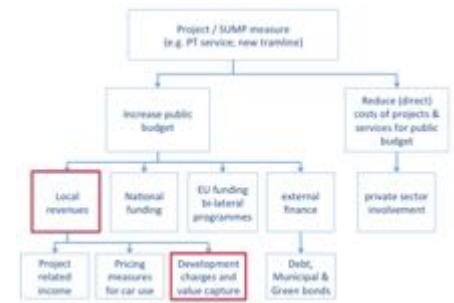
### Example: Versement Transport in Île-de-France

- Tax is calculated as a percentage of the salaries
- Private and public employers
- Île-de-France Mobilités uses the tax to pay transport operators and for investment costs
- The tax contributed, in 2017, to 42 % of the total operation costs and part of Île-de-France Mobilités investment costs



# Local Revenue Streams

## Land Value Capture and Development Contributions



### Rationale

- Land developments require transport infrastructure and services
  - New developments generate new burden on infrastructure (more traffic, congestion, etc.)
  - Provision of high quality transport services increases value of surrounding land and property.
- Make those who profit from land development contribute parts of the cost

### Instruments

- **Mobility Tax** (Barcelona) Surcharge on property tax; revenues go to AMB (transport management authority)
- **Stamp Duty Land Tax** (England and Northern Ireland): Owner pays a when he purchases a property above a certain value
- **Community Infrastructure Levies** (England and Wales): Land developers pay taxes that can be used for public services and infrastructure

# Local Revenue Streams



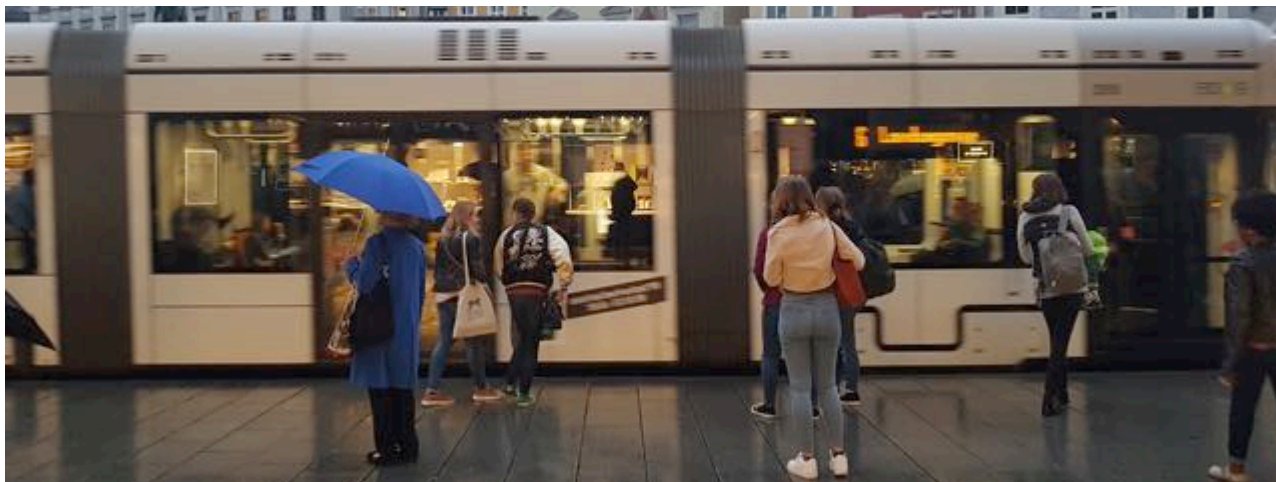
## Ring-fencing local revenues for sustainable mobility

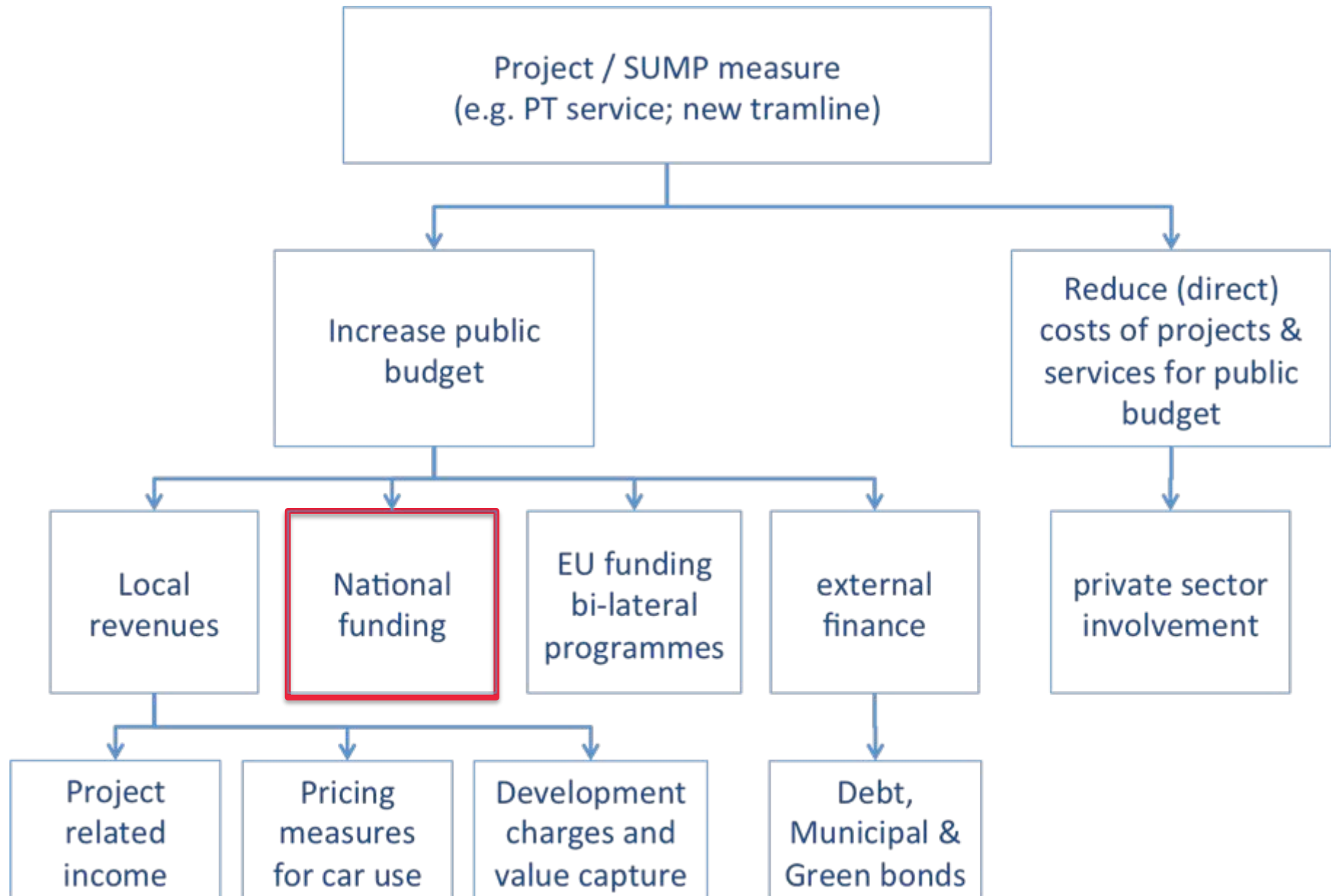
### Pros:

- Additional source of income
- Increases acceptance of ‘push-measures’

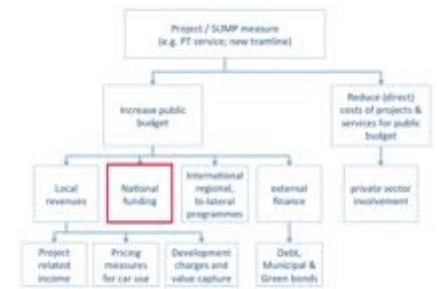
### Cons:

- May reduce contributions from general public budget
- Less reliable source of income: revenues hard to predict
- Successful push and pull approaches degrade their own source of income





# National level funding programmes



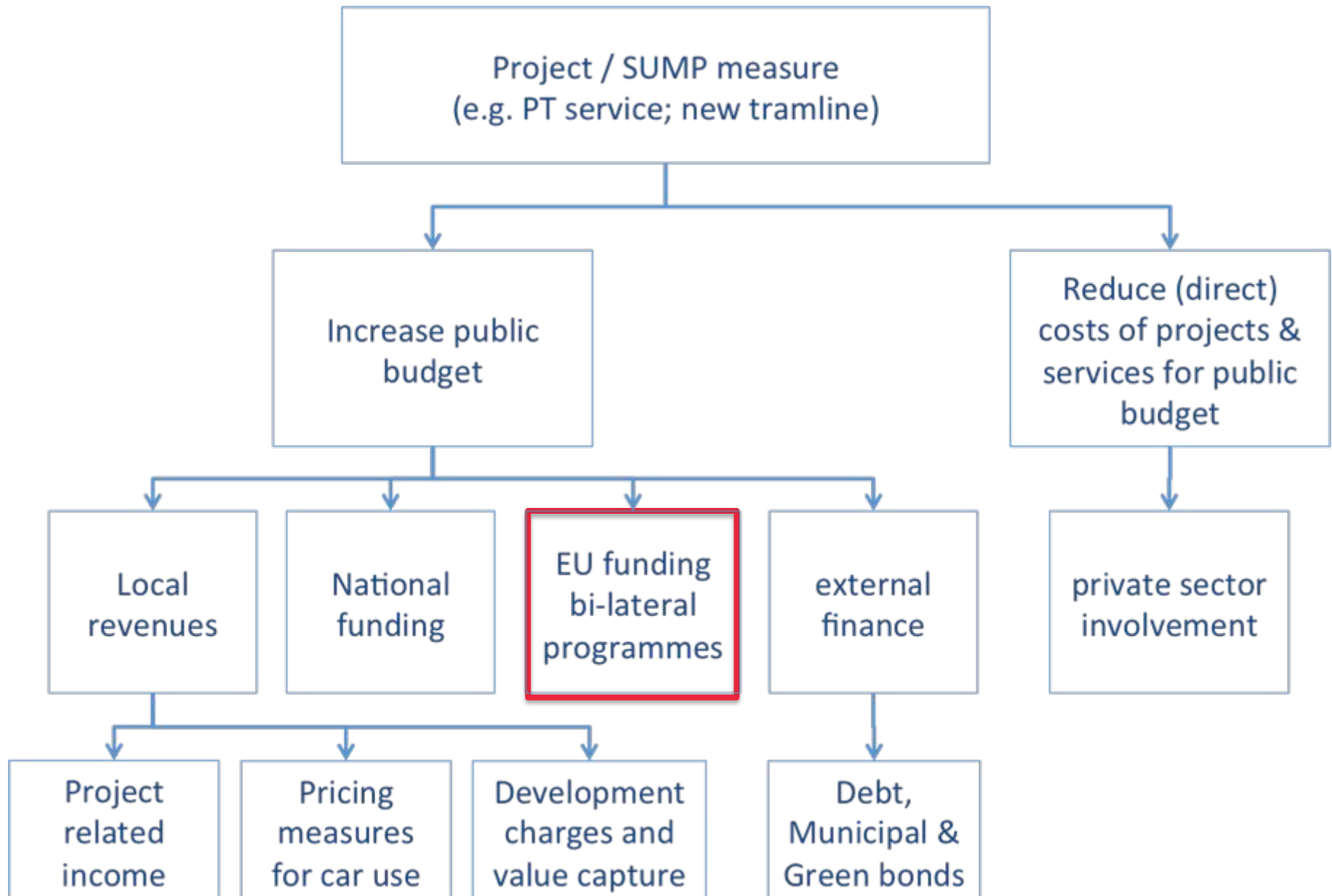
## National level support programmes focus on:

- SUMP preparation and development
- procurement of low-carbon vehicles

## Example: The German National Electric Bus Funding Programme

- Government fund (Ministry for the Environment)
- € 300 mio. to support public transport operators and municipalities with exceeding NOx limits
- Covers 80% of additional investment costs for e-buses and charging infrastructure, compared to diesel buses







# EU funding, bilateral programmes

## Bilateral Programmes



### Example: Cluj Napoca, Romania

- Swiss-Romaian cooperation for the procurement of e-buses
- Switzerland provided funding for the procurement of 11 e-buses (85% + 15% from city budget)



Photo: Primaria Cluj-Napoca

# EU funding, bilateral programmes

## EU funding: Support Instruments

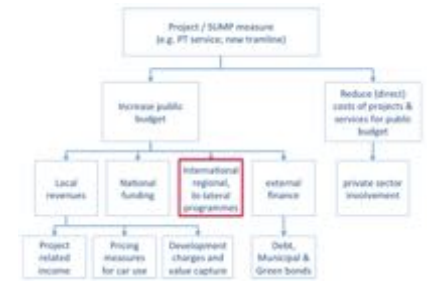
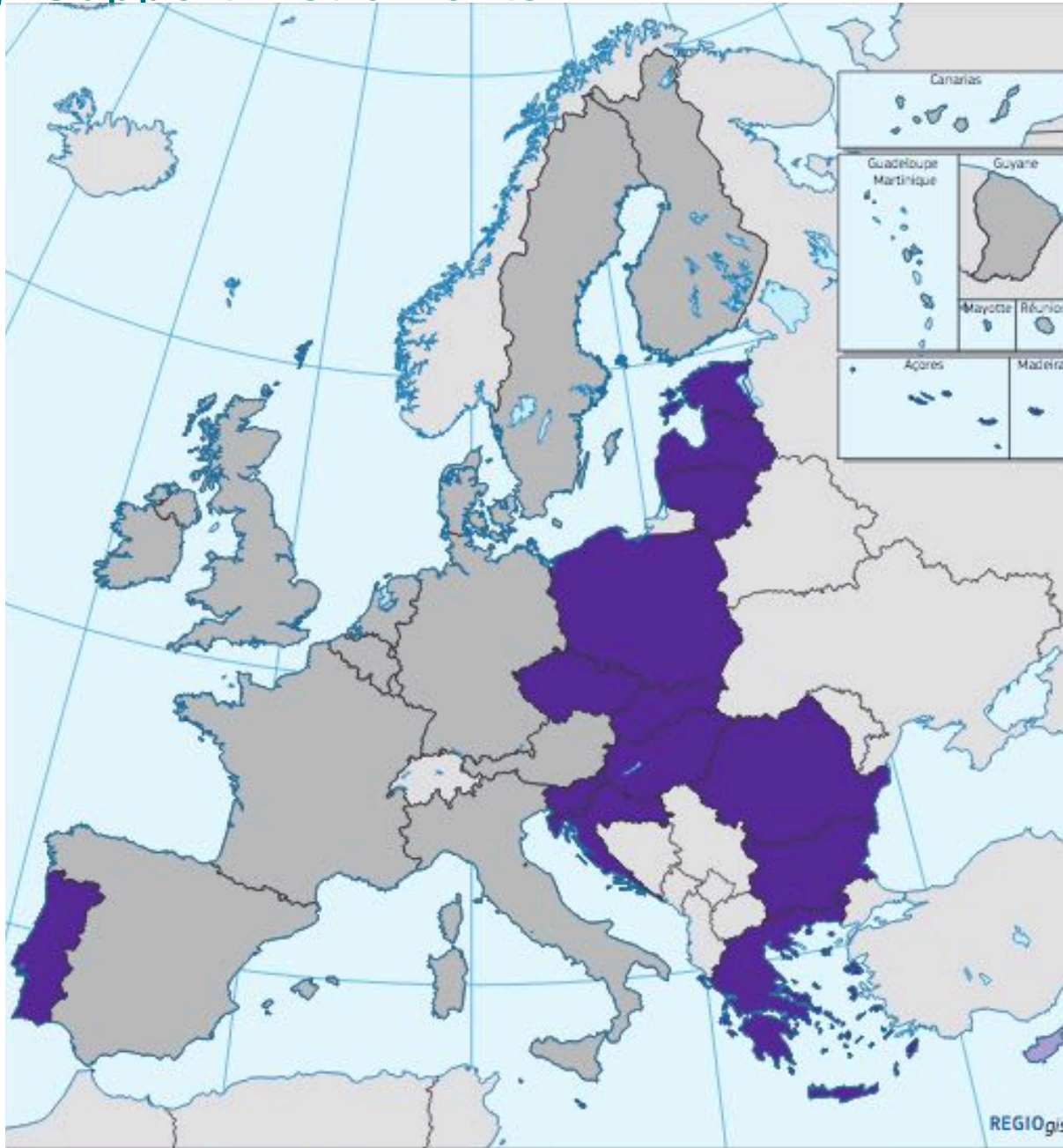
### European Support Programmes

#### European Structural and Investment Funds (ESIF)

- implemented by Member States and their regions
- delivered through nationally co-financed programmes
- funds are used to support economically viable projects that promote EU policy objectives, amongst others on 'sustainable transport networks and bottlenecks'.
- The ESIF contains five separate funds, including
  - **European Regional Development Fund ERDF** and
  - **Cohesion Fund**



# EU funding: Support Instruments



# EU funding, bilateral programmes

## EU funding: Support Instruments



### Connecting Europe Facility (CEF)

- Fund for pan-European infrastructure investment in transport, energy and digital projects,
- Operates through grants, financial guarantees and project bonds.
- Focus on cross-border activities, aims at a greater connectivity between member states
- Potential linkages to urban mobility:
  - urban nodes,
  - multi-modal logistics,
  - new technologies & innovation



# EU Funding, bilateral programmes

## EU funding: Support Instruments



### ELENA

- joint initiative by the EIB and the European Commission under Horizon 2020
- provides grants for larger project development costs (> EUR 30 million with 4-year implementation period)
- Public or private entities can apply for an up to 90% coverage of project-related expenses for technical assistance, internal staff, external expertise.
- Having a SUMP is one criterion in the evaluation of applications.

### JASPERS (Joint Assistance to Support Projects in European Regions)

- European Commission, EIB and EBRD
- offers support to public authorities and promoters in the preparation and implementation of ESIF projects.

### JESSICA (Joint European Support for Sustainable Investment in City Areas)

- European Commission, EIB and Council of Europe Development Bank (CEB).
- supports sustainable urban development through financial engineering mechanisms.



# EU Funding, bilateral programmes

## EU funding: Support Instruments

### LIFE Programme

- Environmental and climate action
- Focus on demonstration projects

### Horizon 2020

- Research and Innovation Programme
- Local authorities can partner with research institutions and other stakeholders to receive funding
- CIVITAS Initiative

### Climate KIC

- European Climate Innovation Initiative, including decarbonising urban mobility

### More information

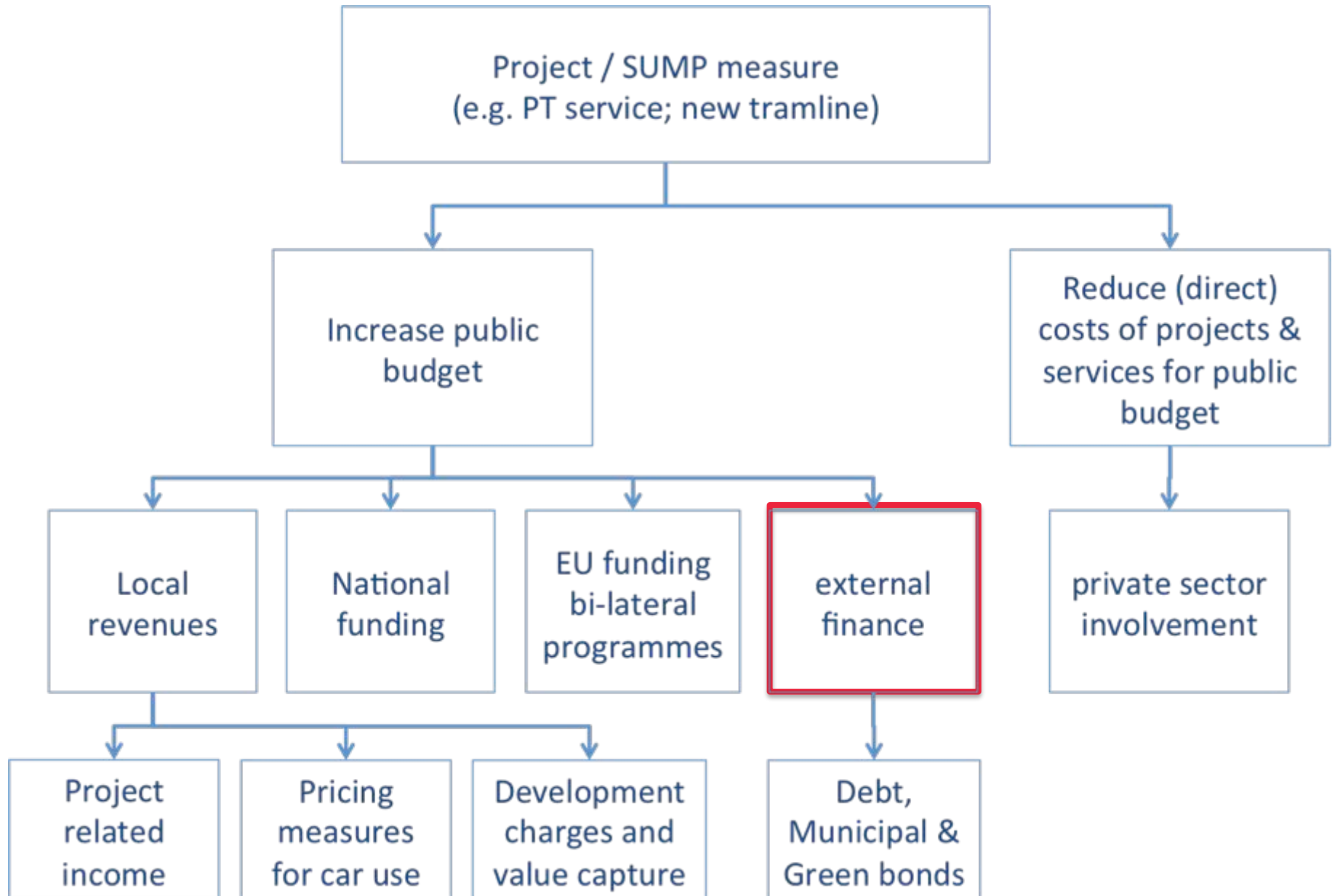
Eltis website <http://www.eltis.org/resources/eu-funding>

The Covenant of Mayors for Climate and Energy

<https://www.eumayors.eu/support/funding.html>

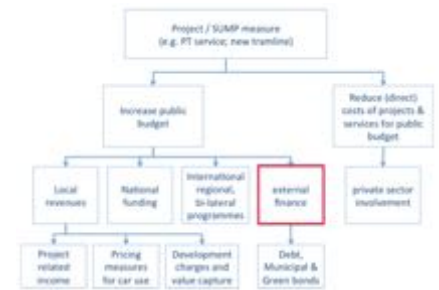






# Debt Mechanisms & External Finance

## Bank Loans: EIB Financing



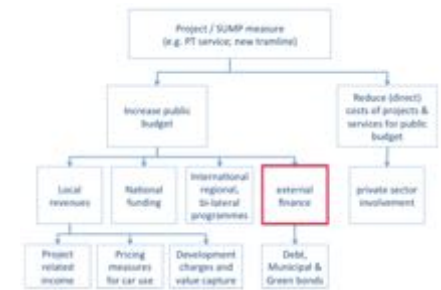
### EIB Financing Instruments

- loans for mobility projects (>50 Mio €) in line with EU objectives
- EIB covers 50% of project costs; other 50 % from other sources
- Projects must be financially viable (i.e. provide returns, limited risks)
- PT related projects are accepted with lower expected economic rates of return (compared to road or aviation projects)
- the EIB prioritises urban public transport projects through the VA method. Particular priority is attributed to:
  - (i) increase in capacity of **public transport** networks
  - (ii) innovative projects such as [...] schemes **based on the user/polluter pay principles**.



# Debt Mechanisms & External Finance

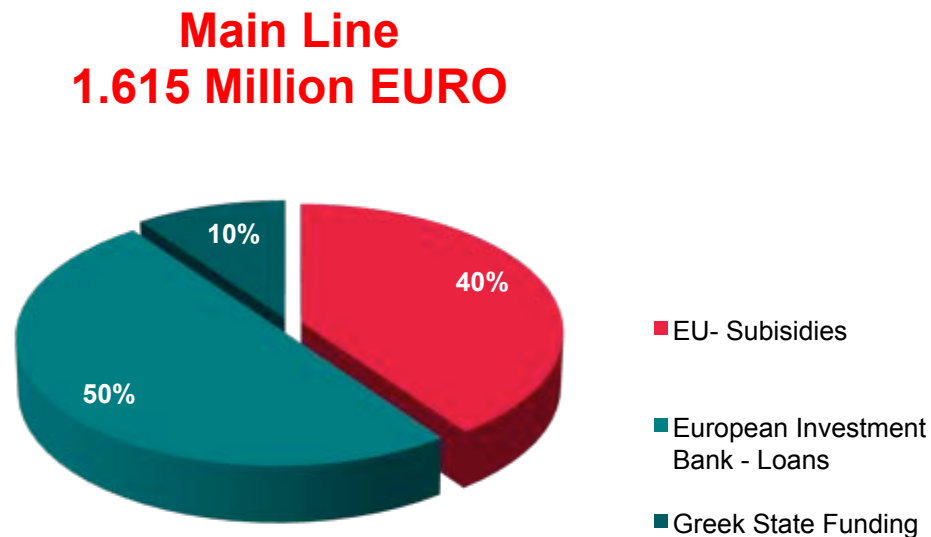
## Bank Loans: EIB Financing



### Blending of EIB loans:

- Combination of EIB loans and other financing / funding instruments

### Case Example: Thessaloniki Metro Funding



Source: Samuel Salem, Transport Authority of Thessaloniki (TheTA): «Financing the construction of Thessaloniki's Metro», presentation at the 6th SUMP Conference, June 2019

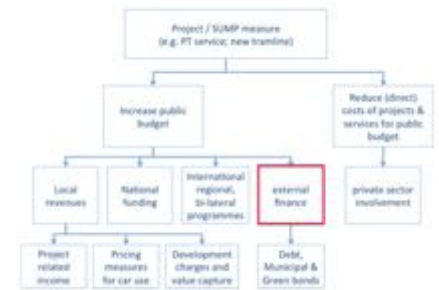
# Debt Mechanisms & External Finance

## European Fund for Strategic Investments (EFSI)

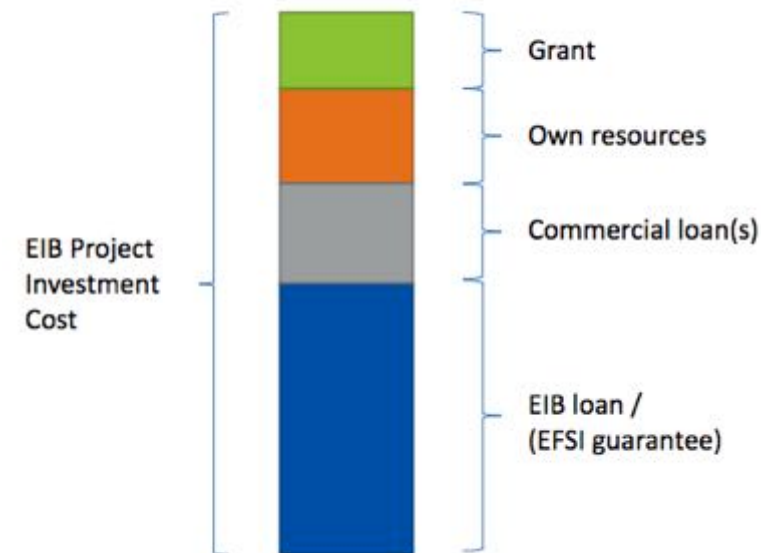
- Joint initiative of European Commission and European Investment Bank
- Supports strategic investments in European key areas, including transport
- Guarantee mechanism, which allows the EIB to provide funding for higher risk projects
- At least 40% of EFSI financed projects will aim to contribute to climate action in line with the Paris Agreement.

## European Energy Efficiency Fund

- Financing instruments for energy efficiency investments, including e-mobility, car sharing, etc.
- Aims to attract private investments to sustainable mobility projects



Simplified funding/financing structure



Source: Jaspers / Kevin Cheung:  
EIB Support to Bus Fleet Expansion



# Debt Mechanisms & External Finance

## Bank Loans: EIB Financing



## Cleaner Transport Facility

- EIB/EC Initiative, launched in Dec. 2016
- Supports investments in low carbon fuelled vehicles
- Combines lending, funds, guarantees, advisory services

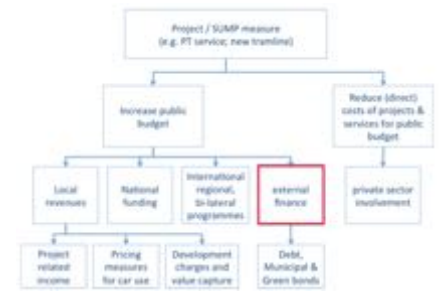
## Cleaner Transport Facility: Supporting the deployment of cleaner transport

The alternative fuels and cleaner transport sector is gradually moving towards large-scale deployment across the EU. The European Investment Bank (EIB) is supporting this shift. The Cleaner Transport Facility (CTF) is a new initiative launched in December 2016 by the EIB and European Commission (EC) to assist investments, by both public and private entities, in cleaner transport projects through existing EIB products and new financial instruments.



# Debt Mechanisms & External Finance

## City Bonds, Revenue Bonds, Green Bonds



### City Bonds

- debt instruments to unlock external investment capital for expenditures, including transport infrastructure projects and service operation.
- yield immediate capital, while repayments can be extended over a long time period of approx. 20-30 years.
- Fixed interest rate, often institutional investors

### Revenue Bonds

- Bonds where interest rates are paid from project revenues (tolls, fares, etc.)

### Green Bonds

- bonds are bonds with proceeds ring-fenced for sustainable projects, including sustainable mobility related projects.
- Re-direct finance towards sustainability solutions
- (long-term) Investors see threats for conventional business models and opportunities of new, green solutions



# Debt Mechanisms & External Finance

## City Bonds, Revenue Bonds, Green Bonds



## The Climate Bonds Initiative Standards for Transport Projects

➤ sector specific criteria for transport projects:

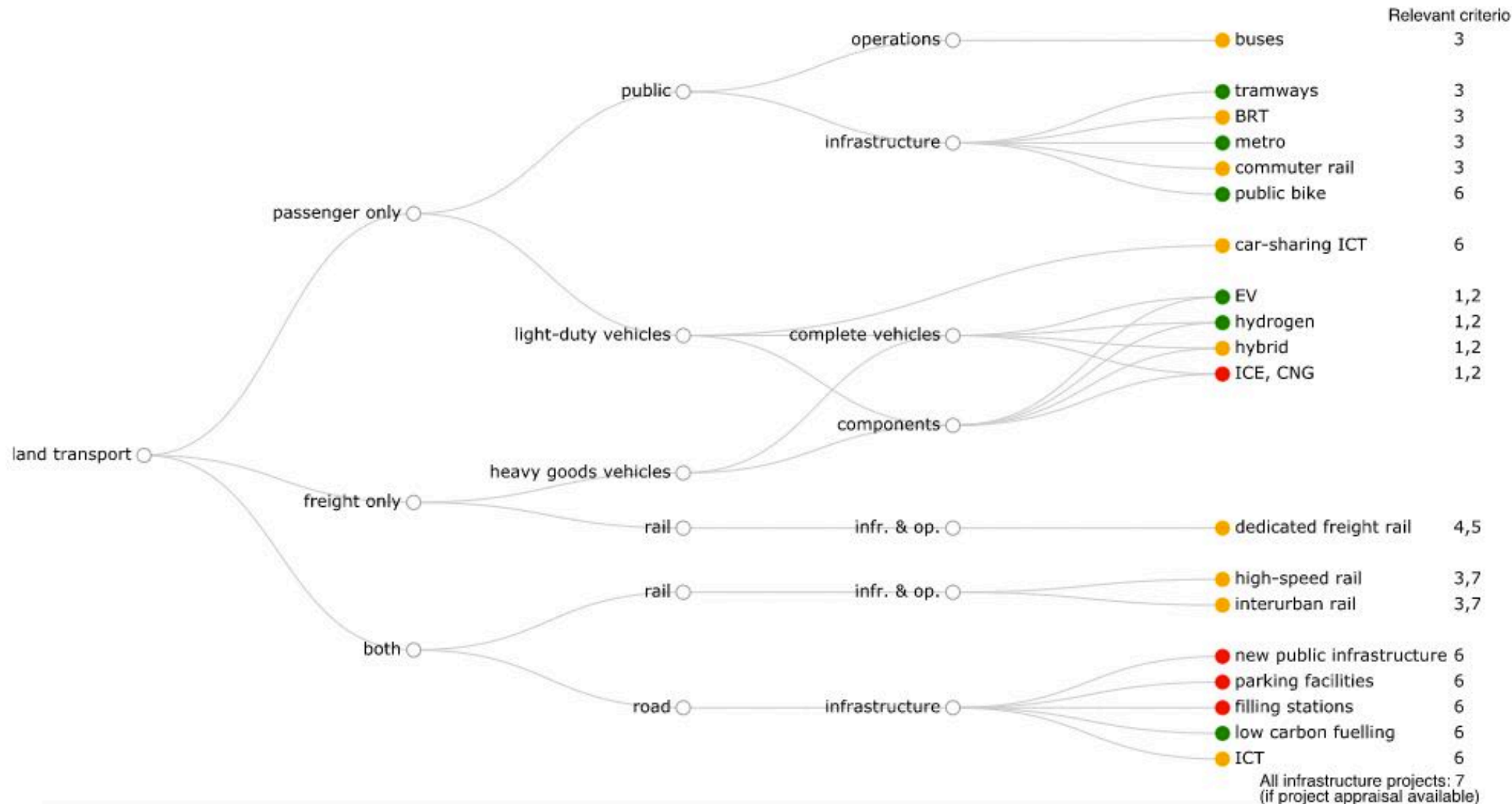
- urban trams,
- metro systems
- bike transport systems
- fully electric vehicles
- hydrogen fuel cells



# Debt Mechanisms & External Finance

## City Bonds, Revenue Bonds, Green Bonds

**Figure 1: Summary of land transport products and projects that would automatically qualify under the standard (green), automatically not qualify (red), or need further consideration in order to determine eligibility (orange) under the relevant criterion or criteria listed**



# Debt Mechanisms & External Finance

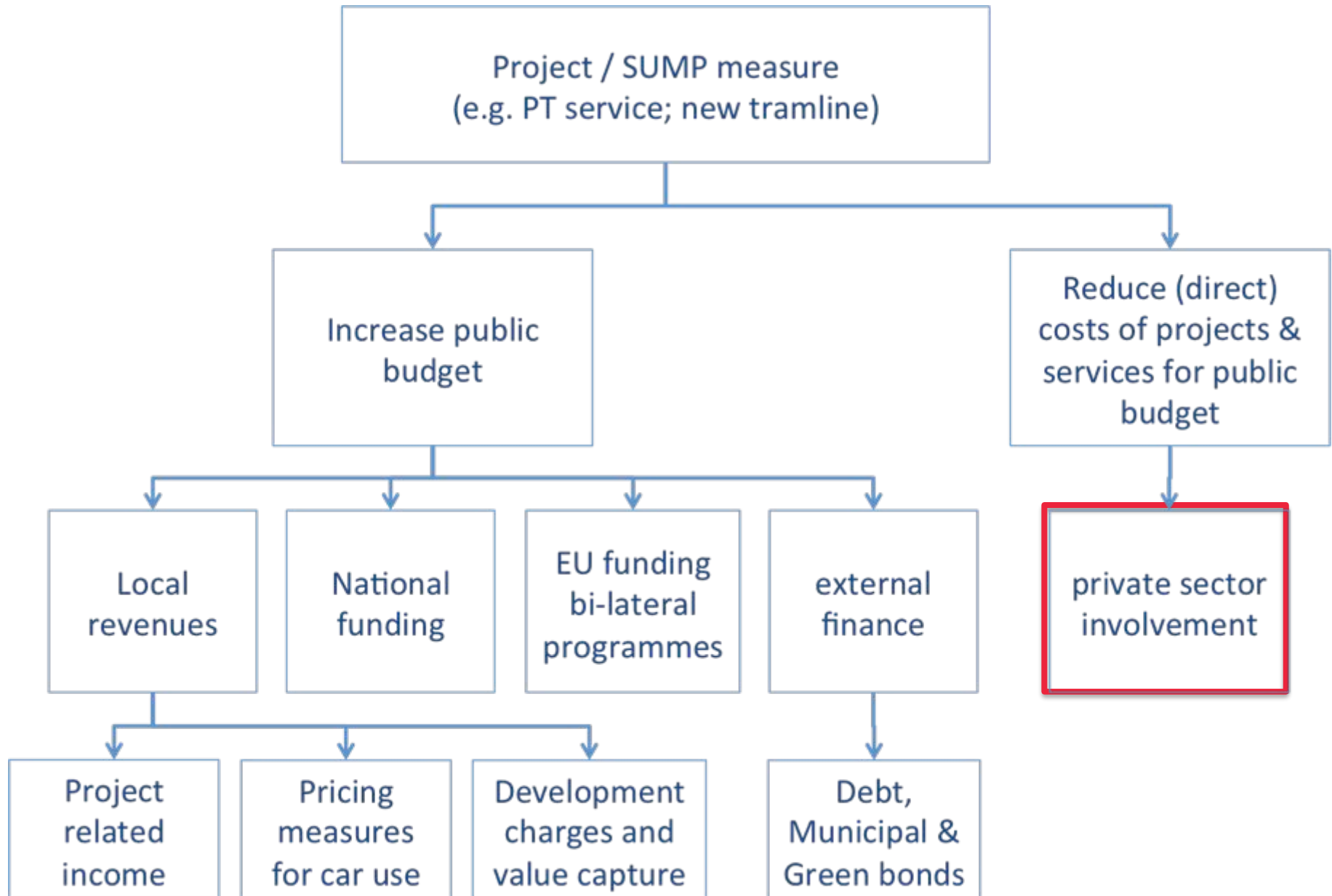
## City Bonds, Revenue Bonds, Green Bonds



### Example: RATP Green Bonds Programme, 2017

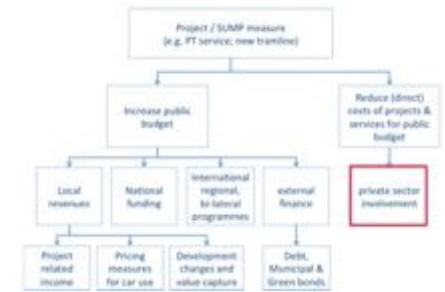
- French state-owned public transport operator RATP (Régie Autonome des Transports Parisiens) launched a green bonds programme in 2017
- Proceeds will be invested into future projects or are used to refinance existing projects:
  - renewal of railway rolling stock,
  - upgrading of a metro line, and
  - purchase of electric locomotives for the maintenance of RER infrastructures.
- RATP aimed at a € 500 million with a 10-years issue. The bond was three times oversubscribed.
- More Information: <https://www.ratp.fr/en/en/la-ratp-et-les-green-bonds>





# Private Sector Involvement

## Different kinds of PPP arrangements



- A PPP is an arrangement between a public authority and a private partner for delivering an infrastructure project and/or service under a long-term contract.

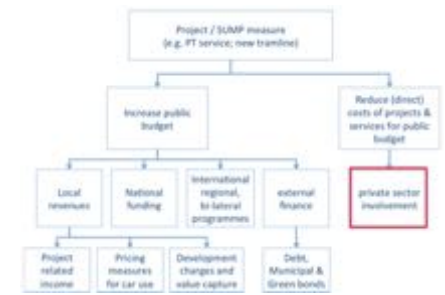
### **Objective of PPPs: reduce the direct costs and risks for public budgets**

- Private partner takes over investment and operation costs and gradually recoups his costs:
  - reimbursed by the public authorities, or
  - concessions to collect user fees.
- PPPs differ in terms of the attribution of risks among the partners
- Risks involved in PPP arrangements:
  - Demand risk: Level of revenues, e.g. from ticket sales, fares
  - Technical risks e.g. related to construction activities, or new technologies
  - Performance risk, e.g. costs of maintenance and operation
  - ...



# Private Sector Involvement

## Different kinds of PPP arrangements



### Private companies as service providers

Arrangement with defined tariffs, quality, service hours, network, and accessibility standards.

#### ➤ Contracting:

- Private partner receives performance based payments for the provision of a service
- Example: Lump Sum payments for the provision of PT services (meeting defined level of service and quality standards)
- Provision of a bike sharing system (with minimum quality standards)
- Public: demand risk – Private: performance risk

#### ➤ Concessions:

- Private partner pays for the exclusive right to operate a PT system/line (tendering process)
- Only profitable projects
- Private Partner takes over the demand, technical, and performance risk



# Private Sector Involvement

## Different kinds of PPP arrangements



## Provision and operation of Infrastructure

### ➤ Build-Operate-Transfer (BOT):

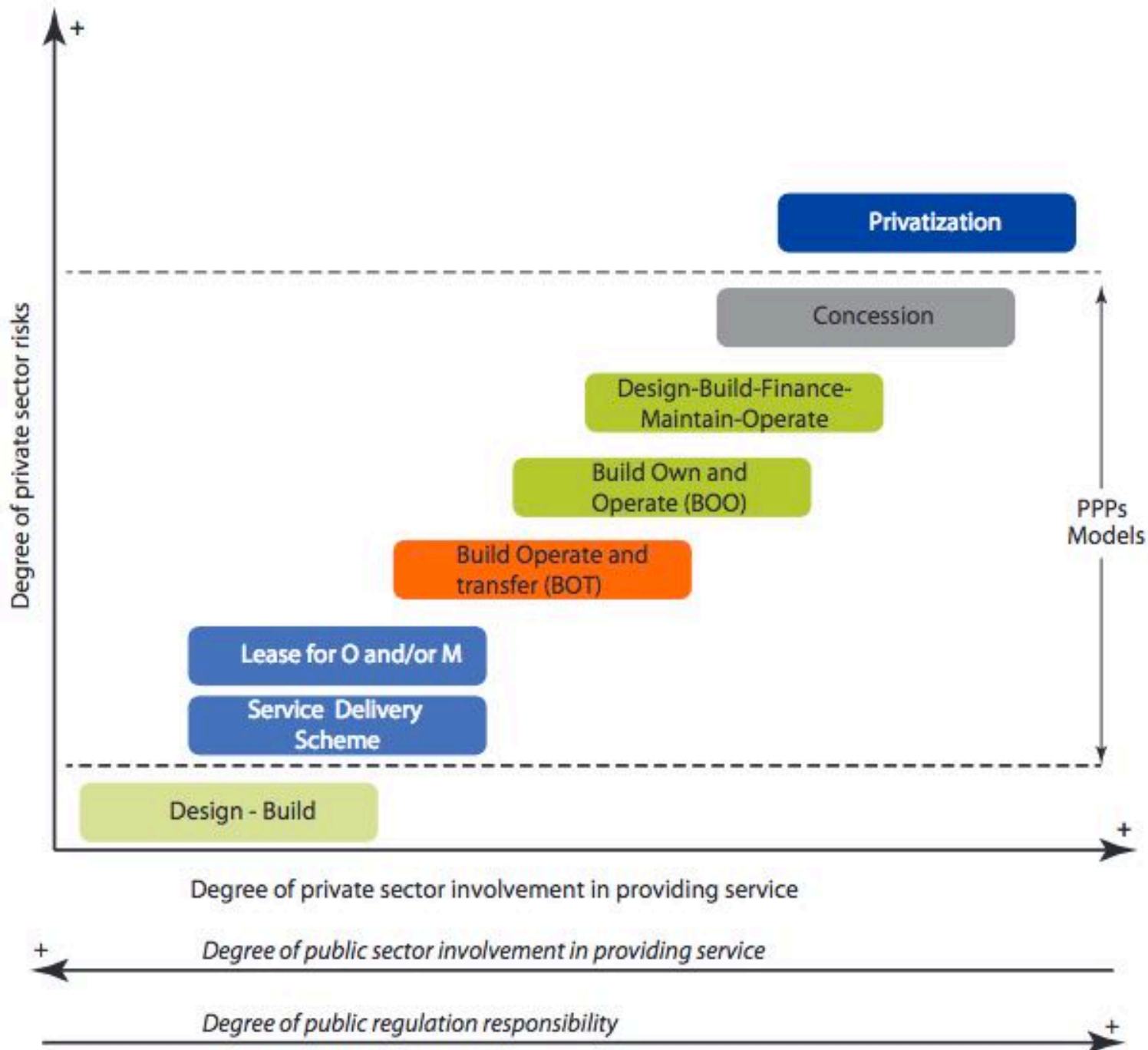
- private sector enterprise receives a concession to build and operate an infrastructure asset (e.g. a road) for a defined period of time.
- private party earns income from the project (e.g. fares, tolls) to recoup its investment.
- Public authority can define basic levels of service.
- After the concession period, the asset is reverted to the public sector.

### ➤ Build-Own-Operate-Transfer (BOOT):

- Private enterprise develops and operates a project for a defined period.
- private party earns income from the project, to recoup its investment.
- private party owns the asset, public sector buys the asset at a predefined price or market price.

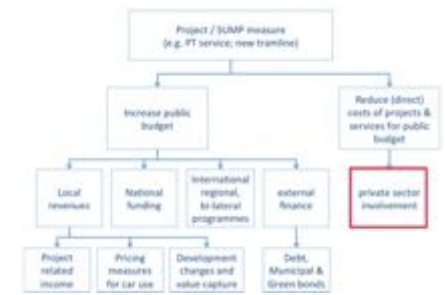


**Figure 9.1 Types of Public-Private Partnerships**



# Private Sector Involvement

## Different kinds of PPP arrangements



## PPPs and municipal governance

- Involvement of profit-seeking private sector in the delivery of public goods can be highly contentious, depending on political/economic culture.
- Fear that PPPs provide profits for private sector while socialising losses

## PPPs do not substitute for effective municipal governance!

- performance based contracts
- clear quality standards and defined levels of services
- environmental and social standards (e.g. ticket prices)
- performance monitoring and reporting obligations
- recurring re-negotiation and adaptation contracts
- clear rules for non-compliance and enforcing mechanisms.

- A lot of funding options, but no one size fits all solutions
  - Depending on project size, legal framework, geographical location, political will, etc.
- Political resistance against the implementation of pricing measures:
  - combine push and pull instruments
- Different financing and funding requirements throughout the project life cycle
  - combine different funding sources



