

# **Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation**

Sustainable Freight Transport Systems: Opportunities for Developing Countries

14-16 October 2015

## **SESSION ON FINANCE AS KEY ENABLING FACTOR THE ROLE OF PUBLIC PRIVATE PARTNERSHIPS (PPPs)**

by

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UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

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Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation,  
4<sup>th</sup> session (sustainable freight transport)

## Session on Finance as Key Enabling Factor > ***The role of Public Private Partnerships (PPPs)***

**Ansgar KAUF**, Expert, PPPs in Transport  
*Geneva 14-16<sup>th</sup> October 2015*

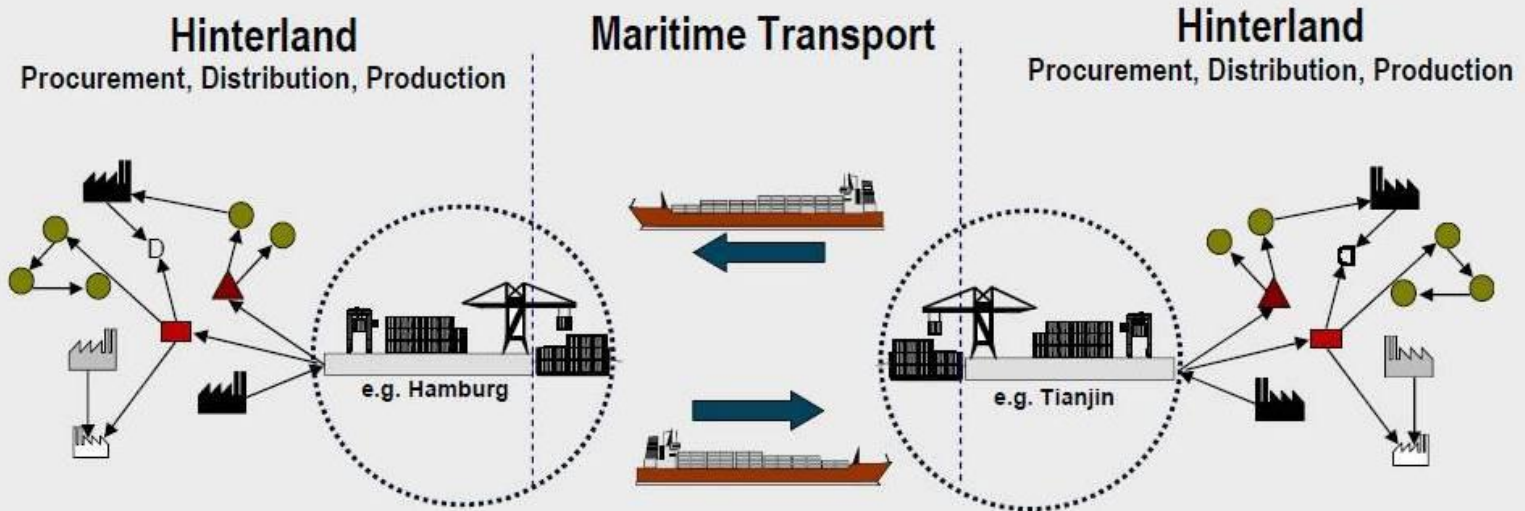
# I. Introduction

1. the role of transport services in the context of international, regional and international trade: taking overall transport sector approach encompassing all modes (road, rail, water, air), inter-modality, supply chains, role of logistics
2. the need of a sustainable development approach: 3 core aspects must be jointly addressed: *economic* viability, social development and equity and *environmental* protection & preservation.
3. Question for freight transport:
  - Infrastructure -> *PPP*: yes!
  - Transport services -> *Privatisation* : yes! // *PPP*: ???

# Transport: services and infrastructure

## many options for **PPP** & **Privatisation**

- **Quite distinct subsectors** > *land transport*  
(modes: road, rail, air, water) > *overseas transport*  
> *a combination of all*
- “Bundled” in > *Infrastructure (networks) &*  
> *Transportation / other services*
- **Clear distinction of roles:**
  - > **Regulator**
  - Infra / network** > **Provider, Operator**  
> **Client**
  - Transport service**  
**Supplier -> Forwarder, Haulier, Agent, Transport company (road, shipping, ...), ... -> Client**



-  Factory
-  Supplier
-  Warehouse
-  Terminal
-  Client
-  Waste inceneration
-  Disposal

# Basic constituents of Transport(ation)

> **Infra (network) // Transp. & other services**

**Who provides** the infra / network – who the services / transportation?

> Trend to **unbundling**

*i.e. split infra / network & its use / transp. services:  
provision*

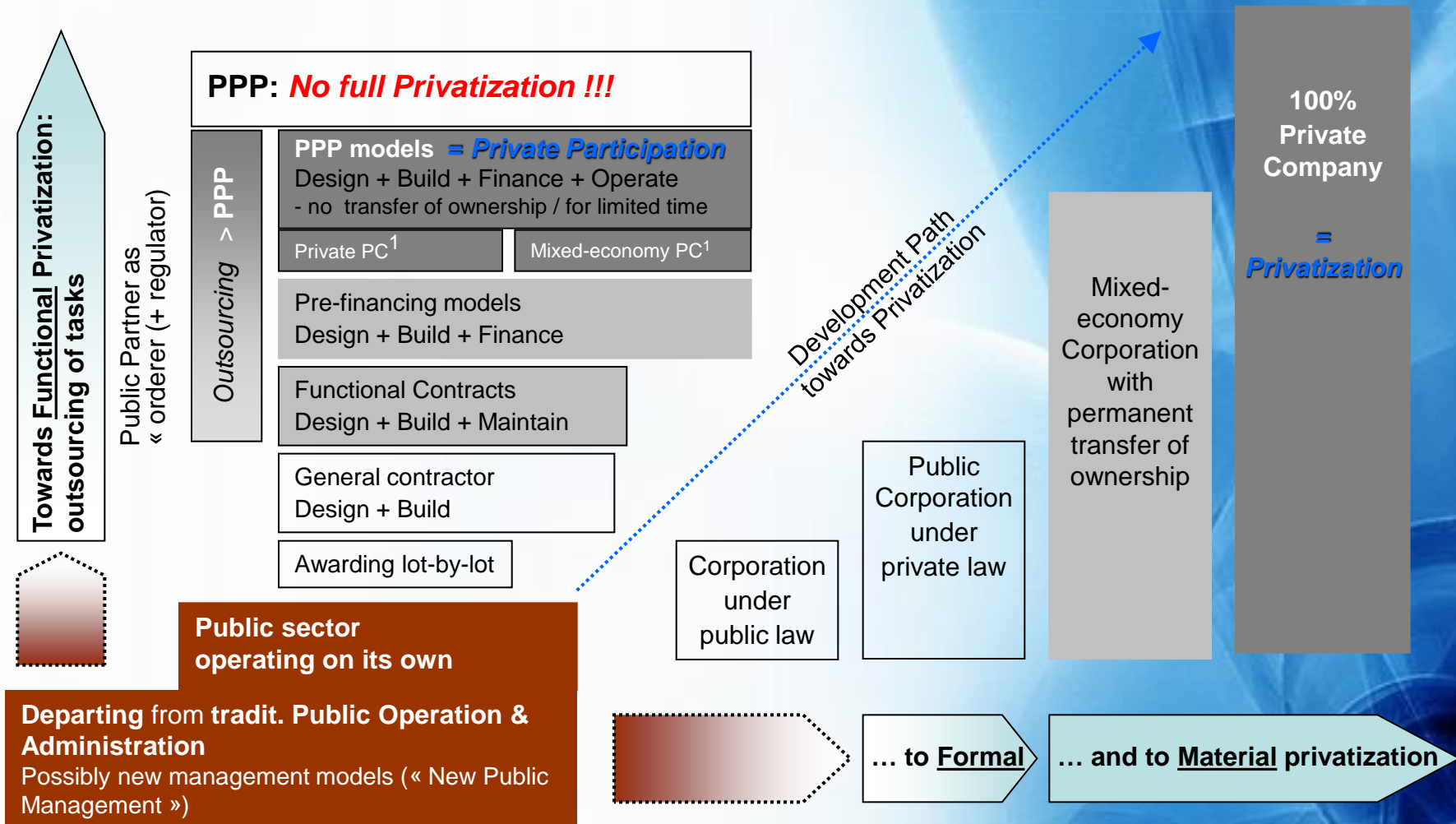
Asset & Service Sector / Progress	Infrastructure Asset	O&M /FM	Transport / associated Services
1. one provider for all ( <i>Monopoly</i> )	Monopolist provider (Public or private)		
2. Unbundling & Privatization ( <i>Demonopolize &amp; Privatize</i> )	1 or several Providers (Public or private) Competition via concession tender		Competitor 1, competitor 2, competitor 3, ..

**Infrastructure  
PPPs**

**Transport services  
Privatisation**



# Difference btw Private Participation (PPP) and Privatization



1. PC = Project Company

Source: Alfen / Weber:

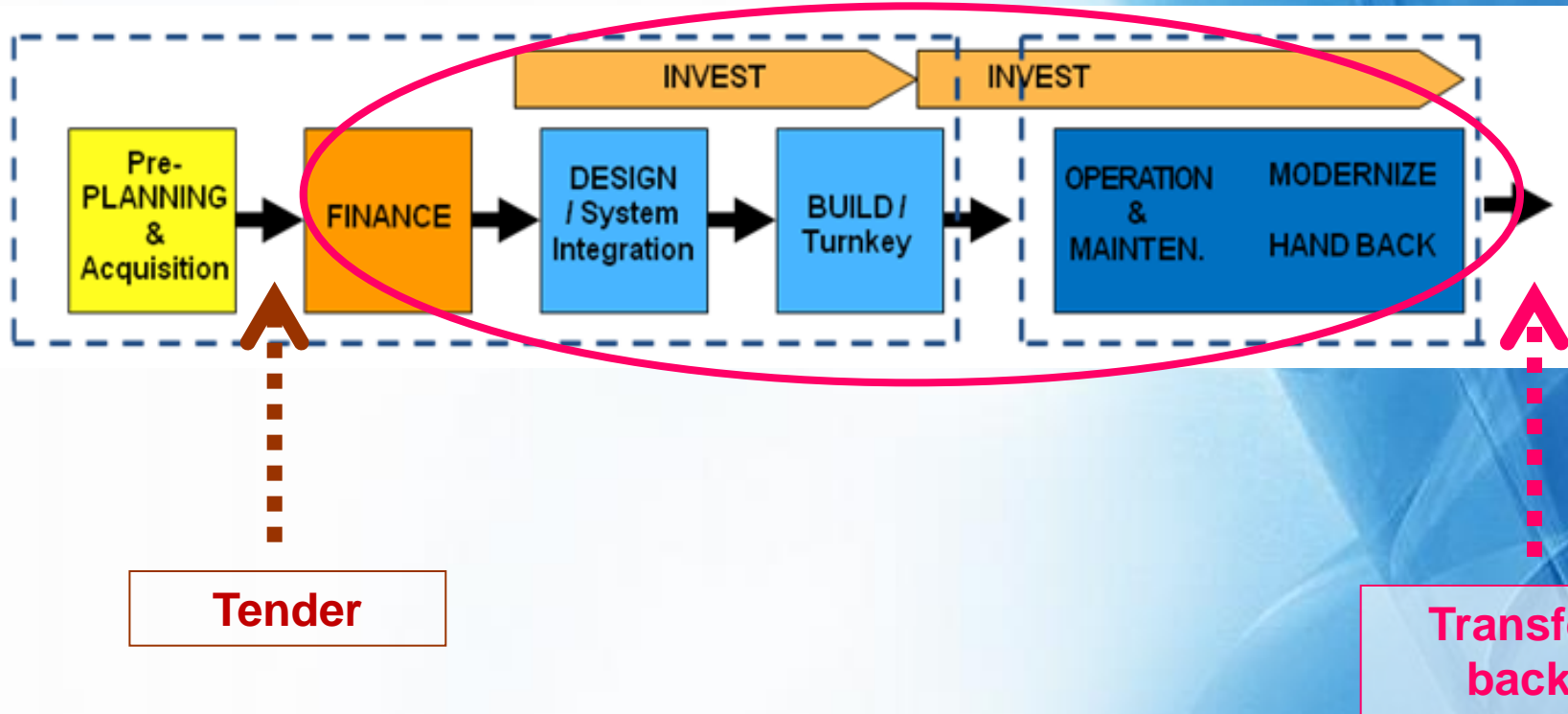
# Transport infrastructure: **Public procurement** or **Public Private Partnerships**



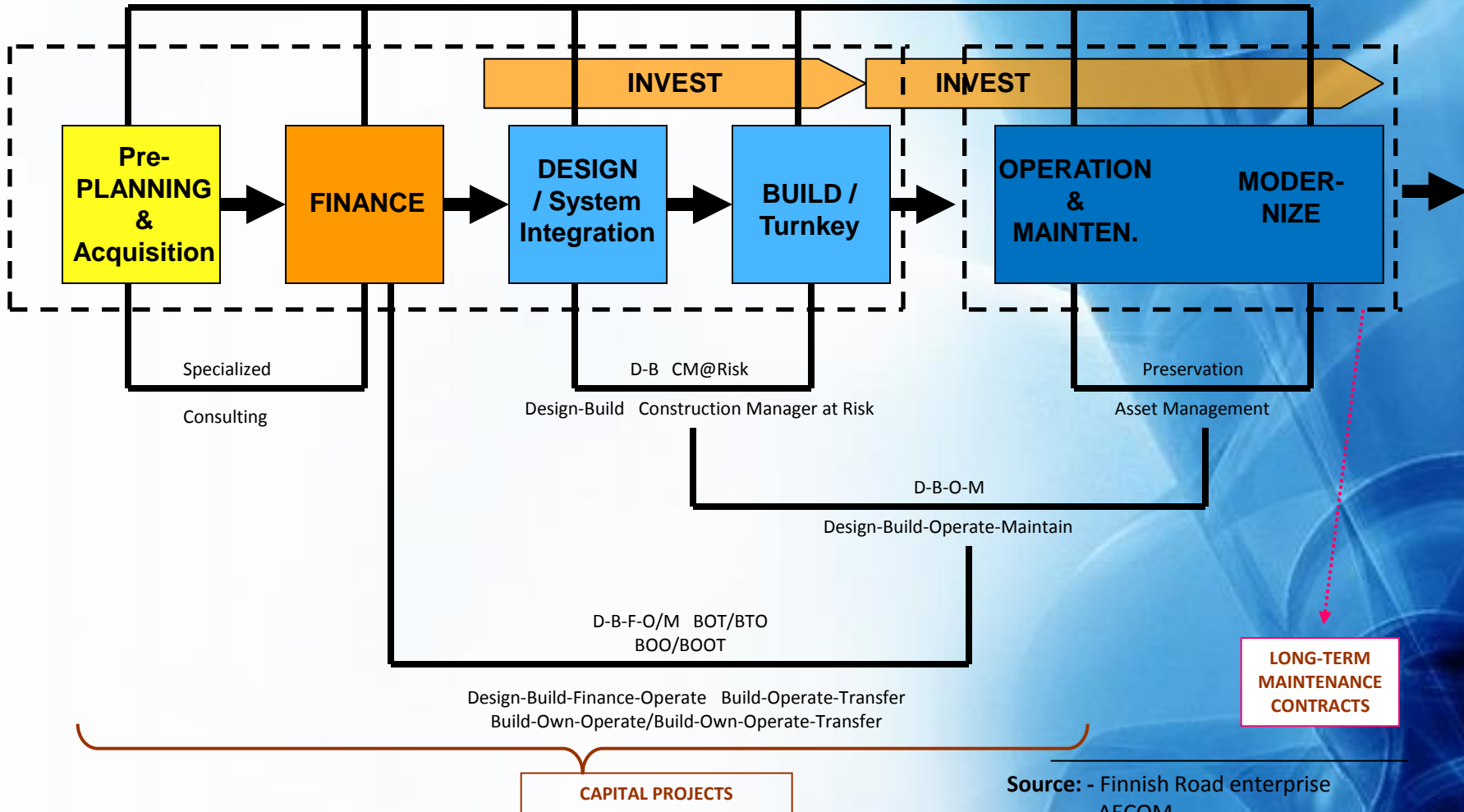
# Range of Options: from tradit. procurement to PPP

Approach	Contract type	Risk & Duration
Fully Privatize	<p>Generally not in public infrastructure / service</p> <p><b>Asset Sale</b> <b>BOO: Build-Own-Operate</b></p>	<p><b>High Risk</b></p>
PPP	<p><b>Concession</b> (private finance / equity)</p> <p><b>BOT: Build-Operate-Transfer</b> <b>DBFO/M: Design-Build-Finance-Operate/Maintain</b></p> <p>← <b>Contracting model</b> (incl. modernization) ← <b>Leasing / Affermage</b></p>	<p><b>Long Term</b></p>
PPP	<p><b>Long Term Contract</b> ("pre-finance", no equity)</p> <p><b>DBOM: Design-Build-Operate-Maintain</b> <b>O&amp;M: Operation &amp; Maintenance</b></p>	
Tradit. Public	<p><b>Works contracts</b> (including turnkey)</p> <p><b>DB-W: Design-Build with Warranty</b> <b>DB: Design-Build = Design &amp; Construct (DC)</b> <b>CM@Risk: Construction Manager at Risk</b></p>	
Tradit. Public	<p><b>Services contracts</b></p> <p><b>Contract Maintenance</b> <b>Fee-Based Contract Services</b> (consulting, installation, technical)</p>	<p><b>Short Term</b></p>
Tradit. Public	<p><b>Product Delivery</b></p> <p><b>B2B</b></p>	<p><b>Low Risk</b></p>

# PPP models: main phases in the life-cycle



# PPP models: life-cycle : phases & Contracts



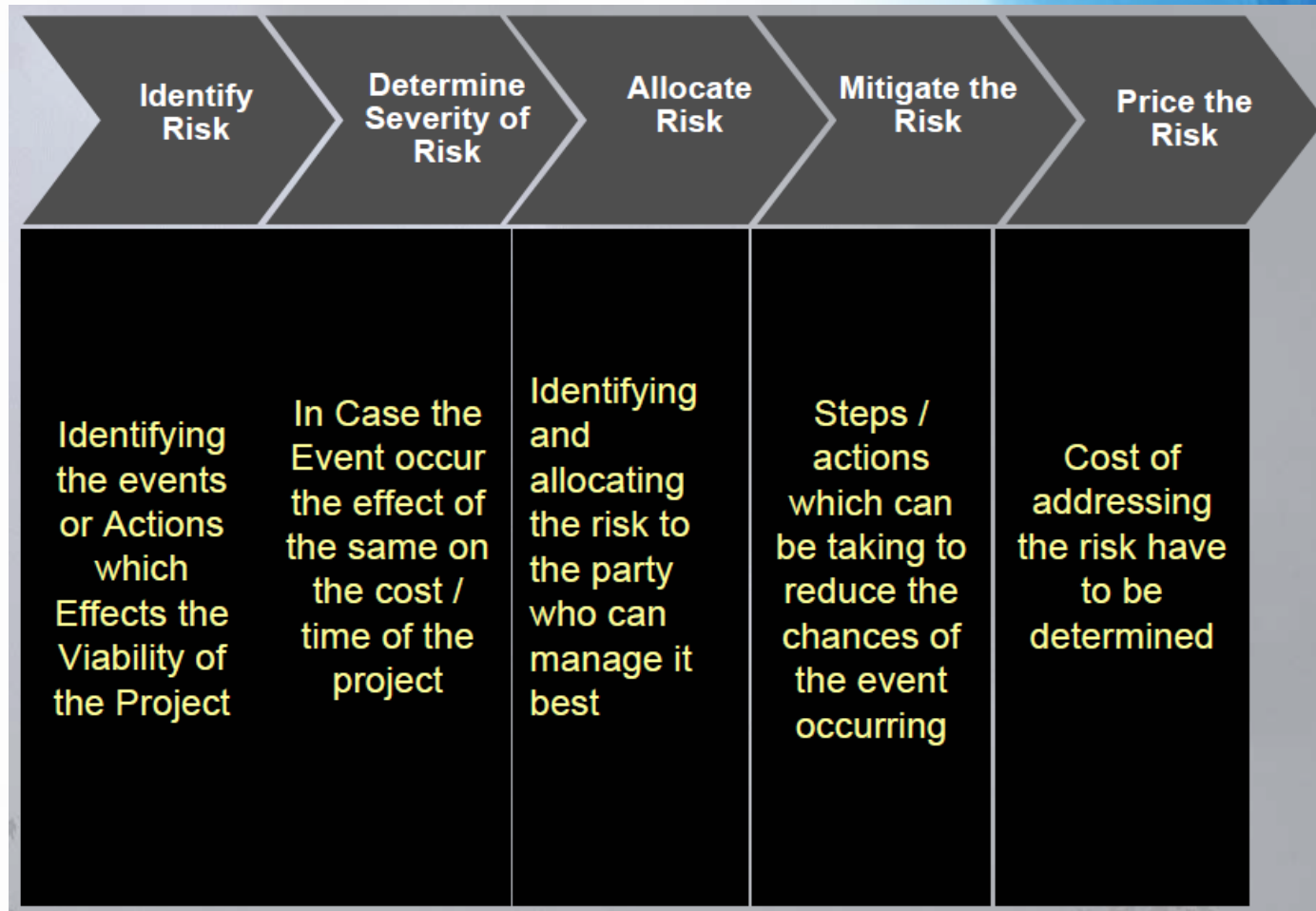
**LONG-TERM MAINTENANCE CONTRACTS**

Source: - Finnish Road enterprise  
- AECOM

# Risk mitigation

Risk category	Who and how ?	
	government	private sector
1. Political Risks		
2. Operational Risks		
3. Market Risks		
4. Economic Risks		
5. Security and Safety		
6. Environmental/climate risks		
7. Financial Risks		
8. Risks Relating to Technical Partnership & Management		

# Risk management principles



Source: Vijay Sarma, Risk Management in PPP Projects, 2007

# Risk allocation

Main risks	Party bearing the risk			
	Grantor	Concessionaire	D&C Contract.	O&M Contract.
<b>General</b>				
Change in law	X	(X)	(X)	(X)
Political and social risk	X			
Development phase : Preliminary and Design Services	Grantor	Concessionaire	D&C Contract.	O&M Contract.
Expropriation	X		(x)	
Planning and Design services / cost and delay			X	
Permits and authorizations	X		(X)	
<b>Construction phase</b>	Grantor	Concessionaire	D&C Contract.	O&M Contract.
Existing infrastructure / utilities conditions			X	
Ground conditions (Geology / Contamination)	(X)		X	
Constr. price overrun (Lump sum price)			X	
Constr. price escalation	(X)		X	
Construction delay overrun			X	
Unforeseen events / Force majeure	X		(X)	
<b>Operation phase</b>	Grantor	Concessionaire	D&C Contract.	O&M Contract.
Permits and authorisation				X
User demand / Revenues		X		
Revenue collect./accounting/fraud/ violation	(X)	X		X
Supply of services / level performances				X
Enforcement	X	X		
O&M costs overrun				X
Price escalation	(X)			X
Unforeseen events / Force Majeur	X		X	
Heavy Repair and Maintenance		X		X



# Risk Transfer – vital issue in PPPs

- Allocate risks to the party that is in the best position to mitigate it
- > Price risk to be included in PPP price. That is why a PPP project is more expensive in absolute terms.
- > This additional cost is then compensated by efficiency gains and, most importantly a price cap for capital expenditure (CAPEX) and operating expenditure (OPEX)
- i.e. all cost overruns (usually some 20 – 100% are at the expense of the concessionaire, apart from exceptions stipulated in the contract

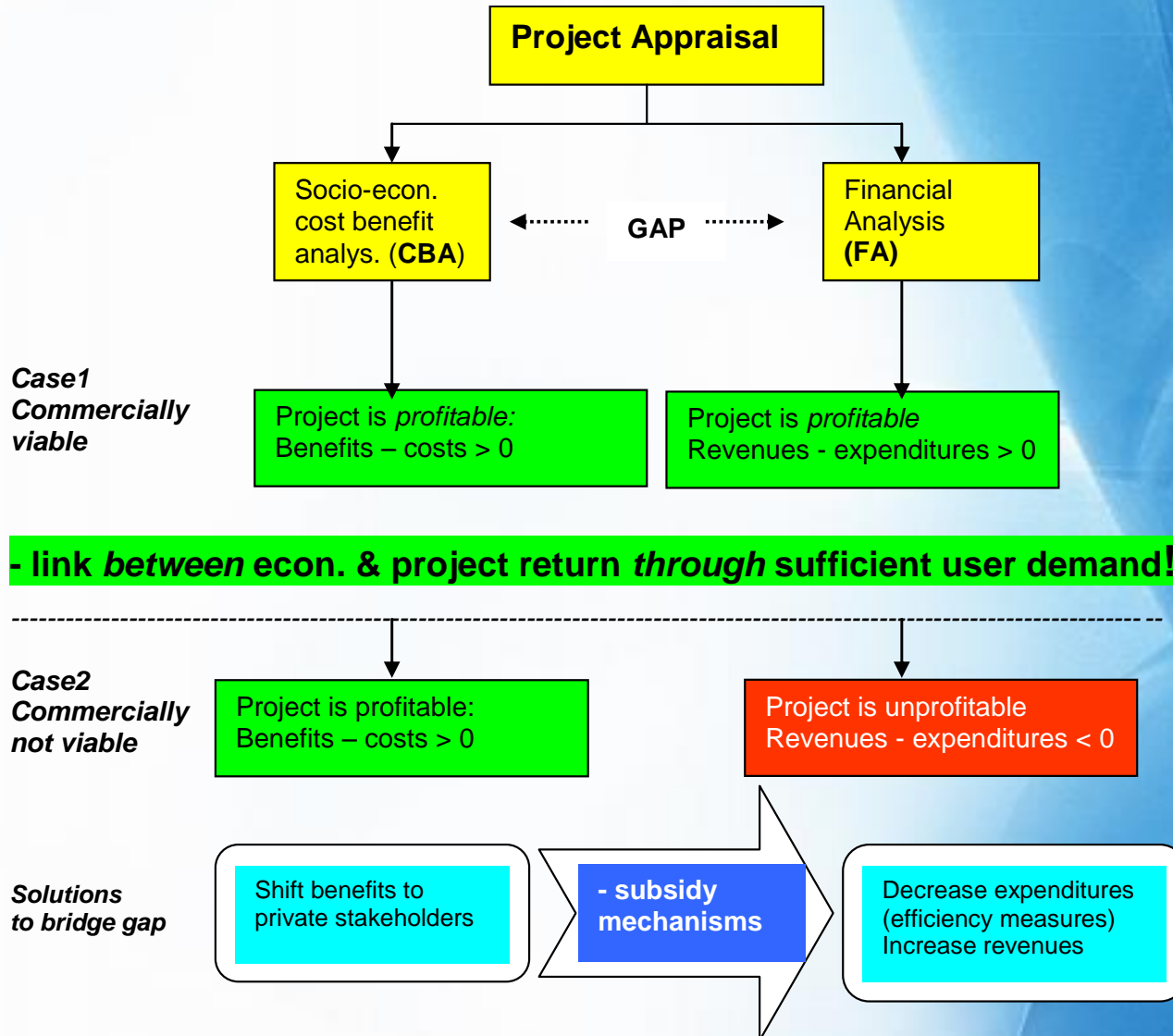
# The Revenue stream - > Payment Mechanisms

Payment Mechanism	Description
<b>Direct user charges</b>	<b>Tolling</b> , (interurban + tunnels / bridges) is a common charge for road use, with 2 objectives: revenue generation and demand management. Care has to be taken to win users to tolling as a fee for service <b>Parking fees</b> are an even more common payment method for drivers, do not meet public resistance
<b>Access control to Cities / Area tolling</b>	<b>Urban charging / road pricing</b> with fixed or variable tariff (peak hour). Difficult to introduce (politicians fear public resistance). Access control systems that privilege area inhabitants over incoming visitors, meet generally stronger acceptability. A clever way is the combination of access and parking charges ("Parkraumbewirtschaftung": users get a grace period for a "free ride" during 20 to 30 minutes. Either they park their car then with a tag, or when they still drive, the same tag is used for urban charging.)
<b>Traffic fines</b>	Traffic fines from speed and red light enforcement (and other violations) create a project budget, the technology provider retains x % or possibly funds other systems, in addition (e.g. red light and speeding fines funding UTC system). Although unpopular, have advantage that drivers are already used to them.
<b>Energy savings (liberating budget)</b>	By upgrading a Traffic Management System to energy saving technology, up to 90% of the previously due electricity bill and O&M cost can be saved; up to 60% for public lighting. The advantage is that it takes the existing budget (governments cannot switch off street or traffic lights), and uses the liberated funds for the new project. Also environmentally very acceptable.
<b>Shadow tolls</b>	A shadow toll is a payment based on traffic volumes made by the public sector partner rather than users paying directly through a toll. In the United Kingdom traffic is divided into bands representing different levels of annual traffic volumes with different per-vehicle payments attached to each. Banding is intended to cap the public sector partner's liability.
<b>Availability payments</b>	<b>Currently main payment mode for &gt; 80% of new PPPs, but not affordable for governments any more.</b> These payments are based on availability of infrastructure and/or services to an acceptable standard. They typically vary for on-peak/off-peak periods and additional features such as cycle ways or bus lanes. Effective availability payments need to be easily measurable, take into account factors affecting availability (damage, accidents, ...) and define unavailability (max.time before being re-stored).
<b>Lump sum contributions</b>	Lump sum payments towards the cost of the project are used in both conventional & PPP procurement. 1. In public procurement, such payments are usually paid upon completion of construction.
<b>Annuity payment</b>	2. In PPPs they usually are annuity payments, within a fixed schedule over the contract duration.
<b>Active TM payments</b>	Active traffic management payments are based on combination of traffic volumes, average traffic speed & availability. This payment mechanism can be used to create incentives or drive desired outcomes.

Self-financing = Future

Budget financed

# From project appraisal to project financing as “Stand alone” or with subsidy ?



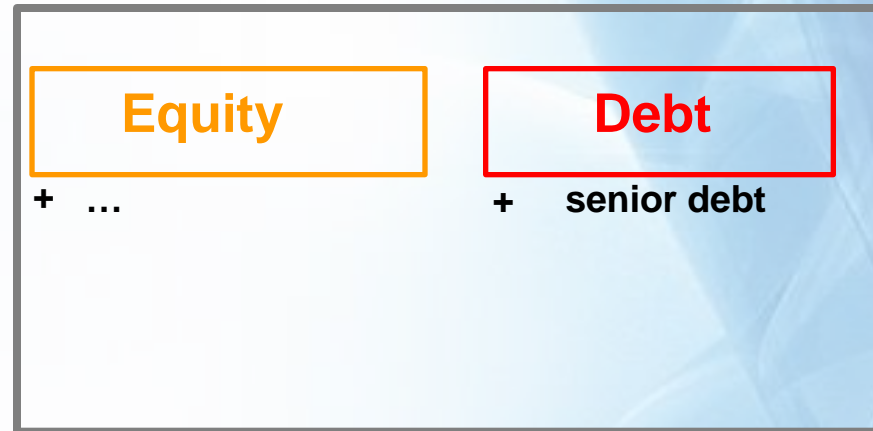
# Financing PPPs

## Sources



- Taxes / debt public sector ----->
- Subsidies (nat. / internat.) ----->
- User: ----->

## Project Finance

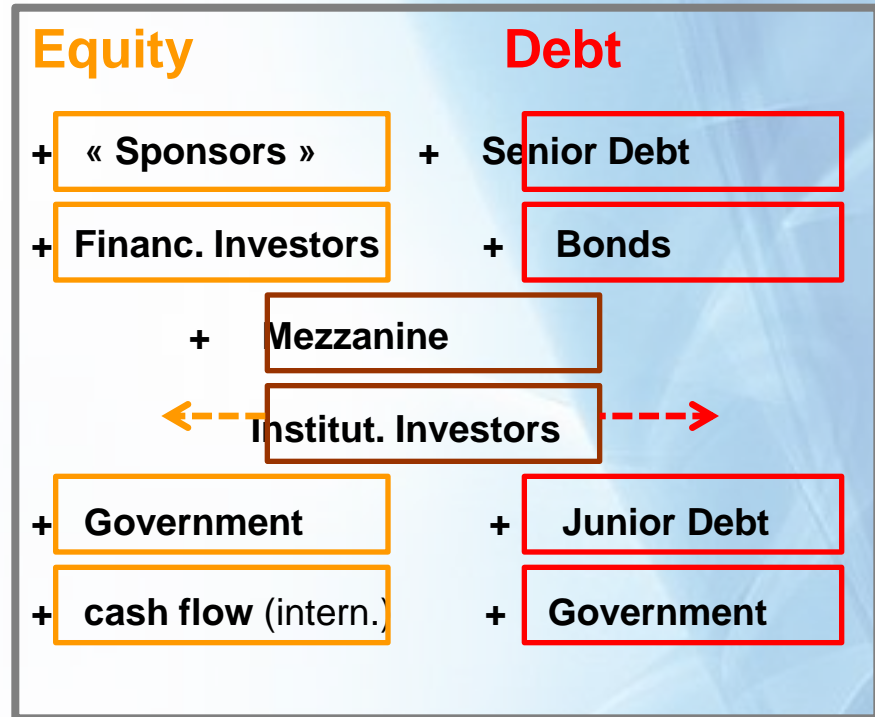


>  
Sources



- Taxes / debt public sector ----->
- Subsidies (nat. / internat.) ----->
  - Viability fund
- User pay mechanism: ----->
  - “as you drive” (distance, moment, category/emission class, ...) : *toll*
  - other charges: *congestion charging*

Project Finance



- + Risk sharing mechanisms
- + Garanties



# India: Viability Gap Funding

## Key Principles:

- “The quantum of financial support (VGF) to be provided under this scheme shall be in the form of a capital grant at the stage of project construction. The amount of VGF shall be equivalent to the lowest bid for capital subsidy, but subject to a maximum of 20% of the total project cost. In case the sponsoring Ministry/ State Government/ statutory entity proposes to provide any assistance over and above the said VGF, it shall be restricted to a further 20% of the total project cost (see Rule 4.1 and 4.2)”

## > Ministry of Finance of India, 2006

[http://finmin.nic.in/the\\_ministry/dept\\_eco\\_affairs/ppp/GuidelinesPPApp250106.pdf](http://finmin.nic.in/the_ministry/dept_eco_affairs/ppp/GuidelinesPPApp250106.pdf)



# Combine Payment Mechanisms *with PPP options*

		PPP Model		
		Concessions	//	Long term contracts
Payment Mechanism		BOT - DBFO/M	Contracting model	DBOM - O&M
Self-financing	Direct user charges - Toll - Parking fee	X		
	Traffic fines	(X)		X
	Energy saving creating budget	X	X	
Budget financed	Shadow tolls	X		
	Availability payments	X	X	X
	Lump sum contributions	-		
	Annuity payment	X	X	X
	Active traffic management payments		(X)	X

# Good governance principles in PPP

*(acc.to UNECE guidebook, proposing practice-oriented modifications)*

1. **Policy & Strategy** (devising a coherent strategy and framework, in which PPPs have their place); ensure **full government support** !
2. **Putting people first, scoping adequate projects**
  - Is the project needed, for which users: 1. socio-economic justification  
2. careful traffic forecast – user-financed, standalone?
  - involving all stake-holders
  - Develop project scope and functions acc.to needs and financiability
  - Project adequate for the PPP approach? PPP stress test
3. **Capacity-Building** (administrative)
4. **Adequate legal frameworks** and **Regulation**
5. **Risk** (appropriate transfer to private partner)
6. **PPP Procurement** (transparent, efficient, competition)
7. **The environment / sustainable development**
8. **PPP contract management** *(during operations phase)*

## **A true Partnership !**



*A World Bank Cartoon, used in many PPP presentations, also tookit for highways*