

# **CAREC Public Private-Partnerships Awareness Workshop**

## **SESSION 1 INTRODUCTION TO PPP APPLICATIONS**

**Tashkent, Uzbekistan  
24 June 2010**

*Art Smith*



# Financing the Infrastructure Gap – an Imperative for GDP Growth

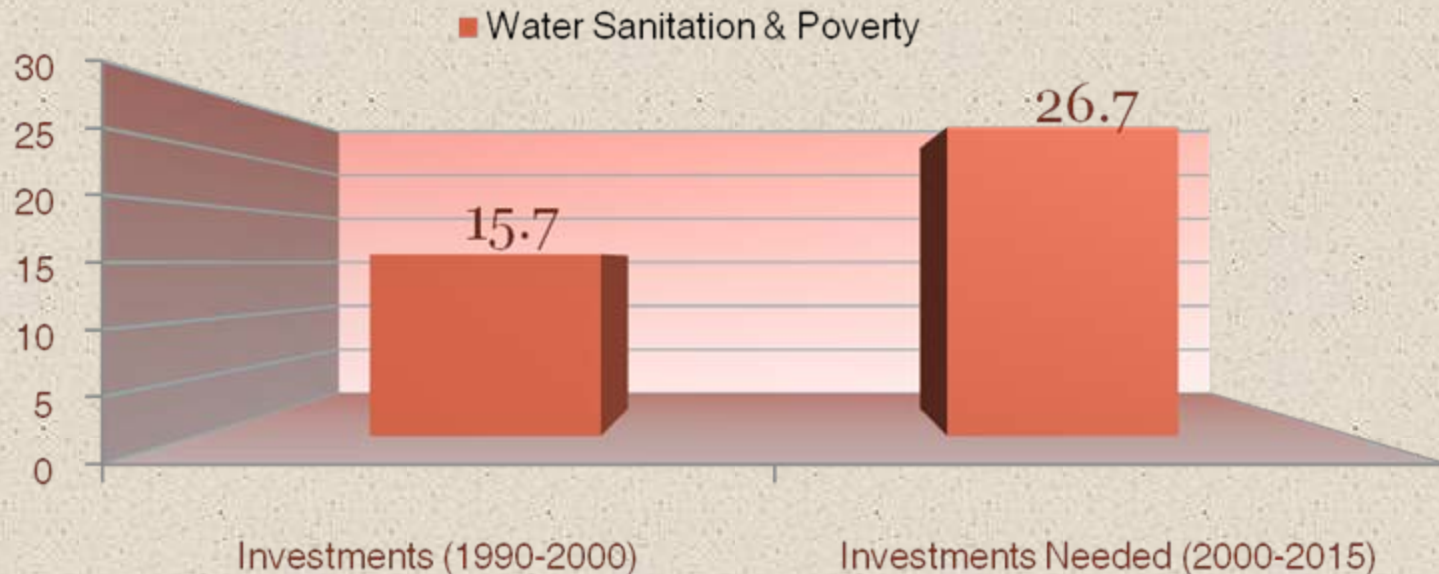
Infrastructure Financing Gap = The gap between Funding Requirements for Investments in Infrastructure (New + Operations & Maintenance) and actual infrastructure expenditures

- The Infrastructure Financing Gap is huge in developing countries amounting to more than US\$900 billion/year
- Across the developing world, this amounts to 60% of the total infrastructure financing requirement.

The World Bank

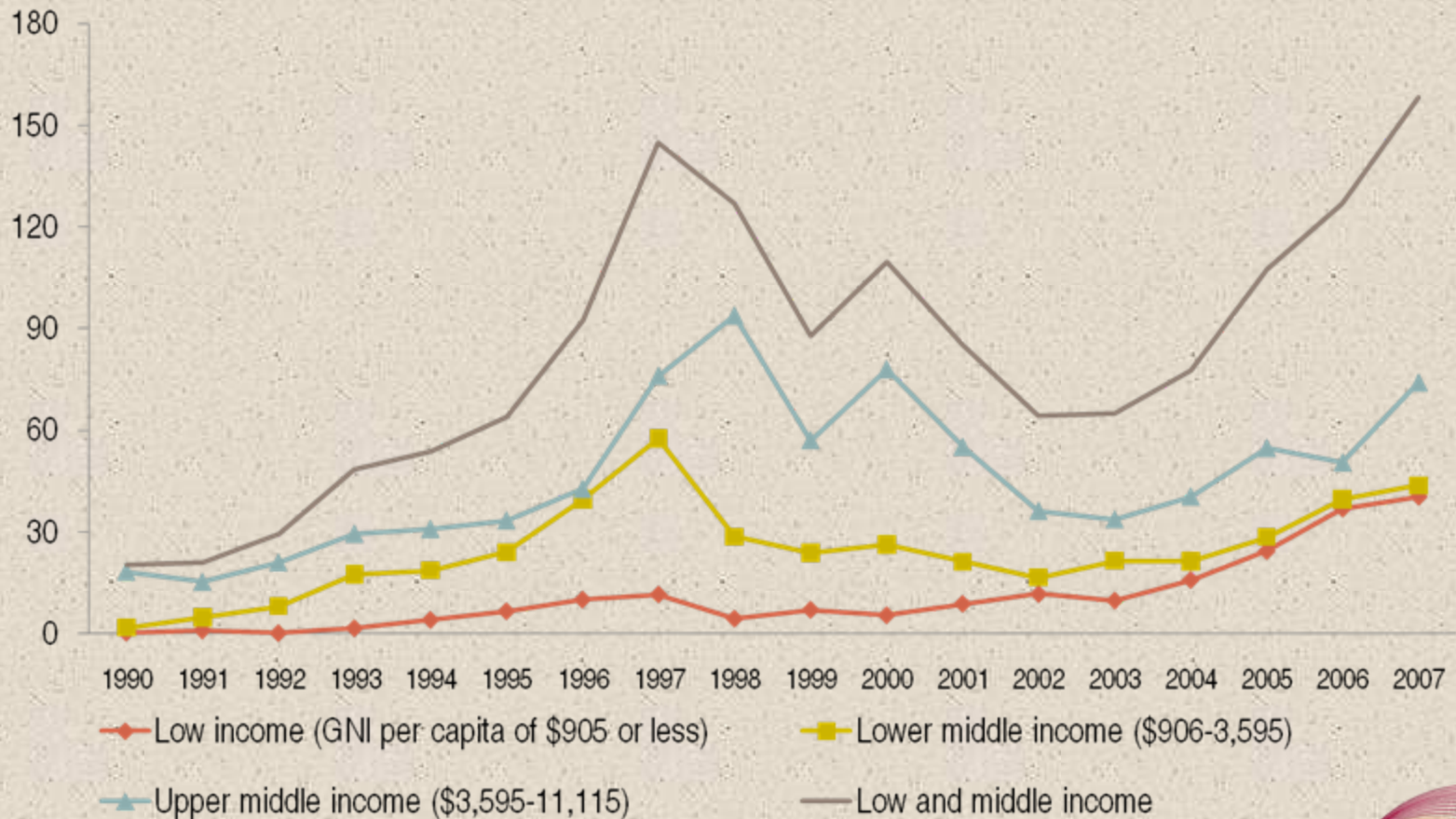
# Millennium Development Goals --- Investment Needed

## Average Annual Investment Implications of MDG Targets



Source: 1990-2000 - WHO Global Assessment 2000  
2000-2015 - Global Water Partnership/WB Estimates

# Growth in Private Sector Participation in Infrastructure, 1990 - 2007



Note: Country income groups are based on the World Bank classification released in July 2007.  
 Source: World Bank and PPIAF, PPI Project Database.

# INTRODUCTION TO PUBLIC – PRIVATE PARTNERSHIPS

## APPLICATION OF PUBLIC-PRIVATE PARTNERSHIPS WORLD-WIDE.

Public – private partnership ("PPP") infrastructure arrangements are growing in use and acceptance world-wide as an alternative and efficient method to mobilize additional financial resources and efficiency benefits from private sector.

PPP has also reached most developing countries, in particular within infrastructure sectors such as electricity generation, telecommunication, transportation ( roads, bridges, airports , railways and ports), water and sanitation, oil and gas industry, and tourism.

# Public-Private Partnerships Occupy The Spectrum of Shared Public and Private Sector Participation



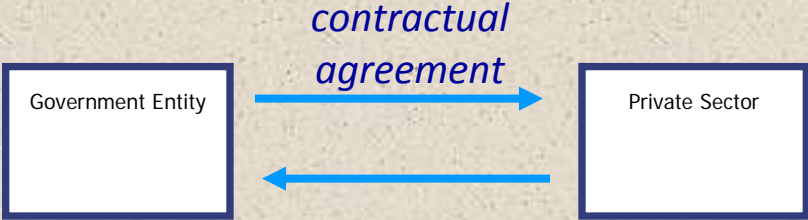
Private sector participation in infrastructure and service delivery can take many forms along the continuum of public and private sector participation

# The Basic Structure of a Public-Private Partnership

Government Entity

Private Sector

# The Basic Structure of a Public-Private Partnership

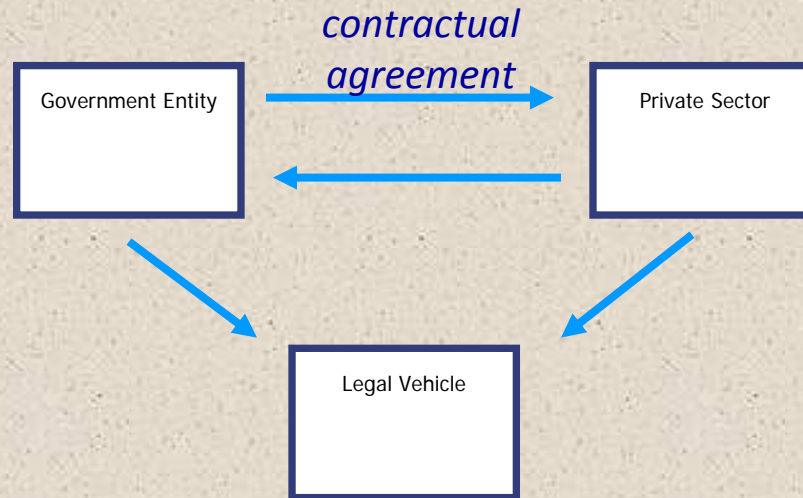




# Public-Private Partnerships Entail:

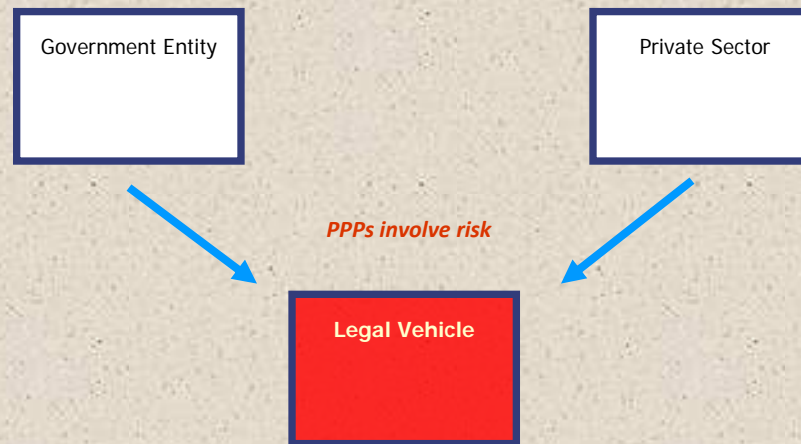
- A contractual arrangement between the public sector representing the public interest through the central, regional, or local government, or a state-owned entity and the private sector;

# The Basic Structure of a Public-Private Partnership



A legal vehicle, which may be wholly private, or public and private, in nature, may be created to provide the desired infrastructure and/or services.

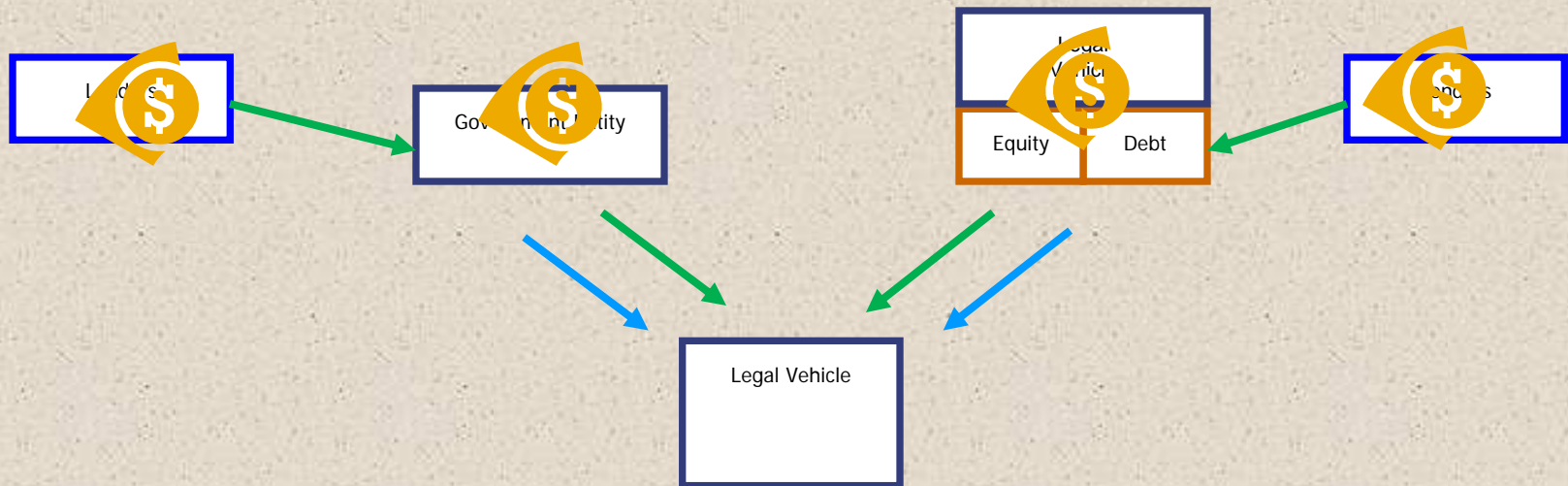
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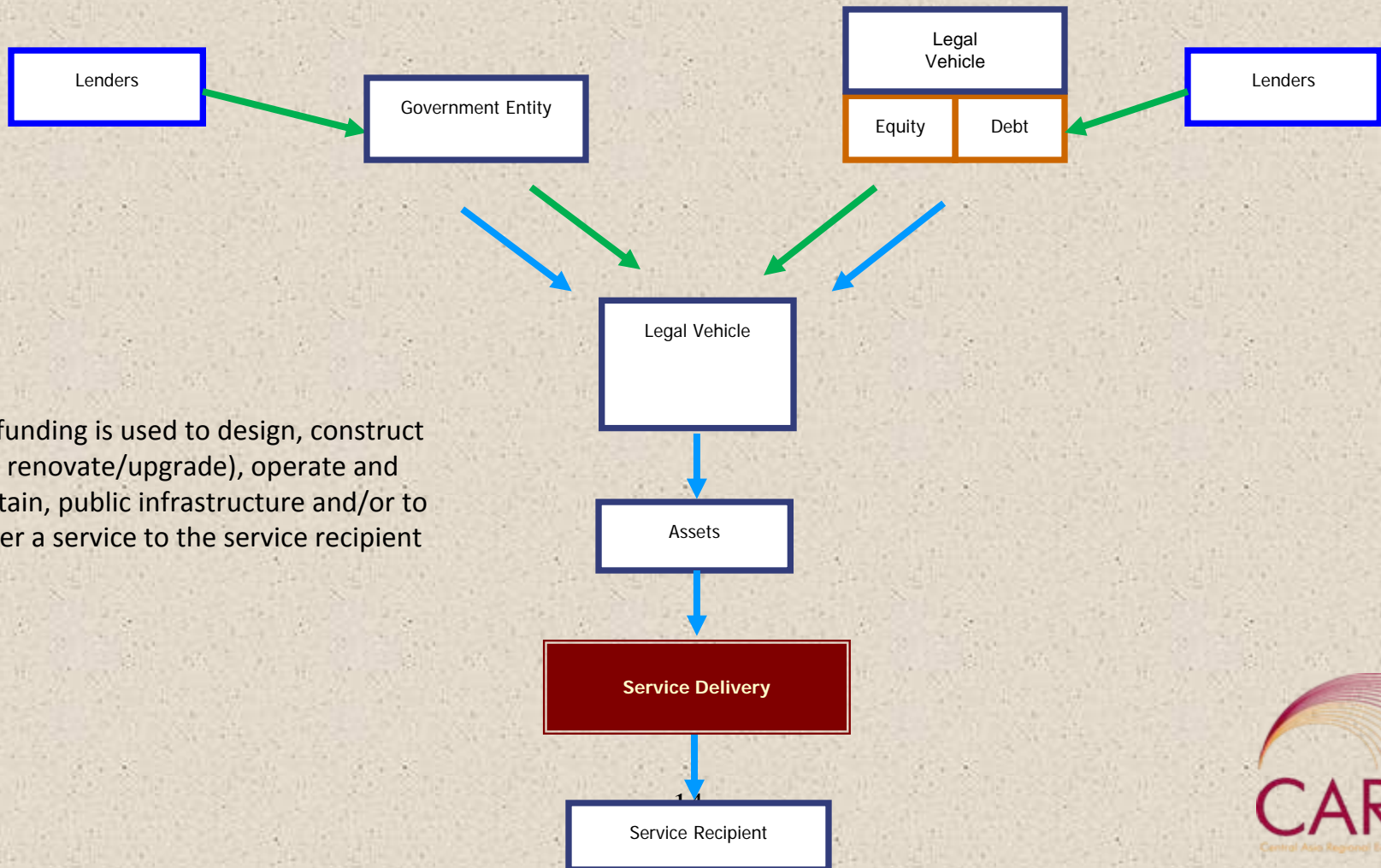
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- Risk transfer to the private sector for construction, operation, and/or maintenance of infrastructure and delivery of service

# The Basic Structure of a Public-Private Partnership



The legal vehicle receives funding from the private or the public and private sectors

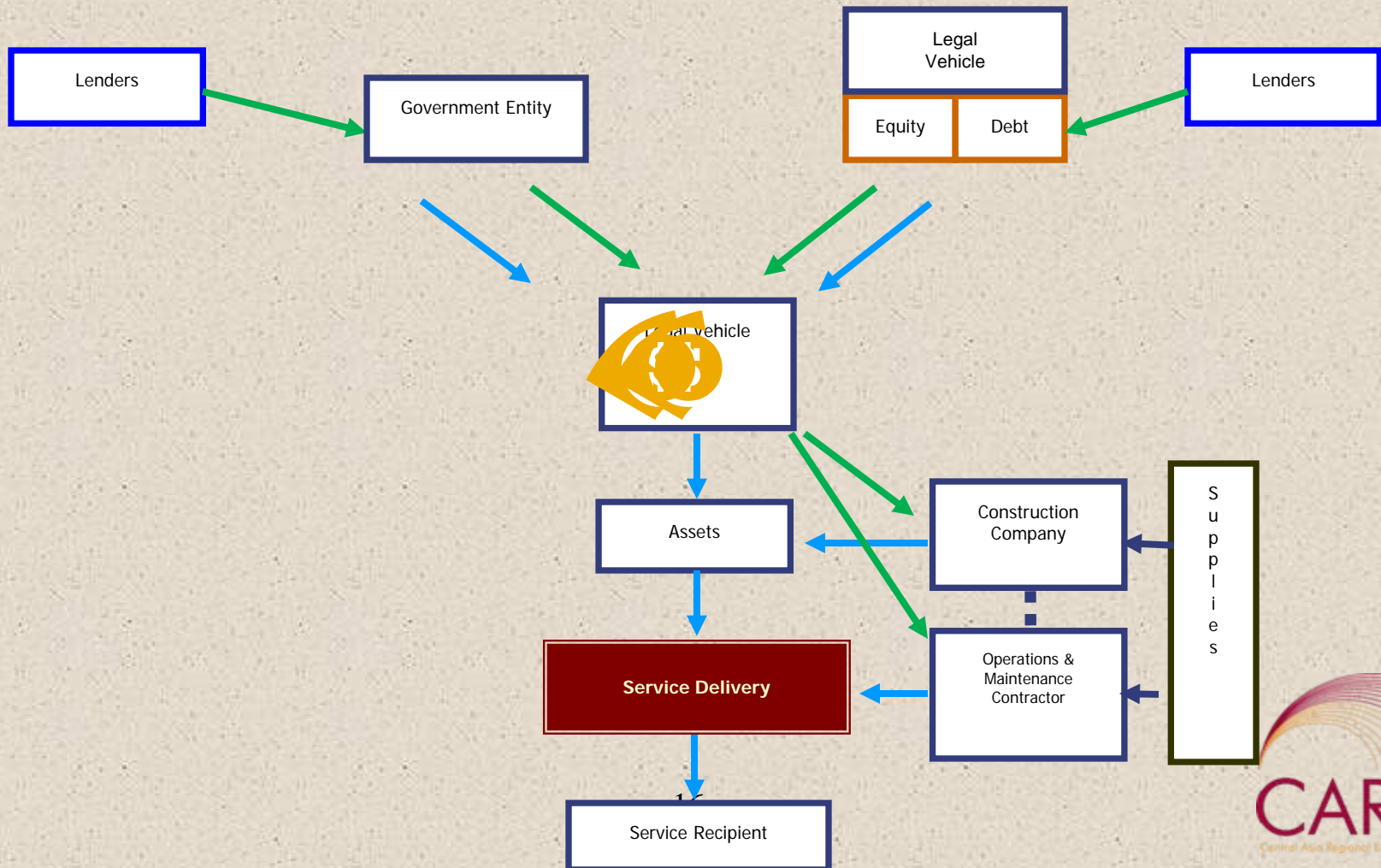
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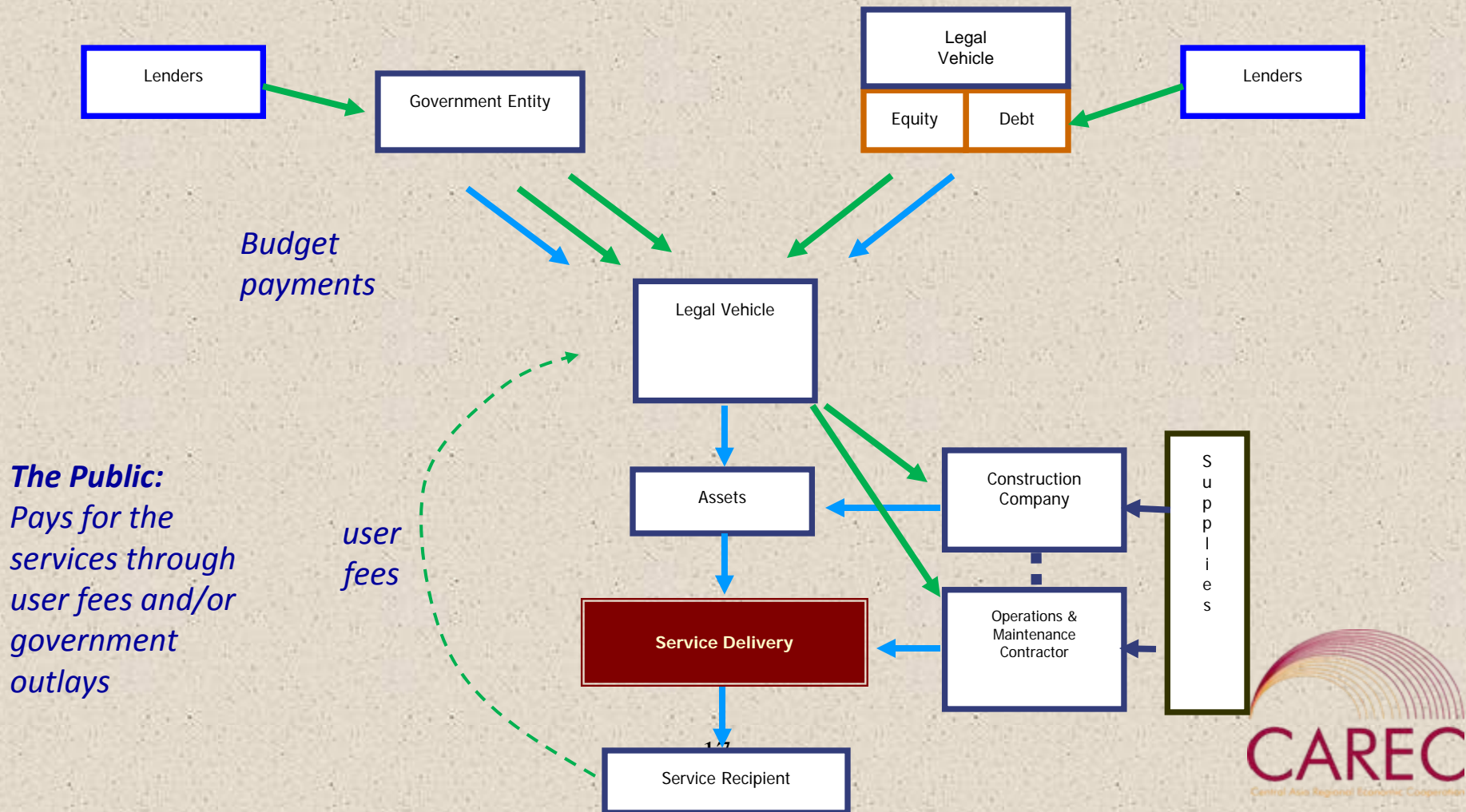
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- Private sector participation in the design, construction (or renovation/upgrade), operation and maintenance of public infrastructure and/or delivery of a service

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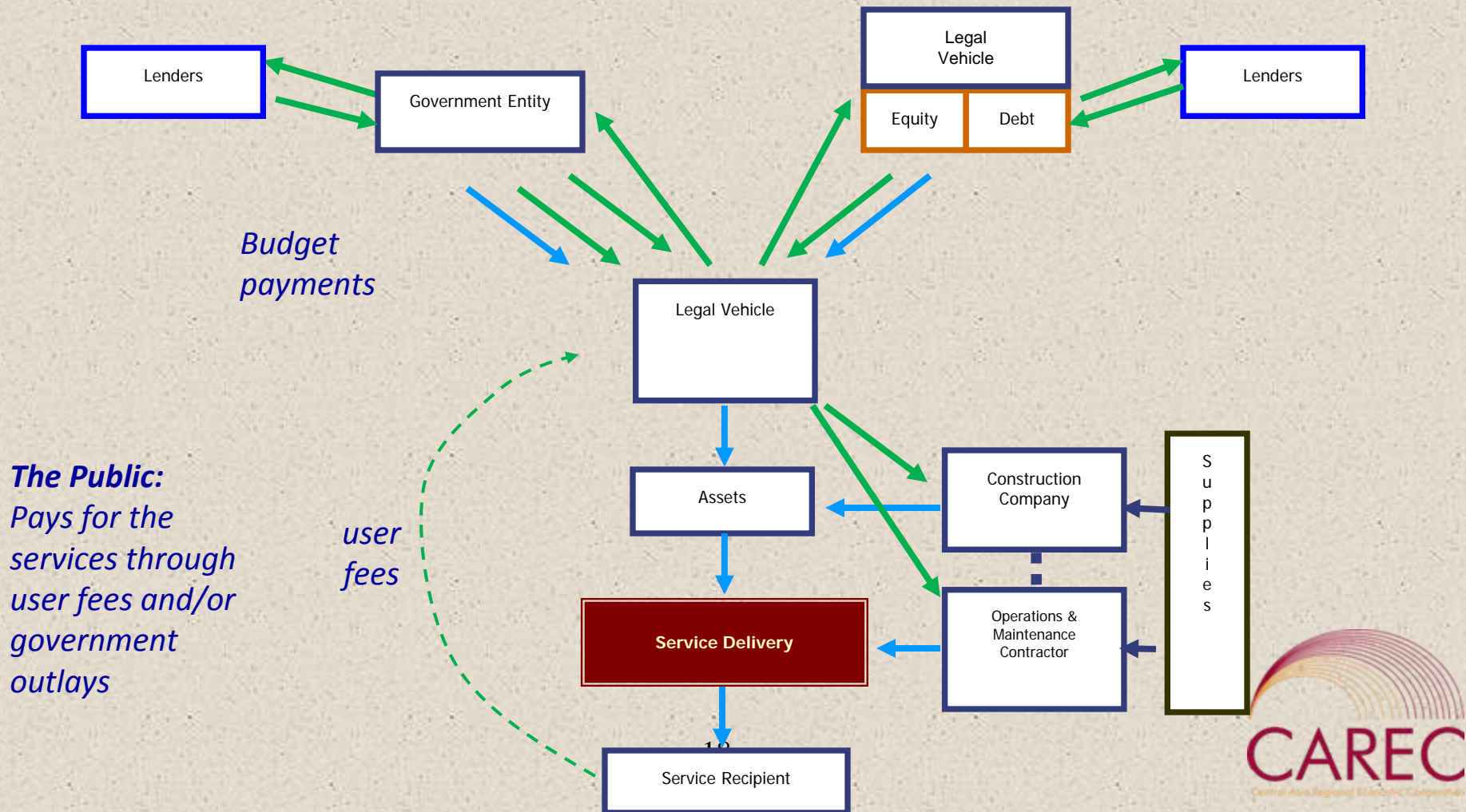




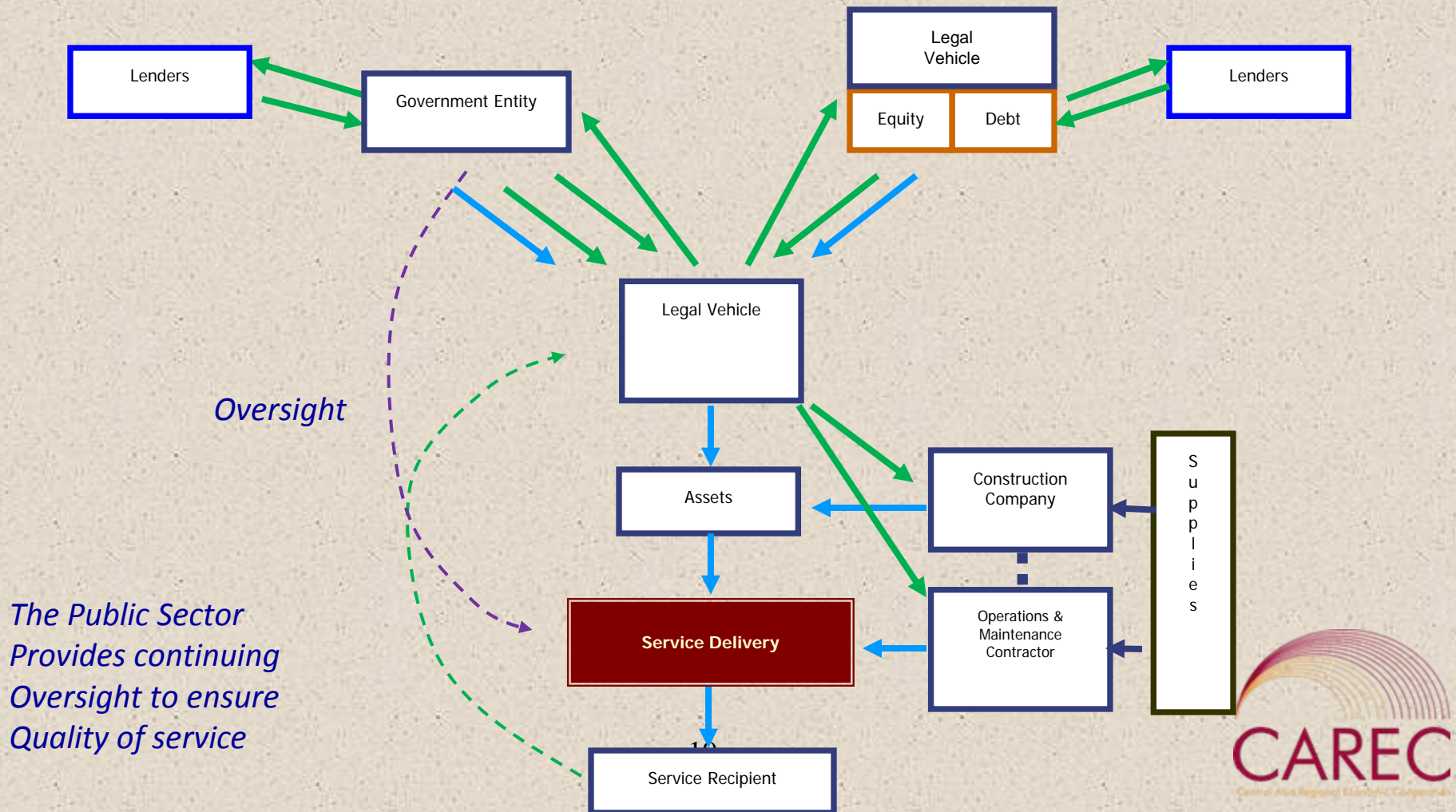
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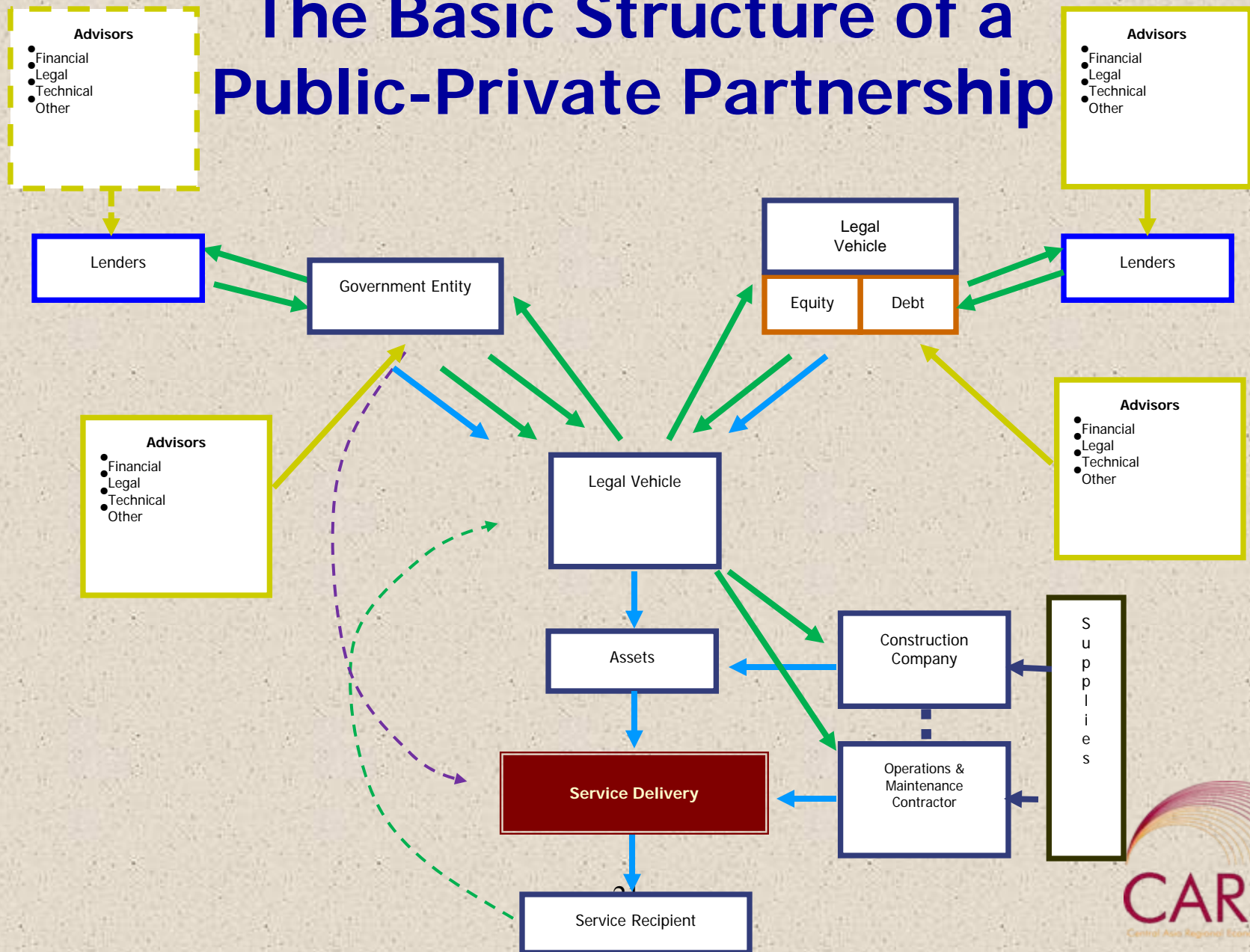
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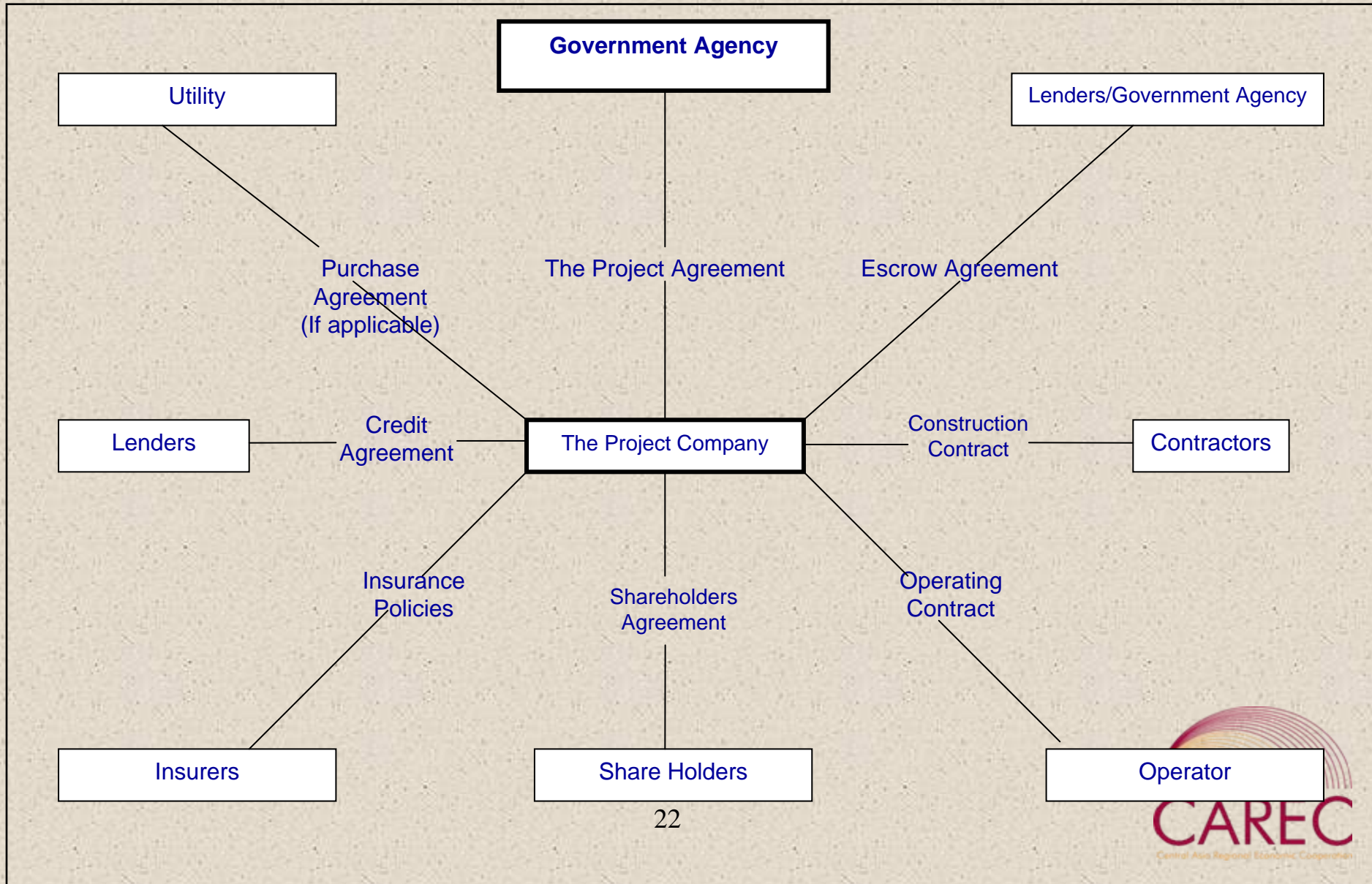
# Public-Private Partnerships Entail:

- A contractual arrangement between the public sector representing the public interest through the central, regional, or local government, or a state-owned entity and the private sector;
- Risk transfer to the private sector for construction, operation, and/or maintenance of infrastructure and delivery of service;
- Private sector participation in the design, construction (or renovation/upgrade), operation and maintenance of public infrastructure and delivery of service;
- Public sector interest remaining focused on quality of service, pricing, and compliance with contract.

# The Basic Structure of a Public-Private Partnership



# The Contractual Structure of a Typical PPP-project



# Case Study

Alternative PPP Structure

Vancouver, British Columbia Cogeneration Plant

# Vancouver Cogeneration Case Study

- The City of Vancouver, British Columbia owns and operates one of the largest landfill sites in Canada. The site serves approximately 900,000 residents and receives approximately 400,000 tons of solid waste annually.
- The site produces landfill gases as a byproduct of waste decomposition, including methane, a greenhouse gas that contributes to global climate change.
- Since 1991, the City collected and burned (flared) the landfill gases to control odors and reduce the gases' environmental impact. This burning created significant heat energy. In 2000, the City began to consider ways to make beneficial use of the landfill gases and heat energy, and to further reduce greenhouse gas emissions, in keeping with Canada's commitment under the Kyoto Protocol.



# Vancouver Cogeneration Case Study – cont.

- The City considered building a power plant itself to use the gas. They decided to solicit private proposals in order to evaluate a broader array of project concepts and maximize the economic, environmental, and social benefits to the City.
- The City decided to implement a Public-Private Partnership-based solution. It pursued a competitive tender process under which potential partners could propose their own solutions for the beneficial use of the landfill gas.
- A request for tender was released in January 2001, for a private partner to finance, design, build, own, and operate a beneficial use facility.
- Five varied proposals were received.

# Vancouver Cogeneration Case Study – cont.

- Following a detailed and structured proposal evaluation and negotiation process, a 20-year Public-Private Partnership contract, based on the most highly-evaluated proposal, was approved by the City Council in February 2002.
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- Under the approved PPP structure, the City continues to operate the landfill, and a 2.9 kilometer pipeline was constructed by the private partner to take the gas from the landfill to a nearby agricultural complex, where they built the cogeneration power plant.



# Vancouver Cogeneration Case Study – cont.

- The private partner selected by the City designed, financed and constructed the cogeneration plant, which uses the landfill gas as fuel to generate enough electricity (7.4 MW per year) to supply 4,000 to 5,000 local homes. The power is sold by the private partner to a provincial utility, BC Hydro.
- Waste heat from the power generation process is recovered as hot water, which is sold by the private partner to a large (32 acre) tomato greenhouse complex adjacent to the plant, where the water is used for heating purposes.
- The City of Vancouver makes no payments to the private partner, but guarantees provision of landfill gases for the twenty-year duration of the PPP contract.

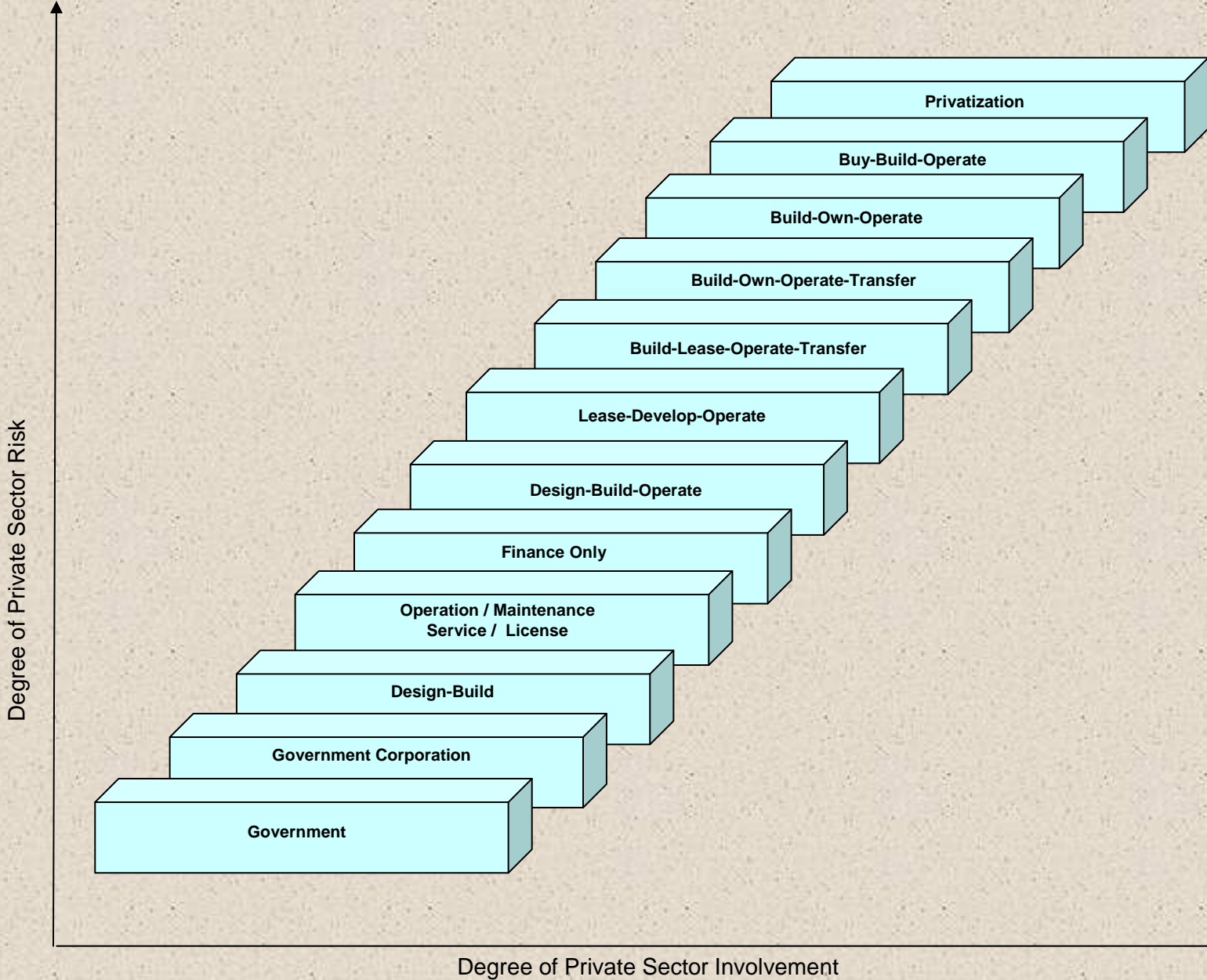
# Vancouver Cogeneration Case Study – cont.

- Proceeds from the sales of power and thermal energy go to the private partner, minus a 10 percent royalty paid to the City.
- The private partner's investment was approximately \$10 million.
- Construction of the power plant was completed in September 2003, and it was operating at full capacity by November of that year. (Initial capacity was 5.55 MW per year, increasing to 7.4 MW per year with the installation of a fourth engine in late 2004.)

# Vancouver Cogeneration Case Study – Outcomes

- Instead of paying to flare the gas, the City now receives net revenues of \$150,000 per year.
- Using the landfill gases in this manner, rather than burning them, results in further reduction of greenhouse gases, equating to the removal of 6,000 vehicles from Canada's roads.
- New jobs and more available power were created for the greater Vancouver area.

# Private Sector Risk Relative to Infrastructure Provision Models



# WHY INTERNATIONAL PRIVATE COMPANIES PARTICIPATE IN PPP IN DEVELOPING COUNTRIES

- *Higher return on equity (maximising profits).*
- *Growth opportunities needed, inter alia, to preserve staffs and expertise.*
- *Limited risk exposure.*

# POTENTIAL ADVANTAGES OF PPP FROM THE PUBLIC PERSPECTIVE

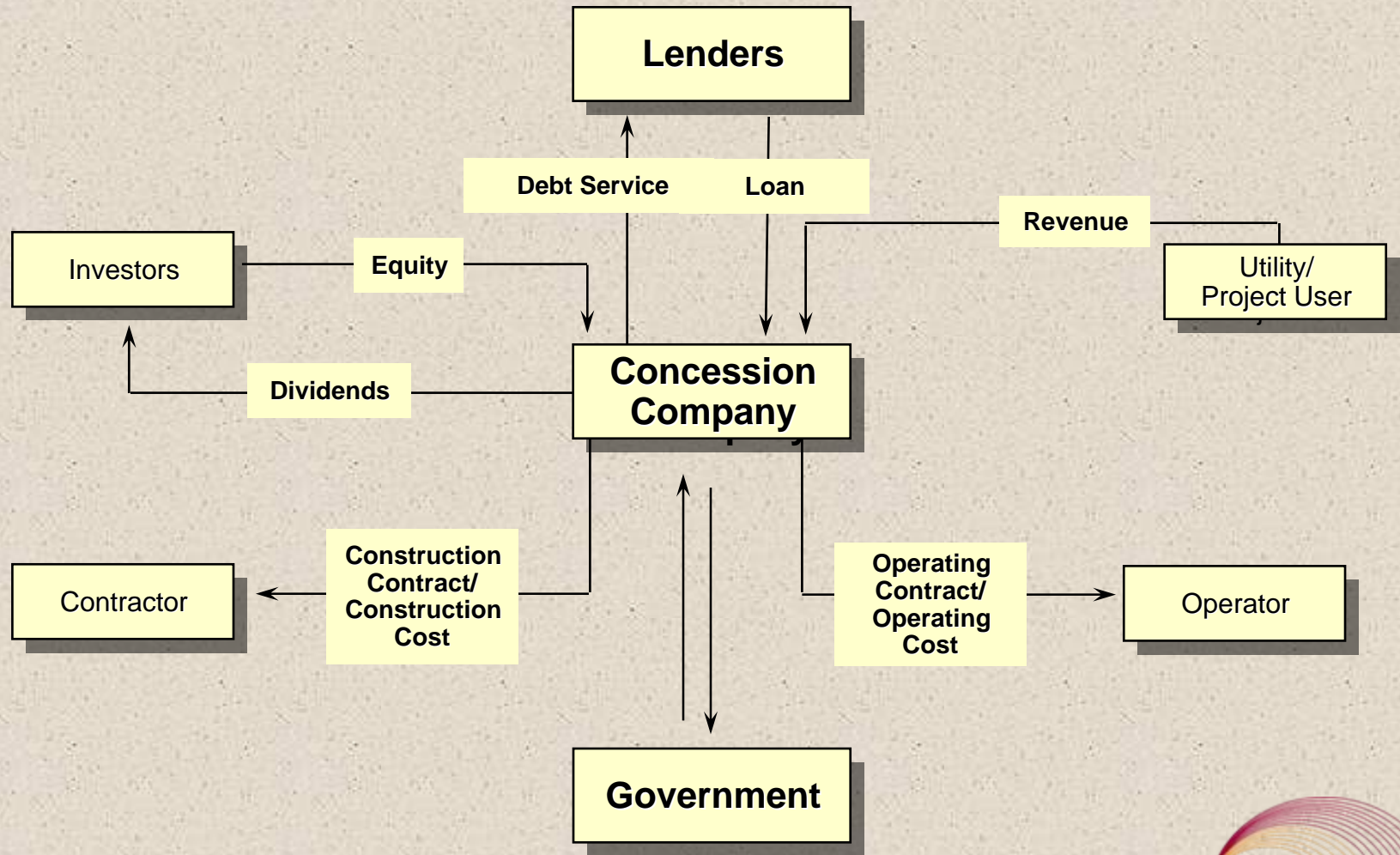
- *Acceleration of infrastructure provision due to private investment when public capital may be constrained.*
- *Faster project implementation due to significant incentives provided for in PPP.*
- *Reduced construction cost.*
- *Reduced whole life costs for the project.*
- *Optimizing of risk allocation saving considerable costs.*
- *Improved quality of infrastructure services.*
- *Application of up-to-date technology, know-how and private sector innovation.*
- *Training of national personnel.*
- *Benchmarking national infrastructure administration and budgeting against competitive standards of private management.*
- *Possible industrial development through long-term cooperation with the PPP developer.*



# POSSIBLE DISADVANTAGES OF PPP FROM THE PUBLIC PERSPECTIVE

- *Higher cost of borrowing to PPP than to comparable sovereign financed projects (a theoretical issue for many developing countries).*
- *PPP arrangements may be too complex for the administration.*
- *High transaction cost and time.*
- *Potential for private infrastructure monopolies.*
- *Lack of public-sector experience in monitoring PPP performance.*
- *Public, national concern over (foreign) private sector participation in infrastructure.*
- *Labour concerns.*
- *PPP is not privatisation.*

# PPP Financing Structure



# GUIDELINES FOR PRELIMINARY , IN-HOUSE IDENTIFICATION OF PPP CANDIDATES.

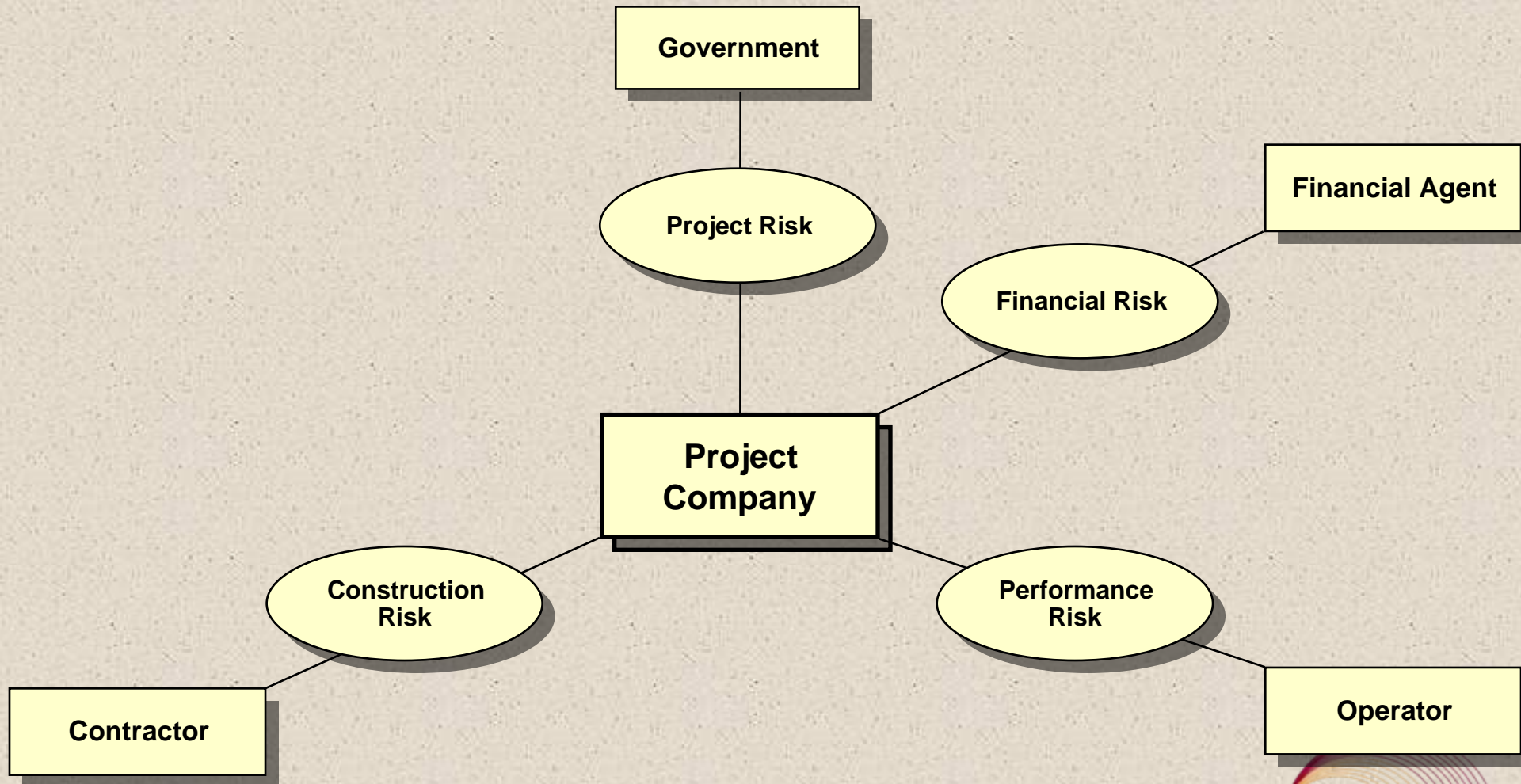
- *Identification of priority infrastructure projects .*
- *Can the Project be made financially viable (revenue stream)?*
- *Are the national customers able and willing to pay for the PPP infrastructure services ?*
- *May a PPP create monopoly or exclusivity for the private sector ?*
- *Preliminary technical assessment of a PPP project.*
- *Preliminary environmental assessment of a PPP project.*
- *Is needed fuel supply and logistics available and reliable for the operation of the PPP project ?*
- *Preliminary assessment of the economic viability of a PPP arrangement.*

# Refinancing Possibilities

**Initial financing package should be designed with maximum flexibility to permit post-completion refinancing in order to lower cost and improve returns on an opportunistic basis upon:**

- **Reduced project risk post-completion**
- **Development of domestic markets**
- **Improvements in international market conditions**
- **Improvements in host country credit risk**
- **Broadening emerging market interest**

# PPP risk allocation



# LEGAL FRAMEWORK FOR PPP. CHANGES OF LAW.

- *Essential legal requirements for PPP.*
- *Providing PPP contracts with the status of national law.*
- *Freezing the national law for PPP.*
- *Specific legislation on PPP addressing the basic legal requirements of PPP.*
- *Adjustment of existing legal system to PPP requirements.*

# Key elements of a successful PPP project in developing countries

1. *The project must be viable.*
2. *The project must be technically feasible.*
3. *The project must be bankable.*
4. *The country risks must be manageable, with host government support, if needed. Currency foreign exchange and inflation issues must be solved.*
5. *Adequate government support and assistance through all phases of the project.*

# Key elements of a successful PPP project in developing countries

6. *Balanced, professional project agreements, coordinating all operational interfaces. First drafts always to be made by the government authority.*
7. *Bankable EIA.*
8. *Competitive procurement procedure in order to realize the inherent advantages of PPPs.*
9. *Sponsors and their construction contractors must have sufficient experience and resources.*
10. *The project must provide for adequate financial return to the sponsor.*



# Basic Project Risks

1. *Development*
2. *Construction and completion*
3. *Performance*
4. *Operation and maintenance*
5. *Revenue*
6. *Currency*
7. *Political*
8. *Environment*
9. *Credit*
10. *Legal*

# Basic Requirements

1. *A sound legal framework for PPP*
2. *Competitive procurement*
3. *Final structure and financial reports requirements*
4. *Manage the complete contract package of PPP*

# Conclusion

- While definite advantages of PPP from a public perspective do exist, and can be harnessed, PPP should not be regarded as a miracle cure nor a quick fix to development of infrastructure. Nor does PPP make bad projects to good ones.
- Provided an adequate regulatory and administrative framework for PPP and active government support during project phases, PPP, however, has proved to be an efficient tool for governments to accelerate infrastructure provision, to ensure "better value for money" and (in some PPP projects) to provide additional industrial and social development. As the Frankfurt conference on PPP (2006) summed up : PPP is a complex, but very healthy way of doing infrastructure projects.

**Thank you for your attention**