

# PPPs in Waste Management

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**European Bank**  
for Reconstruction and Development



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## From waste to resources: mobilising the private sector to deliver sustainable waste management

Policy paper on infrastructure



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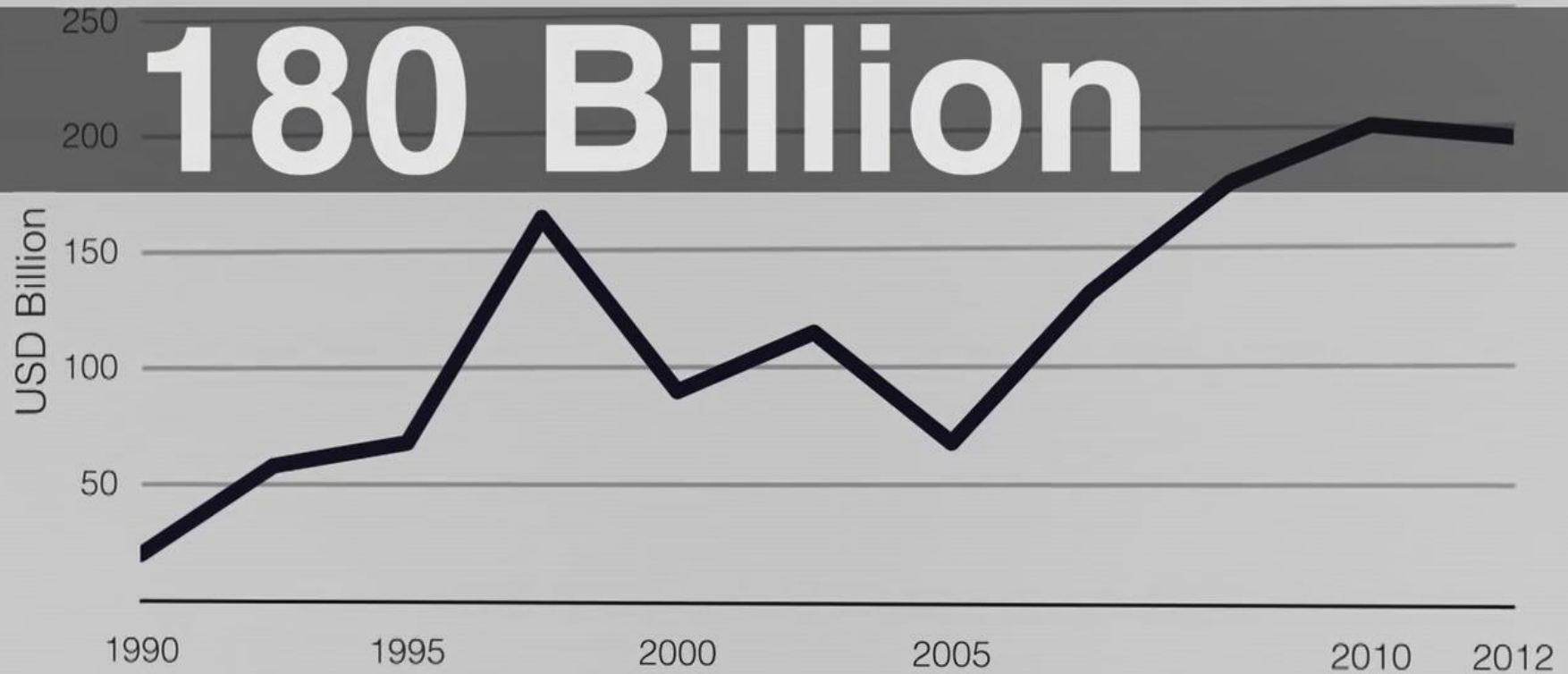
## Sustainable Infrastructure Project and Policy Preparation - Policy paper

<https://www.ebrd.com/documents/climate-finance/from-waste-to-resources-mobilising-the-private-sector-to-deliver-sustainable-waste-management.pdf?blobnocache=true>



- **Setting the scene**
- **Complexity in waste management**
- **Selected issues for waste management PPPs**
- **Examples - Group work**

- Many people have **no access to reliable and safe services**
  - 1.2 billion people live without electricity
  - 2.8 billion people cook food using solid fuels
  - 60% of world's population lack access internet
  - 750 million have no access to safe drinking water
  - **2 billion have no access to regular waste collection services**
- Worldwide we have more mobile phone subscriptions than people having access to proper sanitation!



## Investment in infrastructure with Private sector participation

Source: World bank

- Governments face **capacity and financial constraints**;
- Under the **right circumstances**, PPPs can facilitate economic growth **through** infrastructure development and improve basic services,
- PPPs can be a good business opportunity for the private sector;
- **BUT:** implementing a **successful PPP** is **CHALLENGING** and requires a **long-term commitment** from both the private and the public sector!

- PPPs need very **careful planning and preparation**;
- PPPs are **complex legal, contractual and financial arrangements**;
- Goals: introduction of **private sector expertise** and contractually-defined **performance requirements**;
- **Transfer** of the majority of the **risks and responsibilities** for project delivery from public authority to a **private contractor**;
- A **payment mechanism linked to performance** which is specified primarily in output terms.

## GOOD GOVERNANCE PRINCIPLES:

- Put people first and start with **assessing user needs**;
- Involve **ALL** concerned **stakeholders**;
- Build **administrative capacities** for effectively negotiating and managing long-term collaborations with private sector;
- Adequate **legal frameworks** / regulations;
- Ensure **transparent procurement** policies;
- **Assess all risks** and **allocate them appropriately** between partners;
- **Mitigate all environmental risks.**



# Setting the scene



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1. Usually government sets the stage and drafts a first plan.
2. Launching of a **competitive tender** to identify the best offer from private partner to FINANCE – DESIGN – BUILD – OPERATE and MAINTAIN the project.



3. Private partner recovers initial investment by **service fees paid by public partner** or by the **users directly**.

# Setting the scene



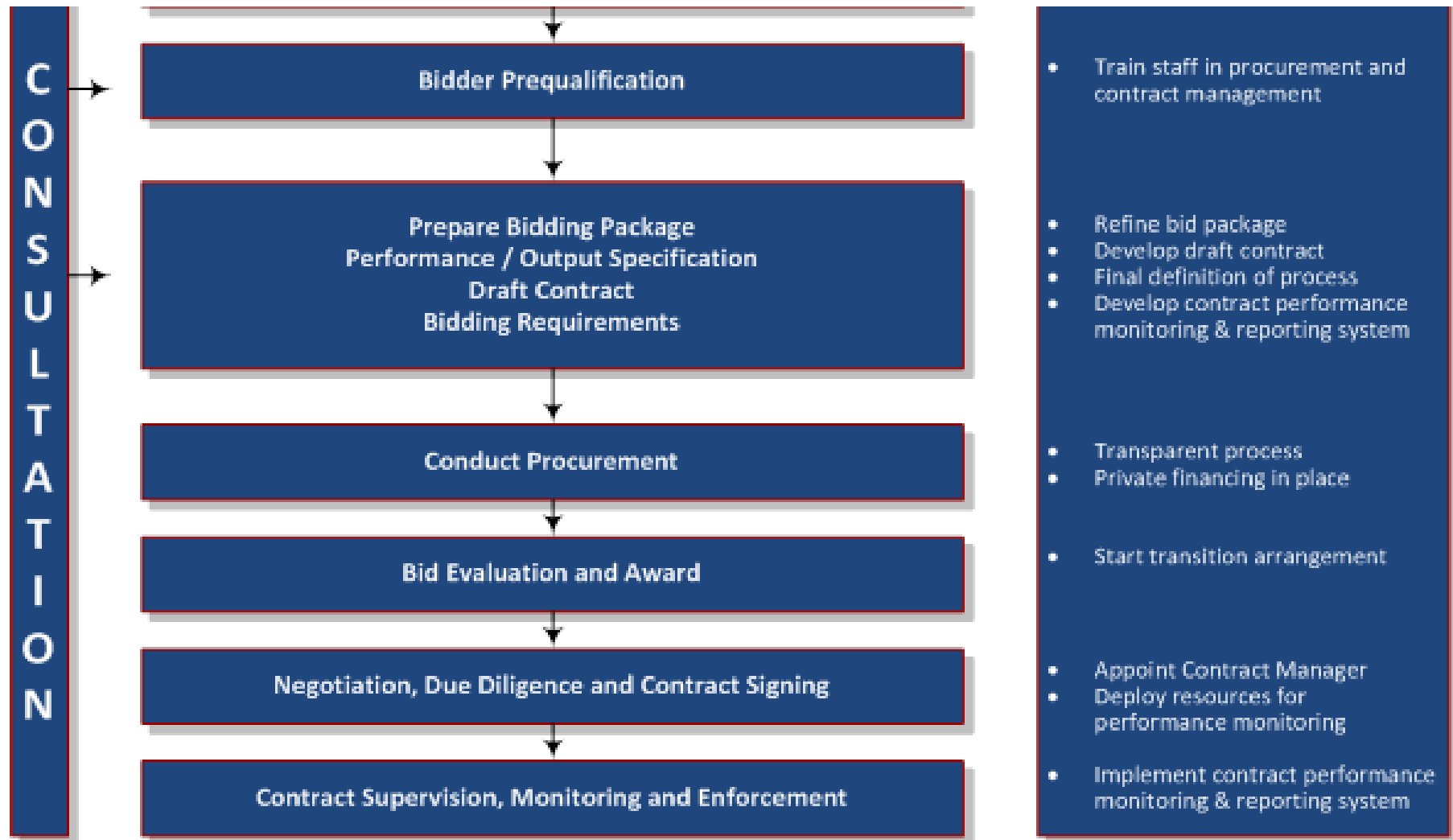
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# Setting the scene

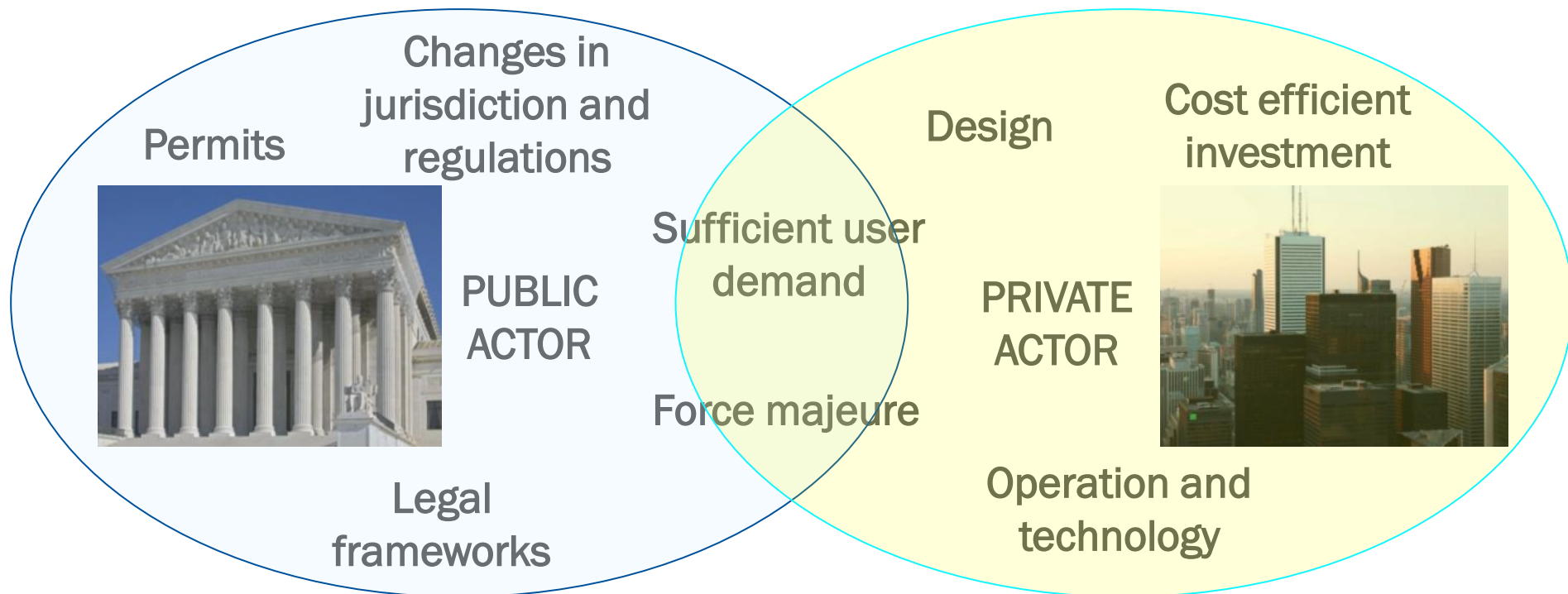


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- PPP approach lets you plan project over **entire lifecycle** and..
- ...**optimises use of available resources.**
- Private sector knows better how to first attract and invest capital and how to avoid cost overruns and
- how best to **operate** and **innovate.**

PPP approach allocates **specific risks** to the partner that is in a **better position to manage** them.





# Waste management is complex – WHY?



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- Waste sector usually receives the **least political attention...**
- ...and **financial support** compared with other infrastructure sectors.
- Despite this **sector is highly visible and politically...**



# Waste management is complex – WHY?

Water sector	Waste sector
<p>Water is universally recognised as being vital to life. Justifiably, policy- and decision-makers see improvements in the quality and availability of water as a top priority.</p>	<p>Waste is typically regarded as a minor negative consequence of economic activity and its proper management is often a low priority for policy- and decision-makers.</p>
<p>The supply of clean water is perceived to be an essential service with an obvious economic value for which householders and businesses are generally willing to pay.</p>	<p>Waste is perceived as having no actual or potential economic value, and its generator or owner can therefore be reluctant to pay for managing it in an environmentally sound manner.</p>
<p>Service users (water consumers) can usually be readily identified at the point of service delivery.</p>	<p>It is often difficult or impossible to identify individual service users (waste producers) at the point of service delivery.</p>
<p>With the application of appropriate technology or systems, service charges and billing can be linked directly to the quantity of water supplied.</p>	<p>Although possible in theory, it is often difficult (and in some circumstances, impossible) to link waste management service charges directly to the quantity and/or type of waste produced.</p>
<p>Disconnection or restriction of supply as a sanction for non-payment of service charges is feasible (at least in theory, although this is often difficult to apply in practice).</p>	<p>Withdrawal of services as a sanction for non-payment of service user fees is not feasible for municipal solid waste management services.</p>

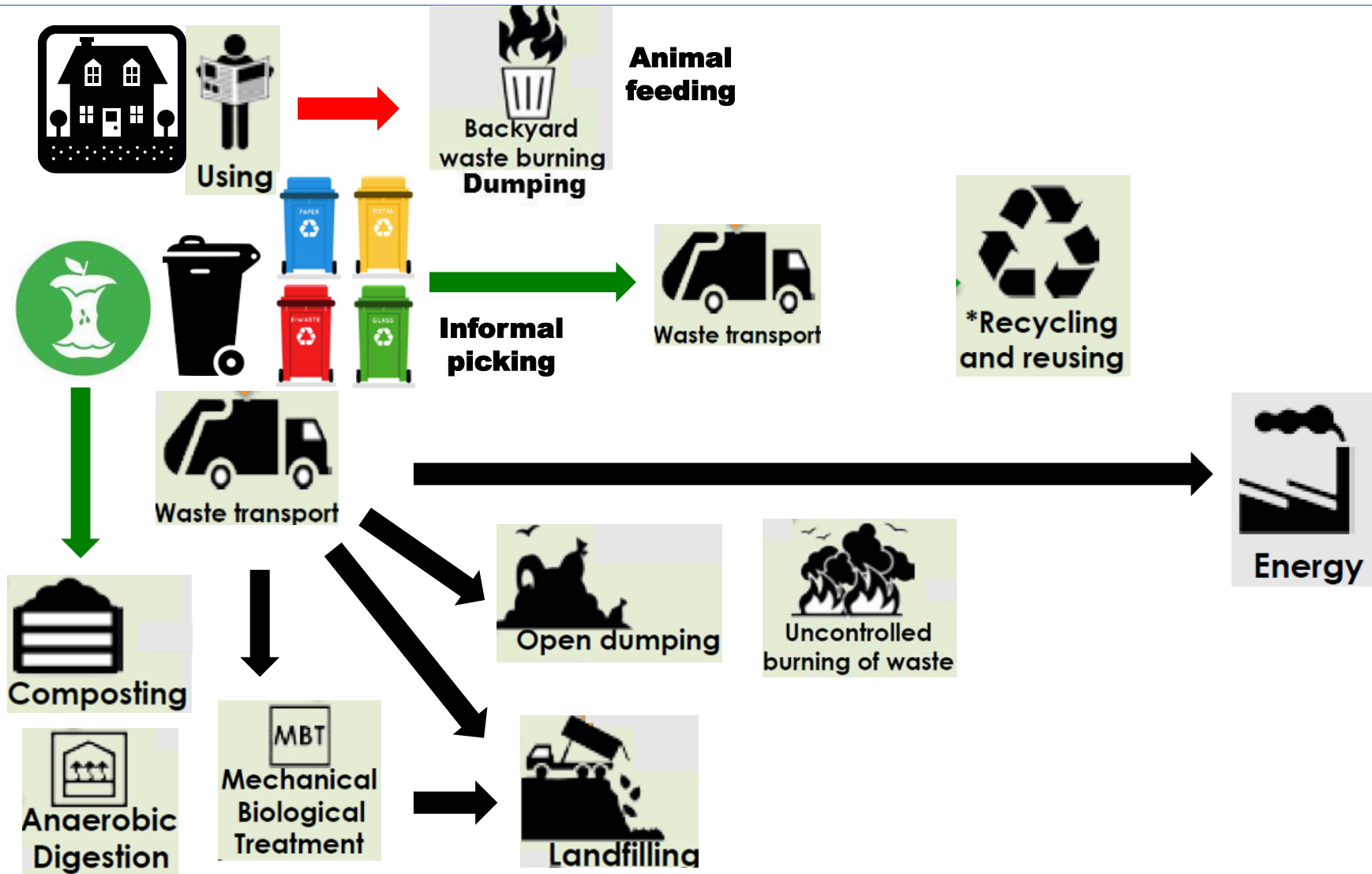


# Waste management is complex – WHY?



Water sector	Waste sector
<p>Disconnection or restriction of supply as a sanction for non-payment of service charges is feasible (at least in theory, although this is often difficult to apply in practice).</p>	<p>Withdrawal of services as a sanction for non-payment of service user fees is not feasible for municipal solid waste management services.</p>
<p>Water supply services are a “natural monopoly”<sup>1</sup> and it is therefore difficult to create a competitive market for such services. This poses major constraints and challenges for private sector participation in infrastructure development and service delivery.</p>	<p>With certain exceptions (such as in small countries or islands, and for some hazardous waste treatment services), it is usually possible to establish a competitive market for waste management services, thereby creating scope for, and facilitating, private sector participation in infrastructure development and service delivery.</p>
<p>Relatively straightforward and inexpensive to regulate effectively.</p>	<p>Difficult and often expensive to regulate effectively.</p>
<p>Consumer attitudes and behaviour can be readily influenced through price mechanisms and targeted enforcement measures.</p>	<p>A well-functioning waste management system, especially one that includes separate collection of recyclables or other types of waste, depends heavily on social attitudes and behaviour, and the willingness of waste producers and other stakeholders to engage and contribute.</p>

# Waste management is complex – WHY?



# Waste management is complex – WHY?



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What are the more **standardised** parts of a waste management system?

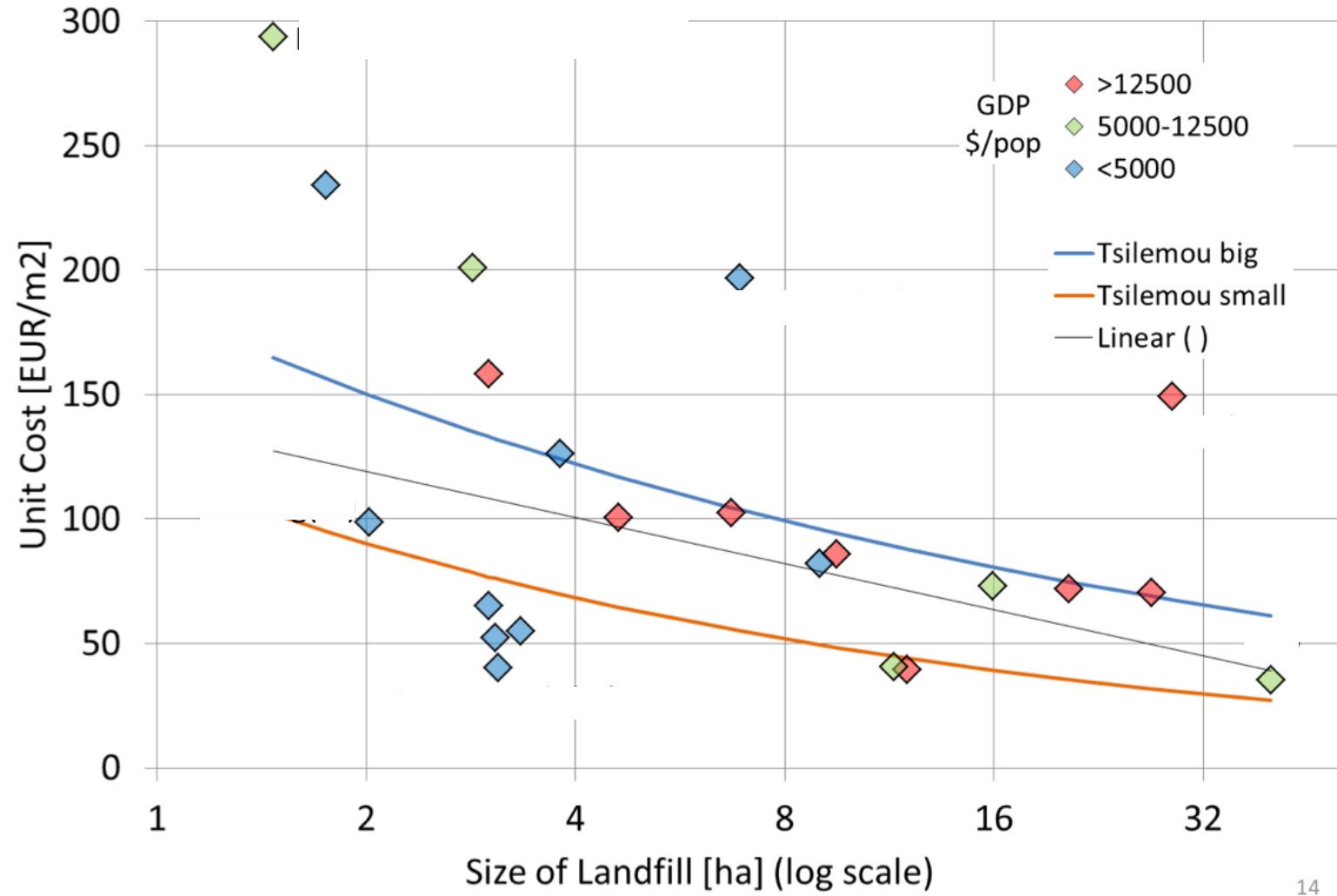




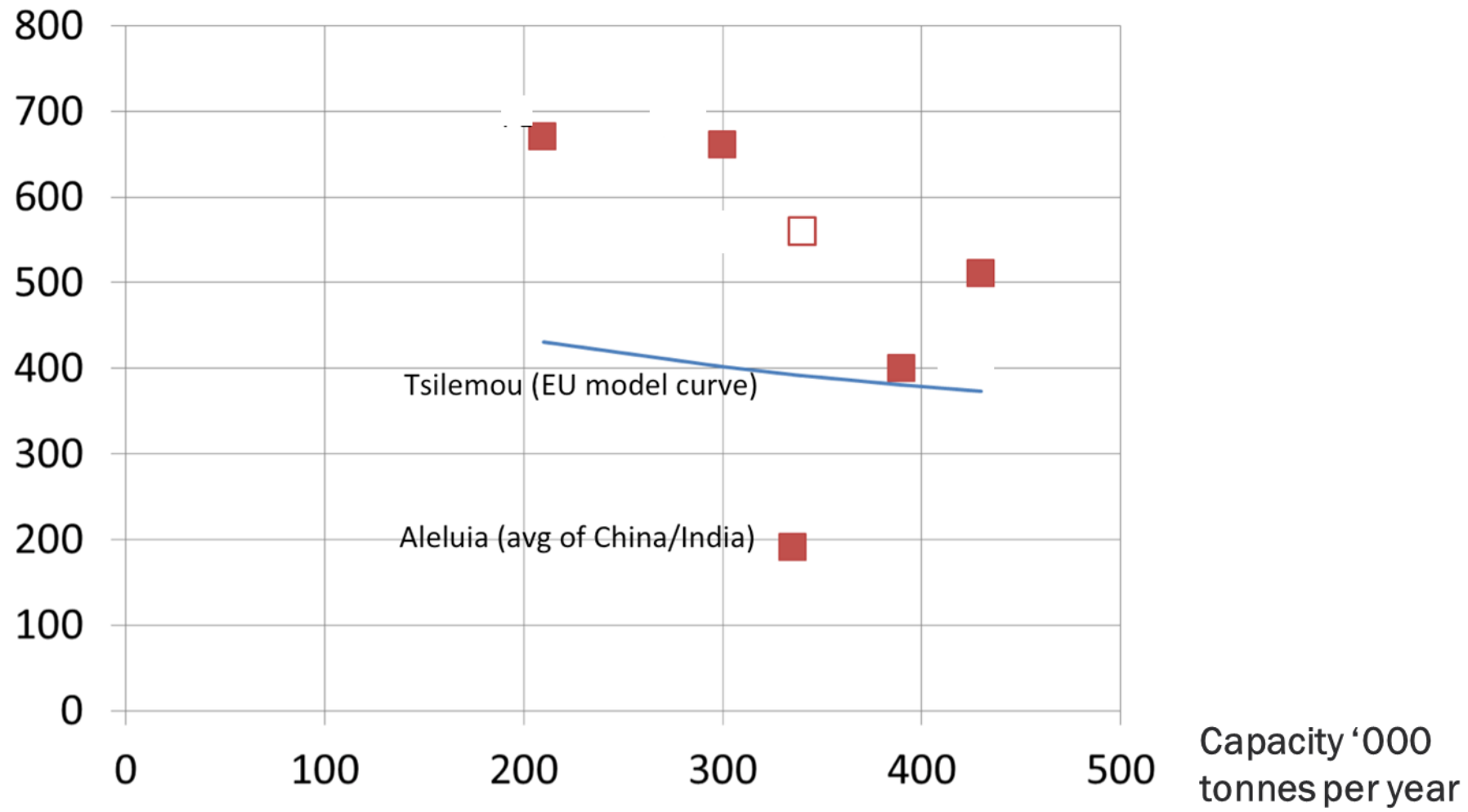
# Waste management is complex – WHY?

- Different waste types and composition
- Urban vs. rural areas (collection costs!)
- Costs of technologies / option
- Economies of scale
- Costs /revenues: recyclables, refuse derived fuels, energy, electricity, disposal costs (hazardous waste!)
- Multitude of stakeholders with different values / attitudes / beliefs
- Affordability / Tariffs / “Hidden services”

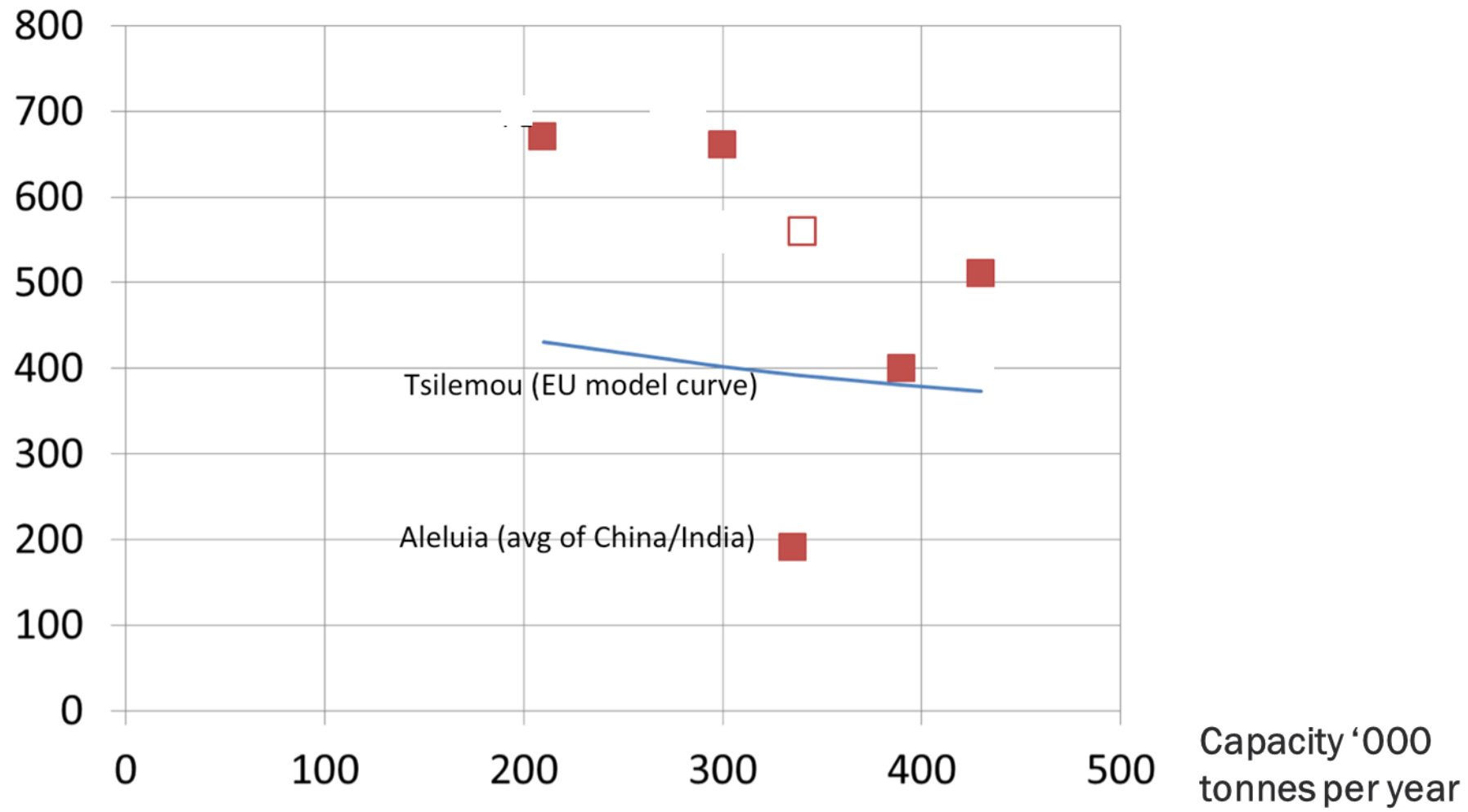
# Capital expenditures for sanitary landfill (EUR per tonne capacity)



# Capital expenditures for municipal solid waste incinerators (EUR per tonne capacity)



# Capital expenditures for municipal solid waste incinerators (EUR per tonne capacity)

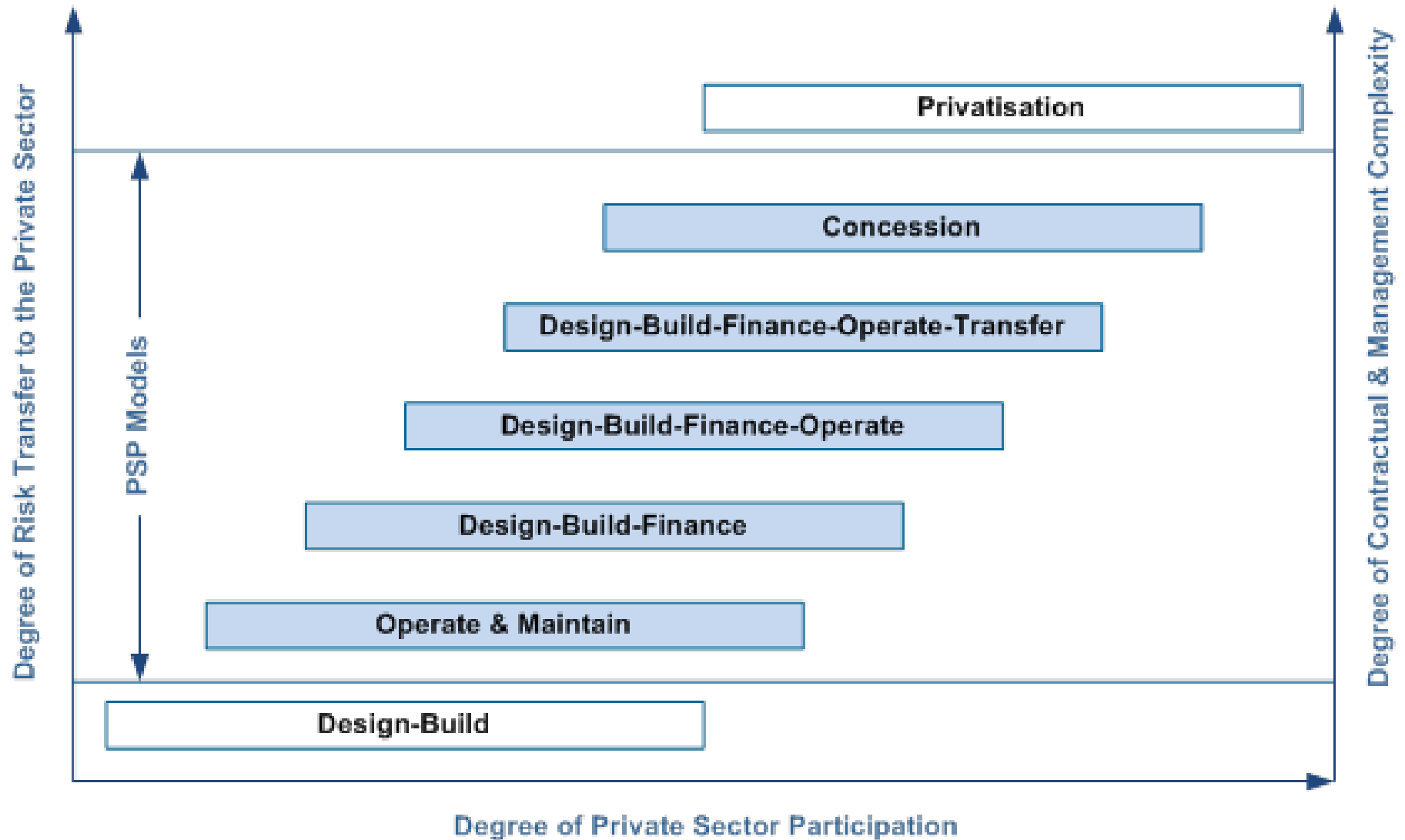


- PPPs commonly used for **larger infrastructure investments** such as
- the **development and operation of a new solid waste treatment / disposal / recovery facility.**
- PSP / PPPs are **NOT** forms of privatisation which involves the permanent transfer of publicly-owned assets to the private sector!



- **Introducing competition**, by reforming public procurement legislation and contracting procedures;
- **Delivering improvements and innovations** in waste infrastructure/ services more **rapidly, comprehensively** and / or on a **larger scale** compared to public sector alone;
- Achieving **significant cost savings** and **increased value-for-money**;
- Increasing the **visibility and predictability** of the whole-life costs;
- **Mobilising private** capital to reduce pressures / demands on limited public budgetary resources;
- **Better maintenance** of the physical assets.

# Selected issues – Common PSP types



- Each PSP type implies **varying levels of responsibility** and **risk** to be assumed by the private sector operator, as well as **differing degrees of contractual complexity** and **management burden** for the contracting authority.

## QUESTIONS:

- Are procurement and contracting options legally available to the contracting authority?
- Technical, legal, regulatory and institutional issues and constraints?
- Commercial, financial and financing requirements and constraints?

## QUESTIONS:

- Interest of the market (local and international);
- **Special requirements** based on the **characteristics of the wastes generated**, proposed system for managing wastes, **topography** and demography of the project area, etc.;
- In the case of **strategically-essential assets**, the need for the contracting authority to retain ownership / ultimate control of the assets.

## CONSTRAINTS:

- **Low-cost recovery levels** due to politically-influenced or **determined tariff policies**;
- **Lack of reliable** data about wastes generated / composition and / or technical performance of the existing services and facilities;
- **Affordability** of the measures proposed for improving the existing waste management services and facilities => **STEPWISE APPROACH!**

## Case: **Extended producer responsibility (EPR)** schemes

Environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle. Characterised by:

- the **shifting of responsibility** (physically and/or economically; fully or partially) upstream toward the producer and away from municipalities; and
- the **provision of incentives** to producers to take into account environmental considerations when designing their products.

### Case: **Extended producer responsibility (EPR)** schemes

- Imply that producers take over the financial and/or organisational responsibility for **collecting or taking back used goods**, as well as **sorting and treatment for their recycling**.
- Producers of products can fulfil the obligations of the extended producer responsibility scheme individually or collectively.

# Selected issues – Common PSP types

## Packaging cycle



Source: [www.expra.eu](http://www.expra.eu)



- PM defines how the private party is remunerated (the **heart** of the contract);
- Is one of the main ways of allocating risk effectively and ensuring that **performance requirements** are met.
- PM shall be **simple and linked directly to measurable project outputs / deliverables**;
- Create a **financial incentive** to perform well;
- Be **affordable for the contracting authority**, and provide **appropriate remedies** in the event that the private party does not meet its obligations;

Key principle: **payments** should be made only if the **asset / service is available** at the **contractually-agreed quality / performance** levels;

- Not be based on the private contractor's actual costs;
- Not require the private contractor to bear **excessive risk**;
- Where appropriate, include **indexation** to compensate for cost increases due to inflation.

- Payments received by private contractor directly from user: **User charges** (e.g. waste disposal fees);
- Payments from the contracting authority to the private contractor
  - Usage based payments (according to how much the infrastructure or service is used);
  - Availability based payments – for making infrastructure / services available for use at the contractually-agreed standard;
  - Performance based payments – vary according to the quality of service provided;

- **Bonuses and deductions / penalties** – if specified outputs and / or standards are met, or conversely not met;
- Provisions for adjustment – to take account of **unpredictable changes** in service needs and / or operating conditions.

## RESPONSIBILITY GROUPS

- 1. Asset development, planning new investments, demand forecast, capacity planning, preparing design, construction etc.**
- 2. Management:** managing the delivery company, appointing staff, HR, establishing / improving businesses processes.
- 3. Operation & maintenance and fee billing and collection**

## KEY RESPONSIBILITIES – waste collection:

- Service delivery: types of waste / recyclables collected / transported, acquisition of permits
- Procurement / supply of assets: supply of containers/equipment, construction of container platforms etc., depot, maintenance, facilities etc.
- Insurance, cleaning, maintenance and replacing of assets

## KEY RESPONSIBILITIES – waste treatment and disposal:

- Service delivery: types of waste received, treated, recovered, disposed of;
- Facilities development, operation, closure and aftercare: site provision/acquisition, permits/licenses, facility design, construction, closure/restoration and aftercare, supply of plant/equipment/consumables, training, monitoring and control etc.

## MAIN RISKS:

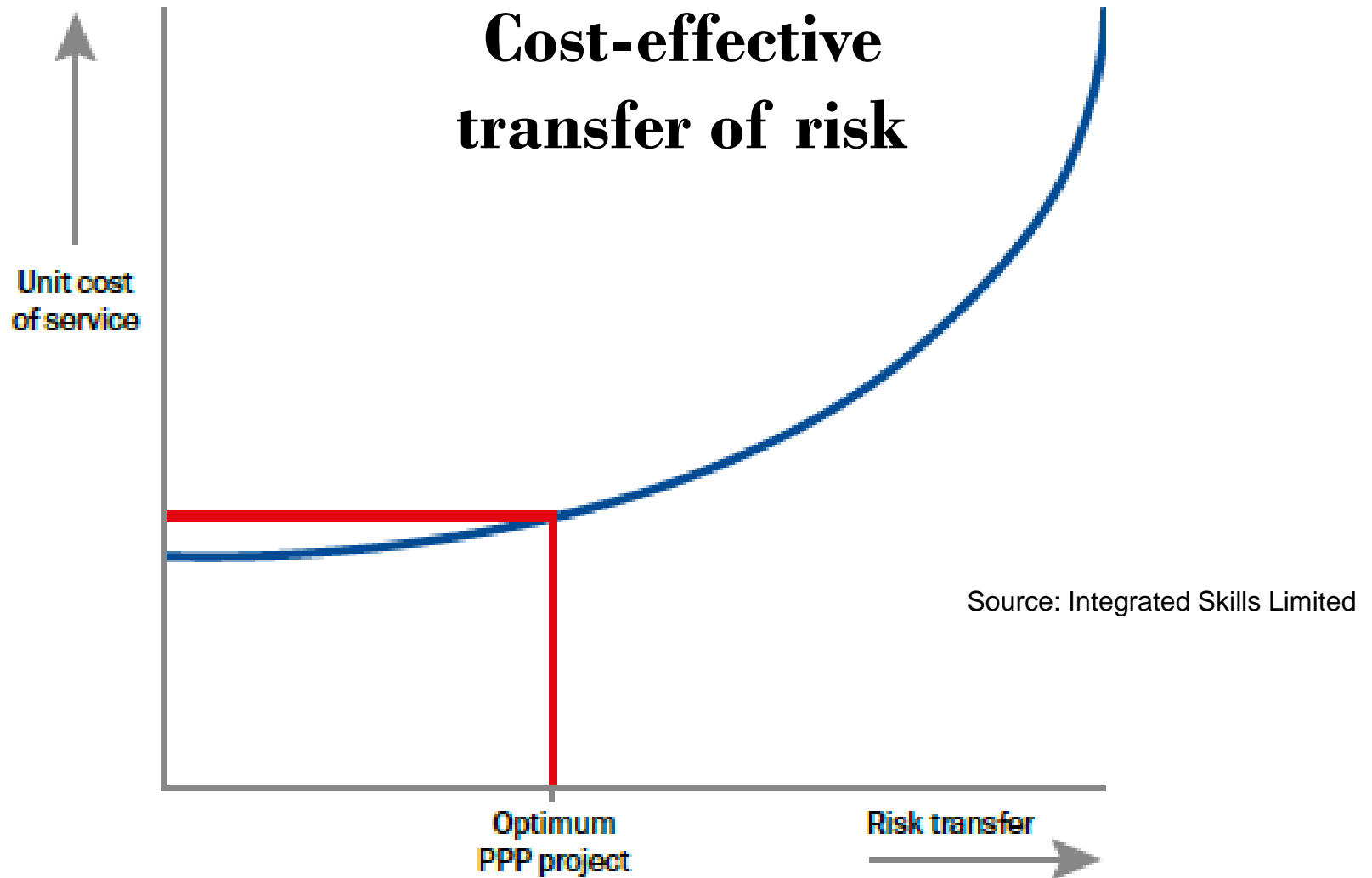
- **Planning risks:** permits are delayed / refused;
- **Design risk:** design solution fails to meet the contracting authority's requirements;
- **Construction risk:** delays due to adverse site, weather conditions;
- **Operating risk:** operation costs higher than estimated or standards required are not met;
- **Demand risk:** service usage varies from forecast, revenues are lower than expected;



## MAIN RISKS:

- **Payment risks:** some user fees are unpaid or delayed;
- **Financial risk:** delays in securing project financing variation, interest or exchange rates;
- **Political, legislative risk:** unforeseen changes in policies, legislation etc.;

# Selected issues – Defining and allocating risks and responsibilities



# EXAMPLES



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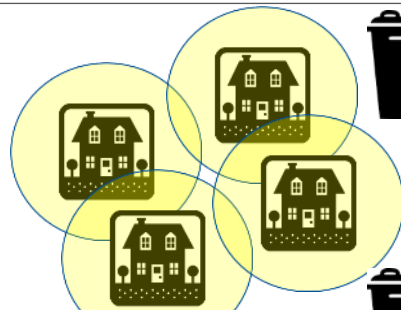


Waste transport



Landfilling

**Case 1**



Rural municipalities

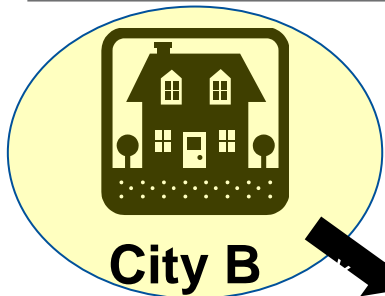


Waste transport



Landfilling

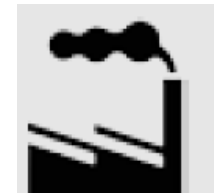
**Case 2**



Waste transport



Recycling



Energy

**Case 3**

## For each Case ask yourself:

1. Which part of the systems could be PUBLIC and which part PRIVATE and WHY?
2. What are PAYMENT MECHANISMS / MONEY FLOWS?
3. RISKS and OPPORTUNITIES for PUBLIC and PRIVATE sector?

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