

Risk Allocation and Management in PPPs: past and current challenges

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Ensuring Sustainable Infrastructure Delivery through Public-Private Partnerships

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EPEC

- An initiative of the EIB, European Commission, EU member and certain other countries
- A membership-based network of public PPP authorities/agencies
- Core international team of dedicated PPP experts
- Based in the Advisory - Public & Infrastructure Finance Division (APIF) of EIB
- Relevant activities can qualify for support under the Invest EU Advisory Hub



What we do

EPEC provides strategic advice on PPP projects, assists PPP policy development and shares and promotes good PPP practice

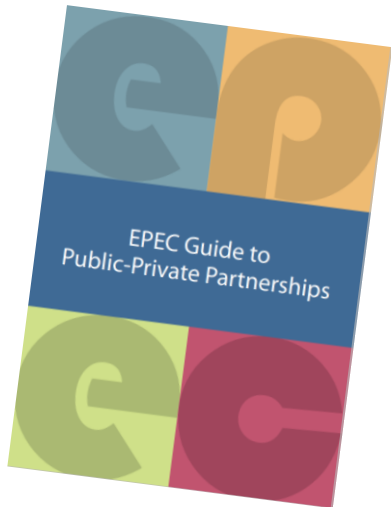
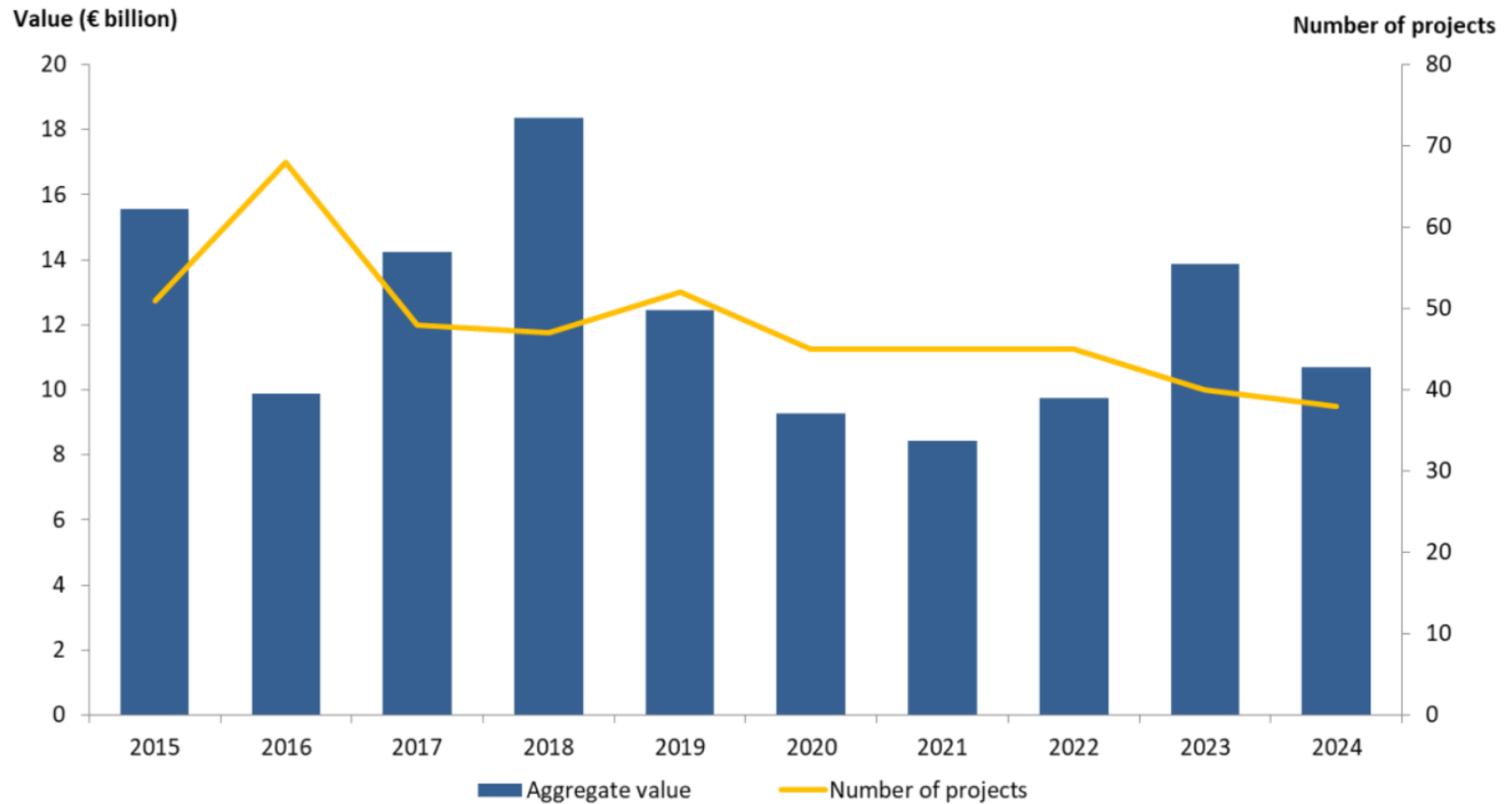


Image: Latvian State Roads (LVC)

The European PPP Market

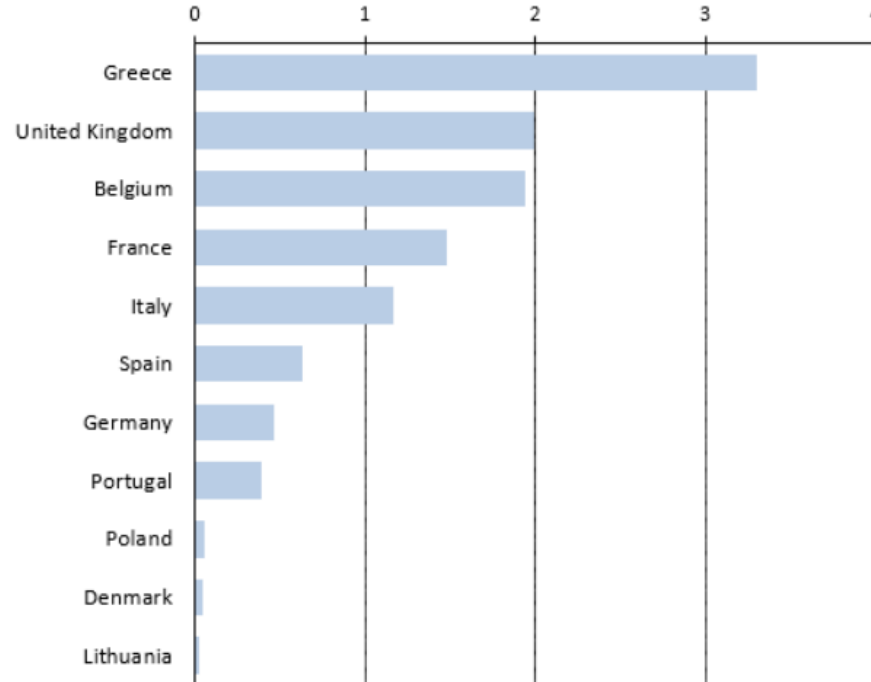
Ten-year view of the European PPP market by value and number of projects (2014-2024)



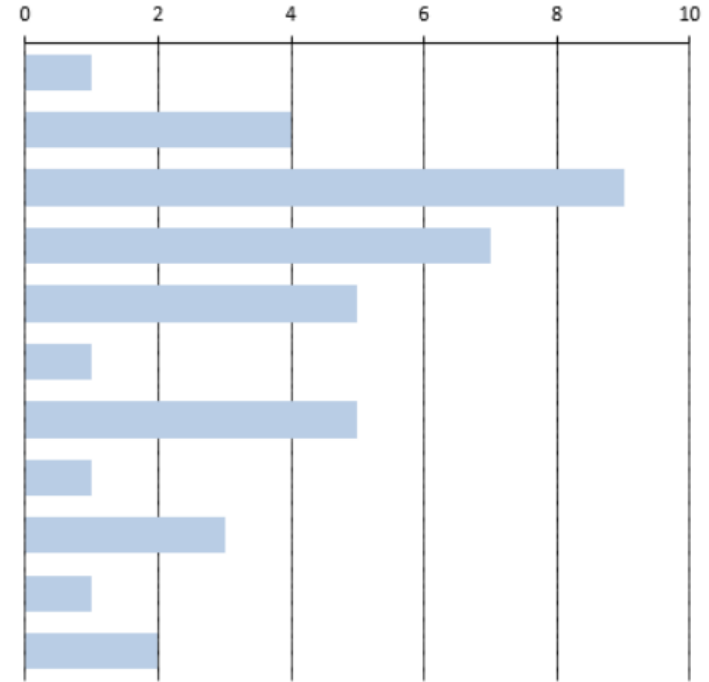
Source: EPEC PPP database

Country breakdown by value and number of PPP projects in 2024

Aggregate value of projects by country (in € billion)

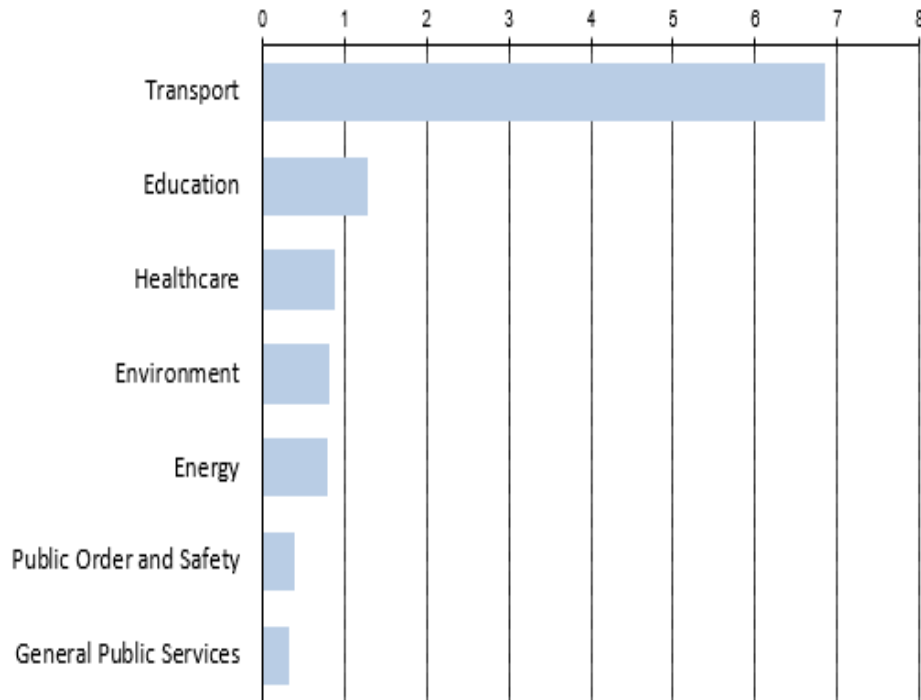


Number of projects by country

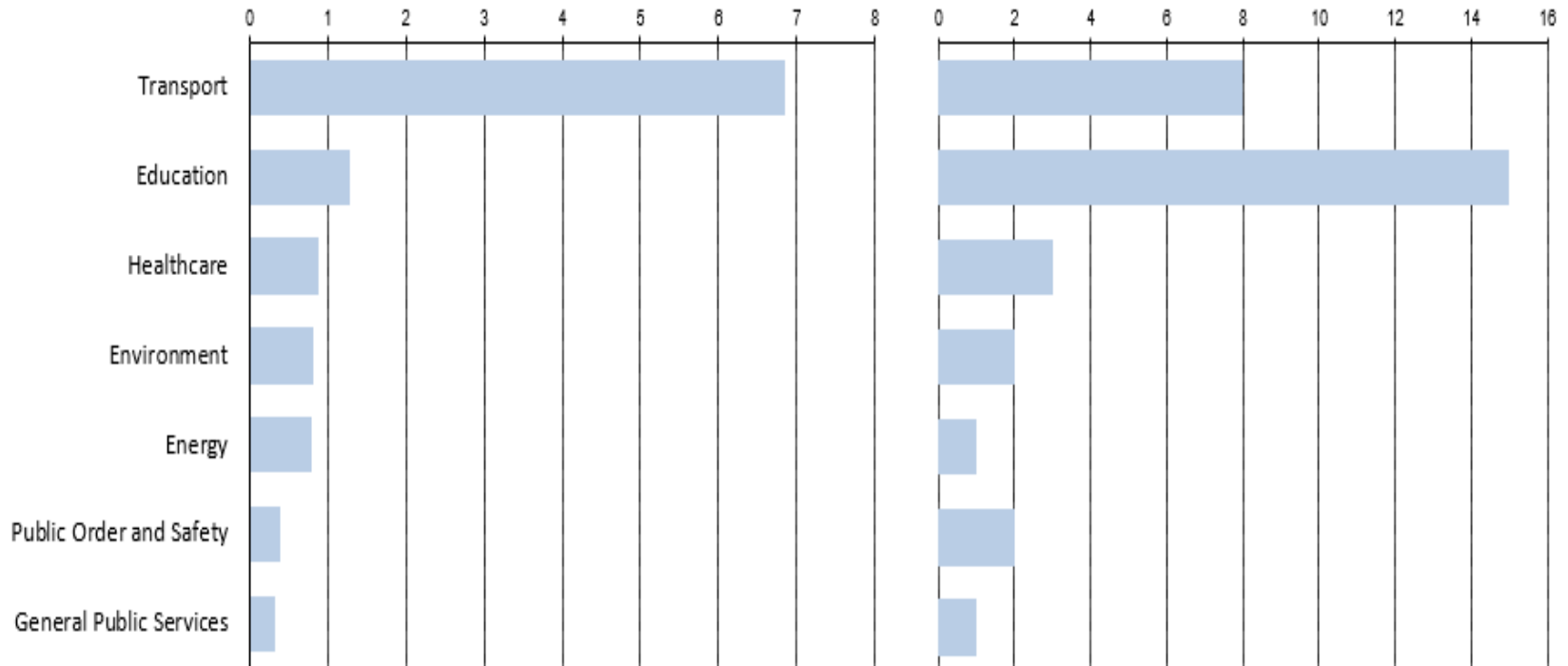


Sector breakdown by value and number of PPP projects in 2024

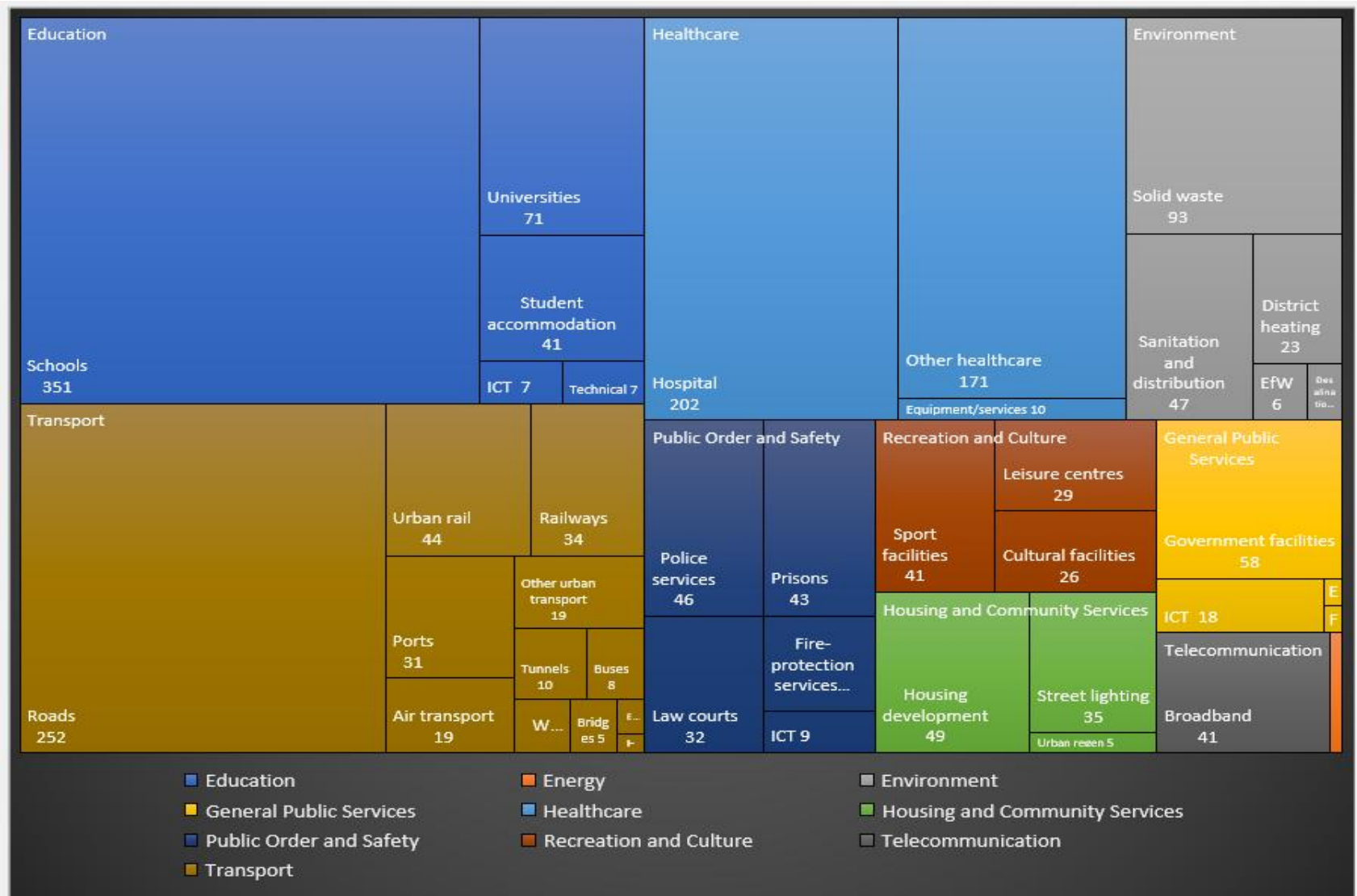
Aggregate value of projects by sector (in € billion)



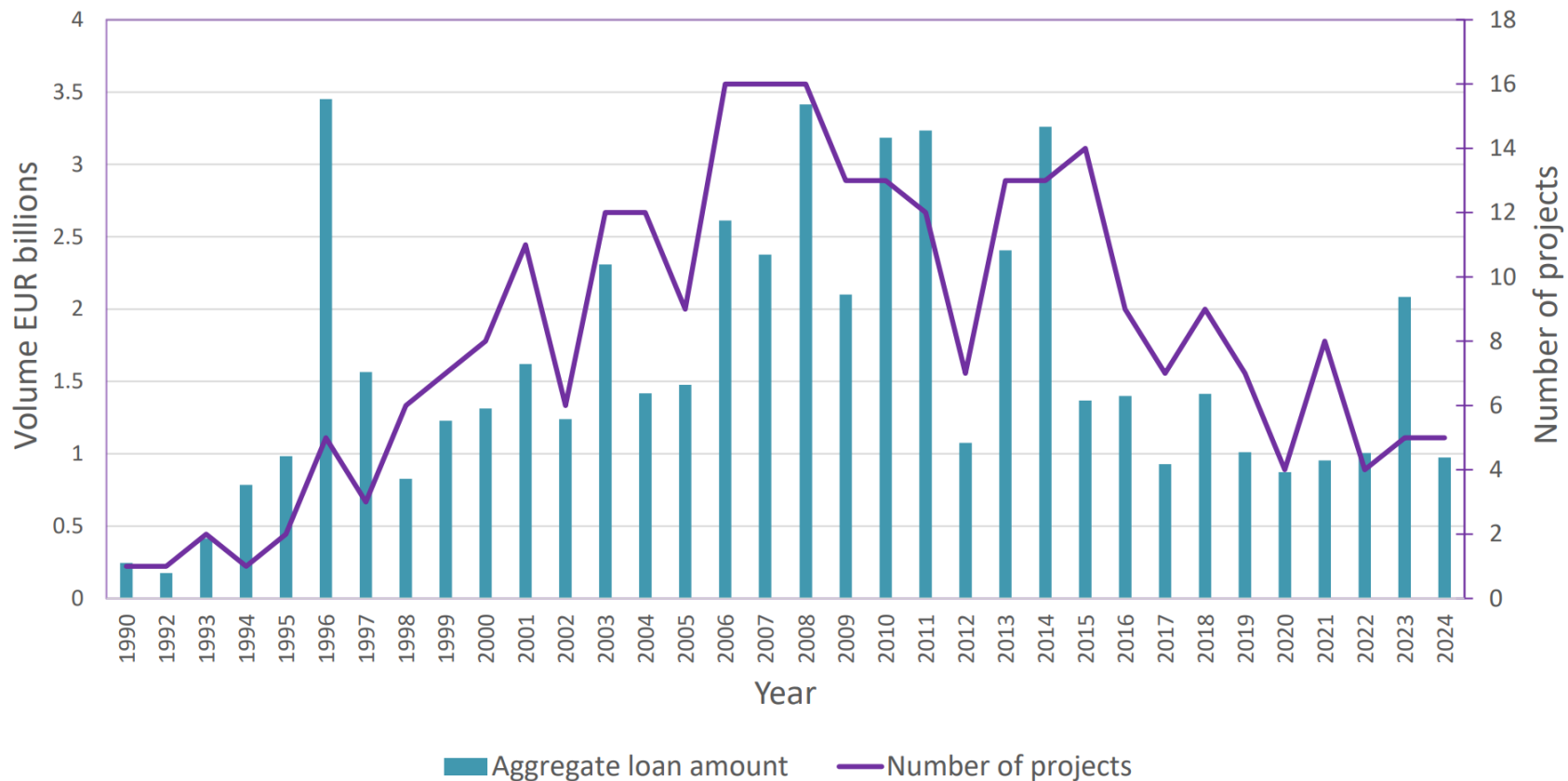
Number of projects by sector



Wide variety of sectors in European PPP market



PPPs financed by the European Investment Bank from 1990 to 2024



Risk

Risk allocation

‘allocate to the party that is able to manage the risk most efficiently’

But what does ‘manage’ mean? It depends on the risk:

- influence the **likelihood** of the risk occurring
- control the **impact** of the risk
- **absorb** the impact of the risk at the lowest cost
- understand the risk

Risk Allocation - relevance

Focus on risk allocation is a significant potential economic benefit of the PPP approach:



- Value for money
- Bankability - but care about the role of debt
- Affordability - esp. if it underpins balance sheet treatment
- Role of the **PPP contract** (and the numerous sub-contracts that flow from this)



Risk Management - tools and challenges

- Risk management **mindset**: registers and risk matrices
- Contract management challenges

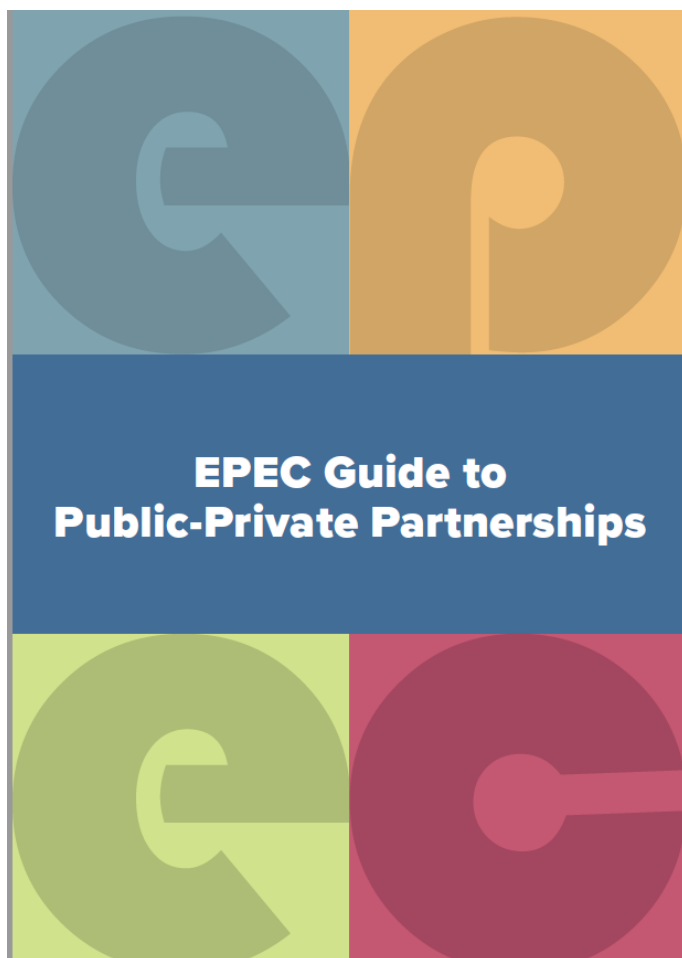
‘the effective management and delivery of PFI Contracts requires a degree of goodwill and flexibility’ - White Fraser Report, July 2023

- Correct **resources, behaviours, consistency, constructive pro-activity**
- **Hand-back** preparation and management

Risk Management - examples of specific recent/ current challenges

- Covid responses
- Construction cost risk sharing responses to Covid/Ukraine invasion
- Impact of fixed price contracting on market capacity
- Ensuring bankable defence PPPs
- Climate (to follow)

Climate Risk in PPPs



Updated version due to be published October 2025, to include management of climate risks

Project screening and options analysis may help mitigate risks - European Commission approach*

Phase 1

Step 1
Sensitivity Analysis - identify climate hazards relevant to the specific **type** of project

Step 2
Exposure Analysis - identify hazards relevant to the planned project **location**

Step 3
Vulnerability Analysis combines outputs of Steps 1 and 2

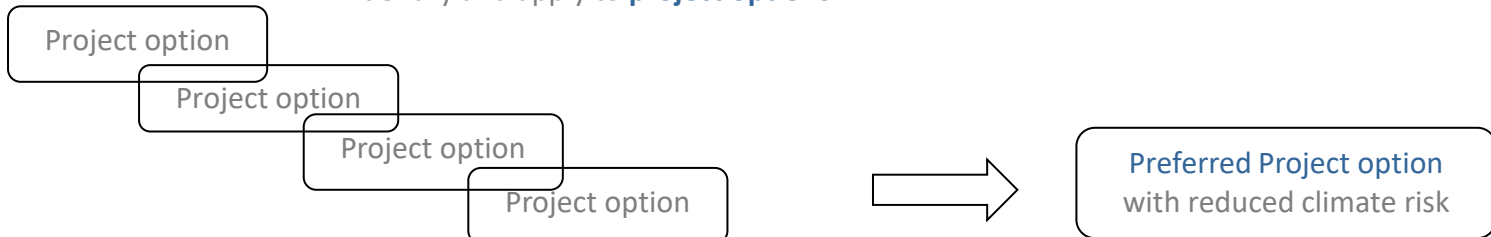
If high then Phase 2:

Step 1
Likelihood of each hazard occurring during the lifetime of the project

Step 2
Impact of each of the identified hazards from Phase 1 its

Step 3
Risk Assessment, taking into account both likelihood and impact of the hazard.

Identify and apply to **project options**



*Technical guidance on the climate proofing of infrastructure in the period 2021-2027, European Commission (2021)

Climate change risks

What climate risks does a typical PPP project face?

Internal Climate Risks

- Acute (e.g. storms)
- Chronic (e.g. high temperature)

External Climate Risks

- Dependencies on other infrastructure (e.g. power grid)
- Transition risks (e.g. policy changes)

Challenges for PPPs

- Long-term nature of PPP contracts
- Limited flexibility of contracts
- Affordability (especially for low probability/high impact events)
- Bankability
- Uninsurability

Opportunities for PPPs

- Benefits of long-term assessment
- Contractualisation of asset performance
- Creation of incentives for the private sector to manage / innovate
- Efficient risk management

Some key observations

Use of climate risk scenarios

Risk sharing

Self-insurance

Narrowing down Force Majeure events

Some recent examples of addressing PPP climate risk

Tł̄chq̄ All-Season Road Project, Northern Canada

- A 97km all-season road over ice-rich permafrost in an area expected to experience increased warming and precipitation.
- Performance exposed to temperature, precipitation and % of precipitation as rain.
- Private party will bear the operating risks over 25 yr operating term within an agreed range, shared with public authority, thereafter subject to a cap.



Source: The Canadian Council for PPPs 2019 CCPPP National Award Case Studies



Source: Government of Wales

Wales Mutual Investment Model Schools Programme

- GBP 1.5 bn education infra programme using mutual investment (MIM model)
- Stringent energy performance targets based on German PassivHaus standards with deduction penalties
- Use of independent M&E commissioning manager
- Schools have to be net zero carbon in operations with embodied carbon target of 800kg /m²

Other key references for PPP climate risk guidance

- **Technical guidance on the climate proofing of infrastructure in the period 2021-2027, European Commission (2021)**
Definitive guidance on climate-proofing infrastructure investments, in accordance with the InvestEU Regulation (European Union (EU) Regulation 2021/523) and other EU legislation.
- **JASPERS practical sectoral guidance on climate resilience proofing, JASPERS (2024)**
Practical advice for the implementation of the above-noted EC Technical Guidance, with a specific focus on the sectors of energy, municipal solid waste management and transport.
- **High-level Climate Toolkit for Infrastructure PPPs, World Bank Group (2022)**
High-level toolkit for dealing with climate change issues on PPP projects plus series of sector-specific subordinate toolkits.
- **Climate-Resilient Infrastructure Officer Handbook, Global Centre on Adaptation (2021)**
Prepared with the support of various Multilateral Development Banks and other agencies, provides guidance on embedding resilience principles into the PPP Project Cycle.
- **Resilience Rating System (RRS), World Bank Group (2024)**
WBG tool designed to help guide investment decisions and improve climate resilience in project design and outcomes. Guidance and specific criteria to assess resilience, both in terms of a project's 'resilience to' climate change hazards and the ability to achieve enhanced climate change 'resilience through' the project.

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