Conclusion and Next Steps for Disruption and PPPs

Disruption and PPPs

Conclusion and Next Steps

The Disruption and PPPs section provides a framework for thinking about potential strategies to enhance resilience and flexibility of PPP contracts in the face of disruptive innovation.

Download Full Report
Download Chatbot View
Photo Credit
Image courtesy of Conclusion and Next Steps for Disruption and PPPs

Watch this space. *The Disruption and PPPs section is based on the Report "PPP Contracts in An Age of Disruption" and will be reviewed at regular intervals.*

Let us know what you think by taking a Quick Survey.

Technology is consistently innovating and developing. However, during recent years the pace of technological change has been accelerating rapidly across the global economy. Disruptive technologies can open up unprecedented opportunities for all infrastructure sectors, in particular with regard to digitalization and decarbonization. At the same time, innovative technology has the potential to displace established business models or supersede existing technologies within a short timeframe, thereby creating winners and losers within infrastructure markets.

Strategies that facilitate the adoption of disruptive technology

Against this background, governments increasingly face challenges caused by disruptive technology when managing long-term PPP contracts. Strategies that have allowed governments to overcome these challenges and to enhance “innovation resilience” and facilitate the adoption of disruptive technology are:

Plan for innovation

- Output specifications:
  - Anticipate long-term needs.
  - Quantify innovative technology risk (caps and exceptions).
- Variations:
  - Allow for technology changes if compensated.
  - Consider risk sharing for unpredictable technology changes (e.g., risk of obsolescence or upgrades with major cost implications).
  - Integrate gain sharing mechanism to incentivize the adoption of superior technology.

Enhance flexibility

- Equity principles:
  - Integrate explicit provisions that restore balance of economic equilibrium where mandated.
  - Consider integration of equity principles where possible (subject to legal advice).

- Term: Enhance flexibility related to contract term, e.g., present value-of-revenue (PVR) contracts.
- Change in law:
    - Limit/share risk for laws/regulations that require technical enhancement unless the requested upgrade is affecting the general economy and any type of business.
    - Integrate financial relief mechanisms to share and limit cost impact if legal obligation was not foreseeable and adversely impacts in a material form economic equilibrium of contract.

Consider potential cyber attacks

- Consider risk of cyber attacks when drafting force majeure/MAGA clauses.
- Consider availability of insurance for cyber risk (mandatory insurance requirement?).

Promote strong partnerships and contract management before dispute stage

- Cultivate strong relationships with the partner and stakeholders, to find amicable solutions when things change, before the disputes stage.
- Alternative dispute resolution mechanism in PPP contracts, including the use of dispute review boards, may be useful to prevent and resolve disputes.

Consider renegotiation and termination

- Consider renegotiation/termination where technological disruption has fundamentally altered circumstances long term.
- Specify process and conditions for renegotiation in PPP contract.
- Include provisions that give contracting authority the right to voluntary termination.

Increase the resilience of PPP contracts going forward

To increase the resilience of PPP contracts going forward and to encourage and facilitate the implementation of disruptive technologies with regard to future PPP contracts, governments need to prepare for technological disruption before the PPP contract stage. The following strategies could be applied going forward:

Plan for disruptive innovation

- Identify, assess and allocate risks/opportunities associated with potential technological changes.
- Find possibilities to integrate new technologies into projects throughout all stages.

Incentivize flexible and innovative solutions during procurement

- Consider quality of technical solution and its flexibility to adapt to a changing technological landscape during PPP procurement.
- Focus, e.g., on life-cycle costs and collaborative procurement methods that allow bidders to prepare alternative proposals or to propose innovative solutions.

Focus on climate-smart and digital projects

- Prioritize “green” and digital infrastructure projects (including smart-city components).
- Set out low-carbon and digital targets.

Collaborate with all stakeholders throughout project development to identify and adopt innovation (e.g., give access to data).

The Disruption and PPPs Section

The Disruption and PPPs section provides guidance to developing country governments on managing PPP contracts in the face of innovative technologies. It attempted to create a framework for thinking about potential strategies to enhance resilience and flexibility of PPP contracts in the face of disruptive innovation.

The examples, case studies and recent reports reviewed with regard to disruptive technology and disruptive events provided crucial inputs for the development of this framework. These inputs made it possible to highlight several strategies that governments could consider to make PPP contracts and contract management fit for the Fourth Industrial Revolution.

However, this section can only be a starting point—given the various types of disruptive technology that could impact infrastructure projects going forward and the fact that these technologies can be integrated into the physical infrastructure as well as used in infrastructure design, planning, delivery and management, and can affect PPP projects and their partners in a number of different ways as well as sector-specific differences. Because disruptive innovation as well as disruptive events are continuing to change infrastructure markets globally, it is expected that the evidence base for this report can continuously be expanded in coming years to make the analysis and guidance even more robust.

Subsections

Executive Summary for Disruptive Technologies and PPPs

Executive Summary for Disruption and PPPs

Context and Aim of Disruptions and PPPs

Context and Aim: Disruption and PPPs

Disruptive Technology, Infrastructure and PPPs

Disruptive Technology, Infrastructure and PPPs

Case StudiesDisru ption and PPPs

Case Studies - Disruption and PPPs

PPP Contracts in An Age of Disruption Table of Contents

Table of Contents for Disruption and PPPs

Research and Publications in PPPRC

BROWSE BY REGION

- East Asia and Pacific (EAP)
- Europe and Central Asia (ECA)
- Latin America and Caribbean (LAC)
- Middle East and North Africa (MENA)

- North America (NA)
- South Asia (SA)
- Sub-Saharan Africa (SSA)

BROWSE BY SECTOR

- Power & Renewable Energy
- Urban & Cities
- Water & Sanitation
- Transport
- Telecom & ICT
- Solid Waste Management

BROWSE BY Topic

- Asset Recycling
- Climate
- Disruption
- Emission Reduction Credit
- Fragile and Conflict-Affected States (FCS)
- Gender
- Innovative Revenues for Infrastructure

The resources on this site is usually managed by third party websites. The World Bank does not take responsibility for the accuracy, completeness, or quality of the information provided, or for any broken links or moved resources. Any changes in the underlying website or link may result in changes to the analysis and recommendations set forth in the Public-Private Partnership Resource Center. The inclusion of documents on this website should not be construed as either a commitment to provide financing or an endorsement by the World Bank of the quality of the document or project. If you have any comments on any of the links provided in the Public-Private Partnership Resource Center, please get in touch here