

Public Private Partnership

Center for Buildings, Infrastructure and Public Space

Under the guidance of Prof. Feniosky Peña-Mora & Adjunct Assoc. Prof. Fredric Bell

Ashutosh Tripathi

Giacomo Garzino

Lizzie Song

Vidit Hirani



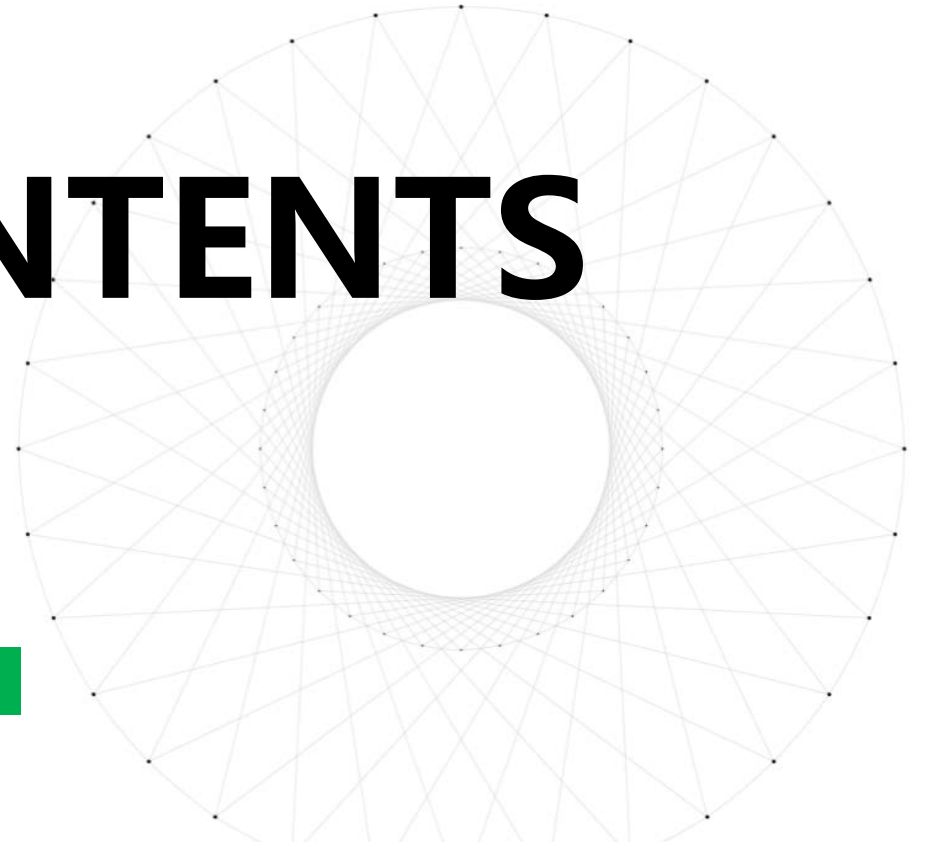
COLUMBIA | ENGINEERING

The Fu Foundation School of Engineering and Applied Science

TABLE OF CONTENTS

CASE STUDIES

PART ONE



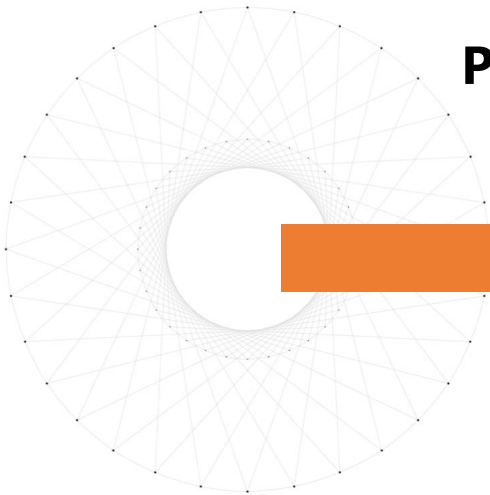
SUCCESSFUL FACTORS

PART THREE



PROBLEMS

PART TWO



I-4 Ultimate

- Reconstructing 21 miles of I-4 from Orange County to Seminole County.
- Divided into 4 zones
- **\$2.3 Billion** project
- Lease period of 40 years.
- Time period : 6.5 years
- Construction delayed by 245 days
- **100\$ million dollar claim** submitted
- Possible Reasons include:
 - Catastrophic drilled shaft failure (complex geological conditions)
 - Weather issues (Hurricanes)
 - Working with existing traffic



La Guardia Airport Central Terminal

- La Guardia airport – development of the central terminal of the airport
- Total 4 number of terminals.
- P3 project with La Guardia Gateway Partners (Skanska, HOK, WSP) as private partner and Port Authority NYNJ as public partner.
- 20th busiest airport with passenger traffic of over 29.7 million passengers
- Value of contract – **\$4 billion**
- Lease period – **35 years or until 2050**
- Possible Reasons/Problems include:
 - Long Procurement Process
 - Construction Risks
 - Revenue Risk



PART TWO PROBLEMS



1

Responsibilities

- Transfer control and ownership to private part
- E.g. La Guardia Airport

2

Design Changes

- Causing delay
- Extra cost

3

Inexperienced government

- Private investor would not feel comfortable
- Communication

4

Construction risk

- Site Condition (Unforeseeable)
- Cannot be in the framework
- E.g.. Goethals Bridge

5

Bidding Process

- Long time to close the contract
- Expensive and complicated bidding process
- E.g. La Guardia Airport

6

Lack of Expertise
in Private sector

- PPP requires a unique formation that involves law, financial and engineering
- E.g. SR 125, Trans Texas Corridor

PART TWO PROBLEMS

7

Insufficient details

- Active P3 projects
- Upcoming P3 projects
- E.g. details of private parties in P3 bulletin projects

8

Statutory Authority

- Model legislation of 2007
- Establish authorities for transportation agencies
- Only 33 out of 50 states have P3 statutory authority- NY,NJ doesn't have one

9

Stringent laws

- Deter construction of parallel roads
- Affect Revenues
- E.g. Chicago Skyway, Indiana Toll Road

10

Monetary Support

- Government financial support
- E.g. Australia, Colombia

11

Revenue Risk

- Public can borrow at a lowest interest rate
- Long term user demand is unpredictable
- E.g. La Guardia Airport

12

Lack of Public Support

- Privatization
- High Returns

APPROPRIATE RISK ANALYSIS METHODOLOGY

- Prudent risk management is fundamental to the success of any capital project delivery
- Risk workshop

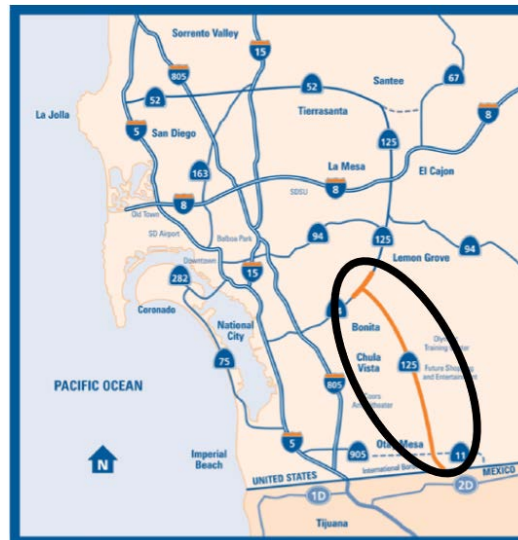
Risk Identification

Risk Assessment

Risk Allocation

Risk Mitigation

SOUTH BAY EXPRESSWAY (SR-125) TOLL ROAD, SAN DIEGO COUNTY, CALIFORNIA



Threat:

- Environmental clearance process

Mistake:

- The private partners bore the responsibility to carry out the full environmental review and clearance process.

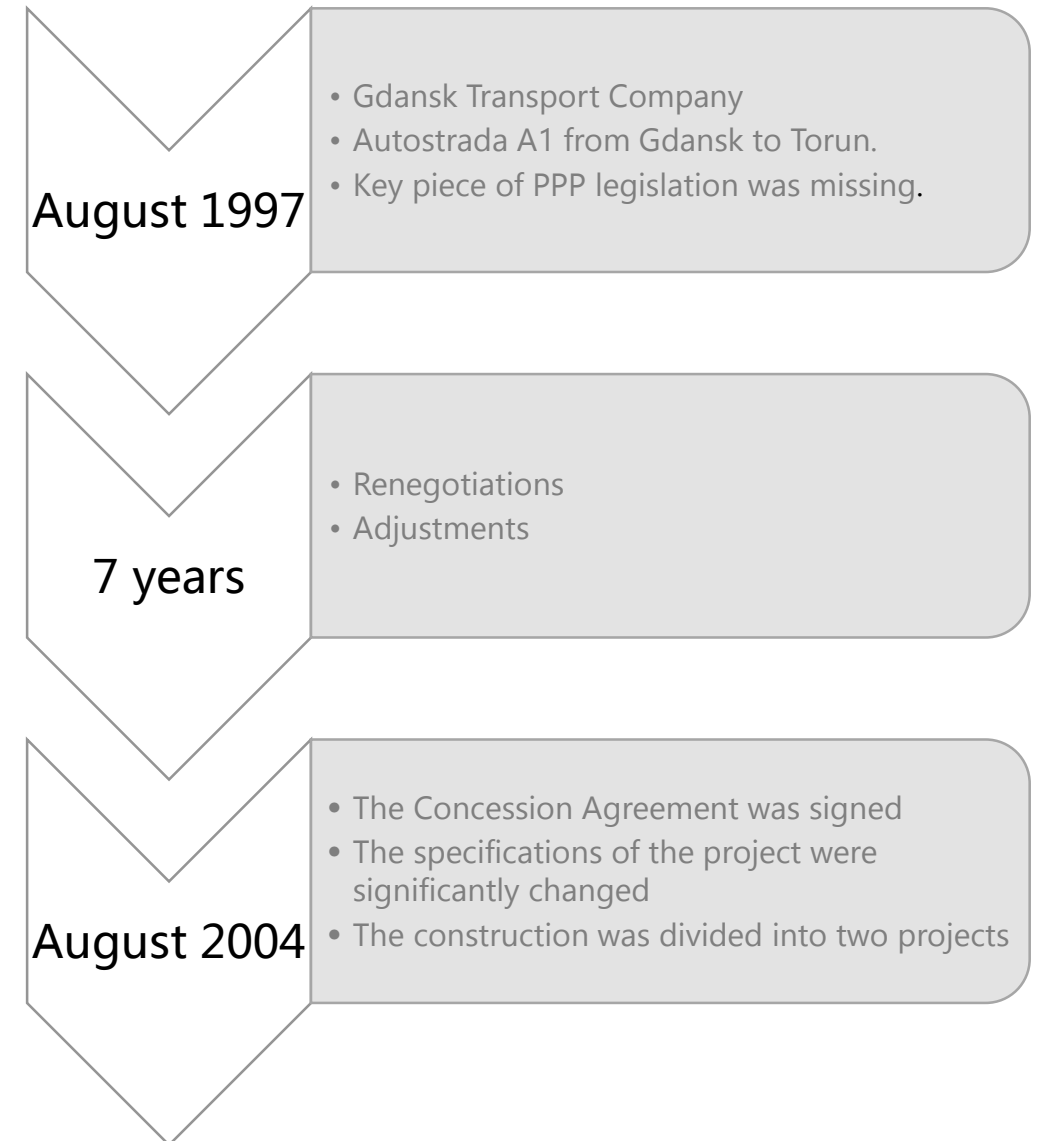
Result:

- Took over nine years to complete.

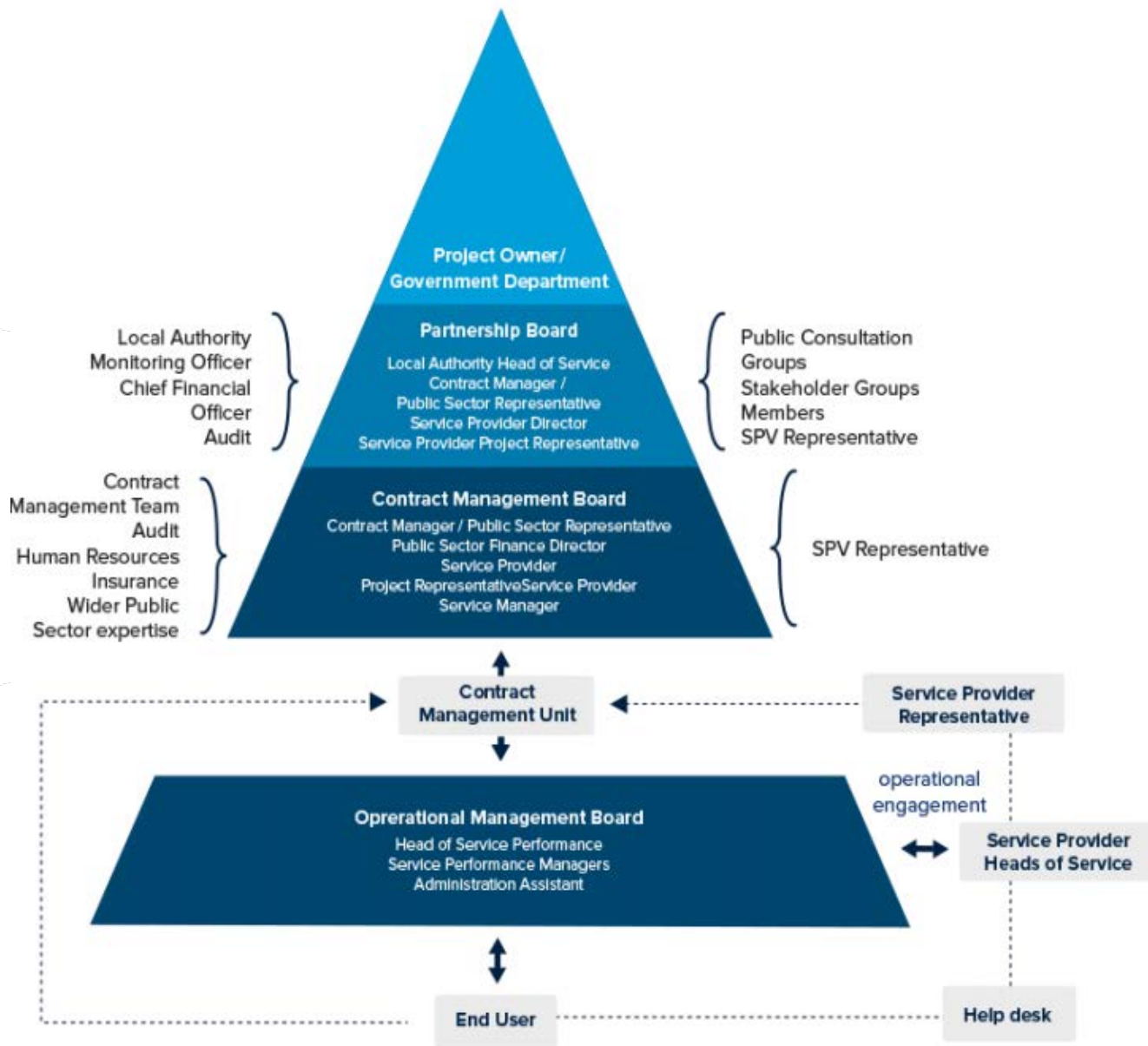
PART THREE SUCCESSFUL FACTORS – FAVORABLE LEGAL FRAMEWORK

- **Increasing capability of government agencies to deliver**
 - Reduce learn cost
 - Risk of mistakes
 - Transfer skills
- **Structured way of reconciling disparate objectives**
 - Expectations
 - Training
 - Skill development
 - Improves longevity of PPP Program
- **Making sure that whole-of-government risk is limited**
 - Government reputation
 - Fiscal risks
- **Generating market interest**
 - Competitive procurement process
 - Drive down price
 - Promote innovation
 - Reduce investor's perception of risk

Case: Poland A1 Toll Motorway Project



PART THREE SUCCESSFUL FACTORS – GOOD GOVERNANCE STRUCTURE



USA

I-495 Express Lanes



Threat:

- Early Engagement

Mistake:

- Public engagement with key stakeholders
- Robust and early customer engagement with end users
- Allocation of operational responsibilities

Result:

- Customers also needed to learn where they could get on and off the network.

PART THREE SUCCESSFUL FACTORS – PUBLIC AGENCY

3 Agencies

- Promotion
- Advisory
- Evaluation

Financial Self-Sufficiency

- Independency from political changes
- Technical institution
- Attention to infrastructure overbuilding

Different in every nation

“An agency must be structured and run in a way that is optimal for PPP transactions in the particular government, and what works for one country may create problems in another.” -----

Director of PUK

Providing Expertises

- P3 sector lack of people with the necessary preparation
- Unique field

Cheaper and shorter bidding process

- 3 months to decide a winner
- 8 months to close

Strong private consortiums



Stimulate Competition

- Public advantage



Examples

- Only three companies
- JFK, 4 proposals
- Dullas Green Way, 1 proposals
- Charlotte Water Plant, 4 proposals



Competitive bidding process

- Possibility to notice inconsistency



Greater number of projects

PART THREE SUCCESSFUL FACTORS – MACROECONOMIC FACTOR



Colombia example

- US \$ 50 billion in Colombia
- 4350 miles in Colombia
- US \$ 300 in USA



Higher return

- More competition
- Cheaper for the Public
- P3 development
- Higher risks are accepted



Lower risks

- Risk Matrix
- Less accurate framework needed, business planning
- Mistakes in traffic forecast

PART THREE SUCCESSFUL FACTORS - GOVERNMENT AND POLITICAL SUPPORT

Senior Public Officials

- Increase involvement of senior public officials by actively involving and educating.
- Officials need to be well-informed of the process.

Political Leaders

- Minimize misperceptions about the value of PPP to the Public.
- Mayor to deliver a champion project addressing fiscal challenges in the process.
- EXAMPLE – Mayor of London for Central London Congestion Charging PPP Program

Public sector monetary support

- Provide concessional finance as in case of Australia (E.g.; NAIF- Queensland Treasury up to \$5b).
- Valuable Contribution as in case of Colombia.

Public Sector Involvement

- Ongoing monitoring of performance with respect to safety and maintenance as stipulated in contract.
- Recourse rights in case of private partner defaults.

Transparency

Creating a transparent environment for all the active and upcoming projects as in case of Australia having a National Infrastructure Construction Schedule.

Contract Disclosure

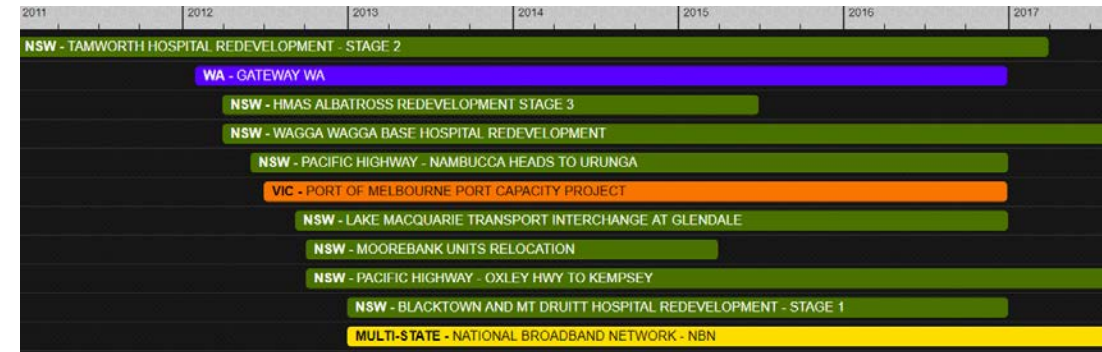
- Under 45 days consistent with government guidelines after contract becomes effective
- E.g.; NSW ISFU for Sydney Harbor Tunnel, Hills Motorway (M2)

Encourage strong competitive bids

- International investment as in case of Australia.
- Limited complexity to ensure lower transaction & monitoring costs.

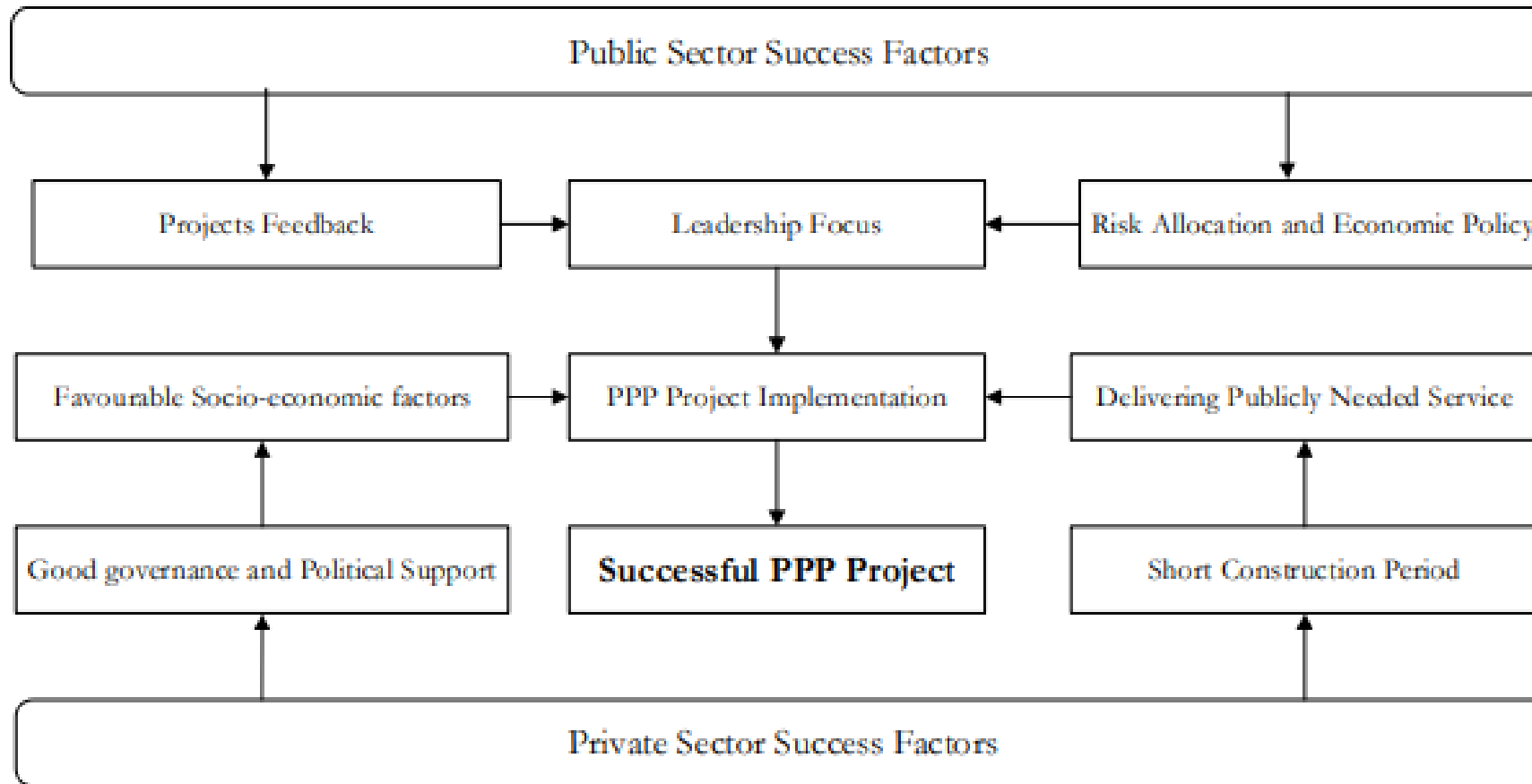
Practitioners guide

- Helps in following the success of different P3 projects in terms of performance flexibility.



Source: NICS GOV Australia

PART THREE SUCCESSFUL FACTORS - COMMUNICATION



Source: Construction Economics and Buildings

Bidding cost refunded

- Percent of losing bids refunded as in case of Colombia which will invite more investments



Capital Raising

- Improve availability of finance by inviting more participants.



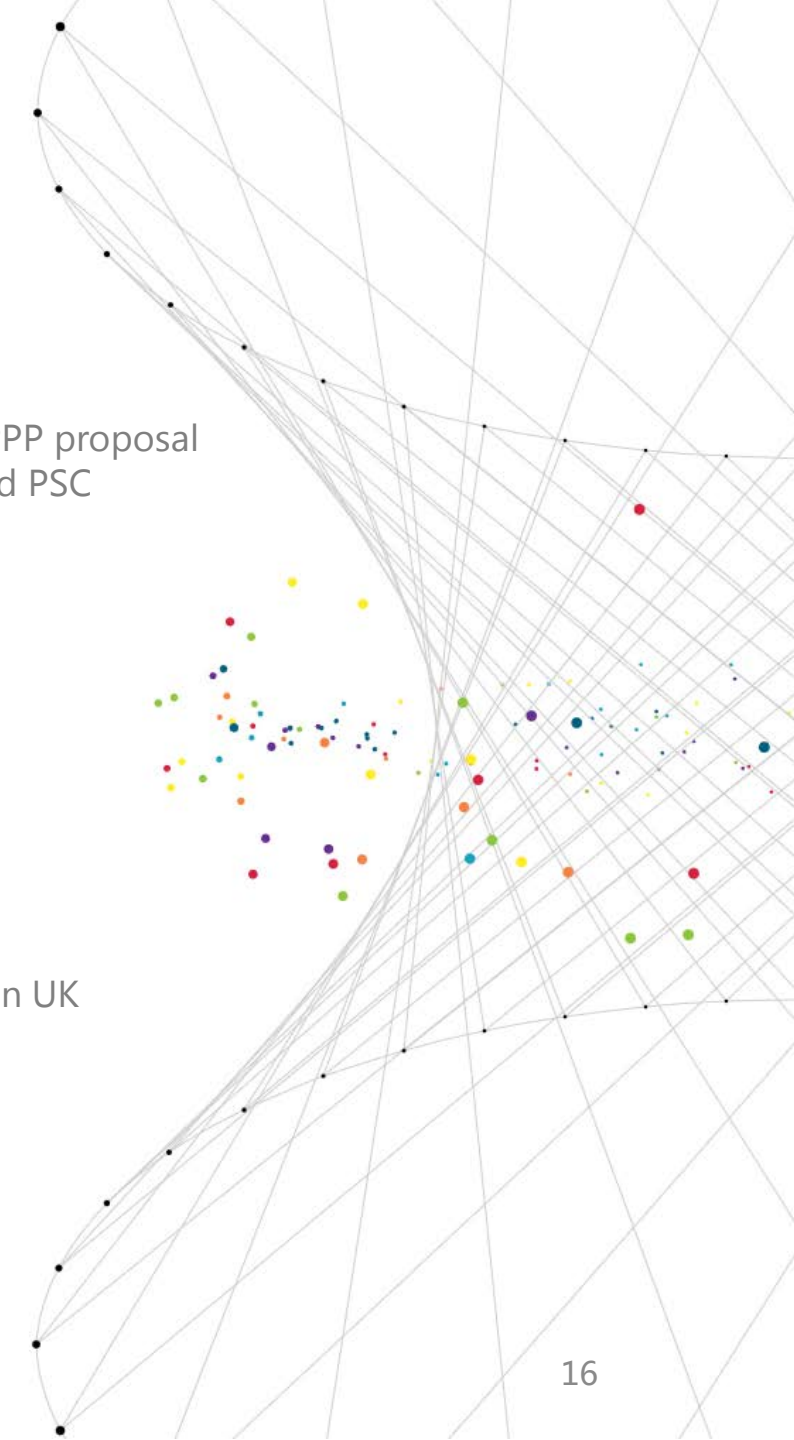
Public Sector Comparator

- Compare outputs and costs of PPP proposal against neutral benchmark called PSC adjusted for risk. E.g. Australia



Tendering Situation

- Australia – time 40% shorter than UK because of transparent pipeline



PART THREE SUCCESSFUL FACTORS - COMPETITIVE AND TRANSPARENT PROCUREMENT PROCESS

Unsolicited Proposal

Private Sector Motivations

- Intellectual Property Rights
- Lack of Private Sector Interest
- Cost Efficiency
- Speed of Project Development

Current Systems

- Bonus System
- Swiss Challenge System
- Best and Final Offer System

Policy Choices

- Project Development Cost
- Time Constraints
- Coordination among agencies
- Effective Sector Planning
- Finding Appropriate Incentives

Need :

- Avoid Corruption
- Promotes Innovation
- Reduced Cost
- Systematic Planning

Implementation :

- All documents are public
- Evaluation criteria
- Minimum number of Bidders

PART THREE SUCCESSFUL FACTORS – PUBLIC AND PRIVATE COMMITMENT

Public Requirements

- Permits
- Access to financial markets
- Public Support
- Legal Framework

Private Requirement

- Cost-effective services
- Work as integrated team
- High quality standards
- Understanding Public Interest

Need

- Mitigate Political Uncertainty
- Long Term Leases
- Foster teamwork

Examples

- Colombia's mitigation of revenue risk
- Pacific Highway Upgrade in Australia

THANK YOU