The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

PPP OPTIONS IN ZAMYN-ÜÜD SPECIAL ECONOMIC ZONE

Prepared by Denzel Hankinson for the Asian Development Bank

Topics for Discussion

- What PPPs are (and what they are not)
- Taxonomy of PPPs
- Relevant Examples
  - *International*
  - *Mongolia*
- Considerations for PPPs in SEZs and possible model for Zamyn Üüd
- Appendix: Case Studies of PPPs in SEZs

WHAT ARE PPPS?

And what they are not…

What are PPPs?

- A long-term agreement between a government entity and a private company to provide public services or assets
- Risks and benefits are shared
- The private company receives a revenue stream—from government budget allocations, from user charges, or a combination—dependent on the availability and quality of the contracted service
- The private company must generally make an investment in the venture
- In addition to budget allocations and conferring the right to charge users, the government may make further contributions:
  - *providing land*
  - *contributing existing assets*
  - *providing various forms of guarantees that enable risk to be shared effectively between the government and the private company*
  - *Providing a share of debt or equity*
- At the end of the PPP contract, the assets revert to government ownership

Do not mean "extra money" for infrastructure

Does not imply a joint venture, but a contractual relationship

Does not transfer asset ownership to the private sector

Advantages and disadvantages of PPPs

-Private finance generally more expensive

-Temptation to record debt “off the books”

-Risk of “contingent liabilities”

-Project outputs must be tightly specifiable
-and contract well structured

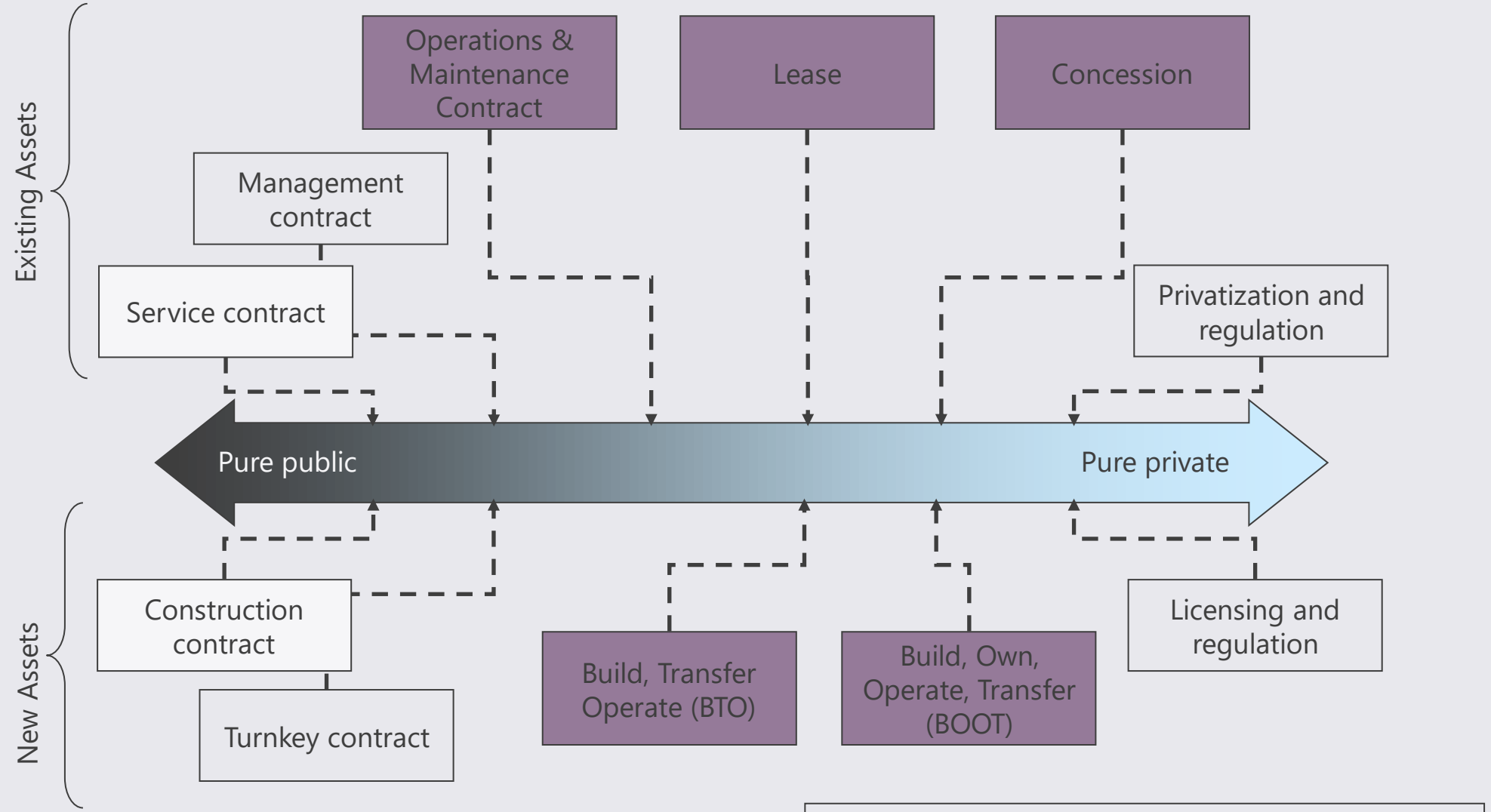
+Additional source of financing

+May be easier to mobilize funds from users

+Allows for private sector innovation

+Good incentives for asset management throughout lifecycle

Taxonomy of PPPs



Source: Adapted from "World Bank Institute; PPIAF. 2012. Public-Private Partnerships : Reference Guide Version 1.0. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/16055 License: CC BY 3.0 IGO."

Comparing "Brownfield" PPPs

	Purely Public		PPPs		Purely Private
Functions	Corporatized Public Entity	Management Contract	Lease Contract	Concession Contract	Sale of Shares
Who provides the service to customers?	Public entity	Public entity	Private operator	Private operator	Private operator
What is the private operator's responsibility?	Managing the operating area	Managing the operating area	Providing utility service	Providing utility service	Providing utility service
Who receives the tariff revenue?	Public entity	Public entity	Operator gets part of tariff to cover O&M	Private operator	Private operator
How is the private operator remunerated?	Not applicable	Fixed fee, plus incentive payments	Operating profit from providing service	Final profit from providing service	Final profit from providing service
Which risk does the private operator bear?	Not applicable	Loss of fixed fee or multiple thereof	Risk related to operations	Most risk of service provision (operations and investment)	All risk of service provision
Who employs the staff?	Public entity	Public entity	Private operator	Private operator	Private operator
Who is responsible for capital expenditure?	Public entity	Public entity (Private operator may manage implementation)	Public entity (Private operator usually manages implementation)	Private Operator	Private operator
What is the typical term?	2-5 years	2-5 years	10-15 years	15-30 years	Indefinite

Comparing "Greenfield" PPPs

DH Infrastructure — ECONOMICS & FINANCE

PPP types differ in their allocation of functions and risks between public and private partners

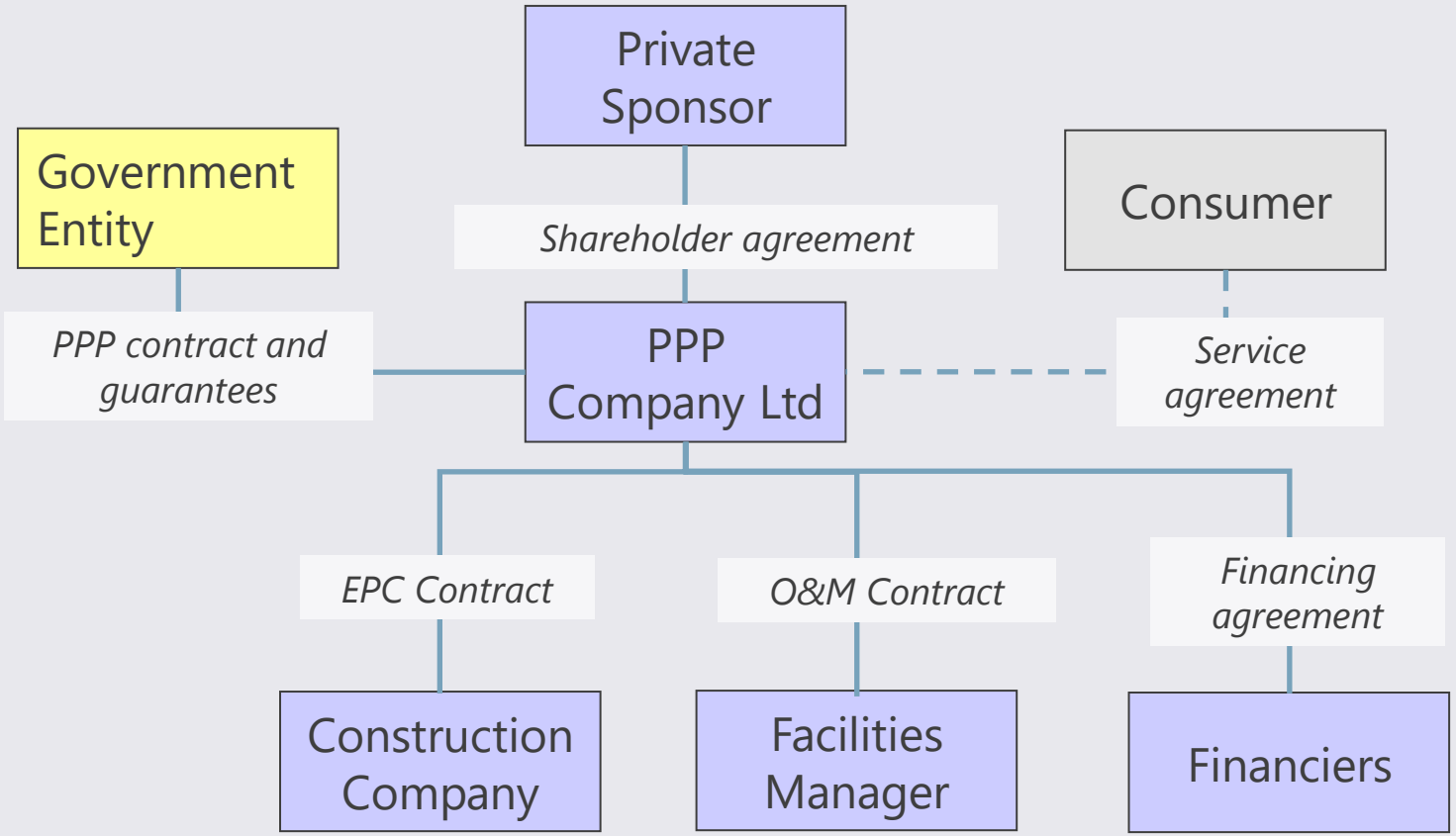
Design	Build	Operate (and Maintain)	Finance	Examples of PPP Acronyms*	Comments
Private	Private	Public	Public	•Design-Bid-Build (DBB) •Design-Build (DB) •Build-Transfer (BT)	•Examples may differ in terms of whether functions are "bundled" or tendered separately
Private	Private	Private	Public	•Design-Build-Lease (DBL) •Build-Transfer-Lease (BTL) •Built-Transfer-Operate (BTO)*	•Examples may differ in terms of whether public or private partner takes demand risk
Private	Private	Private	Private	•Build-Operate-Transfer (BOT) •Build-Own-Operate-Transfer or (BOOT) •Design-Build-Finance-Operate (DBFO) •Build-Own-Operate (BOO)	•Examples differ in terms of whether transfer occurs •Examples may also differ in terms of what "ownership" means (extent to which assets can be pledged, developed, disposed, or transferred)

Functions that matter most are Design, Build, Finance, and Operate

*Acronyms (BTO, in particular) may describe different arrangements in different countries and sectors

DH Infrastructure
ECONOMICS & FINANCE

Generic BOT/BOO contract structure



EXAMPLES

Seminal International and Mongolian Experience

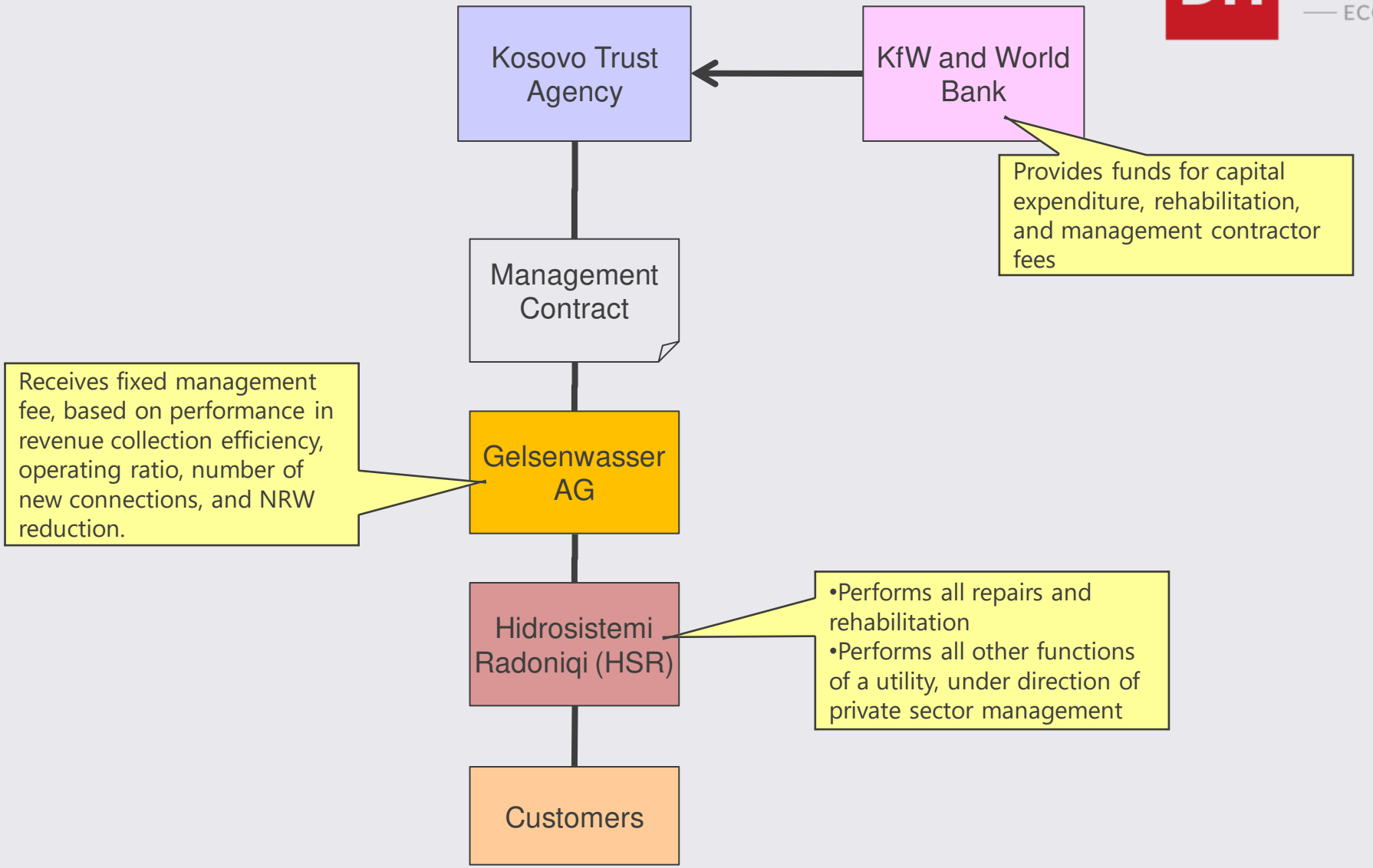
Management contract (Kosovo)

➢ Context

- Setting
  - *Network neglected and poorly maintained*
  - *Considerable damage during Balkans war*
  - *Inefficient operations*
- Contract
  - *Gelsenwasser AG (Germany) signed a 3-year management contract with the Kosovo Trust Agency to provide management services to consolidated regional water utility Hidrosistemi Radoniqi (HSR)*
  - *Gelsenwasser paid a fixed management fee*

➢ Objective and Results

- Objectives
  - *Rehabilitate existing infrastructure and expand the network*
  - *Improve service quality and operation efficiency*
  - *Operate and maintain the system in a technically and financially sustainable way*
- Results
  - *Company went from operating losses of more than €250,000 before contract, to operating profits of more than €250,000 within three years*
  - *Water supply service was rehabilitated and now provides 24 hour service and has significantly less physical losses*
  - *However, annual management fee (including performance incentive payments) exceeded €500,000*


Kosovo Trust Agency
KfW and World Bank
Provides funds for capital expenditure, rehabilitation, and management contractor fees
Management Contract
Receives fixed management fee, based on performance in revenue collection efficiency, operating ratio, number of new connections, and NRW reduction.
Gelsenwasser AG
Hidrosistemi Radoniqi (HSR)
•Performs all repairs and rehabilitation
•Performs all other functions of a utility, under direction of private sector management
Customers

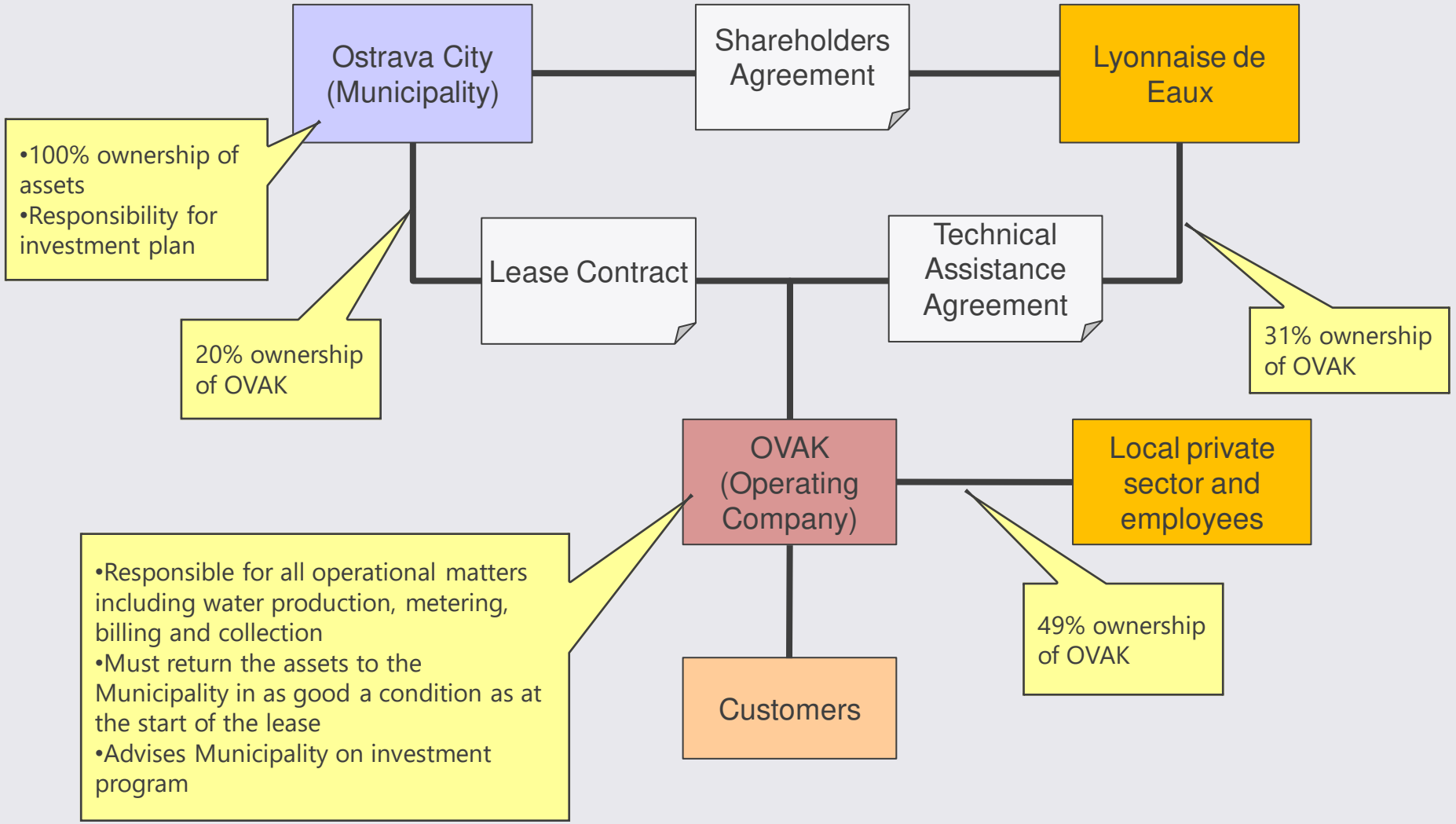
Lease Contract (Ostrava)

Context

- Setting
  - *Population: 325,000*
  - *Third largest city in country*
  - *Start: 1994*
  - *Municipal leaders had no experience running water utility*
- Contract
  - *Ostrava municipality owns assets of Ostrava Water Enterprise (OVAK)*
  - *Operating company jointly owned by:*
    - Private operator, Lyonnaise des Eaux (LDE) (31 %)
    - Municipality (20%)
    - Local private sector and employees (49 %)
  - *Three contracts: Lease, Shareholders Agreement, and Technical Assistance*

Objective and Results

- Objectives
  - *Access private finance for investment*
  - *Improve efficiency of operations*
  - *Consistent with overall market reforms and muncipalization a the time*
- Results
  - *Non-revenue water reduced from 42 to 30 percent within first few years of contract*
  - *Staff numbers reduced by 16 percent*
  - *Commercial culture instilled at OVAK*


Ostrava City (Municipality)
Shareholders Agreement
Lyonnaise de Eaux
•100% ownership of assets
•Responsibility for investment plan
Lease Contract
Technical Assistance Agreement
20% ownership of OVAK
31% ownership of OVAK
OVAK (Operating Company)
Local private sector and employees
•Responsible for all operational matters including water production, metering, billing and collection
•Must return the assets to the Municipality in as good a condition as at the start of the lease
•Advises Municipality on investment program
49% ownership of OVAK
Customers

Concession Contract (Manila)

DH Infrastructure
ECONOMICS & FINANCE

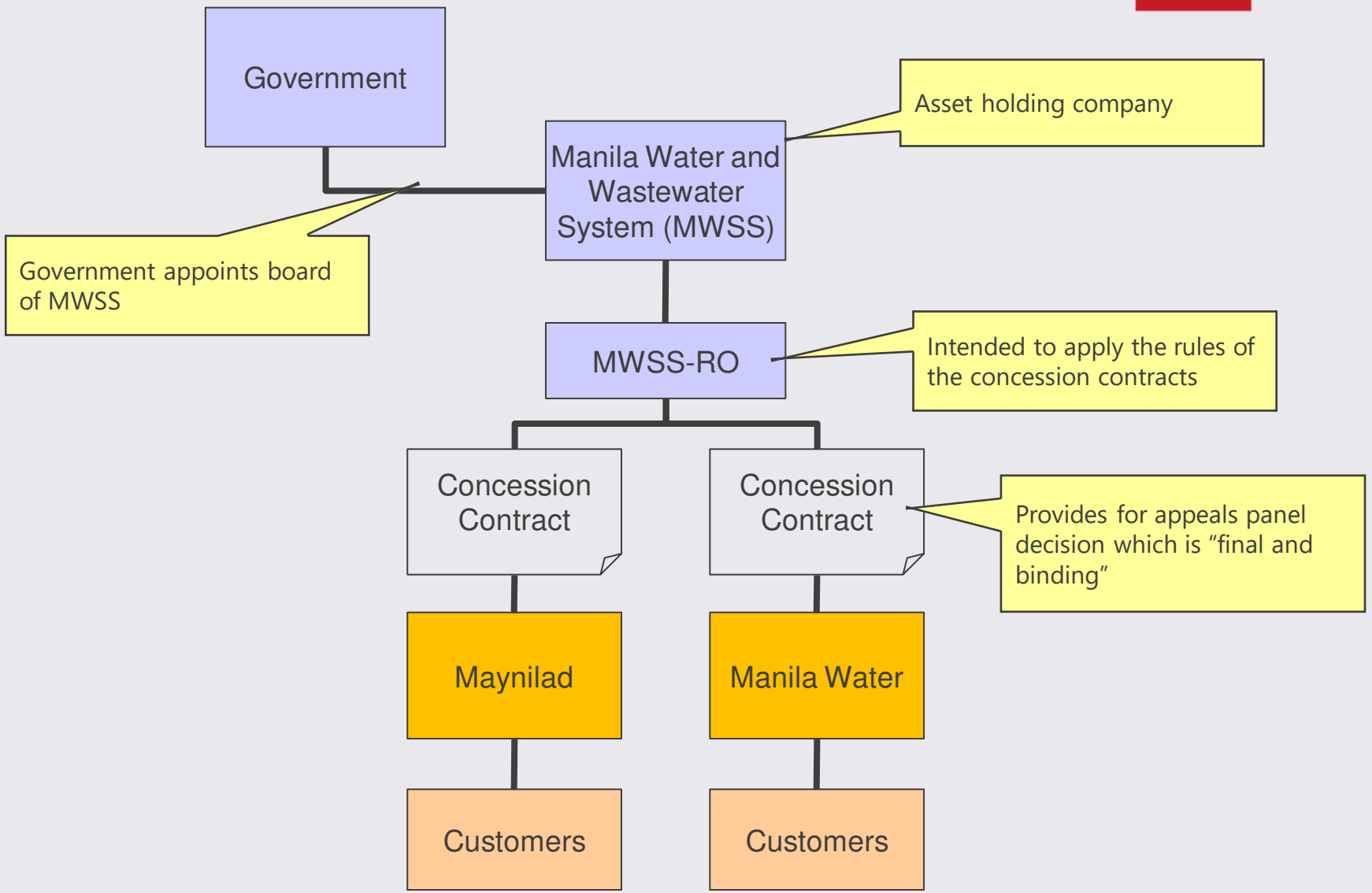
➢ Context

- Setting
  - *Population: ~9.1 million*
  - *Start: 1997*
  - *Poor service beforehand:*
    - Service was available on average for 17 hours per day
    - Non-revenue water (NRW) had was 56 %
    - Sewage network served only 8% of population.
- Contract
  - *Metropolitan Water and Wastewater System (MWSS) entered into 25-year concession contracts with two concessionaires: Manila Water and Maynilad*
  - *Special Regulatory Office (MWSS-RO) regulates the contracts*
  - *MWSS-RO reports to the MWSS Board of Trustees ('the Board')*

➢ Objective and Results

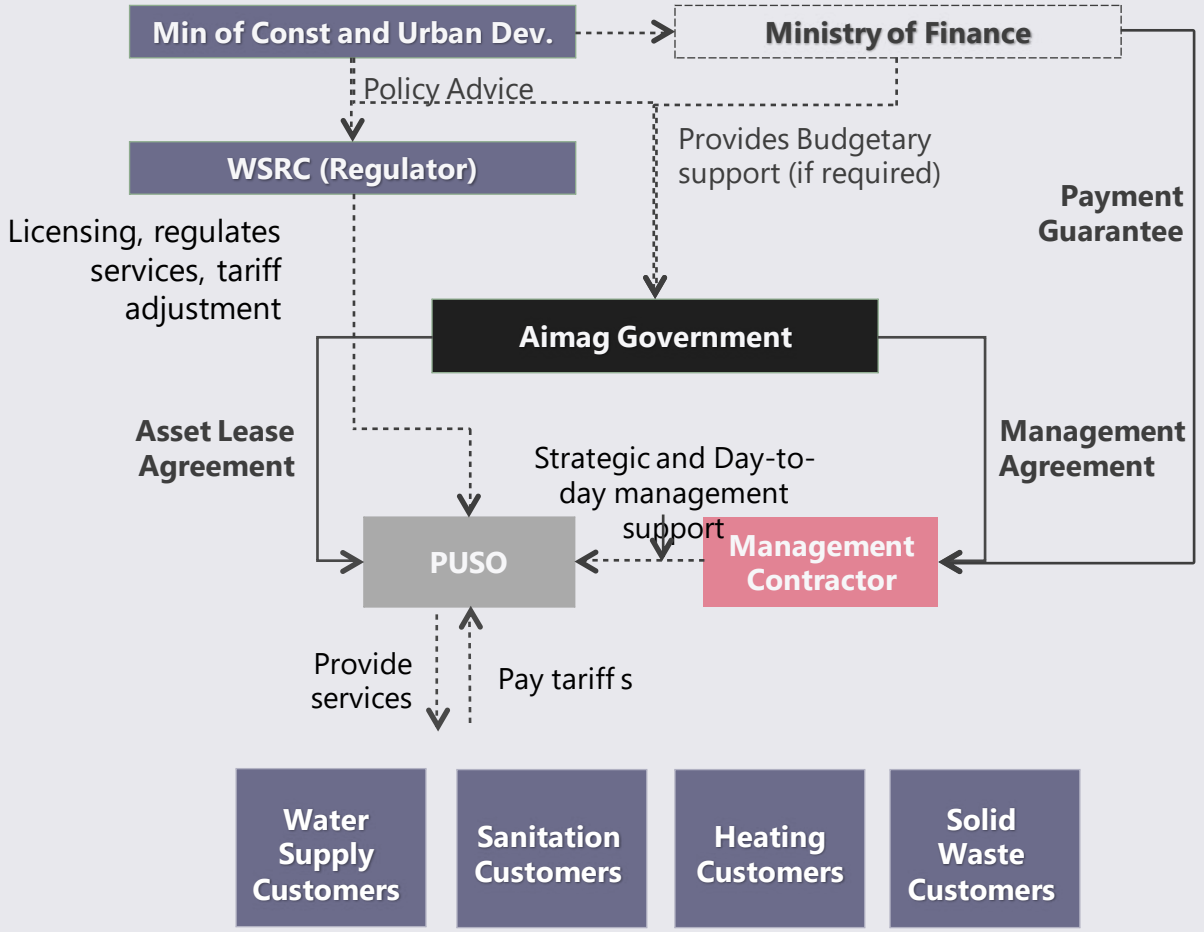
- Objectives
  - *Reduce NRW*
  - *Improve coverage of water and sanitation*
  - *Improve reliability*
- Results*
  - *Coverage levels increased for both concessionaires*
  - *NRW*
    - Manila Water decreased
    - NRW for Maynilad increased
  - *Availability increased from 17 to 21 hours/day, on average*
  - *Profitability (as of 2004)*
    - Maynilad has never been profitable
    - Manila Water has made profit since 1999

*Between 1997 and 2003


Government
Manila Water and Wastewater System (MWSS)
Asset holding company
Government appoints board of MWSS
MWSS-RO
Intended to apply the rules of the concession contracts
Concession Contract
Concession Contract
Provides for appeals panel decision which is "final and binding"
Maynilad
Manila Water
Customers
Customers

Proposed Arrangement for Dornogovi and Ömnögovi (2013)

Developed under ADB-funded project in 2013 to cover Saynshand and Zamyn-Uud in Dornogovi Aimag, and Dalanzadgad, Gurvan Tes, Hanbogd, and Tsogttesetsii in Omnogovi Aimag



CONSIDERATIONS FOR PPP IN ZAMYN-ÜÜD

What could work in Zamyn Üüd?

- **What infrastructure or services are needed?**
  - 2nd phase development of heating, power, water supply, and sanitation network *(utility services provider, BOO)*
  - 2nd phase development of road network, street lights, and tele communication
  - Development of security and customs clearance gates
  - Development of public transportation stations in Zamyn-Uud soum

PPP arrangements allowable under the law

- Build-operate-transfer (BOT)
- ~~Build-transfer (BT)~~
- Build-own-operate (BOO)
- Build-own-operate-transfer (BOOT)
- Build-lease-transfer (BLT)
- Design-build-finance-operate-transfer (DBFOT)
- Renovate-operate-transfer (ROT)

DH Infrastructure
ECONOMICS & FINANCE

Aqaba Special Economic Zone (Jordan): Success Factors

Government support

- Flexibility and clear legislative framework
- Readiness to create tax exemptions, special laws…etc.
- Investor should feel welcome and safe

Risk mitigation

- Clear risk and fair risk distribution between public and private partner
- Risk borne by the private partner balances with project benefits and costs

Bankability

- Make as financially/commercially attractive as possible
- Make as environmentally/socially attractive as possible

Simplicity

- Public partner demands should be clear and consistent throughout lifecycle of deal

Source: https://unece.org/fileadmin/DAM/ceci/documents/2017/PPP/Forum/Case_Studies_Compendium.pdf

APPENDICES

Case Studies of PPPs in Special Economic Zones

DH Infrastructure
ECONOMICS & FINANCE

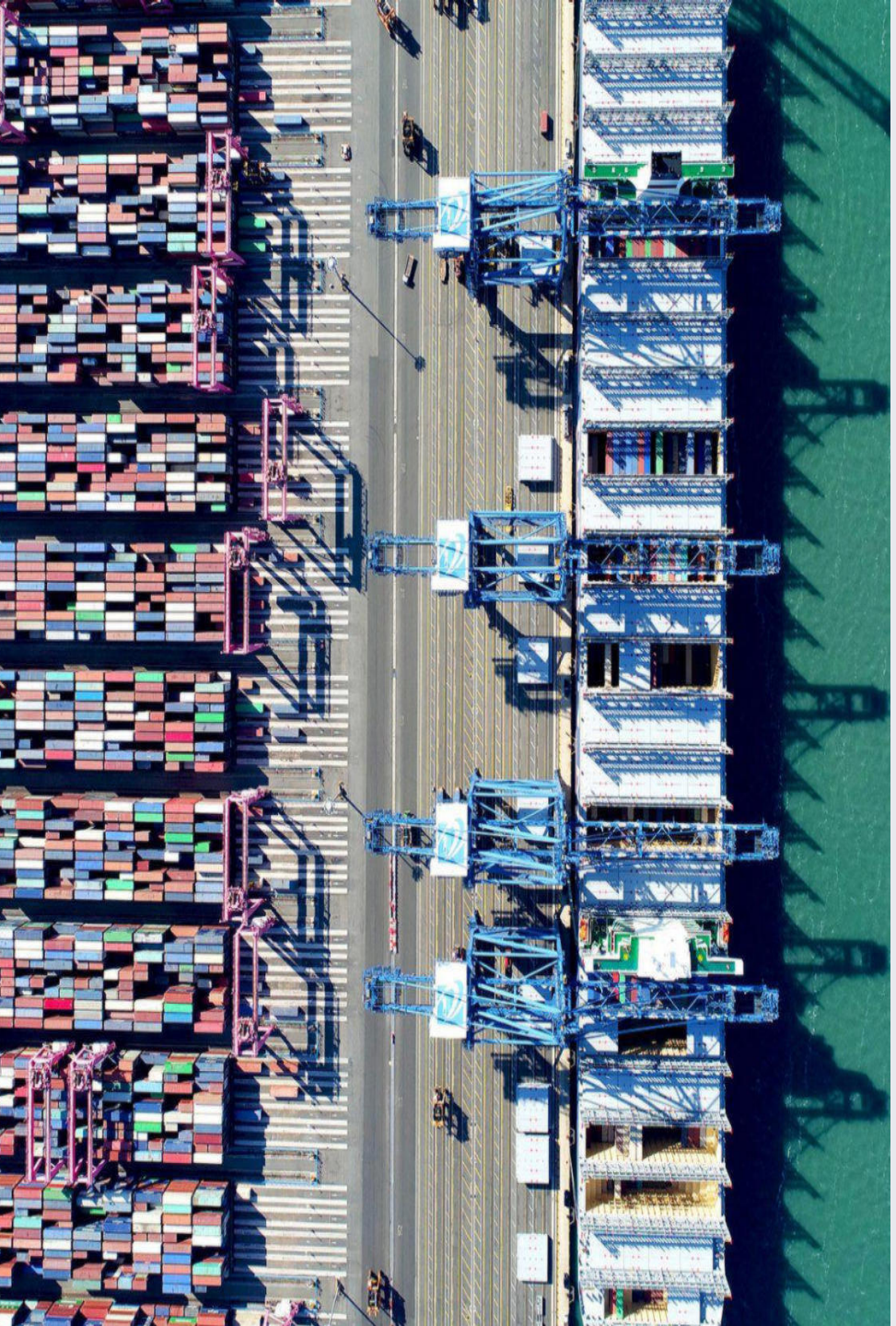
Busan New Port in South Korea: Context

Setting

- Established in 2003; began operations in 2006; Busan New Port incorporated into Busan-Jinhae FEZ in 2020, making it the largest free trade port in South Korea (2.83 million m2)
- Capital structure: equity/debt/construction subsidy = 20%/55%/25%

Contracts

- All 19 PPP port projects in the country under BTO scheme
- Government provided construction subsidy and financial support for the construction of basic harbor facilities, access transport facilities (roads and railroads), and basic infrastructure facilities in the hinterland industrial area
- Equity holdings by large Korean contractors, such as Samsung, Hanjin, Kumho, and Daewoo and financial institutions
- DP World, a global port developer and operator, holds a 25% equity stake in the port's operation
- Ownership 50/50 split with Hyundai Merchant Marine and PSA International as of 2019



DH Infrastructure
ECONOMICS & FINANCE

Busan New Port in South Korea: Construction and PPP

Phase 1 (1997-2006): Development of new port

- Goal to expand deficient harbor facilities at existing ports in Busan and establish a logistics hub in Northeast Asia
- Project awarded to a consortium of 11 Korean contractors led by Samsung (total cost W1,648 billion)
  - Constructed 1.49km of breakwater and 600m of berth (KRW123.3bn)
  - Dredging soil ground revetment construction (Phase 1: KRW251.3bn, Phase 2: KRW245.8bn)
  - Constructed wharf, pier, entrance passage (KRW80bn)
  - Adjacent road (KRW109.2bn)

Phase 2-3 (2011-2012): Development of container terminal

- 29-year concession from South Korea's Maritime Affairs and Fisheries Ministry
  - To design, build, finance and maintain four 50,000-ton berths in a 1,400m-long terminal with an annual capacity of 2.7 million teu (Area of 840,000m2, cost KRW865bn)
  - Unlike most other South Korean PPI deals, the concession comes without government revenue guarantees, only termination guarantees.
  - Maintained and operated by BNCT Co., Ltd
- Shanghai Zhenhua Heavy Industries completed a 38 rail-mounted crane project

DH Infrastructure
ECONOMICS & FINANCE

Busan New Port in South Korea: Objectives, Results, and Success Factors

Results

- Busan New Container Terminal (Busan 2-3 port) achieved freight volume target 2 years after beginning operation in 2012
- Fifth busiest container port in the world
- For phase 2-3, a 6.26% rate of return was established in the 2006 concession agreement

Success factors

- Decision to invest based on rigorous analysis of the 1st shareholder using its global port network (9 ports)
- Shipping companies, terminal operating companies participated as shareholder (ideal shareholder structure)
- Transparency and good governance in appointing management (CEO and Marketing Director)
- Strategic location of Port (Busan being the hub port of Korea)

DH Infrastructure
ECONOMICS & FINANCE

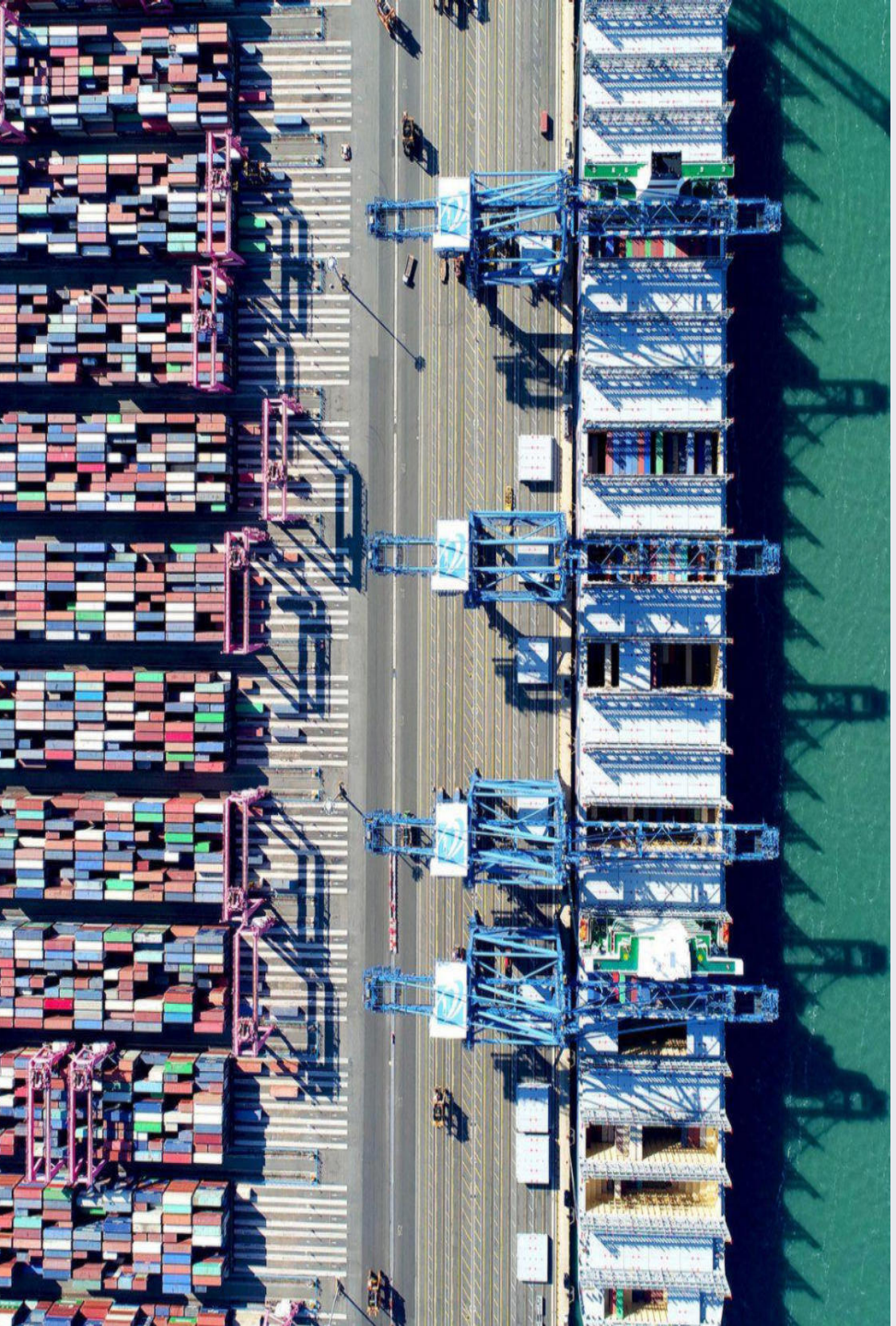
Bejaia International Container Terminal in Algeria: Context

Setting

- First private port PPP in Algeria
- In its fourteenth year of collaboration
- Located in in a small City of about 200,000 people
  - The port serves key sectors in sugar, consumption products and industrial goods

Contracts

- Domestic partner: EPBéjaia
- Foreign partner: Portek Singapore
- Joint Venture (JV) in which the Government via EPB holds a majority stake but gives the management control to a private entity, Portek International Pte Ltd (PIPL)
- 20-year concession starting from 2006 (21 M$)
- EPB invested in infrastructure upgrading via a soft loan from PIPL.
- PIPL invested in modern container handling equipment, IT system and management expertise of International standard to operate the facility
- The investment in development of the Port facility is internally funded by private investment with pay-back from the business. The Government does not require to invest incrementally into the business as we have a re-investment plan whereby we allocated a portion of the profit on an annual basis. The rest are distributed as dividend between the shareholders which is the Government.



DH Infrastructure
ECONOMICS & FINANCE

Bejaia International Container Terminal in Algeria: Construction and PPP

Phase 1 (1997-2006): Development of new port

- Goal to expand deficient harbor facilities at existing ports in Busan and establish a logistics hub in Northeast Asia
- Project awarded to a consortium of 11 Korean contractors led by Samsung (total cost W1,648 billion)
  - Constructed 1.49km of breakwater and 600m of berth (KRW123.3bn)
  - Dredging soil ground revetment construction (Phase 1: KRW251.3bn, Phase 2: KRW245.8bn)
  - Constructed wharf, pier, entrance passage (KRW80bn)
  - Adjacent road (KRW109.2bn)

Phase 2-3 (2011-2012): Development of container terminal

- 29-year concession from South Korea's Maritime Affairs and Fisheries Ministry
  - To design, build, finance and maintain four 50,000-ton berths in a 1,400m-long terminal with an annual capacity of 2.7 million teu (Area of 840,000m2, cost KRW865bn)
  - Unlike most other South Korean PPI deals, the concession comes without government revenue guarantees, only termination guarantees.
  - Maintained and operated by BNCT Co., Ltd
- Shanghai Zhenhua Heavy Industries completed a 38 rail-mounted crane project

DH Infrastructure
ECONOMICS & FINANCE

Bejaia International Container Terminal: Objectives, Results, and Success Factors

Objectives

- Expand the coverage to benefit the Central-East of Algeria including the Inland regions Results

Results

- In the first decade of the collaboration, the port grew the container volume by almost 3 times and employment has increased by 4 times.
- Transfer of management expertise, which covers all level of the workforce has resulted in deployment of 2 expatriates out of a total workforce of 600 people only. Our current CEO is an Algerian..
- PPP participation has raised the productivity of the port operation by at least 3-fold

Success factors

- The success of this venture can be attributed to a good working relationship between EPB and Portek in which the Government is supportive of PIPL's implementation of business plans including but not limited to assisting in getting Governmental approval, promoting best practices and enhancing strong labour union relationship

Examples of PPPs in FEZs: Jebel Ali Port Zone (UAE)

- All seven emirates have or are developing SEZs
- Jebel Ali Port Zone (JAFZA) is the most successful in the UAE, established in 1985
  - *Successful due to the port infrastructure and logistics facilities*
  - *Has boosted economy of Dubai and UAE*
  - *Size: 1.58 million sqm in combined facilities (1.5 million sqm plots; 8,800 sqm office/workstations; and 15,6000sqm of warehouses)*
  - *Facilitated trade worth $93 billion in 2018*

Private sector involvement

- *Private company DP World provides advisory services, master planning, and O&M*
- *Private company Netherlands' Bam was selected for construction of a road segment*

DH Infrastructure
ECONOMICS & FINANCE

Examples of PPPs in FEZs: Aqaba Special Economic Zone (Jordan)

- Aqaba Special Economic Zone (ASEZ) was launched in 2004 and is jointly owned in a joint venture partnership by the Central Government of Jordan and the Aqaba Local Government (ASEZA).
- The private company Aquaba Development Corporation (ADC) is mandated to operate and regulate the zone.
  - *Owns Aqaba's seaport, airport and strategic parcels of land.*
  - *Has development and management rights for these assets and key infrastructure and utilities.*
  - *Mandated to develop ASEZ through building new or expanding existing infrastructure and the required superstructure, creating business enablers for ASEZ and managing or operating its key facilities.*

Successful Port PPPs	Total investment (JD)
Aqaba Container Terminal (REFOT)	800M
Rock Phosphate Terminal (BOT)	170M
Industrial Terminal (REFOT)	70M
Oil Terminal (BROT)	70M
Marine Services (EOT)	20M
Successful Airport and Logistics PPPs	**Total investment (JD)**
ANREPCo. (Warehousing, LI) (LOT)	65M
Aqaba Logistics Village (Concession)	28M
Al-Baddad (AC Maintenance) (BOT)	28M
Aqaba Airports Company (MA)	15M
National Air Services (Air Cargo EOT)	5M

DH Infrastructure
ECONOMICS & FINANCE

Examples of PPPs in FEZs: Aqaba Special Economic Zone (Jordan)

- Offers a range of PPP models and benefits for investors.
  - *Tax exemptions, profit and employment benefits, ownership and sale benefits.*
- Contracts range from 2 years (management contract) to 45+ or permanent (sale).
- Several successful infrastructure PPPs have been completed.

Examples of PPPs in FEZs: Khorgos SEZ and Inland Container Depot (Kazakhstan)

Strategically situated on the China-Kazakhstan border

- The primary transit point for trans-Eurasian cargo trains, the Khorgos Gateway connects Kazakhstan to China by rail
- The cities on either side of the border (Khorogos and Khorogas) operate different gauge railway lines, meaning that cargo crossing in or out of China needs transferring to different wagons

- **Private sector involvement**

- The private company DP World is investing in infrastructure in the SEZ recently signed in Khorgos
- DP World provides management services to SEZ and Depot
- In 2018, it planned to acquire a 51 percent stake in the Khorgos SEZ

Examples of PPPs in FEZs: Port of Aktau SEZ

- A fledgling SEZ in a position to enable cargo shipping on the "New Silk Road"
  - Shipping products by rail between Europe and China
  - Shippers are able to avoid – and bypass – Russian sanctions en route
  - Size: 2000 hectares
  - Investors can set up manufacturing and warehousing operations without corporate income tax, land tax, property tax, VAT on imported goods, customs duties, and rent
- **Private sector involvement**
  - The private company DP World is investing in infrastructure in the SEZ recently signed in Aktau
  - DP World provides management services to the Port of Aktau, Kazakhstan's main cargo and bulk terminal on the Caspian Sea
  - In 2018, the company planned to acquire a 49 percent in the Aktau SEZ