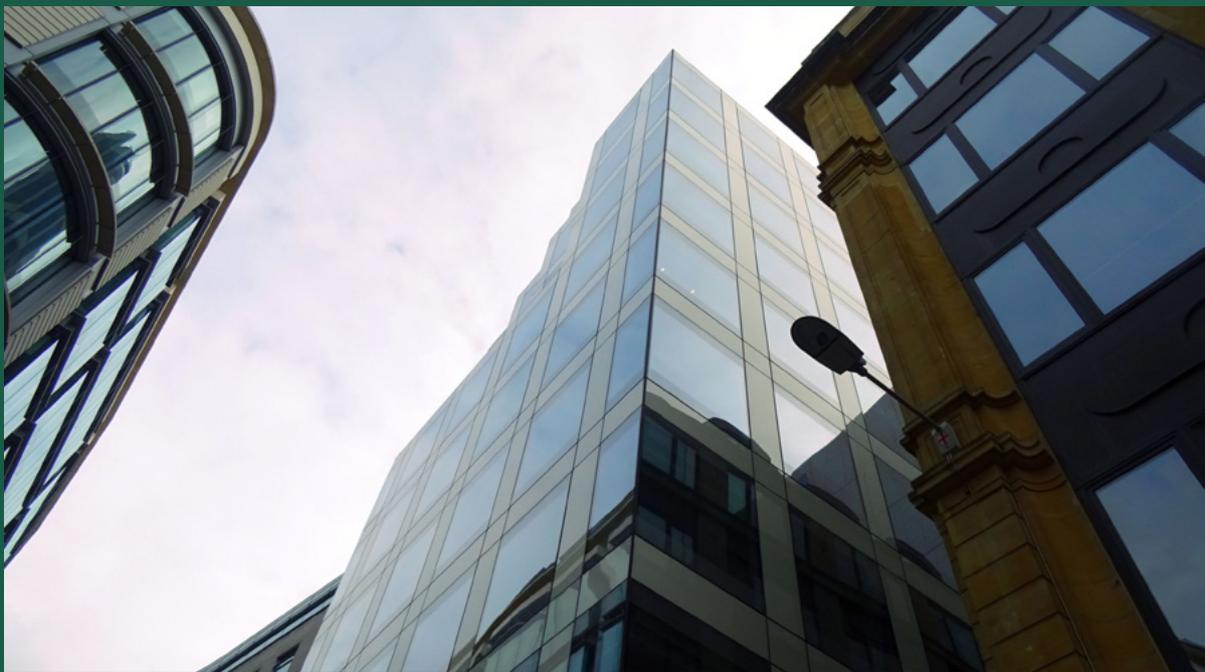

QUARTERLY PPP DEAL UPDATE

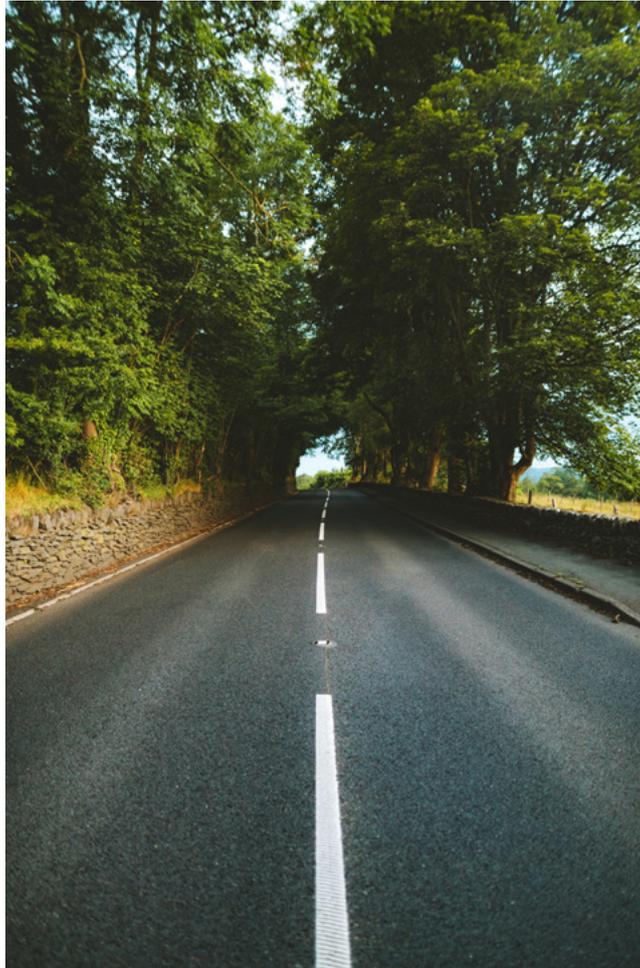
— 2Q 2022 —




WAPPP

InfraPPP

DISCLAIMER



This document has been prepared by [WAPPP](#) (World Association of PPP Units & Professionals) and [InfraPPP](#) (part of IMC Worldwide, a DT Global Company), using the information from the InfraPPP database of PPP projects.

This research includes substantial market information and analyses on PPP projects recorded in the InfraPPP's proprietary databases.

Though the aim of this publication is not to be exhaustive of all the deals in place, we aim to highlight interesting facts and trends that would prelude future developments. Feedback and contributions are welcome.

1. INTRODUCTION

InfraPPP is the leading online platform in Infrastructure Finance and Investment, with databases of projects (>6,290), M&A transactions (>1,840), global infrastructure funds (>730) and PPP-related companies. This report was prepared based on the InfraPPP Database for the 2nd Quarter of 2022. It covers global public-private partnerships in the infrastructure market, with a specific focus on mega-projects with high investment amount.

WAPPP and InfraPPP aim here to highlight the evolution of the market over the quarter, focusing on the overall

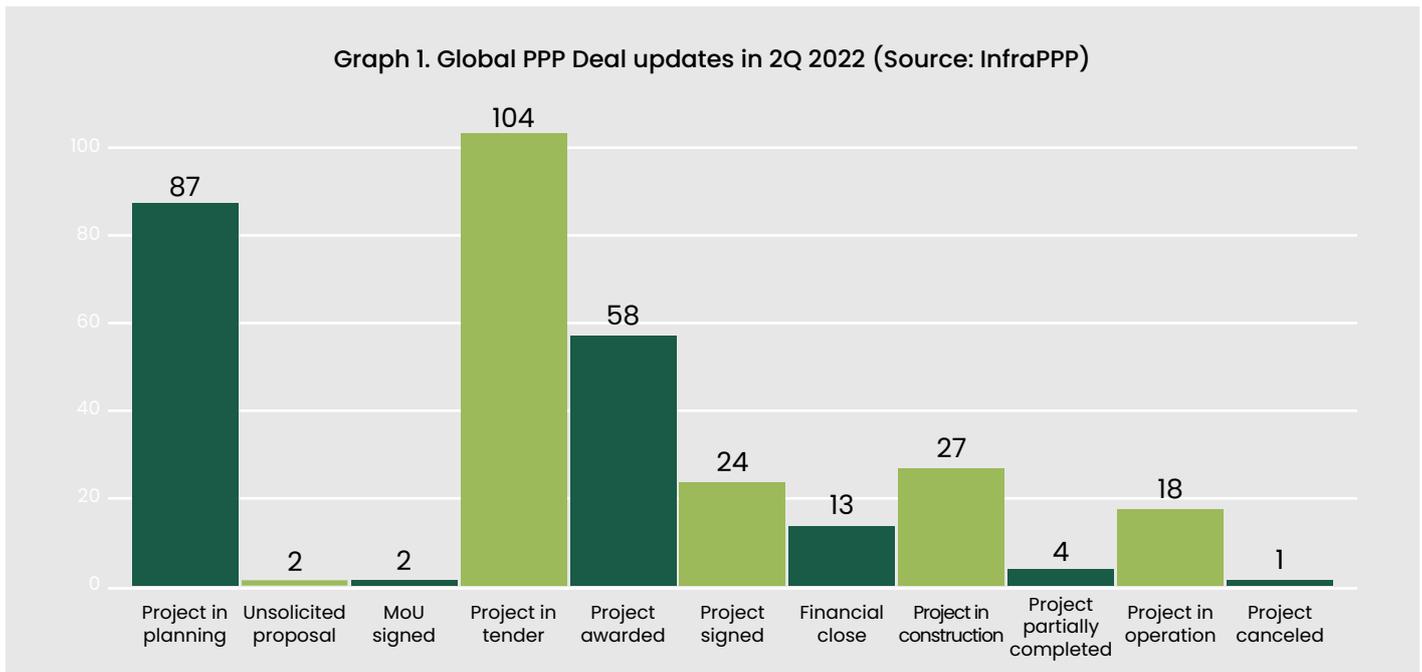
developments registered globally and across all sectors. Our attention will center on the deal pipeline to highlight future market opportunities and on cancelled projects for the enhancement of best practices.

The basis of this publication is the Project Update database compiled by InfraPPP; which records the deal updates on a daily basis.



2. GLOBAL DEAL UPDATES OF 2Q 2022

Graph 1. Global PPP Deal updates in 2Q 2022 (Source: InfraPPP)



The second quarter of 2022 sees an unfortunate combination of persistent geopolitical instability, hikes in commodity prices, and termination of low rates and quantitative easing. Repercussions have been felt across financial markets, leading to downward revisions to growth projections over the short term. On top of that, the fiscal outlook for most governments, at least among developed economies, is sharply deteriorating both in terms of worsening indebtedness ratios and more expensive funding costs. In this overall gloomy picture, nevertheless, the PPP market looks extremely vivid and does not seem to highlight any softening. Namely, after a first quarter of record activity (371 updates), also the last three-months confirmed this resilience with as much as 340 updates on deals..

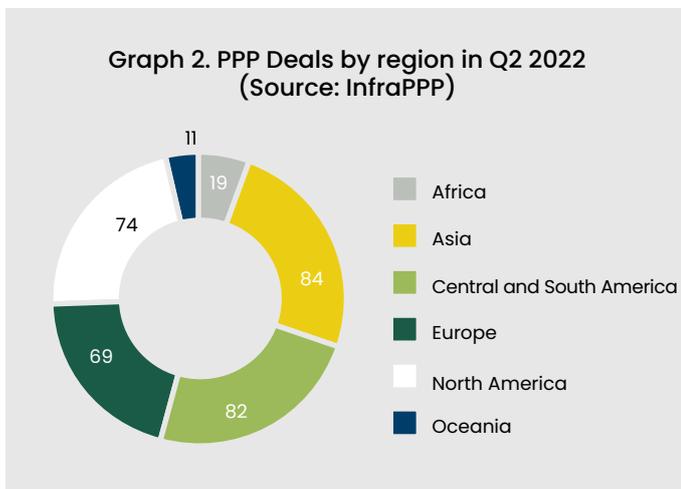
The reason for the positive assessment on the development of the PPP markets resides on two features. Firstly, only one deal was reported as officially cancelled.

In the 1Q 2022 edition of this publication, we mentioned the possibility that deals had been simply put on hold instead of foreclosed, but this option is less and less likely as some of them might begin to hit the maximum completion delays or operational cumulated losses triggering termination clauses. Instead, another option we considered was that the low number of foreclosures originated from a potential renegotiation of the deals to avoid costly penalties. We do retain this latter point as valid also in 2Q 2022, though we are gradually considering a more genuine resilience of the PPP market itself.

Secondly, the pipeline of deals remains heavy with 277 updated reported in the pre-financial closure stage. Despite a drop in unsolicited proposals and MoU signed, the projects “next to financial closure” are abundant (i.e. projects in tender, awarded or already signed) and would grant a flow of deals starting the construction phase in the short term.

3. DEAL SEGMENTATION

3.1. BY REGION



Project updates are equally distributed between Asia, Central and South America, Europe and North America. For reasons of either economic size or difficult access to finance, Africa and Oceania lag far behind.

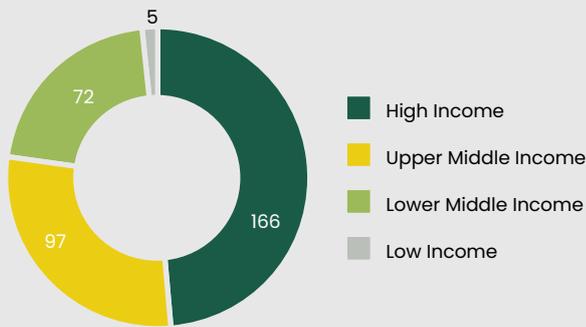
The most active country in disclosing updates was by far the United States (55), with 7 deals above USD 500mn. A very interesting development relates to the expansion and refurbishment of the New Terminal One of the JFK Airport in New York covering an area of 2.5mn sq ft. The deal reached financial close in June 2022 for an amount of USD 9,5bn, with construction and exploitation expected to run until 2060.

The other 3 areas mentioned above see the strong presence of India (16 updates), Brazil (25 updates) and UK (19 updates). In India, the attention is again on the Mumbai-Ahmedabad High Speed Rail (MAHSR) project which we discussed in the previous quarterly. One of the features and reason for structural delays on this deal was in fact that the local authority progressed slowly in the land acquisition and in May, it finally awarded the construction of one of the last tranches missing in the Gujarat region.

It has to be underlined, however that the number of worldwide updates not reporting a volume for the deals is as high as 53%.

3.2. BY INCOME LEVEL

Graph 3. Deal updates by Income Level of countries in Q2 2022 (Source: InfraPPP)



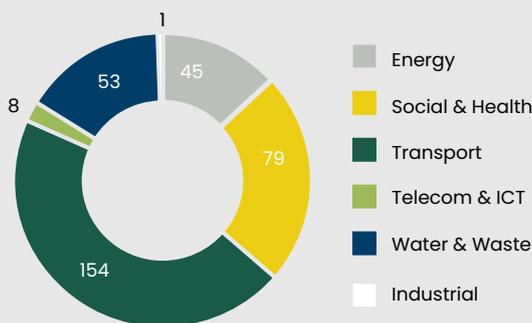
High income countries continue to cover over half of the total updates received in the quarter, with US playing a crucial role as earlier mentioned.

Interestingly, though the low income countries continue to lag the rest of the world in terms of projects updated, their activity is focused on transport or energy, but only within the renewable subsector. The same trend is shared by Lower middle income countries, where Unfortunately they are not reported to develop new projects on social infrastructure, where a large infrastructure gap exists.

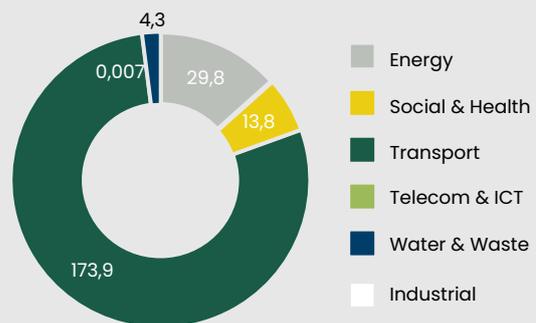
In the quarter, 6 of the 340 updates relate to cross country projects, and in all cases the parties involved belong to High or Upper-middle income countries.

3.3. BY SECTOR

Graph 4. PPP Deals by sector in 2Q 2022 (Source: InfraPPP)



Graph 5. PPP Deal by sector with recorded values (USD bn) in 2Q 2022 (Source: InfraPPP)



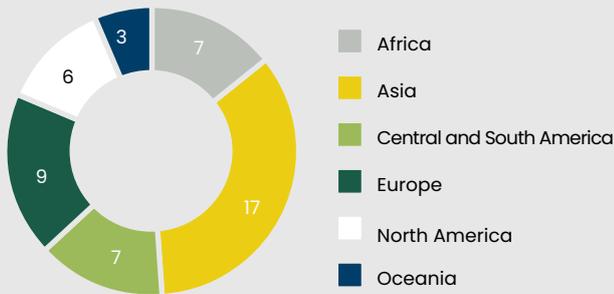
Transport remains the major sector for PPP in 2Q 2022, both in terms of number of deals and volumes. Social & health instead, shows a particularly low amount of investments in USD terms, but this is due to the very small average size of the projects. One exception is the Melbourne PPP for the development of a mixed-use development of a Research and Innovation Precinct, sports research facilities, Health

and Wellbeing Hub as well as commercial, retail and residential areas. Belonging to La Trobe University, the project is located in the 235-hectare Bundoora campus and estimated at USD 3.8bn.

Overall, as much as 158 of the reported 340 deal updates are incomplete on the deal size.

3.4. SECTOR IN FOCUS: ENERGY

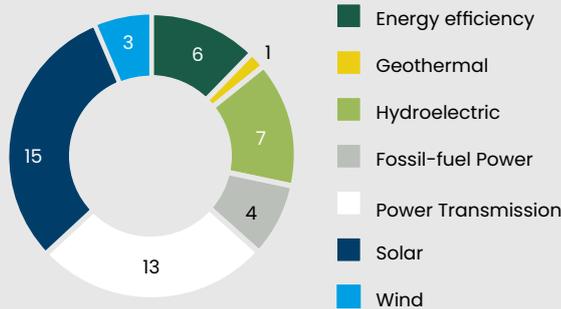
Graph 6. Share of project updates in Energy sector by region in 2Q 2022 (Source: InfraPPP)



The second quarter of 2022 saw the rapid increase in energy prices, driven by the geopolitical tensions in Ukraine. Rising fossil fuel prices act generally as a strong trigger towards decarbonization and development of renewable energy sources, as the high costs in oil and gas discourage their consumption and make more costly investments profitable. The persistence of high energy prices across the quarter drove market focus on import levels and prices, and the repercussions that this exert on growth and inflation.

The PPP market in the energy sector reflects this general trend: updates on fossil fuel deals and more specifically oil and gas are largely outnumbered by the ones based on renewable energies, especially solar and power transmission. Most interestingly, the projects classified as “power transmission” mostly relate to transmission of electricity from sustainable sources and are spread across all continents.

Graph 7. Number of projects by Energy subsector in 2Q 2022 (Source: InfraPPP)



Persistency of high fuel prices is expected to become a strong driver for future renewal and energy transmission projects development, however this might take some quarters before the deals are planned, tendered, awarded and finally signed.

3.5. DEAL IN FOCUS: MPHANDA NKUWA HYDROELECTRIC PROJECT¹

Project : In May, the International Finance Corporation (IFC) and the Ministry of Mineral Resource and Energy (MIREME) of Mozambique have entered into a collaboration to develop a 1,500 MW hydroelectric

power project and its associated transmission facilities on Zambezi River, Mozambique. The estimated size of the investment is US\$4.5 billion, covering a dam, and a power-station. The dam would create a water reservoir by 100sq km, extended from the existing Cahora Bassa Dam 60km upstream. The power generation facility would be coupled to a high voltage transmission

¹ <https://www.infrappworld.com/update/ifc-signs-deal-to-support-15-gw-hydropower-project-in-mozambique>



infrastructure of 1,300 Km from the project site to Tete, the province capital, to Maputo, Mozambique's capital, and the further connection of Maputo to the South Africa Grid. The project is scheduled for financial closure in 2024 and completion in 2031.

Purpose: The Hydropower Project will have the capacity to supply clean power to meet the growing domestic demand in Mozambique and is in line with the government's plan to provide universal access to electricity across the country by 2030, stimulate industrialization and boost growth through reliable infrastructure. Owing to power trading arrangements coordinated by the Southern African Power Pool (SAPP), the surplus electricity generated by the Mphanda Nkuwa Hydropower plant will be exported to the neighbouring countries, transforming the country into a regional energy hub, accelerating the clean energy transition in the area and combating climate change.

Partners: as of the latest news, the project should be run via a SPV comprising the state-owned Electricidade de Moçambique (EDM), the operator of the 2,075MW Cahora Bassa hydropower plant Hidroelétrica de Cahora Bassa (HCB), and a strategic partner yet to be selected on a limited recourse project finance basis. A consortium of four companies, including the international financial advisory services company for the infrastructure sector Synergy Consulting, the Australian engineering company Worley Parsons, and

law firms Baker McKenzie and HRA Advogados, was selected to provide consulting advisory services for the project. COBA Group, IMPACTO Group, and ERM are responsible for the feasibility and environmental study of the hydroelectric power project.

Financing: The financing is not defined yet, however IFC will work with the government to structure the project, with the goal to help mobilize competitive private investment, reaching commercial operation for the port. IFC will be responsible for the review of technical design, environmental safeguards, as well as commercial and financial structuring. Further advisory services are provided by African Development Bank (AfDB).

Impact: This mega project, necessary for Mozambique's energy development, is controversial because of its environmental and social impact. The Mphanda Nkuwa dam reservoir is expected to relocate 1,400 families and impact the livelihoods of 200,000 people. The director of the Nkuwa Hydroelectric Project Implementation Office (GMNK) retains that "AfDB will ensure that international environmental, social and governance standards are respected. It will also ensure that associated standards are met during development, and that the project is attractive to developers, financiers and reputable investors to ensure competitive and low-cost energy for Mozambique and Southern Africa".

4. PROJECTS IN FOCUS IN 2Q 2022

4.1. MOST ACTIVE COUNTRIES

Table 1. Most active countries by updated deals in 2Q 2022
(Source: InfraPPP)

COUNTRY	NUMBER OF UPDATES	SECTOR
USA	55	Transport · 20 Social&Health · 18
Brazil	24	Transport · 12 Social&Health · 7
Colombia	20	Transport · 18 Water & Waste · 3
UK	19	Social&Health · 13 Transport · 3
India	16	Energy · 8 Transport · 7

4.2. LARGEST CAPITAL VALUE



BRISTOL CITY LEAP ENERGY PARTNERSHIP

Country	Stage
UK	Awarded
Subsector	Value
Renewable Energy	USD 14.8B

The Bristol City Leap is a project to deliver a zero-carbon, smart energy city by 2030. The project will involve building a citywide energy system that will protect the environment and improve the quality of life for people in local communities.



AUCKLAND LIGHT RAIL PPP PROJECT

Country	Stage
New Zealand	In planning
Subsector	Value
Railway	USD 9.12B

Development of a 24km long light rail network in Auckland, New Zealand. The light rail will feature 18 stations and stops from the City Centre to Māngere and the airport. The light rail will be running in a tunnel from Wynyard Quarter to Mt Roskill after which it comes to the surface and runs alongside the SH20 motorway to the airport.



DHAKA TO CHITTAGONG HIGH SPEED RAIL PPP PROJECT

Country	Stage
Bangladesh	Project in Planning
Subsector	Value
Railway	USD 9.8B

Development of a 224.6 km long high-speed rail infrastructure connecting Dhaka to Chittagong in Bangladesh. The rail line will also provide connections to Narayanganj, Cumilla and Feni. The railway aims to reduce the travel time to 55 minutes instead of the current travel time of 6 hours. It is expected to boost the economy of Bangladesh, facilitating improvements in existing trade conditions.



JFK AIRPORT REDEVELOPMENT PPP PROJECT (NEW TERMINAL ONE) IN NEW YORK

Country	Stage
USA	Financial Close
Subsector	Value
Airport	USD 9.5B

Redevelopment works at John F Kennedy international airport located in Queens borough of New York, USA. The scope of work includes the design and build of new parking garages, airport terminals and substations, as well as the construction of elevated roadways, utility infrastructure improvements, airfield modifications including work within active taxiways, demolition of buildings, extensive maintenance of traffic and new terminal construction.

4.3. TENDER STAGE ABOVE USD500 MN



EGLINTON CROSTOWN WEST EXTENSION (ECWE) ADVANCE TUNNEL IN TORONTO

Country	Value
Canada	
Subsector	USD 4.4B
Railway	

The ECWE is the first phase of work for the 9.2 km extension of the Eglinton Crosstown LRT in the greater Toronto area. The extension will run mostly underground, westward from the future Mount Dennis station to Renforth Drive. ECWE will connect to different transit services, including the GO Kitchener Line and UP Express train service at Mount Dennis, TTC bus services at transit stops in Toronto, and GO and MiWay bus services via the Mississauga Transitway.



MRT ORANGE LINE (WEST SECTION) PPP PROJECT IN BANGKOK

Country	Value
Thailand	
Subsector	USD 4.09B
Railway	

Development of the MRT Orange Line Project in Bangkok. The line has a total length of 39.6 km, divided into two sections, the West Section (Bang Khun Non- Thailand Cultural Centre Section) and the East Section (Thailand Cultural Centre -Min Buri (Suwinthawong)). The project route includes a 27 km long underground structure and an 8.9 km long elevated structure with 28 stations, of which 21 are underground stations and 7 are elevated stations.



GREEN LINE STAGE 1 LIGHT RAIL TRANSIT (LRT) PROJECT IN CALGARY

Country	Value
Canada	
Subsector	USD 4.04B
Railway	

Development of the Green Line, comprising a 20 km 14-station light rail transit (LRT) system in Canada. The first phase is expected to run from 16 Avenue N in Crescent Heights to 126 Avenue SE in Shepard, running through downtown Calgary. The first stage requires the construction of eight major bridges and four tunnels, including a 4 km tunnel under the city centre, from 20 Avenue N to Macleod Trail.



UNIVERSITY CITY OF THE FUTURE PPP PROJECT IN MELBOURNE

Country	Value
Australia	
Subsector	USD 3.86B
Education	

The project involves the mixed-use development of a Research and Innovation Precinct, sports research facilities, Health and Wellbeing Hub as well as commercial, retail and residential areas in Melbourne, Australia. Belonging to La Trobe University, the project is located in the 235-hectare Bundoora campus.

4.4. PLANNING STAGE ABOVE USD500 MN



AUCKLAND LIGHT RAIL PPP PROJECT

Country	Value
New Zealand	
Subsector	USD 9.13B
Railway	

Development of a 24km long light rail network in Auckland, New Zealand. The light rail will feature 18 stations and stops from the City Centre to Māngere and the airport. The light rail will be running in a tunnel from Wynyard Quarter to Mt Roskill after which it comes to the surface and runs alongside the SH20 motorway to the airport.



NOVA FERROESTE CARGO CORRIDOR PPP PROJECT

Country	Value
Brazil	
Subsector	USD 6.89B
Railway	

Development of a 1,567-km long rail corridor from Paranaguá to Maracaju with a branch line between Cascavel and Foz do Iguaçu in Brazil, including a 263-km branch between Cascavel and Chapecó. The Nova Ferroeste project will help to collect cargo from Paraguay and Argentina.



MPHANDA NKUWA HYDROELECTRIC PROJECT IN MOZAMBIQUE

Country	Value
Mozambique	
Subsector	USD 4.5B
Hydroelectric	

Development of Mphanda Nkuwa hydroelectric plant in Tete Province of Mozambique. It will be located on the Zambezi River, approximately 61 km downstream of the Cahora Bassa Hydroelectric Power Plant. The Mphanda Nkuwa plant will have capacity to produce 1,500 MW. The scope of works also includes the construction of a 1,300 km long transmission line to facilitate electric power transmission from Tete to Maputo.



RING ROAD NO.4 PPP PROJECT IN NORTHERN VIETNAM

Country	Value
Vietnam	
Subsector	USD 3.7B
Road	

Development of a 112.8-kilometer-long ring-road 4 in Northern Vietnam. The road covers three northern provinces of Hanoi, Hung Yen, and Bac Ninh with a connecting route of 9.7-kilometers long. The road goes through 14 districts, connecting the Hanoi metropolitan area, Vinh Phuc, Hung Yen, Bac Ninh, Hai Duong, Ha Nam, Hoa Binh, Bac Giang, Phu Tho, and Thai Nguyen.

4.5. FINANCIAL CLOSURES



NORTH-SOUTH COMMUTER RAILWAY (SOUTH LINE) PPP PROJECT

Country	Value
Philippines	
Subsector	USD 3.7B
Railway	

Development of the public railway system, which includes the design, construction, installation, commission, and finance of the two railway lines: (1) Commuter Rail from Tutuban, Manila to Calamba, Laguna (56km) including 18 stations; and (2) Long-Haul Rail from Tutuban, Manila to Legazpi, Albay in the Bicol Region (478km).



STAGE 3A GOLD COAST LIGHT RAIL PROJECT IN QUEENSLAND

Country	Value
Australia	
Subsector	USD 0.9B
Railway	

Development of a public transport system for residents and visitors to the Gold Coast in Queensland. The scope of work involves the development of a 6.7-kilometer extension south of the existing G: link network with eight new stations, five additional light rail vehicles, new bus and light rail connections at Burleigh and Miami, and an upgrade of the existing depot and stabling facilities.



MALLA VIAL DEL META ROAD PPP PROJECT

Country	Value
Colombia	
Subsector	USD 0.54B
Road	

Development of a ring road around Villavicencio and the construction of a two-lane road between Ciudad Porfía and Acacias and between Río Ocoa and Apiay, the upgrade of the road between Puerto Gaitán and Puente Arimena, and the maintenance of 270 km of the existing road.



NORTHEAST BLOCK AIRPORT CONCESSION IN BRAZIL

Country	Value
Brazil	
Subsector	USD 0.46B
Airport	

Expansion, maintenance and operation of six airports in the north-east of Brazil: Recife (Pernambuco), Maceió (Alagoas), Aracaju (Sergipe), João Pessoa (Paraíba), Campina Grande (Paraíba) and Juazeiro do Norte (Ceará). All airports must be upgraded to be capable of handling A318, Boeing 737-700 or Embraer regional jet aircraft with instrument landing systems

4.6. CANCELLATIONS



MARINA KALAMARIA OPERATION PPP PROJECT IN THESSALONIKI

The Hellenic Republic Asset Development Fund (HRADF) has announced the cancellation of the tender process for the concession of the Marina of Kalamaria port operation and maintenance².

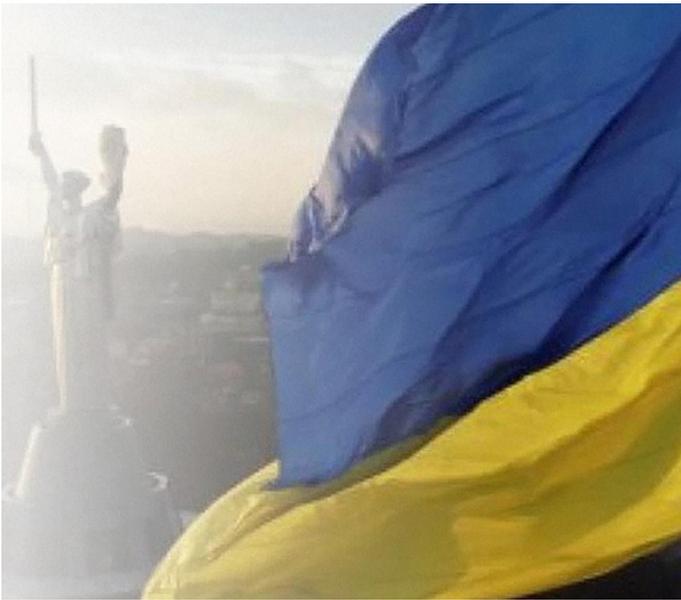
Country	Subsector
Greece	Port

The project involves the operation and the right to use, operate, manage, and exploit Marina Kalamaria port located in Thessaloniki, the Municipality of Kalamaria, Greece. The port sea area extends to approximately 100,000 sq.m. and can accommodate over 380 yachts of yachts up to 50m in length. The upland area of the marina covers approximately 78,000 sq.m.

² <https://hradf.com/en/hradf-cancels-the-tender-for-the-kalamaria-marina-concession/>



5. PPP DEVELOPMENTS IN UKRAINE



Institutional framework: At present, a fully functioning PPP Agency is established under the Ministry for Development of Economy, Trade and Agriculture. The PPP framework is now complete and operational; its development phase having been supported by international financial institutions and international partners, with contacts to potential PPP partners and contractors grants that it is in line with best international practices. The latest bills regard:

- the implementation of a mechanism for financing long-term direct liabilities related to the availability payment in budget legislation.
- the implementation of an Electronic Trading System (ETS) for concession tenders

- a new methodology of PPP efficiency analysis.

Status of existing PPP deals: the Russian aggression has been destroying infrastructure, with direct losses having already reached more than \$100 billion. Among the damages, Ukraine lost two large concession projects in seaports:

- **Olvia Port PPP Project on the Black Sea:** The winner of the concession tender was QTerminals – one of the leading port operators of the State of Qatar. On August 20, 2020, a concession agreement was signed. On the 1st of December 2021, the integral property complex of SE “Stevedoring company “Olvia” and corresponding property of SE “USPA” were transferred to LLC “QTerminals Olvia” in concession for 35 years.
- **Kherson Port PPP Project on the Black Sea:** The winner of the tender is Risoil-Kherson LLC – a consortium of Petro Oil & Chemicals and Risoil S.A. On the 26th of June 2020, a concession agreement was signed. On the 23rd of December 2021, the transfer of assets of Port Kherson to LLC “Risoil-Kherson” in concession was finalized.

Force Majeure status: The Ministry of Infrastructure of Ukraine confirms the occurrence of Political Force Majeure Event according to the concession agreements on the Kherson and Olvia seaport projects. If, following the occurrence of a Political Force Majeure Event, the Grantor does not succeed in remedying such Political Force Majeure Event within 365 days from the date of receipt of the Political Force Majeure Event Notice by the Grantor, then the Concessionaire shall be entitled to terminate the concession agreement and to receive

Compensation (=Initial cost + Additional expenses + Compensated capital - Insurance amount - Cost of inappropriate / unnecessary assets). Circumstances of Political Force Majeure will operate from 02/24/2022 until their official end, which may be associated with the official termination / cancellation of martial law.

Infrastructure reconstruction and economic recovery in the post-war period: Existing commitments of the government to continue the implementation of PPP projects after the ceasefire include projects in the road sector and concessions of airports, railway stations and seaports among others. Though discussions about a potential financial structure are still premature, the government is aware of the need to keep vigilance against corruption and fund diversions high throughout the reconstruction process and to address financial security to investors and creditors. The latter might take the form of:

- Enabling the provision of grant support during the construction phase (co-financing) and ensuring the effective demand via availability payments that will be made from the Ukraine Solidarity Trust Fund (EU) or trust funds set up by certain countries.
- Political risk insurance (MIGA, etc.)/Political risk insurance fund, covering the risks of terrorist attacks or military action renewal (preferably international) – to provide comfort/confidence that investments will be reimbursed (financed) under any circumstances.
- Developing a system of guarantees for investors and creditors and ensuring the flexibility of processes.

Special thanks to Niko Gachechyladze

Director - The State Organization "Agency for Support Of Public-Private Partnerships"

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**AGENCY ON SUPPORT
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You can see Ukraine PPP Unit session during WAPPP Annual Congress [here](#).



6. CONCLUSION

Activity on the PPP market remains sustained in 2Q 2022, despite widespread uncertainties hinting at a cooling (if not contracting) economic environment worldwide. In the near future, the PPP market is still expected to be supported by the many deals currently reported in pre-financial closure stage that will finally reach the implementation phase.

Over the medium term, as financial market volatility would retrace to normal and the anticipation for monetary policy tightening would correct, governments would benefit from smoother access to financing while still facing needs to support the economy. A natural choice to fund public investments would be the use of PPP instruments, coupled eventually to country risk mitigation features.

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The logo for InfraPPP, featuring the text "InfraPPP" in a white, sans-serif font.

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