
QUARTERLY PPP DEAL UPDATE

— 4Q 2022 —



DISCLAIMER



This document has been prepared by [WAPPP](#) and [InfraPPP](#) (DT Global), 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.

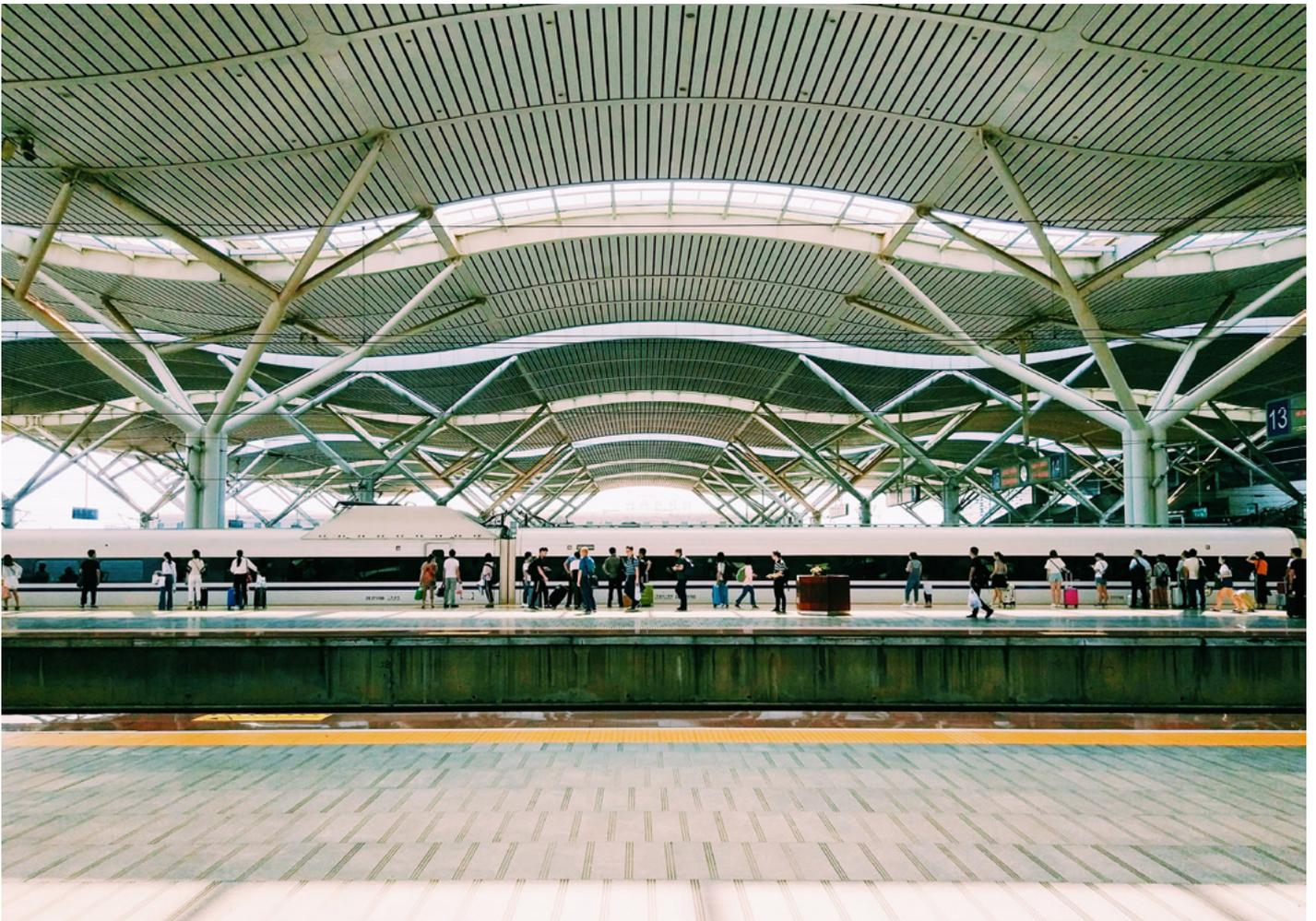
1. INTRODUCTION

InfraPPP (infrappworld.com) is the leading market intelligence platform in Infrastructure Finance and Investment, with databases of projects (>6,410), M&A transactions (>1,930), global infrastructure funds (>750) and PPP-related companies. This report was prepared based on the updates from InfraPPP Database for the 4th 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

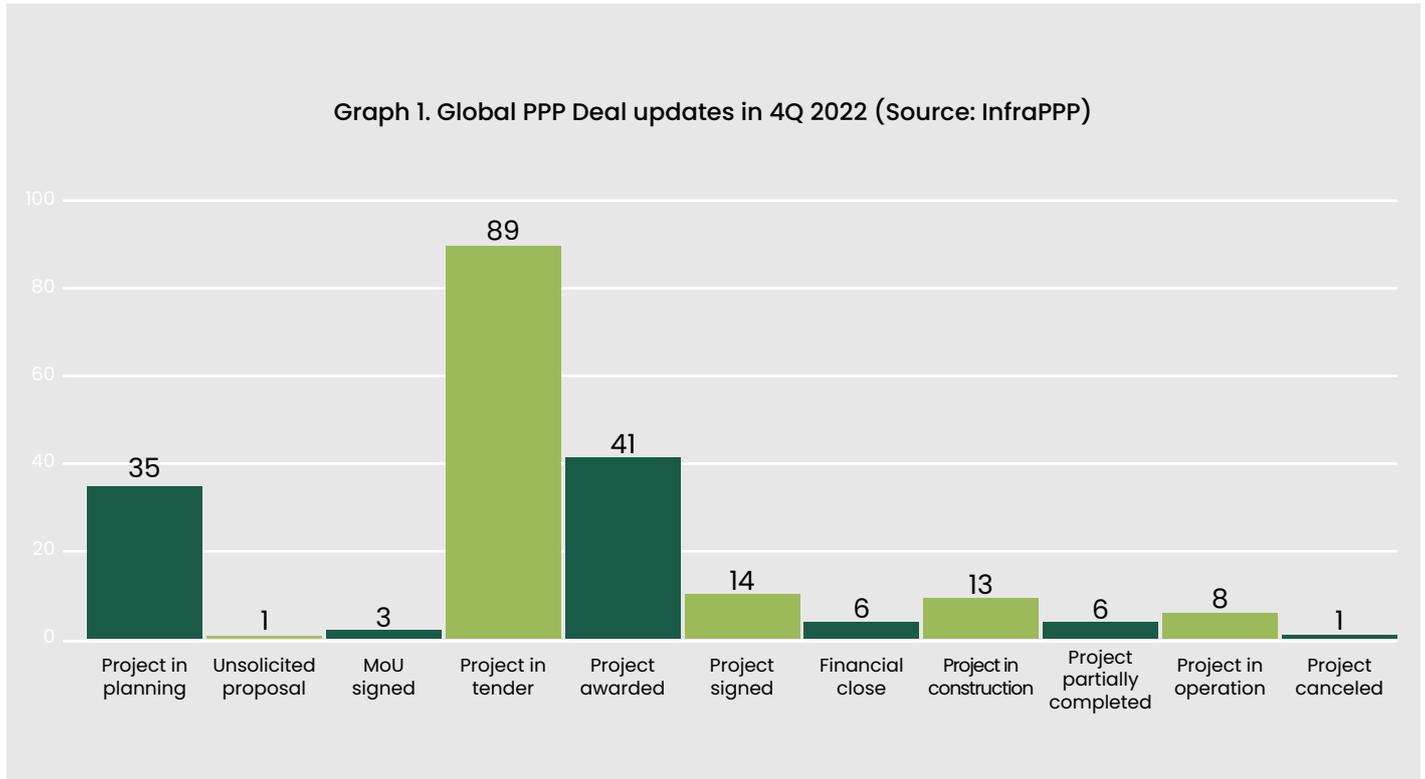
developments registered globally and across all sectors. Our attention will center on the deal pipeline to highlight future market opportunities and on cancelled projects for the enhancement of best practices.

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 4Q 2022

Graph 1. Global PPP Deal updates in 4Q 2022 (Source: InfraPPP)



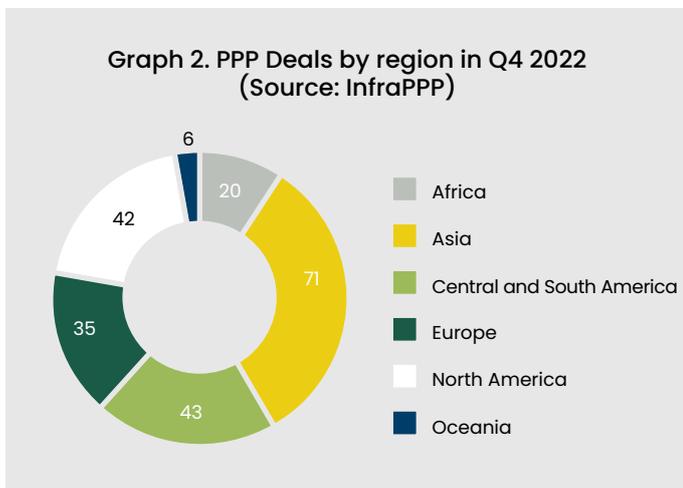
Following on from Q3, geopolitical challenges and market uncertainty continue to be important considerations for investors deciding how and where to deploy infrastructure capital in Q4.

Persistent inflationary pressure, the fallout from the Russia-Ukraine war, aggressive monetary tightening in the US and EU, and the escalating European energy crisis, which has now been exacerbated by an OPEC production cut, all point to a difficult outlook for infrastructure investment.

This has also taken a toll on the number of PPP deals, which declined from 274 in Q3 to 217 in Q4. The number of projects in pre-financial close status has also decreased from 213 to 189. On a positive note, the number of open PPP tenders remains high, with 89 tenders in the current quarter, down slightly from 93 tenders in Q3.

3. DEAL SEGMENTATION

3.1. BY REGION

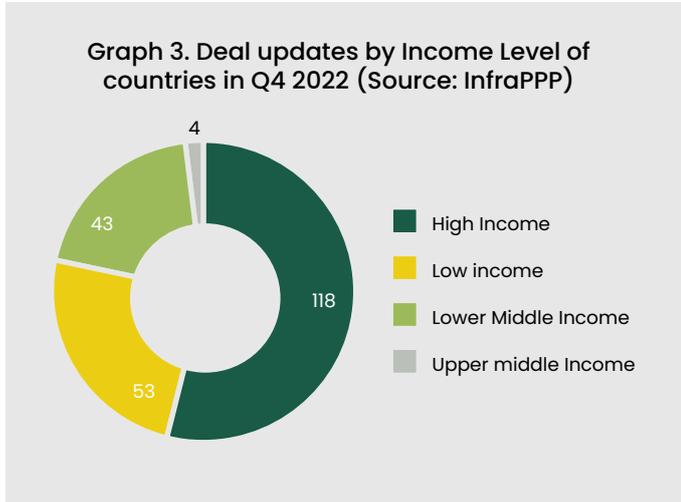


PPP deals decreased the most in Central and South America in this Q4, from 81 to 43 deals. PPP deals in North America were also reduced from 54 to 42. In terms of deal volume, the other regions have remained relatively stable, with Asia leading the way (71 PPP deals). Africa and Oceania are once again falling behind (20 and 6 PPP deals respectively).

United States continues to be the country with the higher number of deals again in this Q4 (21 updates). The biggest active project in the country has been the USD4.9B Automated People Mover (APM) PPP project at Los Angeles Airport. Canada was the second country in number of PPP deals (19), with the PPP contract involving Ontario’s rapid transit line (US\$8.2B) being the biggest active one.

In Asia, India was the most active country (18 PPP deals). Brazil and Paraguay lead in Latin America with 12 deals each, while in Africa, Nigeria ranks first with 6 PPP deals.

3.2. BY INCOME LEVEL

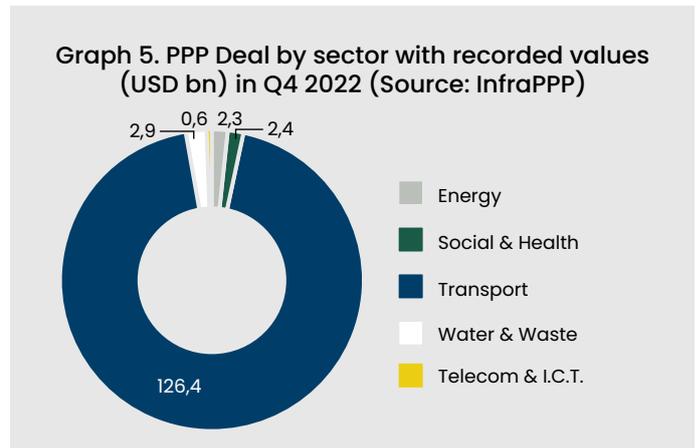
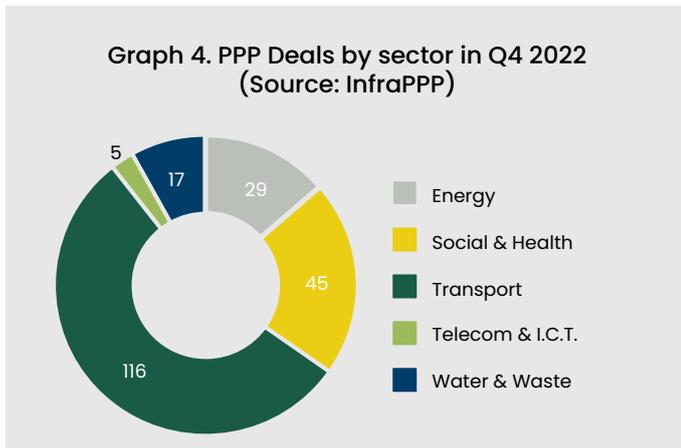


The number of PPP deals continues to be dominated by high-income countries, with the United States and Canada leading this quarter as in the previous one.

Low-income countries continue to lag in terms of project updates, with activity focusing primarily on Transportation and Energy. A remarkable example was the USD450-million concession agreement for the Angolan-Congolese Lobito Corridor Railway, which involves the rail connection of mines in the Democratic Republic of the Congo (DRC) to the Lobito port in Angola.

In this fourth quarter, the majority of projects in low-income countries are in tender. In lower middle-income countries, transportation, social, and health sectors predominate across the majority of project stages.

3.3. BY SECTOR



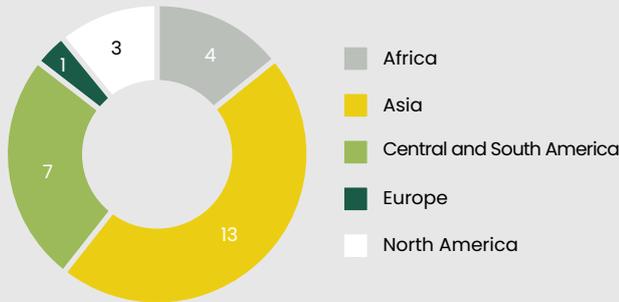
As shown in the charts for this quarter, investment in PPP sectors is significantly unbalanced towards transportation, which has 116 deals totaling USD 126 billion. Although the number of projects in the Energy, Social & Health, and Water & Waste sectors has remained stable, the majority of these projects are in the planning or tender stages, so we cannot yet speak of realized investment in these sectors.

This has severely penalized investment in these sectors.

The only sector that has seen an increase in investment is Telecom & ICT, which has reached USD 600 million with 5 projects in this quarter, being the most important the USD 340 million Northern Hesse Broadband Network project in Germany.

3.4. SECTOR IN FOCUS: ENERGY

Graph 6. Share of project updates in Energy sector by region in Q4 2022 (Source: InfraPPP)



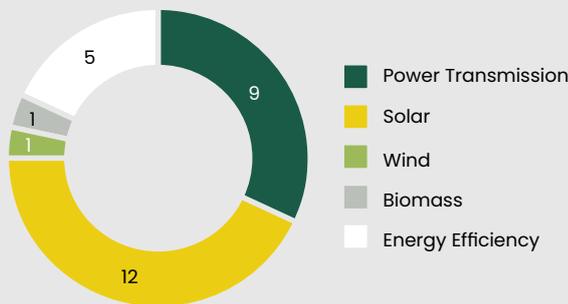
Despite the overall decrease in the number of PPP deals in Q4 compared to Q3, the number of PPP projects in the Energy sector has remained stable. This is particularly relevant in the current context of the global energy crisis and is a sign of how public-private partnerships can help promote key strategic sectors for society.

As we can see in the graphs, at regional level Asia followed by Central & South America leads the number of PPP projects in Energy.

In terms of sub-sectors, solar generation projects stand out, followed by transmission. A notable PPP deal has been the recent launch of a tender for the development of nearly 1GW of solar in Kenya to power two tea factories in Gatwamba, in the country's Central Province.

Another important milestone was the signing in Brazil of a USD 670 million PPP contract for six 500 kV transmission lines in the state of Minas Gerais.

Graph 7. Number of projects by Energy subsectors in Q4 2022 (Source: InfraPPP)



3.5. DEAL IN FOCUS: HV POWER TRANSMISSION PPP IN MINAS GERAIS- BRAZIL

Project: Located in the State of Minas Gerais near Sao Paulo, it consists in the financing, conception, construction, and operation of six 500 kV transmission lines to be installed on 1,020 km, four stretches of transmission lines in a distance of 63 km, one new substation and eight substation extensions.

Purpose: The project aims to meet the growing demand for power transmission projects in Minas Gerais. The demand is estimated at 2,360 km of transmission lines to absorb the accelerated growth of solar photovoltaic power generation in the north of the state.



Partners: In October 2022, Cobra IS, a VINCI subsidiary, signed a public-private partnership (PPP) and engineering, procurement, and construction (EPC) contract for the high-voltage transmission lines in Minas Gerais. The BRL3.48 billion (US\$674.28 million) PPP contract covers the project's financing, design, construction, and operation. The construction will be completed by the end of 2027, and the operation and maintenance period will last 30 years.

Financing: The project has not yet reached financial close. Cobra, as previously stated, will be in charge of securing project financing.

Impact: Transmission lines expansions are crucial due to the vulnerability of Brazil's electric power system amid the intensification of droughts. With the country's main hydroelectric reservoirs at extremely low levels, renewable energy is increasingly transported from the northeast to the southeast. This situation is likely to endure. In the case of Minas Gerais, which is a natural power transmission corridor linking the north and northeast to the southeast, local PV solar power capacity is expected to keep growing as the state offers tax incentives.

4. PROJECTS IN FOCUS IN 4Q 2022

4.1. MOST ACTIVE COUNTRIES

Table 1. Most active countries by updated deals in Q4 2022
(Source: InfraPPP)

COUNTRY	NUMBER OF UPDATES	SECTOR
(USA) United States of America	21	Transport - 9 Social & Health - 8
Canada	19	Transport - 10 Social & Health - 7
India	18	Energy- 9 Transport - 8
Uzbekistan	13	Social & Health - 9 Water & Waste - 3
Paraguay	12	Transport - 9 Social & Health - 3
Brazil	12	Social & Health - 5 Transport - 4

4.2. LARGEST CAPITAL VALUE



GREENFIELD PPP AIRPORT IN KUWAIT

Country	Stage
Kuwait	In Tender
Subsector	Value
Airport	USD 12B

The project involves the construction and operation of a new airport in northern Kuwait. The airport would be able to handle 25 million passengers a year and would generate over 5,000 new jobs



MUMBAI-AHMEDABAD HIGH SPEED RAIL (MAHSR) PROJECT

Country	Stage
India	Contract Signed
Subsector	Value
Railway	USD 10B

The project involves the development of a 508 km high-speed railway between Mumbai and Ahmedabad in India. The Mumbai-Ahmedabad High-Speed Rail Corridor will operate at a speed of 320 km/hr and include 12 stations.



AUCKLAND LIGHT RAIL PPP PROJECT

Country	Stage
New Zealand	In Tender
Subsector	Value
Railway	USD 9.1B

The project involves the 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 project will form the spine of a new rapid transit network for the whole city, that can be expanded in time to connect with other lines to the North Shore and North West.



CENTRALNY PORT KOMUNIKACYJNY (CPK) AIRPORT PPP PROJECT IN POLAND

Country	Stage
Poland	Contract Awarded
Subsector	Value
Airport	USD 8B

The project involves the development of a passenger terminal building, railway station and public transport interchange for the Centralny Port Komunikacyjny (CPK) Airport in Poland. The project will be built between Warsaw and Łódź connecting air passengers to a 2,000 km network of railways. The airport will have a capacity of 40 million passengers which can be expanded up to 60 million.

4.3. TENDER STAGE ABOVE USD500 MN



GREEN LINE PHASE 1 LRT PROJECT IN CALGARY

Country	Canada	Value
Subsector		USD 4B
Railway		

The project involves the development of the Green Line, comprising an 18 km 14-station light rail transit (LRT) system in Calgary. The first phase is expected to run from 16 Avenue N in Crescent Heights to 126 Avenue SE in Shepard, running through downtown Calgary and will require the construction of eight major bridges and four tunnels, including a 4 km tunnel under the city centre.



FOURTH MAINLAND BRIDGE PPP PROJECT IN LAGOS

Country	Nigeria	Value
Subsector		USD 2.5B
Road		

The project involves the development of a dual carriage bridge, located in Lagos. It will be the longest bridge in Africa upon completion with a total length of 37 km.

The bridge will be designed as a two-level bridge; the upper level will be assigned for the vehicular traffic, and the lower level for pedestrian, social, commercial and cultural interactions.

The project will be constructed under a Build, Operate, and Transfer (BOT) basis through a concession contract of 40 years.



MINAS GERAIS HIGHWAY LOT PPP PROJECT

Country	Brazil	Value
Subsector		USD 1.2B
Road		

The project involves the development of 1,500 km long highways in the state of Minas Gerais, Brazil. The four highways included in the lot are the following:

- 432.8 km highway connecting Varginha to Furnas
- 442.9 km highway connecting Lagoa da Prata and Itapeçerica;
- 231.3 km highway connecting Arcos and Patos de Minas;
- 452 km long highway located in region of São João Del Rei.

These highways will connect 120 municipalities, benefiting more than 5 million people. The project aims to improve road safety and the quality of the roads in Minas Gerais.



ROUTE 5 CHILLÁN - COLLIPULLI SECTION SECOND CONCESSION

Country	Chile	Value
Subsector		USD 0.5B
Road		

The project involves the improvement works on the section of Second Concession Route 5 connecting Chillán to Collipulli in Chile. The scope of works involves the following tasks:

- Rehabilitation works for the existing infrastructure;
- Rectification of the route for a design speed of 120 km/hr (with specific restrictions);
- Expansion to third tracks in 18.2 km;
- Two new crossings to existing routes, new bridges, replacement of two interchanges;
- Development of 34.4 kilometers of service roads;
- 16.4 km of bicycle lanes;
- 17 new footbridges;
- The project aims to implement the new standards in terms of road safety and local and interurban connectivity, which will improve the quality of life of the users and inhabitants surrounding the road as well as boost economic reactivation.

4.4. PLANNING STAGE ABOVE USD500 MN



LOUISIANA INTERNATIONAL TERMINAL PPP PROJECT

Country	Value
USA	
Subsector	USD 1.8B
Port	

This project includes the development of a new Louisiana International Terminal container facility capable of handling 2 million TEUs located in New Orleans. The terminal will have an area of 350 ac with a 3,500 linear foot wharf. The site is located within the flood protection system and features naturally deep-draft riverfront acreage, a 50-foot Mississippi River Channel, documented ability to navigate ships with a capacity up to 23,000 TEUs, access to six Class I railroads through New Orleans Public Belt Railroad and interstate highways.



YPACARAÍ – ASUNCIÓN COMMUTER LIGHT RAIL LINE PPP PROJECT

Country	Value
Paraguay	
Subsector	USD 1.6B
Railway	

The project involves the construction of a 43 km railway line eastwards between Asunción and the lakeside town of Ypacaraí, Paraguay. The line will be a double track for 15 km from Asuncion Central to Luque and then a single track for the remaining 28 km from Luque to Ipacarai.



PRINCE OF WALES-LOS PRESIDENTES SECTION OF AVO II HIGHWAY PROJECT

Country	Value
Chile	
Subsector	USD 0.8 B
Road	

The project involves the construction of the 5.2 km Prince of Wales-Los Presidentes (AVO II) section, which will run underground through the communes La Reina, Ñuñoa, Peñalolén and Macul in Chile. The project will improve the situation of the section of Américo Vespucio between Av. Príncipe de Gales and Los Presidentes, by shifting 50% of the traffic to a mostly underground urban highway, will reduce noise and congestion at the surface level thanks to the better distribution of vehicular flows. The project involves the creation of four city attractions in Tobalaba-Príncipe de Gales, Plaza Egaña, Rotonda Grecia and south of Rotonda Grecia.



METRO RAIL NETWORK IN CHENNAI

Country	Value
India	
Subsector	USD 0.8B
Railway	

The Project involves the development of new lines of the metro rail system in Tamil Nadu, India. The project includes:

- construction of 10.1 km of the elevated section between Sholinganallur to State Industries Promotion Corporation of Tamil Nadu-2, including 9 metro stations and system components;
- 10 km of the underground section between Lighthouse and Meenakshi College including 9 stations; and
- 31 km of system components, such as electrical, mechanical, power, and telecommunication infrastructure, between Chennai Mofussil Bus Terminus to Okkiyam Thoraipakkam.

4.5. FINANCIAL CLOSURES



ONTARIO LINE RSSOM PPP IN TORONTO

Country	Value
Canada	
Subsector	USD 8.1B
Railway	

Development of a 3.2 GW high-voltage direct current (HVDC) sub-sea transmission network in the MENA region. The Offshore transmission system will comprise two independent sub-sea HVDC links and converter stations.



GANGA EXPRESSWAY PPP PROJECT IN UTTAR PRADESH

Country	Value
India	
Subsector	USD 4.5B
Road	

The project involves the development of a 595 km six-lane greenfield Ganga expressway connecting 12 districts namely Meerut, Hapur, Bulandshahr, Amroha, Sambhal, Badaun, Shahjahanpur, Hardoi, Unnao, Rae Bareli, Pratapgarh, and Prayagraj located in Uttar Pradesh state of India.



JFK AIRPORT TERMINAL 6 PPP PROJECT IN NEW YORK

Country	Value
USA	
Subsector	USD 4.2B
Airport	

The project involves the development of a new terminal 6 at John F Kennedy airport located in New York, USA. The new International Terminal will connect to Terminal 5 and be equipped with capacity for ten new gates, as well as bright and airy check-in halls and arrival spaces designed to enhance the customer experience. The terminal will also have 100,000 square feet of commercial dining and retail amenities, lounges, and recreational spaces.



DEEP-WATER CONTAINER TERMINAL PROJECT IN PORT OF GDANSK

Country	Value
Poland	
Subsector	USD 0.8B
Port	

The project involves the development of a third deep-water container terminal in port of Gdansk on the Baltic Sea, Poland. The terminal will add 717 m of deep-water quay and 36 ha of yard area and be equipped in the first phase with 7 energy-efficient ship-to-shore cranes and 20 semi-automated rail-mounted gantry cranes.

4.6. CANCELLATIONS



I-25 TOLL ROAD PPP PROJECT IN COLORADO

Country	Value
USA	
Subsector	USD 1B
Road	

The project involves management, expansion and improvement between Segment 2 and Segment 5 of Interstate 25 (I-25), located among Colo. 66 and Colo. 56 in Colorado, USA. The section will be a toll road with an approximate 7 miles length.

The Colorado Department of Transportation (CDOT) rejected an unsolicited proposal in mid-November 2022 for the construction of non-toll express lanes on Interstate 25 to close a roughly 23-mile gap north of suburban Denver (Colorado, USA).

In early 2021, an organization called I-25 Now, managed by Roadis USA, a subsidiary of a Spanish toll road operator, submitted its PPP concept to the Colorado Department of Transportation. CDOT has had difficulty raising the necessary funding for the project's remaining phases.

The I-25 Now team proposed a USD1 billion project with an initial investment of \$350-500 million in an early conceptual presentation. CDOT officials, on the other hand, have been openly skeptical of Roadis' proposal and have stated that they are looking for alternative funding sources¹.

¹ InfraPPP



5. CONCLUSION

This Q4 has followed the trend of Q3 within the current context of macroeconomic headwinds. Specifically, in this Q4 the number of PPP deals has dropped considerably from 274 to 217, with a reduction in the number of PPP deals across all major milestones. On the positive side, the number of projects in competition has remained stable.

By region, the largest drop in PPP deals has occurred in Central and South America, although overall the volume of projects both in number and investment has fallen in almost all regions. Asia is the leading continent in Q4 with 71 PPP deals.

Transportation remains the dominant sector in terms of investment with USD 116 billion, followed by Water & Waste and Energy. The only sector where investment has risen is Telecom & ICT.

By country, the United States and Canada (with 21 and 19 PPP deals, respectively) continue to be the most active, closely followed by India (18 PPP deals). Uzbekistan (13 PPP deals) was also among the most active countries in PPPs in Q4, followed by Paraguay and Brazil (with 12 PPP deals each).

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