



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 30-May-2019 | Report No: PIDC26998



BASIC INFORMATION

A. Basic Project Data

| | | | |
|--|---|--|---|
| Country Peru | Project ID P170609 | Parent Project ID (if any) | Project Name Lima Teleferico San Juan de Lurigancho - (Series 1) (P170609) |
| Region LATIN AMERICA AND CARIBBEAN | Estimated Appraisal Date Apr 02, 2020 | Estimated Board Date Jun 05, 2020 | Practice Area (Lead) Transport |
| Financing Instrument Investment Project Financing | Borrower(s) GOVERNMENT OF PERU - MINISTERIO DE ECONOMIA Y FINANZAS - MEF | Implementing Agency Empresa Municipal Administradora de Peajes de Lima -EMAPE | |

Proposed Development Objective(s)

The Series of projects (SoP) Development Objective is to improve mobility and accessibility to jobs and services in selected hillside urban settlements in Lima Metropolitan Municipality, MML by integrating them to mass transit services. The SoP is comprised of two urban cable car projects: San Juan de Lurigancho (SJL) and El Agustino (EA).

The PDO of the SJL Project is to improve mobility and accessibility to jobs and services of the hillside settlements in the SJL and Independencia districts of MML by integrating them to the BRT and metro services.

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

| | |
|---------------------------|--------|
| Total Project Cost | 123.00 |
| Total Financing | 123.00 |
| of which IBRD/IDA | 100.00 |
| Financing Gap | 0.00 |

DETAILS

World Bank Group Financing

| | |
|--|--------|
| International Bank for Reconstruction and Development (IBRD) | 100.00 |
|--|--------|

Non-World Bank Group Financing



| | |
|---------------------|-------|
| Counterpart Funding | 23.00 |
| Borrower/Recipient | 23.00 |

Environmental and Social Risk Classification

High

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

- In the last decade, Peru has experienced sustained growth and significant poverty reduction; however, despite these efforts, inequality remains a significant challenge.** Between 2004 and 2014, Peru’s economy (led by mining, agroindustry, and tourism) had one of the highest average growths in Latin America. During this decade, the GDP (Gross Domestic Product) growth of Peru has been 4.4 percent. This growth was the primary driver of poverty reduction. In the same decade, the poverty rate decreased substantially from 37.3 to 20.5 percent. Even with these robust results, inequality (based on the Gini coefficient) only decreased from 0.47 to 0.43 in the same period.
- Economy growth decreased during the 2014-2017 period, and rebounded in 2018, supported by both, an expansive macroeconomic policy framework, and a cyclical recovery based on external and domestic factors.** Public spending, in particular investment, accelerated due to reconstruction works in the North and investment related to the forthcoming Pan-American Games in Lima, the country’s capital. Despite increased capital spending, revenue overperformance allowed for some fiscal consolidation. The current account deficit increased moderately to 1.5 percent of GDP in 2018, as commodity exports stagnated, while imports accelerated, driven by the increased spending. The rise in the export prices was matched by an almost equal rise in import prices, maintaining terms of trade unaltered. The external gap was fully financed by inflows of long-term capital. However, lower reserve requirements for banking deposits in dollars and public sector used of stabilization fund prompted a fall in reserves.
- Average inflation was 1.3 percent, close to the lower bound of the Central Bank’s targeted range of 1 to 3 percent.** The low level of inflation is partially due to price reversals after the scarcity of some food products led to increased price pressures in 2017. In this context, the Central Bank lowered its benchmark interest rate to 2,75 percent in March and left it unaltered since.
- Poverty (US\$ 5.5 per day) is estimated to have declined only slightly in 2018.** Labor market started to recover, reflected in the increase in employment and real wages in the formal sector in 2018. The LMA (Lima Metropolitan Area), experienced strong recovery in employment in 2018, especially in the construction sector, although underemployment has also increased. This recovery might not be benefitting all groups equally: youth in LMA seems to remain particularly affected by still weak labor markets, and low-skilled workers saw a larger increase in underemployment and a slight decline in their labor income.



5. **Economic growth is expected to level off close to 4 percent in 2019-21, gradually closing the output gap and generating the space for a gradual withdrawal of monetary and fiscal stimuli.** The fiscal consolidation is expected to continue, with the deficit converging to 1 percent of GDP in 2021, in line with the fiscal rule. Withdrawal of monetary stimulus might begin in the second half of the year, once output recovery gains strength.
6. **GDP is expected to decelerate slightly in 2019, mainly due to lower growth of public spending, as the replacement of subnational authorities would lead to the slower implementation of public projects.** Higher growth in private investment, mainly related to large mining projects, would only partially compensate for the decline in public spending. Also, positive developments in the labor market and favorable credit conditions would support the expansion of private spending. Over the medium-term, GDP growth is expected to accelerate slightly mainly due to a moderate increase in exports, as mining investment projects come into operation.

Sectoral and Institutional Context

1. **Peru is a highly urbanized country, with about 78 percent of the population of about 32 million living in urban areas (2017 World Bank data).** Urbanization and migration rates in Peru have been high for several decades. Since the first wave of migration in the 1950s, when urbanization rate was around 47 percent, Lima was home of only 14 percent of the population. Forced displacement, from areas affected by internal violence, drove the second wave of migration that took place in the 1980s. This wave concentrated migrants in the North of Lima. The third, recent wave is being driven by the arrival of Venezuelan immigrants to Peru, particularly to Lima, which, since 2002, was established as the MML (Lima Metropolitan Municipality). Even without accounting for this recent wave of international immigration, MML's population has increased by an average of 1.1 percent per year between 2008 and 2018.
2. **MML concentrates 29 percent of the national population and, after conurbating with the City of Callao, forms the largest urban area in Peru.** MML and Callao, which have independent administrative arrangements, are physically conurbated, giving the name to the LMA (Lima-Callao Metropolitan Area). LMA stretches north to south for 80 km along the Pacific Ocean, and from west to east for 40 km from the Pacific Ocean to the Andean Mountain Range, with about 2,672 square kilometers leading to a population density of around 3,000 people per square kilometers. LMA encompasses a total of 50 districts, including SJL (San Juan de Lurigancho), the most populated district in the country (1.1 million). In the North of LMA the poverty rates in 2017 range from 16 to 23.2 percent, in some cases over the national rate. Currently, the population for LMA is around 9.3 million (2018), being the third-largest city in Latin America, and it is home to 29 percent of the country's population.
3. **The northeastern municipalities of LMA agglomerate 16 districts that, despite being predominantly poor, stand as engines of economic growth and competitiveness.** LMA accounts for 49 percent of the national GDP and includes the country's leading facilities for international trade and domestic logistics. What is more, Lima has played a vital role in continued poverty reduction and shared prosperity during the past decade (from 37.3 to 20.5 percent). However urban poverty in the north and east districts of the LMA ranges between 16 and 29 percent or 8.3 p.p. above the Lima average (12.9 percent in 2017). These 16 districts concentrate 53 percent for the LMA population and three of them are the largest residential districts of the LMA --San Juan de Lurigancho, San Martin de Porres and EA (El Agustino), see Figure 2. Notwithstanding, the rest of the districts, including economically emerging districts in the northern parts of the LMA, concentrate many commercial and industrial activities (with 85 businesses every thousand inhabitants, a business density only surpassed by Central MML). Overall, these conditions have generated



greater economic dynamism and decentralization of financial and governmental activities from the center of the city towards these emerging poles in the north and east.

4. **LMA's urban transport infrastructure is insufficient, only 15% is covered by mass transit systems.** Around 18 million trips are generated each day in the LMA of which 15% are made in private vehicles and 10% in taxis, while around 75% of the trips are made using public transport modes (which is on the higher end by international benchmarks), including 60% using non-Metropolitano bus services (both formal and informal providers) and only 15% using mass transit systems (7% on the BRT (Metropolitano Bus Rapid Transit) and eight percent on the elevated LM1 (Metro Line 1¹, *Tren Electrico*). LMA's current transport infrastructure can be characterized by insufficient and non-integrated mass transit options, inefficient, fragmented and largely unregulated existing public transport. Formal bus services face fierce competition from informal transport providers, which compete for passengers in the market (commonly referred to as penny wars or "*guerra del centavo*"), effectively undermining the efficiency, safety, and comfort of Lima's formal bus services. Most urban roads are shared by all vehicles, creating traffic congestion and contributing to lost productive time, increased pollution levels, road accidents, as well as other negative externalities. LMA is one of the most congested and polluted cities in Latin America and needs massive investments in urban public mass transit.
5. **The GoP and MML have undertaken significant efforts to improve urban transport, with the most recent efforts aiming at introducing innovative links to favor integration between modes and improve access to hilly settlements of MML.** From 2004 to 2010 MML implemented, through PROTRANSPORTE (*Instituto Metropolitano Protransporte*), the first BRT system in MML, designed as a High-Capacity Segregated Corridor COSAC (*Corredor Segregado de Alta Capacidad*) with the World Bank support (P035740, and P170595, the latter under preparation). This BRT line began commercial operations in 2011 with a 33-kilometer (km) north-south corridor crossing the historic center of the city. LM1 began operations in 2010, with the oversight of AATE (Autonomous Authority for Electric Trains, *Autoridad Autonoma del Tren Electrico*), and the Transport Infrastructure Regulatory Agency (OSITRAN). LM2 (Lima Metro Line 2), supported by the World Bank under project P145610 and other IFIs (International Financing Institutions) is under construction and expected to enter operations initial operations in by 2023. ML4 (Metro Line 4) is currently under early conceptual stages, and AATE is expecting to tender its design and construction in the next three years.
6. **The integration of mass transit modes is a priority for MML, despite the BRT corridor and ML1 are not controlled by the same authority, nor they have fare, operational or physical integration.** Different subnational and national agencies control mass transit: BRT, controlled by PROTRANSPORTE, and Metro Lines, by AATE, which is linked to the MoT (National Ministry of Transport). Although integration is in the plans, to date there is no operational, physical or fare integration between the BRT and metro lines or plans to integrate new modes, i.e., cable-cars. Non-BRT Buses and informal transport operating in mixed traffic constitute one of the main modes of choice for lower-income residents, who are forced to pay additional transit fares when transferring between informal and non-BRT to BRT or ML1. In this context, the integration of modes becomes a priority to improve urban transport in LMA.
7. **Mobility and access to jobs for the poorest inhabitants located in the hills of LMA is limited, with the lower accessibility levels registered in the bustling, hilly settlements in northeast LMA, affecting access to jobs, productivity and economic growth.** World Bank assessment during the preparation of the LM2 (Lima Metro Line 2) Project – P145610 - show that major transport corridors in LMA exhibit slower travel speeds and higher road accident rates than similar corridors with mass transit systems in other large cities. Since the urban transport system is

¹ LM1 is a 34-kilometer elevated railway linking the southern district of Villa El Salvador and SJL, in the northeast.



fragmented and lacks coverage in the north of LMA, users make long trips to access their jobs. In addition, the steep slopes of roads and sidewalks on the hilly urban settlements, home of the poorest inhabitants of LMA, make access to road public transport in some areas virtually inexistent. In the north of LMA, the LA (*Lomas de Amancaes*) Hills, a 400-meter mountainous range limits the mobility from the districts in the east, including SJL, to the economic growth area/districts in the north. The population faces a similar challenge of access to mass transit in the east, where EA (*Cerro El Agustino*), a 200-meter tall hill is located. EA is home to a densely-populated residential settlement which faces important accessibility and mobility challenges, particularly regarding last-mile connectivity. MML has proposed an innovative, aerial cable-car urban transport scheme for these hilly settlements, inspired from experiences in in other cities with similar settlements (i.e., Bogota, Cali and Medellin, in Colombia). These innovative aerial cable car corridors have been successful in providing increased access and integration to Metro and BRT to the mainly poor inhabitants of hilly settlements in the Global South.

8. **By 2025, MML is planning to integrate and complement its existing mass transit modes with two urban cable-car projects.** Since 2015 the Ministry of Housing of Peru has been exploring innovative solutions to integrate the BRT and Metro Lines. This plan prioritizes the SJL cable-car, which will integrate two main existing mass transit corridors in LMA (BRT and metro) and will create a new elevated transit link between the east and the north of Lima. In the medium term, based in the SJL lessons learned, the EA cable car will be implemented to integrate and connect metro lines 1 and 2. Recently, the implementation and leadership of this initiative has been delegated to MML, and specifically, to PROTRANSPORTE and EMAPE (the *Lima Toll Road Municipal Management Agency, or Empresa Municipal Administradoras de Peajes de Lima*), as the infrastructure delivery agency.
9. **Two key institutional reforms that provide the framework for urban transport development, integration and sustainability have recently been approved:** the creation of the ATU (Lima–Callao Urban Transport Authority, *Autoridad de Transporte Urbano*) in December 2018 and the approval of the NUTP (National Urban Transport Policy) in April 2019. These are significant steps forward in urban transport integration and are currently at an early stage of implementation. The GoP created ATU in response to the institutional challenges that undermine urban transport coordination, planning, transport integration and regulation between the cities of Lima and Callao. ATU’s legal and institutional framework was approved to address urban transport planning, transport integration, infrastructure provision, service concession and permitting, and fare policy, including fare setting and adjustments. It is expected to take several years for ATU to increase the institutional capacity to manage these responsibilities. GoP has approved initial regulations for the National Urban Transport Policy and is preparing additional regulations. Despite these efforts, in the short term, considering the institutional capacity of the existing agencies, the construction and operation of urban transport will remain in the current agencies, in the case of the urban cables, SJL and EA, the responsibilities will remain in EMAPE and Protransporte, respectively. Transitioning from the current institutional arrangements and building capacity in ATU are expected to occur during a ramping-up period over the coming years.

Relationship to CPF

10. **The proposed project will support Pillar I. Productivity for Growth: Improve connectivity in critical corridors of the territory of the Country Partnership Framework (CPF) for the period 2017-2021².** The proposed project is in line with Pillar I of the CPF, approved by the Board on April 4, 2017, and is consistent with the SYSTEMATIC COUNTRY

² Report No. 112299-PE.



DIAGNOSTIC (SCD), February 2017³. The project will also help address gender disparities, highlighted in the CPF, by improving access for women to urban transport. Female users will benefit from improvements in project designs, which will include enhancements to operational safety and user safety and security. The project will also foster greater participation in the work force, as captured by one of the CPF’s indicators.

- 11. **The proposed project is fully aligned with the Bank’s twin goals.** It supports the reduction of urban poverty in the districts of the northern and east areas of Lima (currently above the average) where 53 percent of the city’s population is located, including the urban and poor settlements along the LA Hills and EA hills in SJL and EA districts, respectively, of LMA.
- 12. **The proposed Series of Projects (SoP) will address climate change.** The construction of the cable cars under the SoP will provide with an innovative, safe, secure, comfortable, reliable, 100% electric transport to the neighboring hillside communities of SJL and EA, improving access to mass transit services. Both LM1 and the BRT systems have also incorporated climate co-benefits. GHG (Green-house gas) and local pollutant emissions reduction is a key benefit of this proposed project, and around 40 percent of the loan amount (preliminary estimation) is expected to result in climate co-benefits.
- 13. **MML has implemented Urban transport operations under PPP schemes and is gearing the proposed project towards mobilizing the private sector to operate and maintain the cable cars under a quality-incentive concession.** The proposed project will also provide an opportunity for the private sector to participate in the operations and maintenance of the project, the development of collateral business within the project (advertisement, access to WIFI, shops in areas of stations), as well as in equipping the system with the city’s integrated fare collection scheme. The cable car will allow introducing innovations in urban transport provision and social management. The proposed project will contribute to Peru’s green-growth plans and strategy through the improvement of urban transport and private-sector participation under the MFD (Maximizing Finance for Development) approach.

C. Proposed Development Objective(s)

The Series of projects (SoP) Development Objective is to improve mobility and accessibility to jobs and services in selected hillside urban settlements in Lima Metropolitan Municipality, MML by integrating them to mass transit services. The SoP is comprised of two urban cable car projects: San Juan de Lurigancho (SJL) and El Agustino (EA).

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Key Results (From PCN)

- 1. The achievement of PDO will be measured by the results indicators as below:

| | |
|----------------------|---|
| • PDO Outcome | • Outcome indicator |
| • Integrated systems | • Cable car, BRT and metro stations integrated. |

³ Report #: 112694-PE



| | |
|---|---|
| | <ul style="list-style-type: none"> • Number of transfers between cable car and BRT and cable car and metro. |
| <ul style="list-style-type: none"> • Improved mobility | <ul style="list-style-type: none"> • Travel time for public transport users in the area of influence of SJL cable car, including transfer and access time. • Number of users in the SJL cable car corridor. • Percentage of women users that feel safer using SJL cable car transport than previous transport alternatives |
| <ul style="list-style-type: none"> • Improved access to jobs | <ul style="list-style-type: none"> • Number of jobs reachable by public transportation within a 60-minute one-way commute in the area of influence of the SJL Cable car, defined as the 1 km area along both sides of the alignment and stations. • Share of women that access the Metropolitano BRT or Metro Line 1 directly by using the SJL cable car. |

D. Concept Description

Urban cable program

2. The proposed cable cars program is planned as a Series of Projects (SoP) supporting access, mobility and integration to mass transit modes, and includes:

- i) The first project in the SOP: The delivery the SJL cable car system (6.1 kilometers of cable car crossing the Amancaes hills in the north of Lima and the integration with the BRT Naranjal Station and the Metro Line 1 San Carlos Station). Components of the cable car SJL project are (a) engineering designs, environmental and social instruments, pylons, stations, pedestrian access, maintenance and control center facilities; (b) the installation of necessary electromechanical equipment, cabins, and technology; (c) project preparation activities for EA cable car and (d) the supervision of works and the installation of equipment and technology. Preliminary passenger demand studies suggest the cable car will mobilize around 12,800 passengers per day in the first year of operations.
- ii) The second project in the SOP: The delivery of the EA cable car system (3.8 kilometers of cable car crossing the EA hill in the east of Lima), including the integration of the cable car with stations in Metro Lines 1 and 2. Components of the EA cable car project are (a) engineering designs, pylons, stations, pedestrian access, maintenance and control center facilities; (b) the necessary electromechanical equipment, cabins and technology for integration and operations with Metro lines; and (c) the supervision of works and the installation of equipment and technology.
- iii) The program will integrate different urban transport modes with a focus of increasing accessibility for low-income residents from the hillside settlements of SJL and the Independencia, which are particularly vulnerable. It will also provide an opportunity for private sector participation in the operation and maintenance of the system as well as the deployment and operation of the integrated fare collection system.

3. The SoP approach has significant benefits vis-à-vis two stand-alone projects or a Multiphase Programmatic Approach Project, MPA. First, the SoP approach supports borrower’s priorities and the long-term program to integrate mass transit modes in MML. Each cable-car will serve a specific area of MML, and the results between the projects are not correlated. Second, SoP encourages the incorporation of lessons learned into both planning and preparing the second project in series. Given the complexities of greenfield projects, technical and fare integration,



the sequencing allows transferring the expertise gained in the SJL Cable Car project to the EA Cable Car Project. Third, SoP ensures that the planning and construction of the EA cable car will be integrated with the Lima Metro Line 2, which is expected to start operations in 2023. Forth, this will be the first urban cable financed by IBRD, and the series of projects is a useful scheme to identify lessons learned and implement the EA Project.

The San Juan de Lurigancho Cable Car Project (SJL Project)

14. **Project beneficiaries and focus.** The proposed SJL Project is expected to: (a) benefit 1,038,000 residents in the District of SJL; (b) benefit 211,360 residents in the District of Independencia; and (c) improve an average of around 12,800 daily trips in the first year off operations, of which 85% are expected to transfer to BRT or Metro. The remaining description will only cover the SJL Cable Car Project.
15. **Project costs and duration.** MML has estimated the preliminary cost of the SJL Project's at **US\$ 123 million**, including an IBRD loan for US\$ 100 million. The project is expected to be implemented over a period of five years.

Project components:

To achieve the PDOs, and in accordance with the Government of Peru (GoP), the proposed project will finance the below three components:

16. **Component 1: Infrastructure, Electromechanical components, and public space interventions (IBRD: US\$ 94 million; MML: \$ 18 million, total cost: \$112 million).** This component encompasses all civil works and goods associated to the construction of the cable car line, as well as electromechanical components, cabins, and public space interventions aimed at improving the quality, accessibility, safety, and security of public space in the surrounding areas of cable car stations.
 - a. **Sub-component 1.1. Cable car infrastructure and equipment (IBRD: US\$40 million, MML: US\$2 million, Total: \$40 million).** This subcomponent will provide civil works, goods, services, and technical assistance for environmental and social management related to the design, and construction the cable car line and its electromechanical components, including (a) construction of 6.2 km of cable car infrastructure, including 60 tension pylons; (b) provision of 160 cabins; (c) installation of electromechanical equipment and technology to support cable car operations and control; and (d) civil works supervision.
 - b. **Sub-component 1.2: Cable Car Stations, access road for civil works around Station N2, fare collection system, control center, maintenance facility, and cabin depot (IBRD: US\$52 million, MML: \$10 million, Total: \$62 million).** This subcomponent will provide civil works, goods, services and technical assistance for environmental and social management related to the construction of the intermediate and terminal stations, fare collection, control center, and maintenance facility and depo, including: (a) construction of three intermediate stations (labeled N2, N3 and N4) and two terminal stations (N1, integrated with the BRT system at the Naranjal Station; and N2, integrated with the Metro L1 at the San Carlos Station); (b) design and construction of an access road for the construction of station N2, to be later upgraded to an urban road; (c) public space interventions around cable car stations, including upgrading to sidewalks, street lighting, road surface, citizen facilities and pedestrian accesses for stations and terminals and associated public space infrastructure. The stations and pedestrian accesses will be implemented with considerations for improved



safety and universal accessibility for all users, including specific considerations for the physically disabled and for men or women traveling with strollers and children.

- c. **Sub-component 1.3: Technology-related components for the operation, supervision, safety and security of the cable car line (IBRD: US\$2 million, MML: \$6 million, Total: \$8 million):** This subcomponent will provide technology goods and services, including (a) provision of the fare collection system for the entire cable car project; (b) construction of the control center and maintenance facility/depo, including stock depo; (c) cameras and station monitoring equipment aimed at monitoring performance, safety and security of stations, cabins and other key project infrastructure; and (f) civil works and equipment installation supervision.

17. **Component 2: Project Operations Component - Associated Facility: operations and maintenance PPP contract, funded partly by user fares and financed by a competitively selected cable car operator (IBRD: US\$0, MML: \$2 million, Total: \$2 million).** The GoP has conceived the operation of the project as an operations and maintenance PPP management contract (O&M concession) to be competitively awarded to an experienced international cable car operator. Component 2 will provide technical support to the PIU and the Peru PPP Agency (Proinversion) in the design, structuring and bidding process for the planned O&M concession. This technical support will ensure project operations are planned and contracted according to the project design, and that World Bank ESF standards and considerations are incorporated into the O&M concession documents.

18. **Component 3: Series of Projects structuring support and Project Implementation support (IBRD: US\$6 million, MML: \$3 million, Total: \$9 million).** This component will support the structuring of the second cable car project under the SoP and will provide technical project implementation support for the SJL Project, according to the following two subcomponents:

- a. **Sub-component 3.1 El Agustino Project structuring Support (IBRD: US\$3 million, MML: \$1 million, Total: \$4 million) :** This subcomponent includes the elaboration of a comprehensive package of technical, legal, financial, social and environmental studies and documents required to prepare the El Agustino Cable Car proposed Project in this Series of Projects.
- b. **Sub-component 3.2: Project implementation support (IBRD: US\$3 million, MML: \$2 million, Total: \$5 million).** This subcomponent will finance, among others: (a) project management (including M&E activities); (b) citizen and community engagement activities (GRM, stakeholder engagement plan, citizen participation strategies, among others); (c) support for planning and design of additional citizen facilities (small-scale library, health centers, small recreational parks); (d) training on Bank environmental and social standards, fiduciary policies, and land acquisition; and (e) technical lines of work on fare integration between modes, feeder route optimization, BRT performance, road safety and accessibility analyses, and operations management.



Summary of Project costs and sources of funding and financing

| Component | Contents | IBRD | MML | Total (US\$ Million) |
|----------------------------|--|---------------|--------------|----------------------|
| Component 1 | Infrastructure, Electromechanical components and public space interventions | \$ 94 | \$ 18 | \$ 112 |
| 1.1 | Cable car infrastructure and equipment | \$ 40 | \$ 2 | \$ 42 |
| 1.2 | Cable Car Stations, access road for civil works around Station N2, fare collection system, control center, maintenance facility, and cabin depot | \$ 52 | \$ 10 | \$ 62 |
| 1.3 | Technology-related components for the operation, supervision, safety and security of the cable car line | \$ 2 | \$ 6 | \$ 8 |
| Component 2 | Project Operations Component - Associated Facility | \$ - | \$ 2 | \$ 2 |
| Component 3 | Series of Projects structuring support and Project Implementation support | \$ 6 | \$ 3 | \$ 9 |
| 3.1 | El Agustino Project structuring Support | \$ 3 | \$ 1 | \$ 4 |
| 3.2 | Project implementation support | \$ 3 | \$ 2 | \$ 5 |
| Total, US\$ million | | \$ 100 | \$ 23 | \$ 123 |

Additional Implementation Considerations

19. **Accessibility assessment for the Cable Car:** To establish the baseline and estimated target for the PDO indicator, and in coordination with the Lima Metropolitan BRT North Extension project (P170595) currently under preparation by the Bank, the team will conduct an accessibility assessment along the cable car corridor for with- and without-project scenarios. The assessment will analyze accessibility to **jobs** by public transport based on the latest demographic data, the distribution of jobs, and public transport network information in the LMA. The assessment will estimate the net gains from the project in terms of accessibility to jobs, measured by the average number of accessible jobs within a 60-minute one-way morning rush-hour commute by public transport in the project’s area of influence. The results will also be differentiated in terms of PWD (persons with disabilities), income group and gender, to examine further the project’s impact on improving mobility for the disabled, women, and the poor.
20. **The topography of the project location and surrounding settlements requires a disaster risk assessment.** The hilly nature of the Amancaes hills requires a detailed assessment of local conditions which might increase the risk of disaster attributable to climate events, including rain, wind, and hydrogeological activity. The team is expecting to undertake a DRM (Disaster Risk Management) assessment as part of the project preparation activities and, based on the result, will recommend piezometric surveying to monitor hydrogeological activity and mitigate potential landslides or other DRM risks.
21. **Road safety in urban transport projects:** the following assessments will be carried out with support from the World Bank to ensure that the SoP are Road Safety informed and include road safety actions.
 - (i) **Road Infrastructure Safety Assessment:** The Project will undertake appropriate road safety assessment of the existing condition to improve road safety in the surrounding areas with potential safety implications (e.g. access to the stations, bus lines affected by the cable car). During construction, the project will



analyze road safety implications of the works and ensure mitigation measures are in place to address the risks identified, including but not limited to managing speeds of construction-related vehicles and other traffic.

- (ii) **Baseline fatality data:** the project will collect baseline annual crash fatality data, segregated by four road user types (vehicle occupants, motorcyclists, pedestrians, bicyclists), to be available for the cable car project and related BRT extension for data collection, storage and analysis (If this information is not available or suspected to be unreliable, the project will include steps towards strengthening crash data collection, storage and analysis).
- (iii) **Road safety indicator:** the project will include as part of M&E at least one road safety indicator.

22. **The project has conducted a preliminary analysis of gender issues in the provision of urban transport services and identified gender gaps that the project can address.** According to the National Institute of Informatics and Statistics, 79 percent of men were economically active in 2016, compared to 60.2 percent of women. Moreover, the informal sector employs 58 percent of women, compared to 50 percent of men. The gap is more pronounced in terms of employment segregation: the transport, storage, and communications sector employ fewer women than men (men 12.4 percent, women 1.7 percent). Furthermore, in the Independencia District the split of women:men is 50.77% 49.23%, respectively⁴, while the share for the SJL District is closer to 50-50. Based on “*Lima Cómo Vamos* NGO” data⁵, 33 percent of women feel unsafe using public transportation in Lima. This indicator shows that women respondents may have been victims of sexual harassment in public transport. According to cable cars infrastructure, evidence suggests that its implementation improves accessibility and citizen security, particularly for women.⁶

23. **According to a survey conducted by the Peruvian Market Research Company and Public Opinion (CPI), women prefer using slower modes (87.3% percent use *combis*/minibuses in MML), which restrict their access to potentially better employment opportunities⁷.** This project will reduce commuting time by 28.9 percent for people in Independencia and San Juan de Lurigancho. A recent World Bank review on Women’s Mobility in Latin America showcases that women in San Juan de Lurigancho prioritize walking in comparison to men to avoid the use of informal transport for finding them unsafe; however, women have no other options when they want to connect with the metro line 1. The study showcases that women’s constrained mobility impact access to better economic opportunities. Additional findings from IDB (Inter-American Development Bank) illustrate that women in Lima tend to change their trips and transport modes to mitigate the security risk. The project will implement activities to increase women’s security and mobility in the cable car stations and cabins as means to partly address the challenges described above. Additionally, the project will analyze the possibility of encouraging the employment of women in the project, the cable car operation, and the Metropolitano BRT.

⁴ Censo nacional 2007. XI de Población y VI de Vivienda

⁵ Non-governmental organization (NGO) which monitors and evaluates changes in the quality of life of the inhabitants of Metropolitan Lima and Callao.

⁶ *Urban Transport Systems in Latin America and the Caribbean: Challenges and lessons learned, 2018*: IDB Invest, p. 28.

⁷ According to a study conducted by the Interamerican and Development Bank, 28.1 million people in Latin America travel every day 1 hour and 30 minutes, equivalent to 10 working weeks per year, per person.



| Legal Operational Policies | Triggered? |
|---|------------|
| Projects on International Waterways OP 7.50 | No |
| Projects in Disputed Areas OP 7.60 | No |

Summary of Screening of Environmental and Social Risks and Impacts

. The environmental risk classification for this project is high under the World Bank ESF. Classification responds to adverse impacts and risks associated with the following 4 aspects: i) the complex institutional arrangements of project implementation; ii) PIU’s lack of ability to manage social and environmental risks and impacts in accordance with the Bank’s ESF; iii) area’s vulnerability to risks associated with seismic events, landslides, and other natural disasters; iv) wide range of expected risks and adverse impacts on the environment due to the complex nature of this greenfield project and sensitivity of the location (regarding the potential overlap of intermediate stations with the “lomas de Amancaes” ecosystem). Potential environmental impacts and risks are mainly related to: i) Overall nuisances to the communities due to noise and vibration, dust, traffic congestion (including vehicular accidents), waste, and visual disturbances; ii) Occupational health and safety risks during construction; iii) Community health, safety and security during operation, including accidents of the cable car users; iv) Cumulative impacts over the “lomas de amancaes” ecosystem due to the proliferation of invasions and occupations; v) Impacts on landscape quality.

31. The social risk of this project is considered High because of potential adverse social impacts and risks attributable to the project, which include (i) the need to relocate an informal cemetery with at least 100 grave markers; (ii) the land acquisition of 60 social units (43 houses and 17 commercial establishments), (iii) the acquisition of land from an unidentified number of people for the construction of an access road to carry out equipment and construction materials, particularly for Station Two and its nearby towers; (iv) risk of temporary restrictions in access to residential and commercial establishments, which could affect people’s livelihoods; and (v) risks of community health and safety. An indirectly related risk is the potential intensification of local disputes associated to land trafficking in the area, particularly in areas near the annexes of the settlements located near stations 2 and 3, as a result of the potential increase in the value of the land. These risks may be exacerbated by a context of high socioeconomic vulnerability among the inhabitants of the hilltops, particularly around Station 2, characterized by a significant level of informal possession of the land they occupy, oftentimes without access to basic services, in addition to the risk of citizen insecurity around the cable car stations.

Note To view the Environmental and Social Risks and Impacts, please refer to the Concept Stage ESRS Document.

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APPROVAL

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