

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD1783

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED ADDITIONAL LOAN

IN THE AMOUNT OF EURO 20.2 MILLION (US\$23 MILLION EQUIVALENT)

TO THE

GABONESE REPUBLIC

FOR THE

GABON PROJECT

UNDER

THE FOURTH PHASE OF THE CENTRAL AFRICAN
BACKBONE PROGRAM (CAB4)

June 6, 2016

Transport & ICT Global Practice
AFRICA

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2016)

Currency Unit	=	XAF
US\$1	=	XAF575.5270
€0.87738539	=	US\$1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACE	Africa Coast to Europe
AF	Additional Financing
ANINF	National Agency for Digital Infrastructure and Frequencies (<i>Agence Nationale des Infrastructures Numériques et des Fréquences</i>)
APL	Adaptable Program Loan
ARCEP	Posts and Electronic Communications Regulatory Agency (<i>Agence de Régulation des Communications Electroniques et des Postes</i>)
AU	African Union
CAB	Central African Backbone
CAB3	Central African Backbone Program SOP3: Congo project
CAB4	Central African Backbone Program SOP4: Gabon project
CAPEX	Capital Expenditure
CCSPFOG	Fiber Optic Commission (<i>Commission chargée du suivi des projets de fibre optique au Gabon</i>)
CDC	Deposit and Consignment Office (<i>Caisse de Dépôt et de Consignations</i>)
CN-TIPPEE	National Commission, Labor Intensive Small-Scale Public Infrastructure Works (<i>Commission Nationale des Travaux d'Intérêt Public pour la Promotion de l'Entreprenariat et de l'Emploi</i>)
DA	Designated Account
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
GabIXP	Gabonese Internet Exchange Point
HDPE	High-Density Poly Ethylene
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
ICT	Information Communication Technologies
IDA	International Development Association
IFR	Interim Financial Report
IRR	Internal Rate of Return
ISP	Internet Service Provider

ISR	Implementation Status Report
IXP	Internet Exchange Point
Kbps	Kilobit per second
M&E	Monitoring and Evaluation
Mbps	Megabit per second
MENP	Ministry of Digital Economy and Post (<i>Ministère de l'Économie Numérique et de la Poste</i>)
NCB	National Competitive Bidding
NPV	Net Present Value
PAD	Project Appraisal Document
PDO	Project Development Objective
PFM	Public Financial Management
PIU	Project Implementation Unit
PPP	Public-Private Partnership
RAP	Resettlement Action Plan
RAS	Reimbursement Advisory Services
REoI	Request for Expression of Interest
SIM	Subscriber Identity Module
SOP	Series of Projects
SPIN	Holding Company for Digital Assets (<i>Société de Patrimoine des Infrastructures Numériques</i>)
SPV	Special Purpose Vehicle
ToR	Terms of Reference
XAF	CFA franc (<i>Franc CFA</i>)

Regional Vice President:	Makhtar Diop
Country Director:	Elisabeth Huybens
Senior Global Practice Director:	Pierre Guislain
Country Manager:	Sylvie Dossou
Practice Manager:	Boutheina Guermazi
Task Team Leader(s):	Michel Rogy and Charles Hurpy

GABONESE REPUBLIC
GABON PROJECT
UNDER
THE FOURTH PHASE OF THE CENTRAL AFRICAN BACKBONE PROGRAM (CAB4)

CONTENTS

	PAGE
Project Paper Data Sheet	iv
Project Paper	
I. Introduction	1
II. Background and Rationale for Additional Financing	1
III. Proposed Changes	10
IV. Appraisal Summary	17
V. World Bank Grievance Redress	24
Annex 1 - Results Framework and Monitoring Indicators	25
Annex 2 - Detailed Project Financing	34
Annex 3 – Financial Management Arrangements	40
Annex 4 – Procurement Arrangements	47
Annex 5 – Economic and Financial Analysis	54
Annex 6 – Map	60

ADDITIONAL FINANCING DATA SHEET

Gabon

Additional Financing CAB4 (P158299)

AFRICA

GT11

Basic Information – Parent									
Parent Project ID:	P122776			Original EA Category:	B - Partial Assessment				
Current Closing Date:	31-Dec-2016								
Basic Information – Additional Financing (AF)									
Project ID:	P158299			Additional Financing Type (from AUS):	Scale Up				
Regional Vice President:	Makhtar Diop			Proposed EA Category:	B - Partial Assessment				
Country Director:	Elisabeth Huybens			Expected Effectiveness Date:	27-Oct-2016				
Senior Global Practice Director:	Pierre Guislain			Expected Closing Date:	30-Jun-2018				
Practice Manager/Manager:	Boutheina Guermazi			Report No:	PAD1783				
Team Leader(s):	Michel Rogy, Charles Pierre Marie Hurpy								
Borrower									
Organization Name	Contact	Title	Telephone	Email					
Gabonese Republic	Radwan CHARAFEDDINE	Conseiller du Président de la République	24106318080	radwan.charafe@presidence.ga					
Project Financing Data - Parent (Central African Backbone - APL4 - Gabon-P122776) (in USD Million)									
Key Dates									
Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date		
P122776	IBRD-81500	Effective	28-Mar-2012	21-May-2012	06-Mar-2013	31-Dec-2016	31-Dec-2016		
Disbursements									
Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P122776	IBRD-81500	Effective	USD	58.00	58.00	0.00	31.41	26.59	54.15

Project Financing Data - Additional Financing Additional Financing CAB4 (P158299)(in USD Million)					
<input checked="" type="checkbox"/>	Loan	<input type="checkbox"/>	Grant	<input type="checkbox"/>	IDA Grant
<input type="checkbox"/>	Credit	<input type="checkbox"/>	Guarantee	<input type="checkbox"/>	Other
Total Project Cost:		25.10	Total Bank Financing:		23.00
Financing Gap:		0.00			
Financing Source – Additional Financing (AF)				Amount	
Borrower				2.10	
International Bank for Reconstruction and Development				23.00	
Total				25.10	
Policy Waivers					
Does the project depart from the CAS in content or in other significant respects?					No
Explanation					
Does the project require any policy waiver(s)?					No
Explanation					
Team Composition					
Bank Staff					
Name	Role	Title	Specialization	Unit	
Michel Rogy	Team Leader (ADM Responsible)	Program Leader	ICT Policy Advisor	AFCW3	
Charles Pierre Marie Hurpy	Team Leader	Consultant		GTI11	
Kouami Hounsinou Messan	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist		GGO07	
Celestin Adjalou Niamien	Financial Management Specialist	Sr Financial Management Specialist		GGO13	
Antoine V. Lema	Safeguards Specialist	Senior Social Development Specialist		GSU01	
Doina Petrescu	Team Member	Program Leader	Program Leader	AFCC1	
Francis Tasha Venayen	Team Member	Financial Management		GGO25	

		Specialist		
Kristyna Bishop	Safeguards Specialist	Senior Social Development Specialist		GSU01
Maya Abi Karam	Counsel	Senior Counsel		LEGAM
Paul-Jean Feno	Safeguards Specialist	Senior Environmental Specialist		GEN07
Sonia Vanecia Boga	Team Member	Program Assistant		AFMGA
Sylvie Munchep Ndze	Team Member	Procurement Assistant		AFCC1
Tasneem Rais	Team Member	Program Assistant		GTI11

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Gabon	Woleu-Ntem	Oyem	X		
Gabon	Province du Moyen-Ogooue	Ndjole	X		
Gabon	Province de l'Estuaire	Libreville	X		
Gabon	Province du Haut-Ogooue	Lekoni	X		
Gabon	Moyen-Ogooue	Lambarene	X		
Gabon	Province de l'Ogooue-Lolo	Koulamoutou	X		
Gabon	Province du Haut-Ogooue	Province du Haut-Ogooue	X		
Gabon	Province du Haut-Ogooue	Franceville	X		
Gabon	Province de l'Ogooue-Ivindo	Booue	X		

Institutional Data

Parent (Central African Backbone - APL4 - Gabon-P122776)

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

<p>Cross Cutting Topics</p> <p><input type="checkbox"/> Climate Change</p> <p><input type="checkbox"/> Fragile, Conflict & Violence</p> <p><input type="checkbox"/> Gender</p> <p><input type="checkbox"/> Jobs</p> <p><input checked="" type="checkbox"/> Public Private Partnership</p>
--

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Information and communications	Telecommunications	70		
Public Administration, Law, and Justice	Public administration- Information and communications	30		
Total		100		

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Trade and integration	Regional integration	50
Financial and private sector development	Infrastructure services for private sector development	40
Financial and private sector development	Regulation and competition policy	10
Total		100

Additional Financing Additional Financing CAB4 (P158299)

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Topics

<p><input type="checkbox"/> Climate Change</p> <p><input type="checkbox"/> Fragile, Conflict & Violence</p> <p><input type="checkbox"/> Gender</p>
--

Jobs

Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Information and communications	Telecommunications	60	100	
Information and communications	General information and communications sector	20		
Industry and trade	General industry and trade sector	20		
Total		100		

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Trade and integration	Regional integration	50
Financial and private sector development	Infrastructure services for private sector development	40
Financial and private sector development	Regulation and competition policy	10
Total		100

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required ?Consultants will be required

I. INTRODUCTION

1. **This Project Paper (PP) seeks the approval of the Executive Directors to provide an additional loan in the amount of US\$23 million to the Gabonese Republic for the fourth phase of the Central African Backbone Program (CAB4 project, Loan No. 8150-GA).** The proposed Additional Financing (AF) will leverage US\$2.10 million of additional counterpart financing and includes a restructuring of the CAB4 project involving: (a) changes to the project components; (b) extension of the CAB4 project closing date to be *coterminus* with the closing date of the AF; (c) revisions to the Results Framework; and (d) application of the most recent procurement guidelines, dated January 2011 and revised July 2014.

2. **The proposed AF requested by the Government of Gabon (GoG)¹ will help finance a set of scaled-up activities that will enhance the impact of the original well-performing CAB4 project.**

II. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

Project Background

3. **The CAB4 project (IBRD US\$58 million, with GoG counterpart funding of US\$51 million) was approved by the Board of Executive Directors on March 28, 2012 and became effective on March 6, 2013.** The Central African Backbone (CAB) Program is a World Bank Group financed interdependent series of projects (SOP) involving multiple Borrowers² aiming to improve the regional communications infrastructure in Central Africa.³ The development objective of the overall CAB Program is to contribute to increase the geographical reach and usage of regional broadband network services and to reduce their prices.

4. **The Project Development Objective (PDO) of the CAB4 project is to contribute to increase geographical reach and usage of regional broadband network services and to reduce their prices in the territory of the Gabonese Republic.** The project components consist of:

- (a) Component 1. *Enabling Environment (IBRD US\$6.05 million, with GoG counterpart funding of US\$0.30 million).* The aim of this component is to provide technical assistance: (a) to promote and implement an Open Access Regime and a Public Private Partnership (PPP) for international and for national connectivity; (b) for the review, improvement and development of the telecoms and information laws; (c) to provide policy and regulatory capacity building for key stakeholders; (d) to support the increase of broadband access including rural access, as well as further liberalize the sector, including the regulatory regime for Internet service providers (ISPs), and to reap the benefits of broadband's digital switchover; (e) to support establishing an Internet

¹ Financing request dated November 25, 2015.

² Following SOPs have been discussed and approved by the Board: SOP1-A (Cameroon, Central African Republic, and Chad) on September 24, 2009; SOP1-B (Central African Republic, Chad) on June 30, 2011; SOP2 (Sao Tome e Principe) on January 12, 2011; SOP3 (Congo) on May 25, 2011; SOP4 (Gabon) on March 28, 2012; and SOP5 (Democratic Republic of Congo) on July 16, 2014.

³ Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Congo, Gabon, Niger, Sudan, Equatorial Guinea, Sao Tome e Principe.

exchange point (IXP), and to implement a management policy for Internet domain names; and (f) to assist in defining an e-Government strategy and action plan leveraging new connectivity.

- (b) Component 2. *Connectivity (IBRD US\$48.50 million, with GoG counterpart funding of US\$48.36 million)*. On the basis of an open access and PPP structure to leverage private sector investment, the aim of this component is to finance: (a) a share of the Government's US\$15 million contribution (consortium fee) for its participation in the Africa Coast to Europe (ACE) submarine cable; (b) a terrestrial fiber optic link Libreville-Franceville – Bakumba – Lekoko / Border with Congo to interconnect with the Congolese link Dolisie – Mbinda (already financed under the CAB3 project), and additional links within the first phase of rollout of a national backbone; and (c) the set-up of an IXP, and of an interconnection point to access the national backbone capacity.
- (c) Component 3. *Project Management (IBRD US\$3.45 million, with GoG counterpart funding of US\$2.22 million)*. The aim of this component is to strengthen the Government's capacity to implement the project, including the related environmental and social safeguards.

Project Performance

5. **The CAB4 project is a well-performing project.** As of Mid-May 2016, the project had disbursed 51.4 percent of the funds. The major contract for the passive infrastructure⁴ (US\$30.4 million) is under implementation and has disbursed approximately 60 percent of its funds. The remaining funds under the original project are in an advanced procurement stage, with the last large remaining procurement expected to be completed by June 2016.⁵ Disbursements will continue to increase as the national backbone construction progresses. The midterm review (February 2015) concluded that the CAB4 project remains highly relevant to contributing to increase geographical reach and usage of regional broadband network services and to reduce their prices in the territory of the Gabonese Republic.

6. **The CAB4 project is on track to meet the PDO.** Gabon's impressive progress made in ICT development over the recent years has been recognized internationally with the 2015 "ICT for Sustainable Development Award"⁶ from the International Telecommunication Union (the United Nations specialized agency for ICT).

- **The open access regime and the PPP for the international and national connectivity investment financed by the CAB4 project are in place.** A special purpose vehicle (SPV), Holding Company for Digital Assets (*Société de Patrimoine des Infrastructures Numériques - SPIN*), as well as its ACE subsidiary, have been created, registered, and are

⁴ Passive infrastructure encompasses digging trenches, laying ducts and chambers, building technical buildings/centers and pulling the fiber optic cable in order to have an end to end optical continuity.

⁵ For "Component 1 - Enabling Environment" the technical evaluation report for the two remaining studies on broadband stimulation strategies and on review, improvement and development of ICT legal and regulatory framework (US\$0.4 million each in the procurement plan) will be launched in June 2016. For "Component 2 - Connectivity", the bids for the active equipment (US\$10 million in the procurement plan) were received in April 2016 and the evaluation process is expected to be completed in June 2016.

⁶ See <http://www.itu.int/en/ict-sdg-award/2015/Pages/default.aspx>

operational. They own the new international, regional, and national capacity (financed by the project). This capacity is made available by an experienced private wholesale operator, according to open access principles. The wholesale operator was selected through an international, open, and transparent tender and awarded an operating, maintenance, and commercial contract. This operator has been created and registered, is operational and has obtained the license to operate in Gabon. Nine commercial contracts with local telecoms operators and ISPs have been signed for the international connectivity on the ACE submarine cable, and for the national submarine cable between Libreville and Port-Gentil (financed by counterpart funding). There is currently an effective facilities-based competition on the international connectivity market, previously characterized by a monopoly of Gabon Telecom, the incumbent operator, which rationed access to its submarine cable landing station (Libreville SAT3-WASC), and kept wholesale prices close to satellite prices. In addition, the Gabonese IXP⁷ (GabIXP) is operational and has been selected by the African Union (AU) as one of the regional IXPs for Central Africa.

- **Broadband market growth has been unlocked in Gabon, with international bandwidth prices falling substantially and Internet consumption/demand increasing dramatically.** The indicators “Access to Internet Services” and “Retail Price for Internet Services” have exceeded the end targets because the competitive market anticipated the availability of the new international connectivity in Libreville and in Port-Gentil,⁸ at reduced prices, and the boost afforded by the recent launch of 4G offers. For the indicator “International Internet Bandwidth Per User,” in December 2015, the actual value was equal to the value forecast. The average price for wholesale international connectivity sold by the private wholesale operator has dropped from US\$10,500/month to US\$475/month, which is below the end target of US\$500/month (by the original project’s closing date). The indicator “Number of localities with broadband Internet access” is also far higher than the end target because operators scaled-up investments in 4G access networks to use the shared national capacity to make available the new international connectivity to end users. Finally, Gabonese mobile operators’ estimates of the penetration of smartphones (allowing access to mobile broadband Internet services) is 25 to 30 percent as of December 2015, compared to 15 percent on average in Africa, according to a Deloitte study released in February 2015.⁹
- **For Gabon to further scale-up its competitiveness in digital products, retail prices would need to decrease more rapidly, and the coverage of the national backbone would need to expand to cover more provincial capitals and the remaining borders.** The comparison between Gabon and East African coastal countries - Kenya and Madagascar - indicates that a combination of vibrant competition at retail level, and a

⁷ Internet Exchange Points (IXP) are a prerequisite for development of local content, application and services. Typically managed by an association of ISPs and telecommunications operators, they provide the physical infrastructure through which Internet traffic is exchanged between their networks.

⁸ Gabonese authorities authorized technical experimentations on the ACE landing station and of the Libreville–Port-Gentil submarine cable ahead of the selection of the wholesale operator. The anticipation of the new international connectivity in the two most populated cities in Gabon (about 49 percent of the total population) was fueled by the sound competitive dynamic both in the mobile broadband market (3G/4G licenses awarded in March 2014 to both Airtel Gabon and Gabon Telecom/Moov) and in the fixed broadband market (between Gabon Telecom/Moov and independent Internet Service Providers).

⁹ See: <http://www2.deloitte.com/tn/fr/pages/technologies-medias-et-telecommunications/articles/tmt-predictions-afrique-2015.html>

substantial fall in wholesale prices is required to decrease retail prices sufficiently to stimulate uptake by the bottom 40 percent of the Gabonese population. Currently, Gabon's poorest 40 percent would need to spend 10 percent of their disposable income to afford 1Mbit/s of broadband services.¹⁰ Affordable broadband in all provincial capitals will increase the well-being of the bottom 40 percent, including through new opportunities of economic activities and jobs. Connecting with all neighboring countries - as well as improving the reliability of communications within the sub region - will ensure that prices for international capacity are kept low because there will be a competitive sub regional market to access the international capacity.

Table 1. Results Achieved Under the CAB4 project in Growth of the Broadband Market

Indicator	Base (Dec 2010)	Forecast (Dec 2015)	Achieved (Dec 2015)	By the closing date (Dec 2016)
International internet bandwidth (Bits per second per person)	4,620	13,778	13,152	14,712
Access to Internet services (number of subscribers per 100 people)	14	26	67	28
Average monthly price of wholesale international E1 capacity link from capital city to Europe (US\$/ month/2Mbps)	10,500	800	475	500
Retail price of Internet services (US\$/per Mbit/s per Month)	218	100	25	80
Increased access to ICT services: Number of localities with broadband Internet access (256Kbps)	3	10	22	10

Source: ISR and CAB4 PIU

¹⁰ No recent statistics are available on the income profiles of households in Gabon. A 2004 survey from the United Nations Development Program found that 43.1 percent of surveyed people lived with an income of XAF 100,000 per month. Assuming no change in the repartition of households per level of income since 2004, a correction of this income according to the evolution of the gross national income per capita (current) suggests that this bottom 40 percent lived with an income of XAF145,000 per month in 2014. A retail price for broadband access of US\$25 per Mbit/s per month (~XAF 14,500) would represent 10 percent of this income, thus confirming that Internet access remains unaffordable to the bottom 40 percent of the population.

Table 2. Benchmark of Internet Wholesale Prices and Internet Retail Prices in Selected West and East African Countries

Country	Average monthly price of wholesale international E1 capacity link from capital city to Europe (US\$/month/2Mbps)	Retail price of Internet services (US\$ per Mbit/s per Month)	Date of Data
Burkina Faso	2035	178	Sep 2015
Burundi	300	300	Mar 2014
Gabon	475	25	Dec 2015
Gambia	500	164	Jun 2014
Guinea	1,400	700	Jan 2016
Kenya	290	100	Dec 2015
Madagascar	442	58	Oct 2015
Mauritania	82	42	Jun 2015

Source: ISR

7. **The Implementation Status Report (ISR) ratings over the last 12 months, including Implementation Progress (IP) and Development Objective (DO) ratings, have been consistently Moderately Satisfactory or better.** As per the latest ISR, the project's performance is Satisfactory for the DO and the IP ratings.

Table 3. CAB4 project's ISR Performance Ratings

Project Performance	ISR Seq.6 June 17, 2014	ISR Seq.7 December 25, 2014	ISR Seq.8 June 16, 2015	ISR Seq.9 January 25, 2016
Development Objective (DO)	Moderately Satisfactory	Moderately Satisfactory	Satisfactory	Satisfactory
Overall Implementation Progress (IP)	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory	Satisfactory
Financial Management	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Project Management	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Counterpart Funding	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory	Satisfactory
Procurement	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Monitoring and Evaluation	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Overall Safeguards Rating¹¹	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory

8. **The CAB4 project complies with key loan covenants, including audit and financial management reporting requirements. In terms of institutional and implementation arrangements,** the Gabonese Republic has (throughout project implementation) maintained the

¹¹All required safeguards documents both for the international connectivity and for the national backbone connectivity have been disclosed in country and in the *InfoShop*.

Fiber Optic Commission (CCSPFOG) under terms of reference (ToR) satisfactory to the Bank. The CCSPFOG is vested with responsibility for overall technical and operative guidance, direction, and coordination during project implementation, as well as fiduciary and governance oversight. The CCSPFOG has made available full counterpart funding for the CN-TIPPEE established under Decree No., 000007/PRIMPPD, dated January 4, 2006 for the CAB4 Gabon Project Implementation Unit (PIU). The PIU is staffed with key management, technical, and financial specialists for the project's life, and implements its responsibilities under the project. The Gabonese Republic has concluded both the ACE Agreement with the ACE Subsidiary and the Backbone Agreement with the SPV, and has caused the ACE Subsidiary to execute the ACE Wholesale Contract.

9. Finally, there are no unresolved issues concerning fiduciary management (including audit and financial management reporting requirements) and no unresolved environmental and social safeguards issues. The Bank closely monitors compliance of all safeguards. The installation of the passive infrastructure of the national backbone is progressing simultaneously on several fronts. The rating for Overall Safeguards is Moderately Satisfactory because:

- (a) The main environmental and social clauses in the bidding document and the Environmental and Social Management Plan (ESMP) are well-reflected in the works contract but their implementation in the execution work plan needs to be improved;
- (b) The Resettlement Action Plan (RAP) was completed prior to the start of the works for the national backbone. However, during the construction phase along the railway tracks, about 63 additional people were affected (mainly through damages to crops and fruit trees) as of March 2016. Their compensation is ongoing and expected to be completed by end of June 2016; and
- (c) The implementation of the Indigenous Peoples Plan (IPP) is progressing well, but not as fast as originally envisaged. The IPP includes capacity building and infrastructure building mitigation measures. The capacity and citizenship (establishment of identity and health insurance cards for indigenous people) building measures are expected to be completed by end of June 2016. The procurement process for the infrastructure building measures (rehabilitation of dwells) is well advanced and works should start before end of June 2016.

Rationale for Additional Financing

10. **The activities proposed to be funded through the AF have been requested by the GoG and will address the key sector challenge of boosting uptake of broadband by the bottom 40 percent,¹² through: (a) deepening sector reforms to foster decreases in pricing, and ensure good quality; and (b) addressing remaining connectivity gaps to increase geographic coverage and regional integration.** These activities will serve to increase the effectiveness and extent of the CAB4 project's impact, as well as its sustainability.

¹² The World Bank Group aims to promote shared prosperity, with a focus on income growth for the poorest. Instead of simply looking at per capita gross domestic product growth, which is the common indicator to measure a country's welfare, the World Bank Group measures the income growth of the bottom 40 percent of each nation's population.

- With respect to Component 2 Connectivity, the objective of the Government’s five-year plan, “Digital Gabon”¹³ adopted in 2011, is to connect all nine provincial capitals (Franceville, Kouilamoutou, Lambaréné, Libreville, Makokou, Mouila, Oyem, Port-Gentil, and Tchibanga), all regional capitals, and the borders of the country (Cameroon, Congo, and Equatorial Guinea). The CAB4 project will ultimately connect six provincial capitals out of nine, and all borders. The original Project is connecting four provincial capitals (Franceville, Kouilamoutou, Libreville, and Port-Gentil) to broadband Internet and the border with Congo; it has set up a regional IXP in coordination with the Axis project of the AU. Now that the first phase of the national backbone financed under the CAB4 project is firmly on track, both in terms of open access PPP implementation and of progress in backbone works, the Government has decided to launch the second phase of the national backbone. The AF would allow the connection of two additional provincial capitals (Lambaréné and Oyem) and the remaining two borders (Cameroon and Equatorial Guinea) “branching out” from the Libreville-Franceville link constructed under the first phase. The total investments under CAB4 would contribute to increased geographical reach and use of regional broadband network services for 62.5 percent of the Gabonese population (1,131,570 people), up from 57.8 percent in the original project (1,046,476 people).¹⁴
- With respect to Component 1 Enabling Environment, the Government has demonstrated its commitment to developing a dynamic telecommunications market through (a) establishing an independent sector regulator, Posts and Electronic Communications Regulatory Agency (ARCEP); (b) privatizing government owned Gabon Telecom in 2007; (c) suppressing exclusive rights in fixed telecommunications in 2012; and (d) fostering vibrant competition in the emerging broadband market both mobile (3G/4G global licenses awarded in March 2014 to Airtel Gabon and Gabon Telecom/Moov) and fixed (between Gabon Telecom/Moov and several independent ISPs). The cellular sector is dynamic and competitive, with three major operators (Airtel Gabon, Gabon Telecom/Moov, and Azur) and a mobile penetration rate of 167 percent (December 2015).¹⁵ Broadband Internet penetration is also booming, with 67 percent penetration as of December 2015.¹⁶ Through the original project, the Government embarked on a policy reform process led by the Ministry of Digital Economy and Post (MENP) to: (a) strengthen the legal and regulatory environment for ICT both in terms of the basic telecommunications law and the second generation ICT laws;¹⁷ and (b) develop a national

¹³ “Digital Gabon” is structured around six strategic objectives as follows: establish a coherent and stable institutional framework; set up the legal framework for the information society; and build and operate digital infrastructure with the objective to foster infrastructure sharing, standardize and digitalize major state unified registries, implement e-government, and support industrial and social sectors in their migration towards information society and knowledge economy.

¹⁴ There is low population density in Gabon, with 1,688,000 people (2014 estimate) for a land area of 267,667 km². The 33 most populated cities in Gabon account for 72.3 percent of the total population. The original project covers 10 of these 33 cities (57.8 percent of the total population), and the AF would cover four additional cities (8.6 percent of total population).

¹⁵ Penetration exceeds 100 percent as many mobile users possess multiple SIM cards

¹⁶ As in other Sub-Saharan countries, the broadband market is largely mobile (only 1 percent of fixed broadband penetration). The ratio of mobile broadband penetration is expected to decrease due to the following factors: consolidation of the mobile market from four to three operators (Moov has been acquired by Gabon Telecom) which will lead to a clean-up of the client databases ; and customers moving from 3G prepaid to 4G prepaid to enjoy improved quality of the Internet service.

¹⁷ The package of 2nd generation ICT laws typically includes an E-Commerce Law, a Privacy / Protection of Personal Data Law, a Cybercrime Law and a Freedom of Information Law.

broadband plan¹⁸ to replace its Digital Gabon, its five-year plan ending in 2016. The AF will support the Government's implementation of key secondary legislation or regulatory tools through technical assistance, capacity building, and institutional strengthening through training. The total investments under CAB4 will help to further entrench a vibrant and competitive telecommunications market and contribute to reduce the prices of broadband network services for the people of Gabon.

- Finally, the national backbone, once implemented is expected to materially increase the country's climate resilience efforts, particularly in response to climate change. Among other factors, climate change is expected to affect Gabon by way of sea-level rise, increased risk of flooding (particularly in the Ogooué Basin), possible increase in waterborne diseases in the hot and humid environment and change in soil composition with a knock-on impact on agricultural production. The investments in the national backbone will facilitate important redundancy in the network as protection against outages from climate events. It will also facilitate monitoring (and timely response) of weather and climate affected impacts in water and soil systems.

11. **The AF is the preferred financing mechanism** because it will utilize the current effective implementation arrangements and existing PIU, which have produced satisfactory results under past and ongoing projects. Moreover, the AF mechanism will save time that would otherwise be required to prepare a new project. It will also help maintain the positive momentum of the results achieved to date, ensure the continuation of the ongoing sector reforms through Component 1 Enabling Environment as well as reduce costs for Component 2 Connectivity by preventing an interruption between the construction works financed under the original project and those financed under the AF.

Consistency with the Current Country Partnership Strategy

12. **The activities proposed to be funded through the AF are fully consistent with the World Bank Country Partnership Strategy for Gabon FY2012–FY16 and its two-year extension proposed by the Performance and Learning Review (95842-GA, approved by the World Bank's Board of Executive Directors on April 5, 2016), which seeks a tighter alignment with the World Bank Group twin goals of ending extreme poverty and boosting shared prosperity.** The Performance and Learning Review acknowledges that Gabon has met most of the Country Partnership Strategy indicators related to telecommunications. CAB4 is fully aligned with Pillar 2 of the Performance and Learning Review: Competitiveness and Employment, through its contribution to making the Internet universal, affordable, open, and safe. The CAB4 project is contributing to the World Bank Group twin goals. The World Development Report, 2016¹⁹ shows that the potential gains from digital technologies (the Internet, mobile phones, and related technologies) for economic development are high when effectively realized. It acknowledges that, furthermore, connectivity for all (as per the PDO of the CAB Program) remains an important goal and a tremendous challenge and emphasizes that

¹⁸ National broadband plans define objectives – often in phases with moving targets for specified years and with specified speeds – for rolling out broadband infrastructure to the entire population, priority groups or specific communities, as well as objectives for closing gaps in regional broadband infrastructure coverage.

¹⁹ See: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2016/01/13/090224b08405ea05/2_0/Rendered/PDF/World0developm0000digital0dividends.pdf

market competition, public-private partnerships, and effective regulation of Internet and mobile operators encourage private investment that can make access universal and affordable. Finally, the proposed Additional Financing reinforces, and would benefit from, the World Bank's e-Gabon project²⁰ under preparation, and the Investment Promotion and Competitiveness project²¹ under implementation.

Implementation Arrangements

13. The institutional and implementation arrangements set up for the CAB4 project will be maintained for the AF activities. The arrangements involve two organizational levels: the CCSPFOG and the PIU. The CCSPFOG²² is in charge of providing overall technical and operative guidance, direction, and coordination during project implementation; has fiduciary and governance oversight; and bears overall responsibility for the compliance of safeguards activities with national and World Bank policies. Reporting to the Fiber Optic Commission for overall guidance, direction, and coordination, as well as for fiduciary and governance oversight, the PIU is responsible for providing all fiduciary support in the implementation of CAB4 project, including procurement, FM, M&E, and safeguards. CN-TIPPEE,²³ the PIU, is functioning/operating and is experienced in implementing World Bank operations.

²⁰The PDO of the e-Gabon project is to: (a) improve the timeliness and availability of information to support the delivery and management of public health services; and (b) foster the development and roll-out of eHealth applications and services, and ICT services more generally. The PDO will be achieved by developing and rolling out a new National Health Information System, harnessing ICT to support the needs of both clinical staff and health system managers, and by advancing the promotion and growth of a local digital ecosystem in Gabon through opportunities arising from the development and roll-out of eHealth applications and services. Accelerated development of local content, applications and services both through public and private e-services, including mobile applications, under the e-Gabon project will strengthen the economic return for the broadband infrastructure built by Gabon under the CAB4 project. Conversely an expanded footprint of affordable broadband services will contribute to increase the number of beneficiaries of the e-Gabon project. Direct beneficiaries of the project will be patients of the national health system and health workers, as well as private sector actors and entrepreneurs, with a specific focus on women and youth who seek to conduct business in the digital economy. Indirect beneficiaries include potentially all of the country's population, which will benefit from increased availability and quality of affordable health services as well as mHealth and other useful applications tailored for local needs.

²¹ The Investment Promotion and Competitiveness project aims to contribute to the improvement of the investment climate and to foster enterprise development in Gabon. Increasing geographical reach and usage of regional broadband network services and reduction in their prices under CAB4 will directly facilitate the operationalization of Gabonese companies and foster micro-, small- and medium-enterprise development under the Investment Promotion and Competitiveness project. Increased broadband usage by micro-, small- and medium-enterprise will strengthen the economic return for the broadband infrastructure built by Gabon under the CAB4 project.

²² Established and operating pursuant to Ministerial Decision No. 810-424-MENCP-MEEDD dated May 21, 2012.

²³ Established and operating pursuant to the Ministerial Decision No. 00007/PRIMPPD dated January 4, 2006, the CN-TIPPEE is responsible for carrying out projects which are in the public interest on behalf of all stakeholders with a view to implementing best practices and sound governance.

III. PROPOSED CHANGES

Summary of Proposed Changes	
The proposed AF requested by the Government will finance a set of activities to scale up the original project activities grouped under the same three broad components as the original project. The proposed AF in the amount of US\$23 million will leverage US\$2.10 million of additional counterpart financing and includes a restructuring of the CAB4 project involving: (a) changes to the project components; (b) extension of the CAB4 project closing date to be <i>coterminus</i> with the closing date of the AF; (c) revisions to the Results Framework; and (d) application of the most recent procurement guidelines, dated January 2011 and revised July 2014.	
Change in Implementing Agency	Yes [] No [X]
Change in Project's Development Objectives	Yes [] No [X]
Change in Results Framework	Yes [X] No []
Change in Safeguard Policies Triggered	Yes [X] No []
Change of EA category	Yes [] No [X]
Other Changes to Safeguards	Yes [] No [X]
Change in Legal Covenants	Yes [] No [X]
Change in Loan Closing Date(s)	Yes [X] No []
Cancellations Proposed	Yes [] No [X]
Change in Disbursement Arrangements	Yes [] No [X]
Reallocation between Disbursement Categories	Yes [] No [X]
Change in Disbursement Estimates	Yes [X] No []
Change to Components and Cost	Yes [X] No []
Change in Institutional Arrangements	Yes [] No [X]
Change in Financial Management	Yes [X] No []
Change in Procurement	Yes [X] No []
Change in Implementation Schedule	Yes [X] No []
Other Change(s)	Yes [] No [X]
Development Objective/Results	
Project's Development Objectives	
Original PDO	
To contribute to increase the geographical reach and usage of regional broadband network services and reduce their prices in the territory of the Republic of Gabon.	

Change in Results Framework						
<p>Explanation:</p> <p>Annex 1 contains the PDO Level Results Indicators and Intermediate Results Indicators, whose target values have been revised to reflect the current environment and the project's scaled-up activities.</p> <p>Citizen engagement has been mainstreamed in the AF. The Results Framework includes a new indicator on "Citizen perception of the affordability of broadband services (including perception by women)," to ensure that citizens directly inform project implementation as it will track beneficiaries' satisfaction with the retail price and quality of broadband services under the CAB4 project. The data for this indicator will be collected through a survey of citizens based in the project's provincial capitals (Franceville, Koulamoutou, Lambaréné, Libreville, Oyem and Port-Gentil). The indicator will be updated annually. The baseline will be collected in December 2016, because the funds to conduct the survey will be available after project's effectiveness. Data on female users will be tracked and reported.</p>						
Compliance						
Change in Safeguard Policies Triggered						
<p>Explanation:</p> <p>The proposed additional activities are classified as Category B. They trigger the OP/BP4.01 (Environmental Assessment), OP/BP4.04 (Natural Habitats), OP/BP4.11 (Physical Cultural Resources) and the Involuntary Resettlement OP/BP 4.12, which are triggered in the original project. The Government prepared an Environmental and Social Impact Assessment (ESIA), including an Environmental and Social Management Plan (ESMP), as well as a Resettlement Action Plan (RAP). After review and clearance by the Bank, the safeguards documents for the AF were disclosed in the country on April 19, 2016, and in the Bank's <i>InfoShop</i> on April 18, 2016.</p>						
Covenants - Additional Financing (AF CAB4 - P158299)						
Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
IBRD	Backbone Agreement (Section I.B.1. of Schedule 2)	The Borrower shall, not later than three (3) months after the Effective Date, amend the Backbone Agreement with the SPV in accordance with Section I.B.1. of Schedule 2 of the Loan Agreement.	27-Jan-2017	<input type="checkbox"/>		New
IBRD	SPV final share capital legal	The Borrower shall ensure that all	19-March-2017	<input type="checkbox"/>		New

	covenant (Section V.A. of Schedule 2)	face value of shares representing contributions in cash of the SPV have been paid.				
IBRD	ICT legal and regulatory framework (Section V.B. of Schedule 2)	The Borrower shall ensure that a new ICT regulatory and legal framework draft, satisfactory to the Bank, revising the existing ICT regulatory and legal framework has been submitted and approved by the Council of Ministers.	31-March-2017	<input type="checkbox"/>		New
IBRD	Project Implementation Manual (Section I.E. of Schedule 2)	The Project Implementation Manual shall, not later than one (1) month after the Effective Date, be amended in accordance with Section E of Schedule of the Loan Agreement.	27-Nov-2016	<input type="checkbox"/>		New
IBRD	Tompro software (Section II.B.4. of Schedule 2)	The CN-TIPPEE's existing accounting software acceptable to the Bank, shall, not later than one (1) month after the Effective Date, be upgraded for the project.	27-Nov-2016	<input type="checkbox"/>		New

Conditions

Source Of Fund	Name	Type
IBRD	Retroactive financing (Section IV.B.1. of Schedule 2)	Disbursement
Description of Condition		

Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made for payments made prior to the date of this Agreement, except that withdrawals up to an aggregate amount not to exceed EUR4,040,000 may be made for payments made prior to this date but on or after September 1, 2015, for Eligible Expenditures under Category (1) and (2).

Risk									
Risk Category					Rating (H, S, M, L)				
1. Political and Governance					Moderate				
2. Macroeconomic					Moderate				
3. Sector Strategies and Policies					Moderate				
4. Technical Design of Project or Program					Substantial				
5. Institutional Capacity for Implementation and Sustainability					Substantial				
6. Fiduciary					Moderate				
7. Environment and Social					Substantial				
8. Stakeholders					Moderate				
OVERALL					Substantial				
Finance									
Loan Closing Date - Additional Financing (Additional Financing CAB4 - P158299)									
Source of Funds					Proposed Additional Financing Loan Closing Date				
IBRD					30-Jun-2018				
Loan Closing Date(s) - Parent (Central African Backbone - APL4 - Gabon - P122776)									
Explanation:									
The original project closing date would be revised to June 30, 2018 to accommodate the additional activities.									
Ln/Cr/TF	Status	Original Closing Date	Current Closing Date	Proposed Closing Date	Previous Closing Date(s)				
IBRD-81500	Effective	31-Dec-2016	31-Dec-2016	30-Jun-2018					
Change in Disbursement Estimates (including all sources of Financing)									
Explanation:									
Disbursement Estimates have been revised to reflect the current project status and scale-up of the project's activities.									
Expected Disbursements (in US\$ million) (including all Sources of Financing)									
Fiscal Year	2012	2013	2014	2015	2016	2017	2018		
Annual	2.00	1.00	2.00	15.00	20.00	30.00	11.00		
Cumulative	2.00	3.00	5.00	20.00	40.00	70.00	81.00		

Allocations - Additional Financing (Additional Financing CAB4 - P158299)				
Source of Fund	Currency	Category of Expenditure	Allocation	Disbursement %(Type Total)
			Proposed	Proposed
IBRD	US\$	(1) Goods, non-consulting services, Training, Operational Costs and consultants' services for the Project (other than Part 2)	6.44	100.00
IBRD	US\$	(2) Goods and works under Part 2 of the Project	16.50	100.00
IBRD	US\$	(3) Front-end Fees	0.06	100.00
		Total:	23.00	
Components				
Change to Components and Cost				
Explanation:				
The original project's three components would remain: Component 1: Enabling Environment; Component 2: Connectivity; and Component 3: Project Management.				
Changes will be made to:				
<ul style="list-style-type: none"> • Component 1: to accommodate technical assistance and training that are required to assist the Gabonese authorities to strengthen and deepen legal and regulatory reforms in the ICT sector, and increase the sustainability of impacts already achieved in the original project; • Component 2: to finance the strategic terrestrial fiber links to connect two additional provincial capitals (Lambaréné, Oyem) and Gabon's remaining two borders (Cameroon, Equatorial Guinea) and the extension of the existing terrestrial fiber optic link, as well as purchase of ducts and chambers to be maintained as a reserve for the Borrower; • Component 3: to strengthen the Borrower's capacity to implement the AF. 				
Project Activities. The scope of AF activities will include the following (see further in Annex 2):				
<ul style="list-style-type: none"> • Component 1: Enabling Environment (estimated cost: US\$4.85 million IBRD, and US\$0.70 million counterpart funding) will carry out a comprehensive program of technical assistance and the provision of goods, including: <ol style="list-style-type: none"> 1. Developing required bidding documents and carrying out monitoring of works under Part 2.1 of the Project. 2. Preparing recommendation and action plans for the development of datacenter capabilities in the Carrier Hotel set-up under Part 2.3 of the Original Project. 				

3. Preparing necessary documentation to ensure proper coordination between the Borrower, the Republic of Cameroon and the Republic of Equatorial Guinea for cross border fiber optic interconnection provided for under Part 2.1 of the Project.
4. Providing recommendations and preparing an action plan to increase the IXP activity including through domain names under “.ga”, to assist the Borrower in fulfilling its role as regional IXP.
5. Assessing the PPP implemented under Part 1.1 of the Original Project.
6. Strengthening the Borrower’s key stakeholders’ capacity to (i) provide policy and regulatory guidance, including regulatory tools, cost models, monitoring and evaluation capacity, and encompassing a range of activities, focused studies and training designed to assist in improving the overall policy, competitive and regulatory environment for the Borrower’s ICT sector; and (ii) to implement the Borrower’s ICT legal and regulatory framework.
7. Assisting ARCEP in: (i) developing required bidding documents for monitoring of broadband services quality provided in the Borrower’s territory; and (ii) updating the annual cost model to regulate wholesale prices.
8. Undertaking a study to assess viable options for a pilot project aimed at bringing local fiber optic infrastructure in Port-Gentil to support the national broadband plan under Part 1.4 of the Original Project.
9. Developing regulations and procedures aimed at fostering sectoral synergies in the deployment of broadband infrastructure, such as consultations for roads, railways, and electricity lines construction.

The counterpart funding of US\$0.7 million will ensure that one-third of the XAF1 billion (equivalent US\$2 million) share capital of SPV SPIN has been paid.

- **Component 2: Connectivity (estimated cost: US\$16.5 million IBRD, and US\$1.0 million counterpart funding)** will include the following activities:

- Construction of a terrestrial fiber optic link between Booué–Koumameyong–Lalara–Mitziç–Oyem–Bitam–Eboro/Border with Cameroon to KyeOssi/Border with Equatorial Guinea and of a terrestrial fiber optic link between Oyan–Bifoun–Lambaréné, and the extension of existing terrestrial fiber optic link;
- Purchasing ducts and chambers to be maintained as a reserve for the Borrower.

The additional activities to be financed by counterpart funding would be contingencies in an amount of not less than US\$1million.

- **Component 3: Project Management (estimated cost: US\$1.59 million IBRD, and US\$0.4 million counterpart funding)** will strengthen the Borrower’s capacity to implement the project, encompassing the technical assistance required for:

- Upgrading and operation of the CCSPFOG and the CN-TIPPEE to ensure suitable staffing, dedicated staff for the project, the provision of office space and equipment and

the financing of operational costs required for the purpose;

- Conducting the environmental and social studies required by the ESMF, the RAP and the Indigenous Peoples Planning Framework and monitoring and capacity building activities under the project; and
- Fulfilling the Borrower's obligations under the Loan Agreement for implementation, auditing, monitoring, and evaluation, data collection and communication.

The counterpart funding of US\$0.4 million will finance the drafting of the safeguard studies and the Government's share of the implementation of the ESMP and of the RAP.

Action	Proposed Component Name	Current Cost (\$M)	Proposed Cost (\$M)	Action
Component 1 - Enabling Environment	No change in Component name	6.35	11.90	Revised
Component 2 – Connectivity	No change in Component name	96.86	114.36	Revised
Component 3 - Project Management	No change in Component name	5.67	7.66	Revised
Front-end Fee			0.06	
	Total:	108.88	133.98	

Other Change(s)

Change in Financial Management

Explanation:

The assessment concludes that the financial management arrangements meet the minimum requirements of OP/BP 10.00 and project risk is substantial. The assessment of the CAB4 project's financial management (FM) was conducted to determine the adequacy of its FM systems, and its capacity for project implementation. The FM assessment was carried out in accordance with the *Financial Management Manual for World Bank-Financed Investment Operations* issued by the Financial Management Sector Board, effective on March 1, 2010, and the requirements of OP/BP 10.00.

The AF will be managed under the existing FM arrangements for the original project. The AF to the Gabon CAB4 project will be implemented by the CN-TIPPEE which will have overall responsibility for all fiduciary aspects in the implementation of the AF. The financial capacity of the CN-TIPPEE is found acceptable to the World Bank because it has successfully managed the Gabon Infrastructure and Local Development Program, and it is currently managing two World Bank financed projects (CAB4 project and Local Infrastructure Development project) which show adequate performance and an appropriate fiduciary platform (staff, accounting system, manual of procedures, external audit arrangements...). However, to better comply with the minimal World Bank FM requirements, the project implementation unit will need to: (i) update the existing manual of procedures not later than one month after the Effective Date; (ii) customize the accounting software in place so that the transactions can be captured and recorded not later than one month after the Effective Date, (iii) open a new Designated Account (DA), for the additional financing funds; and (iv) amend the ToR of the current external audit arrangements so as to include the new proposed AF. The new DA has been opened and the ToR of the current external auditor to include

the new proposed AF was amended prior to negotiations (Annex 3).

FM rating. The FM performance of the CN-TIPPEE has been Satisfactory for the last 18 months for the CAB4 project.²⁴ There are no overdue audit reports. The FM staff is sufficient and is comprised of a financial officer, a (recently recruited) accountant, and an accountant clerk. The overall arrangements for the project are considered adequate to handle the fiduciary requirements of the AF.

Change in Procurement

Explanation:

Annex 4 details the procurement plan discussed and agreed with the Borrower during negotiations. Procurement under the restructured project and AF will be carried out in accordance with the Bank's most recent version of the Procurement Guidelines. Transitional provisions in respect of procurement have been laid out in the Loan Agreement as appropriate.

Change in Implementation Schedule

Explanation:

The implementation schedule will be adjusted to reflect scaled up and new activities under the AF, and the revised closing date.

IV. APPRAISAL SUMMARY

Economic and Financial Analysis

Explanation:

Rationale for public sector financing. Given the relatively small population in Gabon (1.7 million inhabitants in 2015), the GoG is willing to absorb the investment risk associated with significant investments in broadband connectivity to create effective competition for international connectivity, reduce the digital gap and link the country to its borders whilst entrusting an experienced independent private operator with the operation and maintenance of these investments in a manner that could ultimately evolve towards shared ownership. The GoG's objective is to provide opportunities to grow its dynamic and competitive ICT sector. The main rationale for the Bank's involvement is to provide financing in the early stages of the Gabonese connectivity project, so as to safeguard open access and PPP principles and support GoG's commitment to competition for international connectivity and accelerating broadband development. In this connection, it is key that the new submarine cable capacity, as well as the national backbone that will distribute it throughout the country and to its borders, will be provided according to open access principles and will leverage interest by the private sector (operators and Internet Service Providers) to participate in the CAB4 project. During preparation of this AF, local private sector expressed strong support for this approach.

World Bank's value added. The World Bank's value-added arises from the World Bank's technical expertise as well as its global knowledge in areas such as the creation of an environment

²⁴ The last supervision mission conducted in September - October 2015 rated the FM performance as Satisfactory.

where competition can flourish, and where Public Private Partnerships for building and operating the underlying fiber optic infrastructure can be established when needed. In addition, it has considerable experience in addressing the challenges of accelerating high-speed Internet access in many countries around the world, including through the Global Solutions Group “Broadband for All”. With a World Bank team highly knowledgeable about the ICT sector challenges and the supervision of large fiber optic infrastructure investments under open access regimes, value added during implementation will be substantial.

Building terrestrial fiber optic links is the most cost-effective long term option to ensure the international connectivity to provincial capitals and the borders of the country. Financial analysis was performed for the whole national backbone during preparation of the original project. The analysis considered a variety of radio wave, satellite, and fiber options and concluded that, given pent-up demand in Gabon (which has been confirmed during implementation of the CAB4 project), terrestrial fiber links are the best overall option in terms of long-term cost effectiveness and bandwidth availability.²⁵

Original project and AF will result in a suitable economic return to Gabon (see further Annex 5). All scenarios show a positive internal rate of return (IRR). All but one scenario have a positive net present value (NPV), indicating an IRR equal or greater than 15 percent. Depending on the scenario, the project would operate with a positive cash-flow between 2017 and 2019. In the base case scenario 4, assuming a discount rate of 15 percent, the project is estimated to have a NPV of US\$2.2 million over 15 years and an IRR of 16 percent, with break-even payback occurring in 2019. As shown in the comparison between the revised financial analysis and the one for the original project without the additional financing, the stronger than expected take-up of Internet ensures a solid economic return for all the terrestrial links financed under both the original project and the AF.

Technical Analysis

Explanation:

Open Access Regime and Public-Private Partnership for the international and national connectivity investment

Under the original project the Government of Gabon embarked upon a process (led by the MENP) to strengthen its ICT legal and regulatory environment. MENP acts as policy maker in the sector, with overall responsibility for telecoms licensing, as well as regulating the broadcasting sector. ARCEP, the telecoms regulator, was created under Law No. 005/2001 with the general aim to promote healthy and fair competition, and ensure public access to communications services. It is responsible for governing tariffs, enforcing legislative decisions, issuing tenders, and licenses and formulating policy to develop and modernize the industry. Technical assistance under the original project provided ARCEP with cost models for voice and SMS (short message service), interconnection, and for broadband wholesale connectivity offers. These are applicable to reference offers of dominant operators in the market, including fiber optic backbone connectivity to be built under Digital Gabon. The technical assistance is expected to be launched in June 2016, with the objective to move from the current regime (approach of “Dominant Operator Determination – Interconnection Price Regulation” to wholesale market failures, as per the basic

²⁵ Port-Gentil being an island, the national backbone link was realized using a submarine cable.

telecommunications law n°005/2001 from 27 June 2001) to an approach more aligned with current international best practices (“Market Analysis – Assessment of Significant Market Power – Imposing Obligations on Undertakings Having Significant Market Power”).

Using the existing experienced private wholesale operator for the additional links under the AF saves on transaction costs and operating costs of the national shared infrastructure, and is strongly supported by local telecoms operators and ISPs. The team considered the option to launch a competitive bidding process for managing and operating the additional links financed by the AF and the associated opportunity to have (an)other operator(s) entering Gabon’s broadband wholesale market. This is the approach followed in Congo under the CAB3 (with the caveat that lessons learned are not available yet because the process to select wholesale operator(s) remains ongoing). A key difference between Gabon and Congo is that Congo Telecom, the operator in charge of the national backbone and the West African Cable System submarine landing station in Pointe-Noire, is a state owned operator active at both the wholesale and the retail level. Introducing another private operator on international links to neighboring countries to Congo is therefore key to opening fiber optic infrastructure management to competition in Congo. Given the limited population of Gabon (1.7 million inhabitants in 2015) and its high concentration in a few cities, expanding the existing Open Access and PPP model to additional links of the national backbone saves on transaction costs²⁶ and operating costs. During preparation of this AF, local telecoms operators and ISPs expressed strong support for this neutral (i.e. wholesale only) private wholesale operator model. The Government of Gabon confirmed in its financing request dated November 25, 2015 its agreement with the inclusion of the additional links financed under this AF into the existing Open Access Regime and PPP model established under the original project, and this agreement has been reflected in the Loan Agreement. A seven-year contract was awarded for the PPP contract. The work conducted under the contract will provide the Government, in the near future, an opportunity to review the model based on its performance and impact on the broadband market’s growth.

Accelerated timeframe for the construction of the additional links

Preventing an interruption between the construction works financed under the original project and those financed under the AF will reduce costs. The construction of the fiber optic backbone implies: (a) the provision of passive infrastructure (digging trenches along existing railway tracks and roads, laying ducts and chambers, and pulling the fiber optic cable in order to have an end-to-end optical continuity between technical centers); and (b) subsequent installation of active equipment (that will enable the transmission of information along the fiber optic cable). The passive infrastructure laid along roads under the original project is expected to be completed by end June 2016. The least cost solution for the two additional trajectories, to be completed under the AF (to Oyem and Lambaréné and from there to the Cameroon and Equatorial Guinea borders), is to amend the contract that exists under the original project, and have the corresponding workforce and equipment move from the current sites to the new sites (without too much down time). For the active infrastructure,²⁷ bids under the original project have been structured in a “firm tranche” for

²⁶ The costs of technical assistance to the bidding process for digital assets financed under the original project amounted to US\$850,000.

²⁷ Active equipment encompasses provision and installation of WDM (Wavelength-Division Multiplexing, which multiplexes a number of optical carrier signals onto a single optical fiber by using different wavelengths (i.e., colors) of laser light) and SDH (Synchronous Digital Hierarchy is a standard technology for synchronous data transmission on optical media) equipment as well as the network operation / supervision center.

the equipment to be financed by the original project, and an “optional tranche” for the equipment to be financed by the AF. Bids were received early April 2016 and the “optional tranche” can be signed once the AF funds are available. Finally, the Bank discussed with the Government how to ensure that it has the capacity to monitor and control the additional works, and this will be reflected in the amendment to the contract with the existing consultant.

Capital Expenditures (CAPEX) for phase I of the national backbone are consistent with estimates in the project Appraisal Document (PAD) of the CAPEX for the original project and can serve as a basis for the AF. The estimate for the CAPEX of the national backbone links was US\$40.5 million (including 4 percent contingencies), with US\$30.5 million for the passive infrastructure and US\$10 million for the active equipment. The contract for the provision of passive infrastructure was awarded under International Competitive Bidding (ICB) and was signed October 15, 2014 for an amount of US\$29.64 million, and a duration of 15 months. Due to specific technical constraints to the works along the railway tracks that appeared when the works started, a slight modification of the technical design of the ducts and fiber optic cable was implemented which increased the amount of the initial contract by US\$0.78 million. The total of the existing works contract is therefore US\$30.43 million in line with the estimated value of US\$30.5 million in the PAD. The bidding process to procure the required active equipment is still ongoing. The CAB4 PAD estimated the cost at US\$34,962 per km (value added tax included) given that a significant part of the passive network would be deployed alongside railway tracks which is more costly given the security procedures to adhere to (716 km alongside railway tracks and 345 km alongside roads). The cost estimate for the new links (estimated 522 km) is based on the passive infrastructure on the initial contract unit costs for works alongside roads, and the active equipment on the procurement plan amount adjusted for the length of the new links.

The project’s climate adaptation related investments are estimated to include the entirety of Component 2 related to connectivity. In this context, the expansion of the regional and national backbone networks will serve to increase resilience in a number of ways. First, the investments will allow for rerouting information traffic in the event of a network failure due to a natural disaster. Additionally, according to the International Telecommunications Union, ICTs can play an important role in facilitating climate change adaptation, given that ICTs not only help improve weather forecasting and climate monitoring, but are also essential in disseminating information to large audiences, for example, via mobile phone. This can help the country to put in place better early warning systems and facilitate monitoring of soil conditions and water quality.

Social Analysis

Explanation:

Social benefits. The AF is expected to generate substantial social benefits similar to those generated by the original project, including the possibility of better access to ICT services for the population of Gabon, and improved government-service delivery. Improved quality and reduced costs of communications lower the cost of doing business and weaken the effects of insularity, thus improving access to markets. In recent years, several ICT applications were developed in different countries in the region, bringing other sectoral improvements through ICT platforms. Examples of this are: access to financial services through mobile banking, improved livelihoods of farmers through increased information on agricultural techniques and crop prices, and positive impacts on education through access to eLearning programs. More generally, the project will:

- enable ICT to become a driver for sustainable economic growth;
- set the basis for enabling the Government to use ICT to provide decentralized services;
- improve access and quality of ICT services for the population, businesses, and the government;
- reduce isolation and enhance economic activities in rural areas; and
- create additional opportunities for women entrepreneurs to own ICT-related small- and medium-enterprises.

Social safeguards. The proposed additional activities trigger the OP/BP 4.12 Involuntary Resettlement as is the case for the original project. The Government prepared a Resettlement Action Plan (RAP). The findings of the RAP concluded that: (a) 102 households (512 Project Affected Persons) will be affected by the civil works of the AF; (b) no physical relocation of households will take place; and (c) land acquisition will be restricted to temporary acquisition of strips of land along the fiber optic cable trenches, in the right of way of the roads followed by the fiber optic alignment. After review and clearance by the Bank, the RAP was disclosed in country on April 19, 2016, and in the Bank's *InfoShop* on April 18, 2016. The Government also carried out a social assessment reviewed by the Bank in view of identifying indigenous people in the project area. The findings of this social assessment asserted that there were no indigenous peoples' settlements in the right of way of the fiber optic trenches, and up to 15 kilometers from the trenches. The nearest settlement of indigenous people was located 30 kilometers from the path of the fiber optic cable. Hence the proposed additional activities do not trigger OP/BP 4.10 Indigenous People (OP/BP 4.10 is triggered as in the original project).

Arrangements for social safeguards supervision have been defined and agreed. In line with the original project, the implementation and supervision of AF activities related to safeguards will be conducted as part of the overall project implementation by the PIU CN-TIPPEE, in conjunction with the line ministry responsible for Ecology and Sustainable Development. The Environment and Social Safeguards Focal Point will be in charge of coordinating the implementation and monitoring (control and audit) of the project's social and environmental aspects and act as an interface between the project, contractors, local authorities, and other stakeholders. Environmental and social clauses will be incorporated into the contracts for works. To ensure successful implementation of the project's safeguard measures, the project will continue to support the capacity building efforts of the PIU CN-TIPPEE as well as of the line ministry MCPEN, the ANINF, and the line Ministry in charge of Ecology and Sustainable Development will be strengthened. To ensure effective Bank support, before implementation review missions, the PIU CN-TIPPEE will prepare and update reports on the implementation of the safeguards instruments prepared under CAB4.

Gender. The AF is not classified as gender informed analogous to the original project, because it does not include specific actions to address the distinct needs of women/girl (men/boys) and/or to have positive impacts on gender equality. Direct beneficiaries of the project include people who are connected to the communications network in the Gabonese Republic (including telecommunication services and internet users, schools, hospitals, banks, corporations, government and public administrations). Indirect beneficiaries potentially include all of the country's population, since increased communications capabilities at affordable rates for some of the population may eventually have externalities for all. However the World Development Report 2016 on 'Digital Dividends' highlights that in many countries, gender gaps in technology remain vast. Barriers to access can be particularly salient in the case of the internet, especially in poor and remote localities

where access is predominantly outside the home, and where social norms for socializing or safety concerns can become a barrier. In Africa, for example, women are 50 percent less likely to use the internet than men. In addition to ownership and access, lack of control over the use of the technology can be an additional barrier for women. The indicator on citizen engagement activities introduced in this AF will provide insights into how affordability of broadband services impacts women's access and usage.

Environmental Analysis

Explanation:

The proposed additional activities are classified as Category B. OP/BP4.01 (Environmental Assessment), OP/BP4.04 (Natural Habitats) and OP/BP4.11 (Physical Cultural Resources) are triggered as in the original project. The Government prepared an Environmental and Social Impact Assessment (ESIA), including an Environmental and Social Management Plan (ESMP), following ToRs based on the Environmental and Social Management Framework (ESMF) of the original project (as approved by the Bank and disclosed publicly in Gabon on January 31, 2012 and in the InfoShop). After review and clearance by the Bank, two Environmental and Social Impact Assessments (ESIA), including an Environmental and Social Management Plan (ESMP), for each of the links (Link#1: Booué–Koumameyong–Lalara–Mitzic–Oyem–Bitam–Eboro / Border with Cameroon to KyeOssi / Border with Equatorial Guinea; Link#2: Oyan–Bifoun–Lambaréné) were disclosed in country on April 19, 2016, and in the Bank's InfoShop on April 18, 2016.

Arrangements for environmental safeguards supervision have been defined and agreed and are similar to those applicable for social safeguards.

Risk

Explanation:

Within the Government there is considerable interest and commitment for the proposed additional activities. The World Bank plays a key role in supporting the Government's efforts to establish an enabling environment for the telecommunications and digital economy growth. The project's stakeholders include a wide range of operators, ISPs, as well as the line Ministry MENP, the ANINF (with strong technical expertise to handle the project), the regulator ARCEP, the SPV SPIN and its ACE subsidiary, and the private wholesale operator. The private wholesale operator was selected through international, open and transparent call for tender to operate and maintain the digital infrastructure built under the CAB4 Gabon project and the AF. Stakeholders are fully involved in the implementation of the CAB4 Gabon project and in the proposed additional activities.

Nevertheless, the risk for the project taking into account the AF is substantial, in view of the nature of proposed additional activities.

The Technical Design of the Project or Program risk is rated substantial, because (a) the AF is partly dependent on adequate coordination on both sides of the border to provide effective cross border interconnectivity between Gabon and Cameroon and between Gabon and Equatorial Guinea; and (b) there is a risk that unit prices to be used for the amendment contract for the construction of the passive infrastructure under the AF are not competitive. Therefore, with respect to adequate cross-border coordination, discussion with the Governments of Cameroon and Equatorial Guinea will be conducted under the framework of the "PPIAF study on the Definition and Implementation

of a regional interconnection Regime for broadband fiber optic networks in Central Africa (ECAAS Countries)” and leveraging on the CAB4 (Gabon)-CAB3 (Congo) Memorandum of Understanding for cross border interconnection²⁸ with a dedicated technical assistance. During the preparation of the AF, the Bank discussed with the Government the risks associated with unsuccessful negotiation of an amendment to the existing contract for passive infrastructure and it was agreed that if negotiation was not conclusive, then a new tender for the additional links would be launched.

The Institutional Capacity for Implementation and Sustainability risk is rated substantial, because of potential delays in decision-making and construction of the new links under roughly the same schedule as the links currently under construction under CAB4. Therefore, the counterparts agreed to continue holding weekly progress meetings (on the build out of the additional links) with all the stakeholders on the Gabonese side, the consultant in charge of monitoring and control, the manufacturer, the safeguards focal points, and the representative of the private wholesale operator. Contracts with the existing technical expert and PPP contract monitoring expert will also be extended. Finally, the e-Gabon project will finance a dedicated program manager in the PIU that will be tasked with overseeing the AF to the CAB4 project.

The Environmental and Social risk is rated substantial. The main environmental and social clauses in the bidding document and in the Environmental and Social Management Plan (ESMP) are well reflected in the works – passive infrastructure contract but their implementation in the execution work plan needs to be improved. The Environmental and Social Focal Point in the PIU and the line Ministry responsible for Ecology and Sustainable Development have been monitoring safeguards implementation satisfactorily with the ongoing original project, and frequent field implementation support will be provided by the World Bank’s safeguards specialists to monitor implementation of safeguards for the AF.

All other project-level risks are moderate.

²⁸ Pursuant to discussion with the Government of Gabon, the technical centers close to the borders of Cameroon and Equatorial Guinea will also be equipped with a mast and microwave equipment so as not to delay effective interconnection with carriers on the other side of the border if fiber optic roll-out to the interconnection point on the other side of the border does not progress at the same pace as this AF.

V. WORLD BANK GRIEVANCE REDRESS

14. **Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service.** The Grievance Redress Service ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

ANNEX 1: Results Framework

Project Development Objectives

Original Project Development Objective - Parent:

To contribute to increase geographical reach and usage of regional broadband network services and reduce their prices in the territory of the Republic of Gabon.

Proposed Project Development Objective - Additional Financing. No change.

Results

Core sector indicators are considered: Yes

Results reporting level: Project Level

Project Development Objective Indicators

Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	International Internet Bandwidth (Bits per second per person)	<input type="checkbox"/>	Number	Value	4,620.00	13,152.00	14,712.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been adjusted to new closing date.
Revised	Access to Internet Services (number of subscribers per 100 people)	<input checked="" type="checkbox"/>	Number	Value	14.00	67.00	67.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been revised from 28 in December 2016 to 67 in June 2018 to reflect stronger than expected

							broadband growth and customer base consolidation between 2015 and 2018.
Revised	Access to Telephone Services (fixed mainlines plus cellular phones per 100 people)	☒	Number	Value	147.00	167.00	147.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been revised from 125 in December 2016 to 147 in June 2018 to reflect the expected decrease of the number of customers between 2015 and 2018 caused by (i) the upcoming clean-up of client databases following the merger of Gabon Telecom and Moov and (ii) the registration of all subscriber

							identity module (SIM) ²⁹ card owners by the Gabonese mobile operators.
Revised	Average monthly price of wholesale international E1 capacity link from capital city to Europe (\$/month/2Mbps)	<input type="checkbox"/>	Number	Value	10,500.00	475.00	235.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment		There is effective facilities-based competition for international connectivity	The end target has been revised from 500 in December 2016 to 235 in June 2018 to reflect more abundant international connectivity capacity and strong take-up of broadband demand in Gabon and cross-border.
Revised	Direct project beneficiaries	<input checked="" type="checkbox"/>	Number	Value	0	1,295,074 ³⁰	1,448,410 ³¹
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment	The Baseline has been	The definition of the indicator has	The definition of the indicator

²⁹ A SIM card is a smart card that gives a cellphone its phone number and customer identity.

³⁰ Estimated population in 2015 (1,706,086); Estimated Access to telephone services in 2015 (167 percent); Estimated Number of SIM card per user (2.2). The end target is calculated as follows: Estimated population X Access to telephone services / Number of SIM card per user

³¹ Estimated population in 2018 (1,810,513); Estimated Access to telephone services in 2018 (144 percent); Estimated Number of SIM card per user (1.8). The end target is calculated as follows: Estimated population X Access to telephone services / Number of SIM card per user

					revised, as no one has benefitted from the project prior to start date.	been revised to reflect the number of people having access to telephone services, correcting for the multi-SIM card effect.	has been revised to reflect the number of people having access to telephone services, correcting for the multi-SIM card effect. The end target has been revised from 1,740,208 in December 2016 to 1,448,410 in June 2018.
No Change	Female beneficiaries	<input checked="" type="checkbox"/>	Percentage Sub Type Supplemental	Value	51.00	51.00	51.00

Intermediate Results Indicators

Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	Impact on Telecom sector of World Bank Technical Assistance (composite score: 1- low impact to 5-high impact)	<input checked="" type="checkbox"/>	Number	Value	0.00	3.00	4.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been adjusted to new closing date.
Revised	Average cost of mobile call (three minutes, local, peak)	<input type="checkbox"/>	Number	Value	0.71	0.45	0.30
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018

	(\$/3 min)			Comment			The end target has been adjusted from 0.2 in December 2016 to 0.3 in June 2018 to reflect the consolidation of the market. There are currently two leading operators (Airtel Gabon and Gabon Telecom/Moov) and a challenger (Azur Telecom). The Government of Gabon is considering to allow mobile Virtual Network Operators to keep the mobile market dynamic.
Revised	Retail Price of Internet Services (per Mbit/s per Month, in \$)	<input checked="" type="checkbox"/>	Amount(USD)	Value	218.00	25.00	15.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment		Prices reflect newly available	The end target has been

						entry 3G/4G offers for the mass market. ³²	revised downwards from 80 in December 2016 to 15 in June 2018 to reflect the impact of the AF.
Revised	Number of operators and ISPs buying capacity from the regional infrastructure deployed	<input type="checkbox"/>	Number	Value	0.00	5.00	10.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been adjusted from 6 in December 2016 to 10 in June 2018.
Revised	International Communications (Internet, Telecoms and Data) bandwidth (Gbit/s)	<input type="checkbox"/>	Number	Value	1.20	6.60	37.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment			The end target has been adjusted from 4.9 in December 2016 to 37 in June 2018 to reflect the capacity upgrade in ACE.

³² Internet broadband retail prices were calculated using typical retail offers, normalized for a data usage cap of 1GB per 30 to 45 days: 3G/4G offer of Gabon Telecom at XAF 5,500 (45 days credit validity, usage cap of 1GB per month); 3G/4G offer of Airtel at XAF 14,000 (30 days credit validity, usage cap of 1GB per month); 2.5G offer of Azur at XAF 10,000 (30 days credit validity, usage cap of 500MB per month); 2.5G offer of Moov at XAF 10,000 (45 days credit validity, usage cap of 2.5GB per month). Service providers offer various packages with different validity periods and usage caps. The 1GB cap is considered consistent with a reasonable Internet consumption level. The offers with a 1GB usage cap have all a credit validity of one month, except the offer of Gabon Telecom, with a validity of 45 days.

Revised	Length of Fiber Optic Network Built (km)	<input checked="" type="checkbox"/>	Kilometers	Value	0.00	0.00	1,561.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment		667 km of high-density polyethylene (HDPE) ducts have been laid under the project. The value of the indicator is still 0 because for the fiber optic network to be fully operational the fiber optic cable has to be pulled in the ducts and the active equipment need to be installed to lit the fiber optic.	The end target has been adjusted from 1,140 in December 2016 to 1,561 in June 2018 to reflect additional links under the AF.
Revised	Increased access to ICT services: Number of localities with broadband Internet access (256Kbps)	<input type="checkbox"/>	Number	Value	3.00	22.00	30.00
				Date	31-Dec-2010	31-Dec-2015	30-Jun-2018
				Comment		Libreville, Kango, Cocobeach, Lambaréné, Mouila, Fougamou, Tchibanga, Mayumba,	The end target has been adjusted from 10 in December 2016 to 30 in June 2018 to reflect accelerated

						Bitam, Oyem, Port-Gentil, Gamba, Franceville, Moanda, Makokou, Ndjolé, Mitzié, Owendo, Akanda, Lastourville, Koulamoutou, Ntoun	coverage driven by the competitive 3G/4G mobile broadband market anticipating the dissemination of the new broadband connectivity on the territory.
--	--	--	--	--	--	---	---

New	Citizen perception of the affordability of broadband services (Including perception by women)	<input type="checkbox"/>	Percent	Value		Not available	75% (70%)
				Date		Not available	30-Jun-2018
				Comment:			This new Citizen Engagement indicator will be collected through a survey for the citizens who are based in the provincial capitals (Franceville, Koulamoutou, Lambaréné, Libreville, Oyem and Port-Gentil) covered by the project. The indicator
				The baseline will be collected in December 2016.			

							will be updated annually. Break down data for women users will be also tracked ³³ .
--	--	--	--	--	--	--	--

³³ This indicator is reflecting citizen engagement activities undertaken by the project. It is aligned with the “Collecting, recording and reporting on inputs received from beneficiaries” Citizen Engagement Approach, as measured by an indicator of the type “Beneficiaries satisfied with [specified dimensions e.g. access, quality of services, responsiveness to needs, quality of facilities] (percentage).”

ANNEX 2: Detailed Project Financing

1. Total project financing requirements split between IBRD and Government of Gabon counterpart funding (on a parallel basis) are estimated as follows.

Table A2.1a. Revised Costs by Component (US\$ million), IBRD funding

Component	Original CAB4 Gabon project (PAD)	Proposed Additional Financing (estimate)	TOTAL CAB4 Gabon project after AF coupled with Level 2 Restructuring
Component 1 - Enabling environment	6.05	4.85	10.90
Component 2 – Connectivity	48.50	16.50	65.00
Component 3 – Project Management	3.45	1.59	5.04
TOTAL PROJECT COSTS	58.00	22.94	80.94
Front-end Fees		0.06	0.06
TOTAL FINANCING REQUIRED	58.00	23.00	81.00

Table A2.1b. Government of Gabon Counterpart Funding (parallel financing)

Component	Original CAB4 Gabon project (PAD)	Proposed Additional Financing (estimate)	TOTAL CAB4 Gabon project after AF coupled with Level 2 Restructuring
Component 1 - Enabling environment	0.30	0.70	1.00
Component 2 – Connectivity	48.36	1.00	49.36
Component 3 – Project Management	2.22	0.40	2.62
TOTAL PROJECT COSTS	50.88	2.10	52.98

Table A2.1c. Total

Component	Original CAB4 Gabon project (PAD)	Proposed Additional Financing (estimate)	TOTAL CAB4 Gabon project after AF coupled with Level 2 Restructuring
Component 1 - Enabling environment	6.35	5.55	11.90
Component 2 – Connectivity	96.86	17.50	114.36
Component 3 – Project Management	5.67	1.99	7.66
TOTAL PROJECT COSTS	108.88	25.04	133.92
Front-end Fees		0.06	0.06

TOTAL REQUIRED	FINANCING	108.88	25.10	133.98
-------------------	-----------	--------	-------	--------

2. Proposed additional activities under Component 1 – Enabling environment (Estimated Cost: US\$4.85 million IBRD and US\$0.70 million counterpart funding).

- The additional activities to be financed under the AF were defined on the basis of the activities completed to date under the CAB4 project, as well as the activities that are pending, or may or may not be implemented. This component would include the following comprehensive program of technical assistance and provision of goods, that is required to continue the project’s change management process to assist the Gabonese authorities in strengthening and deepening legal and regulatory reforms in the ICT sector and increase the sustainability of the significant development impacts already achieved in the initial project: (1) Developing required bidding documents and carrying out monitoring of works under the project; (2) Preparing recommendation and action plans for the development of datacenter capabilities in the Carrier Hotel set-up under original project; (3) Preparing necessary documentation to ensure proper coordination between the Gabonese Republic, the Republic of Cameroon and the Republic of Equatorial Guinea for cross border fiber optic interconnection provided for under the project; (4) Providing recommendations and preparing an action plan to increase the IXP activity including through domain names under “.ga”, to assist the Gabonese Republic in fulfilling its role as regional IXP³⁴; (5) Assessing the PPP implemented under the original project; (6) Strengthening the Gabonese key stakeholders’ capacity to (i) provide policy and regulatory guidance, including regulatory tools, cost models, monitoring and evaluation capacity, and encompassing a range of activities, focused studies and training designed to assist in improving the overall policy, competitive and regulatory environment for the Gabonese ICT sector; and (ii) to implement the Gabonese ICT legal and regulatory framework; (7) Assisting ARCEP in: (i) developing required bidding documents for monitoring of broadband services quality provided in the territory of the Gabonese Republic; and (ii) updating the annual cost model to regulate wholesale prices; (8) Undertaking a study to assess viable options for a pilot project aimed at bringing local fiber optic infrastructure in Port-Gentil to support the national broadband plan developed under the original project; and (9) Developing regulations and procedures aimed at fostering sectoral synergies in the deployment of broadband infrastructure, such as consultations for roads, railways, and electricity lines construction.
- The counterpart funding of US\$0.70 million would ensure that one-third of the XAF1 billion (US\$2 million equivalent) face value of shares representing contributions in cash of the Special Purpose Vehicle SPIN has been paid.³⁵ The Government of Gabon confirmed this was done prior to negotiations in a letter dated March 11, 2016.

3. Proposed additional activities under Component 2 – Connectivity (Estimated Cost: US\$16.50 million IBRD and US\$1.00 million counterpart funding).

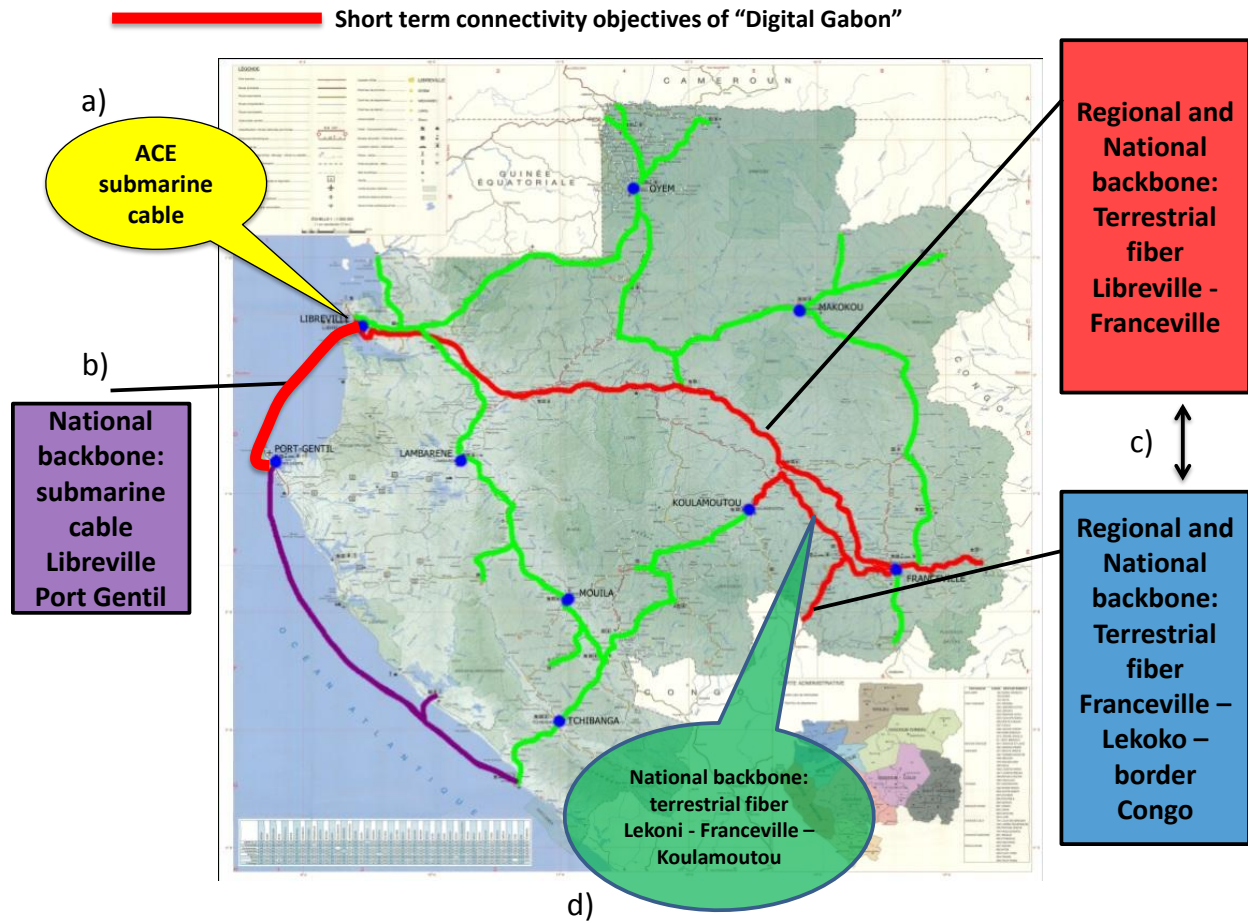
³⁴ The IXP (GabIXP), which is operational since December 2014, was selected in July 2015 by the AU to become the first of the two Regional IXPs for Central Africa.

³⁵ All face value of shares representing contributions in cash of the ACE subsidiary have already been paid.

- The additional activities to be financed by IBRD would be: (1) Construction of a terrestrial fiber optic link between Booué–Koumameyong–Lalara–Mitzic–OYEM–Bitam–Eboro / Border with Cameroon to KyeOssi / Border with Equatorial Guinea and of a terrestrial fiber optic link between Oyan–Bifoun–Lambaréné and the extension of existing terrestrial fiber optic link; and (2) Purchasing Ducts and Chambers to be maintained as a reserve for the Borrower.
 - The objective of the Government of Gabon’s five-year plan called “Digital Gabon” adopted in 2011 is to connect all nine provincial capitals (Libreville, Franceville, Lambaréné, Mouila, Tchibanga, Makokou, Koulamoutou, Port-Gentil, Oyem), all regional capitals as well as the borders of the country (Congo, Cameroon, Equatorial Guinea). The original project is connecting to broadband internet four provincial capitals (Libreville, Franceville, Koulamoutou, and Port-Gentil) and the border with Congo. Now that the first phase of the national backbone financed under the CAB4 project is firmly on track, both in terms of PPP implementation and progress in backbone works, the Government of Gabon decided to launch the second phase of the national backbone. The AF would connect two additional provincial capitals (Oyem, Lambaréné) and the remaining two borders (Cameroon, Equatorial Guinea) “branching out” from the Libreville–Franceville link constructed under the original project as well as the extension of the existing terrestrial fiber optic link. The total investments under CAB4 would ultimately contribute to increased geographical reach and usage of regional broadband network services for 62.5 percent of the Gabonese population, up from 57.8 percent in the original project).
 - The AF would also finance a reserve of ducts and chambers to be installed by the Government of Gabon alongside roads to be built or rehabilitated so as to take advantage of cross sectoral synergies, under a coordinated approach between the National Agency for Large-scale Works and Infrastructures (*Agence Nationale des Grands Travaux et des Infrastructures*), in charge of the planning of transport in Gabon, and ANINF, in charge of planning shared broadband fiber-optic networks in Gabon. Under such a coordinated approach, costs can be significantly reduced and segments of broadband networks more quickly built, especially in underserved areas of developing countries. Deploying fiber optic ducts (either for current or future use) along roads, highways and bridges at the time of their construction or rehabilitation involves only marginal costs. The typical cost for laying ducts at the time of construction of the road could be less than 0.02 percent of total road construction cost (World Bank estimates).³⁶
- The additional activities to be financed by counterpart funding would be contingencies in an amount of not less than US\$1 million. These contingencies may be used to finance activities associated with the passive infrastructure and active equipment of the national backbone.

³⁶ See: World Bank. 2014. Broadband Networks in the Middle East and North Africa. Accelerating High Speed Internet Access; Natalija Gelvanovska, Michel Rogy and Carlo Maria Rossotto. World Bank, Washington D. C.; World Bank. 2015. Assistance Technique sur un projet d’Arrêté relatif à la promotion des synergies intersectorielles lors de la réalisation de travaux de construction pour le déploiement de nouvelles infrastructures haut débit. World Bank, Washington D. C., Transport and ICT Global Practice; available at:

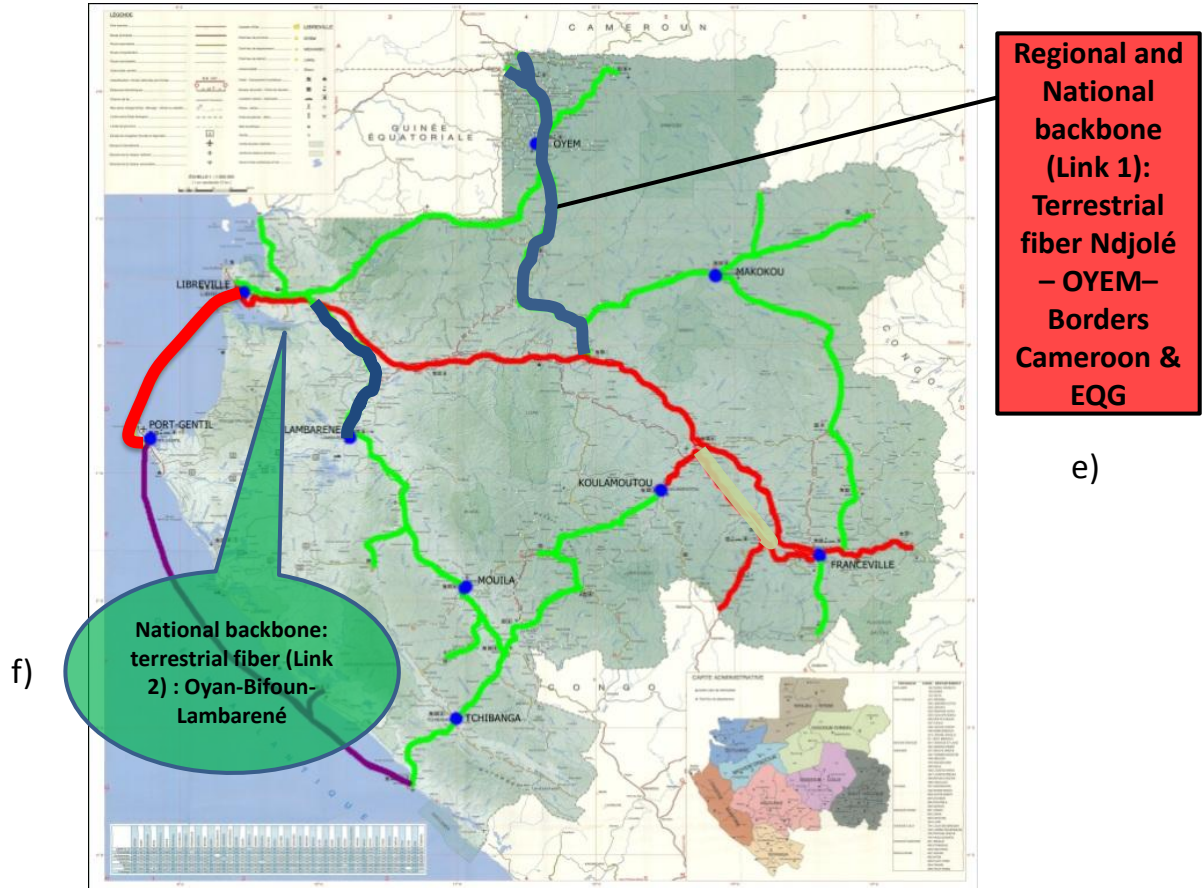
**Figure A2.1. Connectivity Objectives of Digital Gabon
Financed Under the original project**



Terrestrial fiber Libreville-Franceville is alongside railway tracks, whereas terrestrial fiber Franceville - Lekoko - border Congo and Lekoni - Franceville - Koulamoutou are alongside roads. Source: ANINF

Figure A2.2. Connectivity objectives of Digital Gabon financed Under the Proposed AF

- █ First phase connectivity objectives of “Digital Gabon”
- █ Second phase connectivity objectives of “Digital Gabon” (selected missing links)



All Terrestrial fibers are alongside roads. Source: ANINF

4. **Proposed additional activities under Component 3 – Project management (Estimated cost: US\$1.59 million IBRD and US\$0.40 million counterpart funding).**

- The additional activities financed by IBRD would strengthen the Government’s capacity to implement the project, encompassing the technical assistance required for: (a) the upgrading and operation of the CCSPFOG and the CN-TIPPEE to ensure suitable staffing, dedicated staff for the project, the provision of office space and equipment and the financing of operational costs required for the purpose; (b) the carrying out of the environmental and social studies required by the ESMF, the RAP and the Indigenous Peoples Planning Framework and monitoring and capacity building activities under the project; and (c) the fulfillment of the Government of Gabon’s obligations under the Financing Agreement for implementation, auditing, monitoring and evaluation, data collection and communication.

Table A2.2. Overview Component 3 – IBRD Funding

	US\$ Million
Upgrading of FM software	.045
Audit	.040
Surveys, citizen perception of the affordability of broadband services (including perception by women)	.300
Incremental operating costs	.225
Safeguards implementation	.620
Travel and subsistence costs for monitoring and control of backbone construction and safeguards implementation	.060
Institutional communication	.300
Total	1.59

- The counterpart funding of US\$0.40 million would finance the drafting of the safeguard studies and the Government of Gabon’s share of the implementation of the ESMP and of the RAP.

ANNEX 3: Financial Management Arrangements

Country Issues

1. Gabon has embarked upon a series of major reforms and initiatives including the adoption of a new organic budget law in 2015³⁷ and a new procurement code in April 2012,³⁸ the ongoing development of a budget management system (Vectis), the outsourcing of a public investments program to a National Agency for Large-Scale Works and Infrastructures, and the creation of Finance and Administrative Directorates (*Directions Centrales des Affaires Financières*) in line ministries with the view to ease the transition to a program-based budgeting approach, as well as devolution of budget authority.

2. Against this background, critical challenges in public financial management (PFM) remains as highlighted in the Bank Public Expenditure Review (2012 PER). These challenges relate to: (a) the misalignment between public spending and development goals; (b) the lack of a comprehensive public investment management system to manage the current tripling of the investment budget; (c) the low capital budget execution on priority sectors; (d) the poor value-for-money in public spending; and (e) the insufficiencies in the financial report arrangements.³⁹ The underlying causes include amongst others, outdated procurement bidding documents; lack of transparency in the procurement process; lack of and/or delay in preparing the planning and budget execution tools (for example, procurement/commitment/disbursement plans); lack of a manual of procedures guiding the elaboration of the financial reports and, more generally, weak PFM capacities at the sector level.

3. To improve its economic performance, the government has requested technical assistance from the Bank in a number of areas, including PFM. To this end, a first Reimbursement Advisory Services (RAS) amounting to US\$2 million was signed and disbursed on November 2011. The PFM activities under this first RAS, focusing on the improvement of the budget preparation were duly completed and received both Client and Bank recognition. They specifically related to: (a) the timely elaboration of the 2013 annual budget, procurement, commitment and disbursement plans in six key line ministries; (b) the development of a Manual of Procedures for the elaboration of the administrative accounts; and (c) the piloting of the performance audit in the health sector with the aim to assess the value-for money of the underlining spending. A second PFM RAS is being implemented to scale up the impact of the activities completed under this first RAS.

³⁷ This is being readapted to comply with Economic and Monetary Community of Central Africa (*Communauté Economique et Monétaire des Etats de l'Afrique Centrale*) PFM Directives adopted on December 2011.

³⁸ This includes, among others, the creation of a Procurement Regulatory Agency (ARMP) and decentralization of the Directorate of Public Procurement in line ministries.

³⁹ Since 2009, the Court of Account is issuing a qualification on the annual financial reports produced by the Ministry of Budget.

Risk Assessment and Mitigation

Table A3.1. Risk Assessment and Mitigation

Risk	Risk rating	Risk Mitigating Measures Incorporated into project Design	Risk after mitigation measures	Remarks
Country level Weak capacity in public financial management	H	RAS is ongoing with the aim to improve budget execution with World Bank support	H	
Entity level No experience of the line ministry in World Bank financed projects	M	Rely on CN-TIPPEE	M	
Project level	S		S	
INHERENT RISK	S		S	
Staffing	M		M	
Budgeting Delay in the preparation of Annual Work and Budget Plan	M	Establish a clear timeline for budget preparation and monitoring in the Project Implementation Manual	M	Before effectiveness
Accounting Delay in the release of counterpart funds may impact the effective functioning of CN-TIPPEE	S	Yearly and timely release of counterpart funds to finance CN-TIPPEE's operating costs	M	During Implementation
Internal Controls and Internal Audit Delay in the release of counterpart funds may impact the effective functioning of CN-TIPPEE	S	Yearly and timely release of counterpart funds to finance CN-TIPPEE's operating costs	M	During Implementation
Funds Flow Risk of not differentiating between funds from initial financing and additional financing	S	Open a distinct segregated Designated Account in a commercial bank acceptable to the World Bank Perform <i>ex ante</i> and <i>ex post</i> control proposed as part of this Financial Management Assessment Report (FMAR)	M	Done Implementation
Financial Reporting Delay in producing acceptable interim financial reports (IFRs)	M	Rely on existing CN-TIPPEE financial reporting arrangements. Upgrade existing Tompro to produce the project's IFRs	M	During Implementation One month after effectiveness
Auditing No major risk has been identified in existing external auditing arrangements	M	Amend the TORs of the existing external auditor	L	Done
CONTROL RISK	M		M	
Overall FM risk	M		M	

4. The overall residual risk rating is Moderate.

Strengths

5. The CN-TIPPEE has an adequate track record in implementing Bank-financed projects: the existing staff are well-versed with Bank-financed projects and perform satisfactorily.

Weaknesses and action plan to reinforce the fiduciary arrangements

Table A3.2. Action Plan for Fiduciary Arrangements

Significant Weaknesses or risks	Action	Responsible body	Completion
Current manual of procedures may not be suited to Additional Financing activities	Update the existing manual of procedures	CN-TIPPEE	one month after effectiveness
Aggregation of two different financing sources in the same designated account	Open a new Designated Account-DA, for the additional financing funds	CN-TIPPEE	Done
The scope of the current external audit arrangements does not include the proposed project	Amend the ToRs of the existing external auditor	CN-TIPPEE	Done
Existing Tompro application does not include this project	Upgrade Tompro	CN-TIPPEE	one month after effectiveness

Financial Management

6. **Staffing.** The CN-TIPPEE is staffed with one financial officer, one accountant (recently replaced) and a clerk accountant with a track record in Bank-financed projects. The FM staff will record transactions, monitor the compliance of transactions with fiduciary requirement, and prepare the Withdrawal Applications and financial reports. One additional accountant will be recruited to reinforce the FM unit, which comprises one finance management specialist and one accountant.

7. **Budgeting.** Reliance will be placed on the CN-TIPPEE budgeting arrangements. Annual work plans to be approved by the Steering Committee will clearly detail the activities and will be translated into annual budgets. Budget execution will be monitored via: (a) the existing Tompro software, subject to a customization, and in accordance with the budgeting procedures specified in the Project Implementation Manual, comprising of a Manual of Administrative, Financial, and Accounting Procedures and of an Implementation Manual; and (b) an accountant to be recruited. Any variances will be identified in the quarterly unaudited IFRs. Only budgeted expenditures will be committed and incurred so as to ensure resources are used within the agreed upon allocations and for the intended purposes.

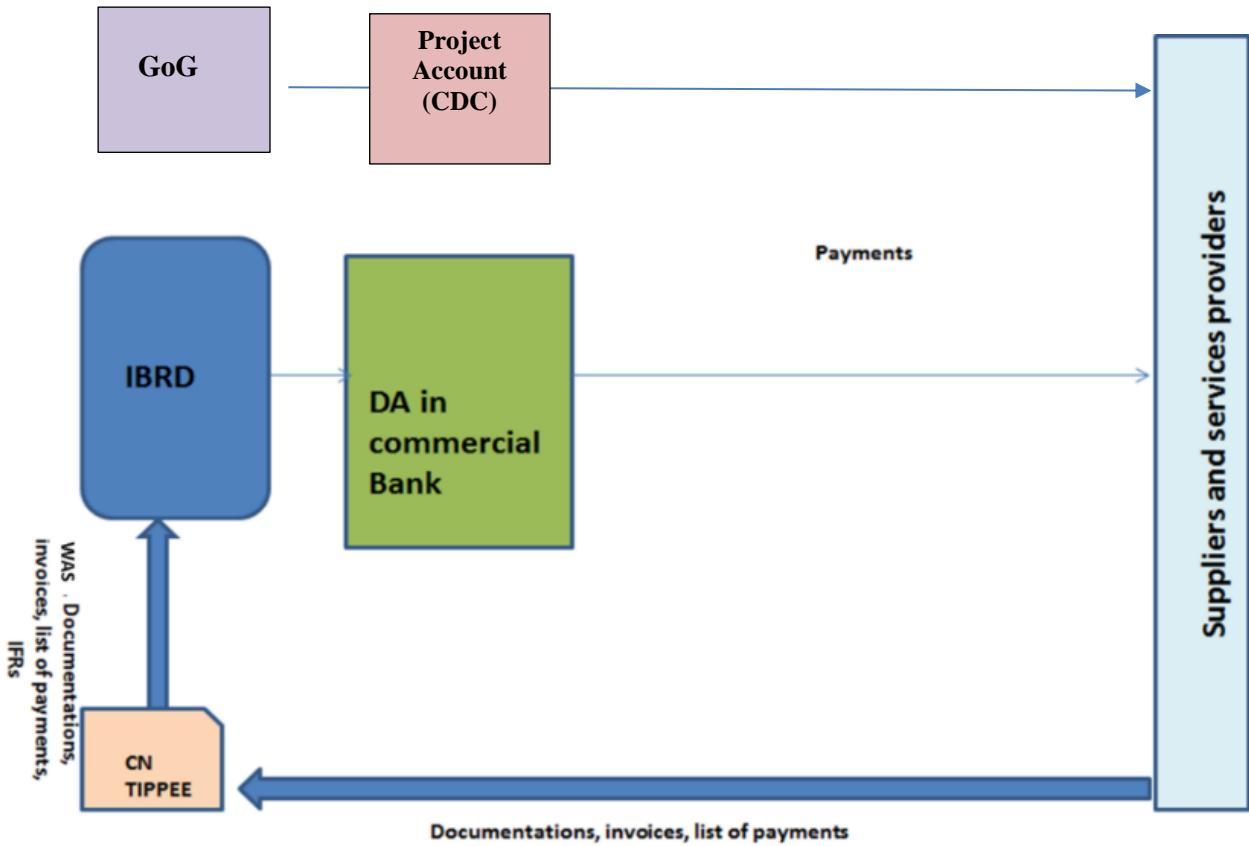
8. **Accounting policies and procedures.** CN-TIPPEE's existing accounting system (accounting software multi-project and multi-site) will be used to maintain the books and accounts of the project activities and ensure that the annual financial statements are produced in a timely manner in accordance with Organization for Harmonization of Business Law in Africa (*Organisation pour l'Harmonisation du Droit des Affaires en Afrique*) accounting principles, which are in line with the international accounting standards. The existing software will be

upgraded to record the project's transactions and generate accurate financial reports on time. The Project Implementation Manual will be amended to take into account the AF specifics.

9. **Internal control and internal auditing.** Internal control will build on the existing CN-TIPPEE arrangement which comprises segregation of duties through four different units respectively responsible for technical implementation, administration and finance, and M&E, as well as information and communication. The M&E unit will be in charge of following up on internal control recommendations made by the external auditor.

10. **Funds flow and disbursement arrangements.** A Designated Account (DA) in XAF, distinct from the DA of the original financing, has been opened in a commercial bank acceptable to the World Bank and will be managed by the joint signature of the Financial Management Specialist and CN-TIPPEE Secretary Permanent or Assistant Permanent Secretary. In the medium-term, the Deposit and Consignment Office (*Caisse de Dépôt et de Consignations - CDC*) may host the DA when it complies with eight criteria highlighted in the *Disbursement Guidelines* (subsection 5.5). The DA will receive an initial advance up to a ceiling amount of XAF 700 million equivalent to the four-month expenditures forecast and will be replenished through monthly Withdrawal Applications supported with statements of expenditures. Direct payments, will be made to service providers if needed as per the disbursement letter. The Withdrawal Applications to replenish the DA will be signed by signatories appointed by the Government. In addition to the designated account, a Project Account will receive counterpart funds in compliance with the terms of the Loan Agreement. As for the initial financing, the CDC will host the Project account that will receive counterpart funds to finance the project activities.

Figure A3.1. Flow of Funds



11. **Disbursement by category.** Table A3.3. shows the expenditure categories to be financed out of the Loan proceeds. This table takes into account the prevailing Country Financing Parameter for Gabon in setting out the financing levels.

Table A3.3. Disbursement Categories

Category	Amount of the Loan Allocated (expressed in EURO)	Percentage of Expenditures to be financed (inclusive of taxes)
(1) Goods, non-consulting services, Training, Operational Costs and consultants' services for the Project (other than Part 2)	5,649,500	100
(2) Goods and works under Part 2 of the Project	14,500,000	100
(3) Front-end Fee	50,500	Amount payable pursuant to Section 2.03 of the Loan Agreement in accordance with Section 2.07 (b) of the General Conditions
(4) Interest Rate Cap or Interest Rate Collar premium	0	Amount due pursuant to Section 2.08(c) of the Loan Agreement
TOTAL AMOUNT	20,200,000	

12. **Retroactive financing.** The Government of Gabon may request retroactive financing for payments related to the AF. In accordance with OP 10.00, retroactive financing is permitted under the following conditions which are satisfied in this specific case: (a) the activities financed are included in the project description; (b) such payments do not exceed 20 percent of the loan amount; and (c) the payments were made by the Borrower not more than 12 months before the expected date of the Loan Agreement signing. In this context, the GoG may make withdrawals up to an aggregate amount not to exceed EUR4,040,000 for payments made prior to the date of the Loan Agreement but on or after September 1, 2015, for Eligible Expenditures under Category (1) and (2) of Section IV.A of Schedule 2 to the Loan Agreement.

13. **Financial reporting and monitoring.** CN-TIPPEE's existing reporting arrangements will be maintained and IFRs will be submitted to IBRD within 45 days after the end of each calendar quarter. The current content and format of the IFR will continue to be used. The IFR will comprise the sources and use of funds and the detailed expenditures by component. At the end of each fiscal year, the project will prepare annual financial statements.

14. **Auditing.** The annual financial statements prepared by the CN-TIPPEE, as well as its internal control system will be audited annually. To this end, the existing external auditor TORs have been amended to include this project. The auditor will provide one single opinion on the annual financial statements in compliance with the International Federation of Accountants Standards on Auditing. In addition to the audit reports, the external auditor will be expected to prepare a Management Letter giving observations, comments, and providing recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the Loan Agreement. The project will be required to produce, no later than six month after the fiscal year, the audited annual financial statements.

FM Conditions and FM Covenants

- (a) The ToR of the external auditor of the Bank-funded CAB4 project were amended prior to negotiations to include the new project.
- (b) Upgrade of the existing Tompro software to handle the new project, no later than one month after effectiveness.
- (c) Upgrade of the existing Project Implementation Manual to handle the new project, no later than one month after effectiveness.
- (d) A new Designated Account-DA for the additional financing funds has been opened.

15. **Implementation Support Plan.** FM implementation support will be consistent with a risk-based approach, and will involve a collaborative approach with the entire Task Team (including the procurement specialist). A first implementation support mission will be conducted shortly after project effectiveness. Afterwards, implementation support will be scheduled by using the risk based approach model and will include the following due diligence:

- Monitoring the FM arrangements during the supervision process at intervals determined by the risk rating assigned to the overall FM Assessment at entry and subsequently during Implementation (ISR);
- Reviewing the IFRs;
- Reviewing the audit reports and management letters from the external auditors and follow-up on material accountability issues by engaging with the task team leader, client, and/or auditors; the quality of the audit also is to be monitored closely to ensure that it covers all relevant aspects and provides enough confidence on the appropriate use of funds by recipients;
- Supervising (on the ground) the project's FM; and
- Providing assistance to build or maintain appropriate FM capacity.

16. **Conclusions of the FM assessment.** The overall FM risk is considered Moderate since the CN-TIPPEE is an existing and adequately-performing PIU. The proposed FM arrangements for this project are considered adequate to meet the Bank's minimum fiduciary requirements under OP/BP10.00. The assessment recommended among other measures (a) the upgrade of the existing Manual of Procedures to handle the new project; (b) the upgrading of Tompro to include this new project; and (c) the recruitment of an external auditor using the existing external audit arrangements.

ANNEX 4: Procurement Arrangements

General

1. **Applicable guidelines.** The new procurement activities under the original project and the current Additional Financing will be carried out in accordance with the World Bank ‘Guidelines: Procurement of Goods, Works, and NonConsulting Services under International Bank for Reconstruction and Development (IBRD) Loans and IDA Credits and Grants by World Bank Borrowers’ dated January 2011, revised July 2014; ‘Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credit and Grants by World Bank Borrowers’, dated January 2011, revised July 2014; ‘Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants’, dated October 15, 2006 and revised in January 2011; and the provisions stipulated in the Loan Agreement.

2. **Advertising.** The Borrower is required to prepare and submit to the Bank a General Procurement Notice. The Bank will arrange for its publication in United Nations Development Business online (UNDB online) and on the Bank’s external website.

3. **To obtain Expressions of Interest,** the Borrower shall include a list of expected consulting assignments in the General Procurement Notice, and shall advertise a Request for Expressions of Interest (REoI) for each contract for consulting firms in a national gazette, provided with wide circulation, or in at least one newspaper, or technical or financial magazine, of national circulation in the Borrower’s country, or in a widely used electronic portal with free national and international access in English or French. In addition, assignments expected to cost more than US\$300,000 shall be advertised in UNDB online. Borrowers may also in such cases advertise REoIs in an international newspaper or a technical or financial magazine. The information requested shall be the minimum required to make a judgment on the firm’s suitability and not be so complex as to discourage consultants from expressing interest. REoIs shall at a minimum include the following information applicable to the assignment: required qualifications and experience of the firm, but not individual experts’ bio data; shortlisting criteria; and conflict of interest provisions. No less than 14 days from date of posting on UNDB online shall be provided for responses, before preparation of the short list. The late submission of a response to and REoI shall not be a cause for its rejection unless the Borrower has already prepared a short list, based on received Expressions of Interest, that meets the relevant qualifications. The Bank will arrange the simultaneous publication of all REoIs prepared and submitted by the Borrower on the Bank’s external website. Contract awards will also be published in UNDB, in accordance with the Bank’s Procurement Guidelines (para. 2.60) and Consultants Guidelines (para. 2.31).

4. **Requirements for National Competitive Bidding (NCB).** Works, goods, and non-consulting service contracts will use NCB procurement methods in accordance with national procedures using SBDs acceptable to the IBRD and subject to the additional requirements:

- In accordance with paragraph 1.16 (e) of the Procurement Guidelines, each bidding document and contract financed out of the proceeds of the financing will provide that: (a) the bidders, suppliers, contractors, and their subcontractors, agents, personnel, consultants,

service providers, or suppliers will permit the World Bank as the Supervising Entity, at its request, to inspect all accounts, records and other documents relating to the submission of bids and contract performance, and will have said accounts and records audited by auditors appointed by the World Bank/Supervising Entity and (b) the deliberate and material violation of such provision may amount to an obstructive practice as defined in paragraph 1.16 (a)(v) of the Procurement Guidelines.

- Invitations to bid will be advertised in national newspapers with wide circulation.
- The bid evaluation, qualification of bidders, and contract award criteria will be clearly indicated in the bidding documents.
- Bidders will be given adequate response time (at least four weeks) to submit bids from the date of the invitation to bid or the date of availability of bidding documents, whichever is later.
- Eligible bidders, including foreign bidders, will be allowed to participate. No domestic or Economic and Monetary Community of Central Africa (*Communauté Economique et Monétaire des Etats de l'Afrique Centrale*) regional preference may be given to domestic or regional contractors or to domestically or regionally manufactured goods. Association with a national or regional firm will not be a condition for participation in a bidding process.
- Bids are awarded to the substantially responsive and the lowest evaluated bidder, provided that the bidder is qualified. No scoring system will be allowed for the evaluation of bids, and no “blanket” limitation to the number of lots that may be awarded to a bidder will apply.
- Qualification criteria will only concern the bidder’s capability and resources to perform the contract, taking into account objective and measurable factors.

5. **Procurement of works will primarily relate to additional links.** Civil works costing more than the equivalent of US\$5,000,000 will be procured through ICB. Other contracts for works costing less than the equivalent of US\$5,000,000 will use NCB procurement methods, in accordance with national procedures using Standard Bidding Document (SBD) acceptable to the Bank, and subject to the additional requirements set forth in the paragraph above (Requirements for NCB of the current annex). Small works estimated to cost less than the equivalent of US\$200,000 per contract may be procured through shopping, based on price quotation obtained from at least three contractors in response to a written invitation to qualified contractors. Direct Contracting shall be used in accordance with the provisions of paragraph 3.7 of the Procurement Guidelines.

6. **Procurement of goods and non-consulting services** will include a stock of High-Density Poly Ethylene (HDPE) ducts, vehicles, furniture, and office equipment. Taking into account (level of value added) manufacturing/producers capacity in the country, procurement of goods will be bulked where feasible (similar nature and need at same time period) into bid packages of at least US\$1 million equivalent, so that they can be procured through suitable methods to secure competitive prices. Goods estimated to cost US\$1 million equivalent and above per contract will be procured through ICB, which will use the Bank’s SBDs. For other goods contracts costing less than US\$1 million equivalent, NCB procurement methods will be used in accordance with national procedures using an SBD acceptable to the Bank and subject to the additional requirements set forth or referred to above.

- Procurement of goods and non-consulting services, including those of readily available off-the-shelf maintenance of the office electronic equipment and other services such as printing, and editing, which cannot be grouped into bid packages of US\$100,000 or more, may be procured through prudent shopping in conformity with Clause 3.5 of the procurement guidelines.
- Based on country-specific needs and circumstances, shopping thresholds for the purchase of vehicles and fuel may be increased up to US\$500,000, provided the major car dealers and oil providers are consulted.
- Direct Contracting will be undertaken in accordance with the provisions of paragraphs 3.7 of the

7. **Selection of consultants.** Consulting services will be needed for the following activities: (a) technical assistance; (b) feasibility and detailed studies as well as any other critical studies; (c) financial and technical audits; (d) capacity development plans; and (e) institutional development plans. These consulting services will be procured with the most appropriate method among the following which are allowed by Bank guidelines and included in the approved procurement plan: Quality- and Cost-Based Selection, Quality-Based Selection, Selection under a Fixed Budget, and Least-Cost Selection. Selection based on Consultants' Qualifications will be used for assignments that shall not exceed \$300,000. Single Source selection shall also be used in accordance with the provisions of paragraphs 3.8 to 3.11 of the Consultant Guidelines, with the World Bank's prior agreement. All ToR are subject to the World Bank prior review. The following requirements will apply:

- Assignments of Engineering Designs and Contract Supervision in excess of US\$300,000, and all other technical Assistance assignments above US\$100,000, must be procured on the basis of international short-lists and in accordance with the provisions of paragraph 2.6 of the Consultants' Guidelines. All other consultancy assignments in which the estimated cost does not exceed US\$100,000 per contract, may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.
- Consultants for services meeting the requirements of Section V of the Consultant Guidelines will be selected under the provisions for the Selection of Individual Consultants, through comparison of qualifications among candidates expressing interest in the assignment or approached directly.

8. **Operating costs** financed by the project include, inter alia, utilities, offices supplies, vehicle operation, vehicle maintenance, and insurance, as well as building and office equipment maintenance costs. These goods and services will be procured using the project's financial and administrative procedures included in the Project Implementation Manual and based on the annual work plan and budget. For services (car maintenance, computer maintenance, and so on) to be financed through operating costs, the project will proceed with service contracting for a defined period.

9. **Training, workshops, seminars, conferences, and study tours** will be carried out on the basis of an approved annual work plan and budget that will identify the general framework of

training and similar activities for the year, including the nature of training, study tours, and workshops; the number of participants; and cost estimates.

Institutional arrangements for procurement and capacity including risk

10. **Procurement capacity of the Implementation Arrangement.** The implementation arrangement remains identical. The PIU employs qualified procurement specialists who have acceptable experience to enable them to deal effectively with project procurement matters.

11. **Risks.** The latest Procurement Risk Assessment & Management System (P-RAMS) risk is Substantial.

Procurement Plan

12. **Procurement plan.** The Borrower, at pre appraisal in December 2015, had prepared a simplified procurement plan for project implementation that provides the basis for the procurement methods and the types of reviews. This plan covering the AF implementation was reviewed and updated during appraisal. The updated version of this Procurement Plan was discussed, and agreed upon, by the Borrower and the project team at negotiations. It will be available in the project's database, and a summary will be disclosed on the Bank's external website once the Board approves the project. It will be updated in agreement with the project team annually, or as required, to reflect the actual project implementation needs and improvement in institutional capacity.

13. **Publication of results and debriefing.** The Borrower shall publish information on UNDB online for all contracts under ICB and Limited International Bidding, and all direct contracts, and in the national press for all contracts under NCB. Such publication shall be within two weeks of receiving the Bank's no objection to the award recommendation for contracts subject to the Bank's prior review, and within two weeks of the Borrower's award decision for contracts subject to the Bank's post review. The disclosure of results is also required for the selection of consultants. The Borrower shall publish information on UNDB online for all contracts when the short list includes any foreign firm and all single-source selection contracts awarded to foreign firms, and in the national press for all contracts where the short list comprises only national firms and all single-source selection contracts awarded to national firms. Such publication shall be within two weeks after receiving the Bank's no objection for award of the contract subject to the Bank's prior review and within two weeks of successful negotiations with the selected firm for contracts subject to the Bank's post review.

14. **Fraud and corruption.** The procuring entity as well as bidders, suppliers, contractors, and service providers must observe the highest standard of ethics during the procurement and execution of contracts financed under the program, in accordance with paragraphs 1.16 and 1.17 of the Procurement Guidelines and paragraphs 1.23 and 1.24 of the Consultant Guidelines. The 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006, and revised in January 2011, will apply to this project.

15. **Frequency of procurement supervision.** The capacity assessment of the CN-TIPPEE has recommended supervision missions to visit the field at least twice a year, and a post-review of procurement actions will be conducted annually.

Summarized Procurement Plan

16. The main works, goods, and non-consulting services to be procured in the AF are listed below.

Table A4.1. Works, Goods, and Non-Consulting Service Contracts to be Procured

Ref. No.	Description	Estimated Cost (US\$)	Procurement Method	Domestic Preference (yes/no)	Review by World Bank (Prior/Post)	Comments/ Expected Bid Opening Date
To be procured under the AF						
1	Works - Amendment – additional links	10,500,000	Direct Contracting (DC)	No	Prior	30 June 2016
2	Goods - Stock of HDPE ducts and chambers	1,000,000	ICB	No	Prior	17 October 2016

17. Prior review thresholds for works, goods, and non-consultant services. Contracts estimated to cost more than US\$10 million for works and US\$1,000,000 for goods per contract, the first ICB and NCB contracts for works and goods, eventually others as identified in the procurement plan, and direct contracting above US\$100,000 will be subject to prior review by the Bank.

18. The main consulting assignments of the AF are listed below.

Table A4.2. Consulting Assignments with Selection Methods and Time Schedules

Ref. No.	Description of Assignment	Estimated Cost (US\$)	Selection Method	Review by World Bank (Prior / Post)	Comments/ Expected Bid Opening Date
To be procured under the AF					
1	Amendment – Monitoring and supervision – Additional links	550,000	SSS	Prior	30 June 2016
2	Technical assistance to promote and implement Open Access Regime and PPP as well as wholesale offers from alternative passive infrastructure providers for a pilot project for metropolitan fiber infrastructure in Port-Gentil	750,000	QCBS	Prior	15 September 2016
3	TA to conduct a detailed feasibility study to set up “white spaces” in the RTG1 technical building in Libreville	300,000	QCBS	Post	30 June 2016
4	TA to include the additional links in the existing Open Access and PPP model	200,000	CQS	Post	30 June 2016
5	TA to support the implementation of the revised ICT legal and regulatory framework	350,000	QCBS	Post	17 October 2016

Ref. No.	Description of Assignment	Estimated Cost (US\$)	Selection Method	Review by World Bank (Prior / Post)	Comments/ Expected Bid Opening Date
To be procured under the AF					
6	TA to support the annual update of the cost model developed under the original project for the Regulatory Authority ARCEP to regulate wholesale prices in Gabon	250,000	CQS	Post	30 June 2016
7	TA to support the implementation of the universal access strategy	200,000	QCBS	Post	17 October 2016
8	TA to prepare the bidding documents for a solution enabling the monitoring of the quality of service for broadband	200,000	QCBS	Post	1 December 2016
9	TA to support the Special Purpose Vehicle SPIN and its ACE subsidiary in conducting the valuation of the asset financed under the original project	300,000	CQS	Post	30 June 2016
10	TA to boost the development of the GabIXP, including through domain names in “.ga”	300,000	QCBS	Post	15 September 2016
11	TA to support the establishment of Memoranda of Understanding between the Gabonese Republic and the Republic of Cameroon and the Republic of Equatorial Guinea for cross border fiber optic interconnection	100,000	IC	Post	17 October 2016
12	Amendment to contract of technical expert	81,100	SSS	Prior	Submitted
13	Amendment to contract of PPP contract monitoring expert	69,000	SSS	Prior	Submitted
14	Audit	40,000	LCS	Prior	31 December 2016
15	TA to conduct an assessment of the PPP set up under the original project and provide recommendations for the Government of Gabon	300,000	QCBS	Prior	30 June 2017 (Given impact on sustainability)
16	TA to develop regulations and procedures to foster cross-sectoral synergies when deploying broadband infrastructure	200,000	CQS	Post	31 March 2017
17	Technical assistance to conduct a taxation study	100,000	CQS	Prior	31 March 2017 (Given impact on sustainability)

CQS = Consultant Qualification Selection

IC = Individual Consultant

LCS = Least Cost Selection

QCBS = Quality and Cost Based Selection

SSS = Single source selection

19. **Prior review thresholds for consultant services.** Contracts estimated to cost above US\$500,000 for firms and US\$200,000 for individuals per contract, and single source selection of consultants (firms and individuals) to cost above US\$100,000 will be subject to prior review by the Bank. Similarly, all audit contracts will be subject to prior review as will be any other contract identified in the procurement plan.

ANNEX 5: Economic and Financial Analysis

Rationale for public sector financing

1. **Given the relatively small population in Gabon (1.7 million inhabitants in 2015), the GoG is willing to absorb the investment risk associated with significant investments in broadband connectivity to create effective competition for international connectivity, reduce the digital gap and link the country to its borders whilst entrusting an experienced independent private operator with the operation and maintenance of these investments in a manner that could ultimately evolve towards shared ownership.** The GoG's objective is to provide opportunities to grow its dynamic and competitive ICT sector. The main rationale for the Bank's involvement is to provide financing in the early stages of the Gabonese connectivity project, so as to safeguard open access and PPP principles and support GoG's commitment to competition for international connectivity and accelerating broadband development. In this connection, it is key that the new submarine cable capacity, as well as the national backbone that will distribute it throughout the country and to its borders, will be provided according to open access principles and will leverage interest by the private sector (operators and Internet Service Providers) to participate in the CAB4 project. During preparation of this AF, local private sector expressed strong support for this approach.

World Bank's value added

2. **The World Bank's value-added arises from the World Bank's technical expertise as well as its global knowledge in areas such as the creation of an environment where competition can flourish, and where Public Private Partnerships for building and operating the underlying fiber optic infrastructure can be established when needed.** In addition, it has considerable experience in addressing the challenges of accelerating high-speed Internet access in many countries around the world, including through the Global Solutions Group "Broadband for All". With a World Bank team highly knowledgeable about the ICT sector challenges and the supervision of large fiber optic infrastructure investments under open access regimes, value added during implementation will be substantial.

Economic Analysis

3. **Building terrestrial fiber optic links is the most cost effective long-term option to ensure international connectivity to all nine provincial capitals (Libreville, Franceville, Lambaréné, Mouila, Tchibanga, Makokou, Koulamoutou, Port-Gentil, Oyem), all regional capitals as well as the borders of the country (Congo, Cameroon, Equatorial Guinea) is the most cost-effective long term option.** Financial analysis was performed for the whole national backbone during original project preparation.⁴⁰ The analysis considered a variety of radio wave,

⁴⁰ See report and financial model developed by Mr. Yves Rouhaud, Technical and Economic consultant advising Government of Gabon (*Projet CAB4-CITGB, Plan d'entreprise du PPP pour l'accès au câble sous-marin ACE, Rapport N° 2: Phase I du Backbone National, Date : 24 décembre 2011*). The following terrestrial links were included in the model: Link 1. Libreville-Franceville (towards Southern border); Link 2. Ndjolé-Oyem – Bitam (towards Northern border); Link 3. Booué-Makokou-Beling; Link 4. Kango-Lambaréné – Mouila ; Link 5. Mouila-Ndendé-Moabi-Tchibanga – Mayumba ; Link 6. Mouila-Mimongo-Mbigou – Koulamoutou ; and Link 7. Ngouoni-Akieni-Lekori-Okondja-Kakwaka-Makokou.

satellite and fiber options and concluded that, given pent-up demand in Gabon (which has been confirmed during implementation of the CAB4 project), terrestrial fiber links are the best overall option in terms of long-term cost effectiveness and bandwidth availability.

4. **CAPEX for the Phase I of the national backbone are consistent with estimates in the PAD of the original project and can serve as a basis for the AF.** The estimate for the CAPEX of the national backbone links was US\$40.5 million (including 4 percent contingencies), with \$30.5 million for the passive infrastructure and US\$10.0 million for the active equipment. The contract for the provision of passive infrastructure awarded under ICB was signed October 15, 2014 for an amount of US\$29,644,315 and a duration of 15 months. Due to specific technical constraints to the works along the railway tracks that appeared when the works started, a slight modification of the technical design of the ducts and fiber optic cable was implemented which increased the amount of the initial contract by US\$789,559. The total of the existing works contract is therefore \$30,433,874 in line with the estimated value of US\$30.5 million in the PAD. The bidding process to procure the required active equipment is still ongoing. The CAB4 PAD estimated the cost at US\$34,962 per km (VAT included) given that a significant part of the passive network would be deployed alongside railway tracks which is more costly given the security procedures to adhere to (716 km alongside railway tracks and 345 km alongside roads). The cost estimate for the new links (estimated 522 km) is based on: (a) for the passive infrastructure, on the initial contract unit costs for works alongside roads, and (b) for the active equipment, on the procurement plan amount adjusted for the length of the new links.

Greenhouse Gas (GHG) Emissions accounting

5. **Greenhouse gas emissions accounting is not relevant in the context of this AF.**

Financial analysis

6. **The financial analysis of the original project was revised to simulate the impact of additional links financed under the AF.** Scenarios were made on a study period of 15 years. Scenario 6 simulates the impact of a higher monthly price per Mbit on the base case whilst Scenario 5 simulates the impact of a shorter length of the network (without compromising key objectives of the Phase 1 of the national backbone). Scenarios 1, 2, and 3 simulate the impact of project costs higher than budgeted, combined in Scenarios 1 and 2 with higher monthly price per Mbit. The discount rate of 15 percent used in the financial analysis is comparable to the Weighted Average Cost of Capital of 16.17 percent used by the national regulator ARCEP in its cost models developed under Component 1 of the original project.⁴¹ With respect to international traffic, it is assumed that in addition to the initial 10 percent of Gabon's international traffic backed-up through the cross-border connection with Congo (with reciprocal traffic volume carried to Libreville from Congo), an additional 5 percent will be backed up from Cameroon over the terrestrial backbone (with reciprocal traffic volume carried to Libreville from Cameroon). Finally, Internet penetration was revised upwards to reflect the current environment in Gabon, where the real need for Internet described in the PAD of the original project has materialized more rapidly than expected thanks to a sound competitive dynamic both in the

⁴¹ See : Développement des modèles de coûts d'interconnexion fixe et mobile et détermination des tarifs d'interconnexion fixe et mobile et de bande passante nationale et internationale y compris infrastructures (pylônes, câbles sous-marins, fibre optique, etc....); Artelia, Bird&Bird, Progressus Corporation, 2014.

mobile broadband market (3G/4G licenses awarded in March 2014 to both Airtel Gabon and Gabon Telecom/Moov) and in the fixed broadband market (between Gabon Telecom/Moov and independent ISPs) fueled by anticipation of the new ACE connectivity.

Table A.5.1. Assumptions of Economic and Financial Analysis (Original project and AF)

Key parameters	Units	Scenarios					
		1	2	3	4	5	6
<u>Exchange rate</u>							
1 Euro =	XAF	655.957	655.957	655.957	655.957	655.957	655.957
1 Euro =	\$	1.31 ⁴²	1.31	1.31	1.31	1.31	1.31
<u>CAPEX BB National Phase 1</u> ⁴³							
Civil work costs per km along existing railways	\$	23,120	30,360	30,360	27,600	27,600	27,600
Civil work costs per km along existing roads	\$	27,600	24,840	24,840	22,080	22,080	22,080
Discount rate	%	15%	15%	15%	15%	15%	15%
Scope of Phase I (Original project)		Base case (1,126 km)	Base case (1,126 km)	Base case (1,126 km)	Base case (1,126 km)	Koulamoutou connected directly to Lastourville and not via Franceville (1,015 km)	Base case (1,126 km)
Scope of additional links (AF)	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila	Link 2. Ndjolé - Oyem - Bitam (towards Northern border) ; Link 4. Kango - Lambaréné - Mouila
Initial Growth Rate of Government of Gabon's demand	%	10%	10%	10%	10%	10%	10%
Annual growth rate of Government of Gabon's demand from 2020	%	10%	10%	10%	10%	10%	10%
Annual increase of operating staff costs in the OpCo	%	3%	3%	3%	3%	3%	3%

⁴² Estimated value for 2013-2015.

⁴³ CAPEX estimate do not include the share of the interests of the IBRD Loan to be allocated to the BB National component. If estimated interests would be allocated 50/50 to the two components (catering for higher profitability of the ACE component), the situation would be comparable to scenario 3.

Monthly wholesale price per Mbit	\$	400	540	200	200	200	390
Monthly price per Mbit for Government of Gabon (bulk capacity)	\$	50	50	50	50	50	50
Annual decrease in monthly price per Mbit	%	3%	3%	3%	3%	3%	3%

7. The original project and the AF will result in a suitable economic return to Gabon.

All scenarios show positive IRR after 15 years. All but one scenario have a positive NPV, indicating an IRR after 15 years equal or greater than 15 percent. The project would become cash-flow positive between 2017 and 2019 depending on the scenario. In the base case scenario 4, assuming a discount rate of 15 percent, the project is estimated to have a NPV of US\$2.2 million over 15 years and an IRR of 16 percent, breakeven payback occurring in 2019. As shown by the comparison with the revised financial analysis for the original project without the additional financing, the stronger than expected take up of Internet demand in Gabon allows for a suitable economic return for all terrestrial links financed under the scaled-up project despite a lower economic return of the two additional links. Simulations have also been made to simulate, for the base case scenario, the impact of a convergence of the wholesale price and of the Government's price for bulk capacity: they indicate that Government could consider such a convergence to further decrease retail prices without significant impact on the economic return.

**Table A.5.2a. Results of financial analysis for connectivity (Original project and AF)
Original project over 15 years – Discount rate of 15%**

Scenario	Total CAPEX (US\$)	Monthly price per Mbit (US\$)	IRR after 15 years (%)	NPV (US\$)
1	45,266,189	400	26	24,629,384
2	42,316,160	400	20	9,679,164
3	42,316,160	200	14	-2,104,763
4	39,366,132	200	15	293,181
5	36,539,058	200	16	2,167,512
6	39,366,132	390	28	27,968,666

**Table A.5.2b. Original project over 15 years – Discount rate of 15% -
Revised Internet penetration**

Scenario	Total CAPEX (US\$)	Monthly price per Mbit (US\$)	IRR after 15 years (%)	NPV (US\$)
1	45,266,189	400	32	42,994,370
2	42,316,160	400	27	28,044,150
3	42,316,160	200	18	7,077,730
4	39,366,132	200	20	9,475,674
5	36,539,058	200	21	11,350,005
6	39,366,132	390	35	45,874,528

**Table A5.2c. Original project and AF over 15 years – Discount rate of 15% - revised
Internet penetration**

Scenario	Total CAPEX (US\$)	Monthly price per Mbit (US\$)	IRR after 15 years (%)	NPV (US\$)
1	79,150,681	400	27	46,046,258
2	76,200,653	400	21	22,363,185
3	76,200,653	200	15	-47,878
4	73,250,624	200	16	2,221,075
5	70,423,551	200	16	3,952,248
6	73,250,624	390	29	48,181,983

Table A5.2d. Phase I (Original project) and AF over 15 years – Discount rate of 15% - revised Internet penetration – Dual pricing simulation

Scenario	Total CAPEX (US\$)	Monthly wholesale price per Mbit (US\$)	Monthly bulk capacity price per Mbit (US\$)	IRR after 15 years (%)	NPV (US\$)
4	76,200,653	100	100	16	3,999,964
4	76,200,653	150	75	16	3,110,519
4	73,250,624	200	50	16	2,221,075

Annex 6: Map

IBRD 33408

