GOVERNANCE AND THE DIGITAL ECONOMY IN AFRICA
TECHNICAL BACKGROUND PAPER SERIES

Adoption of eGP in Africa

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Abbreviations

Abbreviation/Term	Full Terminology/Definition
ADB	Asian Development Bank
AFR-E	East Africa
AFR-W	West Africa
CapEx	Capital Expenditure
COTS	Commercial-Off-The-Shelf
CPB	Central Purchasing Body
CSR	Corporate Social Responsibility
EAP	East Asia and Pacific
ECA	Europe and Central Asia
eGP	Electronic Government Procurement
eProcurement	Electronic procurement, referring to the process of requisitioning, ordering, and purchasing goods and services online
FCV	Fragility, Conflict, and Violence
GDP	Gross Domestic Product
GNI	Gross National Income
GPPD	World Bank's Global Public Procurement Database
GUI	Graphical User Interface
HW	Hardware
IADB	Inter-American Development Bank
ICT	Information and Communications Technology
IDA	International Development Association
IFMIS	Integrated Financial Management Information System
IIAG	Ibrahim Index of African Governance
IOT	Internet of Things
KPI	Key Performance Indicator
LCC	Lifecycle Costing
LPTA	Lowest Price Technically Acceptable
LTA	Long-Term Agreement

MAPS	World Bank's Methodology for Assessing Procurement Systems
MEAT	Most Economically Advantageous Tender
MENA	Middle East and North Africa
MPB	Multilateral Development Bank
NDI	Non-Developmental Items
OCDS	Open Contracting Data Standard
OECD	Organisation for Economic Co-operation and Development
OLC	World Bank's Open Learning Campus
OpEx	Operating Expenditure
P2P	Purchase-to-Pay
PaaS	Platform-as-a-Service
PFM	Public Financial Management
PII	Personal Identifiable Information
PPP	Public-Private Partnership
SaaS	Software-as-a-Service
SAR	South Asia
SLA	Service-Level Agreement
SME	Small- and Medium-Sized Enterprise
SPD	Standard Procurement Document
SSA	Sub-Saharan Africa
SW	Software
TCO	Total Cost of Ownership: an estimate of the total costs associated with a solution over the whole of the operational life, including final disposal
USD	United States Dollars
VfM	Value for Money

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1 Introduction

The objective of this paper is to provide information on Electronic Government Procurement (eGP), a digital technology that can help public procurement organizations optimize spend, improve the performance of supplier markets, and minimize corruption in the procurement lifecycle. This paper aims to:

- Detail the impact of eGP on governance.
- Describe the preconditions that are required for successful eGP implementation.
- Provide country case studies that illustrate the benefits of eGP implementation.
- Review the progress of eGP adoption across Africa.
- Provide solutions and recommendations for countries that are interested in upgrading existing or introducing new eGP solutions and/or modules.

Public procurement is central to the issue of government corruption, fraud, and abuse. Public procurement accounts for between 10 percent and 25 percent of public spending globally. Corruption in public procurement is estimated to consume between 10 percent and 30 percent of capital investment project costs, significantly inflating total costs and delivering less value to governments and the citizens they serve (World Bank 2020b). Misaligned or imprecise public procurement can be wasteful and lead to the acquisition of substandard goods and services that create unintended costs. By not meeting the actual needs of the procuring entities, misaligned goods and services eventually cost procuring entities more than initially estimated. Procuring entities may need to re-procure the same items, resulting in increased costs, in order to receive the goods and services that address their needs.

As of March 2021, the World Bank was managing 47 projects with a value of over US$443.8 million aimed at the improvement of eGP and data analytics systems within client countries globally. Of these projects, 19 are located in Africa with a combined eGP value of US$ 250.4 million as shown in Table I below.

Table I. African Countries with Current World Bank eGP and Data Analytics Efforts

Country	Instrument[1]	Total Value $ Million	eGP Value $ Million	Approval FY	Closing FY	Description of Intervention
Burkina Faso	IPF	30.0	1.5	2016	2022	P155121 – Economic Governance and Citizen Engagement Project, development of e-Procurement.
Burundi	IDA	22.0	1.0	2015	2021	P149176 – Strengthening Institutional Capacity for Government Effectiveness Project.
Cameroon	IDA	31.0	7.0	2018	2023	P151155 – Strengthening Public Sector Effectiveness and Statistical Capacity Project.
Cote d'Ivoire	P4R	100.0	15.0	2019	2024	P164302 – Enhancing Government Effectiveness for Improved Public Services, e-Procurement implementation.
Djibouti	IPF	15.0	9.5	2018	2023	P162904 – Djibouti Digital Transformation of Public Administration, including e-Procurement component.
Ethiopia	IPF	33.0	3.7	2016	2021	P150922 – Public Financial Management Project, development of e-Procurement.
Gambia	IDA	35.0	3.0	2020	2025	P166695 – Gambia Fiscal Management Development Project.
Ghana	IPF	97.0	5.0	2013	2023	P144140 – E-Transform Project, piloting of e-Procurement.
Guinea	IPF	22.0	1.0	2017	---	P157662 – Economic Governance Technical Assistance & Capacity Building Additional Financing Project, development of e-Procurement tools.
Kenya	P4R	150.0	21.0	2018	2023	P161387 – Governance, development and rollout of e-

[1] IPF = Investment Project Financing; P4R = Program-for-Results Financing; IDA = International Development Association Grant.

						Procurement
Liberia	IDA	19.0	1.5	2019	2024	P165000 – Integrated Public Financial Management Reform Project II, development of e-Procurement.
Madagascar	IDA	140.0	56.0	2021	2024	P169413 – Digital Governance and Identification Management System Project (PRODIGY).
Malawi	IPF	72.4	4.0	2017	2022	P160533 – Digital Malawi Program Phase I: Malawi Digital Foundations Project, feasibility study and piloting of e-Procurement.
Mauritania	IDA	24.8	5.2	2016	2022	P146804- Mauritania Public Sector Governance Project
Morocco	P4R	200	10.0	2017	2023	P158346 – Strengthening Agri-food Value Chains Program-for-Results, development and rollout of e-Procurement.
Nigeria	P4R	750.0	70.0	2018	2023	P162009 – State Fiscal Transparency, Accountability, and Sustainability Program-for-Results, rollout of e-Procurement, and use of open contracting standards.
Nigeria	IPF	125.0	28.0	2018	2023	P163540 – Fiscal Governance and Institutions Project, rollout of e-Procurement, and use of open contracting standards.
Sierra Leone	IPF	32.0	3.0	2014	2021	P133424 – Public Financial Management Improvement and Consolidation Project, e-Procurement introduction.
Uganda	IPF	85.0	5.0	2015	2022	P130871 – Regional Communications Infrastructure Program Phase 5, rollout of e-Procurement.

Under a new policy commitment for IDA19,[2] the World Bank will support at least 50 percent (38 countries) of International Development Association (IDA) countries to implement eGP and conduct detailed procurement data analytics in order to increase the efficiency of public spending and mitigate corruption risks. Currently, 19 IDA countries have implemented some form of eGP; 19 additional countries will be engaged to implement eGP as part of the IDA19 policy commitment.

[2] See http://ida.worldbank.org/replenishments/ida19.

2 eGP Definition and System Characteristics

Definition of eGP: Electronic Government Procurement (eGP) is the use of a transactional information system by government institutions and other public sector organizations in conducting and managing their procurement activities and relationships with suppliers for the procurement of works, goods, and services required by the public sector. eGP provides the following public procurement benefits:

- Compliance with laws and standards leading to improved governance.
- Improvement in data collection, analysis, accounting, and monitoring, potentially leading to increased savings.
- Standardization of public procurement processes resulting in improved effectiveness.
- Automation and systematization of the procurement processes, leading to a reduction in processing times and administrative costs while adhering to internationally recognized best practice procurement principles such as Value for Money (VfM).
- Reduction of the prices of procured goods and services as a result of increased competition.
- Improvement in productivity while reducing fraud and corruption.
- Creation of economies of scale which improve local and regional economies.
- Increased participation of small and medium enterprises (SMEs) in the procurement process.
- Improved alignment with development goals as public expenditures are fairer and more balanced.
- Improved decision making-abilities by policy makers, regulators and practitioners.
- Enhanced environmental sustainability through reduction in the use of paper and polluting by means of transport.

eGP should not be considered as a monolithic, single piece of technology, rather it should be considered as an aggregation of different types of procurement modules and functionalities that are fit-for-purpose designed to automate procurement processes. The following table provides the names and definitions of the most common eGP modules used in systems around the world.

Table II. eGP Modules and Definitions as Defined in the World Bank's Global Public Procurement Database (GPPD)[3]

eGP Module Name	eGP Module Definition
eProcurement Plan	Used to create and publish annual procurement plans at the beginning of each fiscal year. This module commonly allows bidders to be aware of the nature, timing, and volume of the planned public procurements.
ePublishing/Notification aka (eAdvertisement)	Supports the publication of public procurement advertisements so that these are available to any interested party.
eTendering/eQuotation	Provides online support for the submission of bids.
eEvaluation/Awarding	Supports the electronic opening (decryption) of bids, their partial or complete evaluation, and the notification of the outcome of the process.
eReverse Auctions	Provide an online real-time purchasing technique, enabling bidders to successively submit bids of lower value. This module features mechanisms for the automatic evaluation of bids.
eContract Management	Supports the management of contracts. This module commonly includes features to manage contract documentation, contract amendments, key performance indicators (KPIs), tasks, and deliverables.

[3] See https://www.globalpublicprocurementdata.org/gppd/.

eCatalogues	Supports the creation of catalogue workspaces and the ability to browse electronic catalogues and create/ manage cart of items to procure.
ePurchasing/P2P	Support the preparation of requisitions and the management of purchase orders. Occasionally this module is also referred to as Purchase-to-Pay (P2P).
eRegistration /Vendor Management	The management of profiles, attestations and/or performance of suppliers, contractors, constructors, bidders, etc. conducting business with public sector entities.
eComplaints	eProcurement system module to receive and manage complaints.
eSignature	Advanced electronic certificate authentication: use of electronic certificates for supporting the user authentication process (i.e. login); **OR** Document electronic signing: use of electronic certificates for supporting the electronic sign off of documents uploaded onto the eProcurement system (e.g. bids); **OR** Action electronic signing: use of electronic certificates for supporting the electronic sign off of crucial actions performed within the context of the eProcurement system (e.g. contract award).
eIntergrity module	Detects bid irregularities for fraud and corruption via automated analytics and flags for procurement officers to investigate.
eReporting/Business Intelligence	Uses data stored in the eGP system to produce data visualizations of procurement metrics and key performance indicators (KPIs).

While each country's existing eGP infrastructure and deployment objectives are unique, it is recommended that countries proceed on an overall journey of increased automation incorporating the above modules into an eventual holistic eGP system.

2.1 eGP Business Models

As country governments consider eGP implementations, an initial focus should be placed on the business model under which the system will be deployed and operate. Table III below references the most common business models used by governments to establish eGP systems.

Table III. Common eGP Business Models for Deployment and Operation

eGP Business Model	eGP Business Model Description
Government Owned and Operated	The government owns and operates the system, which is built by its own information and communications technology (ICT) team. Alternatively, external partners may be used during the development or support phases of the project, but these partners have no rights to any part of the system. They are compensated for their services based on contracted fees.
Government-Managed Service	The system is operated, supported, and owned by a third-party partner, but the government retains ownership of all the data and support services, such as a user help desk and training. A dedicated unit within the government is responsible for managing the service, including the performance of the third-party partner as well as any other government departments that provide support services such as training.
Public-Private Partnership (PPP)	The system is owned and operated by a third-party service provider. The intention of this model is that at some time in the future, as specified in the agreement, the service will be transferred to the government. In the interim, the service provider is compensated either through a fixed monthly fee or transactional revenues based on the usage of the system.

When implementing any of the above business models, the government is exclusively responsible for developing a plan that ensures sustainability. Long-term sustainability outcomes rely on political and leadership commitment to change management efforts, with a long-term outlook and focus on project and organizational sustainability. Operations may become sustainable through a combination of fixed capital funding and ongoing operational revenue generation. From a human resource perspective, a combination of government employees and specialist service providers can be used to ensure seamless operations. These providers may be involved in many aspects of the system, including technical operations and maintenance, end-user training, and end-user support through a dedicated help desk. Regular upgrades to the underlying technology platforms should be planned to ensure that the system continues to operate over a lifetime that exceeds that of the physical technology components. With the continued evolution of the Software-as-a-Service (SaaS) business model as a standard in the deployment of enterprise technology applications globally, it can be expected for the government-managed service business model to comprise a larger share of future eGP implementations.

2.2 eGP System Acquisition Approach

Table IV below presents a summary of the key attributes of eGP system acquisition approaches, including implementation of a SaaS, commercial-off-the-shelf (COTS), or custom-built solution.

Table IV. SaaS/COTS/Custom Build System Acquisition Considerations[4]

Attribute	SaaS	COTS	Custom Build
Quality	● System based on an already tested and used eGP platform. ● Vendor has know-how on analyzing, configuring, and rolling out eGP systems. ● Mature product as a foundation for a system that can be maintained virtually. ● Lower risk of technological obsolescence. ● Limited customization because of the other users of the platform. ● System may impose functional constraints as it is already pre-built. ● System may adopt standards that may be incompatible with existing government systems and/or infrastructure. ● Risk of lock-in by module vendors, mitigated by simplicity and serviceability of module.	● System based on an already tested and used eGP platform. ● Vendor has know-how on analyzing, configuring, and rolling out eGP systems. ● Mature product as a foundation for a system that can be maintained locally. ● Lower risk of technological obsolescence. ● System may impose functional constraints as it is already pre-built. ● System may adopt standards that may be incompatible with existing government systems and/or infrastructure. ● Risk of lock-in by module vendors, mitigated by simplicity and serviceability of modules.	● Software is owned by government. ● Software is built for purpose. ● System development know-how would be accumulated. ● Government may have difficulties in retaining Information and Communications Technology (ICT) experts in its team since the private sector can offer more competitive salaries. ● The possibility of risks to the success of system development. ● Lack of proven skills (offset by including foreign specialists). ● Potential of fragmented developments between agencies unless carefully managed by the steering committee. ● Moderate risk of lock-in by local developers (mitigated by systems portability).

[4] http://www.eprocurementtoolkit.org/documentation (E-Procurement Preparation) plus added case research.

			● If government has proven, internal ICT capacity, high-quality product can be achieved; otherwise, in-house development may be risky.
Time	● Core system functions are already available in the vendor's eGP platform. ● Very short period required for relevant and practical functionality to be operational. ● Vendor may require more time than in-house staff to understand the country-specific requirements.	● Core system functions are already available in the vendor's eGP platform. ● Relatively short period required for relevant and practical functionality to be operational. ● Vendor may require more time than in-house staff to understand the country-specific requirements.	● Time required for the development of from-scratch implementation can be expected to be more than for a COTS-based system. ● If government has proven internal ICT capacity, analysis, development, and rollout of the system can be achieved in reasonable time; otherwise, excessive time may be required.
Cost	● Economies of scale created by a shared service often make it a very cost-effective choice. ● Purchase would only be for the functionality for which there is capacity to utilize. ● Low initial implementation costs. ● Low-risk system development and maintenance costs. ● Government will be contractually bound to the vendor and system; if a clear financial arrangement is not defined right from the start, maintenance/evolution cost may be large. ● At the end of the contractual term with the vendor, process for contracting and migrating to a new eGP system may be costly.	● Purchase would only be for the functionality for which there is capacity to utilize. ● Low initial implementation costs. ● Low-risk system development and maintenance costs. ● Government will be contractually bound to the vendor and system; if a clear financial arrangement is not defined right from the start, maintenance/evolution cost may be large. ● At the end of the contractual term with the vendor, process for contracting and migrating to a new eGP system may be costly.	● Maintenance/evolution of the system will be cost efficient, since all required expertise related to the system architecture will already exist. ● Government may need to make special financial arrangements for retaining experts for the development and maintenance/support of the system.
Security and Access	● Solution must be hosted in vendor's IT environment, which often resides outside of client country's geographical borders, which may violate security or data privacy laws.	● Solution can be hosted on-premises or in domestic cloud to control access and conform to national data privacy laws.	● Solution can be hosted on-premises or in domestic cloud to control access and conform to national data privacy laws.

A country's current and forecasted IT technical capacity is also an important factor in considering different types of system acquisition models. SaaS systems are the easiest to manage over time as the majority of the system IP and support resides with the system provider or a third party service provider. COTS systems may require more in-house IT expertise to manage the system and any customizations. Custom-built systems require the most internal IT capacity as the systems must be maintained by the implementing agency and meet operational standards such as continuous uptime, which requires both technical expertise and personnel resources. Armed with a better understanding of eGP from both a definitional and system attribute perspective, governments can proceed to look at how eGP directly impacts governance and some of the challenges eGP implementers face due to that impact.

3 Impacts of eGP on Governance

eGP has the potential to have a significant positive impact on governance. This impact can be attributed to the close relationship between procurement and governance. Public procurement accounts for between 10 percent and 25 percent of global public spending and, cumulatively, governments spend US$10 trillion on public contracts every year (World Bank 2020). eGP is, by definition, a vital component of how governance maintains legitimacy and delivers services to citizens.

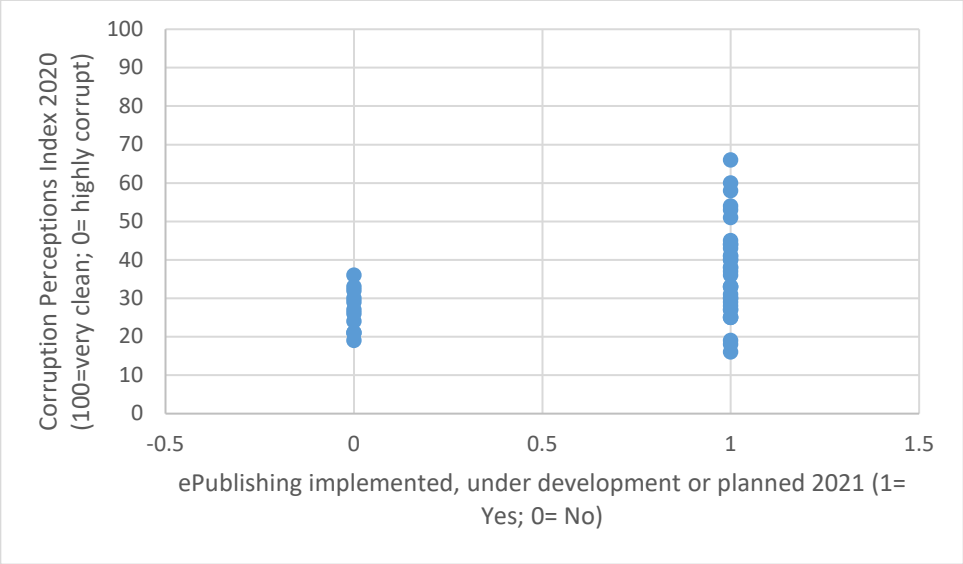
While public procurement varies among government levels and from country to country, human discretion is the primary means by which corruption enters the public procurement process. Existing tools and methods used in procurement provide a significant degree of responsibility and choice to procurement officials. In general, corruption in public procurement results in a substantial net-loss in terms of governance and the economy. Not only does corruption effectively increase the cost of procurement and capital projects and reduce return on investment, but it also has several immediate consequences that have secondary effects. For example, a corrupt procurement process around facility construction may result in inaccessible services that affect the citizens that the facility is intended to serve. Also, substandard infrastructure can increase the likelihood of accidents and cost governments more over the infrastructure's lifetime in the form of higher maintenance and legal costs.

eGP is a potential solution to decreasing the rate of corruption in public procurements. End-to-end eGP solutions can standardize procurement processes while simultaneously improving transparency around the process as a whole. The shift to digital platforms for procurement activities can also enable greater oversight and reveal trends via data that can readily be generated and analyzed, as opposed to languishing in a paper-only format. Real-time monitoring of the procurement process and transactions via eGP can also serve as a check against corruption or, at the very least, as a means to prevent corrupt practices from spreading and taking hold of the procurement process.

It should be noted, however, that eGP is not a silver bullet against corruption. Studies indicate that eGP has variable impact on the rate of corruption (World Bank 2020). For example, it appears that increased prosecutions for corruption in public procurement do not necessarily lead to lower levels of corruption These studies, however, also indicate that eGP adoption in high-corruption locations is in its early stages. For example, the mixed impact of initiatives, such as the introduction of eGP in Albania and the expansion of external audits of public procurement in Chile, indicate that initial assessments are vital to ensuring that eGP has a significant, positive impact on decreasing the incidence of corruption in public procurement. The variation in impact can be attributed to the differences in governance environments, technical aspects of particular eGP systems, capacity of procurement staff, and resistance to reform. Additionally, the increase in transparency and other positive changes, such as a reduction in contract delays and an increase in supplier performance, demonstrate that eGP has substantial benefits even if its impact on corruption is less than expected.

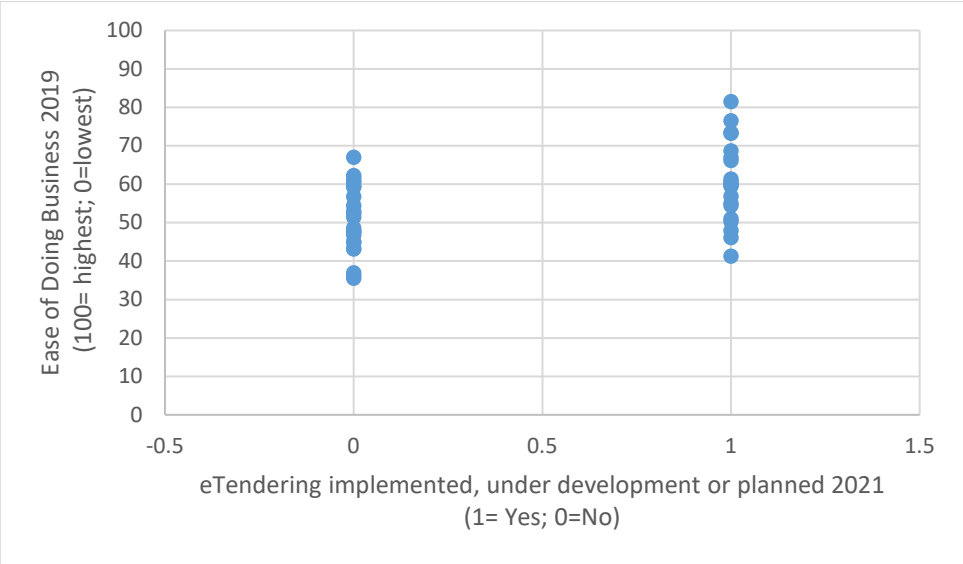
The data indicates varying impact on corruption in African countries between ePublishing/Notification, the marketing and advertising of bidding opportunities, and eTendering, the competition and procurement of goods and services via online platforms. Fifty-five African countries were surveyed to determine whether they are currently using ePublishing/Notification and/or eTendering functionality, or plan to do so in the next two years. The information received was compared to the prevailing perception of corruption in the respective country. The results are presented below in Figure I.

Figure I. E-Publication and Corruption Correlation



Further analysis showed that ePublishing/Notification is negatively and moderately correlated with the level of corruption, as measured by the Corruption Perceptions Index (CPI)[5] of Transparency International. The coefficient of correlation becomes stronger if the implementation of ePublishing/Notification is interacted with the level of accountability of the country, as measured by the Voice and Accountability indicator of the Worldwide Governance Indicators,[6] and the Checks and Balances indicator of the World Economic Forum.

Figure II. E-Tendering and Corruption Correlation



[5] Perceived levels of public sector corruption, according to experts and business people. 100 is very clean and 0 is highly corrupt.

[6] See https://databank.worldbank.org/source/worldwide-governance-indicators.

In contrast with ePublishing/Notification, eTendering is positively and moderately correlated with government efficiency, as measured by the Ease of Doing Business score of the World Bank Group. This contrast gives a strong indication that merely advertising procurement opportunities does not serve to address or combat corruption; and offering and managing tenders electronically does somewhat help to mitigate corruption in the public procurement process.

Case Example – Barriers to eGP Entry in Lesotho

Lesotho is one African country that has already implemented eGP systems. Lesotho's experience with eGP highlights a number of challenges and lessons learned in the eGP context. Lesotho's eGP story began in 2010, when the country first began implementing eGP solutions. The country has noted a number of external and internal challenges to eGP adoption, detailed in the table below.

Table V. External and Internal Challenges to eGP Adoption – Lesotho Case Study[7]

Challenge Type	Description
External Challenges	• Lack of government / political leadership. • Legal and regulatory infrastructures and a lack of definitive government policy to implement eGP. • Unreliable IT infrastructure. • Socio-economic and cultural barriers. • Lack of awareness and training on eGP systems.
Internal Challenges	• Management support and leadership. • Lack of staff training / ICT expertise to conform with eGP-related regulations. • Resistance to change from employees. • Old IT infrastructure in need of upgrade. • High installation and operation costs for eGP system. • Minimal benefits.

Despite these challenges, it was noted that eGP adoption had a number of perceived benefits, including automation, customer satisfaction, transparency, and accountability. Lesotho's experience indicates that while parties easily conceive of the benefits that eGP represents, there are a number of challenges, both external and internal, that complicate eGP adoption. The common threads in terms of challenges are a lack of leadership and focus, lack of training or awareness, and aging IT infrastructure.

[7] "The Role of Institutional Pressures in the Adoption of e-Procurement in Public Institutions in Developing Countries: The Case of Lesotho," The African Journal of Information Systems, Vol. 11, Issue 3.

4 Preconditions for Successful eGP Adoption

Definitive policy and strategic frameworks that provide clear rules and guidelines to users drive effective use of eGP systems. Policy that mandates the use of eGP under defined conditions is the most effective for organizational buy-in and adoption. An integrated approach between whole-of-government and e-procurement initiatives can create a functionally coherent network of policies and standards, minimize competing priorities and objectives, and promote balanced benefits for all stakeholders.

Governments face a number of key challenges during eGP implementation and adoption. According to studies conducted in Europe by consulting firms Accenture (Masson and Margot-Duclot 2018) and PricewaterhouseCoopers (PwC 2016), these challenges include the following:

- Excessive controls on spending and burdensome procurement procedures that can lead to delays that inhibit the adoption of new technologies.
- Governments may be locked into fixed, long-term contracts with obsolete technology systems that impede commercial partnerships with new software providers.
- There is a significant digital skills gap, as recent Accenture research has found that 59 percent of agencies in Europe have trouble finding people with the right skills to support innovation.
- Sales cycles are lengthy, as selling technology to government and the public sector requires sourcing leads, submitting proposals and organizational and financial data, and waiting for official and public comments and frequently delayed outcomes.

Prior to implementing eGP, governments should conduct a readiness assessment. This is a systematic analysis of an organization's ability to successfully implement transformational processes or change. It identifies the potential challenges that might arise when introducing new technology and accompanying procedures, structures, and processes within a current organizational context. As part of a readiness assessment, a gap analysis is performed to identify gaps or risk areas that should be addressed and remedied before or as part of the implementation plan. There are a number of readiness assessments that are oriented specifically towards eGP and which can be leveraged as existing resources to jump start governments on their eGP journey, including:

- Electronic Government Procurement (e-GP) Readiness Self-Assessment, jointly developed by the Asian Development Bank (ADB), Inter-American Development Bank (IADB), and the World Bank.
- Open Contracting Playbook, developed by the Open Contracting Partnership.
- Methodology for Assessing Procurement Systems (MAPS), jointly developed by the World Bank and the Organisation for Economic Co-operation and Development (OECD).

A primer on each of these assessments is provided in the sections below.

4.1 Electronic Government Procurement (eGP) Readiness Self-Assessment

The *Electronic Government Procurement (e-GP) Readiness Self-Assessment*, jointly developed by ADB, IADB, and the World Bank, is a fit-for-purpose readiness assessment that is "intended to assist a jurisdiction to conduct a high-level review of its procurement environment to determine its level of readiness to make a transition to eGP in a sustainable manner" (ADB, IADB, and World Bank 2004). A summary of the strategic foundations and accompanying components of the readiness assessment are

presented below in Table VI. Each component is assessed on a scale from 1 (no readiness) to 4 (adequate degree of readiness).

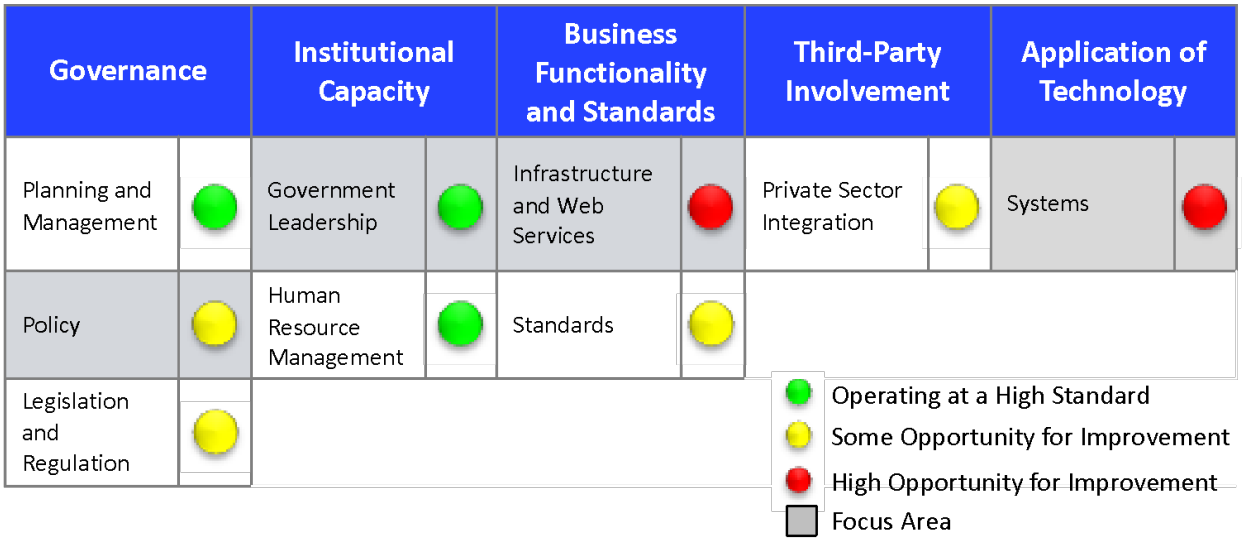
Table VI. eGP Readiness Self-Assessment Strategic Foundations and Components

Strategic Foundations	Components
Institutional Capacity The capacity of government to set directions and lead and resource the changes required.	• **Government Leadership:** vision, sponsorship, resources, stakeholder and implementation support. • **Human Resource Management**: education, skills development, expertise, and career development.
Governance Putting in place the rules, management support, and performance monitoring and evaluation to support eGP.	• **Planning and Management:** strategic planning and re-engineering of management protocols and processes. • **Policy:** setting intent and guidelines that can be consistently applied. • **Legislation and Regulation:** supporting rules and the external and internal monitoring of efficiency, performance, and compliance in relation to the total approach to eGP.
Business Functionality and Standards Sustainable infrastructure, support services, and common standards developed to ensure that accessible, integrated, and consistent procurement services can be put in place.	• **Infrastructure and Web Services:** ensuring the reasonable access to and quality of e-services and their sustainable development and maintenance. • **Standards:** development of management, procurement, and technical standards to ensure the consistency of the approach to eGP and interoperability across the systems involved.
Third Party Involvement Ensuring that the private sector is able to participate in eGP.	• **Private Sector Integration:** suppliers are enabled and have incentives to participate in eGP.
Application of Technology Appropriate, integrated, sustainable, and modifiable technology phased in to provide tendering, contract management, and purchasing services.	• **Systems:** the planning, selection, development, implementation, and support of e-Procurement systems to provide tendering, contract management, and purchasing services.

The outputs of an eGP readiness assessment can take many forms. It should conform to a dashboard format that allows for decision-level data to be communicated effectively to leaders. Figure III below depicts a "traffic-light" dashboard assessment[8] of a technology organization showing the relative performance status of different areas of the organization. It is equally important to demonstrate to leaders what is working and to identify any gaps to be solved via the introduction of an eGP system.

[8] Developed by Valent. See https://www.valentdc.com/.

Figure III. Readiness Self-Assessment Framework Output (Illustrative Example)



The dashboard-level output is created through the collection of both qualitative and quantitative data. An enterprise survey is a key tool that can be used to generate this type of data and is accurate and hyper-local to the situation being evaluated. It is also recommended to use an independent external consultant or consulting firm with expertise in readiness assessments to conduct the assessment to ensure an objective process.

4.2 Open Contracting Playbook

Another example of a framework that provides guidance for eGP implementation and procurement reform is the *Open Contracting Playbook*, developed by the Open Contracting Partnership, a non-profit spun out of the World Bank in 2015. Open contracting "brings together open data and open government to make public contracting reforms more agile, more impactful, and more durable."[9]

The playbook sets out four key components of open contracting:

- Set reform goals and secure buy-in.
- Publish, use, and improve open contracting data.
- Improve stakeholder engagement and oversight.
- Measure, adapt, and institutionalize reforms.

The playbook also includes an annex that helpfully expands on the components listed in above by suggesting additional outputs and outcomes and providing sample indicators that are important for measuring progress.

In addition to the playbook, the Open Contracting Partnership has developed a number of tools[10] designed to facilitate eGP and open procurement implementation. These tools include the Open Contracting

[9] See bit.ly/OCPlaybook-v09.
[10] See more at https://www.open-contracting.org/resources/.

Reform Design and Management Framework[11] and the Open Contracting Data Standard (OCDS). OCDS is the only international open standard for publishing data and documents at all stages of the contracting process, implemented by over 50 governments around the world.[12] OCDS can also be an important tool to support the development of transparent eGP systems, as well as key analyses.[13] The Open Contracting Reform Design and Management Framework is aimed at government reformers and provides a step-by-step guide to planning procurement reform and eGP implementation projects. The framework has four general components, each with various subcomponents and tools as show below in Table VII.

Table VII. Four Components of the Open Contracting Reform Design and Management Framework

Component	Sub-Component
Understanding your contracting challenge This initial step sets the stage and scope of the reform project.	• Analyze your challenge. • Identify key goals and activities.
Understanding your stakeholders This step is crucial to prioritize reform efforts at the local, regional, and national levels.	• Identify your stakeholders. • Research stakeholder needs. • Develop advocacy and communications strategies.
Designing your reform strategy This step enables consideration of challenges, opportunities, stakeholder needs, and engagement strategies.	• Prototype and test assumptions and activities. • Plan reform activities.
Measuring your impact Ensuring the private sector is able to participate in eGP.	• Monitor and evaluate progress.

A universal solution and path to eGP reform does not exist; rather there are multiple best practice frameworks that can be followed and customized for the unique context and solution of the implementing government. For example, a country without a current eGP system may be interested in a full readiness assessment that would lead to a ground up build of an eGP system, while a country with an existing eGP system may only be interested in implementing best data management practices and may therefore opt for using the Open Contracting Playbook to inform their reform program.

4.3 Methodology for Assessing Procurement Systems (MAPS)

MAPS,[14] developed by a joint venture between the World Bank and OECD, is a universal tool that allows governing entities to improve their public procurement systems. MAPS enables governments to evaluate their economic and financial systems to maintain accountability, report to their constituents, identify opportunities for reform, and monitor progress. The MAPS tool assesses VfM, fairness, transparency, and governance as they relate to procurement systems. The MAPS Analytical Framework is composed of four thematic pillars:

[11] See https://www.open-contracting.org/2020/04/29/open-contracting-reform-design-and-management-resources-new-guide/.
[12] See https://www.open-contracting.org/data-standard/.
[13] See https://www.open-contracting.org/2018/07/18/new-guidance-including-ocds-electronic-procurement-projects/.
[14] See http://www.mapsinitiative.org/.

1. Legislative, Regulatory, and Policy Framework.
2. Institutional Framework and Management Capacity.
3. Procurement Operations and Market Practices.
4. Accountability, Integrity, and Transparency of the Public Procurement System.

Figure IV. MAPS Analytical Framework

Figure IV below illustrates the four pillars and related aspects. While a supplementary module that focuses on eGP is currently being developed, two of the pillars discuss eGP: Pillar 1 (Legal Regulator and Policy Framework) and Pillar 2 (Institutional Framework and Management Capacity).

Pillar 1 – Legal, Regulatory, and Policy Framework[15]

The first pillar recommends that the higher the level of sophistication of the desired technology, the more specific the legal framework and standards should be to ensure consistent application of the technology, provide for full access to the system, and ensure privacy and data security. According to the first pillar, the three items listed below should be contained in a legal framework that governs public procurement and eGP.

- Allow or mandate eGP solutions covering the procurement cycle;
- Ensure the use of tools and standards that provide full access to the system, taking into consideration privacy and data security concerns, and
- Require that interested parties be made aware of which components of the procurement process will be managed electronically.

[15] See http://www.mapsinitiative.org/methodology/MAPS-pillar-I-legal-regulatory-policy-framework.pdf.

The appearance of these items indicates that a government has set up the appropriate environment for eGP implementation and operation to be successful.

Pillar 2 – Institutional Framework and Management Capacity[16]

The second pillar focuses on the level of implementation. As a first step, the government should assess the level of eGP implementation and use in the relevant geographic area. A usual first step is for countries to establish centralized online portals to publish laws, regulations, and other relevant documentation concerning procurement. More advanced implementations may utilize supplier registries or transaction-based eGP systems, which support electronic procurement and contract implementation processes. The assessment criteria listed below can be used to determine whether eGP is implemented and managed effectively and efficiently.

- eGP is widely used at all levels of government.
- Government officials have the capacity to plan, develop, and manage eGP systems.
- Procurement staff is adequately skilled to support eGP systems.
- Suppliers participate in a public procurement market dominated by digital technology.
- A government that has yet to utilize eGP has adopted an eGP roadmap.

Regardless of the readiness assessment selected, governments should complete an assessment and merge the assessment with any other initiatives related to procurement and governance.

[16] See http://www.mapsinitiative.org/methodology/MAPS-pillar-II-institutional-framework-and-management-capacity.pdf.

5 eGP Adoption Progress Across Africa

One-third of African countries do not have an eGP system. Half of the countries in North Africa do not have such a system, and within Sub-Saharan Africa (SSA), Middle Africa is lagging behind with respect to all the other subregions. While only one-third of the countries in Middle Africa have an eGP platform, the share of countries with an eGP platform in East, West, and Southern Africa ranges from 75 percent to 80 percent. Middle-income countries in Africa, especially upper middle-income countries, perform worse than low-income and high-income countries in Africa. While 70 percent of low-income countries and 100 percent of high-income countries have an eGP system, only 50 percent of upper middle-income countries have such a system. Sub-Saharan Africa and Middle East and North Africa are the regions with the weakest adoption of an eGP system.

eGP Usage

Usage of the eGP system in the vast majority of African countries is below 50 percent; only 22 percent of African countries with an eGP platform have usage rate above 50 percent. In North Africa, average usage is much higher than in Africa. In two-thirds of North African countries with an eGP system, the usage rate above 50 percent. Sub-Saharan Africa is by far the world region with the lowest usage rate of an eGP system, with only 18 percent of the countries with an eGP platform having usage rate above 50 percent. In contrast, in the world on average, 65 percent of countries with eGP systems have a usage rate above 50 percent. In the Middle East and North Africa, the next worst performer after Sub-Saharan Africa, 50 percent of the countries with eGP systems have a usage rate above 50 percent. Usage of eGP systems is higher in middle-income African countries than in low-income countries. However, usage in the two high-income African countries (Mauritius and Seychelles) is lower than in middle-income African countries on average.[17]

eGP Adoption Statistics

Based on information on eGP implementations within African countries, from data provided directly by governments as part of data collection into the World Bank's GPPD,[18] the 29 African countries that have implemented eGP systems are listed in Table VIII below.

Table VIII. African Countries with eGP Implementations

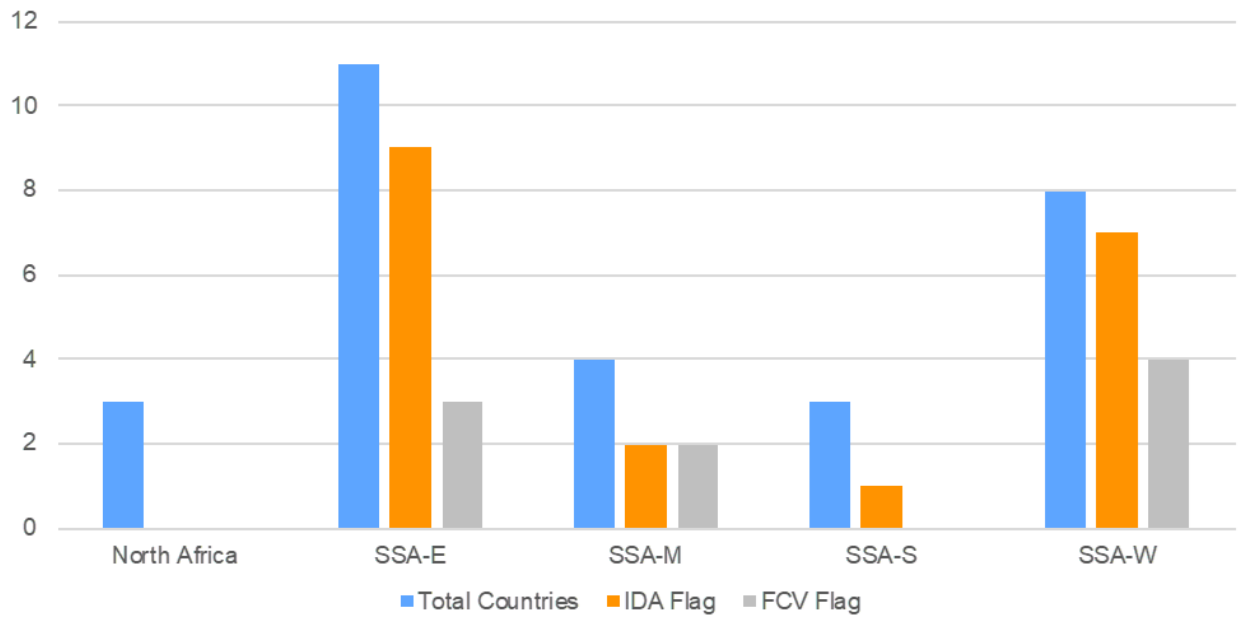
African Countries with eGP Implementations		
Angola	Ethiopia	Rwanda
Botswana	Gabon	Senegal
Burkina Faso	Ghana	Seychelles
Burundi	Lesotho	South Africa
Cabo Verde	Liberia	Sudan
Cameroon	Madagascar	Tanzania
Congo, Dem. Rep.	Mali	Tunisia
Côte d'Ivoire	Mauritius	Uganda
Egypt, Arab Rep	Morocco	Zambia
	Niger	Zimbabwe

[17] The World Bank, Doing Business 2020.

[18] See https://www.globalpublicprocurementdata.org.

As previously discussed in this paper, under a new policy commitment for IDA19,[19] the World Bank will support at least 50 percent (38 countries) of International Development Association (IDA) countries to implement eGP and conduct detailed procurement data analytics in order to increase the efficiency of public spending and mitigate corruption risks. Figure V below presents the distribution of eGP systems across Africa.

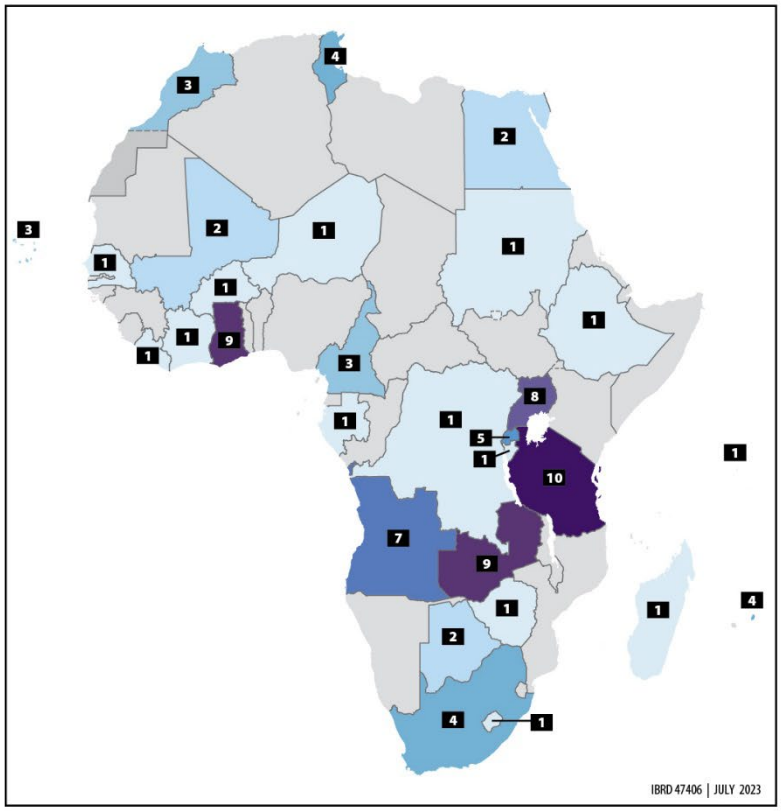
Figure V. Number of eGP System Implementations in Africa by Region/IDA/FCV Designation



Of the 55 countries in Africa, 29 (53 percent) have implemented an eGP system; that lags the overall global average of 64 percent. The majority of eGP implementations (66 percent) are focused in East and West Sub-Saharan Africa. The following heat map (Figure VI) shows the number of eGP modules implemented within each of the 29 countries that have eGP systems. The countries with the most eGP modules implemented are Tanzania (10), Ghana (9), Zambia (9), Uganda (8), and Angola (7).

[19] See http://ida.worldbank.org/replenishments/ida19.

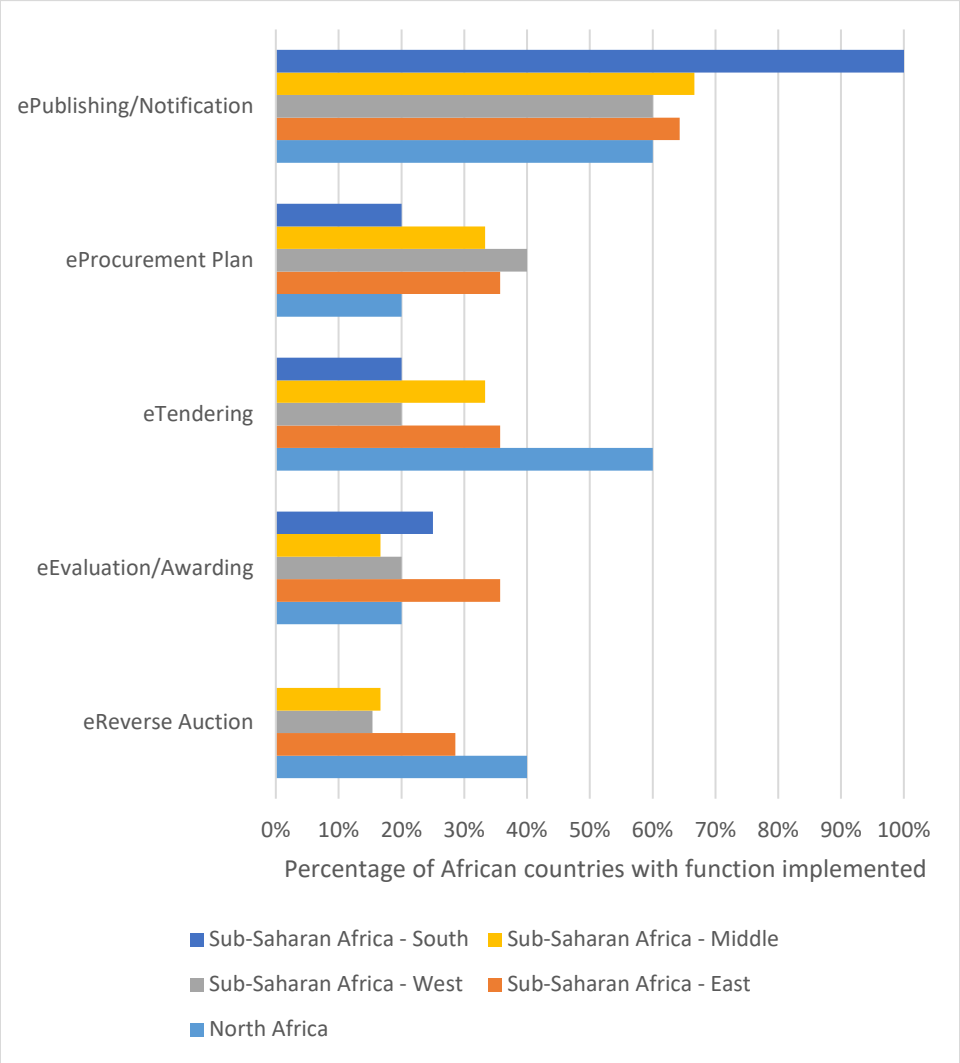
Figure VI. Representation of the Number of eGP Module Implementations in Africa by Country



eGP Module Adoption for the Pre-awarding Phase

The only eGP Module that is implemented in a majority of African countries (67%) is ePublishing/ Notification. All the other functions of the pre-awarding phase are implemented in a minority of African countries: eProcurement Plan (33%), eTendering (31%), eEvaluation/Awarding (25%) and eReverse Auction (21%), as presented below in Figure VII. A significant share of African countries have new eGP functions under development or planned for the next two years. This is especially the case for eProcurement Plan (16%), eTendering (16%), and eEvaluation/Awarding (14%). Nevertheless, the above-mentioned reforms appear to be concentrated in certain African subregions, namely South SSA, East SSA and West SSA. In Middle SSA, no country is undertaking eGP reforms in the pre-awarding phase, and in North Africa, reforms are envisaged only in eProcurement Plan.

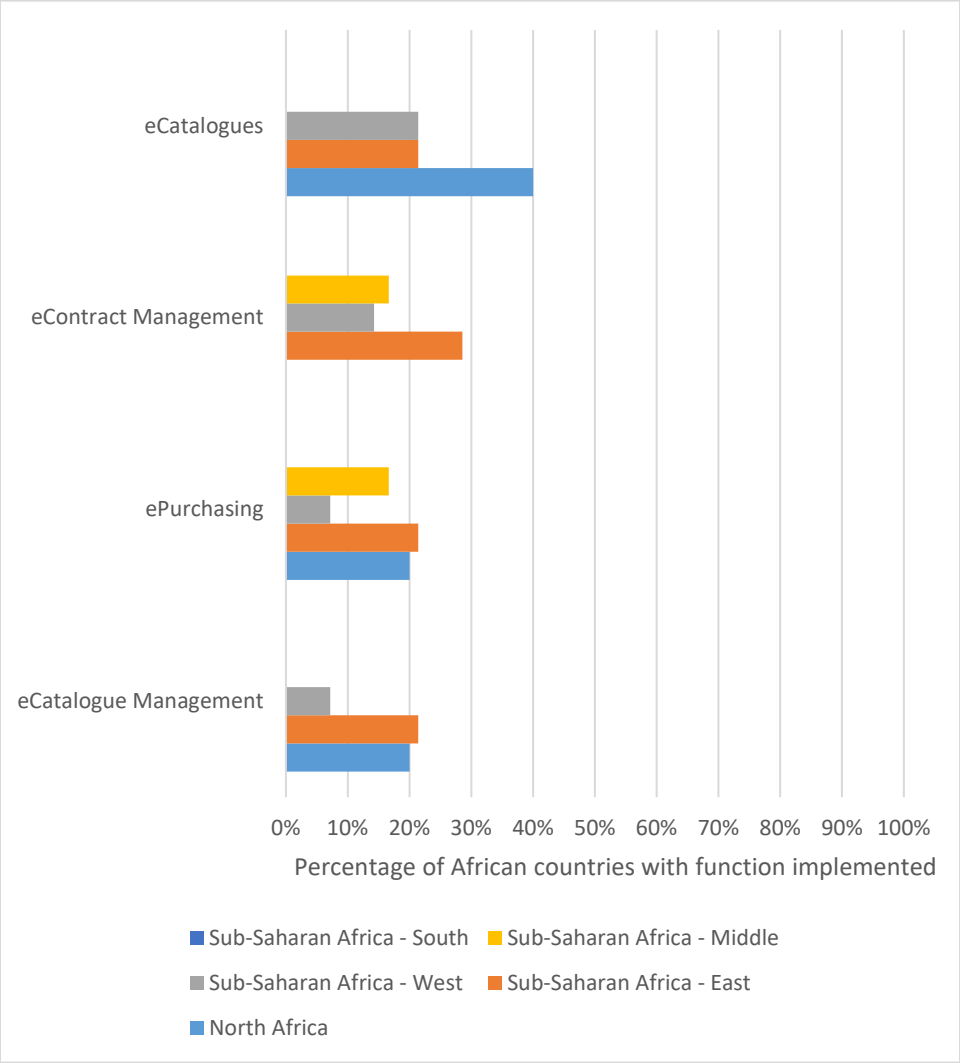
Figure VII. Pre-Award eGP Module Implementations by Region



eGP Module Adoption for the Post-awarding Phase

The level of implementation of all the eGP modules of the post-awarding phase is lower than that of the functions of the pre-awarding phase. eCatalogues are implemented in just 18 percent of African countries, and the other post-awarding functions are implemented in a lower percentage of countries: 16 percent for eContract Management, 14 percent for ePurchasing, and 12 percent for eCatalogue Management. Encouragingly, a significant share of African countries have eGP modules of the post-awarding phase under development or planned for the next two years: 14 percent of countries for eCatalogues, 12 percent for eCatalogue Management, 11 percent for eContract Management and seven percent for ePurchasing (Figure VIII).

Figure VIII. Post-Award eGP Module Implementations by Region



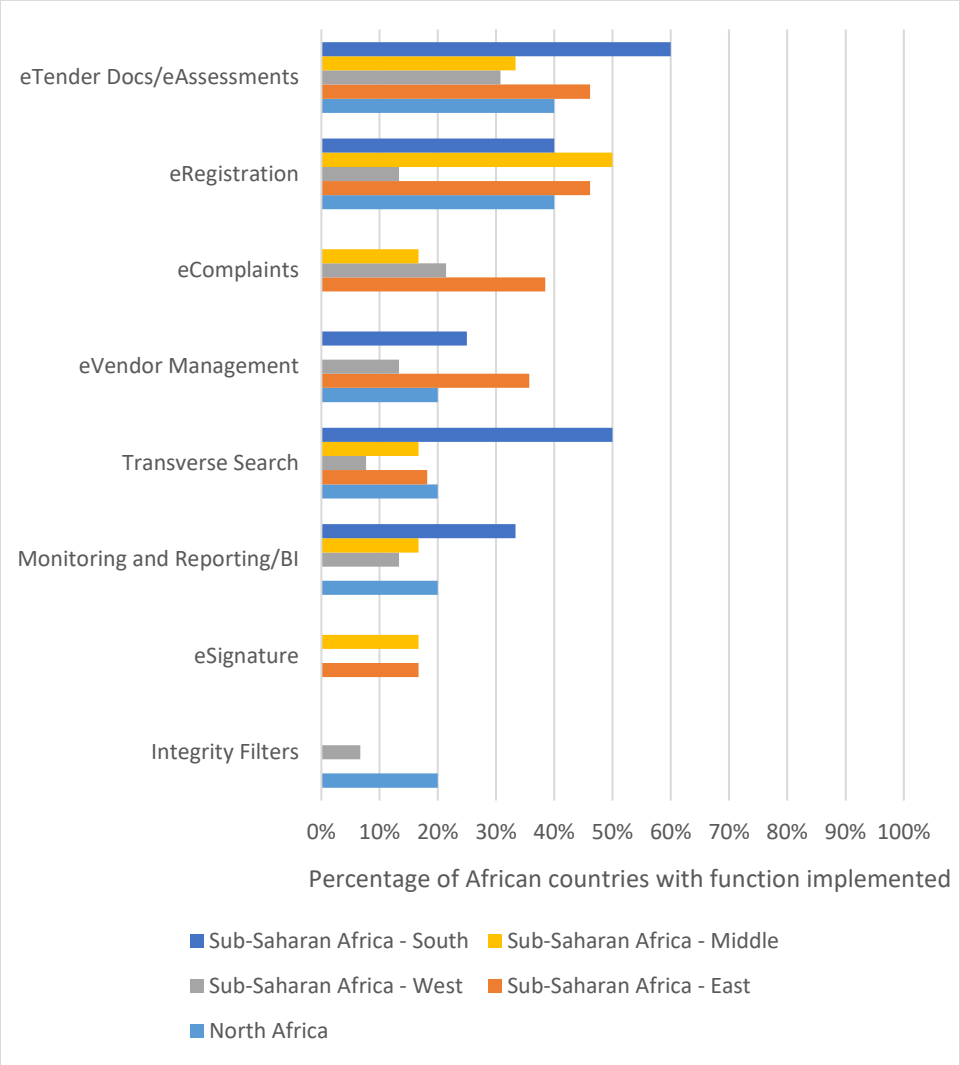
eGP Module Adoption for Supporting Features

Some eGP supporting features are implemented in a higher share of countries than others. Tender Documents Downloadable/eProcurement Assessments, eRegistration, eComplaints and eVendor Management are implemented in more than 20 percent of African countries. Transverse Search, Monitoring and Reporting/BI, eSignature and Integrity Filters are implemented in less than 20 percent of the countries. Tender Documents Downloadable/eProcurement Assessments is the one with the highest implementation rate (40 percent), while Integrity Filters is the one with the lowest (5 percent) (Figure 3). A significant share of African countries have e-GP supporting features under development or planned in the next two years. This is the case for all the supporting features except Tender Documents Downloadable/E-Procurement Assessments—see Figure IX below.

South SSA is by far the subregion where more countries have supporting features under development or planned in the next two years. In this subregion, 67 percent of countries are introducing reforms in e-Complaints, 50 percent in e-Vendor Management, 40 percent in e-Registration, 33 percent in e-Signature and 33 percent in Monitoring and Reporting/BI. The other subregions in SSA are also introducing reforms

in supporting features, but in a much lower percentage of countries (Figure IX). For a majority of the eGP supporting features, the rate of implementation increases for higher income groups. However, in the upper-middle income countries in Africa, there is no implementation of eComplaints, eSignature and Integrity Filters, and in high income countries, there is no implementation eVendor Management, Monitoring and Reporting/BI and Integrity Filters.

Figure IX. Supporting Feature eGP Module Implementations by Region



The survey data of eGP module adoption in Africa shows there is clear room for improvement While it is encouraging to note there are a significant number of countries that plan to implement various eGP modules over the next two years, prior experience shows that countries will require continued support by the World Bank and other development partners to realize these goals regarding adoption.

Case Study: eGP Implementation in Rwanda

In 2013, the Rwandan government undertook a feasibility study, funded by the World Bank, on eGP implementation. At the time, Rwanda annually spent approximately US$800 million on the procurement of goods and services. The feasibility study "found that an [eGP] system in Rwanda could increase efficiency and transparency in public spending" (World Bank, 2018b). Subsequently, in 2014, the Rwandan government launched an initiative that focused on improving the country's public financial management, which included US$12 million to establish and pilot an eGP system.

To establish the eGP system, the government contracted directly with Africa Olleh Services Limited (AOS), a joint venture between the Rwandan government and Korea Telcom Corporation, one of the Republic of Korea's largest telecoms. AOS developed a customized eGP system based on Korea's model, with the World Bank providing technical support. In July 2016, the government piloted the system with several national ministries and agencies and district governments. Officials in pilot organizations were provided training on the eGP system, and the government conducted media campaigns across the country to advertise the system and encourage registration and participation. The pilot ran for one year, after which the system was expanded nationwide.

By law, Rwandan public procuring entities (137 in total) are now required to use the eGP system. As of December 2017, 3,500 suppliers had been registered, 2,000 tenders advertised, and 685 contracts signed. The system is expected to impact procurement substantially: "strategic sourcing will become more predictive, transactional procurement will become more automated, and supplier/contract relationship management will become more proactive. All these enhancements will lead to more efficient public procurement."

In summary, key lessons learned from the experience of Rwanda include:

- **Policy Mandate** – successful eGP implementation would not have been possible without the establishment of a new regulatory body for procurement in 2008 and a new procurement-related law in 2007.
- **Institutional Capacity** – partnering with a Korean company to form a joint venture and seeking World Bank support enabled Rwanda to build capacity within its government to implement the eGP system.
- **Technology** – Rwanda's eGP system was well-received, partly because the technology upon which it was based was straightforward and simple. The procurement website consisted of a single online portal, and the automated bid processing system streamlined processes, reduced the ability of bidders to use falsified documents, and improved efficiency for both potential vendors and government organizations.

6 Solutions and Recommendations for eGP Adoption

A key challenge for a country's eGP journey is knowing where to get started. The World Bank offers tools, resources, templates, and toolkits that are designed to address this issue, as well as to guide a country through their eGP journey. The common challenges encountered in any large-scale change management initiative involving technology – for example, requirements definition, stakeholder management, implementation, training, and adoption – are ever present in introducing or modifying an eGP system. In section 1.3 of this paper (Preconditions for Successful eGP Adoption), three independent readiness assessment resources were reviewed. This section provides further prescriptive recommendations on how to enhance eGP adoption and how to continuously improve its use.

Recommendations for Specific Interventions to Promote eGP Adoption

1. **Build eGP Knowledge Capacity.** The World Bank has developed eProcurement online learning courses[20] aimed at introducing participants to the concepts and main objectives of eGP and state-of-the-art eProcurement systems, through five learning modules:

   i. eProcurement Preparation
   ii. eProcurement Basics
   iii. Advanced eProcurement
   iv. eProcurement Indicators
   v. Incorporating eProcurement into Public Financial Management (PFM) reforms

   Each module follows a common structure including videos, interactive features and assessments. Upon completion, participants can take an eProcurement certification test and obtain an "eProcurement Champion" certification. The learning platform is implemented within the World Bank's Open Learning Campus (OLC) and is free and open to the public. Over 3,000 individuals have registered and taken the course, with 1,100 having passed the assessment and received certification.

2. **Establish mandatory eGP use in National Procurement Policy.** eGP is a proven technology that has been implemented in 127 developing countries[21] to bring efficiency and effectiveness to the public procurement process. National procurement law, regulations, and policy should allow for the creation and maintenance of eGP systems and any associated procurement digitization technologies such as electronic signature. This will lay a foundation of online technology for the implementation of procurement policies and the realization of best practice procurement principles such as VfM, fairness, and transparency.

3. **Utilize the World Bank's eProcurement Toolkit.**[22] The World Bank developed an eProcurement Toolkit which contains the following documentation, templates, and resources to help client countries with their eGP journey.
   i. *E-Procurement Preparation:* Guides understanding of the concept of eGP and evaluating why and how to pursue the establishment of an eGP framework. This document includes the benefits that eGP offers and the actions that are needed to plan a path forward.

[20] See www.eprocurementlearning.org.
[21] Per the GPPD; see https://www.globalpublicprocurementdata.org.
[22] See www.eprocurementlearning.org.

ii. *Open Contract Standard Implementation Methodology:* Facilitates understanding of the concept of Open Contracting Data Standard (OCDS) and obtaining a high-level approach for its implementation in an eGP system. This document presents an overview of the OCDS and how it can be incorporated in a new or existing eGP system.

iii. *Public Procurement Indicators:* Explains the concept of public procurement indicators for the assessment of the operation of eGP systems in relation to policy goals. This document presents different categories of public procurement indicators including calculation methodologies and benchmark targets.

iv. *Guidelines for Conducting Market Analysis for e-Procurement Systems:* Defines core principles of a methodology for conducting a market analysis with a view to obtaining/implementing e-Procurement systems. This document presents why and how market analysis can be performed as a means to better understand the ICT market regarding available vendors and existing e-Procurement software products.

4. **Utilize the Open Contracting Partnership Playbook.** The playbook "brings together open data and open government to make public contracting reforms more agile, more impactful, and more durable" and discusses four key components of developing an eGP system.

5. **Consider Change Management Efforts.** Consideration should be made to modify management efforts as needed while eGP is being implemented. Change management activities include promoting, marketing, and increasing eGP adoption through effective communication with the various stakeholder groups. A key component of any change management plan is the development of strategies to address implementation risks and overcome workforce resistance to change.

6. **Identify and Regularly Communicate with Key Stakeholders**. Particular emphasis should be placed on engaging stakeholders early in the eGP implementation process. In complex transformation efforts, early engagement of stakeholders typically results in sustained stakeholder buy-in, and reduces potential conflict and delays as solutions roll out. Stakeholders may come from government, the private sector, or may be development partners as shown in Table IX below.

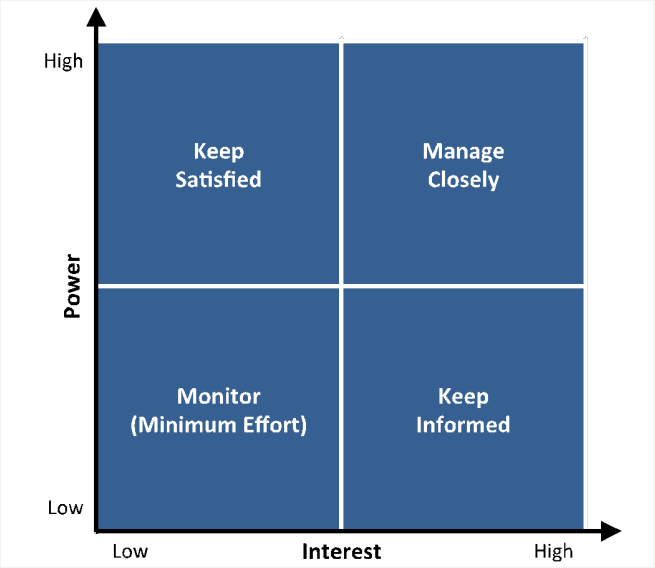
Table IX. Potential eGP Implementation Stakeholder Groups

Government Stakeholders	Private Sector Stakeholders	Development Partner Stakeholders
• Public Procurement Oversight Organization • Ministry of Finance • Legislative Body • Anti-Corruption Commission • Audit Commission • Political Leaders • Procuring Entities • State-Owned Enterprises	• Professional Procurement Associations • Large/Medium/Small Business Community • Non-Profit Organizations	• Bilateral Partners • Multilateral Partners • New/Emerging Donors

Once stakeholder groups have been identified, a communication plan should be developed to ensure that all relevant stakeholders are engaged and informed throughout the implementation process. The key activities for a comprehensive plan include:

- Conduct a rapid analysis to ensure that appropriate communications are created for all key stakeholders as illustrated in Figure X below, which depicts an example of stakeholder analysis output. Note that the axes on the chart can differ from what is presented – for example, "Influence" on the x-axis (horizontal) and "Importance" on the y-axis (vertical).
- Develop clear communication materials to inform and educate the various stakeholder groups, including supporting materials targeted for specific audiences.
- Engage country and procurement leadership and other key personnel to review the communication plan and other materials, including activities, message content, frequency and tone of messaging, and proposed methods/channels for communications delivery; incorporate feedback as necessary.
- Deploy communications via fact sheets, meetings, presentations, websites, blogs, social media posts, and other relevant mediums to maximize reach.

Figure X. Example Stakeholder Analysis Output



7. **Determine a sustainable eGP funding strategy.** It is critical to long term program success to develop a sustainable funding strategy. Funding strategies must focus on both capital expenditure (CapEx) and operational expenditure (OpEx) costs over the full lifecycle of the eGP product. Funding strategies may include milestone-based payments to eGP Contractors during the time of product development and implementation, plus additional payments to the client country based on established Key Performance Indicators (KPIs) related to the outcome of the usage of the eGP product. Table IX below presents two key options to facilitate developing a funding strategy.

8. **Create a Robust eGP Implementation Strategy.** It is imperative that a detailed implementation plan be developed because the absence of a clear-cut strategy can lead to low eGP adoption and use. A dedicated team should lead the implementation effort, and it is highly recommended that an oversight committee of different stakeholders be established to oversee eGP implementation activities. The oversight committee should be accountable for the successful implementation of the eGP system and also be the final point to deal with escalation of issues that cannot be resolved within the implementation team.

Table IX. eGP Funding Strategy Options

Funding Option	Description
Traditional Lending or Grant Funding.	• Set amount of funding for the CapEx and OpEx costs over the lifecycle of the eGP product/program. • Milestone based payments to the Contractor for development and implementation of the platform. • Payment phases may include (i) Requirements Definition, (ii) Pilot Implementation, (ii) Acceptance and Full – Rollout, (iv) Post-Implementation Support.
Performance-based financing instrument, for example, Program for Results (P4R).	• Funding based on the meeting of specific Key Performance Indicators (KPIs). • Milestone based payments made to Contractor for development and implementation of the platform. • Milestone payments made to client country based on Project outcome and KPI achievement. • KPI examples include (i) $ volume of transactions, (ii) count of transactions, (iii) # of registered suppliers on the platform, (iv) number of registered Government Agencies on the platform.

9. **Develop and Implement a Pilot Program.** Development and implementation of a small-scale pilot program should be a strong consideration. In the pilot program, the eGP system is rolled out in a controlled environment for a small set of users who are able to test the system and provide feedback that can be addressed prior to wider release of the system. Outside of the use and functionality of the eGP system, a pilot program is ideal for testing training materials and crafting effective communications and messaging campaigns. Complete Rollout of a typical eGP system takes at least six months, so it is imperative that a realistic timeline be set for implementation that includes contingencies for activities that may run longer than planned based on the pilot program.

10. **Ensure Proper Training of the Workforce**. Proper training of the user base will lead to greater adoption of an eGP system. Training should be tailored to user groups (e.g., procurement officers, suppliers, auditors) based on their system usage and responsibilities. Training should also be implemented using the appropriate forum – in person versus online – to maximize learning and reach. In-person trainings should be offered on a regular basis to quickly bring new users up to speed.

11. **Provide Adequate Post-Implementation Technical Support**. A technical support team should be established (or an organization contracted) to provide continuous help desk support and training for internal users and vendors and to conduct eGP system workshops for all user populations. The lack of adequate technical support may lead to lower adoption and usage rates among the target user population.

Summary of Critical Success Factors

In addition to the specific recommendations above to promote eGP option, the below critical success factors provide more granular insight for project teams to consider as they embark on the journey to implementing eGP solutions.

Table X. Critical Success Factors to eGP Implementation

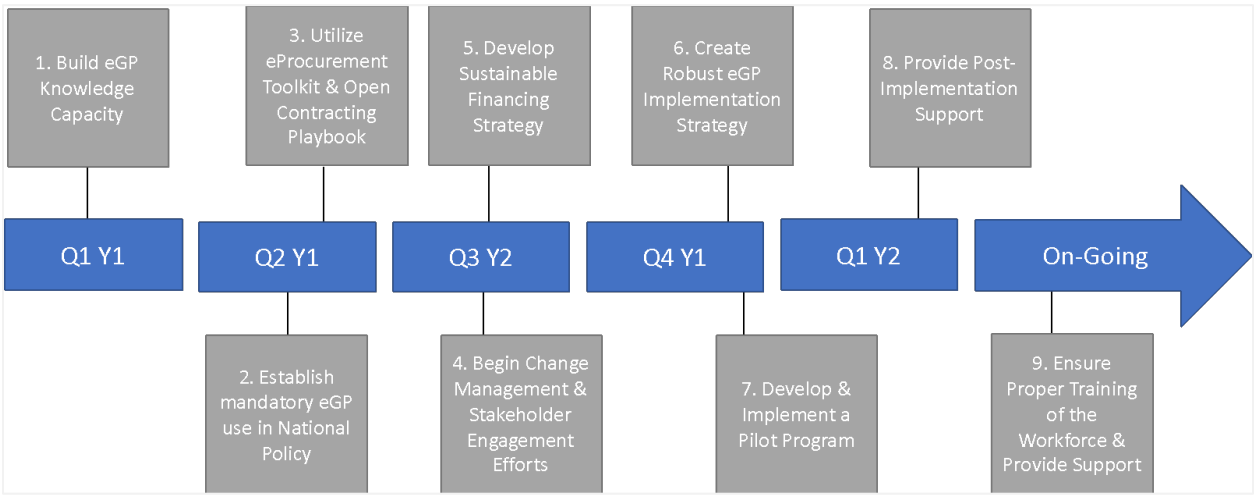
Critical Success Factors	Recommendation
End-Users' Uptake and Training	• Keep end users involved and informed throughout the acquisition process. • Develop and regularly delivery comprehensive user training.
Supplier Adoption	• Engage and prepare the supplier base by developing a supplier adoption strategy and communication plan to include education and a demonstration of eGP benefits. • Ensure compliance with best practices regarding content and catalogue management.
Business Case and Project Management	• Conduct a business process assessment to identify requirements and business drivers. • Calculate and/or track return on investment, total cost of ownership, and risks.
System Integration	• Implement sending and receiving of real-time information to other information systems. • Drive electronic commerce with suppliers.
Security and Authentication	• Develop system security requirements including authentication, authorization, and confidentiality.
Re-engineering the Process	• Improve data and process transparency which may lead to decreased corruption • Automate invoice payment and reconciliation. • Develop and drive compliance with purchasing procedures and standards.
Performance Measurement	• Develop goals and targets that can be tracked using Key Performance Indicators (KPIs). • Conduct a baseline measurement and consistently evaluate to monitor progress and improvement.
Top Management Support	• Identify and onboard a management sponsor to support the project • Consider formation of a steering committee for feedback and to advocate for organizational change.
Change Management	• Identify and actively manage key stakeholders. • Conduct an e-Procurement impact assessment to identify potential barriers to implementation.
e-Procurement Implementation Strategy	• Utilize sound procurement practices with a focus on opportunities for aggregation. • Develop a consistent approach to procurement relationships with industry and small businesses.
Technology Standards	• Develop and adhere to technical, content, and procedural standards • Focus on interoperability requirements.

An Example of an eGP Action Plan Timeline

A government considering the transition to, or management of, an eGP system should first perform a MAPS assessment, described earlier this paper. A MAPS assessment will simultaneously provide the government with a comprehensive understanding of its current procurement systems and inform the government about whether and how effectively eGP systems are currently being used. By identifying those areas in which existing eGP systems are deficient or suboptimally deployed, the assessment provides a roadmap that leads to the improvement of the effectiveness and efficiency of current eGP systems and assists with the steps necessary for deployment new eGP systems at all levels of governance.

In the absence of the ability to perform a MAPS Assessment, or in the case one has already been performed, it is recommended that the following nine (9) high level steps (described in detail in the section above) be carried out over a twelve to eighteen month period to effect an eGP Implementation Plan in a comprehensive and timely manner.

Figure XII. Roadmap for the Deployment of a New eGP System (Illustrative Example)



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ANNEX I: African Countries with Procurement Law Clauses by Procurement Practice Area

High Income Countries – GNI per capita of $12,236 or more (2018)

Region	Country	TCO	LCC	VfM	Sustainability	MEAT
Middle East and North Africa	Malta				X	X
Sub-Saharan Africa	Mauritius		X	X	X	
	Seychelles			X	X	X

Upper-Middle Income Countries – GNI per capita range of $3,956 – $12,235 (2018)

Region	Country	TCO	LCC	VfM	Sustainability	MEAT
Sub-Saharan Africa	Botswana			X		
	Namibia			X		X
	South Africa			X		

Lower-Middle Income Countries – GNI per capita range of $1,006 – $3,955 (2018)

Region	Country	TCO	LCC	VfM	Sustainability	MEAT
Middle East and North Africa	Tunisia				X	X
Sub-Saharan Africa	Angola	X		X	X	X
	Cabo Verde			X	X	X
	Cameroon				X	
	Ghana	X	X	X	X	X
	Kenya	X		X		X
	Kingdom of Eswatini	X	X	X		X
	Lesotho			X		X
	Nigeria			X		X
	Zambia	X	X	X		
	Zimbabwe			X		X

Low Income Countries – GNI per capita of $1,005 or less (2018)

Region	Country	TCO	LCC	VfM	Sustainability	MEAT
Sub-Saharan Africa	Benin					X
	Ethiopia			X	X	X
	Liberia			X	X	
	Madagascar					X
	Malawi			X	X	X
	Mozambique			X	X	X
	Rwanda					X
	Sierra Leone				X	X
	Somalia			X	X	X
	South Sudan			X		X
	Tanzania			X	X	X
	Uganda	X	X	X		

Source: GPPD

ANNEX II: GPPD Key Terms and Definitions

Term	Definition
Gross National Income (in USD)	GNI measures the total domestic and foreign value added claimed by residents and comprises GDP plus net receipts of primary income (compensation of employees and property income) from nonresident sources.
Gross Domestic Product (GDP)	Gross Domestic Product (GDP) is a broad measurement of a nation's overall economic activity. GDP is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.
Public Procurement Agency	The government agency that is responsible for establishing a national public procurement policy and overseeing its implementation among all public sector entities. It occasionally holds the power to approve contract awards of large value.
Central Purchasing Body (CPB)	A central purchasing body is a contracting authority that acquires goods or services intended for one or more contracting authorities or concludes framework agreements for works, goods or services intended for one or more contracting authorities.
Region covered by the CPB: - National* - Regional* - Local*	National: covers whole country. Regional: covers large geographic region of the country. Local: covers small geographical region of the country (e.g. municipalities).
Total Cost of Ownership (TCO)	TCO calculates the complete cost from purchase to disposal including expected costs to be incurred during the lifetime of the product, such as service, repair, and insurance.
Life Cycle Costing (LLC)	LLC is the sum of all recurring and one-time (non-recurring) costs over the full life span or a specified period of a good, service, structure, or system. In includes purchase price, installation cost, operating costs, maintenance and upgrade costs, and remaining (residual or salvage) value at the end of ownership or its useful life.
Value for Money (VfM)	VfM should not be calculated solely on cost, but also on the efficiency and effectiveness of the purchase.
Most Economically Advantageous Tender (MEAT)	Bid evaluation process through which the successful bid is ascertained on the basis of combining technical and financial characteristics of the bids.
Sustainability	Sustainable procurement is the adoption and integration of Corporate Social Responsibility (CSR) principles into your procurement processes and decisions while also ensuring, they meet the requirements of your company and its stakeholders. The 6 core subjects listed by ISO 26000 are: human rights, labor practices, the environment, fair operating practices, consumer issues, community involvement and development.
SMEs & Micro, Small And Medium-Sized Enterprise (SME)	An enterprise which employs a small number of employees (for example, fewer than 250 persons) and has a small annual turnover or balance sheet (e.g., not exceeding USD 50 million).
Bid (submission)	Technical and financial offer of a private sector entity for a specific public procurement competition.
Complaint	Expression of objection against a decision, outcome or procedure of a public procurement competition.
Standstill Period	Period starting from the moment bidders of a competition are informed of its results, during which they are allowed to express their objections on such results. Procuring entities cannot proceed in signing contracts with the winning bidder until this period elapses and all expressed complaints are resolved.
Goods	Objects of every kind and description including raw materials, products and equipment and objects in solid, liquid or gaseous form, and electricity, as well as services incidental to the supply of the goods if the value of those incidental services does not exceed that of the goods themselves.
Works	All works associated with the construction, reconstruction, demolition, repair or renovation of a building, structure or works, such as site preparation, excavation, erection, building, installation of equipment or materials, decoration and finishing, as well as services incidental to construction such as drilling, mapping, satellite photography, seismic investigations and similar services provided pursuant to the procurement contract, if the value of those services does not exceed that of the construction itself.
Services	Services of intellectual and consulting nature and any other services not covered by the terms "goods" and "works."
Bid Validity Period	The period during which the bids submitted for a public procurement competition remain valid.
Contract Award	The result of a public procurement competition, in terms of winning bidder(s) and contract budget.
Disclosure threshold	Disclosure of contract awards is subject to a minimum budget threshold below which disclosure is not required.
Tender threshold	Disclosure of tenders is subject to a minimum threshold below which disclosure is not required.
Advertisement	Notice by which a procuring agency announces the commencement of a public procurement competition.

Direct Contract	Public procurement method whose main distinct feature is the absence of competition, since the invitation to present a bid is addressed only to one bidder.
eProcurement system	The electronic platform used to manage various aspects of the public procurement process (e.g. advertisements).
eProcurement functionalities supported -- eProcurement Plan -- ePublishing/Notification -- eTendering/eQuotation -- eEvaluation/Awarding -- eReverse Auctions -- eContract Management -- eCatalogues -- ePurchasing/P2P -- Vendor Management -- eComplaints	-eProcurement Plan: eProcurement system module to create and publish annual procurement plans at the beginning of each fiscal year. This module commonly allows bidders to be aware of the nature, timing, and volume of the planned public procurements. -e-Publishing/Notification: eProcurement system module to support the publication of public procurement advertisements so that these are available to any interested party. -eTendering / eQuotation: eProcurement system module to provide online support for the submission of bids. -eEvaluation/e-Awarding: eProcurement system module to support the electronic opening (decryption) of bids, their partial or complete evaluation, and the notification of the outcome of the process. -eReverse Auction: eProcurement system module to provide an online real-time purchasing technique, enabling bidders to successively submit bids of lower value. This module features mechanisms for the automatic evaluation of bids. -eContract Management: eProcurement system module to support the management of contracts. This module commonly includes features to manage contract documentation, contract amendments, key performance indicators (KPIs), tasks, and deliverables. -eCatalogue: eProcurement system module to support the creation of catalogue workspaces and the ability to browse electronic catalogues and create/ manage cart of items to procure. -ePurchasing: eProcurement system module to support the preparation of requisitions and the management of purchase orders. Occasionally this module is also referred to as Purchase-to-Pay (P2P) -Vendor Management: The management of profiles, attestations and/or performance of suppliers, contractors, constructors, bidders, etc. conducting business with public sector entities. -eComplaints: eProcurement system module to receive and manage complaints.
eSignature functionalities -- Advanced electronic certificate authentication -- Document electronic signing -- Action electronic signing	Functionalities: -Advanced electronic certificate authentication: use of electronic certificates for supporting the user authentication process (i.e. login). -Document electronic signing: use of electronic certificates for supporting the electronic sign off of documents uploaded onto the eProcurement system (e.g. bids). -Action electronic signing: use of electronic certificates for supporting the electronic sign off of crucial actions performed within the context of the eProcurement system (for example, contract award).
Commercial Off the Shelf (COTS)	Non-developmental items (NDI) sold in the commercial marketplace; in the context of public procurement this term is usually relevant for COTS eProcurement systems (i.e. systems based on platforms developed by private sector entities).
Business model for eProcurement -- Government owned and operated -- Government-managed service -- Public-private partnership (PPP) -- Shared service	Business model for eProcurement: -Government owned and operated: eProcurement system owned and operated by the government, which is built by its own ICT team. Alternatively, external partners may be consulted during the development or the support phases of the project, but these partners have no rights to any part of the system. -Government-managed service: eProcurement system owned, operated, and supported by a third-party partner; the government retains ownership of all hosted data and all supporting services, such as a user helpdesk and training. -Public-private partnership (PPP): eProcurement system owned and operated by a third-party service provider. The intention of this model is that at some time in the future and specified in the public-private partnership agreement, the service will be transferred to the government. In the interim, the service provider is compensated either through a fixed monthly/annual fee or transactional revenues based on the usage of the system. -Shared service: eProcurement system provided by a third-party service provider and is used by multiple public sector entities or other clients.
Spend Taxonomy	Classification used for systematically characterizing procurements to serve improved visibility of competitions and more effective reporting mechanisms. Most usually are UN/SPSC and CPV.
Tender	The procedure by which a public sector entity can acquire goods, services and works. Occasionally referred to as Call for Tenders, Public Procurement Competition, or simply Tender.
Non direct Contract	Public procurement method involving competition and bidding process (i.e. opposite Direct contract).
Framework Agreement	Contractual agreement for a fixed period between procuring entities and selected supplier(s), concluded following a public procurement competition, which sets the conditions for future, repetitive purchases.
Lowest Price Technically Acceptable (LPTA)	Bid evaluation process based on which the procuring entity determines the winning bid by eliminating ineligible bidders and technically inacceptable bids and then selecting the lowest priced bid for award.
Bidder	A private sector entity interested in a public procurement competition, or submitter of bid for a public procurement competition.

Procurement procedure	The procedure by which a public sector entity can acquire goods, services and works. Occasionally referred to as Call for Tenders, Public Procurement Competition, or simply Tender.

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