

**Abbreviated
eGovernment Web
Development Strategy**

Government of Liberia

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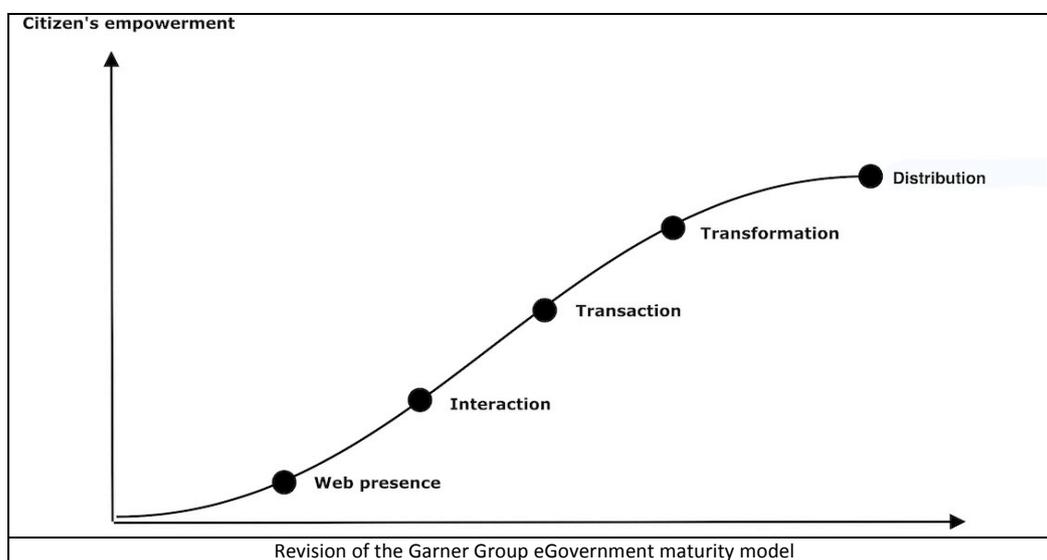
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Executive Summary

eGovernment is the use of ICTs to improve the performance of Government. The eGovernment Web Development Strategy supports the Government of Liberia to improve its eGovernment capability and to improve its ranking. In the eGovernment maturity model, Liberian Ministries, Agencies and Commissions (MACs) rank at the level of *Web Presence* and *Interaction*. This strategy guides the development of eGovernment towards a *Distribution* stage. The strategy will request the installation of sustainable infrastructures to serve public entities and citizens while a secure infrastructure is needed to rise to the *Transaction* level, supporting operations inside and outside the Government.

The Self Evaluation and Digital Development Toolkit includes a scaling tool to measure the current stage of an institution's public digital service.



The development of any digital services either can be done in-house or by outsourcing service development. Adoption of a shared-service offered by GoL is also an option (eg. use a Centralized Web Platform to deliver services).

The Self Evaluation and Digital Development Toolkit supports MACs to build digital services. This toolkit will be online and it will define principles, personas and methods to develop digital services for and with citizens.

The Centralized Web Platform will be an infrastructure providing services to share information, knowledge and contacts inside the MACs. This platform will be based on an Open Source CMS template such as Drupal, Joomla or WordPress, and will harmonize MAC websites, which would like to be part of this initiative.

Finally, the Rural One-Stop-Shop Kiosk Network will provide centralized information and services for the rural population.

1. Vision: Creating an Open Ecosystem

The development of an information society in Liberia shall be based on a shared and open knowledge-based society, open standards, technological neutrality and broadly available ICT to empower citizens and the private sector. Effective use of ICTs can bring benefits to an open knowledge-based society by:

- Achieving enhanced human capital;
- Increasing the growth of a knowledge-based society;
- Reducing the digital divide;
- Reducing the software piracy rate;
- Increasing interoperability among systems;
- Reducing total cost of ownership;
- Increasing growth in the local ICT industry;
- Enhancing local ICT companies, universities and the public sector.

To realize the ICT vision of the government, it's necessary to encourage an ambitious and dynamic ICT ecosystem, which will involve collaboration of all stakeholders. It will be necessary to integrate in this ecosystem all of the existing knowledge and experience for the mutual benefit of all stakeholders. All stakeholders should be part of the ecosystem, which provides the resources and means for the realization of their respective visions and missions.

2. Actions

A broad-based Stakeholders Workshop on Short-term Priority of ICT Projects jointly convened by the MOPT, Liberia Telecommunications Authority (LTA) and USAID-Liberia was held on December 15, 2015 in Mamba Point. The eServices Group recommended actions to take to better-enhanced eGovernment services in Liberia:

- The Chief Information Office (CIO) and the Project Management Office (PMO) be “resourced” to enable them to implement GoL’s eGovernment programs. Presently it is grossly incapacitated. This is not just about funding, but also capacity building and training;
- Provisioning of reliable, affordable and sustainable Internet Access to MACs, with effective utilization of capacity available at the Cable Station;
- The Creation and Advocacy for an ICT institution/Agency with authority to implement ICT/eGovernment programs in Liberia. The Ministry of Science and Technology or the National Information and Technology Agency were the suggested names for the proposed institutions. Strategies to achieve this should be put in place;
- The Mini Shared Services Center be implemented to enable MACs to gradually enroll into the program;
- Outsourcing to the private sector should be considered for the development and operation of eServices and facilities.

These are some of the steps for GoL to create a cost-effective and connected eGovernment to increase competitiveness, improve web presence, increase interoperability and reduce total cost of ownership. GoL shall also foster all measures to design and create sustainable ICT communities, disseminate ICT skills, empower citizens, boost private sector and train ICT professionals.

3. Propositions

3.1 Digital Development Services

The history of digital service development reflects a very high failure rate, with some estimates that 60 to 70% of all ICT initiatives in developed countries fail to meet their objectives. Great care is needed to maximize the opportunity for success. Factors that need to be taken into consideration include:

- The development of digital services requires specialist technical skills, often distributed across a team. It is very often the case that people skilled at understanding requirements and designing solutions are not the same people who have the technical skills to build the service;
- Development needs to be determined by the business needs of the organization, and not by the IT technical team;
- Sustainability of the solution is a key requirement. Dimensions of sustainability include technical, financial and managerial aspects;

MACs have three options to provide a digital service: in-house, outsourcing to the private sector or using a Centralized Platform.

3.1.1 In-House Web Development

A few MACs may have the right human resources internally to develop a digital service or could find them in another public entity. It could be the right solution to easily manage the entire project; utilizing existing resources to save on additional expenses; allocating as many resources as available to build it quickly; resources are allocated within the operating budget; it avoids cultural boundaries, and it avoids questions on ownership and control.

On the other hand, the know-how required for web development changes fast, and the in-house resources need to be technically up-to-date. A project manager could be needed and additional resources may be required, such as designers, extra developers, testers and others. It also could be difficult to keep the service updated and maintained if in-house skills are not retained.

3.1.2 Outsourcing Web Development

It may be possible to find a private sector firm or NGO expert in the design, development, and promotion of digital services. Benefits of outsourcing are:

- Cost advantages;
- Increased efficiency;

- Focus on core areas;
- Save on infrastructure;
- Access to skilled resources;
- Time zone advantage;
- Fast and good services.

Thus, an external enterprise can easily maintain the service while solid professional development firms tend to have low turnover on staff, so the same developers are there to keep the service updated. It is much easier for a developer to learn GoL needs than for a GoL staff to learn web development.

On the other hand, cost can seem high and it can be risky if the wrong development firm is chosen. GoL must make sure that it owns all rights to the code and content.

3.1.3 Centralized Web Platform

Today platforms such as Google, Facebook, Amazon, AirBnb are dominant. A platform is a web-based information system, which provides specific services to a community of users. A platform is very useful to build a community, to easily share information and to provide specific services to a community of citizens.

To implement the vision, GoL could build a centralized platform including all MAC information in it. This platform could run on the Government Cloud Platform and should be a single portal to access all GoL eServices and information. This centralized platform could be developed using a CMS such as Drupal, WordPress or Joomla. Each MAC would only have to provide content to the platform. Each MAC would have its own page based on the same model. At minimum, each page should including several sections such as: Home, About, Mission, Vision, Staff Directory, Our Projects, Our Services, Contact. The standard should be state by the CIO office and NICTCC could handle technical aspects.

3.2 Under Service Communities

Liberia has only 10% of Internet penetration and it is mainly in Monrovia and around. Others mediums such as TV, radio stations, and newspapers could be used to bring governmental services to the population. Rural one-stop-shop kiosks could be also deployed to bring eGovernmental services to the 90% of the population without Internet access.

4. Recommendations for MAC Websites

Despite a good GoL web presence, it is necessary to increase the digital authority of the government and to provide new services.

Government wishes to deliver services in an effective, transparent and efficient way, with improved accessibility to residents and businesses across Liberia, including in rural areas. eServices is one channel to service this need.

Oversight for designing and delivering eServices rests with the CIO program, which is responsible for setting standards and ensuring harmonization and interoperability of systems. ICT Initiatives can be initiated at MAC or Centralized level, but are dependent on sufficient buy-in and capacity of stakeholder.

4.1 Content

MACs need to continuously work on content development, suitably adapted to web reading. A website needs to provide accurate, interesting and up-to-date content which should be authoritative and as complete as possible. MACs need to commit themselves to regularly contributing to and reviewing the content of their websites. Ideas are discussed in the Toolkit. They also need to use social media platforms to communicate efficiently with the public.

Pdf is a perfect format to download a file, store it locally, and print it out. In some case, it could be more effective to propose online forms. Indeed, some administrative forms could be online such as the online passport service (<https://secure.liberiapassports.com>) in order to provide better interactivity with citizens.

MACs website are providing some data in pdf format but it would be better to provide datasets in CVS format. It is difficult to extract data from pdf files. CVS is an open standards file format for dataset and should be used for open data initiatives.

4.2 eServices

It is important to offer contact options to site visitors. Most of the MACs understand already this requirement. It could be an email address, a contact form, a call center or a chat. Additionally, it could be effective to have a public servant repository (yellow pages) detailing MAC personnel.

Search engine optimization is important. MAC websites have to be easily findable with search engines, and websites should be optimized to have a good ranking.

Sites should be easily searchable. As sites grow and develop visitors will need help to find the resources they are looking for. Search facilities, and “Quick Links” provide such help.

4.3 Open Source Technology

MACs should use open source Content Management Systems (CMS) such as Wordpress, Drupal or Joomla. They are good tools to build websites and are free to use, except if you want to use proprietary templates or services. It is important to update these CMS regularly in order to avoid pirate attacks and data loss or corruption. Webservers and websites must be secure using security tools such as Secure Sockets Layer (SSL) for private transactions. Templates should be used that are designed to work on any devices, meaning content is easily accessible on workstations, as well as tablet and smartphone screens.

4.4 ccTLD (country code Top-Level Domain)

The subdomain '.gov.lr' must be use for all MACs websites and services. It is a way to increase web presence, build authority and to promote a national presence.

4.5 Community Manager

MAC webmasters should act as community managers. They have to empower MAC staff as a community to interact with their websites. CMS give the possibility to have several users publishing on a website and it should be a norm. The IT technical teams must resist the temptation to insist that they are the only authorized people to publish on the website. It should also include the Communication Units and others who develop good content.

4.6 Web Design

MACs web design should be simple, providing easy access to useful information. A good example is the New York City Green Book (<http://www.nyc.gov/greenbook>), which has a functional design covering a treasure trove of information important to citizens.

4.7 User-Centered Design

MAC websites should be focused on citizens and less self-centered. Citizens are visiting websites to look for information. Provide them with what they need; they must have an easy access to relevant information. Information, which is not relevant for visitors, should be removed.

5. Proposed initiatives

5.1 Self Evaluation and Digital Development Toolkit

The governmental web presence has to be strengthened and harmonized to further legitimize the Liberian ICT capability on the web. A Self Evaluation and Digital Development Toolkit should be provided online to support website and eServices development.

A digital development toolkit is an online service for public ICT officers, as well as private sector developers, to find a methodology to build or improve websites by following design and technical specifications. This service will define useful information such as public websites policy, supply chain procedure and websites management.

5.2 Centralized Web Platform

A centralized government platform provides opportunities to improve efficiencies. This platform could host a Centralized Web Platform, configured to allow MACs to easily host websites and related eServices. It could be based on an Open Source CMS, with common templates applicable to all MACs. MACs would be responsible for content creation and responding to interaction, with the platform providing a secure and efficient technical foundation

This platform will support the next generation of eGovernment services. It is intended to help GoL operate more efficiently, and will save public sector cash flow.

This platform will provide an important central information technology infrastructure with full cloud computing functions.

5.3 Rural One-Stop-Shop Kiosk Network

This rural one-stop-shop kiosk network will provide and centralize information and services for citizens. It will provide smart, cost-effective, modern public services to the population. Administrative information will be available, such as links to the online passport request service, legal Q&A concerning the GoL laws, online access to birth certificates, administrative forms, text of laws and public datasets from MACs with offline and online access.

In this one-stop-shop kiosk citizens can also access services typically offered by Internet-Café's:

- Use a word processor to create job applications and other documents;
- Consult an offline Wikipedia;
- Photocopy documents;
- Take digital pictures with a rugged digital camera and print them out;
- Watch movies and listen to music;
- Access the Internet if there's a GPRS connection provided in the locality.

The equipment include in a one-stop-shop is:

- A rugged PC;
- A solar system equipment;
- A scanner;
- A printer;
- A rugged digital camera and its printer.

Such one-stop-shop kiosks can be located at the County Community Centers, which are being open across the country, as well as at other government facilities.

Conclusion

This document introduced the eGovernment Web Development Strategy. Its main focus is to guide the Government of Liberia's online presence towards a *Distribution* stage by empowering citizens and supporting transparency in all instances of the government. To reach this goal, three initiatives have been introduced: the Self Evaluation and Digital Development Toolkit, the Centralized Web Platform and the rural One-Stop-Shop Kiosk Network. The first initiative, the Toolkit, will support GoL with a methodology to build useful digital services for the Government. The second one, the Centralized Web Platform, will support GoL with dedicated and specialized national services. The third one, the kiosk, will provide eGovernment services to rural people.

Thus, GoL web presence could be a mix of independent sites and a Centralized Web Platform.

Usefully implemented, this strategy encourages the Government of Liberia to increase its web presence, empower citizens and intensify its authority at the international level.