

Modernizing Public Services through the Use of ICT's: The Case of Senegal

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Abstract: Since 2000, armed with strong political good will, Senegal is implementing a development policy that lays much emphasis on ICT's. Part of this strategy is the modernization of public services by using ICT to establish an adequate institutional framework, equipping government offices with computers, implementing a governmental intranet, providing online services to citizens, adapting the legal and regulatory framework to this new context etc. The objectives are to promote good governance by improving the quality of public services provided to citizens and to enable significant and sustainable economic growth. This paper provides an overview of eGovernment initiatives in Senegal since 2000, challenges, lessons learnt and the current situation.

Keywords: Senegal, National ICT Policy, Good governance, Governmental intranet, Modernization of public services, Electronic procedures.

1. Introduction

Since the election of Abdoulaye Wade as Senegalese pPresident in March 2000, political authorities have given Information and Communication Technologies (ICT) a major role to play in the country's development. Prime Minister Macky Sall has reaffirmed this commitment on October 20, 2004 in his general policy speech to the National Assembly, when he stated, "the Government intends to make Information and Communication Technologies a powerful vehicle for the acceleration of economic growth and the modernization of our public administration"^[1].

The three main objectives of this pledge, expressed through the "e-Senegal vision," are to:

- Consider public services for citizens and the private sector as major priorities;
- Provide access to education and information for all at a country wide level;
- Meet the needs of government services for efficient performance, and of decision makers for critical information.

This vision includes a good governance dimension aimed at improving the transparency and effectiveness of public services for citizens and for business enterprises. It also promotes an economic program with an accelerated growth strategy based on ICT as one of its most important development levers^[2]. Implementation to date includes various actions to improve the institutional framework, legal and regulatory environment, government's telecommunication facilities and services delivered to citizens.

2. A reformed institutional framework to promote a voluntarist policy

Senegal being a republic with a presidential regime, it is the President who determines the national policy in all sectors^[3]. Thus, ICT policy reposes on a system of which the cornerstone is located at the president's office. In addition to a special ICT adviser to the President, the national ICT policy sector resides in two major state agencies: an ICT Agency, "the Agence de l'informatique de l'Etat" (ADIE), and a telecommunication regulatory body, the "Agence de régulation des télécommunications (ART)," both attached to the Secretariat general of the President's office. Within the government, ICT policy also falls under the responsibility of the Ministry of Posts, Telecommunications and Information Technologies^[4]. The main support of this latter is the Telecommunication studies, planing and legislation division (Direction des études, de la planification et de la législation en matière de télécommunications) and the Information and Communication Technologies division (Direction des nouvelles technologies de l'information et de la communication).

In order to achieve the "e-Senegal vision", strong institutional decisions have been taken since 2001 such as the:

- Creation of a ministry in charge of ICT in February 2001^[5],
- Creation of an ICT Department (DIE) in June 2001^[6],
- Adoption of a new law on telecommunications in December 2001^[7],
- Creation of a regulatory body (ART) in January 2002,
- Creation of an ICT Agency (ADIE) in July 2004^[8],
- Liberalization of the telecommunications sector in July 2004,
- Publishing of a sectoral policy paper on telecommunications in January 2005.

From the very beginning, DIE played a major policy role aiming to make the government an ICT champion, so that it will lead all the sectors of the society in this trend. Thus, between 2001 and 2004, it designed and carried out a government information systems modernization project, called PMSIA, which had four major objectives to:

- Promote a public ICT policy ensuring the coherence, the effectiveness and the sustainability of information and communication means at the disposal of the main governmental bodies;
- Master the technological choices in order to get an optimum output from investments made for the development of ICT's within this process to modernize business enterprises;
- Set up an organization capable to federate and promote, on the long run, the efforts made by all the stakeholders involved in the implementation or the use of public information systems;
- Create conditions for a progressive decentralization of some public services to make them more accessible to citizens.

PMSIA has provided services to six main governmental bodies (President's office, Prime Minister's office and other civil services, Ministry of Economy and Finances, state-run enterprises, Ministry of Home Affairs and Ministry of Higher Education) and has equipped them with more than 450 computers to enable their modernization.

To become more attractive to highly qualified IT professionals, reactive to requests and autonomous, DIE changed its status in 2004 from a division to the State's ICT Agency (ADIE). In coordination with civil services, governmental bodies and local governments, its mission is to carry out and promote, all types of actions to endow public services with a coherent system of processing and dissemination of information, in accordance with

international quality standards, security, performance and availability. Its role is also to design an “e-government” strategy for the electronic policy for the civil services by:

- Equipping the government with an information system and tools for decision-making;
- Providing citizens and business enterprises decentralized interfaces, which give them access to public services;
- Making state archives durable and secure by setting up an electronic memory of public services;
- Defining performance indicators for information systems and ensuring their follow-up and assessment;
- Assessing the impact of investments carried out in the ICT field;
- Contributing to good governance, mainly through the promotion of *e*-democracy.

After having nominated a clear “ICT champion” with overarching responsibilities and attaching it to the President office, the government improved the legal and regulatory framework by taking two major decisions. First, it passed a new telecommunication law to replace the one adopted in 1996 to allow the privatization of the national telecommunication company (Sonatel).⁹ This law provides two significant innovations by:

- Clarifying the guiding principles which underlie telecommunications activities: transparency, fair and loyal competition, equal treatment of users, secrecy of correspondences, open telecommunication networks, operators contribution to universal access missions and duties, respect for international telecommunications agreements and treaties and interconnecting network obligations.
- Giving greater coherence to the legal framework applicable to the telecommunications sector with the establishment of five distinct regimes: (1) freedom for internal networks and radioelectric installations exclusively made up of apparatuses of low power and weak range, (2) licensing for the establishment and/or exploitation of any telecommunications network open to the public, (3) authorization for the establishment and operation of independent networks, (4) approval for radioelectric installations, final equipment, test laboratories and measurements of telecommunications equipment and radioelectric equipment installers and (5) notification for the provision of value-added services^[10].

Second, it set up ART, the regulatory body that Senegal should have created since 1997 according to commitments made to the World Trade Organization (WTO)^[11]. The objective was to transfer regulatory activities from the ministry in charge of telecommunications to an independent body and to guarantee the conditions for fair and loyal competition, for the benefit of consumers, private sector companies and the national economy.

In December 2003, Senegalese authorities announced their decision to fully liberalize the telecommunications sector by July 19, 2004, by notifying Sonatel of the end of its monopoly^[12]. Consequently, other actors in the sector regularly asked the government to outline the main trends of its future telecommunications policy, without response. Finally, a few days before the date of the end of the monopoly, it organized a national consultation forum on the liberalization of the telecommunications sector. During this event, Sonatel’s trade unions expressed their fear of the arrival of “adventurers” on the telecommunications market, while members of the local private sector demanded stakes be reserved for them. However, no concrete decision was taken at the end of the debates and uncertainty continued to reign during several months.

Finally, in January 2005, the government issued a sectoral policy paper covering the period 2005-2010 in which some main orientations were defined, including the:

- Promotion of the telecommunications sector as an essential sector for the development of a competitive and open economy;
- Strengthening of the national information infrastructure and the reinforcement of Senegal's position as a pole of excellence in the telecommunications sector and a crossroads for the development of telecommunications services in the West African region through the implementation of structuring telecommunications infrastructures projects;
- Concern for reforms and regulations as an illustration of the Senegalese government's good governance policy^{13]}.

This document also mentions partial or total disengagement of the government from Sonatel, in which it continues to hold 27,67% of shares, but without further explanation. However, the will to increase competition in the sector has since been reaffirmed by the Ministry of Posts, Telecommunications and ICT, which announced the launching of an invitation to tender for the attribution of a full telecommunications Licence (land-line and mobile telephony and Internet)^[14].

Thus, between 2000 and 2005, Senegal, which already had one of the best telecommunications infrastructures in Africa, has established and focused its policy on initiatives to significantly improve its capacities to benefit from opportunities offered by the information society. This result was obtained, on the one hand, thanks to a strong political commitment to use ICT as a development lever and, on the other hand, to improve the institutional, legal and regulatory environment. Internationally this policy has been recognized and is making an impact, as Senegal has been chosen to coordinate the ICT aspect of the New Partnership for African Development (NEPAD)^[15]. In addition, at the World Summit on the Information Society (WSIS) Senegal also played a leading role in the creation of the Digital Solidarity Fund¹⁶.

3. Using ICT's to promote good governance

Senegal currently also gives great importance to ICT's as a means to promote good governance. Good governance became a concern for Senegalese authorities by the end of the eighties. In 1990, a first governmental seminar was organized on this subject in order to define a modernization policy aiming to modify the relationships between public services and citizens. At that time, the famous slogan "Less state, better state" had as its objective to create a "modern but modest government". However, this policy yielded few results and most of its recommendations were not taken into account. April 1998 saw a new attempt at a national program of good governance, known as PNBG, but this also produced no results.

With the election of President Abdoulaye Wade, good governance made significant progress, in particular with the creation, in November 2000, of an interdepartmental executive committee in charge of an integrated public sector reform program (PIRSP). Following the work of several technical commissions, PIRSP evolved to be a "national program of good governance", with a more uniting spirit than that set up in 1998, and in greater harmony with the Poverty reduction strategy paper (DSRP), the NEPAD vision and the orientations identified in the tenth economic and social development plan (PDES) covering the period 2002-2007^[17].

PNBG, which started its activities in August 2003 with UNDP support, includes six components relating to:

- Improved quality of public service;
- Economic governance;
- Legal governance;
- Local governance;

- Improved quality of parliamentary work;
- Information and communication technologies.

ICT have been identified as an essential tool for improvement of public service productivity, provision of quality services and modern communications. To this end, various actions have been planned, among them the:

- Review of the legal framework and the improvement of ICT's institutional framework,
- Development of Internet in order to increase the effectiveness of public services,
- Improvement of human resources management through the installation of a global and coherent information system,
- Computerization of the state's main public registers in order to ensure greater transparency in the management of administrative deeds,
- Improvement of information dedicated to citizens in order to support a greater transparency, to offer to local communities a broader opening to the world and to create partnerships through decentralized cooperation;
- Improvement of information providing to people living in the less accessible zones or in rural areas by using Internet and digital radio,
- Use of the ICT's to improve the productivity of the parliament and to reinforce its communication policy.

It should be said that for a long time, the level of ICT equipment of public services remained quite low with a ratio of approximately 8500 computers for 65.000 employees. Moreover, except for certain local area networks implemented by governmental bodies (President's office, Prime minister's office, Ministries of Foreign Affairs, Home affairs, Finances, Education, etc), computer equipment was mainly stand-alone PC's. As for Internet connections, the government has set up an official website since February 1997^[18] and many ministries, public institutions and public or parastatal companies have been present on the Web. However, there was no common graphic charter, or naming scheme, and as a result it was difficult to identify public Web sites. In addition, many were not very informative and were rarely updated. Finally, in spite of the existence of a governmental Internet services provider, managed by the Prime minister office, many public services were connected to the Internet through private ISP's and it was common for civil servants to use the email addresses of private providers and even *Yahoo* or *Hotmail*.

Taking into account the government's under-equipment and the low ICT skill levels of the majority of civil servants, few services actually were provided through ICT's. Some public bodies, including the Ministry of Finance and Trade Point Senegal^[19], succeeded in putting the legislation and/or regulations relating to their sector on line. However, the only service delivered electronically was customs clearance via the Gainde system first, then with Orbus 2000. In the mid-nineties, the IT Bureau, Delegation à l'informatique (DINFO), launched the idea of creating an administrative communications network, known as the RACVD project, in order to improve communications between public services and to economize on telephone calls. However, this project, whose launching was announced several times, has never been implemented.

In 2004, ADIE decided to benefit from new opportunities offered by technological progress by setting up a governmental intranet, via a private optical fiber network connecting the President's office, the Prime minister's office, ministerial cabinets and a number of other administrative structures. Launched on March 15, 2005, this Intranet is currently only accessible to the capital city Dakar. It should progressively shift to an administrative Intranet, reaching all ministry divisions as well as branches of the public administration nationwide and diplomatic representations abroad. Currently, it provides the following services:

- **Telephony on IP (ToIP)** via a private network that enables free communications without restrictions and channels out-dialed calls towards optimized exit points, thus reducing government communication costs^[20].
- **Videoconferencing** for executive staff both at national and international levels, with the capacity to strongly reduce travel time and expenses.
- **Broadband Internet access** with high performance, as well as virus, spyware, spam and hacker intrusion protection. Civil servants connected to the intranet benefit from free e-mail with an online government directory using an LDAP-based architecture.
- **VPN technologies** permitting ministries to connect with their various branches within a private network, without using expensive specialized connections, and allowing the creation of highly secure networks through installation, on request, of coded tunnels using biometric identification for data exchange, videoconferences or telephony.
- **A resource center** dedicated to hosting public service application programs, whether for databases owned by ministries, applications shared by many ministries, or on line services for citizens. This resource center also allows existing computer centers in the civil services to have a place to store their data.
- **A collaborative environment** based on free and open source software on a CPS-based platform which offers functionalities such as electronic management of content, document management, collaborative work, workflow and a web portal.

However, the installation of such an infrastructure alone would not be sufficient to modernize the civil service and to improve the quality of services provided to citizens. Indeed, the legal regulatory environment has not yet been redesigned to permit the smooth synchronization of different platforms and services and existing regulations still hinder the use of ICT in the daily work of the government and in supplying electronic services to citizens. To tackle this situation, the Senegalese government has conducted an audit of the existing legislation and has launched several legislative projects to bring the law into conformity with the requirements of the information society.

4. Modernizing and adapting the legal environment

For a long time, projects to develop electronic administrative procedures and to promote e-commerce have encountered a hostile legal environment. After the audit of the whole body of ICT related Senegalese legislation, an initiative was launched and four legal documents were drafted: “law in the information and knowledge society” (LOSIC); a personal data protection law (LDCP), an electronic transactions law; and a law dealing with cybercriminality. The LOSIC defines the Senegalese vision of Information Society as “a human society, inclusive and interdependent, open, transparent and secure, which works for the acceleration of the economic and social sustainable development, alleviation of poverty and the modernization of the State”²¹ and is based on: Freedom, Solidarity and Security.

Freedoms of communication, of participation in the information society, of expression, and of creating resources in all sectors of the economy are guaranteed. As for solidarity, the objective is to grant ICT access to all and to promote networks for citizens with adequate funding schemes and partnerships, in such a way that the majority of the population could have a role to play in this new society. Finally, in term of security, the objective is to guarantee the security of information, people and goods. This project also plans to create a Strategic Council on the Information Society (COSI). Reporting to the President of the Republic, it will have the “mission of clarifying the strategic orientations of the Government in the field of knowledge and information technologies, through the confrontation and analysis of diverse points of view.”^[22]

The number of personal data files has greatly increased, whether created and managed by the civil services, such as national identity card registers, electoral rolls, files generated by courts and health institutions, etc, or files developed by private companies in the running of their activities. This increase has required the government to prepare protection measures to ensure that the processing of personal data is carried out “in respect of law and of the fundamental rights and dignity of people” and to punish all illegal uses of personal information. In this spirit, a draft bill has been prepared, taking into account the various methods of personal data processing and providing for an independent state authority to protect personal privacy.

Up to now, electronic transactions have been unregulated and this has hindered the development of both on line administrative application programs and, most of all, e-commerce. A draft bill on electronic transactions has been prepared to fill this gap. It recognizes the validity of electronic contracts and signatures, appoints ADIE as the government’s certification service provider and assigns it the task of controlling private certification service providers. As for public administrative information, the bill states, “All administrative deeds, documents and information can be transmitted and exchanged via electronic means”^[23]. The law recognizes public administrative documents on line and it is possible to implement on line administrative procedures.

Lastly, to supplement these legal provisions, a bill on cybercriminality has been prepared in a way that takes into account the virtual and transnational nature of cybercrimes, which are marked by immateriality, volatility and anonymity of criminal actors. For these reasons, traditional legal responses conceived and worked out for non-virtual national settings are inadequate and unsuitable. And although police pursue cybercriminality cases, existing laws are inadequate for this type of offense. This draft bill takes into account ICT-related infringements such as fraudulent access or attempts to access computer systems, attack to their integrity, introduction, interception, damage, modification, illegal deletion of data, illegal capture of personal data by fraudulent, unfair or illicit means, child pornography, racist and xenophobe statements, denial of genocide and crimes against humanity, violation of the laws protecting personal data, etc^[24].

Exceptionally, all these projects were submitted to on line consultation and public presentation in a national seminar organized in August 2005, which gathered law specialists (judges, lawyers, etc), members of the civil society and the private sector. During this meeting, criticisms, remarks and suggestions were made and these will be included in amendments to the bills, which will be presented by the government to the National Assembly. Beside these legal projects two important initiatives were taken, one to prepare a web portal giving information on administrative procedures and the other to pass a law establishing a digital identity card.

5. Towards the delivery of electronic services to citizens

After setting up the government’s Intranet, ADIE launched the development of various application programs dedicated both to employees of public services and to citizens. For civil servants, two huge applications have been developed for the management of human resources and of equipment. Moreover, a platform offering on line training in management, accounting, etc. is available. Apart from these cross-sectional tools, each ministry has been requested to prepare an IT strategy in order to break with fragmented, not always coherent and often unplanned IT development. As for relationships between the public administration and its citizens, the main idea is to transform administrative procedures in such a way that they treat citizens with the same concern they would give to clients, and not just as users. In the same vein, many convenient Internet services have been launched, such as the creation of Web sites

for all ministries, the creation of a web portal presenting the administrative procedures and the putting online of the Official Gazette of the Republic of Senegal (JORS).

The objectives of the new ministry Web sites is to systematize and render easily accessible the presentation of useful information and services both for citizens and for government employees. All of these sites respond to common terms of reference, specified by ADIE, and present institutional and practical information such as:

- The organization chart of the ministry,
- The list of the institutions/structures of the particular ministry,
- Activities and projects in progress,
- Policy documents prepared by or for the ministry,
- Information on administrative procedures,
- Etc.

Currently, 24 out of the 40 ministries have websites ^[25]. However, the types of information put on line still are not of great interest to most citizens, and although they are dynamic Web sites, they are not regularly updated. While some give information on administrative procedures, these presentations are not fully consistent in content or format. The fact that they are distributed over several websites obliges users to move from website to website to obtain comprehensive information.

To resolve this situation, ADIE decided to create a web portal giving unique access to information related to all administrative procedures needed by citizens. The main objective of this project is to make legally valid, comprehensive, up to date and homogeneously presented information available to citizens. During the first leg of the project, between July and December 2005, a database and a public interface were developed and information collected from twelve ministries. A strategic project committee drawn from the Prime Minister's office, the Public Management Department (DMP), the national program of good governance, the 12 involved ministries and ADIE, decided on each procedure. A data presentation form was prepared, including the following items:

- A short description explaining the procedure and what it possible to do or to obtain with it;
- Essential information needed to begin the procedure (who can make the request, what documents are required, how much it costs, how to pay, how long it takes to obtain the service provided, how to proceed if you lose the delivered document, physical/electronic addresses, telephone and fax numbers, hours and schedules, where to obtain additional information, etc.)
- Legal references to full texts of law regarding the procedure;
- Forms to be downloaded with online assistance to fill them;
- Model request letter ^[26].

In addition to the facilitating administrative procedures and improving the quality of service provided to citizens, the objective of this project is to contribute to improving urban mobility by reducing/removing useless and expensive travel. In general, people visit government offices in person the first time that they obtain information on a procedure. When they are not well informed, their requests frequently are rejected and they are obliged to go back many times before being able to apply successfully. When one knows that for the same procedure it is necessary to provide three or four documents coming from various administrative services, it's easy to imagine the implications in term of time consumption, useless travel, loss of productivity, etc. Through this web portal, the objective is to give citizens all required information to successfully carry out an administrative procedure.

Secondly, the objective is to make it possible to complete some procedures electronically. The citizen is no longer obliged to visit the premises of the civil service office, thus allowing

him or her to avoid travel altogether by sending the request by electronic means. In this way it should be possible, through online forms, to declare taxes and to request the delivery of various administrative documents (birth, marriage and death certificates, extracts from the criminal record, etc) and all other types of administrative documents for which the physical presence of the citizen is not mandatory and he or she just have to supply personal data to apply for the request. In this strategy, civil services should first, through various channels (SMS, MMS, WAP, e-mail, phone message, call center, etc) notify the citizen that the request has been recorded, and then, that the requested document is available. The final objective of this project is to make possible the completion of online procedures for certain administrative actions (payment of taxes and duties, mandatory notifications, delivery of certificates, etc.). However, this final steps requires the setting up of the new legal environment mentioned above, a reliable and secured identification system for citizens^[27] as well as a network of certified bodies before which one can make requests for administrative documents^[28].

All of these projects were carried out with the support of the international assistance, providing financial and/or technical support. Major funders to date have been The World Bank, which assisted the Government's first efforts at administrative modernization, and the French government, which has supported the initiatives creating the governmental Intranet, ministerial websites and the portal providing information on administrative procedures. In this new and complex field, African countries, which generally have few means, should try to get support from international and bilateral agencies in order to benefit from the lessons learned and the experiences of countries that already have set up such projects. The European Union, which maintains particular relationships with Africa within the framework of EU/ACP convention^[29], could be a privileged partner; insofar as the EU considers capacity building in the filed of distance education and electronic government as its two major priorities^[30].

6. Conclusion

In most African countries, citizens are confronted with a jungle of administrative procedures. Worse, to this "natural" complexity often is added opacity, artificially maintained by civil servants (hiding public information, making forms unavailable, etc.) in order to enable and conceal corrupt practices. The creation of an Internet portal giving all of the information necessary to execute administrative procedures should thus be an effective means to promote e-transparency and to reduce corruption attempts. It is also a means for citizens and business people to avoid office visits and to able to know their rights and duties. Finally, making some procedures partly or entirely deliverable on line can save time and considerably improve the quality of service.

The transition to on line services also stimulates the overall improvement of public service by obliging the administration to simplify its procedures and make them internally consistent in order to facilitate their computerization. Putting services on line also ipso facto makes them available to citizens; inexpensively solving problems of outreach to the public and improve the efficiency of the administration.

However the Senegalese experience in modernizing public services through the use of ICT's shows clearly that the simple investment in computer networks, PC's and software does not automatically achieve the triple objective of improving internal working procedures, increasing transparency and offering better services. These basic investments are necessary but not sufficient conditions for administrative modernization.

In fact, it is necessary to operate many gears and levers in order to make real modernization possible. As red tape and resistance to change characterize public administration, it first is necessary to create a clear vision founded on strong political commitment to change. After that, adequate institutional tools are needed to transform political will into concrete actions. If not, the winds of change will die in the inertia of the

civil service system. It is critical to upgrade the regulatory environment by revising obsolete legal texts, which otherwise will create roadblocks to innovation. It is also important to help staff to appropriate new dynamic attitudes and practices and to train them in using ICT tools. Lastly, major efforts are needed to develop new services dedicated to enabling citizens to benefit from the new opportunities offered by ICTs.

After the official launch of the Web portal a communication campaign will target citizens through radio announcements in local languages, articles in local newspapers and TV reporting. However, taking in account the fact that the great majority of the population does not yet have the means to access to the Internet, the main focus of the campaign should be on intermediary users, such as civil society organizations, NGO's, cybercafe managers, and of course civil servants, to be sure that the system will be used ... and hence useful!! A user survey of citizens after six months should determine the strengths and weaknesses of the system and how to improve it. Over a longer period, it should be also interesting to do a study of the Web portal's design and functionalities, as well as its use compared to similar systems in developing and developed countries. Clearly, one the most difficult challenges will be to regularly update the portal with public information provided online. For maximum efficiency and sense of ownership, the portal should be updated and management internally in a manner that is "embedded" in administrative practices. Thus the portal would learn from the experience of the ministerial websites, which has shown that it is quite difficult to create ownership within the government when the creation of this kind of tool is outsourced.

References

[1] Cf. Le Soleil, October 21, 2004.

[2] Other priority sectors of the accelerated growth strategy are agrobusiness, tourism, textile, fishing and aquaculture and mining and geology. (Cf APIX: <http://www.investinsenegal.com/>).

[3] Cf. Article 36 of the Constitution of the Republic of Senegal adopted by referendum on January 7, 2001.

[4] The ministry of Posts, Telecommunications and New Information Technologies was created in November 2004.

[5] The ministry in charge of communication and information technologies was removed in May 2001.

[6] Created by the decree n° 2001-476 of June 18, 2001, DIE succeeded the Délégation à l'informatique (DINFO) created in 1987 and which had been attached to various ministries with changes in government organization.

[7] Cf. Law n° 2001-15 of December 27, 2001 governing the telecommunications sector.

[8] Cf. Decree n° 2004-1038 of July 23, 2004 creating ADIE.

[9] Cf. Law n° 96-03 of February 22, 1996 governing the telecommunications sector.

[10] Cf. ART: <http://www.art-telecom-senegal.org/>

[11] Cf. WTO GATS/SC/75/Suppl.1 April 11, 1997. Senegal: List of specific engagements. Supplement 1

[12] Since 1997 Sonatel benefited from a monopoly on fixed and international telephony and datas for a minimal period of seven years and regulated competition regime existed for mobile telephony sector putting in presence two operators since 1998.

[13] Cf. Sectoral policy paper. Telecommunications sector. Dakar, January 2005.

[14] Following the dismissal of ART's General Director in June 2005, the process was delayed and in November 2005, ART declared that the launching of the invitation to tender for a full telecommunications licence would finally take place in January 2006.

[15] It is on behalf of this position that President Abdoulaye Wade played a key role during the World Summit on the Information Society (WSIS) by proposing the creation of the Digital Solidarity Fund (DSF).

[16] Cf. Digital Solidarity Fund : [Hhttp://www.dsf-fsn.org/H](http://www.dsf-fsn.org/H)

[17] Cf. Plan d'orientation pour le développement économique et social (2002-2007) Xème plan, mars 2004.

[18] Cf. <http://www.gouv.sn/>

[19] Cf. <http://www.tpsnet.org/>

[20] ADIE asses that the government should annually save 2 FCFA billions.

[21] Cf. Article 3 LOSIC project of law, Dakar, November 2005.

[22] Cf. Article 10 of LOSIC project of law, Dakar, November 2005.

[23] Cf. Article 54 Electronic transactions project of law, Dakar, November 2005..

[24] Cf. Cybercriminality project of law, Dakar, November 2005.

[25] Cf. http://www.adie.sn/article.php3?id_article=107

[26] The website also provides links towards public webistes' pagest which describes administrative procedures.

[27] This problem is on the way to be solved since with its effort to make the electoral process reliable, the government recently decided to provide to all citizens a digital national identity card including biometric datas.

[28] Post offices which are located countrywide and even cybercafés having a special licences could be used as access points to deliver this kinf of services to citizens.

[29] Signed in 1975 and lastly updated in 2005, the EU/ACP convention is also known as the Cotonou Agreement.

[30] Cf. Towards A Global Partnership In The Information Society: EU Perspective In The Context of The United Nations World Summit on The Information Society (WSIS). Brussels, May 19, 2003, COM (2203) 271 final. ([Hhttp://www.eu.int/information_society/activities/internationalrel/docs/wsis/acte_fr.pdf](http://www.eu.int/information_society/activities/internationalrel/docs/wsis/acte_fr.pdf)H).