

FINANCING
TECHNOLOGY
ENTREPRENEURS &
SMES IN DEVELOPING
COUNTRIES:
CHALLENGES AND
OPPORTUNITIES

SENEGAL
Country Study

AN *infoDev* PUBLICATION PREPARED BY

Roberto Zavatta

Economisti Associati SRL in
collaboration with

Zernike Group BV

Meta Group SRL

June 2008

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TABLE OF CONTENTS

Abbreviations and Acronyms	v
Executive Summary	1
I. Introduction	3
II. The Country Background	5
II.1 The ICT/ICTE Sector	5
II.2 Policy and Institutional Framework	7
II.3 The Financial Sector	8
III. Issues Related to Financing the ICT/ICTE SME	11
III.1 SME Financing Needs – The Demand Side	11
III.2 Issues in Accessing Financing – The Supply Side	11
III.3 The Financing Gap – Nature and Severity	13
IV. Conclusions and Recommendations	15
IV.1 Introduction	15
IV.2 Measures Aimed at Facilitating Access to Equity Financing	15
IV.3 Measures Aimed at Facilitating Access to Bank Financing	16
IV.4 Improving the Interactions between Supply and Demand	17s
ANNEXES	
Annex A – The ICT/ICTE Sector – Tables and Figures	21
Annex B – The Institutional Setting	23
B.1 Public Entities	23
B.1 Private Entities	24
Annex C – The Financial Sector	25

Annex D – List of Entities Interviewed	27
Annex E – Profiles of SME Financing Organizations	29
Annex F – Profiles of ICT/ICTE SME	33

ABBREVIATIONS AND ACRONYMS

ADEPME	Agence de Développement et d'Encadrement des Petites et Moyennes Entreprise	ITSP	Internet Telephony Service Provider
ADIE	Agence D'Informatique de l'Etat	MFI	Micro-finance Institution
AFD	Agence Française de Développement	MPMEEFME	Ministère des Petites et Moyennes Entreprises, de l'Entreprenariat Féminin et de la Micro Finance
ARTP	Agence de Régulation des Télécommunications et des Postes	MPTNTIC	Ministère des Postes, des Télécommunications et des Nouvelles Technologies de l'Information et de la Communication
BCEAO	Banque Central des Etats d'Afrique de l'Ouest	NCNW	National Council of Negro Women
BMN	Bureau dE Mise à Niveau	OPTIC	Organisation des Professionnels des Technologies de l'Information et de la Communication
BPO	Business process outsourcing	OSIRIS	Observatoire sur les Systèmes d'Information, les Réseaux et les Inforoutes au Sénégal
BRS	Banque Régionale de Solidarité	SME	Small and Medium Enterprise
CDE	Centre for the Development of Enterprises	UNIDO	United Nations Industrial Development Organization
EC	European Commission	USAID	United States Agency for International Development
EIB	European Investment Bank	VoIP	Voice over Internet Protocol
EU	European Union	WAEMU	West Africa Economic and Monetary Union
FPE	Fonds de Promotion Economique		
ICT	Information and Communication Technology		
ICTE	ICT Enabled		
IDRC	International Development and Research Centre		
IFC	International Finance Corporation		
IFI	International Financial Institutions		
ISP	Internet Services Provider		

Exchange Rates

US\$ 1.0 = CFA 493.459 (average 2006)

EUR 1.0 = CFA 655.957 (pegged)



EXECUTIVE SUMMARY

The Senegal's ICT/ICTE sector has constantly grown in recent years, and although its contribution to national economy remains very small, it has been recently included among the priority sectors in the Government development strategy plan (Stratégie de Croissance Accélérée). The sub-sector who seemingly holds the highest potential is the Call Center and BPO services, which have attracted important investment from national and foreign investors over the past few years. By converse other sectors are thinly developed, as for instance the hardware assembling, the software development, and the Internet services. Most of Senegalese ICT/ICTE firms are in fact simple retailers of equipments or providers of basic IT services such as software customization, installation and maintenance, IT consultancy. Overall, as of today, there are an estimated 300–400 ICT/ICTE firms active in the country, to whom some 800–1,000 cybercafés must be added. The total revenue generated by this industry is likely below US\$ 200 million, and the level of employment is of about 6,000–8,000 units, of which some 2,000 work in call centers. The growth potential of the outsourcing industry is fueled by various factors including in particular the presence of a quality IT infrastructure for international connection as Senegal is the West African main hub for two underwater cables.

From the macroeconomic perspective Senegal has recorded a positive trend over the past five year, with a low inflation rate, an average growth rate of about 4%, and a limited deficit. Stability is also underpinned by the participation of Senegal to the West African Economic and Monetary Union (WAEMU). The financial sector is in expansion trend and the system is reportedly pretty liquid. Banking industry includes 13 institutions with the three-largest accounting for two-thirds of the total assets of the banking sector. Lending operations of Senegalese banks are focused especially on few large firms and on short-term loans. Schemes dedicated to

SME-financing are rare and seemingly there is no credit line specific for the ICT/ICTE sector. The private equity industry in Senegal is largely undeveloped. Only a handful of regional operators have a presence and/or have concluded a transaction in the country. This is partially due to cultural aspects and to the fact that the current regulatory framework is not particularly conducive for risk capital operations. The most recent venture capital fund to open a presence in Senegal was the *Aureos West Africa Fund* which started operation in late 2005, but so far it has not concluded any deal. Senegal also hosts some business angels but they appear to be very few and information on their operations is hardly available. The financial system is complemented by a wide network of micro finance institutions (MFI) and financing schemes made available to SMEs by Government's agencies and donors community. However, all of these schemes are of generalist nature and apparently do not fit particularly well with the needs of ICT/ICTE industry.

In summary, the results of the study have showed the presence of a financing gap for ICT/ICTE SMEs. The gap is particularly severe for firms at development and first expansion stage and seeking for amounts in the US\$100,000 to 500,000 range. The factors that concur to determine this gap are as follows:

- **Financing Policies.** Banks are wary of lending to SMEs, especially from the ICT/ICTE sector. Loans need to be secured with immovable assets and personal properties for at least 100% of the amount borrowed. The few existing VC have demonstrated scarce interest for the ICT industry and for small business in general.
- **Limited Diffusion of Alternatives.** There is a lack of equity financing instruments available. In particular, business angels are few and scarcely visible. The existing credit guarantee fund is also marginal;
- **Constraints on the Demand Side.** The degree of informality of ICT/ICTE SMEs is high. Promoters are often unwilling to disclose information on their business, or to spend time to negotiate with bankers. In most cases the

capacity of preparing sound business plans is very limited. The majority of entrepreneurs are also scarcely familiar with equity financing instruments;

- **Understanding of ICT.** Bank officers have often a scarce knowledge of the various ICT/ICTE business models, and therefore are more inclined to reject request of loans in this area.
- **Business Environment Constraints.** The telecom market still presents some restrictions and inefficiencies that affect also the Internet sector. There is a lack of concrete public interventions in support of IT entrepreneurs. Credit information system is scarcely developed.

Against this background a series of measures has been identified that could prove useful to help bridging this financing gap. Some of these measures concern specific interventions aimed at facilitating access to equity and debt financing while others are aimed at improving the interaction between the entrepreneurs and the institutional investors and lenders. Regarding private equity financing, the possible measures identified fall within two catego-

ries: (i) support the establishment of SME financing schemes with mixed participation of public and private investors—ideally providing incentives to the participation of private sector operators; (ii) promote the business angel financing ‘model’ and establishment of a network of investors. At the same time, some initiatives in the field of access to bank financing should be envisaged. In this sense a two-pronged approach could be followed: (i) promotion and assistance to the scaling up of the existing Credit Guarantee Schemes with a dedicated ‘window’ for ICT/ICTE firms; and (ii) provision of direct assistance to ICT/ICTE entrepreneurs to improve their ability in dealing with commercial banks. Finally, ways should be devised to remove obstacles generated by the information gap on ICT/ICTE business models and improve the familiarity of bankers and investors with this type of enterprises. This could take the form of initiatives of various natures, such as studies, publications, trainings, seminars, ideally organized with the support of a vast network of stakeholders from the private and public sectors.

I. INTRODUCTION

This report (the “Report”) has been prepared by *Economisti Associati* (the “Consultant”) within the framework of the assignment on “Scaling up Innovation and Entrepreneurship in Developing Countries: The Role of Private Sector Finance” (the “Assignment” or the “Study”). The overall objective of the Assignment is to analyze issues in the financing of small and medium enterprises (SME) in developing and emerging countries, with special reference to small businesses active in the information and communication technology (ICT) sector as well as in ICT-enabled (ICTE) activities.

This Report is part of Phase 2 of the Assignment and reviews recent developments in the ICT/ICTE sector in Senegal, with special emphasis on current conditions for the financing of ICT/ICTE small enterprises. The Report is based on the results of a field mission in Senegal (June 5–9, 2006) as well as on the analysis of a variety of secondary sources.

The Report is structured as follows:

- Section II provides an overview of the ICT/ICTE sector;
- Section III briefly illustrates the policy and institutional framework for ICT/ICTE activities;
- Section IV illustrates the salient features of Senegal’s financial sector;
- Section V analyzes the main issues related to the financing of small ICT/ICTE enterprises;
- Section VI offers some conclusions and recommendations.

The Study also includes a series of Annexes, providing supporting evidence for the elements presented in the main text. In particular:

- Annex A provides additional information on the ICT/ICTE sector;
- Annex B illustrates the institutional setting for the ICT/ICTE sector;
- Annex C presents the salient features of selected banks and other SME financing schemes;
- Annex D provides the list of entities and persons met during field work;
- Annex E presents the profiles of some SME financing organizations;
- Annex F presents the profiles of small ICT/ICTE enterprises interviewed during field work.



II. THE COUNTRY BACKGROUND

II.1 THE ICT/ICTE SECTOR¹

Overview. With an annual growth rate of nearly 20%, ICT/ICTE is one of the most dynamic industries in the Senegalese economy. The sector is relatively diversified, and includes call centers, ISPs, cybercafés, software and IT services providers, hardware assembly firms, and a vast network of retailers. The activities performed are however little sophisticated, and the bulk of the technology enterprises are in fact providers of very basic services, such as telemarketing, installation and maintenance, IT consultancy, and customization of branded software. Overall, the turnover generated by the ICT/ICTE industry is unlikely to exceed US\$150–200 million, while employments can be estimated in the order of 6,000–8,000 units, with about 2,000 working in the call-centers sub-sector. As of today, the ICT/ICTE encompass some 1,000–1,200 players, including 50–100 software developers and IT services providers, some 200–250 retailers, a dozen call center and BPO providers, seven ISPs, a couple of IT equipment assemblers and a vast network of cyber cafés.

Telecom. The telecom sub-sector includes one fixed-line operator—*Sonatel*—and two mobile operators—*Sonatel Mobiles*, branded *Orange*, and *Sentel*, branded TIGO. *Sonatel* is the former State monopolist that was partially privatized in 1997 with the sale of about 40% of shares to *France Telecom*. The *Sonatel's* monopoly on the land line telephony officially ended in 2004, but despite several announcements no other operators have been licensed so far. The penetration rate of fixed-lines is quite low, about 2.3%, and it improves at a very slow pace, over 8.6% in five years. Completely different is the scenario of the mobile telephony which has spread throughout the country at a breakneck speed over the past few years, peaking at 3.0 million subscribers at the end of 2006, with a

27% penetration rate. There are currently two competitors in this segment: (i) *Orange*, 100% owned by *Sonatel*, which control some 70% of the market; and (ii) TIGO, controlled by the international MNC *Millicom*, with the remaining 30%. Reportedly, a third license will be issued soon. It is worth to notice that telecom services in Senegal are also provided by a huge network of telecenters, including more than 20,000 players. Telecenters represent the most important providers of public access to telephone and generate an annual revenue of some US\$100 million. Some telecenters have also started to provide low-cost international call service through the *Voice over Internet Protocol (VoIP)*².

Internet Services. There are seven Internet Service Providers in Senegal, the largest being *Sonatel Multimedia* (branded *Sentoo*), an affiliate of the telecom operator *Sonatel*. *Sentoo's* market share is close to 75%, while the second largest—*ARC Informatique*—follows with just the 10%. The dominant position of *Sentoo* has been repeatedly contested by other ISPs, who claim that the mother-company *Sonatel* is in the position to provide its affiliate with a better quality of connection at a cheaper price. In fact, *Sonatel* is the only licensed backbone and international gateway operator, and this means that all ISPs and telecenters are in practice simple reseller of its services. Moreover, in Senegal, there is no *Internet Exchange Point (IXP)* and it is therefore impossible for small ISPs to control how *Sonatel* manages their Internet traffic. Most ISPs are also active in providing value-added services, like voice messaging, various on-line information, data transfer. Given the monopoly situation described above, the value-added services represent the most profitable feature of the Internet businesses. The gains on the simple Internet access provision are in fact so small that over the past years many companies specialized had to shut. Internet subscription through ADSL has tremendously

¹ Figures related to ICT/ICTE activities are mainly drawn from publications of the sector association, namely *OSIRIS' bulletin "Batik"*, and from the annual report of the *Agence de Régulation de Télécommunications et des Postes (ARTP)*. Other data are drawn from a variety of sources including articles appeared on "Le Soleil", and company websites.

² The legal status of VoIP is still not clear, and the ARTP is currently conducting a study to understand and regulate this service.

increased in recent years, topping 30,000 as of the end of 2006³. In terms of use, there are an estimated 500,000 Internet surfers in Senegal, who access the web through the numerous cyber cafés. The exact number of Senegalese cyber cafés is not clear, but estimates indicate that they should be in excess of 800, with more than half based in Dakar.

ICT/ICTE Activities. Senegal's ICT/ICTE industry has demonstrated over the past year to be very dynamic and to hold a significant growth potential, especially in the field of outsourced services. However, as of today the volume of operations is still small, unlikely exceeding US\$150–200 million, whereas the level of employment is in the order of 6,000–8,000 units. The ICT/ICTE sector is relatively diversified, although very simple business models prevail, like sales and maintenance, telemarketing, IT consultancy. An overview of the various sub-sectors is as follows:

- **Software Development and IT Services.** The software development and IT services sector represents a small but on-the-rise component of the ICT industry. In some cases software development operations are performed by units or departments within larger groups, such as *Seninfor*, *FTE*, *Groupe Chaka*. However, the number and the importance of the small specialized firms, such as *GSIE Technologie*, *Sen-Site*, *Synapsys Conseil*, and *GCS* is growing. This is mainly due to the outsourcing contracts mainly provided by French companies which are increasingly outsourcing to Senegalese IT firms various technical aspects of their projects. It must be noted, that the operations outsourced to Senegalese companies are not very sophisticated, and to date, the Senegalese software industry is almost exclusively dependent from imported technology. Included in this sub-sector there are also other types of IT services providers, as for instance, web-designers, Internet VAS providers, IT consultant. But most of them do not have the capacity, and the quality to operate on international market. Since the domestic market is quite narrow, this segment is scarcely developed.
- **Sale and Installation of Hardware and Software.** The vast majority of the enterprises active in the ICT/ICTE sector are simple retailers of software and IT equipments that are also able to provide minor services such as installation, maintenance, design and set up of

LANs. Most of these players are small firms with an annual turnover of between US\$100,000 and US\$1,000,000. However, there are also a handful of large chains that dominate the market. These include: (i) *CFAO Technologies*—a division of the *CFAO Group*; (ii) *Alliance Technologie Informatique (ATI Group)*—which also exports to France and in the region; and (iii) *Buhan et Teisseire*—a generalist distribution chain that recently affirmed in the IT services market through strategic alliances with *Dell*, *Microsoft*, *Cisco*, and *Sun Microsystems*.

- **PCs and Peripheral Assembling.** The hardware assembly industry has mainly developed over the past five years. The major obstacle to the growth of this sector is related to custom policies which favor the import of finished good rather than the in-house production. In fact, import of PC components is charged with an 18% duty, while ready-made computers are charged only 5%. The first hardware assembler established in Senegal is *Technology Corporation*, a Senegalese subsidiary of the Canadian *Infoserv. Technology Corporation* was established in 2002 and is based at the *Technopole* of Camberene—a business zone specifically designed for the implantation of ICT firms. *Technology Corporation* assembles customized PC 'on demand' with a yearly production ranging from 1,000 to 3,000. The *Compagnie Africaine de Technologies Informatiques (CATI)* is the second Senegalese hardware assembler. Established in 2004, CATI produces an estimated 1,000 PCs per year.
- **Call Centers and BPO Services.** At present, there is a dozen call centers active in the country, most of which specialized in telemarketing. Altogether, they have 1200 seats and employ some 2200 staff. The largest one, the *Premium Contact Center International (PCCI)*, accounts alone for 60% of seats, and it employs about 1,000 people. The others are mainly medium-sized, ranging from 100 employees, *Center Value*, *Africatel AVS*, to 200, like *Call Me*. There are also smaller ones such as *Senetel*, 20 employees, and *Quality Center*, 40 employees, the latter being the only one not based in Dakar, but in St. Louis⁴. The BPO sub-sector is instead not very

³ It should be noted that Senegal has one of the most developed and modern international connectivity infrastructure in Africa. Senegal is in fact the regional hub for to two main undersea cables, the European SAT-3 and the US's Atlantis-2. That makes Senegal's bandwidth among the largest in the continent, and by consequence the ADSL service is more affordable.

⁴ See Annex A for a brief profile of some Senegalese call centers.

developed. There are just few players active in database management, financial and accountant services and other back-office operation. The largest company in this segment is *Global Outsourcing* who employs more than 300 staff, while other players, like *SESI*, *Jouve Sénégal*, *Senescan*, and *Sinti Senegal* have from 40 to 80 employees. PCCI as well, has recently diversified its activities to include some BPO services. The interest in this field is indeed increasing, and large international players are more and more interested to open offshore facilities in the country. For instance, *TRG*—a group with 1,000 centers worldwide—has recently inaugurated a 300-seats facility in Dakar, which will provide a vast range of BPO services.

II.2 POLICY AND INSTITUTIONAL FRAMEWORK⁵

Overview. An increasingly emphasis on the development of telecom and ICT sector has characterized the government economic policies in the past five years. This process virtually began at the end of 2001 with the issuance of the “Telecommunications Act” (law no. 2001–15). This law is a milestone in the development of Senegalese telecom sector under many respects:

- It aligned the Senegalese legislation on this matter to the internationally accepted principles;
- It started the liberalization process, initially by allowing private investments in the rural telephony market, and then with consistent openings both in the telephony and Internet market (liberalization of the international VSAT transmission);
- It established the *Agence de Régulation des Télécommunications et des Postes* (ARTP) as the central regulatory body responsible for telecommunication services and competition;
- It provided for the creation of the *Universal Development Fund* whose aim is to financially support the extension of connectivity to remote rural areas of the country.

In parallel with the establishment of the ARTP, the *Ministère des Postes, des Télécommunications et des Nouvelles Technologies de l'Information et de la*

Communication (MPTNTIC) was created. The MPTNTIC, together with the Ministry of Finance, issued in January 2005 the *Lettre de Politique Sectorielle*, a policy paper for the telecom and ICT sectors. The document points out that despite some progresses the sector still suffers from: (i) the lack of an adequate regulation, (ii) insufficient private investments both from local and international investors, (iii) a scarce competition in liberalized segments. The ARTP itself is criticized by several private sector operators for various reasons: (i) an allegedly lack of transparency in the process of licensing new telecom operators, the tender has been postponed many times; (ii) the presumed privileged relationship with *Sonatel*, ARTP’s staff is to a large extent formed by former *Sonatel* employees; and (iii) the lack of the technical instruments and competences necessary to carry out its duty, that would translate in an increased dependence of ARTP from *Sonatel*.

Cooperation with Private Sector. The dialogue between the public and private sectors on topics related to the development of ICT is a quite recent issue. The newly established public agencies like ARTP, ADEPME, and APIX, make increasingly recourse to the dialog with the private sector, for the design and implementation of policies and concrete interventions. On the private-sector side, the establishment of business association such as OPTIC and the capacity building programs promoted by the donors’ community have been crucial. Among the various initiatives involving the participation of private sector entities the following are worth to mention:

- On one of the pillar of the *Strategie de Croissance Accélérée* (SCA)—the strategic development plan recently passed by Senegalese Government—is the support to the growth of ICT. To this end, the ICT association OPTIC has been involved to actively participate to the activities that will be carried out within this framework;
- The Government has launched the *Programme du Mise à Niveau*, with the aim of strengthening the overall competitiveness of Senegalese enterprises. The Steering Committee of this Program sees the participation of three type of institutions: (i) Government bodies; (ii) private

⁵ An overview of the main public and private institutions related to the ICT/ICTE sector is provided in Annex B.

sector business associations (CNP, CNES, ACCIAD); and (iii) the banks association (APBEF);

- The *Universal Development Fund* is co-funded with the contributions of the three telecom operators: *Sonatel, Sentel and Orange*, and the World Bank. The fund's objective is to extend connectivity to 13,000 rural villages.

IT Education. The lack of an adequate IT education system is one of the major obstacles for the digital development of Senegal. The main institutions that offers training courses in this field are: the *University of Dakar (UCAD)*, which graduates every year several IT engineers; (i) the *Multinational Higher School of Telecommunication*, based in Dakar and specialized in telecom training, and (ii) the *Centre d'études des sciences et techniques de communications (CESTI)*, who specializes in ICT for the media. However, a strong shortage of high-qualified professionals is reported in the country, due to the emigration of skilled workforce.

E-Government. Although genuine e-government practices are still not in place, some significant steps in the right direction have been taken over the past six years. In particular, the establishment of the *Agence De l'Informatique de l'Etat (ADIE)* has led to the introduction of various IT systems in the State's administration. An example is provided by the SYSDIT—a governmental information system on transports.

Cooperation with Donors. The donor community is supporting the development of the private sector and ICT/ICTE enterprises through several programs and initiatives usually in partnership with local institution and/or State's agencies. A non-exhaustive list of these projects is given below.

- *CDE / Pro€invest* is sponsoring various initiatives centered on the development of ICT. It has supported the establishment of the first ICT industry association, OPTIC, and it has provided grants to ICT firms for a total of 600,000 EUR over the past 18 month. The Senegalese firms who benefited from CDE's grant include: *PCCI, Manobi, and Chaka Group*. The average amount of CDE's grants is 40,000 EUR. CDE is also participating in the *Novatech* initiative that aims at promoting business partnerships between ICT enterprises from

developed and developing countries, and facilitating the private investments. Finally, CDE is currently exploring with IFC the possibility of setting up a regional or even continental sector fund targeting the ICT SMEs.

- Among the various fields of intervention, the World Bank is dedicating a special attention to the promotion of private investment through the project PIP (*Promotion de l'Investissement Privé*) that sees the Ministry of Economy and Finance as the institutional counterparts. PIP is a US\$56.7 million initiative that started in 2004 and will last until 2008. The PIP's overall goal is to stimulate the economic growth of Senegal leveraging the private sector investments. Innovations and IT facilities are among the axes of PIP's implementation.
- The World Bank is also supporting the business incubation through the *infoDev* Program that in Senegal is partner of the NCNW. The purpose of the initiative is the establishment of an IT-enabled incubation facility in the St. Louis region.
- The *International Development and Research Centre (IDRC)* is active in Senegal since 1997. The most famous IDRC's initiative in this field—the *Acacia Programme*—aimed at developing the potential of ICT to empower poor Senegalese communities. IDRC manages also a grant⁶ program that finances capacity-building projects related to ICTs. At present, it is collaborating with ART in the field of research and studies.
- The Belgium's Cooperation will implement in partnership with the MPMEEFMF a project to support the incubation of female-entrepreneurs through ICT. The project will target both the enterprises active in the ICT domain, and those businesses that are willing to introduce ICT in their activities as a leverage for growth.

II.3 THE FINANCIAL SECTOR⁶

Introduction. From the macroeconomic perspective Senegal has recorded a positive trend over the past five year, with a low inflation rate, a growth rate of about 4%, and a limited deficit. The environment

⁶ Figures reported in this chapter are mainly drawn from BCEAO and other WAEMU's publications. Other data are drawn from banks and other financial institutions' websites.

has been therefore favorable for the expansion of financial sector. The Senegal's financial sector comprises 13 banks, 3 non-banking financial institutions and a wide network of microfinance institutions. The private equity industry is extremely limited with only 3–4 players and a scarce number of investments realized. The microfinance sector appears as the most dynamic, and even though in absolute terms its contribution in assets to the financial sector is marginal, below US\$ 100 millions, its importance regarding SME financing is rapidly increasing. As a member of WAEMU, the Senegal financial system is under the control of three regional institutions: (i) the WAEMU Ministries Council—whose responsibilities include the definition of the policy and the legal framework; (ii) the *Central Bank of West Africa States (Banque Centrale des Etats d'Afrique de l'Ouest—BCEAO)*—who represents the monetary authority; and the (iii) *Banking Commission* which acts as the supervising body.

Commercial Banks⁷. Senegal's banking system includes 13 commercial banks, with total assets in the order of US\$ 2.5 billion, which represents the 22% of WAEMU's banking industry. In 2004, the net result was about US\$ 48.6 millions, and the overall credit to the national economy has nearly doubled in the period 2000–2004, reaching US\$ 1.6 billion. The three largest banks are: the *Société Générale des Banques au Sénégal (SGBS)*, the *Compagnie Bancaire de l'Afrique de l'Ouest (CBAO)*, and the *Banque Internationale pour le Commerce et l'Industrie au Sénégal (BICIS)*. Jointly they account for two-thirds of the total assets of the sector, and for the 60% of the overall bank credit to the private sector. Although the bank system is largely dominated by private capital, the State still holds minority participation in some of the main commercial banks of the country. Lending to SMEs is only a minor share of banks' ordinary credit activities. Most of Senegal's banks have large credit exposures with few borrowers and this concentration is considered the main point of weakness in the financial system⁸. Short and medium term loans account for about 87% of the total, while long-term loans are only 6%. The remainder is represented by non-performing loans (7%), but their incidence has significantly decreased in recent years.

Venture Capital. The private equity industry in Senegal is largely undeveloped. Of the 15 venture

capital firms reported in the region, only a handful have a presence and/or have concluded a transaction in the country. The French culture hegemony, where the venture capital industry is traditionally marginal, have likely influenced the overall business environment which is presently not very conducive for this type of operations. The legal framework is also partly inadequate, and some operations are simply not allowed. According to the “Doing Business” report of the World Bank, Senegal ranks at 135th place regarding the “protection of investors” index, scoring below the region average⁹. The first risk capital schemes established in Senegal has been *Seninvest* (1992). This was a scheme funded through an EIB's financing line, especially focused on SMEs in Senegal and West Africa region. However, at that time, the conditions for investment in Senegal were less than ideal; then the funds eventually concentrated on other countries. The same happened with *Cauris Investissement*, a US\$ 10 million financing vehicle mainly sponsored by the *West Africa Bank of Development*. Based in Lomé, Togo, *Cauris Investissement* is a generalist risk capital facility active throughout the region, but the activities in Senegal are marginal. More recently in 2005, *Aureos* has opened a decentralized office of its *Aureos West Africa Fund (AWAF)* in Dakar, with the aim of closely screening the opportunity of investment in established SMEs in this country, but so far no deal has been finalized yet. Reportedly, some business angels are also active in the country. Most of them appear to be Senegalese nationals who are resident overseas. Precise data on the volume and typology of business angels' operations are not available but, as evidenced by direct contacts with entrepreneurs, their involvement in the ICT/ICTE industry is likely very limited.

Other Financing Schemes¹⁰. Financing opportunities for Senegalese SMEs are also offered by a series of institutions and programs set up by the Government¹¹ and/or by the donors' community,

7 A brief profile of some selected commercial banks is provided in Annex C.
8 Only 12.5% of the working capital and 17.7% of investments of Senegalese SMEs is financed by commercial banks. Source: the World Bank's survey on the investment climate in Senegal.

9 Source: www.doingbusiness.org. The 'protection of investors' is measured taking into account three variables: (i) the transparency of transactions, (ii) the liability for self-dealing; and (iii) the shareholders' ability to sue officers and directors for misconduct.

10 Additional information on the schemes mentioned in this section is provided in Annex C.

11 The authority overseeing all initiatives in this field is the *Ministère des Petites et Moyennes Entreprises, de l'Entreprenariat Féminin et de la Micro Finance (MPMEEFMF)*. Recently established, the MPMEEFMF is divided into three directorates: SMEs, Women's Entrepreneurship and Micro Finance.

including a vast network of micro financing facilities. In particular:

- **Fonds de Promotion Economique¹² (FPE).** FPE is a US\$ 75 millions public fund providing financial support to private sector, including SMEs. FPE's activities are three-fold: (i) refinancing of commercial banks; (ii) provision of credit guarantees; and (iii) direct participation in enterprises. The FPE's lines are co-funded by some IFIs including the *African Development Bank*, the *Islamic Development Bank*, and the *West African Development Bank*.
- **Banque régionale de solidarité – Sénégal (BRS).** BRS is a regional institution headquartered in Niamey, whose main aim is fighting the poverty and granting access to financing for those entrepreneurs excluded by the traditional banking system. The Senegalese branch was opened in October 2005. The BRS provides lending and is currently considering establishing a mutual credit guarantee fund.
- **Agence de Développement et d'Encadrement des Petites et Moyennes Entreprise (ADEPME).** Established in 2001, ADEPME is the apex institution for all public policies and initiatives for SMEs. The Agency has three main lines of activities: (i) improving the access to financing for SMEs; (ii) contrasting the wide diffusion of the informal economy; and (iii) improving the regulatory framework for the support of SMEs.
- **Bureau du Mise à Niveau (BMN).** The BMN is responsible for the implementation of the *Programme du Mise à Niveau*, a program that aims at: (i) leveraging competitiveness of local enterprises; (ii) improving integration among enterprises; (iii) supporting the diffusion of entrepreneurial mentality; and (iv) increasing exports. The BMN may also provide financial support to enterprises for investment in innovation and quality upgrade. The program is co-funded by AFD, about US\$ 15 million, and UNIDO, which provides technical assistance.
- **Direction de l'Entreprenariat Féminin (DEF).** The Directorate of Women's Entrepreneurship manages a credit lines specifically targeted to female-entrepreneurs providing loan at the subsidized rate of 9–10%—that is about 6 to 8 points below the ordinary MFIs' interest rates. The fund is very small, less than US\$ 2 millions, and so far has financed some 10 businesses in various sectors including ICT. The types of cost that the fund may cover are related to education and training, typically on management and related field, and to the purchase of working equipments.
- **Micro finance Institutions.** In Senegal there are some 300 micro finance institutions active, the most important being: (i) the *Crédit Mutuel du Sénégal (CSM)*—a joint operation of the *Centre International du Crédit Mutuel de France* and AFD primarily aimed at mobilizing the savings of Senegalese immigrants in France and investing in the economic development of the country; (ii) *Alliance de Crédit et d'Épargne pour la Production (ACEP)*—a mutualistic institution, fruit of the collaboration of USAID with the Senegalese government; and (iii) *Union des Mutuelles de Partenariat pour la Mobilisation de l'Épargne et de Crédit au Sénégal (UM-PAMECAS)*—which is a network of 30 credit institutions with nearly 200,000 members, initially supported by the Canadian fund *Développement International Desjardins*.

12 For more information refer to the FPE's website, www.fpe.sn

III. ISSUES IN THE FINANCING OF ICT/ICTE SMALL BUSINESS

III.1 SME FINANCING NEEDS – THE DEMAND SIDE

ICT/ICTE Companies. Senegalese ICT/ICTE firms have different financing needs depending on their diverse nature. The sector encompasses at large extent recently established micro enterprises as well as few large operators with a remarkable business history. The amounts of capital sought by ICT/ICTE companies vary accordingly, but the study has evidenced that most of players have needs in the order of US\$ 100,000 to 600,000. The rationale for these financing needs is also varied, going from the funding of initial R&D expenses to the building up of working capital and to the establishment of foreign branches to enter in new markets. The salient traits of the financing needs voiced by Senegal's ICT/ICTE enterprises can be better explained in relation with the stage of maturity reached by enterprises. Table 1 below illustrates the extent and the rationale of these needs during the four main stages of SMEs development.

III.2 ISSUES IN ACCESSING FINANCING – THE SUPPLY SIDE

Issues in Accessing Bank Financing. In Senegal the access to bank lending for SME is very limited. The banking system is in fact characterized by a high concentration and typically, loans are accorded to large companies and on a short-term basis. The vast majority of loans obtained by SMEs are of contract

financing nature, while loans for investment purposes are hardly available. Estimates are that only 20% of the loan applications presented by SMEs are accepted, the rest being rejected typically for insufficient collateral requirements. The collateral requirements are considered excessive by many entrepreneurs, usually 100% or more of the loan requested, but this is partly due to the fact that SMEs are often unable to present reliable financial statements, and the juridical system does not offer the certainty of debt recovering in case of difficulties. By consequence, the Senegalese financial system is characterized by a gap between the lending schemes accessible to SMEs—usually made available by micro finance institutions—and the bulk of ordinary commercial banks which instead are strictly focused on large enterprises. This gap is also deepened by the banking regulation that seemingly does not allow commercial banks to directly operate micro lending schemes, unless creating an independent facility. A possible third way, is the one elaborated by *Ecobank Senegal* (see box 1 below) in partnership with the micro finance institution *PAMECAS*, which is one of the biggest in this segment. An agreement is in fact in the pipeline aimed at establishing a new type of scheme where *Ecobank* will act as the refinancing entity for *PAMECAS* micro lending activities. The risk associated to the final borrow will remain on *PAMECAS*.

BOX 1. *Ecobank* SME lending schemes

Ecobank is strongly involved in SME financing. It currently operates three distinct credit lines for small business. The size of the loans extended ranges from US\$ 50,000 to 500,000 depending on the applicants' turnover, and the guarantees requested could be of various natures: contract domiciliation for contract financing, hand over cash-flow for investment financing, mortgages (or start-ups). Interest rates are of about 8%, but may rise up to 14% in case of start-ups. Overall, the value of portfolio is of US\$ 19 million that represents one-third of the overall *Ecobank's* credit to the private sector. *Ecobank* is currently planning to triplicate its involvement in this segment and in particular in micro lending.

TABLE 1. Summary Presentation of ICT/ICTE Financing Needs

Timeline	Amount Sought	Rationale	Examples from the Fieldwork ¹³
Early-Stage	Up to US\$ 50,000	The early stage goes from the conception of the business idea to the moment when commercialization begins. In the case of Senegal, the field interviews showed that at this stage of development financing needs are normally in the US\$ 10,000–50,000 range with lower end represented by software developers, IT consultants, web-designers, and other business that requires little physical assets. Enterprises dealing with IT equipments or with the ambition of offering outsourcing services to foreign MNC usually needs extra investment. This is the case for instance of <i>Amitelo Afrique</i> , a local branch of a Swiss ITSP company. Established in 2006, Amitelo seeks for start up capital in the US\$ 200,000 region.	<ul style="list-style-type: none"> ■ Global Computer Solution – installation and maintenance, software customization ■ Amitelo Afrique – Internet Telephony Services and Equipments
Development	US\$ 50,000 to 500,000	This phase corresponds to the proper establishment of the business and the actual commercialization of the products/services developed in the initial stage. The duration of this phase may vary significantly. In some cases it takes many years of research before reaching a level of know-how and sufficient management skills to come to market, in other cases the process is very quick. The first is the case of <i>Manobi</i> , a company existing since 2000 that has recently developed a set of products based on geolocalization, while the second is the case of enterprises such as <i>Call Me</i> and <i>BSI</i> which have recently spun off (2005) from larger companies (<i>Groupe Chaka</i> and <i>Groupe ATI</i> respectively) In general, the main rationale of financing needs at this stage regards the building of an adequate “production capacity” (including the hiring of new personnel), the expansion of the commercial network, and the scaling up of working capital	<ul style="list-style-type: none"> ■ Manobi – Internet VAS, GIS-based solutions ■ Call Me – BPO services ■ BSI – software development
First Expansion	US\$ 500,000 to 1.5 million	The first expansion phase usually entails a diversification in the company's activities with the introduction of new products/services which build upon the technical expertise acquired and/or on the connections established with certain clients. In other cases this is limited to an upgraded version of the original product, which incorporates and systematizes the improvements gradually introduced during the first commercialization phase. Depending on the nature of the business, financing needs vary on average from as little as US\$ 500,000 to US\$ 1,500,000.	<ul style="list-style-type: none"> ■ ARC Informatique – ISP, Internet VAS ■ GSIE Technology – software development, IT services
Second Expansion	More than 1.5 million	This stage of development is associated with a major change in the scale of operations, often associated with the scaling up of international operations. In this case, financing requirements relate to the establishment of commercial subsidiaries and/or technical assistance centers abroad. In the case of Senegal just few ICT firm has reached this stage, as for instance the call center <i>PCCI</i> , and the highly diversified IT groups <i>Groupe ATI</i> and <i>Groupe Chaka</i> , which have already established some presences also in other countries in the region.	<ul style="list-style-type: none"> ■ Groupe ATI – retail, IT services, BPO

A slight improvement in this scenario could also be represented by the recent establishment of the Senegalese branch of the *Regional Bank of Solidarity* (RBS). The main objective of RBS is in fact to provide credit to those economic players that are usually excluded by the mainstream sources of financing.

Issues in Accessing Equity Financing. As indicated in the previous section, the Senegalese venture capital industry is scarcely developed, with few operators currently active and a limited volume of resources

available. The results of the study suggest that the interest of private equity investors for ICT/ICTE industry is practically non-existing. The main obstacles for deals in this sector can be summarized as follows: (i) ICT/ICTE are usually small firms, and the transaction costs associated with the preparation, negotiation and, monitoring of small investments are not justified by the returns; (ii) ICT/ICTE firms are generally at the early stages of development, thus

¹³ A brief profile of the companies mentioned in this section is provided in Annex F.

requiring a significant flow of capital without offering guarantees of an adequate ROE within the duration of the investment, 5 years on average. (iii) ICT/ICTE firms are usually built around one or few IT experts with limited knowledge of business and financial management. As a consequence, the projects presented are of poor quality and the promoters' ability of implementing their project appears often questionable. In addition to that, it should be noted that the overall environment for equity investment is not really conducive. According to operators, the legal framework would need to be improved regarding both the type of financing instruments permitted, and the taxation applied. Furthermore, legal measures to improve the protection of minority investors would be necessary as well, especially in order to attract more business angels and early stage investors.

III.3 THE FINANCING GAP – NATURE AND SEVERITY

Overview. Although the Senegalese financial system does not suffer from an absolute lack of liquidity, ICT/ICTE SME have limited or no access to ordinary sources of financing during the most critical phases of their development. This financial gap is somewhat reflecting the lack of a *continuum* between the typical micro-finance instruments—relatively available at seed stage and during the start up—and the financing instruments offered by the majority of banks and financial institutions, which are mainly tailored for large and well-established players. In addition, the private equity industry, both in the form of angel investors and of venture capital funds appears too small and cautious to provide any relief to these inefficiencies of the financial market. The importance of SMEs for the Senegalese economy is however widely recognized. SMEs represent in fact 80–90% of the manufacturing industry and employ 60% of the national workforce. In this sense several public bodies have set up measures aimed at reducing this gap by providing direct financial supports to SMEs, e.g. the *MPMEEFMF*, the *Fond de Promotion Economique*, the *ADEPME*, and the *Bureau du Mise à Niveau*. However, none of these facilities is specifically addressing the hi-tech sector. The difficulties in access to financing are also due to severe constraints existing on the demand side. Direct contacts with

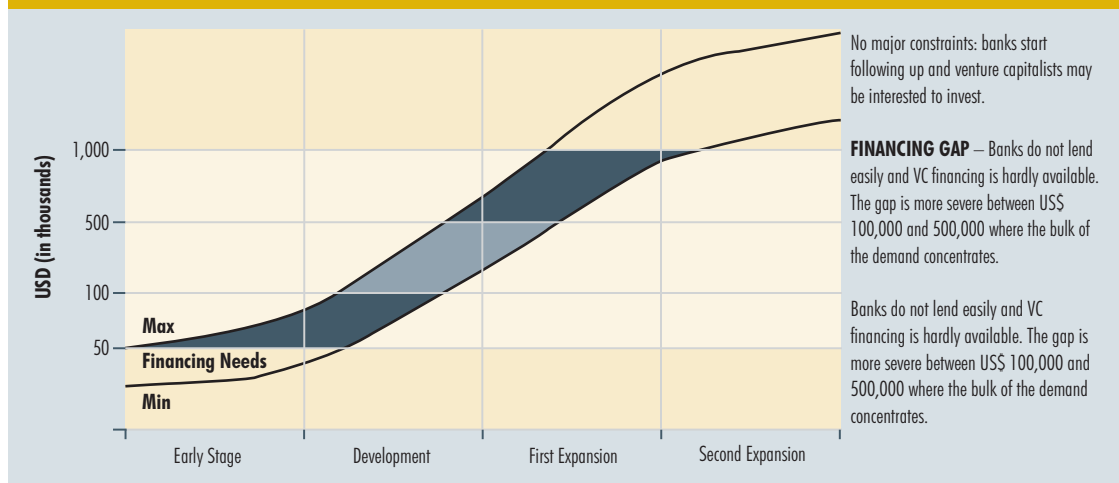
entrepreneurs demonstrated that they are not aware of the existing opportunity of financing, like the existence of the *FPE's* credit guarantee fund was largely ignored by many interviewees, and of the functioning of the various instruments available, especially regarding private equity financing. Also the poor quality of projects, the lack of transparency, and in general the widespread informality of SMEs are factors that dramatically reduces the institutional investors interest in this segment.

Financing Gap & Stage of Development. A summary presentation of the financing gap faced by ICT/ICTE small companies in their various stages of development is provided in Figure 1 below.

As indicated in the figure above, financing constraints faced by ICT companies appear comparatively more severe in the development and first expansion phases, while the situation is more nuanced in other phases. In particular:

- Firms in the *early stage* usually make recourse to internal source of financing, typically owner's savings, friends, family members and informal money lenders. Another opportunity is offered by the vast network of MFIs and by the *Regional Bank of Solidarity*, whose rates are quite expensive but the access is relatively easy. In addition, firms in the early stage phase may complement their resources with the grants provided by State's Agencies such as *ADEPME* and the *Bureau du Mise à Niveau*. The amounts available are however small, usually below US\$ 15,000. It is not infrequent that newly incorporated enterprises are 'spin-off' of divisions of larger enterprises or subsidiaries of foreign companies. In such cases, the start-up capital is typically supplied to a large extent by the parent company;
- The financing gap is more acute by firms who seek for US\$ 50,000 to 1,000,000. Usually, these are enterprises in *development* or *first expansion* stage. This means that they have developed their business at a small but profitable scale, and they need to scale up in order to fully exploit the possibility offered by the market. Enterprises at this stage typically do not have an established commercial network and lack the necessary experience to efficiently deal with banks and other financial institutions. Hence, most of bankers are wary to deal with operations at this stage unless heavy securitization is

Figure 1. Nature and Severity of Financing Gap



provided. As for equity financing, the amounts sought by SME at this stage are generally too small to justify the investment. However, when value of deals approach the US\$ 1 million mark, institutional VC such as *Cauris* or *Aureos* could start being interested. Under these conditions, ICT enterprises are forced to rely predominantly on self financing, and to reduce their investments, thus significantly slowing down their growth;

- For the few enterprises reaching the second expansion stage, conditions for accessing

financing improve significantly. Commercial banks still ask for adequate collateral and the interest rates remain quite high, but obtaining a loan becomes definitely easier. Firms at this level of development may also attract the interest of private equity firm, mainly because they have a market sufficiently developed to guarantee adequate returns. There are a handful of ICT/ ICTE firms in Senegal having reached this stage, but seemingly none has concluded a deal with a VC so far.

IV. CONCLUSIONS AND RECOMMENDATIONS

IV.1 INTRODUCTION

The Senegal's ICT/ICTE sector has constantly grown in recent years, and although its contribution to national economy remains small, it is increasingly recognized as a strategic domain for the country's development. The sub-sector who seemingly holds the highest potential is the call Center BPO: several new facilities have been established over the past few years or are in the pipelines, and the range of services offered is increasing. Outsourcing activities has the positive side-effect of enhancing the transfer of know-how to domestic enterprises thus nurturing the growth of a real innovative IT industry. It appears therefore important to grant that deserving operators have an adequate access to financing to the extent needed by their development plans. Today, there are evident obstacles to SME financing due both to characteristics of the financial system and to lack of creditworthiness of entrepreneurs. Therefore it could be useful to devise measures that could have an impact on both side and help the bridging of the financing gap. In this section, possible initiatives that could prove useful in this respect are briefly illustrated. These initiatives fall into three categories: (i) Measures Aimed at Facilitating Access to Equity Financing; (ii) Measures Aimed at Facilitating Access to Bank Financing; and (iii) Measures Aimed at Improving the Interactions between Supply and Demand.

IV.2 MEASURES AIMED AT FACILITATING ACCESS TO EQUITY FINANCING

It is widely acknowledged that access to equity financing represents an essential feature for the development of small entrepreneurship in ICT/ICTE field. All developed ICT/ICTE industries worldwide can count on the presence of a consistent VC industry providing risk capital to enterprises from early stage to full maturity. In this respect Senegal is dramatically lagging behind, and at present there are no signs of improvement. To reverse this trend, two type of interventions could be particularly effective: (i) support the establishment of SME financing schemes with mixed participation of public and private investors; (ii) promote the business angel financing model and facilitate the creation of a network. A brief summary description of these measures is provided below.

Increase Supply of Equity Financing. The Senegalese private equity industry is still in its infancy. An intervention in this field should be therefore focused on increasing the volume of risk capital available and streamlining concrete transactions in this field. To begin with, it would be recommendable to conduct an in-deep study aimed at shedding light on three particular aspects: (i) the current institutional and legal framework and the type of arrangements and instruments permitted under the law in force; (ii) the identification of the financing mechanisms that would fit best with the existing market and institutional situation; (iii) the elaboration of a feasibility study for the establishment of a specific risk capital facility in the country. Ideally, this type of scheme should be based on mixed capital provided by public and private sector and possibly international organizations. This would mitigate the risk for private sector investors and make the scheme more attractive. In addition, some incentives could be envisaged to further attract sponsors from the private sector, as for instance the provision of leveraged returns or protection mechanisms against failures. In order to

lower the minimum ‘critical’ threshold for the profitability of VC operations, a refunding scheme for the expenses met by VC for preparation and finalization of investment could also be considered. Finally, it is important that such facility could also provide technical assistance to SME, e.g. regarding business management, staff recruitment, and marketing strategy. Given its experience and its role in the financing of private sector and SMEs, an ideal partner on the Government’s side is represented by the *Fonds de Promotion Economique*, which could be usefully involved in a project of this nature.

Promotion of Business Angel Network. There are few business angels in Senegal, and information on their activities is very scarce. They operate on a pure individual basis but it is not clear if and to which extent they are involved in the ICT/ICTE sector. In countries with a more developed ICT/ICTE industry, business angels play an important role in the provision of ‘smart capital’ to startups. It appears particularly useful then to help creating the condition for a diffusion of this ‘model’ also in Senegal. The evidence collected suggests that the first step should be a solid analysis of the status of art, including the overall legislative framework and the current level of activity. Subsequently, a useful initiative could regard the promotion of the establishment of an organized business angels group, on the model of those existing in other countries like India, the Philippines, or Brazil. The existence of a structured group of angels could be useful in various ways, (i) promoting this financing model; (ii) providing a series of services to individual investors, pre-screening, presentation events; (iii) advocating for the necessary reforms.

IV.3 MEASURES AIMED AT FACILITATING ACCESS TO BANK FINANCING

In absolute terms, commercial banks are and will remain the most important source of financing to the private sector in Senegal and it is therefore important to devise ways to facilitate their relationship with ICT/ICTE small firms. To this end, two measures appear particularly useful: (i) a large-scale diffusion of credit guarantee schemes

for SMEs; and (ii) the provision of direct assistance to small entrepreneurs in dealing with commercial banks.

Support to the Establishment of Credit Guarantee Schemes. Credit Guarantee Schemes (CGS) aim at facilitating access to bank financing through the provision of a loan repayment guarantee that replaces, to a variable extent, the need for collateral. Several examples of facilities of this kind can be observed in various European countries, where they play an important role in helping SMEs to access credit. More recently, CGS are spreading in a number of emerging countries worldwide, sometimes with the support of donors and/or local governments. In Senegal, there is only one example of CGS, set up by the FPE, but the volume of operation is scarce and therefore the overall impact on the financial system is marginal. Then, the first step would be to conduct a feasibility study on a possible larger deployment of this instrument. The study should also provide indication on which institutional arrangements are more suitable for the Senegalese market and legal environment, and tentatively spell out the operating modalities. Such scheme should also foresee a sort of ‘special window’ for technology enterprises. To this end, collaboration with the sector business association OPTIC and/or with other relevant stakeholder is recommendable.

Provision of Direct Assistance to ICT/ICTE Promoters. As discussed in Section 3, problems in accessing loan financing cannot be blamed entirely upon banks. Indeed, small entrepreneurs are seldom able and willing to approach banks in a proper way, to disclose information on their financial situation, to prepare sound business plans, and to spend time to discuss their needs with bank officers. Regarding ICT/ICTE enterprises these aspects are complemented with the difficulties deriving from the scarce familiarity of bankers with these business models. Interventions in this field should then focus on training and capacity-building projects for promoters on various practical matters dealing with the financial aspects of the business. For the organization of these activities the existing business incubators and SME-dedicated facilities could be involved.

IV.4 IMPROVING THE UNDERSTANDING OF ICT SECTOR

In many cases bankers and investors have a limited understanding of the fundamentals of the ICT/ICTE sector, and therefore have difficulties in assessing enterprises' assets and gain perspectives. This information gap has the effect of further narrowing the opportunity of financing available for technology entrepreneurs. In addition, most of ICT/

ICTE business models have peculiar productive cycle and therefore would need financing instruments tailored for their specific needs which are currently non-existing. Against this background, it appears useful to support activities aimed at improving the overall understanding of the economic dynamics in this sector. Possible concrete measures include: studies, publications, trainings, and seminars. Ideally, such initiatives should involve business associations, universities, public sector, financial institutions and other stakeholders active in the ICT sector.





ANNEXES



ANNEX A – THE ICT/ICTE SECTOR

TABLE 2. *Main Telecom Operators*

Operator	Line of Business (subscribers)	Comments
Sonatel	<ul style="list-style-type: none"> ■ Fixed telephony (282,000) ■ Mobile telephony (2.0 million) 	The ownership composition of <i>Sonatel</i> is as follows: <i>France Telecom</i> 42.33%, the State 27.67%, actual and former employees 10%, other institutional and stock market investors (20%). The company currently employs 1,500 staff and generates an estimated turnover of US\$ 700 millions. (400 bl CFCA) Profits are around US\$ 100 billions per year. <i>Sonatel Mobile</i> is a 100% affiliate of <i>Sonatel</i> . It employs some 300 staff. In October 2006 has adopted the international brand <i>Orange</i> for the commercialization of its services and promote the convergence of Mobile telephony, Internet, cable TV and entertainment.
Sentel GSM	<ul style="list-style-type: none"> ■ Mobile telephony (900,000) 	<i>Sentel GSM</i> is controlled by <i>Millicom International</i> (75%) with a minority participation of local private investors (25%). It has around 100 employees. The services are commercialized under the international brand TIGO. <i>Sentel</i> is the first operator in Senegal to adopt the GPRS technology.

Figure 2. *Growth of fixed and mobile telephony (2000–2005)*

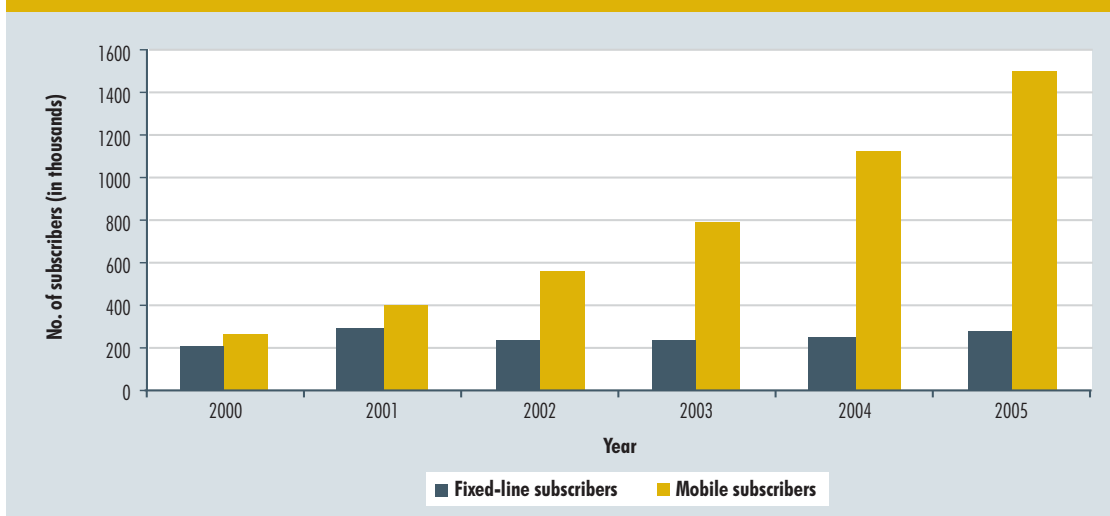


TABLE 3. Profiles of Selected Call Center Operators

Company	No. of Seats (Place)	Comments
Premium contact center international (PCCI)	700 (Dakar)	PCCI is the largest call center of Senegal. The group has its headquarters in London, where the holding company is located, a commercial office in Paris, and the production premises in Dakar. In 2004, PCCI obtained a credit of US\$ 8.6 billion from the West African Development Bank that allowed the firm to nearly double its workstation. Among PCCI's clients: France telecom, Sonatel, Alizè. PCCI has some 1,400 employees.
Call Me	+50 (Dakar)	Recently incorporated as an independent company in 2005, Call Me is 100% owned by the Senegalese Groupe Chaka. Call Me specializes in telemarketing and is presently managing the customer relations of <i>Sentel</i> and <i>Ikatel</i> , Mali. 200 staff are currently employed at Call Me.
Africatel AVS	+50 (Dakar)	Africatel AVS started as a SSII, and only in 1999 entered the vocal services market. Today it manages 40 vocal servers including local radios and several embassies. The Africatel's facilities manage a traffic of more than 500,000 calls per year. The company is also active in providing Internet services, and outsourcing solutions. It employs 100 staff.

ANNEX B – THE INSTITUTIONAL SETTING

B.1 PUBLIC ENTITIES

*Agence de Régulation des Télécommunications et des Postes*¹⁴ (ARTP)

Established in 2001 under the Telecommunications Act, the ART takes over the regulatory competences from the Ministry of Communications and from *Sonatel*. It is a formally independent body under the direct supervision of the President.

Since the beginning the ART has been entrusted with several tasks including: i) the attribution of licenses and permits to operators, ii) the promotion and development of ICT, iii) the adoption of regulations for free and fair competition in ICT-related sectors, and iv) the management of radio spectrum.

At present, one of the most pressing priorities for ART is the issuing of a “global license” including the second license for fixed telephony, the third license for mobile telephony, and a license for various additional services. Postponed many times, ART recently announced the dates of the tender, and the whole procedure is expected to be completed by the end of 2006. Another field in which ART is currently committed is the regulation of the VoIP service. ART receives in fact lot of requests for authorization from local ICT entrepreneur in this respect, but under the law in force it appears that, apart from the incumbent, the exploiting of VoIP is not allowed. But debates are on-going. Finally, two other plans are in the pipeline: i) the design of the project for the *Service Universel*, and ii) the regulation of the e-commerce, in particular the issue of electronic signature.

*Agence De l’Informatique de l’Etat*¹⁵ (ADIE)

The *Agence De l’Informatique de l’Etat* (ADIE) is the body responsible for the implementation of programmes for the modernization and informatization of the Public Administration. ADIE was established in 2002 and it is primarily involved in two major programs: the *Programme de Modernisation des Systèmes d’Information de l’Administration* (PMSIA), and the ICT component of the *Programme National de Bonne Gouvernance* (PNBG). So far, the ADIE obtained significant results in the realization of the Government’s intranet that is currently in process of being extended to all decentralized administrations. The ADIE is also responsible for the public procurement of ICT services and supplies for the public administration.

*Agence de Développement et d’Encadrement des Pme*¹⁶ (ADEPME)

Established in 2001, the *Agence de Développement et d’Encadrement des Petites et Moyennes Entreprises* (ADEPME) is the key feature of the public policy for the promotion of private entrepreneurship. ADEPME collaborates with private sector and donors to create a more conducive environment for micro, small and medium enterprises. The activities of the ADEPME are various and include: i) the implementation of capacity building programs, ii) the promotion of entrepreneurial culture, iii) the provision of TA and training on managerial and financial matters. ADEPME have also a limited budget (less than US\$ 100,000 per year) for the provision of small grants to SMEs. The amount of the grants is typically US\$ 8,000 to 15,000 and cannot exceed the 70% of the project value. The type of expenses that could be financed through the grants includes: training, business planning, technology assessment, investors scouting, and development planning. So far, the enterprises who received a

¹⁴ For more information, please refer to ARTP’s website: www.artp-senegal.org

¹⁵ For more information, please refer to ADIE’s website: www.adie.sn

¹⁶ For more information, please refer to ADEPME’s website: www.adepme.sn

support from ADEPME has been 63, the ICT firms being 6, most of which cyber cafés. The ICT sector represents therefore a minority share of ADEPME's operations, accounting for less than 10% of the total.

ADEPME is also involved in assisting SMEs in identifying possible sources of credit and in the preparation of application. The rate of success for this service is however quite low (around 10%).

B.2 PRIVATE ENTITIES

Organisation des Professionnels des Technologies de l'Information et de la Communication (OPTIC)

– OPTIC was created in 2003 as the ICT branch of the *Conseil National du Patronat* (CNP)—the largest business association of Senegal. OPTIC benefited by the support of CDE / Pro€invest who nurtured it since the beginning. Some 50 ICT enterprises of various natures are presently member of OPTIC, including the telecom operators *Sonatel* and *Sentel*, whose representatives hold the office of deputy chairman.

The first initiative organized by OPTIC was an international meeting that was held in Ouagadougou in 2003. The meeting was attended by 40 representatives of various entities coming from 12 different countries including: national regulators, private sector enterprises, incumbent operators, relevant ministries. The issues in the agenda were: i) the price of bandwidth; ii) the financing of investment in ICT; iii) the enhancement of national Regulators; and iv) the import taxes on ICT equipment. The main achievement of that meeting was represented by the participation of incumbent telephony operators, for the first time

sitting around the same table with small entrepreneurs and telecommunications authorities. After this first successful experience, OPTIC was involved in other similar initiatives, such as an investment promotion meeting held in May 2005, organized with the support of CDE/Pro€Invest. Since 2005 OPTIC is working with the government in the framework of the program *Stratégie de Croissance Accélérée*, for what concerns the policies in favor of the ICT sector.

OPTIC is also committed in strengthening its presence at the regional level, promoting the establishment of similar associations in the neighboring countries.

Observatoire sur les Systèmes d'Information, les Réseaux et les Inforoutes au Sénégal (OSIRIS)¹⁷

– OSIRIS is a non-profit organization managing a thematic portal on ICT. It publishes every month a bulletin, denominated BATIK, providing news and comments on various ICT-related topics. The initiative was launched in 1998 by a pool of Senegalese professionals from the university and from public and private sector. At the initial stage, OSIRIS received some support from a Swiss Foundation and from the *infoDev* program, but since 2000 it is a 100% voluntary association.

Union Nationale des Télécentres et Téléservices du Sénégal (UNETTS)

– Members of UNETTS are the over-20,000 telecenters and cyber cafés present in the country. Although not very active, UNETTS is committed in promoting the interests of its huge base vis-à-vis the Government. In particular, UNETTS asks for a full liberalization of the telecom sector, including VoIP, and the end of *Sonatel's* monopoly.

¹⁷ For more information, please refer to OSIRIS's website, www.osiris.sn

ANNEX C – THE FINANCIAL SECTOR

TABLE 4. *Salient Features of Main Banks*

Bank	Total Assets (US\$ Million)	Net Income (US\$ Million)	Comments
Société Générale des Banques au Sénégal (SGBS)	723	13.3	Established in 1962, SGBS is controlled by the French <i>Société Générale</i> (37.93%). Other shareholders are the <i>Bayerische Vereinsbank</i> (5.57%), <i>Banca Nazionale del Lavoro</i> (7.14%), <i>Crédit Suisse First Boston</i> (5.57%), <i>Générale de Banques</i> (5.57%) and private Senegalese investors (38.22%). Its network includes 32 agencies that globally serve 120,000 households and 6,000 corporate clients.
Compagnie Bancaire de l'Afrique de l'Ouest (CBAO)	636	9.8	Until 1993 known as <i>Banque Internationale d'Afrique de l'Ouest</i> , the CBAO is controlled by the <i>Mimran Group</i> (65%). Another 10% is owned by the State. The network includes 16 agencies. CBAO is the first bank for volume of deposits.
Banque Internationale pour le Commerce et l'Industrie au Sénégal (BICIS)	465	12.8	Established in 1962, BICIS was partially privatized in 1991. Today, the consortium <i>BNP Paribas/SFOM/SIFIDA</i> holds 54.11% of the shares, while the State holds another 24.89%. BICIS specializes in credit for large corporations. In 2003, it became the first bank of WAEMU obtaining ISO 9001 certification.
Crédit Lyonnais du Sénégal (CLS)	223	2.9	CLS is the fourth largest bank of Senegal by value of assets. It is controlled by the <i>Crédit Lyonnais France</i> who owns the 95% of shares, while the rest is held by the State. CLS is primarily focused on corporate business which represent the 70% of its operations.
Ecobank Sénégal	100	n.a.	Established in 2003, Ecobank Sénégal is a member of a private sector banking group based in 13 countries of West and Central Africa. It is the only bank completely owned by African capital, the shareholders being: <i>Ecobank Transnational Incorporated</i> (50%), <i>Ecobank Côte d'Ivoire</i> (20%), <i>Ecobank Bénin</i> (20%), <i>Ecobank Togo</i> (10%). Ecobank has some financing schemes for SMEs developed in partnership with a micro finance institution.

BOX 2. MFI and Other SME Financing Institution

Micro finance Institutions

In Senegal, 300 micro finance institutions are active. Most of them are concentrated in Dakar and Thiès but they virtually cover the whole national territory. Although they mainly deal with small trade and agriculture, over the past few years the number of transaction in the craft sector significantly increased. The figures on performances of micro finance in past fifteen years are definitely remarkable: the amount of private savings mobilized has risen from some US\$ 400,000 in 1988 to US\$ 63 million in 2004, while the overall amount of loan conceded has risen from US\$ 700,000 to US\$ 88 million. In the same period the associated member to micro finance institutions has increased from 30,000 to 500,000.

The three largest institutions account for the 75% of the sector:

- i. **Crédit Mutuel du Sénégal (CSM).** The CSM was established in 1998 by a joint operation of the *Centre International du Crédit Mutuel de France* and the *Agence Française de Développement*. CSM primarily aims at mobilizing the savings of Senegalese immigrants in France and invest in the economic development of the country. CSM's network includes 76 agencies, mainly located in southern regions.
- ii. **Alliance de Crédit et d'Épargne pour la Production (ACEP).** ACEP is a mutual institution, fruit of the collaboration of USAID with the Senegalese government. The ACEP's typical loan size ranges from US\$ 200 to 3,000 while the terms are quite short, 1 to 24 months. ACEP targets exclusively established firms who are willing to expand or to modernize their business. The 57% of financed projects deal with the trade/retail sector, other investments are 22% in services, 12% in agriculture, and 9% in manufacturing.
- iii. **Union des Mutuelles de Partenariat pour la Mobilisation de l'Épargne et du Crédit au Sénégal (UM-PAME-CAS).** The UM-PAMECAS is a network made of 30 credit institutions which comprises 173,000 members in 2005. The total amount of savings mobilized in 2004 was around US\$ 19 millions, and the amount invested exceeded US\$ 21 millions. Established in 1995, UM-PAMECAS was linked until 2000 to the Canadian fund *Développement International Desjardins*.

Fonds de Promotion Economique (FPE)

The *Fonds de Promotion Economique* (FPE), is a scheme established by the Government of Senegal to provide financial support to private entrepreneurship. The FPE was created in 1991 with a capital of some US\$ 75 millions, most of which destined to refinancing activities through some selected banks, and to a lesser extent to be lent directly to SME through specific instruments. During the first decade of activity the FPE was characterized by some incautious transaction which jeopardized its very survival and led FPE to nearly close in 2000. In 2003 the FPE was re-structured. The new management took steps in the direction of improving its competitiveness on financial market; they opened to new players like micro-finance institutions, revised their products and their policy, and increased the commitments in recovering credits.

The three financing scheme managed by FPE, are: i) the refinancing fund; ii) the guarantee fund; and iii) the financial participation fund. The FPE's lines are co-funded by development bank, like the *African Development Bank*, the *Islamic Development Bank*, and the *West African Development Bank*, or supported by bilateral cooperation agreement, such as China and India.

Banque régionale de solidarité – Sénégal (BRS)

The Senegalese branch of The *Regional Bank of Solidarity* opened at the end of October 2005, with a capitalization of US\$ 3.8 millions. The BRS – Senegal is a subsidiary of a holding based in Niamey and established by the eight WAEMU's member States. BRS's main aim is fighting the poverty and granting access to financing for those entrepreneurs excluded by the traditional banking system. The BRS provides lending and is currently considering establishing a mutual credit guarantee fund. Apart from the State and the WAEMU institutions, other BRS's shareholders includes insurance companies, commercial banks, and private investors.

ANNEX D – LIST OF ENTITIES INTERVIEWED

D.1 PUBLIC ENTITIES AND INTERNATIONAL ORGANIZATIONS

Agence de Régulations des Télécommunications

- Mr. Makhtar Fall, Director of Studies and International Affairs

Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME)

- Bécaye Diarra, Director of Enterprises Development

Ministère des Petites et Moyennes Entreprises de l'Entrepreneuriat Feminine et de la Micro-finance

- Mr. Cheikh Tidiane Ly, Direction de l'Entrepreneuriat Feminin – Head of Project Division

Centre pour le Développement de l'Entreprises (CDE) / Proinvest

- Mr. Aliou Abdoullahi, Head of West Africa Regional Office

D.2 PRIVATE SECTOR ORGANIZATIONS

Organisation des Professionnels des Technologies de l'Information et de la Communication (OPTIC)

- Mr. Antoine Ngom, Chairman

Observatoire sur les Systèmes d'Information, les Réseaux et les Inforoutes au Sénégal (OSIRIS) –

- Mr. Olivier Sagnia, Managing Director

National Council of Negro Women

- Mr. Mamadou Falilou Sarr, Head of West Africa Regional Office

D.3 FINANCIAL INSTITUTIONS

Aureos Senegal Advisers

- Mr. Kodjo Aziagbe, Partner

Ecobank Senegal

- Mr. Thierno Ndiaye, Head Commercial Banking

Fonds de Promotion Economique (FPE)

- Mr. Alioune Sall, Director of Studies and Marketing

D.4 ICT/ICTE ENTERPRISES

Amitelo Senegal

- Mr. Bocar Sy, Chief Executive Officer

Alliance Technologie Informatique – Groupe ATI

- Mr. Mor Ndiaye Mbaye, Deputy Director

Atlantic Réseau Communication – ARC Informatique

- Mr. Mohsen Chirara, Managing Director

Call Me – Chaka Group

- Ms. Mbayang Cisse, Managing Director

Global Computer Solutions

- Mr. El Hadji Mamadou Laye Ndiaye, General Director

GSIE Technology

- Mr. Antoine Ngom, General Director

Manobi Senegal

- Mr. Daniel Annerose, General Director



ANNEX E – PROFILES OF SME FINANCING ORGANIZATIONS

PROFILE #1 . Aureos West Africa Fund

Salient Features

<i>Denomination</i>	Aureos West Africa Fund – AWAFF
<i>Nature</i>	AWAF is a private equity fund, targeted at small and medium sized companies. The Senegal's branch is managed by Aureos Senegal Advisers
<i>Location</i>	AWAF's headquarter is in Lagos, Nigeria, with two decentralized office in Senegal and Ghana.
<i>Geographical Coverage</i>	AWAF operates throughout West Africa region, with particular emphasis on Nigeria, Ghana and Senegal. The Senegal's office covers all the francophone countries in the region.
<i>Establishment</i>	AWAF was established in 2003, and achieved its closing in mid 2004. The Senegal's office started operations in mid 2005.
<i>Funding</i>	AWAF's investors are a group of national and international financial institutions including CDC Capital Partners, the Norwegian Investment Fund for Developing Countries (Norfund), European Investment Bank (EIB), Nordic Development Fund (NDF), and two African banks: the Ecobank Nigeria and the Lead Bank Nigeria. The overall capital provision amount to US\$ 50 million.
<i>Investment Policy</i>	AWAF is a generalist scheme. The typical operations sought by AWAFF includes: i) expansions (usually cross-border); ii) capital restructuring; iii) consolidation of fragmented firms; iv) MBO; and v) privatizations. Start-ups are generally not considered. One reason being the fact that the duration of AWAFF's investment is 5 years, while start-ups usually requires at least 3 year before commencing being profitable, and therefore it's very unlikely that they can obtain the return rates expected, about 25% per year, investing in these type of businesses. AWAF is also characterized by taking active part in the management of the invested companies, they require having a presence in the board of management in term of 1/6 to 2/6 of seats, and moreover they carry out monitoring on the company's financial accounts on a monthly basis. AWAF targets investments ranging from US\$ 0.5 to 4 millions, usually combining straight equity with quasi-equity, like <i>prêts participatif</i> , <i>obligation convertible</i> , <i>compte courant associé</i> . A management fee of 20,000 to 30,000 US\$ is applied, plus a 1% of monitoring fee of the amount invested is also applied.
<i>Operations</i>	To date, AWAFF has concluded 5 deals, whose value on average is some US\$ 2 millions. So far, there's no Senegalese company in the portfolio.

Narrative Description

- Aureos Capital was established in 2001 as a joint venture of CDC Capital Partners ("CDC") and the Norwegian Investment Fund for Developing Countries (Norfund). The first regional fund created by Aureos has been the Aureos Central America Fund, who achieved its first closing in 2002. Afterwards, three private equity funds have been established in Sub-Saharan Africa with similar structure, namely the Aureos South Africa Fund, the Aureos East Africa Fund, and the Aureos West Africa Fund.
- To date, the AWAFF has invested some US\$ 10 millions in five companies, active in various sector including manufacturing, leasing, real estates and retails. No ICT business has been financed so far, but a couple of proposals are in the pipeline.

(continued on next page)

PROFILE #1 . Aureos West Africa Fund (continued)

- In management's opinion the problems related to the financing of Senegalese ICT business through venture capital are as follows: i) the ICT SMEs are usually too little and/or too young, and cannot guarantee the level of returns expected by private investors; ii) the real profitable ICT enterprises are the big player of mobile telephony who usually seek for far larger investment and do not allow the strict control on financial entailed by the AWAF's policy; iii) in general the legal framework for private equity is not adequate, instruments such as the issue of preferred shares are not allowed under the Senegalese legislation, and the overall environment is not conducive.

Sources on the Web

- www.aureos.com

PROFILE #2. Fonds de Promotion Economique – Senegal

Salient Features

<i>Denomination</i>	Fonds de Promotion Economique (FPE)
<i>Nature</i>	FPE is a financial institution attached to the Ministry of Economy and Finance but formally independent – in fact FPE is not under the Ministry's budget and its employees are not civil servants.
<i>Location</i>	FPE is based in Dakar
<i>Geographical Coverage</i>	FPE is a national scheme, covering the whole Senegal
<i>Establishment</i>	FPE was established in 1991 and, after a deep restructuring, has been re-launched in 2003
<i>Funding</i>	The FPE's initial capital provided by the Government of Senegal was around US\$ 60 million. At present FPE manages several financing schemes that are sponsored by various bilateral and multilateral institutions, including: the African Bank of Development, the Islamic Development Bank, the West African Development Bank, the Taiwanese International Cooperation Development Fund and the Government of India. The size of each line of financing may vary from the US\$ 15 million of the "Indian line" to some US\$ 40 million of the ADB's line.
<i>Investment Policy</i>	<p>The FPE's main products are the following:</p> <ol style="list-style-type: none">The Refinancing Fund – provides banks and financial institutions (MFI included) with the resources for lending to SMEs. The amount and methodology depends on the line of financing (see below).The Guarantee Fund – provides banks and financial institutions (MFI included) with risk guarantees up to 50% of project value. The beneficiary is charged of a 2% fee per year.The Financial Participation Fund – is specifically aimed at providing SMEs with the share of capital necessary to obtain a bank loan. The contribution cannot exceed the 80% of project value, and may be provided in the form of both capital risk and straight loan. Interest rate is 10% a year. <p>Each FPE's lines of financing are addressed to a specific sector and follows specific financing policies. The lending schemes accessible for ICT enterprises includes:</p> <ol style="list-style-type: none">the ADB line targets SMEs in virtually all sector of manufacturing industry, and it may finance projects up to US\$ 500,000. Interest rate is 7% (plus 4% applied by the bank);the ICDF line is financing deals in almost all sectors, except retails and local transportation, up to US\$ 250,000. Interest rate is 5,5% (plus 4% applied by the bank);the BID line finances micro-enterprises with amounts in the order of US\$ 5,000 to 15,000. The BID scheme is similar to a private equity scheme, then financing is not charged with an interest rate but with a "commission" of 10% per year, plus a 2% management fee.
<i>Operations</i>	Although precise information on the deals financed and the portfolio composition are not available, the estimated amount of lending injected in the national economy in 2005 by FPE is around US\$ 30 million. The 80% of which being channeled through banking industry and the remainder through MFIs. In terms of number of enterprises assisted the rates are opposite: 70–80% of the enterprises access the FPE's credit lines through MFIs while only 20–30% of them access through commercial banks.

Narrative Description

- In 1991 the Senegal's banking industries was undergoing a deep crisis; many institutions bankrupted and only 2-3 commercial banks were still active; interest rates on credit rose to 20%. The government took the decision of creating a fund aimed at filling up the gap

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PROFILE #2. *Fonds de Promotion Economique – Senegal (continued)*

and providing financial services to the Senegalese enterprises. The FPE was then established, and it initially offered financing at a lower rate of 13%.

- During the first decade, the FPE was severely mismanaged, politics biased many of its investment decisions that often trespassed the limits of its mission. In 1999 FPE was on the edge of closing up, when the government restructured it. A new management was hired from the private banking sector, a thorough policy of credit recovering was enforced, and new products were designed. In 2003, FPE's balance was active for the first time after many years of deficit, and since then it has constantly improved.
- FPE has recently set up a fund specifically targeting ICT enterprises. The size of the fund was very limited, US\$ 3 million. Nevertheless they did not succeed so far to allocate the resources because of a weak demand. Therefore they are reconsidering the opportunity of maintaining this fund, provided that ICT firms may access some FPE's generalist lines of credit just as any other company.
- Another new FPE's product is the "Rolling Credits" that will be directed to enterprises to finance the execution of specific contracts. Conditions applied are as follows:
 - financing up to 75% of project value
 - 10% interest rate, plus a 2% commission a year
 - maximum period is 3 years

Sources on the Web

- www.fpe.sn



ANNEX F – PROFILES OF ICT/ICTE SME

ARC INFORMATIQUE

Operations

ARC Informatique was created in 1993 as a sole proprietorship. The first activities were the sale of equipments, PC and peripherals, and some repair and maintenance services. In 1996 ARC was among the first private company entering the business of Internet provision. Later on, another local partner joined in and other services and products have been developed in different segments, such as IT, telephony, radio communication, and energy. The Internet section also improved, with a number of value-added services offered.

At present, ARC with its 3000 subscribers is the second largest ISP of Senegal. However in terms of share ARC represents only the 10–15%. In fact the market is largely dominated by Sonatel Multimedia. Most of ARC's clients are corporate to whom the company offers integrated services that goes from the hosting of the website to the installation of hardware and the 'customization' of software applications.

Today the firm has 30 employees and in 2005 posted a turnover of nearly US\$ 2 millions.

Financing

Established with own capital, ARC has always relied on its own resources in terms of financing. Only recently they explore the possibility of obtaining a loan of US\$ 130,000 from a bank for a Call Center project, but after a long negotiation the conditions applied by the bank were not acceptable, a 100% guarantee, 2 years term of repayment instead of 3 requested, interest rate at 12%, so they eventually dropped it. According to the manager's opinion,

Senegalese banks are not ready to deal with ICT firms because they cannot understand the financing cycle of ICT firms, and they still apply obsolete methodologies that do not fit for this sector. On the other hand, the private equity industry is virtually non-existing.

ARC received some financial support from CDE/Proinvest for this project and a grant from ADEPME is in the pipeline.

But the real ARC's need of financing is much bigger: US\$ 0,5 to 3 millions for the next 3–5 years, just to properly exploit the new opportunities in the VOIP, wireless and Wi-Max technologies.

Other

ARC Informatique is a member of OPTIC, and its director is the president of the ISP commission within the organization. According to the manager the present environment for ISP is a difficult one. The dominant position of Sonatel Multimedia determines market distortions that eventually causes the failure of the smallest players. The situation is also inhibiting the development of new technologies such as the ADSL, in fact ISPs cannot provide ADSL to their clients without prior authorization of Sonatel and the development of services for the ADSL, like TV via Internet, is forbidden.

MANOBI

Operations

Manobi was established in 2000 and has six partners, half of which Senegalese and half French. manobi is present in three countries, Senegal, France, and South Africa. Manobi made with Sonatel a joint venture, thus creating Manobi Senegal. The Sonatel's share of Manobi Senegal is 10%.

The core of Manobi's structure is in Senegal where its first project based on the provision of value-added services through IT platforms for the development of rural economy has taken place. The service, denominated Xam Marsè, informs the farmers in real time

about current prices of their products on the principal markets via SMS. The Xam Marsè service has today 16,000 subscribers. Later on, Manobi developed a package of services for the fishery, including a Xam Marsè-like service on price awareness, and some extra tools, like a weather forecast service via SMS and a geo-localization tool helping rescue boats in case of difficulties. However, the recent crisis of the fishery sector pushed Manobi to seek for other application of its geo-localization device. In particular, the company has elaborated a GIS solution for large multinational companies outside of Senegal.

Plans for the future includes the development of a platform for commercial purposes linking together large purchasers on one end, like Hotels, and the aggregate multitude of supplier on the other end. This would allow real-time awareness on prices and availability of goods, and the possibility of negotiating the best conditions for both part, thus reducing significantly distortions created by asymmetric information. A further exploitation of the geo-localization tool is envisaged.

Manobi Senegal currently employs 12 staff and has a turnover of US\$ 600,000.

Financing

Access to financing is a major obstacle for Manobi whose size and business history does not allow to obtain credit through ordinary commercial banks. There have been contacts with some private equity firms like Aureos and Cauris, but since Manobi is still at an early stage of development it is very difficult to secure an investment. During the seed phase, Manobi benefited of support from the *infoDev* program and from IDRC. Later on they received a small grant of EUR 10,000, from the CDE / Proinvest.

Manobi is at a critical stage, as it passed the start-up phase and is now preparing the scaling-up of its operations. But without support from external sources the company will not be able to make the necessary investment. In fact, internal sources are scarce and a service like Xam Marsè although very important for company's marketing, is presently not making profits.

The value of the various projects for which Manobi is seeking for financing ranges from US\$ 100,000 to several millions.

Other

Since its establishment Manobi has had strong relations with international donors and IFIs, but the concrete assistance received is below the expectations. The management mentioned that after the initial seed phase, the support is interrupted, while the second phase is the most important for the future as it builds the sustainability of the company.

GROUPE ATI

Operations

The Alliance Technologie Informatique (ATI) was established in 1992 as a small retailer of hardware and software. In 1997 it was transformed in Société Anonyme, and the range of activities extended to the development of software application, the IT consulting and the provision of integrated solution. The company grew until the late nineties when the trend changed and ATI begun declining. In 2004–05 ATI underwent a radical restructuring, workforce reduced from nearly 150 staff to 60, and the group fragmented in independent units. The main one—who kept the denomination ATI—maintained under its responsibilities the management of networks, and the equipment sale division, while other divisions became independent firms with the name of BSI, AGES and SEL. ATI remains the main shareholder of these new entities with a typical share of 60%, while the remainder is mainly owned by former division managers.

The sale of equipments and software is still the largest business of ATI that is official distributor for brands as HP, Oracle, CISCO and SAGE for Senegal. The turnover is around US\$ 5.5 millions.

Financing

ATI was established as a sole proprietorship completely financed with internal sources. Overtime it dealt with commercial banks for short-term loans mainly of contract financing nature. But the high costs of financing eventually managed to erode the margins and contributed to the recent decline.

The BSI that is the former software development division of ATI is currently seeking for a US\$ 500,000 financing to set up a Data Center.

Other

The ATI Group has recently made a joint venture with a partner from the U.S. to establish a call center in Dakar. The group is owner of a large building in downtown that will host the new business, while the investment for the equipment has reportedly been made by the American partner. The call center will have 50 positions, and it is expected to be open by the end of June 2006.

AMITELO AFRIQUE

Operations

Amitelo Afrique is an independent subsidiary of a large Swiss ITSP company—Amitelo AG—a Group with a turnover of EUR 20 millions, active in Europe and overseas with various operations spanning from core Telephone Services, to VoIP, ADSL, Call Centers, wholesale of equipments. Amitelo Afrique was incorporated in January 2006, with two Senegalese and three French shareholders. As a subsidiary, it is formally independent from the mother company but received from it limited financial support for the start-up, as well as technical and administrative assistance. Amitelo Afrique specializes in services based on telecommunication and Internet technologies (i.e. VoIP), integrated with other services like setting up of networks, cabling, sale of equipments and maintenance.

Amitelo Afrique has obtained two main contracts so far: i) a contract from the Senegalese Ministry of Interior for the supply of 200 PCs and other equipments, and for the installation of broadband interconnection for some government offices; and ii) a contract with PAMECAS—one of the largest MFI in Senegal—for the implementation of an internal voice and data network based on VoIP technology, interconnecting the 30 PAMECAS' branches.

Due to the recent establishment it is too early to assess the company's performance, however, the director estimates to generate in the first year a turnover of US\$ 400,000. Amitelo Afrique currently employs 10 staff.

Financing

The start-up capital has been provided by the mother company, but management and staff are

currently investing in the enterprise, having fixed their wages well below the sector average. Amitelo Afrique is currently facing a financial problem related to the fact that its bank is not willing to pre-finance the contract with the Ministry because of the uncertainty and the tremendous delay, more than 6 months, of payments characterizing public bodies) The company is therefore seeking for other possible financing sources in order to be able to perform the contract.

An estimation of the financial need of Amitelo Afrique, including the necessary purchase of equipments and the hiring of new professionals, is around US\$ 200,000 for the next 2 years. An acceptable interest rate should not exceed 9–10%.

Other

The management is aware that a 2–3 years period of sacrifices is necessary in order to consolidate the company, and they do not expect fast and tremendous growth in the short run. The sale of equipment is not considered as a profit-making activity, in fact margins are thin and a single delay in payments is sufficient to volatilize them. But on the other hand, the sale of equipments is a strategic tool to establish solid partnership with big clients and the possibility to make more profitable businesses with them, through contracts for IT consultancy, assistance and maintenance, customized solution.

GLOBAL COMPUTER SOLUTION

Operations

Global Computer Solution (GCS) is a small ICT enterprise created by an ICT engineer in 1997. The

enterprise was transformed in a limited company in 2000 when a new partner joined in. The company has been established with 100% Senegalese capital coming from internal sources.

GCS's activities are shared between two departments:

- i. the hardware sale and maintenance department, that includes an equipped atelier for PC and peripherals repairs;

- ii. the software development department, that implement customized solution in the field of administration, accounting, stocks management etc.

GCS has developed a good experience in developing applications for some local insurance companies, who are still among its main clients. Recently they have begun working on IT solutions for health-care institutions.

Until 2004 GCS remained a micro enterprise with only 3–4 staff but in past two years it has grown at a pace of 15% per year and more than doubled its employees. Last year GCS generated a turnover of some US\$ 150,000.

Financing

At the time of its establishment and during its first 6–7 years of existence, GCS was characterized by a low profile attitude and a sort of “craftsman” approach. By consequence, the enterprise was able to fulfill its limited needs of operating capital by recourse to its revenues. But with the growth occurred in last two years the company’s perspectives have change and GCS is considering the possibility of new investments in order to consolidate the present status. They have already contacted two commercial banks to borrow some US\$ 10,000 necessary to open a presence in a different area of the city, and to improve their equipments, but the application has been rejected.

The cost of financing would not be an obstacle for them as in principle they stand ready to pay an interest rate in line with the market.

Other

Due to its history, GCS appears today as a company trying to escape the sort of isolation that characterized its earlier stages. GCS in fact is not a member of any business association, and its visibility appears weak and inadequate, no website, and located in a secondary street of an anonymous suburb. At the same time the managements is fully aware of the necessity of an improvement in the enterprise’s capacity of planning its investment and dealing with financial institutions. Towards this end they are not interested in simply securing a loan rather than in receiving a step by step financial assistance.

CALL ME – GROUPE CHAKA

Operations

Call Me is the Groupe CHAKA’s multimedia contact center. Created in 2002 as a CHAKA’s division, in 2005 Call Me was incorporated as a formally independent enterprise; however the capital is still 100% owned by the mother company.

The Call Me is an advanced Call Center and BPO operator working with both national and international clients. Its products include: customer information centre, long-distance technical support, telemarketing, and customer care consultancy. Among its client it is worth to mention Sentel, the second GSM operator, and IKATEL Mali.

Call Me has opened a presence in Mauritania, Mali and Ivory Coast, and is currently planning to expand to Benin and Burkina Faso. Some 200 staff is employed at Call Me.

Financing

Call Me was established as a division of Group Chaka, and its start-up has been mainly financed through internal sources. The company also benefited of support from CDE / Proinvest (some EUR 40,000), and from the Government’s Agency *Bureau du Mise à Niveau*, who partly financed workforce training. Regarding banks and other financial institutions, Call Me did not make recourse to these financing options so far.

At present, Call Me is financially independent but since it separates from mother company in late 2005, no data on its financial performances are available yet.

The management estimates the company’s financial needs being in the order of US\$ 100,000 to 200,000 for the next three 3 years. Training and remuneration of personnel is the primary feature of the enterprise’s operating costs, accounting alone for more than 70% of the overall expenditure.

Other

The Call Me’s mother company was established in 1994 with the name of Chaka Computers. Since that time the company grew continuously and the Groupe CHAKA is today one of the leading and most innovative Senegalese Société de Service et

d'Ingénierie en Informatique (SSII) with activities in many fields including : i) supply of servers for telecommunications; ii) wide range of value-added business solutions; iii) money transfer services—through the subsidiary *Money Express*; iv) customized IT solutions; v) biometric technology devices; and vi) Call Center and BPO service through the subsidiary *Call Me*. The estimate number of employees of Groupe CHAKA is over 300 staff.

GSIE TECHNOLOGY

Operations

GSIE Technology is an SSII incorporated in Senegal and with capital 100% locally owned. GSIE specializes in two domains:

- i. the provision of value-added services for telecoms like services on SMS and WAP platforms and mobile banking services;
- ii. and the realization of various applications for banks and financial institutions such as: portfolio management solutions; credit management solutions; and e-banking.

Regarding the first domain of activity GSIE geographical coverage includes Senegal, Mali and Togo and its main client is the largest mobile brand *Alizé*, while for the banking solution development GSIE has worked for the largest Senegalese bank SGBS as well as for other institutions in France, Burkina Faso and Gabon.

Last year the company generated a turnover of some US\$ 750,000. The current number of employees is fifteen.

Financing

GSIE was established with owners' capitals, and currently fulfill its financial needs through internal sources. GSIE never applied for a bank loan or any other credit scheme because the group is fully aware of the difficulties for a small ICT firm to obtain a financing from these sources. The director's view is that the establishment of a credit guarantee scheme could represent a possible solution to tackle this issue.

According to the director, the main priority for GSIE is to invest in R&D. GSIE's activities are in fact based on platforms whose technology is coming from abroad, but, in his opinion, in Senegal there are competences that would allow the development of an advanced IT sector able to compete with foreign companies. GSIE has set up a development strategy for the next 5 years that requires an investment of US\$ 1.million, to be employed in R&D activities, in marketing, and to diversify the operations.

Others

The GSIE Director is also Chairman of the ICT business association OPTIC. As such, he confirms that the issue of access to financing is a common problem for all the small enterprises in the ITC sector. Although they have begun discussing about possible solutions, no concrete measure has been identified yet, and each entrepreneurs is currently playing for himself seeking support through some government agencies like ADEPME, or through IIOO like CDE, or the World Bank.

About *infoDev*

infoDev is a partnership of international development agencies, coordinated and served by an expert Secretariat housed at the World Bank, one of its key donors and founders. It acts as a neutral convener of dialogue, and as a coordinator of joint action among bilateral and multilateral donors—supporting global sharing of information on ICT for development (ICT4D), and helping to reduce duplication of efforts and investments. *infoDev* also forms partnerships with public and private-sector organizations who are innovators in the field of ICT4D.

infoDev's mandate is to help maximize the impact of ICTs in global efforts to achieve the internationally-supported Millennium Development Goals. These include improving education and health services, making public institutions more efficient and transparent, supporting rural livelihoods, and contributing to economic growth by supporting small and medium-sized enterprises that use ICT for their business.

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