SECTOR STRATEGY DOCUMENT FOR TELECOMMUNICATIONS AND INFORMATION AND COMMUNICATION TECHNOLOGIES

2005 - 2015
SECTOR STRATEGY FOR TELECOMMUNICATIONS AND INFORMATION AND COMMUNICATION TECHNOLOGIES

2005 - 2015
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LIST OF ACRONYMS

NA : National Assembly
ANTIC : National Information and Communication Technologies Agency
ART : Telecommunications Regulatory Agency
TO : Turnover
CADI : African Centre for Development of the Internet
CAMPAC : Packet-like data transmission network of CAMTEL
CAMTEL : Cameroon Telecommunications
CENADI : National Centre for the Development of Computer Sciences
CFPA/CRTV : Audiovisual Professional Training Centre/Cameroon Radio Diffusion Television Corporation
CNDT : National Centre for Development of Technologies
DCI : Department of International Cooperation
DPE : Division for Planning and Technical Studies of Telecommunications (MINPOSTEL former organisational chart)
DSX : Douala Stock Exchange
DSRP : Poverty Reduction Strategy Paper
ENSP : National Advanced School of Engineering
ENSPPT : Advanced School of Mass Communication
e-X : Generic Term describing such services : e-commerce, e-learning, e-health, etc.
IAP : Internet Access Provider
GFC : Gross Fixed Capital
EIG : Economic Interest Groups
GSM : European Mobile Telephone Standard (Global service/ System for Mobile communication)
HDI : Human Development Index
INMARSAT : International Maritime Satellite Telecommunications
INDAFTEL : Industrialisation of African Telecommunications
IP : Internet Protocol
ISPIAP : Internet Service Provider / Internet Access Provider
ITU : International Telecommunications Union
PCM : Pulse-Code Modulation
MINATD : Ministry Territorial Administration and Decentralisation
MINCOM : Ministry of Communication
MINDEF : Ministry Delegate at the Presidency in charge of Defence
MINCOMMERCE : Ministry of Commerce
MINPLAPDAT : Ministry of Planning, Development Programming, Regional Development
MINFED : Ministry of Finance
MINFIN : Ministry of Finance
MINI : Ministry of Industry, Mines and Technological Development
MINJUSTICE : Ministry of Justice
MINRESI : Ministry of Scientific Research and Innovation
MINPMEESA : Ministry of Small and Medium sized Enterprises, Social Economy and Handicraft
MINPOSTEL : Ministry of Posts and Telecommunications
MMS : Multimedia Message Service
MSC : Mobile Switching Centre
MTN : Mobile Telecommunications Network
MMDS : Multipoint Multichannel Distribution System
OIAF : Inter-ministerial Organ in charge Assigning Frequency Bands
ONG : Non-governmental Organisation
PABX : Private Automatic Branch Exchange
PDH : Plesiochronous Digital Hierarchy
PRC : Presidency of the Republic of Cameroon
GDP : Gross Domestic Product
SAT3 : Name of the fibre optic, sub-marine cable with a landing point in Douala
SCM : Société Camerounaise de Mobile (Orange)
SDH : Synchronous Digital Hierarchy
PMO : Prime Minister's Office
STM : Synchronous Transfer Mode
ICT : Information and Communication Technology
VAT : Value Added Tax
EU : European Union
ITU : International Telecommunications Union
VA : Value Added
VSAT : Very Small Aperture Terminal
xDSL : Digital Subscriber Line [x=A(asymmetry) x=S(Symmetry)]
WAP : Wireless Access Protocol
STATEMENT OF THE SECTORAL POLICY OF TELECOMMUNICATIONS AND INFORMATION AND COMMUNICATION TECHNOLOGIES
1. INTRODUCTION

The structural adjustment programmes adopted at the beginning of the 90s did not produce the results expected to get Cameroon out of the economic crisis that broke out at the end of the 80s. In a global perspective of restructuring the national economy, the Head of State on June 1, 1995, ordered the de-commitment of the State from production activities, like the operation of the postal services and Telecommunications.

The history of economic policies implemented in Cameroon since independence has been marked, it should be recalled, by the adoption of five-year development plans as tools of scheduling government investments. This was the period above all of State monopoly and of granting of subsidies to many sectors, including in the field of Telecommunications, the evolution of which, by way of a preamble, is reviewed succinctly in the lines that follow.

1.1. Period from 1960 to 1988

After Cameroon became a sovereign State, the Department of Telecommunications of the Ministry of the Posts and Telecommunications (MINPOSTEL) was, until 1970, in charge of most of the missions of orientation, regulation, control, operation, follow-up and monitoring of telegraphy, telex, Morse and telephony.

In order to satisfy the needs in human resources development, the State set up in 1969, the National Advanced School of Posts and Telecommunications (ENSPT). In order to meet up with the increase in international traffic and benefit from the modern technological facilities, more advanced than those installed so far in Cameroon, the State set up in 1972, the Corporation known as International Telecommunications of Cameroon (INTELCAM), which confirmed the separation of the operation of domestic telecommunications from that of international telecommunications. Standard A dish antennas were installed in Zamengoe near Yaoundé (1972) and Bépanda near Douala (1986).

In spite of the heavy investments made by the State, the performances were rather low: the social demand for telecommunications services remained extensively unsatisfied, while tariffs continuously rose, during a period marked by the wastage of material resources, and the obsolescence of technical equipment.

1.2. Period from 1988 to 1998

A la fin de l'année 1987, le Cameroun marque une première rupture dans la gestion stratégique des Télécommunications. Le Chef de l'Etat promulgue en effet la loi N° 87/021 du 17 décembre 1987 porAt the end of 1987, Cameroon witnessed a first interruption in the strategic management of Telecommunications. The Head of State enacted law N° 87/021 of December 17, 1987 to create the Annex Budget of Posts and Telecommunications and by so doing, granting a financial autonomy to MINPOSTEL.

The Annex Budget of MINPOSTEL, as far as the field of Telecommunications is concerned, constituted a concrete respond to the national preoccupation to promote the development of Telecommunications by constantly improving on the efficiency of management with regard to the ever-increasing needs of financing. In the course of the period under review, MINPOSTEL made a great technological stride toward the digitalization of its system of telecommunications, with the acquisition of the Yaoundé and Douala digital exchange stations and later, the acquisition of the digital sta-
tion of the Southwest Province. The main transmission trunks were also digitalized.

The balance sheet for the period under review showed a public Administration of Telecommunications rather slow to adjust and to innovate, and that did not permit our country to take full advantage of the execution, initially more flexible, of the Annex Budget as far as the field of Telecommunications and Information and Communication Technologies (ICT) was concerned. As an illustration, the number of telephone lines of the national network did not exceed the asymptotic level of 100,000 installed lines.

It is within this context that the Head of State, as pointed out above, ordered the de-commitment of the State from production activities. This was done in 1998 in the field of Telecommunications, with the adoption of a series of legal and regulatory measures, thereby marking the second interruption in the management of Telecommunications, and that was characterized by:

- The setting up of a new legal and regulatory Telecommunications framework, with the enactment of Law n° 098/14 of July 14, 1998 governing Telecommunications in Cameroon;
- The separation of Postal activities from that of Telecommunications and ICT;
- The reassignment to MINPOSTEL of the missions of strategic orientation, regulation, follow-up and monitoring of the sector;
- The setting up of an independent and autonomous Telecommunications Regulatory Agency;
- The granting to Cameroon Telecommunications (CAMTEL), (the semi-public corporation born from the merging in 1998 of the Department of Telecommunications of MINPOSTEL with INTELCAM), of the exclusive rights on the operation and provision of fixed telephone services;
- The sequenced liberalization by introducing two private mobile operators, access / Internet services providers, value-added service providers (total liberalization) and providers of access to the space segment (partial liberalization);
- A first attempt, aborted, at privatising the CAMTEL (2001).

2. PRESENT SITUATION

The package of measures mentioned above brought about a meaningful increase in the access to Telecommunications and ICT services. Here are some illustrations:

- Telephone users in general increased from about 100,000 in the year 2000 to about 2,000,000 in 2005, thus bringing the overall ratio of phones to population from 0.67% to 12.3%;
- A fibre optic backbone has been installed along the Doba-Kribi pipeline;
- A landing point of the SAT-3 submarine cable has been opened in Douala with a capacity of 2.5 Gbit/s;
- About 300 Billions CFA francs have been invested in fixed and mobile networks during the period from 1999 to 2004;
- More than 20,000 direct and indirect jobs have been created;
- More than 60 providers of Internet access and service at value-added are present on the market;
- There is a steady growth in the Internet traffic and in the number of users.

It is however important to note that as of December 31, 2004,
STATEMENT OF THE SECTORAL POLICY OF TELECOMMUNICATIONS AND ICT

Cameroon was still backward, as the following physical information show:

- Fixed telephone density: 0.7%;
- Mobile telephone density: 11.73%;
- Percentage of Internet users: 0.16% of the population.

As a matter of fact, by way of comparison, taking the example of two African countries, one notes the following information for the same period:

**Morocco:**

- Fixed telephone density: 4.03%;
- Mobile telephone density: 29.42%;
- Percentage of Internet users: 1.55%.

**Senegal:**

- Fixed telephone density: 2.20%;
- Mobile telephone density: 12%;
- Percentage of Internet users: 2.20%.

3. DIAGNOSIS

The reform process carried out following the signing of Law n° 98/014 of July 14, 1998 governing Telecommunications in Cameroon has today shown its limits; notably through:

- an incoherent strategy of development of Telecommunications and Information and Communication Technologies;
- an incomplete regulatory framework;
- a control and follow up system that need to be perfected;
- inadequate infrastructures leading to a rather low penetration rate for the segments of fixed, mobile telephone, and the Internet and this notably in the rural area;
- insufficient financial resources to sustain the setting up of reliable and solid telecommunications infrastructures, the literature on the subject of which reveals that in spite of the liberalization of the sector, these infrastructures are rarely taken over by the private operators and as a matter of fact fall under national sovereignty;
- telecommunications services, the quality and tariff structure of which are less encouraging to the consumer, and cannot therefore foster the development of the Internet, which essentially is dependent on the cost of telecommunications and of access;
- a rather low involvement of the national and international private sectors in a strategic and decisive area for the development of Cameroon;
- an unfulfilled expectation in terms of the creation of jobs.

There is therefore an urgent need to formulate a new strategy capable of giving a clearer picture, by 2015, of the development of the Telecommunications and ICT field, for the purpose of better structuring and planning its development projects in view of ensuring an optimal programming.

4. VISION

"Our country needs a generalized access to the Internet", President Paul Biya declared in his keynote address of November 3, 2004, the day following his election for a new seven-year term of office.
As a matter of fact, the Internet, emblem of the Information Society, has been a constant feature in the speech of the President these past years, beginning from his address to the Cameroonian Youth in 1997, through his speech during the inauguration of the Multimedia Centres of the Lycée Leclerc and the Bilingual High School Essos. Since then, the Head of State has not stopped calling on Cameroonians of all ages and the two sexes to enter definitely into the Information Society.

Cameroon, a signatory of the New Partnership for Africa Development (NEPAD), and which subscribed to the realization of the Millennium Development Goals (MDG) intends to make use of all the potentials and opportunities offered by the Information and Communication Technologies to combat poverty and exclusion.

The unavoidable prerequisite to linking up to the Information Society is to install solid and reliable Telecommunications Infrastructures. Cameroon intends to make Telecommunications and ICT an essential driving force of its development strategy.

And the President of Republic, H. E. Paul Biya already stressed this idea vehemently on November 30, 2002, when he declared, about the effective emergence of an Information Society, that the latter should help to "strengthen the unity of our people and to fight against inequalities by enabling many persons to have access to knowledge"… and so, "put the country in the best conditions to face the third millennium".

Several national initiatives are being taken, starting with the Telecommunications and ICT field, with the purpose of provoking a national response to the problems of development and the fight against poverty faced by Cameroon. Essentially, with regard to the activities placed under the aegis of the Ministry of Programming, Plan and Regional Development (MINPLAPDAT) and the Ministry of Posts and Telecommunications the following can be singled out:

- In April 2003: the identification of ICT as levers in many key strategic areas of action in the Poverty Reduction Strategy Paper (PRSP);
- In August 2004: the seminar on the validation of the diagnosis of the Telecommunications and ICT field, with the participation of Development Partners;
- In October 2004: the seminar on the validation of the objectives and the strategic areas of the Telecommunications and ICT field, with the participation of Development Partners;

Concurrently with these activities, several approaches to the development of ICT are in use in other Cameroonian Administrations. These are notably:

- the drawing up of a government's programme of action for the Information and Knowledge Society by the Ministry of Scientific Research and Innovation;
- the implementation of the ICT strategy in the Ministry of Higher Education;
- the realization of the strategy of including ICT in the management of State personnel by the Ministry of the Public Service and Administrative Reform, thanks to the Integrated Computer Management System for State Personnel and Salaries (SIGI-PES).

These national initiatives are backed up by other external initiatives like:

- the initiative of the Economic Commission for Africa (ECA)
STATEMENT OF THE SECTORAL POLICY OF TELECOMMUNICATIONS AND ICT

on the definition of a National Information and Communication Plan (NICI Plan);
- the initiative of the UNDP on ICT policy in Cameroon within the framework of the Tokyo International Conference for African Development II (TICAD II);
- the support by the ITU in the development of the ICT sector strategy for Cameroon;
- the support by UNESCO of the setting up of rural community radio stations.

It should be pointed out that because of its geographical position on the one hand, and on the other hand, of the opportunities and prospects concomitantly offered to it by the development of the Doba-Kribi fibre optic and the landing point of the SAT-3 in Douala, Cameroon can and must benefit as the sub-regional hub for Telecommunications.

The national Telecommunications and ICT strategy appears then, not only as an instrument of structuring and planning that would increase the output of all areas of activities of the national life (Administration, Agriculture, Culture, Trade, Tourism, Health, Education...), but also as a powerful instrument of sub-regional integration, intended to lead Cameroon to play, in the short-term, the Hub role in Central Africa.

Vast and efficient electronic communication infrastructures are the basis of any knowledge economy. They are required to play a crucial role in economic development and in the reduction of poverty. They are indeed:

- essential for ensuring growth;
- needed for the development of the productive capacity of all sectors of the economy;
- indispensable for linking up a country to the world economy;
- a guarantee to the competitiveness of enterprises and the full efficiency of public administration services;
- a guarantee also to transparency, Good Governance, and the pre-eminence of rule of law.

5. THE OBJECTIVES OF THE TELECOMMUNICATIONS & ICT STRATEGY

The accessibility and the availability of Internet services in Cameroon remains the lowest in the world and in Africa. Access to the Internet service is relatively very expensive when compared to countries of the North and is essentially restricted to the two main cities of the country, Douala and Yaoundé.

It has been proven today that knowledge is the key to development, and that its expansion in the economy and the society implies a generalized networking and which is open to the world. Consequently, the accessibility and the availability of Internet services to all (like e-mail, the web, IP telephony…), are prerequisites for accelerating growth, enhancing the competitiveness of enterprises and generally for the endogenous, progressive and complete development of the skills needed for the reduction of poverty.

The development of national Telecommunications infrastructures and the promotion of an industry of Telecommunications open, competitive and innovative throughout Cameroon are a national priority to enable Cameroon to meet its great expectations.

The objectives targeted by the Government in the Telecommunications and ICT field are notably:
STATEMENT OF THE SECTORAL POLICY OF TELECOMMUNICATIONS AND ICT

● to increase the fixed telephone density from 0.7% in 2005 to 30% in 2015;
● to increase the mobile telephone density from 15% in 2005 to 50% in 2015;
● to provide 20,000 villages with modern telecommunications facilities by 2015;
● to put at the disposal of the public an offer of access at 2 Mb/s in all towns having a digital exchange station before the end 2007;
● to construct an interuniversity network of Internet access by depending on the national fibre optic backbone and drawing up, by the end of 2008 latest, a development plan for private institutions, secondary and primary schools;
● to construct, by the end of 2008 latest, a telemedicine network and other related
● e - services by relying on the aforementioned backbone;
● to double the contribution of the sector to the GDP by 2010 (2005 estimate: 2.5% of the GDP);
● to multiply by 50, from now till 2015, the number of direct and indirect jobs in the Telecommunications and ICT field.

The implementation of this global Telecommunications and ICT strategy is based on three key areas, namely:

First key area: Building and updating the legal, regulatory and institutional framework;

Second key area: Increasing the offer of services in quantity, quality, and at affordable prices;

Third key area: Increasing the use of ICT and enhancing the industrial fabric of ICT enterprises.

6. PROGRAMME OF ACTION

The main actions that the Government intends to carry out are:

6.1. First key area: Building and updating the legal, regulatory and institutional framework

This involves notably:

- adapting the legal and regulatory framework to technological convergence and services before June 2007;
- finalising the regulatory framework for the access of rural areas before the end of 2005;
- defining the working mechanisms for the functioning of the Special Fund for Telecommunications before mid 2006;
- setting up the OIABF and making it go operational by December 31, 2006 latest;
- strengthening the controlling activities of ART by:
  a) improving the assembling of the infrastructures of operators and the publication by December 31, 2006 latest of major guidelines for the settlement of disputes;
  b) drawing up a new numbering plan before the end of 2007;
  c) improving on the management and monitoring of frequency spectrums before the end of 2006.
- Adopting before December 2007 a legal and regulatory framework to encourage electronic transactions (including aspects
related to electronic signature, the security and encryption, protection of personal data, the protection of copyrights);

- Updating training programmes, and promoting research - development in the field of Telecommunications and ICT by:

  a) issuing an invitation to tender for the purpose of conducting a study related to the complete restructuring of the ENSPT before mid 2006;
  b) starting new degree courses at the ENSPT before the end of 2008.

- Strengthening statistical collection for Telecommunications and ICT before the end of 2006 by:

  a) adopting regulatory provisions for collecting statistical information from operators and service providers, with the support of ART, before mid 2006;
  b) setting up a National Electronic Communications and ICT Observatory before 2007.

6.2. Second key area: Increasing the offer of services in quantity, quality, and at affordable prices by:

- reiterating the total liberalization of the sector of communication Infrastructures, notably:

  a) the total liberalization of the international access not later than December 31, 2008;
  b) the total liberalization of fixed services not later than December 31, 2008;
  c) the granting of third-generation mobile licences before the end of 2009;
  d) the total liberalization in the areas not covered by granting licences through the Special Fund for Telecommunications before the end of 2010.

- Strengthening and repositioning the historic operator CAMTEL as the provider of fixed, mobile services and the setting up of a broadband network for the resale of capabilities by:

  a) transferring to CAMTEL the use of the fibre optics along the oil pipeline before January 2006;
  b) approving the privatization strategy of CAMTEL with the entry of a majority strategic partner before December 2005;
  c) issuing the invitation to tender for the privatization of CAMTEL before April 2006;
  d) implementing the recommendations of the corporate plan of CAMTEL as issued by the Cabinet ICEA/Mazars not later than May 2006;
  e) the exclusive rights granted to CAMTEL over the resale of the fibre optic trunk networks capacities until the end of 2010.

- Strengthening the control activities of ART to increase offer with:

  a) the publication of the major guidelines identifying the principles, technical requirements and tariff for access to infrastructures by operators (sharing of infrastructures, open access to national and international infrastructures) before the end of 2006;
  b) the publication of major guidelines for deblocking and transportability before mid 2007 for implementation before the end of 2007;

- the effective set up of the Special Fund for Telecommunications by:

  a) mobilizing financial resources from operators before May 2006;
  b) clarifying the mechanisms of use of resources by the Special Fund for Telecommunications before September 2006;
c) setting up transparent and competitive mechanisms for use of the Special Fund for Telecommunications before January 2007;

- the development by CAMTEL of a national broadband network by:
  a) finalizing the feasibility study of the national, sub-regional and trans-African network, before mid 2006;
  b) upgrading the broadband network between the end of 2006 and 2009;
  c) interconnecting the broadband network to the sub-region before the end of 2007.

- the positioning of Cameroon as telecommunications hub for Central Africa by:
  a) developing the national fibre optic network;
  b) accelerating the construction of complementary infrastructures to connect the fibre optic to the landing point of the SAT-3;
  c) initiating dialogue between Chad and the Central African Republic for the joint operation of the Doba-Kribi fibre optic link.

6.3. Third key area: Increasing the use of ICT and enhancing the industrial fabric of ICT enterprises by:

- setting up before mid 2006, while waiting for the effective installation of the National Information and Communication Technologies Agency (ANTIC), an inter-ministerial steering committee on the inclusion of the ICT component in all Projects, and the Technical Secretariat of which is run by the Ministry of Posts and Telecommunications;
- finalizing the diagnosis of the strategy and the plan of actions on the use of ICT to be presented to the Government before the end of 2006;
- issuing an invitation to tender before the end of 2006 for the purpose of conducting a study on the access to the financing of SME/SMI and the ICT industry;
- organizing a yearly Forum with effect from 2007 with the assistance of financial institutions (including micro finance institutions) to garner support for the setting up of national SME/SMI in the Telecommunications and ICT field;
- promoting ICT Engineering services oriented enterprises, including telework;
- promoting the use of patents that fall within the public domain and free software;
- developing, spearheading and promoting the contribution of the ICT industry to national economy;
- formulating a national strategy of development of capacities in the ICT sector (Cf. the complete Restructuring of the ENSPT);
- supporting the setting up of enterprises in the sector and the development of international strategic partnerships, notably by improving the conditions of reception of delocalization.

7. CONCLUSION

The Government is committed to implementing the present sector strategy for Telecommunications and Information and Communication Technologies.

A framework for the follow-up and assessment of this sector strategy is going to accompany its proper implementation. The assessment of the results obtained by the Telecommunications and ICT sector strategy and the updating of these results will be done every two years, with effect from the date of implementation, until 2015.
The Government would like to count on the support of all national, public and private actors, international private operators, as well as on the support of friendly Countries, development Partners, some of whom have been keenly involved in the formulation of the National Telecommunications and Technologies Strategy.

**The implementation of the sector strategy is a challenge to Cameroonian of all ages and the two sexes whom the Head of State is inviting urgently to adopt the ICT Culture, or the e-culture, or risk being abandoned at the roadside.**

Cameroon would indeed prohibit itself from taking part in the major appointments of the newborn Millennium, the Millennium of Information and Knowledge Society, if Cameroonian, for whatever reason, ignored the Revolution, at least as important as that of printing, which is taking place under their very eyes: the Digital Revolution.
SECTOR STRATEGY FOR TELECOMMUNICATIONS AND INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)
The Sector Strategy Document for Telecommunications and Information and Communication Technologies (ICT) of Cameroon was released on the eve of the holding of the second phase of the World Summit on Information Society (WSIS) that was scheduled to hold in Tunis in mid-November 2005.

In its Vision of development, Cameroon put forward as an essential prerequisite to this summit, the availability and dissemination of learning and knowledge, which make Telecommunications and ICT possible. That is why the Head of State, H. E. Paul Biya declared, in his address to the Nation on 3 November 2004, the day after he was elected to serve a new seven-year term of office: "Our country needs a generalised access to the Internet".

How can our country build a generalised access to the Internet; the Internet understood as the emblem of the Information Society? The Sector Strategy Document for Telecommunications and ICT provides tentative answers to these major problems.

This Document, following the methodology laid down in the area by the Ministry of Planning, Development Programming and Regional Development (MINPLAPDAT), was drafted by an Inter-ministerial Steering Committee set up in the Ministry of Posts and Telecommunications that manages national Telecommunications Infrastructures. It was able to benefit from the intellectual contribution of development partners, notably, the World Bank, European Union, and the International Telecommunications Union.

The development of the Telecommunications field in Cameroon is in three major stages (Diagnosis of the field). What should be borne in mind is that today this field has been liberalised; that access to telecommunications services and ICT has increased significantly in the past five years; nevertheless, despite this increase, Cameroon is still backward, when compared to other countries.

Cameroon however has substantial assets, not only to overcome this backwardness, but also to build, in due time, a viable Information Society. The sector strategy for Telecommunications and ICT has as objectives the following, to:

- increase the fixed telephone density from 0.7% in 2005 to 30% in 2015;
- increase the mobile telephone density from 15% in 2005 to 50% in 2015;
- provide 20,000 villages with modern telecommunications facilities by 2015;
- put at the disposal of the public an offer of access at 2 Mb/s in all towns having a digital exchange station before 2007;
- construct an interuniversity network of Internet access by relying on the national fibre optic backbone and drawing up, by the end of 2008, a development plan for private institutions, secondary and primary schools;
- construct, by 2008, a telemedicine network and other related e-services by relying on the aforementioned backbone;
- double the contribution of the sector to the GDP by 2010 (2005 estimate: 2.5% of the GDP);
- multiply by 50, from now till 2015, the number of direct and indirect jobs in the Telecommunications and ICT field.

The Sector Strategy Paper for Telecommunications and ICT can be divided into three main sections: (1) Description of the field; (2) Diagnosis of the field; (3) and The Proposed Strategy.
The Telecommunications field has been in the process of liberalisation since the enactment of Law n° 98/014 of 14 July 1998 governing telecommunications in Cameroon.

Within this context, the current telecommunications environment has been characterised among other things by:

- the de-commitment of the State from the production sector, including that of the operation of telecommunications networks;

- the setting up of an autonomous and independent telecommunications regulatory organ, responsible for guaranteeing the exercise of a healthy and fair competition between operators, for the benefit of users;

- the presence of one public operator of the fixed telephone and two private operators of the mobile telephone;

- the existence of about sixty providers of Internet access/services and value-added services;

- a certain number of providers of access to the space segment.

At the moment, what is noticed is:

- an incoherent strategy of the development of telecommunications and information and communication technologies (ICT);

- inadequate infrastructures;

- a penetration rate that is still low for the fixed and mobile telephone segments, the Internet and this particularly in the rural area;

- prohibitive tariffs for the consumer;

- low competition within the mobile telephone segment;

- a low involvement of national and international operators in a strategic and crucial sector for the development of Cameroon;

- an unfulfilled expectation in terms of job creation.

There is therefore urgent need to develop a new strategy that would give a long-term clearer picture (by 2015) of the development of the Telecommunications and ICT field, for the purpose of structuring and planning development projects in order to ensure optimum programming.

1.- CONTEXT AND JUSTIFICATION
2 - DEFINITIONS AND DESCRIPTION OF THE FIELD

2.1 - DEFINITIONS

The basic Instruments (Constitution and Convention) of the International Telecommunications Union (ITU) ratified by Cameroon and the law governing Telecommunications in Cameroon define "telecommunications" as being "any transmission, generation or reception of signs, signals, images, sounds or information of any nature by wire, optic, radio or any other electromagnetic system ".

In very simple terms still, telecommunications, is all the means and resources deployed to enable a distant transmitter or receiver to exchange in real time or in non-real time information of any nature through wire connection and/or without a wire.

The European Union (EU) defines electronic communication as "the generation, transmission or reception of signs, signals, written matter, images or sounds, through an electromagnetic channel" and the electronic communication network as "any facility or any set of transmission or distribution facilities as well as, if any, the other means that ensure the routing of electronic communication, notably those of communication and routing". Considered especially as electronic communication networks are the following: satellite networks, ground networks, systems using electrical power grid in as much as they provide electronic communication routing and networks ensuring distribution or used for the distribution of audiovisual communication services.

The ICT sector is made up of a range of service industries and facilities, among which are the following: the offer of Internet services and access, telecommunications services and equipment, computer equipment and services, the media and radio broadcasting, electronics, providers of marketing intelligence, network information services, library services and documentation centres …

2.2 - DESCRIPTION

2.2.1 - Global description

The structure of the field of Telecommunications is as shown in the diagram below:
DEFINITIONS AND DESCRIPTION OF THE FIELD


Republic of Cameroon
DEFINITIONS AND DESCRIPTION OF THE FIELD

The table below shows the basic missions of the Telecommunications and ICT field and the main stakeholders for each component:

**Table No.1: Basic missions of the field and the main stakeholders**

<table>
<thead>
<tr>
<th>No</th>
<th>Component</th>
<th>Mission</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supervision</td>
<td>Formulation and follow up of implementation of the sector policy</td>
<td>PRC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Cooperation</td>
<td>- PRC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Representation</td>
<td>- NA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management of frequency spectrums</td>
<td>- PMO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- MINPOSTEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- International Organisations</td>
</tr>
<tr>
<td>2</td>
<td>Legislation and</td>
<td>Drawing up of a legal and institutional framework</td>
<td>- MINPOSTEL</td>
</tr>
<tr>
<td></td>
<td>regulations</td>
<td></td>
<td>- MINJUSTICE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- OIABF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- ART</td>
</tr>
<tr>
<td>3</td>
<td>Control</td>
<td>General monitoring of activities of operators. Follow up of application</td>
<td>- CAMTEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of the regulations</td>
<td>- MTN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protection of consumers</td>
<td>- ORANGE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management of scarce resources (frequencies, numbers, radio stations...)</td>
<td>- ISP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arbitration of disputes between operators</td>
<td>- Services providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market control</td>
<td>- Banks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definition of principles to govern the fixing of charges</td>
<td>- Standardisation Structures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Radio/television Operators</td>
</tr>
<tr>
<td>4</td>
<td>Operation</td>
<td>1. Offer of unlimited services/access</td>
<td>- CAMTEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Offer of products and services</td>
<td>- MTN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Development of Infrastructures</td>
<td>- ORANGE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Fixing and application of charges based on actual costs</td>
<td>- ISP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Quality of service</td>
<td>- Services providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Banks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Standardisation Structures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Radio/television Operators</td>
</tr>
</tbody>
</table>
## Definitions and Description of the Field

### 5. Training
- Human resources development
- Capacity building
- Matching training/needs of the sector + technological growth
- Job promotion

### 6. ICT
- Development, follow up of implementation and evaluation of the national policy on development of ICT
- Popularising the use of ICT

### 7. Consumption
- Search for satisfaction
- Animation so as to maintain a healthy competition among operators

### 8. Sources of financing
- Mobilisation and provision of financial resources needed for the development of the sub-sector

### 9. Industrialisation
- Contribution to the development of the policy of industrialisation
- Promotion of an industrial fabric
- Promotion of advanced technologies
- Job promotion

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**Republic of Cameroon**

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DEFINITIONS AND DESCRIPTION OF THE FIELD

2.2.2 - Description of each component

2.2.2.1 - Telecommunications and ICT field

a) Fixed telephone

Table N°2: Inventory of downstream production or offer of products and services

<table>
<thead>
<tr>
<th>Nº</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>PRODUCTS AND SERVICES</strong></td>
<td></td>
<td>CAMTEL</td>
<td>- Access in big towns and in some rural areas. Very few among these rural areas are operational</td>
</tr>
<tr>
<td></td>
<td>- <em>Basic services</em></td>
<td></td>
<td></td>
<td>- Long retraction speed</td>
</tr>
<tr>
<td></td>
<td>- telephone</td>
<td></td>
<td></td>
<td>- Long queues (instances)</td>
</tr>
<tr>
<td></td>
<td>- facsimile</td>
<td></td>
<td></td>
<td>- Intelligent platform not yet operational</td>
</tr>
<tr>
<td></td>
<td>- <em>Value-added services</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- billing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- post-payment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- descriptive billing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- limitation of consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- hourly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- alarm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- talking mailbox</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- electronic key</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- detection of crank calls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- toll free numbers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- transfer of calls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- indicator of the second call</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- picture phone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- audiotex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- three-way call</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- teleconferencing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- videoconferencing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Centrex (delocalised PABX: Prepayment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>INFRASTRUCTURES</strong></td>
<td></td>
<td></td>
<td>Ground transmission:</td>
</tr>
<tr>
<td></td>
<td>- Specialised lines</td>
<td></td>
<td></td>
<td>- Analogue technology in bulk and obsolete</td>
</tr>
<tr>
<td></td>
<td>- transmission capacity for local, inter-</td>
<td></td>
<td></td>
<td>- Digital technology timidly installed ( Yaoundé- Douala-South/West line)</td>
</tr>
<tr>
<td></td>
<td>- city and international links</td>
<td></td>
<td></td>
<td>- Fibre optic between Doba and Kribi (1068 km). SAT3 installed in Douala. Optical loops put in place.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Big accounts
- Professionals
- Residential

Exist in big towns
Voice over IP not available
### DEFINITIONS AND DESCRIPTION OF THE FIELD


Republic of Cameroon

#### Switching:
- Analogue Technology in bulk; growing very obsolete
- Installation of digital technology at a standstill.
  - Douala-Yaoundé remains that of the First generation

#### Access systems:
- Network with ageing and saturated cables
- Fibre optic networks: transfer networks are being set up

### Table Nº3: Inventory of downstream production or offer of products and services

<table>
<thead>
<tr>
<th>NO</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Basic Services:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Availability of access as stated in the concession agreement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Gradual coverage of the territory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MTN</td>
<td>- Professionals and residential customers of high standing do not yet have the culture of DATA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ORANGE</td>
<td>- The cost of roaming is very high.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Value-Added Services:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Not available except for GSM gateway</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Infrastructures:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Insufficient/lack of transmission capacity to cover certain contractual regions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Transmission and switching completely digitalized; 2nd generation</td>
</tr>
</tbody>
</table>

b) Mobile phone:

Table Nº3: Inventory of downstream production or offer of products and services

- Voice
- Telephone details
- Fax
- Roaming
- Prepaid
- Data

- Big accounts
- Professionals
- Residential customers

- Operators
- Service providers
- Customers

MTN

- Operators
- Service providers
- Customers

ORANGE

- Operators
- Service providers
- Customers

- Availability of access as stated in the concession agreement
- Gradual coverage of the territory
- Professionals and residential customers of high standing do not yet have the culture of DATA.
- The cost of roaming is very high.
DEFINITIONS AND DESCRIPTION OF THE FIELD

c) ICT

Table N°4: Inventory of downstream production or offer of products and services

<table>
<thead>
<tr>
<th>N°</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
</table>
| 1  | Formulation of the national policy on the development of ICT | - Administration  
- Common carriers  
- Operators  
- Investors  
- Development partners  
- etc. | - PRC/ANTIC  
- MINPOSTEL  
- MINCOM  
- MINEFI  
- MINRESI  
- etc. | - Building the institutional framework of ANTIC  
- Liberalisation of the print and audiovisual media  
- Control, mainly administrative, of the print and audiovisual media |
| 2  | Implementation of the national policy on the development of ICT | - Administration  
- Common carriers  
- Operators  
- Investors  
- Development partners  
- Consumers  
- etc. | - Administration  
- Common carriers  
- Operators | - Commencement of connection of secondary level training institutions (multimedia centres)  
- Start of practice of applications of telemedicine, electronic commerce, management information systems, e-X, management of the .cm  
- Encouragement and sensitisation of the media to start using digital equipment and procedures  
- Community telecentres  
- Modernisation and extension of ICT infrastructures |
| 3  | Massive use of ICT | - Administration  
- Investors  
- Consumers | Administration  
- NGO  
- Development partners | - Sensitisation of the general public  
- Organisation of seminars  
- Training of the general public  
- Specialised training  
- Building of an attractive framework |
### Definitions and Description of the Field

#### d) Internet and others

<table>
<thead>
<tr>
<th>№</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INTERNET - Narrowband, voice over IP</td>
<td>- Big accounts - Professionals - Residential</td>
<td>CAMTEL ISP</td>
<td>- CAMTEL’s access equipment are obsolete - This service is offered in big towns and in some rural areas with a speed of 64 Kbps bits per second - CAMTEL’s wireless high speed offer (wireless access) is limited to professionals</td>
</tr>
<tr>
<td></td>
<td>- Broadband</td>
<td>Idem</td>
<td>CAMTEL ISP/ISP</td>
<td>- This service is only provided by some ISP/IAP</td>
</tr>
<tr>
<td>2</td>
<td>DATA TRANSMISSION</td>
<td>- Big accounts - Professionals</td>
<td>CAMTEL ISP</td>
<td>CAMPAC network: - Low speed - Quality of service barely satisfactory - Obsolete technologies used (X25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other networks: they are gradually being set up</td>
</tr>
<tr>
<td>3</td>
<td>GMPCS</td>
<td>Professionals</td>
<td>THURAYA-SACONETS IMMARSAT-CAMTEL</td>
<td>Limited accessibility to service because of its high cost</td>
</tr>
<tr>
<td>4</td>
<td>TELEX, TELEGRAPHY</td>
<td>Professionals</td>
<td>CAMTEL</td>
<td>Usage gradually diminishing</td>
</tr>
<tr>
<td>5</td>
<td>PRIVATE RADIO STATIONS</td>
<td>- Professionals</td>
<td>- MINPOSTEL - ART</td>
<td>- allocation of frequencies to licence holders by ART - Non deliverance of licences for network operation by MINPOSTEL - Obsolete spectrum monitoring equipment - Non saturation of the spectrum, frequency resources available</td>
</tr>
</tbody>
</table>

*Table No5: Inventory of downstream production or offer of products and services*
DEFINITIONS AND DESCRIPTION OF THE FIELD

ECONOMIC AND FINANCIAL ASPECTS OF THE FIELD

Table No 6 : Economic and financial aspects

<table>
<thead>
<tr>
<th>ITEM</th>
<th>1999/00</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002 (transitional year)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>6312,3</td>
<td>6909,8</td>
<td>7363,6</td>
<td>3304,65</td>
<td>8074,7</td>
<td>ND</td>
</tr>
<tr>
<td>Per capita income in KFCFA</td>
<td>413,0</td>
<td>436,5</td>
<td>442,3</td>
<td>449,0</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>Economic growth rate</td>
<td>4,4%</td>
<td>5,3%</td>
<td>3,6%</td>
<td>4,2%</td>
<td>4,7%</td>
<td>ND</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>1,9%</td>
<td>1,2%</td>
<td>4,4%</td>
<td>2,8%</td>
<td>0,6%</td>
<td>ND</td>
</tr>
<tr>
<td>Total population</td>
<td>14,616,200</td>
<td>15,025,800</td>
<td>15,446,800</td>
<td>154,499,000</td>
<td>15,879,700</td>
<td>ND</td>
</tr>
<tr>
<td>Active population</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>Urban population</td>
<td>7,307,000</td>
<td>7,668,000</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>Turnover 1 In Billion CFAF</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>105,2</td>
<td>161,26</td>
<td>ND</td>
</tr>
<tr>
<td>Value added in KF</td>
<td>776,063</td>
<td>1,929,433</td>
<td>41,196,831</td>
<td>72,875,439</td>
<td>115,816,819</td>
<td>ND</td>
</tr>
<tr>
<td>Wage bill1 in KF</td>
<td>1,182,296</td>
<td>2,583,183</td>
<td>4,549,626</td>
<td>2,285,766</td>
<td>6,399,134</td>
<td>8,778,798</td>
</tr>
<tr>
<td>Investment1 in KF</td>
<td>31,193,604</td>
<td>29,093,727</td>
<td>34,556,738</td>
<td>21,223,558</td>
<td>53,711,269</td>
<td>58,611,831</td>
</tr>
</tbody>
</table>

1 : Mobile telephone operators only
### Tableau No7: Contribution of the field of telecommunications to the national economy

<table>
<thead>
<tr>
<th>RUBRIQUE</th>
<th>1999/00</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002 (transitional year)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sum V A/GDP^1$</td>
<td>0.01%</td>
<td>0.03%</td>
<td>0.5%</td>
<td>2.2%</td>
<td>1.4%</td>
<td>ND</td>
</tr>
<tr>
<td>$\sum (Wage bill (sector))/Wage bill (public)^1$</td>
<td>4.03%</td>
<td>7.6%</td>
<td>12.2%</td>
<td>14.6%</td>
<td>15.88%</td>
<td>ND</td>
</tr>
<tr>
<td>$\sum TO/Strength of operators$ in MF$^1$</td>
<td>ND</td>
<td>27.4</td>
<td>40.1</td>
<td>26.2</td>
<td>45.9</td>
<td>ND</td>
</tr>
<tr>
<td>$\sum (Gross fixed capital formation)/Gross total fixed capital formation$</td>
<td>21.1%</td>
<td>29.0%</td>
<td>34%</td>
<td>21.2%</td>
<td>33.7%</td>
<td>ND</td>
</tr>
<tr>
<td>$\sum VAT/National VAT$</td>
<td>ND</td>
<td>ND</td>
<td>8.53/ND</td>
<td>6.64/ND</td>
<td>6.67/ND</td>
<td>7.17/ND</td>
</tr>
<tr>
<td>$\sum (Outstanding debt)/Outstanding public debt$</td>
<td>1.24%</td>
<td>1.78%</td>
<td>2.67%</td>
<td>154.38/ND</td>
<td>4.2%</td>
<td>107.21/ND</td>
</tr>
<tr>
<td>$\sum (Debt servicing)/External public debt servicing$</td>
<td>ND</td>
<td>ND</td>
<td>16.75%</td>
<td>4.6/ND</td>
<td>10.97%</td>
<td>29.8/ND</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

1: Mobile telephone operators only

### SOCIAL ASPECTS

**Typology of beneficiaries, offers in the telecommunications field, social effects suffered**

Telecommunications and ICT are a means of communication intended for use by urban and rural populations, who are the ultimate beneficiaries of it. Intermediary beneficiaries are economic operators (industrialists, farmers and traders). The growth in telecommunications infrastructures opens up the territory and generates activities likely to reduce poverty among disadvantaged popula-

tions, which is estimated at 50% in the rural area. Telecommunications and ICT assist in integrating the population into the economic circuit and facilitate their access to basic social services like education and healthcare.

**Effect on employment**

Telecommunications and ICT constitute a potentially buoyant sector that facilitates the creation of direct and indirect jobs in towns and villages resulting in combating rural exodus, poverty and unemployment.
DEFINITIONS AND DESCRIPTION OF THE FIELD

SPATIAL ASPECTS

Table N°8 : Spatial coverage of Cameroonian network in terms of subscribers and of IAP/ISP as of 31 December 2004

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of localities covered</th>
<th>Fixed</th>
<th>Mobiles</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IAP</td>
</tr>
<tr>
<td>ADAMAOUA</td>
<td>2</td>
<td>2241</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>CENTRE</td>
<td>4</td>
<td>34083</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>EAST</td>
<td>2</td>
<td>1739</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>FAR NORTH</td>
<td>4</td>
<td>2971</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>LITTORAL</td>
<td>4</td>
<td>33224</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>NORTH</td>
<td>2</td>
<td>1889</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>NORTH WEST</td>
<td>2</td>
<td>3354</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>WEST</td>
<td>6</td>
<td>9130</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>SOUTH</td>
<td>2</td>
<td>2743</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>SOUTH WEST</td>
<td>5</td>
<td>3781</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>95155</td>
<td>1 800 000 (^2)</td>
<td>75</td>
</tr>
</tbody>
</table>

\(^2\) : estimated in terms of active lines

Table N°9 : Comparison of teledensities in Cameroon with other sub-regions of Africa

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>FIXED %</th>
<th>MOBILE</th>
<th>INTERNET</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Africa</td>
<td>147 495 000</td>
<td>9.6</td>
<td>11.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>647 646 000</td>
<td>1.0</td>
<td>2.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Cameroon</td>
<td>16 258 000</td>
<td>0.7</td>
<td>6.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Middle Africa</td>
<td>841 547 000</td>
<td>3.0</td>
<td>6.1</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Source: Africa, ICT indicators, ITU 2003

With respect to this table, the penetration rate remains below the African average of two out of three segments of the market.

DEFINITIONS AND DESCRIPTION OF THE FIELD

ENVIRONMENTAL ASPECT

The reform undertaken in 1998 provided for the building of the legal, regulatory and institutional framework, notably by separating supervision and regulatory activities from those of control and operation. The government facilitated competition by bringing private participation into the mobile, Internet and value added services.

Consequently, a steady growth of the market was witnessed. For instance:

Users of the telephone increased from 100 000 in the year 2000 to 2 100 000 in 2005, thereby raising the overall teledensity from 0.67% to 12.3%;
About 300 Billion CFAF have been invested into the fixed and mobile networks during the period spanning from 1999 to 2004;
More than 20 000 direct and indirect jobs have been created.

Nevertheless, it should be noted that much still has to be done to reverse the backwardness noticed at the sub-regional level, as the following information show:

<table>
<thead>
<tr>
<th>Country</th>
<th>Densité téléphonique fixe (%)</th>
<th>Densité téléphonique mobile (%)</th>
<th>Taux d'utilisateurs Internet (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroun</td>
<td>0.67</td>
<td>6.6</td>
<td>0.16</td>
</tr>
<tr>
<td>Maroc</td>
<td>4.03</td>
<td>29.4</td>
<td>1.55</td>
</tr>
<tr>
<td>Sénégal</td>
<td>2.20</td>
<td>7.6</td>
<td>2.20</td>
</tr>
</tbody>
</table>

Source : ITU, Year 2003

Furthermore, considerable efforts were deployed to improve on the international connectivity of Cameroon by undertaking substantial public investments:

- A fibre optic backbone was installed along the Doba-Kribi pipeline;
- A landing point of the SAT-3 Submarine cable was opened in Douala with a capacity of 2.5 Gbit/s;

However, the non activation of the fibre optic on this segment has led to high charges for international calls and to a low penetration of the Internet (including the broadband Internet).

Republic of Cameroon
The map above situates Cameroon within the international environment.

The table below depicts the negative impact of the low competition in this segment with respect to international voice communications and broadband connection charges.

**INFRASTRUCTURAL ASPECTS**

The fixed network comprises:
- 3 space telecommunications centres;
- 4500 Km of analogue microwave beams;
- 1200 Km of digital microwave beams PDH;
- 120 local cable networks;
- 76 local rural networks;
- 28 electromechanical power plants;
- 12 digital exchange stations;
- a fibre optic submarine station of 2.5 Gbps;
- 1000 Km of fibre-optic cables.

The mobile network comprises:
- 4 earth stations
- 5 MSC
- 350 BTS
- 50 BSC
- 1200 Km of digital beams PDH
- 1000 Km of digital beams SDH

The Internet network comprises:
- 6 POP nodes
- 75 accesses by VSAT.
### 2.2.2.2 - Supervision and regulations

Table N°10: Description of the offer and demand

<table>
<thead>
<tr>
<th>№</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Sector policy</td>
<td>- Government</td>
<td>MINPOSTEL</td>
<td>- Development of the sector policy&lt;br&gt;- Granting of licences and concessions&lt;br&gt;- Carry out sector reform required by Law No. 98/014 of 14 July 1998&lt;br&gt;- Provide telecentres to rural communities through councils and CIG</td>
</tr>
<tr>
<td></td>
<td>- Limited Service and access</td>
<td>- National Assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>International representation</td>
<td>- Government</td>
<td>MINPOSTEL</td>
<td>Participation in and effective follow up of meetings and conferences on Telecommunications at the international, regional and sub-regional levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- International Organisations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>International cooperation</td>
<td>- Government</td>
<td>- Development Partners</td>
<td>- Multilateral and bilateral frameworks of cooperation&lt;br&gt;- Regulatory framework (treaties, conventions, standardisation, …)&lt;br&gt;- Technical assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- International Organisations</td>
<td>- International Organisation</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Management of frequency spectrums</td>
<td>- Government</td>
<td>- Inter-ministerial Organ</td>
<td>- Management of the spectrum made at the international level with the participation of MINPOSTEL&lt;br&gt;- Coordination of national consultation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partners</td>
<td>for the allocation of frequency bands</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Investors</td>
<td>MINPOSTEL</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Follow up of activities of the sector</td>
<td>- Government</td>
<td>MINPOSTEL</td>
<td>- Drafting and implementing operation reports of activities of the sector&lt;br&gt;- Taking remedial actions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- National Assembly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### DEFINITIONS AND DESCRIPTION OF THE FIELD

#### 2.2.2.3 - Control

**Tableau N°11** : Description of the offer and demand

<table>
<thead>
<tr>
<th>N°</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Licence under concession</td>
<td>Investors</td>
<td>- ART&lt;br&gt;- MINPOSTEL&lt;br&gt;- MINEFI</td>
<td>- Preparation of tender files with a view to issuing invitations to tender&lt;br&gt;- Issuing of invitations to tender&lt;br&gt;- Signing of concession agreement and specifications</td>
</tr>
<tr>
<td>2</td>
<td>Licence under clearance system</td>
<td>- Operators&lt;br&gt;- Common carriers&lt;br&gt;- Investors</td>
<td>- ART&lt;br&gt;- MINPOSTEL</td>
<td>- Reception et issuing of the certificate of deposit&lt;br&gt;- Review of the file&lt;br&gt;- Forwarding of the file with an opinion on it to MINPOSTEL&lt;br&gt;- Signature by MINPOSTEL</td>
</tr>
<tr>
<td>3</td>
<td>Deposit receipt under the reporting system</td>
<td>- Common carriers</td>
<td>- ART&lt;br&gt;- MINPOSTEL</td>
<td>- Reception and issuing of the receipt of deposit&lt;br&gt;- Verification and forwarding to MINPOSTEL of the document for signature&lt;br&gt;- Signature of the decision</td>
</tr>
<tr>
<td>4</td>
<td>Monitoring the compliance with rules of the game</td>
<td>- State (government)&lt;br&gt;- Operators&lt;br&gt;- Common carriers&lt;br&gt;- Consumers</td>
<td>ART</td>
<td>- Routine and surprise control of the activities of common carriers and operators&lt;br&gt;- Monitoring reports sent to MINPOSTEL</td>
</tr>
<tr>
<td>5</td>
<td>Assignment of frequencies</td>
<td>- International Organisations&lt;br&gt;- Embassies&lt;br&gt;- Operators&lt;br&gt;- Amateur radio&lt;br&gt;- NGO&lt;br&gt;- Private common carriers</td>
<td>- ART&lt;br&gt;- MINPOSTEL</td>
<td>- Reception of assignment files&lt;br&gt;- Review of assignment files&lt;br&gt;- Forwarding to MINPOSTEL for signature&lt;br&gt;- Signature after advisory opinion of MINDEF and MINATD</td>
</tr>
<tr>
<td>6</td>
<td>Arbitration of disputes between operators</td>
<td>Common carriers</td>
<td>ART</td>
<td>- Referring matter to ART by the complainant&lt;br&gt;- Meeting between protagonists and making of a decision</td>
</tr>
</tbody>
</table>
| 7 | Arbitration of disputes between operators and consumers | Consumers | ART | - Referring matter to ART by the aggrieved consumer  
- Meeting between protagonists and making of a decision |
|---|---|---|---|---|
| 8 | Arbitration of disputes between operators and the regulatory agency | Operators  
- Operators  
- ART | - MINPOSTEL  
- MINJUSTICE | - Referring matter to MINPOSTEL or to the courts by the complainant |
| 9 | Number blocks | Operators | ART | - Drawing up and managing a numbering plan  
- Granting of number blocks |
| 10 | Approval of catalogues and endorsement of agreements | Operators | - Operators  
- ART | - Submission of catalogue project and interconnection contract to ART for approval  
- Review and giving of opinion to ART  
- Publication of the interconnection catalogue |
| 11 | Certification of equipment and terminals | - Operators  
- Common carriers  
- Manufacturers | - ART  
- MINPOSTEL | - Reception and review of the certification file  
- Forwarding of the file with an opinion on it to MINPOSTEL for signature  
- Final opinion and signature by MINPOSTEL |
| 12 | Fixing of tariffs | - Operators  
- Consumers  
- Consumers Association | - ART  
- Operators | - Approval of the tariffs schedule  
- Compliance assessment  
- Definition of principles of fixing tariffs |
| 13 | Quality of service | - Consumers  
- Operators  
- ART  
- MINPOSTEL | Operators | - Existence of standards in the specifications  
- Compliance assessment  
- Report to MINPOSTEL |
| 14 | Market control | - MINPOSTEL  
- ART  
- Public authorities  
- Operators  
- Consumers | - ART  
- Operators | - Statistical data  
- General monitoring |
Table No12 : Description of the offer and demand

<table>
<thead>
<tr>
<th>No</th>
<th>ON-DEMAND SERVICE (DEMAND)</th>
<th>SERVICE USER</th>
<th>SERVICE PROVIDER (STAKEHOLDER)</th>
<th>DESCRIPTION OF THE OFFER (CURRENT SITUATION)</th>
</tr>
</thead>
</table>
| 1  | Human resources development | - Administrations  
- ART  
- Operators  
- etc. | Training schools (ENSP,  
ENSPT, IUT-Universities, IAI, Institut SIANTOU, Institut NDI SAMBA, etc.) | - Conception, designing and follow up of programmes implementation  
- Updating school programmes  
- Organisation of examinations and competitive entry examinations  
- Organisation of training courses and seminars |
| 2  | Capacity building          | - Administrations  
- ART  
- Operators  
- etc. | Specialised international institutions | - Organisation of retraining, specialisation and refresher courses  
- Participation in international, sub-regional and regional conferences  
- Transfer of skills through technical assistance, exploitation of patents that come under public domain |
3 - DIAGNOSIS

3.1 - FIELD OF TELECOMMUNICATIONS AND ICT

3.1.1- Historical review of national policies

The history of the policies and objectives pursued in Cameroon in the field of Telecommunications falls into three major periods since independence: from 1960 to 1988, from 1988 to 1998 and from 1998 till date.

The main feature of the policies and objectives pursued from one period to another is interruption. Interruption in the policy vision of the field and in the strategic management policy of this field. We will briefly review this historical breakdown of Telecommunications activities in Cameroon:

Period from 1960 to 1988

The attainment of independence by Cameroon was legitimised by the formation of a Government organisation supported by five-year development plans serving as tools for scheduling government investments. In short, this was a period of State monopoly and of the granting of subsidies to many sectors. It is within this framework that:

- The Administration in charge of Telecommunications carried out both the Regulatory functions and that of Operation;
- The national network architecture of Telecommunications was built.

During this period, the Department of Telecommunications of the Ministry of Posts and Telecommunications carried out until 1970, most of the regulatory missions and of operation of the telegraph, telex, morse and the telephone.

In order to satisfy the human resources development needs, the State created in 1969 the National Advanced School of Posts and Telecommunications (ENSPT).

In order to meet up with the increase in international traffic and benefit from the modern technological facilities, more advanced than those installed so far in Cameroon, the State set up in 1972 the corporation known as International Telecommunications of Cameroon (INTELCAM), that operated under the rules of a business corporation and confirmed the separation of domestic telecommunications operation from international operation. Standard A antenna dishes were thus installed in Zamengoe (1972) and in Bépanda (1986).

In spite of these substantial investments, the State for several years had obtained low output, consisting of unsatisfied social and political demand, continuous increase in tariffs, and wastage of physical resources and persistent depreciation of equipment.

Period from 1988 to 1998

At the beginning of this period, Cameroon witnessed an interruption in the strategic management of the field of Telecommunications. Engaged in a vast economic adjustment programme, including the de-commitment of the State from public corporations, the Government, through Law No. 87/021 of 17 December 1987 to institute the Annex Budget of Posts and Telecommunications, granted financial autonomy to MINPOSTEL. By putting in place the annex budget of Posts and Telecommunications, the government was responding in a concrete manner to the national preoccupation to promote the development of telecommunications by constantly improving on the efficiency of management with regard to the ever-increasing needs of financing. During this period, MINPOSTEL made a great technological stride with the acquisition of the Yaounde and Douala digital exchange stations and later, it initiated the acquisition of the digital exchange station of the Southwest Province. The main transmission trunks were also digitalized.

As from 1993, the operation of the first GSM mobile telephone network in Africa became effective through the CAMTEL MOBILE project. In June 1995, the Head of State decided to start restructuring the field with the national operator, the Department of Telecommunications, retained in the organizational chart of the Ministry in charge of Telecommunications.

With effect from 14 July 1998, date of the enactment of Law No. 98/014
governing Telecommunications in Cameroon, the State de-committed from the sector by separating the activities of operation, supervision, regulation and control. This situation gave room for the:

- Separation of the Telecommunications field from that of the Post;
- Encouragement and facilitation of the private sector to participate in the development of telecommunications in a competitive environment;
- Fostering of the harmonious development of telecommunications networks and services in order to enable this field contribute to the growth of the national economy and satisfy the multiple needs of the population;
- Telecommunications field to maximise its contribution in the economic and social development of Cameroon.

Instruments of application on the designation, organisation and functioning of new actors in the national telecommunications landscape were published. These were: the Telecommunications Regulatory Agency (ART), CAMTEL and CAMTEL Mobile.

**Period from 1998 till date**

With the liberalisation process on, the policy vision of the field began to brighten. In 1999, a mobile telephone licence was granted to SCM which became ORANGE in 2002. In the course of the same year, MINPOSTEL started featuring again in the general State budget.

The process of de-commitment of the State was further reflected in the privatisation of one of its structures. As a matter of fact, CAMTEL Mobile was sold to MTN International that created MTN Cameroon on 15 February 2000.

The technological changes that were translated in the 80s and 90s into the digitalisation of telephone networks and satellite communications explosion in particular and the wireless system in general, opened new prospects and resulted in new services and needs. Enterprises and professionals desirous of having modern and even tailored-made services were no longer satisfied with the services offered by a non-achieving administration, slow to adjust and innovate.

It is within this context that the reform of the field of Telecommunications, decided on June 1, 1995 by the Head of State, in a global logic of restructuring the national production system, so as to stimulate economic growth and get the Cameroonian economy out of the slump through information and communication technologies bore its first fruits:

- The five-year plans defined actions to be taken by public authorities in order to better the living conditions of the population. The harsh economic crisis led to the abandonment of the five-year planning which had the disadvantage of not allowing adjustments to take place following the evolution of socio-economic conditions, budgetary and policy constraints;
- The changeover from the traditional State budget to the performance budget and the urgent necessity to properly implement the Poverty Reduction Strategy require the adoption of sector development strategies that clearly portray the objectives, priority programmes and projects as well as mechanisms for controlling their implementation;
- The reform policy of the Telecommunications field must be in line with the Poverty Reduction Strategy.

In the light of the above, the Telecommunications field was assigned three main objectives in the Poverty Reduction Strategy Paper [PRSP], namely:

- Offer in sufficient quantity quality products and services to consumers throughout the national territory;
- Create jobs for young graduates;
- Improve on the effectiveness and efficiency of public institutions and corporations of the sub-sector.

The sector strategy for Telecommunications is in line with the dynamics of the PRSP and the Millennium Declaration, and also in line with the current trend of the globalisation of transactions. On that account, the diagnosis balance sheet that follows the Declaration of the Millennium Development Goals [MDG] is a document that presents the field [including institutions] as it is today, with its problems, strengths, weaknesses and constraints.

On the whole, in December 2000, there were many institutional developments, the most significant of which were:
The total de-commitment of the State from the operation of mobile telephone networks opened to the public: two mobile telephone licences were granted to two private operators, ORANGE and MTN; The deployment of many Internet service providers, most of whom are exercising without authorisation; The commencement in September 1999 of activities by the Telecommunications Regulatory Agency (ART); The provision of fixed telephone services by CAMTEL for a transitional period spanning till the liberalisation of this segment of the market.

But all these changes took place without a meaningful and appropriate policy/strategy base to support the development of the sub-sector. As an illustration, the Administration in charge of Telecommunications did not and does not have a real technical hold of the privatisation of public corporations in the field; it participates in technical meetings of the Technical Committee on Privatisation and Liquidations (CTPL) as any other invited institution.

The purpose of the sector policy is to define a clear vision of the long-term development of the sector. It does not only define the major guidelines and general objectives of the development of telecommunications infrastructures and networks opened to the public, but also those of the development of a viable industry for the production of telecommunications equipment and materials as well as the training of adequate and skilled labour force needed in the information and knowledge society and economy.

As far as the sector strategy of development is concerned, it is an instrument which illuminates the priority options of the development of the public investment sector within a context where the available public resources must be used in a rational manner.

The reform of the Telecommunications field started since June 1995 by the Government through a restructuring of its structures and the subsequent achievements makes one to think that the latter is endowed with enormous potentials which are so far underexploited, especially as it concerns a field that is perpetually evolving. After nearly five years since the reform of this troublesome field of the national economy was implemented, it is essential to make a thorough and detailed analysis of the current situation with a view, on the one hand, to identifying, by 2015, the objectives and strategic areas of its development, and on the other hand, defining within a framework of a coherent, ambitious and realistic sub-sector development strategy, priority programmes and projects to be carried out in the short, medium and long terms.

3.1.2- Diagnosis of results of each component

In keeping with the inventory carried out earlier, the situation described above will be analysed with the aim of drawing useful lessons and identifying ways of possible improvement.

The activity of the Telecommunications field is closely linked to endogenous and exogenous parameters that determine how it operates and functions. These are notably:
- The macro-economic framework;
- Socio-cultural factors;
- The international environment;
- Regulations and the budget;
- Control;
- Operation;
- Industrialisation.

All these elements must be harmoniously grouped around a development strategy built thanks to an appropriation of missions by the different actors.

3.1.2.1 - Supervision

The Law governing Telecommunications in Cameroon stipulates: "The Administration in charge of Telecommunications shall be responsible for the formulation and implementation of a sector policy for Telecommunications, taking into consideration the technological development of this sector, the development needs and Government priorities of this field". Besides, it specifies that this policy shall focus mainly on the gradual change in the structure of the market by foreseeing especially the appropriate number of operators in each segment of the market.
DIAGNOSIS

The transient results obtained by enterprises in this field, whether public or private, are partly attributed to the efficiency of the general supervisory service.

In the light of the above, a strong point and several weak points can be identified:

Strong point:
The supervisory service has senior and middle-level personnel trained in sufficient number in respective specialties. Within the framework of a possible redeployment in this field, these calibres of personnel are an asset.

Weak points:
- The determination of the critical size of the different segments of the Telecommunications market and that of the number of operators for each of these segments has not yet been done;
- A Special Fund for Telecommunications had been provided for by the law. This Fund is supposed to contribute in the financing of projects that will promote unlimited service and ensure the development of Telecommunications in the rural area. Until now, this fund has not gone operational;
- The same law set up an Inter-ministerial organ for the assignment of frequency bands. As of today, this organ is not yet functioning;
- The same law provided for the monitoring of the activities of operators and common carriers by ART that keeps an operating report which would be profitable if disclosed. Until now, the information system and the overall management of the field have not been set up [operating report];
- The absence of a strategy that ensures the recruitment of Cameroonians into international organisations;
- The information system that assembles indicators in this field is not operational;
- Policy of fixing charges: the structure of costs is not real charges oriented;
- Absence of a policy vision for the privatisation of CAMTEL;
- Absence of visibility on the strategic repositioning of CAMTEL;
- Absence of a space policy;
- Absence of a national shareholding policy in enterprises operating in the field;
- Absence of a policy of migration towards networks (3G, etc.);
- Absence of a policy of introducing broadband technologies;
- Inadequate monitoring of statistics on the sector.

3.1.2.2 - Legislation and regulation

a) Legislation

Before 1998, basic telecommunications services were provided by the Administration in charge Telecommunications which laid down among other things the rules of the game and ensured that they were implemented. The results obtained were not always as expected.

In June 1995, the Head of State decided to initiate the reform of the Telecommunications sector and this decision was concretised in July 1998 with the enactment of the Law governing Telecommunications in Cameroon. It laid down modalities for the balanced installation, operation and development of Telecommunications networks and services, for encouraging and promoting the participation of the private sector in the development of telecommunications infrastructures, networks and services in a competitive environment.

Strong points:
By setting up the framework for their partnerships, the law enabled:
- The private sector to develop;
- The public and private sectors to work together.

Weak points:
The application of this law raises four major problems:
- In pursuance of the law, disputes between operators or between operators and consumers shall be settled by ART. But those between the regulatory agency and operators directly fall under the competence of the courts of law. However, these courts do not always have the required technical expertise.
The law provided for technical control by ART, the use of frequencies by Telecommunications services. As far as all the frequency spectrums are concerned, the law is silent on them.

- The two laws formulated at different periods and contexts exist side by side. A revision aimed at taking into account developments, within a context of liberalisation and globalisation of markets seems appropriate (computer-related crimes, security of networks and systems, electronic commerce…).
- The scope of Law No. 98/014 on Telecommunications does not allow the taking into account of all the developments that have taken place in the field of Telecommunications and ICT.

b) Regulations

**Strong point:**
The existence and implementation of regulatory instruments has led gradually to a clearer picture of the field.

**Weak points:**
- The legal framework is inappropriate and not very encouraging to private investments, notably with regard to the specific nature of the business law applied to Telecoms/ICT;
- The regulatory system of the Telecommunication sector is gradually being set up. But that of related sectors has not followed the trend (information and freedom, audiovisual, protection from electromagnetic rays, etc.);
- Inconsistency among some instruments (Laws on Telecommunications, concession agreements, law on postal activities, decree on interconnection etc…);
- The existence of instruments instituting monopolies in a competitive environment (Local Provider, trunk transmission links etc.);
- The irrelevance of certain provisions of the concession agreements and specifications;
- Difficulties still exist in the implementation of the decision relating to access to the space segment (technical expertise, equipment accounting, etc.).

3.1.2.3 - Control

The setting up of a control system enabled the Administration to notice that:

**Strong points:**
- Most of the missions assigned to ART had been carried out;
- Apart from these missions, ART found solutions to the transborder problems between Cameroon and Chad, which is a model in the sub-region.

**Weak points:**
- the operating report of ART is not widely publicised;
- the platform for the different technical controls has not be set up;
- no strategy for consulting consumers (instruments of applications, sensitisation on how to refer matters to ART etc.); the mechanisms of redress with regard to disputes between operators and the regulatory agency have not been clarified;
- the setting up of a cost accounting system on costs oriented current rates and on interconnection agreements, within operational structures of the sector is being awaited;
- the analysis of the histogramme of ART staff in relation to their professional experience in the sub-sector highlights a difference between the number of this staff and their qualifications;
- the existence of unauthorised structures that offer services to consumers, putting into difficulties recognized operators;
- inadequate control of operators does not give ART the leeway to act.

3.1.2.4 - Operation

Operators in this field are facing a certain number of problems, among which are:

- CAMTEL infrastructures are obsolete, of low capacity and not maintained in a satisfactory manner, this hinders notably the development of the field of Telecommunications in Cameroon;
- the total pass-band of Internet connection right up to the nodes is of
low capacity and fragmented. High-speed Internet offer is inadequate;
- rural telephone is in bad repair and is declining;
- proceedings are substantial;
- there is teledensity disparity between the towns and rural areas; it is even very low when compared with countries with the same level;
- the absence of a town planning programme does not facilitate forecast on networks dimensioning and set up;
- errors, delay in issuing bills and the poor distribution of bills affect the quality of service;
- the intelligent platform is not operational;
- poor quality service for the mobile telephone;
- the absence of a policy of sharing infrastructures increases the cost of investment in the various segments of the market and exacerbates the charges by making them very high in comparison with the average purchasing power.

a) Fixed telephone network

**Strong points:**
- the digitalisation of certain exchange stations (Garoua, Ebolowa) and FH links (South line);
- modernisation of the Yaoundé and Douala Internet nodes and the installation of an Internet point of presence in Garoua;
- increase in the capacities of transmission thanks to the SAT3 and the fibre optic line installed along the pipeline.

**Weak points:**
- the overall quality of service for the fixed telephone leaves much to be desired;
- fixed telephone offer is insufficient;
- the offer of value-added services of the fixed telephone is still in the embryo;
- Internet access equipment are obsolete and high-speed offer is limited to professionals;
- the capacities available for toll transmission links are inadequate;
- weakness of a fibre optic backbone infrastructure;
- the drastic drop in the turnover in the past years arising out of the development of the mobile telephone service that has access to the outside world.

The table below shows the low teledensity in Cameroon in comparison with other countries cited:

**Table N°13: Comparative study of teledensities**

<table>
<thead>
<tr>
<th>Population</th>
<th>Côte-d'Ivoire</th>
<th>Sénégal</th>
<th>Gabon</th>
<th>Cameroon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed density (%)</td>
<td>1.97</td>
<td>2.45</td>
<td>3.08</td>
<td>0.63</td>
</tr>
<tr>
<td>Fixed main lines</td>
<td>332,970</td>
<td>240,000</td>
<td>40,000</td>
<td>101,442</td>
</tr>
<tr>
<td>Sources: ATCI, CI Telecom, ART Sénégal, ART Gabon, CAMTEL Cameroun</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) Mobile telephone networks

**Strong point:**
The very strong growth witnessed in this segment.

**Weak points:**
- the duplexing of toll transmission infrastructures due to the absence of a policy of sharing of infrastructures raises investment costs and communication charges;
- the current duopoly does not permit the growth of a healthy competition for the mobile service;
- locality wise, the quality of the mobile telephone service is not satisfactory;
- inadequate coverage of the territory;
- high cost of communications and terminals;
- communications are not billed per second;
- insufficient/lack of transmission capacity;
- the non-mastery of the state of saturation of spectrum resources in the 900 MHz band;
- pressure from operators for the allocation of the 1800 MHz band;
requires the revision of the specifications.

c) Internet

**Strong point:**
The great interest noticed with the introduction of Internet services.

**Weak points:**
- services are provided through radio relay channels with no formal authorisation by the Administration in charge of Telecommunications. For example, the wireless local loop offered by Internet access providers;
- credible entreprises for maintenance/repairs of Telecommunications and ICT facilities/equipment are near absent in Cameroon;
- the Internet offer is practically limited to the narrowband. Furthermore, this narrowband is scarcely guaranteed;
- outdated equipment;
- the service is only offered in some big towns;
- existence of pirate common common carriers;
- the offer of wireless high-speed Internet access available at CAMTEL is limited to professionals. The offer at high speed to the man in the street using appropriate technologies (xDSL for example) is timidly being bought;
- the high cost of offers of existing accesses.

3.1.2.5 - Training

**Strong points:**
- training institutions exist;
- young and well-trained human resources are available.

**Weak points:**
- career plan for teachers unattractive;
- non-respect of ratios between different categories of personnel;
- absence of a Human Resources master plan in the field of Telecommunications;

- low capacity of employment of graduates of ENSPT by enterprises in this field;
- non-existence of an appropriate structure for human resources management;
- existence of a gap between training received and the new job requirements (commercial and technical) in the field;
- low synergy between training centres on the one hand and between training centres and entreprises operating in the field, on the other hand;
- a large number of persons have no access into training institutions;
- the system of development and building of capacities does not match with the changes in the field;
- absence of a national survey on the needs of the specific job market;
- absence of funding for the complete restructuring of ENSPT;
- funding of training by the Special Fund for Telecommunications not yet operational.

3.1.2.6 - ICT

**Strong points:**
The impetus given by the highest authority is a voluntary act and is crucial to the development of ICT.

**Weak points:**
- the policy formulated for the development of ICT in Cameroon has still not yet been validated;
- ANTIC that is tasked with implementing and following up this policy is still not yet operational;
- the Civil Society does not mobilise itself enough in order to ensure the massive use of ICT in Cameroon;
- training schools (Advanced schools, colleges, primary schools) do not sufficiently include in their teaching programmes training modules in ICT.
3.1.2.7- Consumption

Weak points:
- there is not enough sensitisation and training of consumers with regard to their rights;
- consumers have not brought themselves together in associations.

3.1.2.8- Sources of financing

Weak points:
- the Special Fund for Telecommunications is not operational;
- difficulties in mobilizing public and private funds constitute a setback to the realisation of new projects;
- the structure does not yet raise funds from the money market (ex: DSE, etc.);
- the absence of investment banks is acute (development banks and specialised financial institutions), which reduces the offer for financing;
- the difficulty in mobilising financial resources from financial institutions in Cameroon leads to the search on the one hand, for external sources, and on the other hand, puts at the disadvantage enterprises with majority shareholders of Cameroonian nationality;
- conditions for having access to bank loans are prohibitive;
- insufficient self-funding capacities of the historic operator, of operators and certain training institutes is a setback to the realisation of projects;
- loopholes in the drawing up of projects to be financed in the field of Telecommunications and ICT reduce the number of projects executed in the field;
- insufficient information on the various sources of financing;
- economic operators are not trustworthy;
- low purchasing power making the market not captivating for investors (low GDP per capita).

3.1.2.9- Industrialisation

Weak points:
- at the moment no policy has been developed for the industrialisation of the field;
- there is lack of incentive measures for promoting the industrial fabric;
- there is no adequate framework to ensure the transfer of advanced technologies, the development of technocities, the appropriation of the process and exploitation of patents that come under the public domain;
- absence of the culture of maintenance;
- absence of the culture of service engineering, including teleservices.

3.1.3- Highlighting the causes of discrepancies

The causes of discrepancies stem from:
- the low availability of the offer of services;
- prohibitive tariffs;
- obsolete infrastructures (fixed operator);
- an institutional and regulatory framework not attractive to investors;
- the fixed and mobile segments of the market not competitive;
- transportation infrastructures not enough;
- poor quality of service.

3.1.4- Opportunities and prospects

The opportunities are:
- the full political will of the Head of State;
- the political stability of the country;
- opening to the outside world;
- a dynamic private sector;
- modern infrastructures of the mobile telephone, GSM growing rapidly;
- two official languages: English and French;
- a rich cultural heritage;
- a young population with a good academic background;
- a liberalised economy;

Republic of Cameroon

The determination and commitment of the international community: the first World Summit on Information Society held in December 2003 in Geneva is a strong signal in this direction.

Prospects are very many. Thus, the obsolete nature of CAMTEL facilities that constitutes actually a weakness could be transformed into a competitive advantage in the near future if the modernisation of its infrastructures, equipment, facilities is based on appropriate strategic options. In this regard, CAMTEL could, for instance, set up a 3G network, technologies of the xDSL family and offer broadband Internet services by relying on the submarine cable terminal and its fibre optic backbone.

By 2015, we could envisage a country complete with:

- A developed, modern and reliable national Telecommunications infrastructure;
- An educated population and acquainted to a large extent with ICT;
- An effective and efficient public Administration thanks, among other things, to the use of ICT in providing services to the citizens;
- A strong growth in the income of Cameroonians thanks among other things to ICT;
- A high exchange rate of ICT products and services;
- A sector of ICT services and industry;
- The reality of an immaterial territory for the exchange of products and services;
- A sanitary system that uses ICT with efficacy and efficiency;
- A sustainable management of the environment through the use of ICT;
- An environment conducive for a free-market economy and innovation, and attractive to foreign investors;
- An abundant labour force skilful in ICT and young but with no specialisation.

The above envisaged prospects can only be realised if the challenges of modernisation are met. To do this, the following weaknesses must absolutely be overcome:

- An obsolete and less advanced fixed telephone network infrastructure;
- Inadequate coverage of the national territory by mobile telephone networks;
- The non-existence of a good fabric of Telecommunications and ICT SME/SMI;
- A very low rate of equipment of homes with micro-computers (about 3.3 PCs for 1000 inhabitants in 2000).

The constraints to be overcome are of several types:

- Inadequate financing resources;
- External debt servicing remains a very heavy burden for public finances, in spite of the various debt relief agreements signed, reducing in particular the resources allocated to the sectors of justice, security, education, health and infrastructures (notably road, rural electrification and telecommunications and potable water infrastructures);
- Poverty affects nearly 50% of the population, the majority of whom live in the rural area;
- The non-updating of population data makes the planning of networks installation and market control difficult;
- Basic infrastructures are not developed (roads, water, electricity), very inadequate especially in rural areas;
- Social infrastructures and services are not developed;
- Endemic diseases and HIV/AIDS.
3.1.5- Cartographie des problèmes à résoudre et des opportunités

**Tableau n°14 - Cartographie des problèmes à résoudre et des opportunités**

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>PROBLÈMS</th>
<th>OPPORTUNITIÉS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>- monopoly preventing a healthy competition</td>
<td>- high potential demand</td>
</tr>
<tr>
<td></td>
<td>- obsolete networks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- high charges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- inadequate offer of services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- inadequate capacities of exchange stations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- quality of service barely average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- absence of cost accounting</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>- Very high costs</td>
<td>- high penetration potential</td>
</tr>
<tr>
<td></td>
<td>- duopoly preventing a healthy competition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- quality of service inadequate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- absence of cost accounting</td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td>- offer of service largely inadequate</td>
<td>- modernisation of POP</td>
</tr>
<tr>
<td></td>
<td>- inadequate overall pass-band</td>
<td>- SAT 3 available</td>
</tr>
<tr>
<td></td>
<td>- fibre optic link between Douala and Yaoundé not available</td>
<td>- fibre optic Doba-Kribi available</td>
</tr>
<tr>
<td></td>
<td>- prohibitive tariffs</td>
<td>- e-services: commerce, government…</td>
</tr>
<tr>
<td></td>
<td>- very poor quality of service</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td>- inadequate and obsolete infrastructures</td>
<td>- obligation to provide limited service</td>
</tr>
<tr>
<td></td>
<td>- low purchasing power</td>
<td>- multi-purpose community telecentres</td>
</tr>
<tr>
<td>Mobile</td>
<td>- very inadequate coverage</td>
<td>- signal available</td>
</tr>
<tr>
<td></td>
<td>- prohibitive tariffs</td>
<td>- potential demand</td>
</tr>
<tr>
<td>Internet</td>
<td>- offer of service largely inadequate</td>
<td>- potential offer of services in e-services: e-learning, e-medicine, e-agriculture….</td>
</tr>
<tr>
<td></td>
<td>- inadequate overall pass-band</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- prohibitive tariffs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- very poor quality of service</td>
<td></td>
</tr>
</tbody>
</table>

**URBAN AREAS**

**RURAL AND SEMI-URBAN AREAS**
3.2 - SUMMARY

Main causes of discrepancies

The following diagnosis highlights several major problems for each component:

Supervision:

- the critical size of the various segments of the telecommunications market and that of a number of operators for each of these segments has not yet been determined;
- the Special Fund for Telecommunications provided for by the law is not operational until now;
- the Inter-ministerial Organ for the assignment of frequency bands is not operational until now;
- policy of fixing charges: the structure of costs is not oriented to real charges;
- absence of a strategic vision for the privatization of CAMTEL;
- absence of visibility of the repositioning of CAMTEL;
- absence of a space policy;
- absence of a national policy of shareholding in enterprises of the sector;
- absence of a convergence policy;
- absence of a policy on pooling of resources;
- absence of a policy of transference of technologies (3G, etc.);
- absence of a policy of introducing broadband technologies.

Legislation

- the law provided for the technical control by ART of the use of frequencies by telecommunications services. It is silent on all the frequency spectrums;
- the 1998 law, drafted within a context when computer-related crimes, the security of networks and systems, electronic commerce … were not taken into account, need to be revised.

Regulation

- the regulatory framework of the field of Telecommunications is being gradually set up. But that of related sectors has not followed the queue, (case of MMDS, etc.);
- the setting up of the unique local provider so as to have access to the space segment is facing some problems.

Control

- sensitisation of consumers on how to refer matters to ART concerning disputes between operators and consumers is not enough;
- there is no organ for remedy with regard to disputes between operators and the regulatory agency (like a higher Telecommunications council).

Operation:

a) Fixed telephone

- CAMTEL’s infrastructures are obsolete, of low capacity and inadequately maintained;
- The rural telephone service is in bad repair and is declining;
- There is teledensity disparity between towns and rural areas; it is still very low when compared with countries with the same level;
- The overall quality of the fixed telephone service leaves much to be desired;
- The offer of the fixed telephone at value-added service is still in the embryo;
- Absence of a national fibre optic backbone.

b) Mobile telephone

- The current duopoly does not permit the growth of a healthy competition within the mobile service;
- Locality wise, the quality of service for the mobile telephone is not
satisfactory;
- The high cost of communication and of terminals;
- The duplexity of transportation infrastructures.

c) Internet
- The total pass-band of Internet connection right to the nodes is low and of fragmented capacity;
- The offer of the Internet is practically limited to the narrowband. Furthermore, this narrowband is rarely guaranteed;
- High cost of offers of access.

d) Training
- There is a problem of the quality and number of lecturers in ENSPT;
- The market needs do not match with the training offered;
- There is no policy on the replacement of senior-level staff since the freezing of direct recruitments;
- The system of the development and building of capacities are not consistent with the changes observed in the sector.

e) ICT:
- No policy has been formulated on the development of ICT in Cameroon;
- There are not yet national bodies for the certification nor for the management of dot cm (.cm);
- The Civil Society does not adequately mobilise itself in order to ensure the massive use of ICT in Cameroon.

f) Consumption
- Consumers are not adequately sensitised and trained on their rights;
- Consumers have not been adequately brought together in associations.

g) Sources of Financing
- The Special Fund for Telecommunications is not operational;
- The absence of investment banks is a serious issue;
- The difficulty of mobilising financing resources from financial institutions in Cameroon leads, on the one hand, to the search for external sources, and puts in difficulty enterprises that have Cameroonians as majority shareholders.

h) Industrialisation
- Until now, there is no policy formulated on the industrialisation of the sub-sector;
- There is lack of incentive measures to promote the industrial fabric;
- There is no adequate framework to ensure the transfer of advanced technologies, the development of technocities, the appropriation of the process and exploitation of patents that come under the public domain;
- Absence of a maintenance culture;
- Absence of a culture of engineering services.

The inadequacies highlighted in the summary have been presented in the form of the problem tree subdivided into three parts:
PROBLEM TREE N°1: Unsuitable legislative, regulatory and institutional framework

**EFFECTS**

- Non-organised market
  - 1, 2, 3, 4

- Expansion of the digital divide in rural areas
  - 1

- Immature R&D
  - 2, 3

- Disorderly occupancy of frequency bands
  - 2, 3, 4

- Jamming of frequencies
  - 2, 3, 4

- Judicial impunity of offenders
  - 1, 2, 3

- Proliferation of pirates
  - 1, 2, 3, 4

- Long and scamp legal proceedings
  - 2, 3, 4

- Consumers rights tampered with
  - 2, 3, 4

**CAUSES**

- The Special Fund for Telecommunications is not operational

- Size of the different segments of markets including operators markets not determined

- Interministerial organ for assignment of frequency bands is not operational

- Law silent on the monitoring of all frequency spectrums

- Non revision of the 1998 law

- Regulations on related sectors inexistent

- Installation of local provider to have access to space segment is facing some problems

- No remedy organ with regard to disputes between operators and the regulatory agency

- Inadequate reference of matters to ART by consumers with regard to disputes between operators and consumers

**PROBLEM**

- Partially ineffective supervision
  - 1

- Legislation not adequately updated
  - 2

- Partially effective regulation
  - 3

- Non optimal Control
  - 4
PROBLEM TREE N°2: Shortage of services offered in quality, quantity and at affordable prices

EFFECTS

- Creation of jobs limited
- Low capacity of use of talents technologies
- Discrimination against access to knowledge
- Low competitiveness of the economy
- Social divide
- Under capacity in the offer of services by ICT enterprises
- Discrimination against access to services and to the information
- Restricted economy

- Low teledensity and non diversified access
- Poor quality of service
- Non optimal use of human resources
- Low contribution of the sector to growth
- Low market output
- High current prices
- Under capacity in the offer of broadband transportion
- Low penetration
- Limited offer

PROBLEM

- Shortage of services offered in quality, quantity and at affordable prices

CAUSES

- Low penetration of ICT
- Internet offer inadequate and unsatisfactory
- Offer of the fixed telephone insuffisante
- Offer of the mobile telephone service unsatisfactory
- Current duopoly not competitive enough

- ICT training
- Ineffective policy of development of ICT
- No national body for certification nor of management of the .cm
- Non mobilisation of the civil society
- Low pass-band and fragmented capacity
- High cost of offer of access
- Offer limited to the narrowband and not guaranteed
- Offer limited to the narrowband and not guaranteed
- Rural telephone poorly maintained and deteriorating
- Immature offer of value-added
- Non activation of Doba-Kribi FO and non completion of RN FO
- Geographically unbalanced network
- Quality of service unsatisfactory locality wise
- High cost of communications + terminals
- Duplexity of transportation infrastructures
PROBLEM TREE N°3: Weakness of the industrial fabric of ICT enterprises

EFFECTS

- Economy based on cash crops
- Dependency on terms of trade
- Low contribution of the sector to GDP
- Dependency of national SME/SMI on external financing
- Low leverage effect of ICT on other sectors of the economy
- Massive repatriation of profits by foreign enterprises
- Low impact of national consultants at the international level
- Low appeal for the delocalisation of foreign enterprises

PROBLEM

Weakness of the industrial fabric of ICT enterprises

CAUSES

- Lack of measures for the promotion of an industrial fabric
- No adequate framework to encourage the transfer of technologies
- Absence of an industrialisation policy on the field
- Special Fund for Telecommunications not operational
- Absence of investment banks
- Intolerance of Cameroonian banks in offering funding. Ressort to external funding
- Low and inadequate training in ENSPT
- Problem of quality and number of lecturers in ENSPT
- Lack of a policy of replacement of senior-level staff
- Lack of research frameworks
4. - STRATEGY

4.1 - GENERAL SITUATION

Knowledge, although out of the control of National Accounting, is a factor of production of its own right, the expansion of which constitutes one of the main sources of growth. This assertion is confirmed by contemporary theories of growth (theory of endogenous growth...), number of scientific studies, and works on the competitiveness of enterprises (CNUCED, OECD, World Economic Forum...). Access to information has been presented by the UNO as one of the major human development indicators of this century. The Poverty Reduction Strategy Paper (PRSP) of Cameroon further states on page 51 that, the difficulties of accessing to information are a determinant of poverty, information understood here in the sense of the United Nations, that is to say, all the knowledge required for basic life functions.

The analysis of this problem within a world context had been presented in the 2001 World Report on Human Development edited by the UNO. In this report and under the main title "Putting Modern Technologies at the Service of Human Development ", M. Mark Malloch Brown, Administrator of UNDP, points out in the preface that (… technology promotes the autonomy of individuals… the centres of excellence that crop up in the developing world are proving in an indisputable way that science and advanced technology can contribute in solving secular problems of human poverty)1

This Report underscores that the revolution in the information society relies on its "ability to create networks", from which comes its entire developing power. Communication technologies can only become efficient if we build around networks, in the widest sense of the term, a trend of acquisition of this information with the objective of bringing all the resources into synergy.

On the basis of the above, it is therefore necessary to envisage the development of production and dissemination of knowledge, capable of enabling each sector of our economy to get at any time and any where, information needed
to transform the opportunities of one's environment into economically viable goods and services.

Main guidelines, objectives and priorities of the national policy

The main guidelines of the national policy have been spelt out in the Poverty Reduction Strategy Paper (PRSP). They translate into a national context the Millennium Development Goals to which the government had acceded. As a matter of fact, it involves strengthening growth by diversifying and modernising the economy by laying emphasis on industrialisation and development of services that support production and a strong value-added system. In the same way, the entire private sector must be made more dynamic by directing efforts on the improvement of one's environment, notably at the level of governance and financial services.

Main guidelines of the sector policy

The main guidelines of the sector strategy have been set out in the 1998 law on Telecommunications and in subsequent instruments. They confirm the separation of the activities of supervision, regulation and control, on the one hand, from those of operation, on the other hand. They reflect within the national context the determination to:

- Offer adequate and in sufficient quantity Telecommunications/ICT means and services to consumers throughout the national territory;
- Create jobs for young graduates;
- Improve on the effectiveness and efficiency of public institutions and enterprises operating in the field;
- Promote the harmonious development of telecommunication and ICT networks and services with the aim of ensuring a high contribution of this field to the national economy;
- Encourage the participation of the private sector in the development of

1 " 2001 World Report on Human Development ", Page iii et iv , édition 2001
telecommunications in a competitive environment;
- Reduce poverty;
- Satisfy the desire of integration of Telecommunications/ICT networks in the sub-region.

**Objectives of the sector and main results expected**

This involves increasing the accessibility to and availability of the broadband offer to enterprises and homes, connecting all the services of the public administration and reducing the digital divide in rural and semi-urban areas.

**Recapitulation of the objectives and priorities**

1. Increasing the accessibility of the broadband offer to enterprises;
2. Connecting all the services in the public administration;
3. Reducing the digital divide in rural and semi-urban areas.

**Cartography of objectives and priorities**

**Priority 1: Increasing the accessibility of the broadband offer to enterprises;**

*Zone 1: Douala and Yaoundé*
- Extending the national backbone of the historic operator;
- Digitalising all transmission routes and switching nodes linking all divisional headquarters;
- Integrating innovating technologies of the moment;
- Building human resources capacities;
- Increasing the offer of broadband Internet.

*Zone 2: Provincial headquarters*
- Digitalising all transmission routes and switching nodes linking all divisional headquarters;
- Extending the national backbone of the historic operator;
- Increasing the offer of broadband Internet.

*Zone 3: The rest of the country*
- Extending the national backbone of the historic operator;
- Developing the Internet.

**Priority 2: Connecting all the services in the public administration**

*Zone 1: Douala and Yaoundé*
- Constructing the inter-ministerial network;
- Setting up a platform to secure government transaction networks;
- Setting up a regulatory framework of confidence on and ethics for ICT;
- Setting up a framework of coherence and synergy for ICT projects.

*Zone 2: Provincial headquarters*
- Extending the inter-ministerial network;
- Extending the provision of security of transactions.

*Zone 3: The rest of the country*
- Interconnecting the networks of local communities to the government's network;
- Extending the provision of security of transactions to the networks of local communities.

**Priority n°3: Reducing the digital divide in rural and semi-urban areas.**

*Zone 3:*
- Setting up multipurpose community telecentres;
- Ensuring their sustainability.
4.2 - TELECOMMUNICATIONS AND ICT FIELD

4.2.1 - Objectives of the strategy

The following objectives have been set with regard to the area of building and updating the legislative, regulatory and institutional frameworks:

- Organise the Telecommunications and ICT market;
- Reduce the digital divide in rural and semi-urban areas;
- Promote R&D in ICT;
- Improve on the management of frequency spectrums;
- Improve on the management of offences and disputes in the field;
- Privatise Camtel;
- Restructure ENSPT.

The following objectives have been set with regard to the area of improving the offer of services in quantity, quality and at affordable prices:

- Improve on the teledensity, the quality of services and diversify access;
- Optimise the use of human resources in order to raise the contribution of the field to growth;
- Improve on the market performance and oversee the prevailing tariffs;
- Offer broadband connections and services and improve on the penetration rate of the fixed telephone;
- Reposition Camtel on the segment of heavy(carrier);
- Rationalise the telephone consumption of other services used by the State;
- Promote innovating services.

The following objectives have been set with regard to the area of enhancing the industrial fabric of ICT enterprise:

- Develop, spearhead and ensure that the ICT industry contributes to growth;
- Organise the system of financing ICT industries;
- Develop new skills and strengthen capacities;
- Support the setting up of enterprises in the field.

Expected results

The following results are expected from the area of building and updating the legislative, regulatory and institutional frameworks:

- The SFT should be operational by June 2006 latest (by sensitising hierarchy on the necessity of completing instruments as expeditiously as possible and by encouraging operators to contribute into the accounts opened to this effect);
- OIABF should become operational by 30 June 2006;
- The legislative and regulatory framework should be updated by 31 December 2006 latest, to take into account the convergence of technologies and services;
- The organ to arbitrate disputes between operators and the regulatory agency, analyse the relevancy and coherence of ICT projects should be set up at the PRC by 31 December 2006 latest;
- The Douala-Yaoundé fibre optic link through Edéa should be operational by 31 December 2006 latest;
- The 14 exit points of the Nana-Kribi line should be activated by 31 December 2006 latest;
- The Douala-Yaoundé fibre optic link through Bana should be operational by 31 December 2007 latest;
- The new digital exchange stations incorporating the IP technology, equipped with DSLAM and IN platforms of a capacity of 1 million lines each should have been installed and gone operational in Douala and Yaoundé by 31 December 2008 latest, with dismantled exchanges, redeployed in the interior parts of the country;
- The SDH rings of the cities of Douala and Yaoundé should be put into use by 31 December 2008 latest;
- Technologies of access to the last Km are compatible;
● Cost accounting systems should have been set up in all operating services by 31 December 2008 latest;
● Camtel should be repositioned on the transportation segment by 31 December 2007 latest;
● The inter-ministerial network should have been set up and kept secure in the cities of Yaoundé and Douala through a national certification authority by 31 December 2009 latest.

The following results are expected from the area of enhancing the industrial fabric ICT enterprise:

● The investment bank specifically for the ICT industries should have been set up and gone operational by 31 December 2007 latest;
● There should be 100 SMI involved in production and 250 in engineering services by 31 December 2008;

● The broadband offer at 2Mbps should be available in quantity and quality in the last Km of the cities of Douala and Yaoundé by 31 December 2007 latest and in the main towns that have digital switching units before 31 December 2015.

4.2.2 - Strategic areas

Key strategic areas can be summarised as follows:

● Building and updating the legislative, regulatory and institutional frameworks
● Improving on the offer of services in quantity, quality and at affordable prices;
● Enhancing the industrial fabric of ICT enterprises.

Table N°15 : Summary Table

<table>
<thead>
<tr>
<th>STRATEGIC AREAS</th>
<th>OBJECTIVES</th>
<th>PROGRAMMES</th>
<th>PROJECTS</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Building and updating institutional framework</td>
<td>1- Organise the Telecommunications and ICT market</td>
<td>Improve on supervision</td>
<td>Render operational the Special Fund for Telecommunications</td>
<td>- Sensitise hierarchy on the necessity of completing instruments as soon as possible;</td>
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<td>- call up capital</td>
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<td>Complete drafting of instrument setting up OIABF and render it operational</td>
<td>- Sensitise hierarchy on the necessity of completing instruments as soon as possible;</td>
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<td>- set up the organ</td>
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<td></td>
<td>Conduct studies to determine size of different segments of the market</td>
<td>- establish the TDR for the recruitment of a specialised firm;</td>
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<td>- issue an invitation for the recruitment of a support firm;</td>
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<td>- conduct study by 31 December 2007 latest</td>
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<td></td>
<td></td>
<td>Update the legislation in force</td>
<td>Revise the 1998 to take into account various developments of the sector including all aspects involving electronic communication</td>
<td>- Revise it by 31 December 2006 latest</td>
</tr>
<tr>
<td>STRATEGIC AREAS</td>
<td>OBJECTIVES</td>
<td>PROGRAMMES</td>
<td>PROJECTS</td>
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<tr>
<td>1- Organise the Telecommunications and ICT market</td>
<td>Increase the effectiveness of regulations</td>
<td>Regulate related sectors and take into account the convergence of technologies</td>
<td>- draft instruments that are lacking taking into account the multiservices aspect by 31-12-2008 latest</td>
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<td></td>
<td></td>
<td>Approve one or several local providers of access to space segment</td>
<td>- ensure issuing of invitation for the granting of the concession to one or several local providers</td>
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<td></td>
<td>Optimise the system of controlling the sector</td>
<td>Set up an arbitration organ to settle disputes between operators and the regulatory agency</td>
<td>- draft accompanying instruments</td>
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<td></td>
<td></td>
<td>EConduct study on the impact of liberalisation: unbundling, transportability, preselection…</td>
<td>- establish the TDR for the recruitment of a specialised firm; -issue an invitation for the recruitment of a support firm; - conduct study by 31 December 2007 latest</td>
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<td></td>
<td></td>
<td>Sensitise users of ICT on their rights</td>
<td>- formulate an instrument for the protection of consumers; - organise information campaigns and training of consumers on the rights</td>
<td></td>
</tr>
<tr>
<td>2- Reduce the digital divide in the rural area</td>
<td>Render operational the Special Fund for Telecommunications</td>
<td>- complete HIPC funds in order to set up multipurpose community telecentres in rural and semi-urban areas</td>
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<tr>
<td>3- Define a national policy on the management of emergency Telecommunications</td>
<td>Initiate a study in order to set up a national network of emergency Telecommunications linked up to the global network</td>
<td>- Formulate the process flap data in order to recruit and International Consultant; -issue invitation to tender for the purchase of eqpt - set up and bring into service before 31/12/2006</td>
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<tr>
<td>4- Improve on the management of frequency spectrums</td>
<td>Update the legislative and regulatory framework to take into account R&amp;D</td>
<td>Revise the 1998 Law</td>
<td>- formulate encouraging instruments</td>
<td></td>
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<td></td>
<td></td>
<td>Revise the agreements with operators in order to increase participation in the financing of R&amp;D</td>
<td>- include provisions in the specifications of operators obliging them to provide resources equal at least to 1% of the turnover excluding all taxes</td>
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</table>

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<table>
<thead>
<tr>
<th>STRATEGIC AREAS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>4- Improve on the management of frequency spectrums</td>
<td>Strengthen supervision and regulation of management of frequency spectrums</td>
<td>Build the legislative and regulatory framework</td>
<td>Render operational the OIABF by 30-06-2006 latest</td>
</tr>
<tr>
<td>1- Building and updating institutional framework</td>
<td></td>
<td></td>
<td>Improve on sensitisation of the consumer</td>
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<tr>
<td></td>
<td>5- Improve on the management of offences and disputes in the sector</td>
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<tr>
<td>6- Privatise Camtel</td>
<td>Determine the structure of Camtel capital</td>
<td>Transfer at least 51% of shares Own the rest</td>
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<td></td>
<td>Compensation of cross-currency swaps</td>
<td>Assess and support Camtel's financial claim over State</td>
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<td></td>
<td>Vesting of heritage</td>
<td>Finalise reports of ad hoc committees</td>
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<td></td>
<td>Optimisation of human resources</td>
<td>Make an audit of the corporation in order to describe duty posts, career profile and the optimum number to retain</td>
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</tbody>
</table>

To privatise Camtel:
- Chose the strategic operator and/or partner to take over the block of shares
- Allocate 10% of shares to Camtel staff
- Put 9% of shares into the stock market
- Keep 10% of the shares for the State
- Exploit the audit of BNP-Paribas
- Cancel the said claim
- Stop the claim at the level of the State
- Undertake a cross cancellation
- Undertake the vesting of the heritage
- Define duty posts, career profile
- Strike a balance with new jobs
- Grade and determine size of workforce
- Earmark programme of redeploying staff not retained
- Encourage voluntary termination of employment

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## STRATEGY

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<thead>
<tr>
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<th>PROJECTS</th>
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</thead>
<tbody>
<tr>
<td>1 - Building and updating institutional framework</td>
<td>2 - Improving on the offer of services in quantity, quality and at affordable prices</td>
<td>1 - Increase the teledensity, quality of service and diversify access</td>
<td>7 - Restructure ENSPT</td>
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<tr>
<td></td>
<td></td>
<td>Reorientation of the organic missions of ENSPT</td>
<td>Restructure the institution</td>
<td>Draw up terms of references for recruiting a specialised firm to conduct study on restructuring the school being financed by SFT</td>
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<tr>
<td></td>
<td></td>
<td>Increase the offer of fixed telephone services: raise the teledensity to 30% by 2015</td>
<td>Restor fixed infrastructure</td>
<td>- gradual replacement of copper cables with FO for transportation and distribution in big towns;</td>
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<td></td>
<td></td>
<td>Increase the geographical balance of the network</td>
<td></td>
<td>- extension of digital exchange stations of big towns and digitalisation of the exchange stations in remote areas of the country;</td>
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<td></td>
<td>Improve on the offer of value-added services</td>
<td></td>
<td>- extend and digitalise all transmission routes.</td>
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<td></td>
<td>Improve on the offer of the mobile telephone: raise the teledensity to 50% by 2015</td>
<td>Expand the mobile telephone network</td>
<td>- set up IP and IN platforms in the exchange stations;</td>
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<td>- extend broadband capacities throughout the national network;</td>
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<td>- implement value-added contents in telecentres, notably e-services</td>
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<td>- allocate the 1800 MHz band</td>
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<td>- include all compatible innovative technologies</td>
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<td>Extension of the national coverage by mobile network</td>
<td>- cover all district headquarters;</td>
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<td>- cover at least 40% of national territory</td>
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<td>Work for scaling down of costs of communication and terminals</td>
<td>- set up by 2010 the cost accounting system for all operators in the sector;</td>
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<table>
<thead>
<tr>
<th>STRATEGIC AREAS</th>
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<th>PROJECTS</th>
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<tbody>
<tr>
<td></td>
<td>1- Increase the tele-density, quality of service and diversify access</td>
<td>Improve on the offer of the mobile telephone: raise the tele-density to 50% by 2015</td>
<td>Assemble infrastructures and sites</td>
<td>- install them by 31 December 2006</td>
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<td></td>
<td>Set up the e 3rd network</td>
<td>Assess pilot phase of TCP project</td>
<td>- adopt the strategy of implementing the de 3rd licence ;</td>
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<td>Assess the technology adopted in relation to current technologies available on the market</td>
<td>- draft the specifications ;</td>
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<td>2- Improving on the offer of services in quantity, quality and at affordable prices</td>
<td>Get hold of  ICT</td>
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<td>Focus on training in ICT</td>
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<td>Redynamise the policy of development of ICT</td>
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<td>2- Optimise the use of human resources to ensure increased contribution to the growth of the sector</td>
<td>Set up a national management body for the .cm</td>
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<td>Set up a national certification authority</td>
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<td>Intensify the sensitisation of the Civil society on the use of ICT</td>
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<td>Popularise the Internet</td>
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<td>3- Improve on the market output and rationalise current tariffs</td>
<td>Improve on the pass band</td>
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<td>Lower the cost of access</td>
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<td>Introduce the high speed offer to the last Km</td>
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<td>STRATEGIC AREAS</td>
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<tr>
<td>2- Improving on the offer of services in quantity, quality and at affordable prices</td>
<td>4-Offer connections and broadband services and improve on the fixed telephone penetration rate</td>
<td>Develop the fibre optic national backbone</td>
<td>- connect the Doba-Kribi FO to Sat3; - Install ADSL, WiMax</td>
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<td>Total digitalisation of Camtel network</td>
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<td>Activation of the Doba-Kribi fibre optic</td>
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<td>Complete the fibre optic national backbone</td>
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<td>Reorientation of Camtel as providers of capacities</td>
<td>- grant Camtel the monopoly to sell FO capacities for 5 years;</td>
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<td>Extension of Camtel's FO backbone to cover national network</td>
<td>- introduce these technologies</td>
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<td>Set up IP and IN platforms</td>
<td>- Let ART temporarily ensure for 18 months the commissioning of the space segment and sublet monitoring</td>
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<td>Conduct a technical study to identify one or more local providers</td>
<td>- select at least 2 local providers while waiting for the completion of the study: * Camtel for Inmarsat and Intelsat for Camtel's tradable services and public utilities * an association of ISP (globalNet, DoualaOne, Conestel…) by offering the possibility to any other company operating under Cameroonian law to take part in the capital formation - interconnect the two teleports by FO; - set development objectives for the association; - open up the network of teleports to Central Africa (Chad, CAR, Equatorial Guinea…); - use the VSAT network as standby because the broadband FO offers lower prices</td>
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<td>STRATEGIC AREAS</td>
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<tr>
<td>2- Improving on the offer of services in quantity, quality and at affordable prices</td>
<td>6- Rationalising telephone consumption and other services by the State</td>
<td>Build an interministerial network to reduce costs from 12 billion/year to 3 billion/year by 2010</td>
<td>Validation of the network architecture study by hierarchy</td>
<td>- choose the type of technology by relying on updated architecture; - build the network; - put the network in service; - set up a platform to ensure security of transactions of government relations; - make provision in the budget of each ministry for the acquisition of PABX; - define and manage the quotas of officials and include them in the management platform.</td>
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<td>Assess the use of financial resources and the quality of expenditure during the pilot phase</td>
<td>- Assess the critical minimal financing and the yield of the allocated funds.</td>
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<td>Assess the relevancy of the retrocession framework and the options taken to ensure its sustainability</td>
<td>- Assess the retrocession framework adopted. - Assess the appropriation capacities of beneficiaries selected. - Compare the two assessments.</td>
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<td>Start up the operation of the community telecentres project</td>
<td>- receive all buildings by end of March 2006 latest. - Install and put into service by end of March 2006 latest all internal equipment earmarked. - Install and put into service by end of March 2006 latest all external equipment earmarked. Complete training and deploy by end of March 2006 latest all support technical staff. - Organise deployment of the said staff over a period of 24 months as from June 2006 according to the following modalities: - Deployment for service: 6 months. - Followed by deployment for operation: 8 months. - Assessment of end of work for support staff based on: + access by CAMTEL + operation by MPT. - Consider results of assessment of pilot phase for possible reorientation of the project.</td>
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<td>Assess the conditions for granting 3G licences</td>
<td>- Set up the TDR for the recruitment of a specialised firm; - issue an invitation to tender to recruit a support firm; - support the realisation by 31 December 2007.</td>
</tr>
<tr>
<td>STRATEGIC AREAS</td>
<td>OBJECTIVES</td>
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<tr>
<td>3- Enhancing the industrial fabric of ICT enterprises</td>
<td>1- Develop, sensitise and encourage the ICT to contribute to the national economy</td>
<td>Set up a policy of industrialisation of ICT</td>
<td>- seek for strategic partnerships; - Draw up an encouraging framework to make the industrial activity of ICT more attractive; - set up technocities; - speed up the completion of these project: African centre for the development of the Internet, sub-regional centre for the maintenance of Telecommunications of Yaoundé…</td>
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<tr>
<td></td>
<td>2- Organise the system of financing ICT industries</td>
<td>Restructuring the organisation and programmes of ENSPT</td>
<td>- make use of the Special Fund for Telecommunications; - ensure the creation of an investment bank specifically for ICT industries; - encourage Cameroonian banks to get involved in funding high-performance industrialisation projects; - form an inter-ministerial committee to ensure use of ICT in the administration.</td>
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<tr>
<td></td>
<td>3- Develop new skill and strengthen capacities</td>
<td>- Establish strategic partnerships with international institutions of the sector, advanced schools, industries and operators; - Equip the laboratories of ENSPT.</td>
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<td></td>
<td>4- Develop a national strategy for the development of capacities in the ICT sector</td>
<td>Take stock and identify the needs in terms of means of development of human resources in Cameroon</td>
<td>- Set up the TDR - Identify structures of HR development - Analyse and identify existing gateways</td>
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<td>- Reformulate the contents of programmes to make them match with market needs; - Link up ENSPT to the university system and upgrade the teaching corps; - Develop a policy of renewal of senior-level staff and ensure that they get international jobs.</td>
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<tr>
<th>PROJECTS</th>
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<tbody>
<tr>
<td>- Take stock and identify the needs in terms of means of development of human resources in Cameroon</td>
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<tr>
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</thead>
<tbody>
<tr>
<td>3- Enhancing the industrial fabric of ICT enterprises</td>
<td>4- Develop a national strategy for the development of capacities in the ICT sector</td>
<td>Encourage upgrading and networking</td>
<td>-Set up a system of reference for new jobs in the ICT and their programmes and contents; -Enrich the contents and recognise them as graduate training material; -Organise the conference of advanced schools offering training in ICT</td>
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<tr>
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<td>Set up Virtual university</td>
<td>- promote the pooling of existing resources and synergies.</td>
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<td></td>
<td>Conduct study on national capacities in ICT</td>
<td>Take stock and identify needs in human resources</td>
<td>- lay down terms of reference with a view to recruiting a consultant; - Set up a dynamic data base</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Include the convergence aspect of technologies in the development of human resources</td>
<td>Pool resources</td>
<td>- promote partnership among national training institutions; - Promote synergies</td>
</tr>
<tr>
<td></td>
<td>5- Provide support to the setting up of enterprises in the sector</td>
<td>Conduct a study</td>
<td>Support local banks in training in the engineering of ICT financing project</td>
<td>- set up the TDR for the recruitment of a consulting firm to conduct technical and financial studies of the project; - implement the conclusions of the study; - ridentify/select the partner proposed by the study; - formulate the specifications for setting up the factory; - determine the share of capital allocated to nationals following the conclusions of the study; - establish joint venture; - Start up the project by 1 January 2008 latest</td>
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<td></td>
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<td>Set up factories</td>
<td>Set up a fibre optic production factory</td>
<td></td>
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</table>

Republic of Cameroon

### STRATEGY

#### 4.2.3 - The public strategy

*This can be summarised in the following tables:*

#### STRATEGIC AREA N° 1: IMPROVING THE OFFER OF SERVICES IN QUANTITY, QUALITY AND AT AFFORDABLE PRICES

**Objective 1:** Increasing the teledensity, quality of service and diversifying the offer of services in quantity and quality

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>PROJECT</th>
<th>ACTIONS</th>
<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the offer of the fixed telephone: raise the teledensity to 30% by 2015</td>
<td>Restore fixed infrastructure</td>
<td>- gradual replacement of copper cables with FO for transportation and distribution in big towns; - extension of digital exchange stations to big towns and digitalisation of stations in remote areas of the country; - extend and digitalise all the transmission routes.</td>
<td>Financing: State/SFT; Implementation: CAMTEL</td>
<td>To be fixed after study</td>
<td></td>
</tr>
<tr>
<td>Ensure the geographical balance of the network</td>
<td></td>
<td>- activation of the 14 exit points of the FO cable at Doba-Kribi and those of Douala-Yaoundé to offer access to localities in which they pass through; - extension of FO SDH ring along Yao-Dla through Edéa and Bana, Bafoussam-Bagangté-Bafia-Obala-Yaoundé; - construction of the Gangui-Méiga, Gangui-Ngaoundéré-Garoua-Maroua-Kousseri, Bafoussam-Ngaoundéré, Bafoussam-Bamenda-Buéa-Douala-Nkongsamba-Bafang-Bafoussam links - expand the setting up of multipurpose community telecentres in 2 000 villages of the country</td>
<td>Financing: Camtel; Implementation: CAMTEL</td>
<td></td>
<td>The study by ART will consist in identifying the most profitable zones and selecting the lowest bidder after invitation to tender. A gradual phasing will follow after evaluation</td>
</tr>
<tr>
<td>Improve the offer of value-added services</td>
<td></td>
<td>- Set up IP and IN platforms in switching centres; - extend broadband capacities to the entire national network; - implement value-added contents in telecentres, notably e-services</td>
<td>Financing: HIPC/SFT; Implementation: CAMTEL</td>
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</tr>
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<td>PROGRAMME</td>
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</tbody>
</table>
| Improve on the offer of mobile telephone: raise the teledensity to 50% by 2015 | Extend the mobile telephone network | - allocate the 1800 MHz band  
- include all compatible innovating technologies | Supervision : ART  
Implementation : MTN, Orange, Camtel | | Studies conducted by ART |
| | Extension of the mobile network to cover entire nation | - cover all district headquarters;  
- cover at least 40% of national territory | | | ART follows up and supervises |
| | Scale down the cost of communications and terminals | - install by 2010 cost accounting system for all operators in the sector; | ART | | Cost accounting system must be set for all operators under supervision of ART |
| | Assemble all infrastructures and sites | - start installing them by 31 December 2006; | Operators | | |
| | Set up a 3rd network | - draw up specifications by 31 December 2006 latest; | ART | | |
## Objective 2: Optimise the use of human resources to ensure a better contribution to the growth of the sector

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Develop ICT</td>
<td>Get hold of ICT</td>
<td>Sensitise hierarchy on the need to use ICT in services, enterprises and training institutions</td>
<td>MINPOSTEL MINESUP MINEBASE MIPME MINCOM MINRESI Civil society etc…</td>
<td>To be fixed</td>
<td></td>
</tr>
<tr>
<td>Reactivate the policy of development of ICT</td>
<td>Validate the policy of development of ICT</td>
<td>PRC PMO MINPOSTEL</td>
<td></td>
<td>To be fixed</td>
<td>Make necessary arrangements for the transfer of the management of .cm by the Civil society</td>
</tr>
<tr>
<td>Set up a national management body for .cm</td>
<td>Sensitise the civil society, ISP, enterprises, the different trades … to form management bodies</td>
<td>Civil society</td>
<td></td>
<td>To be fixed</td>
<td></td>
</tr>
<tr>
<td>Set up a national certification authority</td>
<td></td>
<td>State and Civil society</td>
<td></td>
<td>To be fixed</td>
<td>The State organises and will have the right of supervision of the activities of this body</td>
</tr>
</tbody>
</table>

## Objective 3: Améliorer le rendement du marché et rationaliser les tarifs pratiqués

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</thead>
<tbody>
<tr>
<td>Popularise the Internet</td>
<td>Extend the bandwidth</td>
<td>Camtel</td>
<td>PM</td>
<td>Increase access from 35 Mbps to 1 Gbps</td>
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<tr>
<td></td>
<td>Lower the cost of access</td>
<td>ART</td>
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</tbody>
</table>
**Objective 4 : Offer connections and broadband services and improve on the penetration rate of the fixed telephone**

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Develop the national fibre optic backbone</td>
<td>- connect the Doba-Kribi FO to Sat3 ; - install the ADSL , WiMax</td>
<td>Camtel</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total digitalisation of Camtel network</td>
<td></td>
<td>Camtel</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activation of Doba-Kribi fibre optic</td>
<td></td>
<td>Camtel</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete the national fibre optic backbone</td>
<td></td>
<td>Camtel</td>
<td>PM</td>
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</tbody>
</table>

**Objective 5 : Reposition Camtel**

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</thead>
<tbody>
<tr>
<td>Reorientation of Camtel as provider of capacities</td>
<td>Extention of Camtel's FO backbone with a view to covering the national network</td>
<td>- grant Camtel the monopoly to sell FO capacities up to 31 December 2010 ;</td>
<td>MINPOSTEL</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Setting up of IP and IN platforms</td>
<td>- introduce these technologies</td>
<td>CAMTEL</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differentiation and determination of the number of local providers of the space segment</td>
<td>Technical study to select one or more local providers</td>
<td>MINPOSTEL/ART</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of the Douala and Yaoundé teleports and making Cameroon a Hub for the sub-region</td>
<td>- select at least 2 local providers while waiting for the conclusions of the study ; * Camtel for Inmarsat and Intelsat for Camtel's tradable services and public utilities * an association of ISP (globalNet, DoualaOne, Conestel…) by offering the possibility to any other company operating under Cameroonian law to take part in the capital formation - interconnect the two teleports by FO ; - set development objectives for the association ; - open up the network of teleports to Central Africa (Chad, CAR, Equatorial Guinea …) - use the VSAT network as standby because the broadband FO offers lower prices</td>
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</tbody>
</table>
**Objective 6**: Rationalisation by the State of telephone consumption and other services

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</tr>
</thead>
</table>
| Construct an inter-ministerial network in order to cut down cost from 12 billion/year to 3 billion/year by 2010 | Validation by hierarchy of the network architecture study | - choose the technology by relying on current architectures;  
  - construct the network  
  - put the network in use  
  - set up a platform to provide security to transactions of government relations;  
  - make provision in the budget of each ministry for the acquisition of PABX  
  - define and manage the quotas of officials and include them in the management platform | MINPOSTEL/ MINEFI/Other Ministries | To be fixed | Urgent |

**Objective 7**: Improve on the teledensity, quality of service and diversify access

<table>
<thead>
<tr>
<th>PROGRAMME</th>
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<th>OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess the pilot phase of the TCP project</td>
<td>Assess the technology adopted in relation to current technologies available on the market</td>
<td>Analyse costs, speed, interoperability, services offered</td>
<td>MINPOSTEL</td>
<td>To be fixed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assess the use of financial resources and the quality of expenditure during the pilot phase</td>
<td>- Assess the minimal critical financing and the yield on funds allocated</td>
<td>MINPOSTEL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| | Assess the relevancy of the retrocession framework and the options made to ensure its sustainability | - Assess the retrocession framework adopted  
  - Assess the appropriation capacities of beneficiaries selected  
  - Compare the two assessments | MINPOSTEL | |
| | Start up operation of the community telecentres project | - receive all buildings by end of March 2006 latest  
  - Install and put into use by end of March 2006 latest all internal equipment provided for | MINPOSTEL/MIN-DUH | |
| | | | MINPOSTEL | | |
### Assess the pilot phase of the TCP project

**PROJECT**
Start up operation of the community telecentres project

**ACTIONS**
- Install and put into use by end of March 2006 latest all external equipment provided for
- Complete the training and deployment by end of March 2006 latest of all support technical staff
- Organise this deployment over a period of 24 months as from June 2006 according to the following modalities:
  - deployment for use: 6 months
  - followed by a deployment for operation: 18 months
  - assessment of end of service for support staff based on: + access by CAMTEL + operation by MPT
  - take into account the assessment results of the pilot phase in order to possibly reorientate the project

**RESPONSABILITY**
MINPOSTEL / CAMTEL

**ESTIMATED COST**

**OBSERVATIONS**

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### Objective 8: Promote innovating services

**PROGRAMME**
Introduce the 3G

**PROJECT**
Review the conditions for granting 3G licences

**ACTIONS**
- Set up the TDR in order to recruit a specialised firm;
- issue an invitation to tender for the recruitment of a support firm;
- support the realisation by 31 December 2007 latest

**RESPONSABILITY**
MINPOSTEL/ART / Mobile operators / ART

**ESTIMATED COST**
To be fixed

**OBSERVATIONS**
## STRATEGY

### STRATEGIC AREA 2: BUILDING AND UPDATING THE INSTITUTIONAL FRAMEWORK

**Objective 1**: Organise the Telecommunications and ICT market

<table>
<thead>
<tr>
<th>PROGRAMME</th>
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<th>OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve on supervision</td>
<td>Render operational the Special Fund for Telecommunications</td>
<td>- Sensitise hierarchy on the necessity of completing the drafting of instruments as soon as possible; - call up capital</td>
<td>MINPOSTEL ART/MINPOSTEL</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Complete the instrument to set up the OIABF and render it operational</td>
<td>- Sensitise hierarchy on the necessity of completing the drafting of instruments as soon as possible; - Set up the organ</td>
<td>MINPOSTEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct studies to determine the size of the different segments of the market</td>
<td>- Set up the TDR in order to recruit a specialised firm; - issue an invitation to tender for the recruitment of a support firm; - conduct the study by 31 December 2007</td>
<td>MINPOSTEL/ART MINJPOSTEL/ART MINPOSTEL/ART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Update legislation in force</td>
<td>Revise the 1998 Law to take into account the different developments in the sector</td>
<td>- Start revision by 31 December 2006 latest</td>
<td>MINPOSTEL/ART/OPERATORS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase the effectiveness of regulations</td>
<td>Regulate related sectors and take into account the convergence of technologies</td>
<td>- draft instruments that are lacking by taking into account the multiservices aspect</td>
<td>MINPOSTEL/ MINCOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bring in one or several local providers of access to the space segment</td>
<td>- ensure the issuing of the invitation to tender for the granting of the concession to one or several local providers;</td>
<td>ART/MINPOSTEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimise the system of controlling the sector</td>
<td>Set up an arbitration organ to settle disputes between operators and the regulatory agency</td>
<td>- draft accompanying instruments</td>
<td>PRC/MINPOSTEL</td>
<td></td>
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<tr>
<td>PROGRAMME</td>
<td>PROJECT</td>
<td>ACTIONS</td>
<td>RESPONSABILITY</td>
<td>ESTIMATED COST</td>
<td>OBSERVATIONS</td>
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<tr>
<td>Optimise the system of controlling the sector</td>
<td>Sensitise consumers of ICT on their rights</td>
<td>- draft an instrument to protect consumers;</td>
<td>MINPOSTEL/ART</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- organise information campaigns and the training of consumers on the rights</td>
<td>ART/MINPOSTEL</td>
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</tbody>
</table>

**Objective 2 : Reduce the digital divide in the rural area**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Render operative the Special Fund for</td>
<td>- complete the HIPC resources with the SFT</td>
<td>- complete the HIPC resources with the SFT so as to set up multipurpose</td>
<td>MINPOSTEL/ART</td>
<td>PM</td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td>so as to set up multipurpose community</td>
<td>community telecentres in rural and semi-urban areas</td>
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<td></td>
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<tr>
<td></td>
<td>telecentres in rural and semi-urban areas</td>
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</table>

**Objective 3 : Develop R&D in ICT**

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Update the legislative and regulatory framework to take into account R&amp;D</td>
<td>Revise the 1998 Law</td>
<td>- draft encouraging instruments</td>
<td>MINPOSTEL/ART/O</td>
<td>PM</td>
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<td></td>
<td></td>
<td></td>
<td>PERATORS/CONESTEL</td>
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</table>

| Amend agreements with operators so as to increase contribution for R&D financing | - include provisions in the specifications of operators obliging them to provide resources to the tune of at least 1% of the turnover excluding all taxes | MINPOSTEL/ART/O PERATORS | PM | |

**Objective 3 : Develop R&D in ICT**

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Amend agreements with operators so as to increase contribution for R&amp;D financing</td>
<td>- include provisions in the specifications of operators obliging them to provide resources to the tune of at least 1% of the turnover excluding all taxes</td>
<td>MINPOSTEL/ART/O PERATORS</td>
<td>PM</td>
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### STRATEGY

**Objective 4: Improve on the management of frequency spectrums**

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</thead>
</table>
| Strengthen supervision and regulations in the area of the management of frequency spectrums | - Draw up a general policy relating to the frequency spectrum  
- Render OIABF operational | MINPOSTEL/ART | To be fixed |
| | Revise the 1998 Law to take into account the monitoring of all frequency spectrums | MINPOSTEL/ART/OPERATORS/ MINCOM/MINDEF/ MINATD/MINTRANS/DGSN/ CONESTEL | PM |

**Objective 5: Improve on the management of frequency spectrums**

<table>
<thead>
<tr>
<th>PROGRAMME</th>
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<th>RESPONSABILITY</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Build the legislative and regulatory framework</td>
<td>- draft accompanying instruments before 31 December 2007</td>
<td>MINPOSTEL/ART/OPERATORS/ CONESTEL</td>
<td>PM</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Improve on the sensitisation of the consumer</td>
<td>ART</td>
<td>PM</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Produce suitable instruments</td>
<td>MINPOSTEL/ART</td>
<td></td>
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<tr>
<td></td>
<td>Carry out information campaigns and the training of the consumer</td>
<td>MINPOSTEL/ART</td>
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</table>

**Objective 6: Improve on the management of offences and disputes**

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<tr>
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<tbody>
<tr>
<td>Build the legislative and regulatory framework</td>
<td>- draft accompanying instruments before 31 December 2007</td>
<td>ART/MINPOSTEL</td>
<td>PM</td>
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<tr>
<td></td>
<td>Improve on the sensitisation of the consumer</td>
<td>ART/MINPOSTEL</td>
<td>PM</td>
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<tr>
<td></td>
<td>Produce suitable instruments</td>
<td>ART/MINPOSTEL</td>
<td>PM</td>
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<tr>
<td></td>
<td>Carry out information campaign and the training of the consumer</td>
<td>ART/MINPOSTEL</td>
<td>PM</td>
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</table>
### Objective 7: Privatise Camtel

<table>
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<tr>
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<tbody>
<tr>
<td>Determination of the capital structure of Camtel</td>
<td>Transfer at least 51% of shares Own the rest of the shares</td>
<td>- select the strategic operator and /or partner to takeover the block of shares - allocate 10% of shares to Camtel staff; - put 29% of shares into the stock exchange ; - reserve 10% of shares for the State</td>
<td>MINPOSTEL/CTPL/ CAMTEL MINPOSTEL/CTPL/ CAMTEL MINPOSTEL/CTPL/ CAMTEL/ Financial Markets Commission</td>
<td>PM through CTPL</td>
<td></td>
</tr>
<tr>
<td>Cross currency swap</td>
<td>Assess and support the Camtel's debt claim over the State</td>
<td>- exploit the audit of BNP-Paribas - cancel the said claim</td>
<td>MINPOSTEL/CTPL/ CAMTEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vesting of heritage</td>
<td>Finalise ad hoc committee reports</td>
<td>- carry out the vesting of heritage</td>
<td>MINPOSTEL/MIN- DUH/CAMTEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimisation of human resources</td>
<td>Make a social audit leading to the description of duty posts, career profile and the highest number to take</td>
<td>- define duty posts, career profiles - make a match with new jobs; - grade and determine the size of total workforce ; - envisage a programme of redeploying unengaged staff - encourage voluntary termination of employment</td>
<td>MINPOSTEL/CTPL/ CAMTEL MINPOSTEL/MIN- FOPRA MINPOSTEL/CTPL/ CAMTEL MINPOSTEL/MIN- FOPRA/CAMTEL CTPL/CAMTEL</td>
<td>PM through Camtel</td>
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### Objective 8: Refondation de l’ENSPT

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<tbody>
<tr>
<td>Reorientation of the organic missions of ENSPT</td>
<td>Restructuring the institution</td>
<td>Draw up terms of reference for the recruitment of a specialised firm to conduct a study relating to the restructuring of the school on the funding of SFT</td>
<td>MINPOSTEL/ Board of Directors of ENSPT</td>
<td>MINPOSTEL</td>
<td></td>
</tr>
<tr>
<td>Reform of resources</td>
<td></td>
<td></td>
<td>MINPOSTEL/ Board of Directors of ENSPT</td>
<td>MINPOSTEL</td>
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</tbody>
</table>
## STRATEGY

### STRATEGIC AREA N° 3 : ENHANCING THE INDUSTRIAL FABRIC OF ICT ENTERPRISES

**Objective 1** : Develop, lead and make the ICT industry contribute to the national economy

<table>
<thead>
<tr>
<th>PROGRAMME</th>
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<th>OBSERVATIONS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Develop a policy of industrialisation of ICT</td>
<td>- seek for strategic partnership; - draw up an encouraging framework to make the ITC industrial activity more attractive - build technocities, - accelerate the completion of the following projects: the African centre for the development of the Internet, the sub-regional centre for Telecommunications maintenance of Yaoundé…</td>
<td>MINPOSTEL/MIN-PLAPDAT/ MINMIDT MINPOSTEL/MINMIDT MINPOSTEL</td>
<td>MINPOSTEL</td>
<td></td>
</tr>
</tbody>
</table>

**Objective 2** : Organise the system of financing ICT industries

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>PROJECT</th>
<th>ACTIONS</th>
<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make use of the Special Fund for Telecommunications; - Ensure the opening of an investment bank specifically for ICT industries - Encourage Cameroonian banks to get involved in the financing of high-yielding projects of industrialisation</td>
<td>MINPOSTEL/ART MINPOSTEL/MINEFI/ OTHERS MINPOSTEL/CTPL/SNI</td>
<td>FST</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Objective 3** : Develop new skills and strengthen capacities

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>PROJECT</th>
<th>ACTIONS</th>
<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Restructuring the organisation and programmes of ENSPT</td>
<td>Draw up terms of reference for the recruitment of a specialised firm to conduct a study relating to the restructuring of the school</td>
<td>MINPOSTEL/ART</td>
<td>FST</td>
<td></td>
</tr>
</tbody>
</table>
### Objective 4: Elaborer une stratégie nationale de développement des capacités

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>PROJECT</th>
<th>ACTIONS</th>
<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
</table>
| Include the aspect of Convergence of technologies in human resources development | Pool resources | - Promote partnerships among national training institutes  
- Develop synergies | MINPOSTEL/ART/Operators/industry | FST | |

### Objective 5: Provide support to the setting up of enterprises in the sector

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>PROJECT</th>
<th>ACTIONS</th>
<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
</table>
| Set up an investment bank specifically for ICT | Set up mechanisms of financing | - Grant the bank 10 billion CFAF by debiting SFT  
- Get fixed and mobile telephone operators to contribute between 5 and 10 billion  
- Get national investors involved to the tune of 60 billion  
- Appoint the general manager and limit his term office to 3 years renewable once  
- Render the said bank operational by 1 January 2008 | MINPOSTEL/ART  
MINPOSTEL/ART/CTPL  
MINPOSTEL/SNI/OTHERS | FST | |
| Set up factories | Set up a factory for the production of fibre optics | - Set up the TDR for the recruitment of a research firm to conduct the technical and financial feasibility study on the projet;  
- Implement the findings of the study;  
- Identify/select the partner proposed by the study;  
- Draw up the specifications for the setting up of the factory;  
- Determine the amount of capital share reserved for nationals following the findings of the study;  
- Establish a joint venture;  
- Start up the project by 1 January 2008 latest | MINPOSTEL/MINMINDT  
IDEM  
IDEM  
MINPOSTEL/ MINMINDT/ PARTNERS | | |
| | Set up a factory for manufacturing connector equipment, MIE, MT, crossconnects, amplifiers and repeaters | Idem above | Idem above | | |
### STRATEGY

**Objective 6**: Develop a national strategy for the development of capacities in the ICT sector

<table>
<thead>
<tr>
<th>PROGRAMME</th>
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<th>RESPONSABILITY</th>
<th>ESTIMATED COST</th>
<th>OBSERVATIONS</th>
</tr>
</thead>
</table>
| Conduct study on national capacities in ICT | Take stock and identify needs in human resources | - Draw up the terms of reference to recruit a consultant  
- Make a national analysis  
- Build a dynamic data base | MINPOSTEL/ART | FST | |
| | Take stock and identify needs in the means of development of human resources in Cameroon | - Set up the TDR  
- Identify structures of HR development  
- Analyse and expand existing gateways | MINPOSTEL/ART/Opérateurs et autres | FST | |
| | Encourage upgrading and networking | - Keep a reference of ICT innovative jobs and their programmes and contents  
- Enrich the contents and associate them as graduate training institutes  
- Organise the conference of advanced schools offering training in ICT | MINPOSTEL/MINFO-PRA/Idem | FST | |
| | Set up the Virtual university | - promote the pooling of existing resources and synergies | MINPOSTEL/MINSUP/Operators | FST | |
CONCLUSION

This document on the sector strategy for Telecommunications was first of all built on three main pillars:

1- The inventory and diagnosis of the situation of Telecommunications in Cameroon for the past ten years;

2- The definition of strategic areas and objectives that will serve as a compass to the entire sector;

3- The development of programmes and projects which stem from the objectives set above.

Then, it should be noted that this document has a dynamic nature because it can be revised every three years to take into account the technological developments and the lapses in achievements on the field.

Finally, it reflects the visible determination of the government to be committed in " ensuring " the carrying out within the set time limits all the programmes and projects approved in relation thereto, in order to put an end to the backwardness of Cameroon in the field of Telecommunications and ICT.