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**QUICK SCAN SURVEY**  
**PART B: PRIORITY AREAS FOR DEVELOPMENT**



*Developing Information and Communication Technology (ICT) services  
for institutes of higher education and research.*

**QUESTIONNAIRE**

**January 2000**



**0. General Information**

**0.1 Universidad Nacional Autónoma de Nicaragua.  
(UNAN-M)**

**1. Responsibility for strategic management**

**1.1** Which group (office, directorate, department, committee, council others) is the main responsible body of the university for strategic planning and decision making concerning university wide developments:

- 1. Consejo Universitario
- 2. Consejos Facultativos
- 3. Consejos Técnicos

**1.2** What is the composition (who are members) of the groups mentioned in the answer of 1.1:

- 1. Consejo Universitario:
  - a. Rector
  - b. Vicerrector General
  - c. Secretario General
  - d. Decanos(4)
  - e. Representates del Sindicato Docente(2)
  - f. Representantes del Sindicato Administrativo(1)
  - g. Representante de la Asociación de Estudiantes(5)
- 2. Consejos facultativos:
  - a. Decano
  - b. Vicedecano
  - c. Secretario Académico
  - d. Profesores Titulares(2)
  - h. Representates del Sindicato Docente(2)
  - i. Representantes del Sindicato Administrativo(1)
  - e. Representante de la Asociación de Estudiantes(2)
- 3. Consejos Técnicos:
  - a. Jefe del Departamento Docente
  - b. Representates del Sindicato Docente(1)
  - c. Representante de la Asociación de Estudiantes(1)

**d. Coordinador de cada carrera**

- 1.3** Does the university have a recently updated and well-documented strategic plan? If the answer is yes, can a copy be made available to the consultants?

**NO**

- 1.4** Does the university have a group (office, directorate, department, committee, other) directly responsible for the development of ICT based university wide applications? If the answer is yes, what is the name of this group and who are members:

**Officially it does not exist, but in practice operates of the following form:**

- 1. Vicerrector Administrativo**
- 2. Director de Centro de Cómputo**
- 3. Responsables de los Departamentos de Informáticas de las Facultades.**
- 4. Responsables de administración de Nodos.**

- 1.5** Does the university have a computer centre (or other ICT oriented entity) what provides ICT services to the administrative and academic sector? If the answer is yes, name the main services the centre is providing to internal clientele:

**a)Yes, main services provided are:**

- **Hardware maintenance (PC's)**
- **Development and maintenance of administrative systems**
- **Basic ICT training**
- **Installation of PC's**

**b) The academics departments that offer courses on training and maintenance of PC's**

- 1.6** Does the computer centre provide services to external clientele? If the answer is yes, which services does it provide?

**NO**

**2. Priority areas for development**

- 2.1** What are the main areas for development identified in the strategic plan or (if such a plan is not available) defined by the university management?

- **Qualification of the Academic Record System**
- **Strengthening of the Regional Centers**
- **Installation of INTERNET systems for all the campus**
- **Rehabilitation of the administrative system**
- **Establishment of a System in distance education**

- 2.2 Please define priorities for the following (possible) areas for development by ranking the areas with a number in the range of 0 to 10. The number 0 will indicate “no priority/need at all” and the number 10 will indicate the highest (top) priority. Please try to avoid to give same numbers to different areas

Possible area for development	Priority 10 = top priority 0 = no priority
Setting up (or upgrading) of university wide <b>Internet/e-mail</b> facilities	<b>10</b>
Setting up (or upgrading) of university wide <b>telephone system</b>	<b>2</b>
Implement (or rehabilitate) a computerized <b>financial information system</b>	<b>8</b>
Implement (or rehabilitate) a computerized <b>library information system</b>	<b>7</b>
Implement (or rehabilitate) a computerized <b>human resource management information system</b>	<b>6</b>
Implement (or rehabilitate) a computerized <b>academic register information system</b>	<b>9</b>
Implement (or rehabilitate) a computerized <b>public and external relations information system</b>	<b>3</b>
Implement (or rehabilitate) specific, ICT based, applications for education and research such as <b>GIS</b> and <b>CAD</b>	<b>4</b>
Implement (or rehabilitate) <b>ICT based (distant) learning programs</b>	<b>5</b>
<b>Other 1</b> (please specify) . . . .	
<b>Other 2</b> (please specify) . . . .	
<b>Other 3</b> (please specify) . . . .	

- 2.3 In case *setting up university wide Internet/e-mail* is ranked as one of the 5 top priority areas for development, what impact (or benefits) can be expected of making access to the Internet available to management, administration and service support:

- Improved communication with external organisations
- Enhanced public relations through publishing on the web
- Improved internal communications
- Access to data bases through the World Wide Web (WWW)
- Be part of the academic liaison at international level
- Facilitates the exchange between the university authorities
- Strengthens the leadership to what is internal of the country and at level internacional

**2.4** In case *setting up university wide Internet/e-mail* is ranked as one of the 5 top priority areas for development, what impact (or benefits) can be expected of making access to the Internet available to education and research.

- Staff and students will be exposed to ICT;
- Internet/e-mail will allow cost efficient communication with lectures and researchers in other parts of the country;
- The students and staff will get access to external data bases and electronic information resources.
- Greater access to the scientific information
- Strengthening of the academic exchange
- Divulge the academic and investigative actions of the university
- Development education to other campus using this facility

**2.5** Describe in brief on the following pages for the five areas for development having the highest ranking, the problems the application of ICT may address and the benefits you expect to gain from successful application of ICT in these areas. If the setting up of university wide Internet/e-mail belongs to the top five areas, refer to the question given in 2.4

**2.5.1** First priority area for development:

<p>Description:  <b>Setting up university wide Internet/e-mail</b></p>
<p>Problems to be addressed:</p> <ul style="list-style-type: none"> <li>◆ Lack of knowledge from part of staff and students of the International Net.</li> <li>◆ Outdated scientific Information.</li> <li>◆ Weakness in the academic and research training.</li> <li>◆ Slowness in the access to data base of national and international institutions.</li> <li>◆ Lack of publication of research projects elaborated by professors and researchers.</li> </ul>
<p>Benefits expected:</p> <ul style="list-style-type: none"> <li>✓ Knowledge of the facilities of using INTERNET.</li> <li>✓ Improvement the communication with national and international universities.</li> <li>✓ Publication of research results.</li> <li>✓ Greater information to students and educational.</li> <li>✓ Improves the quality of professional training.</li> <li>✓ Facilitates the academic exchange.</li> <li>✓ Reduces international cost communication .</li> </ul>

**2.5.2** Second priority area for development:

Description: <b>Setting up a computerised academic register information system.</b>
Problems to be addressed: <ul style="list-style-type: none"><li>◆ <b>Unification of codes for each subject matter.</b></li><li>◆ <b>List of a National System of subject matter codes used by all universities of Nicaragua..</b></li><li>◆ <b>Instability of the National Career System.</b></li><li>◆ <b>Difficulty to know the information of the academic results.</b></li><li>◆ <b>Qualification Reports with mistakes.</b></li><li>◆ <b>Duplicity of information systems.</b></li><li>◆ <b>Mistakes on the process of adding courses.</b></li><li>◆ <b>Mistakes with the enrollment of the students.</b></li><li>◆ <b>Poor access of the information students on time.</b></li></ul>
Benefits expected: <ul style="list-style-type: none"><li>✓ <b>A system of transference for students into the National System of Higher Education.</b></li><li>✓ <b>A better control of programs and student transference.</b></li><li>✓ <b>Improves the processes of the enrollments.</b></li><li>✓ <b>Modernization of the record system.</b></li><li>✓ <b>Improves the generation of the academic reports.</b></li><li>✓ <b>Support to the university crediting process at international level.</b></li><li>✓ <b>Unification of the record systems.</b></li><li>✓ <b>Reliability in the information for the takes of decisiones.</b></li></ul>

**2.5.3** Third priority area for development:

<p>Description: <b>Setting up financial information system</b></p>
<p>Problems to be addressed:</p> <p><b>At present the financial system of the university is mainly characterised by:</b></p> <ul style="list-style-type: none"><li>◆ <b>Largely manual operations and hence long processing cycles.</b></li><li>◆ <b>Duplication of same information in various registers and also sections.</b></li><li>◆ <b>High possibility of human errors and consequent additional manpower efforts, time and costs.</b></li><li>◆ <b>Up to date and reliable information not readily available.</b></li><li>◆ <b>Situation of backlogs of works with an increasing trend each year.</b></li><li>◆ <b>Process of the late financial information.</b></li><li>◆ <b>Limitation on the decision making in time and form.</b></li><li>◆ <b>Current Processes do not facilitate a financial analysis of long term.</b></li><li>◆ <b>The current system does not permit to improve the information neither.</b></li><li>◆ <b>accomplishes a consolidated financial of all university.</b></li></ul>
<p>Benefits expected:</p> <ul style="list-style-type: none"><li>✓ <b>Shortened processing cycles.</b></li><li>✓ <b>Direct availability of up to date and reliable financial data for decision making.</b></li><li>✓ <b>Budget holders within the faculties will have direct access to the central financial database for budget queries.</b></li><li>✓ <b>Processing of the financial information in time.</b></li><li>✓ <b>Consolidation of financial information.</b></li><li>✓ <b>Takes decisions in time for the authorities.</b></li><li>✓ <b>Reliable Information.</b></li></ul>

**2.5.4** Fourth priority area for development:

Description: <b>Setting up a computerised Library information system</b>
Problems to be addressed: <ul style="list-style-type: none"><li>◆ <b>Need to increase the number of modern books.</b></li><li>◆ <b>Is not counted on agile information of the bibliographical.</b></li><li>◆ <b>Link with Libraries and documentation of other library centers in the country and at international level.</b></li><li>◆ <b>Difficulty in the managing of the books inventory.</b></li><li>◆ <b>Limits the professional students training.</b></li></ul>
Benefits expected: <ul style="list-style-type: none"><li>✓ <b>Increase quality of education.</b></li><li>✓ <b>Update and to systematize the data bases of the bibliography.</b></li><li>✓ <b>Facilitates the exchange between Libraries and Documentation Centers.</b></li><li>✓ <b>Permits diversify the new bibliography required by the different careers.</b></li><li>✓ <b>Improves the professional qualification level of the students.</b></li></ul>

**2.5.5** Fifth priority area for development:

Description: Setting up a computerised human resource management information system
Problems to be addressed: <ul style="list-style-type: none"><li>◆ <b>By and large, the university has no control on services that faculty could be able to offer to society.</b></li><li>◆ <b>There is a tendency to see educational process only as teaching learning and therefore, there is ignorance on the capabilities of research and services.</b></li><li>◆ <b>Lack of experience on services other than social extension.</b></li><li>◆ <b>The need to organize a Center for Institutional Development able to control faculty skills and society needs in order to reshape the relationship university-society-state.</b></li><li>◆ <b>Largely manual operations and hence long processing cycles.</b></li><li>◆ <b>Information limited.</b></li><li>◆ <b>No continuity on the training process for lack of information on time.</b></li><li>◆ <b>Up to date and reliable information not readily available.</b></li><li>◆ <b>High possibility of human errors and consequent additional manpower efforts, time costs.</b></li></ul>
Benefits expected: <ul style="list-style-type: none"><li>✓ <b>Better control on faculty activity.</b></li><li>✓ <b>Consolidation of faculty prestige.</b></li><li>✓ <b>A better relationship University-society-State.</b></li><li>✓ <b>Definition of a coherent training system to serve university faculty and society.</b></li><li>✓ <b>Shortened processing cycles.</b></li><li>✓ <b>Updated data bases of information on human resources.</b></li><li>✓ <b>Direct availability of up to date an reliable information for the definition of politics of training and development of the human resources.</b></li></ul>

- 2.5** In case an comprehensive project on ICT will be started for your university, who will be assigned the role of project supervisor (or director) with the responsibility to supervise and monitor the whole implementation:

Name project supervisor: **CESAR RODRIGUEZ LARA**

Present function: **VICERRECTOR ADMINISTRATIVO**

Telephone number: **(+505) 278 – 6772**

Fax number: **(+505) 278 - 2990**

E-mail address : **unanread@tmx.com.ni**

- 2.6** In case such an ICT project will span five areas for development with the highest ranking, mention the names of the persons who possible will be assigned the responsibility as sub-project managers for project management of the respective areas of development?

<p><b>First</b> priority area for development:</p> <p>Name sub-project manager: <b>In revision</b></p> <p>Present function:</p> <p>Telephone number:</p> <p>Fax number:</p> <p>E-mail address:</p>
<p><b>Second</b> priority area for development:</p> <p>Name sub-project manager: <b>In revision</b></p> <p>Present function:</p> <p>Telephone number:</p> <p>Fax number:</p> <p>E-mail address:</p>
<p><b>Third</b> priority area for development:</p> <p>Name sub-project manager: <b>In revision</b></p> <p>Present function:</p> <p>Telephone number:</p> <p>Fax number:</p> <p>E-mail address:</p>
<p><b>Fourth</b> priority area for development:</p> <p>Name sub-project manager: <b>In revision</b></p> <p>Present function:</p> <p>Telephone number:</p> <p>Fax number:</p> <p>E-mail address:</p>
<p><b>Fifth</b> priority area for development:</p> <p>Name sub-project manager: <b>In revision</b></p> <p>Present function:</p> <p>Telephone number:</p> <p>Fax number:</p> <p>E-mail address:</p>

**3. Recurrent cost for operation and maintenance of ICT services**

**3.1** Please give an estimate of the annual cost for (national and international) communication in the past year

**Cost for international communication (telephone calls, fax, other) in 1999 US\$ 15,000.00**

**Cost for national communication (telephone calls, fax, other) in 1999: US\$ 30,000.00**

**3.2** For many counterpart universities in development the main bottleneck for operating Internet services are the recurrent cost for bandwidth. For a modest facility (for instance: an Internet channel with a bandwidth of 128 Kbps out, 512 Kbps) serving the whole university, the recurrent costs may vary in the range of US\$ 5.000- 7.000/month.

In case financial support can be attracted from an external donor organisation for setting up a comprehensive data communication network and advanced Internet facilities, but no external financial support can be expected covering the recurrent costs, what would be possible scenario's for the university to solve this problem of high recurrent cost.

**The university intends to provide ICT services to students and external clientele with the aim to generate income which will be used for covering part of the recurrent costs, and considering the strategic importance of Internet for education and research, our university will make budget reservations to complete the total recurrent cost.**

<end part B>