

TECHNO*Compétences*



SECTORAL DICTIONARY OF COMPETENCIES
Equipment Manufacturers - Telecommunications

October 2000

This publication, as well as the French version, can be found in its entirety at the following Web site:

www.technocompetences.qc.ca

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ISBN 2-9806491-6-3
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Aussi disponible en français sous le titre « Dictionnaire sectoriel de compétences / Manufacturiers d'équipements - Télécommunications »

TECHNOCompétences is financed by its industry partners and by Emploi-Québec

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*I- PARTICIPANTS IN THE SECTORAL DICTIONARY OF
COMPETENCIES FOR TELECOMMUNICATIONS EQUIPMENT
MANUFACTURERS*

I- PARTICIPANTS IN THE SECTORAL DICTIONARY OF COMPETENCIES FOR TELECOMMUNICATIONS EQUIPMENT MANUFACTURERS

PROJECT MANAGER

TECHNOCOMPÉTENCES, LE COMITÉ SECTORIEL DE MAIN-D'ŒUVRE EN TECHNOLOGIES DE L'INFORMATION ET DES COMMUNICATIONS

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MITEC TELECOM INC.
NORTEL NETWORKS

TECHNOCOMPÉTENCES WOULD LIKE TO EXPRESS ITS SINCERE THANKS TO ALL THE PROFESSIONALS WITH THE COMPANIES LISTED ABOVE WHO CONTRIBUTED TO THE PROJECT.

II- PRESENTATION OF THE DICTIONARY

II- A) Why a sectoral dictionary of competencies for telecommunications equipment manufacturers?

Competencies, a key competitive factor

Competence is, without a doubt, one of the strategic elements associated with the development of telecommunications in the current reality of market globalization. Companies are becoming increasingly aware of the importance of being staffed by human resources equipped with competencies that conform to the requirements of the new economic and technological era.

By producing this dictionary of competencies in the field of telecommunications¹, TECHNOCompétences, in cooperation with the International Institute of Telecommunications, has set out to identify and validate those job competencies necessary to meet the economic and strategic developmental requirements of this industry.

Competencies classified according to business process

This sectoral dictionary of competencies was set up according to business processes (five processes were identified) from a **general perspective** so as to cover all the companies in the telecommunications equipment manufacturers sector² (the word “equipment” is understood in a broader sense to also include software). The dictionary must be used as a base document containing generic information that can be customized to reflect the image of any company.

You will note, however, that the fields related to the major functions of a company’s overall management are not included in this dictionary. Only the processes specific to the telecommunications industry have been taken into account.

1. Another dictionary of competencies was produced for **telecommunications network carriers**. The dictionaries of competencies in telecommunications, as well as other studies, research and occupational profiles in Information and Communications Technologies are available at the TECHNOCompétences Web site: www.technocompetences.qc.ca.

2. By telecommunications network, we mean the following transmission methods: electrical waves (copper wire medium), hertzien waves (wireless and coaxial cable media) and light waves (fibre-optic medium). In all cases, the information transmitted is either analogue or digital. However, it is becoming more and more difficult to distinguish the sectors within the telecommunications industry owing to the fact that the technologies are now converging, and the products are increasingly being integrated into telecommunications architectures.

Benefits and applications of the dictionary of competencies for the company³

The adequate execution of a professional function or business process assumes the mastery of a number of competencies. Identifying these competencies can have many benefits for organizations and their employees:

- by offering an accurate vision of the capacity of the human resources available within the company;
- by facilitating targeted interventions in the realm of human resources management. By using the dictionary, it will be possible to develop additional tools for recruitment, training, evaluation, remuneration, and succession planning. The evaluation of the level of expertise with regard to professional competencies will, for example, allow for the determination of training and development activities that correspond to the requirements of the employee and the company;
- by making it possible to define those professional standards liable to engender a better understanding of the qualitative labour requirements for all stakeholders;
- by giving employees a clear description of what is expected of them, which will have the added benefit of giving these employees a perspective with regard to their professional development.

Sectoral applications of the dictionary of competencies

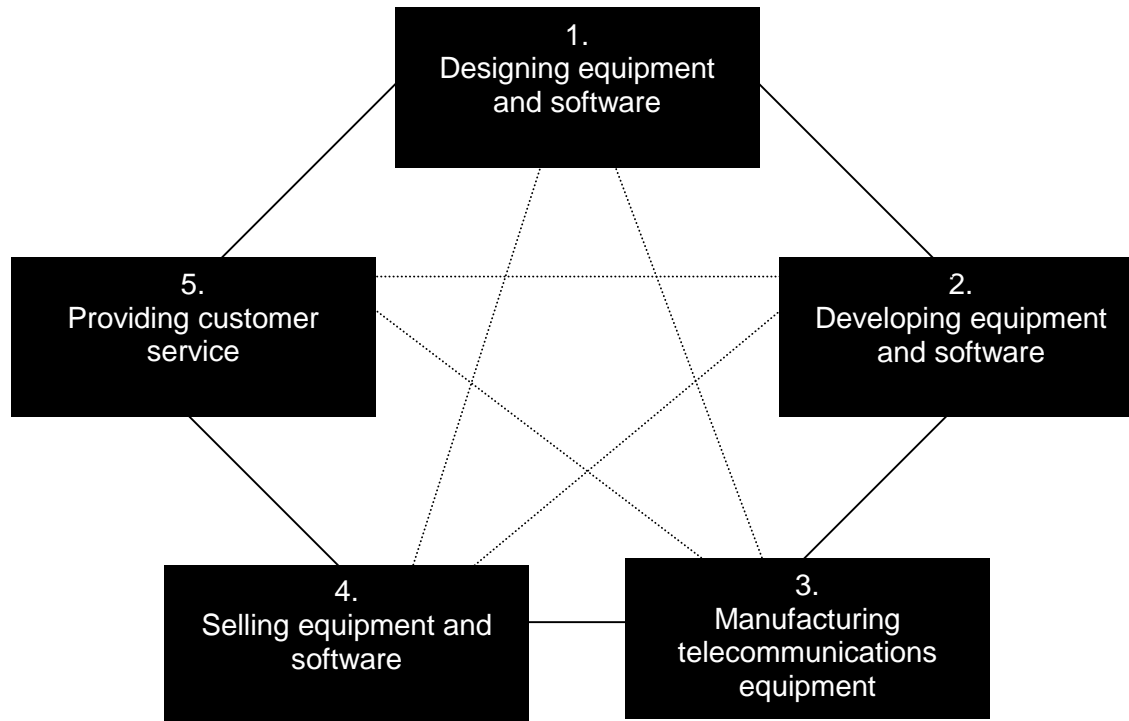
- Facilitate, for companies, training agencies, departments and TECHNOCompétences, the establishment of priorities in terms of labour training and development.
- Contribute to the definition of new frameworks for positions and competency requirements for current employees or for those seeking entry onto the labour market.
- Orientate policies concerning labour development as well as the related programs, services and measures.
- Develop labour projection tools.
- Provide educational institutions with the elements required in order to adapt training programs or fine-tune new ones.
- Facilitate the adoption of a vocabulary that is standard for all stakeholders: companies, departments and educational institutions.

3. For further specifications on the dictionary's applications, please refer to the section entitled: *How to use this sectoral dictionary of competencies* (Page 25).

II- B) THE FIVE BUSINESS PROCESSES EMPLOYED BY TELECOMMUNICATIONS EQUIPMENT MANUFACTURERS

Note: The competencies in this dictionary are classified according to business process. These processes, which are outlined on the following page, correspond to all the business activities executed by telecommunications equipment manufacturers. You will note however that some companies concentrate their activities on only a few of these processes.

II- B) The five business processes employed by Telecommunications Equipment Manufacturers



II- C) DICTIONARY PRODUCTION METHODOLOGY

II- C) Dictionary Production Methodology

1. Approach according to competency

The methodology used in the development of this sectoral dictionary of competencies for telecommunications equipment manufacturers adheres to the organizational development approach “according to competency”.

This approach allows for the derivation, after collecting information from companies, of the competencies necessary for a function to be carried out, or for a business process to run smoothly.

What is a competency?

A competency refers to **integrated knowledge, savoir-faire and self-management skills that are manifested in the form of behaviour**. This behaviour allows an individual to perform a task in accordance with the requirements of a work situation.

A competency implies that an individual knows what he or she is doing, how to do it, and when and why to do it, in such a manner that the individual is able to anticipate and evaluate the consequences of his or her actions.

A competency comprises validation of appropriate actions. It only exists if the individual in question proves him or herself when asked to demonstrate a given competency.

A competency is evident in a professional situation with a view to achieving an end or results, with a given level of expertise.

Therefore, a competency implies a behaviour that can be described, and that we have analyzed during interviews carried out at participating companies.

The two competency groups

The competencies necessary for the execution of a business process are classified in this dictionary in two main groups: **specific competencies and transversal competencies**.

Specific competencies refer to those competencies that directly relate to the execution of a work process.

Transversal competencies refer to those competencies that are present throughout a work process. Most often, these are competencies whose actions are inherent to executing a task, for instance working on a team, communicating, using office tools, etc. These competencies can therefore be reinvested into many activities relating to different processes. The transversal competencies found in this dictionary have been identified in terms of their relevance to the telecommunications industry. We do not claim to have listed them all. They generally relate (with the exception of those that are technical by nature) to social, emotional and intuitive intelligence. They must not be overlooked, for instance when defining hiring criteria.

The competencies are numbered according to business process. The “S” or “T” at the end of a number indicates whether it is a specific competency (S) or a transversal competency (T).

2. Steps in the production of the dictionary

In order to identify all the competencies associated with telecommunications equipment manufacturers, we proceeded with the following steps:

a) Dividing the industry into business processes

An analysis of each position was not carried out owing to the fact that there were too many work functions and differences from one organization to the next. In order to produce a dictionary of competencies that would prove to be an effective management tool, and one that would be shared throughout the industry, we thought it preferable to divide the telecommunications equipment manufacturer industry into five business processes so as to limit the number of distinct segments representative of the entire industry.

Below are the five business processes validated by the participating companies:

1 – Designing equipment and software refers to the activities related to the creation of new products (equipment and software) or the modification of existing products that will satisfy the emerging requirements of the target market. This process includes market analyses and feasibility studies.

2 – Developing equipment and software represents the activities related to software development and to the final product design. The development of an on-line prototype with the functionalities and characteristics defined during the design and validation of the product as developed by the final tests are included in this process.

3 – Producing telecommunications equipment refers to the activities related to the manufacture of equipment that will be shipped to clients in accordance with the specifications outlined during the development step. This process includes assembly, inventory management and inspection.

4 – Selling equipment and software corresponds to the activities related to the marketing and sale of equipment and software. This process includes the development of the business plan, technical services, and sales and marketing activities.

5 – Providing customer service refers to the activities related to the follow-up of the implementation of the equipment and software at client locations. This process includes the delivery, drafting of technical documents, technical support and follow-up with the client.

b) Gathering information from companies

Gathering the information necessary for the identification of competencies associated with each business process is carried out in a unit-by-unit manner, or one organization at a time. Each participating company identified professionals, and we met with them individually to carry out work situation analyses (WSA).

These WSAs lasted approximately four hours each, and were led by a competency expert. Following preliminary preparation, the expert was entrusted with the task of validating the five business processes and classifying jobs under each process. The analysis began with the identification of key responsibilities in the process and the work steps associated with its execution. These WSAs then made it possible to identify the transversal competencies necessary in the execution of the responsibilities.

c) Identifying the competencies

In light of the information obtained during the previous step, it was then possible to proceed to identify those competencies associated with each business process.

Each of the key responsibilities related to the business process studied led to the emergence of a specific competency, while the transversal competencies were identified based on elements related to the work organization and organizational behaviour. The transversal competencies can be transferred to the execution of several other activities.

(See Table 1 on Page 23)

d) Identifying competency categories

In order to respect the generic character of the dictionary, the competencies were classified in six categories:

- ◆ Analysis, study and evaluation
- ◆ Planning and follow-up
- ◆ Production
- ◆ Technologies
- ◆ Interpersonal relationships
- ◆ Management

(See Table 1 on Page 23)

e) Identifying competency indicators

The competency indicators represent those observable aspects of the competencies, and refer to the main activities related to the competencies as presented in Section B of Table 1. **The competency indicators present the generally expected results.** The competency indicators define how a competency is manifested. They specify the nature of the activities, behaviour and attitudes that comprise the competency allowing for the anticipated results to be produced.

(See Table 1 on Page 23)

f) Validation

The information gathered was validated by means of interviews conducted with the operating managers at participating companies. The final layout for the competencies was developed in light of comments received. We took into consideration the discrepancies and convergences observed so as to formulate competencies that reflect a global vision of each business process in the telecommunications equipment manufacturing industry. Moreover, experts were consulted in order to validate the generic nature of some of the more technical sections.

TABLE 1 – FORMULATION OF THE DICTIONARY I
Presentation of the competencies for a business process⁴

PART A – COMPETENCY CATEGORIES	PART B – COMPETENCIES	PART C – COMPETENCY INDICATORS
<p>The competencies presented in Part B have been classified under six categories.</p>	<p>The competency reflects the responsibilities normally associated with it in this sector of telecommunications.</p> <p><i>Specific competencies:</i> relate to a limited number of work processes. They are specific to one activity.</p> <p><i>Transversal competencies:</i> relate to the work organization and organizational behaviour. These are found in several processes and are inherent to many activities.</p>	<p>The competency indicators represent those activities, behaviour and attitudes that will produce the expected results.</p> <p>Observable aspects of the competency.</p>
<p>Examples of competency categories: Analysis, study and evaluation</p>	<p>Example of a specific competency (S): 1.1. S Analyzing business opportunities and demand for new products</p>	<p>Examples of competency indicators: 1.1.1.S Identifying demands deemed interesting for the company</p> <ul style="list-style-type: none"> • Positioning the demand with regard to the corporate mission and strategic development plan • Positioning the demand in accordance with the evolution of the market and the competition • Positioning the characteristics of the sought product with regard to the evolution of new technologies, norms and standards • Evaluating the potential at the different stages in the evolution of a product's lifecycle and competitive advantages
<p>Technologies</p>	<p>Example of a transversal competency (T): 1.1. S Applying technical knowledge to the telecommunications industry.</p>	<p>1.1.1.T Applying knowledge on trends in the world of telecommunications</p>

4. Taken from Process 1: Designing equipment and software

II- D) HOW TO USE THIS SECTORAL DICTIONARY OF COMPETENCIES

II- D) How to use this sectoral dictionary of competencies

1. Concrete applications of the dictionary

This dictionary of competencies must be adapted to your reality and business issues and strategies. It constitutes a basic tool that will save you time and facilitate your task with regard to different human resources management activities, by:

- defining work positions;
- determining your training and development requirements;
- defining your recruitment requirements: for instance, the development of an interview guide or the preparation of specific tests may be made easier with the use of a dictionary of competencies;
- evaluating the effectiveness of your work organization and the distribution of work loads and responsibilities (which will make it possible to better match jobs to employee competencies);
- supporting employee efforts: by targeting key competencies and comparing knowledge with the level of expertise required by the position, the employee will be better orientated in his or her efforts to improve his or her performance and job satisfaction (**see Table 3 on Page 33**);
- supporting performance management by facilitating the clarification of expectations and providing an objective discussion basis that will make it possible to focus discussions on the organization's specific expectations;
- defining a performance evaluation and remuneration program;

- devising programs for new employees and succession plans, and identifying employee development requirements;
- building your own competency references⁵ by determining the key competencies or those that are particularly strategic for your company.

Refer to this dictionary to make a list of **key competencies** (essential or strategic for your company) on which you want to act specifically, based on the examples mentioned previously.

The approach by competency plays a role in all key facets of human resources management:

- *identifying* the personnel
- *mobilizing* the personnel
- *developing* the personnel
- *validating* the personnel
- *retaining* the personnel

5. By reference, we mean a series of competencies a company identifies as being key or strategic, and on which it is intent on acting. For example, these may include competencies you use to overtake the competition and attain your strategic objectives.

The approach by competency can also prove successful if adopted not only by human resources management, but also by employees and unions. If this occurs, it will become a powerful human resources development tool.

2. Evaluation of competencies in the company: performance standards

No matter what theoretical model it is based on, a competency is made up of elements that specify the expected behaviour of an individual with whom performance standards are associated.

These **observable and measurable performance standards** that are specific to a company, allow for the measurement of an individual's level of expertise with regard to a specific competency. **(See Table 2 on Page 31)**

These performance standards, referred to as "performance criteria" in most anglo-saxon models are therefore observable and measurable phenomena that make it possible to determine whether or not an individual is competent in different facets of his or her job. Thus, a company may require an employee to master four office software applications. Another company may specify lower or different standards.

Create your own performance standards

This dictionary of competencies does not contain performance standards owing to the fact that it traces, in a generic manner, the key competencies of the five business processes.

Any company interested in using this dictionary is encouraged to develop its own performance standards based on the level of accuracy it wishes to attain. Do not forget that the performance standards must be measurable.

Lastly, we must understand that it is difficult to evaluate a competency without performance standards.

Once you have identified your performance standards, you must determine a scale of expertise for this standard and determine the level sought by the company. Then you must measure the variance between the level required and the level demonstrated by the incumbent. Lastly, you must establish learning solutions based on the variance.

Summary of the procedure to employ to evaluate a competency

1. Using the dictionary, select a competency and its performance indicators.
2. Create your own performance standards related to the indicators.
3. Define a scale of expertise for these performance standards and determine the level sought by the company.
4. Evaluate the level of expertise demonstrated by the incumbent, and determine the variance between this individual's level and the level required.
5. Depending on the variance noted, define learning solutions (e.g.: *coaching*, on-line training, lecture, etc.)

For an example from this dictionary, refer to: **Table 3 – Example of an application using the sectoral dictionary in a company (Page 33).**

Develop a vision of the future!

Lastly, the speed of change in the telecommunications industry requires us to be vigilant. We must regularly update a competency to make sure it does not become obsolete too quickly. A good exercise would be to project the competencies into the future and try to evaluate their lifespan, and to identify new ones as they emerge.

TABLE 2 – PRESENTATION OF COMPETENCIES IN A COMPANY I

Observable and measurable aspects of the competency

COMPETENCY STATEMENT	COMPETENCY DESCRIPTION		
<p>A brief statement that describes a behaviour.</p>	<p>The competency is reflected by the responsibilities with which it is associated in the company.</p> <p><i>Specific competencies:</i> directly related to the execution of an activity or limited number of processes (most of the time, only one).</p> <p><i>Transversal competencies:</i> related to the work organization and to organizational behaviour. Most of the time, these are present in several processes.</p>	<p>Competency indicators: main activities comprising the competency.</p> <p>Observable aspects</p>	<p>Performance standards: expected results attesting to the competency. The description qualifies each of the performance standards in terms of sought results. The criteria will serve as the main benchmarks in order to evaluate the performance of the incumbent. These criteria refer to the mastery of elements such as concepts, principles, models, techniques and work procedures, use of computer or other tools, work quality, and work attitudes and habits.</p> <p>Measurable aspects specific to the company</p>

TABLE 3 – EXAMPLE OF THE APPLICATION OF THE SECTORAL DICTIONARY WITHIN A COMPANY

Process 1: Designing equipment and software

ELEMENTS PRESENT IN THIS SECTORAL DICTIONARY			ELEMENTS TO BE DETERMINED BY THE COMPANY				
Competency categories	The competency	Competency indicators	Performance standards specific to the company	Level of expertise desired of the position within the company	Incumbent's level of expertise	VARIANCE	Learning solutions proposed by the company
Analysis, study, evaluation	1.1.S Analyzing business opportunities and demand for new products.	1.1.1.S Identifying demands deemed interesting for the company.	1.1.1.1.S Presenting a summary report recommending the development priorities for the coming year, and projecting returns on investment.	Level 3 1 = novice : functional with supervision 2 = qualified : adapts his or her professional intervention according to the situation 3 = expert : diagnostic and highly aware 4 = mentor : anticipates and innovates	Level 2	1	Coaching on research and market analysis Courses 101 and 103 provided by the following supplier: YYYY Recommended readings: AAA, BBB, etc.

III- THE DICTIONARY

*III - A) TOOL 1: TABLE OF COMPETENCIES AND COMPETENCY
INDICATORS BY BUSINESS PROCESS*

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
	SPECIFIC COMPETENCIES (S)	
ANALYSIS, STUDY, EVALUATION	1.1.S Analyzing business opportunities and demand for new products	<p>1.1.1.S Identifying demands deemed interesting for the company</p> <ul style="list-style-type: none"> • Positioning the demand with regard to the corporate mission and strategic development plan • Positioning the demand in accordance with the evolution of the market and the competition • Positioning the characteristics of the sought product with regard to the evolution of new technologies, norms and standards • Evaluating the potential at the different stages in the evolution of a product's lifecycle and the competitive advantages <p>1.1.2.S Conducting a market study</p> <ul style="list-style-type: none"> • Estimating the sales volume among the target clientele • Estimating the production costs and profit margin • Conducting a study of comparative products on the market • Estimating market value according to the competition in place • Conducting a financial analysis • Conducting a competitive analysis <p>1.1.3.S Assessing risks in accordance with the strengths of the company</p> <ul style="list-style-type: none"> • Evaluating the characteristics of the sought product in accordance with mastered specialties and techniques • Evaluating organizational requirements in accordance with marketing deadlines to respect • Analyzing the impact of the project's integration on development activities in progress • Anticipating constraints and problem situations • Drafting alternative plans, if applicable

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
ANALYSIS, STUDY, EVALUATION (CONT'D)	1.1.S Analyzing business opportunities and demand for new products (cont'd)	1.1.4.S Selecting the most profitable and strategic projects <ul style="list-style-type: none"> Evaluating the anticipated benefits based on competitive advantage, financial analysis and available resources 1.1.5.S Establishing a project development sequence in accordance with integration options for projects under way
	1.2.S Defining and adapting a product	1.2.1.S Analyzing the client's operating method 1.2.2.S Producing a description of the functionalities and characteristics sought for the product 1.2.3.S Conducting applied research, as required <ul style="list-style-type: none"> Conducting documentary research Conducting a comparative analysis of specific products, if applicable Analyzing the different possible approaches for developing the concept Proceeding with an experimental pre-validation Assembling an experimental prototype, if applicable Producing a report on the recommended conceptual approach and possible alternatives 1.2.4.S Validating the concept with the individual making the request or a typical client 1.2.5.S Specifying the scope of the production costs and resources necessary for the product's development 1.2.6.S Revising the financial and competitive analysis 1.2.7.S Prioritizing those projects that should be targeted by a detailed technical feasibility study

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
ANALYSIS, STUDY, EVALUATION (CONT'D)	1.3.S Producing a feasibility study	<p>1.3.1.S In cross-functional teams, analyzing the sought functionalities and characteristics for the new product</p> <ul style="list-style-type: none"> • Conducting preliminary feasibility tests, if applicable • Outlining the technical specifications related to the functionalities of the different components <p>1.3.2.S Integrating the analyses from the different experts</p> <ul style="list-style-type: none"> • Ensuring the compatibility of the approaches used for the different components • Determining the overall approach in accordance with the recommendations issued <p>1.3.3.S Demonstrating the technical feasibility of the selected concept for the development of the new product</p> <p>1.3.4.S Making recommendations and drafting the final report</p> <ul style="list-style-type: none"> • Drafting the description of the new product and the technical specifications • Establishing the integration sequence for the different components • Devising a strategy for tests and performance evaluation criteria
PLANNING AND FOLLOW-UP	1.4.S Applying a project management method	<p>1.4.1.S Analyzing documents and reports</p> <p>1.4.2.S Planning resources</p> <p>1.4.3.S Supervising a team</p> <p>1.4.4.S Drafting statements and reports</p>

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
TECHNOLOGIES	TRANSVERSAL COMPETENCIES (T)	
	1.1.T Applying technological knowledge to the telecommunications industry	1.1.1.T Applying knowledge on trends in the world of telecommunications 1.1.2.T Characterizing the different technologies (datacom, Internet architecture, communication protocols, etc.) 1.1.3.T Analyzing the physical design of a telecommunications network 1.1.4.T Applying the norms and standards associated with the operation of equipment (ACNOR, CSA, etc.) 1.1.5.T Applying general knowledge on the different areas of telecommunications
	1.2.T Using tools and systems	1.2.1.T Operating current software: word processing, electronic spreadsheet, etc. 1.2.2.T Preparing presentations using presentation software 1.2.3.T Operating project management software 1.2.4.T Using modelling and requirement management tools, and programmable logic simulators 1.2.5.T Browsing the Web and managing e-mail
	1.3.T Implementing an applied research method	1.3.1.T Identifying the problem at the outset 1.3.2.T Analysing the situation 1.3.3.T Conducting documentary research 1.3.4.T Issuing hypotheses 1.3.5.T Selecting and justifying the retained approach 1.3.6.T Analyzing and validating the results
	1.4.T Contributing to improving processes and quality control	1.4.1.T Remaining abreast of the evolution of technologies, markets and competing products 1.4.2.T Conducting research in one's area of expertise 1.4.3.T Updating one's technical knowledge
INTERPERSONAL RELATIONSHIPS	1.5.T Communicating in the workplace	1.5.1.T Communicating technical and general information on the company 1.5.2.T Making presentations 1.5.3.T Negotiating agreements 1.5.4.T Gathering information 1.5.5.T Validating the soundness of one's proposals

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
INTERPERSONAL RELATIONSHIPS (CONT'D)	1.6.T Working on a cross-functional team	1.6.1.T Diffusing conflict situations 1.6.2.T Analyzing a situation from a global perspective 1.6.3.T Team problem solving 1.6.4.T Preparing and leading meetings 1.6.5.T Applying organization principles for repetitive tasks (feedback loops) 1.6.6.T Working with individuals from different environments and backgrounds
MANAGEMENT	1.7.T Organizing one's work and managing information	1.7.1.T Methodically structuring one's files to maximize the accessibility of information 1.7.2.T Updating one's knowledge in one's area of expertise 1.7.3.T Distinguishing the strategic nature of information 1.7.4.T Developing an internal and external contact network
	1.8.T Managing risky situations	1.8.1.T Anticipating problem situations 1.8.2.T Drafting contingency plans 1.8.3.T Identifying alternate plans and avenues for solutions 1.8.4.T Applying a method for solving problems
	1.9.T Innovating and adapting to change	1.9.1.T Researching innovative solution implementation strategies 1.9.2.T Demonstrating interest in challenges, change and new situations 1.9.3.T Modifying or reorienting one's actions in light of new data 1.9.4.T Proposing new ideas or avenues for improving products or services

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
	SPECIFIC COMPETENCIES (S)	
PLANNING AND FOLLOW-UP	2.1.S Planning the development of the new product	2.1.1.S Looking into the analysis reports, product descriptions, proposed concept and technical and organizational impact studies 2.1.2.S Identifying the different components and critical aspects of the development 2.1.3.S Establishing the component production sequence <ul style="list-style-type: none"> • Determining the component production sequence • Determining the sequence for the trials and validation test sequence of the components and the final product 2.1.4.S Planning the project duration and schedule 2.1.5.S Establishing priorities for action, the schedule and product production plan <ul style="list-style-type: none"> • Identifying the production constraints • Producing a list of tasks and teams involved • Evaluating the number of hours of work involved per component • Allocating the resources in accordance with the sequence of steps and constraints 2.1.6.S Validating the decision to pursue a product's development
	2.2.S Applying a project management method	2.2.1.S Analyzing documents and reports 2.2.2.S Planning resources 2.2.3.S Supervising a team 2.2.4.S Drafting statements and reports

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PLANNING AND FOLLOW-UP (CONT'D)	2.3.S Proceeding with the final design of a new product	2.3.1.S Developing the detailed design of the product and its components <ul style="list-style-type: none"> • Conducting a detailed analysis of the sought functionalities and characteristics • Devising a functional plan of the components • Building component validation prototypes, if applicable • Making a diagram of the component specifications 2.3.2.S Verifying the conformity of the final design in accordance with the technical specifications 2.3.3.S Producing a detailed conceptual diagram of the finished product
	2.4.S Building a prototype for the final product	2.4.1.S Producing the components 2.4.2.S Testing and conducting validation tests on the components 2.4.3.S Integrating the components 2.4.4.S Verifying the functionalities and characteristics of the prototype 2.4.5.S Verifying conformity with the technical specifications 2.4.6.S Validating, in a cross-functional team, the final design of the functionalities and characteristics of the end product 2.4.7.S Making modifications, if applicable 2.4.8.S Documenting, in a detailed manner, all the elements of the final design
		2.5.S Qualifying and validating the final product

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PRODUCTION (CONT'D)	2.6.S Participating in the transfer to production, if applicable	2.6.1.S Planning the steps in the assembly and adjustment 2.6.2.S Proceeding with the production of a pre-series 2.6.3.S Verifying the production results of a pre-series 2.6.4.S Analyzing the results obtained in order to optimize production and standardize the quality of the product 2.6.5.S Validating the technical specifications of the pre-series 2.6.6.S Making modifications to the final design, if applicable 2.6.7.S Drafting, in a detailed manner, the product assembly and validation operations
	2.7.S Ensuring the implementation of software systems	2.7.1.S Consulting the technical documentation 2.7.2.S Implementing the system 2.7.3.S Verifying and configuring the final parameters 2.7.4.S Explaining operational methods to system users
TECHNOLOGIES	TRANSVERSAL COMPETENCIES (T)	
	2.1.T Applying technological knowledge to the telecommunications industry	2.1.1.T Applying knowledge on trends in the world of telecommunications 2.1.2.T Characterizing the different technologies 2.1.3.T Applying knowledge related to telecommunications regulations 2.1.4.T Analyzing the physical design of a telecommunications network 2.1.5.T Applying the general knowledge on different areas of telecommunications
	2.2.T Using tools and systems	2.2.1.T Operating the different user software: word processing, electronic spreadsheet, etc. 2.2.2.T Preparing presentations using presentation software 2.2.3.T Operating project management software 2.2.4.T Browsing the Web and managing e-mail

Categories	Competencies	Competency indicators
TECHNOLOGIES (CONT'D)	2.3.T Implementing an applied research method	2.3.1.T Identifying the problem at the outset 2.3.2.T Analyzing the situation 2.3.3.T Conducting documentary research 2.3.4.T Formulating hypotheses 2.3.5.T Selecting and justifying the appropriate approach 2.3.6.T Analyzing and validating the results
	2.4.T Contributing to improving processes and quality	2.4.1.T Remaining abreast of the evolution of technologies, markets and competing products 2.4.2.T Conducting research in one's area of expertise 2.4.3.T Updating one's technical knowledge
INTERPERSONAL RELATIONSHIPS	2.5.T Communicating in the workplace	2.5.1.T Communicating technical and general information on the company 2.5.2.T Making presentations 2.5.3.T Negotiating agreements 2.5.4.T Gathering information 2.5.5.T Validating the soundness of one's proposals
	2.6.T Working on a cross-functional team	2.6.1.T Reaching a consensus 2.6.2.T Diffusing conflict situations 2.6.3.T Analyzing a situation from a global perspective 2.6.4.T Team problem solving 2.6.5.T Preparing and leading meetings 2.6.6.T Applying organization principles for repetitive tasks (feedback loops)
MANAGEMENT	2.7.T Organizing one's work and managing information	2.7.1.T Methodically structuring one's files to maximize the accessibility of information 2.7.2.T Updating one's knowledge in one's area of expertise 2.7.3.T Distinguishing the strategic nature of the information 2.7.4.T Developing an internal and external contact network
	2.8.T Managing risky situations	2.8.1.T Anticipating problem situations 2.8.2.T Drafting contingency plans 2.8.3.T Identifying alternative plans and avenues for solutions 2.8.4.T Applying a problem solving method

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
MANAGEMENT (CONT'D)	2.9.T Innovating and adapting to change	2.9.1.T Researching innovative solution implementation strategies 2.9.2.T Demonstrating interest in challenges, change and new situations 2.9.3.T Modifying or reorienting one's actions in light of new data 2.9.4.T Proposing ideas or new avenues for improving products or services

Process 3: MANUFACTURING TELECOMMUNICATIONS EQUIPMENT

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>		
	SPECIFIC COMPETENCIES (S)			
ANALYSIS, STUDY, EVALUATION	3.1.S Optimizing the production cycle	3.1.1.S Determining production cycle measurement specifications		
		3.1.2.S Analyzing the product's limitations and constraints with regard to its production		
		3.1.3.S Identifying the operational requirements for production		
		3.1.4.S Analyzing the steps involved in production		
		3.1.5.S Determining the time objective according to step		
		3.1.6.S Implementing an operational strategy		
		3.1.7.S Analyzing the result according to production step		
		3.1.8.S Making the necessary corrections		
		PLANNING AND FOLLOW-UP	3.2.S Planning a product assembly process	3.2.1.S Devising optimal assembly processes
				3.2.2.S Determining the appropriate technology
3.2.3.S Determining the product production steps				
3.2.4.S Determining the production time according to operation				
3.2.5.S Identifying the product's verification and performance measurement steps				
3.2.6.S Drafting the necessary documentation				
3.2.7.S Determining the human resources and equipment requirements				
3.3.S Defining a manufacturing strategy for the product	3.3.1.S Positioning oneself with regard to the future orientations of an overall manufacturing strategy for the evolution of technologies and products			
	3.3.2.S Analyzing the internal production capacity for the product			
	3.3.3.S Analyzing the production capacity for the product by external partners			
		3.3.4.S Evaluating the different production scenarios (sub-contracting, partnerships with suppliers, etc.)		
		3.3.5.S Identifying the appropriate scenario according to the overall production capacity		
		3.3.6.S Defining the necessary resources (equipment, materials and labour)		

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PLANNING AND FOLLOW-UP (CONT'D)	3.4.S Defining the quality assurance process	3.4.1.S Analyzing a product's operating and performance parameters 3.4.2.S Devising a quality control strategy 3.4.3.S Determining the number of items to test, the types of tests, material and equipment required 3.4.4.S Making a diagram of the inspection stations, if applicable 3.4.5.S Putting in place the inspection equipment or materials 3.4.6.S Drafting the technical documentation 3.4.7.S Providing support for the production and design teams
	3.5.S Planning the product production	3.5.1.S Determining the quantities to produce 3.5.2.S Analyzing the real production capacities 3.5.3.S Planning the implementation of the necessary resources 3.5.4.S Allocating equipment and labour according to requirements 3.5.5.S Identifying the purchase requirements and recruitment requirements 3.5.6.S Devising the production plan 3.5.7.S Devising tests for evaluating performance and conformity to technical specifications 3.5.8.S Validating the production plan 3.5.9.S Making the necessary corrections

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PRODUCTION	3.6.S Ensuring the implementation of the equipment and materials required for production	3.6.1.S Determining the necessary equipment and materials 3.6.2.S Conducting equipment tests 3.6.3.S Identifying the development requirements for custom equipment 3.6.4.S Identifying the equipment and material purchase requirements <ul style="list-style-type: none"> • Preparing calls for tenders • Analyzing supplier proposals 3.6.5.S Making purchases <ul style="list-style-type: none"> • Identifying suppliers • Determining the necessary quantities of items • Determining the schedules to be respected • Negotiating agreements with the supplier 3.6.6.S Installing new production equipment, if necessary <ul style="list-style-type: none"> • Qualifying and integrating the new equipment 3.6.7.S Putting in place an equipment training program 3.6.8.S Planning an equipment maintenance program
	3.7.S Supervising the human resources required for production	3.7.1.S Hiring and coordinating production personnel 3.7.2.S Organizing task allocation and work shifts 3.7.3.S Coaching and training the personnel 3.7.4.S Mobilizing the personnel 3.7.5.S Evaluating personnel performance

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PRODUCTION (CONT'D)	3.8.S Manually assembling products	3.8.1.S Consulting assembly instructions 3.8.2.S Assembling components 3.8.3.S Inspecting the assembly and testing the components 3.8.4.S Grouping together the components to be assembled 3.8.5.S Assembling the product according to the instructions 3.8.6.S Testing product performance 3.8.7.S Verifying the product's conformity to the technical specifications 3.8.8.S Identifying defects 3.8.9.S Making corrections 3.8.10.S Identifying areas of improvement 3.8.11.S Proposing appropriate corrections to the production plan, if applicable 3.8.12.S Storing products
	3.9.S Automatically assembling products	3.9.1.S Grouping together the components to be assembled 3.9.2.S Installing the components in the equipment 3.9.3.S Preparing the equipment 3.9.4.S Operating the equipment 3.9.5.S Testing the product performance 3.9.6.S Verifying the product's conformity to the technical specifications 3.9.7.S Identifying defects 3.9.8.S Making corrections 3.9.9.S Identifying areas of improvement 3.9.10.S Proposing appropriate corrections to the production plan, if applicable 3.9.11.S Storing products
	3.10.S Shipping products	3.10.1.S Becoming aware of the order 3.10.2.S Classifying and packaging the products 3.10.3.S Preparing the shipping documents 3.10.4.S Loading the shipment

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PRODUCTION (CONT'D)	3.11.S Maintaining an inventory	3.11.1.S Determining the management parameters <ul style="list-style-type: none"> • Determining the most costly elements • Classifying the elements by purchase volume • Identifying the steps involved in delivering the product to the client 3.11.2.S Determining sought quantities of items 3.11.3.S Managing quantities with suppliers 3.11.4.S Managing reception of materials 3.11.5.S Taking inventory (cyclical or annual count)
TECHNOLOGIES	TRANSVERSAL COMPETENCIES (T)	
	3.1.T Applying technical knowledge to the telecommunications industry	3.1.1.T Applying knowledge relating to radio frequency and its transmission methods 3.1.2.T Applying knowledge in photonics and fiber optics 3.1.3.T Applying knowledge in electrical signals and their transmission modes 3.1.4.T Characterizing the operation and interactions of electronic and electromechanical components 3.1.5.T Characterizing the verification process
	3.2.T Using tools and systems	3.2.1.T Using the electronic verification equipment 3.2.2.T Reading plans 3.2.3.T Operating the MS Office tools 3.2.4.T Operating a project management system 3.2.5.T Operating specialized software 3.2.6.T Browsing the Web 3.2.7.T Operating database software
	3.3.T Applying a problem solving method	3.3.1.T Identifying the problem 3.3.2.T Analyzing the situation 3.3.3.T Finding solutions 3.3.4.T Selecting the optimal solution 3.3.5.T Planning corrective action 3.3.6.T Executing the plan

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
	3.4.T Contributing to improving processes and quality	3.4.1.T Remaining abreast of the evolution of technologies, markets and competing products 3.4.2.T Conducting research in one's area of expertise 3.4.3.T Updating one's technical knowledge
INTERPERSONAL RELATIONSHIPS	3.5.T Communicating in the workplace	3.5.1.T Communicating technical and general information on the company 3.5.2.T Making presentations 3.5.3.T Negotiating agreements 3.5.4.T Gathering information 3.5.5.T Reaching a consensus
MANAGEMENT	3.6.T Organizing one's work and managing information	3.6.1.T Methodically structuring one's files to maximize the accessibility of information 3.6.2.T Updating one's knowledge in one's area of expertise 3.6.3.T Distinguishing the strategic nature of information 3.6.4.T Developing an internal and external contact network
	3.7.T Managing risky situations	3.7.1.T Anticipating problem situations 3.7.2.T Drafting contingency plans 3.7.3.T Identifying alternative plans and avenues for solutions 3.7.4.T Applying a problem solving method
	3.8.T Innovating and adapting to change	3.8.1.T Researching innovative solution implementation strategies 3.8.2.T Demonstrating interest in challenges, change and new situations 3.8.3.T Modifying or reorienting one's actions in light of new data 3.8.4.T Proposing ideas or new avenues for improving products or services

Process 4: SELLING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
	SPECIFIC COMPETENCIES (S)	
PLANNING AND FOLLOW-UP	4.1.S Devising provisional sales forecasts	4.1.1.S Identifying products and services 4.1.2.S Establishing sales forecasts 4.1.3.S Identifying target clientele 4.1.4.S Establishing sales and marketing budgets 4.1.5.S Determining human resources requirements
	4.2.S Providing a sales service	4.2.1.S Ensuring the client-company interface 4.2.2.S Obtaining approval for contract modifications 4.2.3.S Following the progress of contracts 4.2.4.S Resolving invoicing issues 4.2.5.S Devising terms for drafting contracts or agreements
	4.3.S Managing sales and marketing	4.3.1.S Drafting sales reports 4.3.2.S Updating sales estimates 4.3.3.S Conducting a budget follow-up 4.3.4.S Characterizing the competition and the market 4.3.5.S Establishing the link between client needs and production deadlines
PRODUCTION	4.4.S Putting in place a distribution network	4.4.1.S Identifying potential distributors 4.4.2.S Soliciting distributors 4.4.3.S Negotiating agreements 4.4.4.S Training selected distributors 4.4.5.S Measuring client satisfaction
	4.5.S Putting in place a network of representatives	4.5.1.S Dividing the sales territory 4.5.2.S Assigning representatives according to the territory to be covered 4.5.3.S Negotiating agreements 4.5.4.S Training the selected representatives

Process 4: SELLING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
PRODUCTION (CONT'D)	4.6.S Establishing client relations	4.6.1.S Determining the requirements 4.6.2.S Proposing options 4.6.3.S Responding to objections 4.6.4.S Devising an optimal proposal <ul style="list-style-type: none"> • Describing the solution • Coordinating the cross-functional sales project team • Participating in the strategic definition of the price • Proposing financing options • Ensuring the document formatting 4.6.5.S Presenting the proposal
	4.7.S Managing shipments	4.7.1.S Determining the quantity of equipment to ship 4.7.2.S Following up on production orders 4.7.3.S Establishing shipping schedules 4.7.4.S Following up on schedules 4.7.5.S Providing reports on shipped products
	4.8.S Participating in product marketing	4.8.1.S Participating in the development of the marketing plan 4.8.2.S Demonstrating the products
TECHNOLOGIES	TRANSVERSAL COMPETENCIES (T)	
	4.1.T Applying technical knowledge to the telecommunications industry	4.1.1.T Analyzing the equipment performance 4.1.2.T Analyzing the equipment lifecycle 4.1.3.T Characterizing the telecommunications technologies 4.1.4.T Applying knowledge on trends in the world of telecommunications
	4.2.T Using tools and systems	4.2.1.T Operating a word processing software 4.2.2.T Preparing presentations using a presentation software 4.2.3.T Operating specialized software 4.2.4.T Browsing the Web and managing e-mail

Categories	Competencies	Competency indicators
TECHNOLOGIES (CONT'D)	4.3.T Contributing to improving processes and quality	4.3.1.T Remaining abreast of the evolution of technologies, markets and competing products 4.3.2.T Conducting research in one's area of expertise 4.3.3.T Updating one's technical knowledge
INTERPERSONAL RELATIONSHIPS	4.4.T Communicating in the workplace	4.4.1.T Communicating technical and general information on the company 4.4.2.T Reaching a consensus 4.4.3.T Practising active listening 4.4.4.T Gathering technical information 4.4.5.T Establishing a trust relationship
MANAGEMENT	4.5.T Working on a cross-functional team	4.5.1.T Reaching a consensus 4.5.2.T Diffusing conflict situations 4.5.3.T Analyzing a situation from a global perspective 4.5.4.T Team problem solving 4.5.5.T Preparing and leading meetings 4.5.6.T Applying organization principles for repetitive tasks (feedback loops)
	4.6.T Organizing one's work and managing information	4.6.1.T Methodically structuring one's files to maximize the accessibility of information 4.6.2.T Updating one's knowledge in one's area of expertise 4.6.3.T Distinguishing the strategic nature of information 4.6.4.T Developing an internal and external contact network
	4.7.T Innovating and adapting to change	4.7.1.T Researching innovative solution implementation strategies 4.7.2.T Demonstrating interest in challenges, change and new situations 4.7.3.T Modifying or reorienting one's actions in light of new data 4.7.4.T Proposing ideas or new avenues for improving products or services

Process 5: PROVIDING CUSTOMER SERVICE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
	SPECIFIC COMPETENCIES (S)	
PLANNING AND FOLLOW-UP	5.1.S Providing an after-sales follow-up	5.1.1.S Providing after sales follow-up with the clientele 5.1.2.S Processing specific and urgent demands <ul style="list-style-type: none"> • Determining the nature of the request • Evaluating the impact on production • Putting in place appropriate measures • Following up on engineering changes • Following up on changes made to the shipment process 5.1.3.S Verifying the accuracy of invoicing
PRODUCTION	5.2.S Drafting custom technical documents	5.2.1.S Analyzing the technical documents produced by engineering and the product development 5.2.2.S Devising verification or validation strategies and procedures 5.2.3.S Drafting technical procedures 5.2.4.S Formatting the information 5.2.5.S Verifying the accuracy of the information with technical experts 5.2.6.S Presenting documents to the end recipient 5.2.7.S Making changes to the document 5.2.8.S Making recommendations to the design and production personnel
	5.3.S Drafting technical user and maintenance procedures	5.3.1.S Identifying all the technical procedures to provide for the client 5.3.2.S Organizing the procedures 5.3.3.S Validating the procedures <ul style="list-style-type: none"> • Configuring the laboratory equipment • Verifying the procedure • Making corrections

Categories	Competencies	Competency indicators
PRODUCTION (CONT'D)	5.4.S Carrying out inspections in the client's presence	5.4.1.S Testing the functionality of the product 5.4.2.S Verifying the compatibility of the product according to the network functions 5.4.3.S Resolving technical problems 5.4.4.S Drafting a verification report
	5.5.S Providing technical support	5.5.1.S Ensuring technical support during a project's development 5.5.2.S Resolving technical problems during production 5.5.3.S Participating in the development of prototypes 5.5.4.S Participating in technical trials 5.5.5.S Providing training
TECHNOLOGIES	TRANSVERSAL COMPETENCIES (T)	
	5.1.T Applying technological knowledge to the telecommunications industry	5.1.1.T Characterizing the different technologies 5.1.2.T Analyzing the physical design of a telecommunications network 5.1.3.T Applying general knowledge on different areas of telecommunications
	5.2.T Using tools and systems	5.2.1.T Operating a word processing software 5.2.2.T Preparing presentations using a presentation software 5.2.3.T Operating an electronic spreadsheet 5.2.4.T Operating different languages, and communication and programming protocols 5.2.5.T Browsing the Web and managing e-mail
	5.3.T Applying a problem solving method	5.3.1.T Identifying the problem 5.3.2.T Analyzing the situation 5.3.3.T Finding solutions 5.3.4.T Selecting the optimal solution 5.3.5.T Planning corrective action 5.3.6.T Executing the plan
	5.4.T Contributing to improving processes and quality	5.4.1.T Remaining abreast of the evolution of technologies, markets and competing products 5.4.2.T Conducting research in one's field of expertise 5.4.3.T Updating one's technical knowledge

Process 5: PROVIDING CUSTOMER SERVICE

TABLE OF COMPETENCIES AND COMPETENCY INDICATORS BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Competency indicators</i>
INTERPERSONAL RELATIONSHIPS	5.5.T Communicating in the workplace	5.5.1.T Communicating technical and general information on the company 5.5.2.T Making presentations 5.5.3.T Negotiating agreements 5.5.4.T Gathering information 5.5.5.T Reaching a consensus
MANAGEMENT	5.6.T Organizing one's work and managing information	4.7.5.T Methodically structuring one's files to maximize the accessibility of information 4.7.6.T Updating one's knowledge in one's area of expertise 4.7.7.T Distinguishing the strategic nature of information 5.6.1.T Developing an internal and external contact network
	5.7.T Innovating and adapting to change	5.7.1.T Researching innovative solution implementation strategies 5.7.2.T Demonstrating interest in challenges, change and new situations 5.7.3.T Modifying or reorienting one's actions in light of new data 5.7.4.T Proposing ideas or new avenues for improving products or services

III - B) TOOL 2: TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

Process 1: DESIGNING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Position titles representative of the process</i>
ANALYSIS, STUDY, EVALUATION	<p>SPECIFIC COMPETENCIES (S)</p> <p>1.1.S Analysing business opportunities and demand for new products</p> <p>1.2.S Defining and adapting a product</p> <p>1.3.S Producing a feasibility study</p>	<ul style="list-style-type: none"> • Marketing Analyst • Communications Counsellor • Product Director • Project Director • Market Management Director • Marketing Director • Information Technology Specialist • Systems Engineer • Mechanical, Electronic, Optical and Electrical Engineer and Technician • Representative • Specialist – Norms and Standards • Supervisor - Coordination and Network Support
PLANNING AND FOLLOW-UP	<p>1.4.S Applying a project management method</p>	
TECHNOLOGIES	<p>TRANSVERSAL COMPETENCIES (T)</p> <p>1.1.T Applying technological knowledge to the telecommunications industry</p> <p>1.2.T Using tools and systems</p> <p>1.3.T Implementing an applied research method</p> <p>1.4.T Contributing to improving processes and quality</p>	
INTERPERSONAL RELATIONSHIPS	<p>1.5.T Communicating in the workplace</p> <p>1.6.T Working on a cross-functional team</p>	
MANAGEMENT	<p>1.7.T Organizing one's work and managing information</p> <p>1.8.T Managing risky situations</p> <p>1.9.T Innovating and adapting to change</p>	

Process 2: DEVELOPING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Position titles representative of the process</i>
	SPECIFIC COMPETENCIES (S)	
PLANNING AND FOLLOW-UP	2.1.S Planning the development of a new product	<ul style="list-style-type: none"> • Marketing Analyst • Communications Counsellor • Product Director • Project Director • Project Manager • Information Technology Specialist • Engineer – Technological Development and Operations Planning • Production Engineer • Computer Systems Engineer • Engineer and Technician: Mechanical, Optical, Electronic and Electrical. • Representative • Supervisor - Coordination and Network Support
	2.2.S Applying a project management method	
	2.3.S Proceeding with the final design of the new product	
PRODUCTION	2.4.S Building a prototype of the final product	
	2.5.S Qualifying and inspecting the final product	
	2.6.S Participating in the transfer to production, if applicable	
	2.7.S Ensuring the implementation of software systems	
	TRANSVERSAL COMPETENCIES (T)	
TECHNOLOGIES	2.1.T Applying technological knowledge to the telecommunications industry	
	2.2.T Using tools and systems	
	2.3.T Implementing an applied research method	
	2.4.T Contributing to improving processes and quality	
INTERPERSONAL RELATIONSHIPS	2.5.T Communicating in the workplace	
	2.6.T Working on a cross-functional team	
MANAGEMENT	2.7.T Organizing one's work and managing information	
	2.8.T Managing risky situations	
	2.9.T Innovating and adapting to change	

Process 3: PRODUCING TELECOMMUNICATIONS EQUIPMENT

TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Position titles representative of the process</i>	
ANALYSIS, STUDY, EVALUATION	SPECIFIC COMPETENCIES (S)		
	3.1.S	Optimizing the production cycle	
	3.2.S	Planning the product assembly process	
	3.3.S	Defining a production strategy for the product	
	3.4.S	Defining the quality assurance process	
	3.5.S	Planning product development	
	PLANNING AND FOLLOW-UP	3.6.S	Ensuring the installation of the equipment and materials required for production
		3.7.S	Supervising the human resources required for production
		3.8.S	Manually assembling products
		3.9.S	Automatically assembling products
		3.10.S	Shipping products
PRODUCTION	3.11.S	Maintaining an inventory	
	TRANSVERSAL COMPETENCIES (T)		
TECHNOLOGIES	3.1.T	Applying technological knowledge to the telecommunications industry	
	3.2.T	Using tools and systems	
INTERPERSONAL RELATIONSHIPS	3.3.T	Applying a problem solving method	
	3.4.T	Contributing to improving processes and quality	
	3.5.T	Communicating in the workplace	
MANAGEMENT	3.6.T	Organizing one's work and managing information	
	3.7.T	Managing risky situations	
	3.8.T	Innovating and adapting to change	
		<ul style="list-style-type: none"> • Buyer (Junior, Intermediate, Senior) • Assembler • Team Leader • Director, Supplies • Packager • Material Manager • Production Manager • Project Manager • Sub-Contractor Manager • Manager, Introduction of New Products • Distribution Manager • Purchasing Manager • Process Engineer • Product Engineer • Test Engineer • Process Verification Engineer • Component Engineer • Industrial Engineer • NPPI Engineer • Shop Worker • Handler • Manual Assembly Operator • Test Equipment Operator • Automated Line Operator • Planner • Finishing Employee • Product Line Manager • Workstation Ergonomics Specialist • Component Processing Technician • Adjustment Technician • System Technician • Test Technician • Raw Materials Preparation Technician • Operational Technician • Optical Technician 	

Process 4: SELLING EQUIPMENT AND SOFTWARE

TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Position titles representative of the process</i>
	SPECIFIC COMPETENCIES (S)	
PLANNING AND FOLLOW-UP	4.1.S Devising provisional sales forecasts	<ul style="list-style-type: none"> • Sales Assistant • Sales Manager • Representative • Marketing Specialist • Applications Specialist
	4.2.S Providing sales service	
	4.3.S Managing sales and marketing	
PRODUCTION	4.4.S Putting in place a distribution network	
	4.5.S Putting in place a network of representatives	
	4.6.S Establishing client relations	
	4.7.S Managing shipments	
	4.8.S Participating in product marketing	
	TRANSVERSAL COMPETENCIES (T)	
TECHNOLOGIES	4.1.T Applying technological knowledge to the telecommunications industry	
	4.2.T Using tools and systems	
	4.3.T Contributing to improving processes and quality	
INTERPERSONAL RELATIONSHIPS	4.4.T Communicating in the workplace	
	4.5.T Working on a cross-functional team	
MANAGEMENT	4.6.T Organizing one's work and managing information	
	4.7.T Innovating and adapting to change	

Process 5: PROVIDING CUSTOMER SERVICE

TABLE OF COMPETENCIES AND POSITION TITLES BY BUSINESS PROCESS

<i>Categories</i>	<i>Competencies</i>	<i>Position titles representative of the process</i>
PLANNING AND FOLLOW-UP	SPECIFIC COMPETENCIES (S)	<ul style="list-style-type: none"> • Network Consultant • Account Manager • Product Engineer • Technical Writer • Account Representative
	5.1.S Providing an after-sales follow-up	
PRODUCTION	5.2.S Drafting custom technical documents	
5.3.S Drafting technical user and maintenance procedures		
5.4.S Carrying out inspections in the client's presence		
5.5.S Providing technical support		
	TRANSVERSAL COMPETENCIES (T)	
TECHNOLOGIES	5.1.T Applying technical knowledge to the telecommunications industry	
	5.2.T Using tools and systems	
	5.3.T Applying a problem solving method	
	5.4.T Contributing to improving processes and quality	
INTERPERSONAL RELATIONSHIPS	5.5.T Communicating in the workplace	
MANAGEMENT	5.6.T Organizing one's work and managing information	
	5.7.T Innovating and adapting to change	

III - C) TOOL 3: LIST OF CLASSIFIED COMPETENCIES

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
TRANSVERSAL COMPETENCIES					
Applying technical knowledge to the telecommunications industry					
Using tools and systems					
Implementing an applied research method					
Applying a problem solving method					
Contributing to improving processes and quality					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process Competencies	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
TRANSVERSAL COMPETENCIES					
Communicating in the workplace					
Working on a cross- functional team					
Organizing one's work and managing information					
Managing risky situations					
Innovating and adapting to change					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Analysis, study, evaluation					
Analyzing business opportunities and demand for new products					
Defining and adapting a product					
Producing a feasibility study					
Optimizing the production cycle					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Planning and follow-up					
Applying a project management method					
Planning the development of a new product					
Proceeding with the final design of the new product					
Planning the product assembly process					
Defining a production strategy for the product					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Planning and follow-up (cont'd)					
Defining the quality assurance process					
Devising sales forecasts					
Providing a sales service					
Managing sales and marketing					
Providing an after-sales follow-up					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Production					
Building a prototype of the final product		██████████			
Qualifying and inspecting the final product		██████████			
Participating in the transfer to production, if applicable		██████████			
Ensuring the implementation of software systems		██████████			
Ensuring the installation of the equipment and materials required for production			██████████		

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Production (cont'd)					
Supervising the human resources required for production					
Manually assembling the products					
Automatically assembling the products					
Shipping the products					
Maintaining an inventory					

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Production (cont'd)					
Putting in place a distribution network				██████████	
Putting in place a network of representatives				██████████	
Establishing client relations				██████████	

LIST OF COMPETENCIES CLASSIFIED FOR ALL THE PROCESSES

Process	1. Designing equipment and software	2. Developing equipment and software	3. Manufacturing telecommunications equipment	4. Selling equipment and software	5. Providing customer service
Competencies					
SPECIFIC COMPETENCIES					
Production (cont'd)					
Managing shipments					
Participating in product marketing					
Drafting custom technical documents					
Drafting user and maintenance procedures					
Carrying out inspections in the client's presence					
Providing technical support					

