

PROFESSIONAL CATEGORIES

CTTC - Telecommunications Technological Center of Catalonia



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1. PROFESSIONAL CATEGORIES FOR R&D PERSONNEL

There will be four categories. Researcher in training (R1), Researcher (R2), Senior Researcher (R3) and Research Director (R4). In each category there will be several subcategories.

In each category/subcategory, the skills necessary to access each of them are listed. The progression from one category/subcategory to another will not necessarily be limited to the immediately superior one.

<u>At an indicative level</u>, some elements of scientific-technical production are listed that contribute to the accreditation of one or more skills.

The CDEI evaluates the candidacy category according to the criteria indicated in this document both in the incorporation by a certain selection process and in the promotions for structural and non-structural personnel. He then makes a proposal to Management, who finally validates the definitive assignment of the person's professional category.

In each subcategory the skills will be those of all previous categories/subcategories plus those listed specifically for the present subcategory.

R1. Researcher in training

This category includes people who perform R&D under supervision. Normally this category is made up of doctoral students and those who have just graduated from a university degree.

All the subcategories in R1 entail that the person must complete an annual activity report approved by their tutor or director in charge of their training. Said report must be delivered to HR.

R1A. Researcher in Training

Category corresponding to personnel hired to carry out predoctoral studies. The levels will be applied depending on the year of study (from year 1 to year 4 if the grant covers 4 years). The salary corresponds to the applicable minimum, in the case of obtaining a scholarship that sets a higher level, the higher level will be applied.

R1B. Researcher in Training

** Entry category for research staff without a doctorate who are not hired for the purpose of obtaining a doctorate.



Skills:

- He has participated in research projects and/or technological development in experimental platforms, open source solutions, etc.
- Knowledge of scientific research methodologies and their application
- It demonstrates knowledge in the scientific field in which it develops its activity
- Presents, participates and/or publishes in scientific technological events
- Mentorship: It is not required, but it will be valued if you have led work teams/leadership
- Internationalization (Recognition/scientific reputation): Not required, but valued to have a higher level.
- IPR: Not required, but valued if you have a patent

R2. Researcher

This category requires a doctor's degree or 5 years of experience similar to the functions you will develop in your job.

The subcategories are as follows:

R2A. Researcher–A

The skills for this subcategory are:

- He has demonstrated a systematic understanding of the field in which he focuses his R&D activity.
- Ability to conceive, design, implement a personal R&D plan.
- He has made a contribution that extends the frontier of knowledge supported in a substantial work of innovation or application.
- Demonstrates ability in analysis, evaluation and synthesis of new ideas.
- Ability to communicate with colleagues, especially in the scientific-technical interest of your research and its impact on the research community.
- Regular co-author of publications, invention declarations and participation in international conferences.
- Carry out assigned tasks in the context of competitive projects or grants in an autonomous manner.

Contribution to the accreditation of skills:



- Dissemination in the institution of origin.
- Active and autonomous participation (of a scientific and/or development nature) annually in a competitive grant, project or contract.

R2B. Researcher-B

The specific skills for this subcategory are:

- Knowledge of the technological needs of the industrial sector.
- Comprehension of the value of your research in the context of products and services for the industrial sector.
- Communication skills in a broad context and with society in general from your research experience.
- Ability to promote, in a professional, technological and social or cultural context, advances in a society based on knowledge.
- To act as a mentor to researchers in training, helping them to be more effective and successfully approach their career in R&D.
- Execution of technical and management tasks assigned in the context of subsidies or R&D projects.
- Creativity and capacity in the proposal of extensions and improvements in the areas assigned to him in R&D projects and proposals.

Contribution to the accreditation of the previously listed skills:

Management of theses and/or end of degree/master's degree.

- Scientific-technical contributions framed in his personal research.
- Leadership in work packages in R&D projects or grants.

For this subcategory and those that follow, external recognition of your work such as IEEE Senior Member, AQU Lecturer or similar is considered a positive element. The merits alleged or recognized will require the delivery of the documentation, which allows to determine the degree or level of adaptation to the competences of the merits alleged for the corresponding external recognition, to HR.

R2C. Researcher-C.

Specific skills of this subcategory:

- Evidence of clear progress towards R3A
- Contribution to the development of knowledge, research and development via cooperations and collaborations with other internal and/or external units at the institution.



- Identification of research problems and opportunities in their field of action.
- Publications as main author (not necessarily the first author) and organizes sessions in international conferences and workshops.
- It provides support for the external management of tasks in the context of grants or R&D projects.
- It defines additional tasks or activities to be carried out in projects, both during the proposal development period and during its execution. Workpackage leader or Task leader.

Contribution to the accreditation of previous skills:

- Scientific dissemination in the institution every two years, with a report for evaluation purposes, with emphasis on the skills listed here.
- Participation in a declaration of invention/technological innovation or in the implementation or improvement of a testbed.
- Annual participation in scientific and industrial events.
- Participation in the preparation of proposals and/or execution of research projects, leading tasks.

R3. Senior Researcher

This category describes researchers with a doctorate degree who have developed a level of independence that allows them to lead a group of researchers.

R3A. Senior Researcher-A

All the skills of the R2 category plus:

- Participation in the preparation of proposals and execution of R&D projects. Principal investigator of the institution of origin
- Establishment of inter/intra institutional cooperations and collaborations in competitive grants and R&D projects.
- Identifies research problems and opportunities in your area of expertise.
- Significant independence in research.
- On a regular basis, he is the main author of publications and organizes conference sessions, attracting to his activity other units of the institution both nationally and internationally.
- Experience in research methodologies and preparation of proposals.
- Leadership at institution level in the execution of R&D projects. Ability to identify a market niche
- Activity in significant scientific responsibility (associated editors, TPC, editor of special issues,...)
- PhD co-supervisor



Contributions to the validation of skills.

- Active participation in the organization of conferences, courses, demonstrations or scientifictechnical exhibitions.
- Internal conferences every three years on your R&D activity highlighting the relevance of your activity with respect to the listed competencies.

R3B. Senior Researcher-B

The specific skills of this subcategory are:

- Have a scientific reputation (theses courts,...)
- Establishment of collaborative relationships with relevant industry in the sector, motivated by their reputation in research or technological development.
- Ability to communicate effectively to the research community and society in general.
- Innovative vision in research.
- Show attraction to your activity of other researchers, both from your institution and from others.
- Ability to obtain resources from both research agencies and companies (industrial projects) in the sector at national and international level.
- Acts or has acted as promoter and principal researcher in consortium projects, it being valued that this funding fully covers the cost of the activity to be carried out.
- I am committed to the development of your professional career and acts as a mentor for others.

Contribution to the accreditation of previous skills:

- Promoter and leader of R&D projects
- Relevant contributions to the IPR of the institution.
- Organizer or "TC chair" of international scientific conferences.

For this subcategory and for those that are, external recognitions such as IEEE Fellow, ACM Fellow, Agregado or Catedrático AQU and similar, will be considered a relevant merit. Again, the additional documentation must allow us to assess which competencies of those required have been recognized externally. Even if the nomination is unsuccessful, the documentation provided and/or nomination, references, appointments, etc. they will be considered a positive element of the candidate or under evaluation. This documentation must be deposited in HR of the CTTC, at the time it is submitted externally.



Your treatment will be strictly confidential until the access or evaluation process where the merit of having been a candidate is alleged and, where appropriate, having obtained the corresponding external recognition.

R3C. Senior Researcher-C

Show clear progress towards R4A category competencies, as follows:

- Reputation as a leader in promotion, design and scientific-technical capacity of research projects.
- Demonstration of your capacity to secure economic resources for research activities.
- Good connoisseur of the broad implications and applications of the research he leads.
- Solvency in the identification and execution of research and development activities.
- Be a scientific referent in your subject
- Publishes and presents publications and/or books of great impact and relevance.
- He has acted as principal investigator (PI) or scientific-technical manager (Technical Manager) in collaborative projects.
- Adaptability/flexibility to different scientific topics

Contribution to the accreditation of previous skills:

- PI or TM ("Technical Manager") in collaborative research projects and completely aligned with their research activity. The scientific-technical content of the project must be consistent with his professional career in the last four years.
- Evidence of actions as evaluator or expert in the conception or development of national or international programs.
- Index H or equivalent (impact factor, quartile) of the publications of the last 10 years that attest to the impact and/or relevance of their publications and, where applicable, elements that reveal the impact and/or relevance of "keynotes", "invited presentations", "overviews", "round tables", etc.
- Leadership in IPR contributions.
- Promotion and leadership of a research line
- Evidence of your ability to create R&D activity around you that is attractive to other researchers.
- Leadership in international cooperation with emphasis on the multidisciplinary composition of the team participating in the collaboration.
- Management of completed PhDs



R4. Director of Research.

This category is for researchers with a doctorate who are leaders in their field of research and with the ability to lead teams of researchers in the international field. Its performance is based on a group or team of researchers.

There are two subcategories within this category.

R4A. Research Director -A

Competencies from the previous category plus:

- Publications with a high number of citations or impact.
- List of relevant contributions in IPR, especially royalty contracts
- Proven experience in promoting, managing and scientifically leading attractive R&D projects for other researchers of similar reputation.
- Carrying out scientific-technical work at a personal level (eg, software programming, laboratory work, etc,...)
- Proven ability based on its scientific-technical reputation to secure long-term funding for research projects.
- Extensive list of persons trained under his supervision or direction and, where applicable, their current professional relevance.
- Identifies the implications and applications of his scientific-technical activity with his participation in round tables or his participation in the preparation of "white papers".
- Excellence in communication skills and relationship with the research community, especially in the productive sector.
- It develops a strategic vision of the future and is a scientific reference in its subject.

The accreditation of these skills will correspond exclusively to external evaluators.

External recognition, for example, ERCs ("Advance") or similar will almost completely accredit the previous competence.

R4B. Research Director -B

In addition to the skills of the previous subcategory:

- Substantial and innovative contribution in his field and implications in other fields of research firmly based on his list of publications and other scientific-technical contributions. (Index H, Patents, etc.).



- It has an international reputation based on excellence or relevance.
- Beyond the formation of a solid research team and networked in international collaborations, a long-term vision must be evident.
- Ability to create an innovative and comfortable environment to attract other researchers of similar reputation to carry out short or medium-term stays in his work team.
- Active and committed person in the professional development of his colleagues.

The accreditation of these skills will correspond exclusively to external evaluators.

With the aim of guaranteeing the provision of an equitable and international scientific service of excellence and in the exercise of the autonomy regime of management in selection matters, the knowledge of the Catalan and Spanish languages will not be required of the research staff as a requirement to access the CTTC selection calls.



2. PROFESSIONAL CATEGORIES FOR ADMINISTRATIVE STAFF

Below is a table with the most important characteristics of the professional categories for administration.

LEVEL	MINIMUM TRAINING	EQUIVALENT EXPERIENCE	COMPETITION	PROBLEM SOLUTION	AUTONOMY	SUPERVISION	PERSONNEL MANAGEMENT
1	ESO graduate title, school graduate They do not need specific training	No experience or experience of less than a year in a similar position.	Basic functions. Surveillance of facilities, access control, custody of material, furniture and facilities, orders, correspondence, receipt of goods and general administrative tasks. It includes all those activities that, by analogy, are comparable to those listed.	Simple tasks with detailed and repetitive instructions	NO	Subject to close supervision or perfectly defined work routines.	NO
2	ESO graduate title, school graduate, technician corresponding to middle school training cycles, specialist technician corresponding to first-grade professional training or equivalent	2 years of demonstrable experience in similar jobs	Functions of a general nature that are attributed to him in the area of the execution of administrative processes of basic complexity, for example: attention to people, introduction and processing of data, preparation of lists, orders, etc. It includes all those activities that, by analogy, are comparable to those listed.	Similar situations that require choosing between well-learned and common-sense options. Guided by simple procedures and standardized work methods.	NO	Subject to standardized control procedures and/or, partially in established work routines.	NO



3	Bachelor's degree, higher technical degree corresponding to higher-level training courses, specialist technical degree corresponding to secondgrade professional training or equivalent.	3 years of demonstrable experience in similar jobs	Specialized administrative tasks within an organizational environment, which include the execution of complex processes.	Different but familiar situations. Solutions within the framework of diversified procedures and clear precedents.	Some degree of autonomy of minor and supervised tasks within an activity area.	Supervision of work progress and subjection, partially, to standardized control procedures, with some degree of autonomy	NO
4	University degree or CFGS with complementary training related to the job	1 year of demonstrable experience in similar jobs	Development of technical or management function activities, or design and supervision of a complex process, which may include inspection, execution, control or similar activities, as well as others that are specifically attributed to it due to the specialization of its function.	Different and new situations that require analysis between things learned. Solutions within the framework of diversified and precedent procedures	Discretion in application of procedures. Certain autonomy in interpretation/application of work procedures	Subject to supervision on work progress and results	NO
5	University degree (or equivalent) and postgraduate studies in the subject to be developed or equivalent merits	2 years of demonstrable experience in similar jobs	Development of activities in a particular, specific and complex area of activity, for which a high degree of technical specialization is required. Acting as service or operation manager	Complex and diverse problems. Solutions within the framework of very diversified rules and procedures	Wide autonomy in interpretation/application of work procedures	Subject to concrete and defined plans and programs	YES. Management capacity to supervise and coordinate activities and teams of qualified people



6	Higher degree university degree + master's/postgraduate degree specialized in the subject to be developed and high specialization	3 years of demonstrable experience in similar jobs	Development of higher level activities corresponding to functions of management, study, report, assessment, proposal, planning, direction and supervision. He is responsible for the decision, direction and execution, coordination and control of the work of the professionals in his area of activity	Very complex and diverse problems. Solutions within the framework of highly diversified functional policies, rules and procedures	Great autonomy in budget management	Subject to plans and programs based on functional policies or clearly defined precedents	YES. Proven management ability to lead, motivate and develop teams of qualified people, in complex work environments
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In the exercise of the autonomy regime of management in selection matters, in all calls for management personnel of the CTTC it will be necessary to prove a minimum knowledge of the Catalan and Spanish languages in accordance with the equivalent categories for the administration of the Generalitat of Catalonia, with the exception of the staff who provide service in the Projects department, who, in order to guarantee a quality service for the management of international competitive calls, will require a basic level of Catalan in terms of oral and written comprehension.