



PROFESSIONAL CATEGORIES

CTTC - Centre Tecnològic de Telecomunicacions de
Catalunya

Extract

Below is a proposal related to the definition of professional categories applicable to the CTTC staff. This proposal has been approved by the centre's Works Council and ratified by the majority of the staff.

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1. CTTC PROFESSIONAL CATEGORIES FOR R&D STAFF

There will be four categories. Research trainee (R1), Researcher (R2), Senior Researcher (R3) and Research Director (R4). Each category will have several sub-categories.

Each category/sub-category contains a list of the competencies required to access it. The progression from one category/sub-category to another will not necessarily be restricted to the one immediately above it.

For guidance purposes, a list is provided of some of the scientific-technical production elements that contribute to the accreditation of one or several competencies.

Access and evaluation will be carried out by a Committee formed by the Division Head, who will act as the Chairperson, the Department Head, who will act as the Secretary, two experts from outside the institution and one representative of the CTTC Works Council. The documents with the elements related to decisions and the selection procedure, along with the proposal, will be sent to CTTC's Management Committee for its final approval and if necessary, submitted to the Board of Trustees. In the event of a change in the category/sub-category of a person occupying the post of Division or Department Head, the Chairperson or the Secretary will be designated by the Management Committee.

It should be noted that the extreme relevance and grade of compliance of the candidate in one competency (clearly above the average) may be a valid element in the decision to propose them.

In each sub-category, the competencies will be those of all the previous categories/sub-categories plus those specifically listed for the present sub-category.

R1. Research trainee

This category includes people carrying out R&D activities under supervision. Normally, this category is made up of doctoral students and new university graduates.

In all the R1 sub-categories, the person must draft an annual report of the activities which must be approved by their tutor or the director in charge of their training. That report must be delivered to the HR department.

R1A. Research Trainee

Research trainees who carry out all their R&D activities subject to supervision and tutoring.

Competencies associated with their university degrees.

R1B. Research Trainee

Competencies:

- Perform research or technological development.
- Ability to develop knowledge on research methodologies and scientific discipline.
- Proven knowledge in the scientific field in which they develop their training.
- Ability to communicate their research results or development, highlighting their relevance to others.

Contribution to the accreditation of competencies:

- Annual presentation of an internal conference.
- Annual participation in an international conference falling within the scope of their line of work.

R1C. Research Trainee

This sub-category is for researchers who have completed their PhD or equivalent training in terms of experience, competency and relevance.

The competencies are the following:

- Capacity for critical analysis, evaluation and synthesis of innovative and relevant ideas.
- Adequate oral communication skills, particularly in the international context.
- Participation in an R&D project.

Contribution to accreditation of competencies:

- Giving an annual internal CTTC conference with a report available for evaluation, describing the evolution of their R&D plan and disclosing their alignment with the objectives of the CTTC department to which the person is assigned.
- Annual participation in on scientific publication.
- Active and continuous participation in an R&D project or development/improvement of a CTTC testbed.

R2. Researcher

This category requires the person to have a PhD or 5 years in the profession that accredit a similar level of experience, competency and relevance.

The sub-categories are the following:

R2A. Researcher–A

The competencies for this sub-category are:

- Having demonstrated a systematic comprehension of the field on which their R&D activity is focused.
- Ability to conceive, design and implement a personal R&D plan.
- Having made a contribution that goes beyond the frontiers of knowledge, based on a substantial project that involves innovation or application.
- Proven skill in the analysis, evaluation and synthesis of new ideas.
- Ability to communicate with their colleagues, particularly in the scientific-technical interest of their research and its impact on the research community.
- Regular co-author of publications, declarations of invention and participation in international conferences.
- Independently performs tasks assigned within the context of projects or competitive grants.

Contribution to accreditation of competencies:

- Imparting of internal conferences.
- Active and independent participation on an annual basis (related to science and/or development) in a competitive grant, project or contract.

R2B. Researcher-B

The specific competencies for this sub-category are:

- Knowledge of the technological needs of the industrial sector.
- Concretion of the value of their research in the context of products and services for the industrial sector.
- Ability to communicate their research experience in a broad context and to society in general.
- Ability to promote advances in a society based on knowledge in a professional, technical and social or cultural context.
- Acting as a mentor for research trainees, helping them to be more effective and successfully embark on their R&D careers.
- Execution of the technical and management tasks assigned to them in the context of R&D grants or projects.
- Creativity and ability to propose extensions and improvements in the areas assigned to them in R&D projects and proposals.

Contribution to accreditation of the above competencies:

Supervision of dissertations and/or end of degree/master degree projects.

- Scientific-technical contributions within the scope of their personal research.
- Leadership in work packages in R&D grants or projects.

In this and the following sub-categories, external recognition of their work is considered a positive element, for example IEEE Senior Member, AQU tenure-track lecturer and similar. The alleged or recognised merits will require the presentation of documentation to the HR Department that determines the grade or level or adequacy of the merits for the competencies for the corresponding external recognition.

R2C. Researcher-C

Specific competencies of this sub-category:

- Evidence of clear progress to RE3A, for instance:
- Contribution to knowledge, research and development and cooperation with other CTTC units and/or units from outside the institution.
- Identification of research problems and opportunities within their area of action.
- Publications as a main author (not necessarily the first author) and organisation of sessions at international conferences and workshops.
- Provision of external support to management in tasks within the context of R&D grants or projects.
- Defining of additional tasks or activities to be carried out in projects during the proposal drafting and execution phases.

Contribution to accreditation of the above competencies:

- Contributions to contract programme objectives with emphasis on leadership.
- Imparting of an internal conference every two years and a report on evaluation proposals, with emphasis on the above competencies.
- 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 preparing proposals and/or executing research projects and leading of tasks.

R3. Senior Researcher

This category describes researchers who have developed a level of independence such that it allows them to lead a group of researchers.

R3A. Senior Researcher-A

All the competencies of the R2 category, plus:

- Participation in the preparation of proposals and execution of R&D projects.
- Establishing of cooperation and collaboration with external entities, relying on the contribution of other CTTC divisions in competitive grants and R&D projects.
- Identification of research problems and opportunities within their area of experience, totally aligned with the strategic plan of their division.
- Regular author of publications and organiser of sessions at conferences, inviting other CTTC units, national and international institutions to participate in their activity.
- Experience in research methodologies and preparing of proposals.
- Leadership in CTTC in the execution of R&D projects.

Contribution to validation of competencies:

- Contribution to preparing the Strategic Plan of the institution.
- Active participation in organising conferences, courses, demonstrations and scientific-technical exhibitions.
- Internal conferences every three years on their R&D activity, highlighting the relevance of their activity with respect to the listed competencies.

R3B. Senior Researcher-B

The specific competencies of this sub-category are:

- Establishing collaborative relations with relevant industry in the sector, due to their reputation in research or technological development.
- Able to effectively communicate with the research community and with society in general.
- Innovative vision in research.
- Attracts other researchers to their activity, in both CTTC and from other institutions.
- Ability to obtain resources from research agencies and from businesses (industrial projects) in national and international markets.
- Acts or has acted as a promoter and head researcher in consortium projects, with importance being attached to this funding completely covering the cost of the activity to be carried out for CTTC.
- Committed to the development of their professional career and acts as a mentor for that of other persons.

Contribution to accreditation of the above competencies:

- Promoting and leading R&D projects(in AP and VIP).
- Research activity completely aligned with the strategic plan of their division. In this regard, the persons included in this category may be required to report directly to the CTTC Scientific Committee at its biannual meeting.
- Relevant contributions to the IPR of the institution.
- Organiser or “TC chair” in international scientific conferences.

In this and the following sub-categories, external recognition as an IEEE Fellow, ACM Fellow, Tenured or AQU Professor will be considered a relevant merit. Again, the additional documentation must show which competencies of those required have been recognised externally. Even in the case that the nomination was not successful, the documentation provided and/or the nomination, references, mentions, etc. will be considered a positive element for the candidate or person being evaluated. Said documentation must be furnished to the CTTC HR Department at the time of the external recognition process. The processing thereof will be strictly confidential until the access or evaluation process in which the merit of being the candidate and, as applicable, having obtained the respective external recognition, is alleged.

R3C. Senior Researcher-C

Show clear progress to competencies included in category R4A, as follows:

- Reputation as a leader in the promotion, design and scientific-technical capacity of research projects.
- Demonstration of their capacity to ensure economic resources for research activities.
- Sound knowledge of implications and applications in the widest sense of the research they lead.
- Solvency in identifying and executing R&D activities.
- Publication and presentation of publications and/or books with enormous impact and relevance.
- Has acted as a Head Researcher (HR) or a Technical Manager (TM) in collaborative research projects.

Contribution to accreditation of the above competencies:

- HR or TM ("Technical Manager") in collaborative research projects that are completely aligned with their research activity. The scientific-technical content of the project must be consistent with their professional career during the last four years.
- Evidence of actions such as an adviser or expert in the conception and development of national or international programmes.
- H index or equivalent (impact factor quartile) for publications over the past 10 years above the average in their field, accrediting the impact and/or relevance of their publications and, as applicable, elements that indicate the impact and/or relevance of "keynotes", "invited presentations", "overviews", "round tables", etc.
- Leadership in IPR contributions.
- Promotion and leadership in a research line included in the Strategic Plan of the institution.
- Evidence of their capacity to make R&D activity around them attractive to other researchers.
- Leadership in international cooperation, with emphasis on the multidisciplinary composition of the CTTC team participating in the collaborative initiative.

R4. Research Director

This category includes researchers who are leaders in their research fields and able to lead international researcher teams. Their actions are those of a research group or team.

This category has two sub-categories:

R4A. Research Director-A

Competencies of the previous category, plus:

- Publications with a high number of citations or impact.
- List of relevant IPR contributions, and in particular, royalty contracts.
- Proven experience in the scientific promotion, management and leadership of R&D projects that are attractive to other researchers with similar reputations.
- Proven ability to guarantee the long-term funding of research projects based on their scientific-technical reputation.
- Long list of persons trained under their supervision or management and, as the case may be, their current professional relevance.
- Identifies the implications and applications of their scientific-technical activity through their participation in round tables or in the preparation of "white papers".
- Excellent communication abilities and relations with the research community, especially in the production sector.
- Development of a strategic vision of the future in their area of research that has great relevance in the CTTC Strategic Plan.

Accreditation of these competencies will correspond exclusively to external evaluators.

The above competency will be almost completely accredited by external recognition, for instance, ERCs ("Advance") or similar.

R4B. Research Director -B

Apart from the competencies of the preceding category:

- Substantial and innovative contribution in their field and implications in other research fields, firmly substantiated by their list of publications and other scientific-technical contributions (H index, patents, etc.)
- Having an international reputation that is based on excellence or relevance.
- Apart from training a solid research team and participating in international collaborative projects, they must present evidence of having a long-term vision.
- Ability to create an innovative and comfortable environment that attracts other researchers with similar reputations to make short or medium stays in their work teams at CTTC.
- An active person who is the professional development of their colleagues.

Accreditation of the above competencies will correspond exclusively to external evaluators.

2. PROFESSIONAL CATEGORIES OF CLERICAL STAFF

The following chart sets out the most important characteristics of the professional categories of clerical staff.

LEVEL	MINIMUM EDUCATION	EQUIVALENT EXPERIENCE	COMPETENCY	PROBLEM-SOLVING	AUTONOMY	SUPERVISION	PERSONNEL MANAGEMENT
1	GCSE. No specific training required.	No experience. Experience of at least one year in a similar post.	Basic functions. Facility surveillance, entrance control, custody of material, fixtures and facilities, errands, correspondence, receipt of good and generic clerical tasks. Includes all those activities which, due to their similarity, are equivalent to those enumerated.	Simple jobs with detailed, repetitive instructions	NO	Subject to close supervision and with perfectly defined work routines.	NO
2	GCSE/vocational education and training. Technician/specialist with equivalent first level vocational training.	Proven experience of 2 years in a similar post.	General functions attributed to them in the scope of executing basic-level clerical processes, such as dealing with people, entering and processing data, preparing lists, orders, etc. Includes all those activity which, due to their similarity, are equivalent to those enumerated.	Similar situations that require choosing between options that are correctly learnt and based on common sense. Guided by simple procedures and standard work methods.	NO	Subject and/or partially subject to standard control procedures in established work routines.	NO
3	A-level qualifications, higher education diploma, second level specialised vocational training or equivalent.	Proven experience of 3 years in a similar post.	Specialised clerical work in an organisational area that includes the execution of complex processes.	Different but known situations. Solutions within the framework of diversified procedures and clear precedents.	A certain degree of autonomy in minor tasks, supervised in an area of activity.	Supervision of progress in work and partially subject to standard control procedures, with some degree of autonomy.	NO

4	Bachelor's degree or equivalent.	Proven experience of 4 years in a similar post.	Development of activities with technical, management or design functions and supervision of a complex process that may include inspection, execution, control or similar activities, as well as others specifically assigned to them due to the specialisation of their function.	Different and new situations that require analysis, among other things learnt. Solutions within the framework of diversified procedures and precedents.	Discretion in applying procedures. A certain degree of autonomy in interpreting/applying work procedures.	Subject to supervision related to progress of work and results.	NO
5	Master's degree or equivalent.	Proven experience of 5 years in a similar post.	Development of activities in a determined, specific and complex area for which a high degree of technical specialisation is required. Acting as the person responsible for the service or operation.	Complex, diverse problems. Solutions within the framework of highly diversified guidelines and procedure.	Extensive autonomy in the interpretation/ application of work procedures.	Subject to specific and well-defined plans and programmes.	YES. Management ability in supervising and coordinating activities and qualified staff.
6	PhD and a high degree of specialisation	Proven experience of 6 years in a similar post.	Development of higher level activities corresponding to management, study, report, evaluation, proposal, planning, leading and supervisory functions. Responsible for making decisions, managing and executing, coordinating and controlling the work of the professionals in their area of activity.	Highly complex and diverse problems. Solutions within the framework of extremely diversified functional policies, guidelines and procedures.	Extensive autonomy in budgetary management.	Subject to plans and programmes based on functional policies or clearly-defined precedents.	YES. Proven managerial skills in leading, motivating and developing highly qualified staff in complex work environments.