

9.3. ESG Standard 3.3 Independence

Standard: Agencies should be independent and act autonomously. They should have full responsibility for their operations and the outcomes of those operations without third party influence.

Guidelines: Autonomous institutions need independent agencies as counterparts.

In considering the independence of an agency the following are important:

- *Organisational independence, demonstrated by official documentation (e.g. instruments of government, legislative acts or statutes of the organisation) that stipulates the independence of the agency's work from third parties, such as higher education institutions, governments and other stakeholder organisations;*

- *Operational independence: the definition and operation of the agency's procedures and methods as well as the nomination and appointment of external experts are undertaken independently from third parties such as higher education institutions, governments and other stakeholders;*

- *Independence of formal outcomes: while experts from relevant stakeholder backgrounds, particularly students, take part in quality assurance processes, the final outcomes of the quality assurance processes remain the responsibility of the agency.*

Anyone contributing to external quality assurance activities of an agency (e.g. as expert) is informed that while they may be nominated by a third party, they are acting in a personal capacity and not representing their constituent organisations when working for the agency. Independence is important to ensure that any procedures and decisions are solely based on expertise.

French law clearly defines CTI's missions and duties (see section 9.2 of this document). These texts (which have been established several decades ago) do not use the more recent notions of quality assurance developed within the *European Higher Education Area*. However, the responsibilities they give to CTI have made it possible for it to constantly adapt its standards and procedures, in complete independence (within the framework of the legal provisions relating to Higher Education and the academic grade of master).

A number of elements enables CTI to function in an independent manner:

- The balanced distribution of stakeholders among CTI membership (with equal representation from public owned and private higher education HEIs, employer and employee organizations, and graduate alumni associations) protects it from outside dominant interventions.
- CTI's members are appointed according to their own personal competences and sign a deontology chart, which assures their independence and their integrity. They are appointed by the Minister in charge of higher education, on the proposal of their organization, for a period of four years, renewable once. Once appointed, CTI's members may resign for personal reasons, but cannot be dismissed by public authorities, or if they no longer meet the conditions required for their appointment.
- The CTI resources come from three main origins: ministry grants, yearly contributions of the accredited HEI's, international accreditation procedures that cover all expenses, including overhead costs. They account for more than 80% of CTI's resources, which guarantees CTI financial and decisional independence from both the ministry and the HEIs and avoids the temptation of national and local authorities or other organisations to exert any kind of pressure.
- CTI has established and has adopted its by-laws in 2011 which establish, in all independence, its internal operating procedures. The by-laws were last updated in July 2018.
- All CTI members, experts (from academia, industry, students) and external observers (where applicable) must sign a deontology charter before being able to participate in an evaluation

procedure. By signing the charter, they commit to avoid any kind of conflict of interest, to maintain complete confidentiality and to act in total independence.

- The president and 2 vice-presidents are elected by CTI's members for a renewable period of two years. The members of the board and the steering committees, the external experts and the external special advisors are appointed by a CTI vote in the plenary meeting. The agendas of CTI's board and plenary meetings are validated by the president.
- In France, no regulatory texts exist concerning the content and quality criteria of engineering education. The accreditation standards and procedures are defined by CTI. They are prepared by working groups including the stakeholders, supervised by CTI and then are adopted in plenary sessions and published under CTI's exclusive responsibility (primarily on its website). Every three to four years, CTI publishes a new version of its standards. The last version of CTI's standards was released in 2016 and is currently being updated with a planned publication at the beginning of 2019.
- Regarding decision making, as explained in chapter 6.1.2. above, in the case of private institutions, CTI takes the final decision, whereas in the case of public owned institutions, CTI makes a recommendation on which the relevant ministry (in co-ordination with the ministry of HE) bases its decision to grant the accreditation. Since 2005 (year in which CTI was granted full ENQA membership for the first time), only one ministerial decision has been different from a CTI recommendation (out of the around 1500 accreditation recommendations made by CTI during this period of time).
- Finally, within its area of competence - the mutual recognition of accreditation procedures and assistance for graduate mobility - CTI has signed international agreements with other countries' professional institutions of engineers (Canada, followed by Quebec for example).

Evidences and references

Evidence 9.3.1.: Main legal texts regarding CTI: [Bylaws](#), annex 1 page 20

Evidence 9.3.2. [CTI's budget](#)

Evidence 9.3.3.: CTI charters for members, experts, observers: [Bylaws](#), annexes 2, 3, 4

Evidence 9.3.4.: [CTI's standards and guidelines "R&O", 2016 version in French](#)

Evidence 9.3.5.: [CTI's standards and guidelines "R&O", 2017 international version in English](#)

Evidence 9.3.6.: [Co-operation agreements with Canada](#)

9.4. ESG Standard 3.4 Thematic analysis

Standard: Agencies should regularly publish reports that describe and analyse the general findings of their external quality assurance activities.

Guidelines: In the course of their work, agencies gain information on programmes and institutions that can be useful beyond the scope of a single process, providing material for structured analyses across the higher education system. These findings can contribute to the reflection on and the improvement of quality assurance policies and processes in institutional, national and international contexts.

A thorough and careful analysis of this information will show developments, trends and areas of good practice or persistent difficulty.

As CTI is in charge of the definition of the expected generic profile of the engineer and of defining the criteria and procedures for awarding the engineering degree, it is obvious that CTI must continuously analyse the societal evolutions, the needs of industry and provide opinions on all topics regarding the engineering education and its quality assurance.

CTI's annual conference

CTI uses its annual conference to take stock of the previous campaign and analyse the major shortcomings and recurrent difficulties of engineering programmes and define recommended general action lines for improvement.

Apart from this analysis of the previous campaign and the presentation of major issues for the upcoming campaign, the conference is also an opportunity to deal with general topics regarding the engineering profession or training and quality assurance.

Normally external specialists are guest speakers at the annual conference to give an insight of general interest in a key note or during round tables that initiate a dialogue with the conference participants. The proceedings of the last annual conferences are published on CTI's website: <https://www.cti-commission.fr/colloque-de-la-cti-13-fevrier-2018>

In 2018, CTI replaced its annual international workshop (that takes normally place on the afternoon before the annual conference) by a **European conference** co-organized with its stakeholder organisation CDEFI (association of the deans of engineering HEIs). This event that took place in Paris on 5-6 April 2018 focused on the *Role of engineering Higher education institutions in the inclusive processes of the European Higher Education Area*. The proceedings were published under the form of a joint CDEFI-CTI *Contribution to the ministerial conference of the EHEA, Paris 2018*. The document lists suggestions for the evolution of the Bologna process; it was sent to the French Minister of higher education, research and innovation; to the French media and is published on the websites of both organisations.

The day before the annual 2018 conference, CTI organized a **joint conference with Hcéres** on the evolution of the evaluation procedures for engineering HEIs and the co-ordinated Hcéres-CTI procedures. This conference served both as an information space and as a feed-back on stakeholders' analysis on the possible evolutions.

CTI's activity reports

CTI's biannual activity report normally includes a feed-back by external experts or stakeholders. The 2014-2016 version includes three such articles:

- *Travaux conjoints AEQES- CTI*, A. Jeneveau and L. Courard
- *Partenariat avec l'Institut national de recherche et de sécurité au travail (INRS)*, JP. Leroux
- *Partenariat avec le réseau Ingénium*, N. Gartiser

The "Focus" initiative

CTI wished to collect and analyse the HEIs' practice in specific aspects of the engineering education. The "Focus" initiative was launched in 2016-2017 and renewed for 2018-2019. HEIs which participate in the review campaign have to submit a short presentation (3-4 pages) on their practice in the imposed topic. HEIs which are not involved in an evaluation procedure may participate on a voluntary basis. At the outcome of 3 campaigns, CTI will be able to analyse for each topic the shortcomings, difficulties, good practice, common vision and draw general conclusions. For the HEIs it represents a means for a focused self-assessment which enables them to take stock of the realised efforts and the ways for improvement. Three topics were chosen: *Innovation and entrepreneurship; Sustainable development and societal responsibility; Health and safety at work*.

Periodical analysis of the situation of engineering graduates

Every year, the alumni association of graduate engineers IESF carries out a social and occupational survey amongst engineering graduates from 175 engineering HEIs. The response rate is representative, as about 55.000 engineers participate every year. Apart from the recurrent subjects such as training, employment, innovation, payment, motivation, specific optional questions may be asked.

CTI contributes actively on a regular basis to the survey. In 2008, 2012 and 2016, CTI participated in defining a few questions of the survey and analysed the outcomes on specific issues raised, such as for example in 2016: *Quality of the training in order to develop the expected competencies and Impact of the competencies developed during the graduates' training on their current position*.

In 2017, IESF and CTI decided to work together on a yearly basis and CTI will be able to suggest a few complementary questions on relevant issues every year and draw conclusions.

Presentations and communications by CTI representatives

CTI representatives participate regularly in conferences and workshops in France and abroad as speakers and write publications of general interest. The documents are published on CTI's website and in the monthly newsletter.

CTI also publishes in its newsletter reports, articles and analysis from its partner or stakeholder organisations.

Evidences and references

Evidence 9.4.1.: [CTI's Standards and guidelines \(R&O\), Volume 1, section I: The engineer in his professional surroundings](#)

Evidence 9.4.2.: [CTI's Standards and guidelines \(R&O\), Volume 4: In-depth thematic notes](#)

Evidence 9.4.3.: [CTI's Activity report 2014-2016](#)

Evidence 9.4.4.: CTI's [Newsletter](#)

9.5. ESG Standard 3.5 Resources

Standard: Agencies should have adequate and appropriate resources, both human and financial, to carry out their work.

Guidelines: It is in the public interest that agencies are adequately and appropriately funded, given higher education's important impact on the development of societies and individuals. The resources of the agencies enable them to organise and run their external quality assurance activities in an effective and efficient manner. Furthermore, the resources enable the agencies to improve, to reflect on their practice and to inform the public about their activities.

CTI ensures that it has the financial and human resources necessary for carrying out its missions which allowed CTI to effectively fulfil its goals and missions for several decades.

9.5.1. Human resources

CTI's human resources and their responsibilities are respectively:

Permanent staff

CTI's permanent staff team is responsible for day-to-day management and supporting CTI's governance. 4 persons (2 in 2013), appointed by CTI on its own resources fulfil following missions: organisation and follow-up of the accreditation procedures; quality and communication management; administrative and financial management; international relations; representation; logistics of CTI events such as annual conference and international workshop and training sessions.

Temporary staff

In order to face the workload linked to specific tasks or events (thematic analysis, annual conference, newsletter, ...), CTI entrusts specific tasks and responsibilities on its own resources to external project managers, counsellors, interns or occasional administrative staff members. Over a year, these contributions represent the equivalent of 2 persons.

Administrative operator

CTI out-sources its accounting and management of human resources contracts to an administrative operator which is a partner association, the association of the deans of engineering HEIs (CDEFI). A signed agreement between CTI and CDEFI indicates the annual fees and ensures the decision making independence of CTI and total and mutual transparency with CDEFI. The CDEFI staff working for CTI is equivalent to 1 full-time person.

Registrars

CTI's registry services are provided by 2 part-time persons (50% each) who are civil servants from the *General Directorate for Higher Education* within the Ministry of Higher Education. They establish the calendar of the accreditation campaigns; register the applications, self-evaluation reports and follow-up reports from the institutions as well as the evaluation reports of CTI; propose

the agenda and write the minutes of the plenary sessions; they prepare the annual decree in the *Journal Officiel* of the French Republic listing all the officially accredited programmes.

CTI members and special advisors

The involvement of CTI members goes much beyond their mere participation in evaluation procedures and the monthly general assembly meetings. According to some recent estimates, they fulfil the equivalent of 4 half-time positions filled respectively by the chairman and two vice-chairs, 12 one-third-time positions filled by the steering group and working group leaders, the international representatives and the board members in charge of specific missions (qualification framework forms (*fiches RNCP*), annual *certified data*, international working groups, ...). The rest of CTI members and special advisors fill the equivalent of one fourth position.

This means that CTI operates with the equivalent of 14 full-time equivalent staff.

This system, which is unique in many ways, is also the reason why CTI's stakeholders are so committed and why its community is so close and competent, with each member sharing their tasks and experience.

9.5.2. Budget

Financial resources

The total annual budget of CTI's services to engineering degree programmes (accreditation, national and international representation, etc.), including CTI's staff salaries, administrative operator's and experts' fees for management and evaluation, is about 900,000€.

The annual budget includes 4 types of resources:

- 230,000€ as a grant from the ministry as a counterpart for CTI's mission of public service.
- 340,000€ contributions of the French HEIs as a counterpart for the CTI action in the promotion of the engineering studies, in the representation of the engineering education in national and international organizations (9€/year/graduate).
- Variable revenue from accreditation activities abroad (which are billed to the institutions on a full-cost basis), of about 100,000€ to 160,000€ in recent years. There was one exceptionally high amount of 309,000€ in an exceptionally busy year 2016.
- The billed expertise fees (134.000€) are used to pay the experts.

To be noted that institutions themselves which take in charge directly the on-site costs of the expertise missions (experts' travel tickets, accommodation and food).

Expenditure

- CTI's most important expenses line is represented by staff costs (including permanent and temporary staff salaries, administrative operator and experts' fees): about 455,000€.
- About 270,000€ represent the rent and operational expenses.
- Between 14,000€ and 24,000€ are spent each year on training sessions of members and experts.

Thanks to the international accreditation procedures, CTI's balance has been positive for the last two budget periods and is expected to be balanced in 2018.

9.5.3. Premises

In September 2016, CTI moved to new premises in the same building as one of its main stakeholders, the association of the deans of engineering HEIs, CDEFI, which is also CTI's administrative operator. This greatly facilitates and accelerates the exchanges between the staff members for organisational issues. This proximity also favours greatly the sharing of news and opinions and the organisation of meetings between CTI and CDEFI members and presidential teams.

CTI has fully-equipped offices and conference rooms that can be adapted to meet different needs, including ordinary meetings, plenary sessions and seminars.

Evidences and references

Evidence 9.5.1.: [Agreement signed with administrative operator CDEFI](#)

Evidence 9.5.2.: [CTI's budgets of the years 2015, 2016, 2017, 2018](#)

9.6. ESG Standard 3.6 Internal quality assurance and professional conduct

Standard: *Agencies should have in place processes for internal quality assurance related to defining, assuring and enhancing the quality and integrity of their activities.*

Guidelines: *Agencies need to be accountable to their stakeholders. Therefore, high professional standards and integrity in the agency's work are indispensable. The review and improvement of their activities are on-going so as to ensure that their services to institutions and society are optimal.*

Agencies apply an internal quality assurance policy which is available on its website. This policy

- *ensures that all persons involved in its activities are competent and act professionally and ethically;*

- *includes internal and external feedback mechanisms that lead to a continuous improvement within the agency;*

- *guards against intolerance of any kind or discrimination;*

- *outlines the appropriate communication with the relevant authorities of those jurisdictions where they operate;*

- *ensures that any activities carried out and material produced by subcontractors are in line with the ESG,*

- if some or all of the elements in its quality assurance activities are subcontracted to other parties;*

- *allows the agency to establish the status and recognition of the institutions with which it conducts external quality assurance.*

CTI put into place an internal quality system in 2008. Since then, CTI has been committed to deploying its internal quality assurance and to developing specific tools for the tracking and control of its assessment and accreditation process. A complete description of CTI's internal quality organisation can be found in chapter 7 above.

As stated in the ESG standard 3.6., this system includes:

- Defining, assuring and enhancing the quality and integrity of CTI's activities through steering committees and working groups which submit their proposals to be discussed and - where appropriate - voted during meetings of the Board and plenary assembly.
- By-laws and charters which describe and guarantee the appropriate professional and ethical behaviour of CTI members, experts, observers, staff.
- Training sessions for members and experts to ensure their appropriate ownership of CTI's guidelines and processes and prepare their expected behaviour during evaluation procedures.
- Internal and external feedback mechanisms, for instance through:
 - o satisfaction surveys filled in by HEIs, experts, members;
 - o meetings and working groups with stakeholders;
 - o an annual conference;
 - o transversal analysis and reports on CTI's procedures; ...
- Communication and information on all activities, internally with members, experts and staff; externally with stakeholders, including the relevant ministries which publish a yearly joint decree listing all accreditation decisions
- Promote the academic and professional recognition of the engineering degree and support the institutions by:
 - o publishing the results of the accreditation procedures and information on the level and contents of the engineering degree;

- handing out certificates to graduates confirming the level and programme outcomes of the degree;
- having CTI's standards and guidelines certified by CNEFOP (and thus qualifying accredited programmes for public funding for continuing education) see chapter 9.7.4. below
- signing agreements with foreign organisations;
- participating in European projects;
- organising and participating in national and international events
- transversal analysis and reports on the engineering education and profession

Evidences and references

Evidence 9.6.1.: [Link to CTI's website page on internal quality assurance](#)

Evidence 9.6.2.: [Link to CTI's website page on CTI's steering committees](#)

Evidence 9.6.3.: [Link towards the by-laws and charters on CTI's website](#)

Evidence 9.6.4.: [Internal satisfaction survey addressed to CTI members](#)

Evidence 9.6.5.: [Internal satisfaction survey addressed to CTI French and international experts](#)

Evidence 9.6.6.: [Annual satisfaction survey addressed to deans of HEIs](#)

Evidence 9.6.7.: [CTI's standards and guidelines \(R&O\), Volume 4](#): In-depth thematic notes

9.7. ESG Standard 3.7 Cyclical external review of agencies

Standard: Agencies should undergo an external review at least once every five years in order to demonstrate their compliance with the ESG.

Guidelines: A periodic external review will help the agency to reflect on its policies and activities. It provides a means for assuring the agency and its stakeholders that it continues to adhere to the principles enshrined in the ESG.

CTI undergoes periodical external reviews by following organisations:

- ENQA (9.7.1)
- EQAR (9.7.2.)
- ENAEE (9.7.3.)
- CNEFOP (9.7.4)

9.7.1. ENQA

CTI has been a full member of ENQA since 2005. The renewal of CTI's full membership was periodically confirmed following an external review process in 2009 and in 2014.

In 2016, CTI submitted a follow-up report to ENQA regarding its response to the recommendations from the 2014 evaluation report.

This self-assessment report contains the results of a recent self-evaluation process carried out by CTI with the objective of analysing the compliance of its procedures with parts 2 and 3 of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

9.7.2. EQAR

CTI was included into the EQAR in November 2010 and confirmed in 2014, following the external evaluation by ENQA, and EQAR's own analysis of CTI's compliance with the ESG.

ENQA's 2019 evaluation report on CTI will be used by EQAR for taking the decision on confirming CTI's registration on the register before end of June 2019.

9.7.3. ENAEE

CTI is a founding member of the *European Network for Accreditation of Engineering Education* (ENAEE) since its foundation in 2006.

CTI belongs to the 15 quality assurance agencies that are currently habilitated by ENAEE to award the EUR-ACE® label. In order to be able to carry out the evaluation procedures and to award the label, CTI has to undergo a periodical external evaluation procedure by ENAEE. The external review aims to check the agencies' compliance with ENAEE's *EUR-ACE® Framework Standards and Guidelines* (EAFSG), updated in 2015. The agencies reviews check the effectiveness of the agency accreditation procedures in the evaluation of the learning process of the degree programme being accredited and its compliance with the student workload requirements, programme outcomes and programme management specified in the EAFSG, for bachelor's and master's degree programmes respectively. In the case of CTI, the authorization applies exclusively to the masters' level.

During the period 2018-2019, CTI will undergo a new external review by a panel of ENAEE experts in order to renew its authorisation to award the EUR-ACE® label during the period 2020-2025.

The EAFSG have been formulated so as to be substantially compliant with following European reference documents:

- The overarching *Framework of qualifications of the European Higher Education Area* (EHEA Framework or QF-EHEA) as adopted by the Ministers of Education of the Bologna Process at their meeting in Bergen in May 2005, including the *Dublin Descriptors*.
- The *European Qualifications Framework for Lifelong Learning* (EQF) as developed by the European Commission and signed on 23 April 2008 by the Presidents of the European Parliament and of the Council of the European Union.
- The *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG) as adopted by the Bologna Process ministerial summit in Bergen (Norway) in 2005 and revised in 2015.

9.7.4. CNEFOP

The [*Conseil National de l'Emploi, de la Formation et de l'Orientation Professionnelles*](#) (CNEFOP) is the national council for employment, training and professional orientation which regroups representatives from 12 ministries, regional authorities, social and professional organisations, chambers of commerce and operators in the relevant field.

According to the recent French *Labour Code* (article L. 6316-1), continuing education may only be financed for quality assured programmes. CNEFOP is in charge of certifying that the procedures of accreditation and label awarding organisations are compliant with the expected national and European standards for continuing education. This means that continuing education programmes accredited by these organisations may be financed.

Since many engineering HEIs offer a pathway of continuing education for their engineering degree programmes, CTI applied for its *Standards and guidelines* (R&O) to be registered on the CNEFOP list of certifications. CTI underwent an external evaluation review in 2017 that checked the consistency of its reference document with CNEFOP expectations. In December 2017, CNEFOP confirmed the certification of CTI's *Standards and guidelines* (R&O) for a duration of 3 years. This means that engineering programmes accredited by CTI are automatically qualified for public funding.

Evidences and references

Evidence 9.7.1.: [ENQA external review report of CTI, 2014](#)

Evidence 9.7.2.: [CTI's follow-up report 2016 addressed to ENQA](#)

Evidence 9.7.3.: [ENQA Terms of Reference for the external review of CTI, 2018](#)

Evidence 9.7.4.: [EQAR's decision regarding CTI, 2014](#)

Evidence 9.7.5.: [ENAEE's authorization decision regarding CTI, 2015](#)

Evidence 9.7.6.: [ENAEE's external evaluation report of CTI, 2015](#)

Evidence 9.7.7.: [CNEFOP's decision regarding CTI, 2017](#)

10. Compliance with European Standards and Guidelines [Part 2]

10.1. ESG Standard 2.1 Consideration of internal quality assurance

Standard: External quality assurance should address the effectiveness of the internal quality assurance processes described in Part 1 of the ESG.

Guidelines: Quality assurance in higher education is based on the institutions' responsibility for the quality of their programmes and other provision; therefore it is important that external quality assurance recognises and supports institutional responsibility for quality assurance. To ensure the link between internal and external quality assurance, external quality assurance includes consideration of the standards of Part 1. These may be addressed differently, depending on the type of external quality assurance.

All criteria of the ESG part 1 are taken into account in CTI's *Standards and guidelines* as shown as an outcome of an internal analysis that was published in four parts in CTI's newsletter from January to April 2018.

The effectiveness of the HEIs' internal quality assurance processes is indeed taken into consideration by CTI and it is an explicit accreditation criteria. The ability of the institutions to assure and improve the quality of their programmes is an essential factor for a successful accreditation, as described in CTI's published *Standards and guidelines* (R&O). A dedicated section "F" in volume 1 *Main accreditation criteria* as well as in volume 2 *Guide for the self-evaluation* deals with the HEIs internal quality assurance management system.

Quality issues are taken into account throughout the whole accreditation process (self-assessment, assessment, site visit, accreditation and follow-up).

Even in those cases in which institutions have undergone external accreditation or certification processes of their internal quality systems (such as ISO9001), a specific time slot during the site visits and a dedicated section of the minutes of the site visit prepared by the CTI expert team are devoted to this issue.

Quality issues are an important part of the discussions and a fundamental factor for the evaluation outcome discussed during the plenary meeting.

Due to its particular double academic and professional nature, CTI pays a special attention to stakeholders' involvement in internal quality assurance. As far as CTI is concerned, institutions need to guarantee and improve quality with respect not only to stakeholders inside the institution (students and faculty), but also outside the institution (institutional and industrial partners and alumni). Throughout the different accreditation campaigns, CTI has also focused on the assessment of teaching quality by the students and has been able to witness clear improvements.

When analysing the evaluation outcomes of the 2016-2017 campaign, internal quality issues ranked in the 4th position of CTI's guidelines for improvement addressed to HEIs. Interestingly enough the same quality management issue figured amongst the main examples of good practice (7th position). This shows that quality management is unequally implemented by French engineering HEIs.

Evidences and references

Evidence 10.1.1.: [CTI study on the consistency of its Standards and guidelines \(R&O\) with part 1 of the ESG](#)

Evidence 10.1.2.: [CTI's Standards and guidelines \(R&O\), volume 1, Main accreditation criteria, section F: Quality approach and continuous improvement](#)

Evidence 10.1.3.: [CTI's Standards and guidelines \(R&O\), volume 2, Self-evaluation guide, section F: Quality approach and continuous improvement](#)

Evidence 10.1.4.: [List of guidelines for improvement as an outcome of the campaigns 2014-2015; 2015-2016; 2016-2017](#)

Evidence 10.1.5.: [Comparative analysis of guidelines for improvement and strengths as an outcome of the campaigns 2014-2015; 2015-2016; 2016-2017](#)

10.2. ESG Standard 2.2 Designing methodologies fit for purpose

Standard: External quality assurance should be defined and designed specifically to ensure its fitness to achieve the aims and objectives set for it, while taking into account relevant regulations. Stakeholders should be involved in its design and continuous improvement.

Guidelines: In order to ensure effectiveness and objectivity it is vital for external quality assurance to have clear aims agreed by stakeholders.

The aims, objectives and implementation of the processes will

- bear in mind the level of workload and cost that they will place on institutions;
- take into account the need to support institutions to improve quality;
- allow institutions to demonstrate this improvement;
- result in clear information on the outcomes and the follow-up.

The system for external quality assurance might operate in a more flexible way if institutions are able to demonstrate the effectiveness of their own internal quality assurance.

Regulations

CTI is the authorized body, founded by law in 1934, in charge of carrying out evaluation procedures of French engineering degree programmes that lead to the accreditation of the institutions to award engineering degrees *titre d'ingénieur diplômé*. CTI's activities may include the evaluation of foreign engineering programmes upon the specific request of the institution.

Definition and evolution of external quality assurance methodologies and criteria

CTI's activities include the defining of the generic profile of the engineer at master's level and drawing up criteria and procedures for awarding the engineering degree and for carrying out CTI's missions.

CTI's standards and guidelines for external quality assurance (*Références et Orientations – R&O*) are up-dated on a regular basis every 3 or 4 years, with the active involvement of its stakeholders. These evolutions can result in changes in the accreditation criteria or in the expected learning outcomes for a graduate engineer established by CTI; some significant recent examples of these developments are:

- the annual certified data survey filled in by all HEIs has become part of the compulsory follow-up of all engineering HEIs,
- introduction of new accreditation criteria regarding the level in foreign languages of engineering graduates with the increase of the recommended proficiency level from CEFR level B2 in English to C1 and a CEFR level B2 in French as a foreign language for international students,
- strong incentive for implementing an international mobility of at least one semester for all engineering students.

A dedicated steering committee is currently working on the up-coming version of R&O to be published in 2019. Apart from the meetings of the committee itself, working sessions are organised with stakeholders, in order to discuss specific aspects that may evolve (ex.: meeting with the association of language professors of business and engineering schools on the issue of language proficiency for engineering students).

The steering committee also exchanges with other steering committees and working groups, for example on the issue of simplified procedures.

The draft version is always submitted for comments to several stakeholder groups (the association of the deans of engineering schools, the supervisory ministries, the association of engineering students, the association of graduate engineers) before the validation by the CTI board and the vote at the general plenary.

The new version of the reference framework is sent to the deans of engineering schools and formally presented during CTI's annual conference in February, where a specific presentation is devoted to this issue.

The quality loop closes with a survey filled in by deans and experts every year which includes a specific section on CTI's accreditation processes and criteria.

Information

The *Standards and guidelines* as well as all evaluation reports with decisions/recommendations are published on CTI's website. An annual inter-ministerial decree lists all accredited programmes and is published on a governmental website. The information on awarded labels is also published on ENAEE's and ECA's websites.

HEIs internal quality assurance and support of HEIs

The objective of CTI's accreditation process is two-fold:

- to make sure that the intended learning outcomes of the programme are consistent with the general profile defined by CTI for all engineering programmes, as well as the efficiency of the programme in order to achieve these learning outcomes,
- to make sure that the institutional environment of the programme is appropriate, so as to ensure the necessary level of internal quality (governance, organization, external links and partnership, quality assurance system, resources, information systems...).

In order to achieve this double objective, CTI pays a great attention to institutional aspects. This focus on institutional environment has consequences in terms of process organization, as CTI operates according to a principle of institutional clustering. This means that all engineering programmes offered by an institution are accredited at the same time (rather than applying other possible clustering principles preferred by other agencies, such as clustering by study field). This means less workload for the HEIs which may present the institutional aspects once for all programmes.

As described in chapter 10.1. above, the internal quality assurance of HEIs is an important aspect of the external evaluation of a programme. CTI is keen not to act as a "controller" but to focus on the continuous improvement of the programmes. Engineering HEIs are very different in size, governance, wealth: they may be run by the public or private sector, may or may not be part of a university, and may come under different ministries (higher education; food and agriculture; economy; industry; telecommunications; defence; ecology and sustainable development) or a local authority. The means for setting up an efficient internal quality assurance and for its implementation is accordingly variable. During an external accreditation procedure CTI takes into account these contextual specificities and focuses on the progress made.

In the latest evolutions of its *Standards and guidelines* (R&O), CTI tries to be less prescriptive and leave more space to the HEI's' initiatives for the implementation for certain criteria, for example the internationalisation of the programmes, the taking into account of distance learning, ...

Workload

In order to avoid an unnecessary burden for both CTI and the HEIs, CTI's accreditation processes and criteria are applied with different intensity depending on the maturity of the programme and the institution under accreditation. Institutions which intend to offer an engineering programme for the first time are subject to a thorough accreditation process, whereas engineering programmes already in operation are subject to a procedure which focuses more on the improvements and evolutions of the programme between accreditation rounds. CTI has defined 6 different types of accreditation applications, which assures the efficient and adapted treatment of the different cases, described in volume 3 of R&O.

CTI wishes to go still further in alleviating the procedures for programmes without any major problems identified and will carry out pilot simplified procedures during the 2018-2019 period, as described in chapter 6.2.3. above. At the same time, during the academic year 2018-2019, CTI will carry out joint simplified follow-up reviews with its Belgium partner agency AEQES for francophone engineering programmes in Belgium.

After completion of both experiences, CTI will be able to draw conclusions and decide whether simplified procedures will be confirmed in its *Standards and guidelines*.

As another important step to alleviate the workload for HEIs, CTI adapted its calendar and the regional division of the French territory in order to align with the ministry's five year contracts with the institutions and the related Hcéres evaluation. Both agencies together started a pilot project in 2017-2018 that continues in 2018-2019 of joint CTI-Hcéres procedures. The participation of the HEIs is on a voluntary basis.

In order to structure the workload of foreign HEIs and CTI itself, CTI has put into place a new procedure for international applications: prior to a new accreditation procedure, the foreign applicant has to fill in a simplified document, the *preliminary admissibility file* including the *indicators survey*. The writing and the analysis of this short file is not time consuming and serves to identify whether the concerned programme is an engineering programme at master's level and consistent with CTI's missions. In case the outcome is positive, an accreditation procedure is planned according to CTI's availability and national priorities.

Stakeholders' involvement

The active involvement of stakeholders enables CTI to ensure the validity, reliability and fitness for purpose of its accreditation processes:

- The main stakeholders in the context of engineering higher education in France (academia, industry, engineers) are represented in the composition of CTI's commission (see chapter 4.4. on the distinctive features of CTI).
- Apart from CTI members, CTI's assessment activities are carried out using an extensive network of national, international and student experts (see chapters 6.1.1. above and 10.5. below).
- External special advisers are involved in CTI steering committees and working groups and make sure that CTI gets an external vision and objective feed-back on topics at stake.
- CTI's steering committees and working groups organise specific meetings with representatives from stakeholder organisations.
- CTI's presidential and permanent teams and CTI members meet colleagues from partner and stakeholder organisations (Hcéres, ministries, the association of deans of engineering schools, professional associations, student and alumni associations, ...) on a regular basis, to take stock of current events, comments and issues.
- CTI's annual conference with its workshops is an excellent means for exchanges with stakeholders.
- Periodical satisfaction surveys enable CTI to have a feed-back from HEIs, members, experts, conference participants.

Evidences and references

Evidence 10.2.1.: [CTI's Standards and guidelines \(R&O\)](#)

Evidence 10.2.2.: [CTI's Standards and guidelines \(R&O\), volume 1, section A, Mission and organisation of the HEI](#)

Evidence 10.2.3.: [CTI's Standards and guidelines \(R&O\), volume 1, section F, Quality approach and continuous improvement](#)

Evidence 10.2.4.: [Publication of the outcomes of a procedure \(accreditation section\) on CTI's website](#)

Evidence 10.2.5.: [Annual inter-ministerial decree listing all accredited programmes and published on a governmental website](#)

Evidence 10.2.6.: [CTI's Standards and guidelines \(R&O\), volume 3, section III, Different types of accreditation applications](#)

Evidence 10.2.7.: [CTI information on simplified evaluation procedures](#)

Evidence 10.2.8. [CTI deliberation on co-ordinated evaluation procedures with Hcéres](#)

Evidence 10.2.9.: [CTI's note on simplified procedures for periodical reviews \(A'\)](#)
 Evidence 10.2.10.: [CTI's note on simplified procedures for follow-up reviews \(B'\)](#)
 Evidence 10.2.11.: [CTI's note on simplified procedures for new pathways of an existing programme \(E'\)](#)
 Evidence 10.2.12.: [AEQES-CTI co-operation agreement for joint follow-up procedures](#)
 Evidence 10.2.13.: [CTI's admissibility procedure for foreign HEIs](#)
 Evidence 10.2.14.: [CTI's organisation, plenary assembly](#)
 Evidence 10.2.15.: [Findings of surveys addressed to HEIs, 15-16 and 16-17](#)
 Evidence 10.2.16.: [Outcomes of survey addressed to CTI members, 2016](#)

10.3. ESG Standard 2.3 Implementing processes

Standard: *External quality assurance processes should be reliable, useful, pre-defined, implemented consistently and published. They include*

- *a self-assessment or equivalent;*
- *an external assessment normally including a site visit;*
- *a report resulting from the external assessment;*
- *a consistent follow-up.*

Guidelines: *External quality assurance carried out professionally, consistently and transparently ensures its acceptance and impact.*

Depending on the design of the external quality assurance system, the institution provides the basis for the external quality assurance through a self-assessment or by collecting other material including supporting evidence. The written documentation is normally complemented by interviews with stakeholders during a site visit. The findings of the assessment are summarised in a report (cf. Standard 2.5) written by a group of external experts (cf. Standard 2.4).

External quality assurance does not end with the report by the experts. The report provides clear guidance for institutional action. Agencies have a consistent follow-up process for considering the action taken by the institution. The nature of the follow-up will depend on the design of the external quality assurance.

CTI's *Standards and guidelines* reference document (R&O) is published on its website. It is divided in 3 volumes: *General information and main criteria / Applicant's self-assessment guide / Accreditation process*. Recent evolutions are published under the form of *deliberations* and also available on the website.

Volume 3 of R&O describes the accreditation procedures. CTI has conceived a standard accreditation process that consists of five phases that are described extensively in chapter 6 above:

- **Evaluation phase** (see 6.1.1.), including a self-evaluation report by the HEI with evidence material and a site visit by an expert panel which includes meetings with the HEIs main stakeholders and examination of relevant documents.
- **Accreditation phase** (see 6.1.2.), including the evaluation report with decisions for the programmes of private HEIs and recommendations for the programmes of public owned HEIs and with guidelines for improvement for each evaluated programme.
- **Communication of results** (see 6.1.3.), by formal letters to the HEIs, and publication of the results on CTI's website and in an annual inter-ministerial decree. The awarded quality labels are also published on the ENAEE or ECA websites.
- **Follow-up procedure** (see 6.1.4.), that may take on various forms, according to the evaluation's outcome, but in all cases takes stock of the compliance with the guidelines for improvement.
- **Appeals and complaints procedure** (6.1.5.)

The consistency of the outcomes and follow-up of an evaluation procedure is an important issue and guaranteed through various means:

- Shared and public guidelines and criteria, R&O (see above)

- Participation of 2 CTI members (one from industry and one from academia) in every evaluation procedure. Their presence during the site visit helps to ensure that the information gathered during the mission is sufficient to support CTI's general assembly decisions, which is essential to ensure consistency.
- Members' renewal: CTI members are appointed for a term of 4 years, renewable once. In order to assure the continuity and to limit knowledge loss, only a third of the commission is renewed every two years. Former members who have played a preeminent role at CTI often continue to be linked to the organization as experts or advisors.
- CTI's plenary assembly: in order to favour consistency of decisions, all CTI accreditation decisions/recommendations are made by the plenary assembly. All discussions during plenary assembly meetings are recorded by the secretary of the session, and recordings are used to prepare a complete written account of the meeting. The minutes are sent to all CTI members and are formally approved during the following plenary assembly meeting. During the plenary session, all members participate in the discussions and bring in their past experience; in this way, a collective memory is built which helps to avoid discrepancies between decisions for similar situations.
- Development and documentation of new jurisprudence: during the plenary assembly meetings, an important place is devoted to the discussion on the accreditation criteria so as to assure a common understanding by all CTI members. These exchanges serve to clarify or to detail certain criteria. The conclusions are published through CTI's website under the name of *délibérations*.
- Information system: since 2010, a new CTI information system enables to track all information and documents regarding CTI's accreditation procedures. This tool, which is essential for CTI's daily operations, offers many possibilities in terms of information on past accreditations and analysis.
- Training sessions (see chapter 10.4.4. below)
- Expert tool-kit (see chapter 10.4.4. below)
- A specific working group in order to further improve the consistency of the outcomes of the evaluation procedure (described in chapter 6.2.1. above).
- Deontology charters for CTI members, experts and occasional observers. (see chapter 10.4.4. below)
- CTI's by-laws have to be applied by all members, experts, advisors and permanent staff.

Evidences and references

Evidence 10.3.1.: [CTI's Standards and guidelines \(R&O\), volume 3, section IV, Accreditation procedure](#)

Evidence 10.3.2.: [CTI's Bylaws, chapter V on evaluation procedures](#)

10.4. ESG Standard 2.4 Peer-review experts

Standard: External quality assurance should be carried out by groups of external experts that include (a) student member(s).

Guidelines: At the core of external quality assurance is the wide range of expertise provided by peer experts, who contribute to the work of the agency through input from various perspectives, including those of institutions, academics, students and employers/professional practitioners.

In order to ensure the value and consistency of the work of the experts, they

- *are carefully selected;*
- *have appropriate skills and are competent to perform their task;*
- *are supported by appropriate training and/or briefing.*

The agency ensures the independence of the experts by implementing a mechanism of no-conflict of-interest.

The involvement of international experts in external quality assurance, for example as members of peer panels, is desirable as it adds a further dimension to the development and implementation of processes.

The active involvement of stakeholders on expert teams enables CTI to ensure the validity, reliability and fitness for purpose of its accreditation processes:

- The main stakeholders in the context of engineering higher education in France (academia, industry, engineers) are represented in the composition of CTI's commission: (see chapter 4.4. on the distinctive features of CTI). They constitute a highly representative and legitimate plenary assembly. 2 CTI members participate in every evaluation procedure (one from industry and one from academia).
- Apart from CTI members, CTI's external reviews are carried out using an extensive network of national and international experts (see chapter 6.1.1. above). Interesting profiles may be identified by CTI members or known thanks to individual applications. The CVs are analysed by the *Audit Steering Committee* and validated by the CTI board and then by the plenary assembly. The mandate of a CTI expert has a duration of two years, renewable for 2 terms. Each of the experts should be involved in at least one evaluation procedure per year. The profile of the experts is to be complementary to the profile of the members, in order to enlarge the field of expertise of the panels.
- in 2010, CTI established a co-operation agreement with the French engineering students' association, *Bureau national des élèves ingénieurs* (BNEI). Since then, CTI systematically nominates student experts in all its evaluation missions. The list of student experts is renewed annually. This list is built on the basis of propositions made by the BNEI and is validated by CTI's general assembly after proposition by the CTI's board. In 2017-2018 it is composed of 41 experts from various institutions, covering a large range of expertise and academic tracks. A specific training session for student experts is organized every year. The training session is co-organized by CTI and the BNEI; participation in this session is a mandatory condition for being nominated as an expert. Apart from their participation in the site visits, students are invited and usually take an active part in all CTI's working groups.

The composition of the teams will vary depending on the characteristics of the programmes to be accredited (engineering fields, the number and size of the programmes, etc.). An expert panel is generally made up of four to six people, in accordance with the following criteria:

- at least two CTI members, representing academia and industry,
- at least one expert (specialist in a field related to the evaluation or in transversal subjects such as human and social sciences, quality, education, ...),
- one student expert,
- in the case of the periodical reviews, an international expert is part of the panel.

The composition of the expert panel is sent to the HEI for approval. In case of any known (real or perceived) conflicts of interest, the concerned expert is replaced. The CVs of all CTI members and experts are published on CTI's website.

One of the CTI members of the audit team acts as chair; he/she is responsible for coordinating the team activities and for presenting the panel's conclusions to CTI's general assembly during the accreditation phase. All experts participate in the writing of the minutes of the site visit which constitutes the basis for the evaluation report.

In order to ensure a professional, reliable and consistent carrying out of the evaluation procedures, CTI has taken following measures:

- Since 2010, training sessions addressed to all CTI members and experts are organized periodically in order to clarify all aspects related to the evaluation and accreditation missions of CTI. Other than that, training of CTI members and experts is completed through participation in meetings of steering committees and working groups and attendance at the annual conference.
- CTI has produced a set of support documents for members and experts describing the procedures associated to the evaluation and accreditation process. These documents

constitute an “expert’s toolkit” describing the chronology of the evaluation process, the organization and logistics of the site visit, the preparation of the minutes of the site visit, the presentation of the panel’s analysis to the general assembly and the role of the different members of the audit team.

- The CTI information system provides the panel members with information on the previous evaluations and accreditations, as well as other contextual elements regarding the institutions under evaluation.
- Before being able to participate in an evaluation procedure, all members and experts have to sign a deontology chart that defines the rules of discretion and behaviour during an evaluation procedure.
- CTI’s by-laws define the internal rules and regulations and apply to members, experts, staff.

Evidences and references

Evidence 10.4.1.: [Link to list of CTI members](#)

Evidence 10.4.2.: [Link to list of CTI experts](#)

Evidence 10.4.3.: [Link to list of CTI special advisors](#)

Evidence 10.4.4.: [List of training sessions during the period 2016-2018](#)

Evidence 10.4.5.: [Tool-kit: Role and workload of a CTI member](#)

Evidence 10.4.6.: [Tool-kit: role of a panel chair](#)

Evidence 10.4.7.: [Tool-kit: role of a CTI expert](#)

Evidence 10.4.8.: [Tool-kit: Memo Bologna criteria for CTI experts](#)

Evidence 10.4.9.: [Tool-kit: Memo EUR-ACE criteria for CTI experts](#)

Evidence 10.4.10.: [Deontology charts for members, experts, observers](#)

Evidence 10.4.11.: [CTI’s By-laws](#)

Evidence 10.4.12.: [Composition of expert teams in 2017](#)

10.5. ESG Standard 2.5 Criteria for outcomes

Standard: Any outcomes or judgements made as the result of external quality assurance should be based on explicit and published criteria that are applied consistently, irrespective of whether the process leads to a formal decision.

Guidelines: External quality assurance and in particular its outcomes have a significant impact on institutions and programmes that are evaluated and judged.

In the interests of equity and reliability, outcomes of external quality assurance are based on pre-defined and published criteria, which are interpreted consistently and are evidence-based. Depending on the external quality assurance system, outcomes may take different forms, for example, recommendations, judgements or formal decisions.

All CTI formal decisions and recommendations are based on explicit and public criteria. All CTI processes and criteria are described in the document *Références et Orientations* (R&O) and published on CTI’s website. Volume 1 of R&O is dedicated to the *Main criteria* and volume 3 describes the procedures. Volume 2 represents the *Guide for self-evaluation* with indications to support the HEIs when preparing the evaluation.

The HEIs’ self-evaluation reports must include evidence material. If necessary, the panel chair may before, during or after the site visit ask the HEI to provide further documents. During a site visit, the expert panel examines a certain number of documents during a dedicated session.

CTI’s responsibility in the accreditation decision varies according to the legal form of the HEIs: CTI takes accreditation decisions for private institutions and those run by Chambers of Commerce; it issues recommendations to the relevant ministries for public owned higher education institutions.

The evaluation reports list for each programme the strength, weaknesses, opportunities and threats as well as guidelines for improvement.

Evidences and references

Evidence 10.5.1.: [CTI's Standards and guidelines, volume 1, Main criteria](#)

Evidence 10.5.2.: [CTI's Standards and guidelines, volume 3, Contents of the HEI's application](#)

Evidence 10.5.3.: [CTI's Standards and guidelines, volume 3, Documents to be made available during the site visit](#)

Evidence 10.5.4.: [Example of the summary of conclusions of a plenary session](#)

10.6. ESG Standard 2.6 Reporting

Standard: Full reports by the experts should be published, clear and accessible to the academic community, external partners and other interested individuals. If the agency takes any formal decision based on the reports, the decision should be published together with the report.

Guidelines: The report by the experts is the basis for the institution's follow-up action of the external evaluation and it provides information to society regarding the activities of an institution. In order for the report to be used as the basis for action to be taken, it needs to be clear and concise in its structure and language and to cover

- context description (to help locate the higher education institution in its specific context);
- description of the individual procedure, including experts involved;
- evidence, analysis and findings;
- conclusions;
- features of good practice, demonstrated by the institution;
- recommendations for follow-up action.

The preparation of a summary report may be useful.

The factual accuracy of a report is improved if the institution is given the opportunity to point out errors of fact before the report is finalised.

After a site visit, the CTI expert panel writes down the minutes of the site visit with elements from the auto-evaluation report and prepares a standard presentation of the evaluation for the plenary assembly. These "minutes" are considered to be an internal work document that is sent to the institution that may change fact-based information before it is presented at CTI's plenary assembly. Following discussions and the vote at the plenary assembly, the SWOT analysis and conclusions proposed by the expert panel may be changed. The form and contents of the minutes may vary according to the expert panel and the evaluated programmes. At CTI there is no person in charge of the rewriting of the site visit minutes (guaranteeing the consistency of style and length) as is the case in other agencies.

The evaluation report is written after the outcome of the plenary assembly. It is conceived to respond to the needs of the main CTI stakeholders (higher education institutions and their relevant ministries, as well as the general public).

The approximate length is three pages per engineering programme structured as follows:

- presentation of the type of procedure and list of the expert panel,
- brief introduction on the characteristics and history of the institution and of the results of past CTI's accreditations,
- brief description of the engineering programme and its evolution,
- follow up of CTI's previous guidelines for improvement,
- programmes' strength, weaknesses, opportunities and threats,
- examples of good practice,
- guidelines for improvement,
- result of the accreditation: decision for private HEIs or recommendation for public owned HEIs.

All CTI evaluation reports are forwarded to the concerned institutions and published on CTI's webpage together with the minutes of the general assembly meetings. The reports are accessible through CTI's website research engine.

Apart from CTI's webpage, a number of additional publication mechanisms are in place:

- the HEIs' annual *certified data* are published on CTI's website with the evaluation report,
- the official list of accredited programmes is published every year through an inter-ministerial decree,
- CTI participates in ECA's QROSSROADS initiative, a European data base containing information on accreditation programmes and institutions,
- CTI also contributes to the update of the EUR-ACE® data base (data base containing the information on all EUR-ACE® accredited programmes),
- the awarded CeQulnt labels are published in ECA's CeQulnt database,
- after validation by CTI, the main features of the accredited programmes, in particular the expected competences, are published in the *Répertoire National des Certifications Professionnelles*, RNCP, www.cncp.gouv.fr.

Nowadays CTI does not publish the minutes of the site visit report which is an ENQA recommendation. The minutes of the site visit are considered to be a working document between the expert panel and the HEI and contains detailed and sometimes confidential information that the HEIs do not wish to be published (cf. meeting with representatives of engineering HEIs on 23rd March 2018). But CTI is aware that it is an issue for the renewal of its ENQA membership and its *Audit steering committee* is currently dealing with the issue.

A sub-group of the *Audit steering committee* is currently working on a draft template for a new global evaluation report, that could be used from the analysis of the written self-assessment report by the HEI and preparation of the on-site visit, to the minutes of the on-site visit, the presentation during the plenary session and the final report. This new template is tested during a pilot phase in 2017-2018 by the members of the working group in parallel with the usual documents.

CTI is committed to publish the site visit minutes as soon as the outcomes of the working group dealing with this subject will be known, either by adopting the new template or by adapting the existing template for the minutes.

Evidences and references

Evidence 10.6.1.: [Published documents relating to the plenary sessions, including the summary of conclusions](#)

Evidence 10.6.2.: [Example of the evaluation report of a public owned engineering school integrated into a university](#)

Evidence 10.6.3.: [Example of the evaluation report of a public owned independent engineering school](#)

Evidence 10.6.4. [Example of the evaluation report of a private engineering school](#)

Evidence 10.6.5.: [Research engine on CTI's website for accredited programmes and certified data](#)

Evidence 10.6.6.: [Governmental list of accredited programmes](#)

Evidence 10.6.7.: [ECA's QROSSROADS database](#)

Evidence 10.6.8.: [ENAAEE's EUR-ACE® database](#)

Evidence 10.5.9.: [ECA's CeQulnt database](#)

Evidence 10.6.10. [RNCP's database](#)

10.7. ESG Standard 2.7 Complaints and appeals

Standard: *Complaints and appeals processes should be clearly defined as part of the design of external quality assurance processes and communicated to the institutions.*

Guidelines: *In order to safeguard the rights of the institutions and ensure fair decision-making, external quality assurance is operated in an open and accountable way. Nevertheless, there may be misapprehensions or instances of dissatisfaction about the process or formal outcomes.*

Institutions need to have access to processes that allow them to raise issues of concern with the agency; the agencies, need to handle such issues in a professional way by means of a clearly defined process that is consistently applied.

A complaints procedure allows an institution to state its dissatisfaction about the conduct of the process or those carrying it out.

In an appeals procedure, the institution questions the formal outcomes of the process, where it can demonstrate that the outcome is not based on sound evidence, that criteria have not been correctly applied or that the processes have not been consistently implemented.

CTI's complaints and appeals procedures are described in chapter 6.1.5 above.

Applications for re-examination of the evaluation reports and appeals are extremely rare.

There are 4 types of possible applications:

- a complaint to CTI regarding the evaluation process (behaviour of one or more members of the expert panel, not respected deadlines, ...),
- an application to CTI for a re-examination of the evaluation report before the official notification of the accreditation results,
- an appeal against an accreditation decision of public owned HEIs to their supervisory ministry,
- an appeal of private and public owned HEIs to the *Conseil d'Etat* against an accreditation procedure.

The applications for a re-examination of the evaluation report are examined by an independent committee of external and knowledgeable personalities who analyse the application/appeal and submitted evidence and forward their conclusions to CTI's plenary assembly through the Board with an advice to change or to maintain the original report or recommendation/decision. The outcome of the new vote of the plenary assembly is forwarded to the HEI and the ministry in charge of higher education.

The complaints and appeals procedures are published in CTI's *Standards and guidelines* (R&O) and in the bylaws which are public on the internet site. The procedures have been up-dated recently and the bylaws take into account the new version. CTI's *Standards and guidelines* will be updated at the beginning of 2019.

Evidences and references

Evidence 10.7.1. [Bylaws, chapter V.5.](#)

11. Information and opinions of stakeholders

Stakeholder representation amongst CTI members, experts, special advisers

CTI's main stakeholders are represented through its nominated members. As described in chapter 4.4. about CTI's distinctive features, the 32 CTI members are representatives from HEIs and from industry. But even in these two categories, they represent different stakeholders: the academic members are from HEIs under different ministries (higher education, research and innovation; food and agriculture; economy; industry; telecommunications; defence; ecology and sustainable development) and half of the socio-economic members represent employers whereas the other half represent trade unions and engineers' associations. When the Commission votes

on evaluation outcomes or takes decisions regarding the evolution of CTI's *Standards and guidelines*, a whole range of approaches are represented during the discussions.

The same representativity applies to the experts: CTI pays attention to their varied professional backgrounds and fields of expertise in order to have the widest possible range of vision during accreditation procedures. Student experts participate in all accreditation procedures.

External special advisers with different profiles are members of CTI steering committees and working groups.

Exchanges & meetings with stakeholders

According to the subject, CTI invites external specialists and representatives from stakeholder organisations to specific steering group or working group meetings.

CTI also organises on a regular basis meetings with other stakeholder organisations such as the association of deans of engineering HEIs CDEFI; the association of engineering and management HEIs *Conférence des grandes écoles* (CGE); the engineering students' association BNEI; the alumni association of engineering graduates IESF; ...

One CTI board member has the specific task of dialoguing on a regular basis with the national commission for professional certification CNCP *Commission nationale de la certification professionnelle*.

The fact that CTI's administrative operator is CDEFI and that both organisations share the same premises greatly facilitates informal exchanges on a daily basis.

In certain complex situations for HEIs (mergers, new campus, ...), CTI and representatives from the relevant ministry accept to discuss the issue at stake with the dean of the implied institution during a personalized meeting.

CTI's annual conference which is attended by most HEIs and representatives from ministries is another important tool for exchanges with stakeholders. The workshops during the conference enable CTI to listen to stakeholders' opinion and to get to know further examples of good practice.

In return, CTI representatives participate – often as speakers – in conferences, seminars, workshops of its stakeholder organisations where the dialogue continues: general assemblies of the engineering students' association BNEI, annual conferences of the association of language professors, the association of deans of engineering HEIs CDEFI; the association of engineering and management HEIs CGE; seminars of the alumni association of engineering graduates IESF; workshops by professional organisations, ... (see [list of communications and participation in events](#)).

Satisfaction surveys

An important means to get a feed-back on accreditation procedures is the satisfaction survey sent to the HEIs. Until a recent past it was sent at the same time to all involved HEIs at the end of a campaign. Some of the comments were that the survey arrived too late and was disconnected from the procedure that took place in some cases many months before. Since 2017-2018, the survey is sent to the concerned HEIs after its accreditation procedure is concluded.

The feedback from the surveys of the last 2 campaigns (2015-2016 and 2016-2017) shows that globally the satisfaction rate is quite high. HEIs were especially satisfied with the usefulness of the guide for the self-assessment report; the quality of exchanges with the expert panel and its objectivity; the importance of the site visit in the process; the accreditation outcomes with the guidelines for improvement as an important tool for their internal quality assurance. Among the opportunities for improvement for CTI remains the gap between the date when the HEI's self-assessment report is submitted and the date of the site visit and the publication of the accreditation decision.

Information to the general public

The general public has access to a lot of information on engineering education and profession, on recognition and accreditation issues through CTI's website. Through the search engine, it is possible to have access to all evaluation reports and annual certified data for each accredited programme.

A "contact" section on the website enables any person to ask specific questions regarding a personal situation. CTI receives about 20 requests a week from that source. Most questions are from students, families and graduates and deal with the way CTI's criteria are applied by the HEIs and the recognition of the French engineering degree abroad and of foreign engineering degrees in France. At the time of the year when admission procedures to HEIs take place many questions are about the accreditation issues of the programmes. Sometimes CTI is asked to indicate a ranking between similar programmes, which it categorically refuses.

Stakeholders for recognition issues

On recognition issues, CTI has periodically contacts with the ENIC-NARIC France centre and always recommends engineering graduates who prepare an incoming or outgoing individual mobility to apply for a comparability certificate by the relevant ENIC-NARIC centre.

In order to facilitate the international mobility of graduate engineers, CTI itself forwards upon request certificates to graduates and employers. CTI's certificate states that a specific degree was accredited and gives information on the level and required competencies of a French engineering programme.

CTI's missions include the improvement of the academic and professional recognition of the French engineering degree abroad. In this framework CTI has signed agreements with various foreign academic and professional stakeholder organisations such as:

- Engineers Canada – Ingénieurs Canada
- Ordre des ingénieurs du Québec (OIQ)
- Ordre des Ingénieurs forestiers (Québec)
- Ordre des Chimistes (Québec)
- Ordre des Agronomes (Québec)
- Accreditation Board for Engineering and Technology (ABET, USA)
- Under preparation: MOU with Engineers Australia

Partners & stakeholders for quality assurance issues

CTI is involved in a number of networks and associations in order to exchange on good practice and to continuously improve its own methods and procedures (ECA, ENAEE, FrAQ-Sup, ENQA, ...). It carries out joint projects with partner quality assurance agencies (AEQES, ASIIN, IEAQA, ...).

In France, CTI works in close co-operation with partner Hcéres; a steering group of 3 representatives from each organisation meets every month for the follow-up of the relationship. Both agencies work closely together as regards international relations.

Foreign ministries, quality assurance agencies, HEIs contact CTI on a regular basis for information on its procedures and criteria. In 2017-2018, CTI welcomed delegations for study trips and information sessions from China, Senegal, Tunisia.

12. Recommendations and main findings from previous review[s] and agency's resulting follow-up

(for second and subsequent reviews only)

CTI addressed all previously made recommendations of the previous ENQA review in 2016 in a [follow-up report](#).

Below is a synthesis of the recommendations and actions taken including an up-date since 2016.

ENQA recommendations, 2014	Responses by CTI, 2018
Former SG 2.1. Use of internal quality procedures Improve members' and experts' training	Since May 2014, CTI has implemented systematic training sessions for all its members and experts. There is at least one training session per year for all members and experts and one dedicated to the student experts.
Former ESG 2.4 Processes fit for purpose - Increase the number of international experts, not only at national but also at international level. - Publish the composition of the committees for each review on the website indicating their profile and role in the accreditation process. - Improve the procedure for the selection and nomination of experts - Increase the student participation in the evaluation committees and consider the possibility to involve them at the member level."	- The number of international experts has nearly doubled between 2012 and 2016. There was an international expert in the evaluation panels for the periodical programme accreditation in 87% of the visits scheduled in 2016-2017. - The roles of the panel members and of the panel chair are described in CTI's guidelines "R&O" that are public. The standardized CVs of all CTI members and experts are published on the website. Each year at its annual conference in February, CTI announces and publishes on its website the chairs of the expert panels for the following evaluation period starting in September. Before an evaluation procedure starts, CTI informs the institution of the panel composition. - In May 2016, CTI released an internal note that defined the principles of selection and management of the expert list. The CVs are analysed by the <i>Audit Steering Committee</i> and validated by the CTI board and then by the plenary assembly. The student experts are selected by the national union of engineering students (<i>Bureau National des Élèves Ingénieurs-BNEI</i>). - Since 2016-2017 each expert panel includes an engineering student. As regards CTI membership, it is determined by law: 32 members (50% professionals from academia and 50% professionals from industry) and the participation of students as members is not within CTI's capacity.

<p>Former ESG 2.5 Reporting Publish the full evaluation reports on the Agency's website.</p>	<p>The evaluation reports with the decision/recommendation and guidelines for improvement are published on CTI's website. CTI considers the site visit minutes as a confidential working document between the HEI and the panel. A working group is currently working on a new template for the evaluation report, including the site visit minutes. CTI commits to publish the site visit reports as soon as the pilot phase of the new template will be concluded, either by using the new template or by adapting the existing one.</p>
<p>Former ESG 2.6 Follow-up Procedures Include a follow-up procedure for the newly created programmes and the programmes with no major problems detected.</p>	<p>A significant number of the periodical evaluation procedures result in a follow-up procedure that may take different forms: limited duration of the accreditation (100% of new programmes and 22,5% of existing programmes), "urgent action lines" (3 cases in 2017_2018), follow-up report (38% of applications for programmes with no major problems detected). In the case of new programmes, CTI systematically grants a short accreditation of maximum 3 years and thus assures a follow-up after a short period of time when the programme is fully running. The <i>certified data</i> survey filled in every year by the French HEIs is also an efficient means of annual follow-up.</p>
<p>Former ESG 3.2 Official Status - Develop the agreement with AERES, better align their evaluation calendars and reduce the workload for the Institutions. - Assure the continuity of the agreement between both Agencies taking into account the change from AERES to Hcéres in the near future.</p>	<p>- CTI has changed its annual calendar from 6 to 5 years and changed the regional division of the French territory for the periodical evaluation procedures, in order to align with the ministry's five year contracts with the institutions and the related Hcéres evaluation. Both agencies started a pilot project for co-ordinated procedures in 2017-2018 that continues in 2018-2019 (joint self-evaluation with or without a joint site visit). - A new cooperation agreement has been signed between Hcéres and CTI in September 2016 for 5 years and a working committee has been set up for its follow-up. As regards international relations, both agencies never stopped working closely together.</p>

<p>Former ESG 3.3 Activities Protect the Agency from the possible risk due to the equilibrium between the main mission and the international requests.</p>	<p>CTI set up steering groups to pilot its activities. The <i>Audit Steering Committee</i> and the <i>International Steering Committee</i> plan the calendars for national and international evaluations far ahead and manage the workload. A new procedure for international applications has been set up, the “preliminary admissibility file”, which avoids a useless workload for non-eligible programmes. A maximum number of 2 CTI members may participate in the same accreditation procedure abroad. “Special advisors” participate in CTI’s activities and lessen the workload of the members and permanent staff. A working group on simplified procedures has been set up in 2017 and the first pilot procedures take place in 2018-2019.</p>
<p>Former ESG 3.4 Resources Take into account the risk of a higher workload for the staff with the view of increasing its activities and with the changed accreditation period (from 6 to 5 years.)</p>	<p>The calendar has been adapted with a transitory phase. CTI’s financial means improved thanks to an increase of the grant by the ministry of higher education and of the yearly contribution of the institutions. A further full-time staff member was hired; occasional employees or experts complete the staff on specific missions. In September 2016, CTI moved to new premises in the same building as its administrative operator, which greatly facilitates and accelerates the exchanges between the staff members.</p>
<p>Former ESG 3.5 Mission - Develop the strategic aims of the Agency to strengthen its vision and goals. - Continue to publish the biannual activity reports</p>	<p>- CTI’s former strategic plan was published in the 2012 version of its <i>Standards and guidelines</i> (R&O, volume 1, page 41). CTI’s strategic plan for the period 2017-2020 was worked out in 2016-2017 and updated following a working seminar of CTI members in September 2017. - CTI resumed publishing its activity reports since the 2014-2016 period. The 2016-2018 report is due to be published at the beginning of 2019.</p>
<p>Former ESG 3.6 Independence Develop the strategic aims of the Agency so as to reinforce the way the Agency wants to follow its activities and make this public</p>	<p>CTI’s strategic plan (see above ESG 3.5.) includes 3 parts: missions, objectives, action plans and is published on CTI’s website. CTI’s international policy and action plan for the period 2016-2018 is also published on the website. The Newsletter publishes regularly a feed-back on CTI’s positions and strategic communications at seminars, conferences, events.</p>
<p>Former ESG 3.7 External Quality Assurance Criteria and Processes used by the Agencies - Improve the selection and nomination of experts - Include a follow-up procedure for the programmes with no major problems detected</p>	<p>See above, measures taken described under criteria 2.4 and 2.6.</p>

EQAR recommendations, 2014	Responses by CTI, 2018
<p>Former ESG 2.5 Reporting Publish the full site visit report along with the accreditation report and decision.</p>	<p>The evaluation reports with the decision/recommendation and guidelines for improvement are published on CTI's website. CTI considers the site visit minutes as a confidential working document between the HEI and the panel. A working group is currently working on a new template for the evaluation report, including the site visit minutes. CTI commits to publish the site visit report as soon as the conclusions of the pilot phase for the new template will be drawn, either by using the new template or by adapting the existing one.</p>
<p>Former ESG 3.7 External Quality Assurance Criteria and Processes used by the Agencies Involve students on the expert groups in non-standard evaluation missions.</p>	<p>Since 2016-2017 each expert panel includes an engineering student. This applies to all evaluation missions, even the non-standard ones.</p>

13. SWOT analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ✓ National and international expertise and renown (since 1934) ✓ Field dedicated ✓ Independent responsibility for the definition of expected programme learning outcomes and accreditation criteria ✓ Annual follow-up through certified data survey ✓ Close relations with stakeholders including the associations of deans of engineering HEIs, students, graduate engineers and the balanced members' profile (academia/industry) ✓ Permanent dialogue with HEIs, for instance through the annual conference, individual meetings, ... ✓ National and international co-operation with other QA agencies, professional institutions, ... 	<ul style="list-style-type: none"> ✓ Limited means ✓ No officially allotted time for CTI activities for all academic members ✓ Limited consultation of the evaluation reports by the general public
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ✓ Willingness of external experts, including students, to participate in plenary sessions, working groups and steering committees or for specific analysis ✓ Growing need for engineering skills ✓ Increase of number of students & programmes ✓ Growing requests from abroad ✓ Facilitated relations with francophone HEI 	<ul style="list-style-type: none"> ✓ Workload induced by: <ul style="list-style-type: none"> • Shift from a 6 to a 5 year accreditation cycle • Massification and diversification of education & growing number of new programmes and impact on workload ✓ Miss-use of data: quality assurance versus rankings

14. Current challenges and areas for future development

In chapter 6.2. of this report are mentioned four issues that CTI is currently working on:

- consistency of the outcomes of an evaluation procedure (6.2.1.)
- publication of the minutes of the site visit (6.2.2.)
- simplified procedures for programmes without any major identified problems (6.2.3.)
- joint procedures with Hcéres (6.2.4.)

The working groups dealing with these issues are meant to come up with their conclusions in one to two years.

Other topics for future working groups are:

- balance between institutional aspects and programme linked issues during evaluation procedures,
- questioning of the duration of a site visit,
- external quality assurance for double degrees in complementary areas, for example: engineer-architect; engineer-pharmacist; engineer-manager;...
- creating of a "CTI" label for accreditation procedures abroad,
- simplified procedure for foreign HEIs applying only for the EUR-ACE® label,
- transversal analysis on following subjects:
 - o strategic positioning of the engineering degree programmes
 - o evolution of the engineering profession due to the impact of the digitalisation (related to society, science and education)
 - o certified data survey results over the last 5 years
 - o evolution of the scope, missions and size of CTI.

In France there is a much discussed issue these days regarding the possibility for engineering HEIs to award "bachelor" degrees in engineering. Today there are national three year degrees (including science and technology) awarded by universities, and evaluated by Hcéres, called "licence". In order to improve the attractiveness of the engineering HEIs and the mobility of their students, more and more institutions offer institutional diplomas, using the translated term of "bachelor". In case the situation would evolve towards the recognition of "bachelor" degrees by engineering HEIs, many questions would have to be dealt with:

- what expected learning outcomes for a bachelor's degree in engineering versus a master's degree?
- which criteria for external quality assurance would be taken as a reference? EUR-ACE® at bachelor's level? Other?
- which organisation would be in charge of the external quality assurance? Hcéres, as is the case for the "Licence" university degrees? CTI for its expertise in engineering? Any ENAEE authorized agency?

CTI pays a close attention to the on-going discussions and will probably have to take a position in a short while.

And last but not least CTI has to face a growing challenge due to the internationalisation of HE and its own renown in the field of engineering: the number of applications by foreign HEIs for a CTI procedure is growing on a regular basis and CTI will have to decide whether to decline eligible applications or to change its current organisation.

Glossary of Terms

AAQ:	Swiss agency of accreditation and quality assurance
ABET:	Accreditation Board for Engineering and Technology (USA)
AEQES:	Agence pour l’Evaluation de la Qualité de l’Enseignement Supérieur (Belgium)
AERES:	Agence pour l’Evaluation de la Recherche et de l’Enseignement Supérieur (French quality assurance agency replaced by Hcéres)
AFD:	Agence française de développement
ANECA :	National Agency for Quality Assessment and Accreditation (Spain)
ASIIN:	Akkreditierungsagentur für Studiengänge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften und der Mathematik (Germany)
AUF :	Agence Universitaire de la Francophonie
BNEI:	Bureau national des Elèves Ingénieurs (France), national engineering students’ organisation
CDEFI:	Conférence des Directeurs des Ecoles Françaises d’Ingénieurs (France)
CEAIE :	China Education Association for International Exchange
CEFDG:	Commission d’Evaluation des Formations et Diplômes de Gestion (France), accreditation agency for management programmes
CeQuInt:	Certificate for Quality in Internationalisation, ECA quality label
CGE :	Conférence des Grandes Ecoles (France), association of engineering and business schools
CIEP:	Centre International d’Etudes Pédagogiques (France)
CNEFOP :	Conseil National de l’Emploi, de la Formation et de l’Orientation Professionnelle (France), national council for employment, training and professional orientation
CPGE:	Classes Préparatoires aux Grandes Ecoles
CTI:	Commission des titres d’ingénieur
EAFSG:	EUR-ACE® framework standards and guidelines
ECA:	European Consortium for Accreditation (Europe)
EHEA:	European Higher Education Area
ENAE:	European Network for the Accreditation of Engineering Education ; this association is responsible for the EUR-ACE® label (Europe)
ENQA:	European Association for Quality Assurance in Higher Education (Europe)
ESG:	Guidelines for Quality Assurance in the European Higher Education Area (Europe)

EUR-ACE®:	A quality label for engineering programmes developed by ENAEE (Europe)
EQAR:	European Quality Assurance Register for Higher Education (Europe)
Fraq-SUP:	Réseau francophone des agences qualité pour l'enseignement supérieur
Hcéres:	Haut conseil de l'évaluation de la recherche et de l'enseignement supérieur (France), quality assurance agency in charge of the evaluation of HEIs, bachelor, master and doctorate programmes and research
HEIs:	Higher Education Institutions
HES :	Higher Education System
IEAQA :	Instance Nationale de l'Evaluation, de l'Assurance Qualité et de l'Accréditation (Tunisia)
IESF:	Ingénieurs et scientifiques de France (France), alumni association of graduate engineers
IUT:	Institut Universitaire de Technologie, awards degrees up to the Bachelor grade (France)
NVAO:	Accreditation Organization of the Netherlands and Flanders (The Netherlands and Flanders)
QROSSROADS:	ECA's European programmes database (Europe)
R&O :	Références et Orientations, CTI's standards and guidelines
RNCP:	Répertoire national des certifications professionnelles (France)
SAR :	Self-assessment report
UNIBASQ:	Agencia de Calidad del Sistema Universitario Vasco (Spain)
VAE:	Validation des Acquis de l'Expérience (France)

Annexes: links to essential documents

CTI

1. [CTI's missions, objectives and action plan, 2017-2020](#)
2. [Bylaws with annexes](#) (main legal texts; deontology charters for members, experts, advisors, observers; role of the panel chair; role of the experts; procedure regarding mission orders and coverage of expenses)
3. [CTI's activity report, 2014-2016](#)

Standards and guidelines for external quality assurance

4. CTI's Standards and guidelines, [Références et Orientations \(R&O\), volume 1 Main criteria](#)
5. CTI's Standards and guidelines, [Références et Orientations \(R&O\), volume 2 Guide for the HEIs self-assessment](#)
6. CTI's Standards and guidelines, [Références et Orientations \(R&O\), volume 3 Procedures](#)
7. CTI's Standards and guideline, [Références et Orientations \(R&O\), Volume 4 In-depth thematic notes](#)
8. CTI's [Accreditation Criteria, Guidelines and Procedures](#), English version for accreditation procedures of foreign programmes
9. [EUR-ACE® framework standards and guidelines](#), English version
10. [CeQulnt: Frameworks for the assessment of quality in internationalisation](#)

ENQA & EQAR

11. [ENQA review report, 2014](#)
12. [EQAR's renewal decision of CTI's inclusion on the Register, 2014](#)
13. [CTI's follow-up report addressed to ENQA, 2016](#)
14. [Terms of reference for the ENQA review of CTI, 2018](#)

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