



CE-IGT GUIDELINES

**FOR CANDIDATES WHO WOULD LIKE TO PARTICIPATE IN THE
PROSPECTIVE EUROPEAN CENTRE OF EXCELLENCE FOR INDUSTRIAL
GAS TURBINE TECHNOLOGY**

FOREWORD

The initiative, CE-IGT, has the objective to map and identify expertise in defined research priority areas related to Industrial Gas Turbine technology in Europe.

Purpose of the Guidelines

These guidelines have been prepared for candidates, who would like to participate in the CE-IGT Initiative. The guidelines give information about the purpose & general structure, the survey procedures as well as practical information concerning the questionnaire. The results will be made available to the European Commission (EC) as part of the mission of the EC supported Concerted Action entitled "CE-IGT". Further Information about the project can be obtained from its official website: <http://www.ce-igt.org>

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Part A: PURPOSE AND GENERAL STRUCTURE

A1. MOTIVATION

The CE-IGT objective is to identify and map expertise, in defined IGT research priority areas. The idea is not to establish a ranking of the 'best and the winners', but rather an ongoing process aimed to identify, in an open fashion, centres with an excellent scientific expertise in the EU and also in the Accession countries plus Switzerland and Israel.

Meeting the objectives will make European IGT Centres of Excellence visible to scientists, industrialists, investors and political decision-makers.

A2. BACKGROUND

On a global scale Europe cannot afford to fragment its research efforts or waste resources through duplication or lack of co-ordination.

The IGT-Technologies for the future require combined European research efforts and capacities that are integrated to a far greater extent than at present.

A2.1. VISION STATEMENT

To strengthen European competitive edge, on a global scale, in the field of industrial gas turbines it is necessary to improve the co-ordination of IGT's research and innovation activities conducted throughout Europe. Identification, mapping and networking of excellent scientific European expertise in IGT research will be the base for the creation of CoE related to the European Research Area (ERA).

A2.2. MISSION STATEMENT

Based on the above vision a survey shall be performed which will display the actual as well as the potential profile of each participating candidate (industry, academia and research centres) in terms of its scientific and/or technological expertise. This target will be pursued within the constraint of an objective, independent, clear and verifiable set of procedures.

A3. RECIPIENTS

Candidates which want to participate in the process of CE-IGT shall belong to one of the following groups:

- a) Academic Institutions "AI"** (University Departments and the like);
- b) Research Centres and Research Laboratories "RC"** (publicly or privately owned);
- c) Industry R&D Departments "IRD"** (i.e. structured official units or departments within an industrial company specifically devoted to research and technological development).

Other categories shall not be considered during this phase of the initiative. Potential candidates should be located in the European Union, the accession states or the EFTA member states.

A4. DEFINITIONS

A4.1 PROCEDURES DEFINITION

The basis for setting up the Survey Database and the Qualification Database is an appropriate definition of procedures for the mapping (phase of survey) and the identification (phase of qualification) process. Detailed scope categories from a hardware point of view¹ will be defined as reference (or cross-reference) for selective, specialised sub-cataloguing or search purposes within the databases.

¹ Micro Turbines, Industrial Gas Turbines, Marine Gas Turbines, Fuel Cells, Heat Recovery Steam Generators, Co-Generation Plants, Electrical Equipment, Controls and Electronic Equipment, Instrumentation and Ancillaries.

These scope-categories shall be specific for each of the three groups of candidates (AI, RC, IRD). Additional scope categories can be defined for other potential fields of interest. The commitment of all CE-IGT partners is to strive for a professional, unbiased, independent and objective implementation of the “knowledge content” in these databases. The CE-IGT partners will take all reasonable steps to ensure that only totally unbiased information is included in the database.

A4.2 ADDRESS DATABASE (ADB)

The address database is a non-exhaustive list of the addresses of potential candidates, containing basic information and coordinates of contact persons. This list, divided into the three categories described above (AI, RC, IRD), is a reference database (named Address Database, ADB), for internal use by the CE-IGT members. Within CE-IGT there is no regulation to pre-select the “entries” into the ADB. The set up of the data base is based on the available information on institutions involved in gas turbine research. Therefore, it could happen that an institution, a centre, or an industrial department will not appear in the ADB. Note that the possible absence from the ADB of candidates is only due to lack of information, rather than to a decision of rejection. In order to cover as many potential candidates as possible a call for “self candidature” has been issued and made available both in CORDIS (EC-news magazine) and on the CE-IGT and EuMIGT web sites.

A4.3 SURVEY DATABASE (SDB)

The aim of the SDB is a clear, accurate, up-to-date, quantitative mapping of the European scientific research and technological potential in the field of industrial gas turbines, divided into the three Candidate groups (AI, RC, IRD) and to provide this information to the European Commission and to other interested parties. To achieve this aim the candidates are asked, to honestly and correctly report their “actual ability” and on-going achievements. For this purpose questionnaires for the different groups (AI, RC, IRD) have been set-up and are going to be made accessible via the web. Once the SDB questionnaire has been filled in by the candidate, the corresponding SDB profile of the OT is completed. In connection with this procedure the candidates agree to allow the CE-IGT team to perform on-site visits at the Operative Team’s (OT) premises when considered necessary. In the following the build-up of the corresponding profile for the below described database will be performed.

A4.4 QUALIFICATION DATA BASE (QDB)

For the set-up of the QDB, normally no additional data will be requested from the Operative Team (OT). The data already available in the SDB will be processed, mostly in an automatic fashion, and restructured into two series of quantitative parameters. The first set, named Descriptors² refers to a corresponding SDB Category of the OT’s profile. The second set, named Indicators³ directly references the OT’s performance. By normalising the Indicators they will become independent from the size of each OT and will mirror the levels of efficiency and effectiveness for each OT.

2 A Descriptor is a parameter suitable to quantify the overall “strength” or “ability level” of a candidate. A Descriptor is constructed by a “weighted summation” of the corresponding data.

3 An Indicator is a parameter, obtained by normalising the descriptor to the available resources (personnel, funds, etc.) of the OT.

PART B: INFORMATION FOR COMPLETING THE QUESTIONNAIRE

B1 QUESTIONNAIRE

The questionnaires for the different candidates (AI, RC, IRD) are available at the CE-IGT homepage, www.ce-igt.org. In order to facilitate the completion of the questionnaire, we would suggest that you look at the below explanations and definitions of different categories in the questionnaires.

The questionnaires are organised in a series of thematic categories suited to produce a quantitative assessment of each candidate. The basis for objective and comparable entries in the Survey Database (SDB) is an accurate information philosophy of each candidate. The information will be utilised to elaborate a series of “Descriptors” and “Indicators” in order to set up the Qualification Database (QDB)⁴ which will show the abilities, the experience and the expertise of each candidate.

B2 INPUT OF DATA

In connection with question items implying quantitative responses, the questionnaire shall be filled-in by each candidate with data corresponding to the years of 1999-2000-2001-2002. When a single overall indication is required, the average over these years shall be adopted. The term “on-going” shall only reference the year 2003. The term “prospective” shall reference year 2004. No other time period shall be considered.

B3 DEFINITIONS

OFFICIAL UNIT

Each “Official Unit” (OU), such as an Institution, University Department, Research Centre, Industry Department, or Laboratory may submit its candidacy to become an entry in the SDB.

OFFICIAL ENTITY

The term Official Entity (OE) will refer to the whole University or Polytechnic School in case of AI Candidates; to the Research Establishment or Research Administration in the case of specific RC Candidates; to the Chief Administration of a Corporation or of an industrial Company in the case of specific IRD Candidates.

OPERATIVE TEAM

It is possible that an Official Unit (OU) consists of different “Operative Teams” (OT’s) and one or more of them perform research activities or develop the product in the field of industrial gas turbines independent from each other. In this case each of the OT’s should declare their interest of participation and complete the questionnaires. When the OU is the same as the OT, the OU has to complete the questionnaires. The person in charge of the OU does not need to correspond with the responsible person of the OT.

In the next paragraphs candidates will find the definitions that you need to study in conjunction with the completion of the questionnaire that your organisation belongs to (C1 for AI, C2 for RC and C3 for IRD).

⁴ See A4.4

B4. CANDIDATE GROUPS

B4.1 ACADEMIC INSTITUTIONS (AI)

For AI Candidates, the main question items of the Survey Database are organised into the following categories:

- Official Entity (OE) Coordinates: Official name, address, homepage, representative of the OE.
- Official Unit (OU) Coordinates: Official name, address, homepage, person in charge of the OU (contact details).
- Structure and organisation of the OU: number of scientific / non-scientific staff, teaching activities in the gas turbine related fields, number of bachelor, master, diploma, PhD. / Doctoral degrees.
- Structure and Organisation of the OT: (even if the OT is coincident with the OU): information about scientific and non-scientific staff, contact details, scientific coordinator of the OT.
- Financial resources: at an institutional (regional/national) level of the OT, Research projects at national, European, international level.
- Aims and goals of the OT: information about the research fields of interest, about the research infrastructure including IT facilities and experimental facilities (Hardware-based research facilities, large experimental facilities, advanced instrumentation), publications, software proprietary development, patents, etc.

B4.2 RESEARCH CENTRES (RC)

For RC Candidates, the main question items of the Survey database are organised into the following categories:

- Official Entity (OE) Coordinates: Official name, address, homepage, representative of the OE.
- Official Unit (OU) Coordinates: Official name, address, homepage, person in charge of the OU (contact details).
- Structure and organisation of the OU: number of scientific / non-scientific staff.
- Structure and Organisation of the OT: (even if the OT is coincident with the OU): information about scientific and non-scientific staff, contact details, scientific coordinator of the OT.
- Financial resources: at an institutional (regional/national) level of the OT, Research projects at national, European, international level.
- Aims and goals of the OT: information about the research fields of interest, about the research infrastructure including IT facilities and experimental facilities (Hardware-based research facilities, large experimental facilities, advanced instrumentation), publications, software proprietary development, patents, etc.

B4.3 INDUSTRY R&D DEPARTMENTS (IRD)

For IRD Candidates, the main question items of the Survey Database are organised into the following categories:

- Official Entity (OE) Coordinates: Official name, address, homepage, representative of the OE.
- Official Entity (OE) coordinates: size, business areas, yearly turnover, number of employees.
- Operative Unit (OU) coordinates: Official name, address, homepage, person in charge of the OU (contact details).
- Structure and organisation of the OU: number of scientific / non-scientific staff.
- Structure and Organisation of the OT: (even if the OT is coincident with the OU): information about scientific and non-scientific staff, contact details, scientific coordinator of the OT.
- Financial resources: at an institutional (regional/national) level of the OT, Research projects at national, European, international level.
- Aims and goals of the OT: information about the research fields of interest, about the research infrastructure including IT facilities and experimental facilities (Hardware-based research facilities, large experimental facilities, advanced instrumentation), publications, software proprietary development, patents, etc.

Part C: FINAL STATEMENT

Finally, we would like to state that the definition of European Centres of Excellence, related to the IGT industry, is an ongoing process. A second call for updates and new entries will give the candidates the opportunity to fill in the latest information. Note that the reference-frame for the quantitative assessments, regarding AI, RC and IRD will be clearly defined and linked to the European Commission's research policy.

To clarify the perspective and to conclude the text we quote the Commission, stating that **“research and innovation, co-ordinated across the European Union, will be twin engines of its drive to become, by the end of the decade, the most successful and competitive knowledge-based economy in the world”**.