

Proposed Programme 2013 - 2014

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The outline strategy planned for the ECCE Knowledge and Technology Standing Committee is presented in this document. The strategy is based on short term and long term objectives.

The proposed outline strategy is presented in the form of a programme intended to encourage discussion in the ECCE Standing Committee. The feedback to the programme from all members of ECCE shall be instrumental in setting clear targets for the SC during the coming months. The programme and feedback shall form the basis for discussion during the Standing Committee meeting at the 58th ECCE General Assembly in Cyprus.

Proposed Programme

During the past few years, the Knowledge and Technology Standing Committee has focused in particular on specific areas namely; collecting and distributing Knowledge and Technology on actual themes including Nearly Zero Energy buildings and Lifetime oriented buildings and Civil Engineering; interaction through a proposed new social network BuildLife.

The Proposed Programme is planned to build on strong points of the activities during the past years, whilst proposing the new initiatives intended to drive the SC forward during the coming years.

Furthermore the proposed programme is intended to address any gaps in activities of the Standing Committee. In this regard the proposed programme is planned to address the effective organisation and actions of the group by targeting well defined deliverables attainable within reasonable timeframes with reasonable resources.

The programme is intended to set the rhythm for concrete action through a holistic strategy for the future development of the Standing Committee within ECCE.

To attain these aims, the programme is based on the following basic principles:

- 1. Information – Knowledge & Technology.**
- 2. Communication & Knowledge Transfer.**
- 3. Management & Organisation.**

1. Information – Knowledge & Technology.

1.1 Survey Methodology: Identification of Strategic Areas in Civil Engineering.

In the context of the past development of the Standing Committee and in the current scenarios developing in the industry main priority areas include Energy and Transport.

However in order to ensure that the Standing Committee is effectively addressing the current and future needs of the Civil Engineering fields it is planned to reinforce the exercise already started in ECCE Knowledge and Technology SC in the 56th ECCE General Meeting: the exercise is a based a Planned Survey, intended to assess the development of Civil Engineering in the coming 5 years. The survey Methodology is based on a data collection exercise through surveys proposed in a systematic manner in different stages, with the first phase already in progress with a promising feedback from ECCE member countries. The principles for the survey are outlined as follows:

The Construction Industry is a major driver in the economy which evolves at a fast pace with new emerging technologies and innovate materials. The Civil Engineer as a key player in the industry has a critical role in supporting this advancement. The Civil Engineer must not only adapt to a changing industry, but also has a responsibility to help lead this change. The challenge for the Civil Engineer is to lead the construction industry to excellence, by understanding current and future needs as well as expectations in a dynamic world of change. The Engineer must anticipate the new challenges with vision and leadership.

The aim of this survey is to identify priority areas for the future development of Civil Engineering, in view of the advancement of the Profession for tomorrow's challenges. In the first stage the survey was circulated to ECCE members, and it was then circulated to a larger number of engineers throughout Europe.

The results of the survey will be published on the ECCE website, and aim to be useful to main stakeholders in the building industry including professional associations and educational institutions.

The survey can be completed in approximately 5 minutes and can be accessed using the following link: <http://www.surveymonkey.com/s/TDYNX8H>

1.2 Trends Analysis in Civil Engineering

The Survey Methodology shall also allow for an analysis of trends in Civil Engineering, and thus is required to be an ongoing activity in the tasks of the Standing Committee. Therefore instead of a single survey leading to a snap shot of the state of civil engineering, regular surveys are proposed in order to keep an updated database on trends and changing attitudes in different countries and regions.

In conjunction with the Education Network (Point 2.3) the trends Analysis allows for an assessment of both Industrial trends, Research Initiatives and Educational programme development in different European States.

The Analysis of Trends shall also serve as an important reference point for different stakeholders including Civil Engineering Associations, Education Institutions and the Construction Industry itself.

The outcome of the Analysis of trends can be published regularly by ECCE and diffused in Europe.

1.2 Analysis of Key Areas

The Standing Committee shall analyse the outcome of the Survey intended to identify key areas in Civil Engineering and define priority areas. Whilst Energy and Transport need to be addressed effectively, the Standing Committee shall address specific areas on the basis of the survey analysis exercise.

Key areas considered as priority areas for the future development in Civil Engineering shall be addressed including but not restricted to the following:

- Energy Efficiency in Buildings, Near Zero Energy Buildings,
- Life time engineering and Life Cycle Costs, Building Maintenance.
- Existing Sub-Urban Housing Stock in Europe - which makes up a significant part of the European Building Stock.
- Analysis of Skills and Supply Chains in the Construction Industry.
- The Drivers and Barriers of low Carbon regions and territories in Europe.
- Smart Materials and Intelligent Buildings, building Management Systems and Network Systems.
- Building Information Modelling
- Civil Engineering and Sustainable Construction Education in Europe
- Resilience of the Built Environment – Risk management, Earthquake Engineering and seismicity.
- Resource and Waste Management – Embodied Energy and Carbon Footprint.
- Renewable Energy Sources and Civil Engineering

2. Communication & Knowledge Transfer.

2.1 Web-Based Communication Platform

A Basic Platform intended to facilitate Information and experience exchange is proposed based through the setting up of an ECCE LinkedIn Group – LinkedIn is an existing established network which already serves as a useful platform. The ECCE Group in LinkedIn shall be created by the Knowledge and technology Standing Committee in order to promote Information and data Exchange and sharing between civil engineers. The Group is easily created and can be open to either or all of the following:

- Standing Committee members - ECCE Members
- Civil Engineers Members of the respective organisation members of ECCE.
- Other Civil Engineers

The network ECCE Group can be set up easily and can serve the purpose of retaining healthy lines of communication between ECCE members, whilst reaching out to the wider audience of civil engineers. It is proposed to be an effective tool to facilitate communication, but also to serve as a window onto ECCE for Civil Engineers members of the country organisations in each member country.

2.2 Data on International Research Initiatives.

It is planned to keep an organised record of ongoing research programmes and identify relevant outcome from research projects.

Besides research, specific initiatives promote international Collaboration and Networking such as the European Science Foundation, Transport and Urban development COST Action programme, with relevant collaborative frameworks between organisations and institutions. It is proposed to track developments and outcome of such programmes and research projects in general.

2.3 Knowledge and Technology Education Network

The Standing Committee shall serve as a Knowledge Network by addressing both Research and Educational Institutions in different countries and maintaining contact with Knowledge Institutions (including Universities, Research Institutes) in respective countries. Through this network the Standing Committee can identify the development in Civil Engineering education in priority areas in Civil Engineering.

1.3 ECCE Participation in Research Initiatives.

It is proposed to address Horizon 2020, Intelligent Energy Europe and other research proposals.

The Knowledge and Technology SC shall promote a research network for collaboration in view of new research proposals, addressing common interests based also on pressing needs in Civil Engineering, with a perspective to emerging areas of innovation.

3.Management & Organisation.

3.1 Work Group – Task Force Organisation

In order to successfully manage the organisation of the Standing Committee it is proposed to set up Work Groups, with Work Group leaders and respective members. The aim of the Work groups is to address specific tasks, and perform as a task force over a defined period of time with a clear deadline and deliverable.

The Specific tasks proposed include, but are not restricted to the following;

Work Group 1: Definition of Strategic Areas in Civil Engineering – Analysis of Trends.

Work Group 2: Communication and Knowledge Transfer.

Work Group 3: Research Projects Initiatives

Work Group 4: Knowledge and technology Education Network

Furthermore subject-specific work groups shall address specific priority areas which are defined and which the Standing Committee members consider necessary to promote. The following Preliminary Specific Task force proposals are intended for discussion and as a continuation of ongoing discussions with a view to future development and research proposals which ECCE can promote. Furthermore these shall be revised on the basis of the outcome of the survey analysis;

Task Force: Energy Efficiency, Smart Energy, Existing building stock - Building Retrofit, Low Carbon Systems – Zero Energy Buildings and optimized design. Innovative and smart materials, LCA and lifetime Engineering

Task Force: Materials and the Environment – Resource and Waste Management. Recycling of materials, Design for Deconstruction.

Task Force: Drivers and Barriers for Sustainable Construction; Skills in Civil Engineering – Supply Chains in the industry;

3.2 Involvement of Civil Engineers members of Country Associations

It is felt that the mission of the Knowledge and Technology Standing Committee is to extend knowledge and information to civil engineers, members of the National organisations belonging to ECCE, and also to the European Civil Engineer in general.

In this regard it is proposed to discuss the possibility of extending the membership of the Task Force to nominated members from the National Country organisations, that is Civil Engineers

from respective home institutions. This model shall ensure a wider participation and dissemination of ECCE activities and initiatives.

Regular Skype conference meetings shall be organised on a regular monthly basis with the active participation of the members of the

Conclusion

Whilst the proposed programme is intended to set clear defined targets, the useful contribution, feedback and ideas of the ECCE members and the Standing Committee members shall be most welcome and encouraged. The success of the SC depends on the collaboration and useful contribution of all members.

Moreover the collaboration of the Standing Committee members is considered as fundamental and essential for the clear definition and eventual successful implementation of the programme.