## *Sustainable Competitiveness of the Construction Sector*

## *Questionnaire April 2014*

The European Commission is seeking to gather information on the main potentials related to skills and competences. We are particularly keen to focus on those areas that could trigger a greater pace of energy-efficiency renovation and foster the development of sustainable construction.

Within this broader context, this questionnaire has the purpose of providing a quick and estimated view of current skills needs for people already working in the construction sector for the period September 2014 to end-2016 and **related to energy-saving renovation occupations only**.

Please circulate this questionnaire to your employees and then kindly compile the responses. Please also provide the number of people who work in your company (to give us an idea of its size).

> Answer submitted by the **Federal Chamber of German Architects**, the representation of over 129,000 architects, landscape architects, interior designers and urban planners in Germany.
>
> Please note the additional Position Paper for complementary information.
>
> Where answers could not be given within the multiple-choice format, an additional answer has been added below the respective question-box.

-*-*-*-*-*-*-

First we would to ask about your professional background.

1. What is your profession?

     a. ~~On-site worker~~

     b. ~~Contractor (e.g. electricians, plumbers)~~

     c. <u>Architect /</u> ~~Designer/Engineer~~

     d. ~~Management~~

     e. ~~Administration/Sales~~

     f. ~~Other (specify)~~

| 2. How did you achieve professional competences - please rate on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)? | 1. | 2. | 3. |
|---|---|---|---|
| a. Learning on-the-job by expert colleagues; | | | |
| b. Gathering information by suppliers/providers; | | | |
| c. Training manuals; | | | |
| d. Courses paid by the company; | | | |
| e. Courses paid by me; | | | |
| f. Publications, journals, websites; | | | |
| g. Other (specify). -> please see answer in box below | | | |

---

**2.**

The German system for the education and regulation of the architectural profession in order for architects to **achieve, maintain and upgrade their professional competences** foresees a combination of university education (minimum of 4 years), professional, supervised training (minimum of 2 years) and a system of mandatory continuous professional development (CPD).

"a" to "f" will be utilised by architects in variable frequencies.

---

| 3. Based on your experience, please rate which training method you prefer on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)? | 1. | 2. | 3. |
|---|---|---|---|
| h. Hands-on training; | | | |
| i. e-Learning / on-line training; | | | |
| j. Traditional (class) training; | | | |
| k. Brief evening course; | | | |
| l. Other (specify): -> please see answer in box below | | | |

---

**3.**

Based on the answer to question 2, the use of different training methods strongly depends on the nature and aim of the desired training. University courses are taught mainly in traditional class training, courses and seminars with complementing hands-on training where needed.

Supervised training on the job is focussed on hands-on and on-site training.

In the field of CPD the courses are taught mainly by means of courses, seminars, class training and e-learning.

| 4. In your professional career, did you already undergo training in these fields? Please rate on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)? -> please see answer in box below | 1. | 2. | 3. |
|---|---|---|---|
| m. Practical knowledge about energy-saving (more efficient insulation and heating/ventilation); | | | |
| n. Practical knowledge about "green" renovation (how to achieve zero emissions, using recycled materials, renewable energies); | | | |
| o. Specific technologies to improve a building as an "energy system"; | | | |
| p. An update on the state of the art of sustainability techniques; | | | |
| q. New materials and products; | | | |
| r. How to improve the use of traditional ones; | | | |
| s. Installation techniques for newer materials and products; | | | |

4.

The several courses offered at universities and in the field of CPD include all the mentioned fields ("m" to "s"). It is not possible to give a general answer for the profession since the single members have the possibility to tailor their desired courses exactly to their needs and to the market demands.

In general it can be said that any architect offering services with a special expertise will most likely have undergone specialised education and training in this sector. This could have happened already during their university education with a further specialisation during their career via CPD. The skills acquired this way are attested by the architect's degree and by CPD certificates. Furthermore, the German market of private, independent education providers offers sufficient relevant and well-devised courses where CPD points can be acquired. This way a customer asking for a certain expertise can be sure to commission an architect that has the necessary and verifiable skills. This is an effective tool that fosters consumer protection.

| 5. Which are the main subjects for which you think you would need to improve your competences - please rate on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)? -> please see answer in box below | 1. | 2. | 3. |
|---|---|---|---|
| t. Practical knowledge about energy-saving (more efficient insulation | | | |

| | 1. | 2. | 3. |
|---|---|---|---|
| and heating/ventilation); | | | |
| u. Practical knowledge about "green" renovation (how to achieve zero emissions, using recycled materials, renewable energies); | | | |
| v. Specific technologies to improve a building as an "energy system"; | | | |
| w. An update on the state of the art of sustainability techniques; | | | |
| x. New materials and products; | | | |
| y. How to improve the use of traditional ones; | | | |
| z. Installation techniques for newer materials and products; | | | |

**5.**

As mentioned in the answers to questions 2 and 4 above, the German system of architectural education is covering all fields that are necessary to stay on top of the developments in every field of design and construction. Since every single architect will build their expertise and qualification path according to their likes it is not possible to point out a single field that would need to be improved.

In general it needs to be stressed that CPD-courses at the German states' architects' chambers are monitored and (further) developed on a regular basis in order to adapt to the market needs and to reflect recent developments. This way every architect will be able to find the courses that will suit their demands best.

6. Do you need to improve your language skills to work in another language than your own? yes / no -> please see answer in box below

**6.**

Professional language courses are offered by most of the German architects' chambers of the states or their partner institutions. If German architects desire to take on a design project abroad they have the possibility to find a respective language course. However, these are mostly courses of the English language.

| 7. If you are dealing with management tasks in the company, which skills you would you need to improve competences - please rate on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)? -> please see answer in box below | 1. | 2. | 3. |
|---|---|---|---|
| a. Site and logistics management on "green" projects; | | | |
| b. Managing personnel with new - "green" – skills. | | | |

7.

Management courses with different focusses – also with focus on "green" competencies – are an essential part of the German chambers' and their partner organisations' CPD curricula.

| 8. Do you think you need to improve your competences in convincing clients of the advantages of "green" renovation solutions: (please choose one). -> please see answer in box below | Private | Companies | Public authorities |
|---|---|---|---|
| | | | |

8.

Communication courses are part of the German chambers' CPD curricula as professional and reliable communication with clients is one of the core competencies of architects and thus part of the profession's everyday work.

| 9. IT skills are becoming more and more important in your professional environment: which are the particular IT skills you feel are relevant for your profession - please rate on a scale from 1 (more frequent), 2 (sometimes), 3 (never/barely)?? -> please see answer in box below | 1. | 2. | 3. |
|---|---|---|---|
| a. Capacity to search for specific information on the internet; | | | |
| b. Using e-mail and other "general" IT tools; | | | |
| c. Using other "construction-specific" IT tools (specify); | | | |
| d. Skills on how to use e-Learning (doing courses by yourself using a computer); | | | |
| Other (specify). | | | |

9.

Mastering IT is also a basic requirement for working in the field of architecture. These are already taught at university level at the latest and are updated in self-study by most of the architects. In addition to that IT courses with different emphases are part of the CPD curricula.

10. Did we forget a question that you think is important?

Please refer to the additional BAK-Position Paper submitted along with this questionnaire.