

CHAPTER 5

SERVICES OFFERED BY PROFESSIONAL CIVIL ENGINEERS

The question asked of ECCE member organisations was “What services may be offered by civil engineers in your country?”

The aim of the question was to ascertain the degree of diversity in the civil engineering role – also to discover if there are any exceptions for which special approvals or specialist education is required.

COUNTRY

- Croatia** The following services are provided by civil engineers :
- design services for infrastructure projects (roads, railways, water supply, sewerage schemes, water treatment plants, hydroelectric power plants, dams, etc.),
 - design services (only for the civil engineering portion of design work for buildings, such as structural design, organization of work, material and work specifications, conceptual and detailed structural drawings, etc.),
 - supervision (inspection) services during realization of works,
 - project control to check fulfilment of essential project requirements, in accordance with the Construction Product Directive (Directive 89/106/EEC),
 - construction services in building and engineering works,
 - use and production of raw materials, and material testing services,
 - maintenance of completed projects,
 - scientific research in the field of civil engineering.
- They may be self-employed, employed in design offices, or employed in other types of companies.
- Civil engineers are not allowed to offer architectural design services.
- Cyprus** Civil engineers can offer various services for civil engineering works including, feasibility studies, civil engineering designs, structural designs, preparation of tender / contract documents, procurement, supervision of construction works etc. Civil engineers who have registered before 1993 can also carry out architectural designs and submit them for building permits. Civil engineers who registered after 1993 are not permitted to submit architectural designs. There is however a dispute as to what ‘architectural design work’ is.
- Czech Rep** Civil engineers can undertake the design, development, supervision and execution of all forms of construction.
- Selected activities in construction, which are of decisive significance for the protection of public interest, in the preparation, design, or execution of construction work may be performed only by persons who have a proven professional qualification obtained by examination and have obtained a professional certificate.
- Estonia** A wide range of services may be offered by civil engineers after graduation in the fields of construction, design and maintenance of buildings and structures.
- Finland** The education of civil engineers covers the whole civil engineering scope, that is to say, Bridge Engineering, Building Materials Technology, Construction Economics and Management, Environmental Protection, Highway Engineering, Transportation Engineering, Soil Mechanics and Foundation Engineering, Steel Structures, Structural Engineering and Building Physics, Structural Mechanics,

Water Resources and Water and Wastewater Engineering.

- France** Civil Engineers are involved in all steps of the construction process, so they offer services their services in main following phases:
- preliminary plans of works,
 - materials production,
 - design of works,
 - construction processes on job sites,
 - quality control of works carried out,
 - operation of works after construction.
- They also operate at any functional or operational levels in industry and in public authorities.
- Germany** There is a wide range of possibilities of services in Germany, for example: Services related to civil engineering works and transportation facilities, traffic planning services, services relating to buildings, open-air facilities, project control, experts reports and valuations, town planning services, services relating to planning load-bearing structures, services relating to thermal building physics, services relating to sound insulation and acoustics, services relating to soil mechanics, earthworks and foundation engineering.
- Greece**
- Hungary** In Hungary civil engineers may operate in consultancy, planning, expertise, as building managers, investor advisors or in public authorities.
- Ireland** In Ireland, civil engineers may offer all services **Please offer examples as with other countries – please highlight differences with other countries – what difference does it make if you are not a Chartered engineer for instance?**. The title of Chartered engineer is protected by law.
- Civil Engineers are allowed to submit “architectural” designs for building permits.
- Italy** The professional competences of the Members of the Albo are provided by law and are “reserved”.
- The Royal Decree Regio Decreto n. 2537/1925 and the D.P.R. 328/200 provide that the following competences are reserved to civil and environmental engineers (Section A of the Albo):
- 1) planning, design, development, works direction, esteem, testing, management, evaluation of the environmental impact of the built works and structures, transport and territorial infrastructures, works to safeguard soil and the depollution and the cleaning up, geotechnical works, of civil plants and systems and relevant to environment and territory;
 - 2) activities implying the use of advanced, innovative or experimental methodologies in designs, works direction, esteem and testing of structures, systems and complex, innovative processes;
 - 3) design, management and esteem relevant to works to win, transform and use materials directly or indirectly necessary to the constructions and industries, of the works relevant to transport ways and means, to communication and downflow, to construction of any kind, to machinery and industrial plants, as well as, in general, to the application of physics, geometrical

surveys and esteem.

The D.P.R. 328/2001 provides that the following competences are reserved to civil and environmental iuniores engineers (Section B of the Albo):

1. activities based on the application of science to contribute and cooperate to the activities of designing, working direction, esteem and testing of the built works, public works included;
2. designing, works direction, supervision, accountancy, and liquidation of sim0le civil constructions, using standardized methodologies;
3. direct or instrumental survey of modern and historical building and geometrical survey of any kind.

Lithuania After graduation from university, there is a wide range of possibilities of services in the areas of construction, design and maintenance of buildings and structures.

Poland Designing, building management, technological supervising, technical consulting, expertising, teaching

Portugal The services offered by Civil Engineers are defined by law but only relating to design.
A civil engineer may offer any service in the Construction sector. For example, design of structures, urban planning, hydraulics, geotechnics, construction mangement, etc.
Civil Engineers are still allowed to submit "architectural" designs for building permits, but only for small buildings. This will change in the near future.

Romania Civil engineering services offered cover a wide range of activities such as:

- drafting of projects (design)
- construction works
- supervision of construction
- quality control
- testing etc.

for all kinds of building and civil engineering work.

Russia

Slovak Rep. Civil engineers perform complex activities in design, territorial development planning and design, project management, research and development, performing site manager's duties as well as service activities. They are also involved in public and state administration, education, rural development in all kinds of services, surveying and many other areas.

For selected activities they must have e.g. authorization, i.e. proof of qualification from the Slovak Chamber of Civil Engineers by an examining board including a Certificate.

Turkey The Civil Engineering sector in Turkey has a very wide range of implementations. A graduate civil engineer can study as an academic in universities, or become an engineer in either the public sector or private sector. All divisions of civil engineering are considered, researched and applied in Turkey. Civil engineers who have graduated from university provide services as designers, implementation engineers, contractors, subcontractors, consultants, control engineer, materials engineer, researcher, etc.

Considering the distribution of civil engineers to these services; there are

mostly implementation engineers, followed by control engineers most of whom are in the public sector. The weights of other services are distributed almost equally in between.

**United
Kingdom**

Civil engineers can undertake the development, design, supervision and execution of all forms of construction both in public and private work.

For some types of work, e.g. the construction of dams or to work as an independent building inspector, a special authorisation is needed.