

EUCEET GROUP H

DEVELOPING SYNERGIES BETWEEN THE ACADEMIC AND PROFESSIONAL WORLDS

THE STATE OF THE ART, JANUARY 2009 2008

This is based on a literature survey of the reports, articles, etc produced in the Czech Republic during past period.

SKILLS SHORTAGES

[1] June 2008

Shortage of workers is threat for global civil engineering.

Shortage of workers threatens the Czech and global civil engineering as well, limits its growth and increases its expenses. Builders miss mostly civil engineering and project managers, craftsmen, specialists and contractual managers. In the Czech Republic and in the world the companies solve the problem mainly by acquiring the workers from abroad. This follows from world-study of consulting company KPMG. Positively the greatest shortage in global civil engineering is in civil engineering and project managers, claimed in about 74 % of addressed companies. In 34% of addressed companies is shortage of craftsmen, specialists and contractual managers while 30% has shortage of civil engineers. Czech President of Society of contractors in civil engineering told earlier, that on domestic market is shortage of approx. 5000 people.

[2] February 2009

In accordance with inquiry made in January and February 2009 on internet Portal Spravnykrok.cz among small and medium-sized civil engineering companies is the main shortage in the area of civil engineering in particular in civil engineering electricians, where the excess demand/supply is more than quadruplicate. Double demand is for simple civil engineering workers, joiners/carpenters and foremen. Civil engineering companies, on the other side, currently do not demand more qualified employees like engineers and site managers. In January the number of applicants in these categories was twofold. In January in accordance with absolute numbers of the Portal mainly foremen and simple civil engineering workers were looking for jobs and, and the main demand was for civil engineering electricians, simple civil engineering workers and foremen.

[3] April 2009

From year to year, the desperate call from corporate sphere sounds: we have shortage of engineers. Branches, on which the Czech Republic was proud at one time, weaken from lack of interest of young people to study engineering fields of study. In accordance with Institute for information in education, the Czech Universities enrolled this year 17.000 more students than two year years ago. However, in technical sciences the number increased only for 2.400 students. This is in spite of the fact that the technical universities tried to attract as much applicants as possible through various scholarships or sponsorships from companies. However, without any success.

QUALITY AND STANDARDS

[4] July 2008

Shortage of time to elaborate high-quality design documentation, limited financial means, poor choice of contractor of civil engineering works and supervision (in many cases the supervision is made by the contractor himself) are the main roots of low-quality structure execution. If the risk factors are cumulated, the malfunctions may be forecasted with the greatest probability. Therefore, the new concept of quality management and quality assurance is necessary, because the current management is often insufficient. It is inevitable to project the revolutionary economical changes into system of education, namely through open credit courses, possibly in cycles of CPE (continual professional education), and professional seminars. Recently, for example, in German universities have arisen

departments focused on new models of company and site management and civil engineering technologies. In the Czech Republic little attention is devoted to such questions in the contemporary curricula.

THE ROLE OF GOVERNMENT

[5] May 2009

At present we can see that the current graduates, mostly from universities, are different from former ones. They are more independent (usually they were employed during their study), self-confident and courageous in the sense to take a risk. However, what they miss, and it is not their fault, are abilities to assert oneself in real operation and quick adaptability for a work in the company. The roots may be found in several principal fields. The university professors are frequently separated from practice. Either they did not work in real surroundings at all or left it long ago. They know modern theories, new materials and technologies but they can not pass on to the students the experiences from practice. Even the content and extent of the courses does not correspond to demand of practice in the full. The graduate of a university should be prepared for a job in various technological plants. Monothematic education and perfect knowledge of strictly limited discipline only complicate their use in practice. What miss the graduates? They have nearly no preparation for communication with people, managing of work teams, ability to acquire natural authority due to knowledge, they have little knowledge about law, practical economy from the view of pricing and financing of construction and little knowledge about criminally legal consequences of some negligence acts. Another important thing is to speak about bachelors. Accordingly to law, they are university educated people. However, their use in practice is very limited which is clear from little contractor's interest to offer them a job.

[6] April 2009

The Czech Universities miss 1.500 millions CZK, redundancy is threatening. Government owns to the Czech Universities 1.500 millions CZK for their educational activities. In case, the Government does not succeed to settle the debt, rectors will have to start economize. For example, they will fire employees or lower expenses for technical operations. It means to lag behind the world in technical equipment, told Rector of CTU in Prague. The proposal of Ministry of Finance for this year was initially intended with deficit of 2.500 millions CZK.

THE CURRENT ECONOMIC CRISIS

[7] February, 2009

Today the Czech Statistical Office published last year results which looks in the flooding of bad numbers, for which the economy starts to be used in the last period, as pleasant surprise. In spite of the fact that in 2008 there were less civil engineering contracts, their value was 17.4% higher in comparison to 2007, altogether more than 309.000 millions CZK. However, analysts raise a finger with warning, because the economic crises does not avoid not construction sector and the accomplished projects are rapidly decreased. Results of civil engineering sector are good especially due to public contracts. Their amount was interannually higher nearly for one half and amounted for 182.000 millions CZK. On the other side, in accordance with bank analysts, the contracts for construction of apartments and commercial buildings direct sharply down. After years of massive construction of apartments and commercial objects a recession and slump is coming.

Demonstration of crisis in civil engineering sector may be illustrated by results from last quarter. There are 27% less contracts for new flats. Even worse is situation in contracts for non-dwelling industrial contracts, where the fall is 44.7%. The slump is mainly in more demanding structures of traffic infrastructure. In comparison with the last year's contracts the average value of the new ones has been increased for more than one third, to 4.3 millions CZK. Especially the public contracts are noticeably more expensive. In the last quarter their average value was 9.3 millions in comparison to 2.5 millions in private sector.

[8] March 2009

The economic crisis in the Czech Republic decreases the number of contracts, especially from private sector. This was confirmed from an inquiry among the leading civil engineering companies. It has to be said that only 2 years ago the contractors had to refuse the new contracts because they did not kept them up due to construction boom. In the competition some of the companies were said to underbid the prices, to be under the real spending. Such approach may result in relatively short period to not paying to the first contractors with following bankruptcy of these companies. Contractors are also afraid of postponing or even stopping of some contracts. Economic crisis may supposedly lead some companies working mostly for private sector to public contracts. At the same time to accept smaller commissions, which were formerly not attractive. The last year global civil engineering works in the Czech Republic according to Statistical office increased for 0.6%, what means the lowest increase from year 1999.

OTHER POINTS TO INCLUDE

[9] August 2008

Opening market of European Union to authorized persons (chartered engineers) is without doubt the basic problem to be solved by the Czech Chamber of Civil Engineers. This belongs to the primary activities of the Chamber. One of the big debts of the Chamber to its members is a fact, that authorized person is not accepted in e.g. German speaking countries and on the other side the market of the Czech Republic is relatively open to foreign persons. The Chamber itself can not solve the whole problem of closed or open job market of EU, but at least could prepare for its member meaningful information on current situation. The colleagues from abroad should be involved, especially from Germany, together with governmental deputies to discuss this situation, because it is non-correct to all our authorized persons.

BILIOGRAPHY

The above was based on the following articles and commentaries:

- [1] iHNed.cz (electronic newspaper), 16. 4. 2009
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- [4] Stavebnictvi (Civil Engineering), No. 7, 2008
- [5] Stavebnictvi (Civil Engineering), webpage, May 2009
- [6] CTK (Czech News Agency), 16.4.2009
- [7] CT24 (Czech Television), 26 February, 2009
- [8] iHNed.cz (electronic newspaper), 16. 3. 2009
- [9] Stavebnictvi (Civil Engineering), No. 8, 2008