Public consultation on the preparation of a Communication on the Sustainable Competitiveness of the construction sector and its enterprises

Key Challenges for the construction sector operators

**Market and Investment conditions**

Considering your experience and feedback from your sector, do you think that the financial and economic crisis will have a long term impact on the structure and operation of the construction sector in general or specifically in your sector, in particular due to more stringent access conditions to capital and credit? If so, what do you think this impact will be?

- Both public and private clients were affected by the economic downturn. - The industry is struggling with uncertainty about the future of major public and private projects. - Engineering consultancy firms are moving into new strategies: they use ‘new’ delivery methods in response to the clients’ focus on better use of their budgets, and search for reducing project costs and risks (cf. PPPs). They also now offer a broad range of services across the project/value chain, often including facilities management and service delivery. New delivery methods combine project management, design and engineering, or financed design and engineering. - Some firms (SMEs) enter into niche areas and develop partnerships and short-term alliances with other project partners. - Large firms are moving into countries such as China, the Middle East, Russia and Brazil, as well as other parts of Asia. - Many mergers and acquisitions in the European engineering consultancy industry and at the same time US companies are buying strategically as they move into Europe. - Competition is growing for engineering consultancy firms as traditional markets shrink and new suppliers of engineering advisory services enter the market (e.g. universities). - Fierce competition is leading to abnormally low tenders and shortened delivery periods. - Slow payment and non-payment of invoices is continuing to cause cash flow issues. - Lack of access to affordable credit and downward pressure on fee levels.

What is your experience with national recovery measures on the redeployment of the national labour market and the creation of new business in the construction sector? What can you say about the implementation and the impact of these measures with respect to the objectives of the EU recovery plan?

The economic crisis and national budget deficits have a significant impact on the engineering consultancy markets (considerable downturn of public investments). Some firms (continue to) face dramatic staff reductions whilst staff is stable in others; the Irish industry saw a loss of talent.

In your opinion, how are construction enterprises in general and enterprises in your field in particular adapting to changing conditions related to the labour market, the demand and urban, environmental and demographic concerns? Please give specific examples if possible.

- New sectors are emerging, driven largely by sustainability and climate change issues: sustainable cities, climate adaption, renewable energy, water, health, transport, and leisure and tourism. Firms are diversifying; others are targeting fewer and growing sectors. - International opportunities are opening up especially in countries with strong economies and substantial population growth. These opportunities are generally being absorbed by the larger engineering consultancies which are better able to deal with barriers for foreign expansion, including the amount of time such a process may require. Acquiring or subcontracting local firms, or opening offices with local staff, is a faster route to understanding local culture and regulations, and developing local contacts and networks. Smaller companies have fewer options - one of which is recognising their specialisms could be attractive to consortia working on large foreign projects. - Firms are looking to Eastern Europe and further afield for low-cost technical skills (e.g. Egypt or India).

Do you consider that they are sufficiently adapting to these changes? Please specify.

The five main responses to the current environment, by engineering consultancy and architectural firms are: • Specialising - developing added value services and promoting themselves accordingly• Merging/acquiring firms - to gain economies of scale, new knowledge and skills, sector or country knowledge • Collaborating - with compatible and complementary companies, formal or informal networks to improve capacity • Cutting costs - developing efficient protocols and/or competing on price• Closing

Is there any particular construction market where you see possibilities for a faster development of “greening” the market?
- Replacement and upgrading of infrastructure, including new transport networks capable of bridging gaps
- Building of smart grids for energy distribution
- Environmentally friendly systems for the disposal of waste
- High quality, deep energy renovation of existing buildings
- Adaptation to the consequences of climate change

**Human capital**

In your opinion, what is the overall situation regarding the recruitment of qualified staff?
What specific challenges would you raise for the enterprises in your field?
- Skills shortage: need to re-orient resources to education in Science, Technology, Engineering and Mathematics
- Demographic change: future scarcity of workers in the field of science and technology due to a relatively high outflow from the labour market
- Need for more emphasis on generic competencies like adaptability, creativity, communications and entrepreneurship in engineering education

What are in your views the priority areas that should be addressed in order to develop a better qualified, competitive and innovative management and workforce in the construction sector in general and enterprises in your field in particular?
- Design skills for high performance systems
- Management skills for internal processes
- Social skills & behavioural demands
- Teamwork skills with all construction/project actors
- Business skills for external processes
- Communication skills & languages

Where do you see new job opportunities expanding in the construction sector in general and enterprises in your field in particular?
Engineering consultants have a particular role in the context of sustainability: they have the competences to act as advisor to awarding authorities/clients in relation to sustainability guarantees, independent from the building’s operator and with due respect of the society’s long-term demands

**Regulatory environment**

Could you identify domains in construction that would require a better coordination between national and EU regulatory instruments (i.e. laws, standards, labels, certificates)? Please provide some examples and explain why you see gaps/overlaps in terms of rules definition, interpretation and enforcement, especially with respect to sustainable development objectives?

Major problems relate to the differences between member states’ legislation on liability and national insurance market conditions. Another concern relates to the national transposition of Directive 92/57: substantial differences exist between responsibilities of consulting engineers that are set out in member states’ national legislation. Moreover, the role of the designer in relation to application of the Directive is not clearly defined.

Do you see different framework conditions between the access of EU enterprises to international markets and the access of non-EU enterprises to the EU Internal Market in the construction sector in general and enterprises in your field in particular? Which main problems have come to your attention?
- Third countries such as Mexico, Brazil or Chile require tendering through a local company (subsidiary).
- Third countries such as Panama, Peru or Colombia do not have barriers for the tendering of international firms, but companies need to be registered in the country. In some cases their legal framework could entail restrictions for international firms. For instance in Panama there is a legal requirement for a company with a public contract not to have more than 10% of its staff from foreign countries.
- USA: Buy America Act provisions, small business set-aside schemes and lack of transparency related to sub-federal procurement opportunities.
- China: complex legislation, exclusion of important sectors and poor coverage of services, domestic preferential treatment
- Other problems: restrictions on export of money, divergences in tax systems.

**Demand for sustainable construction**

Do you think that national performance assessment methods and certification tools should evolve to address construction works performances in an integrated manner and at the same time be useful to a wider range of projects (i.e. not only for large representative projects, but also for smaller construction works)?
Certification and labelling systems are primarily information instruments, benchmarking the performance of construction works. Such labelling schemes may promote ‘greener construction’. Various assessment methods exist and are used throughout the EU member states; integrated building performance assessment and certification tools need to address areas/distinct/cities (and in relation to infrastructure performance) and also existing buildings/infrastructure and integrate life cycle costing and global performance assessment. There is a risk that such integrated building performance assessment (“building global performance”) by some actors in the supply chain (e.g. operators) is not in line with the required benefits in the long term. An integrated lifecycle approach is taking into consideration the design, construction and operation & maintenance phase of the building; the engineering consultant’s impact on the performance of the building during the use phase is limited; FIDIC’s Project Sustainability Management concept is considering a broad range of sustainable performance goals in relation to the local circumstances of the project; whilst engineering consultants incorporate absolute and theoretical sustainability goals (zero impact) they relate these goals to local circumstances of individual projects; the client’s and the engineering consultant’s goals and objectives (design phase) do not necessarily correspond with the operator’s interests (operation and maintenance phase). Independent expert advisors’ control of the building performance during the use stage is therefore relevant and important.

In your opinion, what are the main obstacles/issues for construction enterprises to meet the Green Public Procurement criteria in the coming years?

- Lack of knowledge and coordination/harmonisation/integration of criteria and methodologies; - The clients’ fragmented/restrictive views on sustainability criteria / performance requirements; - The service providers’ competition in prices, the clients’ lowest price-based award instead of considering a selection process with more emphasis on quality and life cycle cost approach; - Culture and knowledge gap among construction firms (small and medium sized enterprises face difficulties to improve their ‘green’ capacities); - Lack of common sustainability definition and metrics; - Lack of common LCC methodology; - Lack of private and public investments.

What is your experience with the use of European Structural Funds for energy efficiency investments in buildings, particularly in the residential sector, for infrastructure and for measures in support of the competitiveness of construction enterprises? Have you got any views on how the use of these funds could be improved to even better meet the needs of the construction sector?

- Create a better understanding for the complex and complicated interactions between building/construction performance, infrastructure performance and city-structures etc; - Continue to develop systems for energy production, transmission and usage at city, district, and building levels - not at least urban energy systems.

Other possible challenges

Do you consider that there would be other major challenges for the construction sector not addressed in the previous questions worth pursuing at European level? If yes, please specify the context and the main issues that should be tackled in your view.

- The construction sector is highly fragmented along national borders and each country has its own distinct customs, regulations and practices. This results not only in a poor competitive performance but also presents a barrier for international activities. However, value chain integration through the adoption of common EU sustainability standards would substantially help construction companies to improve their performances; - The EU should promote the use of life cycle concepts/methodology as important drivers and in particular support SMEs to uptake a life cycle approach. - Politicians do not demonstrate responsibility for long range maintenance of the value and functionality of buildings and infrastructure: proper operation and maintenance are no priorities; - Need for an integrated and holistic approach; - Need for teamwork and partnerships in the sector to bring together various disciplines and skills; - Need for a process approach (bundling the stages of the life cycle of construction projects).

Policy measures

**Improve the human capital of enterprises according to the changing demands, technology and management methods especially for public-private partnerships**

Regarding the capacity of construction enterprises to cope with the issues mentioned above, what should in your opinion be put in place to strengthen the dialogue and cooperation between construction stakeholders and vocational education and training
Institutions, at national and regional levels? Please specify the mechanisms that could improve the dialogue and cooperation.

- Strengthen cooperation between educational institutions and industry (including professional organisations)
- Organise science fairs, ‘open day’ events, visits to major projects to demonstrate the contribution that engineers make in advancing technology and improving lives

Do you think that the EU and/or national/regional administrations should develop policy frameworks to support these mechanisms? What would be the main lines of these frameworks?

- Ensure high quality educational content
- Engineering programmes must nurture practical skills that answer the needs in labour markets
- Design appropriate resource allocation
- Develop ICT-enabled learning opportunities and conduct engineering courses based on open-sourced engineering building blocks

In the field of Information and Communication Technologies (ICT), do you think that specific initiatives could support a more rapid uptake? If yes, please specify.

Cf. 2.1.2 ICT-enabled learning opportunities

Looking at existing initiatives already launched by the European Commission such as those mentioned above, should equivalence systems for skills acquired in continuous vocational education and training be further promoted for the construction sector in general and enterprises in your field in particular? If yes, would you consider specific professions/domains?

Equivalence systems need ensure comparability of qualifications; In order for the industry (employers) such ‘competence grid’ should be user-friendly, reliable, transparent and up to date. However, major obstacles are the different professional organisation structures, national regulatory regimes for engineers and current national (political) sensibilities.

Do you think that the European Commission and Member States should further encourage the development of skills and competences for performance based contracts, life cycle costing and Green Public Procurement criteria? Could you suggest any initiative that could support this development? What would be the respective role of the European Commission and of the Member States in the implementation of the initiative?

Yes, in particular resources should be dedicated to support the development of tools and training in public procurement methods so that life cycle costs are evaluated and long term perspectives included.

**Increase the capacity for innovation and exploitation of technological developments**

In your opinion, what could be put in place in order to better coordinate the various mechanisms supporting research and innovation and ensure that future EU and national research programmes well address the main issues and challenges of the construction sector in general and enterprises in your field in particular?

- Focus research on bringing together various stakeholders in the construction projects to integrate and implement technological developments;
- Reduce the sustainability knowledge gap between clients, consultants, researchers and policy makers (better dissemination of research & development findings).

Would you consider demand side instruments supporting innovation (standardisation, labelling, certification, etc.) as a possibility to strengthen the exploitation of EU research? What would you suggest to improve the functioning of the existing instruments and initiatives in relation to the market concerned, e.g. new construction or renovation?

- Introduce regulatory instruments and research initiatives relating to sustainable renovation of existing buildings
- Include a dialogue between clients and potential bidders in order to incorporate life cycle considerations in the procurement process (with adequate protection of intellectual property rights)
- Adopt a broader and inclusive thinking about ‘innovation and sustainability’ to include three dimensions: performance contribution, surrounding community considerations and pathway contribution (i.e. effects on sustainability that are beyond the boundaries of a certain project)
- Connect energy efficiency standards and methodologies to other sustainability criteria such as health & safety, risk and accident factors etc.
- Increase R&D investments to develop the sector’s innovation capacities

**Manage efficiently the coherence and application of various legislations and regulations at European and national levels**
In your view, what are the specific cross-cutting issues amongst various EU legislations in fields such as the Internal Market, energy, environment, health and safety at work and Public Procurement that could require clarification, interpretation and better coordination with respect to their application to construction?

**Definition of sustainable development, LCC methodology, common indicators for assessment and measurement of environmental/sustainability performance of buildings, green standards (versus commercial rating systems and labels).**

Which mechanisms would you suggest to reduce disparities in the enforcement of European legislation affecting the construction sector at national and regional levels? In your opinion, is there any legislative domain that requires specific attention in these mechanisms and how would you monitor and assess the efficiency of these mechanisms?

**EC implementation guidance to member states**

Do you consider that there should be an EU initiative to reinforce the usage of European technical specifications (i.e. technical standards) in national construction regulations/codes/guidelines and public procurement, in particular for Eurocodes? Could you describe the main features of this initiative?

No

Should research in support of European standardisation be further promoted and which areas would benefit most from more support?

**Areas:** specific methodologies (e.g. urban planning), BIM (Building Information Modelling).

**Improve the harmonisation of different existing instruments based on life cycle approach for the assessment of the sustainability performances of construction products and construction works within the context of public procurement**

What would you propose to improve coherence between different existing instruments with respect to their application to the construction sector in order that they become more operational?

- Improve inter-institutional and inter-departmental consultation and coordination
- Balanced and integrated sectorial and public consultation;
- Sufficiently analyse and quantify likely implementation problems in the field and for the sector(s) involved and invite feedback from the sector(s) and public
- Develop quantitative LCC indicators and metrics;
- Develop a global/European harmonised LCC methodology and related indicators

Amongst existing instruments, which ones do you see the most effective for the construction sector? Please specify according to the market considered.

**Growing general awareness and increasing level of knowledge.**

If you consider that existing instruments are not effective enough for the construction sector, would you propose new instruments? Please specify according to the market considered.

- Exemplary demonstration projects
- More research, analyses and easy access to relevant knowledge, harmonisation of labels, standard, regulation, programmes, routines, procurements etc.

Do you think that the recourse to European Structural Funds for construction projects should be conditional to more ambitious sustainable development criteria than today’s practice? Please specify the domains of particular relevance and the type of criteria to be developed.

- Sustainability goals are linked to a range of the client’s performance requirements, community considerations and also local conditions; Projects cannot be driven by a single concept (‘sustainability’); there may be various approaches to define how the intended project outcomes/results can be achieved

**Ensure fair treatment in matters of competition**

According to your current experience, do you consider that it is necessary to have in the short term a monitoring of the practices regarding the access of non-European enterprises to construction public procurement in the EU? If yes, which criteria would be used for this monitoring?
Ensure effective control of (a) use state aid at home (including state guarantees), (b) compliance with social and environmental standards, (c) respect of legal rights like intellectual property

Do you consider that there are specific initiatives to be undertaken to guarantee a proper assessment of potential presence of state aid elements both in public and private developers projects? Please give the context and the type of initiative to be possibly undertaken.

Yes, effective control measures should be developed at national, European and global level to restore a level playing field.

**Meta Informations**

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