



Design central to sustainability – role of consulting engineers needs more recognition

Best Kept Secret

Commenting on the interview with colleague Kari Harsunen, EFCA President Flemming Pedersen (Chair of Trustees for the Danish Rambøll Foundation) said "Above headline is often used to attract people to exotic travel destinations, but regrettably it also applies to consulting engineers. Few people seem to know that consulting engineers are advisers to their clients as would lawyers or architects. Apart from offering solutions, designing and managing projects, engineering companies endeavour to optimise projects with a view to delivering best value services to clients." Engineering consultancies provide €150 billion engineering consulting services per year in Europe for about €1,300 billion investments in buildings, infrastructure and industrial complexes."

"Our intangible, knowledge-based services" he continues "are preceding any road works, electricity grid, factory or urban mobility plan, but hardly anyone knows that these are designed by consulting engineers. I trust the interview with Kari will contribute to shedding light on the services that we provide and unveil some of the secrets."



Kari Harsunen

Massive change is taking place in the construction sector. Climate change, population growth, resource scarcity offer complex challenges while new technologies, new business relationships, new ways of thinking are emerging to help create innovative, sustainable solutions.

At the centre are consulting engineers, still partially hidden in the design phase of large building or infrastructure projects but, with their tools of creativity and imagination, slowly becoming the new leaders for creating a more sustainable society.

"We have always been there, at the hub of national and municipal projects," says Kari Harsunen, CEO of the international consultancy firm SWECO Industry (Finland) and Board member of the European Federation of Engineering Consultancy Associations (EFCA), "but our role needs to be much better

acknowledged. If we want to have the best technical solutions to make our lives and our cities more sustainable then we need consulting engineers fully recognised."

He calls on EU politicians and officials to take the time to understand the way the industry works, and how the independence of consulting engineers is crucial for developing the best sustainable solutions. He wants better recognition within the regulations and directives that govern public procurement of the quality aspects of these intellectual services.

Unfortunately for the sector, out of sight is sometimes out of mind. Consulting engineers have often been invisible for those outside the industry and this can affect their contribution. "We have somehow been the 'hidden heroes' of the construction industry," says Mr Harsunen, "not well seen, working behind the scenes, but creating state-of-the-art engineering solutions".

"People think roads, bridges, factories, even power plants just come," he continues, "they see someone delivering machinery and someone else doing the construction work but no-one sees the design phase."

Independence

"We are not economists or politicians," he says, "we are not solving all problems faced by society, but we are creating the most sustainable technical solutions." And our independence, he argues, makes us best-placed to do so.

"Machine-makers, for example," says Mr Harsunen, "cannot take all aspects of sustainability into consideration because the company also needs to make money. We need to make money too but we do it by creating the best solution for society, not for business. This might seem a slightly difference but in practical sense", Mr Harsunen says, "it is huge."

EFCA stands ready to assist developing quality criteria

For years EFCA has been advocating and promoting the introduction of quality criteria in public procurement. Delivering best value procurement to clients is the concern and ambition of engineering consultants. This is now also reflected in the new Public Procurement Directive 2014/24/EU which is breaking a lance for the introduction and use of criteria other than price.

Conscious of the significant economic leverage of public procurement and the opportunity that Directive 2014/24/EU provides to include quality in the competitive procurement process, EFCA is seeking to enhance the use of the MEAT criterion and promote a practical approach. One way of simplifying the introduction of quality criteria in public procurement would consist of introducing a standardised price/quality ratio assessment. The overall challenge is to standardise the points of quality and price in order to obtain the intended weights materialised in the evaluation. Variation in price and quality must be taken into account as to reach an unbiased evaluation.

Quality procurement has many facets. The introduction of a European methodology for Life Cycle Costing (LCC), in the spirit of article 68 paragraph 3 of Directive 2014/24/EU, would also substantially contribute to sustainable and quality public procurement. Our technology based intellectual services industry is a champion of LCC and is therefore keen to assist the Commission in developing a LCC methodology should the occasion arise.



www.efcanet.org

Responding to the needs of a whole society has led many consulting engineers to recruit social scientists, economists, lawyers as well as engineers, architects and environmentalists as their remit has deepened and broadened. Assessing needs and designing technical solutions also means understanding different sectors and building multi-disciplinary relationships to ensure much more sustainable projects than in the past. This is not a role that can be easily sub-contracted to the lowest bidder.

Cost of quality

Cost is a major award criterion in procurement regulations and practice. As society's problems become more of a challenge and solutions become more complex, the quality aspects of design engineering become more important, not less. Cost will always be a major factor, but a project proposal should be assessed on life-cycle costs not just those of the initial construction, and reflect the high quality, creative inputs of design engineers.

"The EU needs to defend its engineers," says Mr Harsunen. "We are no longer machine-dependent, we don't have to answer to the big construction companies, we are free to seek the best solution for society as a whole. Our highly skilled workforce is the result of a long history of learning and development and our creative abilities are still second to none."

Leaders not followers

The sector is at a cross roads and needs to regroup. Mr Harsunen admits that Europe's historical lead in engineering technology has lessened in recent years: "but we are now looking more broadly and taking in all aspects of engineering not only the technical," he says.

Digitisation is the biggest change - intelligent roads and bridges, machines that talk to each other and new digital modelling and planning systems are all coming. "In another 20 years we will see them everywhere," he says. "There is a complete change coming and we are just at the beginning. We should be preparing to be the leaders not the followers."

"That's why it makes sense for us to look in the mirror a little more often," he continues, "some engineers would rather stick to 'we've always done it this way' but the world has changed around us and the solutions of the past may not be the best for the future. We must all embrace new perspectives and new ways of thinking."

"Young people can easily do this," he says, "they have grown up in a digital world, it's natural for them."

Appealing career

The image of engineering has recovered from the recession years when would-be engineers were enticed by higher salaries in sectors like law and banking. Offering a chance to be creative, innovatively solving problems in response to the very human needs of our cities makes it an increasingly attractive career choice, particularly with the independence enjoyed by many consulting engineers. Working with the Higher Education sector, especially in the Nordic countries but actually all over the EU, is strengthening this momentum. It is also increasingly available to women: "They use their feelings, their social perspective and are fantastically creative," says Mr Harsunen, "we need more of them."

CONTACT

EFCA secretariat
Avenue des Arts 3/4/5, B-1210 Brussels
Phone: + 32 2 209 07 70 | Fax: +32 2 209 07 71
email: efca@efca.be | <http://www.efcanet.org>

EFCA has member associations in 24 countries, and is the sole European federation lobbying on behalf of engineering consultancy and related services, a sector that employs around one million staff in Europe. EFCA contributes with a strong and cohesive input to legislative actions of its national associations on issues affecting market conditions. Furthermore, the organisation works as a Europe-wide platform for national associations and their member firms to gather relevant facts and discuss issues with their counterparts.