

Dialogue needed with software developers and new data policies

The European Federation of Engineering Consultancy Associations (EFCA) and the Architects Council of Europe (ACE) sent a letter to the European Commission in June 2021 in support of the FIEC position paper (on the relationship between users and software companies/editors/service providers dated 24/02/2020), outlining the uncertainties concerning securing intellectual property and access to and ownership of data.



Benoît Clocheret

The letter drew attention to the current legal framework for the EU which is considered complex. The EFCA and ACE will propose clarification of current EU legislation on the design community's concerns regarding data ownership, transferability in the event of changes to software services, control over the data and unfavourable licensing agreements.

Commenting on the correspondence with the Commission, EFCA President Benoît Clocheret said that "consulting engineers, architects and software developers have an essential role to play. Communities and countries are facing huge challenges in terms of climate change, an aging population, urbanisation, strained financial resources, and major needs for investment and better maintenance of public buildings and infrastructure. Digitalisation tools coupled with our members' expertise will be key to finding and developing intelligent and cost-effective solutions. However, there is a need for a more constructive dialogue between the consulting industry, architects and the software industry, to achieve sustainable solutions for all parties."

Universities called to fill the breach in education on circular thinking

The adoption of a circular economy, where resources are used and re-used and the natural environment is a project component not an afterthought, must be better supported by academia and the education sector if consulting engineers are to use more of its innovative concepts in building and infrastructure.

A lithium mine in Serbia forced to delay plans because of environmental protesters, a mayor in Paris restricting the use of cars and developing the '15-minute city', or builders using repurposed 'waste' as cladding, all illustrate that elements of the circular economy are already taking root. The sector is on the right track, according to EFCA committee members, senior engineers Branislav Simovic (representing Serbia and Balkan states) and Despina Kallidromitou (Greece), and senior architect and urban development specialist Elisa Maceratini (Italy). But the transition, they say, is too slow. They are insisting on a stronger legislative framework and a bigger effort by the education and research sector to push it forward.

Companies want to know more

"In the Balkans we have good communication with engineers in Western Europe and knowledge is getting transferred," says Mr Simovic. "We have organised courses and seminars to educate people in the circular economy. We've had good interest from local communities, not only in Serbia but also councils in Macedonia and Montenegro, helped by colleagues in Slovenia where they have a sound roadmap. The rest of the region should be following this. But it's still too limited. In Montenegro we have 55 companies in our association wanting to know more, and that's not enough.

"In lithium mines 80% of the waste could be used in construction – building factories for example. Countries like Australia, Canada, the USA and Germany are already looking at this," he says. "For me, that is the circular economy working."



Branislav Simovic



Elisa Maceratini

Ms Maceratini sees a generally low-level uptake in Italy. "Italy didn't develop a proper legislative framework for the circular economy," she points out. "But it has adopted a national strategy for resilience. Some cities have municipal policies for material re-use, such as Genoa and Milan. The private sector is involved but it is still difficult to adopt the circular economy in practice without that framework. And without greater awareness as to what it all means.

"The sector is not so engaged and we are just starting to develop guidelines. We face lots of challenges because of the level of change needed. That's why we need to bring in the educators and academia. We need to start from the beginning: thinking and building theory."

Concerns were reported by the industry regarding essential software being sold as bundles containing unused applications and licensing policies that are changing from multiuser to single/named users, which contribute to an increase of license costs besides additional administrative costs. "Direct and indirect engineering software costs are rising annually at a vastly higher rate than general industry price indexes", Mr Clocheret explained. "With software costs in some cases rising to up to 30% annually, software costs have in fact become the second largest expenditure in many engineering consultancy firms, surpassed only by staff salary costs." Regarding price hikes of software with only a few months warning, Mr Clocheret emphasised that "the industry requires financial predictability. Many projects last years rather than months."

Some regions have been subject to different license prices in certain cases, Europe facing substantially higher rates compared to the United States. Mr Clocheret pointed out that "equal business terms should be provided to different regions with similar economic climates."

As part of the digital transformation objectives set by the European Commission for 2030, new rules were adopted on 23 February 2022 regarding the access to data generated within the EU. The adopted Data Act defines who creates value from data and under which conditions. Mr Clocheret welcomed potential benefits linked to the adopted Act, stating: "the adopted Data Act includes measures which assist SMEs against contractual abuses in data sharing contracts, improves the conditions on using cloud and edge services in the EU, facilitates the transfer of data between service providers and protects data held in the EU from unlawful access by governments outside of Europe." As regards data ownership, Mr Clocheret however stressed the importance of the adopted legislation in guaranteeing the protection of data, "the obligations imposed by the Data Act must protect the data owner and apply only insofar these are compatible with international agreements on the protection of intellectual property rights."

The adopted Data Act can be consulted via this link: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0767>

EFCA has member associations in 28 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.

Regulation and incentives

Ms Kallidromitou sees some EU companies able to identify lost value under 'business as usual' and recognise a circular approach can be good for business. "Performance goes up, project costs go down, resource flows are eased, and there is more potential revenue in a circular economy," she says. "It offers businesses profitable services and ultimately leads to more sustainable cities."

There may be a willingness to implement the changes but, according to Ms Kallidromitou, the vagueness surrounding the concept is creating a barrier. She agrees that much information and social infrastructure is still missing, and incentives are few. "We need large up-front investments to achieve benefits at some point in the future, and we need regulation to encourage circular design. Not all builders are aware of circular design principles or their importance."

Although it is possible to save €350 billion through resource and energy savings by 2030, she continues, "there are a lot of stakeholders involved, in many complex supply chains each with their own environmental impact and costs. The sector is characterised by strong project-based institutionalised practices and market mechanisms, which don't always facilitate the inclusion of circularity principles."

It's a real 'issue', adopting the circular economy in practice, according to Mr Simovic. "We only started a couple of years ago to use BIM¹ in the Balkans and that was for large infrastructure projects financed by the World Bank or European Investment Bank (EIB). Nowadays we are thinking about using it for residential areas. We need the universities on board but we also need supporting legislation, and we need incentives."

'Circularity' standards for building products

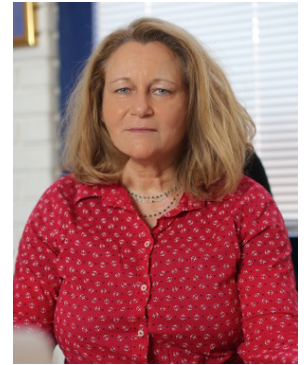
EU building standards are already being strengthened to better address climate change by upping the focus on life-cycle thinking, for example. However, recent changes mean there will soon be harmonised standards relating specifically to sustainable development goals (SDGs) and the circular economy which will facilitate change at the international level. Construction products will also soon be clearly assessable for their 'circularity': their effect on biodiversity and their economic and social performance, as well as their use of energy, resources and waste.

The growing energy crisis has served to push efficiency to the fore. "It's a challenge for Europe as it tries to decrease its reliance on external resources," Mr Simovic points out, "but we are being pushed in the right direction. The European Investment Bank and World Bank are pumping money into the transition in the Balkans. They are focussing on big infrastructure projects." Through EU Green Deal major investors are also ready to spend.

"Big companies are listening to the people," he says. "Even in Serbia where technologies are not as advanced as in Western Europe, people are getting more educated about harm to the environment. Its time for smart thinking and smart engineers."

Local governments have an obligation to develop the circular economy, financial institutions are placing conditions on their funding, the EU is establishing circularity standards, and people are in the streets demanding no more pollution. "All we need is a 'circularity' culture in the construction sector," says Ms Macerati, "and a bit of support to get there."

¹ BIM is a digital design tool shared in real-time amongst project partners – creating huge amounts of data and massive efficiency drives.



Despina Kallidromitou

