



General Assembly GA20/2

Summary of the ACE positions developed by the ESA WG since 2013

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Most people in the EU spend approximately 90% of their time in buildings and 100% in the built environment. Buildings shape social and cultural constructs and affect the health, well-being and productivity of people. Buildings also account for over 40% of EU carbon emissions, while half of all raw materials and a third of all waste in the EU is construction related. A large part of this is determined during design and it is imperative that architects are empowered to improve decision making in the sector.

Addressing the Climate and Biosphere Emergency requires urgent action to establish a financial, regulatory and research framework that:

1. Embeds **feedback and the validation of achieved performance** in use at its core to accelerate innovation and to facilitate accountability for quality and performance;
2. Tackles **impacts and promotes benefits across the entire life span** of buildings and components to ensure that lifecycle impacts can be fully considered up-front;
3. Recognises the creation of **social, economic and environmental value** as fundamental to achieving a step-change in the performance of the EU building stock.

Based on feedback from ACE members representing over 562,000 architects in Europe, ACE advocates the following actions:

CREATE SUSTAINABLE VALUE THROUGH ARCHITECTURE: Reducing the consumption of natural resources, while increasing the economic and social value of buildings is the imperative of our times. The energy and environmental performance of new buildings and renovations relies on the expert integration of spatial, material and technical solutions that is led by architects. As a regulated profession, practitioners in the EU have to follow high standards of ethics and maximise the long-term resilience as well as the cultural, health and productivity benefits of buildings. It is this value creation that drives the long-term sustainability of buildings, yet it is also the least recognised aspect of building performance.

Aligning stakeholder incentives to support holistic value creation is a major challenge for the highly fragmented buildings sector. It is widely acknowledged that the regulatory framework for the built environment must make whole life impacts as well as benefits more explicit for these to begin to translate into value. To this end ACE calls for:

- ⇒ **A broader definition of building performance in line with the 17 UN Sustainable Development Goals**, which includes accounting for both the resources consumed and the value created in terms of societal and economic well-being.
- ⇒ **The recognition of the power of high-quality architecture** as a means to re-cast our relationship with the natural world. Greater priority should be given to research and investment focusing on the role of the creative arts and design in the social, economic and environmental transformation of the built environment.
- ⇒ **The creation of a Sustainable Buildings Directive** to legislate for a more holistic approach to sustainable buildings that empowers the sector to effectively target whole life environmental performance enabling the transition towards circularity.

REDEFINE THE TERM BUILDING PERFORMANCE TO INCLUDE A BROADER AND WHOLE-LIFE APPROACH: There is an increasing body of scientific evidence showing a need to define



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'building performance' as the use of natural resources for the creation of environmental quality, resilience and value. Considering environmental impacts beyond energy consumption over the full life-cycle of buildings is essential so that designers can balance the multiple and often conflicting factors driving building performance. To prevent impacts being transferred to less reported areas, the role of regulation is to require minimal reporting to maximise benefits, i.e. to use indicators that are transformative. 'Clever' indicators can empower architects to re-design the interface between the built environment, its enabling technologies and its occupants.

Studies already show that a lifecycle approach tackles inefficiencies across the supply chain and can save substantially more carbon compared to targeting operational savings only. To deliver 2050 targets new buildings and refurbishments should already be net zero, so all opportunities for saving carbon emissions should be followed up.

⇒ **ACE therefore calls for a greater acknowledgement in future sustainable buildings legislation of all five pillars of building performance, namely:**

- Reducing the consumption of non-renewable resources and protect the environment;
- Improving indoor environmental quality including indoor air quality, thermal comfort, daylight, acoustics, biophilia;
- Raising occupant satisfaction including occupants' health, wellbeing and their perception of building functionality, adaptability and accessibility and how the building meets current and future needs;
- Reducing the risks presented by the heating climate and ensure that buildings and neighbourhoods are resilient to extreme weather events and future climate conditions;
- Transform the perception of value to reflect social, economic and environmental contributions over a building's life span as defined by the 17 UN Sustainable Development Goals.

Accordingly, ACE advocates the following:

- ⇒ **Incentivise the retrofit and rehabilitation of existing buildings and brownfield sites** and ensure that energy efficiency retrofits are embedded into the functional and aesthetic upgrades of buildings and neighbourhoods.
- ⇒ **A greater recognition of architectural solutions over technological ones:** the whole life cost and impacts of technical systems need to be fully addressed in policy and practice, otherwise priority should be given to simple, passive, low-tech, locally tested solutions that do not consume energy and are less prone to human error.
- ⇒ **The Level(s) reporting framework should underpin the reporting of the performance of sustainable buildings** in EU green procurement, financial incentives, and legislation and in the longer term to inform the development of an EU Standard for harmonised sustainable building metrics.

'MEASURE TO MANAGE': EMBED FEEDBACK AND VALIDATION IN ALL LEGISLATION AND INITIATIVES: Current EU legislation does not mandate the reporting of achieved operational performance nor the validation of the indoor spatial and environmental quality achieved. **Validation and disclosure** of building performance in use for both operational and lifecycle impacts is the only way to achieve the rapid transformation of the construction sector to respond



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to the climate, health and biodiversity emergencies we face. It is necessary to ensure that the investment of natural resources and funds deliver outcomes that work, reducing risks. The reporting and validation of both qualitative and quantitative performance data is the most effective way to overcome the fragmentation of the sector and introduce greater accountability. It must permeate all areas of sustainable building performance: energy, material impacts, indoor environmental quality, health, resilience, cultural and community value. Making feedback and related data accessible to the market would grow the evidence base for continuous improvement, accelerate research and allow knowledge transfer building, neighbourhood and at stock level. ACE therefore calls for:

- ⇒ **The creation of transparent reporting and benchmarking tools** on achieved building performance, harmonised across MS.

- ⇒ **A broad disclosure of the actual energy consumption and embodied carbon data:** aggregated anonymised data should be made available in the public domain, to ensure the rapid and continuous improvement of sustainability measures and technologies.

- ⇒ **The validation of the *actual* capabilities of building systems and fabric** as well as performance in use to introduce accountability for building performance.

SCALE UP FROM THE SINGLE BUILDING BOUNDARY: Currently, EU legislation on building performance and sustainability essentially focuses on single building units. However, going beyond the boundary of single buildings is necessary to enhance and optimise the economic, social, environmental and cultural value of our built environment.

Nations, regions and cities are unlocking finance to support the transformation of the construction sector to achieve net zero while creating a more circular economy. Meanwhile the global pandemic has revealed an urgent need for green urban renewal and the protection of biodiversity. While the barriers may seem different, enabling large-scale net-zero regeneration and the landscaping of public and semi-public spaces require similar mechanisms and are more effective when deployed jointly.

ACE promotes the following measures to overcome barriers to both:

- ⇒ **Embed community health and well-being** in EU Taxonomy, Green Procurement and Recovery Fundcriteria for built environment initiatives

- ⇒ **Deploy multi-scale approaches:** consider policy mechanisms for building projects to be evaluated for the potential enhancement they bring to their community in a street, district, and city context in terms of functional mix, density and intensity ratios, environmental restoration, resource flows, etc.



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- ⇒ **Make accessibility and green mobility major priorities** – to successfully interweave regeneration efforts at building, neighbourhood and city level.

- ⇒ **Support local self-organisation** to empower the green transformation of neighbourhoods alongside the mass deployment of low carbon measures. For example, One-Stop-Shops, already promoted by the EPBD should be re-cast to offer architectural and landscape design, legal, and procurement advice for local communities to take concerted action. The architectural profession provides an expert role to guide individuals as well as local authorities, to enable participatory design.

- ⇒ **Incorporate criteria for climate change resilience** as per the EU Level(s) framework in national renovation strategies to improve green and blue infrastructure, to build resilience to heat-waves, drought and flooding, reduce pollution peaks, etc.

- ⇒ **Incorporate in the Strategy for Sustainable Buildings the application of the Level(s)** reporting framework to neighbourhood and city scale regeneration.

NATURE BASED SOLUTIONS (NBS): NBS are actions inspired, supported, or copied from nature that mimic the ability of natural systems to continuously innovate and adapt to changing environmental, social and economic conditions.

Regenerative design mimics natural feedback loops to generate and refine successful local solutions for the restoration of degraded ecosystems, supporting sustainable urban renewal. It implies a synergistic rather than top-down relationship with the ecosystem and the ACE promotes this approach to environmental policy to develop locally based eco-system services that accelerate the improvement in quality of life with the use of significantly less and renewable resources.

In particular, NBS support the planning process of developments that are resilient to extreme weather events, such as flooding and heat waves, and have wide stakeholder support through the creation of attractive and accessible green public realm.