Structural Sustainability for existing Infrastructure and buildings

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Abstract: (250 to 500 words: for each heading use the bullet points or narrative - the submission including graphics should not exceed one page)

Buildings:
For existing buildings, Sustainability means that when renovation projects of a certain scale are undertaken, structural upgrade should be considered and funded jointly with functional and energy efficiency upgrade. While new buildings can be constructed with high performance levels, the older buildings typically need renovation measures, because of their low energy performance and seismic vulnerability. It is reasonable to argue if it makes sense in countries with high seismicity to invest heavily in the improvement of the buildings envelope, regardless of the state of the structure of those buildings. It is statistically certain that many of the surface interventions and coatings will sink down to the next earthquake. So we would like to stress and emphasize on the need of considering the energy and structural efficiency upgrade, jointly.

Infrastructure:
As the state of transport infrastructure, after many years of insufficient maintenance seems to become critical, and as the Genoa collapse showed, sometimes even dangerous, we have to undertake a new positive development in investing with innovative way in maintenance, upgrade and renovation. It is obvious that regular maintenance and upgrade of the existing infrastructure, mainly of bridges, is vital for safety and functional reasons if Europe has to maintain its productive and human respect standards. In each European country there are of course a lot of actions undertaken concerning the assessment maintenance and upgrade of existing infrastructure, but there is not a common European approach on methods and efforts. Obviously, the scale of needs requires a much more organized approach and we think that we must come to a European roadmap of maintenance and upgrade of the existing European network to keep it functional and safe. In addition to the necessary organizational and managerial effort, the unified administrative structure, the modernization of monitoring methods and the assessment of infrastructures, it is clear that significant resources will have to be mobilized either from Community resources or from national or other mixed funding methods.

Forum statement:
We need to develop a policy for seismic upgrading of Europe’s structural wealth alongside wider sustainable environmental upgrading, approaching holistically the problem of improving the performance of the built environment. This policy requires a collective effort and a cross-sectoral approach.

Keywords: (up to 5 keywords)
Structural Sustainability; Building and Infrastructure Maintenance; Sustainable Structural Design