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SUSTAINABILITY: CONCEPTUAL ORIGINS, EVOLUTION AND CURRENT CHALLENGES IN THE CONSTRUCTION SECTOR

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Abstract
Sustainability is the desirable attribute of an ideal economic system, where development stems from a balanced integration of economic factors, namely economic growth, with considerations for environmental preservation and social fairness. This sort of development is called sustainable. The idea is frequently illustrated through diagrams such as the well-known three overlapping circles (Figure 1).

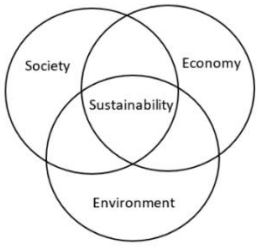

Figure 1. The sustainability diagram

The concept arose largely in response to questioning of the prevailing economic order, which prioritizes economic growth while treating environmental and social issues as externalities. Opposition to that economic model intensified in the 1960s, led by civil movements concerned with environmental problems, as well as with social issues.

One of the first documents to appear as a response, in the early 1970s, was MIT's report The Limits to Growth [1]. This proposed to replace the economic concept of growth with that of equilibrium, in a new type of economic system that was coined as "sustainable".

The idea of sustainable development was popularized fifteen years later, in 1987, through the United Nations (UN) report Our Common Future [2]. While considering economic growth a necessary driver to development, the report emphasizes the need to manage growth to avoid excessive pressure on environmental resources, the biosphere, and social equity, that is, to achieve sustainability.

Since then, several initiatives have been launched to implement the concept. In 1992, a global plan of action for sustainable development, known as Agenda 21, was put forward at the United Nations Rio 92 Conference [3].

Agenda 21 emphasizes the social and environmental dimensions of sustainable development and reiterates they should be considered alongside purely economic issues. Nine years, later, in 2011, the UN report Towards a Green Economy introduces the concept of a so-called Green Economy [4]. This was intended as a reaction to the recurrent market crises and the increasing disillusionment with an economic system that continued to favour growth at the expense of social disparities and environmental destruction. The construction sector is considered one of those with the greatest potential for change. Finally, in 2015, the United Nations launched the Agenda 2030 for Sustainable Development, which introduced 17 sustainable development goals (SDG) to be achieved by 2030 [5]. The SDGs address pressing environmental, economic, and social issues, from poverty and inequality to protection of the planet.

These initiatives, among others, created the backdrop for several developments at European level. Still in 2015, the European Commission (EC) released the concept of a Circular Economy, a model of production and consumption that promotes sharing, leasing, reusing, repairing, refurbishing and recycling [6]. In 2019, a strategic plan entitled the European Green Deal was launched by the EC, which is aimed at making the EU climate neutral by 2050 while promoting a circular economy to reduce both resource usage and energy dependency [7].

Recently, the EC decided to take action to address the problem of greenwashing too, through an update to EU consumer rules. Greenwashing is a concept that gained popularity in the early 1990's and occurs when organizations falsely project an image of environmental friendliness for their products or practices [8]. This deceptive behaviour misleads people and undermines efforts to protect the environment.

In the European Union, the translation of sustainability principles into the construction sector is also underway. At first, it was largely based on the set of standards produced by CEN/TC 350 [9]. Then, the EC launched Level(s), a simplified framework for assessing the sustainability of buildings, their parts and materials, which is still partially under development [10]. Another important step is the revision of the Construction Products Regulation, which establishes the requirements for construction products to circulate freely within the European Single Market. This is currently ongoing and will incorporate sustainability criteria. In addition, the EC is proposing a new Ecodesign for Sustainable Products Regulation, aimed at making sustainable products the norm in the EU market.

In this presentation, we will take an integrated approach to analysing the concept of sustainability and the evolution it has undergone over time and in its application to the construction sector in the European Union. We will also discuss the internal consistency of the concept, as well as chief distortions that may arise, such as greenwashing.

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