

Plenary Keynote

PERFORMANCE BASED BUILDING R&D ROADMAP TOWARDS EUROPE'S VISION 2030 FOR CONSTRUCTION

Greg Foliente

CSIRO Manufacturing & Infrastructure Technology, Australia
Greg.Foliente@csiro.au

ABSTRACT

A performance based building (PBB) research and development (R&D) roadmap that leads to the realization of the European Construction Technology Platform or ECTP's Vision 2030 is presented. It is argued that the transition of the building, construction and property industry into a client-focused, knowledge-based and services-based industry, characterized by sustained innovation and excellence required the comprehensive application of the performance concept in practice – from planning to management and to re-use/refurbishment (i.e., cradle-to-cradle). Thus, the ECTP Vision was re-cast into PBB Vision 2030, viz.:

Performance concept underpins (i.e., is used routinely and applied comprehensively within) a construction and property industry that:

- (1) delivers value to present and future stakeholders;*
- (2) delivers sustainable outcomes; and*
- (3) is transformed into a knowledge- and services-based industry, characterised by sustained innovation & excellence.*

Considering industry and market drivers, science and technology trends, and the current states of knowledge and practice, an R&D Roadmap supporting this vision was developed considering three time horizons: (a) Horizon 2010 (short-term, incremental); (b) Horizon 2020 (medium-term); and (c) Horizon 2030 (long-term, transformational).

It is recommended that this R&D roadmap be used to assist: (1) researchers and research planning agencies in identifying topics of investigation that will make significant contributions to advance knowledge and enhance practice; (2) practitioners and building professionals in better understanding the state of development and application of the concept and in supporting priority R&D areas; and (3) R&D funding agencies in directing or allocating their resources wisely.

R&D investment in the performance approach is an investment into the future of the building, construction and property industry everywhere, in high-performing and sustainable built environments, and in a better quality of life for us and our future generations.

Keywords: innovation, research needs, vision, trends