

# EXECUTIVE DESIGN: TECHNOLOGICAL INNOVATION AND INSTRUMENTAL PROCEDURES

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**T**his study examines the theoretical and instrumental contents concerning the executive design that was considered as an operational and cognitive apparatus aimed at planning, managing and guiding the on-site production and construction processes. The executive design is defined as means of knowledge and action aimed at modeling, anticipating and simulating the production and construction reality. Its objective is to lead, guide and materialize the practical implementation according to the development of the technical devices aimed both at structuring the contents, rules and design data, and at the feasibility assessment. The study is defined as a sum of research and didactic activities including the analysis relating both to the references concerning the technological design culture and the executive design practices carried out in the contemporary scenario. Furthermore, the study aims at developing a fundamental theoretical system concerning the executive design, whereby to proceed with the configuration of the layout related to the specific subject area and with the in-depth analysis of educational aspects (with respect to the impartation of instrumental knowledge), procedural aspects (with respect to the development of organizational and management processes) and notional and regulatory aspects. The executive design develops the graphic and descriptive contents with the purpose of representing an interaction and mediation tool for operators, professionals, qualified workers, experts, especially in relation to the production phase and the implementation phase; structuring, organizing and managing information (regarding products and materials, systems, components and technical elements, operators and their responsibilities); developing a decision making tool and an instrument that would determine the managing, prediction and rational organization procedures concerning the production and construction phase; creating a communication tool, with the aid and the application of scientific representation modes by using a symbolic and coded language, for viewing and controlling the production and construction phase

## Biography

Massimiliano Natri has received his PhD in 1999 and the Post-Doctoral degree in 2002 in *Technical Innovation and Architectural Design*, and a Research Grant in 1999-2000 at the Polytechnic of Milan. He is serving as Assistant Professor in *Building Technology* at the Department of architecture, built environment and construction engineering of the Polytechnic of Milan (since 2005). He develops his own scientific activity related to innovative executive design methods and to advanced building structures and envelopes. Scientific Director of the Editorial Collection *Executive culture and technological innovation* (Tecniche Nuove Publishing House S.p.A.), he published *Introduzione al design vibro-acustico* (FrancoAngeli, Milano, 1997; also translated in Greece, 1998), *Technites* (Maggioli, Santarcangelo di Romagna, 2002), *Involucro e architettura* (Maggioli, Santarcangelo di Romagna, 2008), *Téchne e progetto esecutivo* (Maggioli, Santarcangelo di Romagna, 2008), *La costruzione dell'architettura. Strumenti e procedure operative per l'elaborazione tecnica del progetto* (FrancoAngeli, Milano, 2009), *La realtà del progetto* (Maggioli, Santarcangelo di Romagna, 2009).

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