Abstract

The research addresses the integration of Building Information Modelling (BIM) and Facility Management (FM) within Public Administration, starting from a central critical issue: BIM has entered public policies and procurement procedures, while its translation into ordinary management practices remains fragile. The problem concerns the capacity of public organisations to transform models, data, and platforms into information that is usable, verifiable, updateable, and coherent with maintenance and management processes.

The work is situated within the Italian context and adopts the *Palazzo Unico della Regione Piemonte*, also known as the *Torre della Regione Piemonte*, as its case study: a public building that is complex in terms of scale, spatial articulation, building-services density, institutional functions, and quantity of information involved. The case makes it possible to test BIM–FM integration in a concrete condition, characterised by an as-built BIM model, an existing FM platform, and the relationship between models, documents, maintenance processes, people, and tools.

The central hypothesis is that **BIM–FM continuity** requires the alignment of three interdependent dimensions: **Models and Tools**, **Processes and Documents**, and **Training and People**. The first pillar concerns the transformation of the as-built or as-is model into an information configuration oriented towards FM. The thesis develops the concept of the **Record Model** as the outcome of verification, simplification, selection, coding, and reorganisation of information, testing it on rooms, workstations, doors, movable furniture, and fan coil units. The model is assessed according to its capacity to make information searchable and integrated with management tools. The second pillar addresses flows, responsibilities, and public information demand. Information loss is interpreted as a governance issue, particularly evident in the transition between handover and the start of operation. The research proposes **two operational BIM–FM strategies**: fault-based maintenance, which transforms a report into a localised and traceable event, and planned maintenance, which connects assets, procedures, frequencies, work orders, and evidence. At the documentary level, the analysis of Italian ***Capitolato Informativo*** leads to the proposal of a protocol and a modular prototype aimed at making requirements, deliverables, checks, and data uses more controllable. The third pillar concerns competences and the internal capacity of Public Administration. Training is interpreted as the construction of operational and verifiable capacities: reading models, formulating requirements, checking deliverables, using platforms, and maintaining coherence between information and processes. The thesis defines and validates a **BIM–FM Training Framework** for Public Administration, structured into differentiated levels and based on needs, roles, and observable results. The opening of the **BIM Office** of *Regione Piemonte* represents the transition from training to capacity as a stable organisational safeguard.

The final part recomposes the three pillars through the perspective of **Drawing for FM 5.0**. Drawing and representation are interpreted as operational interfaces capable of connecting models, data, documents, platforms, actors, spaces, and processes. The main contribution of the thesis lies in the definition of an integrated methodological framework for making BIM–FM a governable capacity of Public Administration. The value of BIM for FM lies in making information legible, verifiable, and updateable within ordinary processes, transforming the model into an informational and organisational infrastructure for public asset management.