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IN THE BUILT ENVIRONMENT

# **DIGITAL DESIGN TOOLS IN ARCHITECTURE THE PAST, THE PRESENT, AND THE FUTURE**

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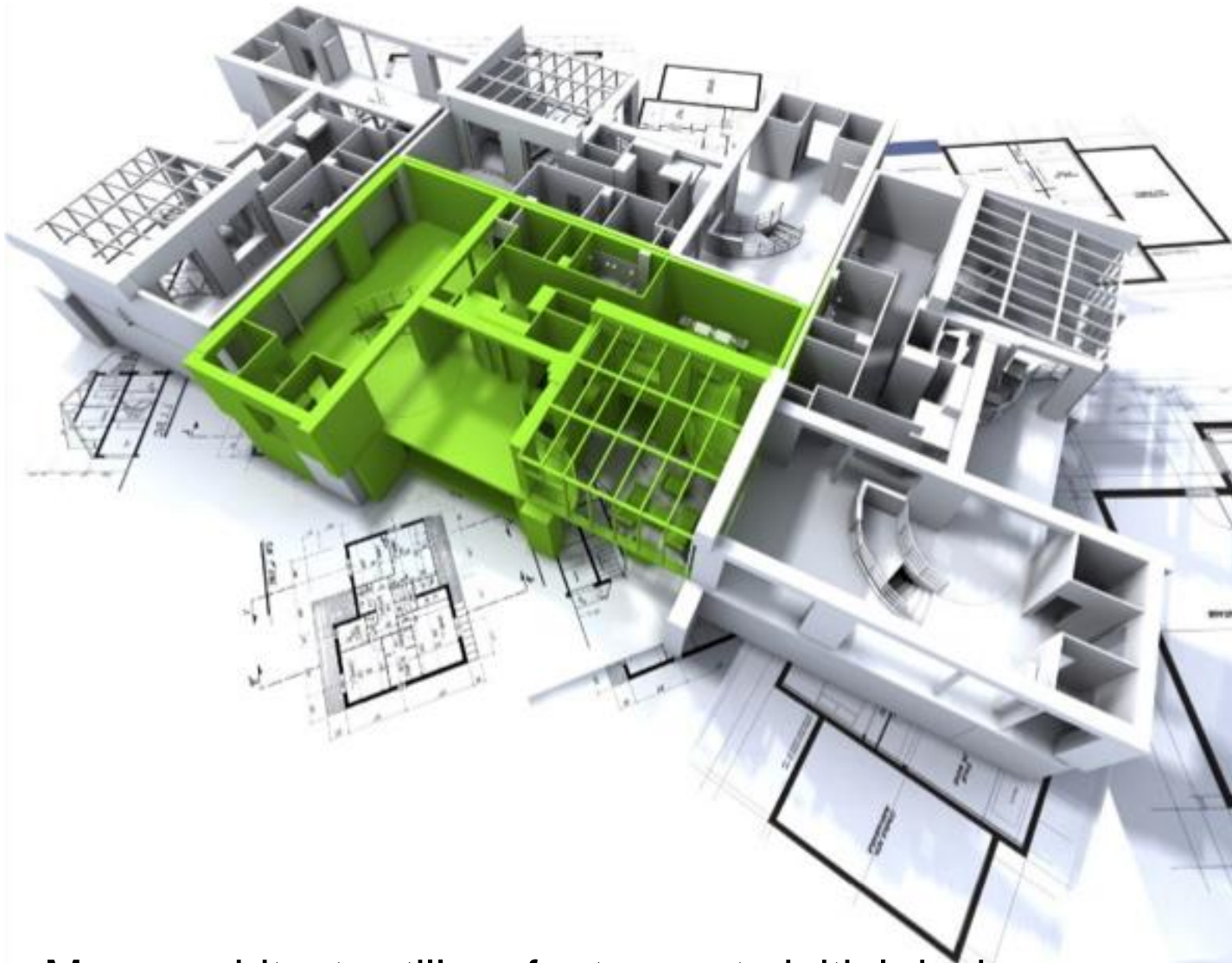
# 1

## The Past: CAD/CADD



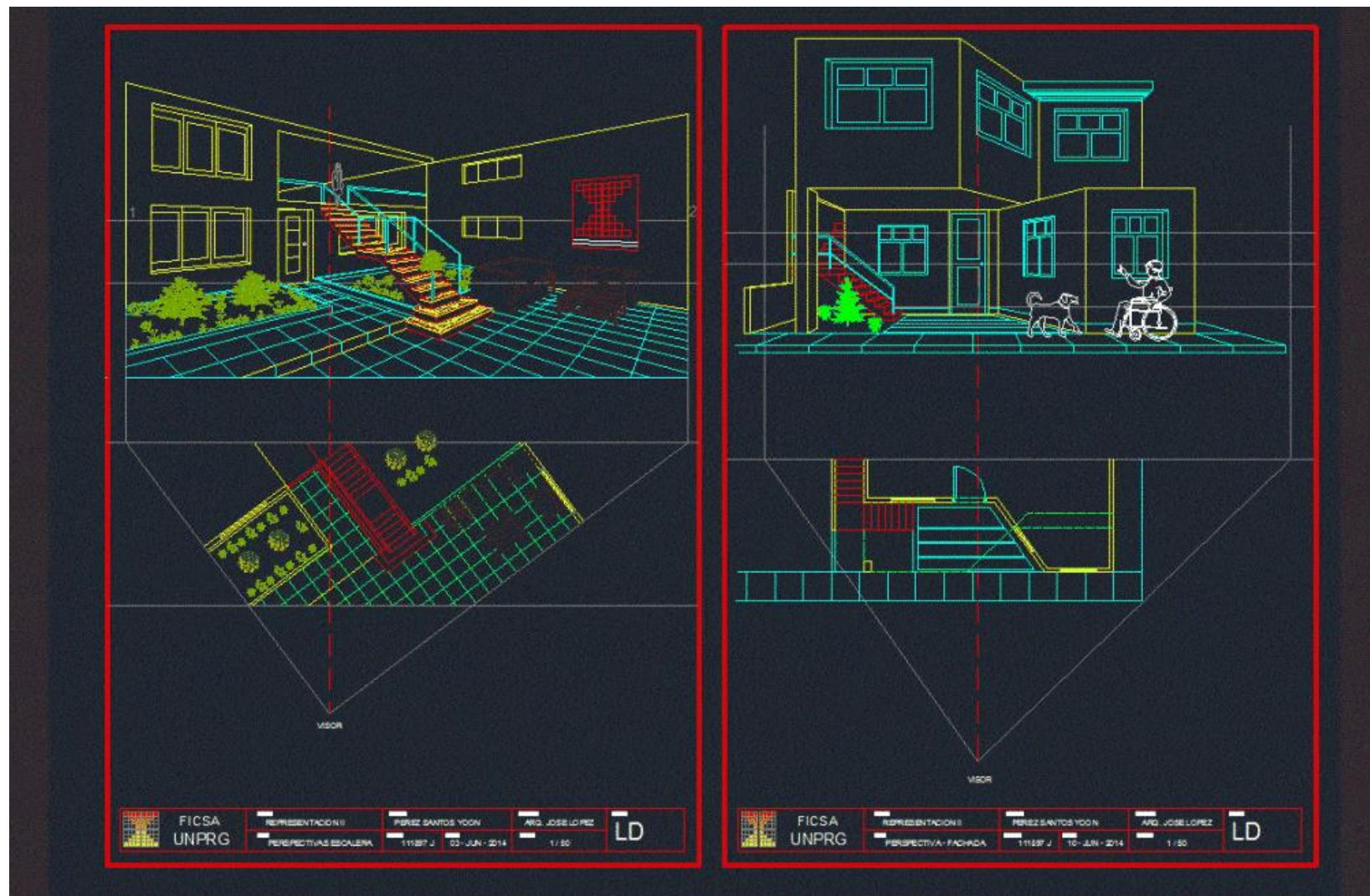
- **Computer-Aided Design (and Drafting)** Disrupted the drawing table and pen drafting, by the mid-1990s.





- Many architects still prefer to create initial designs on paper and then transfer them into CAD.





- Able to view different aspects and perspectives; allows location and fixing problems



# 2 The Present: BIM



- **Building Information Modelling** Provides more advanced capabilities beyond CAD: 4D





- Collaboration is at the heart of BIM





- Better visualization
- Accurate quantification of supplies



# 3

## The Future: Blockchain, AR & AI







- **Blockchain's distributed ledger technology** will become mainstream in many business activities to decentralize and democratize information





- **Augmented and virtual realities (AR/VR)** will let you “walk the site” before groundbreaking





- **Artificial Intelligence** uses data to make decisions and recommendations will be crucial to the design process, especially in the early stage of an architectural project.





**Thank you!**