## "What is the user response to complex facades created with digital fabrication, measured through virtual reality, and how does it inform future construction trends?"



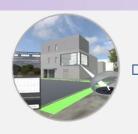
Computational Image
Complexity Analysis (CICA)



3D Modeling Façade variations



Façade complexity score and data visualization



**Immersive Simulation** 



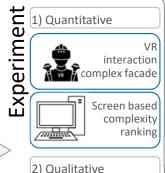
**VR** interface control



VR APP FOR FAÇADE ANALYSIS



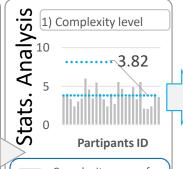
- Building interior and exterior inspection
- Façade variation selection, complexity score CICA registration
- Complexity Data visualization



r Post-interaction Survey stage

## Conditions:

• 1 Building, 3 façade patterns, 10 variations



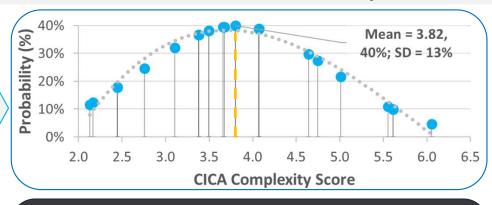
Complexity score of facade chosen

Mean Complex, score

2) Survey analysis

Participant BackgroundPerception and parameters of complexity





## **CONCLUSION:**

The Computational Image Complexity Analysis (CICA) applied to a data base of historical buildings uncovers a cyclical preference between complex and simple architectural styles, hinting at the emergence of a new era favoring complexity. In a VR experiment, participant choices facing façade variations, influenced by different degrees of complexity resulted in an average complexity score of 3.82 (on a scale of 1 to 10) by CICA. These findings align with the historical analysis, affirming the trend towards contemporary architecture embracing complexity.