POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

DOTTORATO DI RICERCA IN DESIGN
POLITECNICO DI MILANO
DIPARTIMENTO DI DESIGN

15-21 JUNE 2023

POLIMI DESIGN PHD SUMMER SCHOOL

DESIGN THAT LASTS

Group 06
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Rossella Locatelli
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POLITECNICO MILANO 1863
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POLITECNICO DI MILANO
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Classroom Activity Ph.D. Research possible Connection

- **Cherished Possession**
- Waste Walk
- **Maintenance and Repair**
- Rich Experience Vignettes

PHD TOPIC

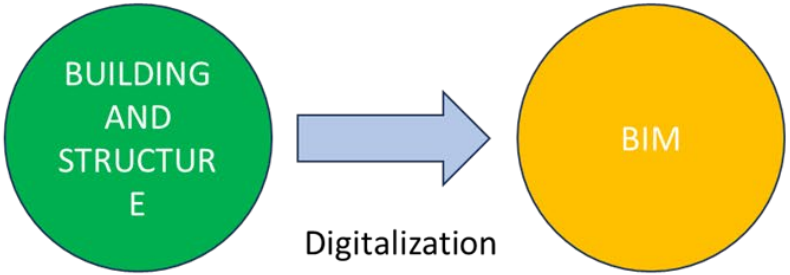
Integration of Lighting and Color Material Finishes Design in the Building Information Modelling methodology and relations with the Metaverse

Cherished Possession

Portable DJ Consolle

- 1st times / special moments in our lives
- Evolution of technologies
- Portability

- **Digitalization of Building and Structure**
  Hand drawing – CAD drawing – Digital Architecture



PORTABILITY

MOBILE

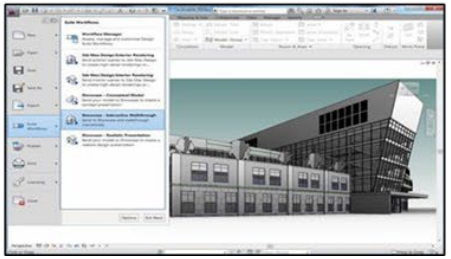
(Deng, Menassa and Kamat, 2021)
(Huang, 2022)
(Rafsanjani and Nabizadeh, 2023)

HARDWARE

CONNECTIVITY

SOFWARE

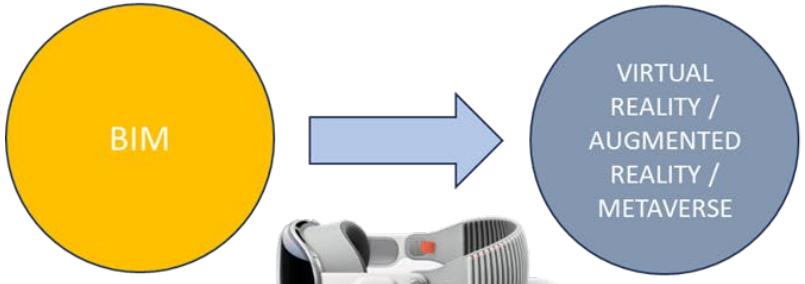
Complex Project Collaboration



GIANLUCA GUARINI

Cherished Possession

Portable DJ Consolle



- 1st times / special moments in our lives
- Evolution of technologies

- **Design Visualization of Building and Structure**
  1st times for clients
  - Real-time Visualizing the Project
  - Real-time decision making

EVOLUTION OF TECHNOLOGIES

DESIGN VISUALIZATION

MOBILE

NEW DEVICES

Maintence and Repair



- Repairing a Vinyl Turntable,
- Reapairng an Object …
- **Repair a building**
- **Managing a Building**

7D Dimension is all about **facility management**

- Crucial for managers and owners
- Specifies the asset data, including technical specifications and status, for the future maintenance of the project
- All data is collated in a single model accessed and used by all other stakeholders
- The model is in its best capacity throughout the project life cycle.

(Adhikari *et al.*, 2021)
(Brunone *et al.*, 2021)

Dimensions of BIM
3D – 3D modeling
4D – Analysis of the timing of the realization of the works
5D – Cost analysis
6D – Sustainability assessment.
7D – Facility managemtent

New
8D – Safety
9D – Lean Construction
10D – Industrialized Construction

References

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Thank you