



**5 - 8 DECEMBER 2022**  
DUBAI WORLD TRADE CENTRE

# The Best Use of **Technology** in the **AEC** Industry

Tips and tricks to choose the right tools and Build  
the right Process

**Eng. Billel Dridi**

BIM Expert/Digital Transformation Lead



## Biography:

- 1-Bsc Architectural Engineering-Algeria
- 2- Dual Master Degree in Global BIM Management from Barcelona University and Zigurat Institute Of Technology, Spain
- 3-Msc in Building Information Modeling and Project Collaboration, University Of Derby UK.
- 4-Certified Project Manager professional, PMP.
- 5-Autodesk Certified Professional. Revit Software.
- 6-BreAcademy Certification in Information Management.
- 7-Zigurat Institute Of Technology UAE Ambassador.
- 8-StreamBIM MENA Region BIM Expert.
- 9-Certified Building Transformations (Can-BIM).
- 10-SmartLeanBIM partner
- 11-BIM Dictionary Arabic Language editing team.
- 12-Founder Of BD Technology HUB.
- 13-Lecturer in BIM Arabia Magazine.



1-Industrial Revolution 4.0 and AEC Industry .



2- Tech Trends Driving the Construction Industry.



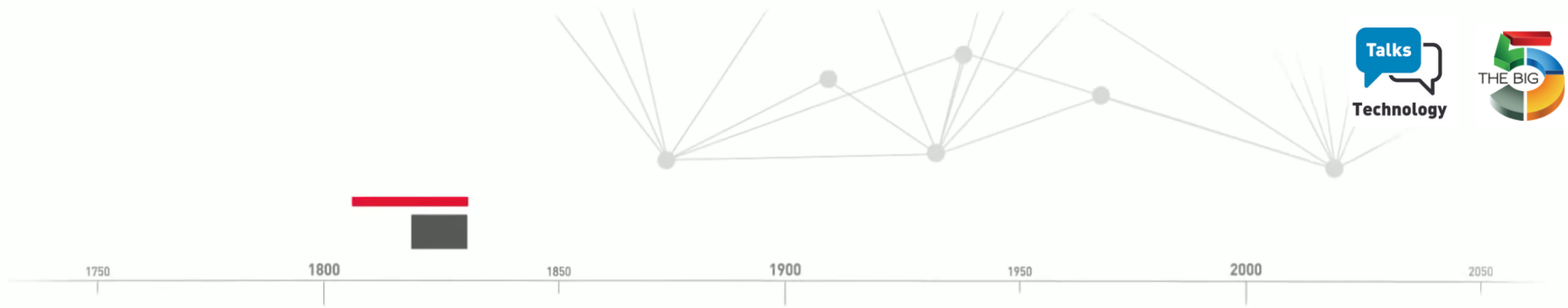
3-Virtual world and gaming industry and movies using BIM model.



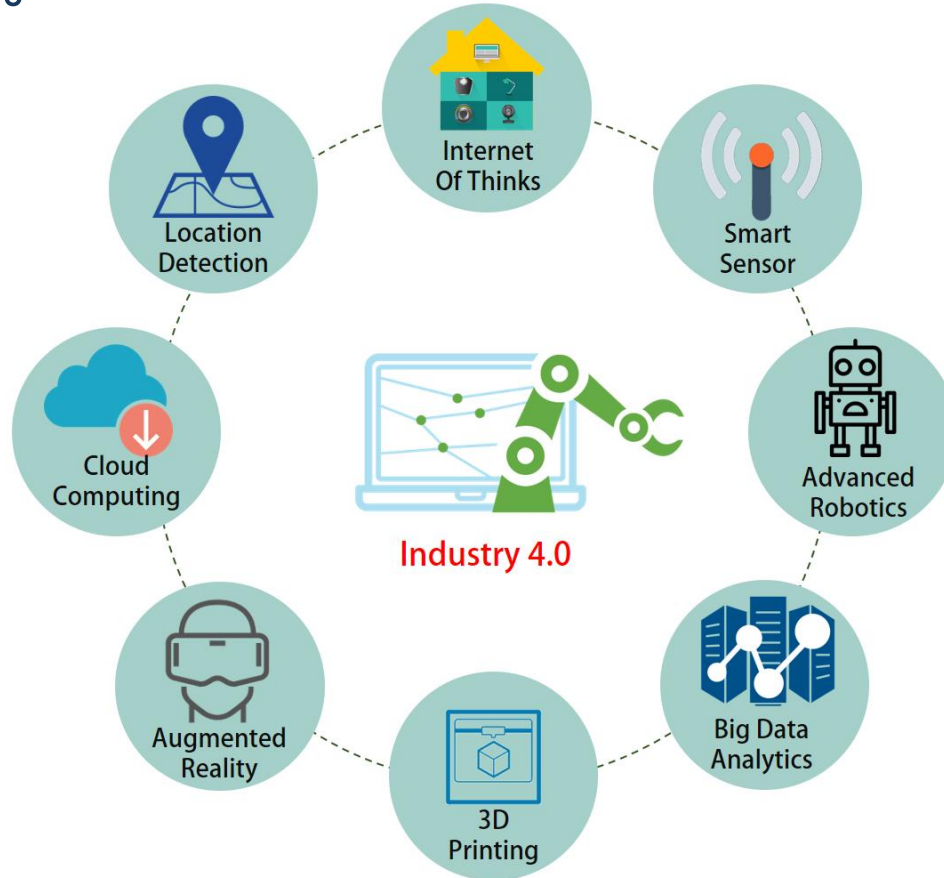
UNREAL  
ENGINE



## 1-Industrial Revolution 4.0 and AEC Industry .



# Architecture, Engineering and Construction (AEC) integration with Industry 4.0

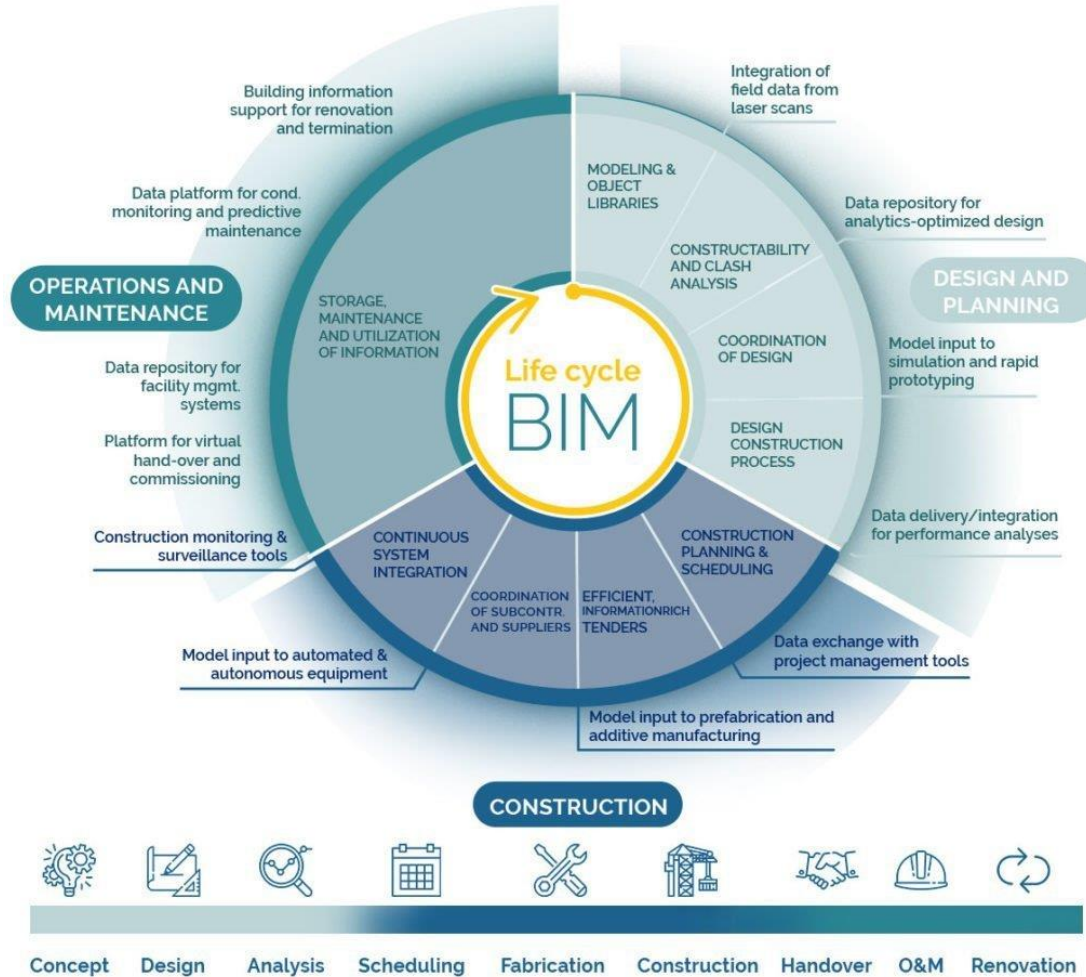




## 2- Deferent Tech **Trends** Driving the Construction Industry.



# 1- BIM & Beyond

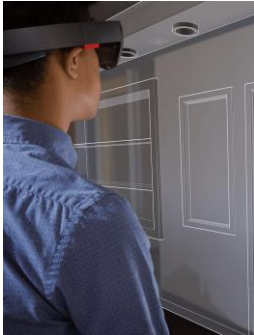




# 2- Augmented and Mix Reality

SiteVision

SketchUp Viewer



## Architects

Design Review  
Stakeholder Buy-In

SiteVision

Trimble Connect



## GC's

Model Coordination  
Preconstruction  
Training  
Model Sequencing  
3D Task  
Management  
Install Verification

SiteVision

Trimble Connect



## Pre-Fabricators

Design Review  
Guided Assembly  
Remote Assistance

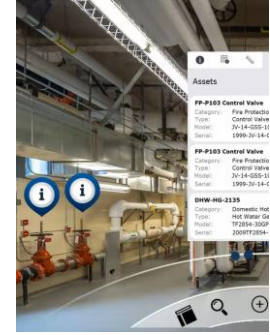
SiteVision

Trimble Connect



## Subcontractors

Preconstruction  
Model Sequencing  
Guided Install  
Remote Assistance  
3D Task  
Management  
Install Verification



## Maintenance

Hidden As-Built View  
3D View of IoT Data  
3D Task  
Management  
Remote Assistance

Organized By

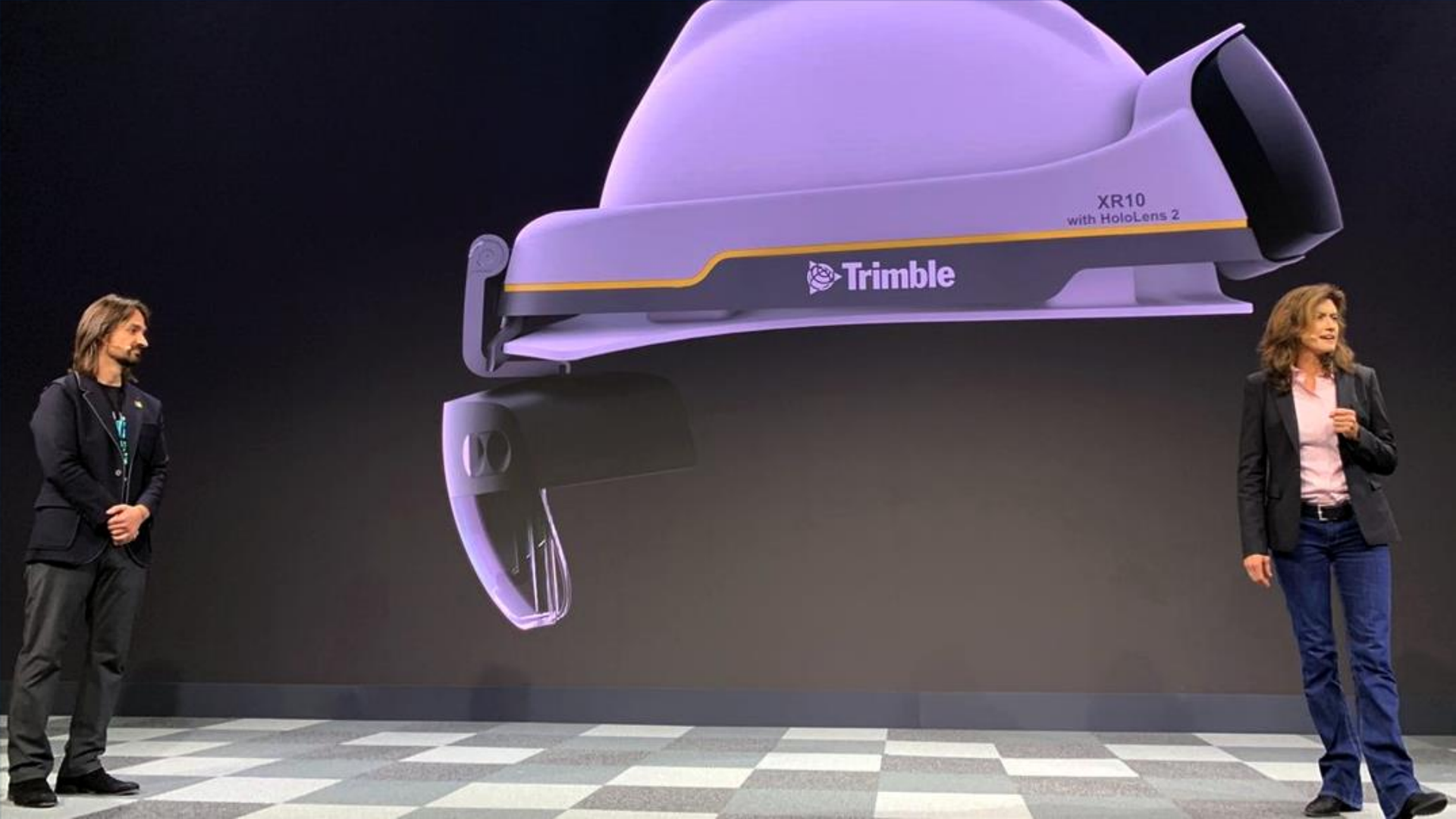
**dmg** events

# 2015




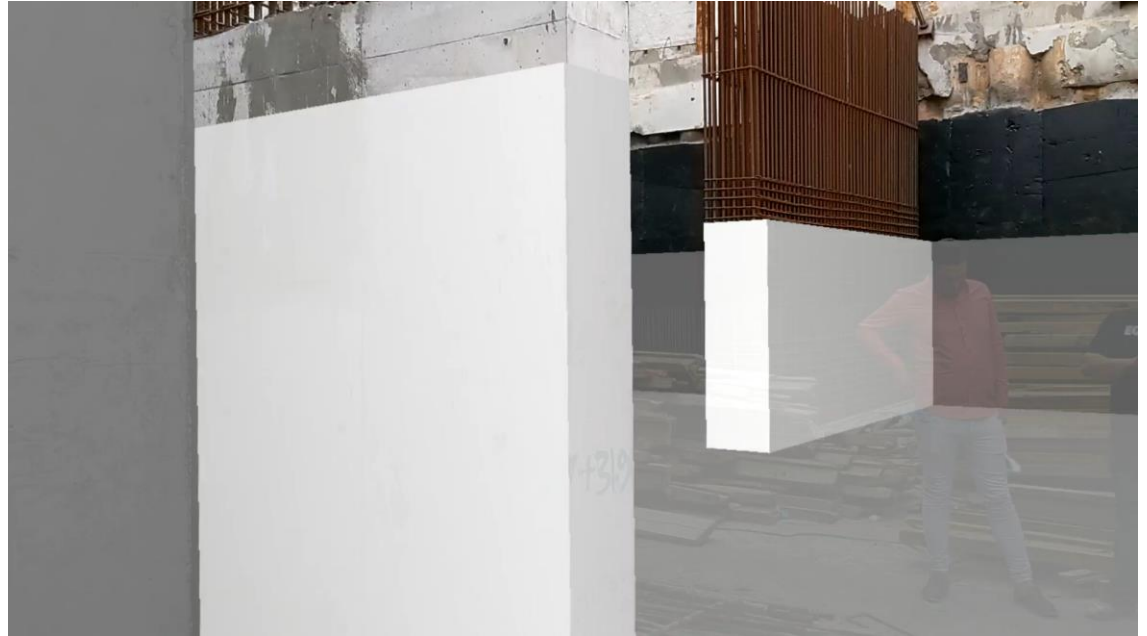
Microsoft  
HoloLens





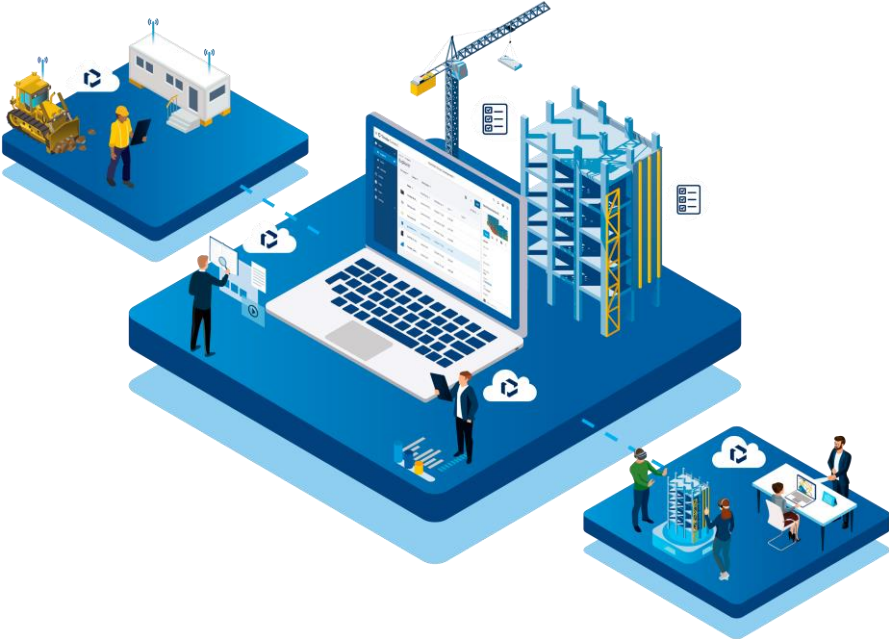
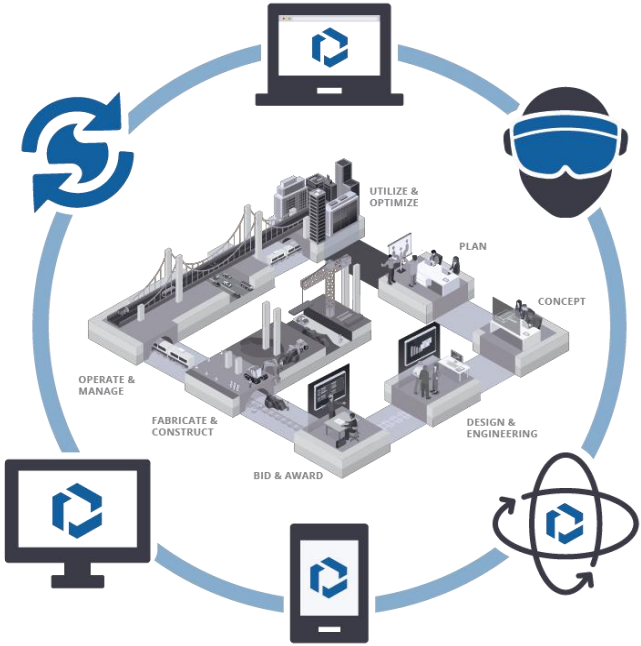
XR10  
with HoloLens 2

 **Trimble**





# 3-Liberation Construction Data







B1-B3\_Etasje 4

63,2 m<sup>2</sup>

3R-01S

H4012-B3







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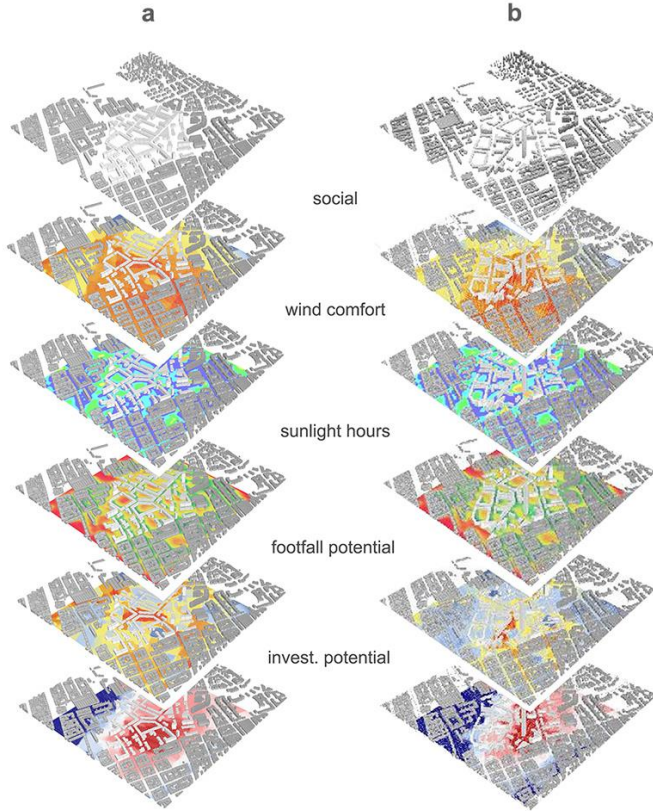
B1-B3\_Etasje 4

🏠 🔍 ?

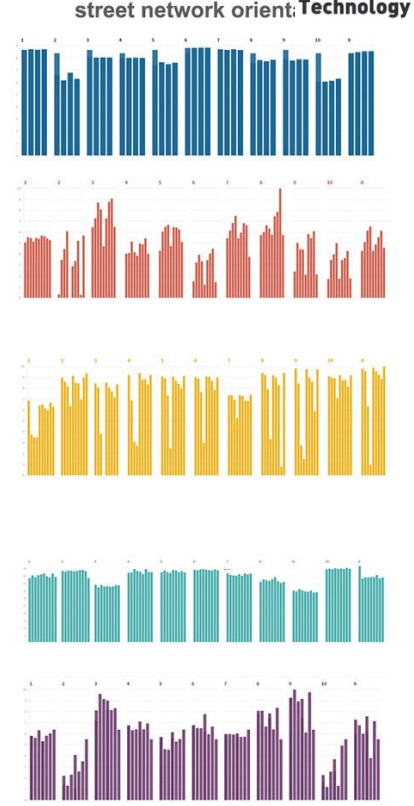
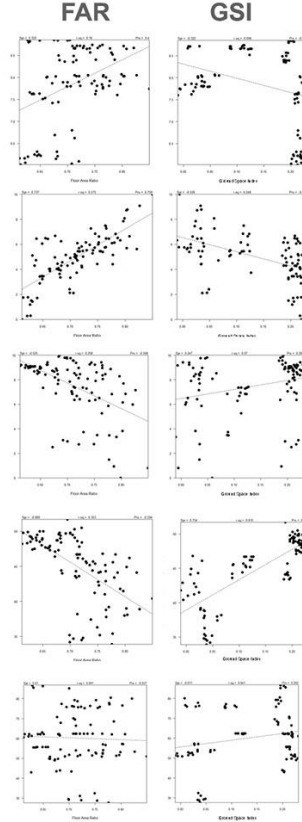
Stue/ kjøkken  
24,7 m<sup>2</sup>

H4012-B3  
3R-01S  
63,2 m<sup>2</sup>

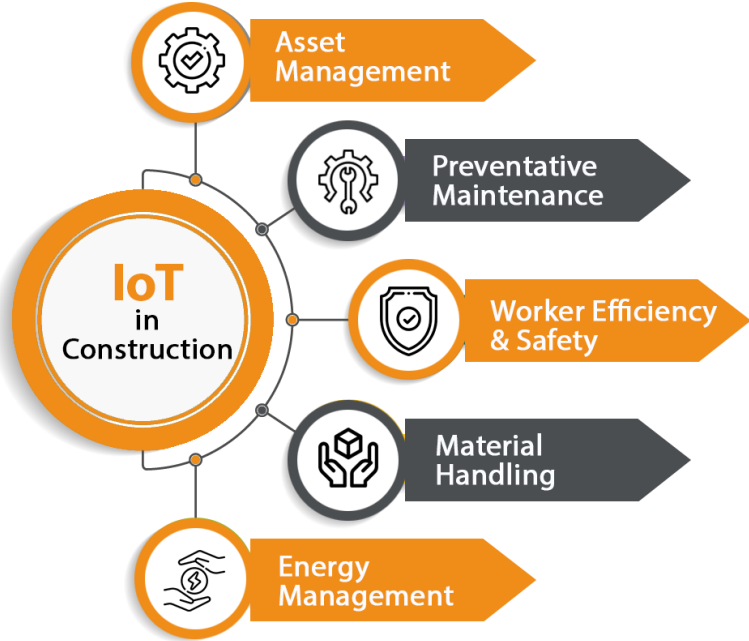
# 4-Artificial Intelligence



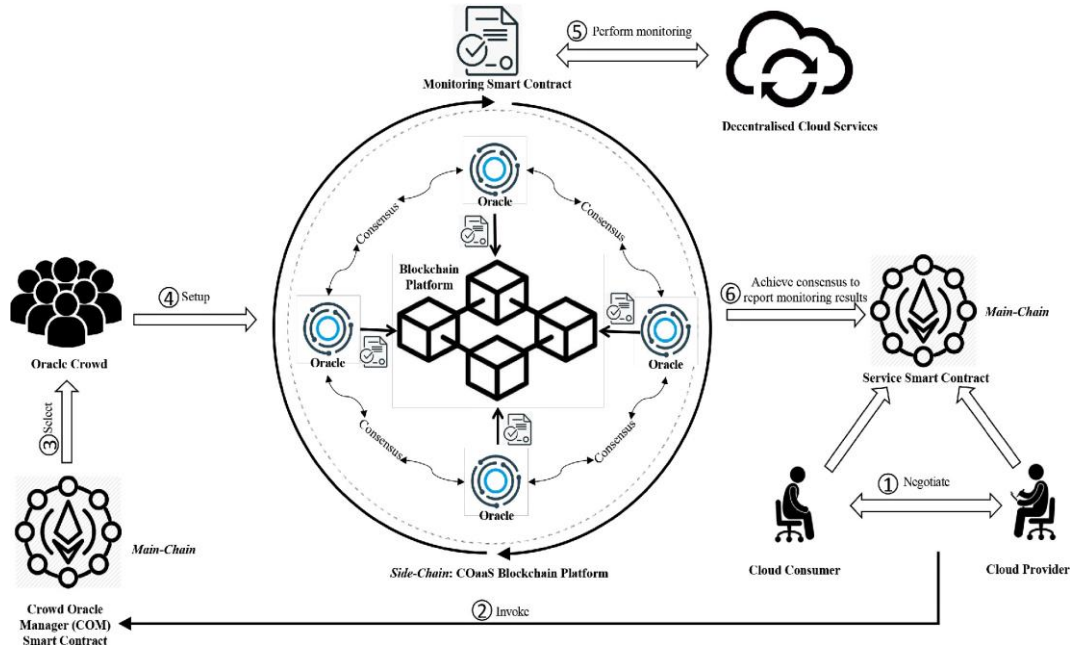
invest. worth poten.  
 system sturdiness  
 sunlight hours  
 wind comfort  
 asa -aggr. social sust.



# 5-Internet of Things



# 6-Blockchain & Smart Contracts



## INDUSTRY INSIGHT

Smart contracts will be used to break down traditional deliverables into smaller stages. This work could then be billed out in incremental portions of the total payment, replacing large, lump sums with continuous cash flow. This can strengthen trust between parties.

# 7-Enable Projects with Managed Content



# 8-Laser Scanning & Reality Capture



Future Vision get robots Involved



## 1-Preparing BIM Execution Plan

- Level Of Information Need
- Software Used
- BIM Uses and Goals
- Data Drops
- .....



Data Collection



## 2-Collect Existing Data

- Old Survey
- Archeologic Reports
- Geology Reports
- Old Plans, Elevation
- Building Status Reports
- Site Typology (Several Site Visit Mandatory)



## 3-Laser Scanning of The Historic Building

- Point Cloud Model
- 360 Images.



## Dynamo



## 6-Modelin Phase

- Create the BIM Model
- Create Parametric Families.



## 5-Create Virtual Tours

- VR & AR.





4-Virtual world and gaming industry and movies using **BIM** model.









THANK YOU

شكرًا

Talks

Concrete

Talks

Facilities  
Management

Talks

Geotechnical  
& Engineering

Talks

HVAC R

Talks

Offsite  
& Modular

Talks

Project  
Management

Talks

Solar

Talks

Stone Design

Talks

Technology

Talks

Urban Design  
& Landscape