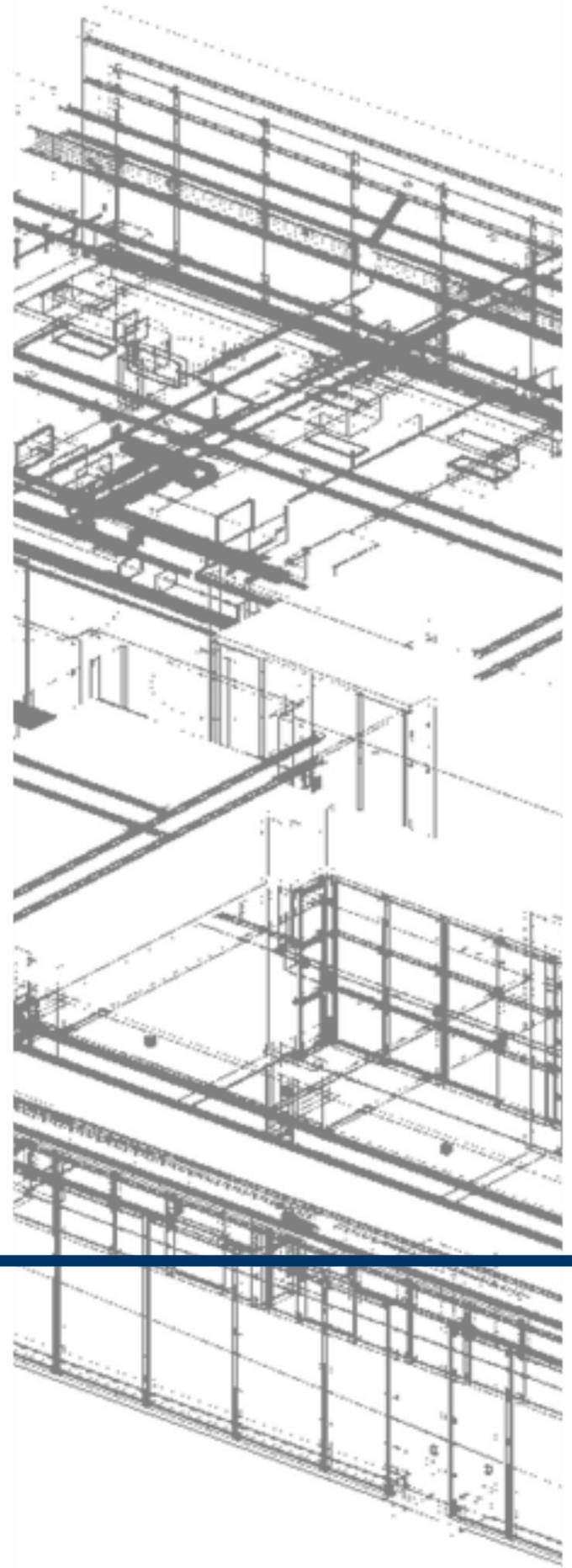
PORTFOLIO

NEHA NALAVDE



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BIM Portfolio

Neha Nalavde

Introduction

BIM Coordinator
MSc BIM and Digital Transformation Graduate

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MSc Building Information Modelling & Digital Transformation graduate from the University of Liverpool (Distinction), with professional experience as a BIM Coordinator and a strong foundation in architecture. Skilled in Autodesk Revit, Navisworks, Synchro 4D Pro, and BIM 360, with proven success in delivering clash-free federated models, implementing ISO 19650 workflows, and cutting project rework costs by £26,000.

Experienced in developing BIM Execution Plans, coordinating multi-disciplinary design teams, and creating 4D construction simulations that accelerate client decision-making by 20%. Adept at streamlining digital workflows, integrating VR/AR for design reviews, and applying innovative solutions such as IoT-BIM integration and additive manufacturing for sustainable construction.

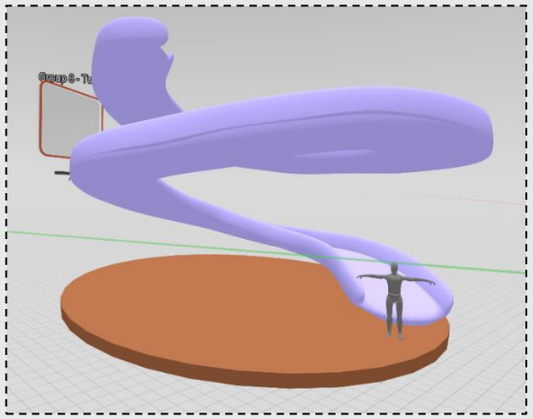
Building Information modelling and Digital transformation

Academic projects

1. VIRTUAL REALITY (3DS MAX, Gravity Sketch and Unity)

Turkish-Themed Pavilion Design: Design of a 40m2 pavilion space, connected to a gallery using 3ds Max and Gravity Sketch, exploring Turkish cultural elements. Developing a Unity-powered VR and computer navigation system for immersive virtual exploration of the 3D model.

Pavilion

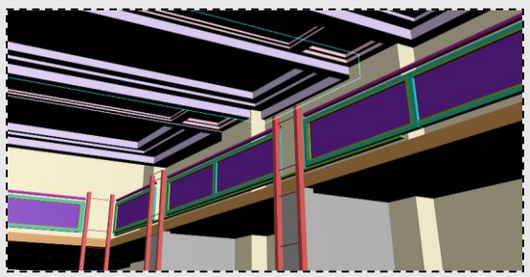


Tools and shapes exploration

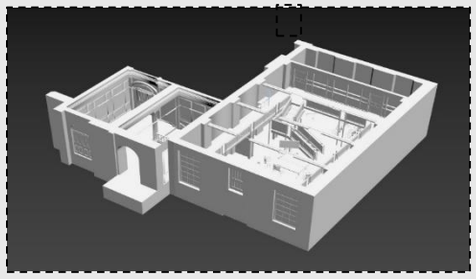
Complete model in Gravity sketch

Pavilion rendered model in unity

Gallery



Tools exploration



Complete model in 3DS MAX

Gallery rendered model in unity

2. DIGITAL CONSTRUCTION

Unleashing the Power of IoT: The Transformative Force in BIM and Digital Construction

The blog *Unleashing the Power of IoT: The Transformative Force in BIM and Digital Construction* explores the integration of the Internet of Things (IoT) with Building Information Modelling (BIM) to revolutionize construction management. It highlights how IoT-enabled BIM creates digital twins, facilitates real-time monitoring, predictive maintenance, and automates processes to overcome traditional construction inefficiencies like poor communication and reactive maintenance. The blog discusses the benefits of IoT-BIM, including enhanced site safety, environmental monitoring, logistics optimization, and streamlined modular construction. Real-world case studies, such as The Edge in Amsterdam and Shanghai Tower, demonstrate successful implementations of these technologies. While addressing challenges like data security and interoperability, it emphasizes the potential of future advancements, including AI and augmented reality, to further enhance IoT-BIM applications.

3. COMPUTATIONAL DESIGN

Computational optimization and analysis for M3XD Bridge - A case study approach of Robotic 3D printing metal method

Abstract

Due to technological advancements in construction Industry, new possibilities have unlocked through robotic automation and technology. On site robotic automation of metal structures have been innovated by applying new methods of computation design optimization, Additive manufacturing (AM) is one computation method carried out by using Wire and Arc manufacturing in design and construction of MX3D Bridge. Wire Arc Additive manufacturing (WAAM) enables complex geometry while improving structural performance and material efficiency.

This paper focuses on the computational analysis performed for the MX3D Bridge project, a 30-foot stainless steel pedestrian bridge built entirely by a specialized 3D metal printing robot in Amsterdam. To improve printability simulations, material usage minimization, robotic path planning and structural soundness additional computation designing methods are used in the case. Further, The MX3D Bridge project goals and constraints are discussed in detail.

The integrated computational engineering workflow allowed for the development of a lightweight yet strong 3D printed Stainless Steel Bridge. This case study's findings offer valuable insights into design, optimization, and construction techniques for large-scale additive manufacturing in infrastructure. The findings contribute to the advancement of digitally-driven robotic metal printing for the built environment.

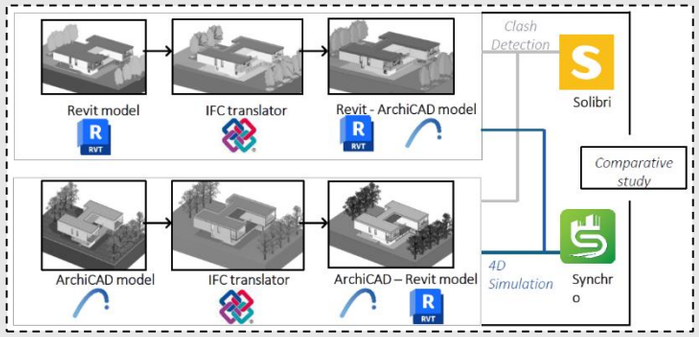
Keywords: Robotic 3D printing, Computational method, Additive Manufacturing, Wire Arc Additive Manufacturing, MX3D.

Building Information modelling and Digital transformation

Academic projects

BIM Integrated project (Revit, Archicad, Solibri, and Synchro)

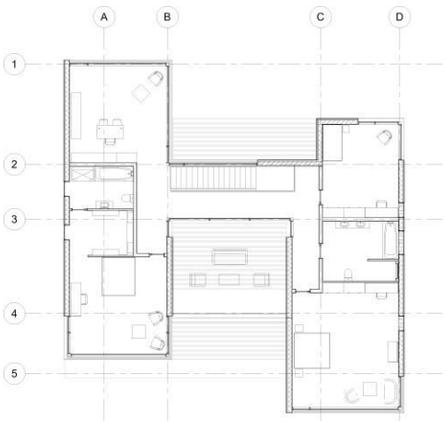
The study aims to examine the interoperability between Revit and Archicad by modelling two models in different software and highlighting its potentials and limitations, while checking the model in Solibri and initiating 4D simulation in Synchro as part of the quality assurance process.



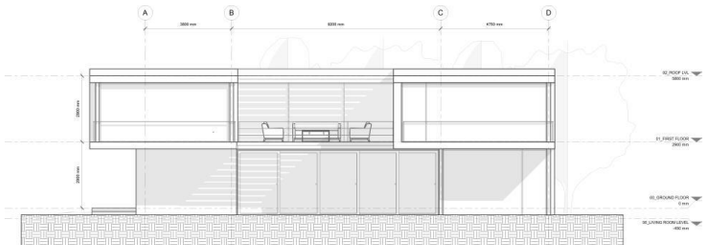
Methodology

The project involves creating 3D models in Revit and Archicad, comparing the models, checking for clashes, and simulating 4D construction sequencing. The comparison examines differences in general information, editability, geometry, and characteristics between the Revit and Archicad models. Interoperability between the software platforms and Solibri is also evaluated.

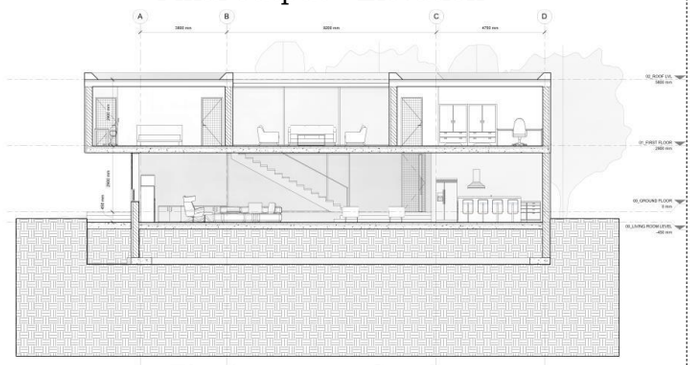
1. Model creation in Revit



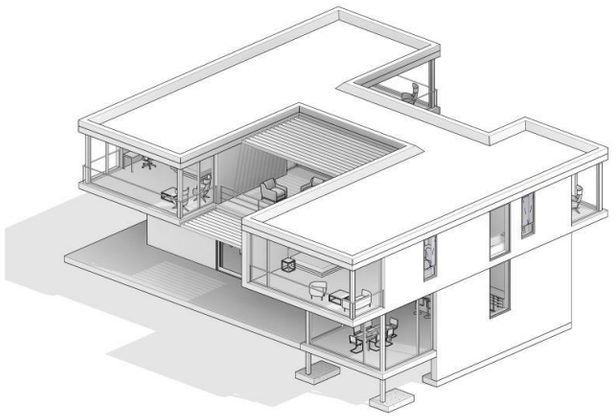
First Floor Plan



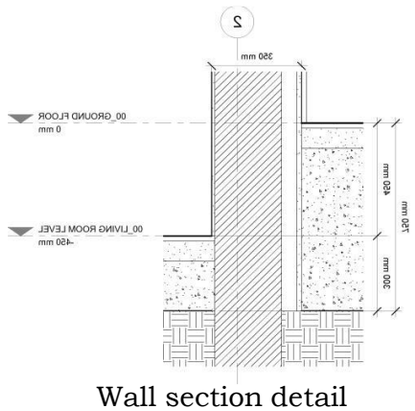
Final output - Elevation



Final output - Section

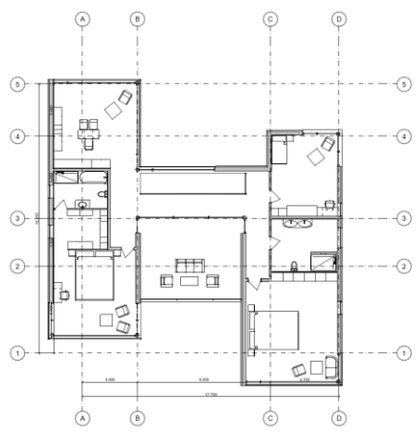


Final output – 3D View

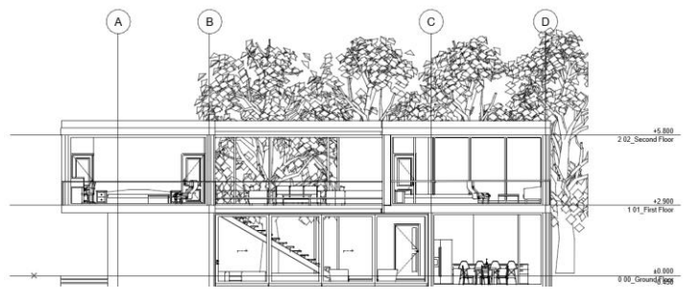


Wall section detail

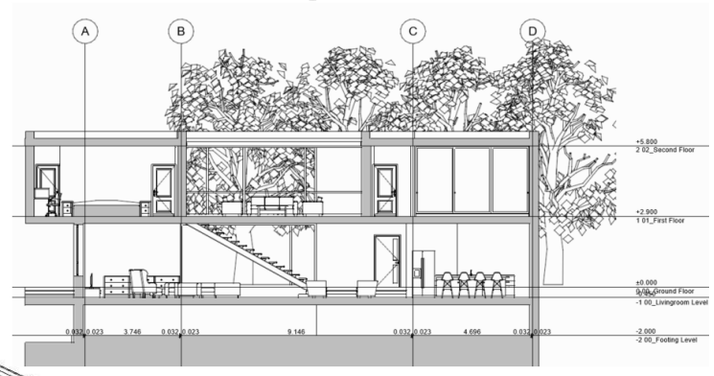
2. Model creation in Archicad



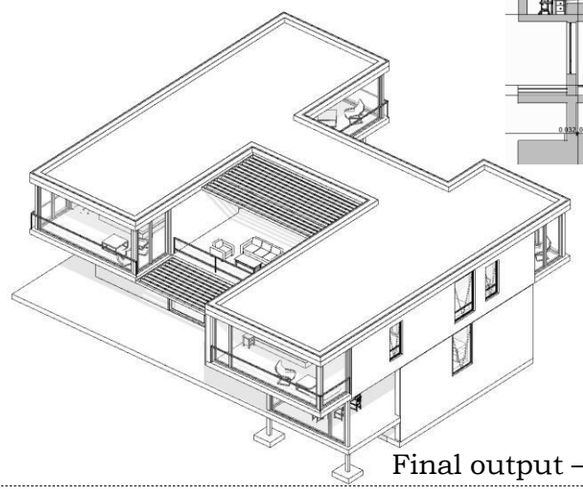
First Floor Plan



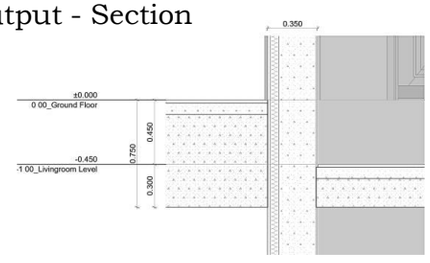
Final output - Elevation



Final output - Section



Final output – 3D View

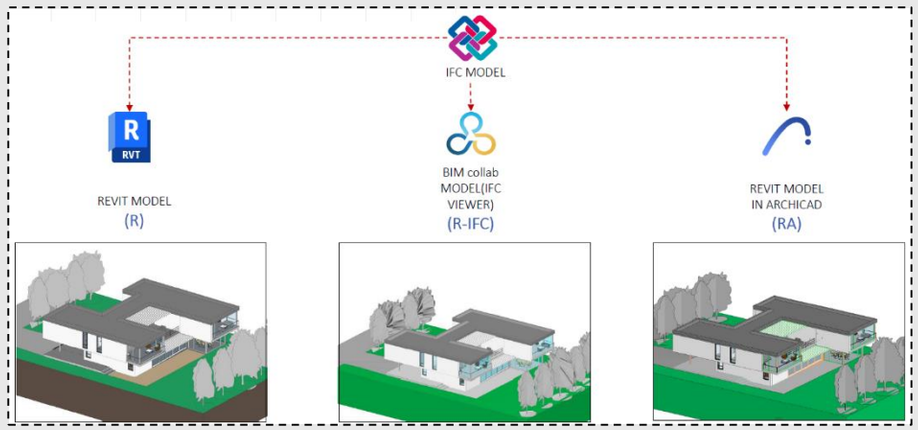


Wall section detail

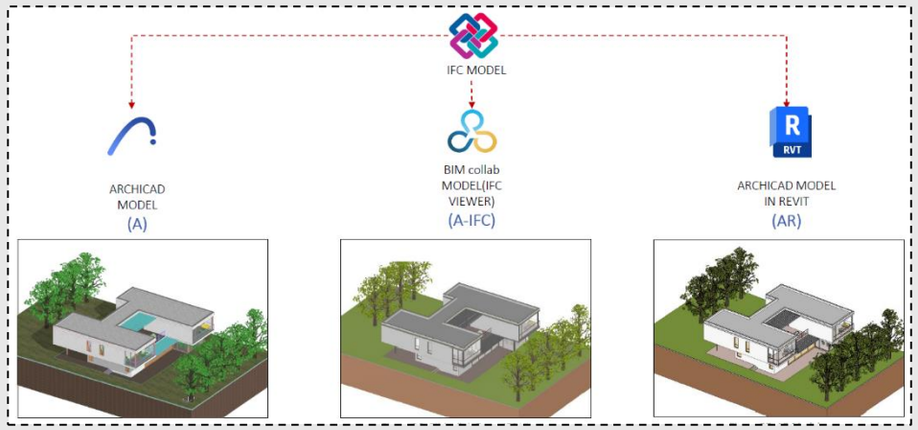
Building Information modelling and Digital transformation

Academic projects

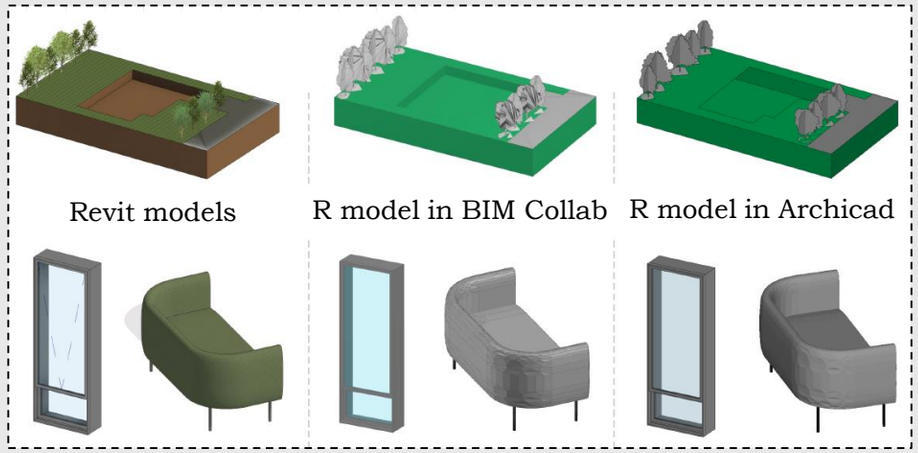
3. IFC Transfer

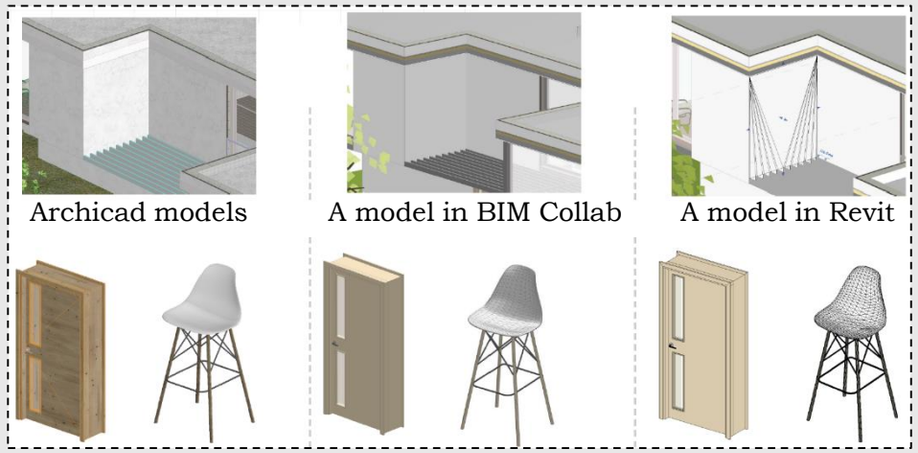


IFC Transfer – Revit model – BIM Collab model – Revit model in Archicad



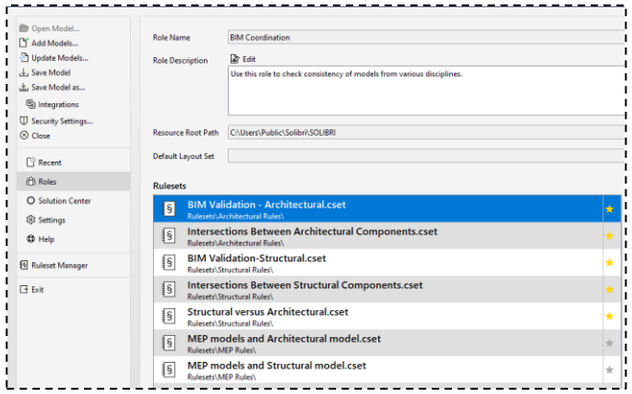
IFC Transfer – Archicad model – BIM Collab model – Archicad model in Revit



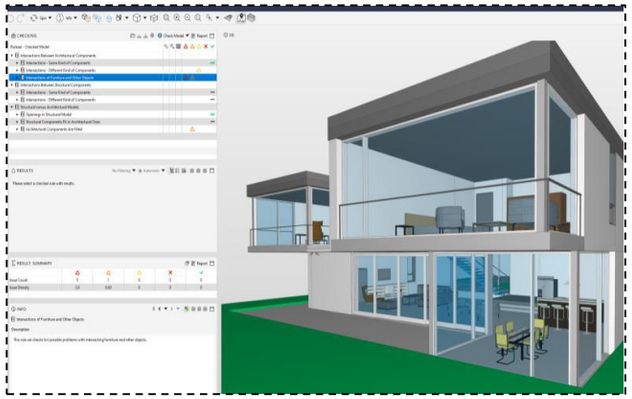


Graphical comparison

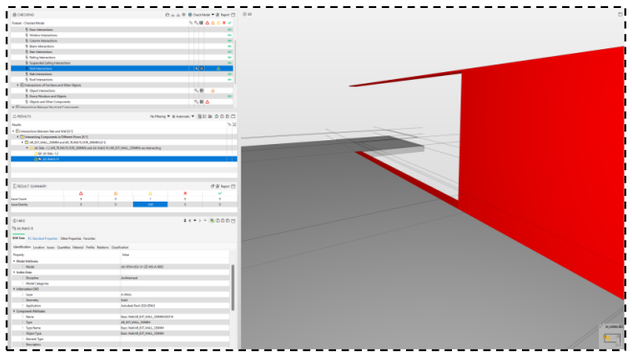
4. Solibri – Clash detection



Customized role and rule set

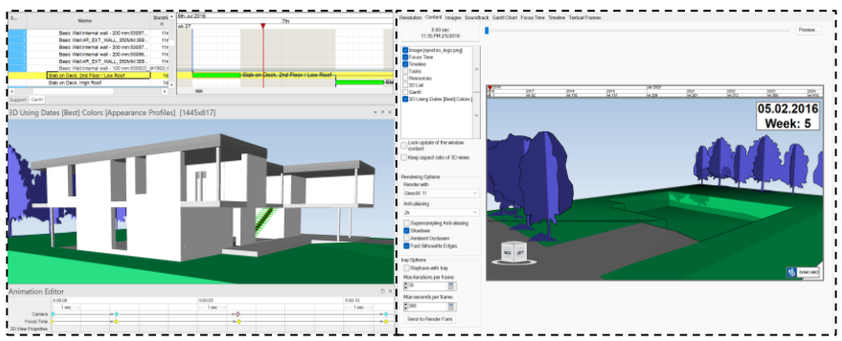


Check model

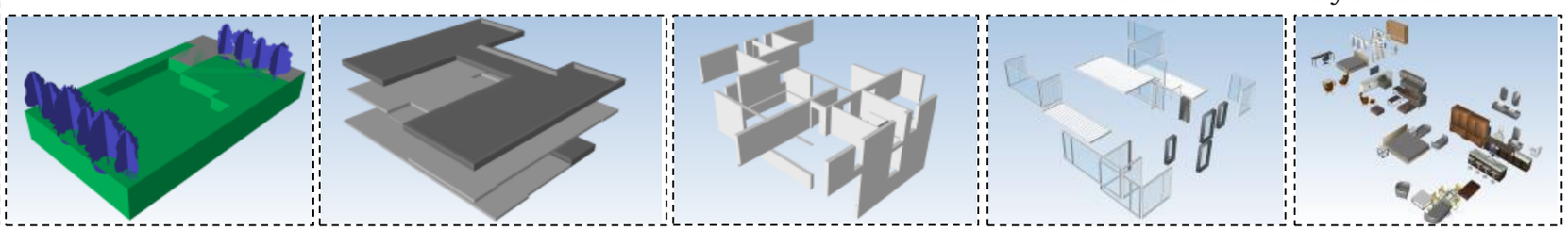


Clash and its severity identified

5. Synchro – 4D Simulation



Synchro Interface Animation



3D Filters for creating tasks

BIM Implementation

Academic project

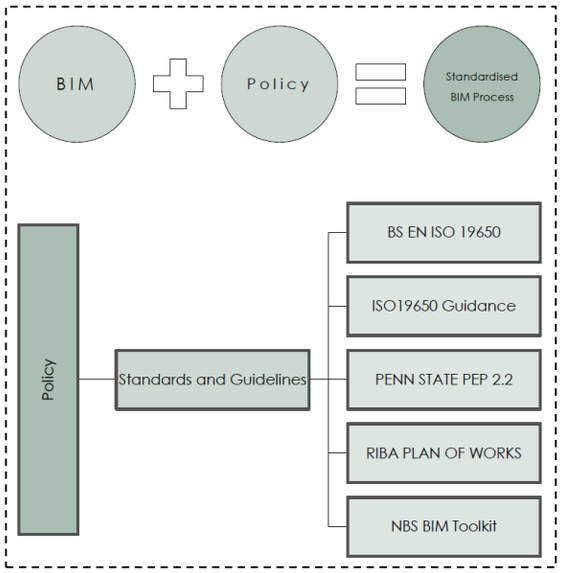
PROJECT OVERVIEW

Aim: The design and construction firm seeks to strategically transform its technological capabilities through a comprehensive BIM implementation approach, have been selected a pilot project to enhance their organizational BIM maturity, establishing collaborative workflows that will serve as a replicable framework for future project deliveries. By undertaking this initiative, the firm aims to develop a unified understanding of BIM processes, up skill their project team, and ensure alignment with current UK BIM mandates.

1: Collaboration in AEC Industry

Key Highlights:

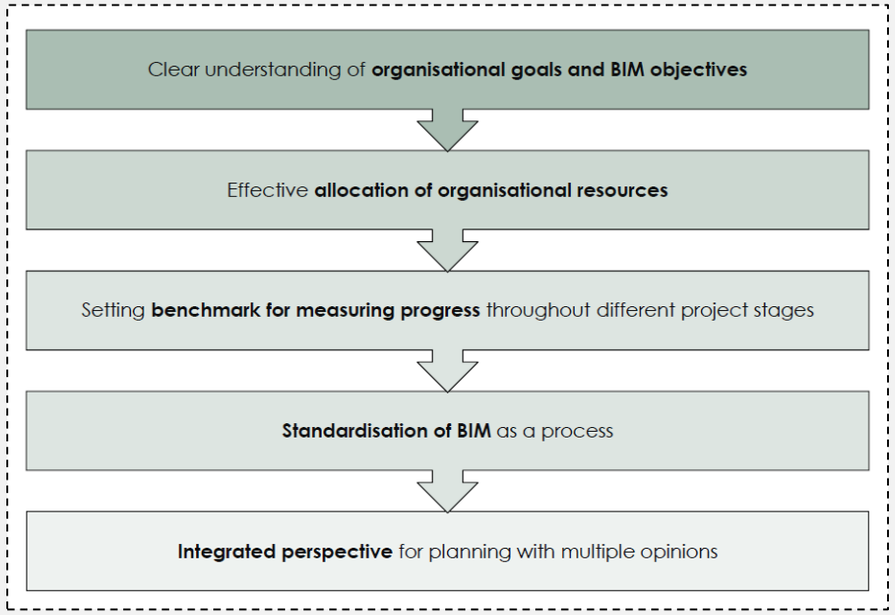
- Comprehensive analysis of collaborative methodologies in modern Architecture, Engineering, and Construction (AEC) sectors.
- Explored interdisciplinary communication strategies.
- Developed insights into effective team integration and mutual understanding.



Overview of BIM

BIM is a human-computer interaction-based process that enables collaborative management of integrated information for enhancing the overall efficiency of the project throughout its lifecycle.

A. BIM Implementation Plan

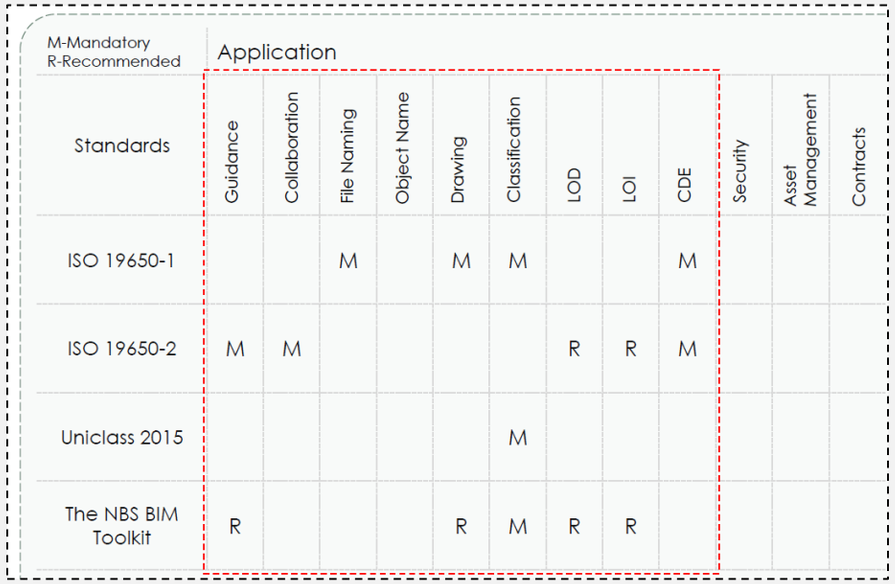


B. BIM Implementation Strategy

A. The BIM implementation plan outlined covers key elements such as project analysis, defining the BIM scope, outlining responsibilities, facilitating knowledge exchange, documenting the BIM process, and establishing a timeline for BIM implementation.

B. The plan emphasises the importance of clear organizational goals, effective resource allocation, progress measurement, BIM standardization, and an integrated planning approach to ensure successful BIM adoption.

C. The plan also identifies applicable industry standards and guidelines, such as ISO 19650, Uniclass 2015, and the NBS BIM Toolkit, that should be considered during the BIM implementation process.



M-Mandatory
R-Recommended

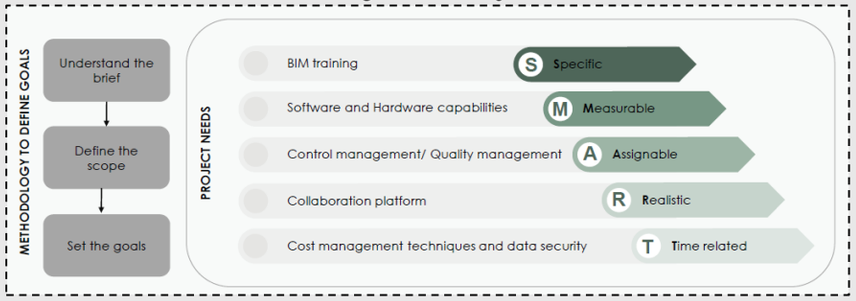
Standards	Application											
	Guidance	Collaboration	File Naming	Object Name	Drawing	Classification	LOD	LOI	CDE	Security	Asset Management	Contracts
ISO 19650-1			M		M	M			M			
ISO 19650-2	M	M					R	R	M			
Uniclass 2015						M						
The NBS BIM Toolkit	R				R	M	R	R				

C. Applicable standards

BIM Implementation

Academic project

Project Analysis

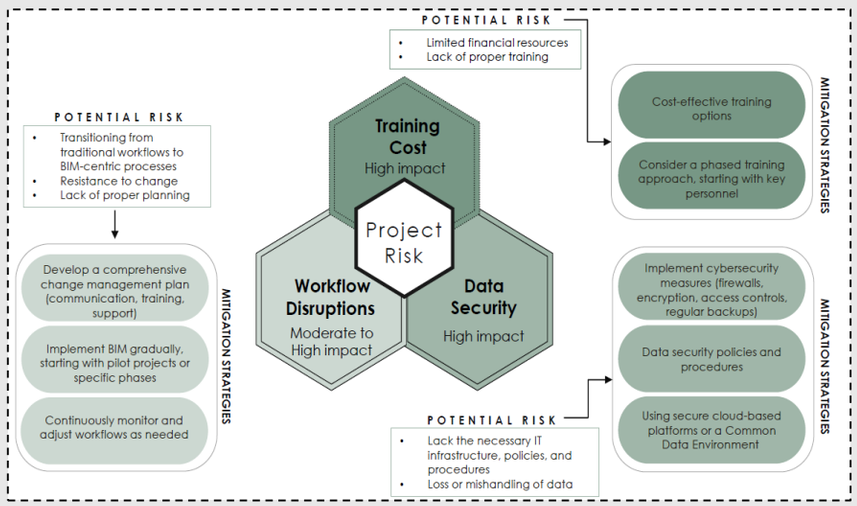


Project Specifics

Project phasing
Considering Integrated Project Delivery (IPD) as a collaborative method of project execution. IPD encourages high levels of integration and collaboration among project stakeholders, aligning their interests and objectives from the beginning.

High Level Responsibility Matrix		Axis 1- Information Management Functions						
		Architectural Task Team	Structural Task Team	MEP Task Team	Geospatial Task Team	Quantity Surveyor Task Team	Quality Assurance Task Team	Contractor
Axis 2 - Tasks or Deliverables	1. Site Information				Responsible			
	2. Design Information	Responsible						
	3. MEP Information			Responsible				
	Mechanical System			Responsible				
	Electrical System			Responsible				
	Plumbing System			Responsible				
	4. Structural Information		Responsible					
	5. Cost Information					Responsible		
	6. Phase Planning & Scheduling Information							Responsible
	7. Quality Control Information						Responsible	

BIM activities and responsibility matrix



Project Risk Assessment

2: Technological Interoperability

Key Insights:

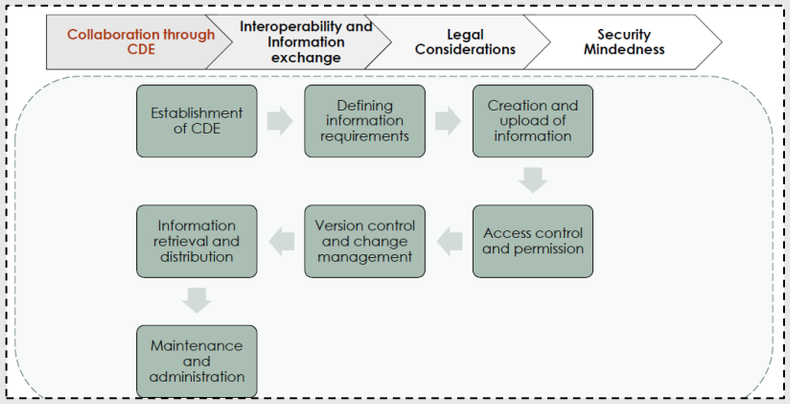
- In-depth examination of technology integration in project delivery.
- Analyzed compatibility of different software platforms and data exchange mechanisms.
- Demonstrated proficiency in navigating complex interdisciplinary technological environments.

3: BIM Standards and Integrated Design

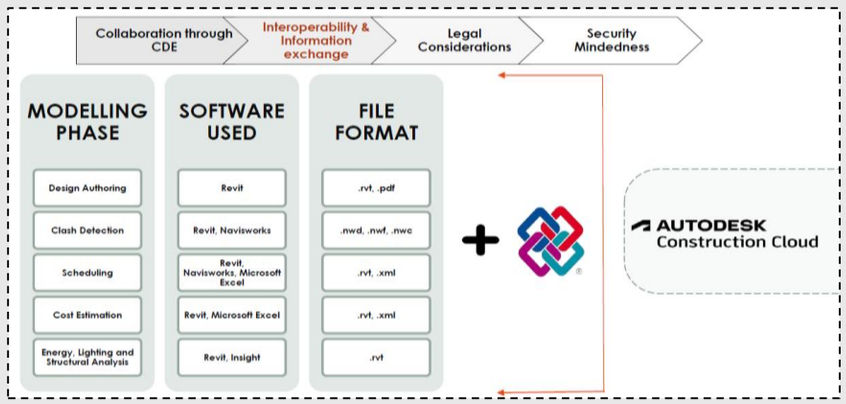
Critical Appraisal:

- Thorough investigation of UK BIM standards (ISO19650, RIBA).
- Comprehensive understanding of Integrated Project Delivery (IPD) principles.
- Critical evaluation of BIM implementation strategies and best practices.

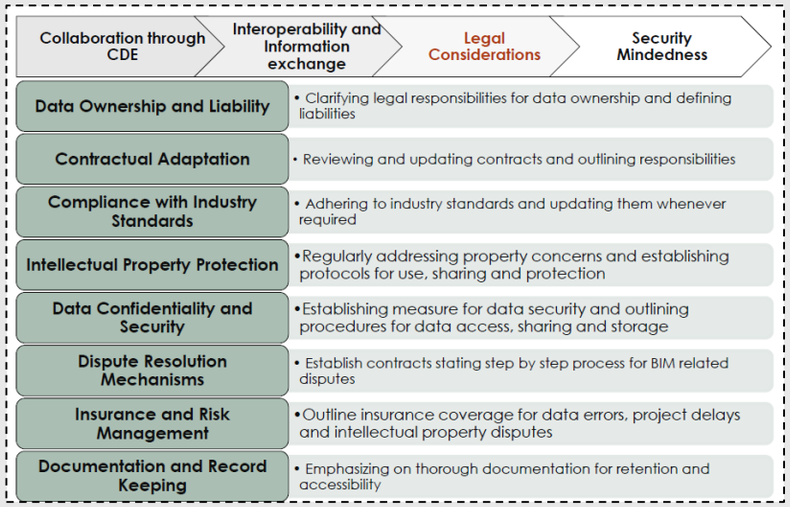
Knowledge exchange process



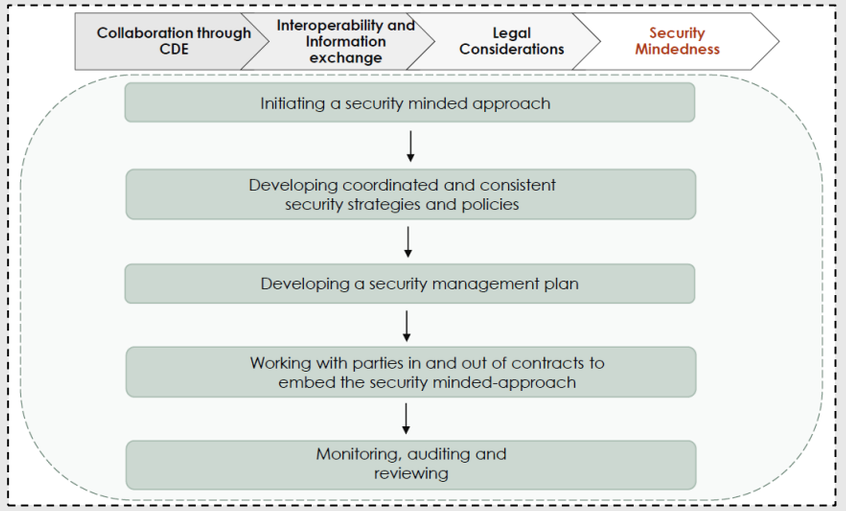
Collaboration through CDE



Interoperability & Information exchange



Legal Considerations



Security Mindedness

BIM Implementation

Academic project

4: Data Exchange and Lifecycle Management

Methodology Analysis:

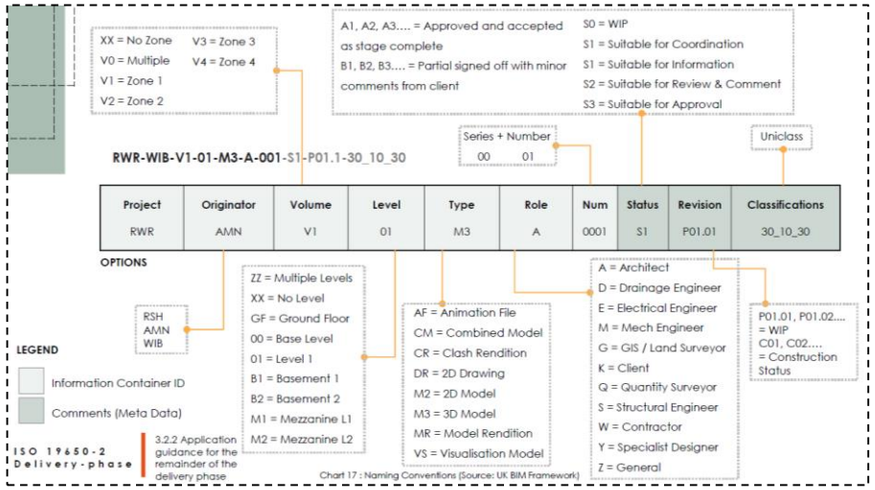
- Detailed exploration of information exchange protocols.
- Mapped comprehensive data sharing strategies throughout project lifecycle.
- Developed systematic approach to information management and transfer.

5: Performance Targeting and Strategies

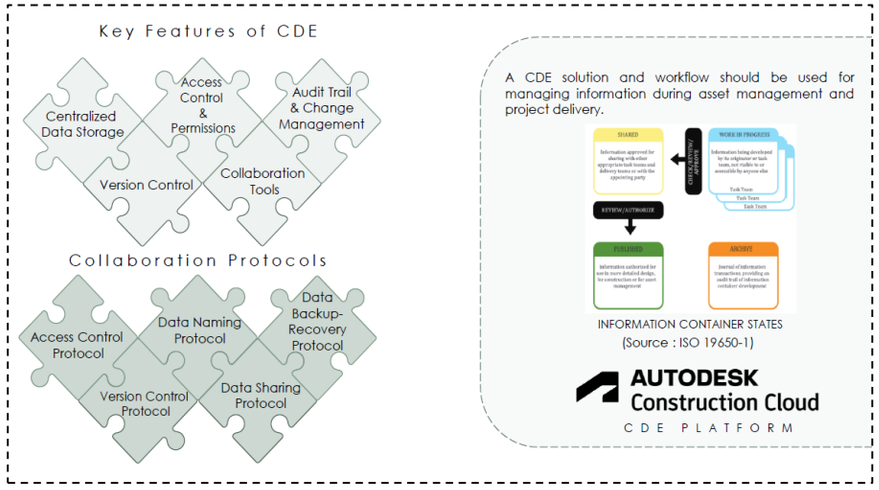
Performance Management:

- Critical assessment of performance target articulation.
- Developed dynamic strategies adaptable across design, construction, and maintenance phases.
- Created frameworks for continuous performance monitoring and improvement.

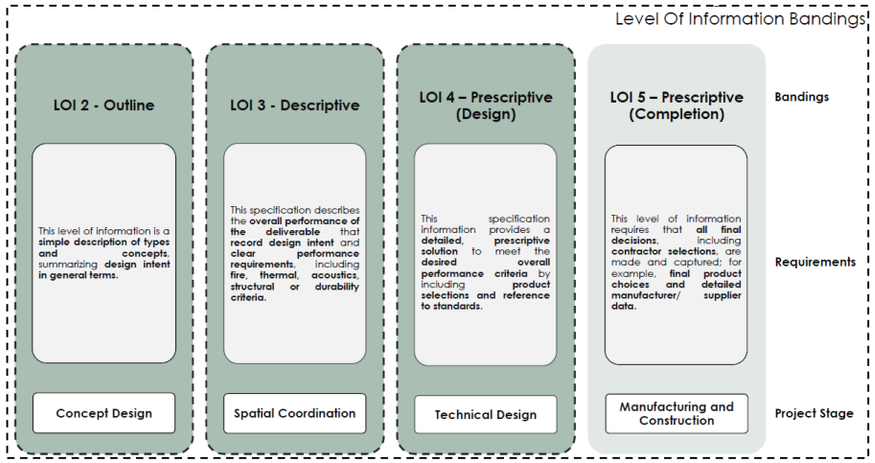
BIM Process



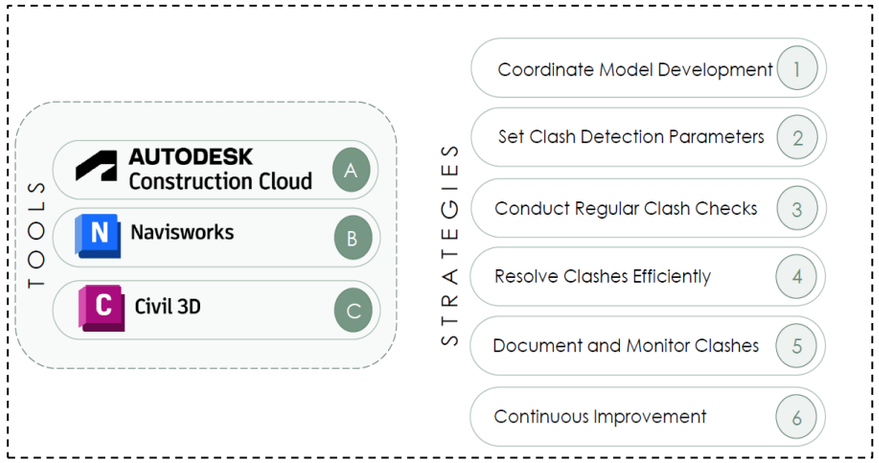
Naming Conventions



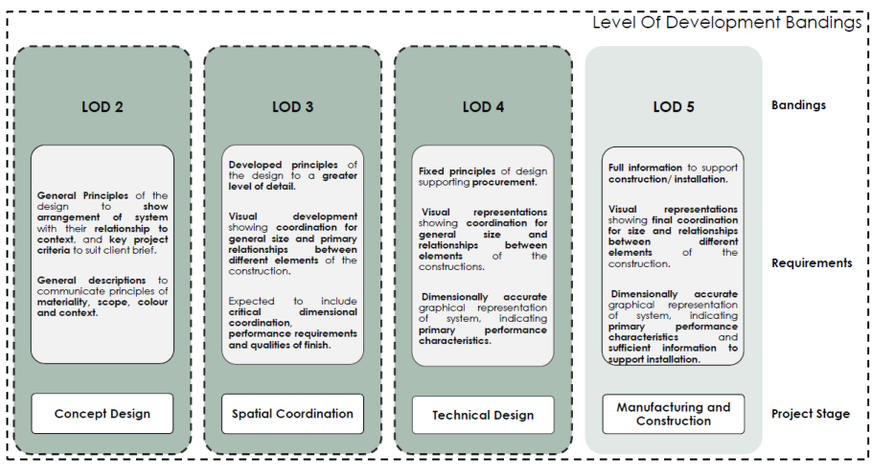
Collaboration Protocol-CDE



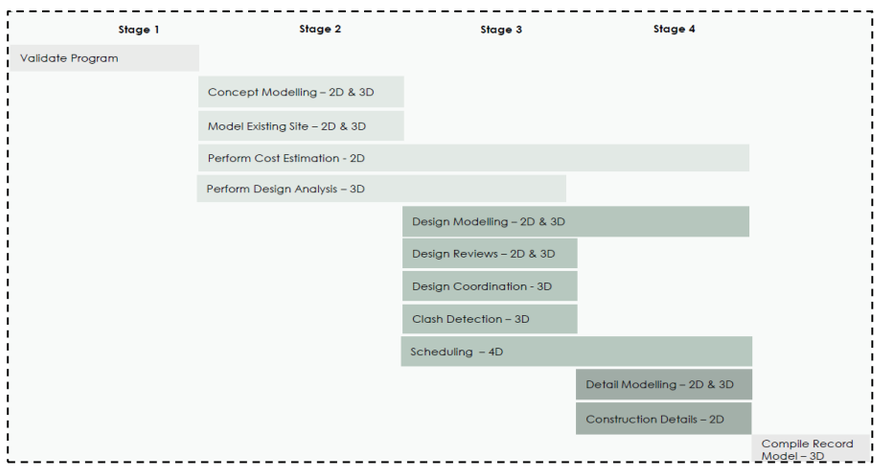
Level of Information - LOI



Strategies and tools for clash detection



Level of Development - LOD



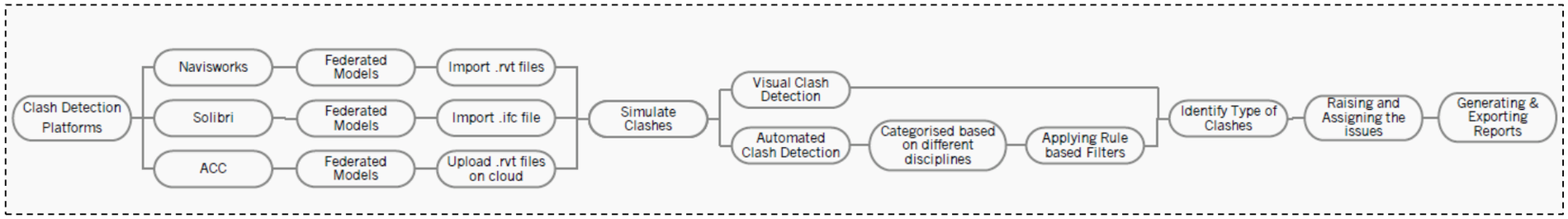
Deliverables and timeline

Collaborative BIM Project

Academic projects

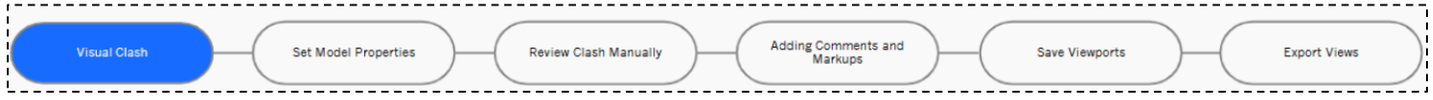
PROJECT OVERVIEW

Aim: The aim of this project is to develop a comprehensive federated BIM model by merging and appending architectural, structural, and MEP models of the same building using Autodesk NavisWorks and Solibri Office. The project will involve conducting thorough clash detection within the federated model, exploring the features and capabilities of both software applications, and documenting the process to understand the potential and limitations of clash detection in relation to design coordination and BIM collaborative workflows.

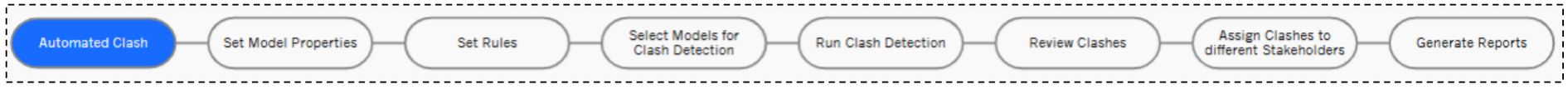


Framework followed for clash detection using NavisWorks, Solibri and Autodesk Construction Cloud

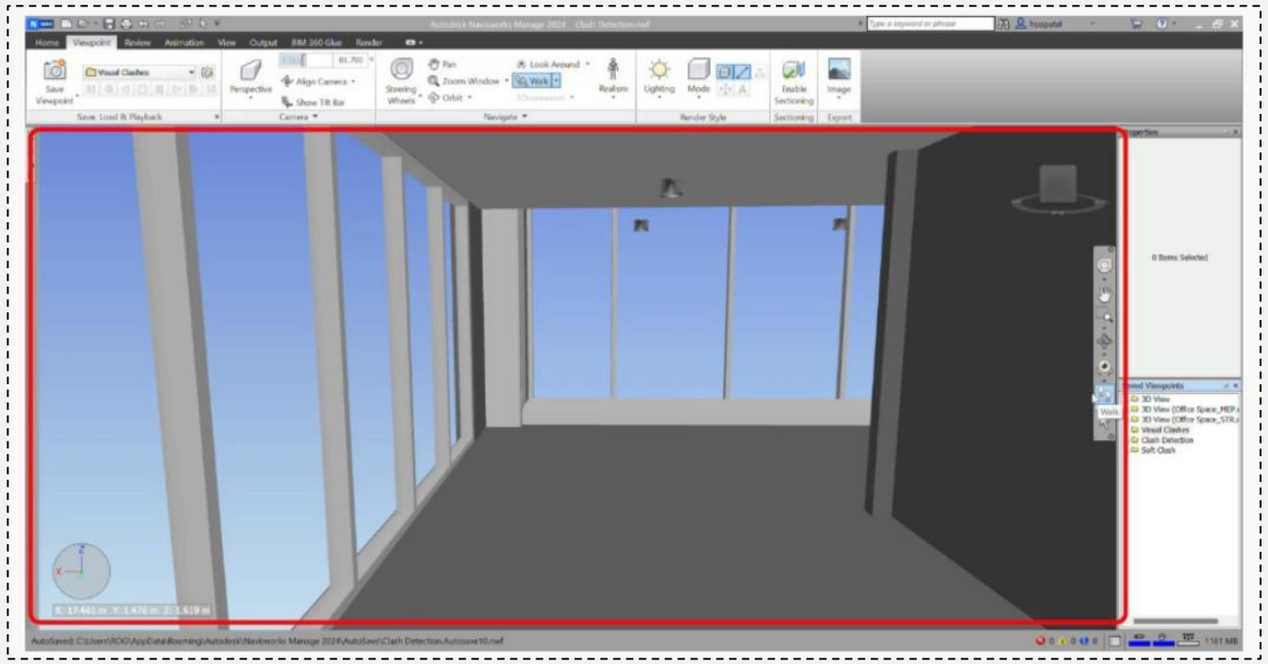
1. NAVISWORKS



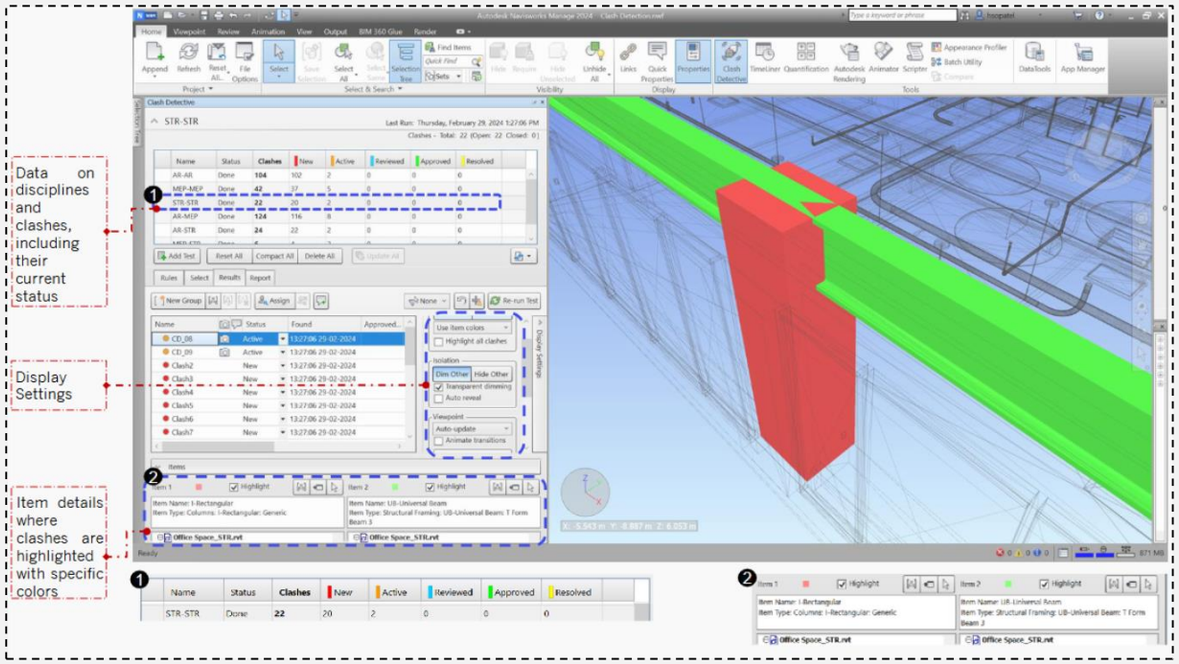
NavisWorks visual clash detection framework



NavisWorks automated clash detection framework



Visual Clash

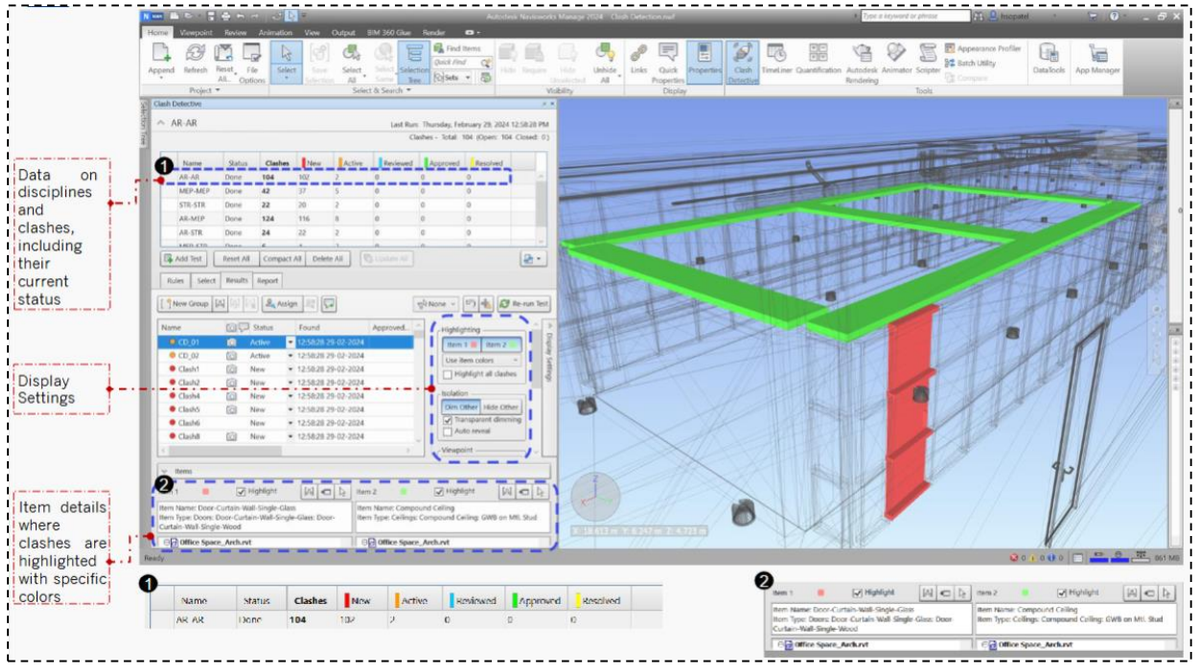


Automated Clash

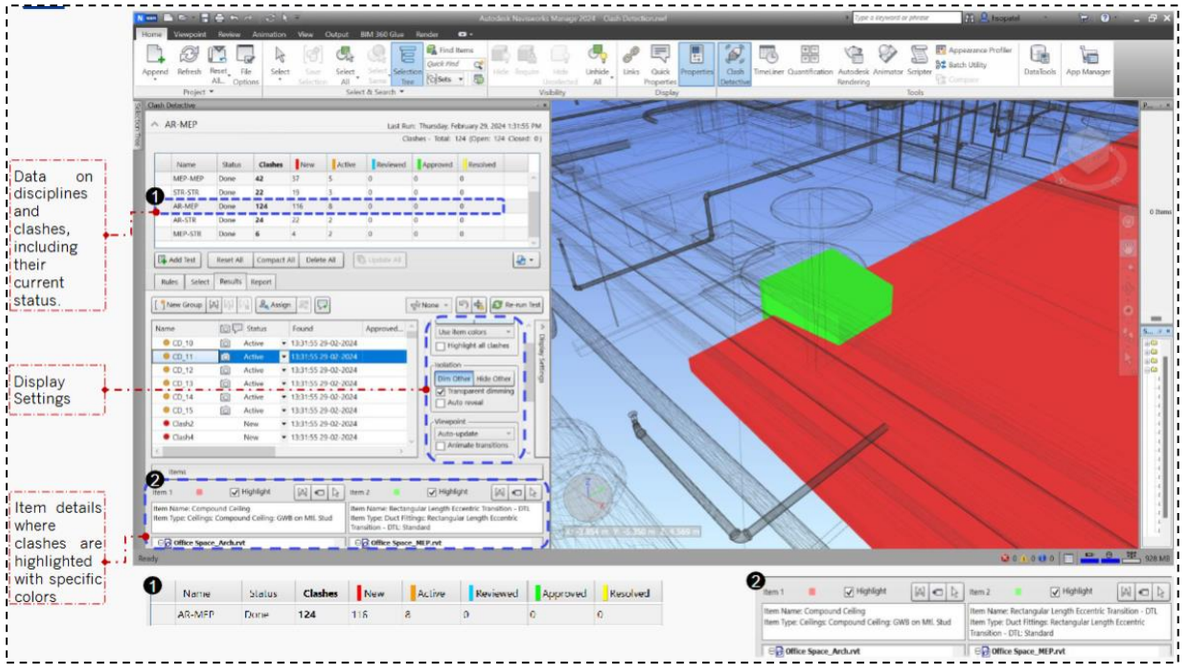
Collaborative BIM Project

Academic projects

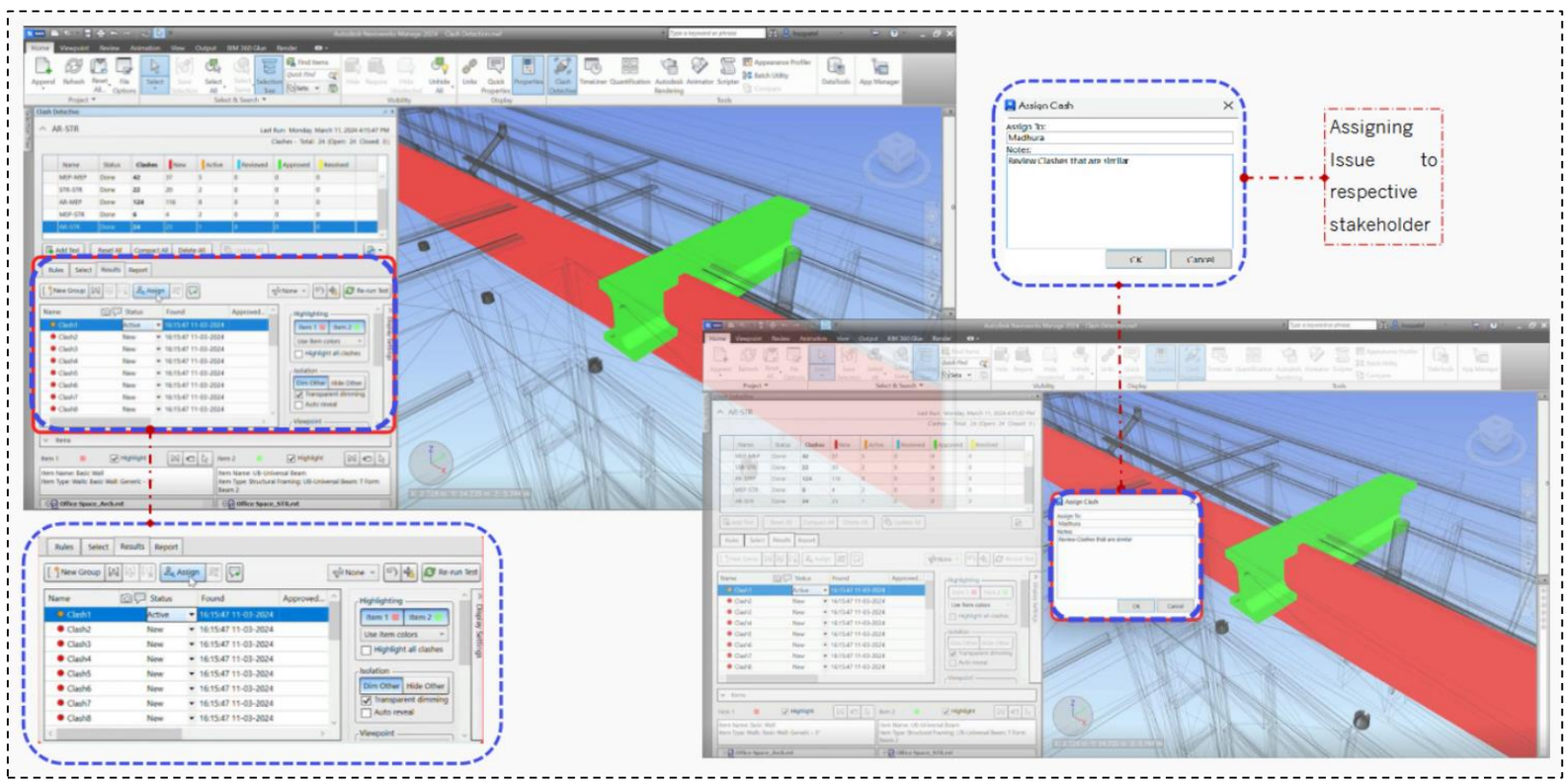
1. NAVISWORKS



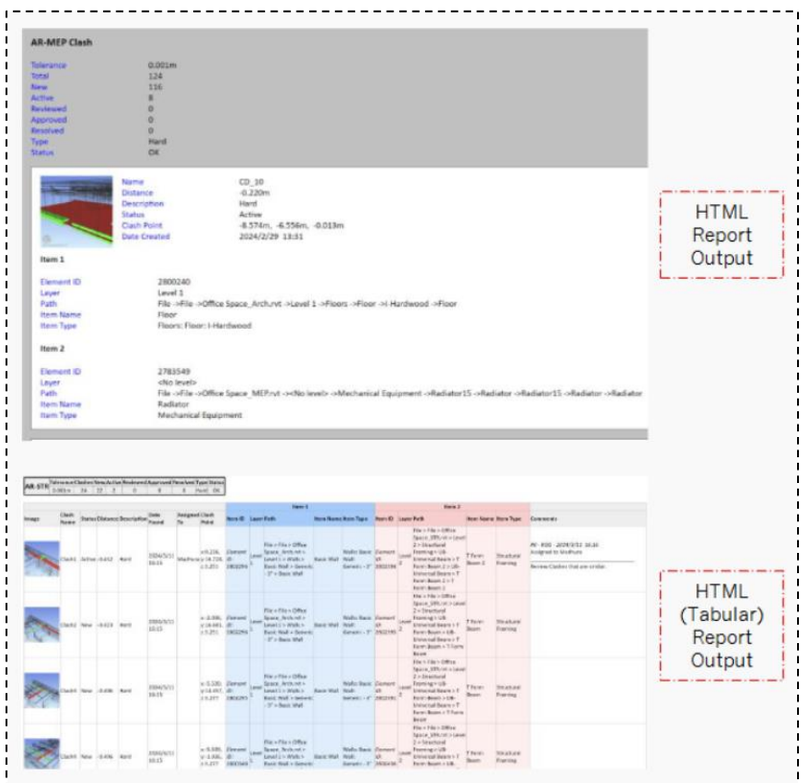
Clash between same discipline



Clash between different discipline



Assigning issues and responsibility



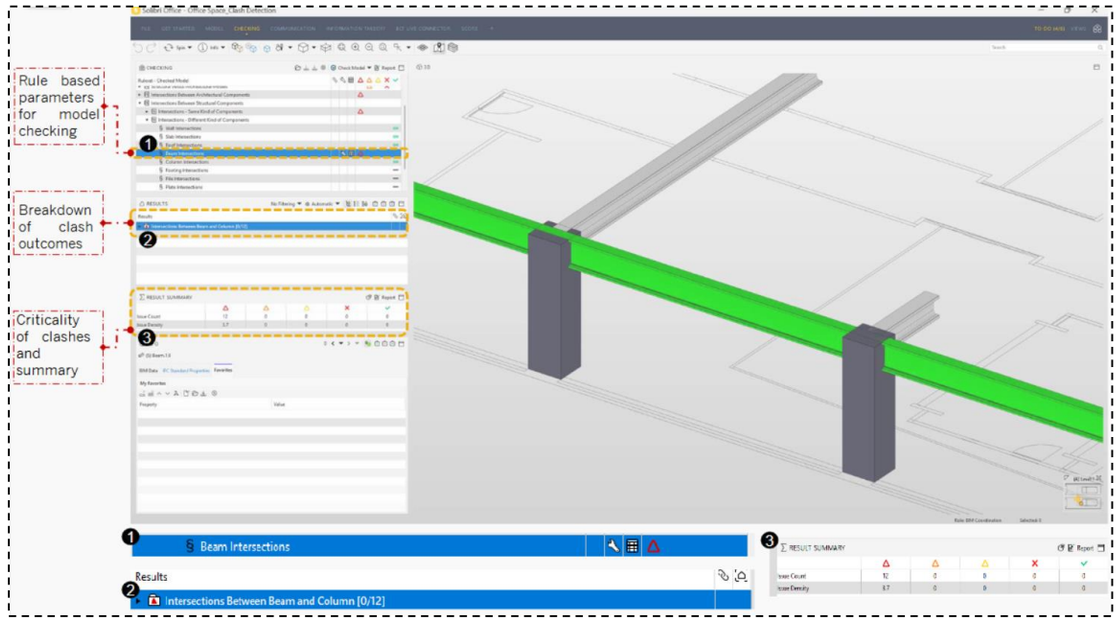
Clash analysis report

Collaborative BIM Project

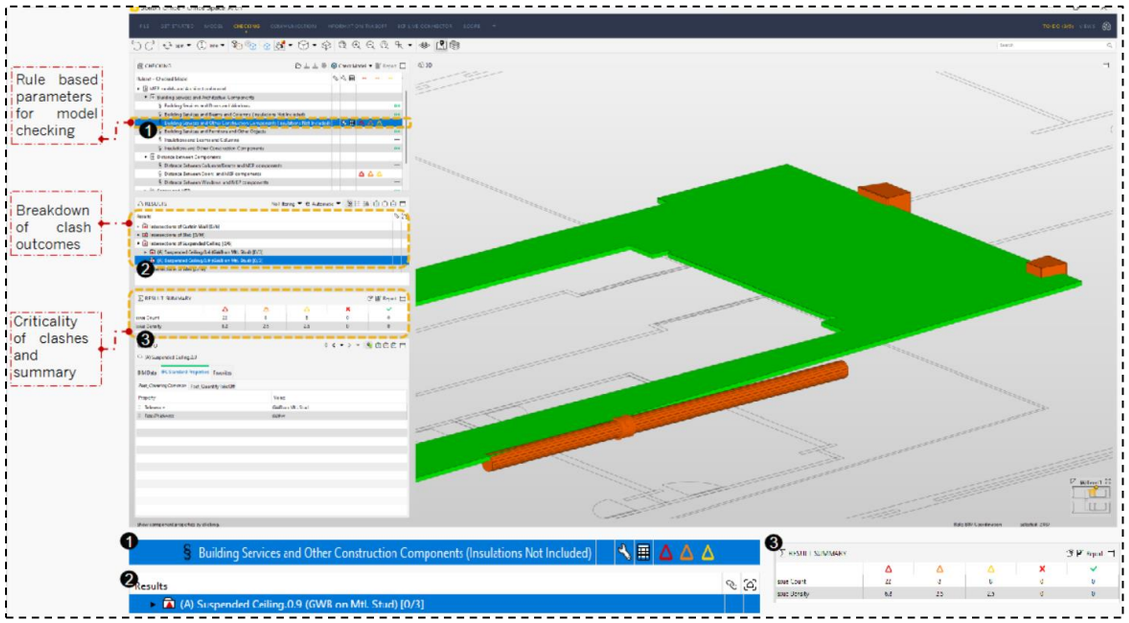
Academic projects

2. SOLIBRI

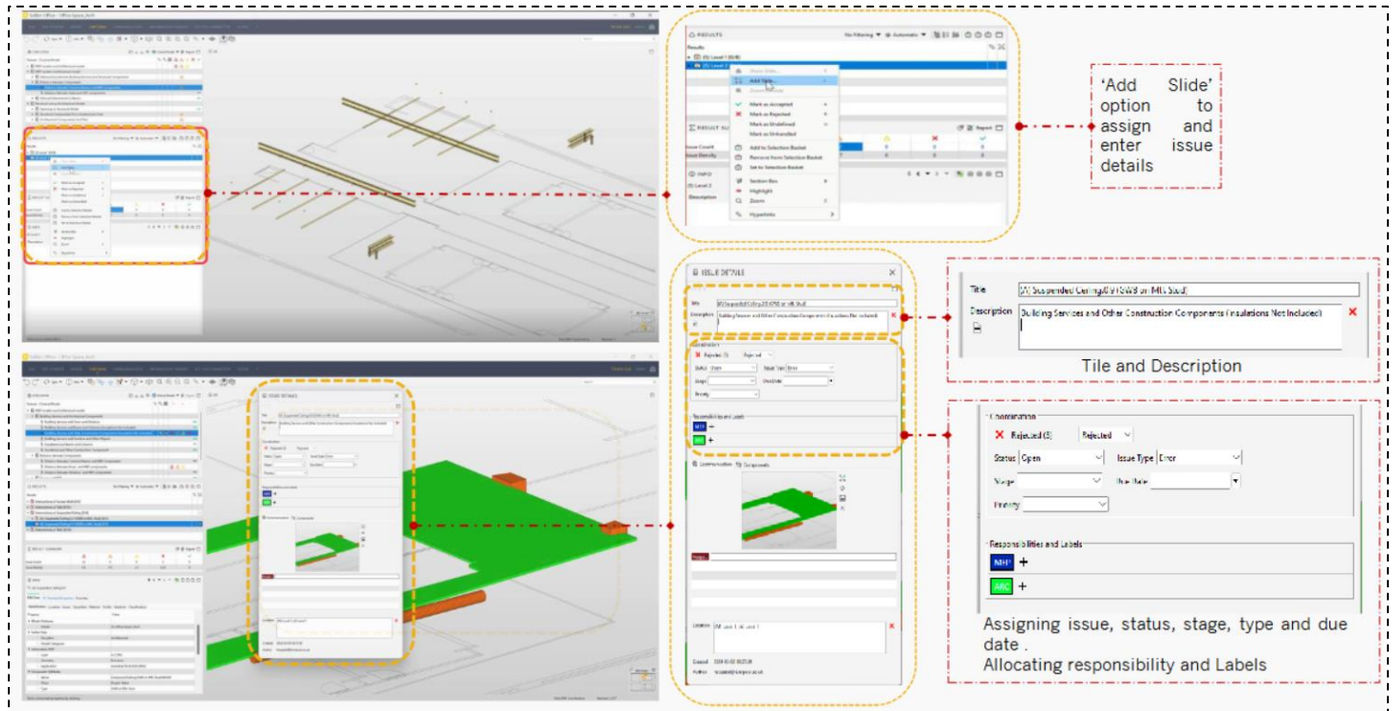
Solibri automated clash detection framework



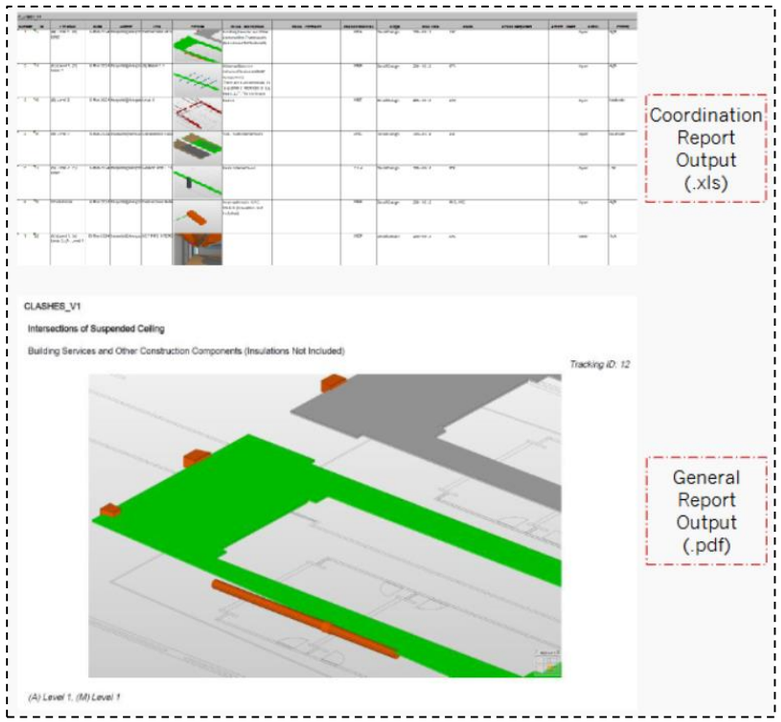
Clash between same discipline



Clash between different discipline



Assigning issues and responsibility



Clash analysis report

Collaborative BIM Project

Academic projects

3. AUTODESK CONSTRUCTION CLOUD

ACC Automated Clash Detection

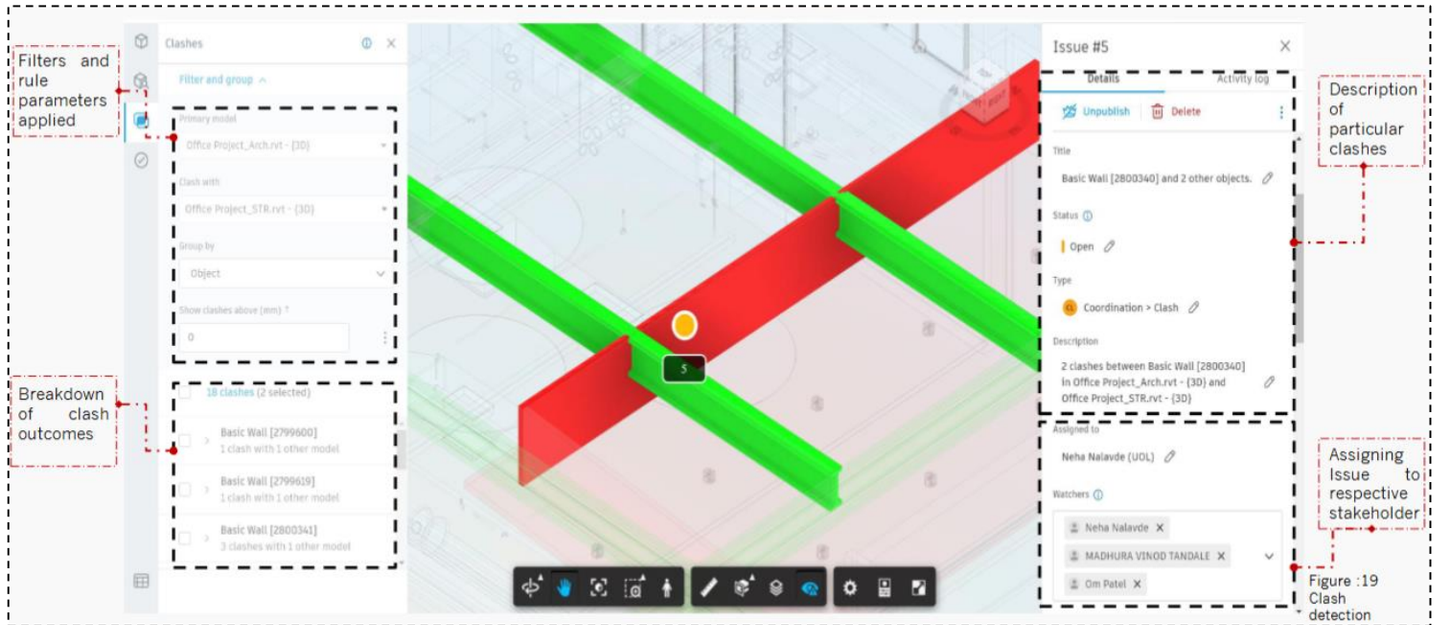
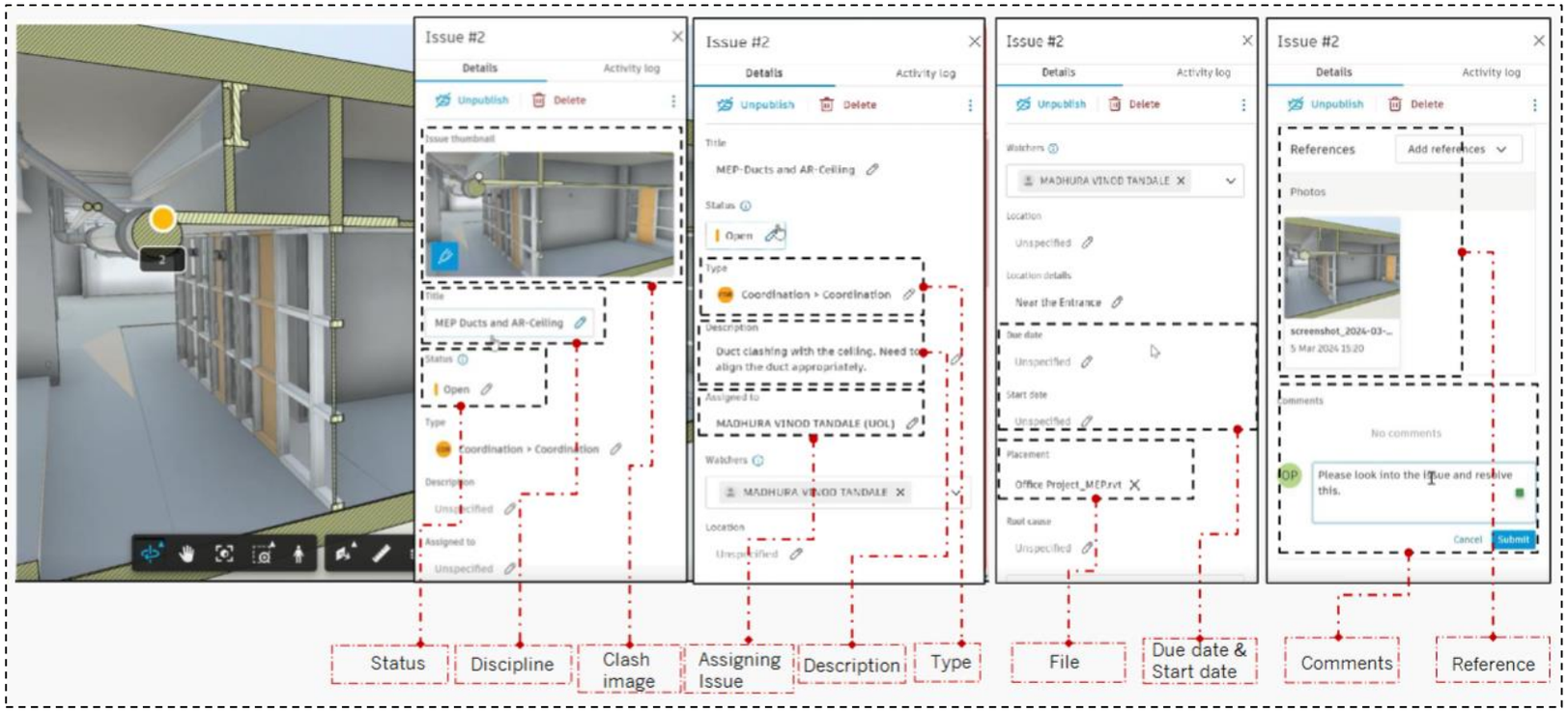
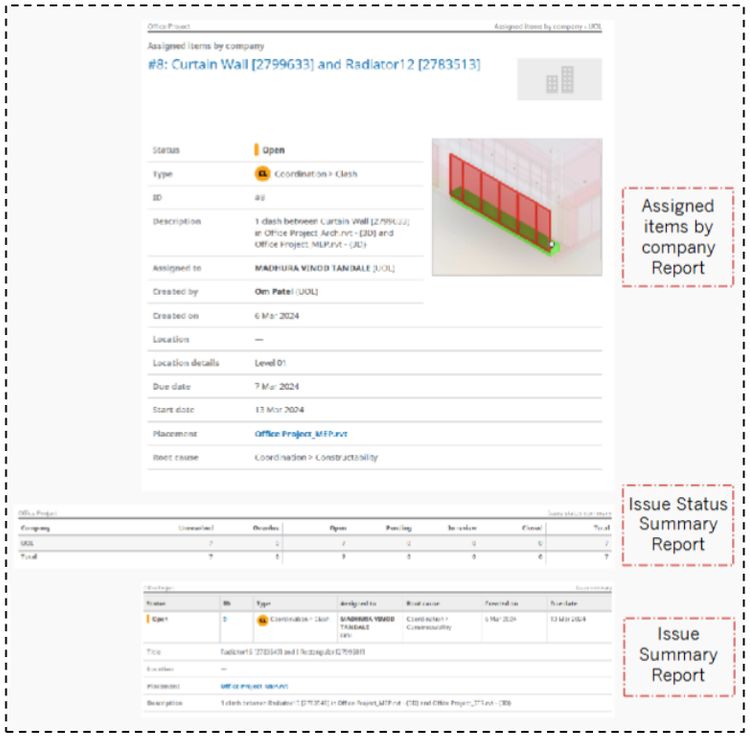


Figure :19 Clash detection

Clash between different discipline



Assigning issues and responsibility



Clash analysis report

MSc Dissertation Project

Advancing Construction through Additive Manufacturing

Aim

The research aims to investigate and analyze how Additive Manufacturing can revolutionise the construction industry by examining BIM integration, comparing on-site versus off-site techniques, and optimizing material strategies to enhance construction efficiency, sustainability, and innovation.

Methodology

Conducted a comprehensive systematic literature review spanning 2020-2024, employing an Integrated Review Systematic Literature Methodology to evaluate implementation barriers and opportunities in construction-based AM technologies through rigorous inclusion/exclusion criteria and thematic analysis. Demonstrated how AM technologies could transform traditional construction practices by improving efficiency, reducing waste, and enabling complex architectural designs while addressing key challenges in sustainability, workforce shortages, and cost optimization in the building sector.

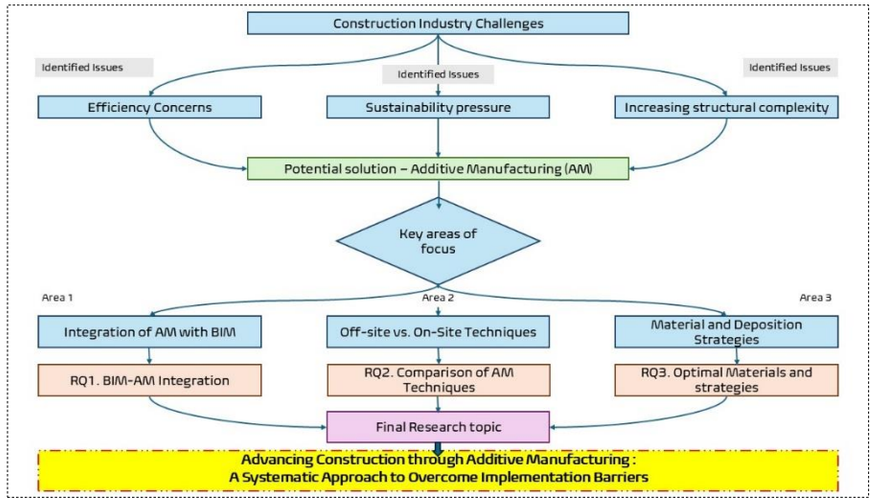
Key Findings

- BIM-AM integration enhances construction efficiency
- AI-facilitated optimisation decreases manual modification time
- On-site and off-site AM techniques have different strengths
- Printing parameters and material choice impact structural integrity
- Advanced cementitious composites improve mechanical characteristics

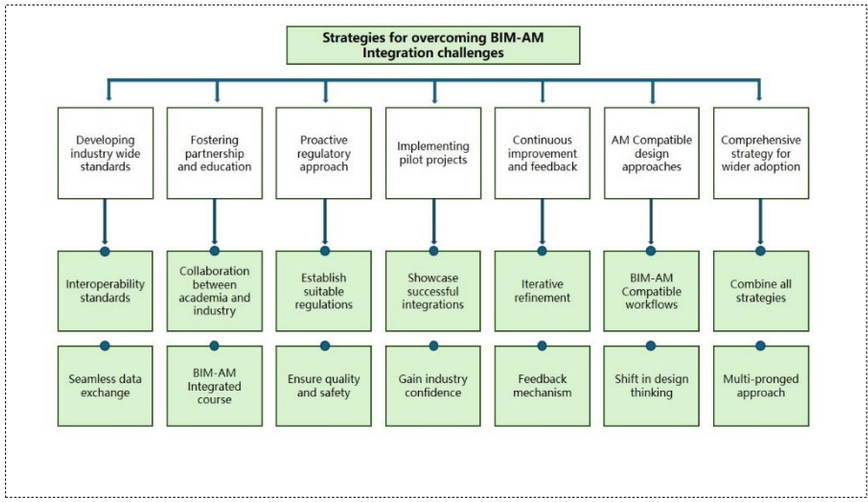
Potential Industry Applications

- Development of industry-wide standards for BIM-AM data exchange
- Investment in hybrid AM technologies
- Prioritisation of sustainable, AM-optimised materials
- Implementation of mobile factories for on-site printing
- Integration of AI for optimizing printing parameters

Research topic selection flowchart



Strategies for Overcoming Integration Challenges



Comparison table – off site vs. on site AM techniques

On-Site vs. Off-Site AM Techniques Comparison Table

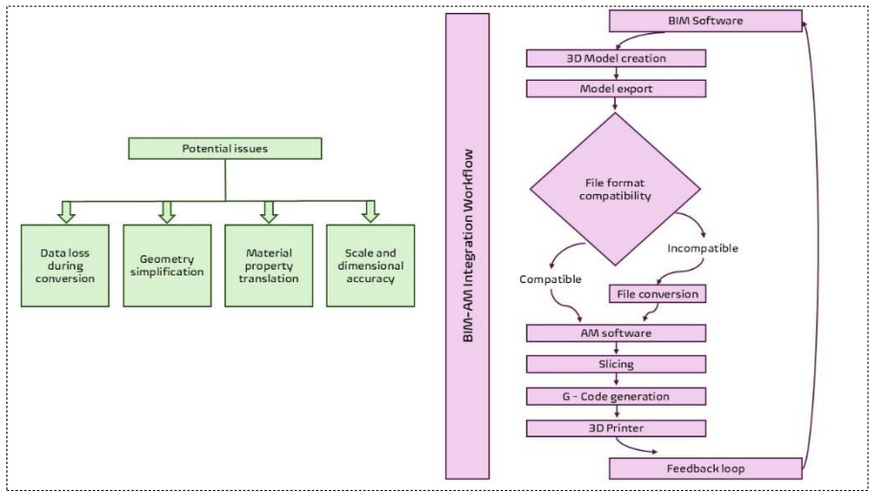
Factor	On-Site AM	Off-Site AM
Cost	Lower due to reduced transportation costs, especially for large prefabricated components	Higher due to the need for transporting printed components
Environmental Impact	Reduced as it eliminates transportation of materials	Higher due to emissions from transporting large components
Quality Control	Harder to control due to environmental factors (temperature, humidity)	Easier due to controlled production environment
Design Flexibility	High flexibility with real-time adjustments	Lower flexibility, but allows for high precision in design
Logistical Constraints	Requires adaptable, mobile equipment for site-specific challenges	Transportation of large components can be complex and costly
Project Scale	Better for smaller, simple projects or those with complex geometry	Suitable for large-scale projects that need precise control
Material Use	May face challenges with curing and quality under environmental conditions	Controlled conditions allow better material management

Material and deposition strategies

Material and Deposition Strategies for AM in Construction

Material Type	Key Properties	Challenges
Polymer-Based AM	High adhesion, dimensional stability, 10-30% fillers	Filler modification for strength
Metal-Based AM	High temperature resistance, structural integrity	Post-processing under extreme conditions
Concrete-Based AM	Fast setting, shape retention, balanced rheology	Rheology control, setting time optimization
Geopolymer-Based Composites	Low CO2 emissions, eco-friendly, sustainable	Maintaining structural properties while reducing emissions
Fiber-Reinforced Composites	Enhanced mechanical strength, flexibility	Improving flexural strength, avoiding anisotropic properties
Self-Healing Materials	Self-repair capabilities, durability	Ensuring durability and reducing maintenance needs
Smart Materials	Responsive to environment, embedded sensors	Optimizing performance and structural integrity

BIM – AM Integration Workflow



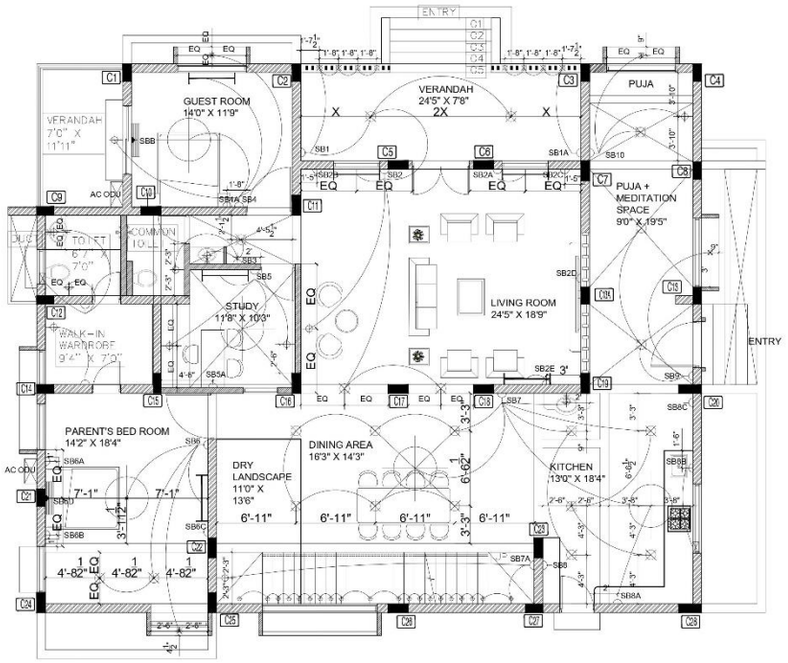
Categorised Key Findings

Category	BIM-AM Integration	On-site and Off-site AM	Materials and Deposition Strategies
Advantages	• AI-driven optimization reduces manual modification time by up to 70% • Proprietary middleware solutions decrease data inconsistencies by 95%	• On-site AM reduces transportation costs and environmental impact • On-site printing offers increased design flexibility and site-specific adaptability • Off-site printing provides controlled production and higher quality outputs • Off-site printing enables mass customization and prefabrication	• Geopolymer-based mixtures can reduce CO2 emissions by up to 30% • Fiber-reinforced composites improve flexural strength by 20-50% • Self-healing materials can regain up to 80% of initial strength after damage
Limitations	• High initial investment costs, especially for smaller firms	• Choice depends on project scale, site conditions, and available infrastructure	• Different AM technologies require specific material properties
Challenges	• Lack of standardized protocols and interoperability are major challenges • Regulatory frameworks lag behind technological advancements	(No specific challenges mentioned in the key findings)	• Rheology control and setting time optimization are critical challenges
Emerging Solutions	(No specific emerging solutions mentioned in the key findings)	• Hybrid approaches (e.g., mobile factories) emerging to combine benefits	• Concrete mixes for 3D printing: 35-40% cement, 40-45% aggregates, 15-20% water • Polymer composites with 10-30% fillers improve mechanical properties

Architectural Design

Professional projects

Residential Bungalow Project: The primary aim of the project was to design and document a comprehensive set of plans for a residential bungalow that met client requirements for functionality, aesthetics, and efficiency while adhering to architectural and safety standards.

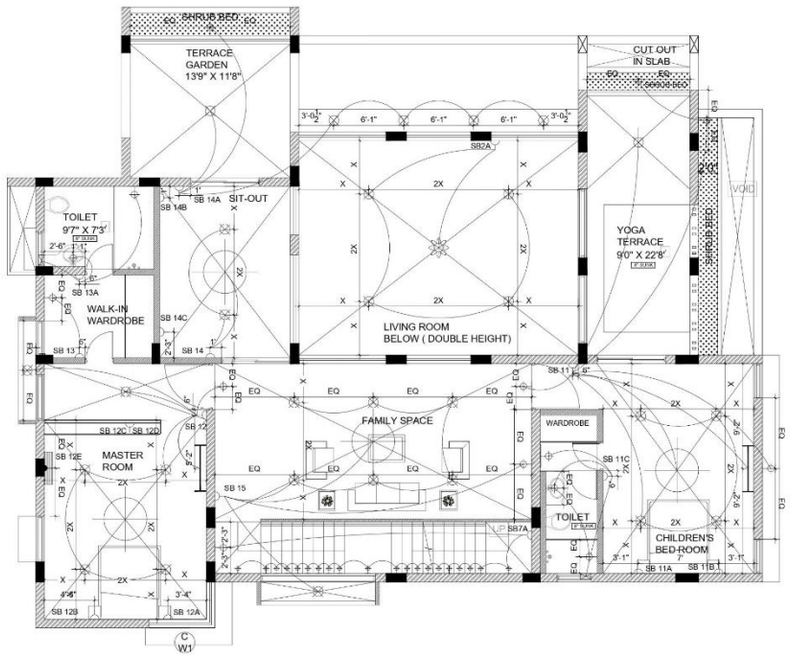


GROUND FLOOR PLAN

NOTE: ALL THE SWITCH BOARDS TO START AT 6" FROM WALL / COLUMN EDGE UNLESS SPECIFIED

ELECTRICAL LAYOUT FOR GROUND FLOOR

ROOM	SB.NO.	LEVEL	NO. OF POINTS	DESCRIPTION
VERANDAH	SB 1	4'-6"	2	CEILING LIGHT
			4	SPOT LIGHTS
			1	6AMP POINTS
			1	16 AMP TV PT
	SB 1A	4'-6"	4	SPOT LIGHTS
			1	6AMP POINTS
			1	16 AMP TV PT
LIVING ROOM	SB 2	4'-6"	2	CEILING LIGHT
			2	SPOT LIGHTS
			1	WALL LIGHT
			1	6AMP POINTS
	SB 2A	4'-6"	1	TUBE LIGHT POINT
			1	6AMP POINTS
			1	CHANDELIER
			4	CEILING LIGHT
	SB 2B	2'-6"	2	6AMP POINTS
	SB 2C	2'-6"	2	6AMP POINTS
	SB 2D	2'-6"	2	6AMP POINTS
			1	DISH TV CABLE POINT
			1	WIFI CABLE POINT
	SB 2E	2'-6"	1	TUBE LIGHT POINT
			2	6AMP POINTS
PASSAGE/ COMMON TOILET	SB 3	4'-6"	1	CEILING LIGHT
			2	WALL LIGHT
GUEST ROOM	SB 4	4'-6"	1	CEILING LIGHT
			1	CEILING FAN POINT
			1	WALL LIGHT
			1	TUBE LIGHT POINT
	SB 4A	4'-6"	2	6AMP POINTS
			1	FAN REGULATOR POINT
	SB 4B	7'-6"	1	16AMP AC POINT
STUDY	SB 5	4'-6"	1	CEILING FAN POINT
			2	WALL LIGHT
			1	TUBE LIGHT POINT
			1	6AMP POINTS
	SB 5	4'-6"	3	6AMP POINTS
			1	FAN REGULATOR POINT
PARENT'S BED ROOM	SB 6	4'-6"	1	CEILING FAN POINT
			1	TUBE LIGHT POINT
			2	CEILING LIGHT
			1	6AMP POINTS
	SB 6A SB 6B	4'-6"	2	6AMP POINTS
			1	FAN REGULATOR POINT
	SB 6C	2'-6"	2	6AMP POINTS
			1	DISH TV CABLE POINT
			1	WIFI CABLE POINT
	SB 6D	7'-6"	1	16AMP AC POINT
DINING AREA, STAIRCASE & KITCHEN	SB 7	4'-6"	11	CEILING LIGHT
			2	CEILING FAN POINT
			1	WALL LIGHT
			1	6AMP POINTS
	SB 7A	4'-6"	20	SPOT WALL LIGHT
			1	WALL LIGHT
	SB 8	3'-6"	2	6AMP POINTS
	SB 8A	3'-6"	2	6AMP POINTS
			1	16AMP POINTS
			1	CEILING FAN POINT
	SB 8B	3'-6"	2	6AMP POINTS
			1	EXHAUST POINT
	SB 8C	2'-6"	1	16AMP POINTS
PUJA & MED-TATION	SB 9	4'-6"	3	CEILING LIGHT
			1	6AMP POINTS
	SB 10	4'-6"	2	CEILING LIGHT
			2	WALL LIGHT
			1	6AMP POINTS



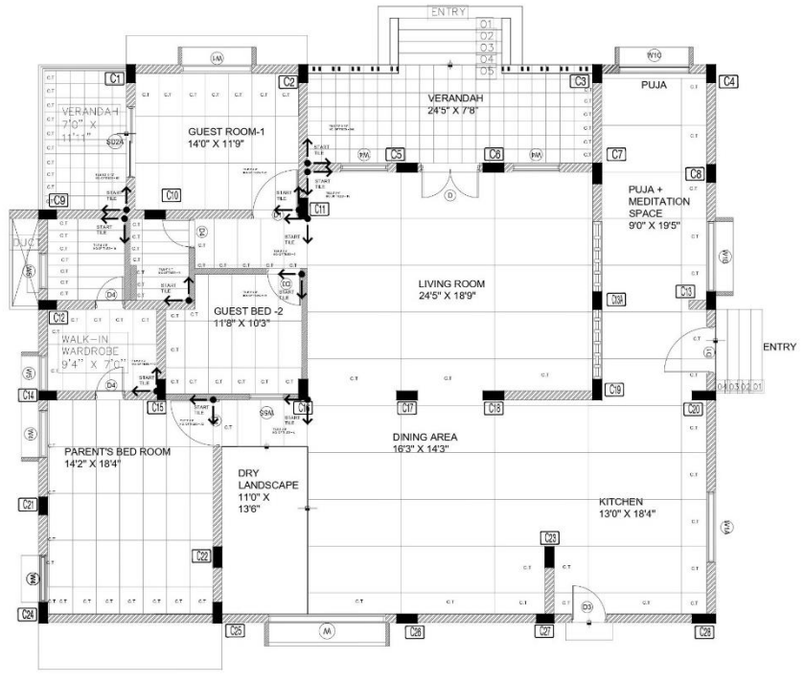
FIRST FLOOR PLAN

NOTE: ALL THE SWITCH BOARDS TO START AT 6" FROM WALL / COLUMN EDGE UNLESS SPECIFIED

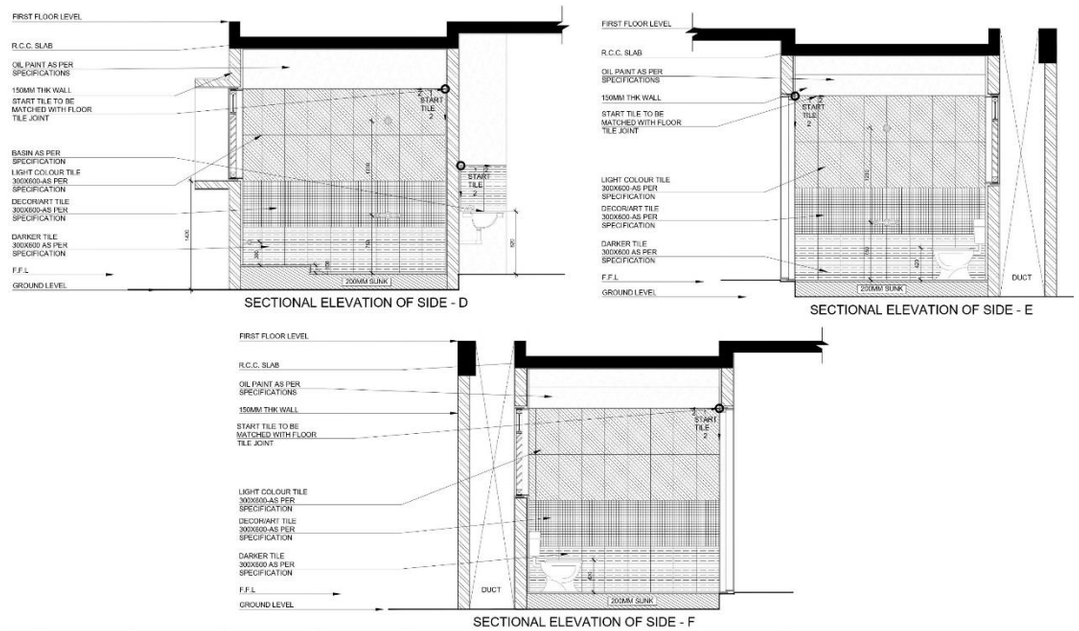
ELECTRICAL LAYOUT FOR FIRST FLOOR

ROOM	SB.NO.	LEVEL	NO. OF POINTS	DESCRIPTION
CHILDREN'S BEDROOM	SB 11	4'-6"	4	CEILING LIGHT
			1	CEILING FAN POINT
			1	TUBE LIGHT POINT
			2	WALL LIGHT
			2	WALL LIGHT
			1	CEILING LIGHT
			1	6AMP POINTS
	SB 11A	2'-6"	2	6AMP POINTS
			1	FAN REGULATOR POINT
	SB 11B	2'-6"	2	6AMP POINTS
	SB 11C	4'-6"	1	WALL LIGHT
			2	WALL LIGHT
			1	EXHAUST FAN POINT
MASTER BEDROOM	SB 12	4'-6"	4	CEILING LIGHT
			1	CEILING FAN POINT
			1	TUBE LIGHT POINT
			2	WALL LIGHT
			1	CEILING LIGHT
			1	6AMP POINTS
	SB 12A	2'-6"	2	6AMP POINTS
			1	FAN REGULATOR POINT
	SB 12B	2'-6"	2	6AMP POINTS
	SB 12C	2'-6"	1	DISH TV POINT
			1	16 AMP POINT
			2	6 AMP POINT
	SB 12D	4'-6"	1	16 AMP POINT
	SB 12E	7'-6"	1	16AMP AC POINT
WALK IN WARDROBE	SB 13	4'-6"	1	WALL LIGHT
			1	6AMP POINTS
			1	16AMP POINTS
	SB 13A	4'-6"	1	WALL LIGHT
			1	WALL LIGHT
			1	EXHAUST FAN POINT
SIT OUT	SB 14	4'-6"	1	CEILING FAN POINT
			2	CEILING LIGHT
			1	16AMP POINTS
			1	6AMP POINTS
	SB 14A	4'-6"	1	WALL LIGHT
			1	CEILING LIGHT
			4	CEILING LIGHT
			1	6AMP POINTS
	SB 14B	1'-6"	2	16AMP POINTS
	SB 14C	1'-6"	2	16AMP POINTS
FAMILY SPACE	SB 14	4'-6"	1	CEILING FAN POINT
			1	CEILING LIGHT
			6	CEILING LIGHT
			1	WALL LIGHT
			1	6AMP POINTS

Electrical Plans: Detailed ground floor and first floor electrical layouts showcasing the strategic placement of fixtures, switches, and wiring routes to optimize usability and ensure compliance with safety regulations.



Flooring Plan: A meticulously developed ground floor flooring plan, specifying material choices and patterns for durability and visual harmony.



SECTIONAL ELEVATION OF SIDE - D

SECTIONAL ELEVATION OF SIDE - E

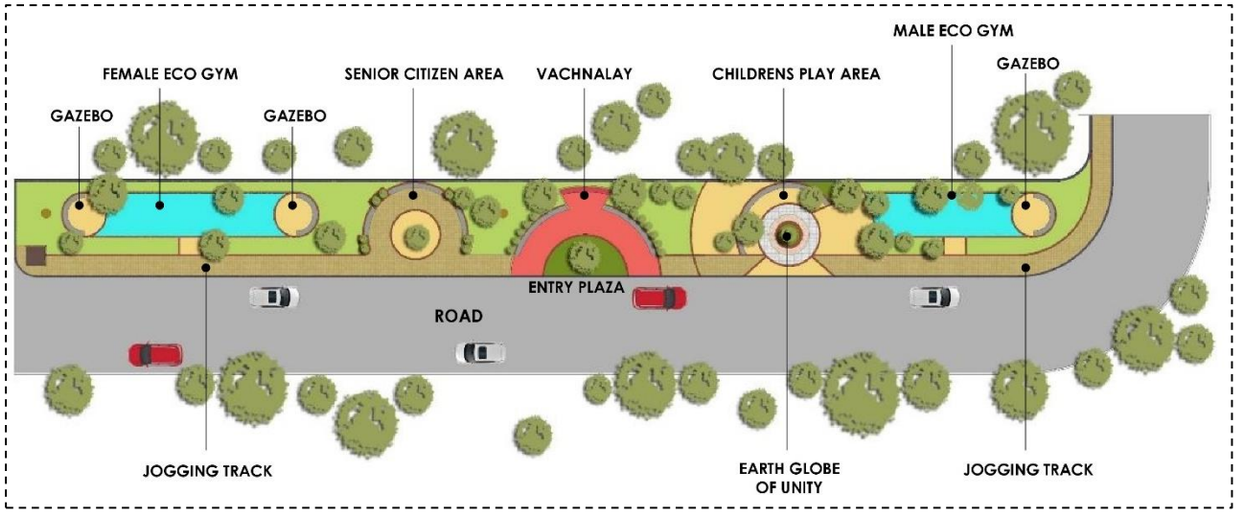
SECTIONAL ELEVATION OF SIDE - F

Toilet Design: Functional and aesthetically appealing toilet layouts, integrating efficient space utilization, modern design elements, and well-coordinated plumbing systems

Architectural Design

Professional projects

Garden and Landscape project : The aim of this garden and landscape project was to design a multifunctional community space that caters to diverse user groups, promoting health, recreation, and social interaction while incorporating sustainable and aesthetic landscape elements. The design sought to enhance the urban environment by integrating functional zones for various activities, such as exercise, relaxation, and community gatherings.



Site Plan: A detailed plan illustrating the zoning and spatial layout, including features like jogging tracks, eco gyms for men and women, gazebos, a senior citizen area, a children's play area, and a central unity globe.
3D Views: Rendered visualizations showcasing the design intent, materiality, and functionality of key spaces, such as the entry plaza, children's play zone, and library, to provide a realistic understanding of the proposed environment.

Residential Bungalow 3D Visualisation and Façade design:
These 3D rendered views and elevations was to visualize the design of the residential bungalow in a realistic and comprehensive manner, providing the client with a clear understanding of the architectural aesthetics, material palette, landscaping, and spatial context. These renderings were created to communicate the design intent effectively, highlighting the modern façade, landscaping features, and the integration of the bungalow within its surroundings.

3D Visualisation

Façade Design

3D Interior Design

Interior Design for Bedroom renovation :
The aim of the 3D model with interior design solutions for the bedroom renovation was to create a visually engaging and functional layout, showcasing optimized space utilization, modern aesthetics, and a harmonious material and color palette to enhance comfort and style.

Architectural Design

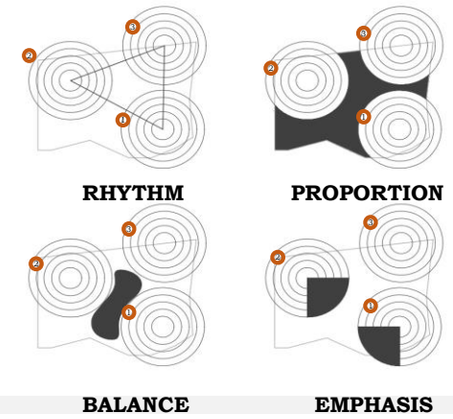
B.ARCH Thesis Project – Fashion Institute in Pune, India

Project location
Tingre nagar, Pune.
Site area : 30,000 sq.m
Site FSI : 1.1
Land use Zone :
Public Semi-Public zone

Proximity to existing facilities:
Bus stop –100m
Airport –1.5 km
Shopping mall –3km
Railway station –8km
Hospital –2km

Site Specifics
Applicable statutory and safety codes:
• Parking- institutional building : for every 100 sq.m- 1 car and 12 scooter + 20% visitors
Parking- mercantile (commercial retail spaces) :- for every 100 sq.m 1 car and 6 scooter
Auditorium and halls : for every 40 seats 4 cars and 16 scooters
commercial can be built upto 15%compond wall 1.5 m to 2.4 m
Recreational spaces : 10% recreational space to be provided.

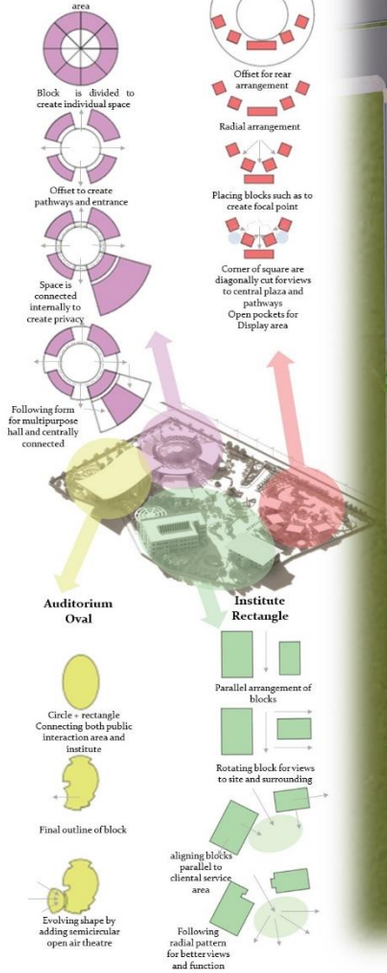
Design Concept
The design concept integrates fashion and architectural principles, dividing the site into private (institute), semi-public (commercial), and public spaces arranged in a circular form for symmetry and unity. The three areas are interconnected and offset equally, creating rhythm and balance with green spaces, while emphasizing key structures like the main institute building and multipurpose hall. This approach aims to produce an iconic landmark that serves society by harmoniously blending design principles with functional spaces.



Design Intent

Fashion entails both imagination and time.
A constantly shifting phenomena. A spatial modulation of continuous movement in time and space in architectural terms. In recent years, fashion has taken on enormous importance in our people's daily lives. With the winds of adventure and creativity blowing across the fashion industry, Indian design is ready to make a global impact. The fashion industry necessitates artistic innovation and charm, as well as a technical knowledge foundation. This rapidly developing sector need a higher level of professionalism. As a result, competent fashion technology institutes are required to offer a solid foundation for this expanding sector.
Design is extremely important in India since it establishes living standards and, as a result, the country's economic level, as well as the intellectual and psychological growth of its people. The objective is to provide interactive, creative platforms for diverse fashion industry experts and students, as well as to connect architecture and fashion.
To build a hub with a strong identity that combines fashion, business, entertainment, culture, and leisure activities.
The Project would be created on a commercially self-sustaining basis as an integrated development catering to the fashion industry's requirements in Pune as a "one-stop-solution."

Design development



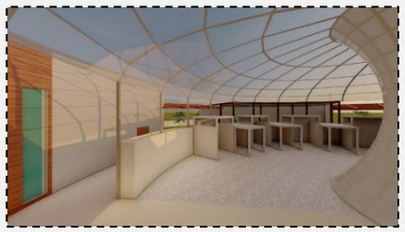
Site Plan

Architectural Design

B.ARCH Thesis Project – Fashion Institute in Pune, India

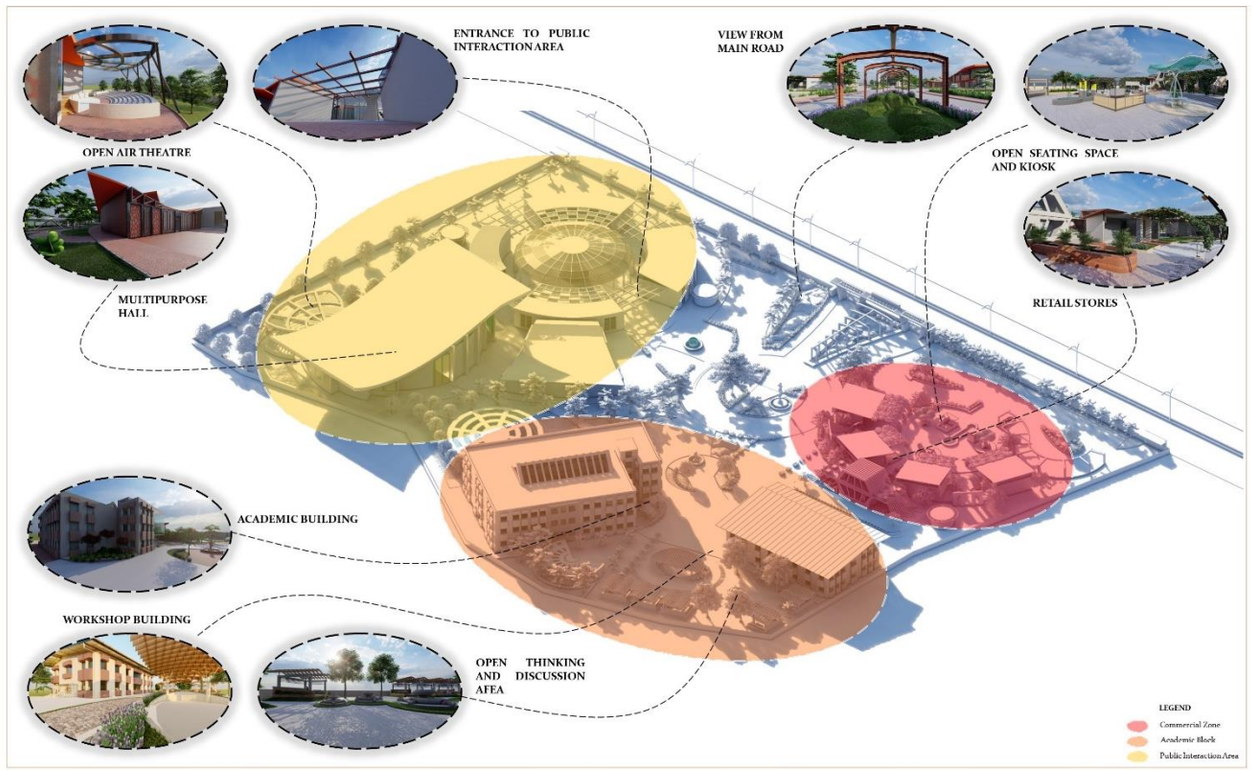
Restaurant

Kiosk in public interaction area



Cliental service area

Isometric View of site



Central view of the Institute

Plaza in academic area

Open discussion area

Master Plan

SITE AREA	- 30,000 SQ.M
BUILT UP AREA	- 10,367 SQ.M
GROUND FLOOR AREA	- 6460 SQ.M
FIRST FLOOR AREA	- 2446 SQ.M
SECOND FLOOR AREA	- 1461 SQ.M

LEGEND

PUBLIC INTERACTION AREA
1 – AUDITORIUM
2 – OPEN AIR THEATER
3 – MULTIPURPOSE HALL
4 – EXHIBITION
5 – FITTING ROOM
6 – REHEARSAL ROOM
7 – PHOTOGRAPHY ROOM
8 – BUYERS LOUNGE
9 – SPONSER LOUNGE
10 – MEDIA LOUNGE
11 – REGESTRATION LOUNGE
12 – KIOSK
13 – TOILET
14 – RWH
15 – FILTERATION TANK
16 – PUMP ROOM
17 – UGT
18 – STATIC TANK
19 – ELECTRICAL ROOM
20 – SWT

CLIENTAL SERVICE AREA
21 – RETAIL STORE
22 – CHANGING ROOM
23 – SEATING / DISPLAY AREA
24 – PLAZA
25 – PAVALLION
26 – RESTAURANT
27 – KITCHEN

ACADEMIC BUILDING
29 – WAITING AREA
30 – RECEPTION PANTRY
31 – EXAMINATION DEPT.
32 – ADMISSION DEPT.
33 – PRINCIPAL CABIN
34 – PHOTOCOPY ROOM
35 – COMPUTER ROOM
36 – DINING HALL
37 – SEMINAR HALL
38 – DIRECTOR CABIN
39 – ACCOUNTS DEPT.

WORKSHOP BUILDING
40 – ENTRANCE
41 – CUTTING AND TAILORING WORKSHOP
42 – DYEING WORKSHOP
43 – WEAVING WORKSHOP
44 – PRINTING WORKSHOP
45 – THINKING AND DISCUSSION AREA
46 – TOILET

PARKING
47 – 2 WHEELER PARKING
48 – 4 WHEELER PARKING
49 – VIP PARKING

First Floor Plan

THANK YOU