

Institution: Harcourt Butler Technical University (HBTU), Kanpur
Mode: Online Webinar
Participants: 40 Students
Speaker : Dr Praveen Kr TR
Conducted on : 22/12/2025

Overview

A technical webinar was successfully conducted for students of HBTU Kanpur focusing on Building Information Modeling (BIM) and its practical applications in the construction and infrastructure industry. The session was delivered by an industry expert and covered real-world project scenarios, highlighting how digital tools are transforming modern construction practices.

The webinar emphasized collaborative workflows, clash detection, and advanced BIM dimensions such as 4D and 5D integration, enabling students to understand how technology improves efficiency, cost control, and project planning.

Key Topics Covered

Challenges of working in silos in traditional construction practices

Importance of centralized data and collaboration

Clash Detection using BIM to identify conflicts before construction

Real-life examples of HVAC, structural, and MEP coordination

4D BIM – Time-based construction sequencing

5D BIM – Cost integration and budget control

Case references to Indian metro projects using BIM for time and cost savings

Student Benefits

Clear understanding of industry-relevant BIM workflows

Exposure to real-world construction problems and solutions

Knowledge of how BIM reduces rework, delays, and cost overruns

Awareness of career opportunities in BIM, project planning, and digital construction

Improved perspective on modern project management techniques

Outcome

The session was highly interactive and well-received by the participants. Students actively engaged in discussions and gained valuable insights into how BIM is reshaping the construction industry, making them better prepared for future academic and professional challenges.

Praveenkumar T R (Presenting)

USHERING IN A NEW ERA OF INDUSTRY AND R&D COLLABORATION IN CONSTRUCTION ROBOTICS

Shreeji Park ENGINEERING & CONSTRUCTION CRAFTSMAN LABS

12:44 | agm-fkey-vpa

Praveenkumar T R (Presenting)




Silos in Work

- Architects, structural engineers, MEP engineers, and contractors worked in **isolation**.
- No central data → conflicts discovered **on-site**, not in design stage.
- Example: A pipe running where a beam already exists → costly **rework**.

12:17 | agm-fkey-vpa

Praveenkumar T R (Presenting)


Clash Detection (Major Breakthrough)

-  BIM detects conflicts *before* construction.
-  Example: HVAC duct colliding with a beam → software highlights it → fixed in design stage.
-  Saves millions of rupees in rework.

12:23 | agm-fkey-vpa

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Praveenkumar T R (Presenting)



Which Indian Metro project successfully used BIM for cost and time savings?

- a) Delhi Metro
- b) Hyderabad Metro
- c) Mumbai Metro
- d) Bangalore Metro

12:28 | agm-fkey-vpa

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4D & 5D Integration

4D → Adds *time*:
simulate
construction
sequence.

5D → Adds *cost*:
auto-updates
budgets.

Helps project
managers **plan
better & avoid
delays.**

A grid of participant avatars in a Zoom meeting. The grid includes: Praveenkumar T R (Presenting), Vaibhav Kumar, HARSH VAR..., ANAS ALEE..., ROHIT CHA..., SWAYAM PA..., SANNIDHYA..., 51 others, and Nivesh Gahoi.

