India’s 1st Digital Project Management Platform: 5D BIM Integrated with SAP ERP
Challenges in Mega Construction Projects

Cost Overrun  
Time Overrun  
Quality Adherence

Weak Document Management  
Lack of Effective Asset Management

1st Integrated 5D BIM & ERP For Metro Project

Better Project Management Through 5D BIM  
Visualise Real Metro Virtually

Convenience backed by Technology  
Real Is Virtual Is Real

Manage Projects Through 5D BIM + ERP

5D Cost Monitoring on visual BIM model  
4D Time progress on visual BIM model

3D Visualisation through BIM Models & Object collaboration  
1D Conventional CAD Drawings

Digital Project Management Platform

OSO (Owner’s Support Office)

ERP (Enterprise Resource Planning)

Digital Project Management Platform

Top business benefits of using BIM for construction project owners

- Improve Construction quality
- Significantly reduce lifecycle cost
- Better understand design projects end to end
- Optimize operational efficiencies & Increase use rate

Reduced document Error s& omissions - 61%
Reduced Rework - 36%
Reduced Construction Cost - 30%
Reduce Project Duration - 22%
Fewer Claims/ Litigations - 17%

**Integrated 5D BIM**

**Intelligent 3D Models**
- Have additional information, Dimension, Coordinates, Volume etc.
- Information further utilized for processing

**Engineering Collaboration**
- Usage of Collaborative platform for managing engineering design & drawings
- Platform will be used across eco system (NMRCL, DDC, GC, Contractor etc.)
- Establishing common understanding across stakeholders

**Asset Information Management**
- Asset tagging with the models
- Track assets and sub assets
- Which can be further used during operation & maintenance phase

**Project Schedule 4D**
- Time dimension (4D) added to Intelligent 3D model - Primavera integration
  - Project progress can be tracked live
  - Monitor planned vs. actual progress

**Design Reviews**
- Common platform for Design/Drawing
  - Transmittal
  - Review
  - Approval

**Project Cost 5D**
- Cost dimension (5D) added to Intelligent 3D model - SAP integration
  - Monitor actual vs. estimated cost
  - Simulate actual progress with cost
Metro Case Study: India’s First Linear Mega Project using 5D BIM integrated with ERP

Digital Platform: Adding Value at every stage

Design & Planning
- Easy collaboration environment minimizes coordination efforts
- Dynamic allocation of reviewers
- Maintain Intelligent Information (Graphical & Non-Graphical)
- Clash detection & conflict resolution
- Reports to help minimize delays in review of drawings
- Customizable dashboards to monitor design & drawings management

Execution & Monitoring
- 5D simulation & visualization
- Office automation
- Change order management to track variation in quantities, change of materials.
- Single platform for enterprise level reporting
- Repository of construction phase data to act as reference during O&M phase

Operation & Maintenance
- Timely & cost effective
- Maintenance processes
- Asset Information management
- Maintenance Dashboards

Overall Benefits
- Engineering practices combined with project management practice
- Single source of truth to avoid duplication
- Highest level of visibility in megaprojects
- Reduction in lifecycle cost
- Faster delivery of project with highest quality

About Highbar Technocrat
Highbar Technocrat, an associate company of HCC Group, is an end-to-end IT solution provider with its portfolio of enterprise business solutions, line of business IT solutions, process consulting & IT Infrastructure services aiming at increasing efficiencies for infrastructure industry. It’s a successful spin-off of HCC’s IT function, recognised as global case study amongst top 5% successful spin-offs by Gartner. IT expertise backed by industry domain knowledge differentiates Highbar as preferred partner for IT initiatives for infrastructure industry. Highbar has developed SAP certified templates based on industry best practices enabling customers to achieve business efficiencies. Highbar is now offering IT services across multiple sectors like manufacturing, BPO, Agro-Chemicals, Telecom, Consumer Products, Pre-engineered Buildings etc. Highbar remains as preferred partner for SAP implementation & re-implementation with eleven global case studies to its credit.

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