Application of BIM technology in project execution
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BIM in Brief

Manages the Whole Life of the Project

- **3D model**
  - Marketing Management
  - Collaborative 3D Design

- **3D+time**
  - Schedule control

- **4D+cost**
  - Cost control

- **5D+O&M**
  - Smart plant
  - Spare parts

- **Safety**
  - Smart safety management

**Covers the full business chain of Project**

**Manages the whole life cycle of the project**
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BIM 7D Smart Safety

Integrate Smart Management Technical

- Personnel management
- Equipment management
- Safety inspection
- Environment monitor
- CCTV monitor
- Manpower calculation
- Personnel positioning

- Overall monitoring
- Area monitoring
- Monitor hazard points
- Equipment record and inspection via mobile APP
- Safety routine inspection via mobile APP
- Safety routine inspection via mobile APP
- Noise detection
- Dust content detection

- Hazard identification

Sinoma International Engineering Co., Ltd.
BIM 7D Smart Safety

Integrate Smart Management Technical

CCTV

Routine inspection

Vehicle QR code
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3D COLLABORATIVE DESIGN
3D COLLABORATIVE DESIGN

Simultaneously design, accurate and high efficiency

- Jointly design in one same model
- All designer simultaneously work on it
- Minimize design duration
- Improve design quality and efficiency
- Accurate BOQ
- Check design stage at any time
- To be the basis of Digitalization plant
3D COLLABORATIVE DESIGN

Provide accurate BOQ in Bidding stage

01 Visualized technical solutions

02 Accurate quotation

03 Construction plan simulation
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BIM 4D schedule management

- Work Breakdown Structure (WBS) automatically generated by 3D model
- Use mobile APP to scan QR code to feedback actual completion time
BIM 4D schedule management

- To **monitor site construction** progress on BIM platform at any time any place.

- Completed
- On going
- Ahead of schedule
- Parts to be delay (Alarming)
- Behind schedule (need to catch up)
BIM 4D schedule management

- Mobile APP to Initiate **Quality Inspection**
- Mobile APP to record **Resource Consumption**

worker and tools consumption
BIM 4D Progress Management

- Equipment purchase inquiry
- Equipment procurement
- Equipment manufacturing
- Equipment logistics and delivery
- Equipment on-site stock in and out
- Equipment installation and Status

Logistic tracking and inventory

- Deliver from factory
- FOB
- Handing over
- Site unloading
BIM 4D Progress Management

Logistic tracking and inventory

Site unloading

QR code scanning
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6 BIM 6D O&M
BIM 5D Cost Control

Quantity Completion monitoring

- Automatically calculate each work task (WBS), and summarize into Workshop/BOQ.

- Summarize the Work Quantity of:
  - Plan to be completed
  - Actual completion
Set up project Price Break down list, integrate the price into each WBS.

Automatically summarize the Cost of:

- Plan to be completed
- Actual completion

Completion Quantity will be the Evidence for Interim Payment release.
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**BIM 6D O&M**

**Massive spare parts data via BIM platform**
- For global users
- Massive spare parts information library
- Bulk purchase to reduce costs

**Shared spare parts inventory**
- Manage and Replace via BIM platform
- Trade-in, barter and liquidity of Inventory
- Reduce inventory cycles and maximize benefits

**Intelligent detection, early warning**
- Access intelligent monitoring data to analyze spare parts life
- Full life cycle detection and accurate judgment
- Pre-stocking spare to ensure the availability

**Solutions to**
**emergency spare parts**
Thank you