Technical Session
Project Schedule Optimization Using 4D Visualization Planning

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Business Challenges

• Is it easy to identify construction and operations hazards?

• Is it easy to visualize the construction sequence?

• Is it easy to obtain firm buy-in and ownership from various parties?
4D Planning Development?

- **3D Model**
- **4D Planning Model**
- **PRIMAVERA Schedule**

**E6 Project**
- 116,000 nos of CAD Element
- 700 nos. of Tasks
- Built in 1 day
Benefits: Before Execution

<table>
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<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
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Before Simulation (5 Weeks)

Virtual Tour Enable:
1. Re-prioritize the work sequence
2. Identify gaps, clashes & constraints
3. Better understanding of dependencies
4. Enable alternative scenarios to be investigated
5. Accelerates decision making for best possible execution strategy.

After Simulation (4 Weeks)

Subsequent analysis, optimization and updates early re-run. Generally takes 1 min versus 3 days in traditional method. Review sessions reduced from weekly basis to hourly basis.
**Benefits: During Execution**

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<th>Gantt Chart</th>
<th>Plan</th>
<th>Actual</th>
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1. Monitor the progress effectively (different colour shows different status)
2. Early Delay Warning
3. Accurate Forecast
4. Early Safe Completion. Overall duration reduced by 20%
My Reflection

Confident

Connected

Challenge Efficiently

Clarity