

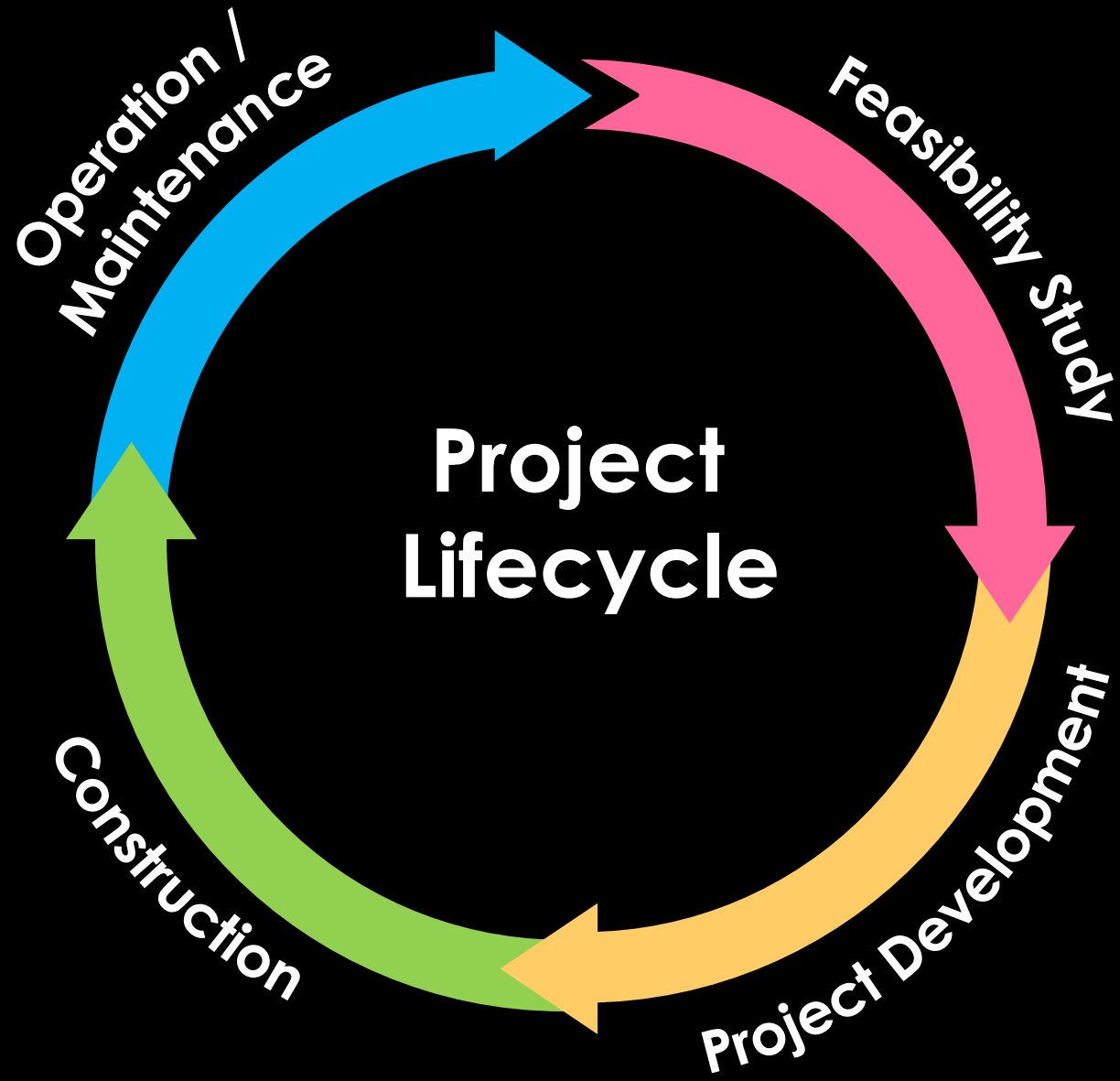


SUNWAY



The
Potential of
Project Lifecycle Approach
Through **5D**

Project Lifecycle



Problems



Budget
Aesthetic
Functionalities
Energy Efficiency
Regulatory Requirements
Site Constraints

Guesstimate



An aerial night-time rendering of a futuristic architectural complex. The design features seven tall, slender, illuminated towers arranged in a circular pattern around a central green courtyard. The towers have a textured, metallic appearance and are topped with small, glowing structures. The central courtyard is lush with greenery, including trees and lawns, and is surrounded by a curved walkway. The entire complex is situated on a dark, possibly water-filled, area, with a city skyline visible in the background. The text "Complex Design" is overlaid in a large, bold, black font across the lower portion of the image.

Complex Design

Lack of Collaboration

Property

Construction





Architect



Structure



MEP

Concurrent Engineering



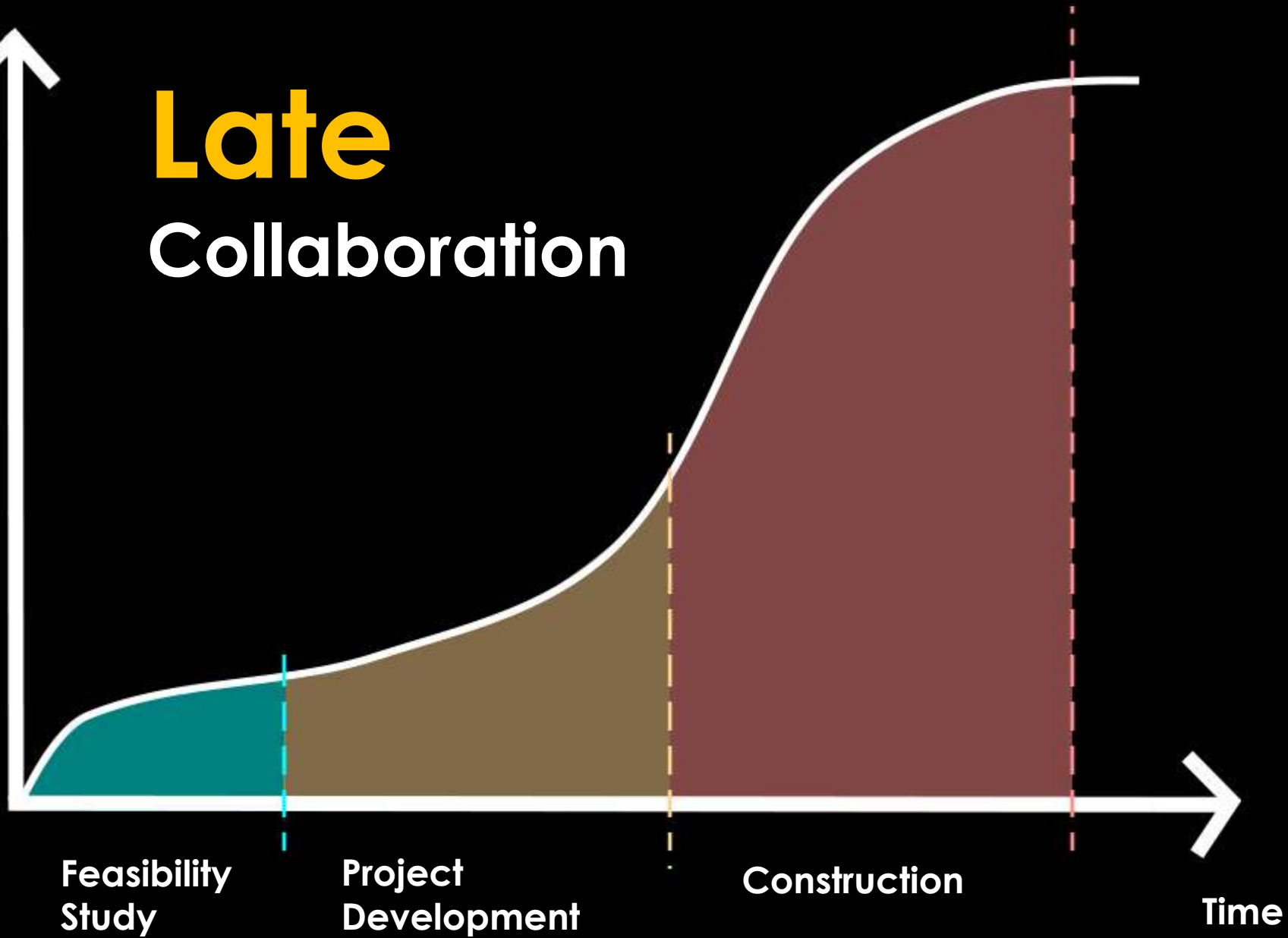
The Outcome

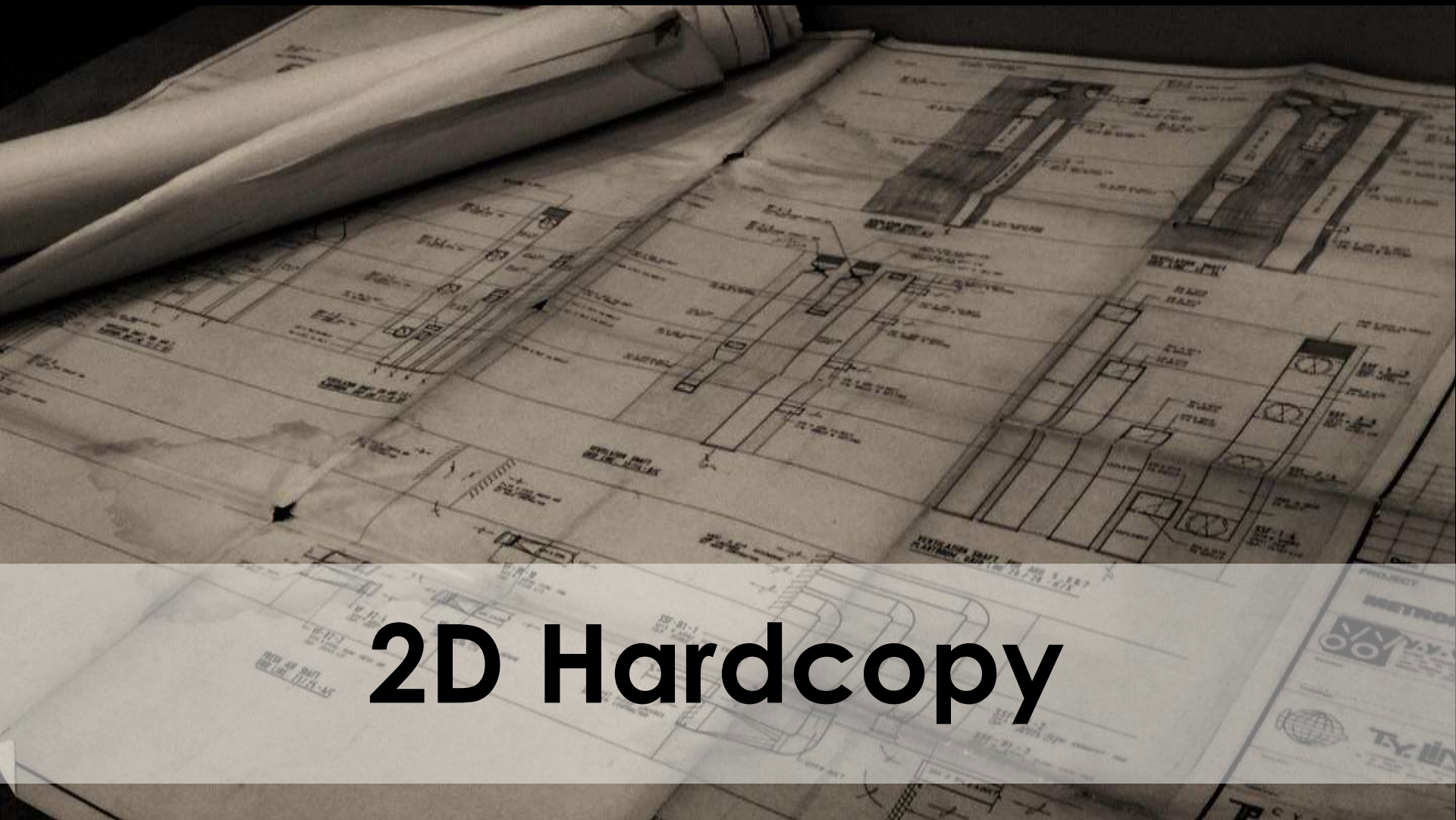
Inefficient Information Exchange



Project Progress

Late Collaboration





2D Hardcopy



Rework



Time & Cost Overrun

Operation & Maintenance



Renovation





Call for
Change



SUNWAY's *IT* JOURNEY



2D
ERP

1980s



e-Procurement eDMS

1980s

1990s





1980s

1990s

2010

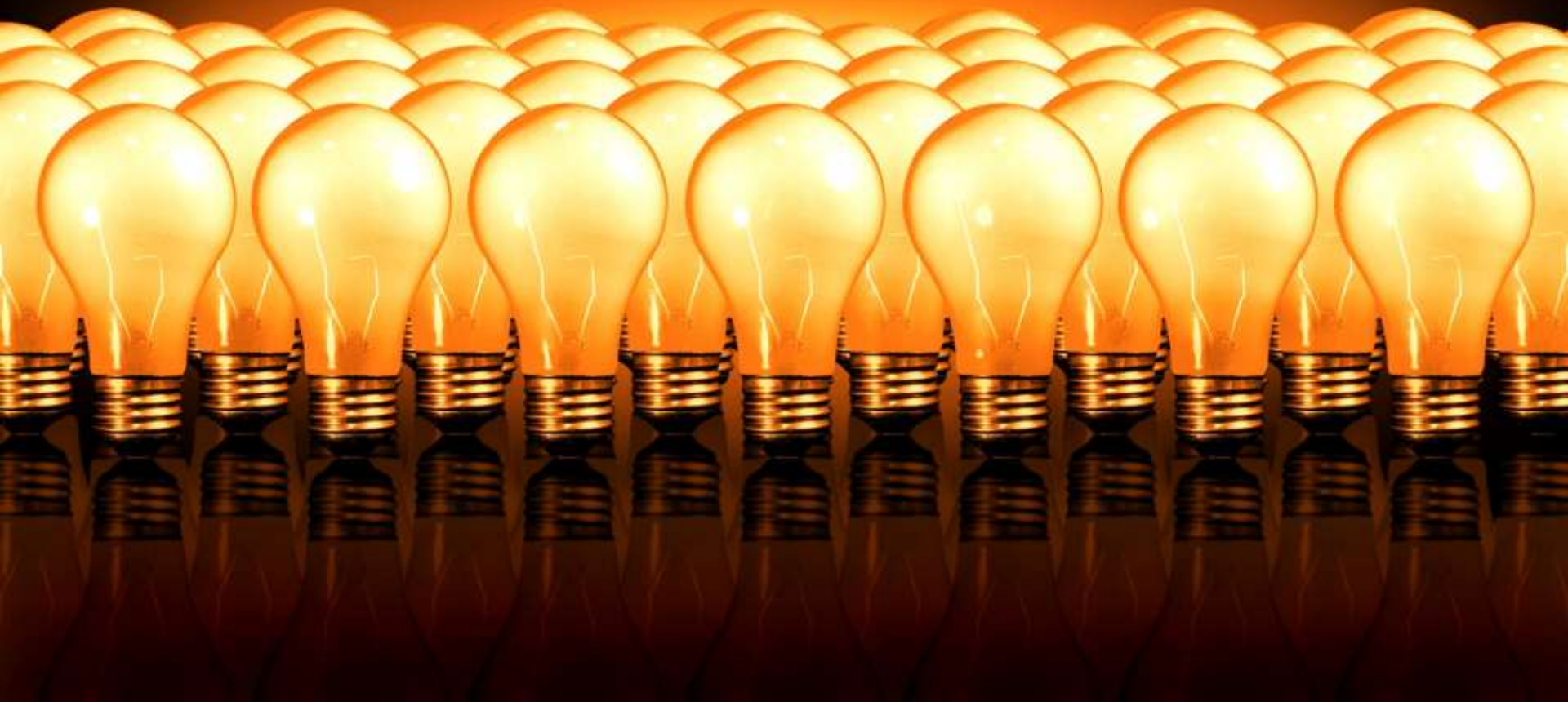


BIM



BIM

Core Team

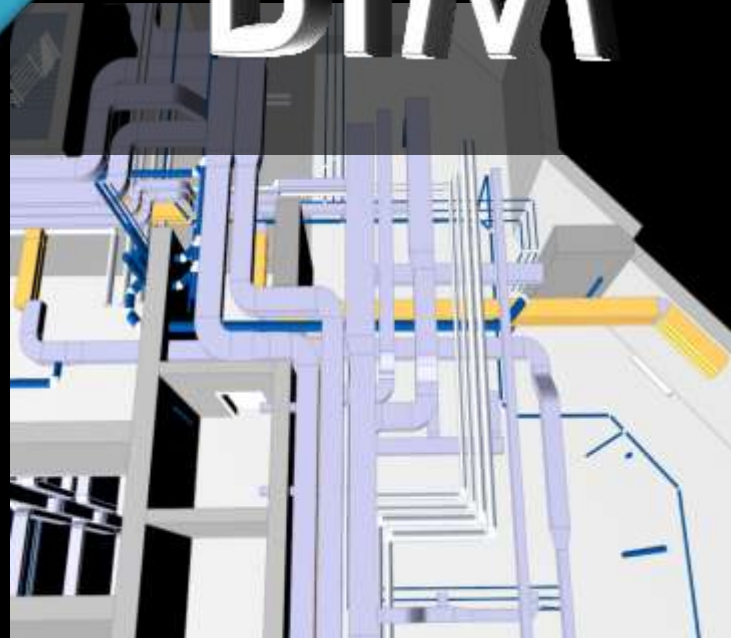
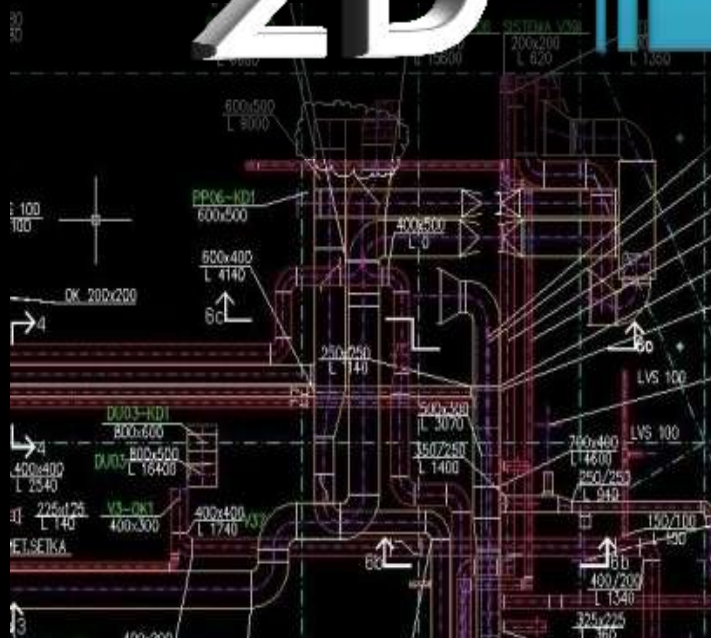




2D



BIM





3D

MEP

Structure

Architecture



Cost saving

● Conventional

Time saving



3D

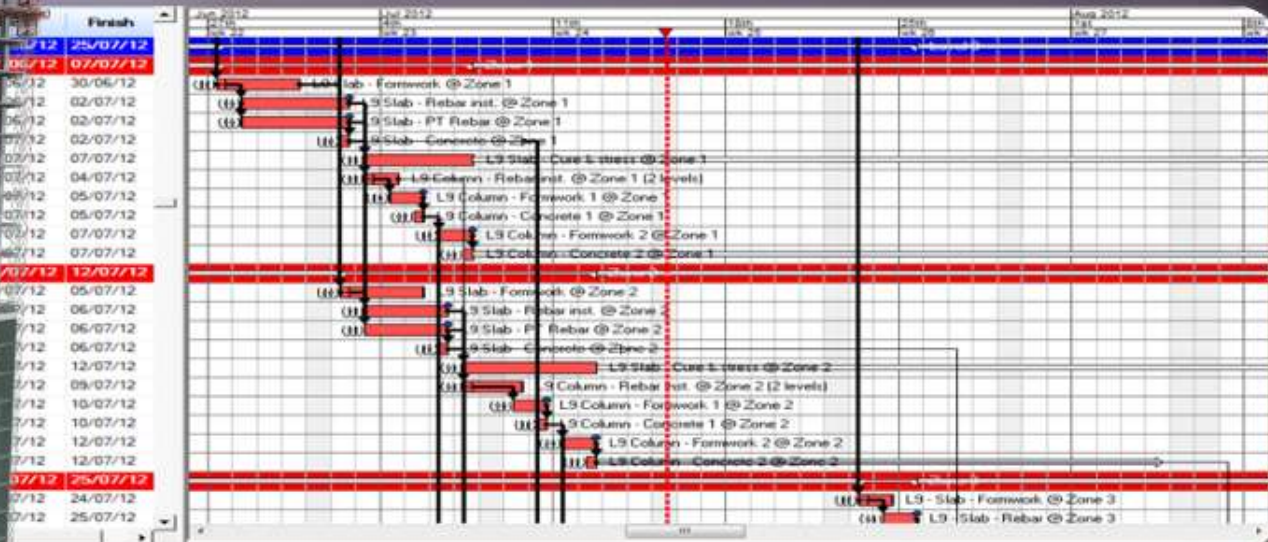


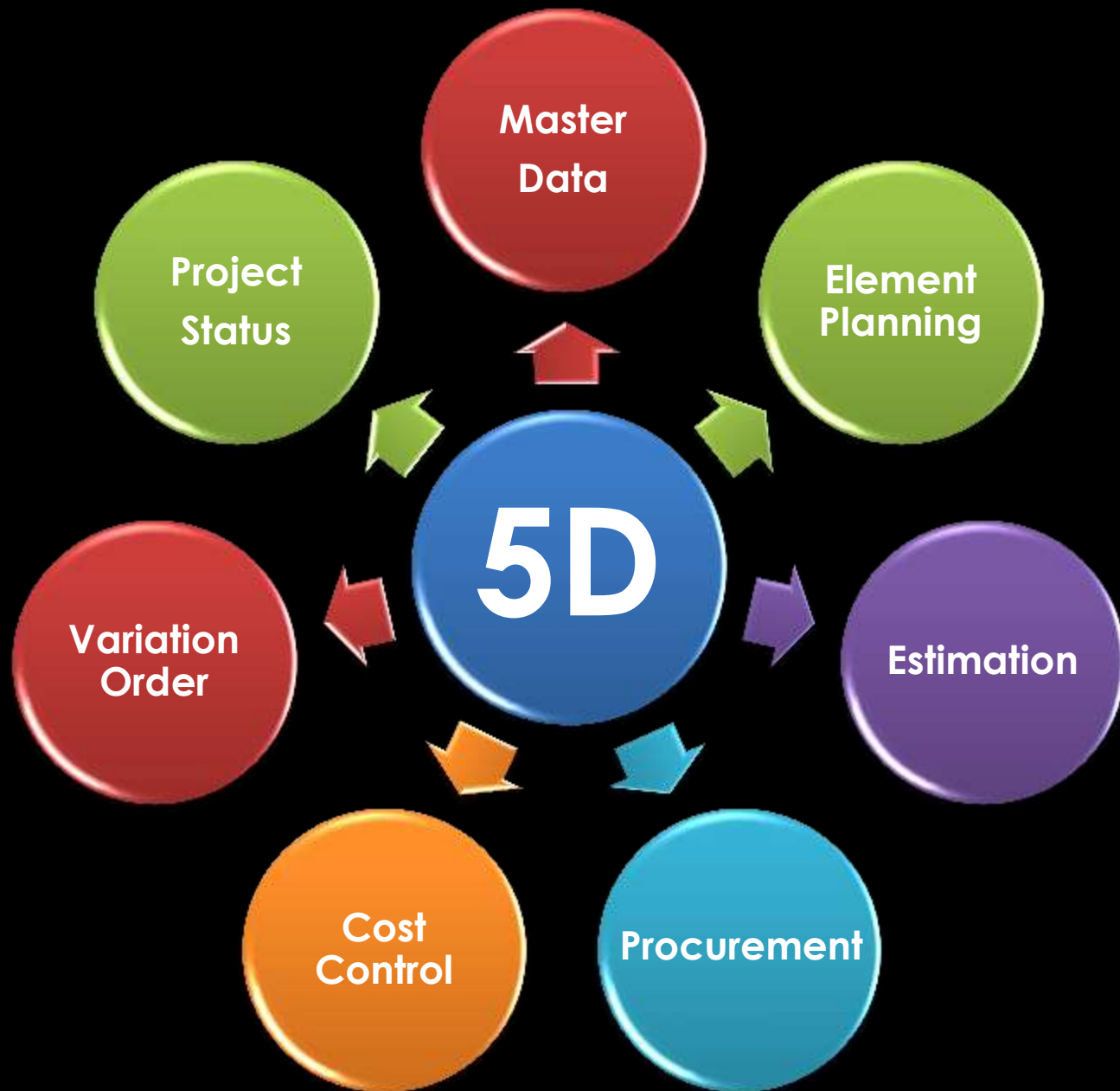
4D



5D

4D



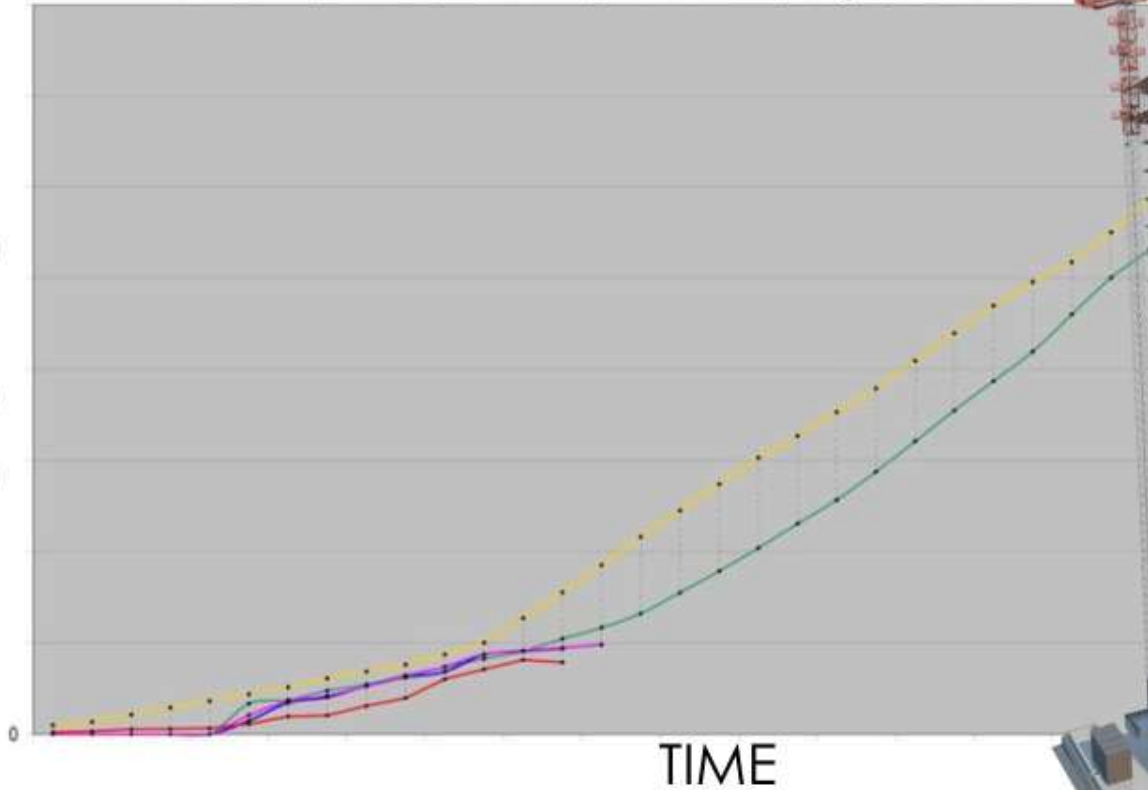


5D

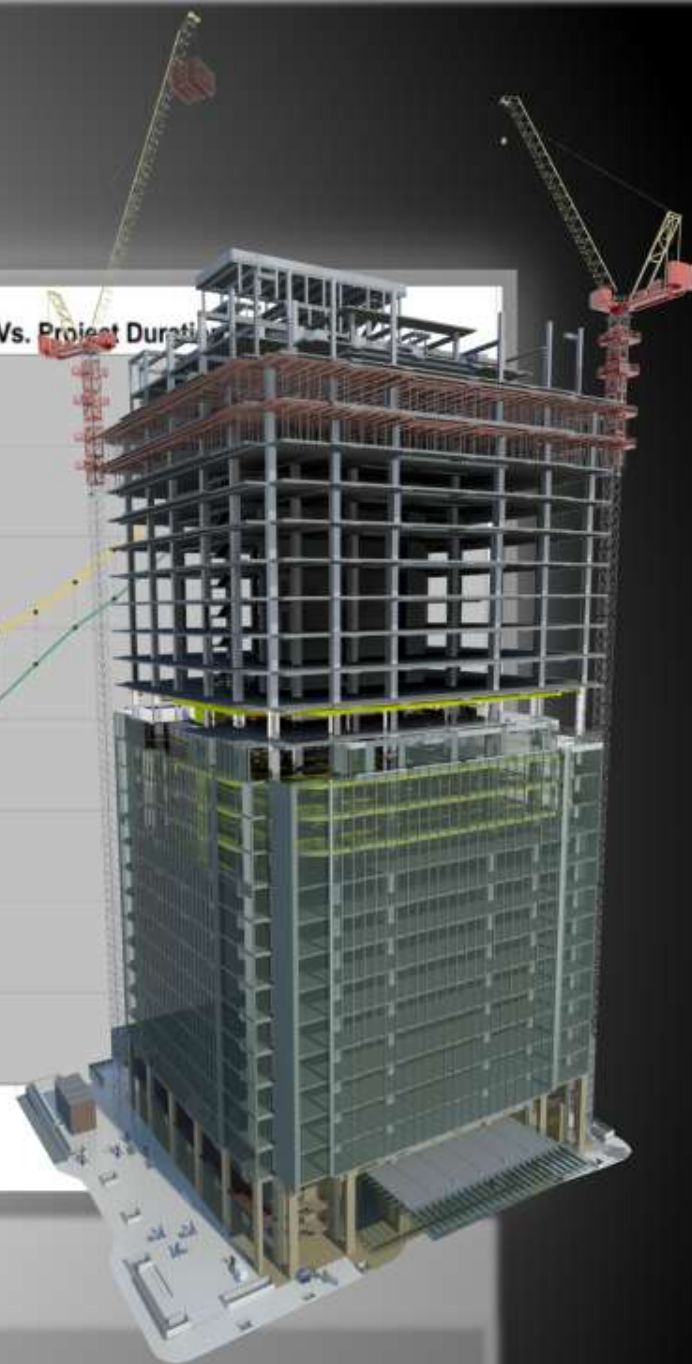
~ PROJECT COST ~

Business Plan, Revenue, Actual Claim, Actual Certified, Budget, Actual Cost Vs. Project Duration

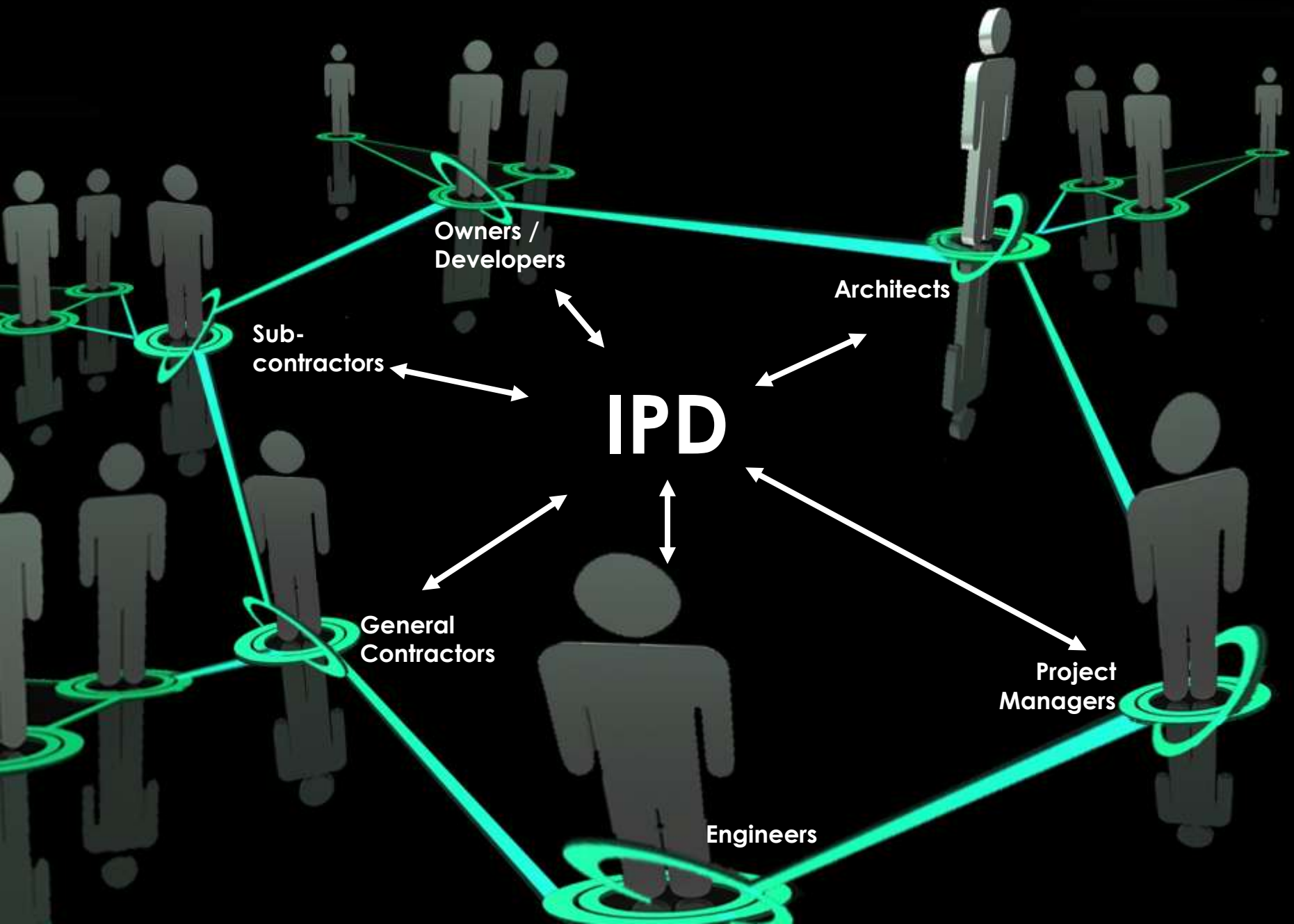
CASH FLOW



TIME



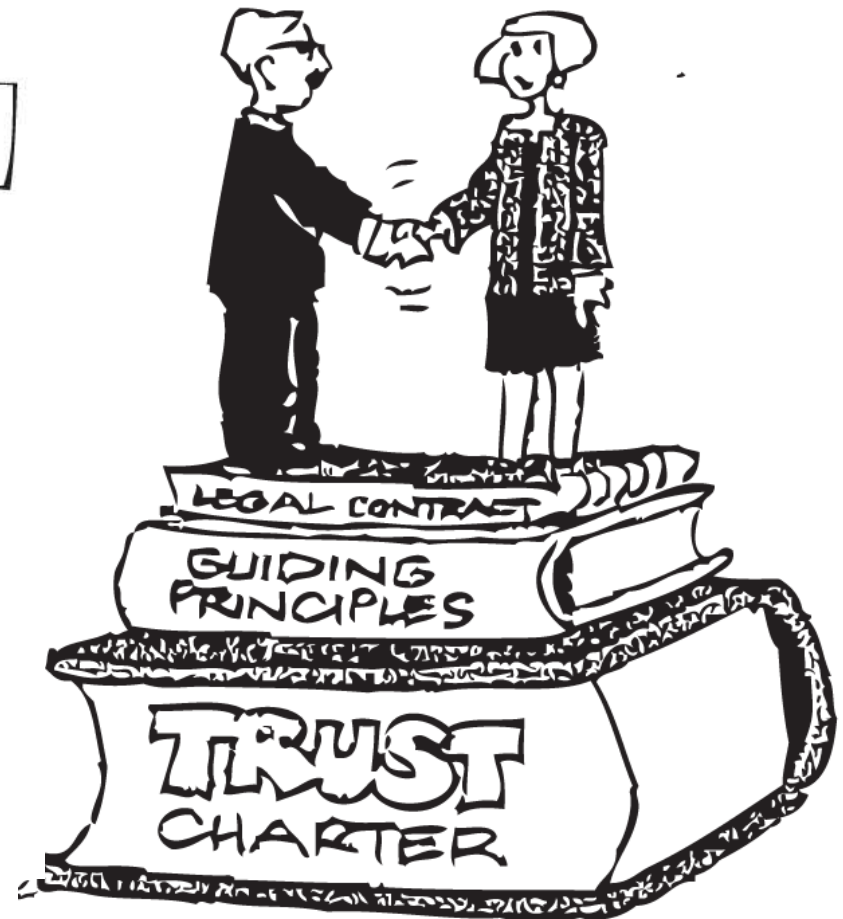




Conventional



Collaborative



Change of Mindset & Culture



Leap of Faith



VDC

Virtual Design & Construction

BIM + IPD



TECHNOLOGY

VDC

PROCESS

ORGANISATION



GAME CHANGER





GAME CHANGER

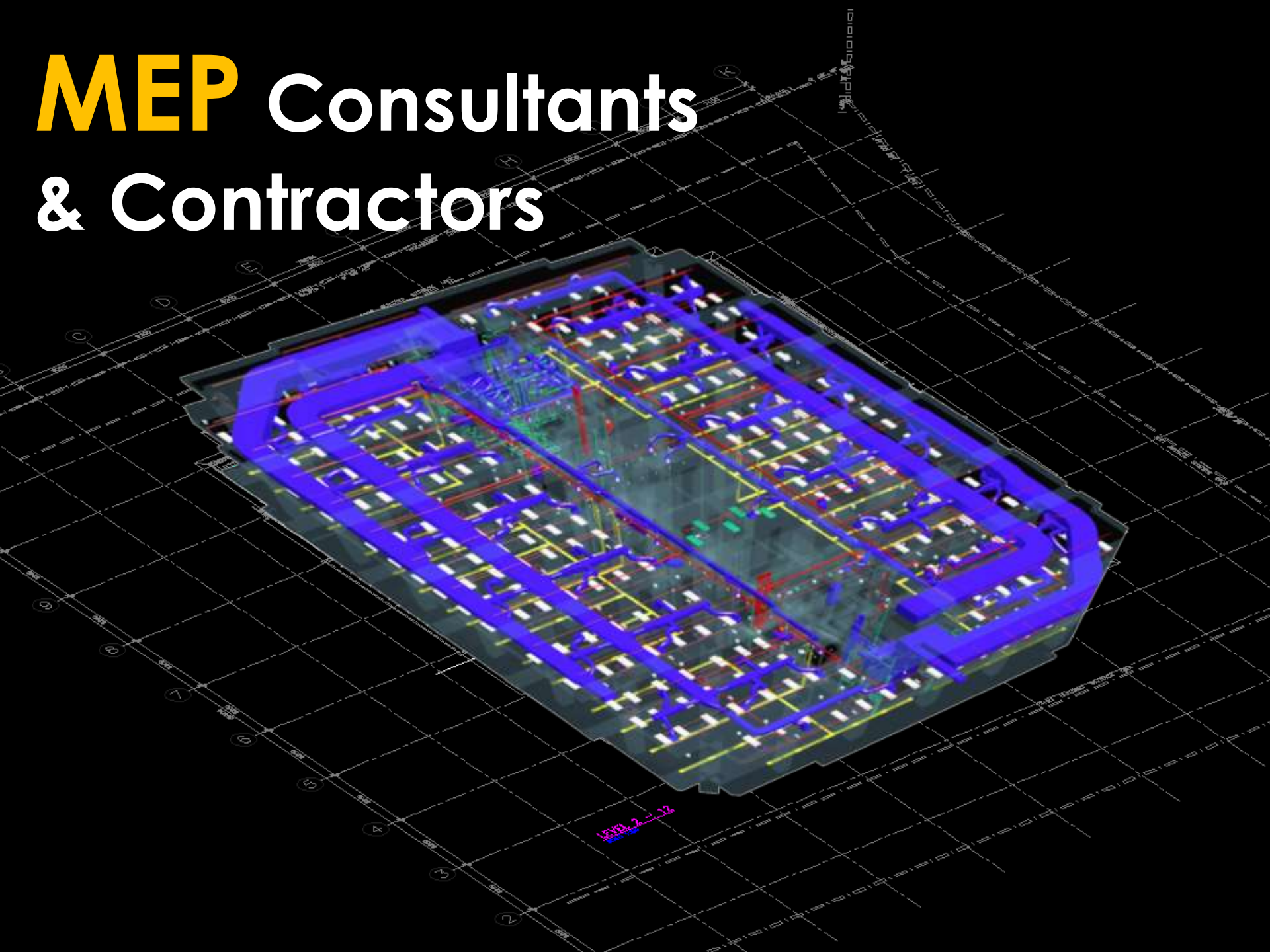




Owner

- Manage Risks
- Increase Yield Potential
- Reuse Data For Operation
And Maintenance

MEP Consultants & Contractors



Quantity Surveyor

- Automate Quantity Takeoff
- Project Cash Flow
- Real time Cost Control

Sunway **VDC** In Action

Property



Construction



33 Storey Office

USD **200M**

Began in **2010**

Scenario Analysis





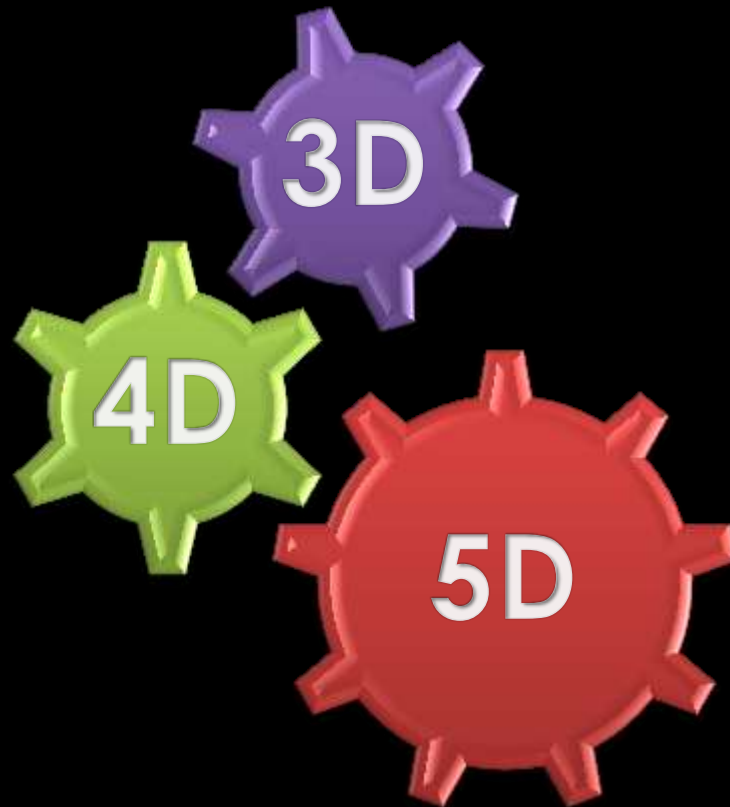
Facade Cost ↓ USD 4.3M

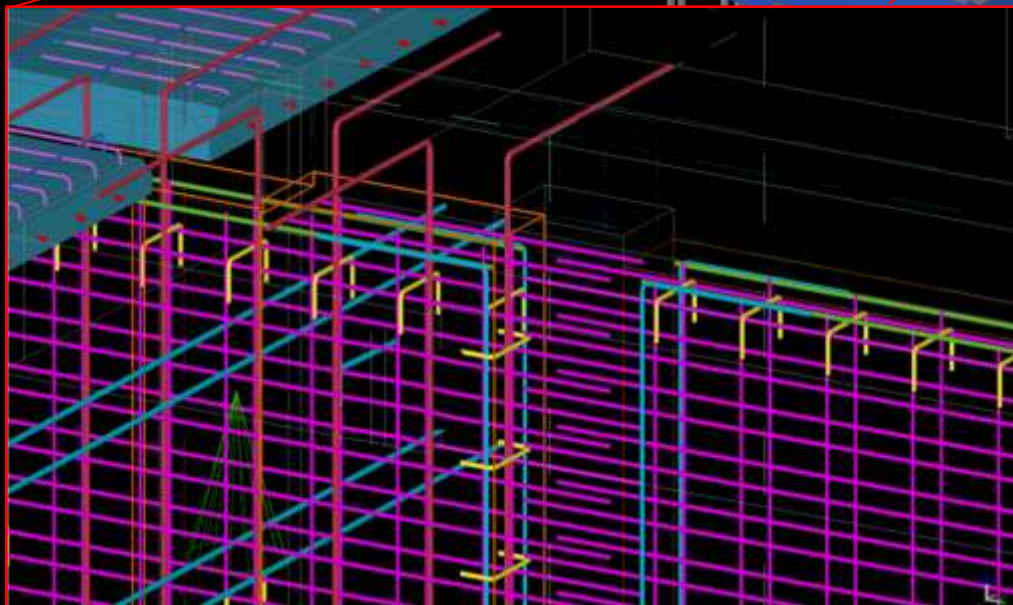
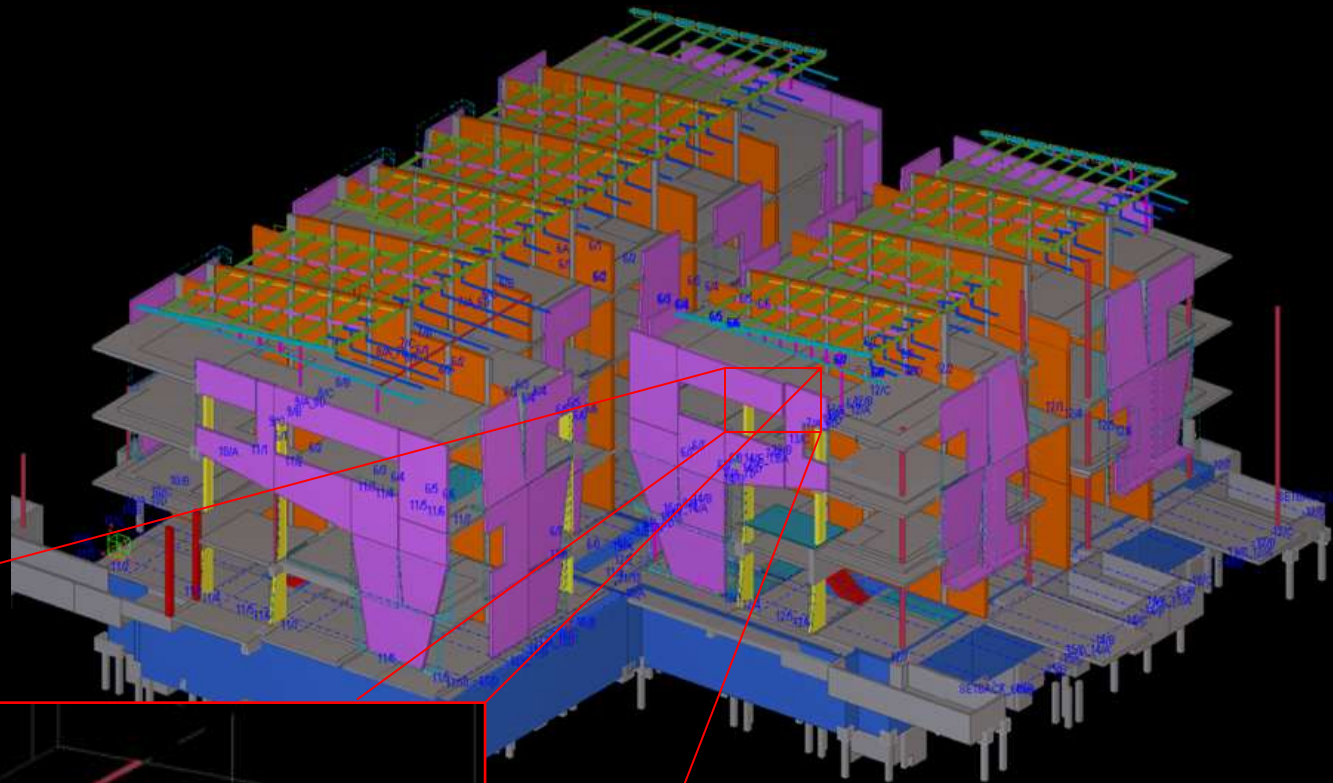
Installation Time ↓ 20%

↓ Construction Overhead

Potential yield
↑ USD 1.3M pa

Automation





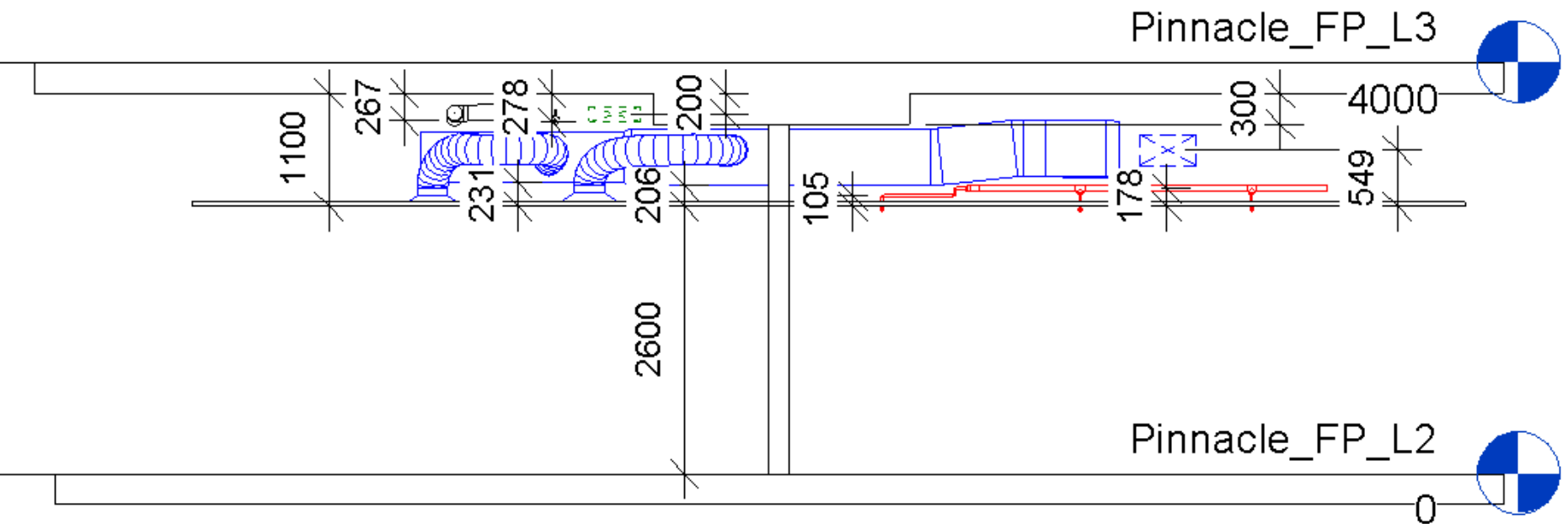
Bidding preparation time



A detailed 3D architectural rendering of a complex industrial facility, likely a power plant or refinery. The image shows a dense network of pipes, structural beams, and equipment. Red pipes are prominent, running horizontally and vertically. Blue pipes and structures are also visible, often curving or branching. Yellow structural elements, including vertical supports and horizontal beams, are scattered throughout. The background is dark, making the brightly colored components stand out. The overall scene conveys a sense of a large-scale, intricate engineering project.

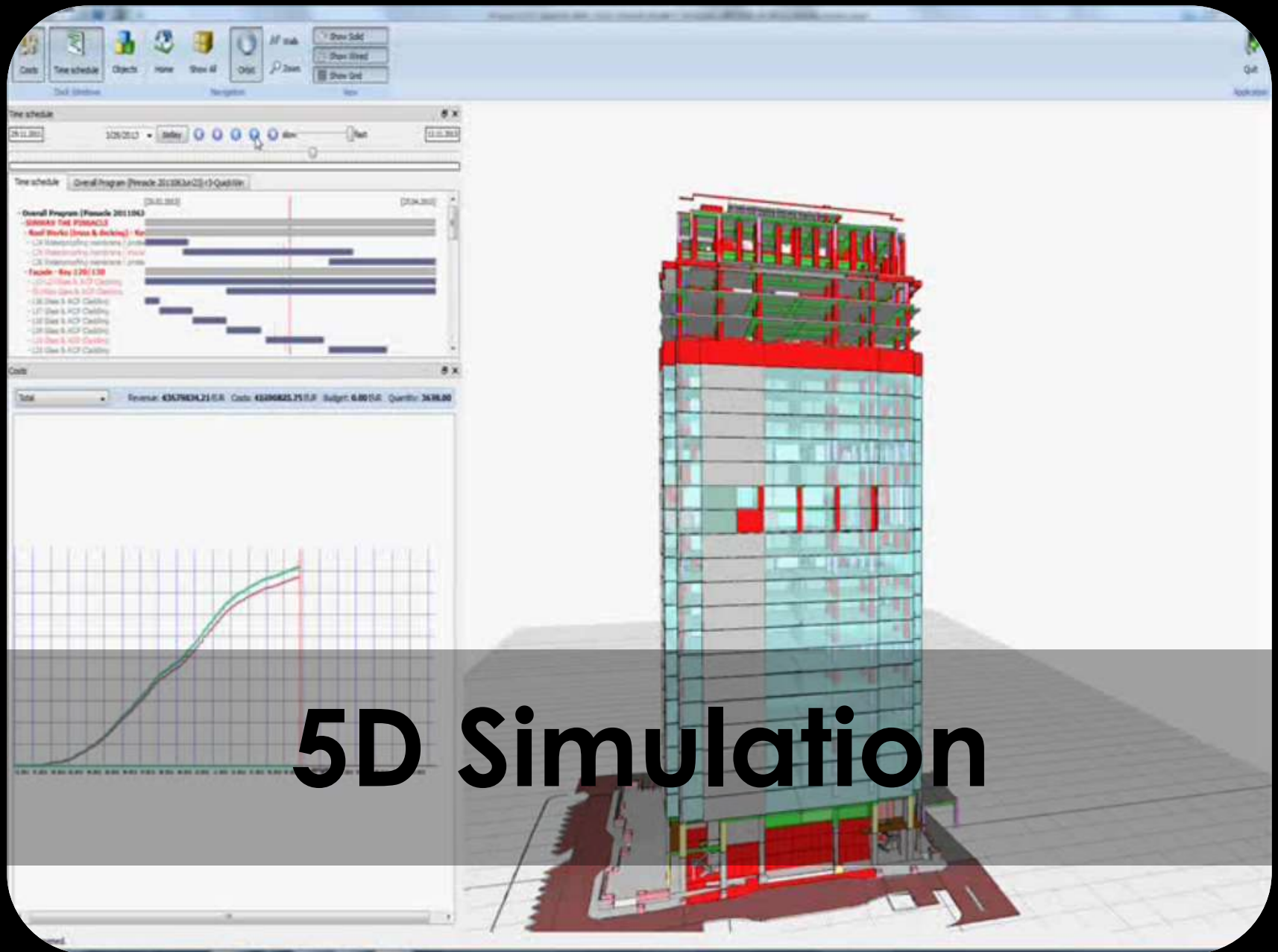
Coordination

Visualisation with Subcontractors

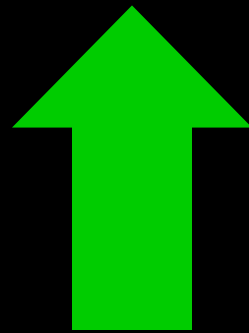




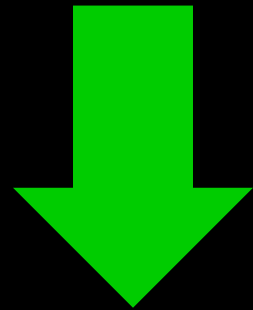
Construction



Procurement Savings by



USD 6M



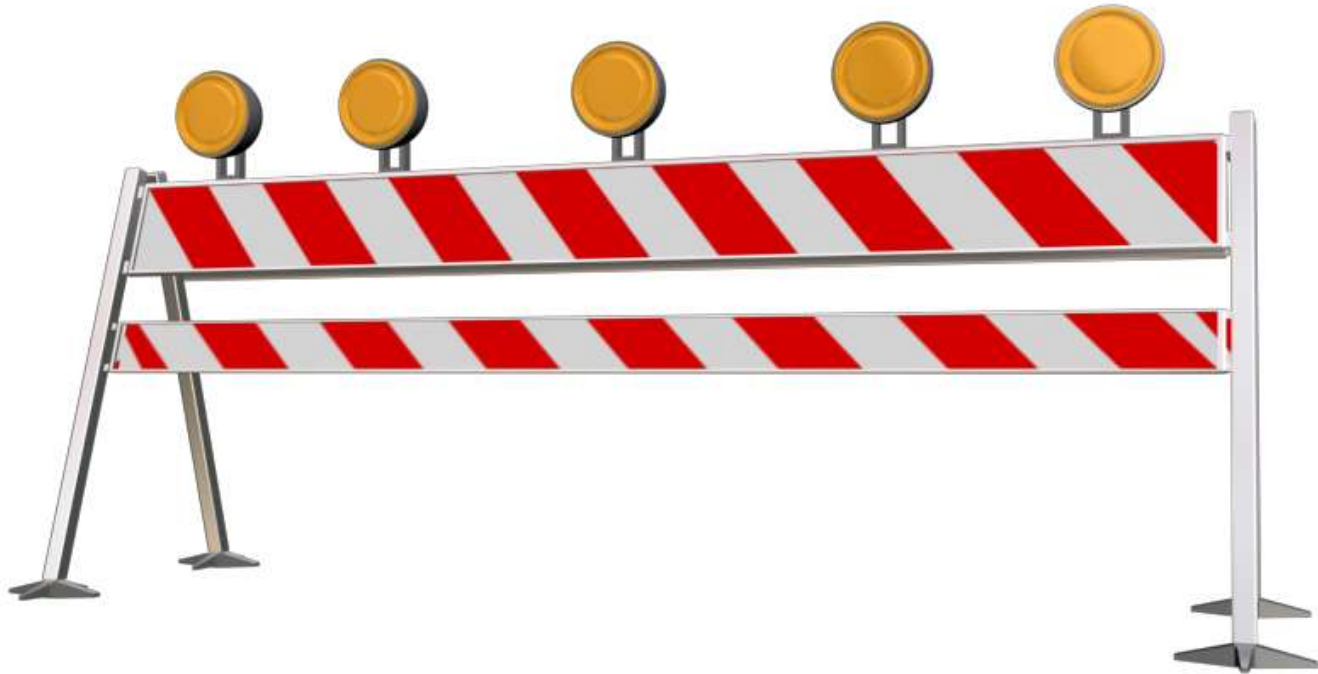
Contingency Sum

Intangible

Paradigm Shift

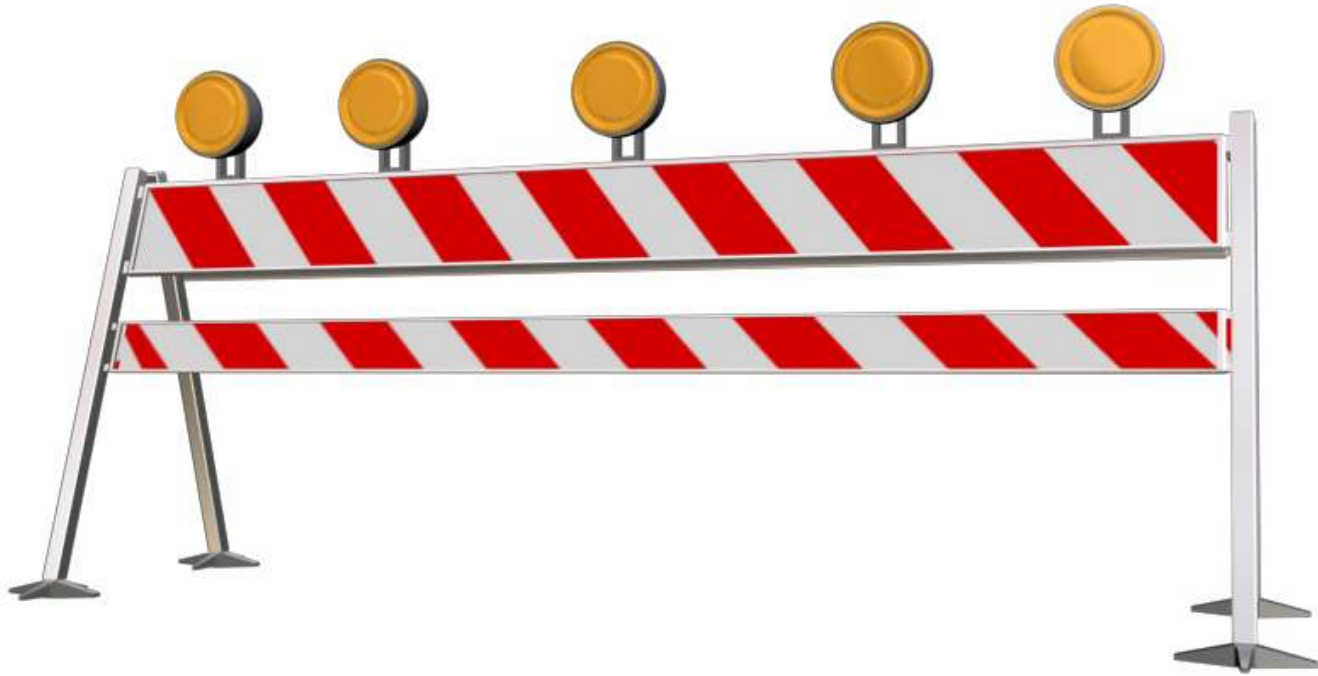


Challenges



Predominant 2D Market

Challenges



Talent Pool

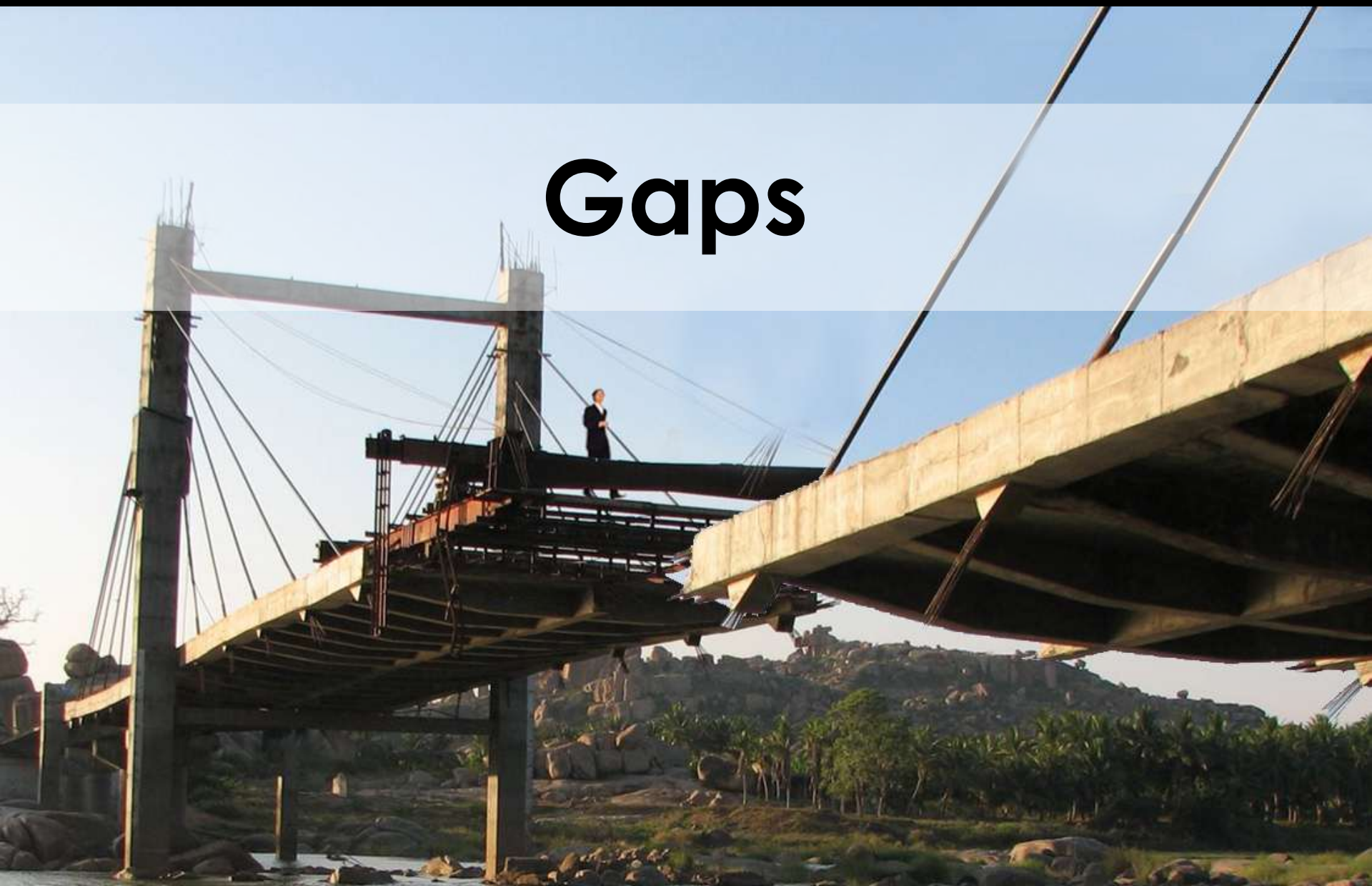


Learning Curve



Software Limitations

Gaps





Tip of

Iceberg





Expect to make
Mistakes

Key Summary

One more thing...

A wide-angle, nighttime aerial photograph of Kuala Lumpur, Malaysia. The city is densely packed with buildings, their lights creating a vibrant, glowing pattern against the dark sky. In the center, the Petronas Twin Towers stand out prominently, illuminated in white. To their left, the Kuala Lumpur Tower is visible, lit with a pinkish-purple glow. The foreground shows a mix of urban development and some greenery, with lights from roads and buildings reflecting on the surfaces. The overall scene captures the bustling energy of the city at night.

Kuala Lumpur



Tin Mining



Palong

A large stack of tin ingots, which are rectangular metal bars with a distinctive T-shaped cross-section. The ingots are arranged in multiple rows and columns, creating a dense, layered appearance. The metal has a dark, slightly weathered surface with some lighter, silvery-gray highlights. The background is dark and indistinct.

Tin Ingot

Sunway Township Transformation







Sunway Integrated Township

An aerial photograph of Sunway City Ipoh, showing a large residential complex with numerous red-roofed houses and several multi-story apartment buildings. The development is situated in a valley, surrounded by lush green hills and mountains. A major road runs through the center of the complex, and a small body of water is visible on the right side. The text "Sunway City - Ipoh" is overlaid in the center of the image.

Sunway City - Ipoh

A photograph of a hot spring source. In the foreground, a calm pool of water reflects the surrounding environment. A low stone wall separates the pool from a rocky ledge. In the background, a steep, layered rock cliff rises, with some greenery growing on its surface. A yellow metal railing is visible on the right side of the cliff. The text "Source of Hot Spring" is overlaid in white with a red outline at the bottom of the image.

Source of Hot Spring



Banjaran Hot Spring Resort

Thank You



www.sunway.com.my

vdc@sunway.com.my