

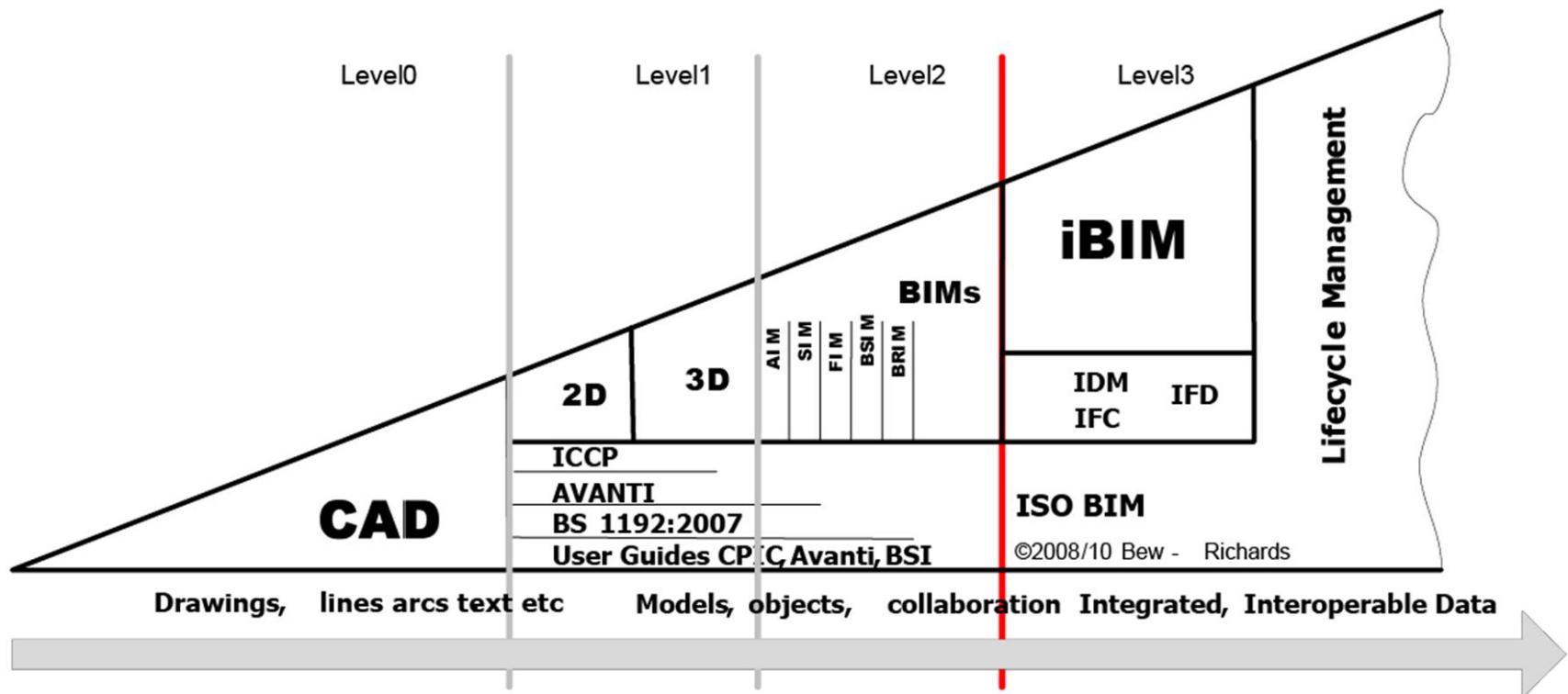


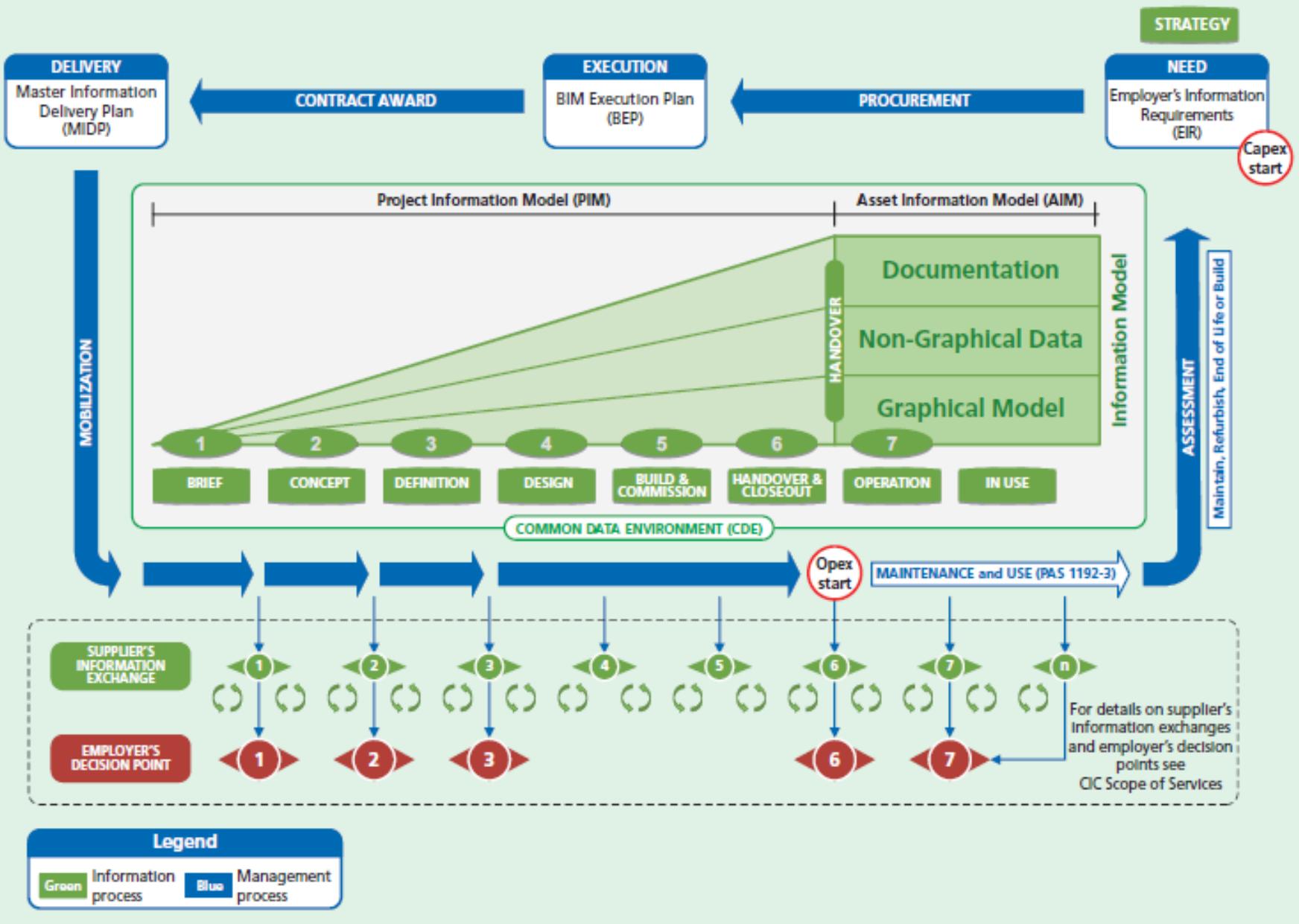
# **Soporte BIM al Análisis de Atrasos**

Félix Soto Morales, MSc, PSP, EVP

En general, ¿hay un aporte del BIM en los reclamos de construcción?

# Niveles de BIM





**¿hay un aporte del BIM en los reclamos de construcción?**

**SI, DEBERÍA**

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# CLAIMS, DISPUTES AND LITIGATION INVOLVING BIM



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JASON M. DOUGHERTY



- Enfoque del reclamo en un proyecto sin BIM:
  - Derecho al reclamo, la causa - responsabilidad, el daño y su cálculo
- ¿Y el enfoque en proyectos con BIM?
  - Derecho al reclamo, la causa - responsabilidad, el daño y su cálculo

# DIMENSIONES

## 3D

- Existing Conditions Models
  - Scanning
  - Ground Penetration
- Safety & Logistics Models
- Animations, renderings, walkthroughs
- bIM driven prefabrication
- Laser accurate bIM driven field layout

## 4D

- SCHEDULING**
  - Project Phasing Simulations
  - Lean Scheduling
    - Last Planner
    - Just In Time (JIT)
    - Detailed Simulation Installation
  - Visual Validation for Payment Approval

## 5D

### ESTIMATING

- Real time conceptual modelling and cost planning
- Quantity extraction to support detailed cost estimates
- Trade Verifications
  - Structural Steel
  - Mechanical Plumbing
  - Electrical
- Value Engineering
  - Visualisations
  - Quantity Extractions
- Prefabrication Solutions
  - Equipment Rooms
  - MEP Systems
  - Unique architectural and structural elements

## 6D

### SUSTANABILITY

- Conceptual energy analysis via D Profiler
- Detailed energy analysis via Eco Tech
- Sustainable element tracking
- LEED tracking

## 7D

### FACILITY MANAGEMENT APPLICATIONS

- Life Cycle bIM Strategies
- bIM As-Builts
- bIM embedded O&M Manuals
- COBie data population and extraction
- bIM Maintenance Plans and Technical Support
- bIM file hosting on Lend Lease's Digital Exchange System

# Cómo puede aportar el BIM<sup>4D</sup> en el análisis de atrasos?

## 3D

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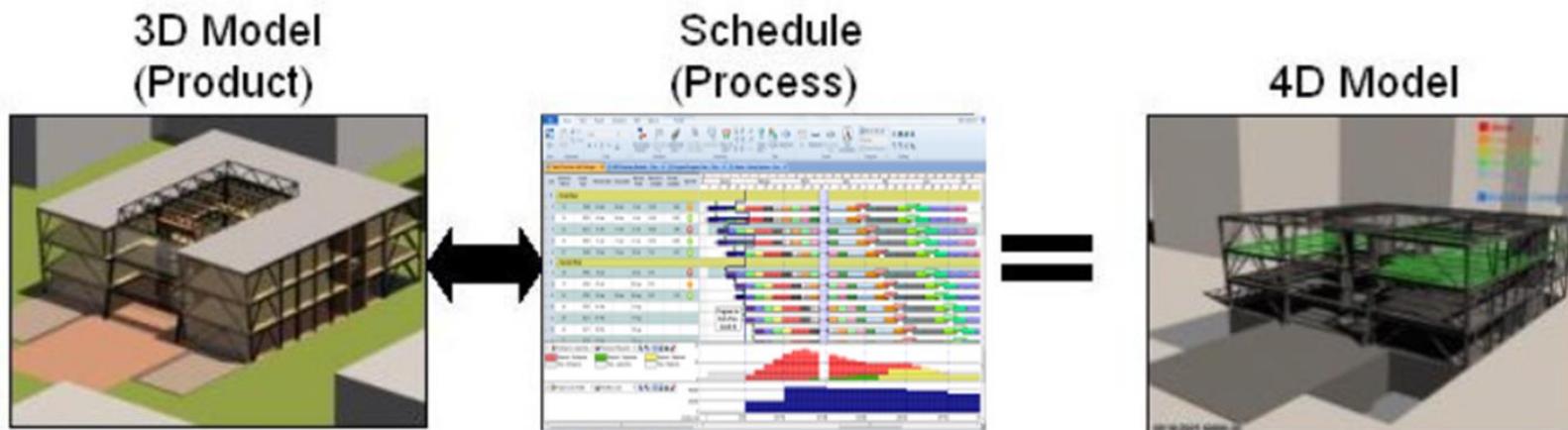
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# 4D scheduling

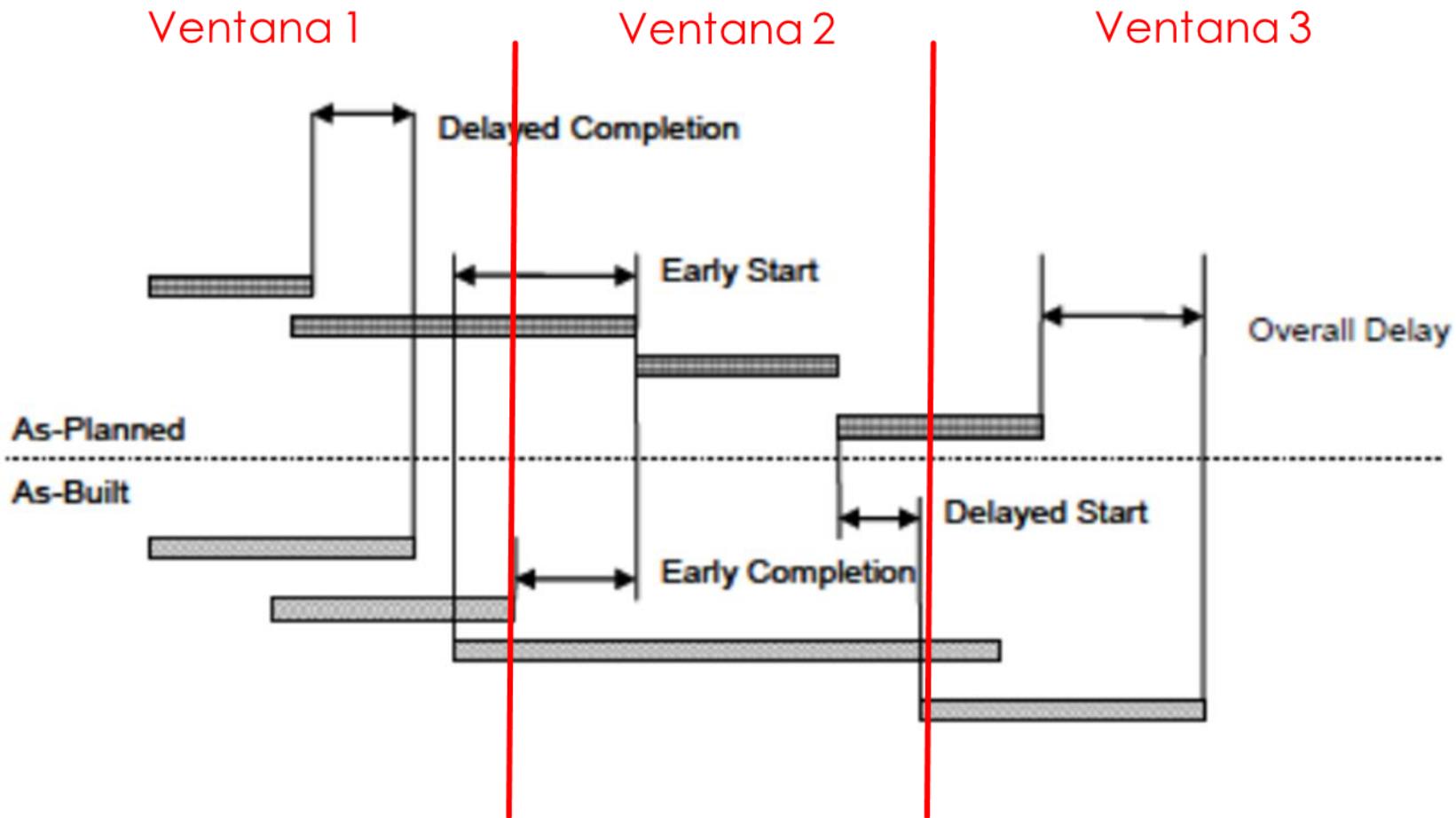


# Técnicas de Atrasos

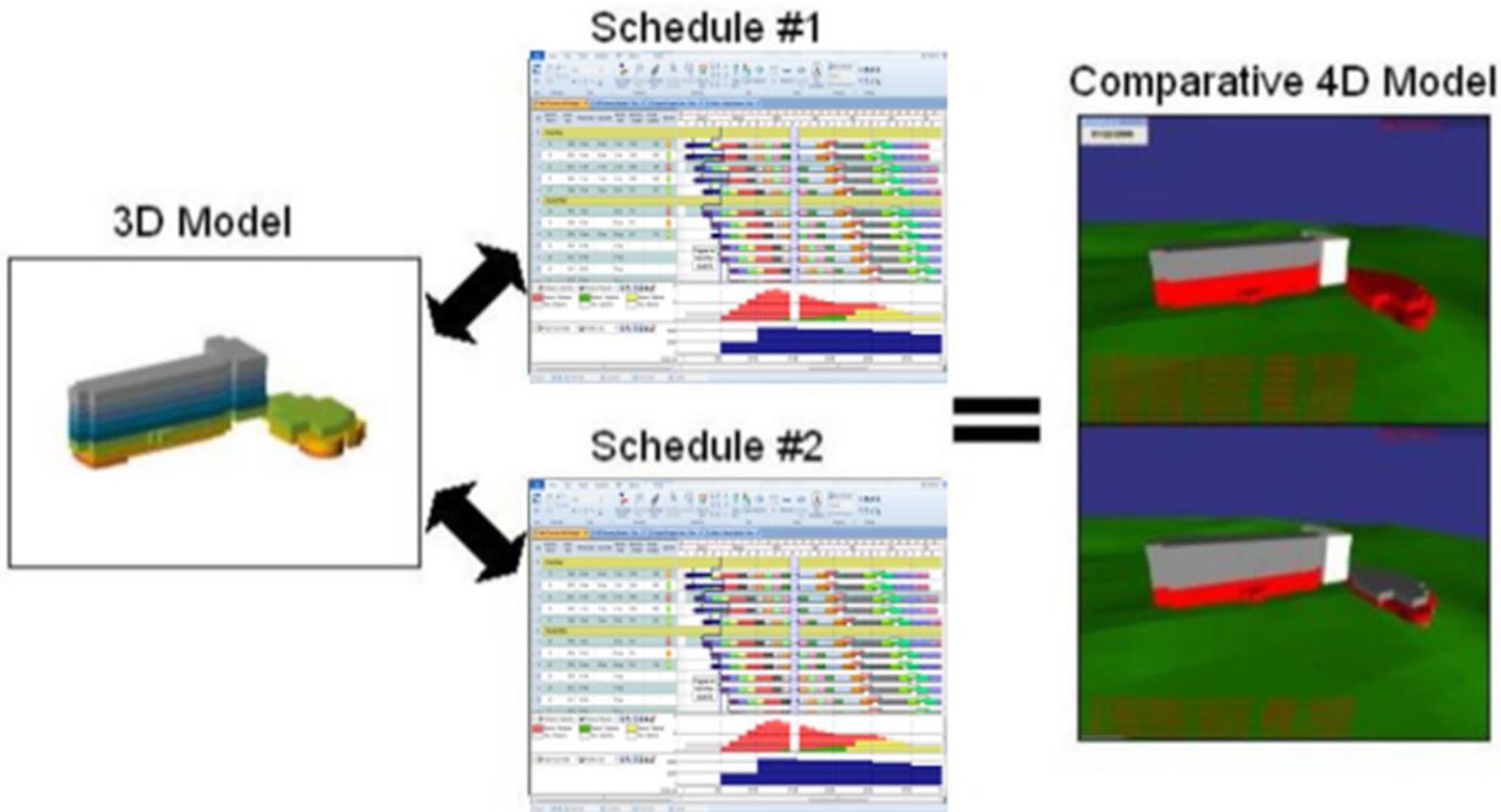
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- As Planned v As Built – APAB
- Time Impact Analysis – TIA
- Collapsed As Built – CAB
- Impacted As Planned - IAP

# As Planned versus As Built



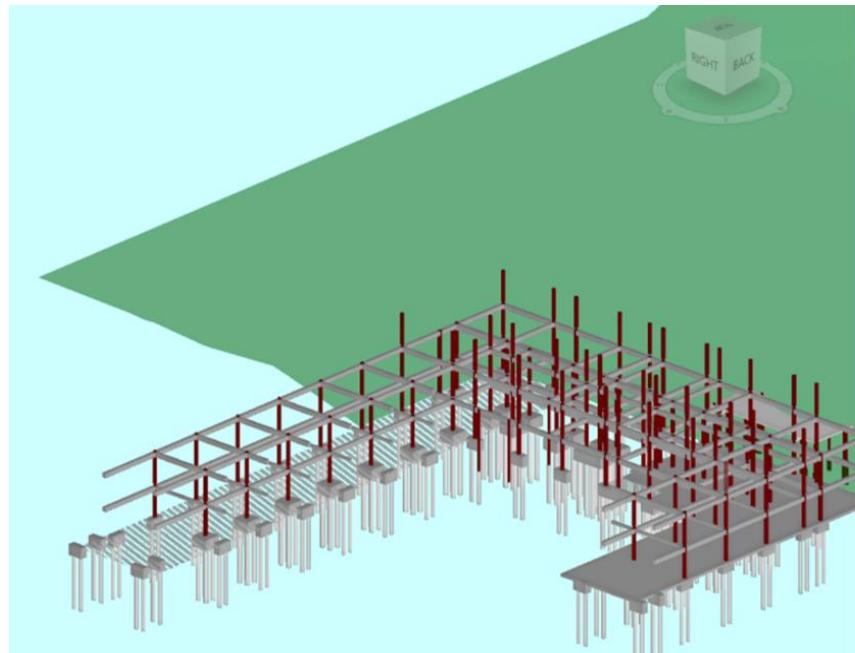
# Comparativos



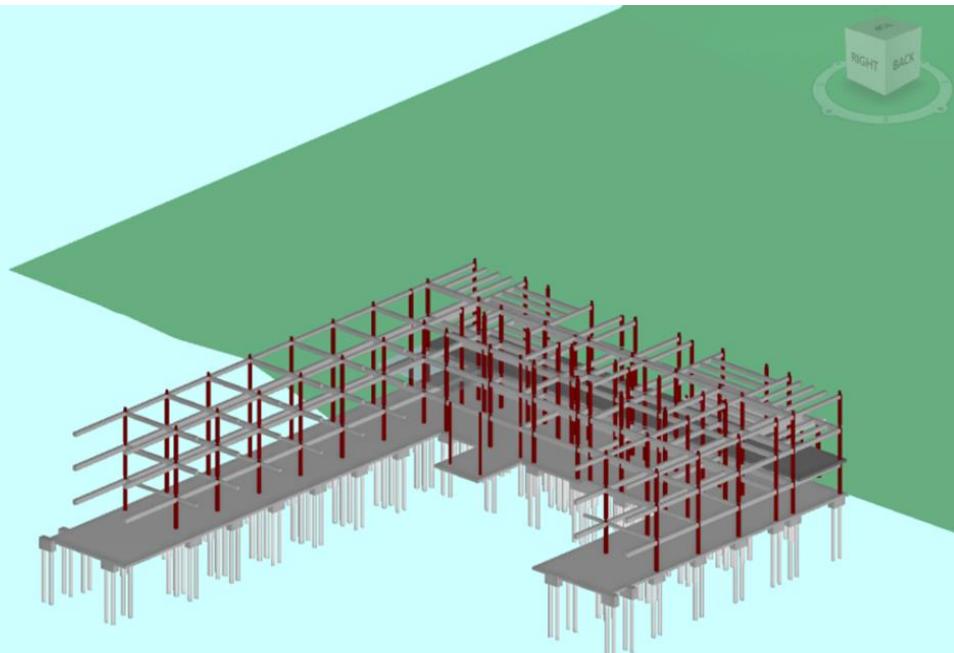
# AACE VENTANA 1

PERU  
SECTION

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AS BUILT

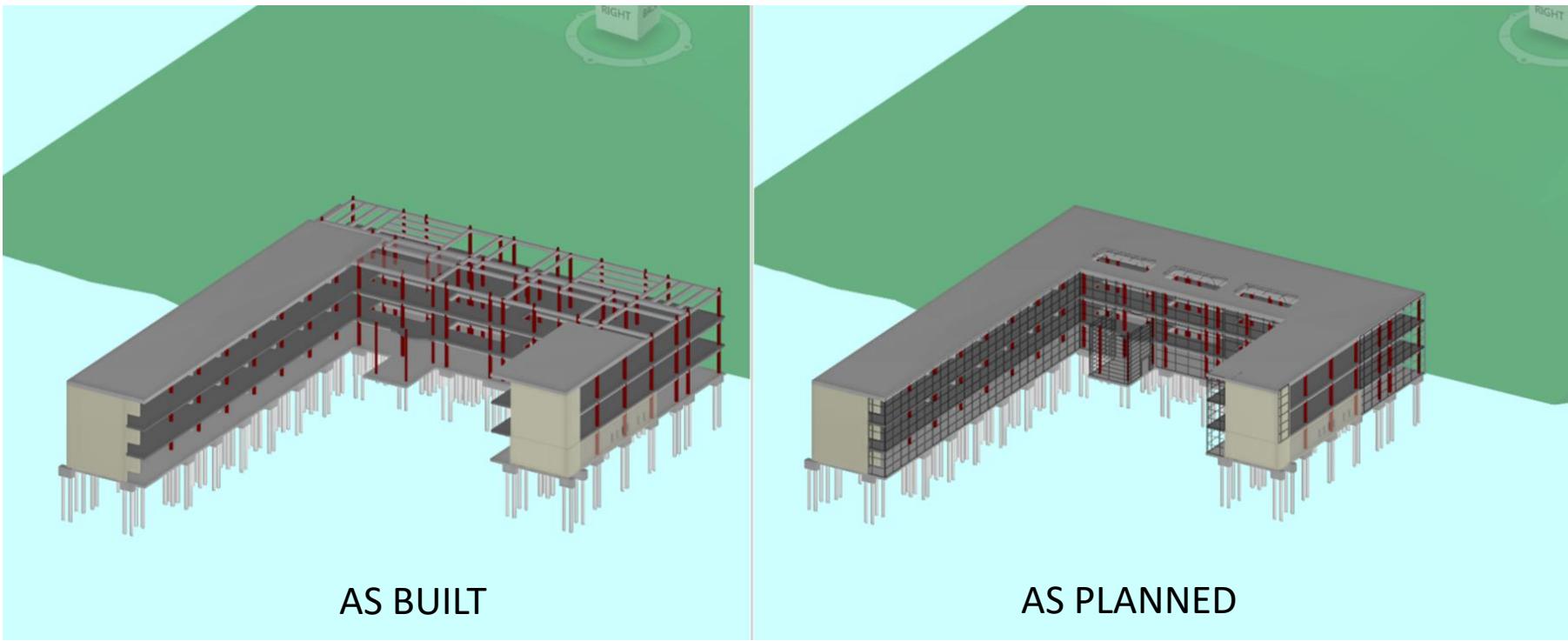


AS PLANNED

# AACE VENTANA 2

PERU  
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# Conclusión

- Recopilación de datos
- La presentación