



Delivering Constructible Data Earlier

Trimble & Design 4 Structures

Presented By: William Hulme (Trimble) & Daniel Leech (D4S)

© 2025 Trimble, Inc - All Rights Reserved



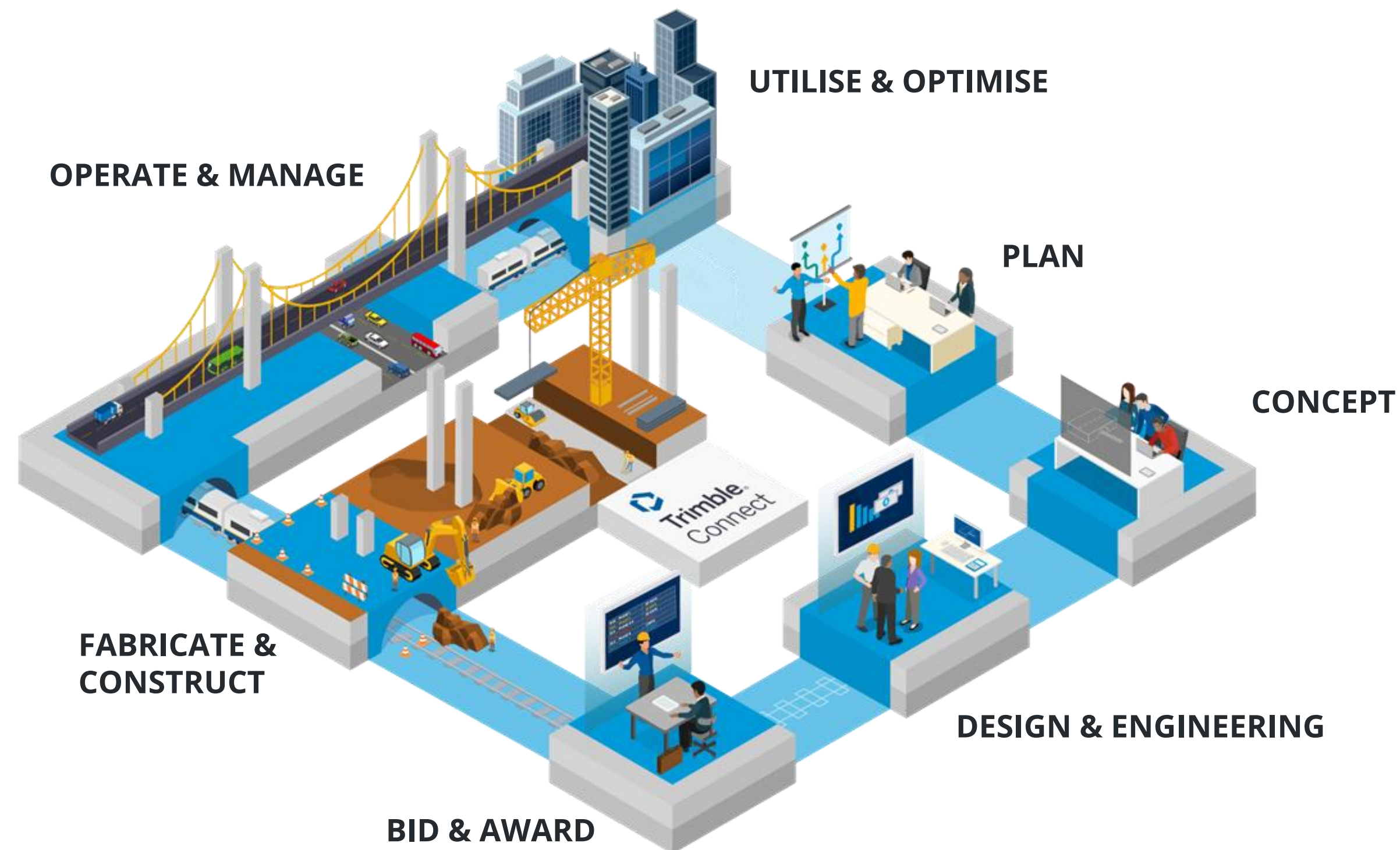
Agenda

- 01** Trimble Introduction
- 02** Connected Construction
- 03** Design 4 Structures Case Study
- 04** Q+A



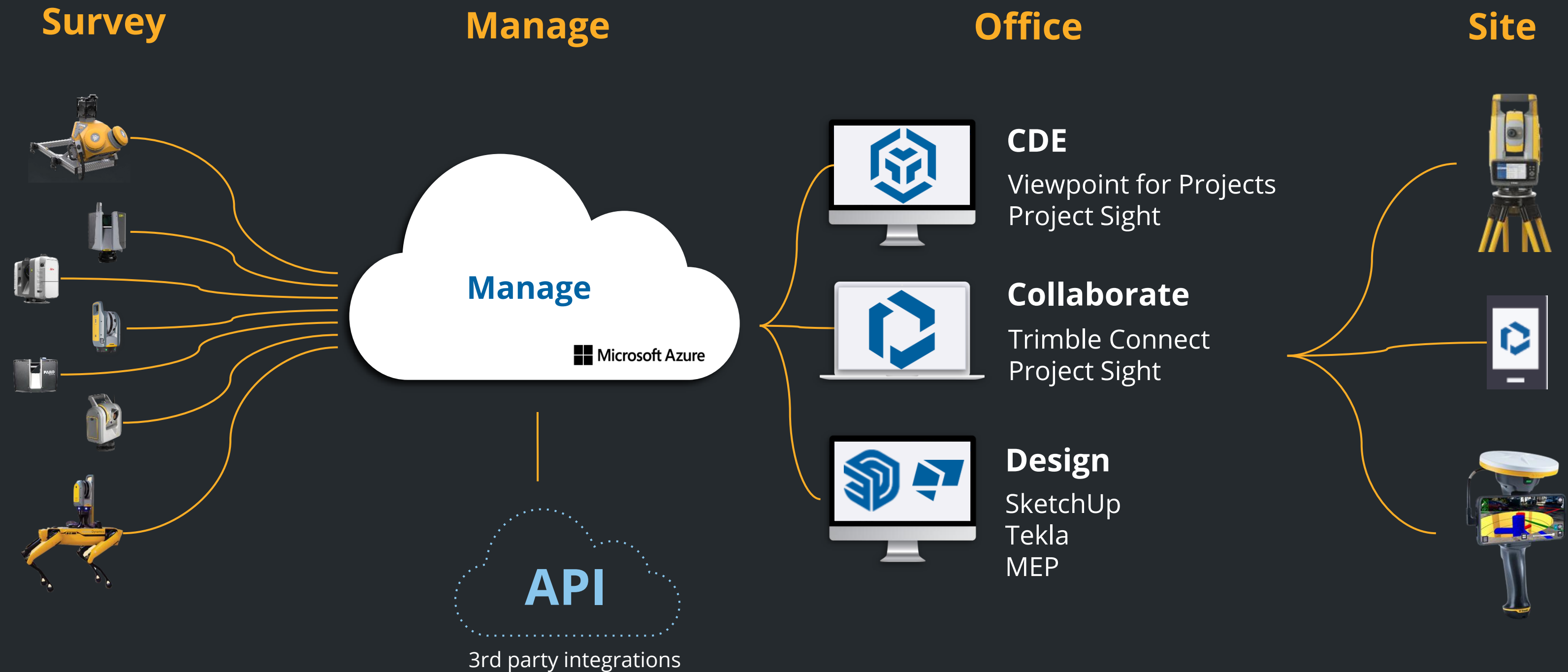
Trimble Connected Construction

Supporting every phase of construction





Trimble Connected Construction





Case Study

Daniel Leech - Design 4 Structures



Delivering Constructible Data Earlier

Whether we're talking about industrialised construction, DfMA, Gateway 2 or digital delivery, they all depend on one thing:

Constructible information being available earlier.

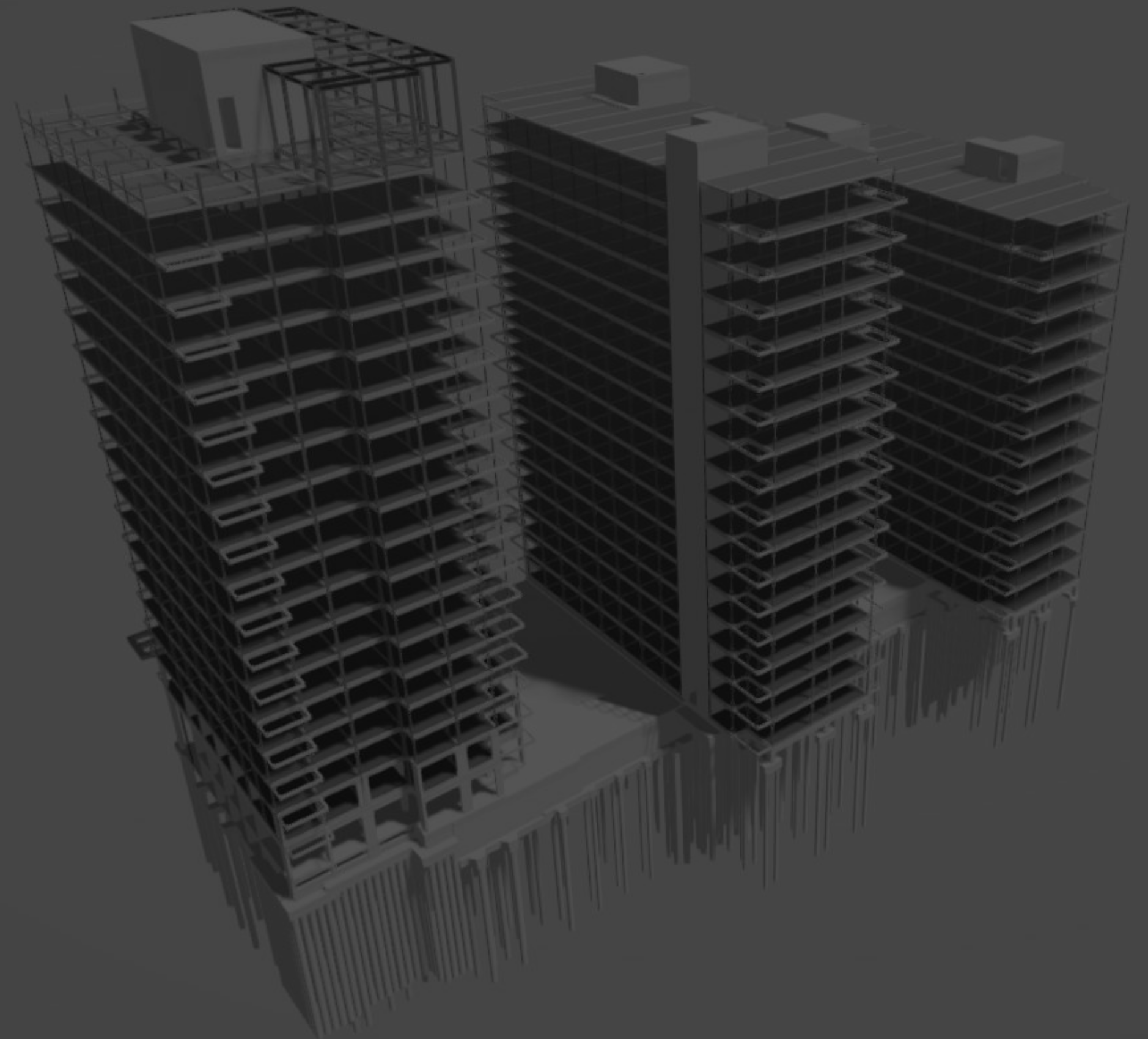
Daniel Leech,
CEO, Design 4 Structures

What do we mean by Constructible Data?

Constructible data is information developed to support:

- Procurement
- Manufacture
- Installation
- Compliance
- Sustainability

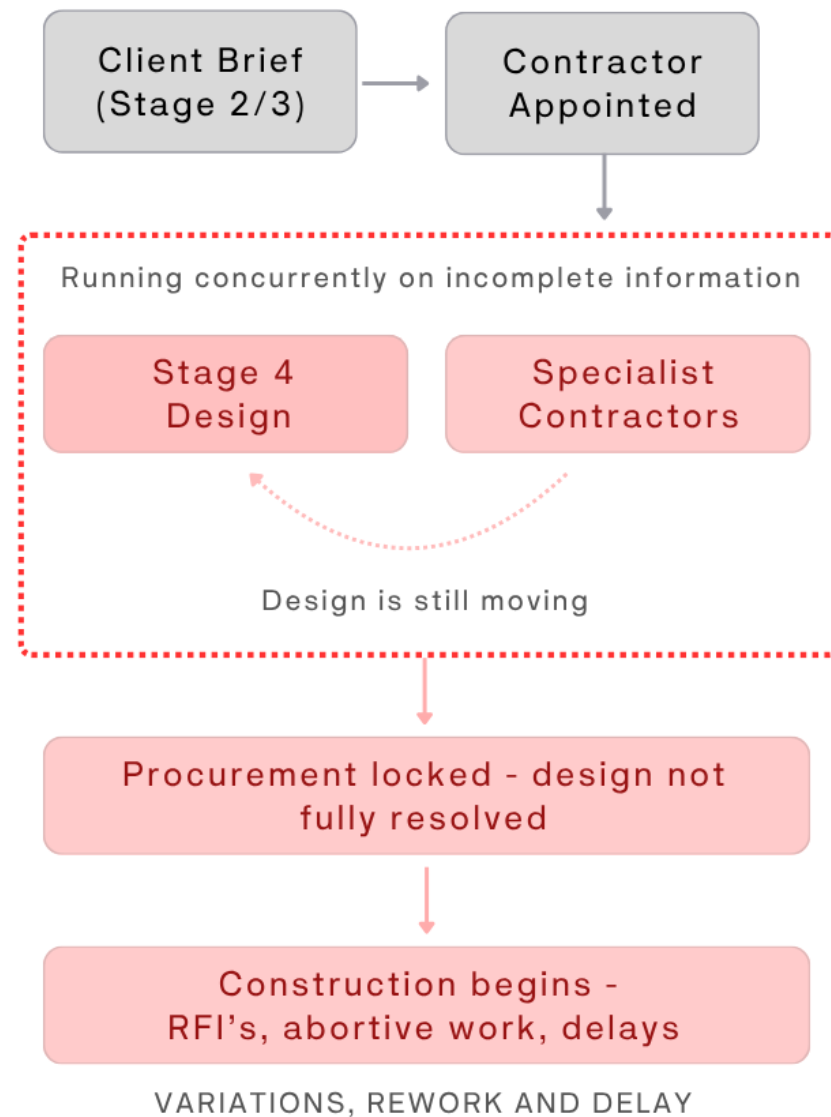
Not simply design.



The Information Gap

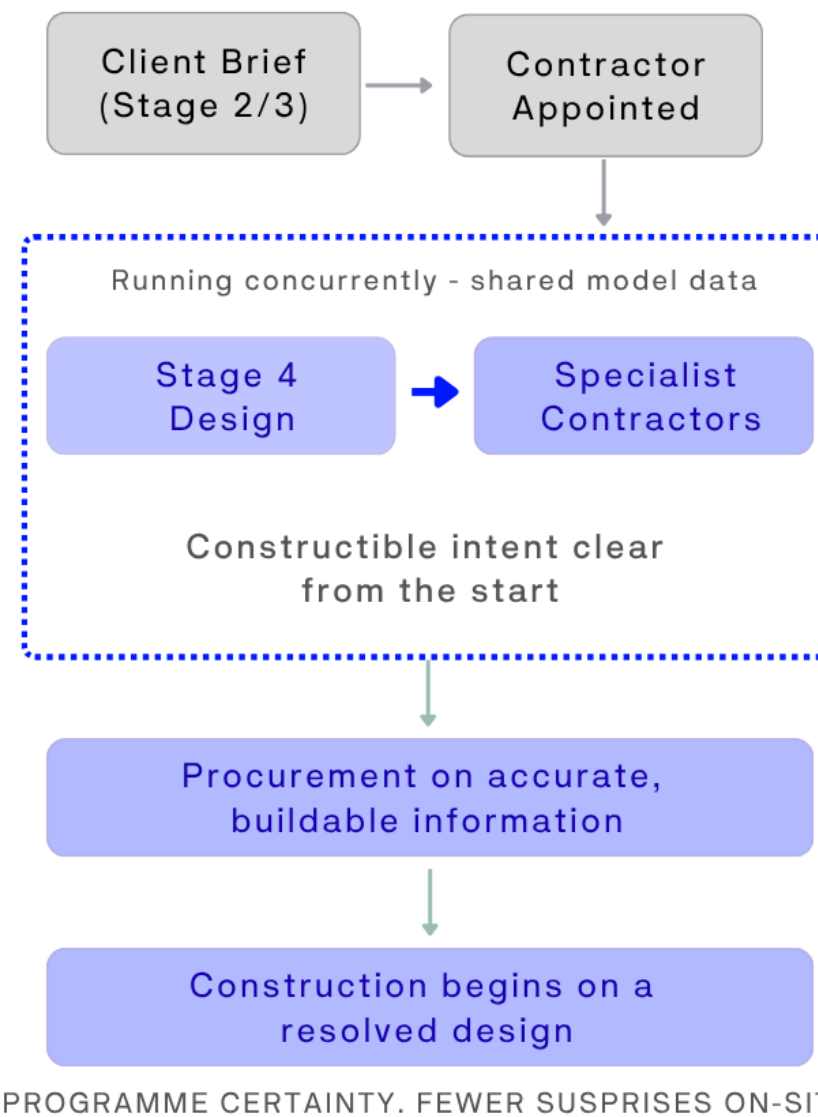
[HOW INDUSTRY TYPICALLY WORKS]

Contractor-led Design



[WITH CONSTRUCTIBLE DATA]

Same route - structured model data shared early



Enabled through Connected Workflows

- Shared model data
- Coordinated project information
- Real-time collaboration

 Trimble Connect

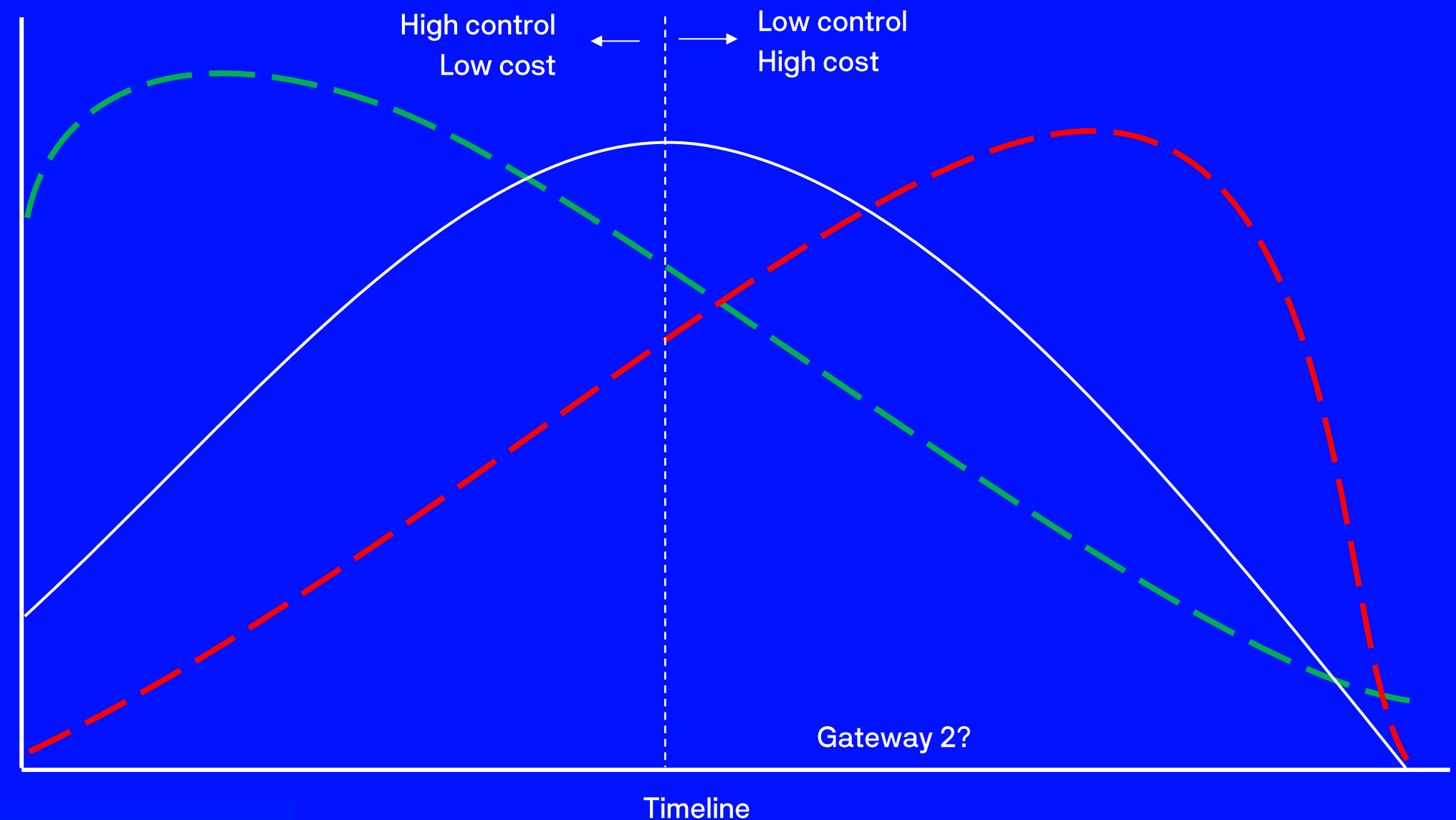
Why Earlier Information Matters

Earlier visibility of:

- Material quantities
- Procurement requirements
- Manufacturing constraints
- Installation sequencing
- Programme implications
- Key project risks

Outcomes

- Better decisions
- Greater certainty
- Better procurement
- Reduced waste
- Improved profitability



D4S Approach
Early technical design engagement

Impact of late engagement

Gateway 2 and Industrialised Construction are Driving the Same Behaviour

GATEWAY 2 INCREASINGLY EXPOSES

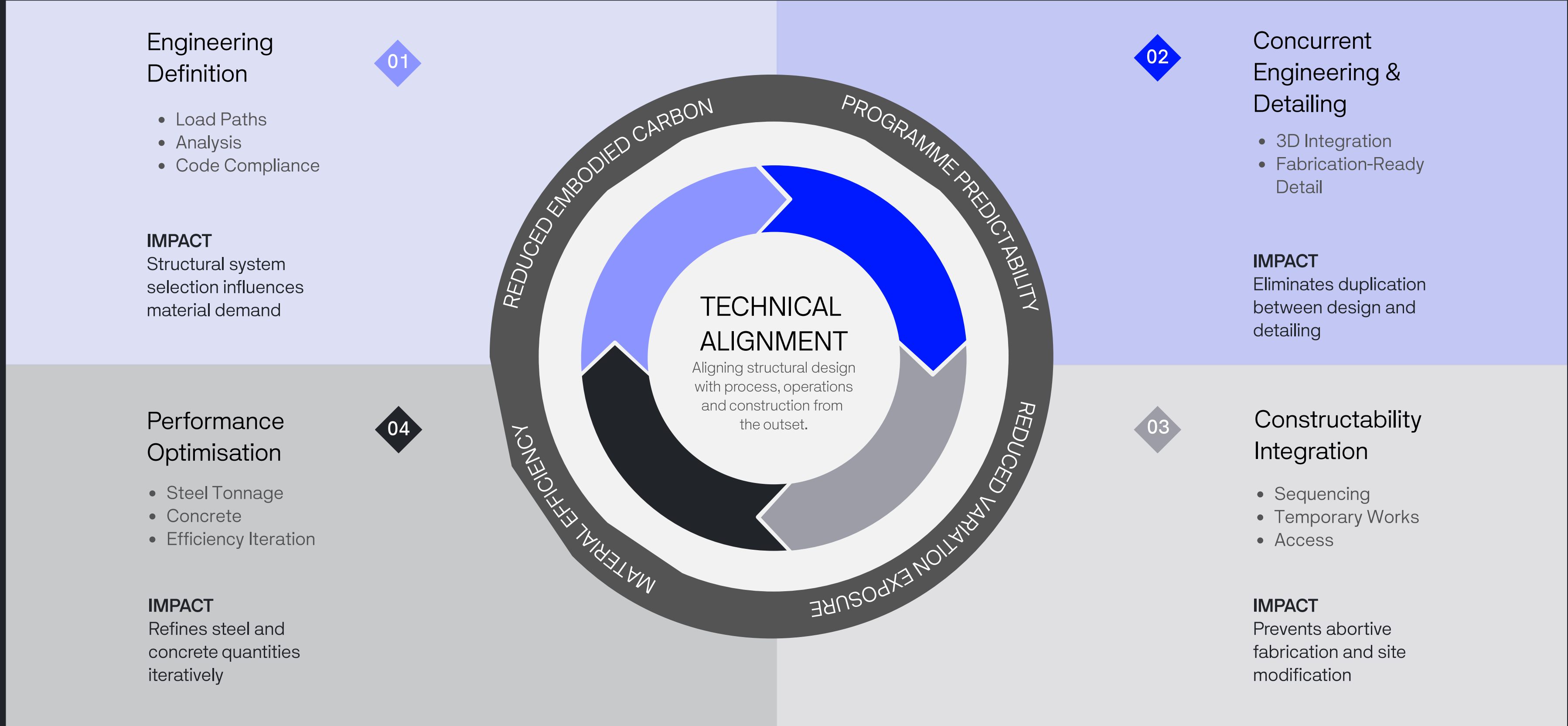
- Incomplete design assumptions
- Unresolved interfaces
- Late specialist input:
Fire – Structure – MEP misalignment
- Insufficiently developed information

INDUSTRIALISED CONSTRUCTION REQUIRES

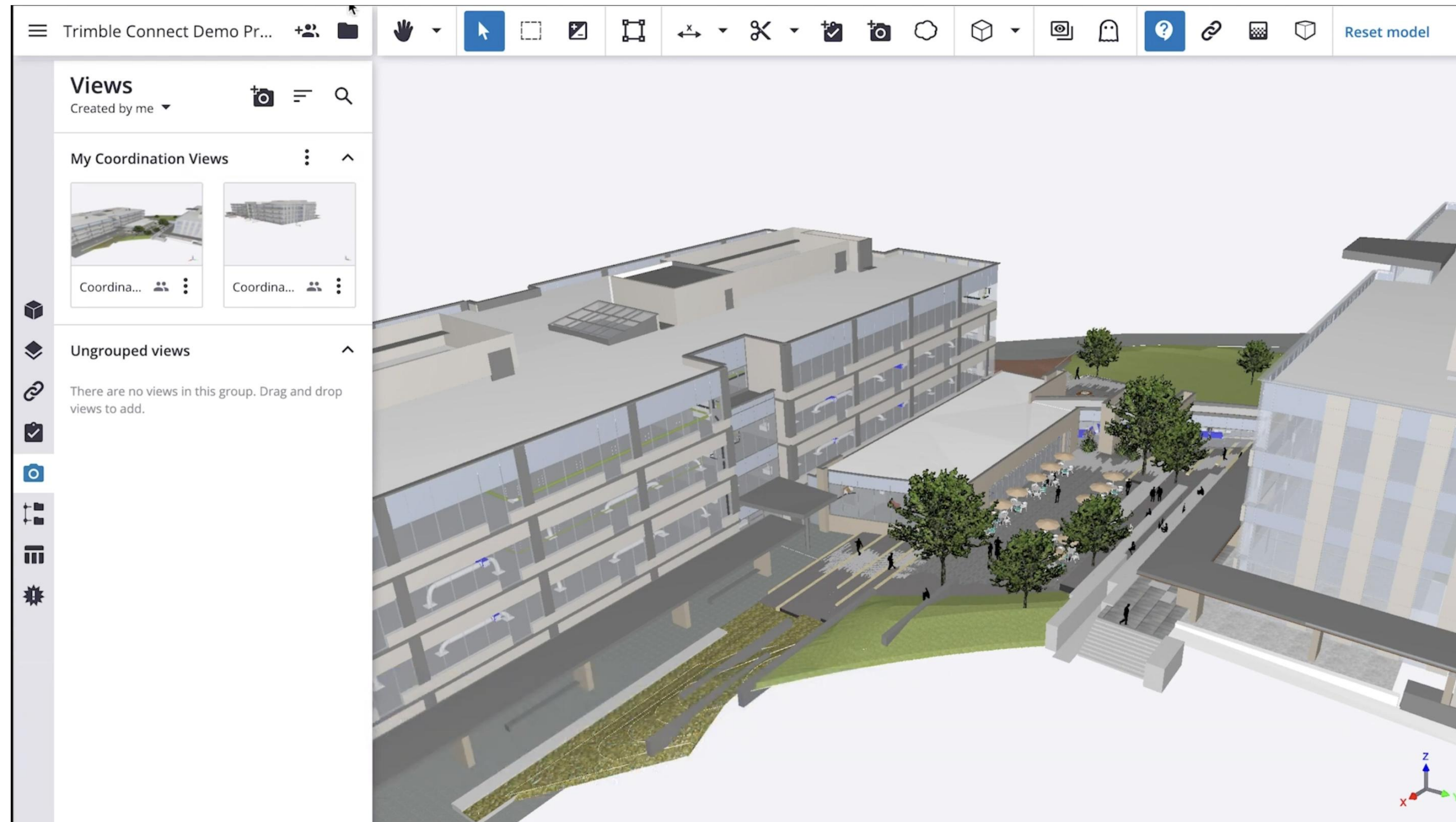
- Better coordination
- Defined interfaces
- Earlier certainty
- Reduced ambiguity

BOTH DEPEND ON BETTER INFORMATION BEING AVAILABLE EARLIER

[HOW CONSTRUCTIBLE DATA IS DEVELOPED]



[SUPPORTED BY A CONNECTED ENVIRONMENT]



Supports

- Programme savings
- Design stability maintained – zero design creep, no late-stage rework
- Procurement-ready construction packages for early supply chain mobilisation
- Accurate cost and programme planning
- Single Source of Truth: Golden Thread of Information



CASE STUDY: ALEXANDER HOUSE

Earlier Information
Creates Certainty

Site:	Southend - on - Sea
Sector:	Residential
Client:	Comer Homes
Architect:	Farrells

CHALLENGE

- 557-unit residential development across a retained 1970's building, plus new extensions.
- Multiple package interfaces
- Gateway 2 requirements

RESPONSE

- Rapid 2D-to-3D model, exposing key RC slab interfaces.
- Early structural validation
- Early structural fire review
- Integrated design coordination: In-house LGSF, balcony and envelope design
- Parametric modelling to speed testing and analysis.
- Foundations validated with geotechnical specialists.

OUTCOME

- Gateway 2 readiness
- Early clarity on cost and scope
- Greater certainty in programme and decision-making
- Faster, more efficient information flow
- Constructability assured, reducing rework and delays



Image: Rapid 2D-to-3D model output



CASE STUDY: WOKING HIGH STREET

Earlier Information
Creates Flexibility

Site:	High Street, Woking
Sector:	Mixed-use / Residential
Client:	JRL Group, Halycon
Architect:	Assael

CHALLENGE

- RIBA Stages 2-5, co-living development of 329 units, up to 17-storeys tall, with a single-storey basement.
- Gateway 2 requirements
- Constrained railway-adjacent site
- Modular hybrid scheme requiring significant coordination
- Needed to maintain flexibility while progressing design

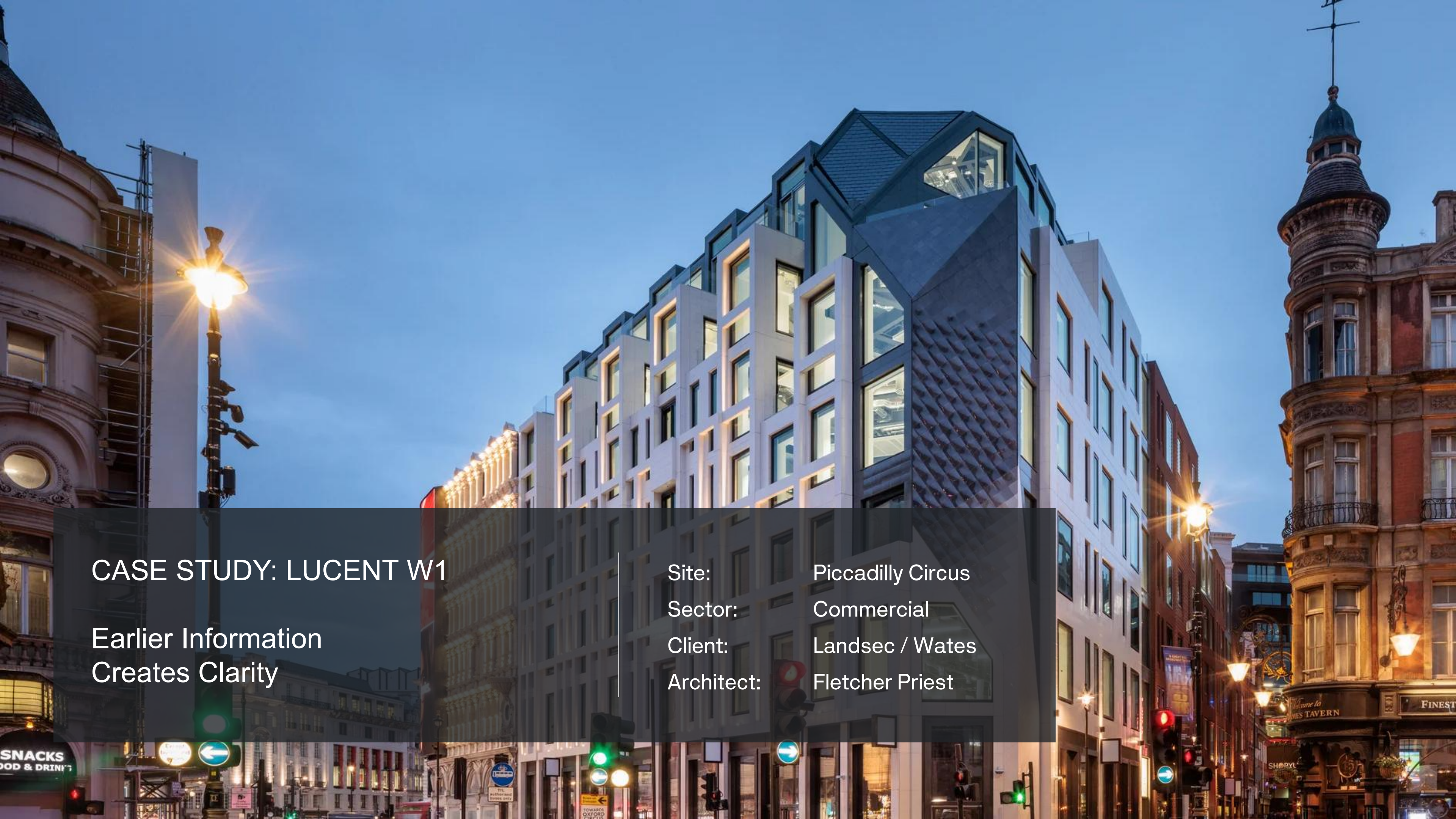
RESPONSE

- Developed coordinated design information ahead of Gateway 2
- Structural, infrastructure and delivery teams working in parallel
- Modular strategy fully tested, including logistics and lifting requirements
- Entire redesign to an RC hybrid solution delivered in-house

OUTCOME

- Competitive tendering maintained
- Gateway 2 submission supported
- Programme and quality maintained
- Alternative delivery routes remained viable





CASE STUDY: LUCENT W1

Earlier Information
Creates Clarity

Site:	Piccadilly Circus
Sector:	Commercial
Client:	Landsec / Wates
Architect:	Fletcher Priest

CHALLENGE

- Scheme reignition: appointed to review approach after initial methods failed
- Highly complex geometry
- Constrained site in a high-traffic area

RESPONSE

- Offsite panel strategy, with focus on design repeatability
- Production of a full fabrication package and lifting strategy
- Multi-disciplinary approach and expertise, including structural detailing and fabrication.
- High level of BIM coordination

OUTCOME

- 75% of construction in a controlled factory environment
- 16 weeks saved on-site
- Zero non-conformance reports
- No remedial works
- Health and Safety: no on-site injuries





CASE STUDY: LOCKE HOTEL

Earlier Information
Creates Continuity

Site:

Canary Wharf

Sector:

Serviced Accommodation

Client:

CWG

CHALLENGE

- Original modular supplier entered administration
- Replacement manufacturer required a different framing system
- Significant redesign risk

RESPONSE

- Levels 4-15 redesigned in Tekla Structures
- Alternative manufacturing system adopted
- Fully connected and coordinated manufacturing model delivered

OUTCOME

- Manufacturing solution successfully transitioned
- Programme impact minimized
- Design intent maintained
- Delivery continuity preserved



Video: Tekla Model Flythrough

Better Information.
Earlier Decisions.
Better Outcomes.

Key Takeaways

- Better information enables better decisions.
- Gateway 2 and industrialised construction both require earlier coordination and greater certainty.
- The greatest project risks often sit at interfaces, not within disciplines.
- Tekla Structures helps develop constructible information. Trimble Connect helps make it available to the people making critical project decisions.