Remote Solving
Collaborative Design & Analysis in the Cloud
Ben Howes & Matt Naugle

@howesben
@MatthewRNaugle
@ttinc
CUSTOM TOOL DEVELOPMENT

PARAMETRIC MODELING

INTEROPERABILITY / WORKFLOW

RESEARCH AND DEVELOPMENT
The Beginning: Al Meena Soccer Stadium

Rendering by 360 Architects
Parametric Design / Engineering Model
Parametric Design / Engineering Model
Structural Interoperability
Structural Interoperability
WEB APPLICATION
- Minimal API
- BIM Database

ARCHITECT

ENGINEER

LMNts

CORE studio

Thornton Tomasetti
Structural Sizing, Embedded Energy / Carbon
Mullion Sizing Demo
Remote Solving Applications

- Embodied energy & carbon
- Preliminary member sizing
- Material takeoffs / cost
- Environmental / operational performance
- Geometry Rationalization
Remote Solving Questions

• Contract structures that enable rapid data exchange?
• Data ownership / management?
Takeaways

1. Collaborate sooner, and more often.

2. Develop analysis feedback loops at every stage of the project life cycle.

3. Use computation (whenever suitable) to accomplish numbers 1 and 2.
How will practice change as we exchange increasing amounts of design data, at increasingly greater rates, over the next 10 years?