



APPLYING BIM TOOLS IN IPD PROJECT IN PERU

Andrews Erazo, Giankeving Guzman, Stefany Espinoza



Outline



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION

- Introduction
- Literature Review
- Case Study
- BIM & IPD Integration Flow
- Metrics
- Conclusions



Introduction



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION



2017



2019



3

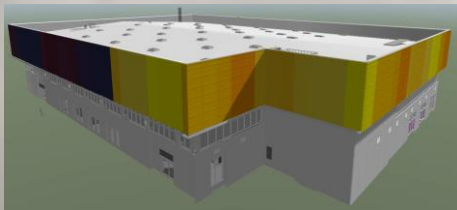
Literature Review - BIM



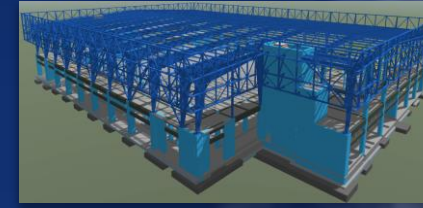
IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION

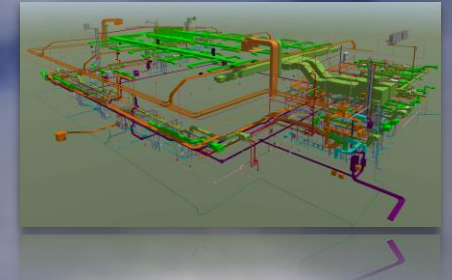


Architecture
Model

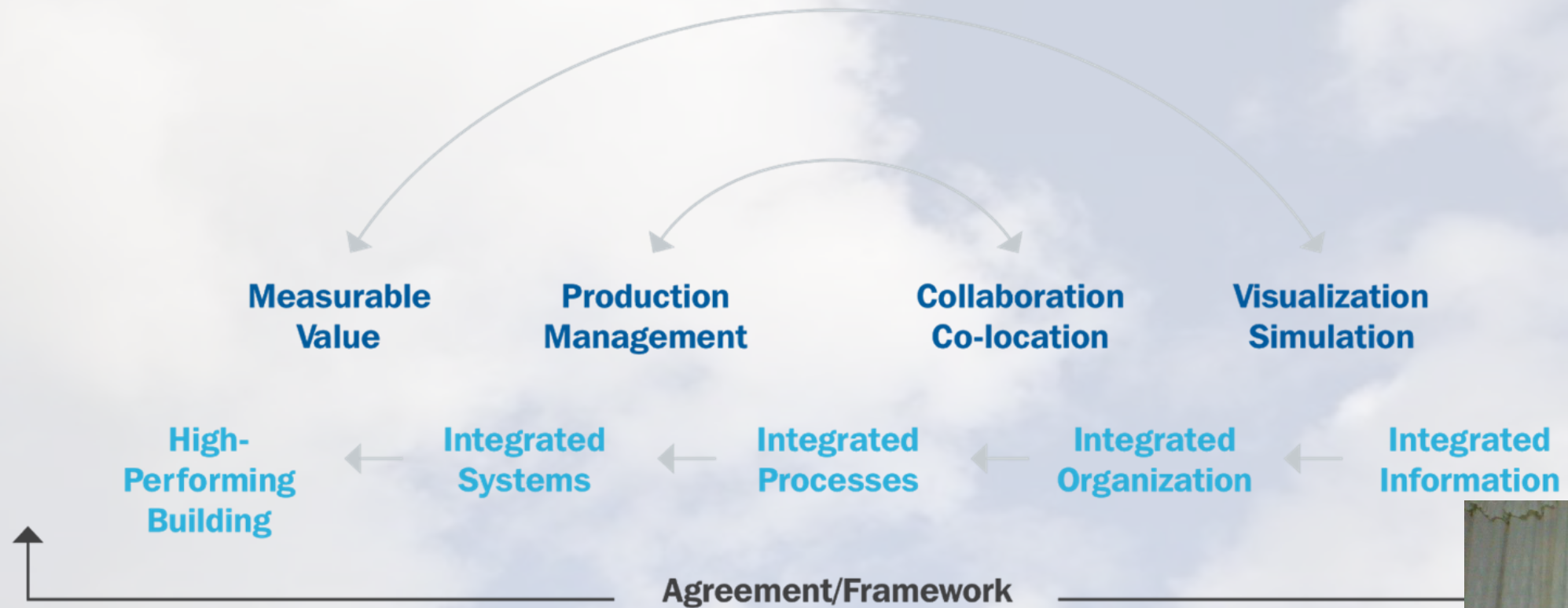


Structure
Model

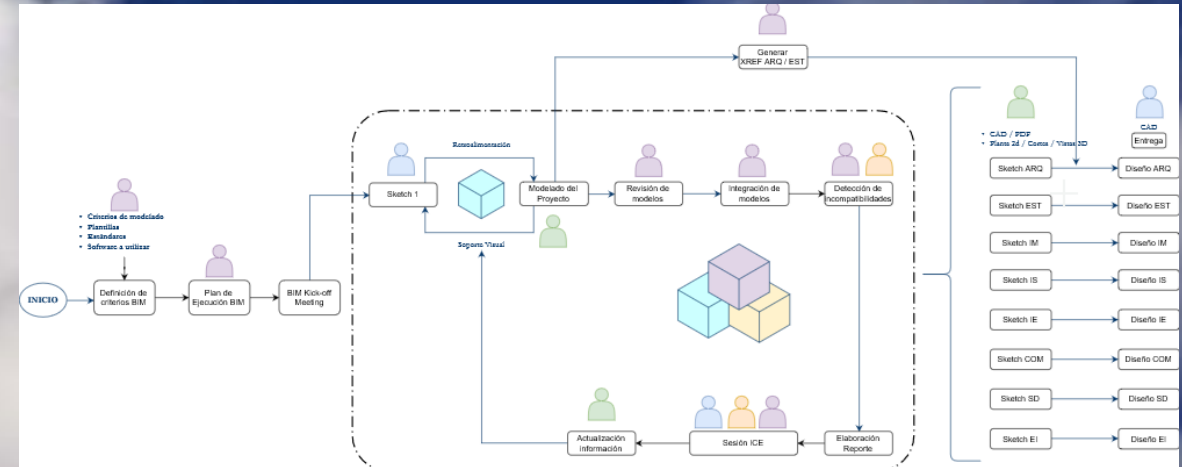
Sports Center



Literature Review - IPD



Literature Review-Lean



Study Case: Videna National Sports Complex



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION

Project: Peruvian project for the
2019 Lima Pan American
Games.

Time: 18 months (Design-Build)

Contract: NEC 3



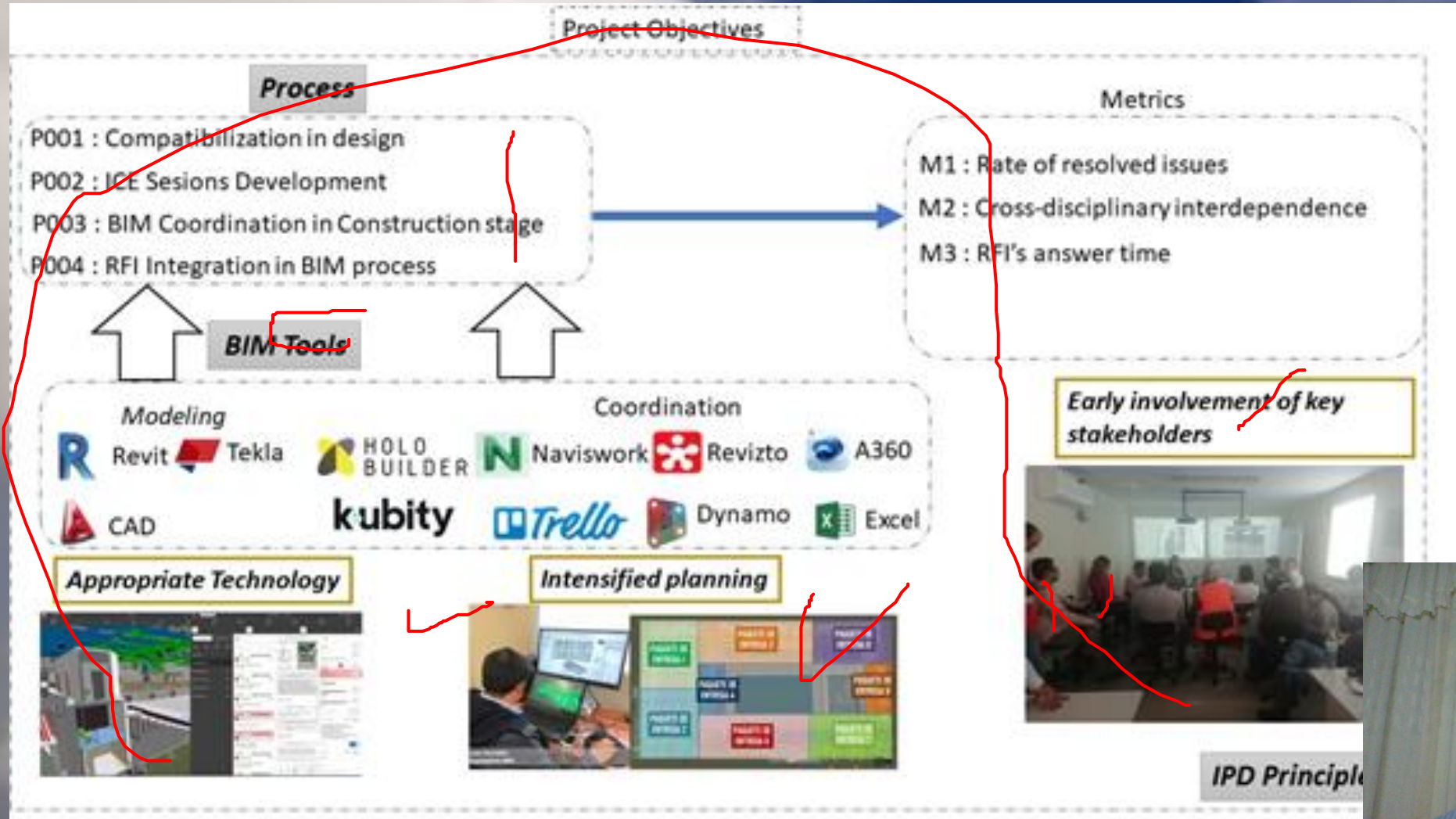
BIM & IPD Integration Flow



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION



BIM & IPD Process



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION





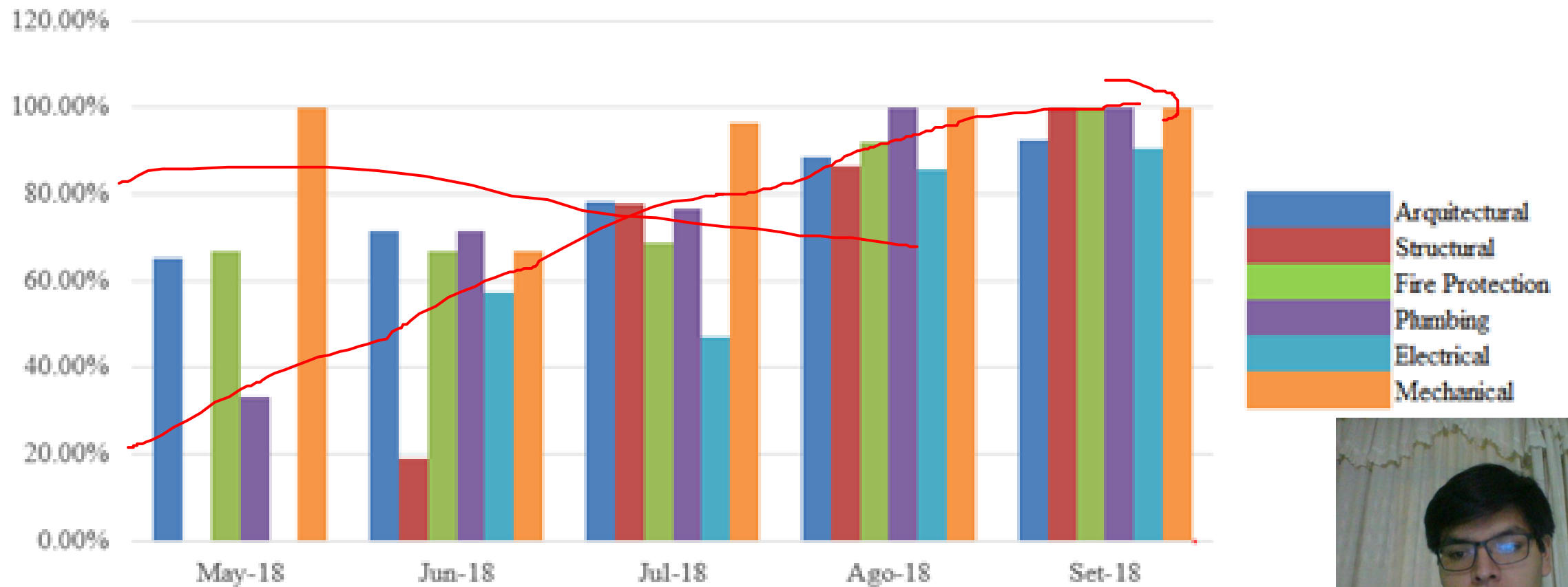
IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION

Metric: Rate Of Resolved Issues

Rate of resolved issues over time



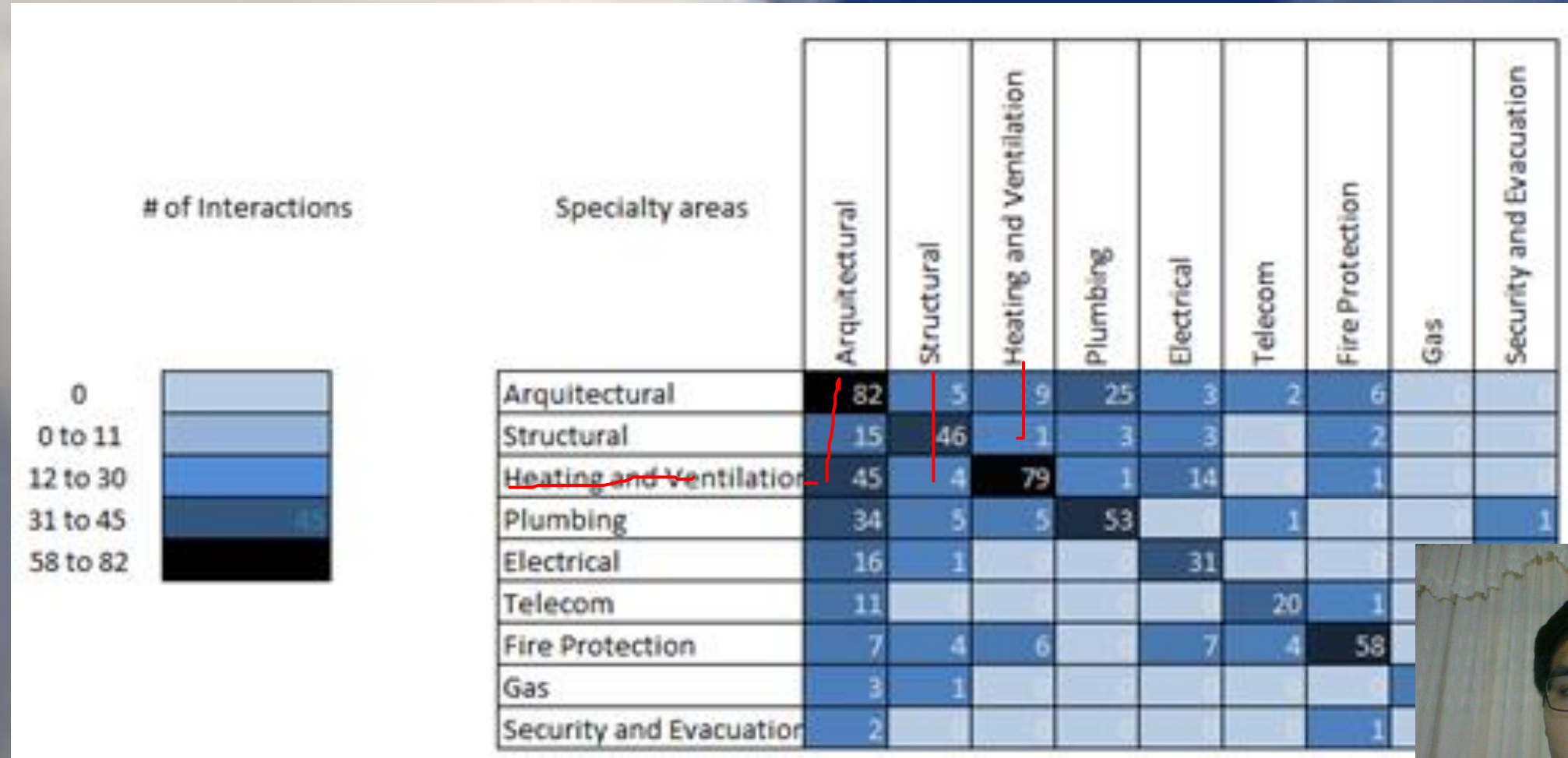
Metric: Cross-Disciplinary Interdependence



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION



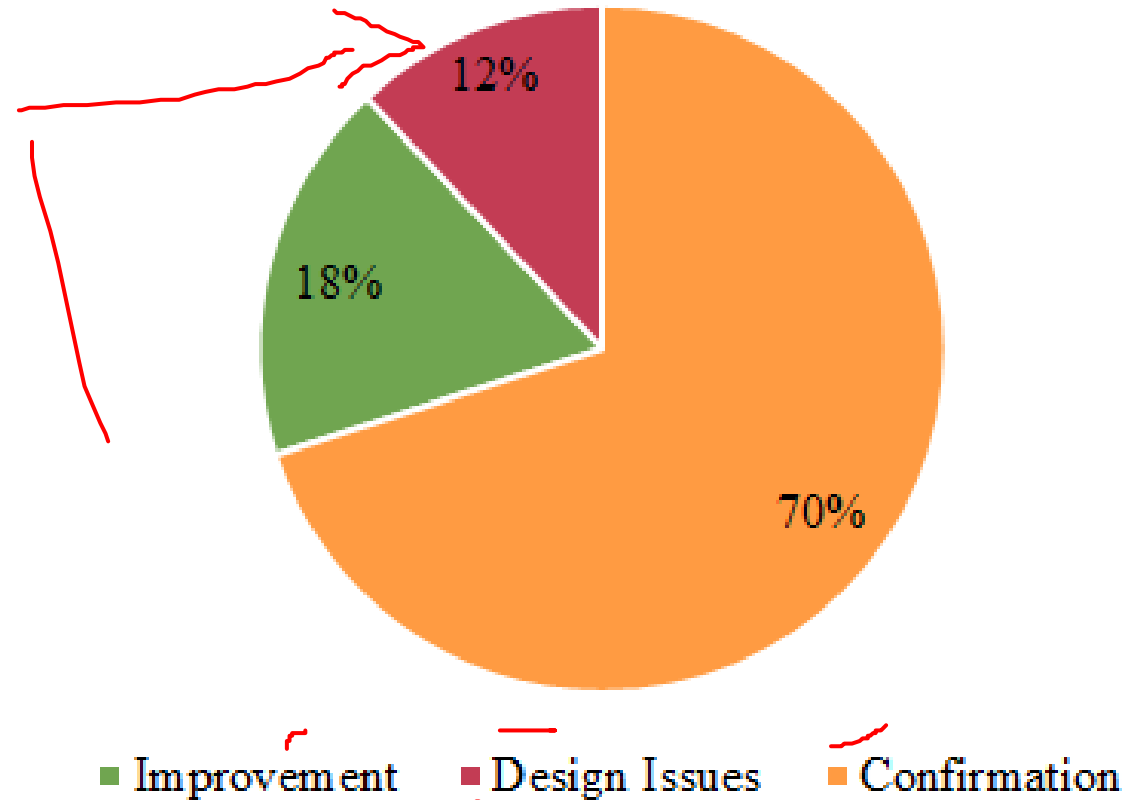
Metric: Classification Of Requests For Information(RFI)



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION



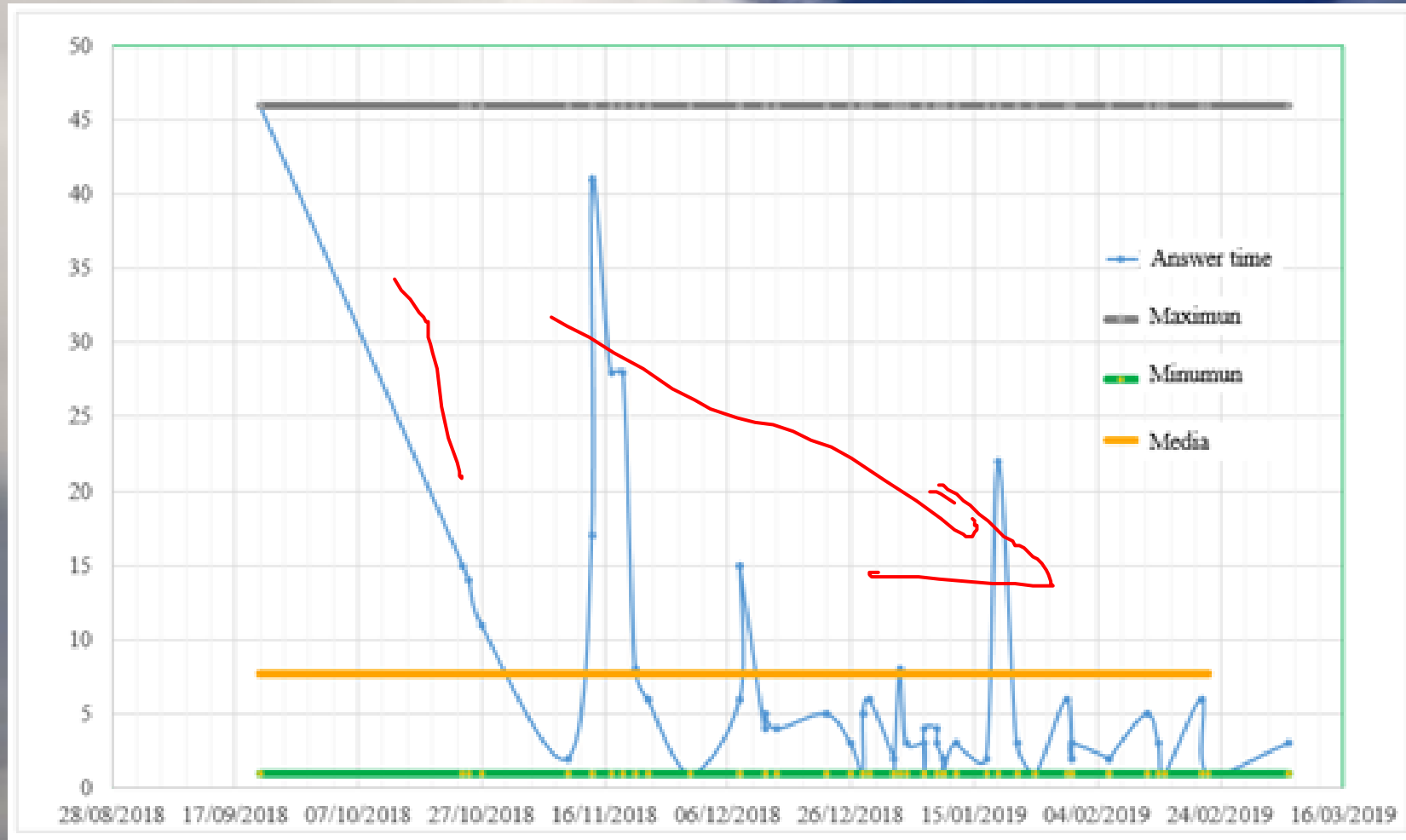
Metric: RFI Answer Time



IGLC 28

BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION



Conclusions



The average response time was 7 days, which shows that the integration and collaboration of specialists helped reduce the response time by 67% compared to a traditional management project.

The proposed model allows that the participants in the design are very familiar with the coordination platform because it allows interacting very easily, An average ratio of resolved issues 73.28% was determined, which indicates the collaboration of the design team and an increasing trend over time

After the application of the BIM and IPD integration framework in the project design stage, it was possible to solve relevant problems, improve efficiency during the construction stage, and create value for the client, since the project could be delivered to the client in time, as expected.



Andrews Erazo Rondinel
aerazor@uni.edu

Giankeving Guzman Ganto
gguzmang@uni.edu.pe

Stefany Espinoza
sespinoza@cosapi.com.pe

