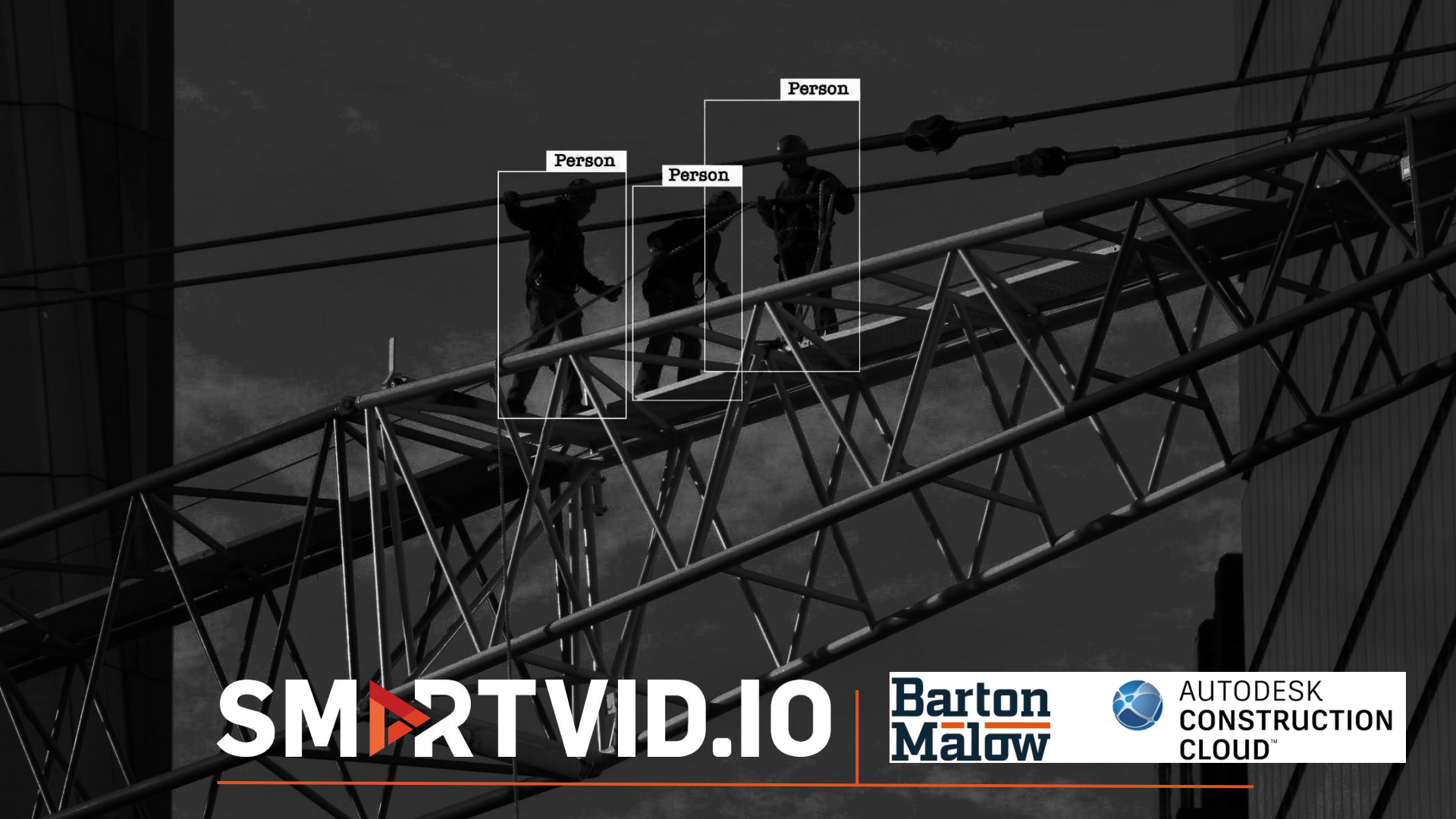


SMARTVID.IO

Barton Malow

AUTODESK CONSTRUCTION CLOUD™

Agenda

- Speaker introductions
- About Barton Malow, Smartvid, Autodesk
- Barton Malow's Smartvid journey
  - Expansion
  - COVID-19 impacts
  - Where we go from here
- Q&A

Josh Kanner, Smartvid.io

- Founder, CEO
- 15 years in AEC Software
- Former founder, Vela Systems, now Autodesk BIM 360 Field
- Boston based
- “Fun” facts
  - Best jobsite walks: Cowboy stadium, Liberty hotel
  - Continue to try to organize cross-industry groups (now the Predictive Analytics Strategic Council)
  - Tip for handling the quarantine with 2 sons, wife, dog: lots of Netflix

SmartVid.io's Mission

To reduce risk in the AEC industry by using AI to improve safety, quality and productivity.

Who is Smartvid.io?

- Software focused on reducing project risk using AI
- 100% focused on the Construction Industry
- Our construction-tuned AI is 4x better than Google
- Pre-built integrations with leading con-tech vendors for easy deployment
- Boston-based, offices around the world

Barton Malow
Suffolk
Lithko Contracting, Inc.
Clayco
Obayashi
DPR Construction
Messer We Are Building.
JE Dunn Construction
Shawmut Design and Construction
Webcor
Clark Construction

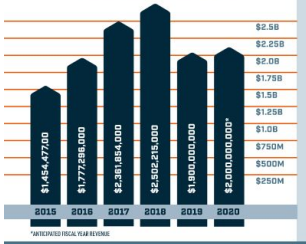
Ted Jennings, Barton Malow

- Senior VDC Manager
- Based in Southfield (aka, Detroit), MI
- Construction experience (11 years)
  - Federal Court House, San Diego
  - Coranado Island Naval Hangars, San Diego
  - Power plants across SE Michigan
- Fun facts (little known)
  - Loves skiing
  - 2 boys - 7 and 3 (if on video, watch the door behind him)

Barton Malow

76 MILLION MAN-HOURS WORKED IN 5 YEARS
BARTON MALOW + SUBCONTRACTORS

OFFICE LOCATIONS



FISCAL YEAR REVENUE

100% AMERICAN + EMPLOYEE OWNED

BUILD IT SAFE NO EXCEPTIONS

0.45 EMR WORLD CLASS SAFETY RECORD

ONE VISION
10 STATES
15 OFFICES

2000 EMPLOYEES (6 month average)

52% TRADES
48% OFFICE

20% CERTIFIED PE, AIA, LEED AP

REVENUE PER MARKET (3 YEAR AVERAGE)

- 24% INDUSTRIAL
- 20% EDUCATION
- 17% HEALTHCARE
- 15% SPORTS + ENTERTAINMENT
- 14% ENERGY
- 10% COMMERCIAL

DELIVERY METHOD

- 40% CONSTRUCTION MANAGEMENT
- 33% GENERAL CONTRACTING
- 22% DESIGN BUILD | EPC | IPD
- 5% FACILITIES | PROGRAM MANAGEMENT

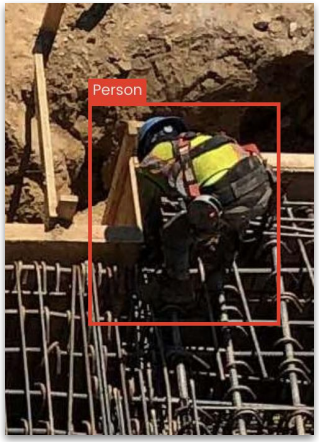
96 YEARS CONTINUOUS OPERATION
c1924

BUILDING WITH THE AMERICAN SPIRIT
PEOPLE
PROJECTS
COMMUNITIES

bartonmalow.com

SmartVid relationship recap

- 2019 Pilot expanded to Division-wide rollout in Q1 2020
- Safety Monitoring using 2D photos from Box and 360 photos from Structionsite
  - Now adding BIM 360 imagery
- Currently launching Safety Observations Module
- Member of the Predictive Analytics Strategic Council
  - Demonstrated potential value in incident rate reduction from analytics & management focus



AUTODESK® BIM 360®

StructionSite

Autodesk relationship Recap

- Long time customer of Assemble, PlanGrid, BuildingConnected
- Now moving company-wide to BIM 360 as core construction management system
- Review of entire process from viewing documents in the field to the analysis of all of the data generated by project teams

AUTODESK **CONSTRUCTION CLOUD**™

Assemble

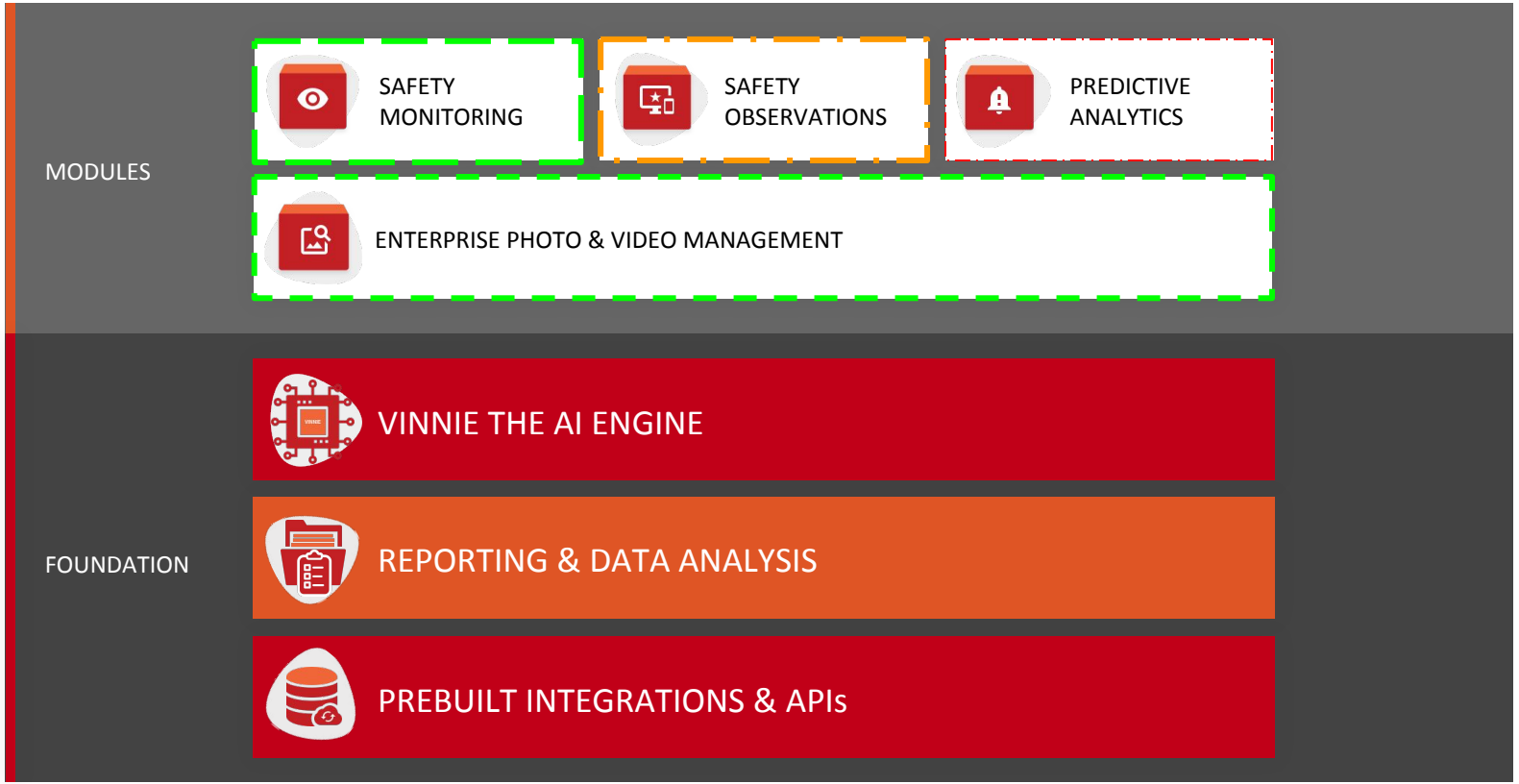
BuildingConnected

BIM 360

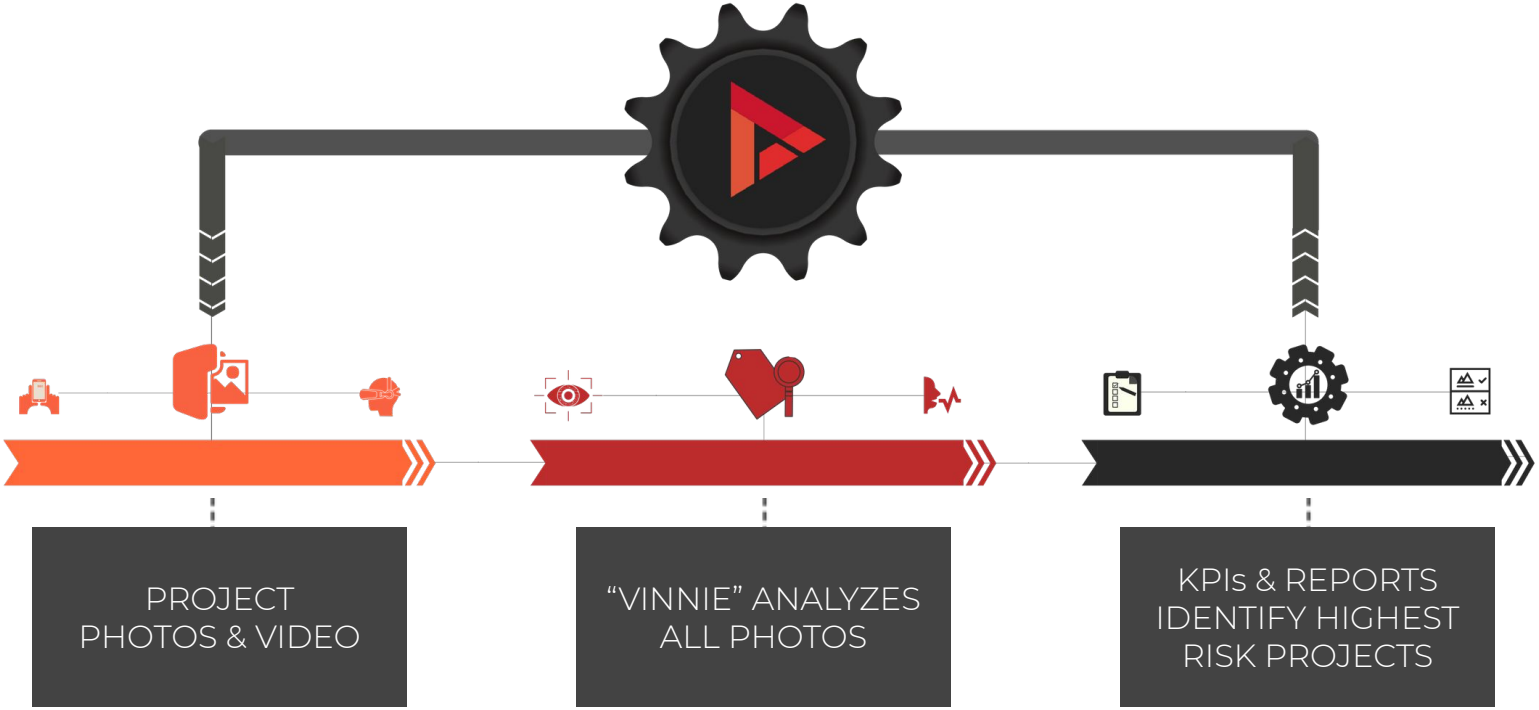
PlanGrid

SMARTVID DEPLOYED IN 3 PHASES

Phase 1 | Phase 2 | Phase 3



SAFETY MONITORING MODULE



SMARTVID.IO
SAFETY SUITE

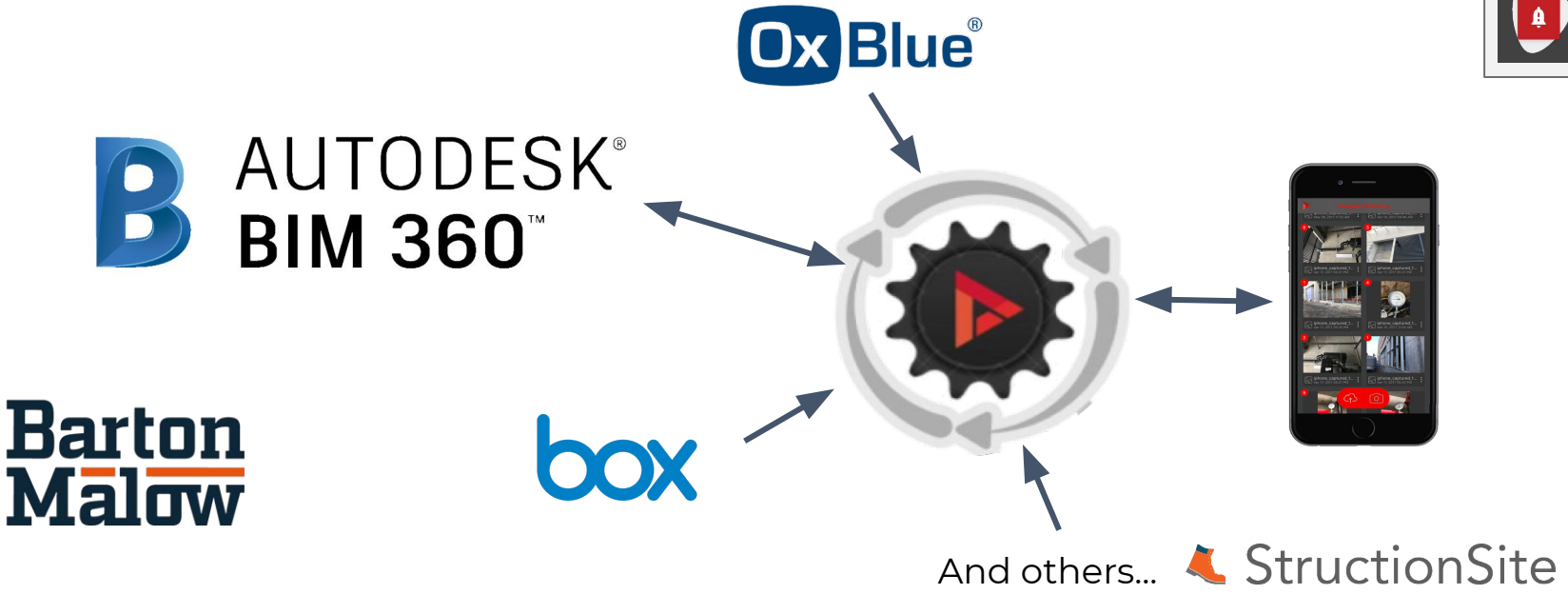
- SAFETY MONITORING
- SAFETY OBSERVATIONS
- PREDICTIVE ANALYTICS

Analyze All Jobsite Imagery

SMARTVID.IO
SAFETY SUITE

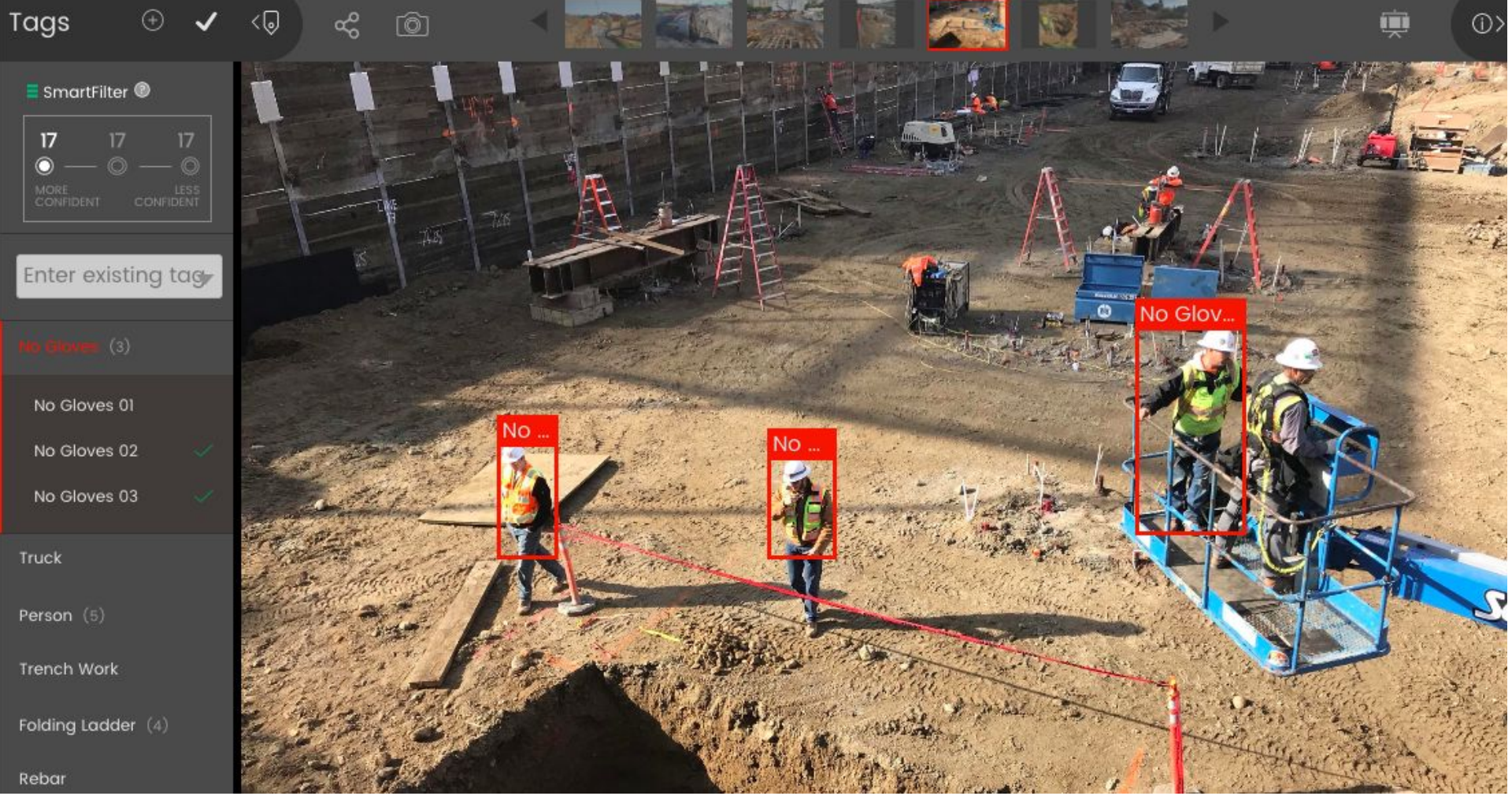
- SAFETY MONITORING
- SAFETY OBSERVATIONS
- PREDICTIVE ANALYTICS

Project teams capture photos. Smartvid.io's mobile app & pre-built integrations make it fast and easy to pull them all together:

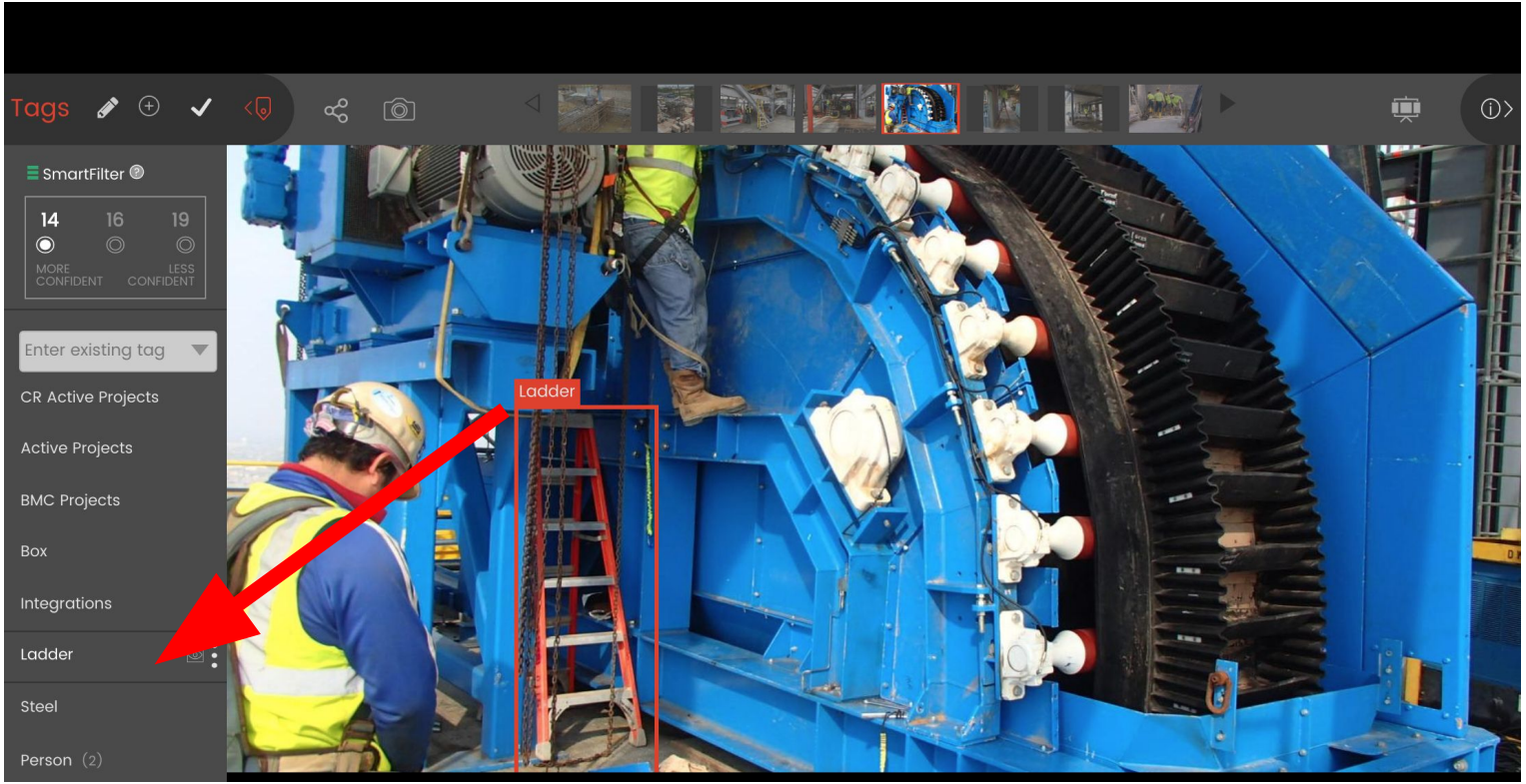


What does Vinnie see? Some examples...

-1 of 5 workers not wearing gloves


Tags
SmartFilter
17
17
17
MORE CONFIDENT
LESS CONFIDENT
Enter existing tag
No Gloves (3)
No Gloves 01
No Gloves 02
No Gloves 03
Truck
Person (5)
Trench Work
Folding Ladder (4)
Rebar
No ...
No ...
No Glov...

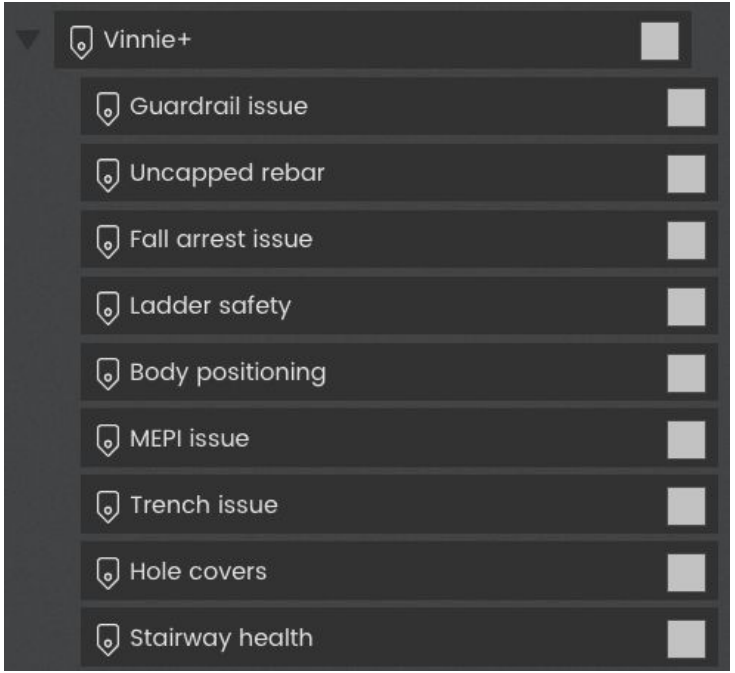
What does Vinnie see? Some examples...



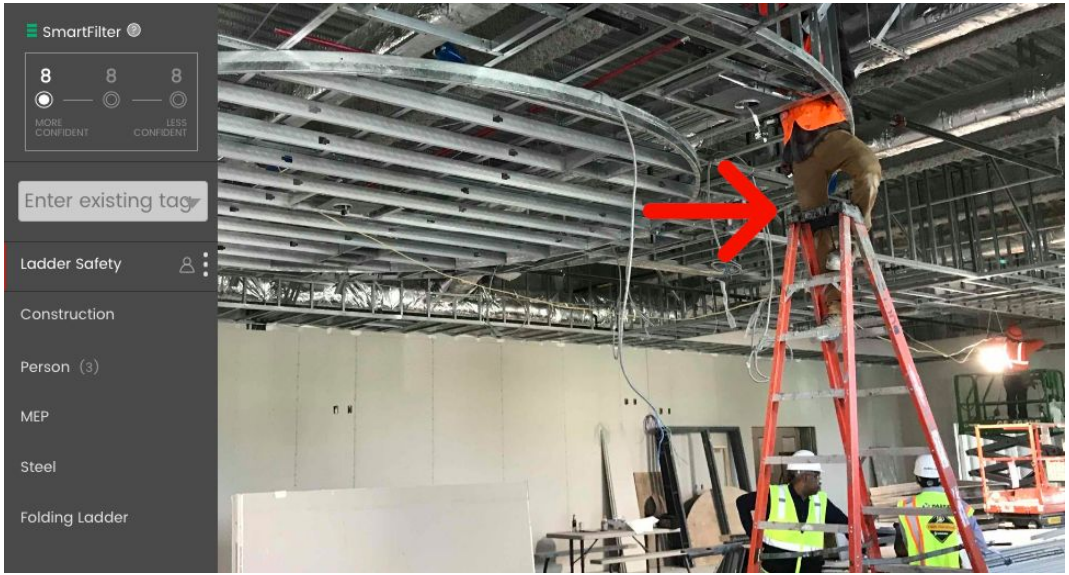
Finding ladder positioning

Vinnie+ extends SmartVid's insights to new categories

Vinnie+ Risk Categories:



Ladder Safety Example



COVID-19 RESOURCES

- **Appreciation to everyone keeping jobs open and cranes moving**
- Mitigation measures we've heard from our customers
  - Temperature screening; On/off days; Clear social distancing guidelines; Additional cleaning crews; Minimize ride & tool sharing
- Some of Barton Malow's mitigation measures include
  - Immediate and strong action plan to work from home
  - Leverage technology like StructionSite for WFH, site documentation
  - Develop simple tools for surveys and questionnaires

Resources

AGC THE CONSTRUCTION ASSOCIATION

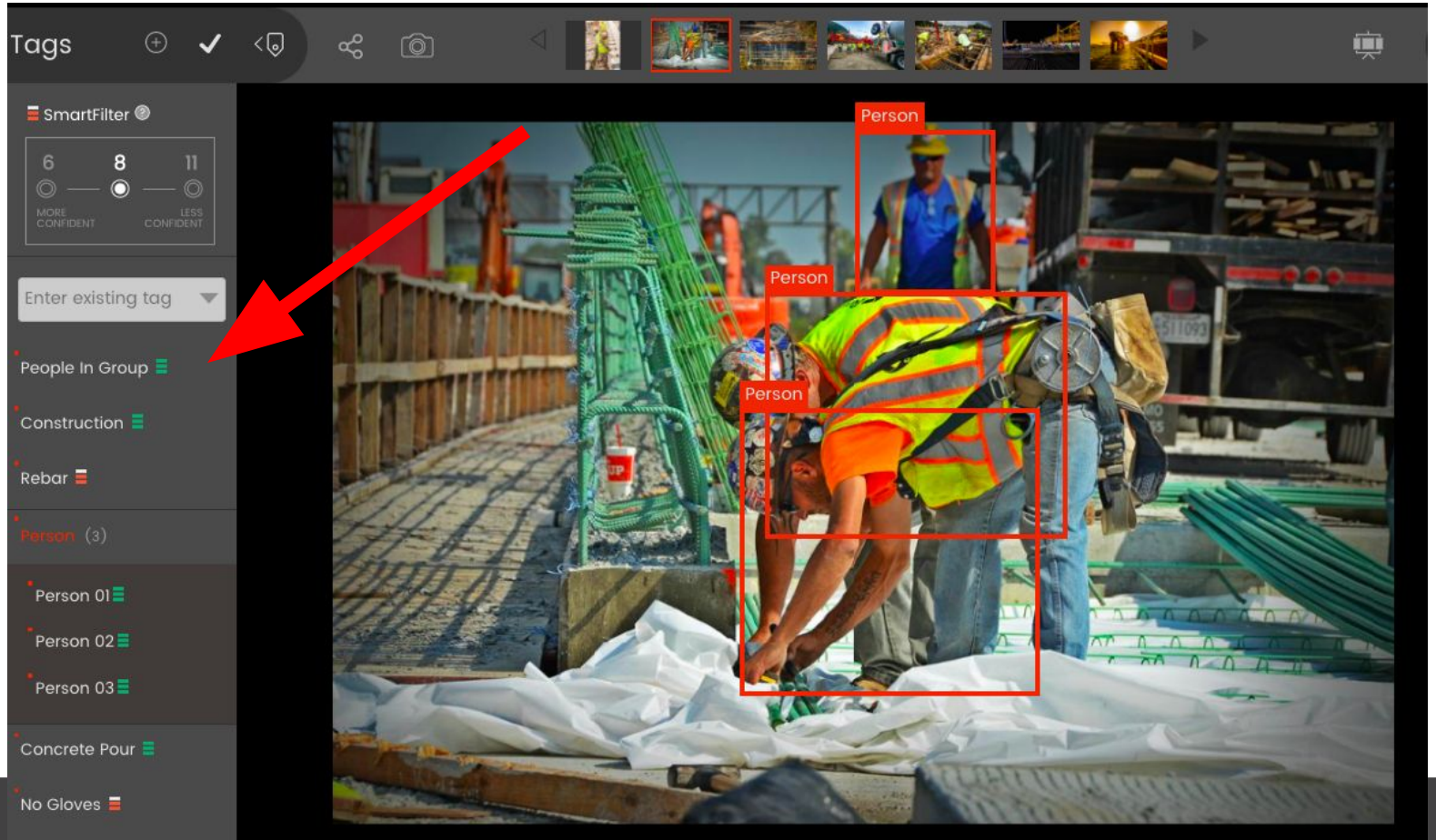
https://www.agc.org/coronavirus

Includes: sample COVID-19 mitigation plan

AUTODESK.

https://constructionblog.autodesk.com/covid-19-construction/

And now... People in Group tagging



Ted Jennings TJ

Tags

Information

SmartFilter

16 21 28

MORE CONFIDENT — LESS CONFIDENT

Enter existing tag

Ladder (2)

Person At Height (2)

Construction

People In Group

No Face Mask

Steel

Properties

2020-09-22_019.jpg

Size 3.1 MB

Uploaded
Oct 09, 2020 08:01AM

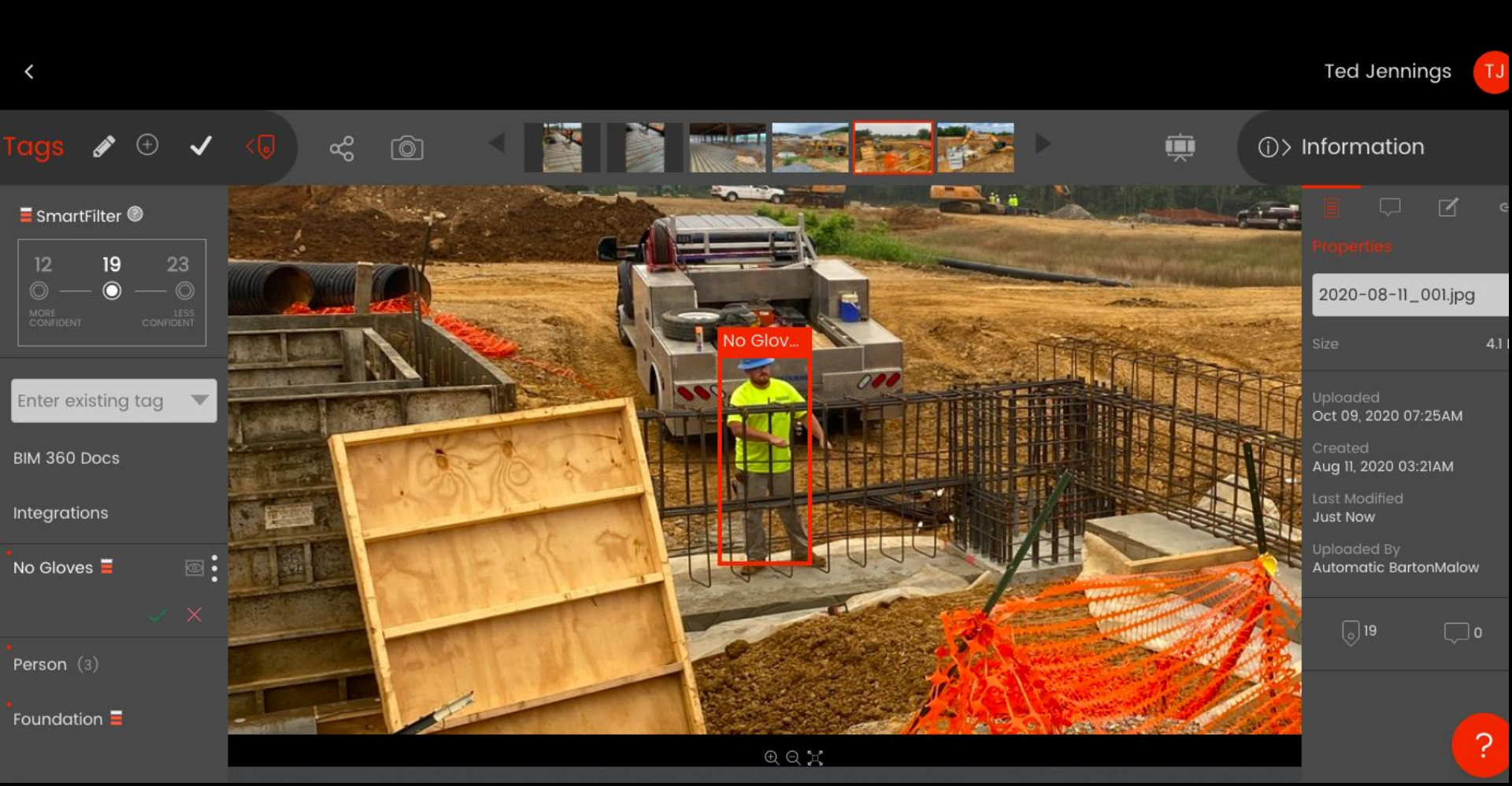
Created
Sep 22, 2020 09:05AM

Last Modified
Just Now

Uploaded By
Automatic BartonMalow

16 0

?


Ted Jennings
TJ
Tags
Information
SmartFilter
12
19
23
MORE CONFIDENT
LESS CONFIDENT
Enter existing tag
BIM 360 Docs
Integrations
No Gloves
Person (3)
Foundation
No Glov...
Properties
2020-08-11_001.jpg
Size
4.1
Uploaded
Oct 09, 2020 07:25AM
Created
Aug 11, 2020 03:21AM
Last Modified
Just Now
Uploaded By
Automatic BartonMalow
19
0

Ted Jennings TJ

Tags

Information

SmartFilter

16 21 26

MORE CONFIDENT — LESS CONFIDENT

Enter existing tag

Person (6)

Construction

Structural Steel

No Face Mask

Concrete

Properties

2020-09-25_029.jpg

Size 3.5 MB

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Created
Sep 25, 2020 04:17AM

Last Modified
Today 11:13AM

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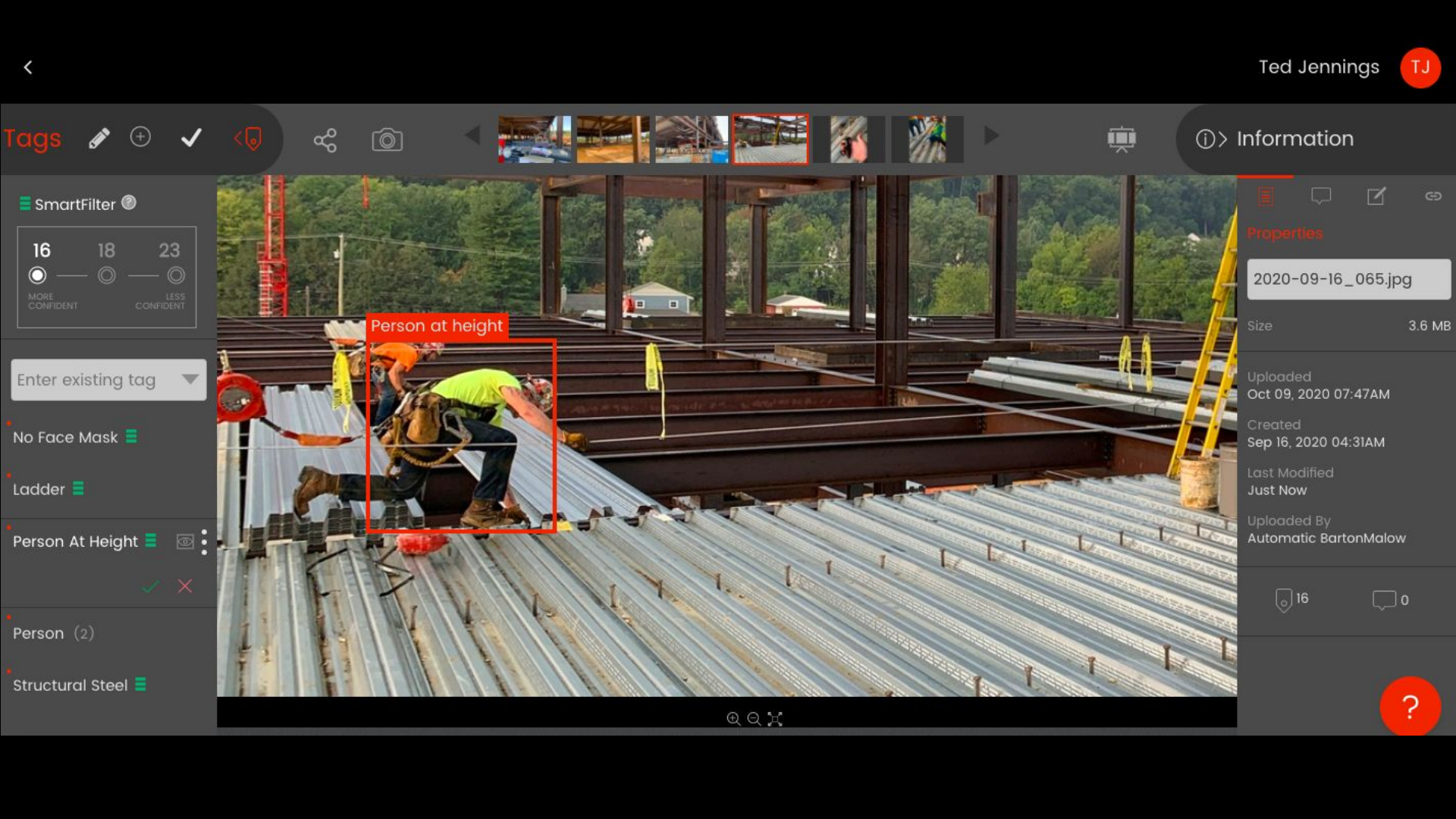

Ted Jennings
TJ
Tags
Information
SmartFilter
16
18
23
MORE CONFIDENT
LESS CONFIDENT
Enter existing tag
No Face Mask
Ladder
Person At Height
Person (2)
Structural Steel
Person at height
Properties
2020-09-16_065.jpg
Size
3.6 MB
Uploaded
Oct 09, 2020 07:47AM
Created
Sep 16, 2020 04:31AM
Last Modified
Just Now
Uploaded By
Automatic BartonMalow
16
0
?

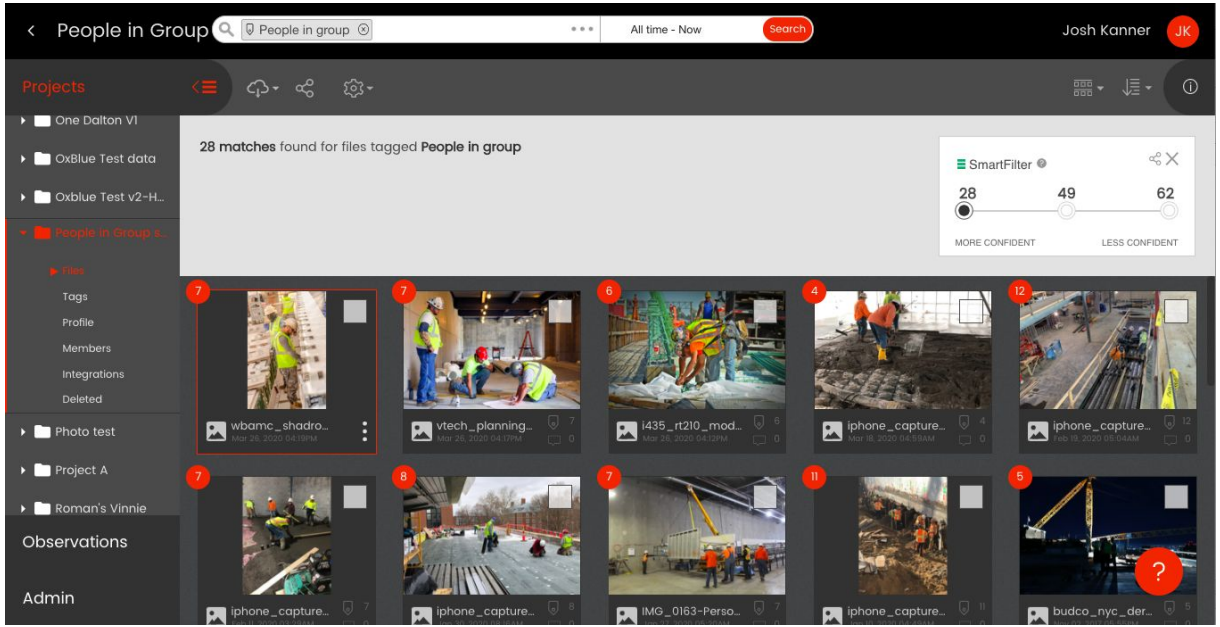
People in Group: Reporting

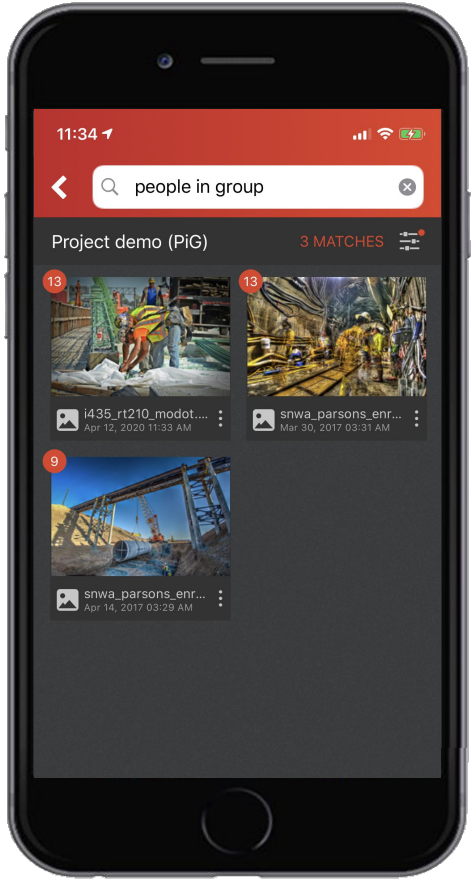
- Get automatic .pdf reports summarizing all examples for each project

Report generated automatically on all “People in Group” tags

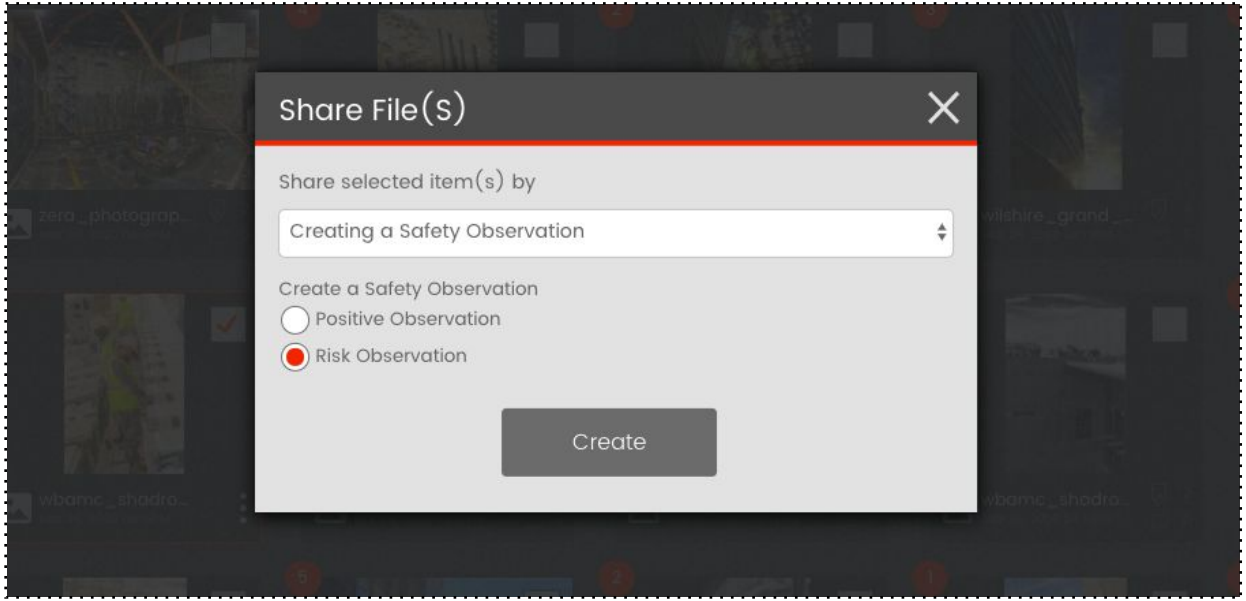
People in Group: "Real time" viewing

- Keep an eye on results in "real time" in the web or mobile interface





People in Group: Create observations

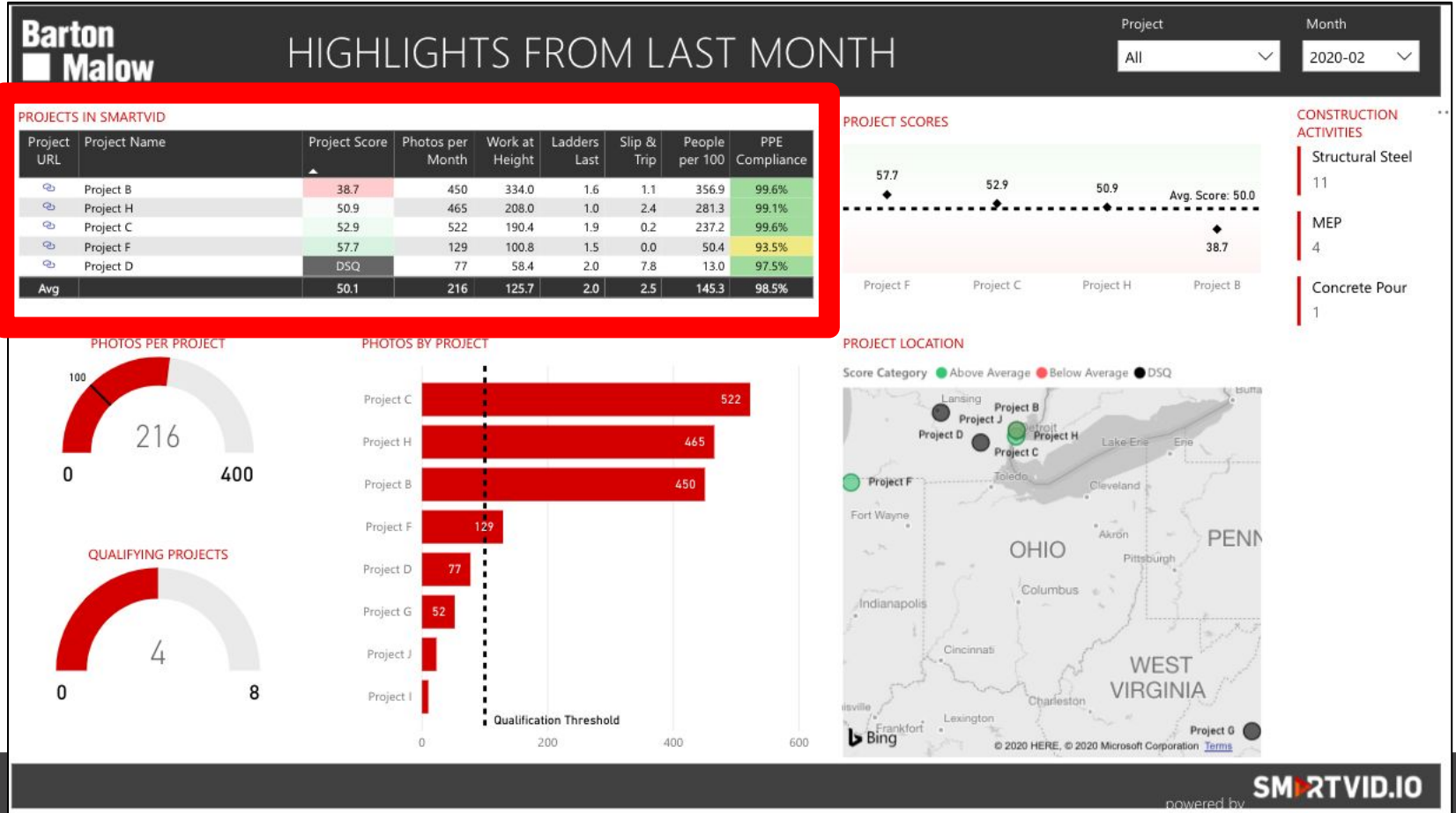


Create observations in:

AUTODESK CONSTRUCTION CLOUD™

SMARTVID.IO

Beyond images, get insight into safety trends

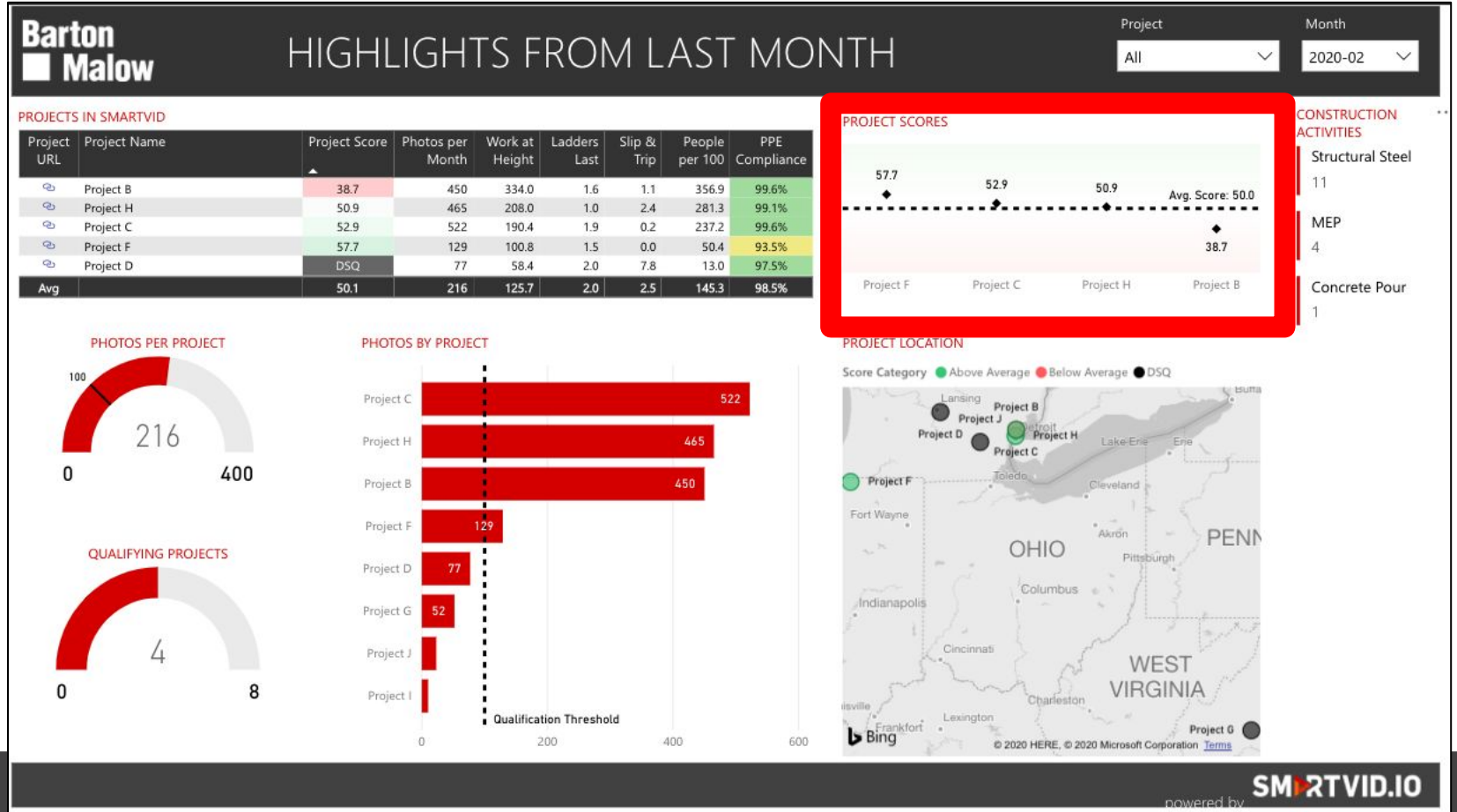


Simple prioritized list of projects by risk score

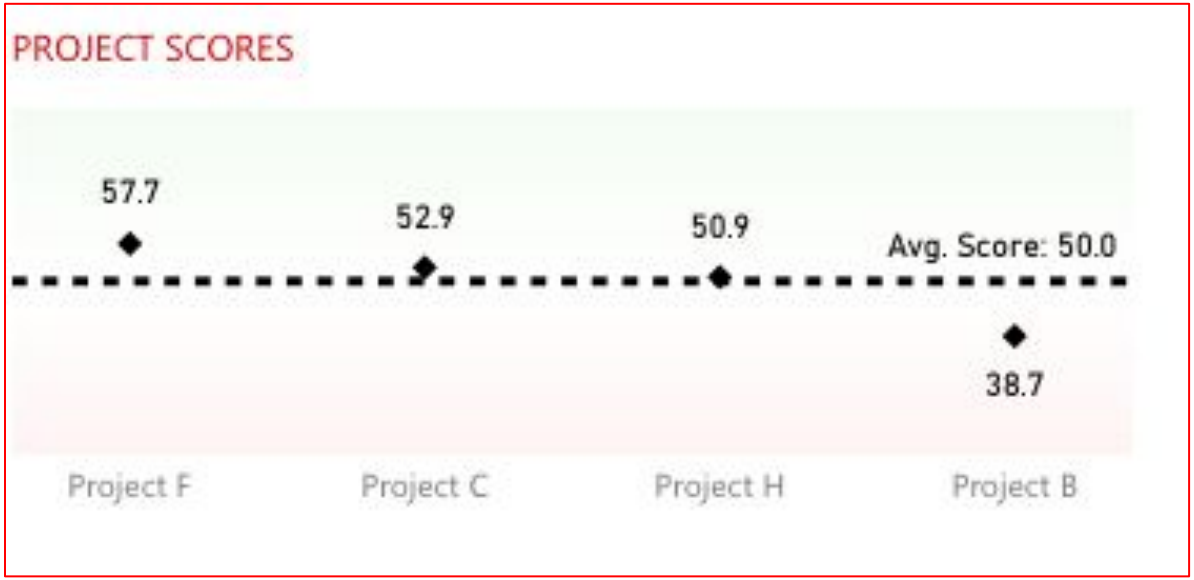
PROJECTS IN SMARTVID

Project URL	Project Name	Project Score	Photos per Month	Work at Height	Ladders Last	Slip & Trip	People per 100	PPE Compliance
	Project B	38.7	450	334.0	1.6	1.1	356.9	99.6%
	Project H	50.9	465	208.0	1.0	2.4	281.3	99.1%
	Project C	52.9	522	190.4	1.9	0.2	237.2	99.6%
	Project F	57.7	129	100.8	1.5	0.0	50.4	93.5%
	Project D	DSQ	77	58.4	2.0	7.8	13.0	97.5%
Avg		50.1	216	125.7	2.0	2.5	145.3	98.5%

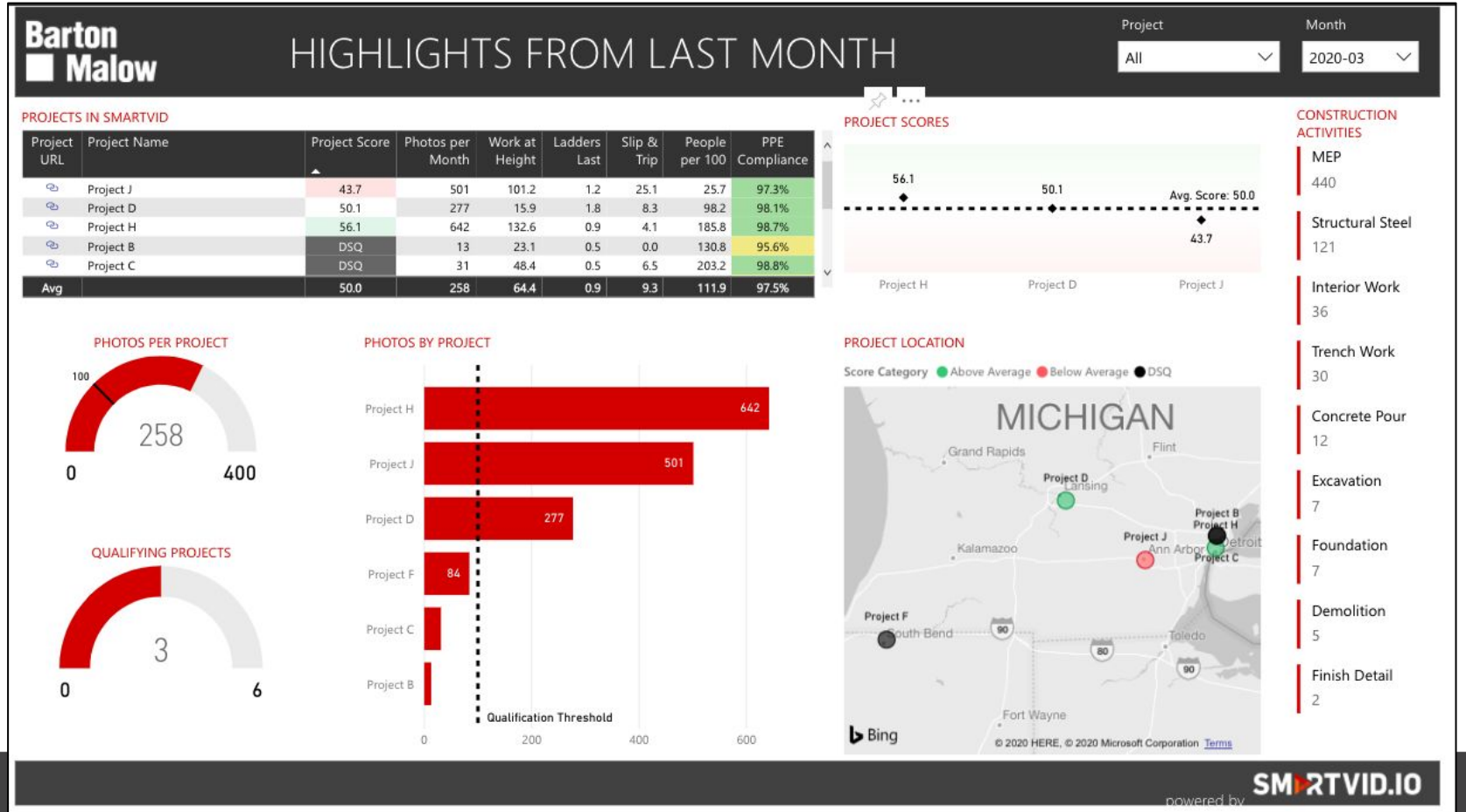
VINNIES SCORING FOR PROJECT BENCHMARKING



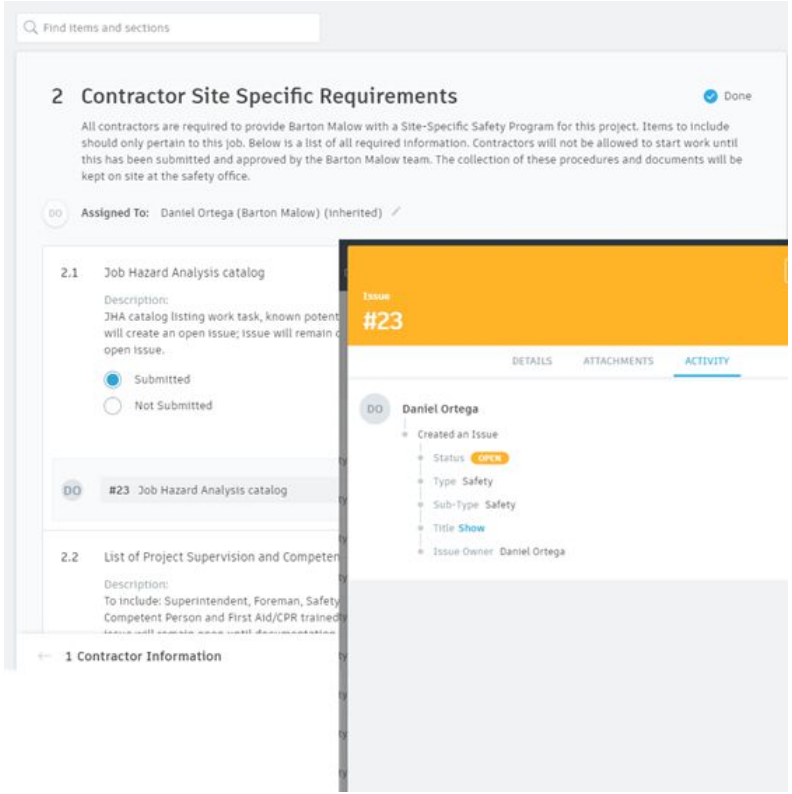
Risk score benchmarking helps focus attention

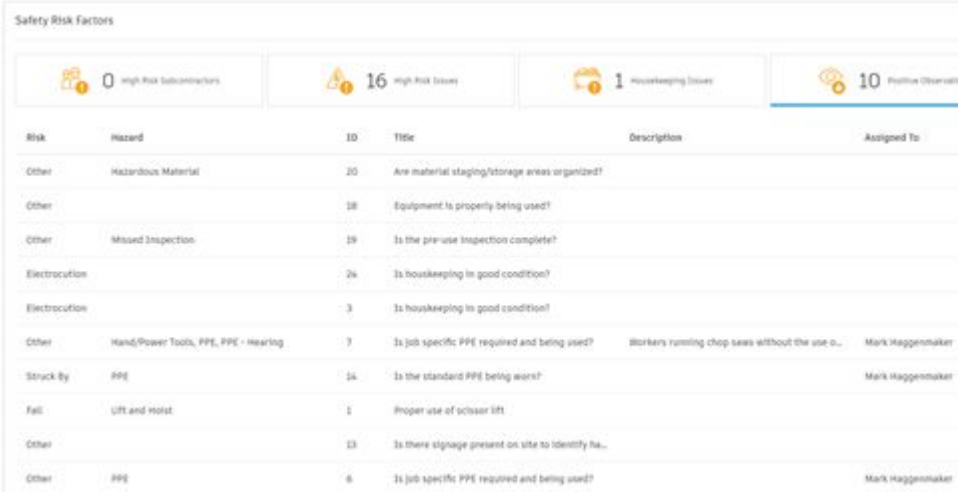


Now let's go to the live dashboard for more...

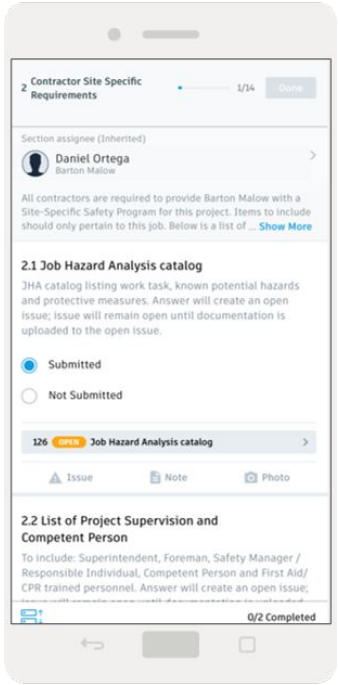


BIM 360 JOURNEY THIS YEAR ...



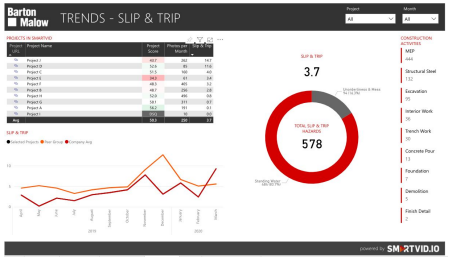


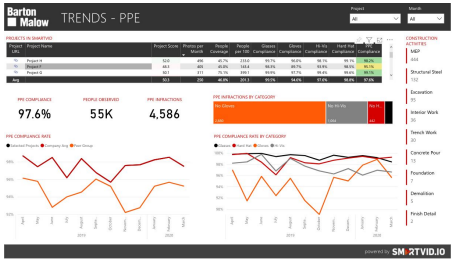
BIM 360 + SmartVid



(Internal slide) Live demo to explore...

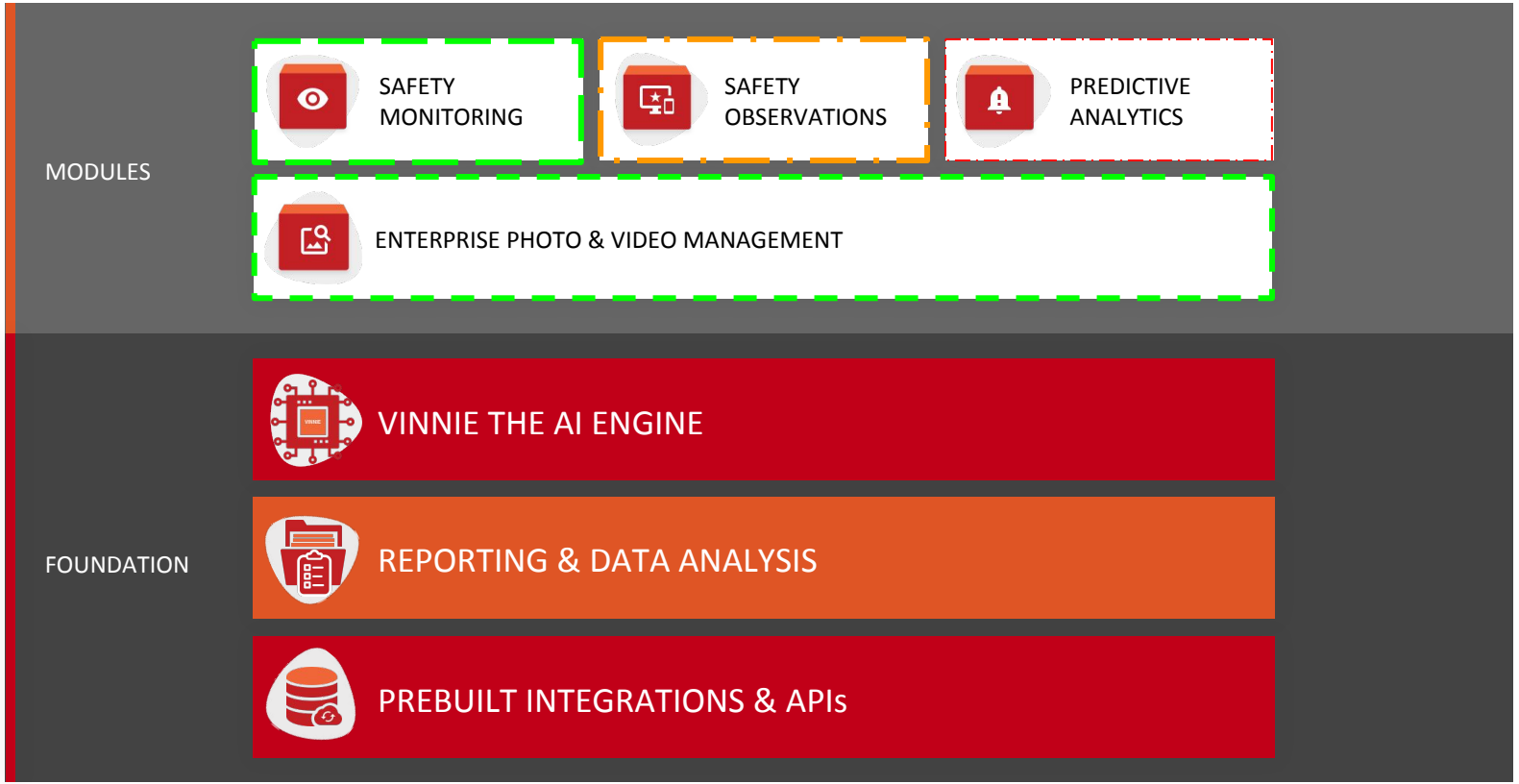
- Phases of Construction on Homepage (click projects) - we'll come back to this
- Click into "Project J" to explore work at height metrics
  - See ratio of ladders last improving but above peer group
  - Types of work at height increasing a lot Month over month
- Slip and Trip hazards - where do we need to focus?
  - Click into that tab and identify the projects see vs. peer group
- PPE analysis - where and how are issues cropping up?
  - Compare one project to another
  - Context specific is key - may not care as much if in interiors
- Speaking of construction phase, we now can give insight into phase across your projects in the activities tab



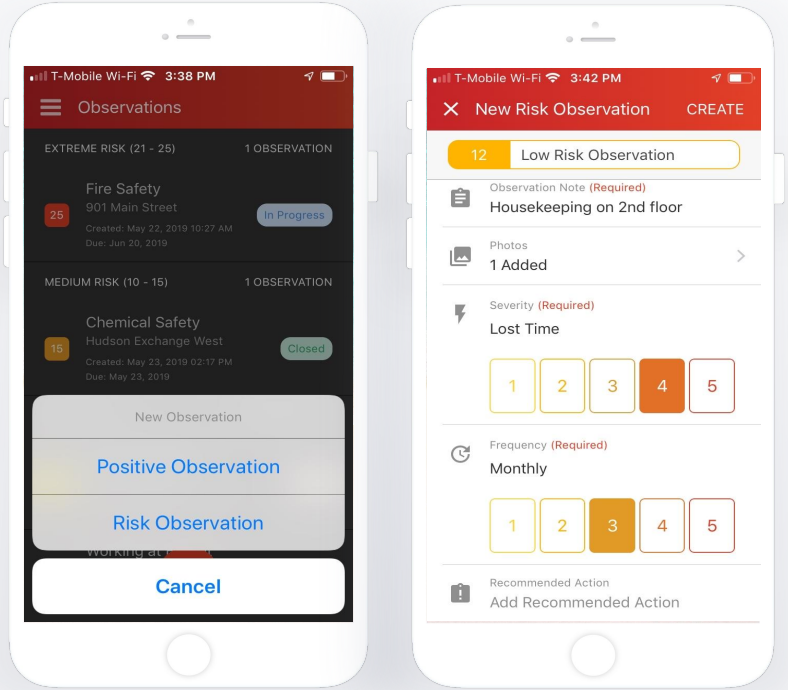


Next: Observations and Predictive

Phase 2 | Phase 3



Risk-weighted mobile safety observations



- Easy to use, mobile-first
- Configurable
- Risk-weighted & AI-ready
- APIs & access to data
- Enables Predictive-Based Safety

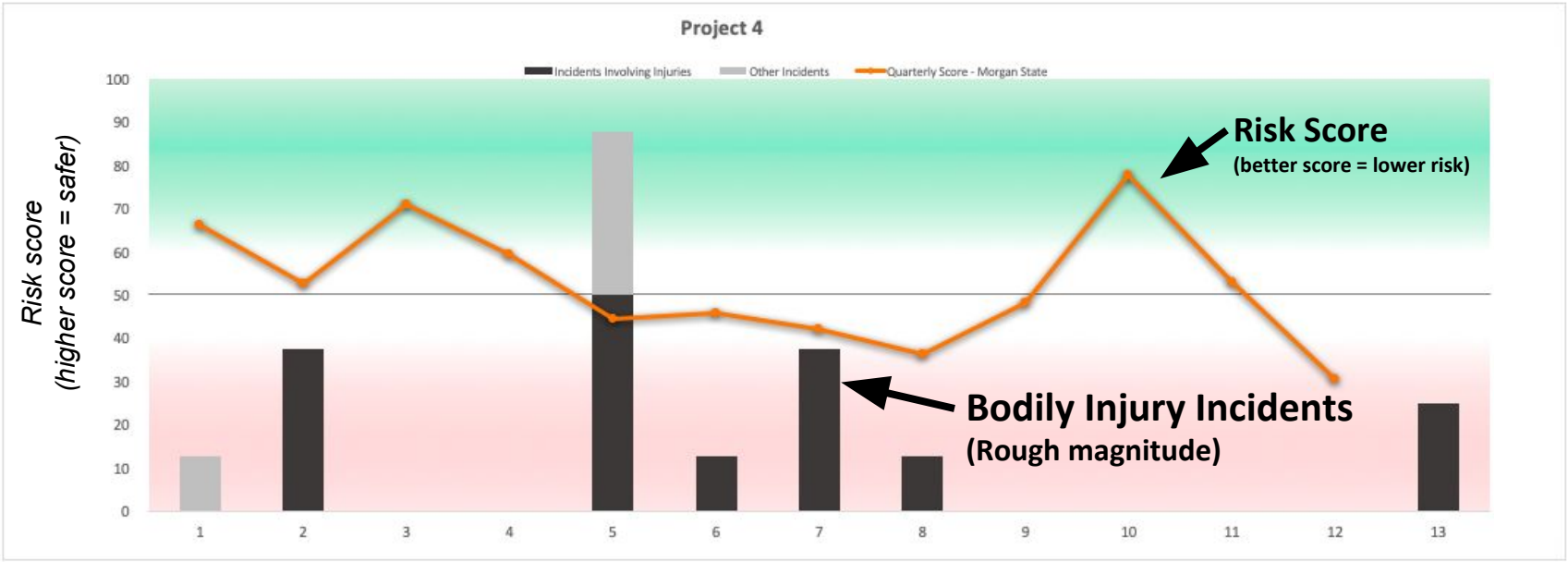
SMARTVID.IO
SAFETY SUITE

SAFETY MONITORING

SAFETY OBSERVATIONS

PREDICTIVE ANALYTICS

Vinnie metrics correlate with actual incidents across history



Predictive Analytics at Work

SMARTVID.IO
SAFETY SUITE

- SAFETY MONITORING
- SAFETY OBSERVATIONS
- PREDICTIVE ANALYTICS

SAFETY MONITORING OUTPUT

SAFETY OBSERVATION DATA

SAFETY INCIDENT DATA

ERP DATA: PROJECTS, HOURS & OTHER DATA

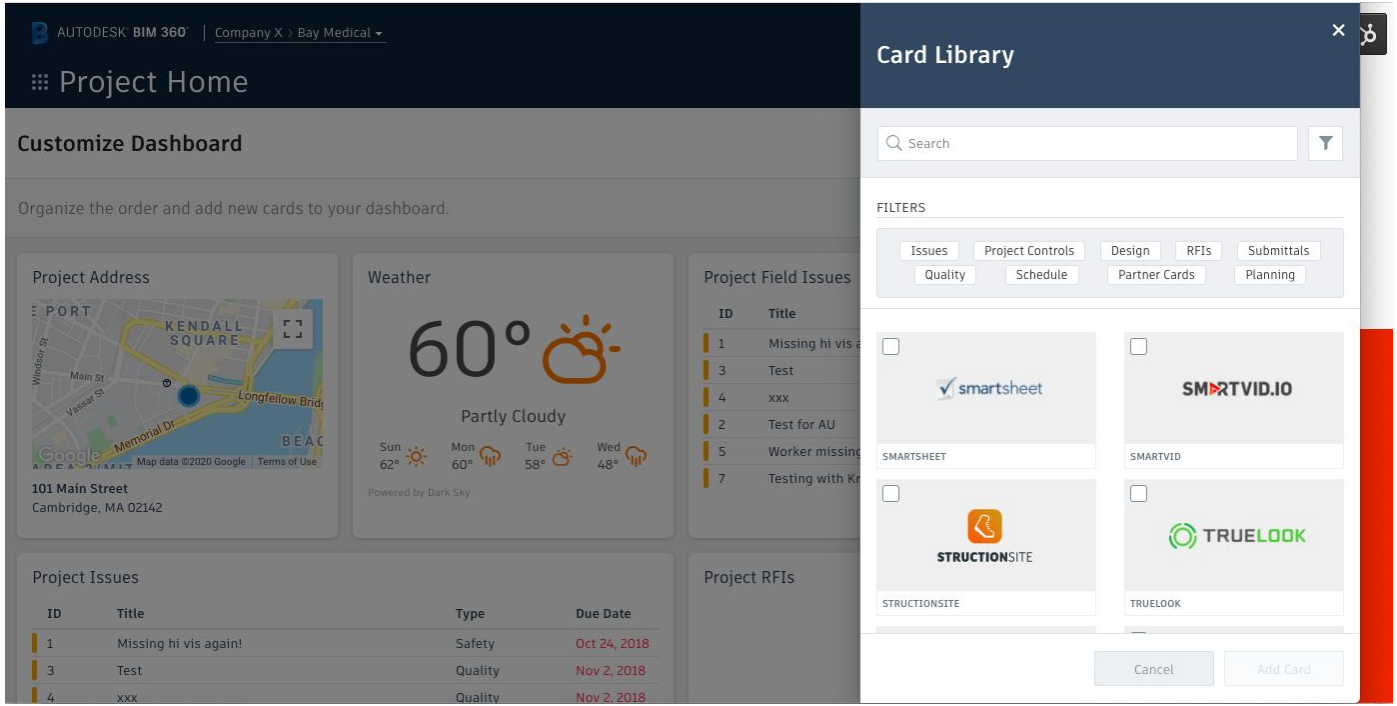
"VINNIE" THE AI & RISK SCORING ENGINE

RISK SCORES & PREDICTIONS ARE DELIVERED FOR EVERY PROJECT

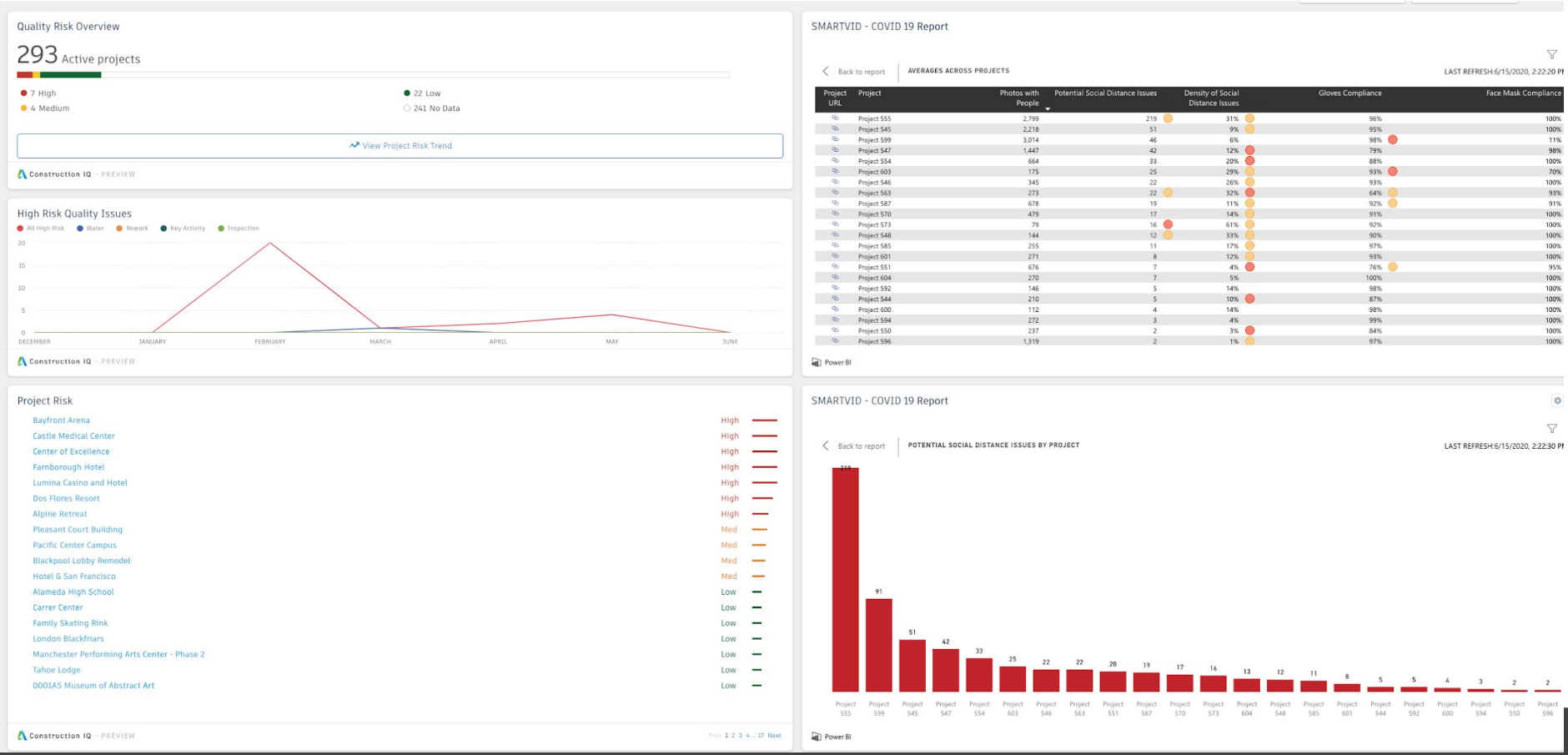
INCIDENT RATES ARE REDUCED WHEN THE PREDICTIONS ARE ACTED ON

BIM360 AND SMARTVID - FROM DATA TO CARDS

- Insights and safety risks heat map is aligned well with Smartvid & Vinnie



Add Safety, Covid metrics to BIM 360 insights dashboard



For more information...

- Add “Vinnie” to your team!
  - email: info@smartvid.io
  - visit: www.smartvid.io and “Contact us”
- Thank you and stay safe!

Barton Malow

AUTODESK CONSTRUCTION CLOUD™

SMARTVID.IO

Thank you!

Smartvid.io
101 Main St., 14th Floor, Cambridge MA, 02142
844-382-7300 | www.smartvid.io