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Risk-Adjusted Estimating & Bid Management for General Contractors

Laura Watts

Manager, ACS Customer Success

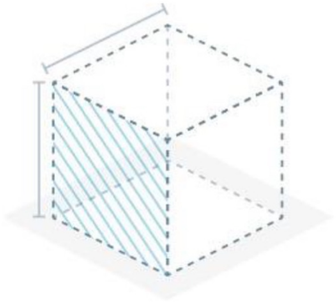
About the speaker

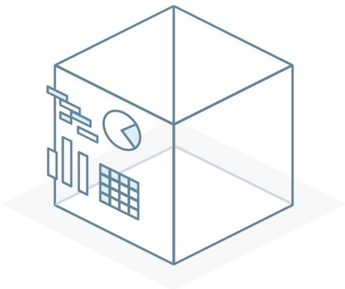
Laura Watts

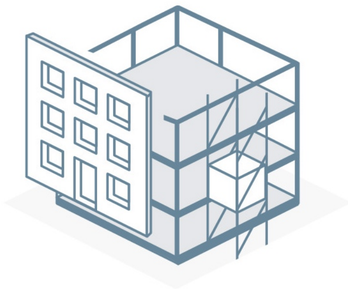
- Joined BuildingConnected in early 2019 as a Customer Success Manager focusing on helping general contractors enhance their preconstruction and prequalification workflows.
- Previously, spent the last 6+ years working in a variety of roles focused on the customer experience for software companies.
- Developed a strong passion for helping customers understand how innovative technology can help solve their problems and have a positive impact on their business.
- Has helped over 100+ general contractors implement Autodesk Construction Cloud solutions across their organizations and specifically, over 50+ TradeTapp customers.

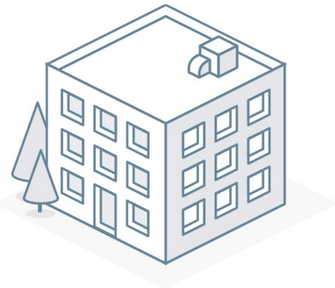
The importance of connected construction

Connected workflows in construction









Apps	DESIGN	PLAN	BUILD	OPERATE
Workflows	• Design Authoring • Design Collaboration	• Model Conditioning • Model Coordination • Quantification • Bid Management • Qualification	• Project Management • Field Collaboration • Quality & Safety • Cost Control • Commissioning	• Facilities Maintenance • Asset Lifecycle
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Connected workflows in construction

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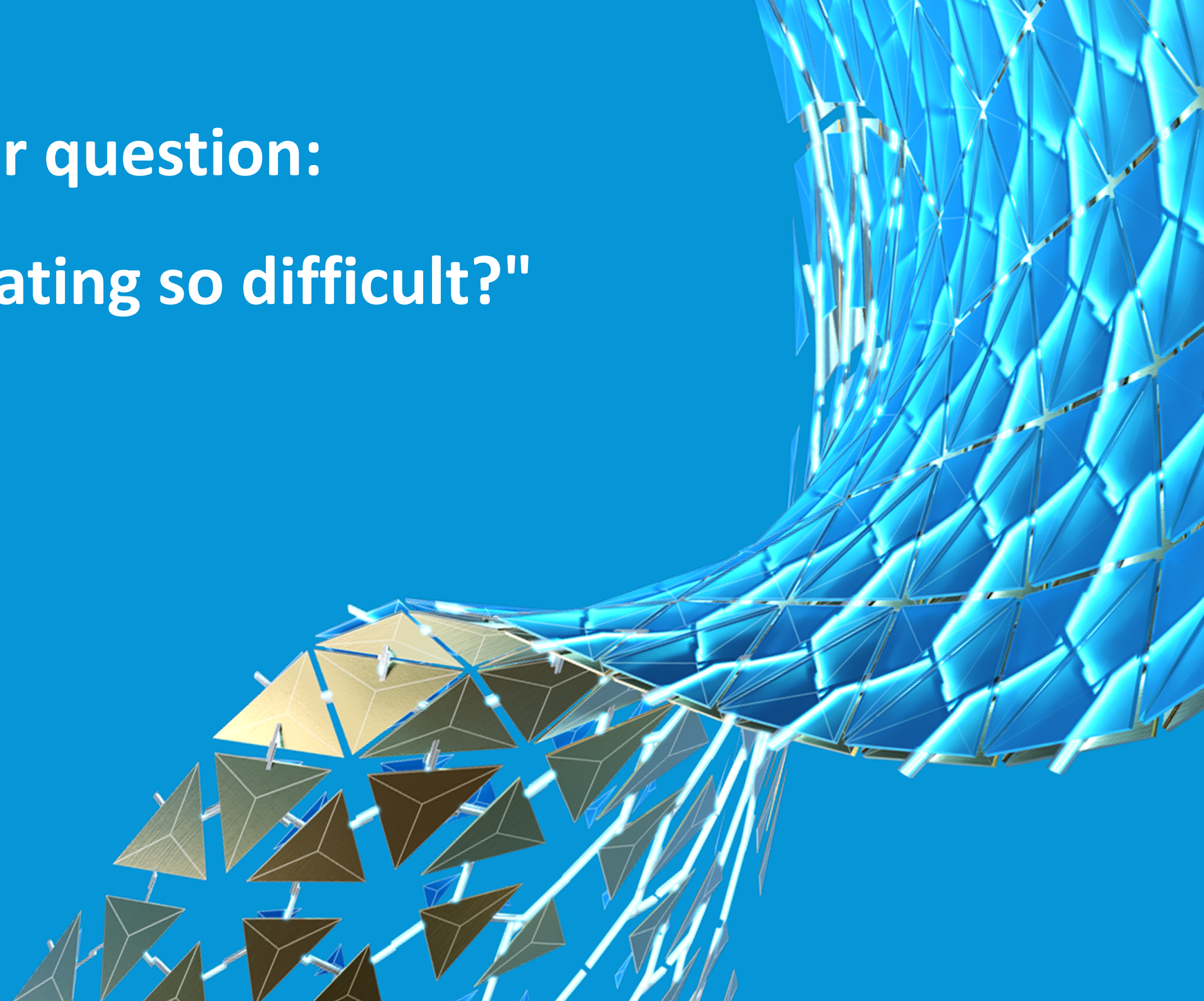
The million-dollar question:

"Why is estimating so difficult?"



The reality of construction today

20% of projects overrun their timeline

80% of projects are over budget

31% of all construction projects from The past 3 years have been completed within **10% of their initial budget**

COVID 19 related layoffs & increased safety precautions

General labor & supply chain shortage trends

Devastating weather conditions

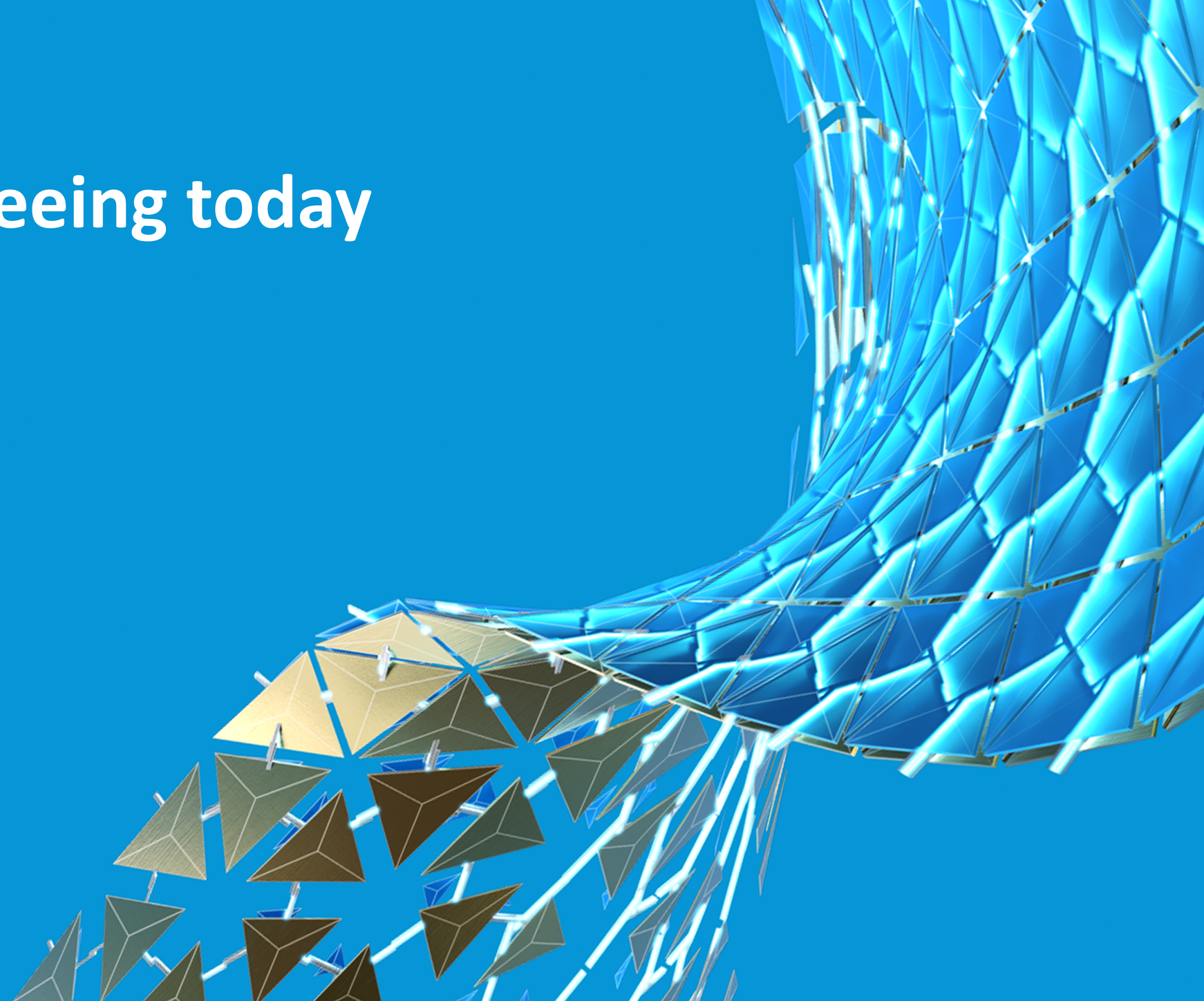
Mckinsey 2016 Study: Imagining Constructions Digital Future
KPMG 2015 Global Construction Survey

Top challenges & technology investments

	Challenges	Current Software Investments	Planned Software Investments	Innovative Tech Investments
1	Data security	Enterprise resource planning	Client relationship management	Predictive analytics/big data
2	**Effectively managing risk**	Project management	**Estimating**	Internet of Things
3	Lack of effective technologies/ outdated technologies	Project scheduling	BIM-based workflows	Augmented reality/virtual reality

Source: IDC 2019 The future of connected construction pulse survey (worldwide n=835)

What we’re seeing today



We have bid management processes in place.

We *(may)* have risk processes in place.

How are these two processes currently working together?

Breaking down the bid management process

ESTIMATING TEAM

- Sends bid invitation to subcontractor
- Analyzes bids and performs bid leveling
- Puts together a cost estimate
- Awards subcontractors

Breaking down the prequalification process

RISK TEAM

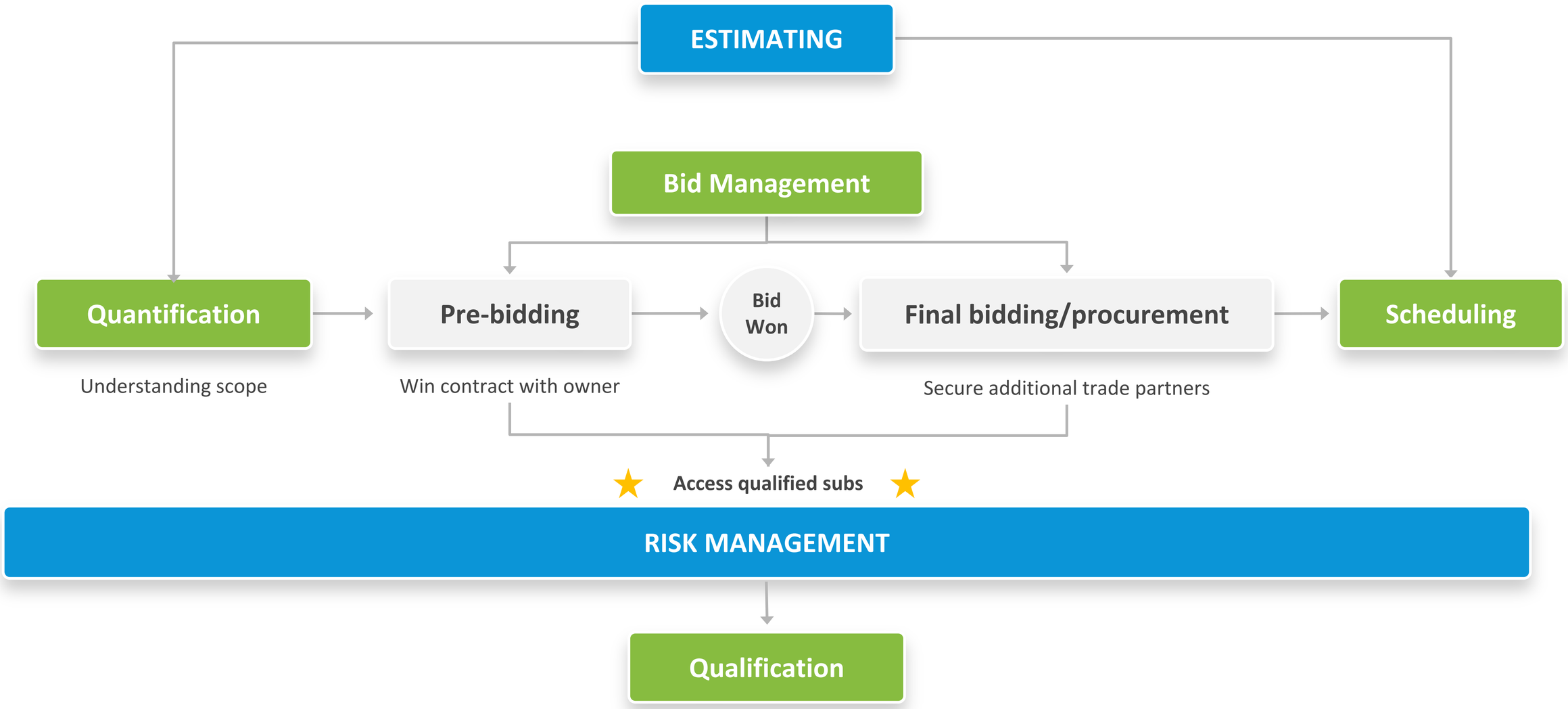
- Invites subcontractors to quality
- Subcontractors complete questionnaire
- Performs risk analysis
- Creates risk mitigation plan
- Assigns qualification status

Challenge with the current process

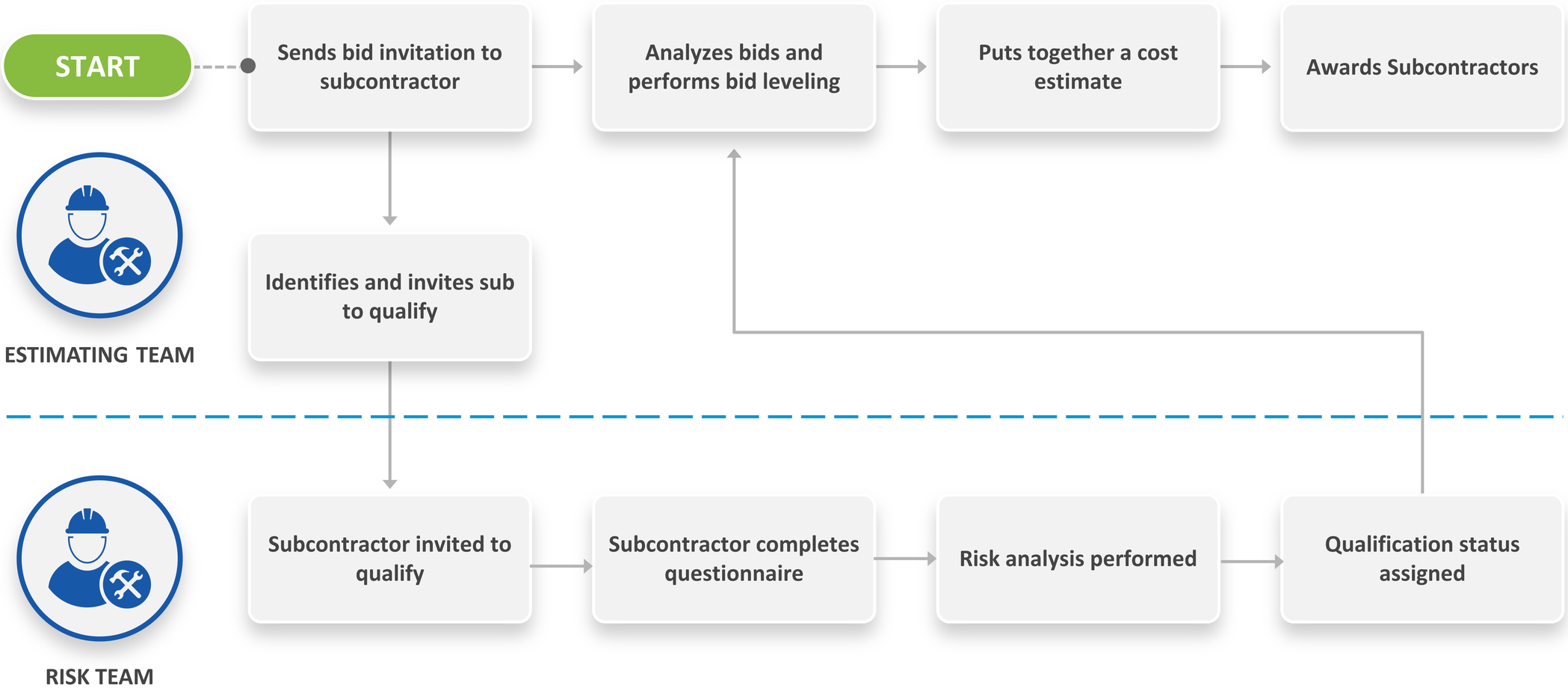
Risk data is not always incorporated into how Estimators analyze bids and choose the best subcontractors for the right jobs:

- Increased unforeseen costs.
- Increased change orders.
- Increased safety issues.
- Extended project timelines.

Connecting estimating & risk teams

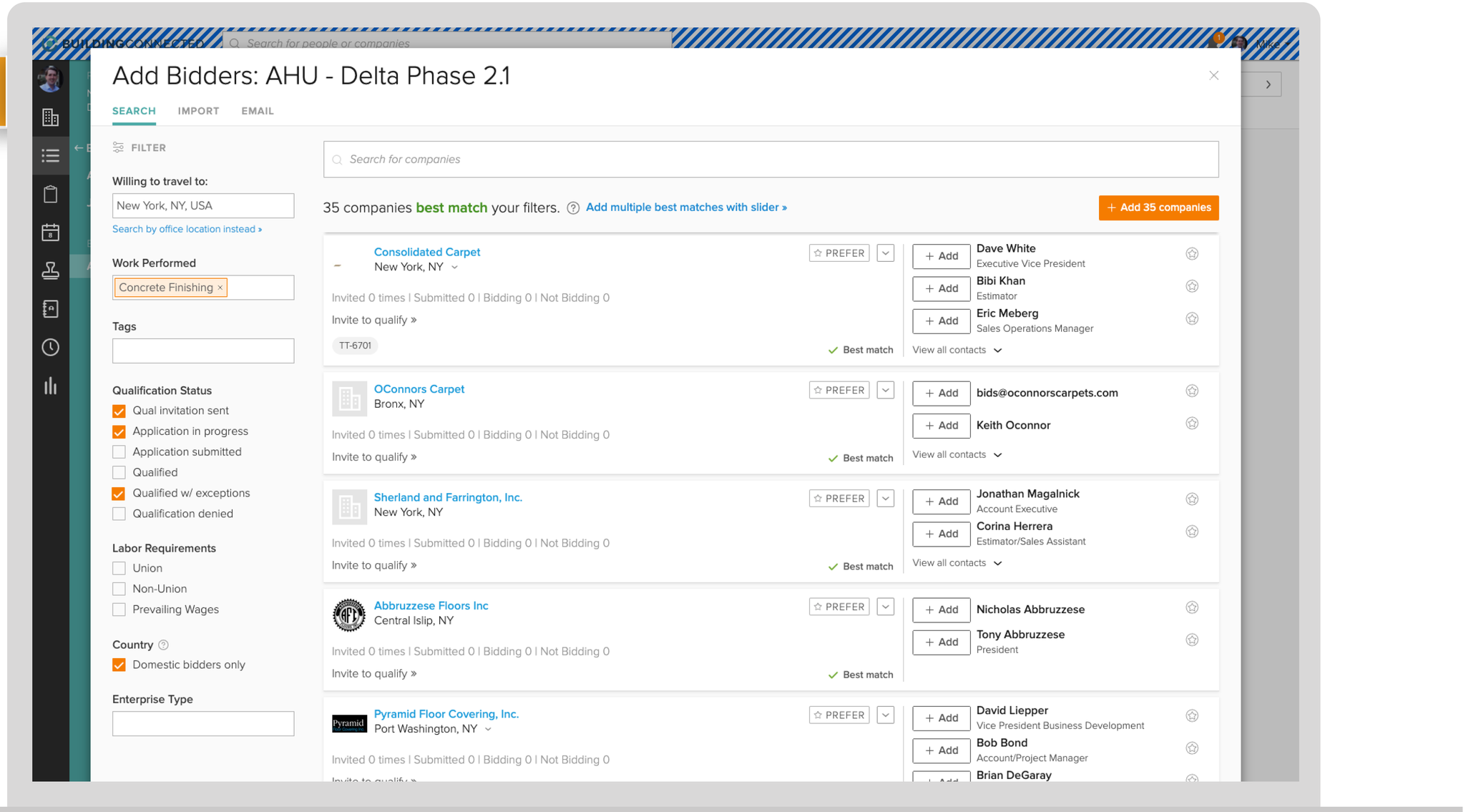


Connecting risk & estimating workflows



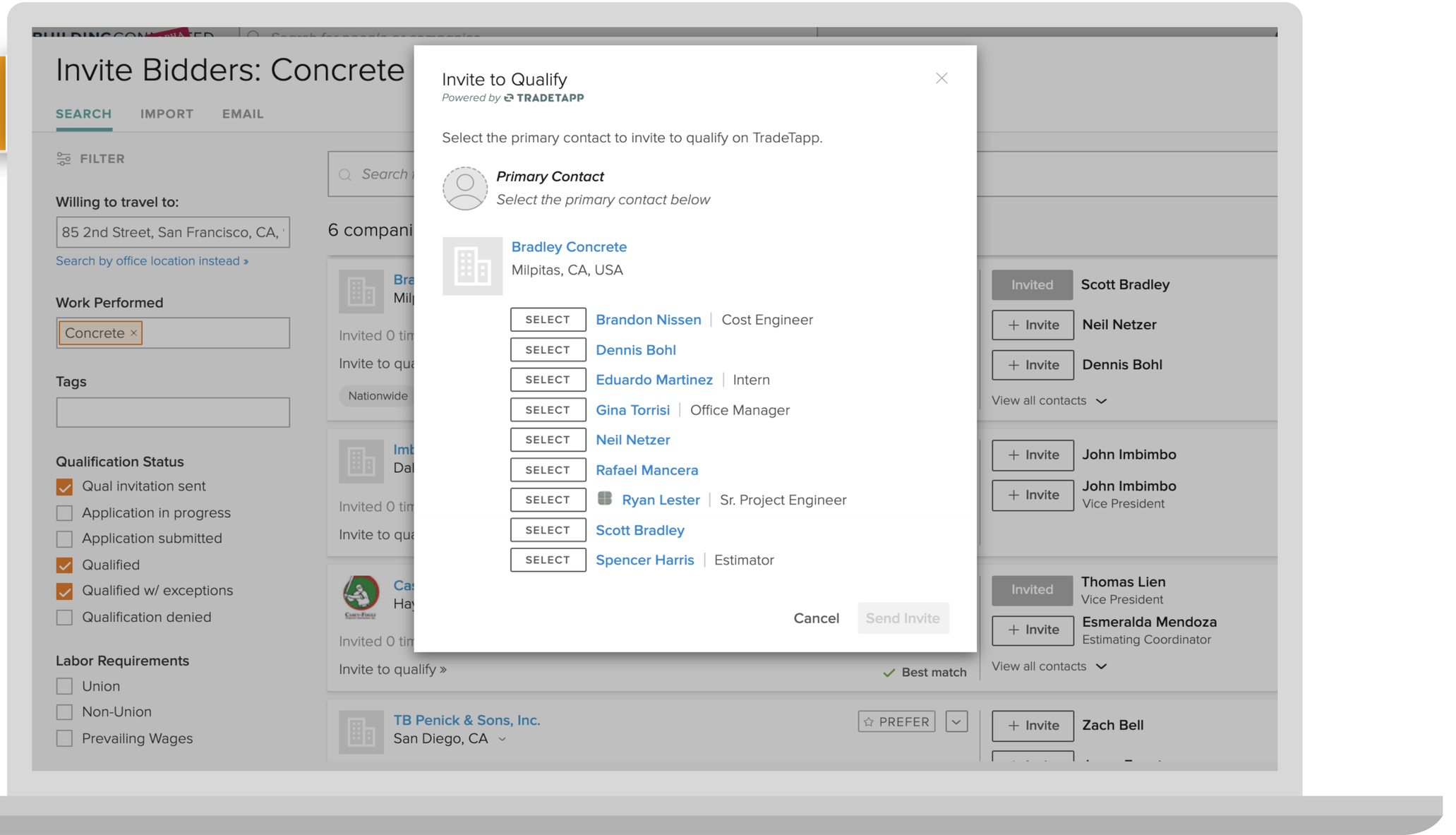
Integrating your prequalification & bid management processes

Smart Bid Lists



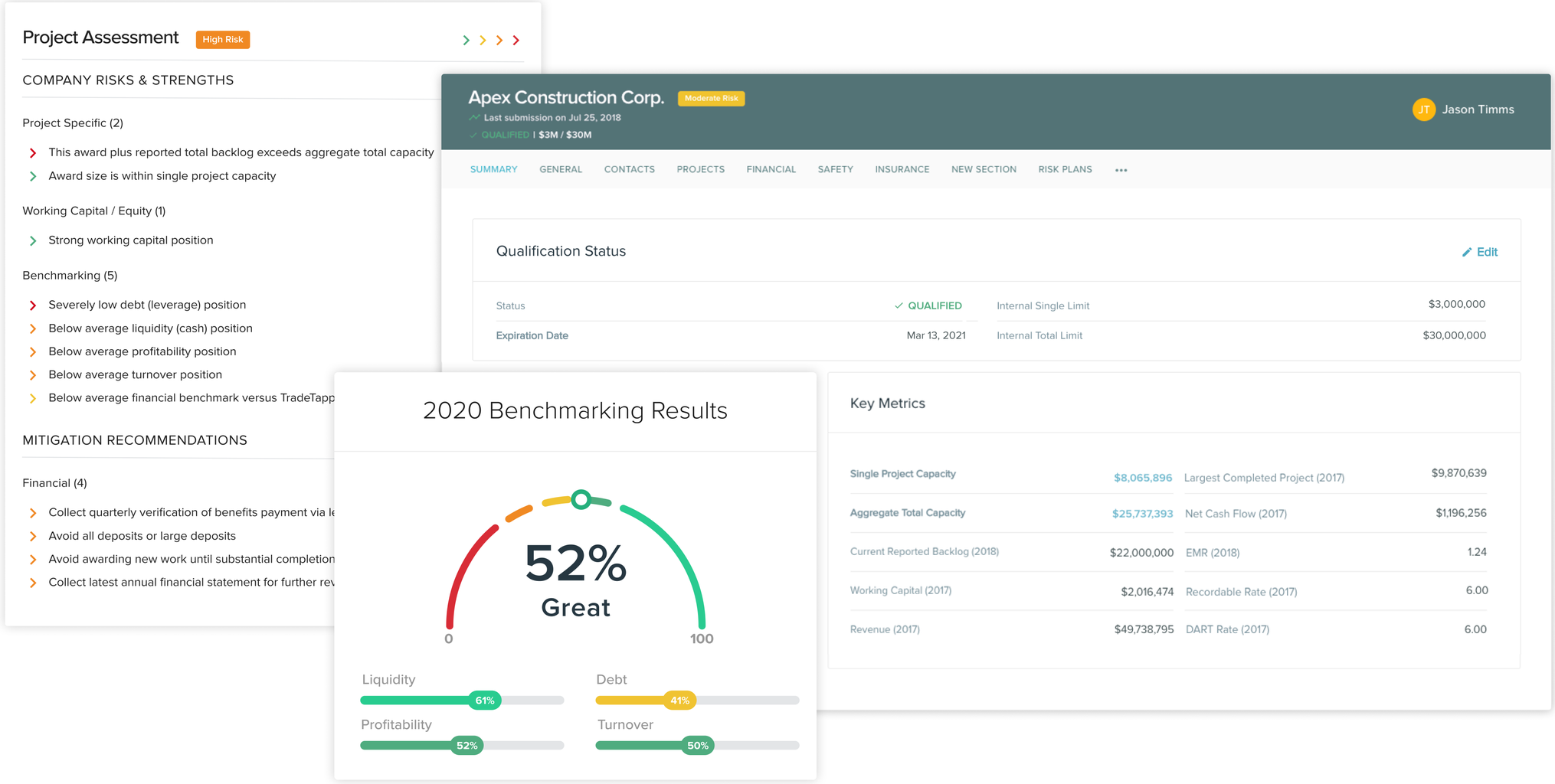
Integrating your prequalification & bid management processes

Quickly Identify Subs



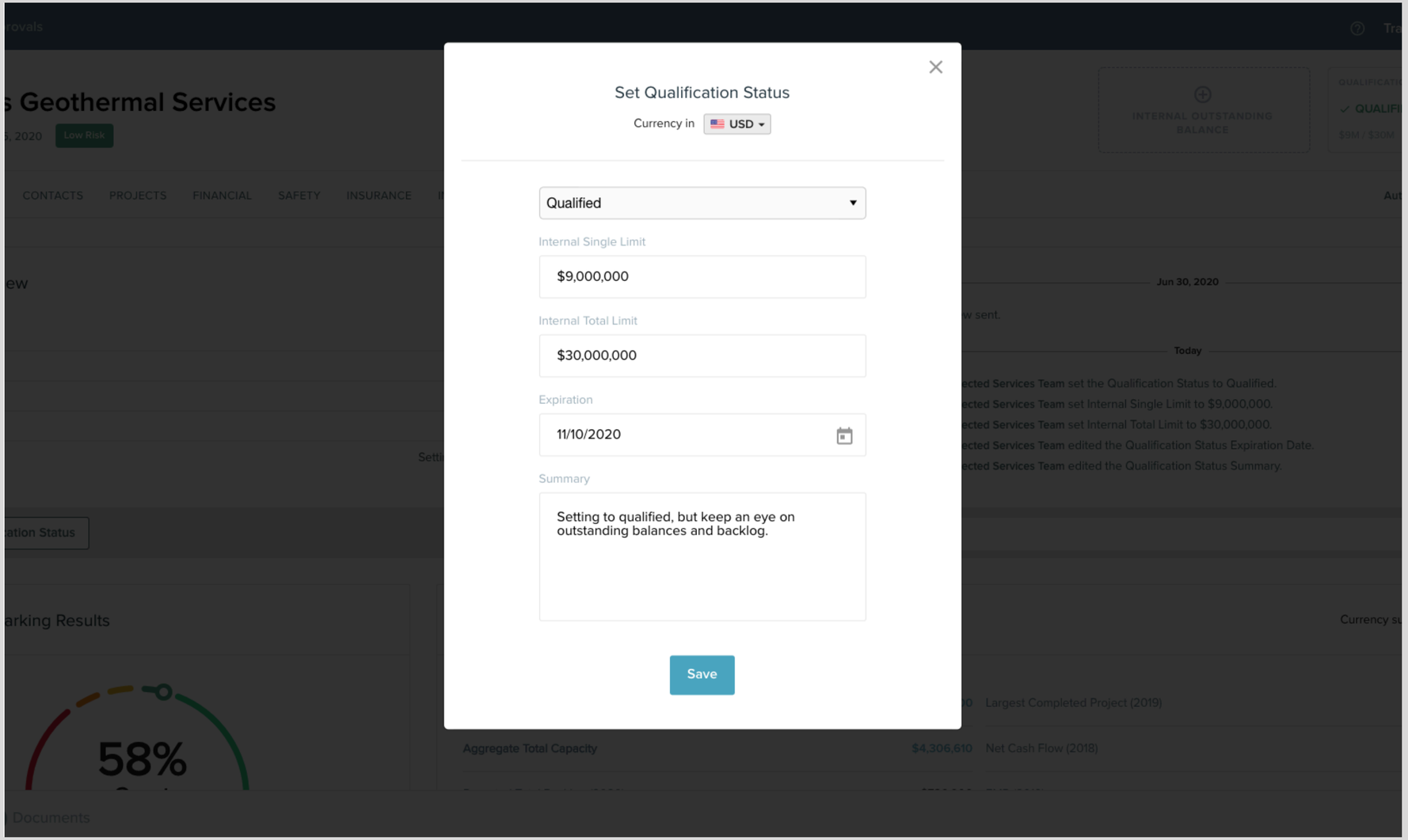
Integrating your prequalification & bid management processes

Automated Analysis



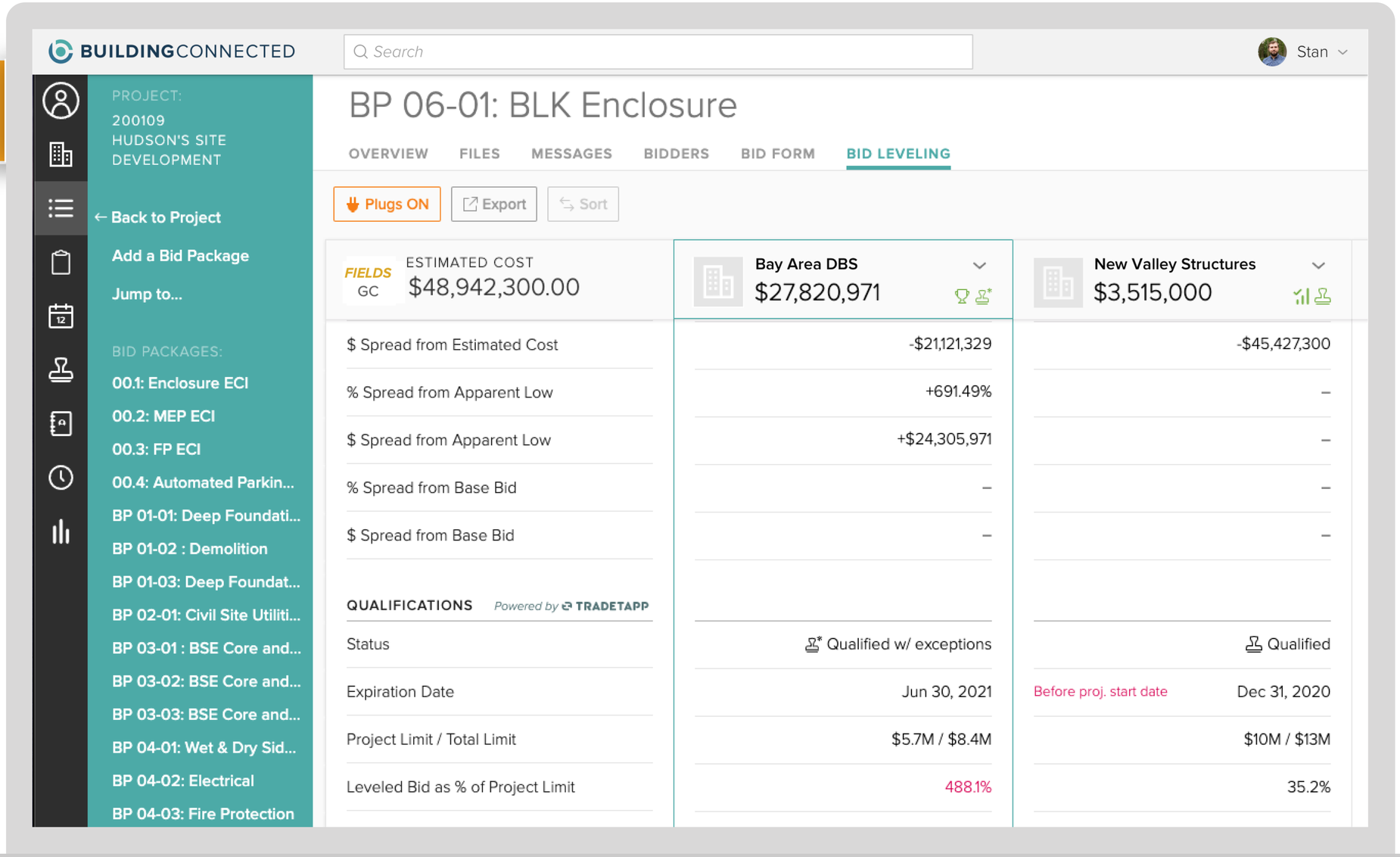
Integrating your prequalification & bid management processes

Setting Status & Limits

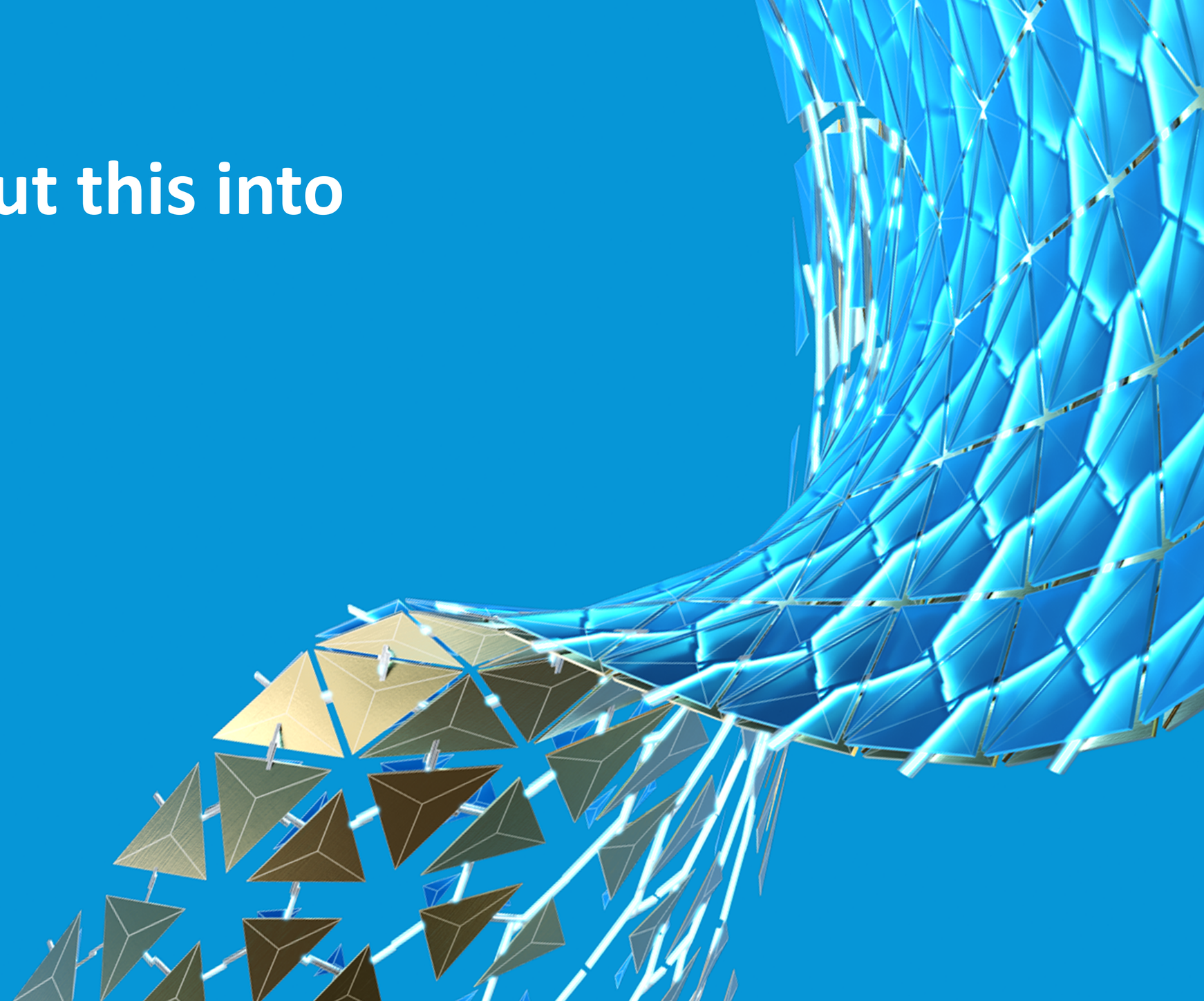


Integrating your prequalification & bid management processes

Optimized Bid Leveling



How do we put this into motion?

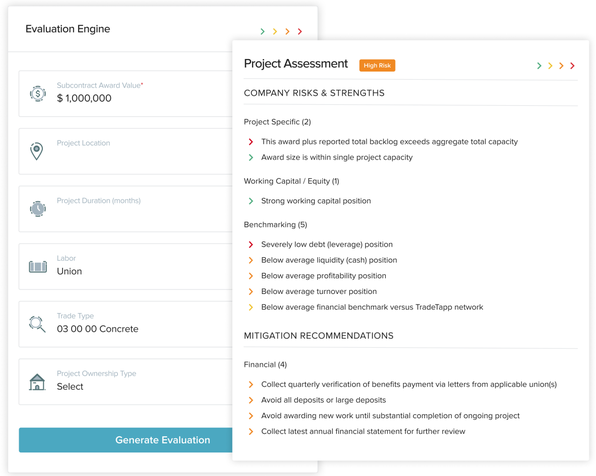


Identifying & quantifying **financial risk**

Can my subcontractors complete my job within my timeline and budget?

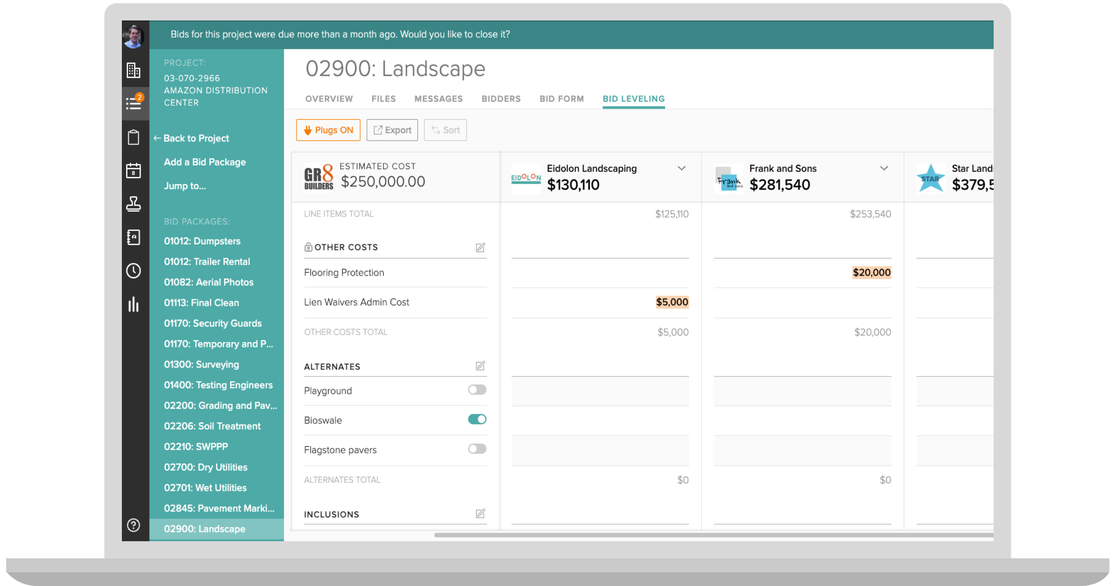
Identifying Risk Factors:

1. Automated risk and safety analysis
2. Qualification status
3. Single / total project limits
4. Risk mitigation plans
5. Internal project backlog



Quantifying Risk Examples:

1. Accounting for additional administrative costs for lien waivers or joint checks
2. Comparing labor hours on the bid submitted against outstanding backlog



Identifying and quantifying **safety risk**

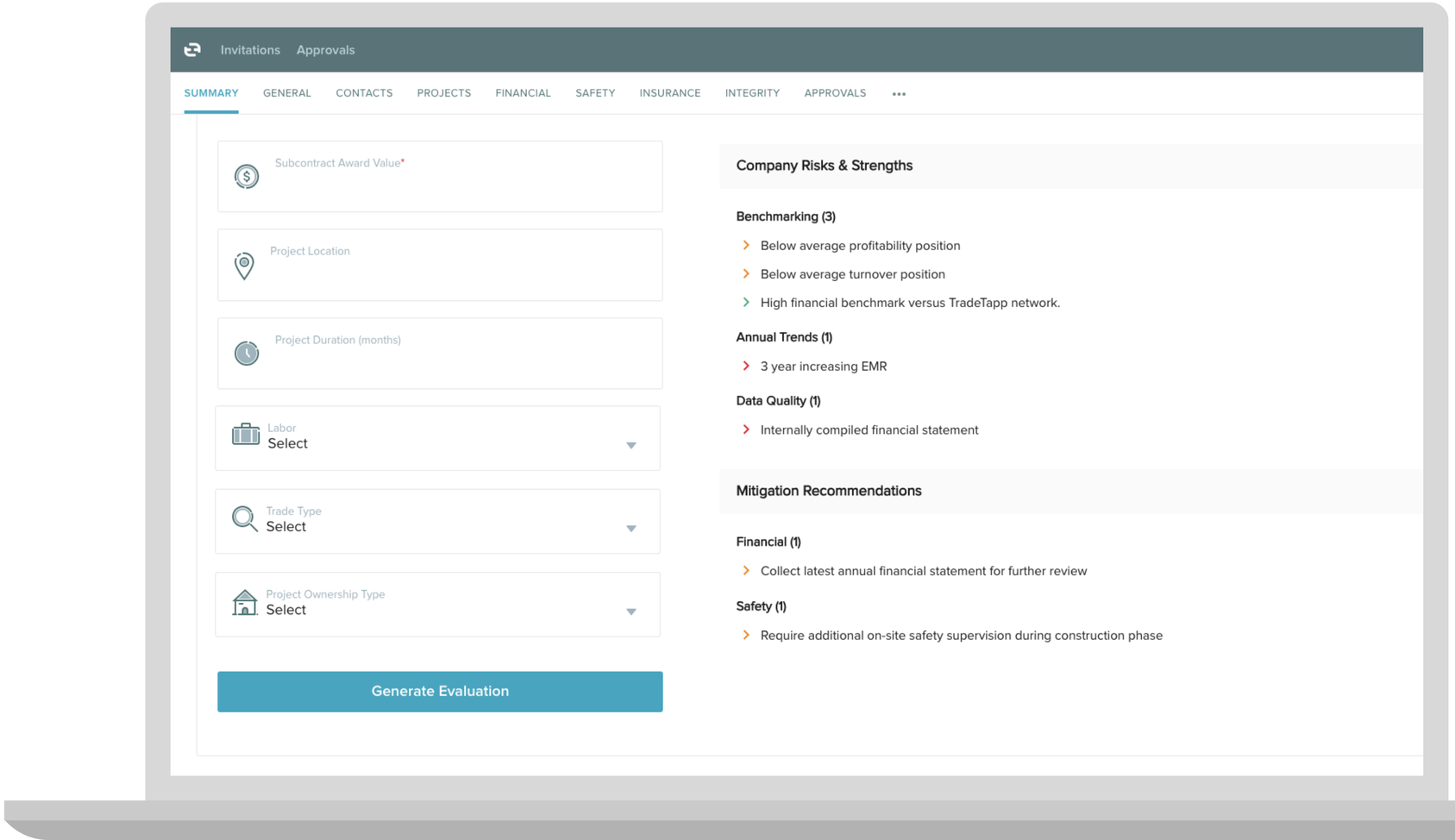
Can my subcontractors complete my job without safety issues?

Identifying Risk Factors :

1. EMR
2. OSHA Records
3. Collecting safety standards
4. Project history

Quantifying Risk Examples:

1. Additional onsite supervision



Implementing **project approval workflows**

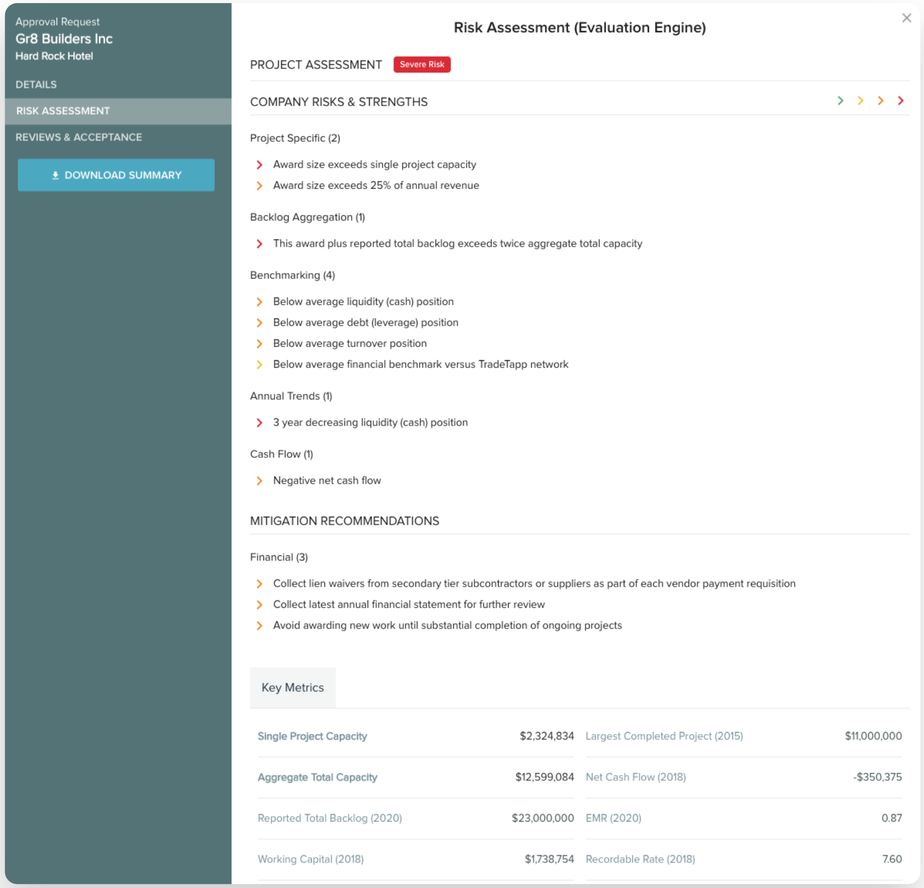
Project team requests approval

Approval routed internally

Teams review and document

Decision communicated to project team

Project team awards sub



Identifying and quantifying **COVID risk**

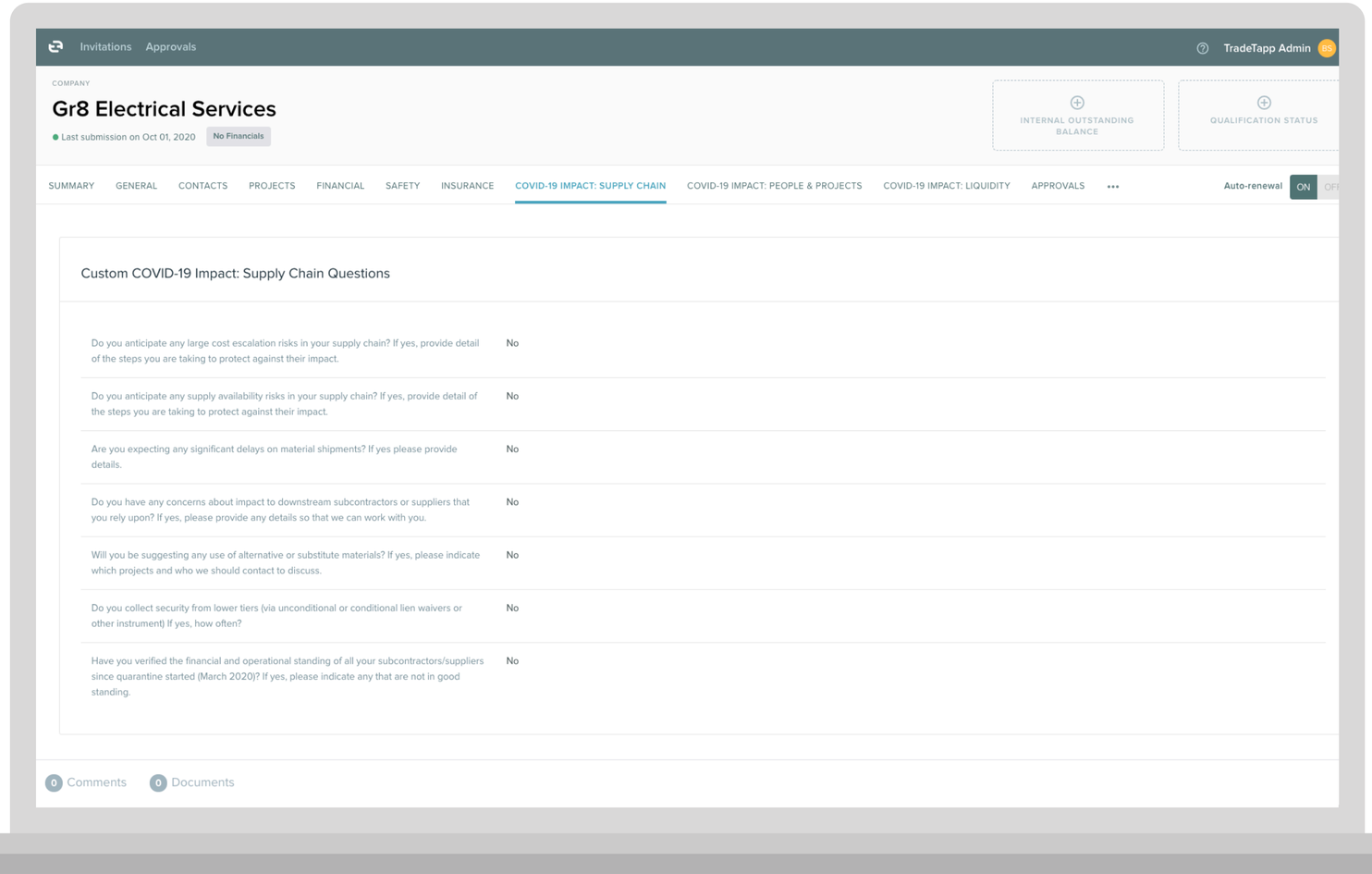
How have my subcontractors been affected by COVID?

Identifying Risk:

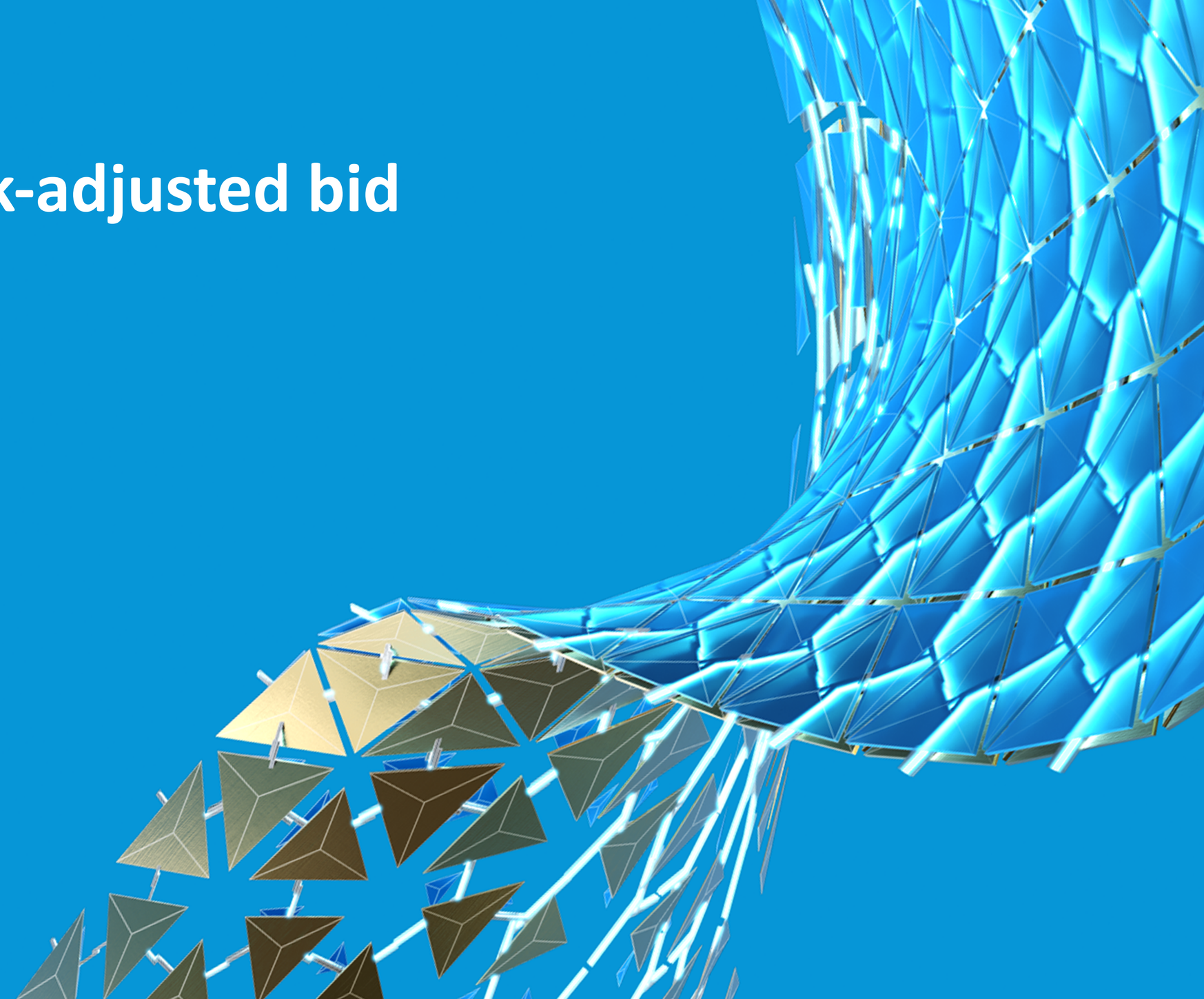
1. Understanding people impact
2. Understanding liquidity impact
3. Understanding supply chain impact

Quantifying Risk Examples:

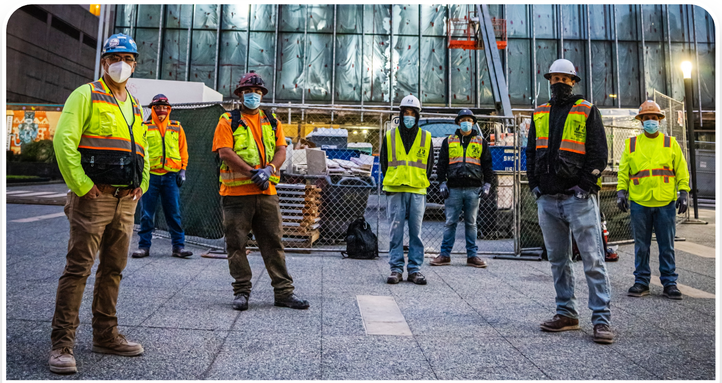
1. Adjusting labor hours
2. Adjusting materials being used onsite



The future of risk-adjusted bid management



How are you adapting your processes during COVID for improved risk assessment?



People & Projects

- Recent company lay-offs or furloughs
- Effects on staff or manpower
- % of projects that have been shut down

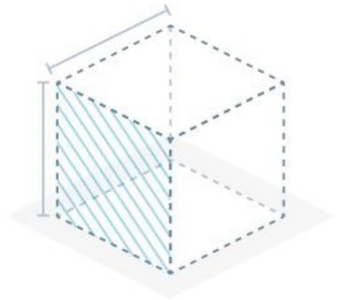
Supply Chain

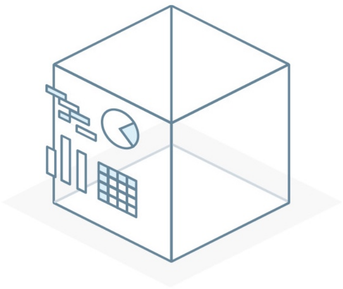
- Protection against large supply chain risks
- Material delays

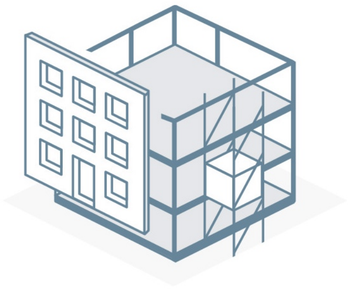
Liquidity

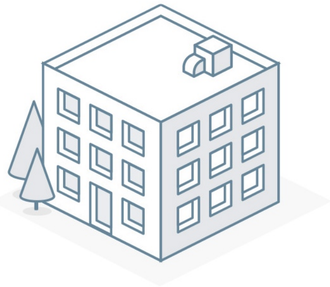
- Federal loans
- Aging projects

Connected risk data throughout the project lifecycle









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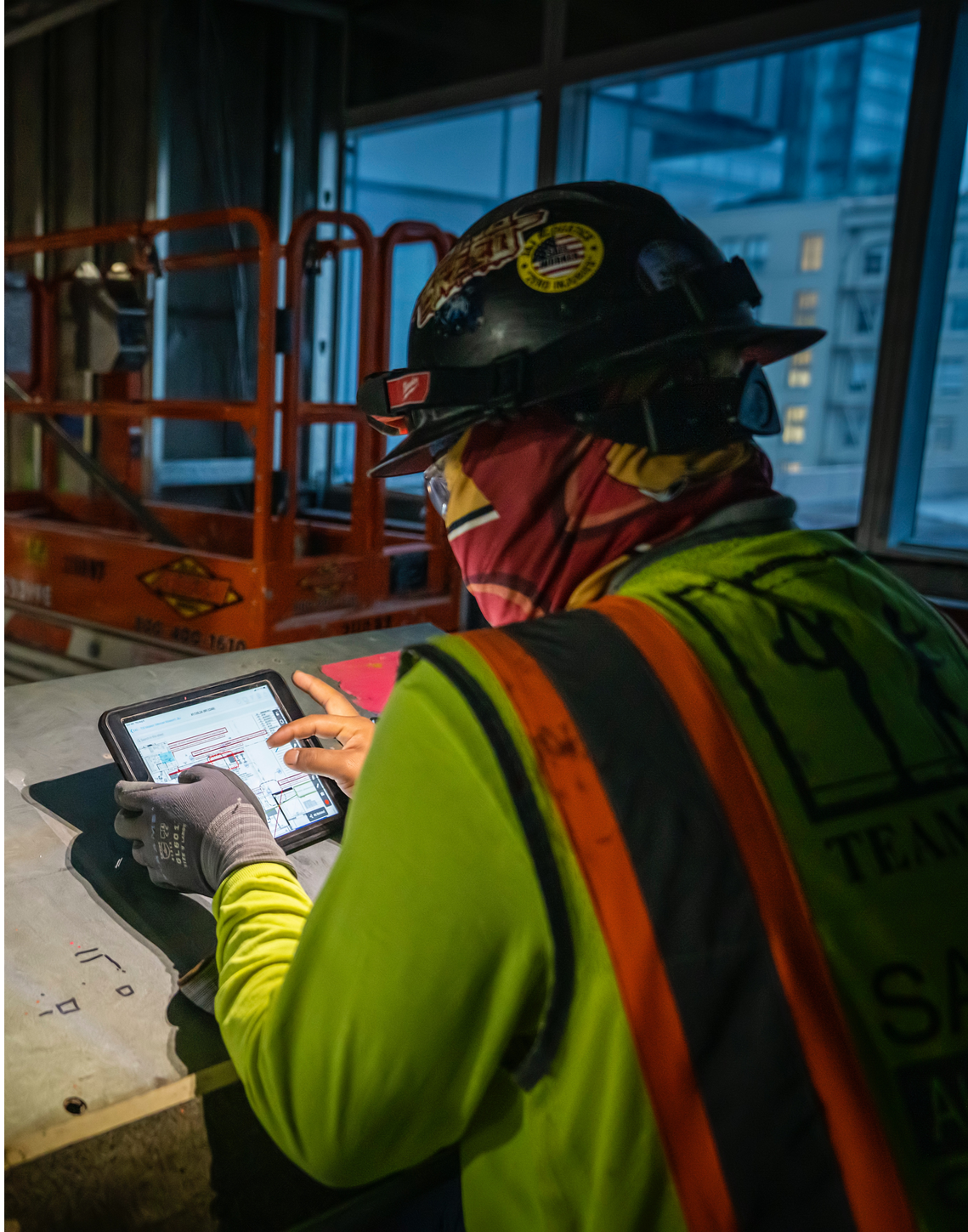
Final thoughts

- How can you get your project teams to think more like your risk teams?
- How is the technology you're using helping you adapt to today's current complexities?
- How can you start better predicting potential risk to protect your profit margins?



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