Exclusive AI Insights From AEC Visionaries

Nicholas J.A. Baldor, Account Executive

Ellen Cox, Account Executive

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The Future

"

The horse is here to stay, but the automobile is only a novelty — a fad.

– President of the Michigan Savings Bank advising Henry Ford's lawyer not to invest in the Ford Motor Co., 1903

66

Television won't last. It's a flash in the pan.

– Mary Somerville, pioneer of radio educational broadcasts, 1948

"

There is no reason anyone would want a computer in their home.

– Ken Olson, President, Chairman and Founder of Digital Equipment Corp. (DEC), the maker of big business mainframe computers, arguing against the PC, 1977

> " I predict the internet will soon go spectacularly supernova and, in 1996, catastrophically collapse.
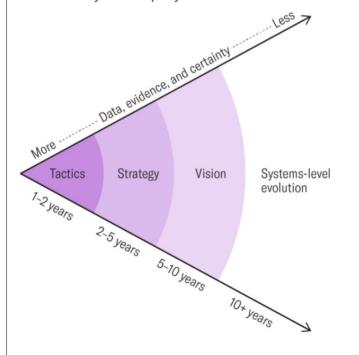
– Robert Metcalfe, founder of 3Com, 1995

> "

**A good hockey player plays where the puck is.
A great hockey player plays where the puck is going to be.**

– Wayne Gretzky, world-renowned hockey champion

A Futurist's Framework for Strategic Planning

Instead of arbitrarily assigning goals on a quarterly or yearly time line, use a cone instead. First identify highly probable events for which there's already data or evidence, and then work outward. Each section of the cone is a strategic approach, and it encompasses the one before it until you reach major systems-level evolution at your company.

HBR

AI

About the Survey

38
Questions

4
Continents

1st
AEC-Focused
Survey on AI

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United States

Canada

Australia

Europe

Africa

Small/Medium Firms (≤ 500 employees)   **54%**

Large Firms (> 500 employees)   **46%**

59% **Tech Leaders**
(Leadership titles related to data, information, technology, digital, AI and innovation)

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Executive Overview

The rapid advancement of artificial intelligence technologies has propelled the world headfirst into the Fourth Industrial Revolution — the Data Revolution. For the AEC industry, AI brings promising capabilities for innovative design, more sustainable practices, expedited workflows and beyond. It also introduces a broad set of challenges, known and unknown.

The insights in this report provide a perspective on the current state and future impact of AI and data advancements specific to the AEC industry.

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Importance & Adoption of AI

Firms believe AI will transform the AEC industry, but few are ready to embrace it.

82% Expect AI-Driven Industry Transformation

78% Expect It Within 5 Years

Only about **20%** of respondents claimed readiness at a mature or advanced level.

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Business & Strategic Impact of AI

2

AI is recognized as a key to profitability, but many firms lack a clear integration strategy.

1/3 of respondents revealed that their AI strategy is **not** integrated with their business strategy.

77% Most respondents anticipate an increase in their firm's AI investments within the next year.

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Technology & AI Use Cases

3

Applying the right technologies in high-impact areas is vital to proving AI's value.

Top Areas Expected to See AI-Driven Revenue Gains

Project Design & Delivery

Almost **90%** of respondents specified project design and delivery as one of the top three areas with the highest potential for growth due to AI.

Marketing & Sales

At least **75%** of respondents included marketing and sales in the top three areas where they expect to see revenue growth due to AI.

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Data Governance & Security

4

Experimental technologies can leave firms open to security threats, so balancing eagerness with caution is crucial.

Data Security

92%

Nearly all respondents highlighted security and privacy as high-priority risks of GenAI usage, specifically:

- Cybersecurity vulnerabilities
- Intellectual property infringement
- Irresponsible, unsafe and unethical use
- Personal/individual privacy concerns

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Workforce Impact

5

Leadership can ease displacement concerns through change management, upskilling and reskilling.

74% Most respondents **do not** expect firm size to change much after AI integration.

Believe *it or Not…*
Only 5% of respondents predict that some roles will be replaced by AI technology in the future.

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Tembi Hommes
Global Chief Data Officer

ARUP

"

We see a generational shift in how we solve problems. AI is part of that shift — speeding up workflows and letting us tackle more complex challenges.

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Shankar Kalyana

Senior Vice President &
Chief Technology Officer

Stantec

"

It's a pivotal moment for humankind, and the reason is that many things we thought were impossible are now possible.

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BST Global's AI Summit 2025

Freek Matheij
Global Citizen Development &
AI Director
ARCADIS

Tembi Hommes
Global Chief Data Officer
ARUP

Jack Li
Global Future Focus &
AI Director
AtkinsRéalis

Joseph Joseph
Partner & Chief Digital Officer
Gensler

Paul Murphy
Chief Information Officer
GHD

BST Global's
AI + Data
Consortium

Chadi Habib
Chief Technology Officer &
Head of Business Solutions
WSP

Lalitha
Krishnamoorthy
Vice President, AI & Digital
Stantec

Ricardo Lorenzo
Chief Technology Officer
PARSONS

Nasrine Tomasi
Head of AI &
Information Management
MOTT MACDONALD

Shannon Miller
President – Strategy, Growth
& Digital
Jacobs

Voice of the Client

3 Megatrends

AI@Work

BST Global™ **ARCADIS**

Empowering Arcadians: Leading the AEC Industry Into an AI-Driven Future

BST Global AI Summit 2025

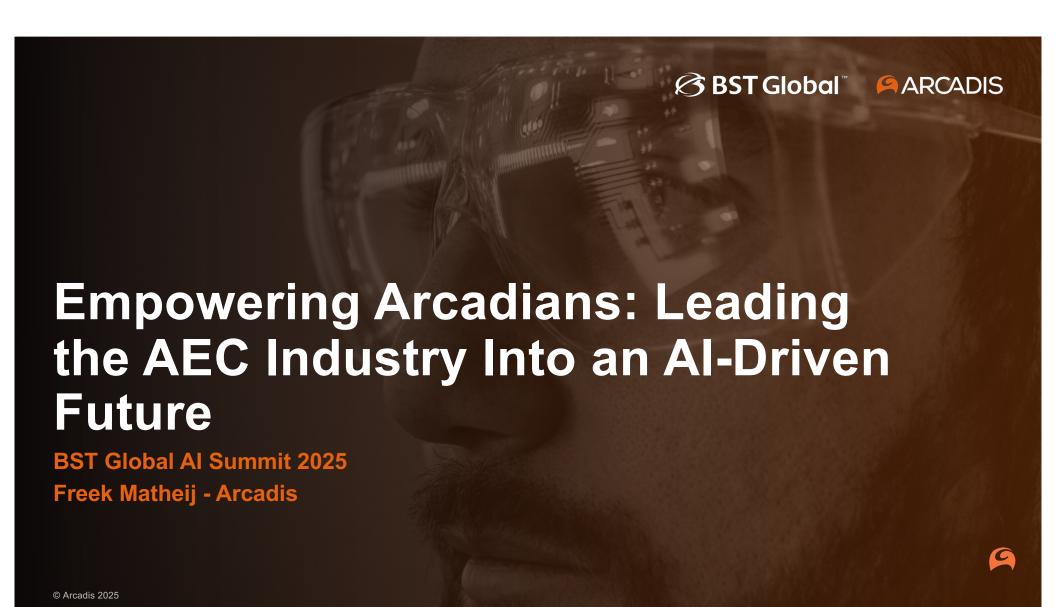**Freek Matheij - Arcadis**

ArcadisGPT: Embedded Intelligence at Scale

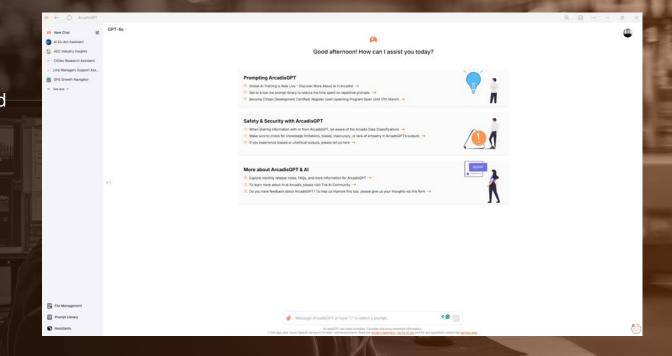Time savings of 3.5 hours per user per week

2.5M+ AI-Platform powered interactions in the last 30 days
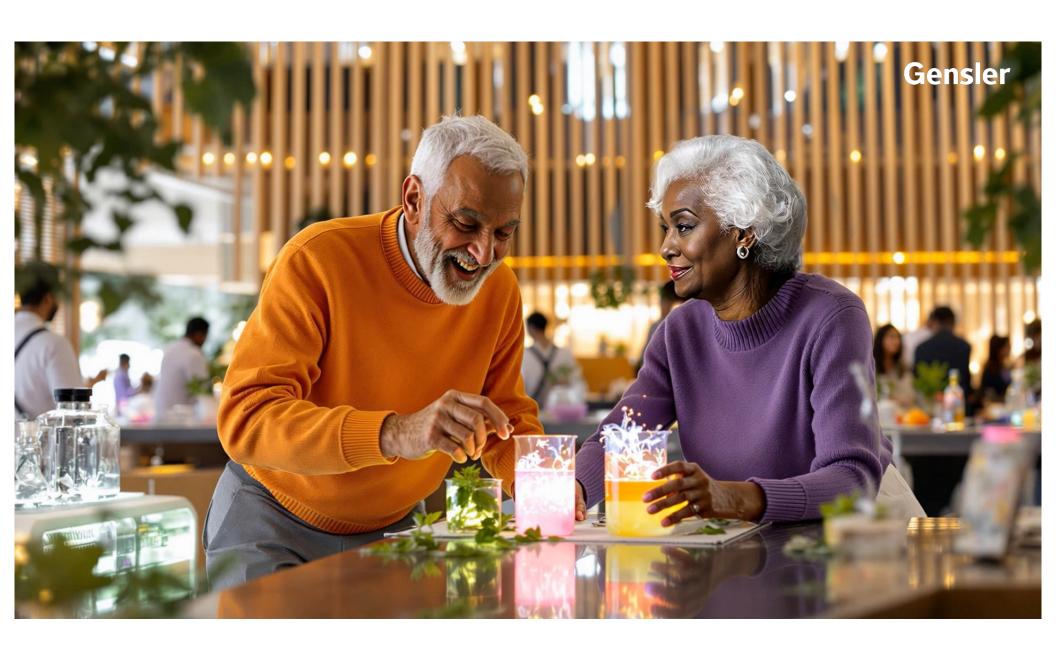
ArcadisGPT reaching 15,000+ unique users during last 30 days

Embedded within our AI training program

Gensler

CREATIVE HORIZONS

[TELLING HUMAN STORIES IN THE AGE OF AI]
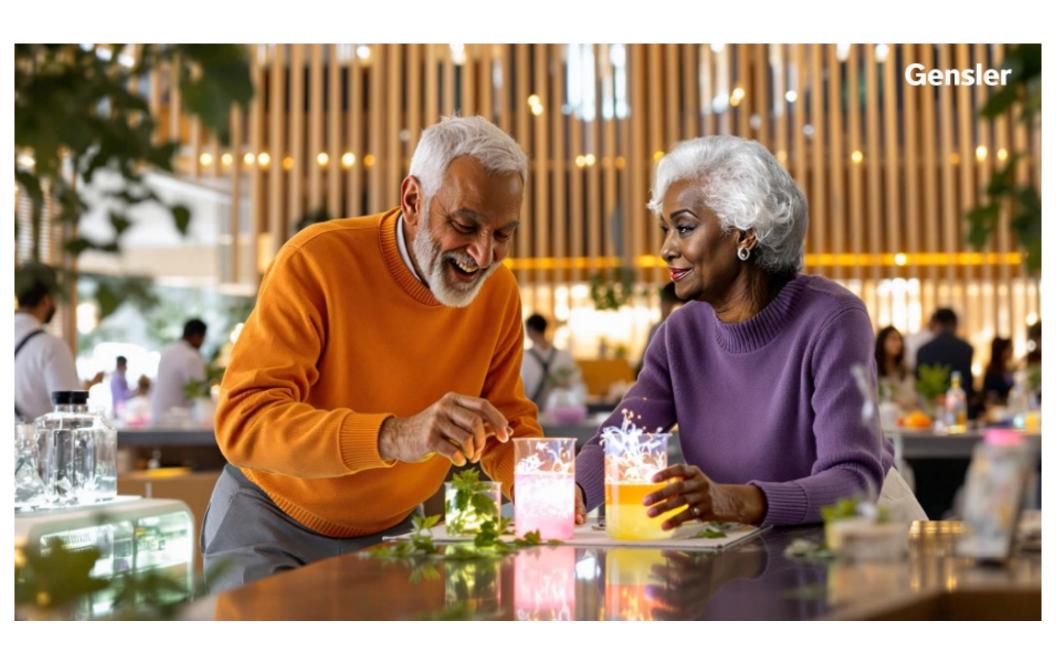
ARUP

Designing for a Changing World:
The Role of Data & Artificial Intelligence

Project XYZ Lessons on Data and AI Integration

- ✓ All data comes from people in a context – understand the Data Generation Point

- ✓ Optimize the collection, flow and completeness of data before analysis. **Use AI to Optimize or Improve Quality of Data!**

- ✓ Automate everything you can and iterate the design

- ✓ SaaS Cloud technology enables scalable large data processing and application of Machine Learning

- ✓ **Experience feeding into Industry Research project on modernizing 'Observational Method'**

My AI Timeline

PROCESS AUTOMATION
Hydraulic Modelling
2013

PREDICTIVE CAPABILITY
Safeswim
2017

DIGITAL TWIN
Auckland Rainfall
2020

GEN AI ADOPTION
Copilot & EMMA
2024

2040

2010

2015

2020

2025

| Y1 | Y2 | Y3 | Y4 | Y1 | Y2 | Y3 | Y4 | Y1 | Y2 | Y3 | Y4 | | | | |

1

2

3

4

5

6

7

8

?

CLOUD and IoT
H2knowHow
2010

CLOUD PLATFORM
Launch of Moata
2019

MACHINE LEARNING
Flood Forecasting
2021

AI STRATEGY
Define MM AI strategy
2024
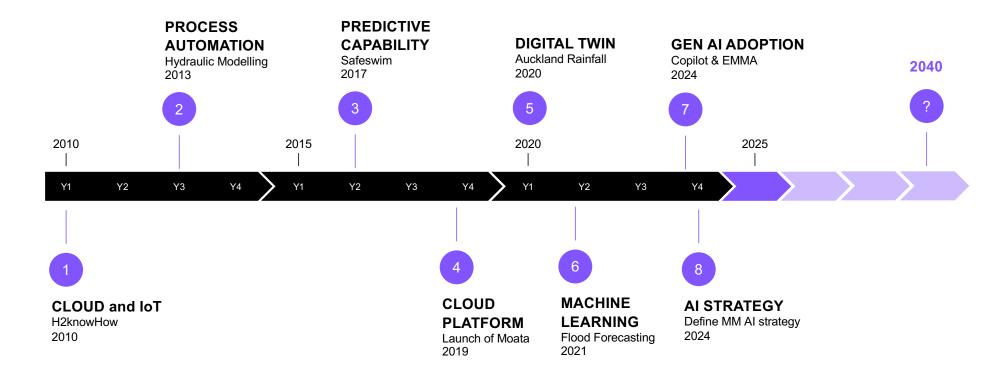
Data Alchemy: Turning AEC Challenges Into Opportunities With Data

→ **Paul Murphy, CIO**

There's Still Work to Do

AI/ML in Action for Projects

The Challenge
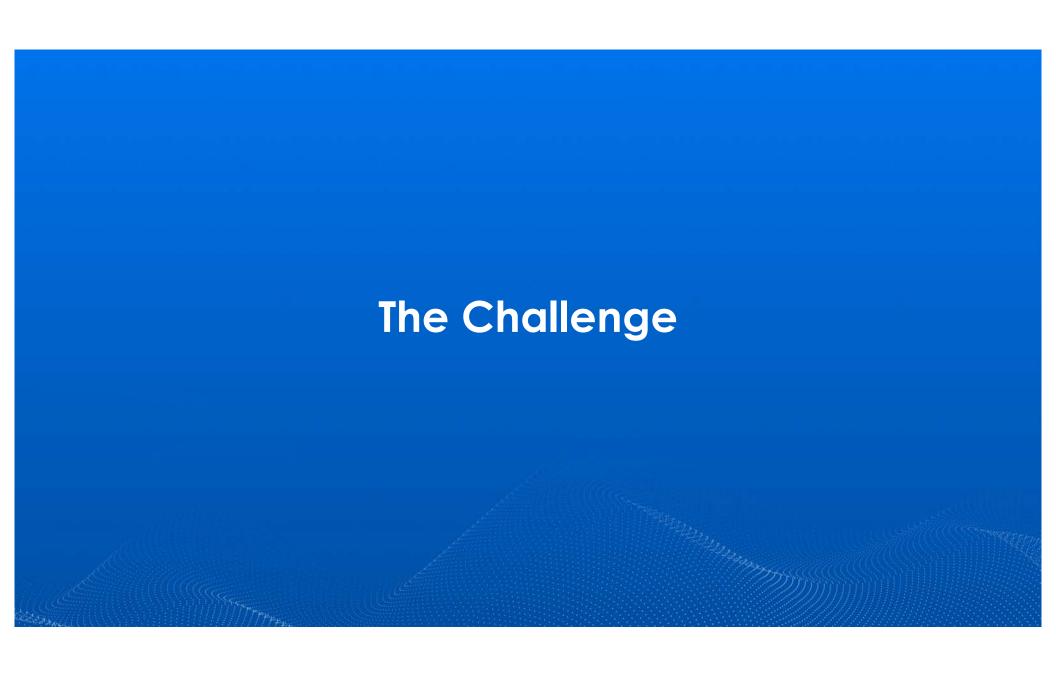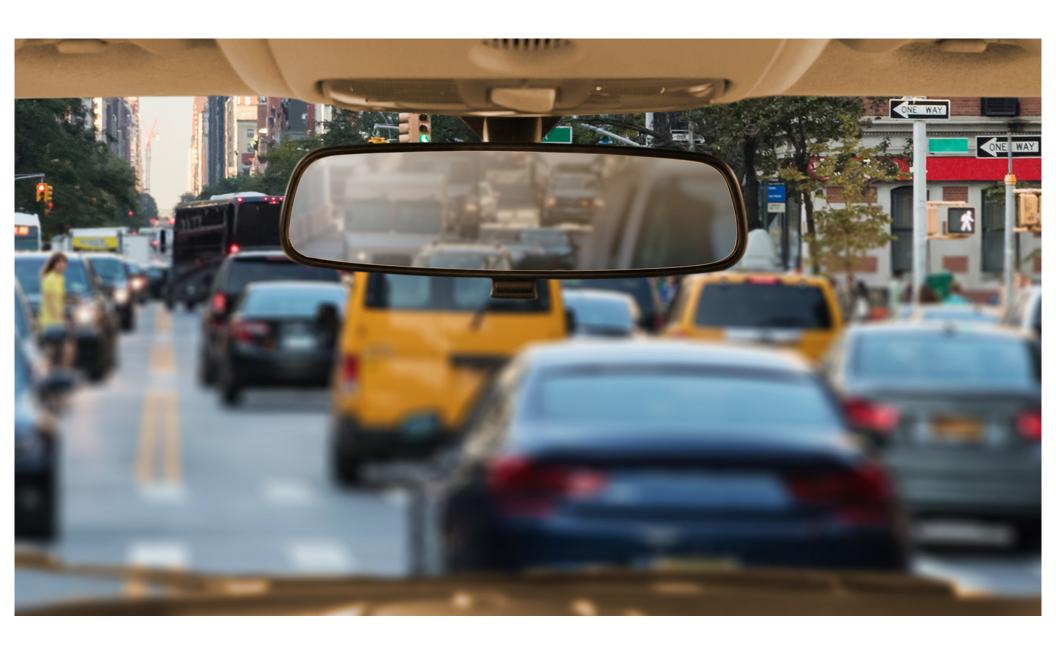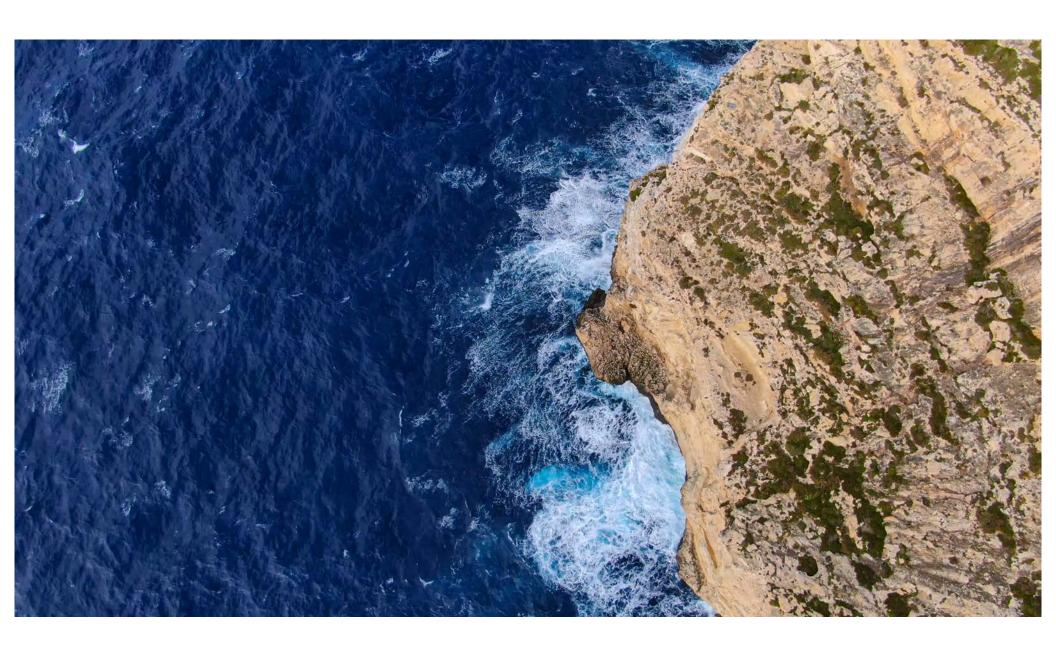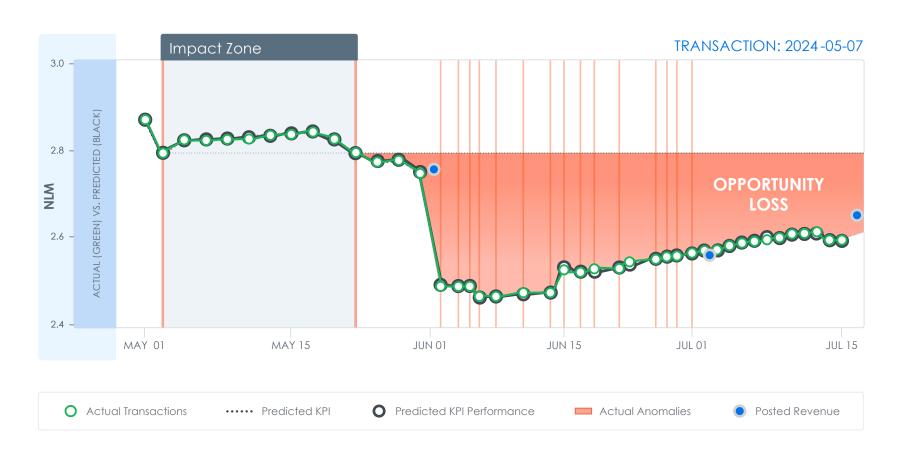
Predict, Detect & Optimize Simulation

TRANSACTION: 2024-05-07

Impact Zone

OPPORTUNITY LOSS

NLM

ACTUAL (GREEN) VS. PREDICTED (BLACK)

3.0

2.8

2.6

2.4

MAY 01   MAY 15   JUN 01   JUN 15   JUL 01   JUL 15

○ Actual Transactions   ⋯⋯ Predicted KPI   ◯ Predicted KPI Performance   ▭ Actual Anomalies   ● Posted Revenue

Insights

Prediction Summary ⓘ

Prediction Date - Feb 22, 2022

3.1
Actual NLM

2.5
Predicted NLM

3.0
Target NLM

0.6 ↓ drop in NLM is predicted for your projects in the next 30 days. Learn more

My Projects With Predictions ⌄

Q Find Project

PR-BNOS
Birds Nest Olympic Stadium

CITIC Group

3.1
Actual

2.5
Predicted

NLM Forecast

This project is predicted to be negatively impacted by **43,000** USD in the next 30 days.

Today

NLM

3.2
3.0
2.8
2.6
2.4

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7
Nov 2021   Dec 2021

- - Historical Predicted NLM   — Actual NLM   ---- Predicted NLM

Show Details

My Projects With Predictions ⌄

Find Project

Actual 2.5 **Predicted**

NLM Forecast

2.8
2.6
2.4

1 2 3 4 5 6 ⑦ 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7

Nov 2021   Dec 2021

- - Historical Predicted NLM   — Actual NLM   - - - Predicted NLM

Show Details

PR-BAAH

Burj Al Arab Hotel

Jumeirah Group

2.9 **Actual**   2.5 **Predicted**   2.8 **Target NLM**

NLM Forecast

This project is predicted to be negatively impacted by 30,000 USD in the next 30 days.

Today

NLM

3.0
2.8
2.6
2.4

1 2 3 4 5 6 ⑦ 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7

Nov 2021   Dec 2021

- - Historical Predicted NLM   — Actual NLM   - - - Predicted NLM

Show Details

PR-MBS

Marina Bay Sands

This project is predicted to be negatively impacted by 15,000 USD in the next 30 days.

Today

PR-BAAH
Burj Al Arab Hotel
Jumeirah Group

This project is predicted to be negatively impacted by **30,000** USD in the next 30 days.

✕

NLM Forecast

Current This Year Project to Date

2.9
Actual

2.8
Target NLM

2.5
Future

Today

NLM

3.0

2.8

2.6

2.4

1 2 3 4 5 6 **7** 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7

Nov 2021   Dec 2021

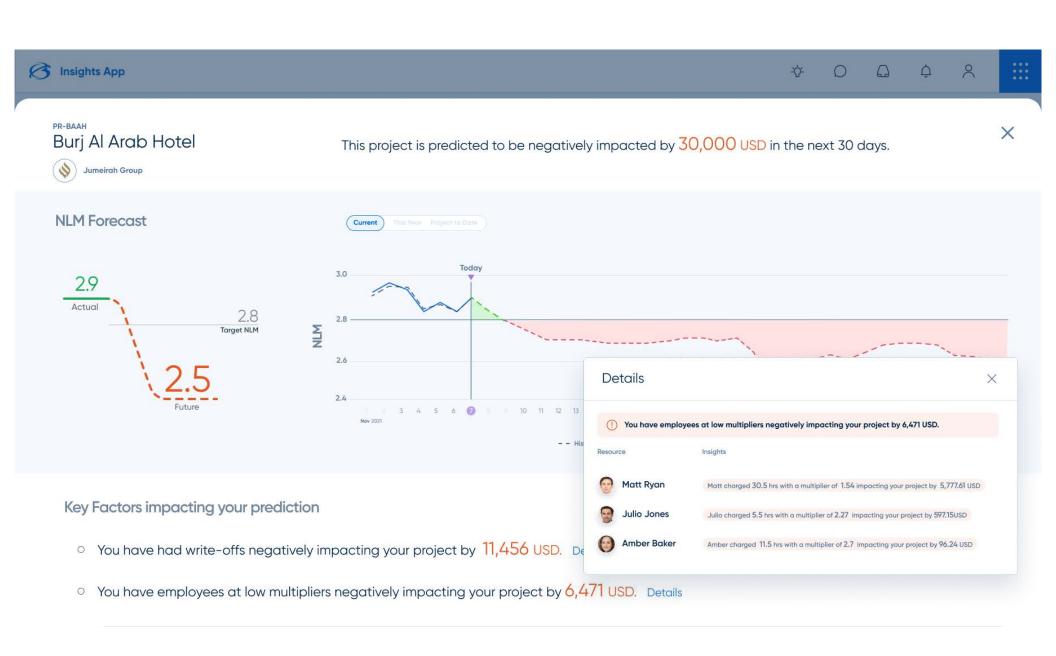- - - Historical Predicted NLM   —— Actual NLM   - - - Predicted NLM

Key Factors impacting your prediction

○ You have had write-offs negatively impacting your project by **11,456** USD. Details

○ You have employees at low multipliers negatively impacting your project by **6,471** USD. Details

PR-BAAH
Burj Al Arab Hotel

Jumeirah Group

This project is predicted to be negatively impacted by **30,000** USD in the next 30 days.

NLM Forecast

Current · This Year · Project to Date

2.9
Actual

2.8
Target NLM

2.5
Future

Today

NLM

3.0

2.8

2.6

2.4

1 2 3 4 5 6 **7** 8 9 10 11 12 13
Nov 2021

- - His...

Details

⚠ You have employees at low multipliers negatively impacting your project by 6,471 USD.

Resource	Insights
Matt Ryan	Matt charged 30.5 hrs with a multiplier of 1.54 impacting your project by 5,777.61 USD
Julio Jones	Julio charged 5.5 hrs with a multiplier of 2.27 impacting your project by 597.15USD
Amber Baker	Amber charged 11.5 hrs with a multiplier of 2.7 impacting your project by 96.24 USD

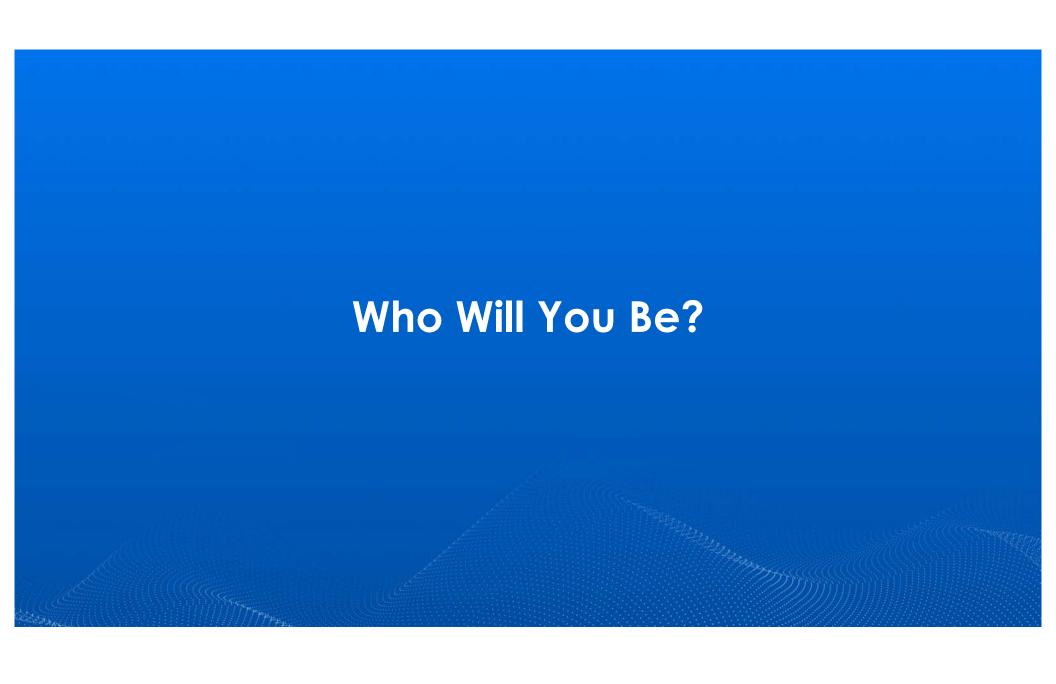## Key Factors impacting your prediction

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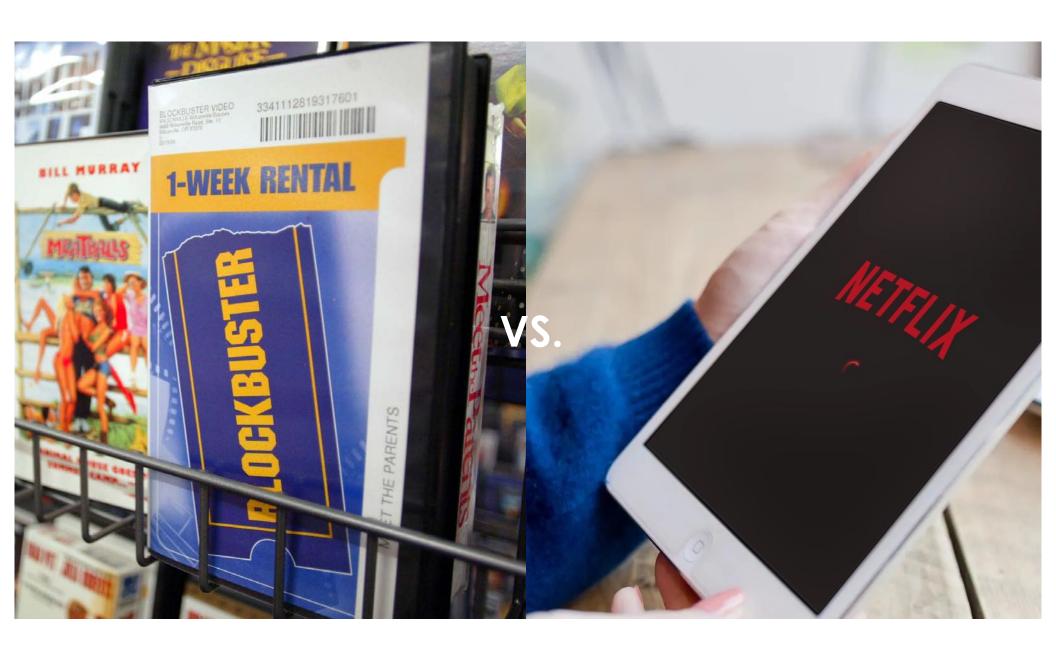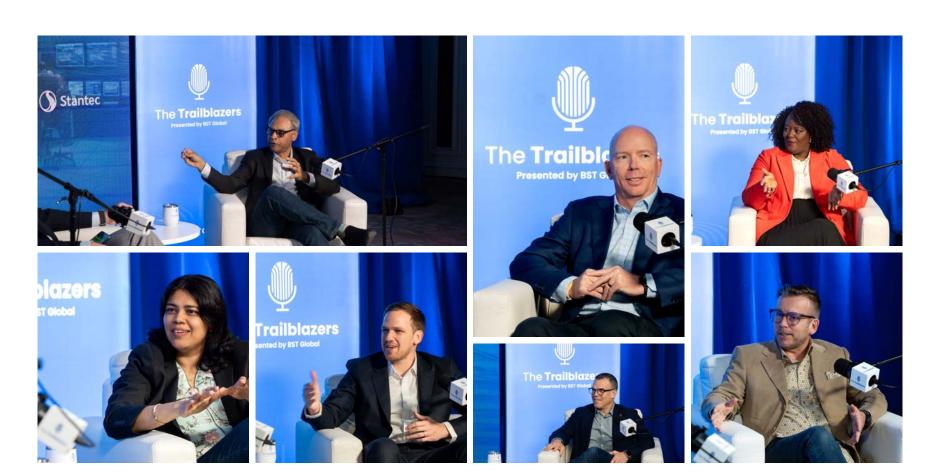
Artificial Intelligence Unlocks Endless Industry Use Cases to Explore

- Project bidding
- Project planning and setup
- Project execution

- Demand Capacity Planning
- Portfolio management
- Project billing and collections

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Who Will You Be?

vs.

vs.

BST Global's

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Questions?

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Thank you!

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