



EAB

# Using Predictive Analytics to Forecast Financial Aid

A Rapid Insight Deep Dive

*January 23<sup>rd</sup>, 2023*

Rapid Insight

# Meet Your Presenters

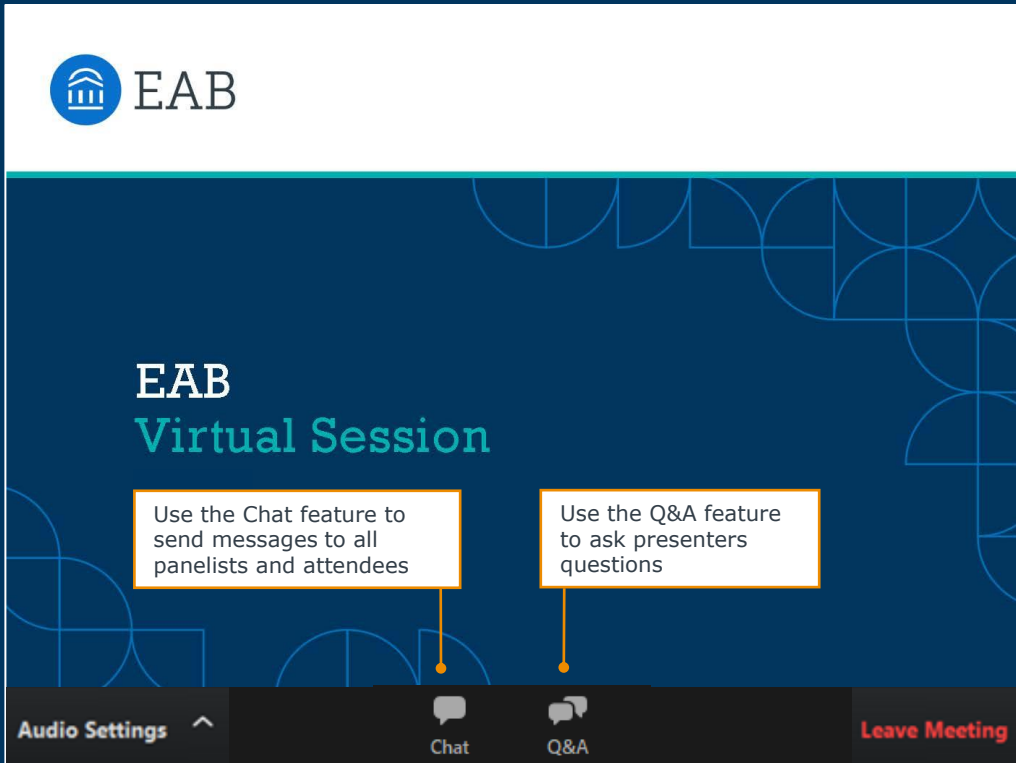


**James Cousins**  
*Strategic Leader,  
Data and Analytics*



**Lily Brennan**  
*Strategic Leader,  
Data and Analytics*

# Submit a Question or Comment



The screenshot displays the EAB Virtual Session interface. At the top left is the EAB logo, which consists of a blue circle containing a white building icon, followed by the text "EAB". The main background is dark blue with a pattern of light blue geometric shapes. The text "EAB Virtual Session" is prominently displayed in the center. Below this, two white callout boxes with orange borders provide instructions: the first points to the "Chat" icon and says "Use the Chat feature to send messages to all panelists and attendees"; the second points to the "Q&A" icon and says "Use the Q&A feature to ask presenters questions". At the bottom, a dark grey navigation bar contains the following elements from left to right: "Audio Settings" with an upward-pointing chevron, "Chat" with a speech bubble icon, "Q&A" with a speech bubble icon, and "Leave Meeting" in red text.

**EAB**

**EAB**  
Virtual Session

Use the Chat feature to send messages to all panelists and attendees

Use the Q&A feature to ask presenters questions

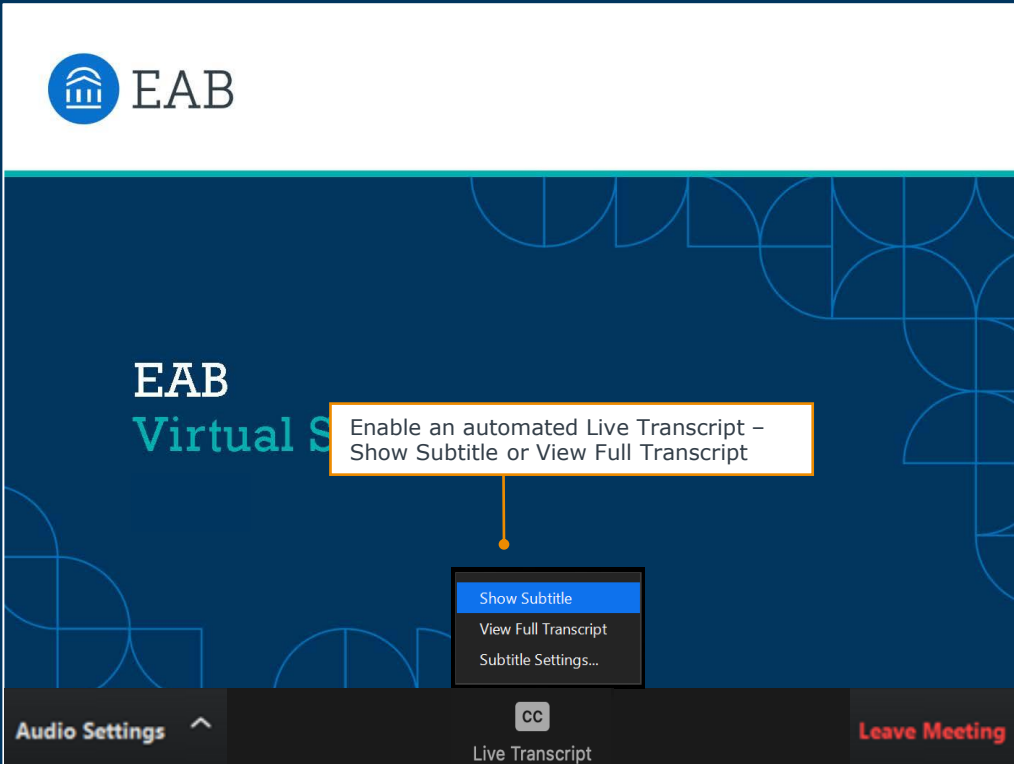
Audio Settings ^

Chat

Q&A

Leave Meeting

# Turn on Captions



The image shows a Zoom meeting interface. At the top left, the EAB logo is displayed. The main content area has a dark blue background with the text "EAB Virtual S" and a decorative pattern of overlapping circles. A callout box points to the "CC" (Closed Captions) icon in the bottom toolbar. The callout box contains the text: "Enable an automated Live Transcript – Show Subtitle or View Full Transcript". The "CC" menu is open, showing three options: "Show Subtitle" (highlighted in blue), "View Full Transcript", and "Subtitle Settings...". The bottom toolbar also includes "Audio Settings" with an upward arrow, "Live Transcript" (with a "CC" icon above it), and "Leave Meeting" in red text.

EAB

EAB  
Virtual S

Enable an automated Live Transcript –  
Show Subtitle or View Full Transcript

Show Subtitle  
View Full Transcript  
Subtitle Settings...

Audio Settings ^

CC  
Live Transcript

Leave Meeting

# Rapid Insight Collaborative Cloud

6

The diagram illustrates the user workflow for accessing and viewing a job posting in the Rapid Insight Collaborative Cloud. It starts with the Veera Construct application menu, where the user selects 'Browse RI Collaborative Cloud'. This leads to the main interface of the Rapid Insight Collaborative Cloud, which displays a list of job postings. The first posting, 'Deep Dive: Scoring Student for Projections & Strategic Insight', is highlighted. An arrow points from this listing to a 'Details' window that provides a comprehensive view of the selected job, including its title, contributor, date posted, description, history of attachments, and options for commenting, deleting, or downloading.

**Veera® Construct**  
File View Job Data View Schedule RI CC Tools  
Browse RI Collaborative Cloud  
Contribute to RI Collaborative Cloud

**Rapid Insight® Collaborative Cloud**  
Filter By Contributor: (All) Sort By: Contribution Date  
**Deep Dive: Scoring Student for Projections & Strategic Insight**  
by James Cousins | EAB  
Date Posted: 1/19/2023  
Times downloaded: 0  
# Comments: 0  
This job is meant to correspond with a webinar delivered 1/23/2023. T...  
There are three main threads which each demonstrate a singular conce...

**July Newsletter Quarterly Challenge**  
by James Cousins | EAB  
Date Posted: 7/18/2022  
Times downloaded: 2  
# Comments: 0  
This job contains everything you'll need to partake in the July edition o...  
The reason this challenge was chosen is because using multiple model...

**Inside the Nodes**  
by James Cousins | EAB  
Date Posted: 6/13/2022  
Times downloaded: 15  
# Comments: 0  
This job is a companion to the "Back to Basics" webinar entitled "Insid...  
The unifying characteristic of the nodes is listed in green at the head of...

**Newsletter Challenge - Wordle**  
by Jon MacMillan | EAB  
Date Posted: 4/12/2022  
Times downloaded: 8  
# Comments: 0  
What do you think of when you think of "data"? Do scrolling green nu...

Page 3 of 3 Loaded

**Details**  
Title: Deep Dive: Scoring Student for Projections & Strategic Insight  
Contributor: James Cousins  
Date Posted: 1/19/2023 2:48:00 PM Category: Job  
Description:  
This job is meant to correspond with a webinar delivered 1/23/2023. The webinar focuses on Using Predictive Analytics to Forecast Financial Aid.  
There are three main threads which each demonstrate a singular concept from the overall discussion, but they can be used together for more intricate reporting as well (such as forecasting the anticipated yield "after" strategically assigning scholarship offers).  
As ever, with questions, comments, or any interest in bringing these techniques into your reporting, feel free to reach out to: [ri-support@eab.com](mailto:ri-support@eab.com)  
History:  
1/19/2023 14:48 - Added Attachment "Scoring Student for Projections & Strategic Insight.vvcj"  
Attachments (Optional)  
+ Add File Attachment X Remove File Attachment  
 I accept the [Terms & Conditions](#)  
Comments Delete Download

## Call to Action

Share your questions about financial aid and predictive analytics in the chat. We will do our best to field them and follow up when we don't know the answer!

Sample questions:

- Is there any way we can gauge the impact of financial aid despite the disruption of the recent COVID years?
- Can we forecast yield for *specific* types of scholarships/grants?
- Is financial aid just like a knock-off competitor to kool-aid?

# 1 Predictive Modeling and FinAid Factors

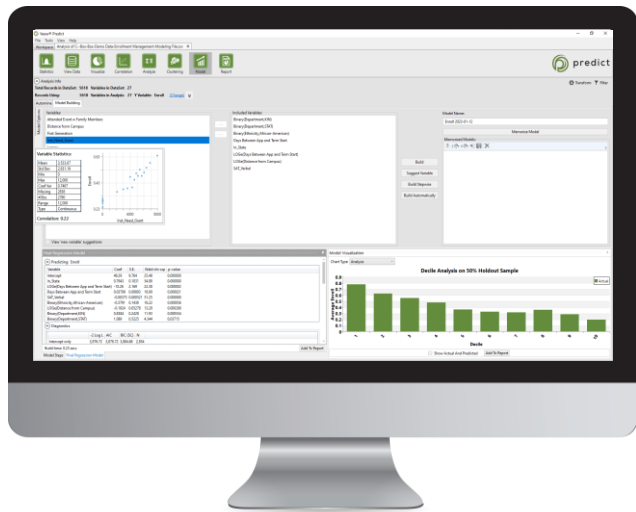
2 Forecasting Net Financial Aid Outlay

3 Predicting Discount Rates

4 Strategic Discretionary Scholarship Offers

5 Audience Q & A

# Offer Amount Doesn't Mean What You Think it Means



More “need based” aid *means* fewer choices



More “merit based” aid *means* more choices



Some forms of aid are not offered in controlled conditions

## Financial aid is fundamentally correlated with application characteristics



Users often think of financial aid’s impact in a vacuum, but its dependencies on other student characteristics can lead to counter-intuitive relationships inside of models.



# Quick Poll

Which of these topics is most compelling to you?

- Forecasting gross financial aid outlay
- Forecasting discount rate / net financial aid outlay
- Strategic allocation of discretionary scholarships

1

Predictive Modeling and FinAid Factors

2

**Forecasting Net Financial Aid Outlay**

3

Predicting Discount Rates


4

Strategic Discretionary Scholarship Offers

5

Audience Q & A

# Calculating Financial Aid Outlay — Two Ways



**After-the-Fact**

**Enrollment**



enrolled  
or not

x

**Offer Amount**



add offer  
to total, or  
do not add

=

**Total Outlay**



descriptive  
reporting



**Ahead-of-the-Fact**

**Probability**



likelihood of  
enrollment

x

**Offer Amount**



*scale* offer  
received to  
likelihood of  
enrollment

≈

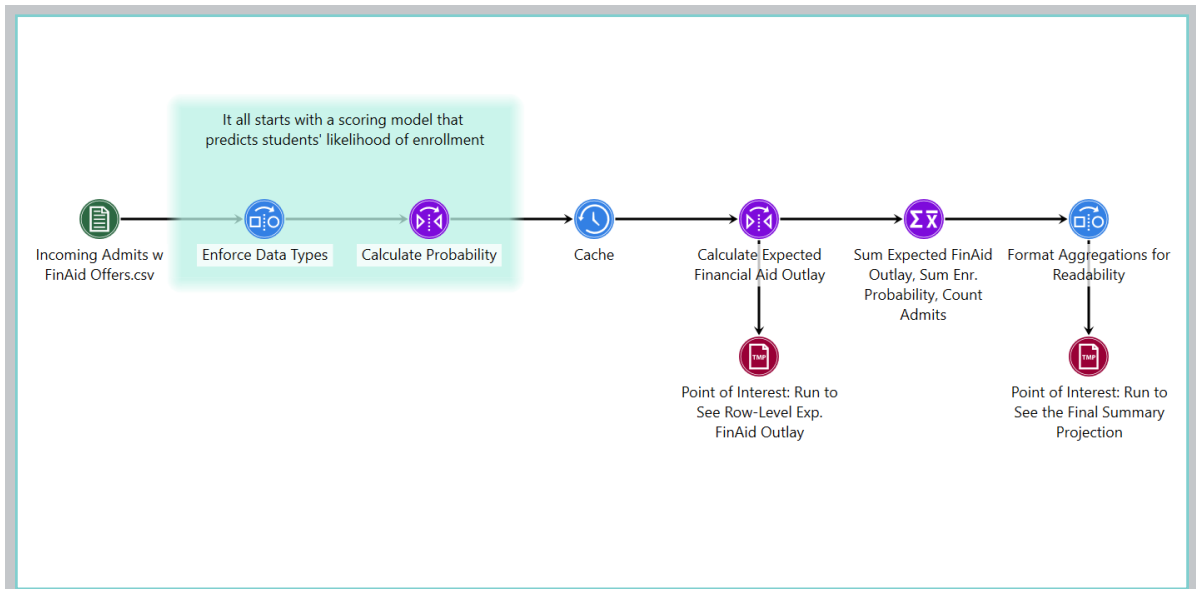
**Total Expected  
Outlay**



count partial offers  
for admits to form  
predictive estimate

# Forecasting Net Financial Aid Outlay

Screenshot from Job Posted in the RI Collaborative Cloud



1

Predictive Modeling and FinAid Factors

2

Forecasting Net Financial Aid Outlay

3

**Predicting Discount Rates**

4

Strategic Discretionary Scholarship Offers

5

Audience Q & A

## Discount Rate

**Definition:** The rate of expected revenue that you are discounting via financial aid offers

- Can be calculated at either the individual or the cohort level

### How to Calculate Discount Rate:



Offered Aid



T&F, R&B  
or COA



Discount  
Rate

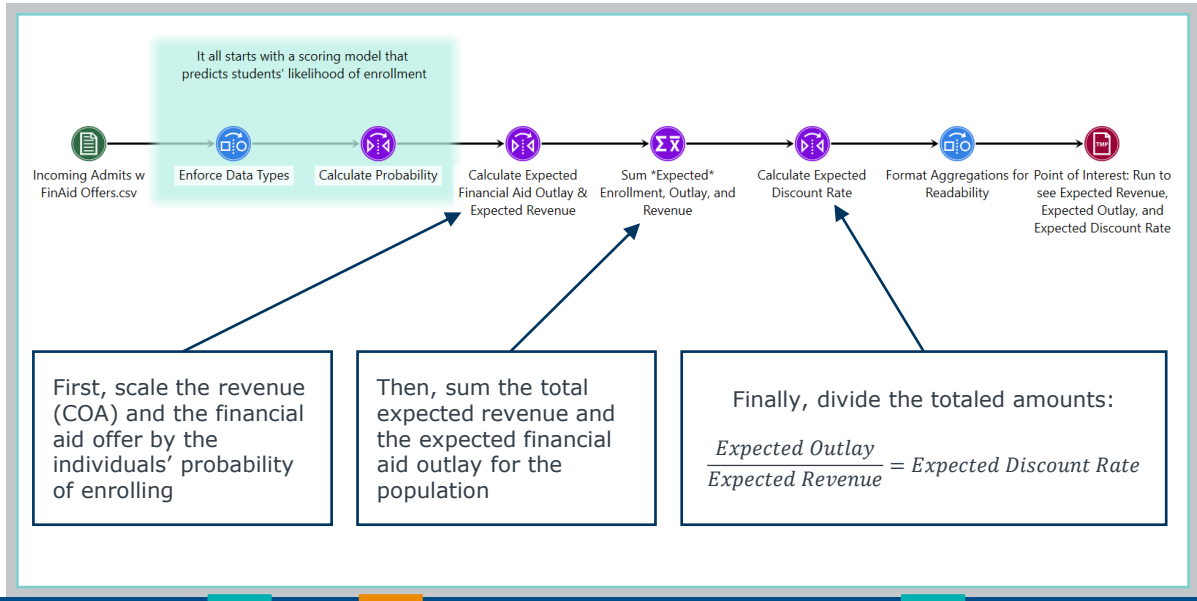
# Before-the-Fact Discount Rate



Translating this simple calculation into a projection mostly entails multiplying the offered aid and the cost of attendance by the probability of enrollment.

# Forecasting Net Financial Aid Outlay

## Example of Job Posted in the RI Collaborative Cloud





1

Predictive Modeling and FinAid Factors

2

Forecasting Net Financial Aid Outlay

3

Predicting Discount Rates

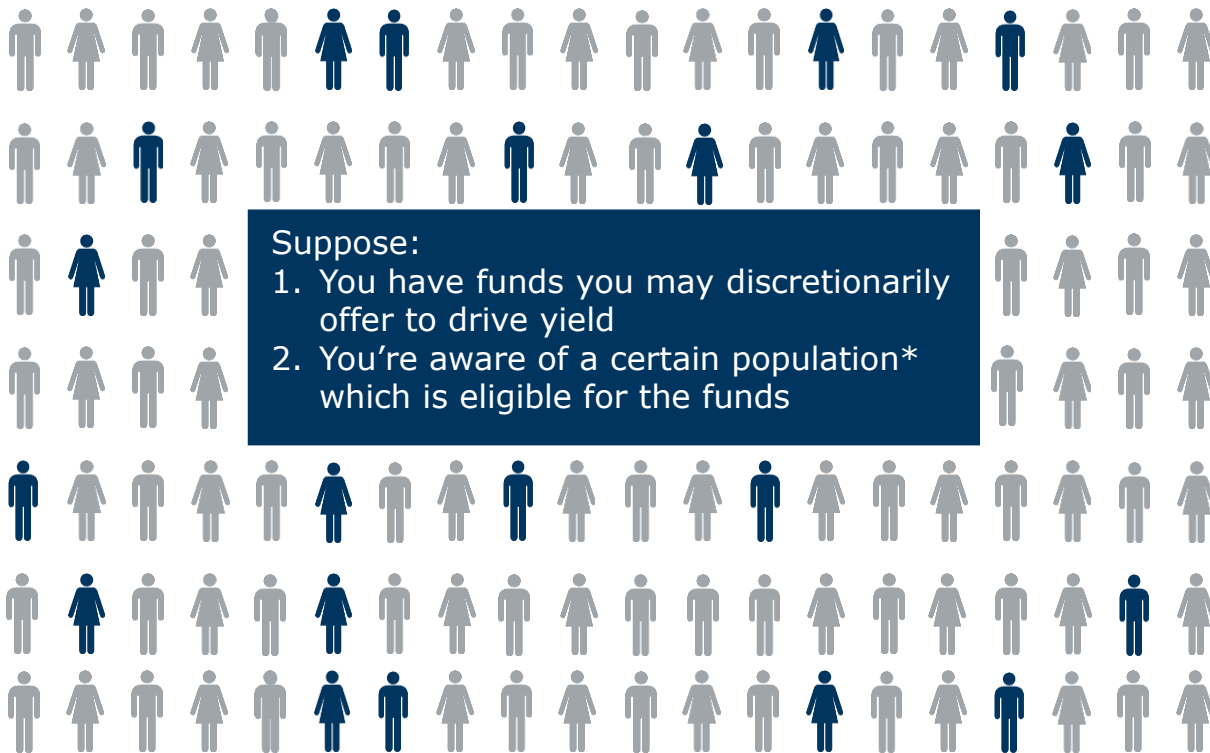
4

**Strategic Discretionary Scholarship Offers**

5

Audience Q & A

# When Do “Strategic Scholarship Offers” Apply?

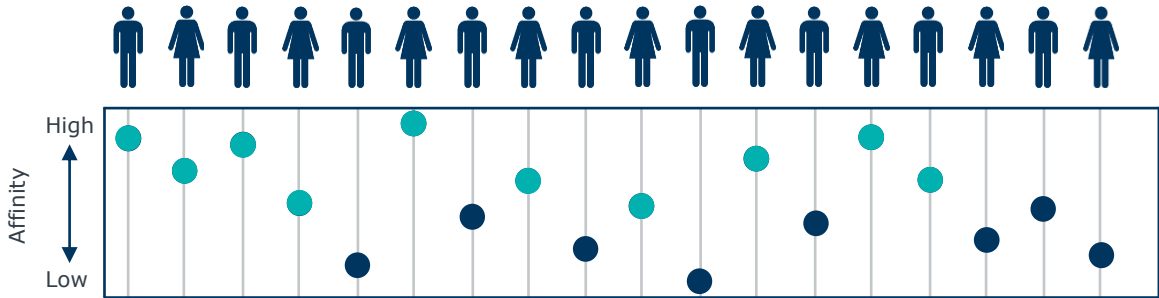


Suppose:

1. You have funds you may discretionarily offer to drive yield
2. You're aware of a certain population\* which is eligible for the funds

\*The criteria for eligibility could be desirability, academic, or demographic, and those conditions might even be subject to grant stipulations

# When Do “Strategic Scholarship Offers” Apply?



If any of the students are eligible for discretionary funds you cannot offer it to everyone who qualifies. Using the enrollment probability as decision support can help increase offer yield.

1

Predictive Modeling and FinAid Factors

2

Forecasting Net Financial Aid Outlay

3

Predicting Discount Rates

4

Strategic Discretionary Scholarship Offers

5

**Audience Q & A**

<https://support.rapidinsight.eab.com/hc/en-us>

The screenshot displays the EAB Rapid Insight Help Center interface. At the top, there is a navigation bar with the EAB logo, the text "EAB Rapid Insight", and a user profile for "Lily Brennan". Below the navigation bar is a large blue banner featuring a network diagram background. On the left, a person is sitting at a desk with a laptop, and on the right, a person is standing next to a large data visualization. A central search bar is present in the banner. Below the banner, the content is organized into two main sections: "Construct" and "Predict". Each section contains three cards: "Module Overview", "Tool Actions", and "Software Setup and Security".

**Construct**

- Module Overview**  
Learn about the Construct module, including its tabs, toolbar, and nodes.
- Tool Actions**  
Explore how to perform actions with jobs, connections, and nodes.
- Software Setup and Security**  
Learn about software setup and security standards.

**Predict**

- Module Overview**  
Learn about the Predict module, which allows users to create predictive models to support their work.
- Tool Actions**  
Explore how to perform actions with the Workspace and Analysis tabs in Predict.
- Software Setup and Security**  
Learn about software setup and security standards.



## Office Hours

Thursday, February 16<sup>th</sup>  
1:00-1:30 PM EST  
[Register Online](#)



## Email

RI-Support@eab.com



## Help Center

Submit a request

# Rapid Insight Office Hours

## Sessions Occur Once a Month

Thursday, 1:00 – 1:30 pm Eastern Time

- February 16<sup>th</sup>
- March 16<sup>th</sup>
- April 20<sup>th</sup>

Register for sessions [online](#) (linked in the Chat)



## Q & A: Submit a Question Using the Q&A Button

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**James Cousins**

*Strategic Leader,  
Data and Analytics*



**Lily Brennan**

*Strategic Leader,  
Data and Analytics*



Additional Questions?

Email [RI-Support@eab.com](mailto:RI-Support@eab.com) with technical questions and [RapidInsight@eab.com](mailto:RapidInsight@eab.com) for all other inquiries.





# Quick Poll



How was today's session?



202-747-1000 | [eab.com](http://eab.com)

