

# Getting Started with **AI** in L&D



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Chief Learning Architect  
Axonify



Axonify™

Disney

KAPLAN



Today we're going to talk about 4 things ...

**Mindset**

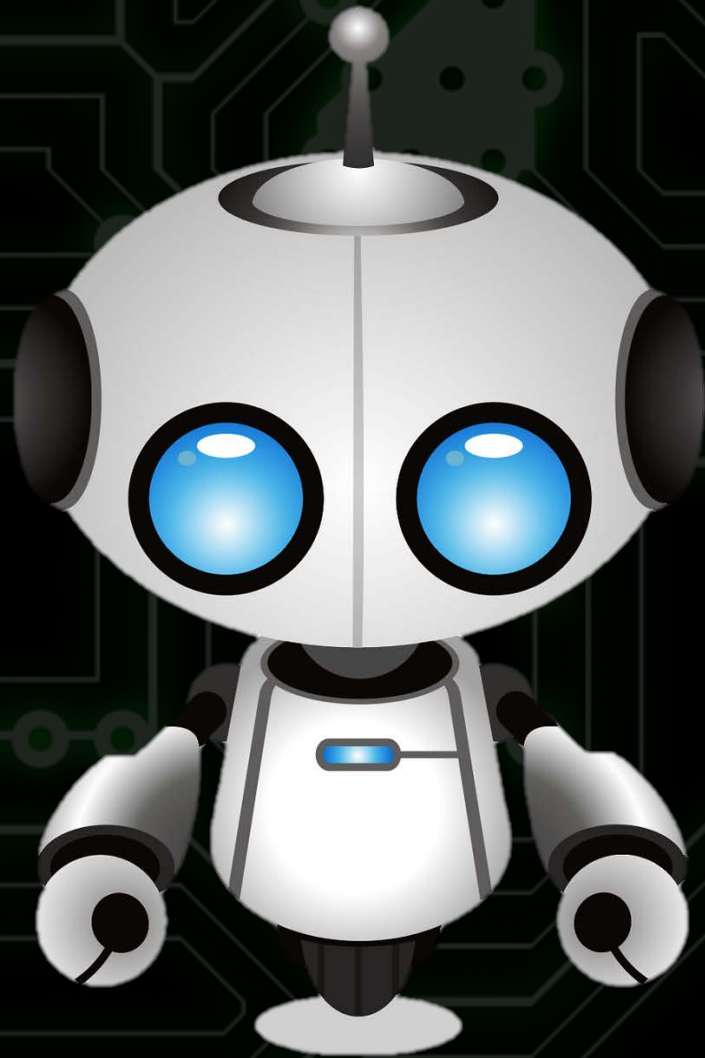
**Application**

**Data**

**Preparation**



Why are you **interested** in AI?



AI is NOT about robots.



# This is what AI can do **today**.

- Pattern Recognition
- Natural Language Processing
- Conversational Response
- Discovery
- Visual Recognition
- Sentiment Analysis
- Text <> Speech

**General AI**  
*Revolutionary*

**Broad AI**  
*Pervasive*

**Narrow AI**  
*Emerging*

We are here.



Axonify™

# L&D will not introduce AI in your workplace.

AI-enabled technology is likely already in use by your Sales, Marketing, Logistics or Recruitment teams.





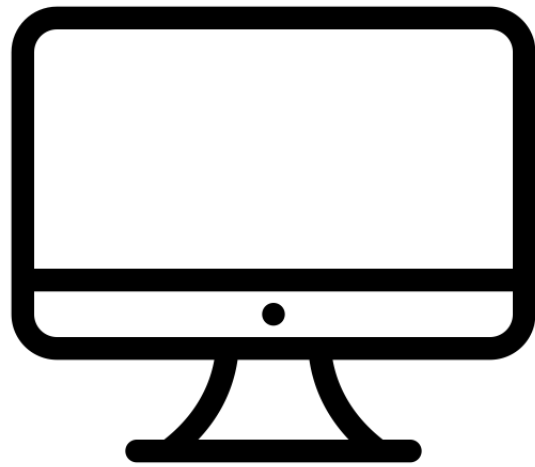
**Before we can talk about applying**  
**AI in workplace learning ...**



... we have to talk about **boxes.**



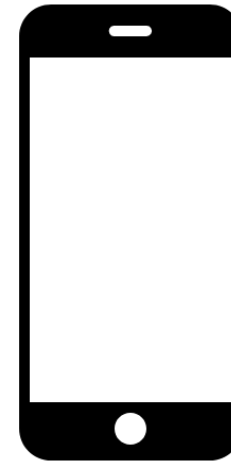
L&D tends to put new concepts into isolated boxes,  
thereby missing the larger potential impact of the innovation.



internet



social



mobile

AI represents the next **technology inflection point** for L&D.

L&D

**75%** of ~~commercial~~ applications  
will use AI ~~by next year.~~  
within 3 years.



How can you **apply AI** within workplace learning?





AI can be applied to **solve problems** in different ways. AI-enabled traffic signals can alleviate congestion and help vehicles move through a designated area more effectively. Self-driving cars are also AI-enabled and focus on transportation challenges but from a different perspective.



**Before you decide how you want to apply AI, you must determine what **problem** are you trying to solve.**

# 10 Real-world AI Applications in L&D

Administration

Translation

Authoring

Chatbot

Search

Recommendation

Coaching

Personalization

Impact Analysis

Gap Analysis



The background of the slide is a close-up, slightly blurred photograph of an open desk calendar. A gold-colored pen lies diagonally across the top of the calendar pages. The calendar pages show dates in a grid format, with some dates like 11, 18, 19, 25, 26, and 27 visible. The overall lighting is soft and natural.

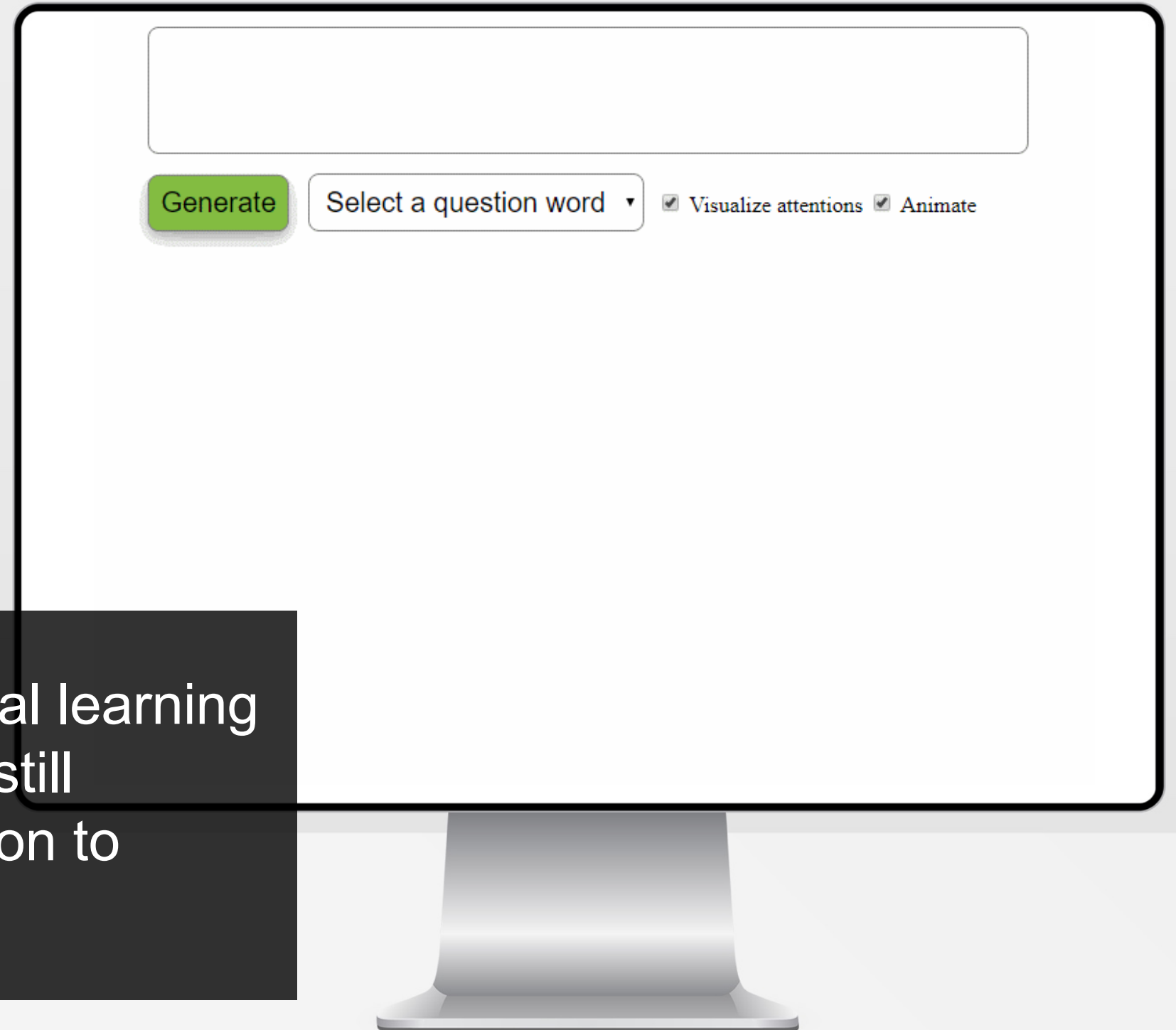
# Administration

A host of L&D administrative tasks, such as class scheduling, report generation and course assignments, can be automated through emerging AI-enabled tools.



# Authoring

AI can be applied to develop digital learning content from source material but still requires human review and revision to ensure accuracy and context.







For how many people?

8



Choose a time

7pm

We have the following  
dates available still.

Which date would you  
like to book?



Thanks Owen  
LoyaltyApps. We've  
booked you a table for 8  
at 7pm on 22/12/2016.  
We look forward to  
seeing you!



Type a message...

Many chatbots are complicated branching programs and not true applications of AI. Some do use AI capabilities, such as natural language processing.

Chatbot



how old is ted danson



All

News

Images

Shopping

Videos

More

Settings

Tools

About 4,010,000 results (1.14 seconds)

Ted Danson / Age

72 years

December 29, 1947



People also search for

Larry David  
72 years

Feedback

People also ask

How old is Ted Danson?

Is Ted Danson still married?

How old is Ted Danson?

Is Ted Danson still married?

How old is Ted Danson?

Feedback

## Ted Danson



American actor

Edward Bridge Danson III is an American actor and producer who played the lead character Sam Malone on the NBC sitcom Cheers, Jack Holden in the films Three Men and a Baby and Three Men and a Little Lady, and Dr. John Becker on the CBS sitcom Becker.

[Wikipedia](#)

**Born:** December 29, 1947 (age 72 years), [San Diego, CA](#)

**Height:** 6' 2"

**Nationality:** American

**Spouse:** [Mary Steenburgen](#) (m. 1995), [Casey Coates](#) (m. 1977–1993), [Randy Danson](#) (m. 1970–1975)

**Children:** [Kate Danson](#), [Alexis Danson](#)

**Books:** [Oceana: Our Endangered Oceans and What We Can Do to Save Them](#)

### Movies and TV shows

[View 45+ more](#)



**Cheers**  
1982 – 1993



**The Good Place**  
2016 – 2020



**Becker**  
1998 – 2004



**Three Men and a Baby**  
1987



**CSI: Crime Scene In...**  
2000 – 2015

AI can be applied to help users find specific information rather than just providing links to related content based on keywords.



# NETFLIX ORIGINAL STRANGER THINGS

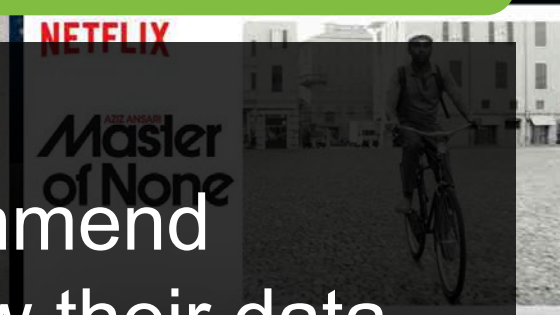
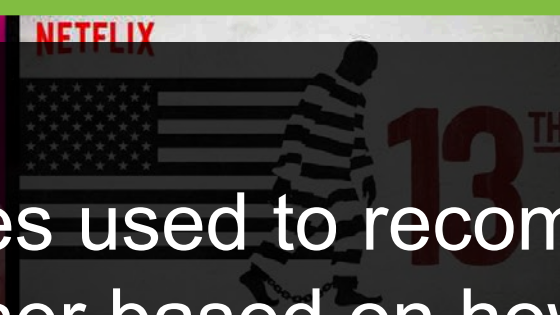
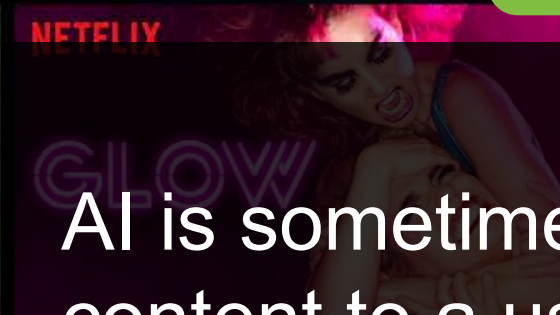
95% Match 2017 2 Seasons 4K Ultra HD 5.1

When a young boy vanishes, a small town uncovers a mystery involving secret experiments, terrifying supernatural forces and one strange little girl.

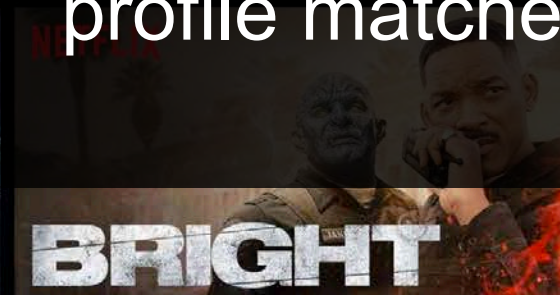
Winona Ryder, David Harbour, Matthew Modine  
TV Shows, TV Sci-Fi & Fantasy, Teen TV Shows

## Recommendation

### Popular on Netflix



### Recently Watched

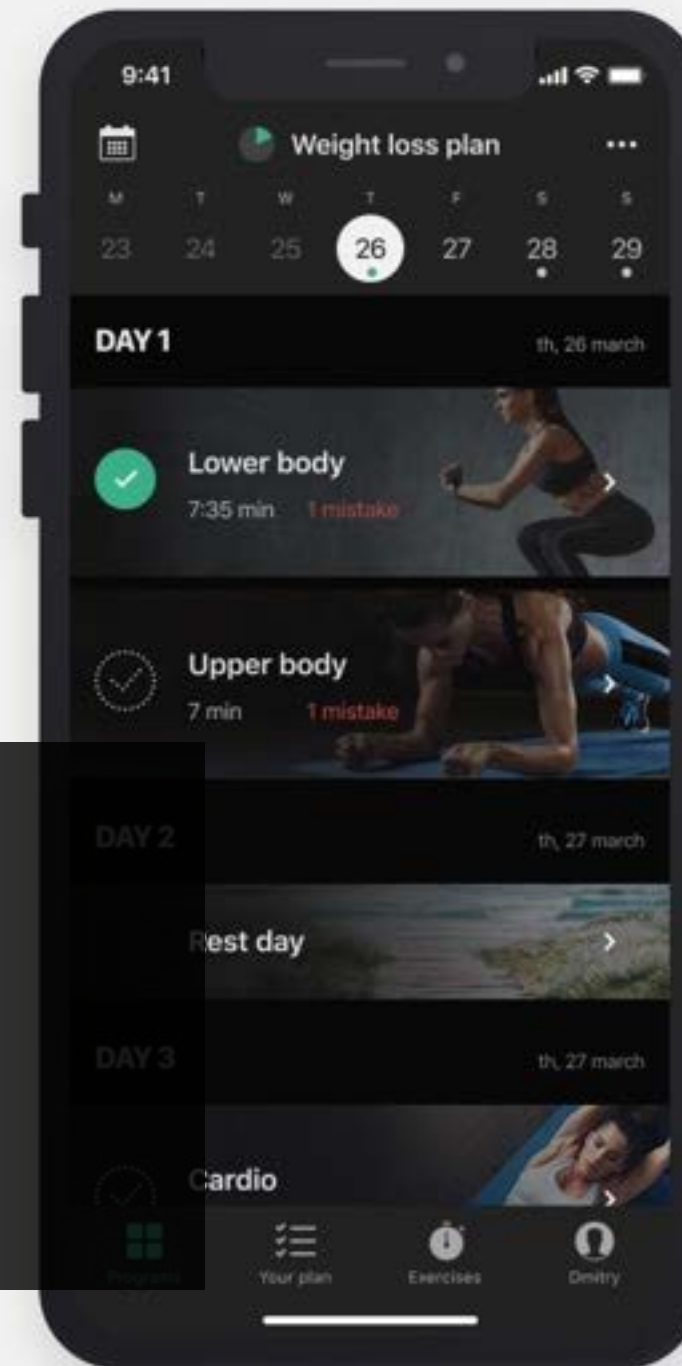


AI is sometimes used to recommend content to a user based on how their data profile matches other user activity.



# Coaching

AI can be applied to provide actionable coaching recommendations, just like a personalized exercise application.

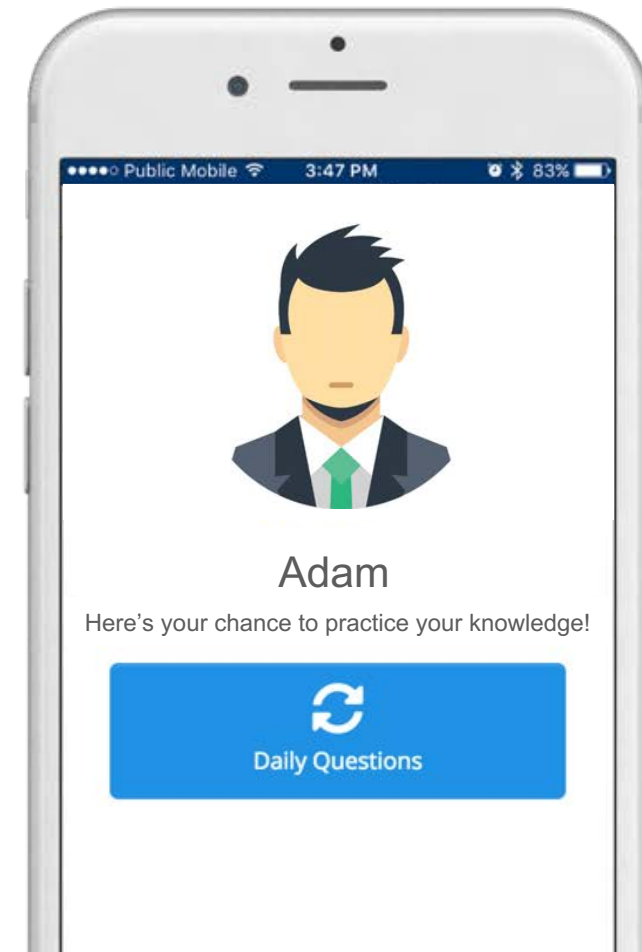
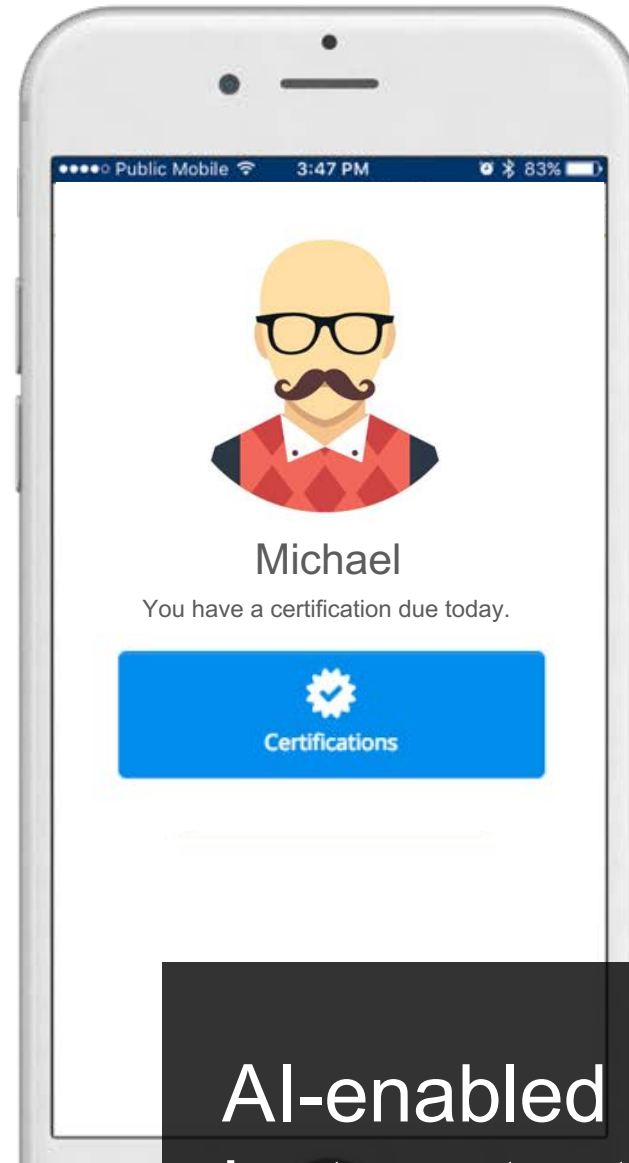
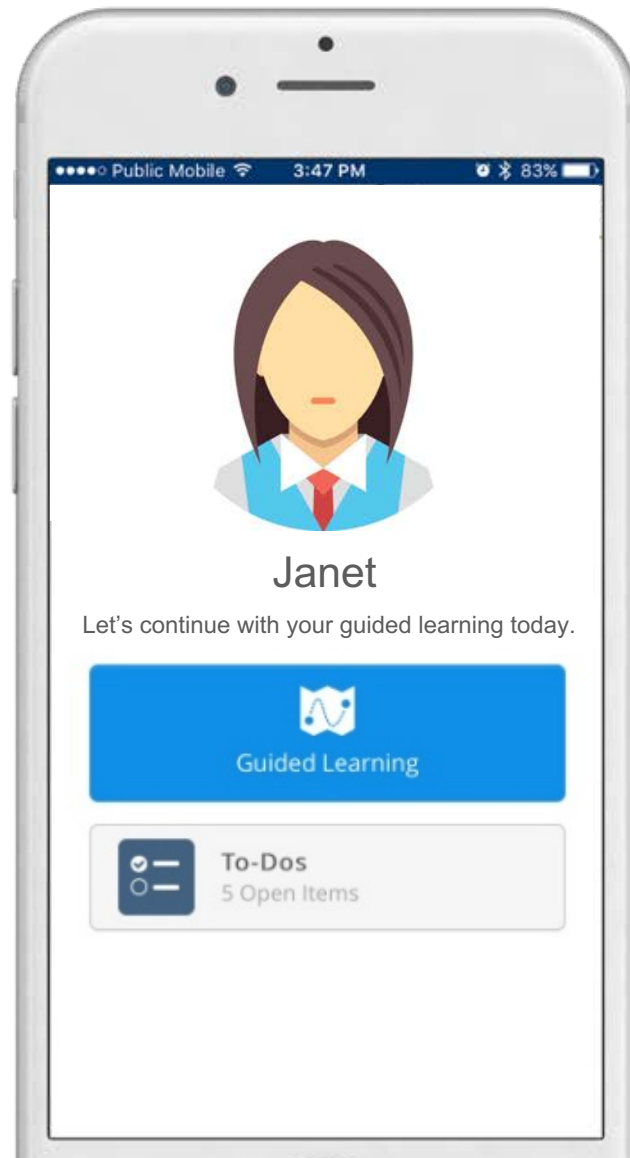


**Fully guided  
workouts**

**Automatic  
repetitions count**





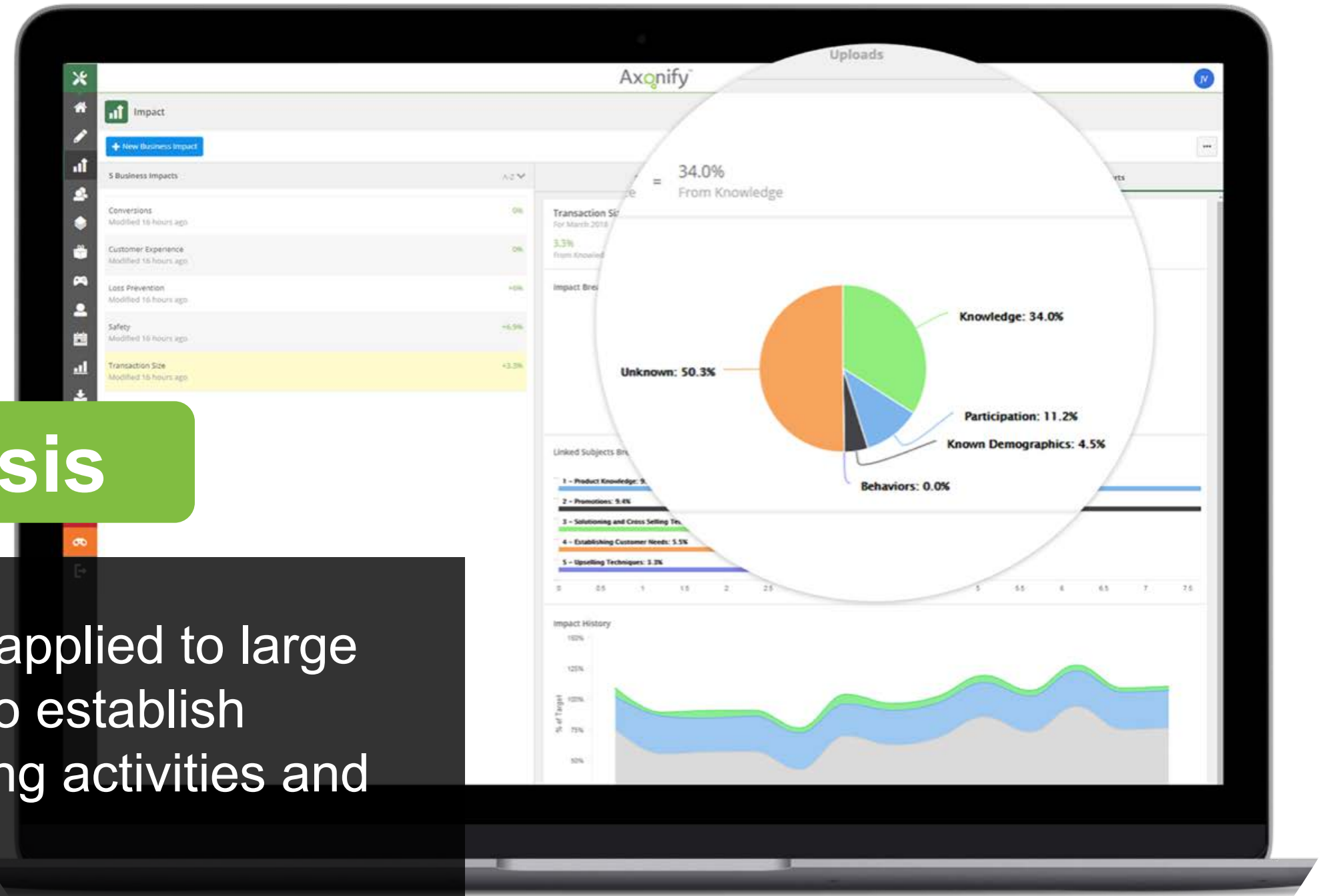


# Personalization

AI-enabled personalization goes beyond just content recommendation by adapting the learning experience to meet the immediate, proven needs of an individual.

# Impact Analysis

Machine learning can be applied to large data collections in order to establish causation between learning activities and performance outcomes.







- ✓ Capability #1
- ✓ Capability #2
- ✓ Capability #3
- ✓ Capability #4
- ✓ Capability #5



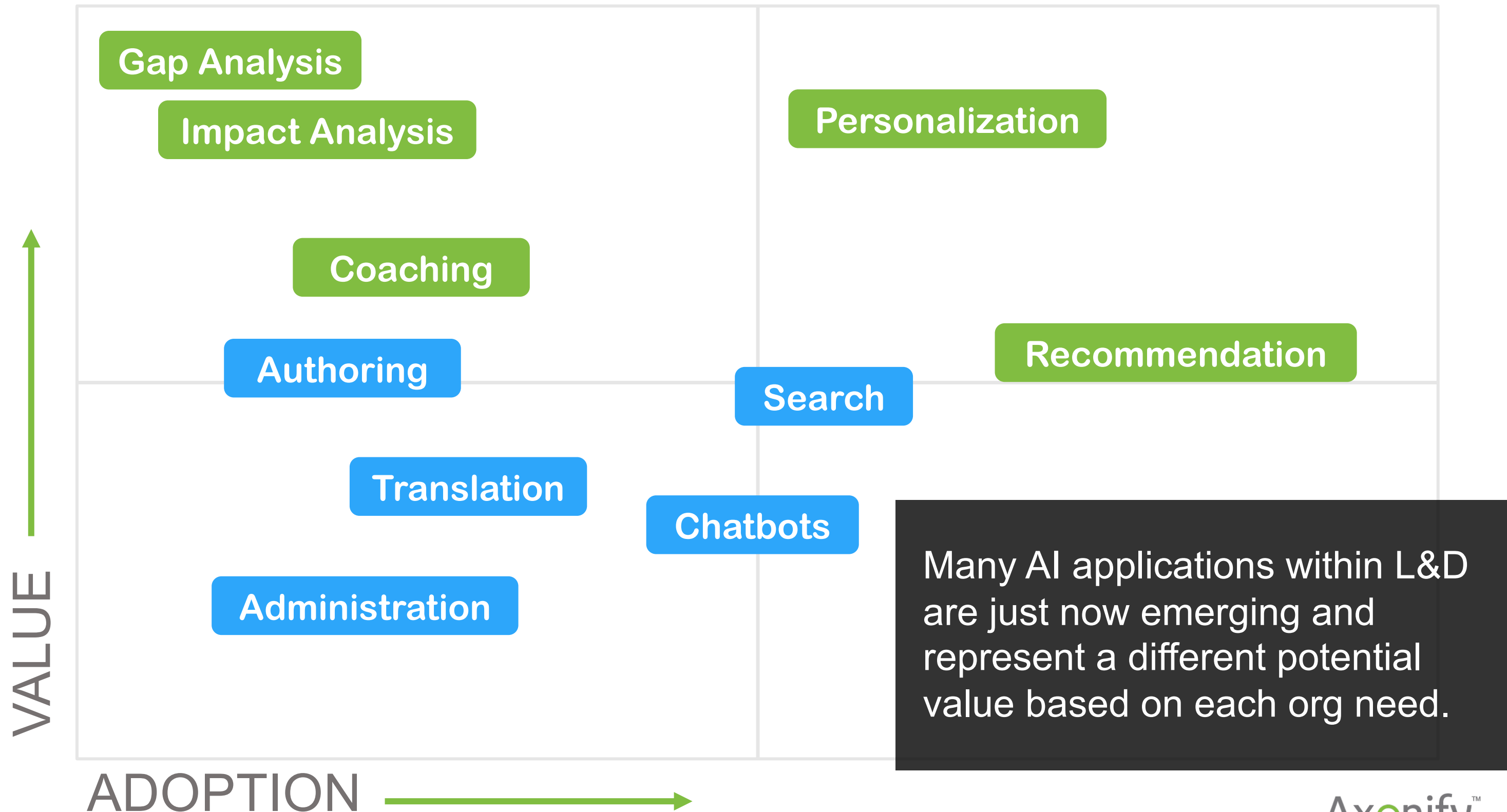
- ✓ Capability #1
- ✓ Capability #2
- ☐ Capability #3
- ✓ Capability #4
- ✓ Capability #5



- ✓ Capability #1
- ✓ Capability #2
- ✓ Capability #3
- ☐ Capability #4
- ☐ Capability #5

AI can be applied to proactively identify employee capability gaps and match people to roles with both speed and scale.

**Gap Analysis**





Is L&D **ready** for AI?

*Kinda ...*

AI requires data.  
An AI-enabled application  
must have the right  
information architecture at  
its foundation to power the  
solution.

**AI**

**Machine  
Learning**

**Analytics**

**Information  
Architecture**



Administration

Translation

Authoring

Chatbot

Search

## Software-Enabled AI Limited **IA** Required

*Applications may be able to function  
without a robust information architect.*

# Software-Executed AI IA Foundation Required

*Applications require a strong information architecture in order to function.*

Recommendation

Coaching

Personalization

Impact Analysis

Gap Analysis





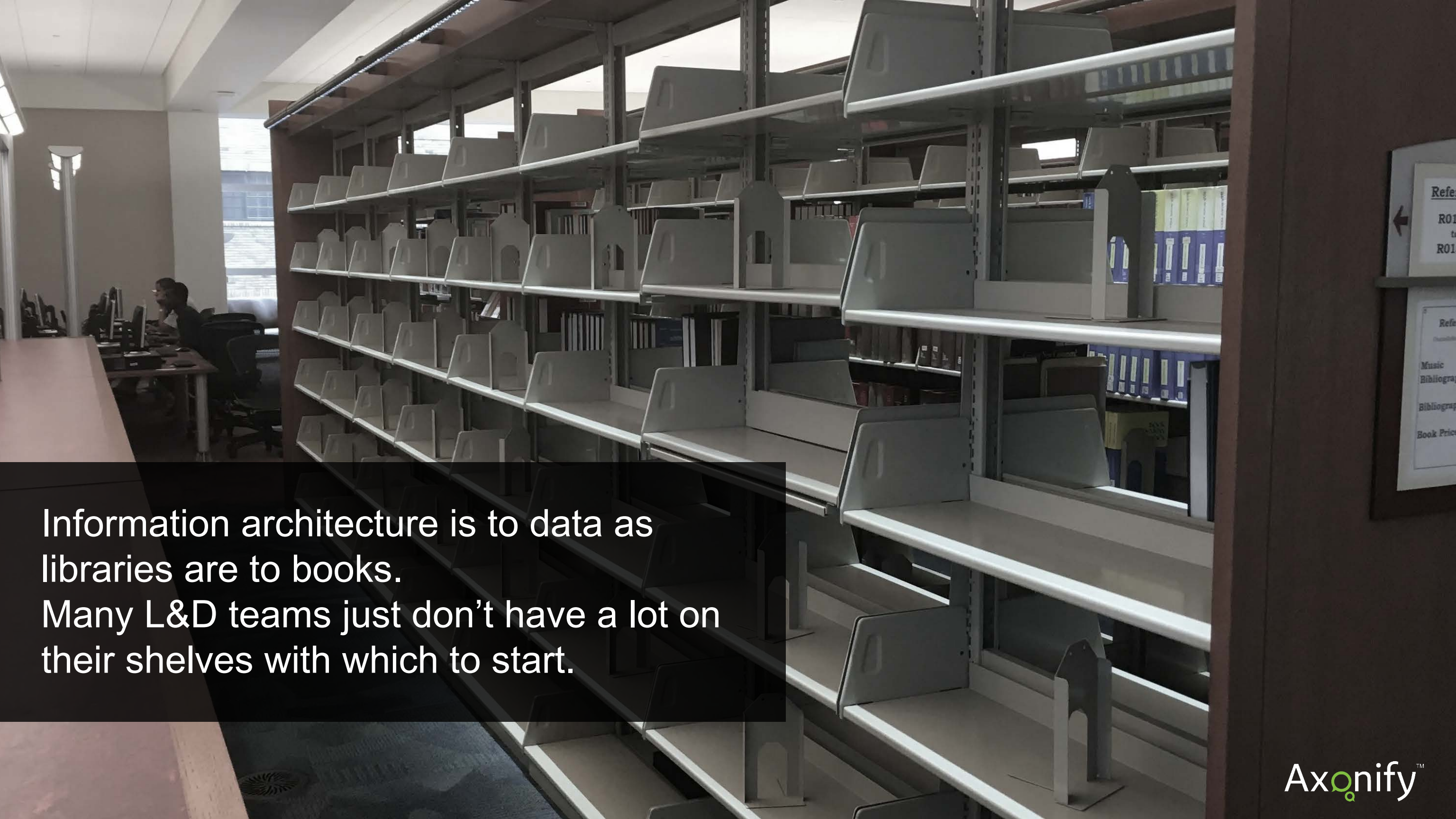
**AI**

**Machine  
Learning**

**Analytics**

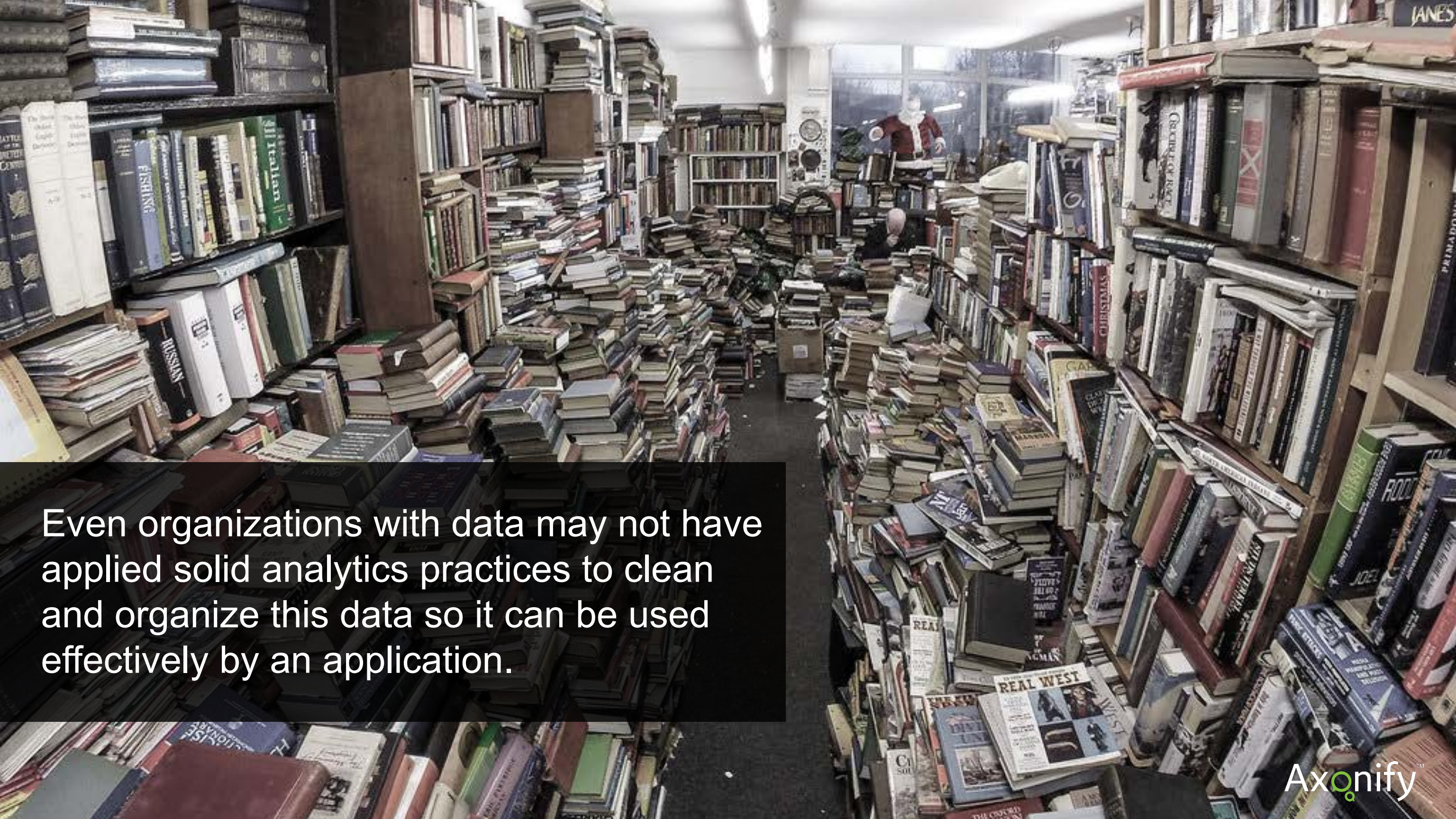
**Information  
Architecture**



A photograph of a library interior. In the foreground and middle ground, there are several rows of tall, white metal shelving units. Most of the shelves are empty, with only a few books visible on some of the lower shelves. The shelves have white plastic dividers. In the background, a person is sitting at a desk with a computer, working. The room has large windows on the right side, letting in natural light. The overall atmosphere is quiet and organized.

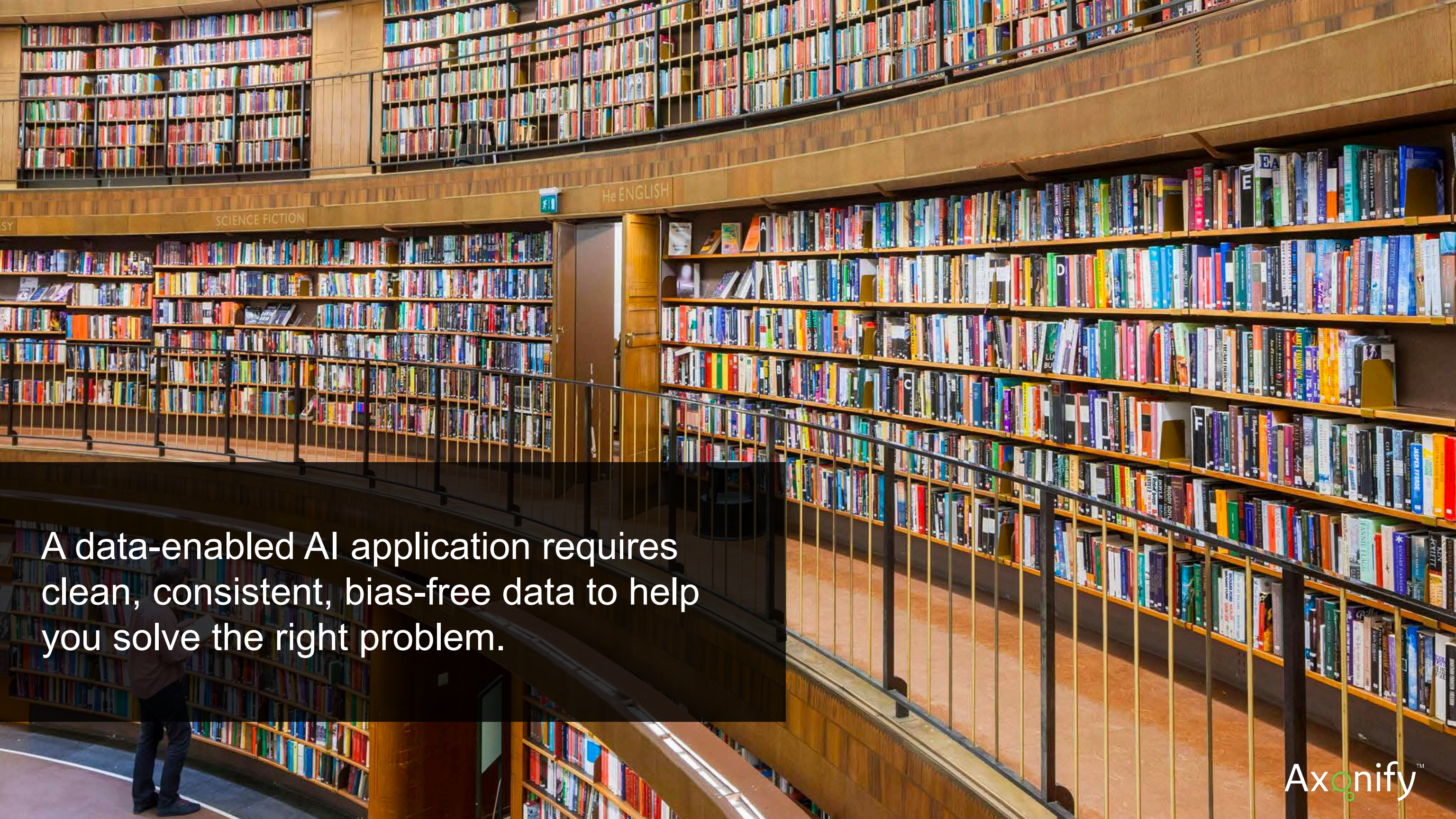
Information architecture is to data as  
libraries are to books.  
Many L&D teams just don't have a lot on  
their shelves with which to start.





Even organizations with data may not have applied solid analytics practices to clean and organize this data so it can be used effectively by an application.





A data-enabled AI application requires clean, consistent, bias-free data to help you solve the right problem.



# L&D does not have sufficient data to power **AI**.



## Level 4: Results

Results evaluation is the effect on the business or environment by the trainee.



## Level 3: Behavior

Behavior evaluation is the extent of applied learning back on the job—implementation.



## Level 2: Learning

Learning evaluation is the measurement of the increase in knowledge—before and after.



## Level 1: Reaction

Reaction evaluation is how participant feels about the training or learning experience.

Fixing the measurement problem begins with **mindset** – the way we think about learning in the modern workplace.



# data-rich **solution** design

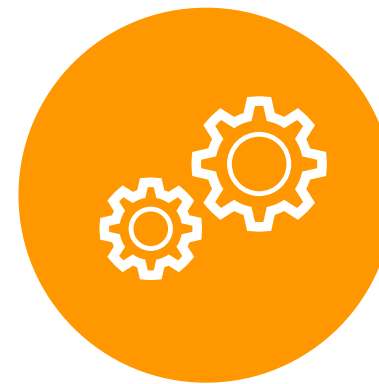
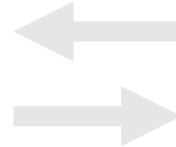
START HERE



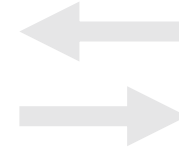
Determine the  
**right-fit** solution



Define the knowledge  
**required** to execute  
the expected behavior



Define the **observable**  
behavior required to  
achieve the result

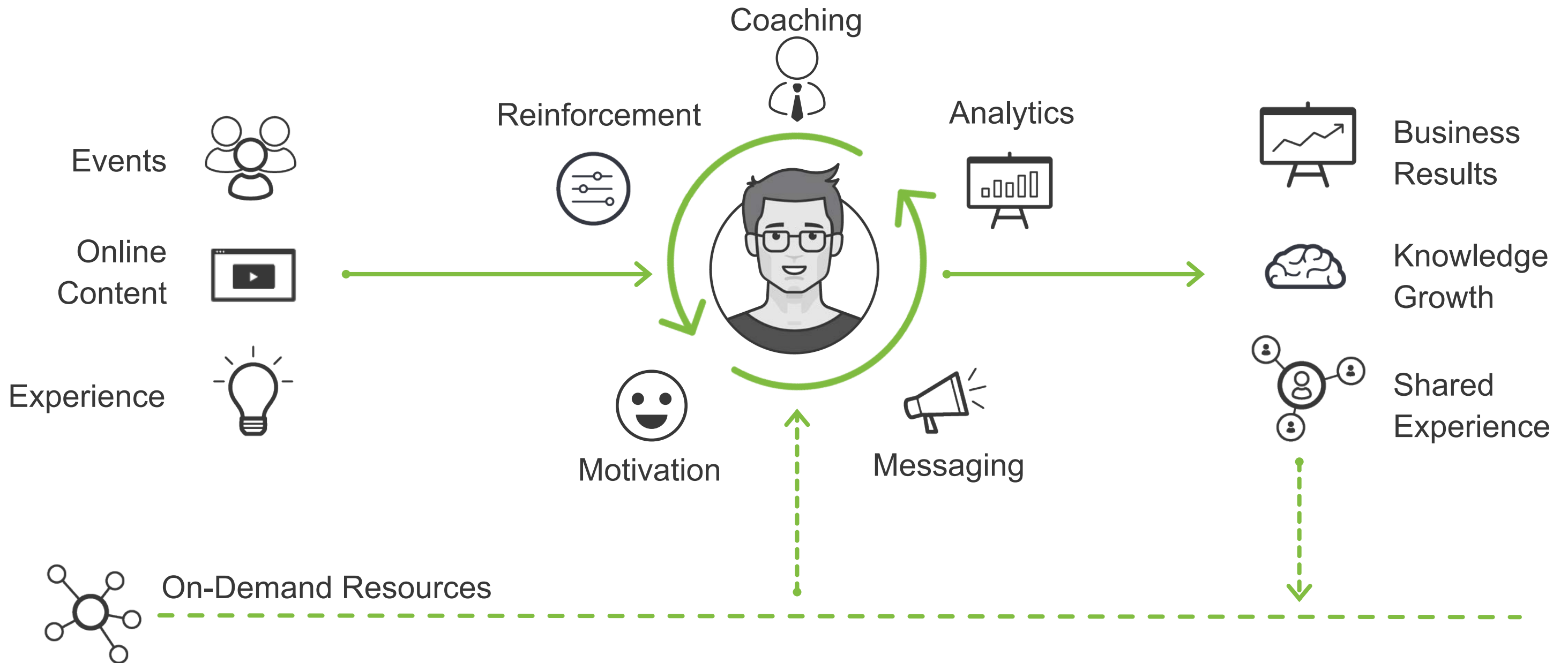


Agree on a clear,  
**measurable**  
business result



DESIGN + MEASUREMENT

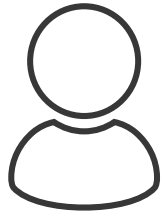
# data-rich **learning** tactics







# multi-dimensional data



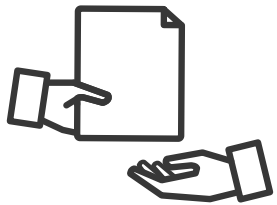
## Demographic

Who is this person?



## Connections

How does this person engage with the org?



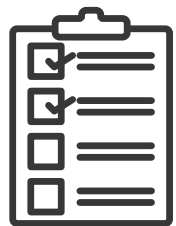
## Consumption

What has this person reviewed?



## Knowledge

What does this person know right now?



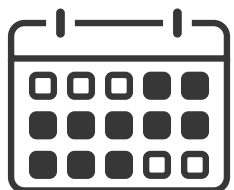
## Feedback

What does this person say they want/need?



## Behavior

What is this person doing on the job?



## Context

What else is happening around this person?



## Results

What impact is this person having on business outcomes?

## Adaptation

How can we continuously adapt our support tactics to ensure optimum results?

## Prediction

How are we projected to perform in the future with our key business goals?

## Outcomes

How is learning impacting business results and delivering ROI?



## Engagement

How are people engaging with learning opportunities?

## Learning

How is people's knowledge changing over time?

## Behaviors

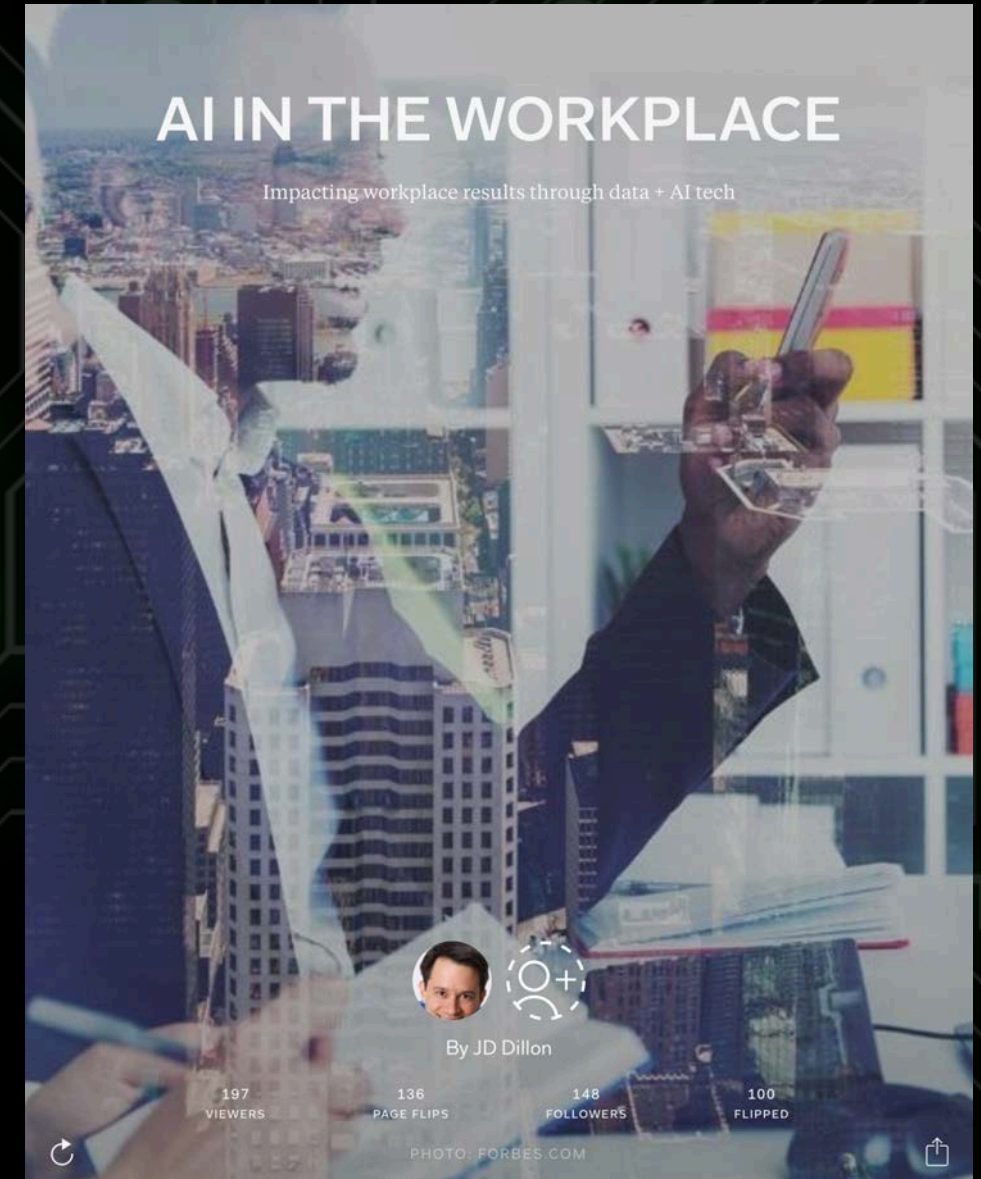
How are people's behaviors changing on the job?



**What steps can you take to **prepare**  
for the application of AI in L&D?**




- 1 | explore AI within your organization
- 2 | do your AI homework
- 3 | find the problems
- 4 | establish a vision for AI-enabled L&D
- 5 | fix your measurement practices
- 6 | partner with experts + providers
- 7 | solve specific problems
- 8 | evolve your role



[learngeek.co/ai](https://learngeek.co/ai)



A woman with curly hair, wearing a red sweater and a black apron, is smiling and looking at a tablet computer. She is standing in a modern cafe or restaurant. In the background, a man in a plaid shirt and black apron is working behind a counter. A woman with long brown hair is also visible in the background. The cafe has a chalkboard menu with various items written on it, including "sendvič sandwich" and "solate salads". The lighting is warm and modern.

As we explore AI, L&D must continue to focus on solving problems to help people do their best work every day.



## To summarize ...

- 1 | L&D is late to the AI party, but that's OK.
- 2 | AI is very good at very specific tasks.
- 3 | AI is not about tech. It's about solving problems.
- 4 | Meaningful AI is out of reach until we fix L&D measurement.
- 5 | To fix measurement, we must change how we approach learning.
- 6 | Don't try to solve this one on your own. Get expert help.





@JD\_Dillon



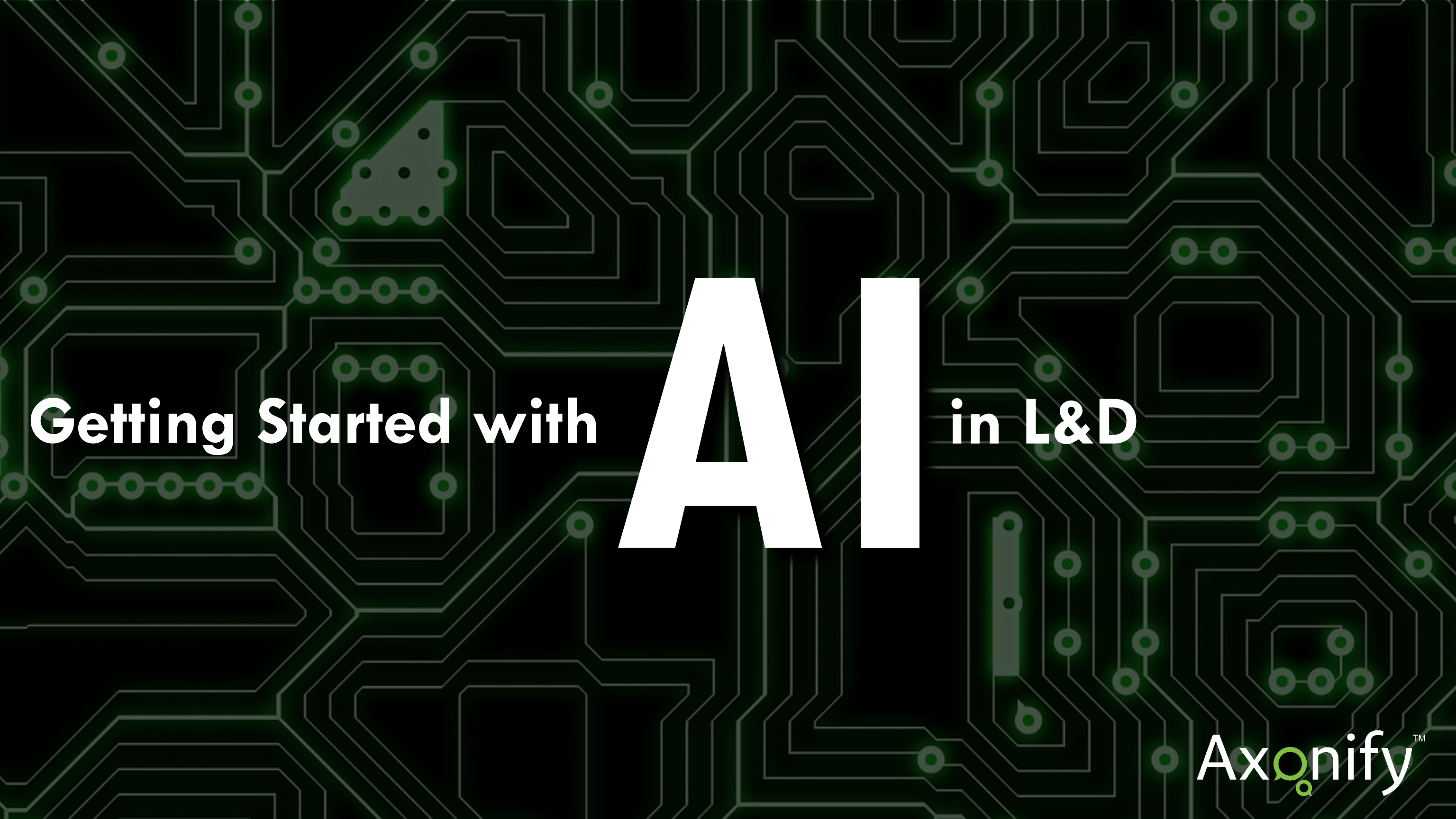
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