



# Modular, Data-driven, Adaptive: Future of Training

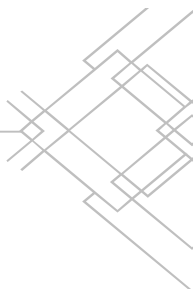
From the learning science company

ATD Webinar

Confidential



# Not much has changed...



# But consumer media looks like this now...



SEAMLESS

DATA-DRIVEN

GAMIFIED

INVISIBLE

SOCIAL

MICRO

INTEGRATED

HUMAN-CENTRIC

PERSONALIZED

CLOUD-BASED

# Modular content is everywhere



# What does this mean for learning?



vs.

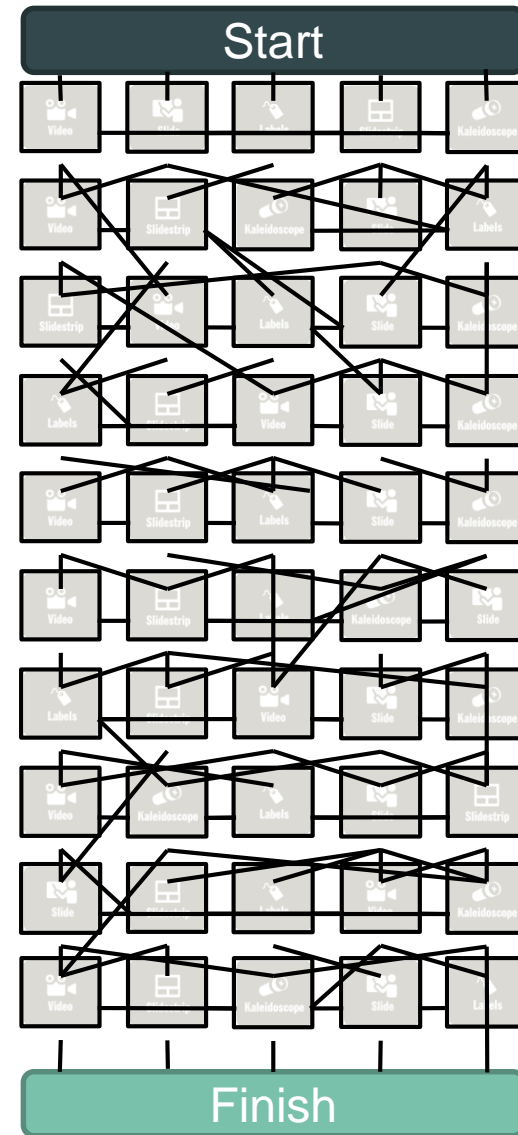




# Learners experience personalized and variable learning paths



vs.



# Adaptive path for average learner

Learner 1:  
Some LR's



# Adaptive path for new learner

Learner 2:  
Most LR's



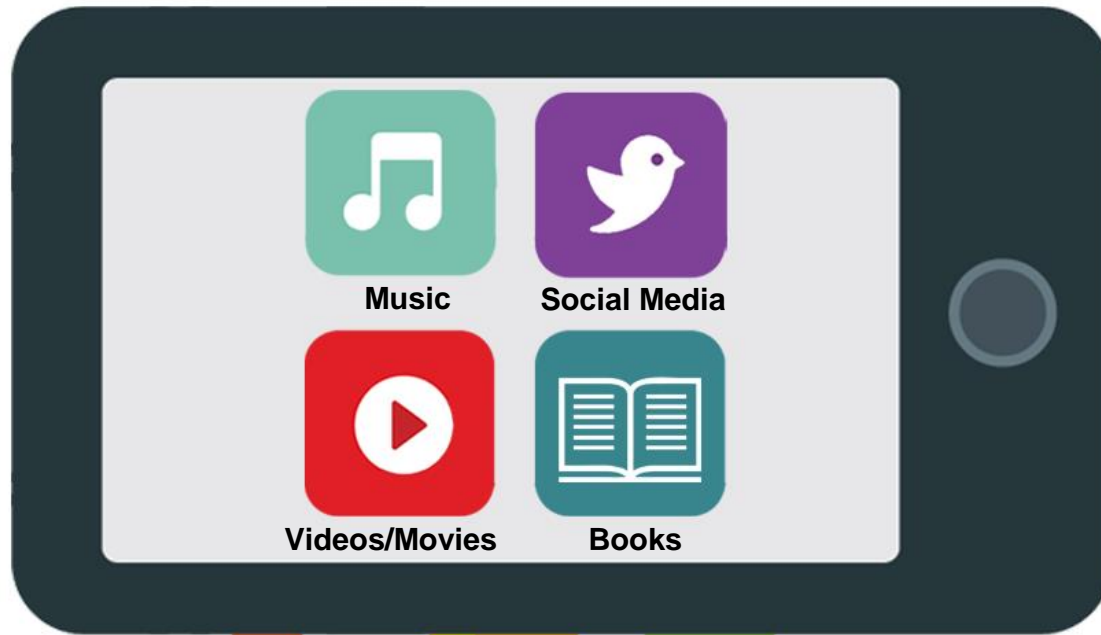


# Adaptive path for experienced learner

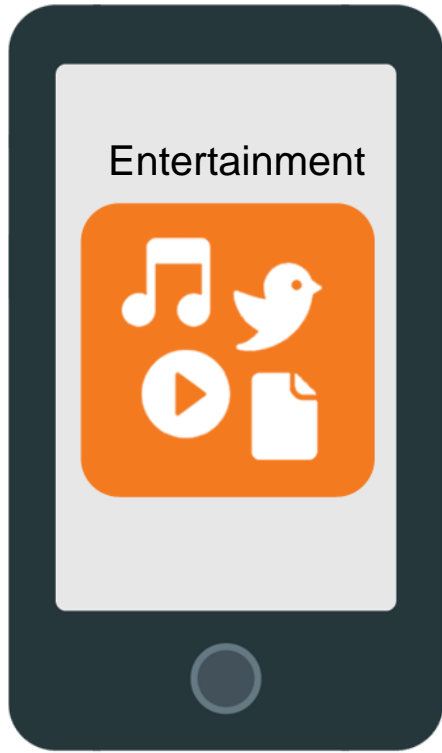
Learner 3:  
Few LR's



# Modular content becomes data-driven



# What is the big difference between learning and media?



Like



Dislike



Star  
Rating



Time



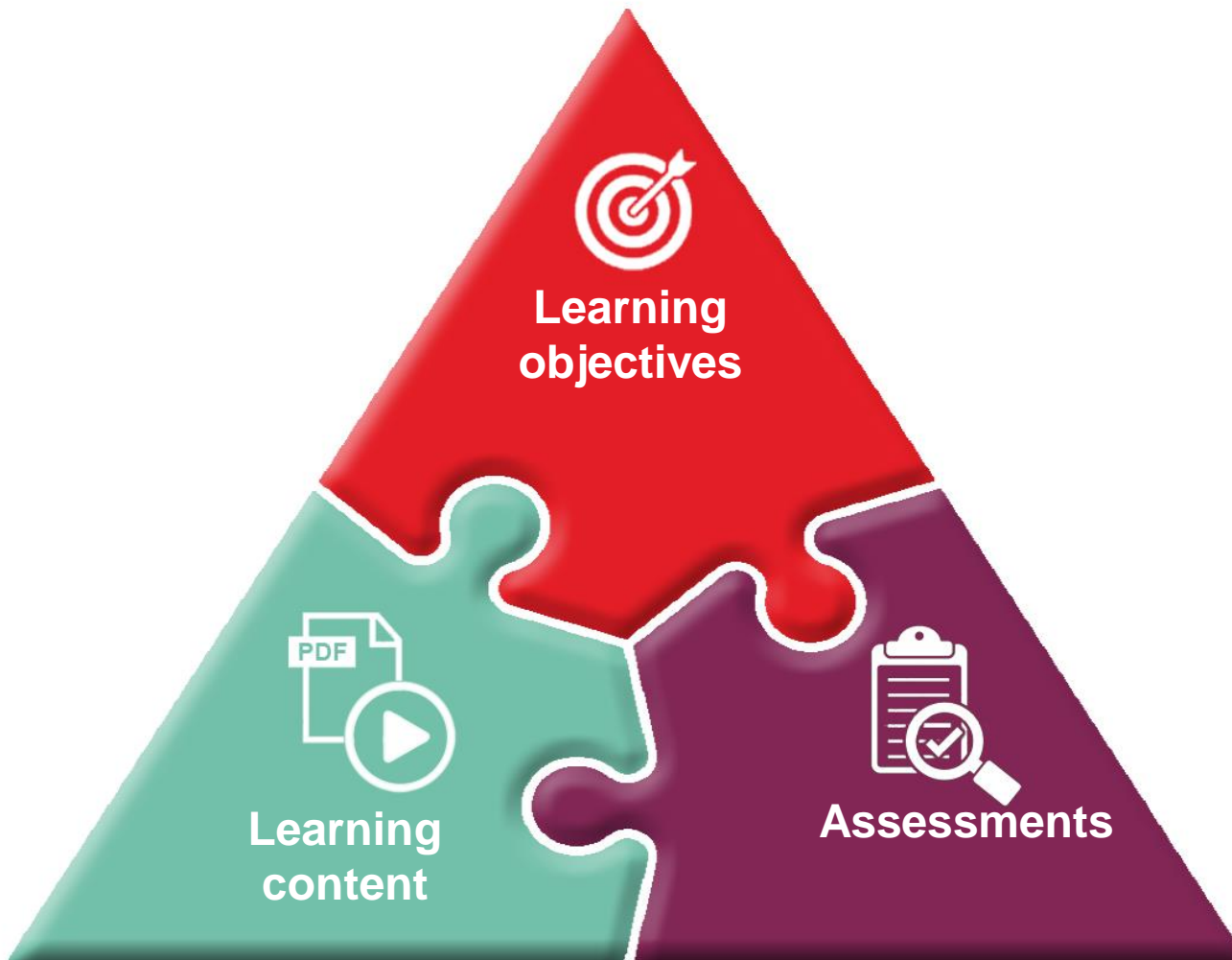
Tagging  
Factors



Demographic  
Factors



# Framework for understanding learning...



# A learning objective

*Each learning objective is aligned with a resource*

## The Balance Sheet

The purpose of the **balance sheet** is to report the financial position (amount of assets, liabilities, and stockholders' equity) of an accounting entity at a particular point in time. We can learn a great deal about what the balance sheet reports just by reading the statement from the top. The balance sheet of Maxidrive Corp., presented by its former owners to Exeter Investors, is shown in Exhibit 1.2.

### Structure

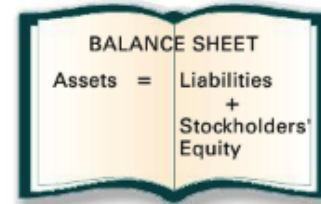
Notice that the **heading** specifically identifies four significant items related to the statement:

1. **Name of the entity**, Maxidrive Corp.
2. **Title of the statement**, Balance Sheet.
3. **Specific date of the statement**, At December 31, 2010.
4. **Unit of measure** (in thousands of dollars).

The organization for which financial data are to be collected, called an **accounting entity**, must be precisely defined. On the balance sheet, the business entity itself, not the business owners, is viewed as owning the resources it uses and as owing its debts. The heading of each statement indicates the time dimension of the report. The balance sheet is like a financial snapshot indicating the entity's financial position at a specific point in time—in this case, December 31, 2010—which is stated clearly on the balance sheet. Financial reports are normally denominated in the currency of the country in which they are located. U.S. companies report in U.S. dollars, Canadian companies in Canadian dollars, and Mexican companies in Mexican pesos. Medium-sized companies such as Maxidrive often report in thousands of dollars; that is, they round the last three digits to the nearest thousand. The listing of Cash \$4,895 on Maxidrive's balance sheet actually means \$4,895,000.

Maxidrive's balance sheet first lists the company's assets. Assets are economic resources owned by the entity. It next lists its liabilities and stockholders' equity. They are the sources of

A **BALANCE SHEET** (Statement of Financial Position) reports the amount of assets, liabilities, and stockholders' equity of an accounting entity at a point in time.



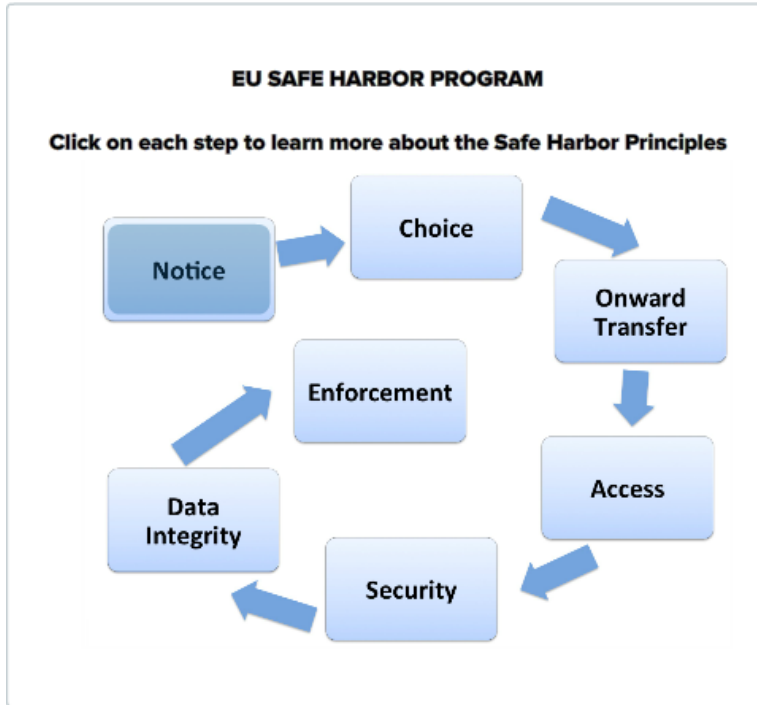
An **ACCOUNTING ENTITY** is the organization for which financial data are to be collected.

Recount the date of the balance sheet  
nancy lynch 3/6/2011 7:12:05 PM

The heading of each statement indicates the time dimension of the report. The balance sheet is like a financial snapshot indicating the entity's financial position at a specific point in time—in this case, December 31, 2010—which is stated clearly on the balance sheet.

# A learning resource

## Safe Harbor Program



Click on a step in the chart to the left to learn more about the Safe Harbor Program.

**Notice**

Organizations must notify individuals about the purpose for which they collect and use information.

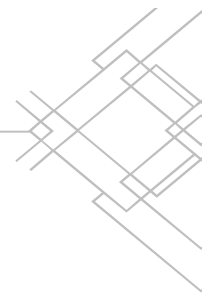
GIVE FEEDBACK



OK



# An assessment



Below is a screenshot from SmartBook (the learner tool). It probes the learner's mastery of the underlying learning objective linked to the learning resource.

A financial statement heading notes that it was prepared: "For the Year Ended December 31, 2010." This would be the: (Check all that apply.)

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Check **all** that apply.

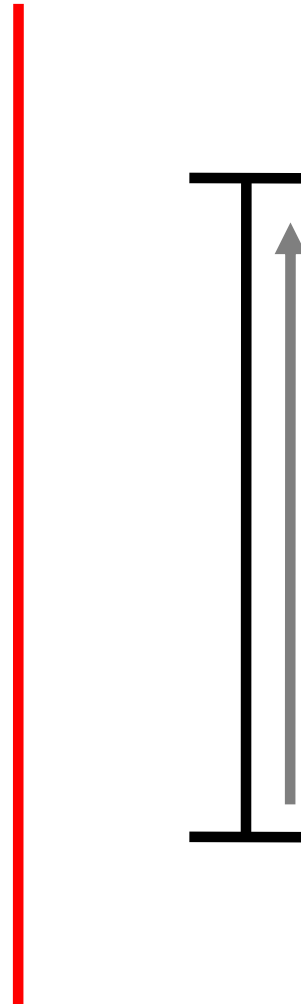
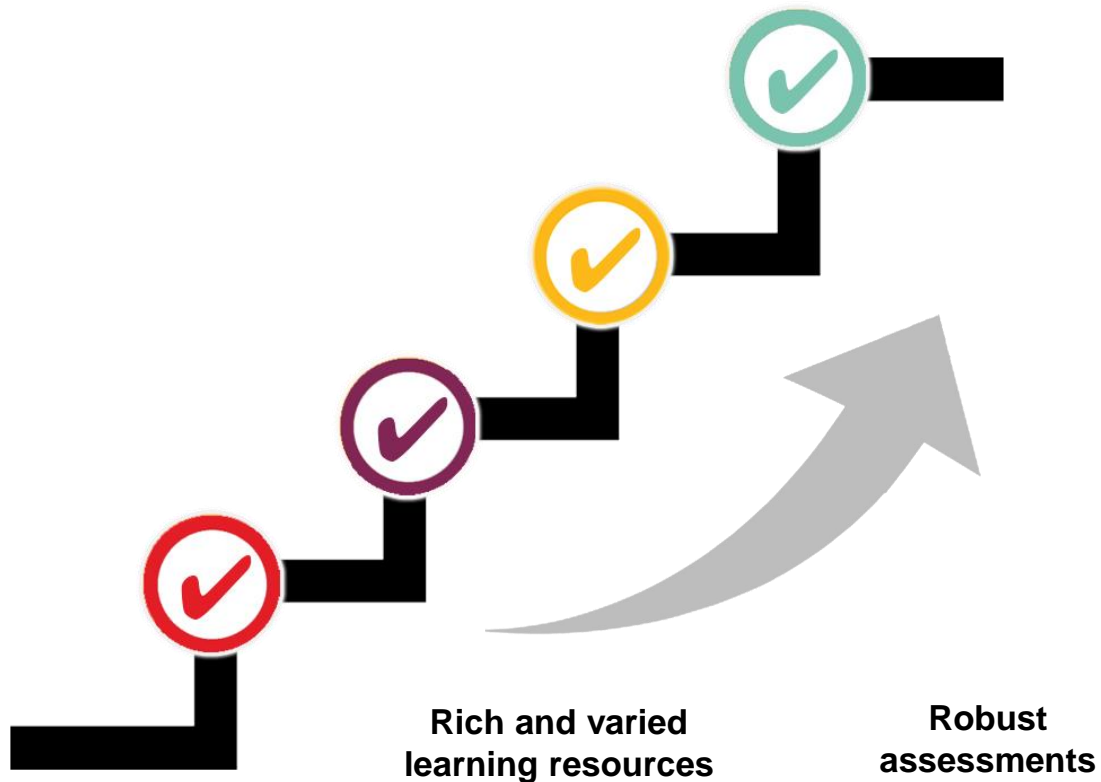
- statement of cash flows.
- statement of retained earnings.
- income statement.
- balance sheet.

Do you know the answer?

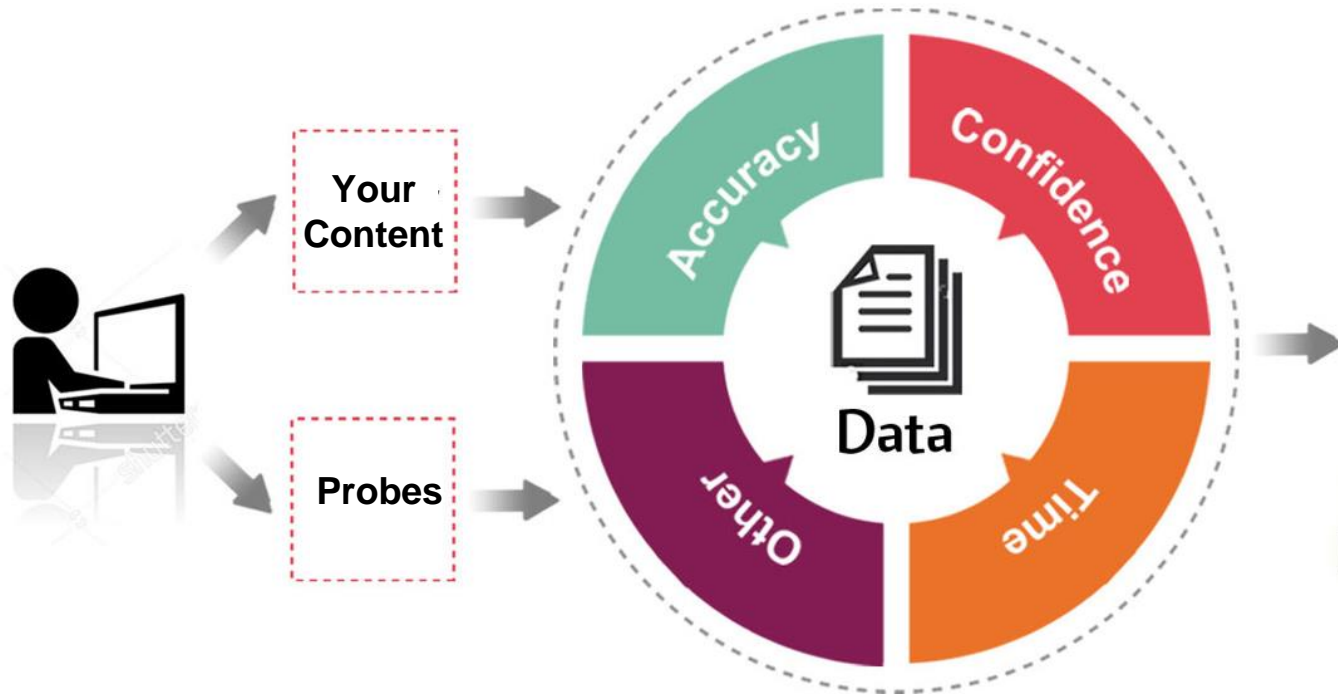
[Read about this](#)

**I know it**   **Think so**   **Unsure**   **No idea**

# Assessments are key



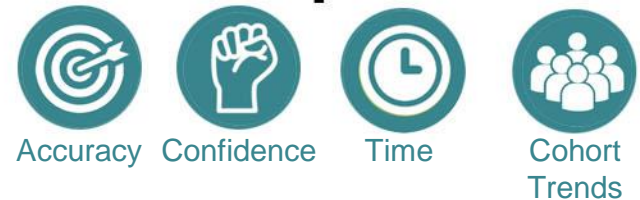
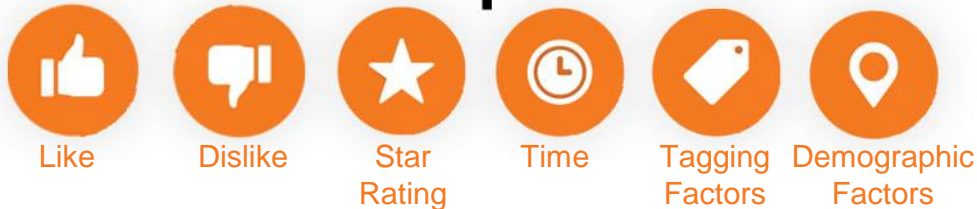
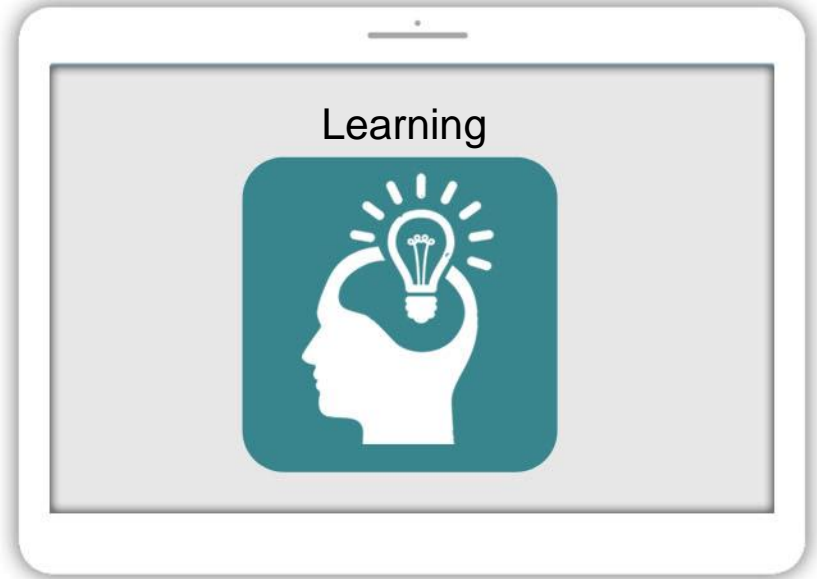
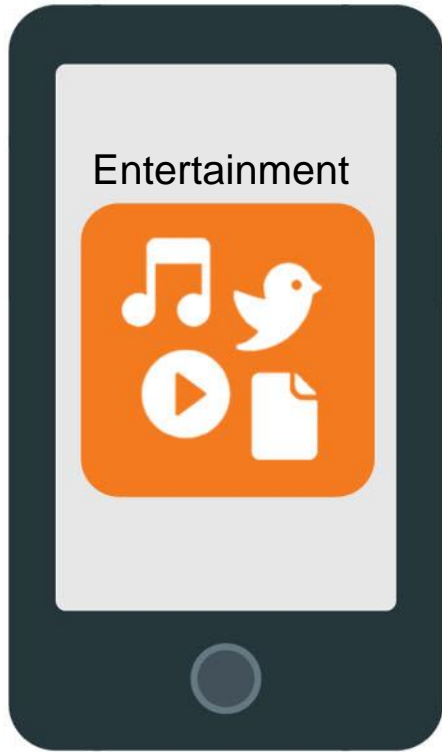
# Driving personalized learning paths with data



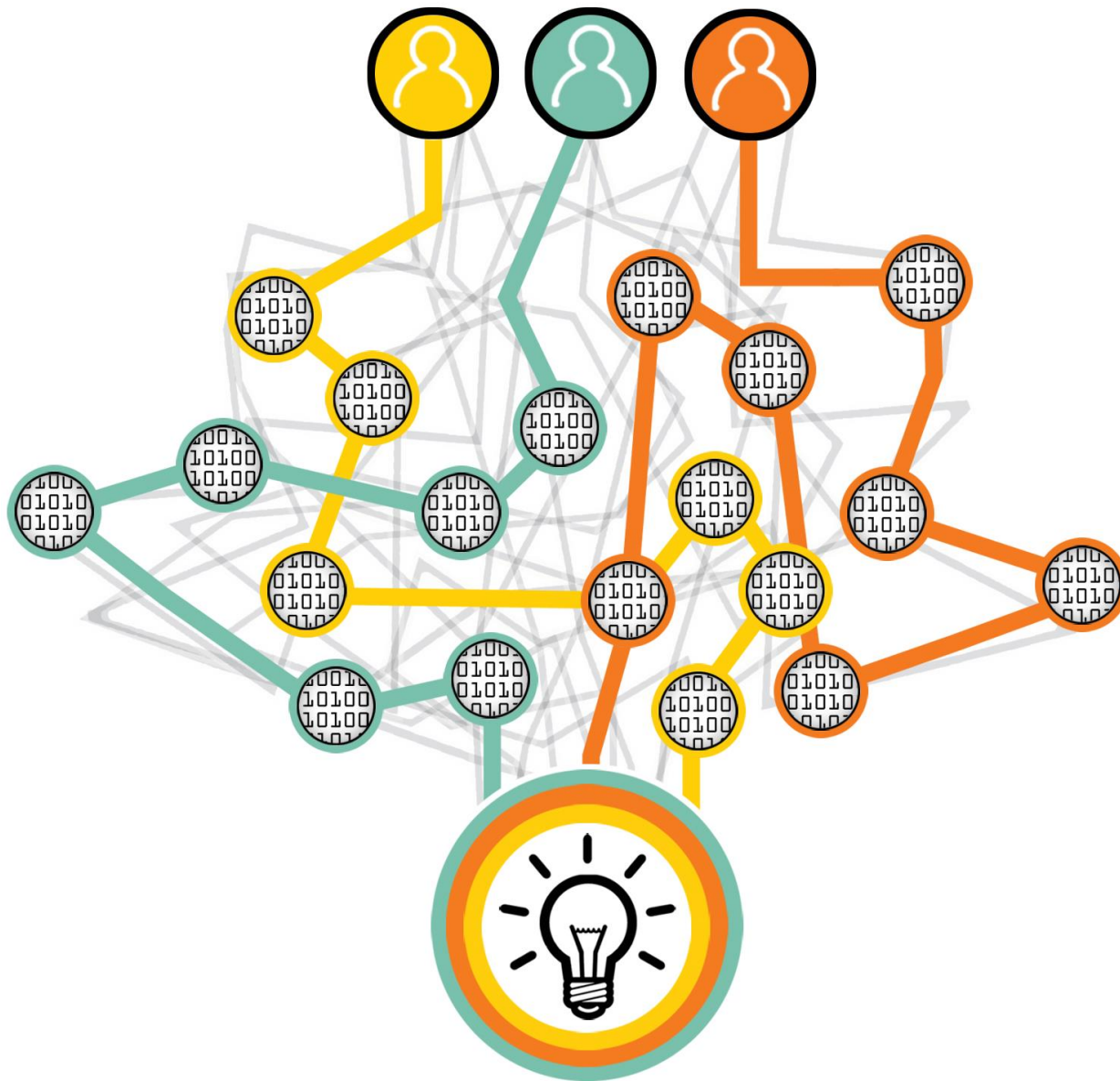
# Driving personalized learning paths with data



# Data used to optimize each learner's experience



# But what exactly drives the personalized paths?





# Learning science drives MHE technology, informs our design



**Metacognitive  
Theory<sup>1</sup>**



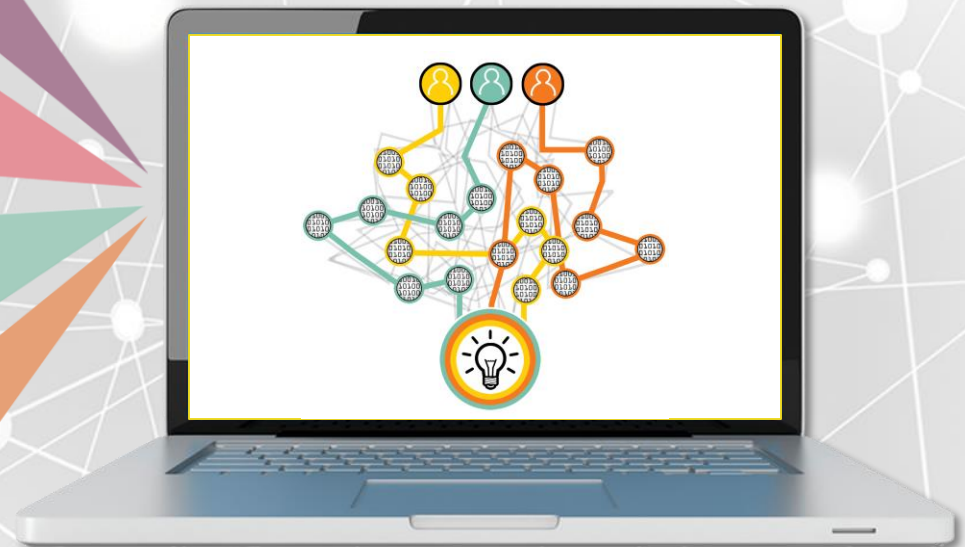
**The Theory of  
Deliberate Practice<sup>2</sup>**



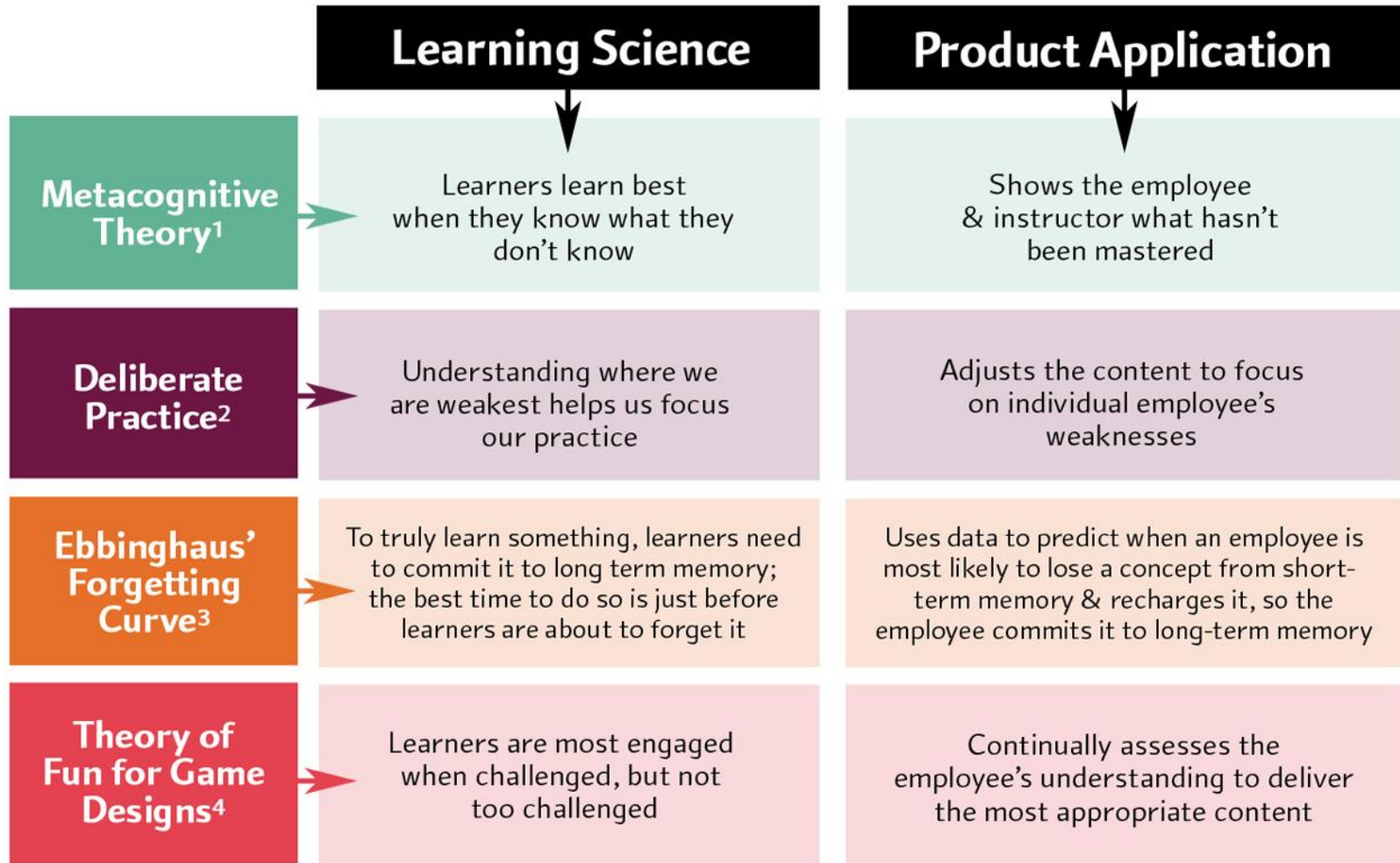
**The Theory of  
Fun for Game Design<sup>3</sup>**



**Ebbinghaus  
Forgetting Curve<sup>4</sup>**

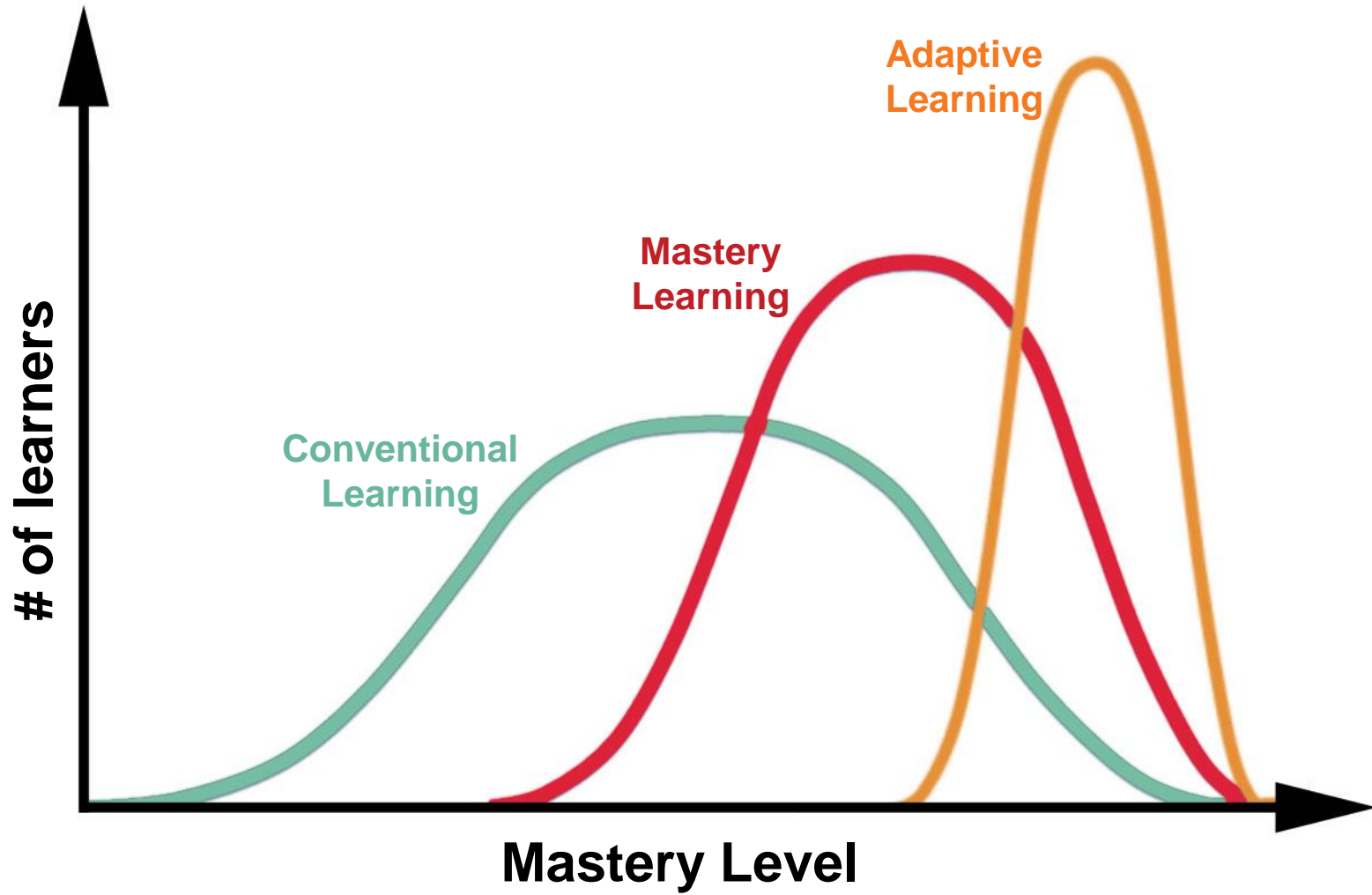
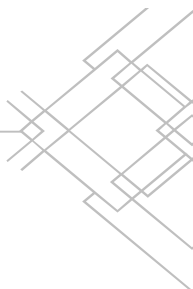


# Product application for each learning theory

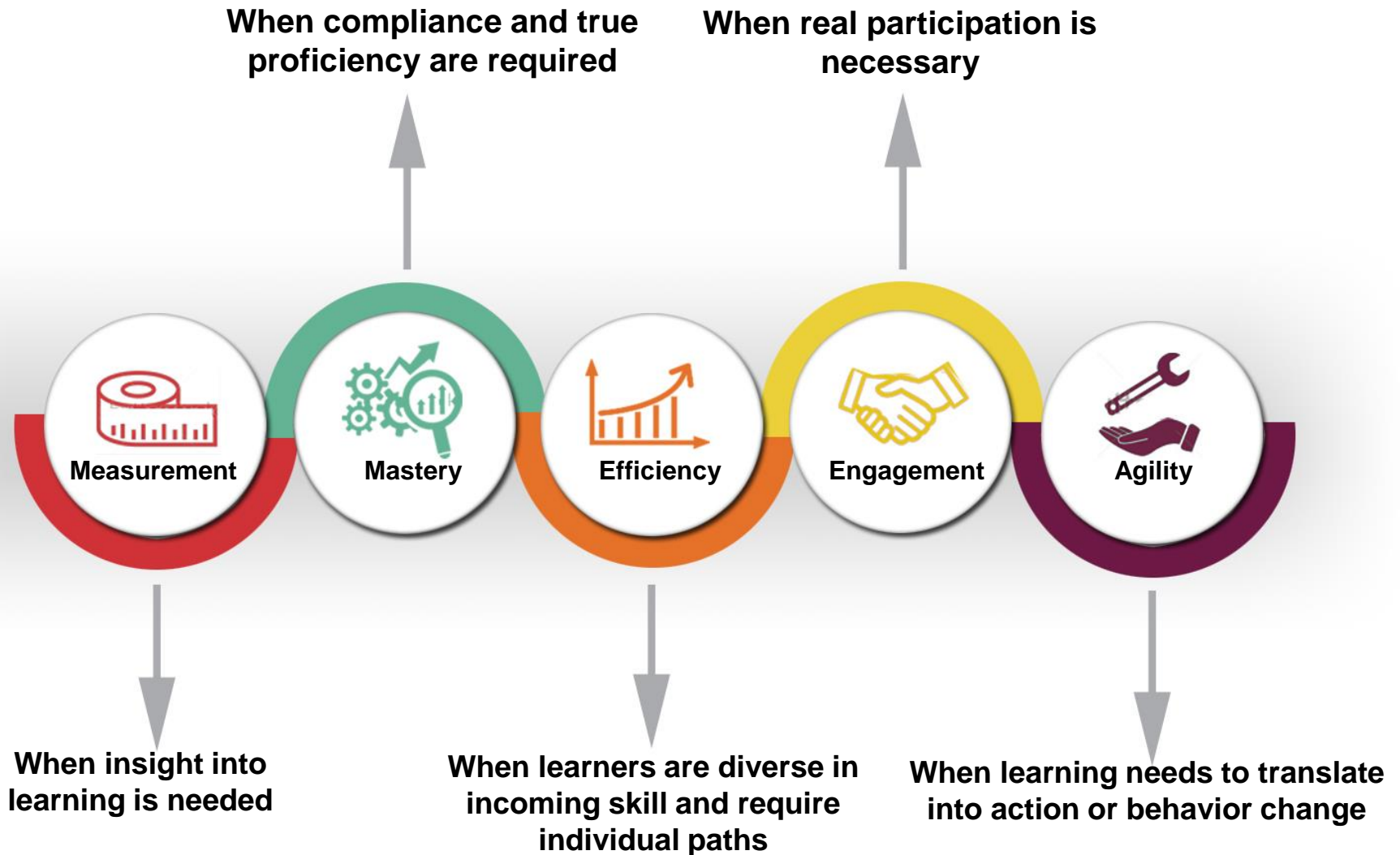
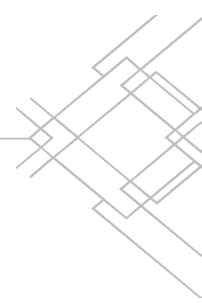


1. Flavell, J. H. "Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry." American Psychologist (1979) 34, 906 - 911. Print.  
 2. Ericsson, K. Anders, Krampe, Ralf Th., Clemens Tesch-Romer. "The Role of Deliberate Practice in the Acquisition of Expert Performance." Psychological Review Vol. 100 No. 3 (1993) 363-406. Print.  
 3. Ebbinghaus, Herman, Trans. Clara E. Bussenius and Henry A. Ruger Memory: A Contribution to Experimental Psychology. Eastford, CT: Martino Fine Books, 2-11. Print.  
 4. .Koster, Raph. A Theory of Fun for Game Design. Scotts dale, AZ: Paraglyph Press, Inc., 2005. Print.

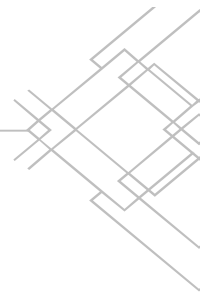
# Adaptive learning leads to better outcomes



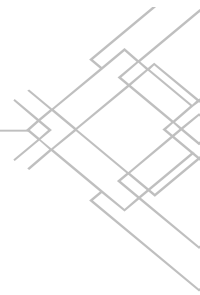
# Beyond the individual: unlock organizational performance



# The Evolution of Corporate Learning



# The Evolution of Corporate Learning



1990's

**Traditional and Computer-Assisted Training**

Instructor and Computer-based (CBT)  
LMS becomes the Administrative Platform

2000 +

**The E-Learning Era**

Materials On-Line, Information vs. Instruction

2005 +

**Blended and Informal Learning**

Mixing forms of media with informal learning  
Learning on demand with Integrated Programs

2009 +

**Collaborative, Talent-Driven Learning**

Formalize Informal Learning  
Collaboration and talent management by Design

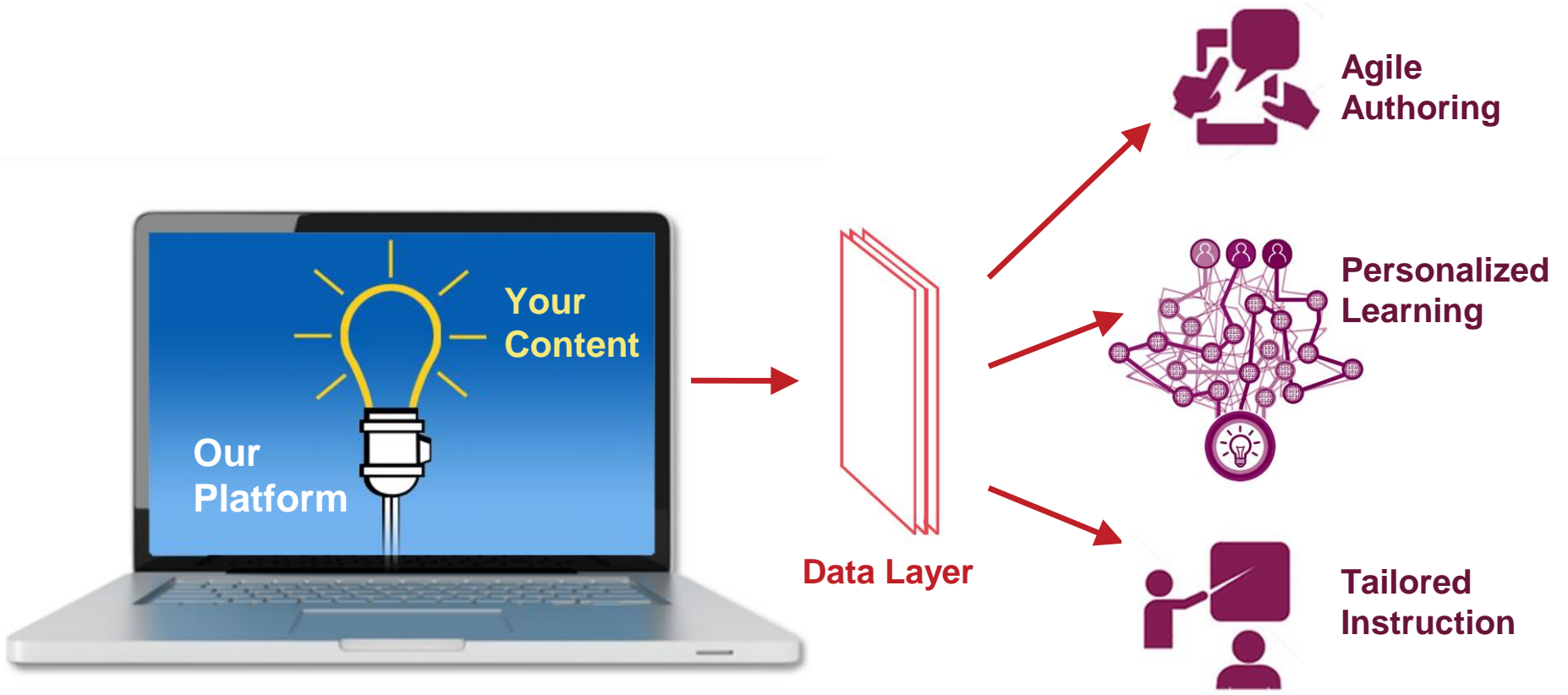
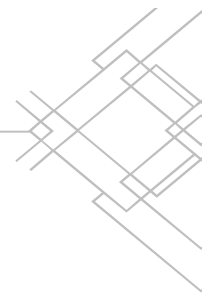
2016 +

**Mastery-Based Adaptive Learning**

Personalized, Competency-Based  
Data-Driven, Digital, Seated in Science



# Powerful data layer with advanced analytics



# Benefits for every stakeholder



## LEARNER

- A personalized experience
- Self-paced and easy-to-use
- 100% mastery of objectives



## AUTHOR

- Eliminates course versioning
- Real-time feedback for agile authoring



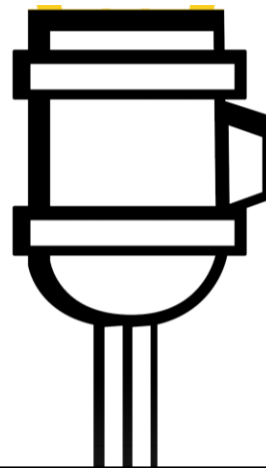
## MANAGER/TRAINER

- Measureable and easily reportable outcomes
- Improved efficiency and retention
- Direct savings in cost to train






# Improvement across all applications



**COMPLIANCE  
CERTIFICATION  
ONBOARDING**



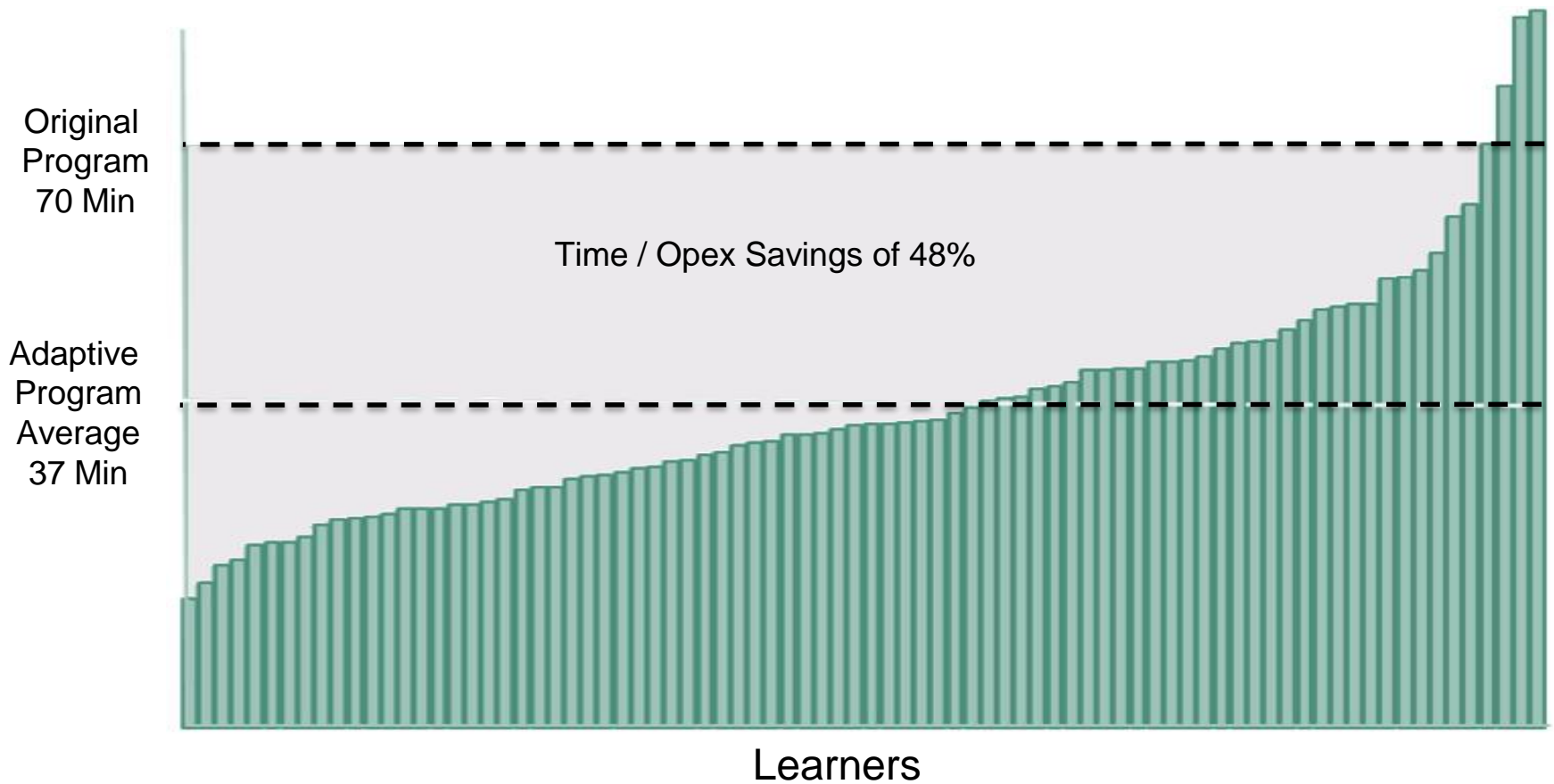
# ROI: Possible metrics to evaluate learning

ROI METRIC	DESCRIPTION	EXAMPLE
 <p>Measurement</p>	Data layer allows stakeholders to identify trends (learning, content, and cohort analytics down to the objective)	75% of learners who exceed their sales quota are aware of their accuracy 80% of the time, in addition to achieving 100% mastery.
 <p>Mastery</p>	100% mastery of all learning objectives (increase in proficiency rates, organizational readiness)	1000 learners are certified (achieved 100% mastery of 50 Learning Objectives, up from 75% mastery).
 <p>Efficiency</p>	Reduces training time (opex savings, increased productivity in redistributed full-time hours)	45% increase in efficiency due to transition from one-size-fits all to personalized learning.
 <p>Engagement</p>	Right content at right time makes learning inspire (increased retention, improved quantitative and qualitative survey data)	90% of learners would recommend the course to others. 100% of learners completed the course, up from 50%.
 <p>Agility</p>	Real-time analytics means real-time action for all stakeholders (leads to increased revenue, margin, market penetration)	Learner data has been used to make course revisions and decreased the versioning time required by 30%.

# Case Study | Data improves learning efficiency

IT Services Industry  
Fixed 70 Min Webinar w/test  
Conversion to Adaptive Platform

All Gained 100% Mastery





We exist to unlock the full potential of every learner



**Mc  
Graw  
Hill  
Education**

# Questions ?

