



Assess the impact of training

apprentx
by Edgenda



Agenda



Example of an evidence-based approach to learning assessment



Why don't we measure?



The urgency of measuring now!



Two learning evaluation models



Evaluation strategy and indicators



Now, what do we do? Game Plan



Resources and Questions



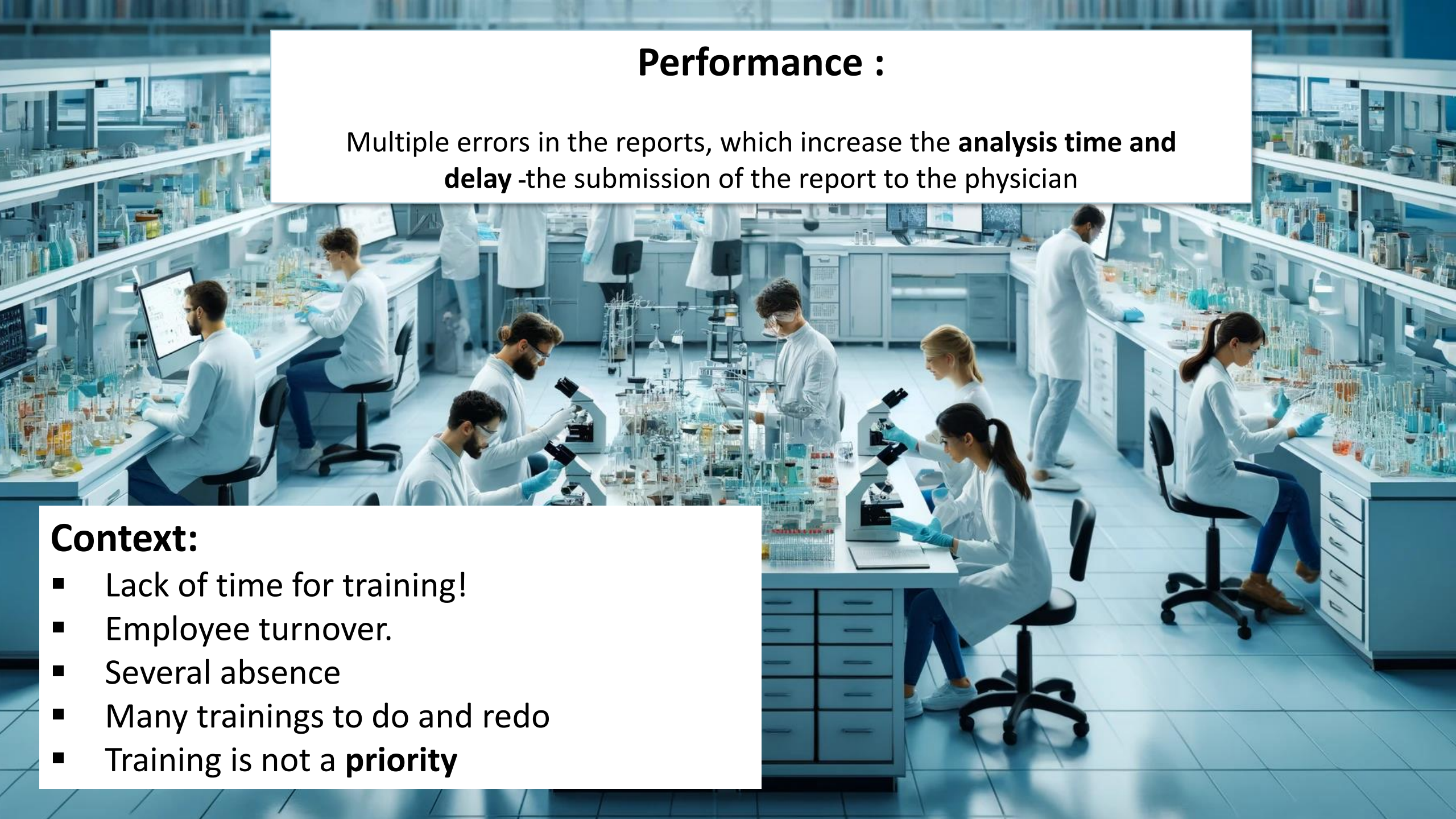
Example of an evidence-based approach to learning assessment

Performance :

Multiple errors in the reports, which increase the **analysis time and delay** -the submission of the report to the physician

Context:

- Lack of time for training!
- Employee turnover.
- Several absence
- Many trainings to do and redo
- Training is not a **priority**



Example of an Evidence-Based Approach to Learning Assessment

1. Inventory of errors and performance criteria

- Increase in real anomaly detections (performance threshold)
- Decrease in incorrect interpretations (false positives/false negatives)
- Non-compliance errors

2. Team communication: measuring progress

3. One learning activity per week: measurement

4. Check-ins and feedback with data

Evaluation of Prior Knowledge

Indicators by Topic

Knowledge Topic	Knowledge	Confidence
Chromosome classification	83%	71%
Theoretical knowledge	42%	69%
Efficiency	68%	78%
FISH	67%	69%
Anomaly identification	66%	71%
ISCN	83%	75%
Technique	44%	71%



Needs to be strengthened
High risk of error

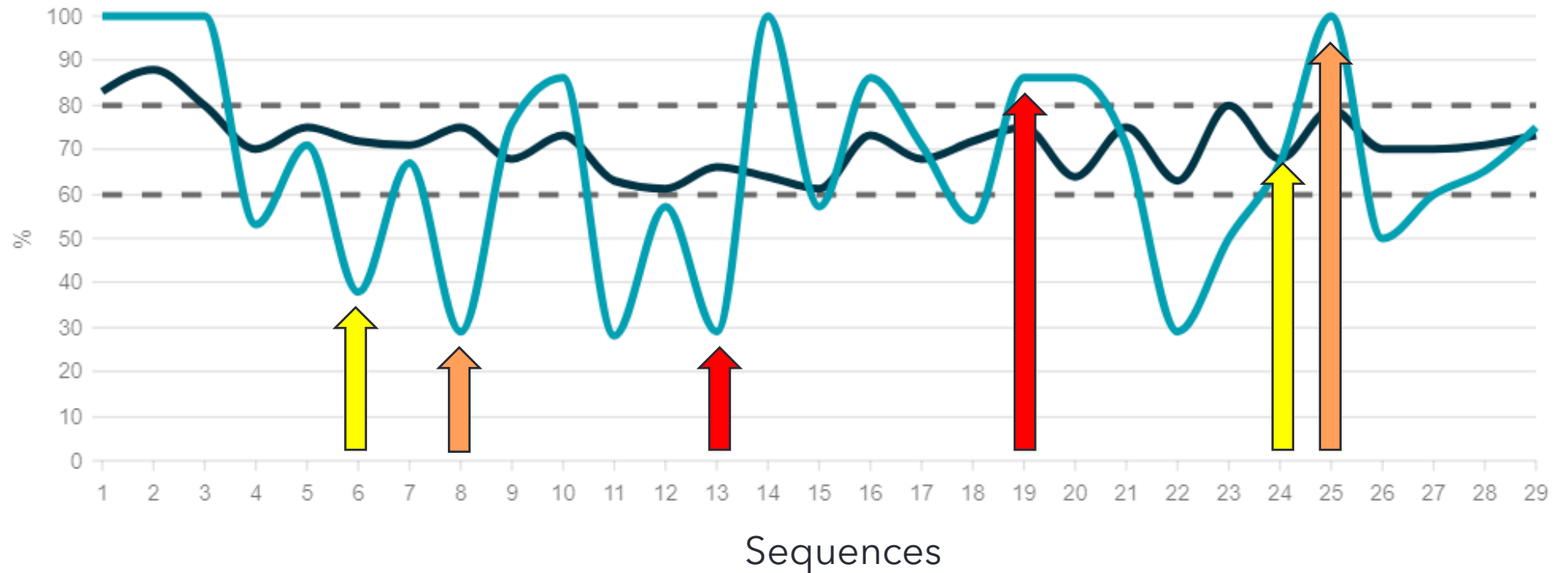
Repetitions to Foster Progress

Repeated Sequences and Success Rates:

#S6: 40% vs 67% (yellow)

#S8: 30% vs 100% (blue)

#S13: 25% vs 86% (red)



Results

Starting from 3 months: Decrease in errors and reduction in analysis time and report to the physician.

Time savings for supervisors and clinical specialists.

Awareness of the impact of theoretical knowledge.

Recognition and appreciation for employees.

Increase in personal sense of effectiveness.

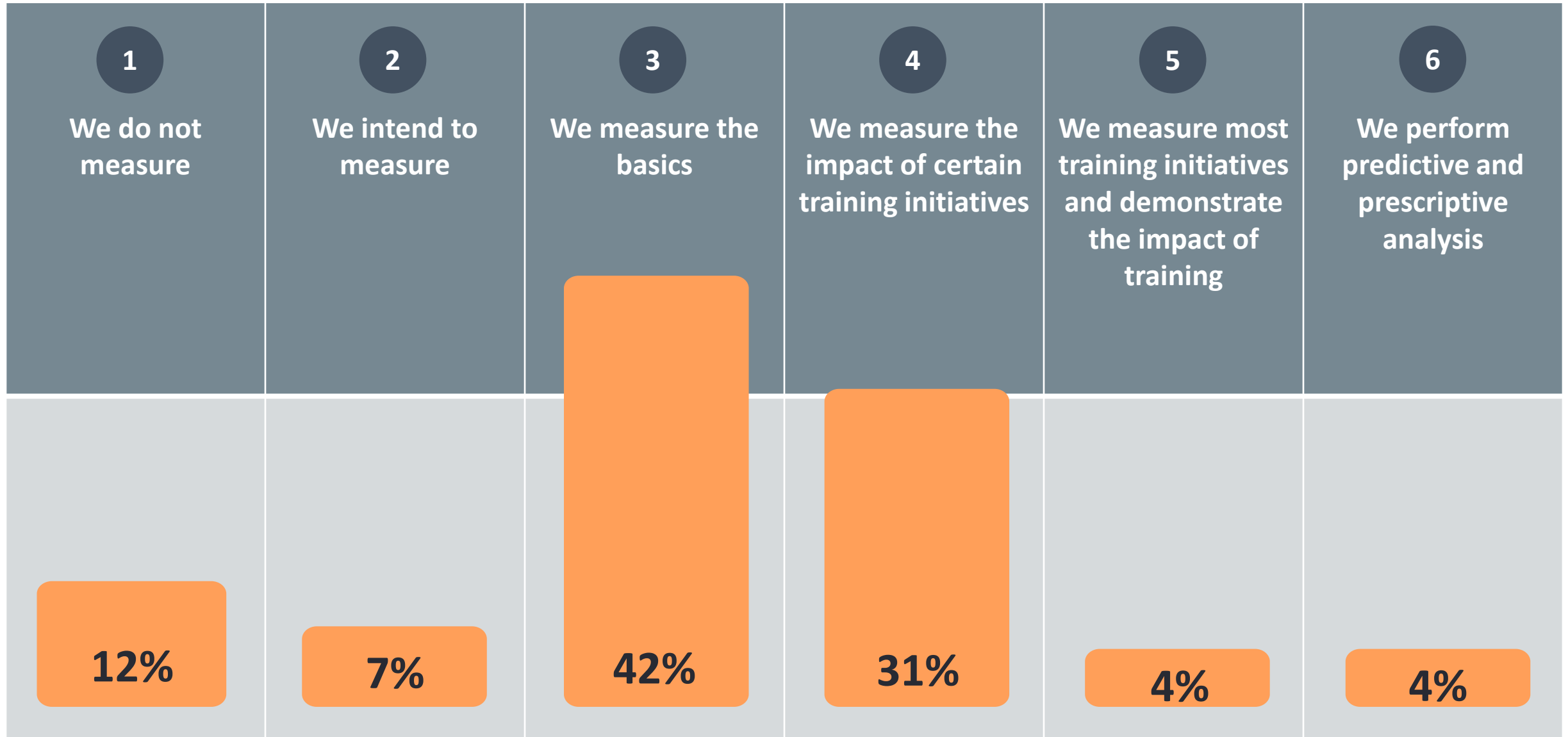
Stress reduction.





Why don't we
measure?

Where does your organization stand regarding learning measurement?







Why don't we measure?

The Organization	The ID/Trainer	The Learner
<ul style="list-style-type: none">▪ Priority on operational results▪ Data disconnected from real impact▪ No budget▪ Low psychological safety▪ Limited involvement from managers	<ul style="list-style-type: none">▪ Not a priority▪ Too complex▪ Lack of performance data▪ Focus on content, not impact▪ Fear of negative results▪ Fear of inducing stress on learners	<ul style="list-style-type: none">▪ Negative perception of measurement: stress▪ Difficulty seeing their progress▪ Fear of failure▪ Lack of feedback▪ Relevance to the actual task is unclear

Without evaluation, we
move forward blindly,
which reduces the
effectiveness of
learning.

What do you measure most often in your daily life and why?





120 million

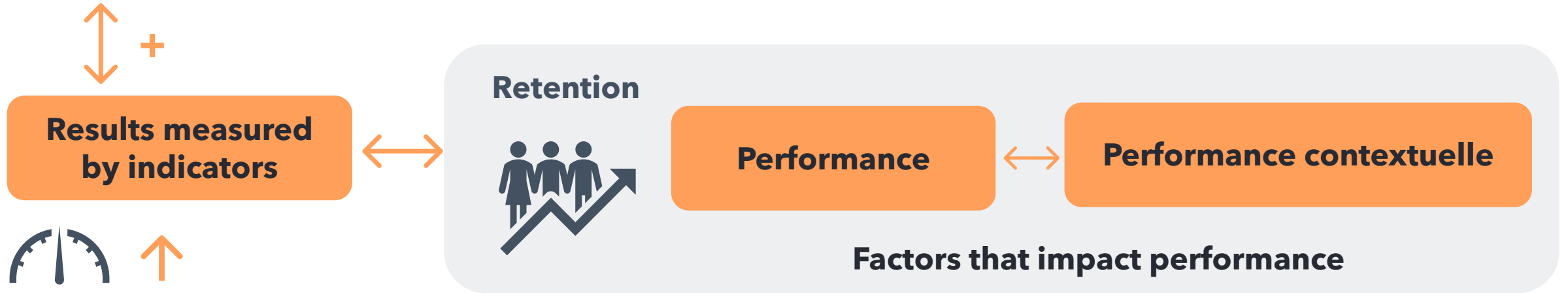


The urgency of
measuring now!

By measuring learning, we enable employees to grow, excel in their work, and reduce their stress.

Evolving from a service provider to a strategic partner

Priorities: Efficacy, Reduction, Simplicity, Engagement, Health



Learning measurement is the #1 tool to demonstrate value generated and support progress.

Learning Solutions



- Job sustainability: becoming essential
- Designing content (AI)
- Transition from order-taker to strategic advisor
- Expertise makes the difference
- Sense of effectiveness

What motivates me at work?

	35 and under	36-44	45-54	55 and over
Doing my job faster and/or better	56%	54%	46%	51%
Being able to meet the expectations of my role	51%	49%	51%	54%
Allowing me to better support the organization	32%	31%	31%	34%
Reducing anxiety about my knowledge	27%	26%	20%	19%



Two learning evaluation models

Former Kirkpatrick-Katzell Model

Niveau 1 : Reaction

Niveau 2 : Learning

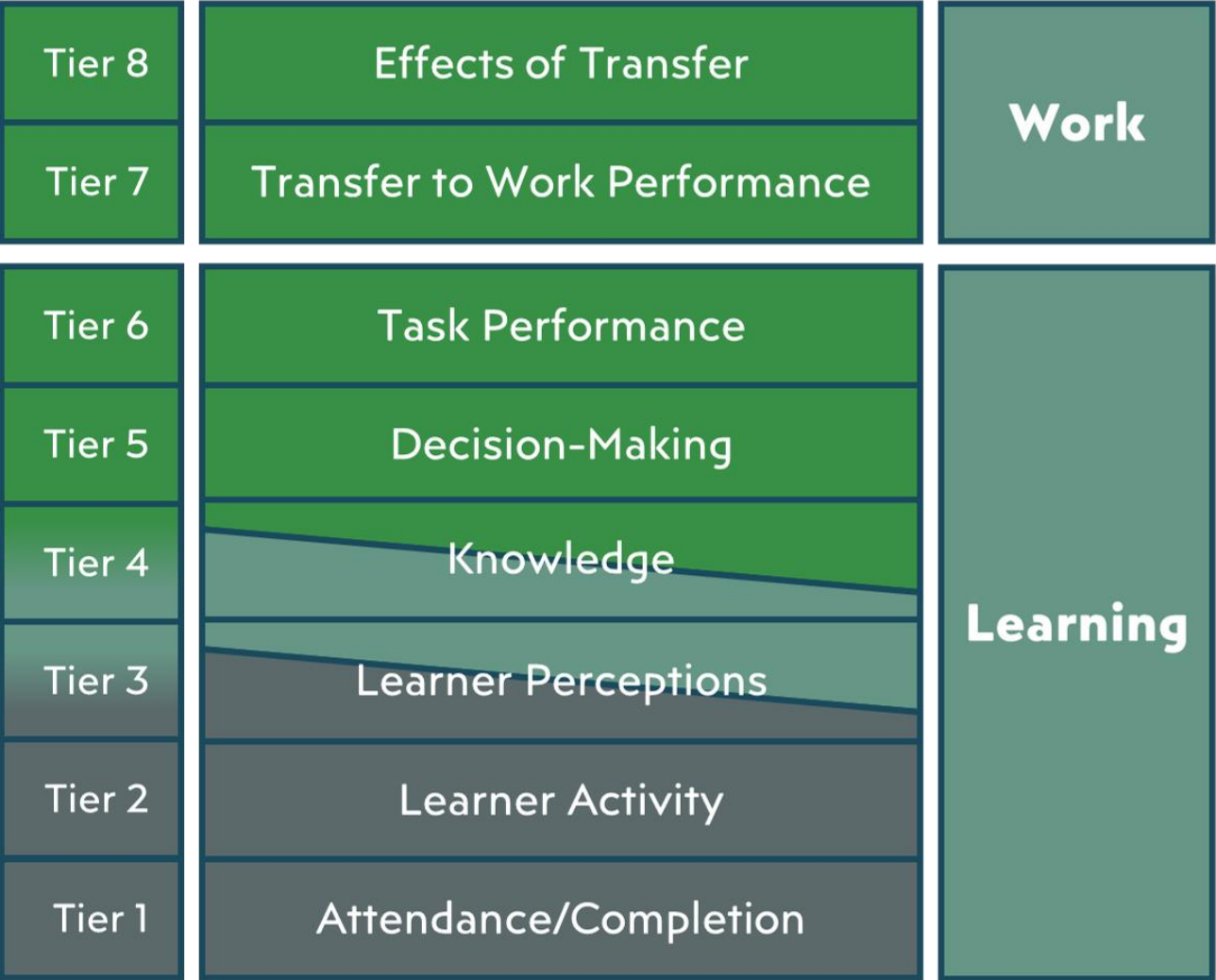
Niveau 3 : Behavior

Niveau 4 : Results

THE NEW WORLD KIRKPATRICK MODEL



LTEM: Learning-Transfer Evaluation Model (version 13)



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Adapting your model

Which one to choose?

- Choose one?
- Choose more than one and adapt it?
- Be inspired by one and reinvent it?
- Build your own model?
- THERE IS NO RIGHT ANSWER HERE.
- Seek inspiration from models.
- Go beyond volume and satisfaction!

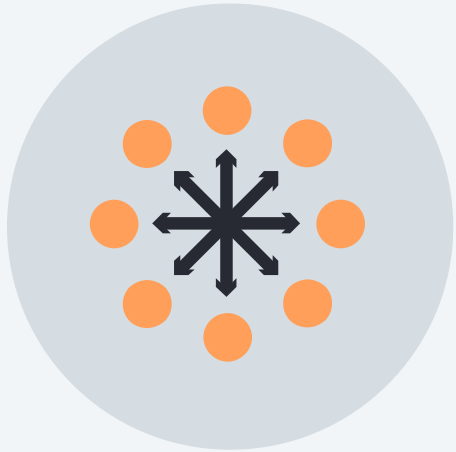


Learner satisfaction

Two meta-analyses covering over 150 scientific studies have shown that satisfaction surveys are virtually uncorrelated with learning outcomes

(Alliger, Tannenbaum, Bennett, Traver, & Shotland, 1997 ; Sitzmann, Brown, Casper, Ely, & Zimmerman, 2008).

They are often biased they are provided to learners in the learning context immediately after the training.



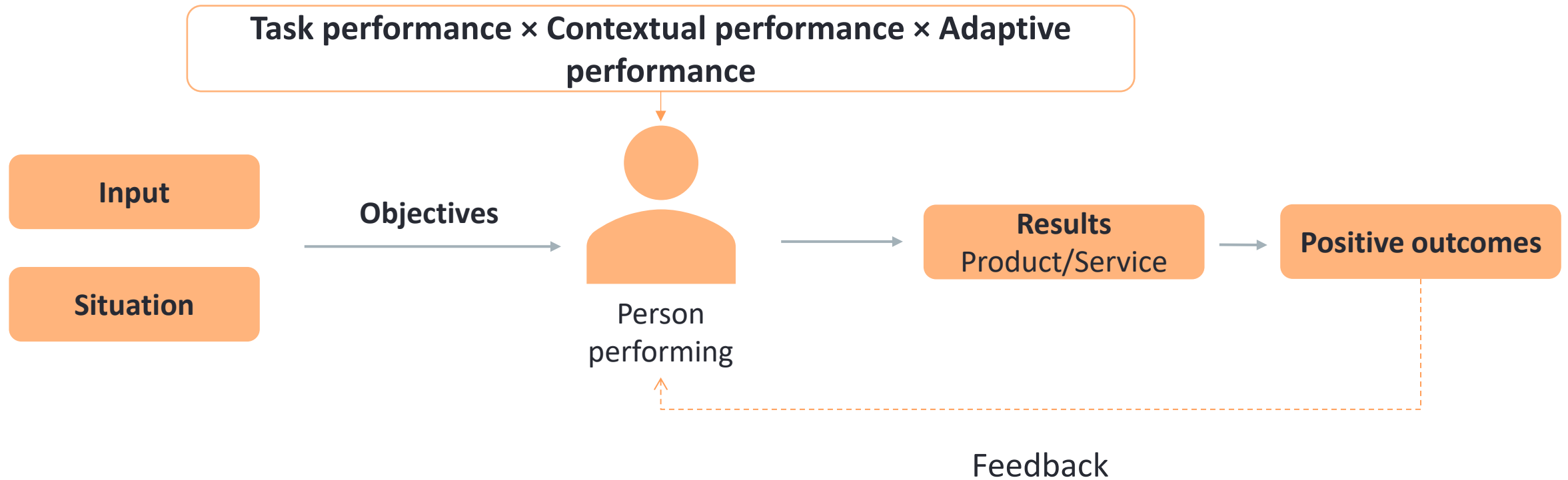
Evaluation strategy and indicators

An evaluation strategy must:

Be aligned with performance:

- Aim to measure PROGRESS between the current situation and the desired situation
- Aim to identify INDICATORS that will allow us to track and MEASURE continuous progress

What is performance?



Source : Adapted from Geary Rummler and Alan Brache

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Indicators

Process	Involvement	Perception	Knowledge and Decisions	Behaviors (During and After)	Results and Outcomes
Budget: time and money	Statistical measures	Questions	Questions	Observation	Operational metrics
<ul style="list-style-type: none"> Level of agility Level of performance (speed/results) Return on Investment 	<ul style="list-style-type: none"> Level of engagement Level of progression Dropout rate 	<ul style="list-style-type: none"> Level of motivation Level of attention Sense of effectiveness Level of support Level of cognitive load Level of stress 	<ul style="list-style-type: none"> Level of understanding Level of recall Level of decision-making Level of confidence 	<ul style="list-style-type: none"> Level of quality Level of productivity Level of efficiency Level of autonomy Level of adaptability Level of consistency 	<ul style="list-style-type: none"> Key Performance Indicators Level of organizational engagement

Mandate: Redesign of initial training in a call center

Performance: 4 advanced indicators to Influence

- Average handling time (AHT)
- Procedure search rate
- Reassurance Call Ratio
- Member and client coyalty



Accelerate
learning
progression and
ensure long-term
retention

Process

Involvement

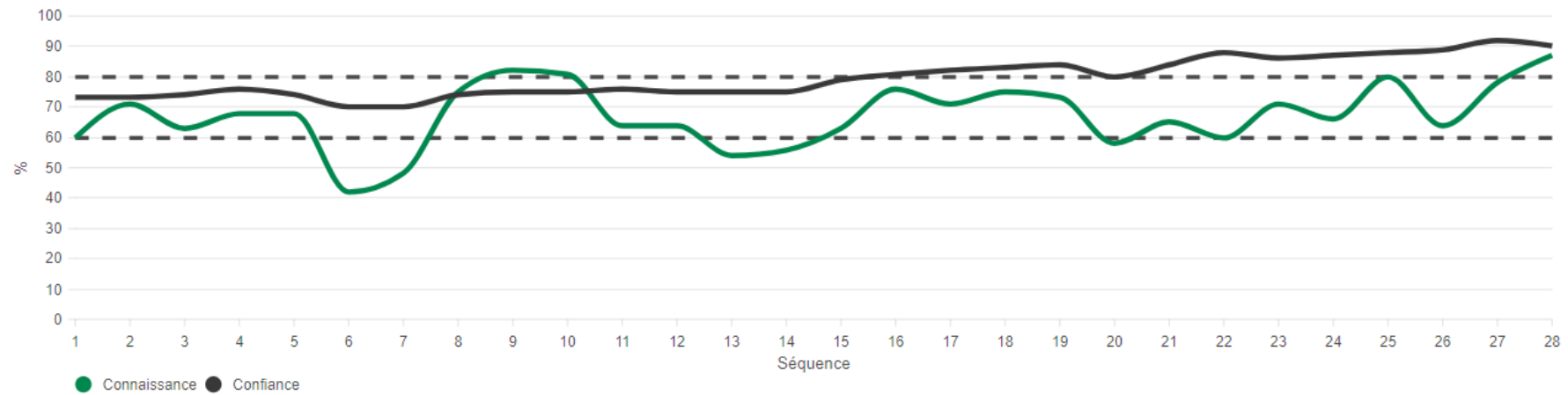
Perception

Knowledge and
Decisions

Behaviors
(During and
After)

Results and
Outcomes

Trends of Key Performance Indicators



Indicators by Topic

Knowledge Topic	Knowledge	Confidence
Accelerating trade exchanges	80%	75%
Improving liquidity management	69%	79%
Managing exchange rate risk	67%	80%
Simplifying and securing trade exchanges	53%	74%

Process

Involvement

Perception

Knowledge and
Decisions

Behaviors
(During and
After)

Results and
Outcomes

Responses: 13 Last response: December 19, 2024

Criteria	Self-Evaluation	Peer Observation	Trainer Observation
I listen attentively to my client	75%	84%	58%
I demonstrate that I understand the situation	63%	69%	67%
I ask the right questions at the right time	75%	59%	75%
I propose a solution	38%	56%	33%
I ensure follow-up with my client	50%	81%	58%

Summary Scores:

- **Self-Evaluation:** 60%
- **Peer Observation:** 70%
- **Trainer Observation:** 58%

Process

Involvement

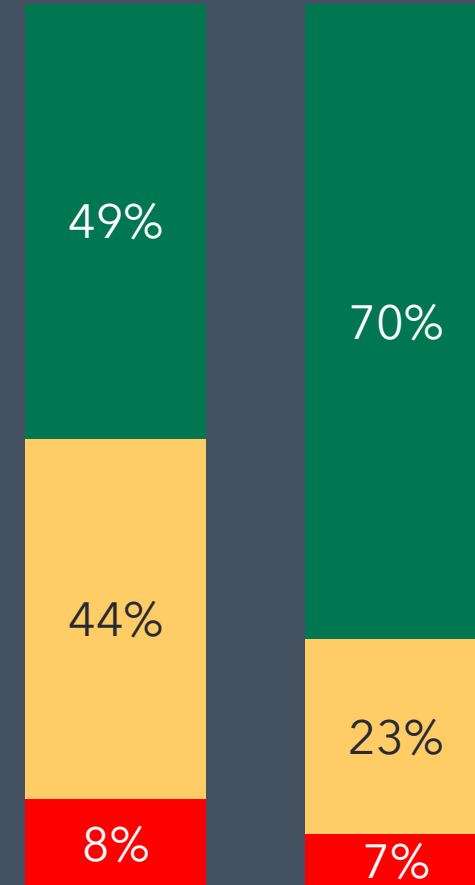
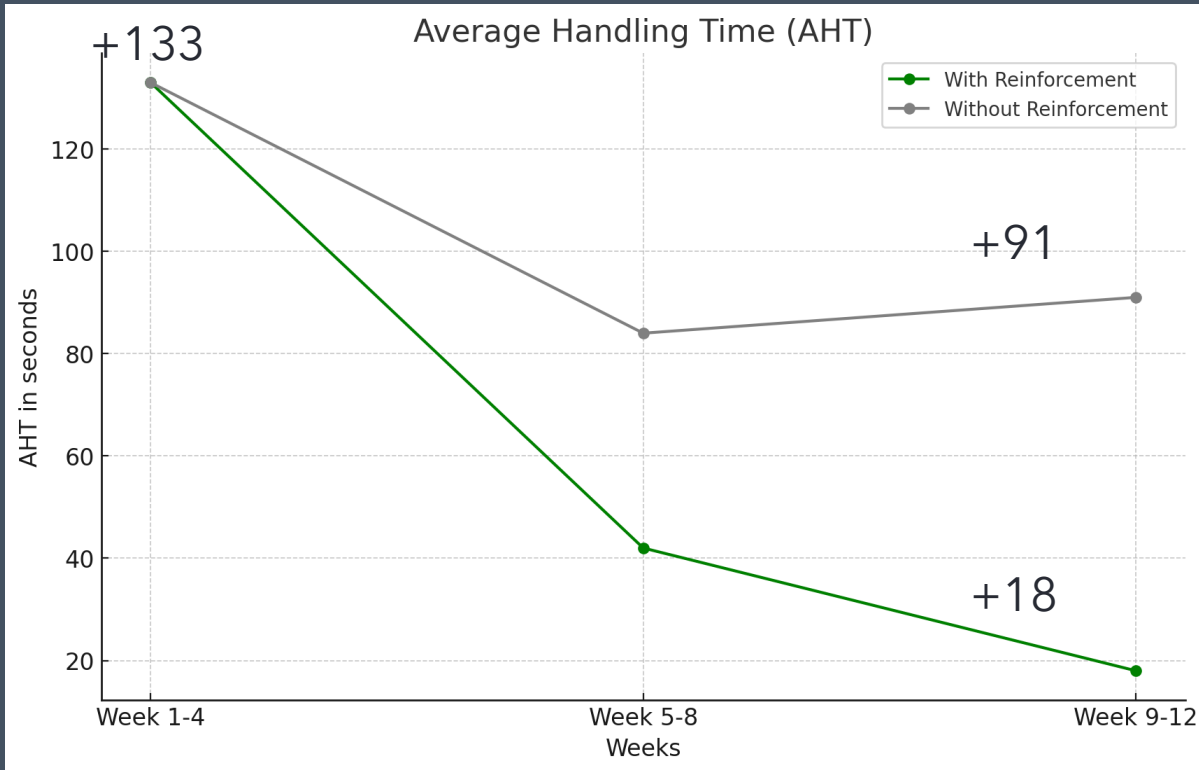
Perception

Knowledge and Decisions

Behaviors (During and After)

Results and Outcomes

Loyalty

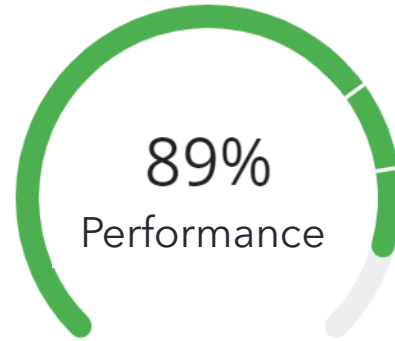
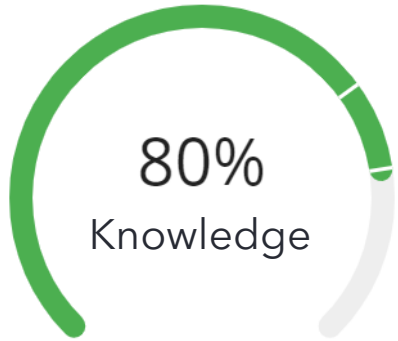


Increased
Unchanged
Decreased

Approximately 6 hours per month per advisor who received training with reinforcement.

With Reinforcement

Key Performance Indicators



Indicators by Subject

Knowledge Subject	Knowledge	Confidence
Procedure	93%	89%
Materials	86%	86%
Energy	96%	93%
Work Instructions	74%	90%

Results and Outcomes

- Reduction in lockout time
- Lockout quality (errors)
- Tagout quality (errors)
- Reduction in form errors
- Reduction in incidents

Use data to make strategic decisions

Organization	Managers	Employees	L&D Team
<ul style="list-style-type: none">• Link data to performance indicators.• Establish organizational conditions that enable employees/managers to transfer learning.	<ul style="list-style-type: none">• Linking data to team performance indicators.• Data for coaching.• Establish team conditions (management) to enable staff members to transfer learning.	<ul style="list-style-type: none">• Address challenges faced by individuals to achieve desired performance.	<ul style="list-style-type: none">• Improve learning solutions• Enhance the learning experience.• Demonstrate the value of solutions (Budget 😊).



Now, what do we do? Game Plan

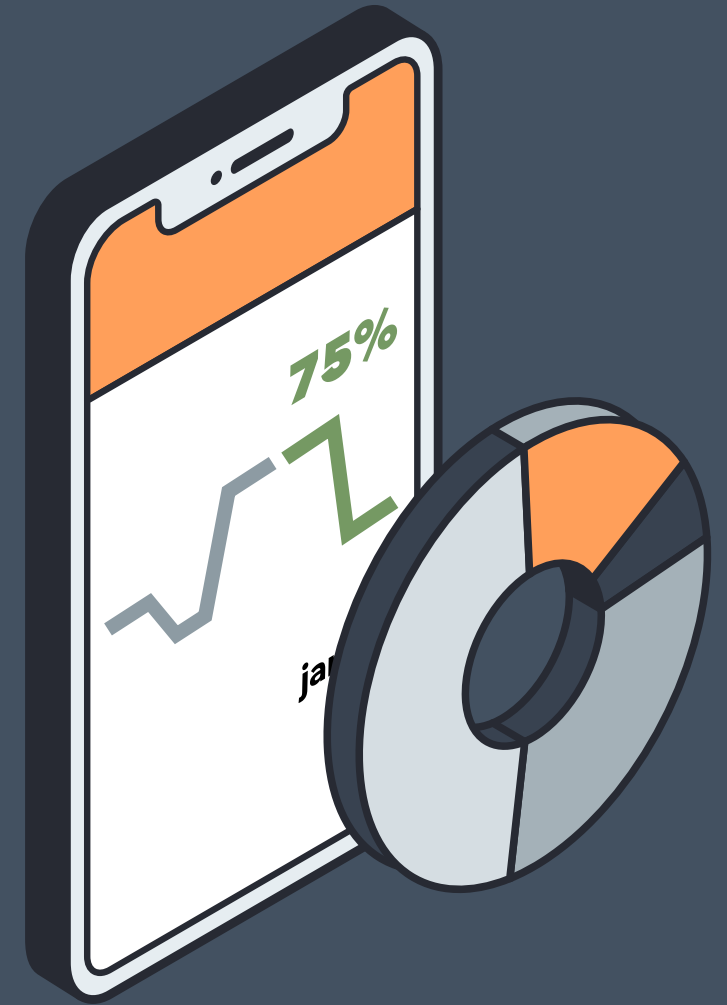
Game Plan

1. Change our mindset: Evaluation as a tool for progress
2. Quick evidence-based approach
3. Use AI to save time and optimize analysis



Quick evidence-based approach

1. Selection of a steering team
2. Select a skill and describe the performance (e.g., solving a problem)
3. Choose the indicators
4. Inventory of errors
5. Integrate continuous measurement into the workflow
6. After 3 months: Present the results to management



Using AI to Save Time and Optimize Analysis

Evaluation Creation:

- Identify performance criteria
- Identify observation criteria
- Create a pre/post evaluation questionnaire
- Perception questionnaires
- Develop decision scenarios for contextual evaluations

Data Analysis:

- Qualitative analysis facilitated by AI
- Data analysis
- Dashboard analysis



**Help managers
interpret training data
to support employee
development**

Example

The screenshot displays a data analysis interface. At the top, a text block reads: "réponses des participants. Le rapport sera créé en tenant compte des filtres utilisés en haut de la page." Below this is a green button labeled "Télécharger".

The main area contains two charts. The top chart is a scatter plot with "Connaissance (%)" on the y-axis (0-100) and "Confiance (%)" on the x-axis (0-100). A red shaded region covers the area from 0% to 60% on the x-axis and 0% to 60% on the y-axis. A single blue data point is located at approximately (45, 45). A light green shaded region is visible in the top right corner of the plot area.

The bottom chart is a line graph with a y-axis labeled "%" (0-100) and an x-axis that is not fully labeled but has a grid. It features two solid lines (one green, one blue) and two horizontal dashed lines (one at approximately 80%, one at approximately 60%). Both solid lines show a downward trend from left to right.

On the right side, there is an "Assistant" chat interface. It shows a "Thinking ..." status. The first user question is "What is the cumulative time?", followed by the assistant's response: "The total cumulative time is 94,737 seconds." The second user question is "Who completed the most sequences?", followed by the assistant's response: "The learner with ID 40681 completed the most sequences, with a total of 8 sequences completed." Below the chat is a text input field containing "Message B12" and a send button. A note at the bottom of the chat area states: "Please note this functionality is still in development".

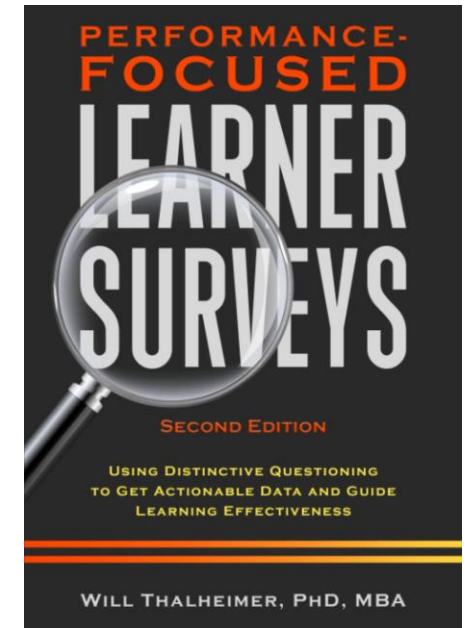
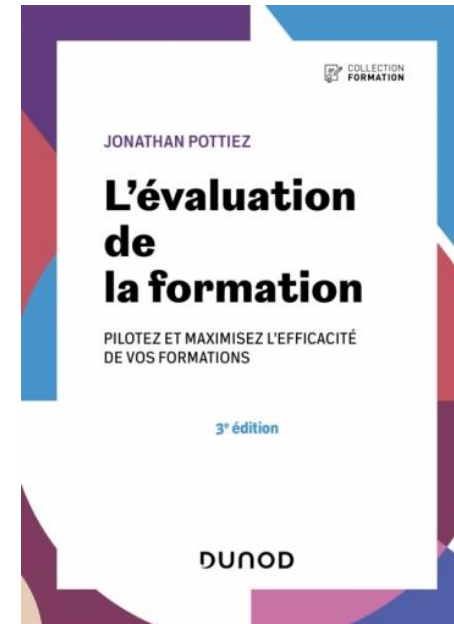
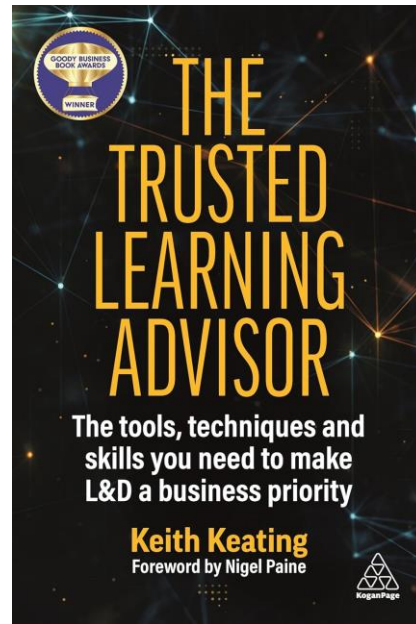
Resources

Web

[Le modèle LTEM \(ENG\)](#)

[Le modèle Kirkpatrick \(FR\)](#)

[New World Kirkpatrick Model \(ENG\)](#)

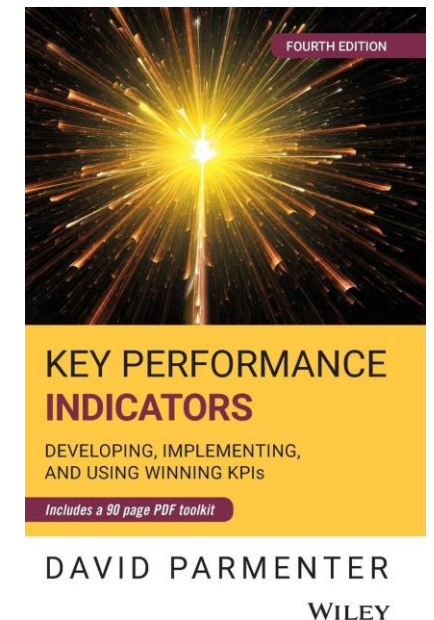
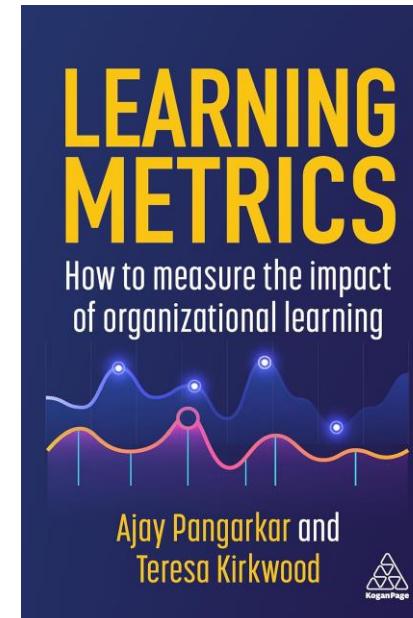


Podcast

[Épisode 15 - Des pratiques de formation et d'évaluation d'excellence au Canada \(FR\)](#)

Video

[Le cas de Desjardins](#)

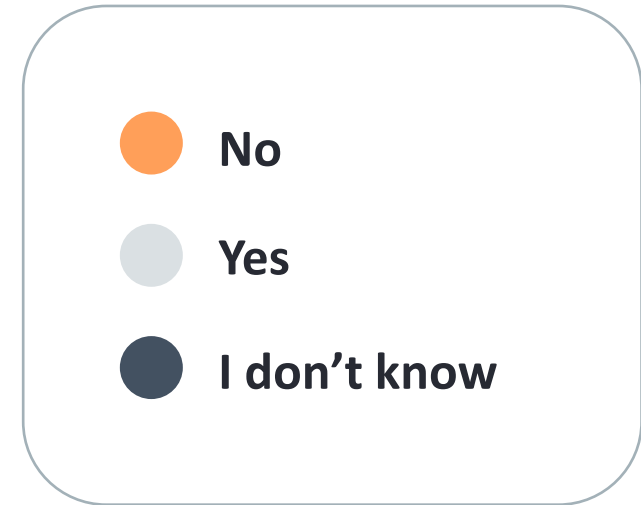
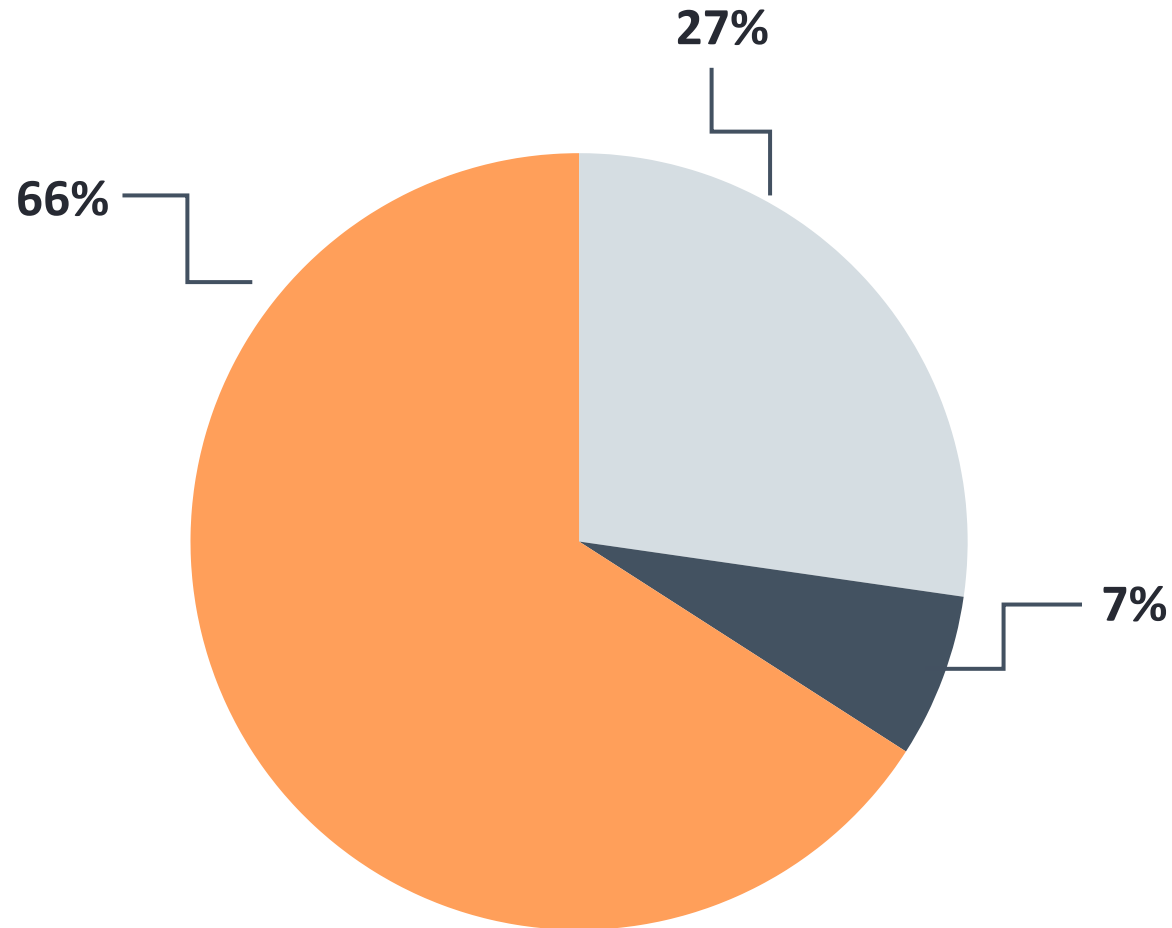


Questions





Our team allocates a budget for training evaluation





The biggest challenge in measuring the impact of learning in my organization is the following:

