

# Learning Technology Ecosystems

The Tools,  
Strategies, and  
Skills Needed  
for Success



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# A Note From the Sponsor



We must acknowledge today's workforce dynamics: Approximately two-thirds of employees

contemplate leaving their companies, often due to a lack of career development opportunities. However, this is not news to companies. According to a 2023 LinkedIn report, more than 90 percent of organizations were concerned about employee retention, with 83 percent expressing a desire to foster a more people-centric culture by making providing learning opportunities a top priority.

There is a notable trend emerging: Organizations and employees are both seeking efficient people development. There is a strong intent to educate, but the hurdle is finding efficient ways to do it on a larger scale. A substantial 81 percent of organizations, per a 2023 World Economic Forum report, are ready to invest in education and workforce development technologies, turning strategic visions into tangible outcomes.

eloomi is a leading learning and development platform that helps organizations around the world train, develop, and engage their people. We make it easy to deliver impact with training and performance management through automating HR workflows, structuring meaningful one-on-ones and career pathways, and leading skills-based talent transformations.

Employee training and people development used to be complex and time consuming. Many learning platforms are still exploring their function, with user dissatisfaction caused by training inefficiency, limited functionalities, and ultimately subpar employee experience.

Today, our integrated, scalable platforms host user-friendly course libraries and job skills that are accessible from any device, anywhere. By adding generative artificial intelligence (AI), you'll have the most powerful tool to create a seamless training experience for any organization.



New learning technologies are paving the way for companies to be people centric, making people development more successful than ever.

## About eloomi

eloomi was founded with the clear goal of simplifying complex HR and L&D processes and delivering scalable learning and people development solutions. The platform makes it easy for companies to train their people, and create a thriving company culture. eloomi helps more than 1,000 companies create and distribute ad hoc training to employees, and contractors, as well as customers and partners.

What makes eloomi unique is its integration of learning management system (LMS) and learning experience platform (LXP) features into a unified platform, allowing tailored learning paths for individuals and teams. We achieve this by connecting our core platform to a vast library with 25,000 courses and 30,000 job skills. The platform extends to performance management,

including essential features for managing and improving employees.

Recognized as a high performer in the corporate LMS category by G2, eloomi addresses various needs across industries and company sizes, including onboarding, essential compliance, learning and training, blended learning, upskilling employees, instructor-led learning, extended enterprise, and performance management.

Established in 2015, eloomi has offices in Copenhagen, Denmark, and Orlando, Florida, with more than 100 employees from 30 nationalities. Our multicultural workforce stands as a commitment to promoting diversity and driving innovation, ensuring we serve our customers, and their employees, in the best way possible.



# Executive Summary

In today's business environment, technology is vital to the growth and advancement of all organizational departments. In talent development, technology is an essential component for creating, managing, delivering, and analyzing learning. In the 2023 report *Learning Technologies: Increasing Effective Learning*, ATD Research found that 72 percent of TD professionals believed learning technology was important for the organization's overall strategy.<sup>1</sup>

With this in mind, ATD Research wanted to learn more about the tools organizations were using, how often they formally audited their systems, how they managed data governance, and more about the people who managed and administered an organization's learning technology ecosystem. The resulting survey and report, *Learning Technology Ecosystems: The Tools, Strategies, and Skills Needed for Success*, found four key findings:

- **While organizations have many tools available, they aren't necessarily using all the features of each tool.** For instance, 90 percent of organizations had a learning management system (LMS), but only

54 percent were fully using every feature. Organizations may be able to increase their use of tools by conducting formal reviews and auditing their learning technology ecosystems.

- **Only 32 percent of organizations were conducting formal reviews of their learning technology ecosystems.**

Additionally, when organizations did conduct reviews, they differed in how often the reviews happened. Some organizations were constantly reviewing their systems, whereas others were doing this annually or less often. Organizations may find that having a data governance strategy in place could help with setting a schedule to conduct these formal reviews.

- **Organizations were using data governance strategies.** In fact, 67 percent of organizations had a data governance strategy, and nearly two-thirds said that they had improved compliance with data regulations through this strategy. Organizations may find that a data governance strategy could aid them in understanding data usage, technical usage, consistency standards, and success criteria.



- **Having knowledge and skills in learning technology was important for all TD professionals.** Nearly three-quarters of organizations considered these skills when making hiring and promotion decisions for TD roles. Although most talent development professionals were comfortable troubleshooting technology, they may need additional training on how to identify technology system requirements.

This study can help organizations benchmark their own learning technology ecosystem data, as well as provide steps for successfully administering the system.

# Defining High Performers

This report identified practices associated with being a high performer. In this report, high-performing organizations were those that met two criteria:

1. They reported themselves as performing as well as or better than their competitors in:
  - Financial performance
  - Customer and client satisfaction
  - Employee engagement
  - Growth potential for the next five years
2. They strongly agreed that their talent development functions helped them achieve their business goals.



Throughout the report, the star symbol is used to indicate if there is statistical significance connected to being a high performer.

# Introduction

In 1993, James Moore authored the article, “Predators and Prey: A New Ecology of Competition,” which introduced the term, *business ecosystem*. He defined it as what is created when “companies coevolve capabilities around a new innovation: They work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations.”<sup>2</sup> This was the first time that organizations and businesses were described using an ecosystem analogy. As the analogy has evolved, talent development professionals have adopted the idea, coining the term, *learning technology ecosystems*.

*Learning Technology Ecosystems: The Tools, Strategies, and Skills Needed for Success* delivers benchmarking data and highlights best practices. It draws on a study of 212 talent development professionals.

## Defining Learning Technology Ecosystem

A learning technology ecosystem consists of the tools and platforms that an organization uses to create, deliver, manage, and analyze its learning content. It also includes the people and processes for enabling those tools and platforms.<sup>3</sup>



# Key Finding 1

## Technology Tools

Talent development professionals have many tools to help develop, administer, deliver, and evaluate learning programs—but they don't always fully utilize each one.





# Features Are Important in a Learning Technology Tool

Ease of use for the learner was an important feature in learning technology tools. However, although 77 percent of respondents said it was extremely important, 66 percent rated their learning technology as somewhat or extremely easy to use. Ease of use, along with other features, can influence how effective a course is for a learner.<sup>4</sup>

TD professionals said security measures—such as multifactor authentication, privacy regulation compliance, and security protocols—were also important. According to a recent study by BT, cybersecurity experts are logging more than 500 signals of potential attacks every second.<sup>5</sup> With the volume of attacks that are occurring, it's unsurprising that more than 75 percent of respondents said security was an important feature in their learning tools.

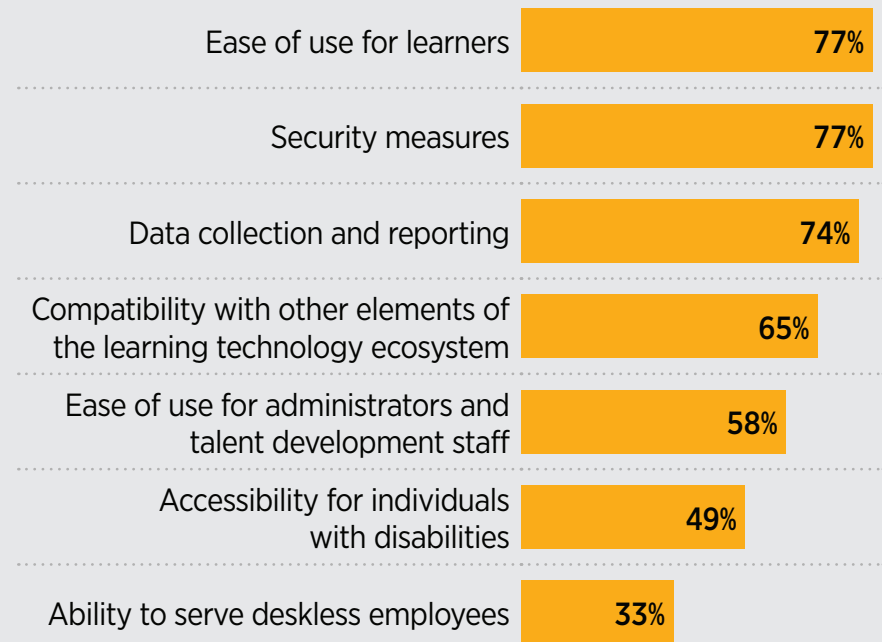
The platform also needs to have data collection and reporting abilities. Data like course enrollment numbers, quiz scores, and key performance indicators can help TD professionals see the big picture of the entire learning technology ecosystem.



Ease of use for learners and accessibility for individuals with disabilities are extremely important to high-performing organizations.

## Ease of use for learners, security measures, and data collection and reporting were all considered to be extremely important features in learning technology tools.

*Question: At your organization, how important are the following when acquiring a new learning platform? (Respondents who selected extremely important)*



## Many Organizations Have Content Administration, Content Design, and Data Tools

Learning technology ecosystems integrate a variety of tools that allow talent development professionals to administer, design, and deliver content, while also collecting and processing data.

**90%** of organizations use an LMS.

**83%** of organizations use survey tools to get feedback from learners.

**78%** of organizations use e-learning authoring tools to help them design and develop content.

**72%** of organizations use assessment tools to quiz learners.

**64%** of organizations use media equipment, including video cameras and audio editing software.

**60%** of organizations use graphic design tools to design and develop content.

**53%** of organizations use data visualization tools, which include software for making charts and dashboards.

**53%** of organizations use data storage tools, such as databases.

**49%** of organizations use a virtual classroom platform. This is an online learning space where learners and facilitators interact.

**38%** of organizations use data analysis tools, such as statistical software.

**36%** of organizations use a learning content management system (LCMS).

**30%** of organizations use application programming interfaces (APIs).

**17%** of organizations use learning experience platforms (LXPs).

**An LMS** is software technology for delivering online courses or training to learners while performing learning management functions, such as creating course catalogs, keeping track of learners' progress and performance across all types of training, and generating reports.

**An LCMS** is software technology that provides a multiuser environment where developers, authors, instructional designers, and subject matter experts may create, store, reuse, manage, and deliver digital e-learning content from a central repository.

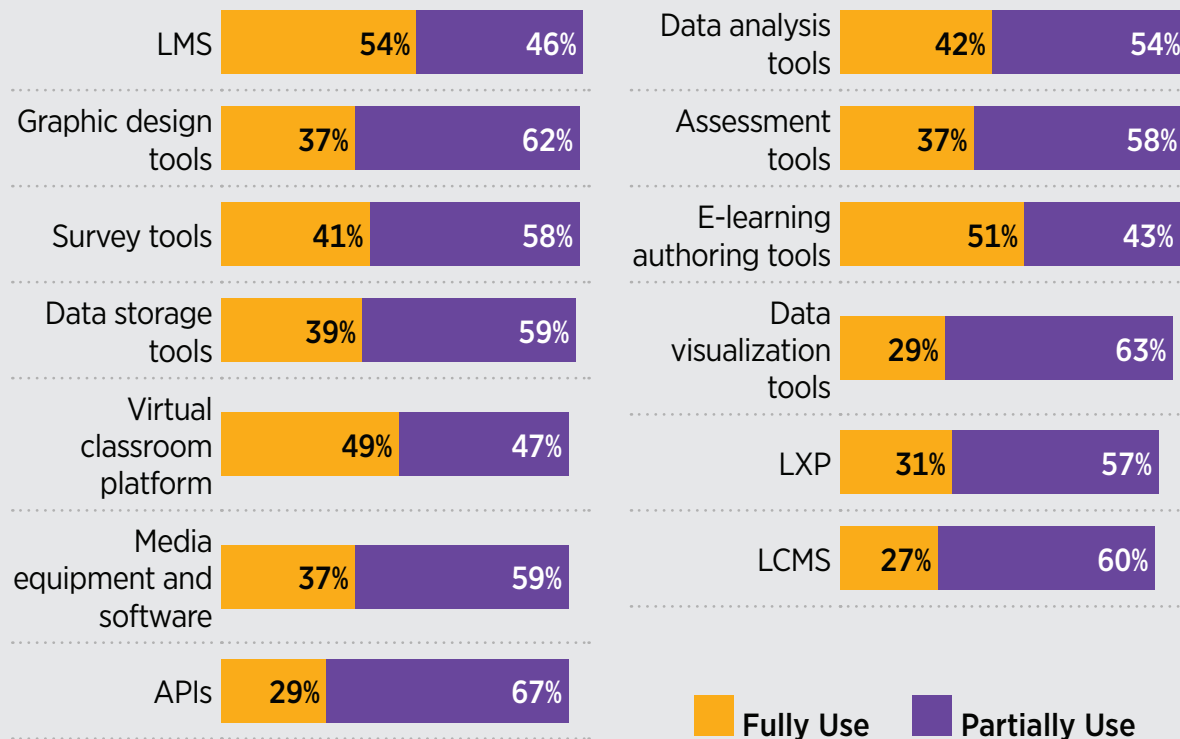
**An LXP** goes beyond a traditional LMS to provide personalized social and online learning opportunities.

# Most Organizations Are Not Fully Using All the Tools in Their Learning Technology Ecosystem

While most organizations had a variety of tools available to them, not all organizations are using all of the features of each tool.

## Organizations were not fully using their learning technology ecosystem tools.

Question: How would you rate each of the following tools from your learning technology ecosystem? (N ranges from 35 to 190 responses for each tool.)



“This is a reflection of the complexity of learning technology tools. If you take all the things that learning tools can do, not everybody needs them.”

—Becky Willis,  
WillLearn Consulting



High-performing organizations were more likely to fully use assessment tools.

As organizations make decisions about what tools to include in their learning technology ecosystem, it's important to conduct a learning technology needs assessment. Questions to ask include:

1. How will these technologies and content be maintained?

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2. How secure are the technologies and the learning output they produce?

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3. How will the learning technology be deployed?

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ATD members can access a free Learning Technology Needs Assessment tool by visiting [td.org/templates-and-tools/learning-technology-needs-assessment](https://td.org/templates-and-tools/learning-technology-needs-assessment).



## Key Finding 2

### Audits and Formal Reviews

Only a third of organizations were conducting formal reviews of their learning technology ecosystems. When organizations did these audits, about half were continuously reviewing their systems, focusing on learning content, learner satisfaction, and learner needs.

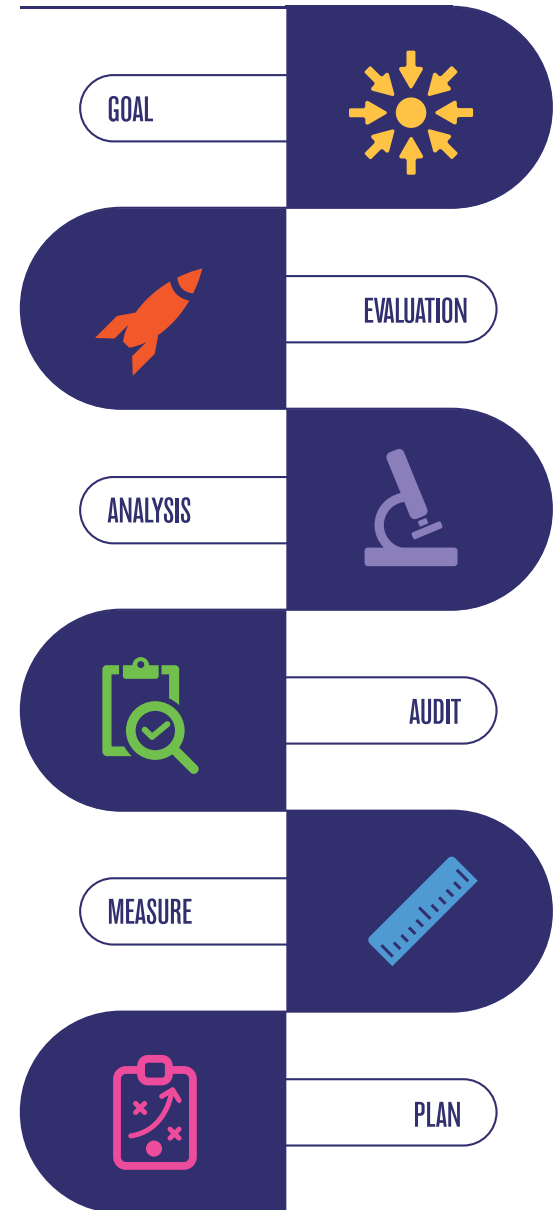
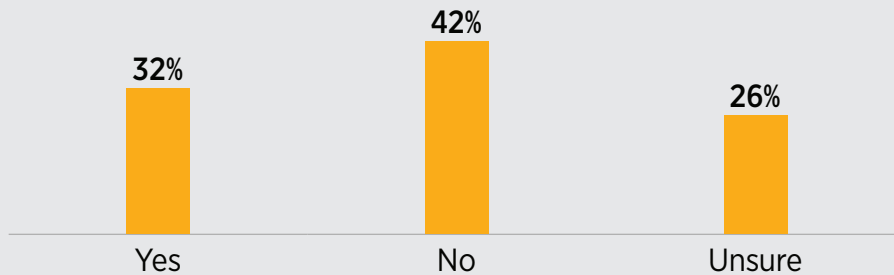


# Audits Help Organizations Determine If Their Tools Are Meeting Their Business Needs

Some organizations conducted formal reviews or audits on their learning technology ecosystems. During these reviews, TD professionals are tasked with determining whether the tools are still meeting their business needs. Because business needs can rapidly change, this can be an important function for the administrator and manager of the learning technology ecosystem.

## Nearly a third of organizations conducted learning technology ecosystem audits.

Question: Does your organization formally review or conduct audits of your learning technology ecosystem?



## Most Parts of the Learning Technology Ecosystem Are Audited Annually

Of the organizations that conducted learning technology ecosystem audits, approximately half were formally reviewing and auditing learning content, learner satisfaction, learner

needs, and compliance requirements on an ongoing basis. Other areas under review included product usability, training goals, and compatibility with other platforms.

Unsurprisingly, most organizations were formally reviewing budgets on an annual basis.

**Approximately half of organizations continuously reviewed learning content, learner satisfaction, learner needs, and compliance requirements.**

*Question: How often does your organization formally review the following to make sure the learning technology ecosystem is still meeting organizational needs? (N ranges from 65 to 67.)*

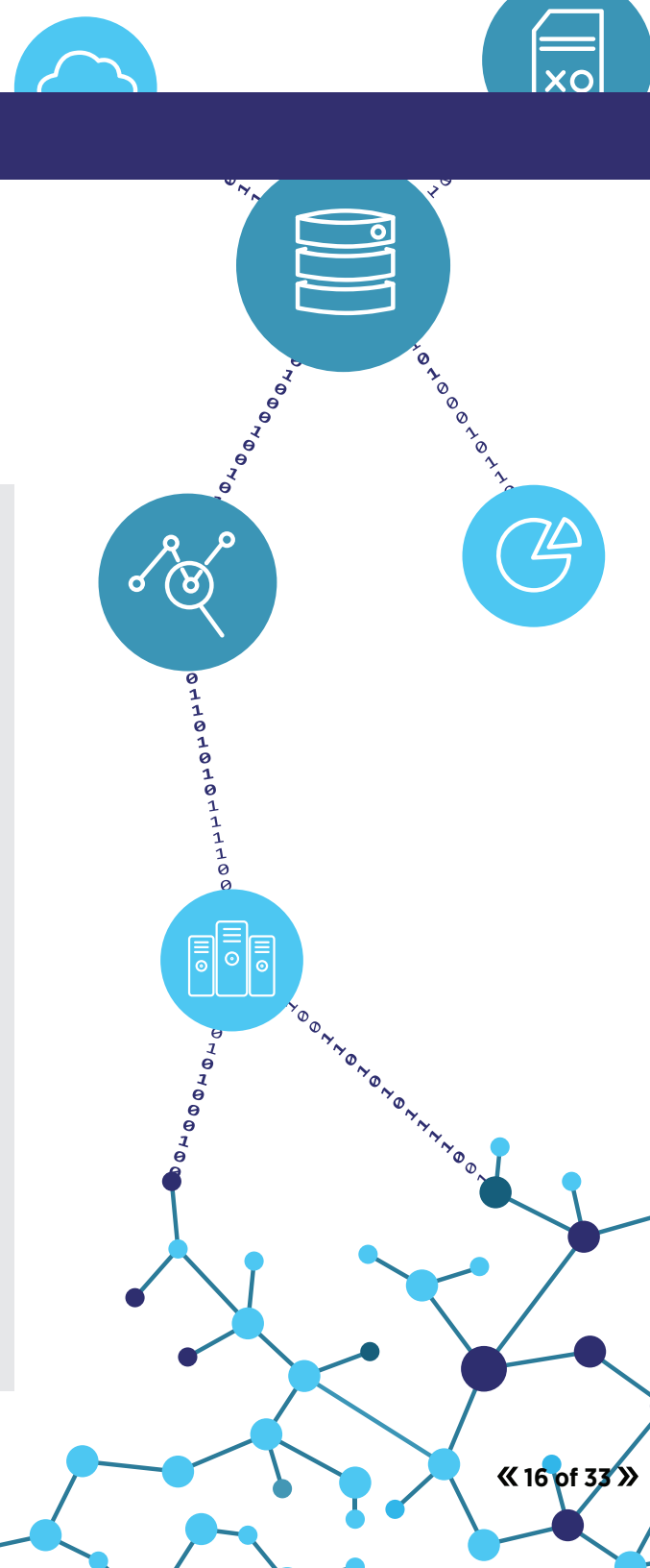
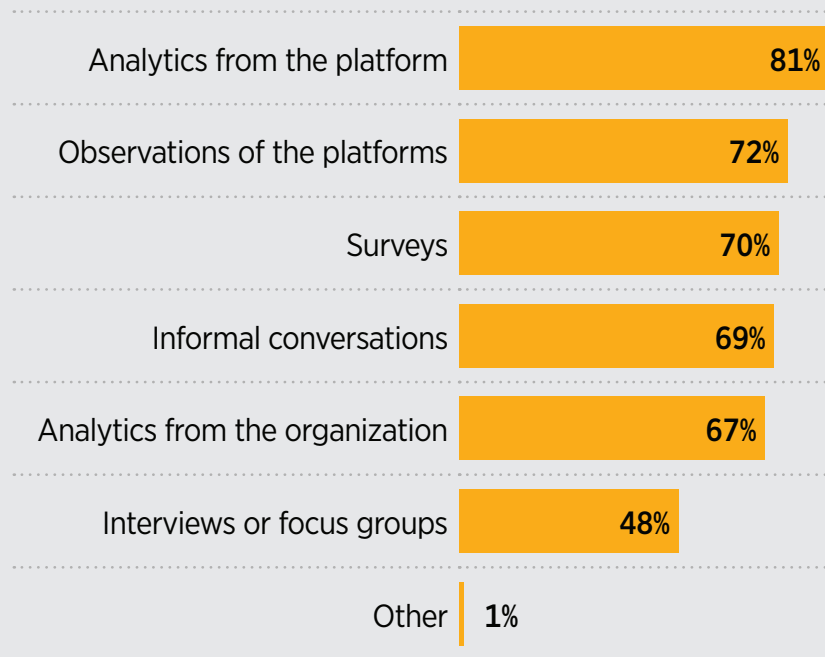
	The Process Is Ongoing	More Often Than Annually	Annually	Less Often Than Annually	Never	I Don't Know
Learning content	58%	12%	20%	4%	3%	3%
Learner satisfaction	55%	19%	16%	5%	2%	3%
Learner needs	48%	18%	21%	9%	2%	2%
Compliance requirements	47%	11%	32%	6%	0%	4%
Product usability	44%	15%	28%	5%	0%	8%
Training goals	41%	30%	18%	8%	1%	1%
Compatibility with other platforms	30%	17%	21%	15%	3%	14%
Budget	20%	15%	48%	11%	0%	6%

# Organizations Find Data for the Audits in a Variety of Ways

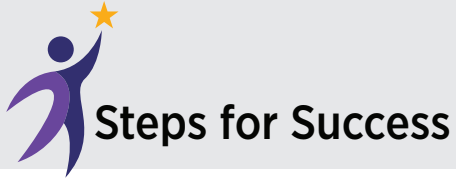
To formally review the learning technology ecosystem, organizations should collect data from several sources. Platform analytics were the most common data source, followed by observations and surveys. These sources provided talent development professionals with data about the learning content, learner satisfaction, and leader needs, along with other information.

## Analytics from the platform were the most common data gathered from audits on learning technology ecosystems.

Question: How does your organization find the information needed to formally review the platforms in its learning technology ecosystem? (Select all that apply.)







Business needs can change rapidly, so it's important to continuously review your learning technology ecosystem. Here are some basic questions for auditing your system:

1. What components of the learning technology ecosystem need to be reviewed? (For example, learning content, learner satisfaction, learner needs, and compliance requirements are typically reviewed on an ongoing basis.)

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2. What data is needed to determine if the learning technology ecosystem is meeting your organizational needs? (For example, analytics from the platform, observations of the platform, and surveys provide popular data points.) Your platform may also provide information about completion rates, pass rates, and time spent per session.

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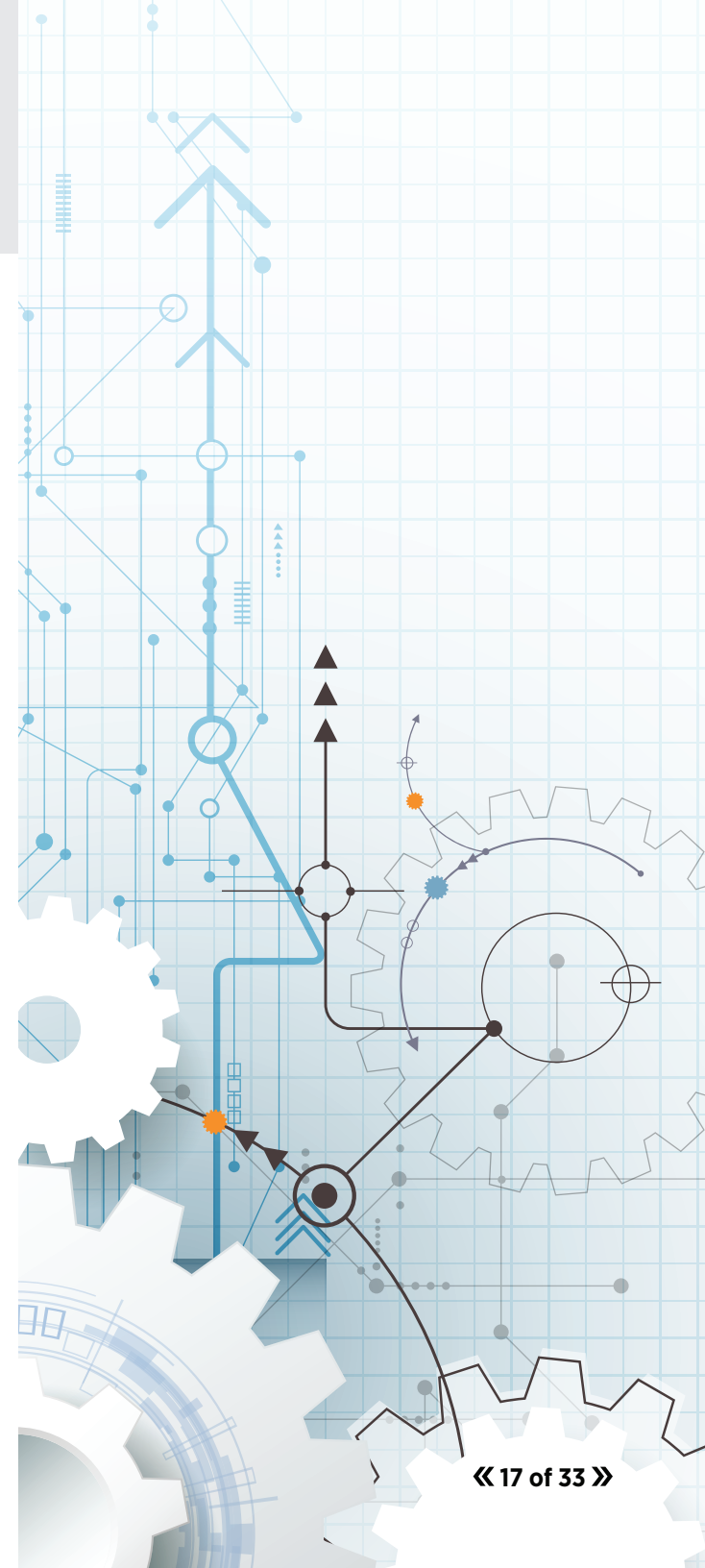
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3. Is your learning technology ecosystem helping your organization achieve its business goals? If it is, this is great news—continue reviewing the data to ensure that business goals remain met. If not, you'll need to determine next steps. For example, you may need to adjust (or look for alternatives to replace) some parts of your ecosystem.

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# Key Finding 3

## Data Governance

Two-thirds of organizations had a data governance strategy. One of the most common strategies was improving compliance with data regulations.

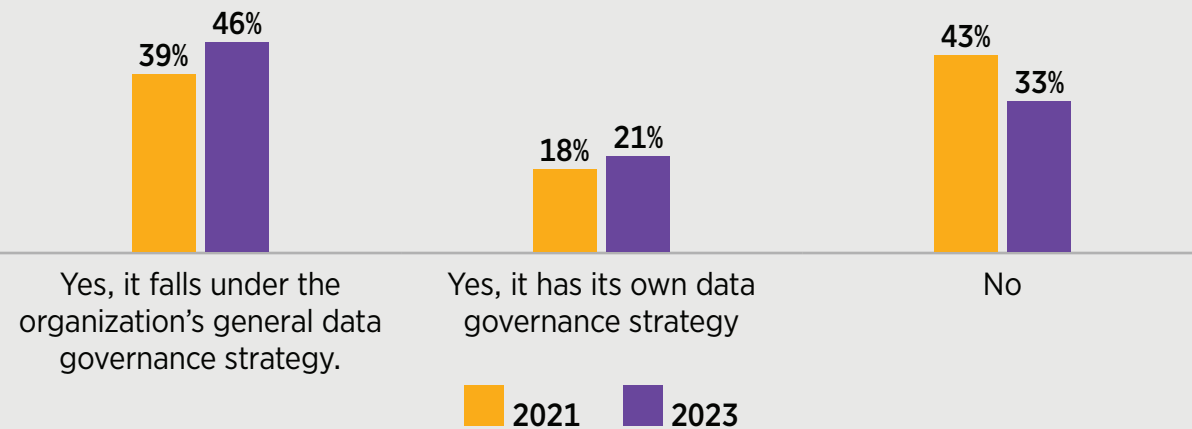


# Data Governance Strategies Are More Common Today Than They Were Two Years Ago

A data governance strategy defines “how data is named, stored, processed, and shared.”<sup>6</sup> The percentage of organizations that had data governance strategies increased 10 percentage points from 2021, when ATD last conducted a learning technology ecosystem study.

## 67% of organizations had a data governance strategy in 2023.

Question: Does your organization have a data governance strategy that applies to its learning technology ecosystem?

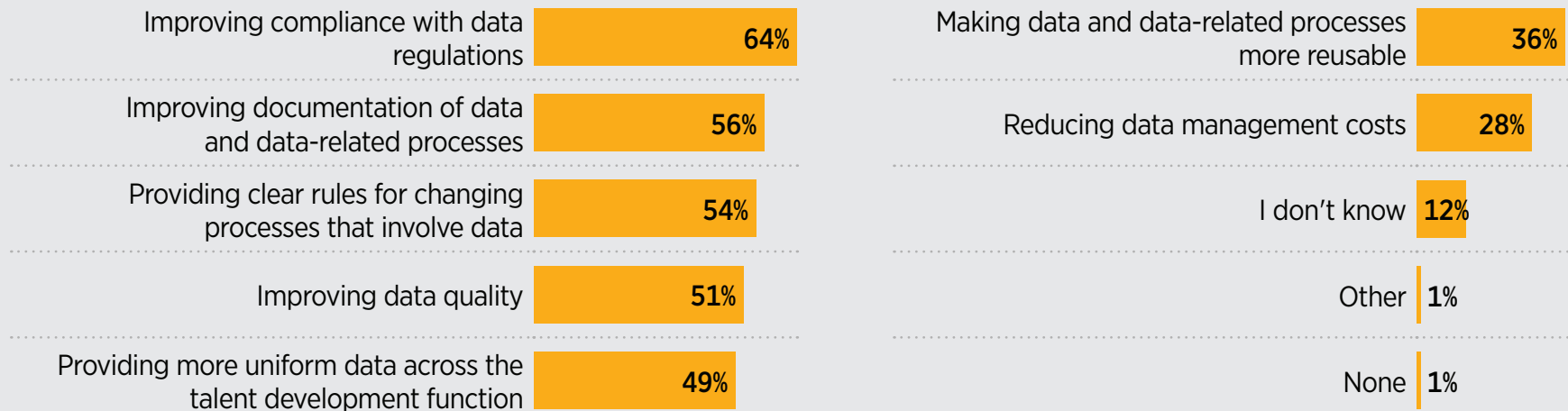


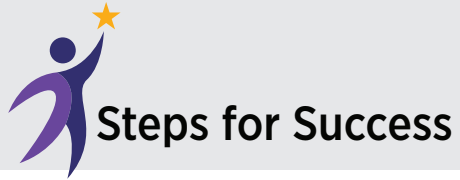
# Data Governance Strategies Can Help Organizations Understand Data Usage, Technical Usage, Consistency Standards, and Success Criteria

Data governance strategies have many objectives; the most common was improving compliance with data regulations. Other common uses were improving documentation of data, providing clear rules, and improving data quality.

## 64% of organizations were improving compliance with data regulations because of their data governance strategy.

Question: Which of the following does your organization's data governance strategy accomplish? (Select all that apply.)





Organizations should consider creating a data governance strategy if they don't already have one. Consider these questions when planning a data governance practice for your organization:

1. How will the data be used?

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2. Who has access to the data?

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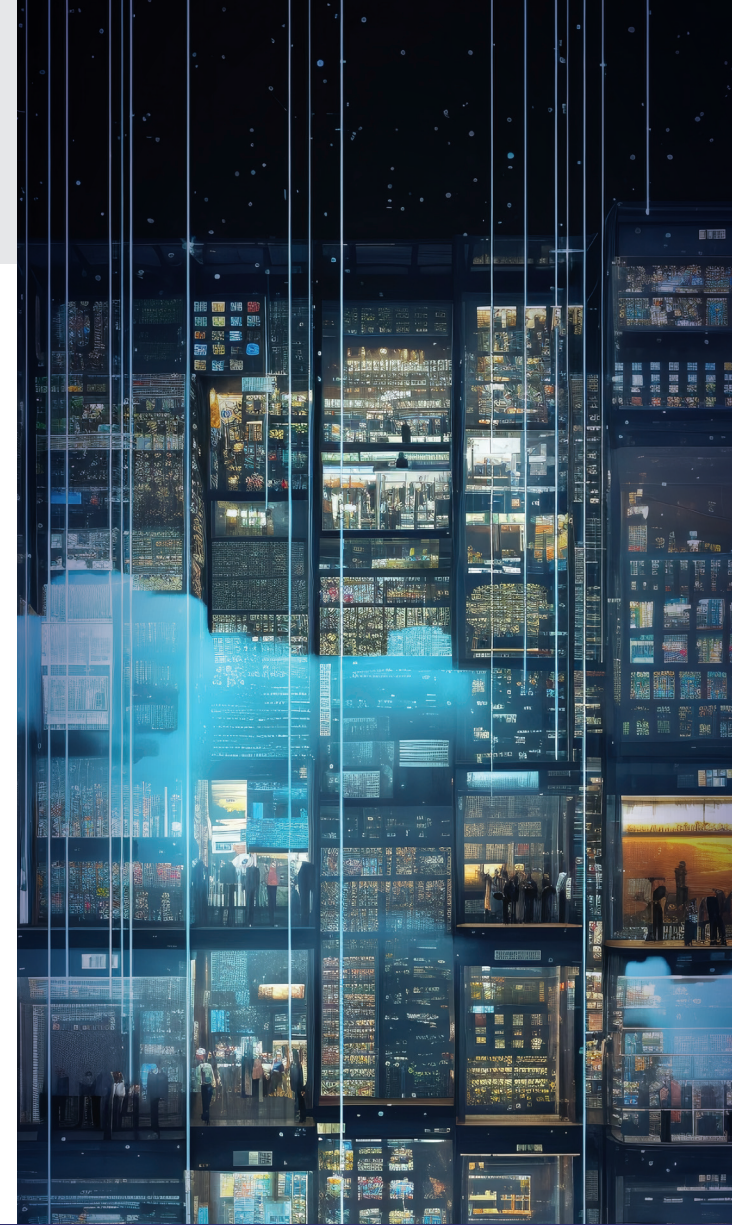
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3. What does success look like in your data governance?

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ATD members can access the entire Considerations for Creating a Data Governance Practice tool at [td.org/templates-and-tools/considerations-for-creating-a-data-governance-practice](https://td.org/templates-and-tools/considerations-for-creating-a-data-governance-practice).



# Key Finding 4

## People and Skills

It's important for TD professionals to have technology skills—almost three-quarters of organizations consider this when making hiring and promotion decisions. Most TD professionals were comfortable troubleshooting technology but may need some training in how to identify technology system requirements.



# Technology Skills Are an Important Part of Managing a Learning Technology Ecosystem

Three-quarters of respondents said their job function included administering and managing some part of the learning technology ecosystem. To learn more about their skills and proficiencies around managing these systems, ATD Research asked follow-up questions about each area. Respondents rated themselves as capable or better when it came to troubleshooting, managing learning platforms, and usability testing. Approximately a quarter said they were in the beginner stages of understanding how to select a platform, measuring the success of a platform, and identifying the technology system requirements.

“An important skill is data analytics,” notes Becky Willis. “Fortunately, a lot of the platforms have integration into business intelligence tools. To get information that is actionable data, you must have a mindset and training to understand how to look at the data from a business intelligence standpoint.”

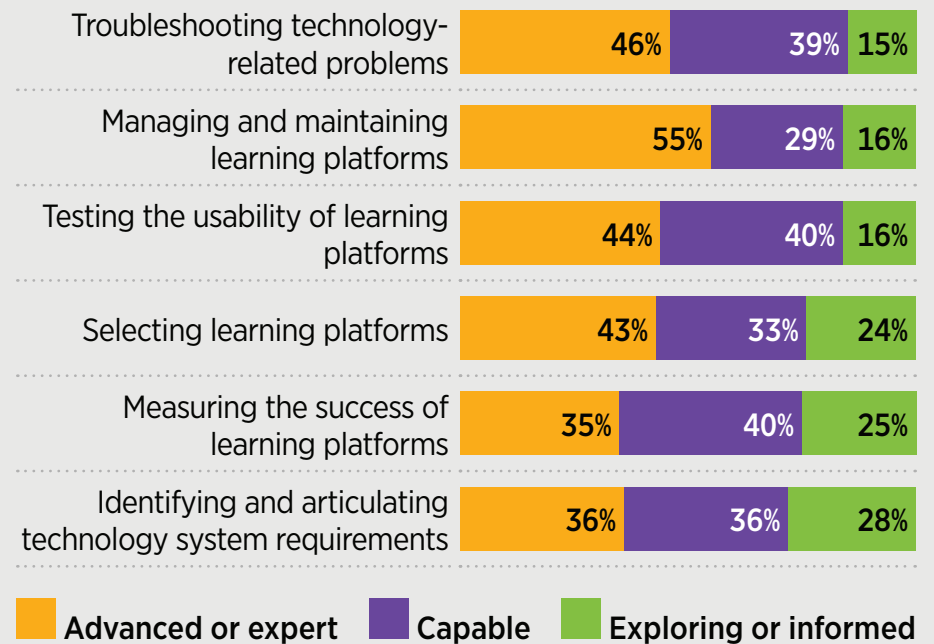
Nearly 75 percent of organizations considered these technology skills at least sometimes when making decisions to promote or hire talent development staff. This means that these are important skills for TD professionals to develop.



High-performing organizations were more likely to always consider technology proficiency when making promotion and hiring decisions.

## TD professionals believed they were capable or better at most technology skills.

*Question: Please rate your proficiency on each of the following technology skills.*

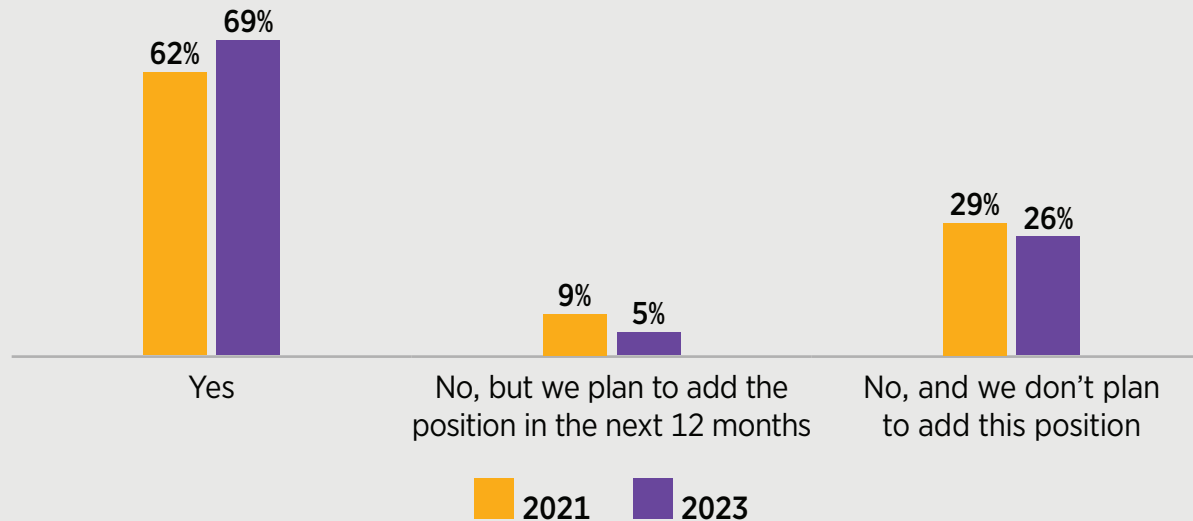


# A Dedicated Staff Person Manages the Learning Technology Ecosystem at Most Organizations

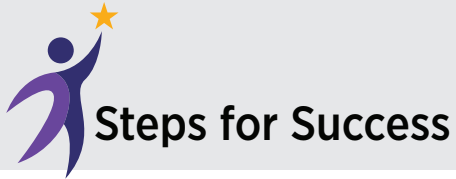
Nearly 70 percent of organizations had a dedicated staff member who specialized in administering and managing the learning technology ecosystem; another 5 percent planned to add this position in the next year. This is 7 percentage points higher than in 2021 when ATD previously published research on learning technology ecosystems.

## More organizations had a dedicated staff member to manage the learning technology ecosystem today than 2 years ago.

*Question: Does your organization's TD function have one or more dedicated staff members who specialize in administering and managing the learning technology ecosystem?*







When administering your organization’s learning technology ecosystem, ATD recommends that you ask these questions:

1. Are we keeping a pulse on the learning technology landscape?

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2. Do we have a learning technology strategy?

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3. Have we identified our reporting and data integration needs?

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4. Who are the key stakeholders and partners for administering our learning technology ecosystem?

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For a full list of tips, read the Checklist for Administering a Learning Technology Ecosystem at [td.org/templates-and-tools/checklist-for-administering-a-learning-technology-ecosystem](https://td.org/templates-and-tools/checklist-for-administering-a-learning-technology-ecosystem).

# Action Plan

In this study, ATD Research looked at how organizations administer and manage their learning technology ecosystem. By having a better understanding of the tools, platforms, people, and processes other organizations use, talent development professionals can potentially improve their own organization's learning technology ecosystem.

If organizations are beginning to develop their learning technology ecosystem, there are a few action steps ATD recommends:

- When deciding on which tools to include in the learning technology ecosystem, conduct a needs assessment. Ask questions like, "How will the learning technology be deployed?"
- Once you have established your learning technology ecosystem, continuously review and audit the components. Be sure to review the learning content, learner needs, usability, and compatibility within the systems. Determine if the learning technology is meeting your business objectives and make adjustments as needed.
- Create a data governance strategy. When deciding how to manage data, organizations need to ask questions; for example, "Who has access to the data?"
- For talent development professionals who manage their learning technology ecosystem, be sure to develop a strategy that helps you achieve your business goals. This can help organizations plan for the future use of learning technologies.



For organizations that have an established learning technology ecosystem and are interested in learning some better practices from high-performing organizations, ATD recommends the following:

- When acquiring a new learning platform, be sure to emphasize the importance of accessibility for individuals with disabilities. It is important that all employees can use and have a good experience with a learning platform.
- It's important that learning platforms are easy for the learners to use. When purchasing or creating a new platform, keep the learner's experience at the front of your thoughts.
- If the learning technology ecosystem has assessment tools, use them to the fullest extent possible.
- When making hiring and promotion decisions, consider the candidate's technology proficiency for the role they applied to. Does the candidate have the skills and knowledge needed, or do they have the drive and grit to become proficient with learning technologies?

Finally, whether their organization is at the beginning of the learning technology journey or already has an established ecosystem, all TD professionals should continue to learn from and find resources that will allow them to stay current in this area. ATD provides members with resources they can use to learn more about learning technologies.



# Survey Overview

## Target Survey Population

The target population for this research was talent development professionals across different organizations and industries. There were 212 talent development professionals who completed the survey.

## Survey Instrument

The survey was composed of 26 questions including those related to the demographics of the respondents.

## Procedure

ATD Research distributed a link to an online survey to the target population in September and October 2023. The survey closed in October 2023.

## Identifying Statistically Significant Differences

This report notes differences between groups. All differences are significant at a level of at least  $p < 0.05$ . A significance of  $p < 0.05$  implies a less than 5 percent probability that the difference is a result of chance and one can be 95 percent confident that the results represent a statistically significant relationship.



# Demographics

## Employment Status

Employed full time	97%
Employed part time	3%

## Organization Size

Small <i>1 to 99 employees</i>	10%
Medium <i>100 to 2,499 employees</i>	43%
Large <i>2,500 to 9,999 employees</i>	24%
Extra-Large <i>10,000 or more employees</i>	23%

## Work Arrangement

Remote	15%
In-Person	29%
A hybrid of remote and in-person	55%

## Industry

Accommodation and Food Service	1%
Arts, Entertainment, and Recreation	<1%
Construction	2%
Educational Services	14%
Finance and Insurance	11%
Healthcare and Social Assistance	15%
Information	4%
Manufacturing	8%
Mining, Quarrying, and Oil/Gas Extraction	<1%
Professional, Scientific, and Technical Services	10%
Public Administration	5%
Real Estate and Rental/Leasing	1%
Retail Trade	3%
Transportation and Warehousing	4%
Utilities	<1%
Wholesale Trade	1%
Other Services	17%

## Region

Africa and the Middle East	<1%
Asia-Pacific	<1%
Europe, UK, and Ireland	3%
Mexico	<1%
USA	95%
Other	<1%

## Span of Control

Executive or Director	16%
Manager, Supervisor, or Team Leader	29%
Individual Contributor	54%
Other	1%

## Member of ATD

Member	65%
Nonmember	35%

# ATD Resources

ATD has many free and paid resources about learning technology ecosystems. Whether you have five minutes or five weeks, we have content that will fit your schedule.

**The ATD Blog** is filled with posts on a variety of topics.

- “What Open Versus Closed Ecosystems Mean for Your L&D Tech” describes the differences between open and closed ecosystems. Visit [td.org/atd-blog/what-open-versus-closed-ecosystems-mean-for-your-l-d-tech](https://td.org/atd-blog/what-open-versus-closed-ecosystems-mean-for-your-l-d-tech).

**ATD On-Demand Courses** are high-quality, flexible learning opportunities for members and nonmembers. They're available immediately after purchase.\*

- The Administering a Learning Technology Ecosystem course teaches participants about the components and approaches necessary to build a comprehensive learning technology ecosystem. Visit [td.org/education-courses/administering-a-learning-technology-ecosystem](https://td.org/education-courses/administering-a-learning-technology-ecosystem).

**ATD Certificate Programs** are comprehensive, skills-based courses available to members and nonmembers. They're offered both live online and face to face.\*

- The Learning Technologies Certificate program will train participants on maximizing the right tools and technology to achieve your talent development initiatives. Visit [td.org/education-courses/learning-technologies-certificate](https://td.org/education-courses/learning-technologies-certificate).

**ATD Press Books** offer insightful and practical information on talent development and professional development.\*

- *The Modern Learning Ecosystem* by JD Dillon discusses a new L&D mindset to help you navigate workplace change. Visit [td.org/book/the-modern-learning-ecosystem](https://td.org/book/the-modern-learning-ecosystem).

**Talent Development Capability Model** is a framework to guide the TD profession in what practitioners need to know and do to develop themselves, others, and their organizations.

- ATD members can sign in to the interactive Capability Model using their td.org account. From there, they can review the knowledge and skill statements and rate their proficiency. After completing the self-assessment, members can identify and prioritize areas for further development. Visit [td.org/capability-model/about](https://td.org/capability-model/about).

\* Not included in the price of ATD membership.

Not a member of ATD? Visit [TD.org](https://td.org) to join and gain access to ATD's resources, articles, whitepapers, webinars, and more.

# Acknowledgments

ATD gratefully acknowledges the contributions of time and professional insights from the following subject matter expert:

- **Becky Willis**, WillLearn Consulting



# Notes

1. Association for Talent Development, *Learning Technology Ecosystems: Tools, Programs, and Strategies* (ATD Press, 2021).
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# About the Author and Contributors

**The Association for Talent Development (ATD)** champions the importance of learning and training by setting standards for the talent development profession. ATD is the largest, most-trusted organization for the professional development of practitioners in training and talent development, serving a worldwide community with members in more than 100 countries. Since ATD was founded in 1943, the talent development field has expanded significantly to meet the needs of global businesses and emerging industries. ATD's mission is to empower professionals to develop talent in the workplace.

The resources we provide to help talent development professionals increase their impact and effectiveness include our research. ATD's researchers track trends, inform decisions, and connect research to practice and performance. By providing comprehensive data and insightful analyses, ATD's research products, which include research reports, briefs, infographics, and webinars, help business leaders and talent development professionals understand and more effectively respond to today's fast-paced industry.



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