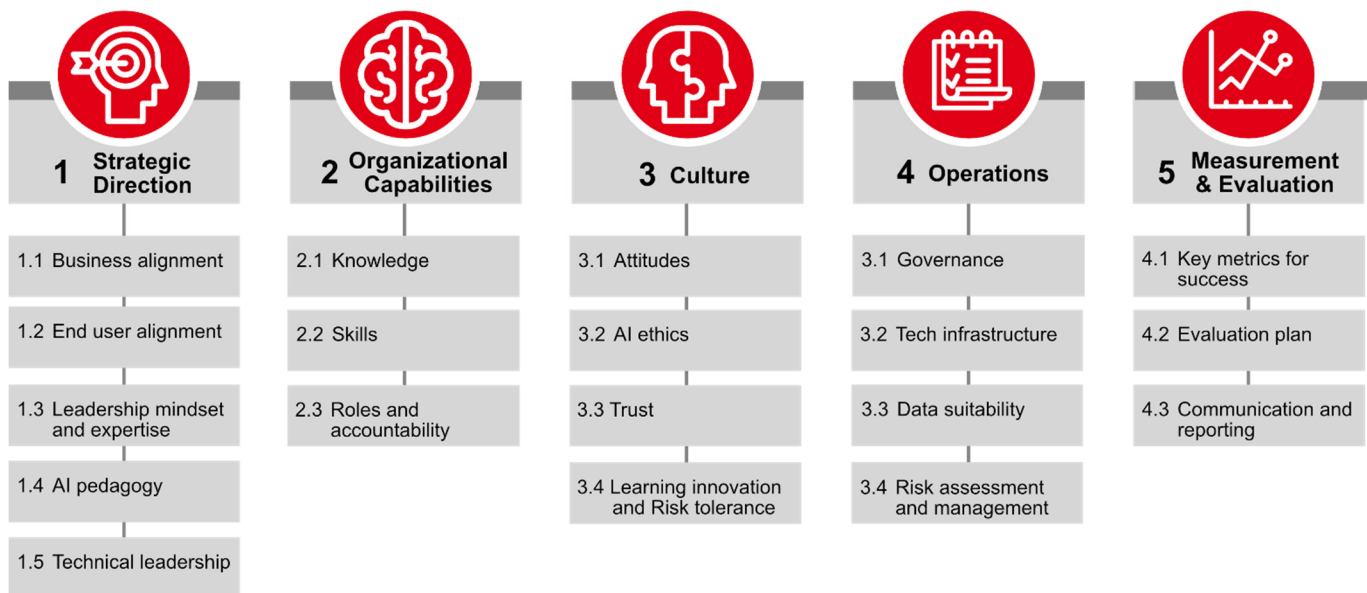


## AI Adoption Framework for L&D

As Artificial Intelligence (AI) makes major headway in recent years, organizations are exploring the promise of AI in increasing productivity, providing insights about their customers, expanding business reach, automating tasks, and many more possibilities. Practitioners in Learning and Development (L&D) are interested in the multi-faceted role of AI in education and how we can leverage the technology to create and curate content, facilitate learning, augment learning analytics, and personalize the learning experience. While experimenting with AI tools has become commonplace, to strategically implement AI is no walk in the park. It is an expensive endeavor with a high failure rate.

To avoid falling into this statistical majority, learning leaders must take a holistic approach for AI adoption, balancing blue-sky thinking with practical steps. Specifically, we need to have a standardized way to assess our own and our organization's readiness for AI and to identify gaps and areas requiring further development. To increase the likelihood of success, leverage an AI adoption framework for L&D. This framework serves as a rapid assessment tool for functional leaders and key stakeholders to evaluate our organization's maturity and readiness. Figure 1 summarizes the framework:

**Figure 1: AI Adoption Framework for L&D**



## Pre-Strategy Retrospective Analysis: Learning from the Past in AI Adoption

Prior to diving into the AI Adoption Framework, we need start with retrospection and learning from past experiences in educational technology (edtech) implementations.

Reflecting on what succeeded and what faltered in past edtech initiatives offers invaluable insights. Historically, edtech's promise to revolutionize learning has often fallen short, with many technologies merely digitizing existing educational methods. For instance, virtual classroom platforms, rather than innovating educational interactions, often perpetuated the traditional format of lectures with a facilitator presenting to an audience. This reflection highlights the necessity to not just adopt but to transform with technology.

Understanding AI as just another tool in the educational arsenal instills a grounded perspective on its adoption expectations. AI's unique characteristics – such as its data dependency, opaque decision-making processes, and unpredictable outputs – should be carefully considered. These aspects could significantly influence both the implementation process and future strategic directions. This segment of strategy formulation is dedicated to analyzing how past lessons and insights can inform and shape forward-looking AI strategies and visions, ensuring a more thoughtful and effective integration of AI in educational settings.

### 1 Strategic Direction



The first dimension, **Strategic Direction**, encompasses a comprehensive understanding of the organization's business needs, overarching goals, and strategies. It assesses the objectives of AI implementation, focusing on how it aligns with and supports the broader business context while balancing the efficacy of the AI tools for educational purpose. This dimension also includes identifying target users, evaluating the organization's functional and technical leadership's aptitudes necessary to endorse and guide AI integration.

The Strategic Direction dimension assesses an organization's preparedness across five subcategories:

#### 1.1 Business alignment

AI projects, if not judiciously aligned with broader organizational objectives, risk becoming department-centric, overlooking the full spectrum of business needs and the potential value they can add. This misalignment is common when projects are spearheaded by a single department, focusing narrowly on specific departmental requirements rather than the collective organizational goals. To counter this, business alignment scrutinizes the extent to which an AI initiative underpins and enhances the organization's overarching goals and objectives.

Furthermore, determining the desired outcome of the AI project will directly influence the types of data that need to be collected or sourced. This foresight aids in later stages by facilitating the assessment of data availability and quality within your organization (see *Dimension 4.3 Data Suitability*).

### 1.2 End user alignment

Who are the intended users of your AI project? It's critical to ensure that any AI project addresses the needs of a disparate set of users and stakeholders. Project sponsors would likely care about the required investment in tools and the AI product's compatibility with the existing technology stack. Alternatively, end users want a product that is easy to use and can integrate into their current learning process and workflow. End user alignment emphasizes the need to define intended users and include them at the onset of the project as part of the decision making team, solicit their input through interviews, pilot testing, and surveys.

### 1.3 Leadership mindset and expertise

While leaders don't need to have technical expertise in AI, they must have a realistic and broad understanding of the potential and limitations of the technology to manage expectations from sponsors, end users, and stakeholders. This subcategory focuses on the attitudes and experiences of the leadership team regarding AI. It assesses if leaders have a supportive and informed mindset towards AI, as well as the relevant experience to guide its implementation effectively.

### 1.4 AI pedagogy

To use AI tools effectively for L&D purposes, it is important to examine the underlying assumptions and potential impacts of an AI tool in shaping learning. AI pedagogy is about understanding and applying AI within the context of educational methodologies and strategies. It assesses how AI can enhance learning and whether the product is grounded on evidence-based educational theories and best practices. Additionally, it involves a thorough examination of the potential downsides and limitations of certain approaches, ensuring an informed approach to integrating AI in learning. For instance, AI-powered adaptive learning systems could personalize content based on individual learner's pace, prior knowledge level, and past interactions; however, it runs the risk of over-prescription, where the learning path becomes excessively dictated by the algorithm.

### 1.5 Technical leadership

Technical leadership evaluates the organization's technological capabilities, how AI can be integrated into current workflows and systems. This involves gauging the capabilities of internal IT teams, including data science and business analytics, to effectively support and maintain AI-driven initiatives. Furthermore, it covers the tech leaders' comprehension of the integration of AI within the organizational framework, ensuring they understand how these technologies align with the company's strategic objectives.



For general AI adoption insights, read [Keep Your AI Projects on Track](#) by Iavor Bojinov, Harvard Business Review.

## 2 Organizational Capabilities



The second dimension, **Organizational Capabilities**, addresses the competencies of the staff, comprising both the L&D team and the broader organizational workforce.

The L&D team serves as the bridge between strategic vision and operational execution. They play a vital role in ensuring that the AI solutions are effectively integrated into the learning environment, and in shaping AI-driven pedagogy – evaluating whether the AI solutions genuinely impact learning outcomes and analyzing evidence to support their effectiveness.

In addition to the L&D team, staff within the organization must be prepared to engage with AI tools, requiring an awareness of how these technologies can augment their work and learning experiences. Essentially, this means that we need to ensure that they are AI literate.

The Capabilities dimension is segmented into three subcategories:

### 2.1 Knowledge

Knowledge focuses on gauging the depth and breadth of understanding regarding AI technologies. It examines the extent of awareness and comprehension concerning AI's functionality, its evolving landscape and marketplace dynamics, familiarities with various tools and techniques, and a thorough grasp of its potential advantages and limitations. Additionally, it includes the ability to recall relevant case studies and examples, enriching the practical use of AI knowledge.

### 2.2 Skills

This aspect highlights the essential practical skills necessary for the proficient utilization of AI tools. It involves skills such as conducting pilot testing and evaluating different AI solutions, sourcing, and integrating data effectively into AI systems, applying critical thinking to analyze AI-generated content, interpreting data-driven insights, and leveraging AI tools to both enhance and innovate learning experiences.

### 2.3 Roles and Accountabilities

This aspect delineates the transformation of conventional L&D roles in the wake of AI integration, highlighting the shift towards data-driven decision-making and technology incorporation. A frequently overlooked yet critical role is L&D's involvement in the AI product procurement process. This role demands proactive collaboration with IT and business stakeholders to ensure that AI solutions align with the organization's learning objectives and workforce development strategies.



To develop both knowledge and skills in your organization, explore this [AI Literacy Framework](#) and its corresponding set of competencies.

## 3 Culture



The third dimension, **Culture**, examines the integral role that organizational culture plays in the success of AI projects. This is the collective attitudes and perceptions of staff towards technological adoption, drawing from their previous experiences in similar initiatives. Additionally, it examines the organization's stance on critical issues such as data ethics, privacy, trust, and how these have been addressed and communicated.

### 3.1 Attitudes

It assesses the overall stance and expectation of staff towards AI integration and their commitment to ongoing learning. This includes their openness to adapt to AI-driven changes, the willingness to collaborate with others, enthusiasm for technological innovation, and receptiveness to experimenting with new AI-enabled learning approaches and processes.

### 3.2 AI Ethics

This area focuses on the organization's commitment to ethical considerations in AI deployment, including data privacy, algorithmic transparency, equitable AI practices, enabling user agency, ensuring these principles are deeply ingrained in the organizational ethos. Ethical considerations should be integrated from the project's onset, not retrofitted as an afterthought. Furthermore, we need to focus on ethical issues specific to L&D, such as enforcing that individual learner data is protected, regularly auditing AI-enabled learning recommendations and content, and communicating to users that their learning data is not used to make value judgments or to impact their performance reviews in any way.

### 3.3 Trust

One of the greatest barriers for AI adoption project is the lack of trust from the end users. If people suspect an AI system is biased, inaccurate, or infringing on their privacy, then they won't use it. This subcategory involves building and maintaining trust not just in the AI systems themselves but also in the decision-making processes surrounding AI deployment. Trust needs to be established with end-users through open communication and regular feedback solicitation. L&D needs to emphasize building trust in AI systems among target learners, providing options for them to review and opt out of pilot projects.

### 3.4 Learning Innovation and Risk Tolerance

This is the organization's commitment to fostering a culture that values continuous learning and skill development, particularly in areas relevant to AI and emerging technologies, while simultaneously embracing innovation and risk-taking. It reflects an environment where staff are encouraged to explore new ideas, experiment with AI technologies, and are supported in their efforts to upskill in this domain.



To learn more how to mitigate bias in AI, read [Fairness in AI: Impact and Opportunities](#), published by the AI Asia Pacific Institute.

## 4 Operations



The fourth dimension, **Operations**, focuses on the practical aspects of bringing an AI project to fruition. This involves addressing key operational tasks and some AI-specific considerations as well as emphasizing the need for meticulous planning and structured implementation.

The following four subcategories evaluate operational readiness:

### 4.1 Governance

Governance involves establishing formal processes to oversee the AI project, data management, and use. It includes the creation of policies, adherence to industry standards, and alignment with current research and best practices for AI integration. Furthermore, for L&D practices, it also entails setting standards and processes for course design, instructional methodologies, and content curation are aligned with AI capabilities.

### 4.2 Technical Infrastructure

Technical infrastructure ensures that the appropriate technological framework and support are in place for both the organization and for L&D specific applications. In many cases, AI vendors offer cloud-based solutions which can reduce the burden of having to maintain extensive in-house tech infrastructure. However, considerations on specific infrastructure questions such as scalability, software compatibility, and security need to be addressed and confirmed with the vendors during the procurement stage.

### 4.3 Data Suitability

It is critical to assess the suitability of the data for training and operating the AI. This involves ensuring that the data is not only available but also relevant, high-quality, and ethically sourced. Specifically, we need to focus on the availability of L&D-specific data, such as learning content usage and interaction data, learning pathway patterns, formative and summative assessment data, and learner feedback. This data should be representational (represent all the target learners and not biased toward a specific group) and sufficient to train AI systems to make meaningful, education-focused decisions and recommendations.

### 4.4 Risk Assessment and Management

Risk assessment involves a thorough examination of the accuracy and applicability of AI-generated content, analysis, and recommendations, ensuring they adhere to L&D quality and organizational standards without hallucination, errors, or infringing on copyrights. Furthermore, it needs to consider the broader implications of these risks, such as the potential for data misinterpretation or the ethical concerns surrounding AI deployment in educational settings. Risk management focuses on developing and implementing strategies to mitigate the above risks. This includes establishing protocols for regular monitoring and evaluation of AI systems to ensure their ongoing accuracy and relevance in L&D contexts.

## 5 Measurement & Evaluation



You won't know if your AI project is successful until you have evidence to support your claims. The fifth dimension, **Measurement and Evaluation**, is essential in understanding the effectiveness and impact of your AI adoption project. This dimension revolves around the methodologies and criteria used to measure and evaluate the outcomes of AI integration.

The sub-categories for this dimension are:

### 5.1 Key Metrics for Success

This subcategory focuses on identifying specific, relevant measures that will indicate the success of the AI adoption. These metrics should assess the learning objectives and the degree to which they help achieve business goals. They include levels of learner engagement, improvements in learning outcomes, enhancements in performance support, gains in workplace efficiency, and customer satisfaction rates, etc. Ideally, these metrics should have been established during the business alignment phase (see **Dimension 1.1 Business Alignment**), aligning closely with the organization's defined business goals. For instance, if the objective is to augment a customer service training program using a personalized chatbot, it is crucial to first determine clear metrics for "effectiveness". This could involve defining effectiveness in terms of tangible outcomes such as increased job satisfaction, improved customer ratings, higher rates of returning business, or a reduction in error rates.

### 5.2 Evaluation Plan

This plan should outline the methods, strategies, and processes for assessment. It should detail how data will be collected, analyzed, and interpreted. The plan must also consider both short-term and long-term evaluations, assessing immediate impacts as well as changes over time.

### 5.3 Communication and Reporting

This subcategory underlines the importance of effectively communicating and reporting the findings from the evaluation. This involves not just presenting data, but also interpreting it in a way that stakeholders can understand and use. Reports should be clear, concise, and actionable, providing insights that can guide future decisions and improvements.



For a robust and structured approach to this dimension, I recommend the [BetterEvaluation Rainbow Framework](#) as a planning tool. This tool can serve as a comprehensive guide for planning and conducting evaluations, ensuring that all relevant aspects of AI adoption in L&D are thoroughly assessed. The framework can help in identifying appropriate methods for both measurement and evaluation, ensuring that the results are reliable, valid, and useful for ongoing decision-making and strategy development.