THE eLEARNING GUILD

WHITE PAPER

Learning and Performance Ecosystems

Strategy, Technology, Impact, and Challenges

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Executive Summary

"The whole is greater than the sum of its parts."

—Common colloquialism often attributed to Aristotle

The increasing complexity of the world in which we live and work, combined with the explosion in the amount of knowledge we need to be successful, requires us to be more sophisticated in how we learn. We must be better prepared to learn on demand, with minimum disruption to our workflow and productivity. With this goal in mind, it is increasingly critical that the resources put in place to help us learn—and ultimately perform—be as direct, effective, and instantly available as possible.

To accomplish this, we must move away from individual, siloed, "one-off" solutions to an *ecosystem* comprised of multi-faceted learning and performance options that enhance the environments in which we work and learn.

We define a *learning and performance ecosystem* as enhancing individual and organizational effectiveness by connecting people, and supporting them with a broad range of content, processes, and technologies to drive performance.

While this framework is new, it is derived from earlier, well thought-out concepts including, but not limited to, blended learning, human performance technology, and informal learning. It brings together six major components that help people learn and perform better: talent management, performance support, knowledge management, access to experts, social networking and collaboration, and structured learning. These are not set in stone. We expect these components to evolve and new ones to emerge over time.

Despite its name, a learning and performance ecosystem is more flexible and adaptable than most typical "systems." It can be applied in creative and dynamic ways, shaped one way to address a specific set of performance problems and opportunities, and then reshaped to meet new challenges. It gives us a way to organize the increasing complexity of what we do, without locking us into one specific step-by-step methodology.

This white paper explores learning and performance ecosystems from conceptual, technological, cultural, and managerial perspectives, and looks into how this new framework will dramatically impact the ways in which people learn and work.

This white paper lays a foundation for further discussion, experimentation, and innovation into new ways to leverage all that we know about learning to improve workforce performance. There isn't enough space to delve into the intricacies of each of the many solutions possible within the ecosystem, or describe in great detail their underlying processes and technologies. It assumes that the reader is familiar enough with these approaches, terms, and concepts to make the jump to ecosystem thinking, or can access additional information if needed.

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Introduction

"The tipping point is that magic moment when an idea, trend, or social behavior crosses a threshold, tips, and spreads like wildfire."

—The Tipping Point: How Little Things Can Make a Big Difference, Malcolm Gladwell

Organizational learning and performance has reached a tipping point. Businesses, non-profits, government agencies, and more have tipped from providing learning solutions at specific times and places to 24/7/365 availability. They have tipped aggressively to supporting people at work, on demand, and at the moment of need. They now know that although training remains important, the likelihood that training can, *by itself*, maintain high performance, or keep up with the avalanche of new knowledge, is extremely unlikely.

Gone (or going) are massive brick and mortar training centers and corporate universities. Whether by using technology to deliver learning programs to the desktop or placing training rooms next to offices, organizations have flipped from the old model where workers traveled to attend training to a new model where learning programs are delivered in the workplace.

For organizations, and for learning and performance professionals, the shift of attention from the classroom to the workplace is moving ever faster. There is no turning back. Yet, while we have made great strides in bringing training closer to the work*place*, our next challenge is to bring learning closer to the work*flow*.

How much of your work from day to day is new to you? How often must you figure out ways to learn as you go in order to complete a task or a project? People search for information; talk with colleagues; ask questions, seek out examples, tools, and templates; and pursue many creative approaches in order to learn while they work. In these cases, learning is not something that is separate from work. People cannot always afford to stop working to attend training—they must learn while they work. So how can we in the learning function (a.k.a., "learning and development" [L&D], "training," the "learning organization," "corporate university," etc.) help? How can we create an environment that embeds learning and performance solutions into the flow of work?

Existing Paradigms

There is more to the learning and performance function than training; this is nothing new. But what those new alternatives are has been hard to define, much less implement. Three notable efforts in this direction include:

1. *Blended learning*. The idea that a learning strategy (more appropriately, a training strategy) could benefit from multiple approaches—like classroom training and eLearning, for example—showed that bringing varied tactics to bear on a learning problem could improve its effectiveness and efficiency. However, blended learning is limited, for the most part, by its focus only on different *training* formats, without going beyond formal instructional pedagogy.

2. *Human-performance technology*. Human-performance technology (HPT) broke through the practice of addressing performance problems with only instructional solutions. Practitioners of HPT understand that such problems or opportunities are addressable in many ways, including, but not limited to, providing real-time information and data, motivating rewards and recognition, performance feedback, and better tools and processes, as well as quality training. Exceptionally focused on analyzing problems and recommending solutions, HPT does less to specify exactly what those solutions should be, beyond these general categories.

3. *Informal learning*. The idea that formal learning, including training and eLearning, can be significantly augmented and enhanced by informal learning, where self-directed individuals and communities of people use job-based tools to manage, access, and share insights and information, has been the main driver of the shift from the classroom to the workplace. To some, the weakness here is the concept of "informal," which can seem too amorphous to manage, implement, or measure, much less sell to those who might sponsor it.

Despite limitations, these paradigms have been helpful in shaping our current thinking. How can we take our past experience, accomplishments, and lessons learned, as well as what we know about learning and performance, and make it all work for us going forward? How can we ride the tipping points in our field to our best advantage?

Who Is This White Paper For?

This white paper introduces a new and comprehensive framework—an ecosystem—to the application of new and innovative solutions for improving the performance of people at all levels in any type of organization. You will find this white paper of value if you are:

- *A learning and development professional* who seeks to meet ever more challenging human-performance problems and opportunities by going beyond traditional learning strategies, like training and eLearning, to a more wide-ranging set of strategies that focus on the workplace and the flow of work.
- *A business executive* who is responsible for the performance of workers in his or her business unit or division, and who knows that improving performance is one of the best ways to improve productivity, customer service, and profitability, and who seeks innovative ways to accomplish this goal.
- *A front-line manager* who seeks to improve the performance of her or his people in the most efficient and effective way, so that they can contribute even more to their own success and the success of the enterprise.

If you fall into any of these descriptions, and believe that although training has its role in performance improvement, it cannot do it all and there ought to be more diverse and efficient ways to meet these challenges, read on!

Where Are You on the Learning and Performance Ecosystem Continuum?

Organizations and individuals enter the conversation about learning and performance ecosystems at different points of understanding and maturity. This is fine. As you read through this white paper, think about where you see yourself, your department, and your company.

1. *You are curious*. Perhaps you are interested in how a learning and performance ecosystem can help your operation. Use this white paper to learn more about the concept and develop questions for those who are emerging as experts in this space.

2. *You are just getting started*. Perhaps you're interested in the ecosystem concept, but you're not sure how to put it into action in your organization. You may have explored the characteristics and benefits of an ecosystem and begun to educate others to move into a learning and performance ecosystem mindset. Use this white paper to begin your journey and to forge an initial strategy as to where you want to go.

3. *You have some of the pieces, but haven't put them together yet*. Maybe you are at the stage where you have an initial strategy and some of the pieces are in place, but you need a plan for how to move forward and solidify your gains. You may have a good understanding of the basics of a learning and performance ecosystem, but haven't operated in a way that takes advantage of it. Use this white paper to help plan your next steps in identifying a strong sponsor and a high-impact project to showcase the benefits of the ecosystem approach.

4. *You are moving forward*. If you are at this point, you have likely established some models and developed some solutions that demonstrate a learning and performance ecosystem. Use this white paper to generate ideas among your team and your clients and customers as to how to apply the ecosystem model on a larger scale, to get more buy-in from senior managers, and to educate new clients and customers.

Wherever you are on the continuum, the ecosystem framework presents a powerful approach and a great opportunity to move forward in making a more significant contribution not just in the learning and performance arena, but in the broader organization as well.

The Learning and Performance Ecosystem

"The convergence of learning with work has changed the rules of engagement. Our current training paradigm often comes up short."

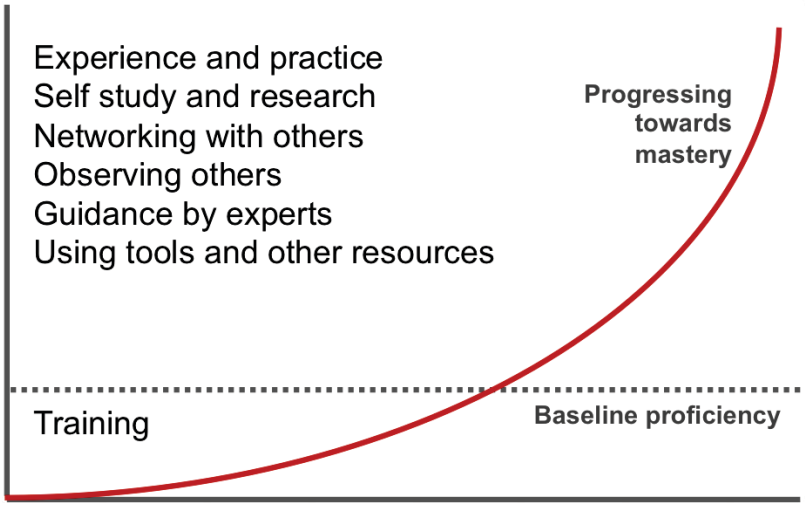
—Gary Wise, learning and performance solutions strategist

People learn in many different ways. Education and training is just one of those ways. Given that most working people get no more than a few days to a few weeks of training a year, it is impossible for them to learn everything they need to know through formal instruction. And with the seemingly overwhelming amount of knowledge that is amassing in the workplace and the ever-shorter life span and volatility of that knowledge, workers would almost have to be in training *every day* in order to keep up.

Training Is Not Enough

We cannot hope that training alone will get people to mastery. At best (and this is never guaranteed), it can get them to baseline proficiency. To keep the learning process going, we must look to alternatives to formal training and move beyond the classroom to the workplace. If we do this, our view of the ways we can positively impact learning and performance greatly expands:

Figure 1
Ways people learn



We are becoming smarter about how people learn. We know that people learn differently depending on their level of experience and expertise. A master performer learns quite differently than a novice. We also know that people learn differently depending on the content to be learned. Learning a carpentry skill is different than learning a scientific principle, which

differs from learning how to write computer code or a music score. So the challenge we face is not just in expanding our toolkit and the places where we apply it, but in clearly matching our solutions to the people we seek to help, and the specific type of work they do.

It is important to recognize that learning and performance solutions are not limited to learning or training programs. Today, solutions must be much more diverse. People learn from each other as well as from a variety of online, non-instructional information resources. Sometimes learning is secondary to performance; that's where performance support comes in. In many of these situations, how the user approaches these learning and performance opportunities is self-directed, rather than dictated by the program. And, it can all be customized based on individual or group needs, so that we don't have to teach all things to all people.

We need to look at all these approaches to learning in a new way that better addresses the realities and challenges people face working in complex and always changing environments. We need to advance beyond designing and delivering disparate solutions and, instead, think about how those solutions can function together in an *ecosystem*.

What Is an Ecosystem?

Ecologist Ernst-Detlef Schulze defines an ecosystem as *the network of interactions among organisms and between organisms and their environment*. The term *ecosystem* was originally used to describe connections in nature, among species and their physical environment. However, ecosystems are not limited to the natural world; the idea is also popular in business and technology.

- *Business ecosystem*: An economic community supported by a foundation of interacting organizations and individuals—the organisms of the business world. (Harvard professor James Moore)
- *Software ecosystem*: A set of software solutions that enable, support, and automate the activities and transactions by the actors [e.g., users] in the associated social or business ecosystem, and the organizations [e.g., IT., HR, L&D] that provide these solutions. (Swedish professor Jan Bosch)

For a while now, K-12 and higher education professionals have been using the ecosystem concept to get their arms around the expanding learning options that are available to students today. In industry, Apple Computer, Google, and Microsoft are well-known for developing their own software and/or hardware ecosystems; Facebook is working on building its own social ecosystem. The relationship between a company's manufacturing process and its suppliers, distributors, and retailers can also be an ecosystem. And ecosystems constantly reinvent themselves: The heating and cooling ecosystems of green buildings

are significantly impacting those of traditional structures, and ecosystems built into electric automobiles may one day replace internal combustion ecosystems.

What Is a Learning and Performance Ecosystem?

Definition: *A learning and performance ecosystem enhances individual and organizational effectiveness by connecting people and supporting them with a broad range of content, processes, and technologies to drive performance.*

In any work environment, workplace ecosystems already exist. They are comprised of the people, workflows, and technologies that support the work. A learning and performance ecosystem introduces new capabilities that integrate learning and performance solutions into the work environment. It minimizes the need for workers to leave work in order to learn, reduces work disruption, and places more learning opportunities directly into the flow of the work.

FAQ: What's the Difference Between Learning and Performance?

Learning and performance are interrelated but they are also fundamentally different. Performance is a goal, and learning is just one of many ways to reach that goal. In other words, learning enables performance, just as training enables learning.

In the past, learning has been largely developed and delivered in ways similar to how we learned in school. By changing this paradigm, we add new opportunities for workers to learn from one another, as well as from new resources now becoming available in their work environment.

Why Do We Need a Learning and Performance Ecosystem?

Some may argue that we don't need the structure or the concepts embedded in a learning and performance ecosystem, that the tools we already use are fine as they are. But there are five unique and important advantages to embracing an ecosystem framework:

1. *It expands our capabilities and choices*. The ecosystem is a much bigger toolbox. It takes into account the full array of components and resources that you can combine in hundreds of different ways to support learning and performance.
2. *It increases our innovativeness and agility*. The demands of modern organizations, especially in the arena of learning and performance, require both quick responses to problems and innovative solutions. The ecosystem framework allows us to apply

more direct and impactful solutions, faster, by using the appropriate combination of approaches, some of which can be embedded in the workflow.

3. *It helps us find solution relationships*. Ecosystem components are complementary and synergistic. When used in combination, ecosystem components can support learning, mastery, transfer, reinforcement, enrichment, sharing, and more.
4. *It adds value*. By providing more options, ecosystem solutions have the potential to be more efficient and effective, improving productivity and lowering costs.
5. *It provides a framework to organize the learning and performance improvement function*. The ecosystem provides an inherent structure for organizing staff and budget in ways that can optimize resources.

What should be clear is that a true learning and performance ecosystem is more comprehensive, conceptually and operationally, than the individual components that comprise it.

FAQ: Is Training or eLearning a Learning and Performance Ecosystem?

No. Training and eLearning are tactics in the "structured learning" component of a learning and performance ecosystem. They represent single approaches that combine with others in the ecosystem to form unique learning and performance solutions.

Inside Learning and Performance Ecosystems

> ***"You cannot create value for any one investment—you have to bundle them."***
>
> —David Norton, developer of the Balanced Scorecard

Learning and performance ecosystems put people and users in the center and support them with six primary *components*—talent management, performance support, knowledge management, access to experts, social networking and collaboration, and structured learning. From these six components we can craft an infinite number of dynamic learning and performance solutions.

Figure 2:

Six primary components of a learning and performance ecosystem

One key focus of the ecosystem mindset is that people don't always need to engage in training in order to improve their performance. People are enriched by additional, equally important, opportunities to advance, perform, research, consult, and share.

The ecosystem idea fits the learning and performance function quite well. It seeks to bring all the disparate parts of the field together into a comprehensive yet flexible structure that is easy for organizations to understand, configure, implement, and scale.

Characteristics of a Learning and Performance Ecosystem

There are eight main characteristics of a learning and performance ecosystem:

1. *It is performer- or user-centric*. The primary focus of the learning and performance ecosystem is on the users and performers, not on content, process, or technology. The best measure of the effectiveness of a learning and performance ecosystem is, first and foremost, the value it brings to users. In so doing, it also brings value to the organization as a whole.

2. *It is part individual and part social*. Components of a learning and performance ecosystem can be used by individuals working alone, or by communities of people of varying sizes who are working together toward a common goal.

3. *It interacts with and is influenced by the culture of the organization*. How a learning and performance ecosystem works, and how successful it is depends, to a great extent, on the culture of the organization in which it exists. User acceptance, management sponsorship, openness to experimentation and change, technological savvy, and prevailing attitudes toward learning and performance are key factors.

4. *It is an expanded toolbox of resources for the designer or developer*. They can leverage the components that make up the ecosystem in hundreds of combinations to address nearly any learning and performance problem or opportunity. Relying on a single solution—even a good one—no longer works. The proverb "If all you have is a hammer, everything looks like a nail" rings true for too many of us, and that attitude must change.

5. *It is part managed and part self-directed*. A learning and performance ecosystem may combine purposefully designed content and locked-in programs with user-generated content and social mechanisms.

6. *It is adaptable*. Each user, or user group, can customize a learning and performance ecosystem in different ways to meet unique requirements. There is no lockstep or single way to do things. Changes in the environment (e.g., new use-models, new audiences, time or financial constraints, or advances in technology) may result in different applications of ecosystem components. For example, a sales team facing a customer deadline may use selected ecosystem components differently than an IT organization implementing new software.

7. *It is organic and evolves over time*. Over time ecosystems change. Elements that were once critical to the ecosystem become outdated and die off, replaced by new elements that did not exist even a few years earlier. You must allow a learning and performance ecosystem to evolve with the changing nature of work.

8. *It is expansive and holistic*. A learning and performance ecosystem takes the broadest, most comprehensive view of potential approaches and solutions to the need at hand. There is no artificial determinant as to what content, processes, and technologies can be incorporated, beyond simply what works.

What a Learning and Performance Ecosystem Is NOT

One helpful way to define a learning and performance ecosystem is to describe what it isn't. We've already described three precursor concepts—blended learning, human performance technology, and informal learning—that have contributed to our current understanding, so we won't cover them again here. But there are other approaches that don't qualify as learning and performance ecosystems. Here are three:

1. *It isn't limited by a single type of intervention, no matter how prevalent*. Talking about a learning and performance ecosystem in terms of one specific approach (e.g., training, eLearning, performance support, coaching, and more) is just too limited. Rather, the ecosystem is the *total collection* of all approaches and resources that are available.

2. *It isn't a single system or process*. Despite the name, there is no single blueprint or methodology for a learning and performance ecosystem. Rather, you can adapt it and use it in many ways, to meet many different needs. The ecosystem that thrives in a desert would not work well in a rainforest. One that succeeds in the military may not work well in a public school. An organization's strategic goals, culture, readiness, and use models will determine its optimum ecosystem.

3. *It isn't just technology*. The desire to associate a learning and performance ecosystem with software applications is strong. You can acquire and assemble technologies into an infrastructure that helps *enable* the ecosystem, but technology alone is *not* enough. What really makes up the ecosystem is the learning that happens through relationships, connections, and interactions between and among people who work together, and the processes, content, and technology used in the workflow.

FAQ: Is an LMS a Learning And Performance Ecosystem?

No. An LMS primarily supports the structured learning-solution component of the learning and performance ecosystem. It may be an important technology building block, but it is not an ecosystem.

It's All About Connections

The aim of a learning and performance ecosystem is to increase productivity. The ecosystem does this by introducing a lattice of enhanced connectivity to the work environment. Through the ecosystem, workers become better connected with the people, processes, content, and technology that help them to learn, perform, and succeed.

A learning and performance ecosystem is not just technology or merely a set of features and functionality. Ultimately, It must be active, alive, and thriving. A learning and performance ecosystem lives through its use by people. Without people using it, interacting with it, connecting through it, and deriving value from it, the ecosystem becomes useless and dies.

Putting People in the Center

"To win in the marketplace you must first win in the workplace."

—Doug Conant, CEO, Campbell's Soup

Without people, learning and performance ecosystems have no purpose and no value. Putting people in the center reinforces their critical role.

Learning and performance ecosystems serve people in all sorts of roles: employees, customers, executives, sales people, nurses, soldiers, and many, many others, in all types of environments: offices, factories, retail stores, hospitals, the military, to name a few, and at all four levels of readiness: novice, competent, experienced, and expert.

Individual Goals

What's most interesting is that people pursue different and multiple goals when interacting with the six ecosystem components:

1. *Talent management*. Here people seek to move their careers forward and find the best place for themselves in the organization. The organization, in turn, seeks to allocate its workforce in the most efficient and productive manner. From the workers' perspective, the goal is to *advance*. From the organization's perspective, the goal is to *manage and develop the workforce*.

2. *Performance support*. Here, people seek assistance at the moment of need by employing performance-support tools in the context of their work tasks. From the workers' perspective, the goal is to *get a job or task done*. From the organization's perspective, the goal is to *improve productivity and reduce errors*.

3. *Knowledge management*. Here, people access content in support of their work. From the workers' perspective, the goal is to successfully *research* a topic and *get answers* quickly. From the organization's perspective, the goal is to *provide easy and reliable access to information*.

4. *Access to experts*. Here, people look for help from more experienced people, sometimes in the form of coaching and mentoring, but also more informally, including getting assistance from a colleague, calling a help center, or even asking the boss. From the workers' perspective, the goal is to *consult* with experts to resolve a problem or issue, or grow their capabilities over time. From the organization's perspective, the goal is to most effectively *leverage expertise*.

5. *Social networking and collaboration*. Here, people share information and insights with one another so that the collective knowledge and experience of a group helps everyone solve a problem, improve performance, etc. From the workers' perspective, the goal is to *share*. From the organization's perspective, the goal is to *encourage exchange of knowledge and ideas.*
6. *Structured learning*. Here people avail themselves of precisely designed learning programs (classroom and online) that help build skills and knowledge. From their perspective, the goal is to *learn*. From the organization's perspective, the goal is to *train, certify, and meet compliance requirements*.

Organizational Goals

For each of the six ecosystem components, the organization's perspective can also be seen as the key *goals* of the learning and performance ecosystem as a whole. It's worth highlighting them again:

1. Manage and develop the workforce
2. Improve productivity and reduce errors
3. Provide easy and reliable access to information
4. Leverage expertise
5. Encourage exchange of knowledge and ideas
6. Train, certify, and meet compliance requirements

The learning and performance ecosystem framework also provides for different approaches through solution *sequencing*, depending on the work requirements, as well as the *proficiency* of workers. These, in turn, have implications for how the solutions are designed.

Sequencing and Layering

You can implement learning and performance ecosystem solutions differently for different situations and different groups of people. For example, you can precede a structured-learning solution with a knowledge-management component and follow it with a social-networking component. Or, you can follow up an individual development plan (talent management) with a number of coaching or mentoring (access to experts) sessions. Alternatively, some solutions can be overlaid or combined with others. For example, you can build performance support and social networking into structured learning, and combine knowledge management with access to experts. Sometimes, however, the sequencing itself is flexible, left up to the user. For example, users can determine when, how, and for how long they use knowledge man-

agement, performance support, and access-to-experts solutions in the context of their work and immediate needs.

Proficiency

Learning and performance ecosystem solutions can also differ depending on the proficiency of the people who will use them. People usually move through four levels of proficiency as they develop their expertise and capabilities—but keep in mind that the same person could be at different levels of proficiency for different aspects of the job (e.g., a technical manager can be an expert in technology but a novice in management):

1. *Novice*. Novices (or apprentices) are, by definition, new to a job. They know little or nothing about the work, certainly too little to perform to any acceptable standard. Novices must be taught (or shown) the basics of what is to be done before they can have any chance of being productive. The approach here is overwhelmingly instructional. "Show me (teach me) how to do my job," they ask. Talent management also plays a key role by assuring the right people are in the right jobs from the start. In most, but not all situations, usage of learning and performance ecosystem components at the novice level tends to look like this:

Ecosystem Usage at the Novice Level

Table 1:
Ecosystem usage at the novice level

Ecosystem Solution Component	Focus/Use
Talent Management	High
Performance Support	Low
Knowledge Management	Low
Access to Experts	Low
Social Networking and Collaboration	Low
Structured Learning	Very high

2. *Competent*. Competent (or journeyman) workers perform to basic standards. They've had their initial training and now look for more workplace support, coaching, and practice to improve their skills. "Help me do it better" is their primary request. In most, but not all situations, usage of learning and performance ecosystem components at the competent level tends to look like Table 2 (on page 18).

Ecosystem Usage at the Competent Level

Table 2:

Ecosystem usage at the competent level

Ecosystem Solution Component	Focus/Use
Talent Management	Low to Moderate
Performance Support	High
Knowledge Management	High
Access to Experts	High
Social Networking and Collaboration	Moderate
Structured Learning	Moderate to High

3. *Experienced*. Experienced workers are beyond merely competent. They vary their performance based on unique situations. Because they encounter a variable and often unpredictable set of work problems and challenges, they need timely access to knowledge and performance resources on demand, and the ability to search those resources in ways that are flexible and customizable by them, depending on the situation. "Help me find what I need," they ask, as they search for information from sources ranging from sophisticated online systems to the coworkers around them. In addition, talent management kicks in here as job incumbents start to think about, and work towards their next assignment or development experience. In most, but not all situations, usage of learning and performance ecosystem components at the experienced level tends to look like this:

Ecosystem Usage at the Experienced Level

Table 3:

Ecosystem usage at the experienced level

Ecosystem Solution Component	Focus/Use
Talent Management	High
Performance Support	Moderate
Knowledge Management	Moderate
Access to Experts	High
Social Networking and Collaboration	High
Structured Learning	Low

4. *Master and Expert*. Masters and experts create new knowledge. They invent new and better ways to do a job, and they can teach others how to do it. They are truly unique individuals and seek to learn in unique and personal ways, primarily through collaboration, research, and problem solving. "I'll create my own learning," they say. In most, but not all situations, usage of learning and performance ecosystem components at the master and expert level tends to look like this:

Ecosystem Usage at the Master/Expert Level

Table 4:

Ecosystem usage at the master/expert level

Ecosystem Solution Component	Focus/Use
Talent Management	Moderate
Performance Support	Low
Knowledge Management	High
Access to Experts	Moderate
Social Networking and Collaboration	Very High
Structured Learning	Low

Implications for Design

What is clear from these sequencing and proficiency variables is that learning and performance ecosystem solutions are different for different people, in different work situations, and at different stages in their development. How you might combine the solutions is different as well. In addition to paying increased attention to sequencing, layering, and proficiency, there are five more key considerations to keep in mind:

1. *Analyzing the work inputs, outputs, and processes as much as you analyze the worker*. This includes up-front analysis of the business need, job, and task requirements, as well as performer capabilities. Analysis uncovers opportunities.

2. *Focusing more on human factors and support*. The best solutions will fail if users can't figure out how to use them, or if using them makes the work harder rather than easier, or if they can't get help when and where they need it. Test, and then test again.

3. *Integrating technology into the workflow*. Implementing new technologies and tools is always a challenge; getting multiple, interoperable technologies and tools to fit seamlessly in the workflow even more so. Partner with IT.

4. *Measuring the right things*. Learning may or may not be as important as it is with traditional training solutions, but performance, productivity, efficiency, and user or client satisfaction certainly is. Begin with the end in mind—what does the client or business say constitutes success, what metrics are they already using, and how will your solution impact those metrics?

5. *Getting the content right*. Depending on the nature of your solution, the way in which you engage with subject matter experts may differ from formal learning design and development. For example, if you are designing performance support, you may ask SMEs how they would consult with someone to diagnose a problem and recommend a solution. If you are designing a knowledge base, you may ask SMEs what information people need to access in real time. When working with SMEs, make sure you are asking the right questions in order to generate the appropriate content.

The Building Blocks of Learning and Performance Ecosystem Solutions

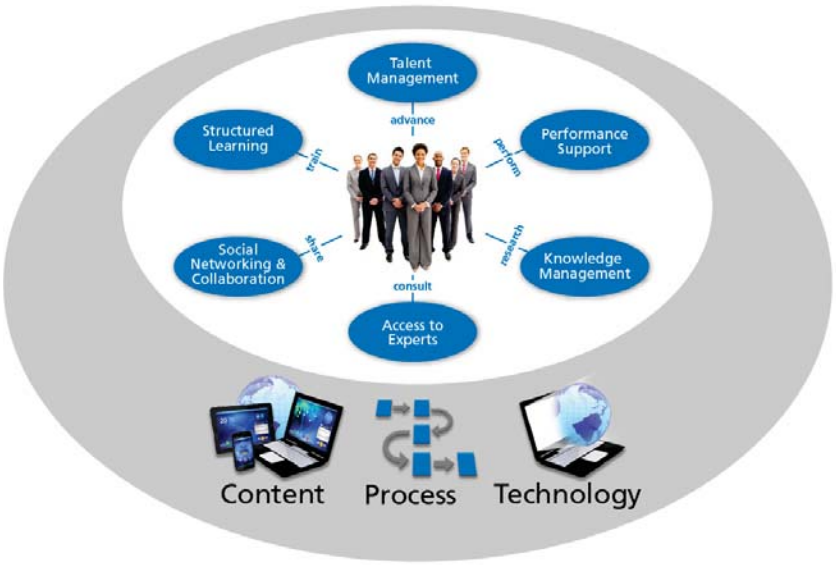
"The loftier the building, the deeper must the foundation be laid."

—Thomas à Kempis, 13th-century Dutch priest and author

After people, who are at the center of the ecosystem, the focus turns to the three main building blocks of the ecosystem components: content, process, and technology.

Figure 3:

The three building blocks of a learning and performance ecosystem



Content

"Information is the oxygen of the modern age."

—Ronald Reagan

Without content, a learning and performance ecosystem has no value. Content breathes life into otherwise useless processes and technologies.

Content comes in all forms. When we think of content, we usually think about documents, presentations, spreadsheets, etc. But content also comes in videos, podcasts, books, magazines, newspapers, and more. Courseware, knowledge bases, and social media are all about content. So are conversations between people in meetings, on the phone, and even in text messaging. Content is why we watch television, listen to podcasts, and surf the web. How-

ever, from a learning and performance ecosystem perspective, it's important to separate content from the technology that transports it. To use a metaphor, technology is the roads and content is the cars. And if there are no cars, why build the roads? The result: lots of concrete that has no valued purpose.

FAQ: What's the Difference Between "Content," "Information," and "Knowledge"?

Many definitions abound, but in general, "information" is external to the user, while "knowledge" is internal. People get and use information; they have and share knowledge. For the purposes of a learning and performance ecosystem, the difference is interesting but not crucial. Content is the result when information is packaged for use by people.

When working with content, the first rule is that it must be the right content. It goes without saying that content is less than useful when it is inaccurate, incomplete, outdated, irrelevant, poorly constructed (making it difficult to read or understand), or targeted to the wrong users. In many situations, bad content can lead to severe consequences when people use it to make bad decisions or take inappropriate actions. High-quality content requires effective content development processes, the right subject-matter expertise, and a strong emphasis on review and feedback from SMEs and users.

Within a learning and performance ecosystem, content has some additional implications. Among them:

1. *Expert-generated vs. user-generated*. Subject matter experts generate most content. But there is a growing amount of content generated by the "crowd." People post questions or statements, reply to posts, share experiences, point out information they've found useful, qualify content with ratings and reviews, and write blogs and tweets. People can access the wisdom of the crowd by searching, following, subscribing, and in many other ways. This user-generated content offers great value.
2. *Instructionally designed vs. ad hoc*. Sometimes content must be designed in a very specific way, with structure and precision. This is the case, for example, in training, where instructional design methods ensure that content is organized and presented in the best way possible for learning. On the other hand, content can emerge informally, ad hoc, sometimes on the spur of the moment. Important ideas and insights can surface in lunch conversations or meetings, in an email or text suggestion, or as feedback on a blog. These are just a few examples where content is not necessarily packaged and distributed, but may still be available at the moment of need. Often, content is carefully designed, but in some cases, all we need to do is design an environment where ad hoc content can happen.

3. *Managed as curated content or socially useful content*. Much content is managed centrally, curated by experts, and distributed through structured, well-defined channels. But a growing amount of content is managed socially. For example, in many social networks, the more "likes" content receives, the more it rises to the top and becomes noticeable to users. Or, the more positive reviews a piece of content gets, the more likely it is to show up early in search results. When people step up to say, "This content is valuable to me," that's an exceptional endorsement.

4. *Organized and tagged by content architects or "the collective."* One particular aspect of managing content is how it is organized and "tagged." This can be done centrally by content architects, information specialists, or librarians, so that it can be found in a logical, sustainable, and systematic fashion (like the Dewey Decimal System for libraries). But some of this centralization is giving way to emerging approaches where groups of users, with similar interests and needs, perhaps in a community of practice, decide for themselves how to organize their own content.

Structured or organic, content, as the saying goes, is king. Sometimes we can focus too much on implementing great delivery channels and not enough on the quality of the content we are distributing. Great processes and technology with bad content just makes the management and distribution of that bad content more efficient. But if you give people great content with not-so-great processes or technology, they will find it, even if they have to struggle a little to do so.

Process

> ***"If you can't describe what you are doing as a process, you don't know what you are doing."***
>
> —W. Edwards Deming

In the work environment, processes drive workflow. Processes help us work individually and with others to get things done. A learning and performance ecosystem solution begins with a focus on existing business processes, and is most effective when it is embedded in and surrounds those work processes.

But to get it right, we have to ask the right questions. Where are the bottlenecks? What are the key challenges? Where do most of the errors and omissions occur? What is the nature of the existing learning and performance ecosystem and how does it support the business processes? What learning and performance solutions are already in place? How well are they working? Once we know the answers, the solutions will start to emerge, and we are halfway home.

The learning and performance ecosystem may augment and improve existing business processes with solutions that help prevent bottlenecks, address key challenges, and reduce errors and omissions. It may also introduce new processes, such as those needed to capture and curate knowledge, operate technology, and distribute information in ways that support the workflow.

There are two important perspectives that impact how we see process: the organizational perspective and the ecosystem solution-design perspective. In implementing learning and performance solutions, both are very important.

1. **The Organizational Perspective**. The organization has countless processes and workflows that define how the business operates. Manufacturing, marketing, sales, R&D, legal, procurement, and other areas of the enterprise use processes and workflows to effectively and efficiently run the operation.

   From a learning and performance ecosystem perspective, it is critical to understand precisely how people use work processes to get the job done. Through a thorough analysis of job-based processes and workflows, learning and performance solutions are more likely to be:

   - *Better integrated into the work*, thus increasing productivity and reducing downtime, rather than being an afterthought or a workaround.
   - *More agile and responsive* to real-time performance problems, with less redesign than would normally result from a lack of understanding of how the solution will be applied.
   - *More cost effective* by targeting each specific process or workflow with the right learning and performance solution—from the start.

2. **The Ecosystem Solution-design Perspective**. People who create learning and performance solutions also have processes they use to make sure the solutions are well designed and delivered. These processes are as diverse as the solutions that emerge from them.

   There is no single process for managing or designing a learning and performance ecosystem as a whole; the organic and dynamic nature of the ecosystem likely precludes it. However, there are a host of processes associated with each of the six ecosystem components. For example, instructional design processes (ADDIE, agile, SAM, etc.) are focused on structured learning. Software development processes (Waterfall, agile, etc.) may be used to create performance support, and HR processes contribute to talent management solutions. Tagging, taxonomy, publishing, and expiry processes facilitate knowledge management, and social environment design and communications processes help build social networks.

While one process, like instructional design, may be just right for structured learning, it may not be appropriate for another solution component. If just one process worked for everything, over time everything would tend to look and act the same. We don't want that. So identifying and applying the right set of processes to each ecosystem solution is critical.

Putting effective processes in place is critically important to support the content and technology legs of a learning and performance ecosystem. Go back to the roads and cars metaphor. Without consistent civil engineering and manufacturing processes, we are likely to build roads (technology) and cars (content) that are incompatible with each other. And then no one is happy. The result: chaos.

Technology

> ***"Computers themselves, and software yet to be developed, will revolutionize how we learn."***
>
> —Steve Jobs

Without technology, a learning and performance ecosystem has limited capability. Technology provides the means to connect users with the right content and to support the processes required to manage all of it effectively.

There are many types of systems and applications that you can incorporate into a learning and performance ecosystem. The right combination of these is predicated on your organization's business needs, learning strategy, work environment, organizational maturity, and culture. When assembling technologies to support your ecosystem, you may find that some should be integrated while others can stand on their own.

Each ecosystem component is supported with its own set of technology platforms:

1. *Talent management technologies*: These technologies are used to support many human resources functions such as recruitment, compensation modeling, performance management, career planning, succession planning, competency and job modeling, and workforce analysis. Some key areas where talent management overlaps with learning are in the areas of (a) competency models, which define skill, knowledge, and performance standards for job roles; (b) performance management, which includes development planning to address skill and knowledge gaps that may impact an individual's ability to achieve their performance objectives; and (c) career planning, which includes development of skills, knowledge, and experience to advance or change roles.

In a learning and performance ecosystem, talent management technologies can enable users to assess their own competencies in relation to the performance standards of the current or desired job role and to plan learning and development experiences and activities that can help them advance. Organizations can more easily recognize existing employees as candidates for advancement. Without these technologies in place, workforce optimization, as well as the potential synergies between the learning and human-resources functions may not be realized, and retention may suffer as people look to other employment opportunities to build their careers.

2. *Performance support technologies*: Some commercially available tools provide an authoring environment to create robust, context-sensitive simulations, walk-throughs, and help for using enterprise systems and desktop software. Some of these tools also provide features to create walk-throughs, explanation, guidance, and examples to support execution of business processes, procedures, and tasks. You can custom develop more advanced performance-support solutions using technologies such as rule-based inference engines to create tools that diagnose problems and recommend solutions, configure products or services, or provide support for complex decision making.

   In a learning and performance ecosystem, performance-support technologies make it easy for users to get guidance, instructions, explanation, examples, and other forms of support on demand, at the moment of need. For organizations, consistency, accuracy, and productivity increase. Without these technologies in place, errors and omissions increase and work slows down as users get stuck, waste valuable time trying to recover through trial and error, or interrupt the work of a colleague or manager to ask for help.

3. *Knowledge management technologies*: There are a number of products that one can use to create searchable knowledge bases. At a high level, these types of systems typically support document management, configurable workflows for publishing, and other content-management tasks, a variety of organizing structures and metadata, and a robust search capability.

   In a learning and performance ecosystem, knowledge-management technologies make it easy for users to access large amounts of information, and for the organization to manage it all. Without these technologies in place, access to information would be very haphazard, leading to lower content validity, a higher cost of information access, and degraded performance due to the wrong information being used for the wrong purpose.

4. *Access to experts technologies*: These technologies provide listings of experts in various categories, or areas of expertise. They range from relatively simple expert directories that provide a sort of expert "yellow pages," to robust expertise location and management systems that enable experts to publish content and post office

hours, and users to schedule appointments and rate and review the advice they receive.

In a learning and performance ecosystem, access-to-experts technology provides users with the advanced answers and insight they need to be productive. For organizations, these technologies allow distribution and leverage of individual expertise more easily and cost-effectively. Without these technologies in place, expertise remains largely untapped as users find fewer ways to connect with someone who could really help them, and the organization as a whole, to be successful.

5. *Social networking and collaboration technologies*: These include many different types of applications such as wikis, blogs, microblogs, social networks, and online communities. Online communities tend to be more centrally managed with criteria for membership and rules or approvals for sharing information. Social networks tend to be individually controlled as each user decides who to follow or connect with, what to post, and when to reply.

   In a learning and performance ecosystem, social networking and collaboration technologies provide users with ways to freely share information, connect with colleagues in similar roles, collaborate on projects or work outputs, and take advantage of the wisdom of the crowd. For organizations, these technologies provide more ways to distribute and capture knowledge, resulting in higher quality, speed, and productivity. Without these technologies in place, workers are constrained to networking with the people in the immediate vicinity of their office or cubicle or suffering through time delays waiting for the return of emails and phone calls.

FAQ: Are Products like SharePoint Ecosystems?

No. A product like SharePoint is a technology framework upon which ecosystem components, such as knowledge management, access to experts, and social networking and collaboration can be fashioned.

6. *Structured learning technologies*: Many of us are familiar with the technologies used to develop and deliver structured learning. These include, but are not limited to learning management systems, authoring tools, testing and survey systems, virtual classroom and webinar applications, learning-content-management systems, and learning record stores. eLearning standards and specifications such as AICC, SCORM, and xAPI also play a role.

   In a learning and performance ecosystem, structured-learning technologies provide users with instructionally sound learning programs to develop their skills and knowledge. For organizations, these technologies are critical to onboarding

new hires, meeting regulatory compliance requirements, introducing new policies, procedures, or systems, and many other purposes, including the tracking and reporting of structured-learning activities. Without these technologies in place, workers are left to their own devices or must rely on help from their manager and colleagues to learn what is needed for them to be successful.

Once you select the technologies to include in your learning and performance ecosystem, you must consider how they fit together into an architecture or infrastructure that supports it. There are several ways to approach architecture design. You can think in terms of how the technologies fit together, how the data flows between systems, or how you present the features to users.

The following diagram illustrates the features of a highly evolved learning and performance ecosystem architecture.

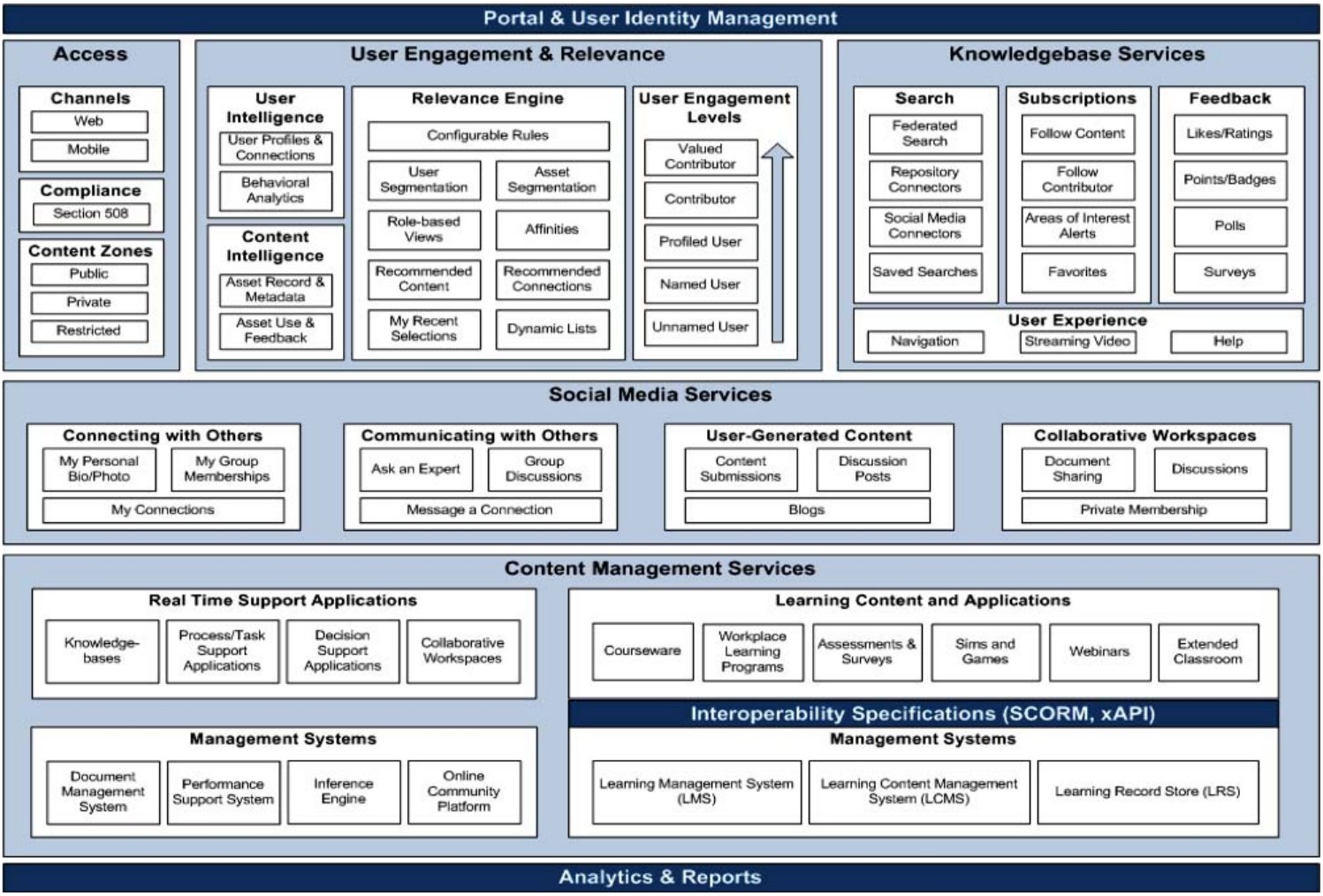


Figure 4: *Highly evolved learning and performance ecosystem architecture (image copyright Steve Foreman)*

In this example, there are five main feature areas: access, user engagement and relevance, knowledge base services, social media services, and content-management services:

1. *Access features* describe different devices that can be used to access the ecosystem and identify security zones and compliance requirements for the ecosystem.
2. *User engagement and relevance features* combine what is known about users with what is known about content and applies a set of rules to determine which content will be most relevant to which users. They also recognize user-engagement levels based on how people use the system, and may unlock special features with increased value to users at higher levels of engagement.
3. *Knowledge base services* include a robust ecosystem search capability, user subscriptions and alerts to follow content and other users, a set of feedback and gamification features, and capabilities that make the user experience richer and more engaging.
4. *Social media services* provide methods for users to connect, communicate, collaborate, and share information.
5. *Content management services* deliver real-time performance support, content and learning management, virtual-learning environments, courseware, simulations, games, and more.

This model architecture is fairly sophisticated. If you are just getting started, your architecture can be simpler, and will grow in capability over time as it supports an increasing array of ecosystem solutions. Whatever the design and level of complexity of your learning and performance ecosystem architecture, be sure to involve information technology (IT) as a key partner.

In today's learning and work environments, technology plays a crucial role in building and implementing ecosystem solutions. Looking at the metaphor of roads and cars one final time, if the cars (the content) didn't exist, the roads (the technology) would have no value. But the reverse is true as well. If the roads (the technology) are in disrepair or non-existent, the cars (the content) won't be going anywhere. The result: a massive traffic jam.

FAQ: Do You Always Need All Three Building Blocks—Content, Process, and Technology—in a Learning and Performance Ecosystem?

Yes. Think of the building blocks as legs to a three-legged stool. Degrade or take away even one of the legs and the whole stool collapses. Without high-quality content, efficient processes, and work-enhancing technology, learning and performance ecosystems will, most likely, not perform very well at all.

Focus, Process, Technology, and Content Attributes

As summarized below, each solution component is associated with a general user focus and the three fundamental "building blocks" that enable solutions to be built:

Table 5:

Learning and performance ecosystem: solution component attributes

Ecosystem Solution Component	User Focus	Process*	Technology*	Content *
Talent Management *Organizational Goal*: **Manage and develop the workforce**	Improve in current job performance, prepare for a new job or career, and acquire or develop competencies	• Competency assessment • Workforce analysis • Appraisal process • Succession planning	• Performance management systems (PMS) • Talent management systems (TMS)	• Job roles and descriptions • Competencies and proficiency levels • Work and development objectives
Performance Support *Organizational Goal:* **Improve productivity and reduce errors**	Complete specific processes and tasks, diagnose problems, and make decisions, in the context of work, precisely at the moment of need	• Human performance needs analysis • Workplace culture and environmental analysis • Workflow analysis	• Help-system applications • Inference engines and decision support systems • Performance-support systems (PSS) and electronic performance-support systems (EPSS)	• Advice and recommendations • Calculators • Configurators • Examples • Explanations and walk-throughs • Links to related materials (see knowledge management) • Sample outputs • Scripts • Step-by-step instructions • Simulations • Templates • Wizards

Table 5 (continued):

Learning and performance ecosystem: solution component attributes

Ecosystem Solution Component	User Focus	Process*	Technology*	Content *
Knowledge Management *Organizational Goal:* **Provide easy and reliable access to information**	Access tools, templates, sample work outputs, definitions, process and procedure documentation, and other information	• Meta tagging • Publishing and approval workflows • Content development and authoring • Content curation • Content "shelf-life" management • Version control	• Portals • Knowledge bases • Content management systems (CMS) • Document-management systems (DMS) • Digital asset-management systems (DAMS) • Workflow engines • Relevance engines • Search engines • Analytics tools	• Best practices • Competitor information • Customer information • Emergency procedures • Topical information • Product information • Rubrics • Rules and procedures • Sales collateral • User manuals and guides
Access to Experts *Organizational Goal*: **Leverage expertise**	Get real-time guidance, insight, and answers to questions	• Expertise classification and indexing • Expert qualification and certification • Expert content publishing • Expert consultation scheduling and management	• Expert directories • Automated expert inquiry and response systems • Live chat solutions • Expertise location and management systems (ELM) • Knowledge brokers	• Coaching and mentoring programs • Expert articles, blogs, and wikis • Centers of excellence

Table 5 (continued):

Learning and performance ecosystem: solution component attributes

Ecosystem Solution Component	User Focus	Process*	Technology*	Content *
Social Networking & Collaboration *Organizational Goal*: **Encourage exchange of knowledge and ideas**	Exchange ideas and expertise with colleagues, learn through dialogue and shared experiences	• Social environment design • Crowd-sourcing • Community leadership • Connecting, friending, following • Searching, posting, and replying	• Blog and microblog applications • Community of practice (CoP) applications • Social networks and directories • Wiki applications	• Other people in similar or related roles • User-generated content from discussions, chats, forums, blogs, and tweets • Community members, events, information, and resources
Structured Learning *Organizational Goal*: **Train, certify, and meet compliance requirements**	Enhance skills and achieve certification in specific tasks and content domains	• Program development • Program management • Program delivery (electronic and human) • Instructional design • Learning evaluation • Curriculum design • Training-resource management • Training scheduling and registration • Transcripts and reports	• Authoring tools • Learning management systems (LMS) • Learning content management systems (LCMS) • Simulation and gaming tools • Testing, assessment, and survey systems	• Classroom courses • eLearning • Virtual learning • Simulations and games

* A representative but not an exhaustive list; a learning and performance ecosystem should be able to continually incorporate new ideas, processes, and technologies, and jettison the less useful ones

There are a number of additional processes that apply across all of the six ecosystem components. These include, but are not limited to:

- Alignment of learning strategy with business strategy
- Governance
- Policies and standards
- Help-desk and end-user support
- Security
- Systems configuration management
- Usability, beta and pilot testing
- Data mining and analysis
- Metrics alignment and measurement

Learning and Performance Ecosystems in Action

"Think different."

—Apple Computer advertising slogan, 1997

Many organizations have started to see their learning and performance efforts in the context of a broader ecosystem of solutions. Here are some examples:

Figure 5:

Healthcare specialist and clinician ecosystem

Healthcare

A major healthcare company wanted to increase the consistency and quality of interactions between 300 clinical-care specialists and network clinicians, as measured by group audits, network-clinician satisfaction data, and clinical-outcome data. The solution included three learning and performance ecosystem components: (1) clinical and pharmacological knowledge bases where care specialists could look up diagnostic codes, treatment options, and medication information; (2) process-based performance support to increase the consistency of treatment planning and decision making; and (3) structured learning that enabled network clinicians to practice with simulations and scenarios. This combination of solutions resulted in improved rapport between clinical-care specialists and network clinicians, increased consistency of covered treatment decisions, and increased alignment between treatment options and evidence-based research findings.

Figure 6:

Financial services field agent ecosystem

Field Agent Productivity

With high turnover rates and a complex set of products and services, a financial services company sought to decrease the time it took for 20,000 field agents and staff in a variety of different roles to be productive. The company calculated at least $11 million in lost opportunity costs resulting from inefficiencies in the way information was managed and disseminated. The solution included four learning and performance ecosystem components: (1) a talent management solution to develop staff and improve retention, (2) structured learning to improve the onboarding process for new hires, (3) a searchable knowledge base to provide faster access to product information and sales collateral, and (4) access to experts who could provide answers to complex questions about products. This effort resulted in an average of 85 percent reduction in search time enabling field agents and staff get the information they need and spend more time with customers.

Figure 7:

Communications company marketing and sales ecosystem

Sales

As the 10,000-person marketing and sales organization of this international communications company moved to "solutions selling," there was a great need to increase the size and revenue of each sale. A learning and performance ecosystem comprised of five components was deployed. It included: (1) a knowledge base to provide sales collateral, product information, competitive analysis and positioning information, and market research data anytime and anywhere; (2) sales performance support to provide guidance to the sales force around the solutions-selling process; (3) a unique online "ask an expert" feature that allowed sales representatives to consult with peers who were star performers in selling high-revenue solutions; (4) communities of practice for networking; and (5) a revamped learning and mentoring program that provided opportunities for sales people to practice solutions-selling encounters with retired CEOs. The results? The organization reached or exceeded its overall revenue target two of the first four quarters of its solution-selling initiative and continued to increase the percentage of revenue achieved through solution sales over the following years. After years of selling discrete products to middle managers, the sales culture gradually evolved into selling high-revenue solutions that included entire product suites to C-level executives.

Figure 8:

Manufacturing ecosystem

Manufacturing Inventory Management

A global manufacturing company wanted to optimize inventory management by reducing a key ERP metric: "days on hand." The solution included five learning and performance ecosystem components: (1) a diagnostic performance-support system assisted inventory managers in identifying problems and recommended solutions, (2) an inventory management knowledge base provided access to information that helped managers implement recommended solutions, (3) access to experts enabled managers to consult with inventory experts through a new online profile and contact tool, (4) new communities were established to help share inventory best practices, and (5) a set of inventory management courses was provided. After a period of time over which more and more manufacturing engineers began to use the tool, this effort began to result in a gradual reduction of the "days on hand" metric.

Figure 9:

Corporate training ecosystem

Training Development

The training department of a global 100 corporation wanted to significantly enhance the ability of its instructional designers and SMEs to develop valid and reliable tests so that certification of employee skills would be more consistent and dependable, resulting in more accurate placements of workforce talent. The solution included three learning and performance ecosystem components: (1) a knowledge base of information on test design and management, (2) online mini-courses on test development, and (3) a unique performance-support tool that enabled trainers to determine the proper testing strategy for a given training situation. Through this combined approach, the time it took to develop tests was reduced and their overall quality increased.

Figure 10:

Ecosystem emphasizing communication

Product Planning

In the face of stiff competition and a struggling economy, a company that built and sold its own products found that its market share was slowly declining. Executive leadership directed the L&D organization to find a way to help the company's product designers and engineers gain a better understanding of what its customers needed. After a needs analysis, L&D determined that there was little or no communication between the engineers who designed and built the products and the sales representatives who were closest to the customers. The solution included two learning and performance ecosystem components: (1) structured learning in the form of a bi-monthly summit event that brought engineers together with star sales representatives for presentations and facilitated group discussions, and (2) social networking and collaboration in the form of a wiki where sales people could write about customer needs, engineers could translate them into product feature descriptions, and sales people could provide feedback. Over time, the lines of communication between engineering and sales improved so profoundly that they created their own, new channels of communication in addition to those designed by L&D. In this example, the workers took control and expanded their own learning and performance ecosystem.

What Do These Examples Tell Us?

Looking at each example, design decisions about which learning and performance ecosystem components to employ, when to employ them, and how to ensure they worked in a complementary, synergistic way were unique to each case. Here are ten key insights brought out by a deeper dive into these examples:

1. *Learning and performance ecosystems are more effective when they are driven by business problems or opportunities*. Not only does a business focus improve the ecosystem's effectiveness, but also, by targeting outcomes that are measured by business metrics, creates a much higher likelihood of support from business leaders and sponsors.

2. *Ecosystem solutions are likely to involve multiple components*. By using a complementary set of components, the ecosystem is more likely to offer sustainable value. Multiple components support a greater number of touch points and use cases to provide a more comprehensive solution.

3. *There are many recipes for using an effective learning and performance ecosystem solution*. No two business problems are identical. Every time components of an ecosystem are employed, care must be given to the specifics of the sponsor's goals and metrics, the culture and values of the workers, the workflows and business processes, and the challenges and obstacles you must address.

4. *Although structured learning was a part of every solution, in each case, workplace considerations trumped training considerations.* The ecosystem perspective first puts the emphasis on supporting people in the context of the work environment, and secondarily, in the context of the structured learning environment, like a classroom.

5. *The sequence in which the ecosystem solutions are implemented is important*. Determining how each solution component fits into an implementation timeline is a key decision. For example, does a structured learning solution, like training, precede workplace support, such as knowledge management or social networking, or is it implemented concurrently with those solutions?

6. *The most effective ecosystems are sustained over the long-term, where continuous support for workers, in the workplace, is critical*. Whether you are implementing a structured-learning solution, a performance-support tool, or a new talent-management system, concepts like "begin" and "end" are losing relevance. Once implemented, ecosystem solutions must be supported throughout their life cycle. You cannot simply launch a solution, declare victory, and then move on.

7. *Moving to a learning and performance ecosystem mindset is a major strategic decision*. In each example above, decisions on how to approach a possible solution set required new thinking, some risk, and a significant amount of paradigm shifting. "Getting there" was harder for some organizations than others.

8. *Ecosystems are adaptive and reusable*. Once a learning and performance ecosystem is established, it provides a springboard for new solutions. You can expand an ecosystem and grow it to solve new business problems and address new opportunities.

9. *Learning and performance ecosystems impact business measures*. In each example, the organizations that implemented ecosystem solutions were not counting student days, credit hours, or test scores. They were measuring impact using established business metrics they had identified before they designed the ecosystem solution. By building learning into the workflow, learning results and business results become one and the same.

10. *Most of the ecosystem components are embedded in the workflow*. Performance support, knowledge management, access to experts, and social networking and collaboration are all in-stream, in the workflow. These components enable our learning and performance solutions to be used seamlessly and continuously, with more direct impact on productivity.

Learning and Performance Ecosystems and Organizational Culture

"Commitment is an act, not a word."

—Jean-Paul Sartre, French Philosopher

Learning and performance ecosystems interact with and are influenced by the organizational culture in which they operate. Moreover, an organization's culture can determine whether the ecosystem is sustainable and successful. That is why, from department-to-department, organization-to-organization, and company-to-company, learning and performance ecosystems with similar components will likely have solutions that look and behave differently.

Figure 11:

Learning and performance ecosystems are surrounded and influenced by organizational culture

FAQ: Is a Very Well-designed Learning and Performance Ecosystem Sustainable in an Unsupportive Culture?

No. Even if you are successful in deploying a learning and performance ecosystem, sustaining it in an unsupportive organizational culture will be challenging if not impossible.

Characteristics

Here are seven key characteristics of an organizational culture that influence—for better or worse—the viability of learning and performance ecosystems:

1. **Management leadership and sponsorship**. Your boss, your boss's boss, and your client's boss can be supportive or not, and this matters a lot. The advocacy and buy-in of leaders is critical to your success in finding a broad-based business problem or opportunity where a learning and performance ecosystem can have sufficient impact to justify the time and effort it will take you to design, implement, and sustain it. Be careful not to focus exclusively on senior executives. Certainly, they are key; they control the resources and the purse strings, and can make things happen. But frontline management is equally important—if they're not on your side, chances are you'll never get to help their people the way you want to.

   Recommendation. Interview executive leaders and ask high-level questions like, "What are the top five challenges to our business strategy over the next three to five years?" and, "How does human performance impact those challenges?" Identify high-impact areas of opportunity and potential sponsors based on your interviews. Follow up by conducting focus groups of middle and frontline managers to explore obstacles and challenges in more detail. This process will ensure your learning and performance ecosystem solution aligns with the business strategy—a must for acquiring and sustaining the necessary sponsorship to make it happen. In addition, data always speaks volumes. Show your leaders and sponsors the bottom-line benefits of a learning and performance ecosystem.

2. **Technology advocacy**. Is your organization open to new ways to use technology? Is technology an integral part of your business strategy? Does IT have a positive reputation with other business divisions? Is access to technology generally easy? Are technology and security policies practical and workable? Does the L&D organization have a good working relationship with IT? If your answer to any of these questions is "no," then you have some work to do to get your organization's technology culture to be supportive of a learning and performance ecosystem. No technology implementation is problem-free—sometimes far from it. But most implementation challenges can be addressed as long as people believe that new ways of doing things will pay off down the road.

   Recommendation. Try to get at the root cause of why technology is looked at with resistance and trepidation. Make sure you partner with IT rather than seeing them as just a necessary evil; remember that your solutions will be using *their* infrastructure. Finally, it's always a good idea to showcase how technology will benefit users, so their response will be "I can really use this," rather than "When will this go away?"

3. **Ownership and control**. Are there overt or covert struggles for "ownership" of the learning and performance ecosystem, or its component parts? Although one could argue that when people fight over something, it's a sign that the object of their contention is "taking off," disputes over ownership and control do little to advance new ideas, and the learning and performance ecosystem is no exception.

   Recommendation. It's often the case that new technologies or ways of doing things often bounce around before they find a good "home." Take the opportunity to be proactive here; offer a partnership with other organizations before contention takes root. HR needs to be a part of talent management; IT needs to be included in anything that involves existing technology (and especially new technology). And, of course, the business units that represent the learning and performance need should be at the table. A steering committee or other governance body, formed early, with appropriate representation from all parties, and agreed-upon rules, can be very helpful.

4. **Attitudes toward learning and performance**. This includes two key areas: (1) what people think of learning, in all its forms, as an effective agent of performance improvement, and (2) the views people have of the L&D function. In other words, is learning a core pillar of how your organization operates? Is it supported and appreciated? Is the L&D function respected? If not, you need to turn this attitude around first to increase the likelihood that people will accept new approaches to learning that will emerge from an expanded learning and performance ecosystem framework.

   Recommendation. It's not always a question of a bad reputation; sometimes it's the *wrong* reputation (i.e., "Strong in training, but that's all they do"). A success story in the form of a prototype, pilot, or demo project can sometimes be helpful in getting people to share your vision and place their confidence in you and your initiative. In addition, an appropriate "re-branding" of your organization and services couldn't hurt. Just be sure that you live up to your new mission.

5. **Perceived charter of the L&D function**. It is important that those who work in the function also have an open-minded view of their charter, even if others don't. L&D professionals must have a breadth of vision and enough business acumen to effectively integrate the learning and performance ecosystem with key business realities and also the drive to keep learning strategy fully engaged with business strategy. If the L&D function is chartered only to provide classes, and is not tuned in to key organizational challenges, some of the most exciting and innovative aspects of your ecosystem may never see the light of day.

   Recommendation. Look inward. What do L&D professionals think about ecosystems and what they mean for their work? How open are they to thinking differently? Be sure that your processes and systems don't discourage trying

something new. If you can, bring in a few seasoned people to serve as role models for others.

6. **Budget, resources, and time**. Branching out into new areas of learning and performance improvement may pay off, but probably not immediately. Many of your costs will be front-loaded. So it's important to be sure you have the budget, resources, and time to implement new types of solutions.

   Recommendation. Implement the component(s) with the highest potential impact first. Once you are successful, your budget, resources, and time issues should take care of themselves. Then follow up with additional components.

7. **Standards**. The old saying "If you don't know where you are going, anyplace will do" should be taken to heart. Establishing quality and operational standards for your learning and performance ecosystem will help implementation go more smoothly and give everyone a common set of benchmarks to shoot for.

   Recommendation. Put additional emphasis on metrics geared to the new solutions you will be offering. Involve your clients and sponsors in setting standards and success criteria early on. As in the examples showcased in this white paper, focus on business metrics wherever possible.

Beyond the Ecosystem: The Future of Learning and Performance

"We are products of our past, but we don't have to be prisoners of it."

—The Purpose Driven Life,
Rick Warren

Wherever human performance has the potential for high impact on business strategy, there is a great opportunity for learning and performance ecosystems.

But there will be no learning and performance ecosystem if there is no real change in our views about learning and performance and about how we practice our craft. It's best to be mindful of an ancient proverb: "If we don't change our direction, we'll end up exactly where we are headed." The new direction is clear: from an exclusive focus on instruction, to a much broader suite of solutions that go beyond the classroom, and even beyond delivering training to the workplace to an increasing emphasis on embedding learning into the flow of work. Our use of the six ecosystem components will vary each time we employ them, but *all* components matter; to ignore or arbitrarily dismiss any of them is counterproductive, to say the least.

There is no question that the demand for more learning and performance ecosystem-like solutions is growing, and every day we learn more about how to make it happen. The science—and art—of performance improvement continues to advance. The question is more about a paradigm shift; do we have the wherewithal to foster a new way of thinking about what we do? Are we willing to risk disrupting what we have been doing for decades for the promise of making more of an impact? Time will tell.

But time is short. Training facilities, large and small, have been shut down in many organizations. The size of many training staffs is stagnant or declining. Most organizations are not abandoning training; they're just being smarter about it. Today, with more to know and far less time to learn it, we have to be more clever, more diverse in our thinking, more agile, and more innovative.

Through eLearning, we successfully brought structured learning (training) to the workplace. Now we must do the same for the other components of the learning and performance ecosystem, and, ultimately, bring the ecosystem into the workflow itself.

We've reached a major tipping point in learning and performance. To take advantage of it requires a special effort—*now*—on our part to see things differently and do things differently. We can't wait for someone else to step up, because sooner rather than later, someone else will.

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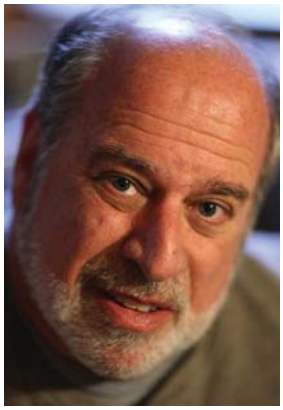

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