



Blueprints for Success: Designing a Scalable Learning Ecosystem

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Introduction

We've entered an era where learning technology goes far beyond a single system or even a small set of tools. The options for developing and delivering training are no longer limited to simply using an authoring tool to create courses and a Learning Management System (LMS) to deliver those courses. There's high value for both your employees and your organization in using specific tools and resources to meet different needs.

“ On average, organizations use 25 different learning technologies¹. ”

Organizations often use multiple platforms to solve a variety of needs and goals within an enterprise learning ecosystem. As you start adding more components, your ecosystem becomes more complex, and you may find yourself inundated with more tools than you can manage, more varied content than you imagined, and more data than you know what to do with.

Whether you're building your ecosystem, discovering that it's becoming complicated, or working in a complex one, this guide will help you better understand the learning tools and technologies available and how to design a healthy, scalable ecosystem.

This ebook will help you:

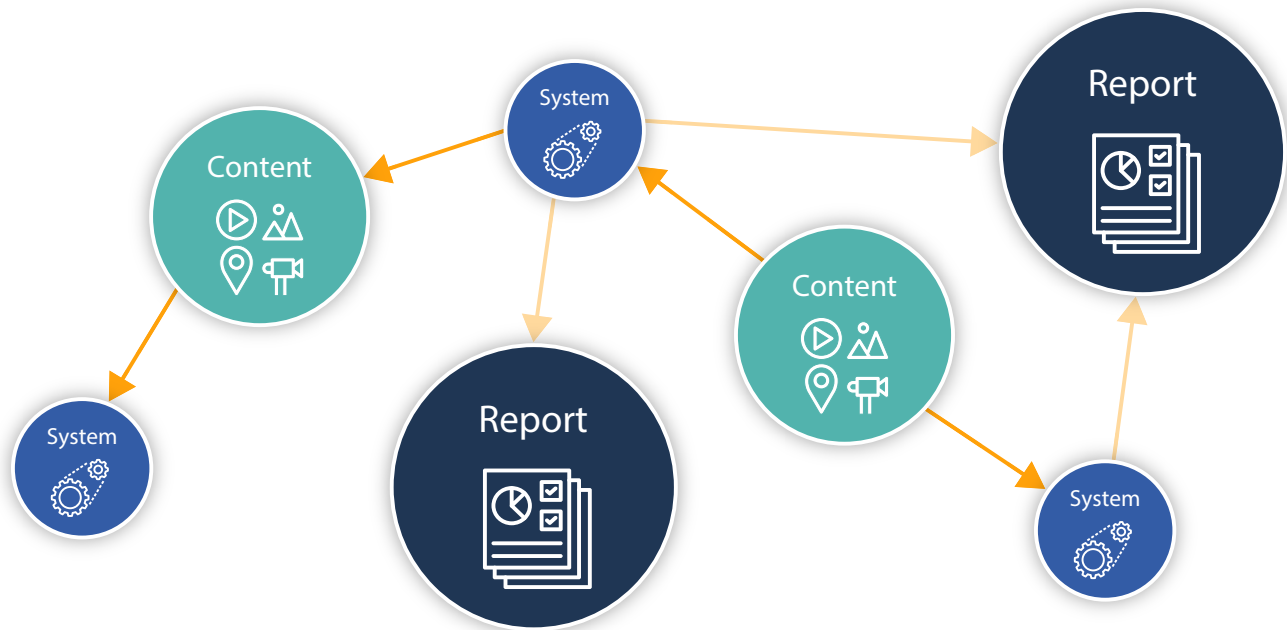
1. Discover common tools and platforms.
2. Organize your ecosystem.
3. Manage content across various platforms.
4. Prepare for introducing new components.
5. Plan for reporting and data.

As you read, think about:

1. What systems and tools you currently use.
2. Learning and development goals as well as business goals.
3. What data you want to track.
4. Building and designing your ecosystem with the future in mind.

¹. Source: Emerald Works, ["Back to the Future,"](#) Feb. 2020.

What's a learning ecosystem?



The term can be loaded, and depending on who you ask, you might hear a variety of answers. We'll try to keep this simple by using the following definition:

“A learning ecosystem is the collection of people, processes, and tools that deliver, integrate, and support the L&D function across your organization.”²

For the purposes of this guide, we'll focus primarily on designing your ecosystem in a way that saves you time, improves the employee experience, streamlines reporting, and allows for future growth. We'll also discuss common tools, components, and systems. One thing to remember is that while you may have a small set of tools now, it can grow quickly.

² Source: Training Industry, [“Learning Ecosystems: What Are They and What Can They Do For You?”](#) June 2018.

The hub model design

It's important to understand the role of each technology and use the right tool for the job to be done. You also want to consider where and how these components intersect. Using a hub model to architect your ecosystem offers you flexibility and can go a long way for reducing headaches and administrative burdens in the long run.

What is the hub model?

Instead of thinking that every tool or course has to work with every other tool in the ecosystem or having to arbitrarily connect tools, consider grouping them by related functions: content, systems, and reporting. These hubs provide a centralized place for each distinct component of your ecosystem, and you'll end up with an interconnected core system of record for each area, like spokes on a wheel.

As long as you know that each functional hub can connect to the tools in that hub, it minimizes the number of integrations you need to worry about. For example, let's say you want to purchase a new course and have multiple learning platforms that might deliver it to learners. All you need to confirm is that the course is compatible with your content hub rather than having to make sure that the course works in every single system.

As you work through the hub model, keep in mind what the most important problem is and that you don't have to solve the entire ecosystem at once. You can start with one piece or one hub, depending on your needs. Note that you may not have multiple tools or components for each functional area.

Content hub

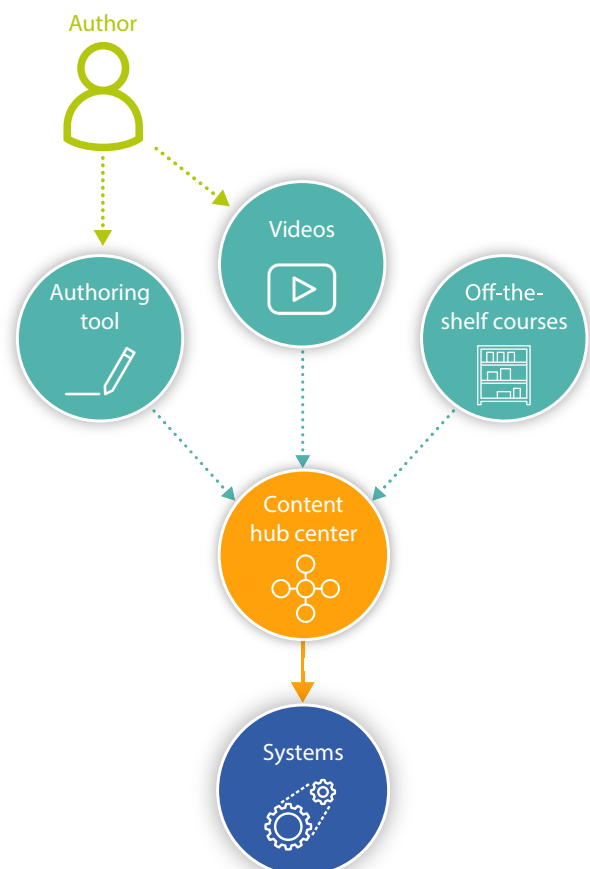
Content is the information that your employees are consuming, and the content hub is where all of your courses and training will be managed. You might think of it as your organization's course catalog or library.

Benefits:

- Version control and content accuracy
- Streamlined content administration
- Content analytics
- Cross system compatibility

Key stakeholders:

- Content creators
- Instructional designers
- LMS admins
- Risk management
- Compliance officer(s)



Common tools and content sources:

- Authoring tool outputs
- Learning Content Management Systems (LCMS)
- Off-the-shelf content
- Videos
- Simulations
- Virtual Reality (VR)

When adding new content sources, consider what your company's training goals are, what kinds of content you'd like to add, and what would be most beneficial for your employees.

Choosing a platform to be the hub center

There are a lot of opportunities here to build a hub that works for your organization. Regardless of where your content comes from, you want to choose a platform that has the capability to manage and deliver content across various systems.

Examples of platforms that could be the hub center:

- **LCMS:**
 - ✓ **Pros:** Replaces multiple tools with a single system, including authoring content, versioning, and revisioning.
 - ✗ **Cons:** Might not allow bringing in outside content, may not support as many content types, and if you need another authoring tool, then you have to bring in more tools.
- **Content distribution platform:**
 - ✓ **Pros:** Supports multiple content types and eLearning standards. All content sources come into the platform and go out to the connected LMS.
 - ✗ **Cons:** Most don't offer native support for content creation.

The content hub's goal is being responsible for all training content and providing that content to your various LMS platforms in whatever standards or technology integration strategy is appropriate.

When designed this way, your organization can easily switch out different tools and not worry about compatibility issues. Remember, you don't have to overhaul your entire ecosystem at one time, and the content hub is one of the easiest places to start the organizing process.

Tweet this

The goal of the content hub in your #learningecosystem is to manage all of your courses in one place and provide access across your various LMSs and training platforms.



Content Controller centralizes learning content across your ecosystem

Content Controller centralizes the management and distribution of content to LMSs and other learning applications. With support for a variety of standards and content types, Content Controller helps solve for content compatibility across your ecosystem.

With Content Controller, you can:

- Import your courseware (SCORM, AICC, xAPI, cmi5, LTI, MP3, MP4, PDF)
- Test and debug courses
- Set up licenses to control and manage usage
- Share courses out to any LMS via proxy SCORM or AICC files or as LTI
- Track results and share data with other tools

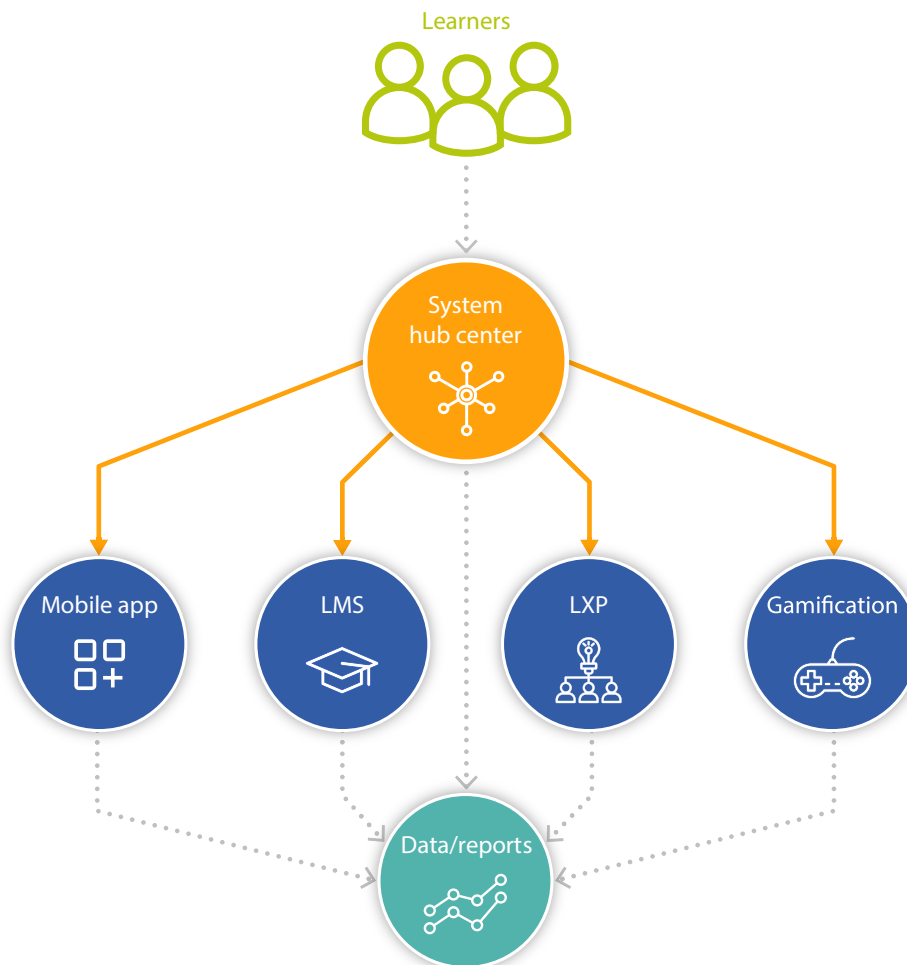
Along the way, you can easily manage new course versions, handle any standards compatibility issues, disable course access, and troubleshoot any issues.

Systems hub

Systems are where your employees go to find information and access content and training resources. As of 2020, there were more than 1,300 learning systems available³ and that number is growing. With so many options, consider designating a system in the hub as the one place where employees are directed to start their learning or training journey. Ideally, they should be able to easily access this system

from whatever business systems or tools they use in their daily workflow.

Single Sign-On (SSO) is recommended to allow learners to seamlessly access any of the components in the systems hub to take training. You'll see the best of both worlds: Being able to use a variety of systems and point solutions, and making it simple for employees to access the right training at the right time.



3. Source: Craig Weiss, "2020 Learning System Awards," Dec. 2020.

Benefits:

- Content discoverability
- Improved learner experience
- Single source of truth for all learning related activities
- Increased adoption and engagement
- Access to niche and best-of-breed learning applications

Key stakeholders:

- Learners
- L&D department
- LMS administrators
- IT

Common learning systems or training platforms:

- Learning Management System (LMS)
- Learning Experience Platform (LXP/LEP)
- Human Capital Management System (HCMS)
- Talent Management Systems (TMS)
- Sales enablement platforms
- Mobile apps
- Gamification platforms

When adding new systems, consider your learners' needs and how you can meet those needs during their flow of work, with little interruption.

Key considerations for adding new systems:

- Compatibility
- Accessibility and SSO support
- Employee experience
- Solutions the system provides
- Reporting and data access

Choosing a platform to be the hub center

Virtually any system can serve as the hub center, but you'll want to be sure that the system you choose has both SSO functionality and APIs.

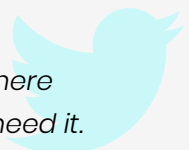
Here are a few important questions to ask:

- Does the system have SSO functionality? This is critical for both user experience and adoption.
- What integrations are available today? How easy is it to connect with other learning applications? Is there an API available?
- What are the capabilities and limitations of the platform?
- How accessible or portable is the data?

The goal of the systems hub is to have one, single system (even though you may have many systems) where employees go to find the learning and training materials they need to perform better in their role. For most organizations, this will be an LMS or LXP that launches them into another component.

Tweet this

The goal of your systems hub in your #learningecosystem is to have only one place where employees go to easily find training, information, and materials they need when they need it.



Reporting hub

Reporting and data analytics tools collect, surface, measure, and analyze learner data in order to better understand and optimize your training programs. They can also help you connect learning activities to both employee and organizational performance.

From here, you can connect your reporting hub with other business intelligence tools or other reporting systems used across your organization. This is a key hub for just about everyone in your organization.



Benefits:

- One system of record for learning data
- Data portability between tools and platforms
- Report outcomes and metrics alongside training and learning data
- Enable more advanced analytics

Key stakeholders:

- Everyone!
- Decision makers
- Compliance auditors
- Business analyst

Common reporting tools you may encounter:

- Learning Record Store (LRS)
- Learning Analytics Platform (LAP)
- Business Intelligence (BI) tools

When adding new reporting tools, the goal is to better understand your employee's learning habits, experiences, and activities in order to optimize training content. With that in mind, think about what information is most beneficial for your organization.

To start, here are questions you may want to track:

- What resources, topics, materials, or training are employees using the most?
- Which employees or teams are taking the most training?
- Do employees perform differently after completing training?
- Has training improved organizational performance?
- Has a certain course or training saved the company money?

Tweet this

Adding an analytics tool to your #learningecosystem gives insights into learning and performance data, improves #training effectiveness, and increases ROI for #trainingprograms.



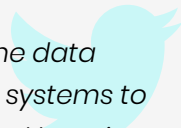
Choosing a platform to be the hub center

Be sure to consider how that platform receives and shares data and the types of data and information each stakeholder expects. What questions are they trying to answer? Will the platform support their needs? Does the reporting system provide APIs or available methods to import and export data? While this may seem overwhelming, knowing your organization's overall needs and requirements will help narrow the decision.

The goal of the reporting hub is to be able to see all the information your content tools, systems, and reports compiled into a single source of truth. Options can vary, and the outputs might be as basic as a collection of CSVs or a more turnkey learning analytics platform.

Tweet this

The reporting hub's goal in an #learningecosystem is collecting the data outputs from different content and systems to provide a holistic view of training and learning and the impact to the overall business.



watershed

Watershed measures the impact learning and training has on business goals

Watershed, a Learning Analytics Platform (LAP), provides insights to effectively measure and validate learning and development investments.

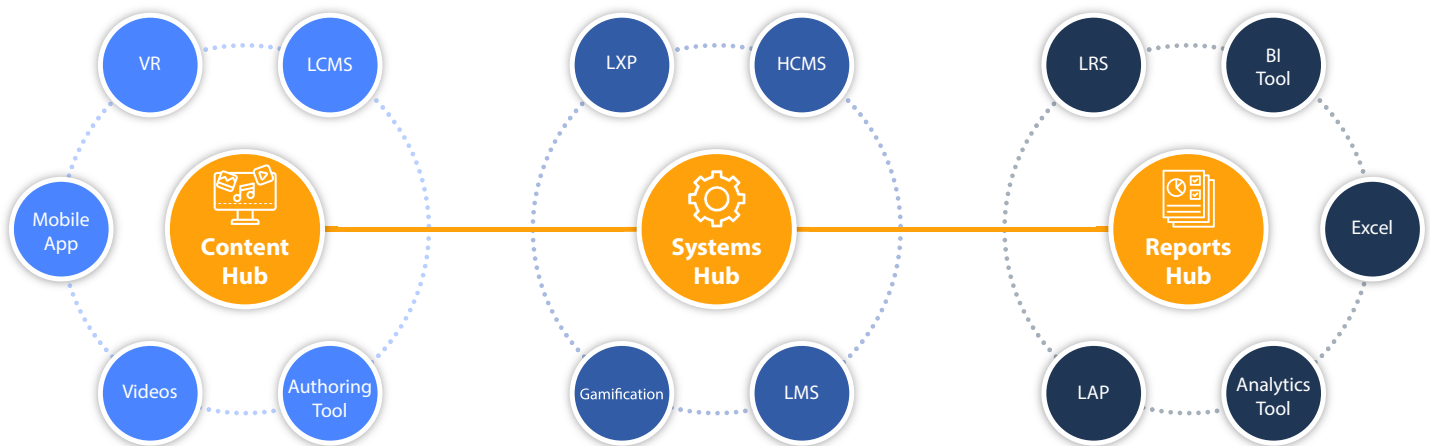
With Watershed, you can:

- Collect data on learning experiences and performance where they occur
- Have a single source of truth while using the tools and technologies you want
- Track and explore learning outside your LMS
- Send results and insights directly to colleagues or download for later
- Feed data to other business intelligence tools your organization uses

Watershed collects and standardizes data and automates reporting to improve learning and development efforts.

What will my ecosystem with the hub model look like?

Now that we've learned more about how using a hub model can centralize and organize our ecosystem by functional areas, what does it look like when all the pieces are put together?



Regardless of how complex your ecosystem currently is, at some point you'll likely want to add more tools, platforms, or systems, and you'll want to know how difficult that process will be. A main advantage of centralizing your tools in the hub and spoke model with multi-functional hubs is that when a new application is needed down the road, you'll know exactly where it will fit -- content, systems, or reporting -- and what you need to ask of it.

Tweet this

When adding new tools into a complex #learningecosystem, it's important to consider how it connects to other systems and what it needs to accomplish.



Standards and compatibility

While you could use a screwdriver to hammer in a nail, using a hammer is much more efficient. With a variety of options available, you'll want to be sure you're using the right standard for the right job.

One thing to consider for all tools and platforms is how they may (or may not) integrate with each other. Standards help ensure your content and systems work well together and can also determine what data is captured.

SCORM 1.2

Most universal and widely used, it's supported by almost every commercial LMS and authoring tool. Captures completion, score, duration, satisfaction, and limited interaction data.

SCORM 2004 (2nd, 3rd, and 4th Editions)

Best for capturing interaction data (e.g. question level details), and supports sequencing and navigation. Adoption varies, and 3rd Edition is the most common.

Experience API (xAPI)

Provides virtually limitless flexibility to track any digital learning activity and capture more expressive data. Support and implementation varies widely.

cmi5

Uses xAPI in the context of launched activities, and provides the flexibility to collect a variety of data while handling interactions between content and an LMS. Adoption rates are growing.

Learning Tools Interoperability (LTI)

Most widely seen in the EdTech space with limited corporate LMS adoption. Score is typically the only data shared back to an LMS.

AICC

Now defunct, AICC supports hosting content on your servers. Data collected mirrors SCORM 1.2.

While this might seem like a lot of standards to know, you don't have to support every standard with every course you create or purchase. You want to use the standard that best suits your needs and training goals.

Note about the importance of xAPI

Traditionally, you've known who was enrolled in a course and who completed it, but you didn't really know what's going on inside that course. The amount of data you were able to gather was very limited, and it was hard to draw conclusions about course content, effectiveness, and learner insights. Using a shared format for both sending and receiving data, xAPI makes it possible to track any type of learning activity, including ones not initiated from an LMS, capture more detailed data, and enables data to be shared across systems.

Why xAPI is important:

- Increases the fidelity of what's captured in a learning activity so you can learn more about how your learners are interacting with the content
- Supports data portability across systems
- Is especially useful for more dynamic environments, such as simulations, mobile apps, serious games, and virtual reality

Wrapping up

These solutions help you centrally host eLearning courses. That way, when you upload a course in your central hub, it's immediately made available to every other connected platform. Not only do you cut down on time administering courses, you also receive a consolidated usage report across all learners in every system.

No matter the size of your current ecosystem, the hub model helps you efficiently manage content and data across systems to increase the effectiveness of your training initiatives and has the flexibility to allow for future training goals and new technologies.

Time to inventory and plan

Now that you've read through the ebook, are you ready to inventory the contents of your ecosystem? Download our inventory and planning worksheet to help build or organize your ecosystem by taking an inventory to see what tools, platforms, and systems you currently have and what needs each one satisfies. Or maybe you're ready to add a new component. The planning worksheet helps you to know what questions to ask vendors to be sure the component will fit into your hub and discover how it can fit your needs.

[Download the worksheet](#)

About us

Rustici Software helps companies in the eLearning space work well together. As the world's leading eLearning standards experts, we provide the tools and knowledge to help companies convert, distribute and play eLearning content. Since 2002, we have assisted hundreds of LMSs, authoring tools, content providers and organizations conform to specifications like SCORM, the Experience API (xAPI), cmi5 and AICC. We continually strive to improve and evolve the standards and have actively supported development in partnership with ADL, IMS Global, and other industry organizations.

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