



watershed

How Watershed Fits into a Data Ecosystem

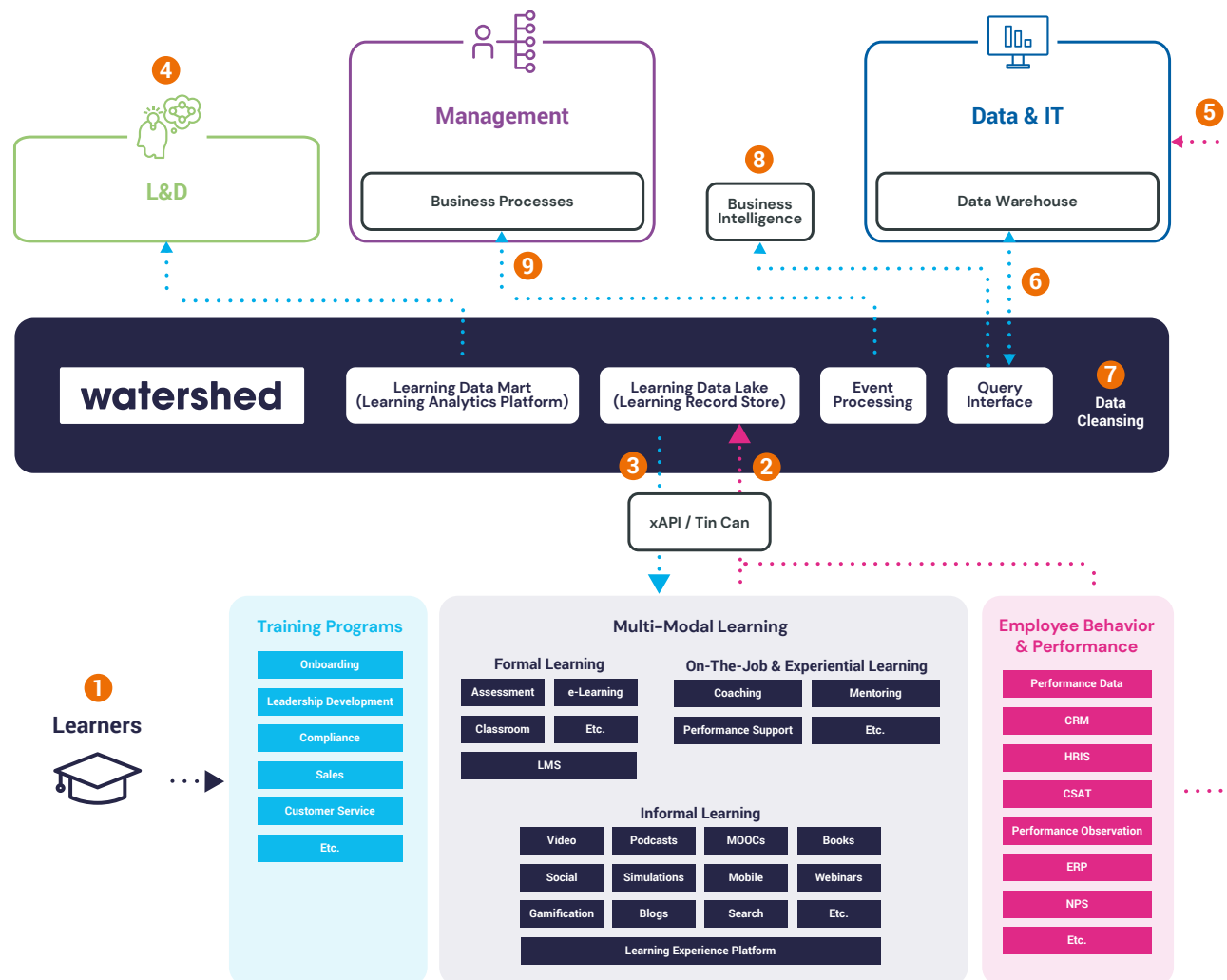
Watershed is a Learning Analytics Platform (LAP) and Learning Record Store (LRS) in one. Its LRS functionalities offer a place to gather data about all your training and learning data, while the LAP layer adds a powerful analytics tool tailor-made for Learning and Development (L&D).

At its core, Watershed is much more than an LRS or LAP. Think of it as the command and control center for all your learning programs—the key interface between learning data and the broader enterprise data ecosystem.

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Watershed's Data Ecosystem



- 1 Learning happens in many places, in many ways, and in many systems throughout your organization.
- 2 Learning tools publish detailed learning data via xAPI. A Learning Record Store (LRS)—such as Watershed—is required to collect this data. When these tools use xAPI, integration is seamless, eliminating the need to connect each system separately.
- 3 xAPI communication is bidirectional. Learning activities can adapt and personalize themselves to the learner based on data from prior experiences.
- 4 Watershed provides sophisticated reports and analytics tailor-made for L&D. Easy to use, automated, sharable, and available in real time, Watershed's reports pre-answer common L&D questions. L&D gets the detailed analytics they need without having to rely on IT.
- 5 To understand if their work is effective, L&D needs access to data about employee behavior and performance which can come from the corporate data warehouse or be sent directly to the LRS via xAPI.
- 6 Keep comprehensive learning data in the LRS for L&D to use. Send high-level summary data to the enterprise data warehouse for other business lines to consume.
- 7 Watershed normalizes, aggregates, and abstracts a complex stream of xAPI learning data into easily storable and consumable tabular formats. An abstraction layer hides the complexity of different learning tools and enables you to swap providers without costly re-integration.
- 8 Provide management with dashboards directly from Watershed. For complex queries and statistical analysis, pull structured data from Watershed into your favorite BI or reporting tool.
- 9 Trigger events when specific learning conditions are met to drive business processes.

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Learning Happens Everywhere

Learning happens everywhere; it's an inherently human activity that will never be confined to just one system or tool. Watershed lets you track data about all your training and learning events, not just the tiny fraction that happens in a Learning Management System (LMS).

How?

In organizations, learning happens through many programs, each of which uses different tools and different delivery modalities. Oftentimes, programs are delivered through one or more LMSs or Learning Experience Platforms (LXPs) such as Degreed and EdCast. But, the resulting data from these delivery methods is usually scattered or difficult to access. Watershed brings all that data together in one central hub.

Why?

The primary purpose of training and learning programs in the corporate context is to change the actions of the employee (i.e., learner) to boost the performance of the organization. Watershed allows you to monitor these changes in behavior and performance of your workforce to understand whether your learning programs are truly effective at impacting the bottom line.

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We invented this!

Enabling Technologies: xAPI & LRS

Experience API (xAPI) is a modern technical standard that allows learning tools to publish their data in a common format that's easily consumed by other systems. xAPI is rapidly gaining traction among the latest generation of learning tools, opening an abundance of data possibilities for users.

We invented this.

Originally called the Tin Can API, xAPI was invented by Rustici Software in partnership with a U.S. government research lab called ADL. Watershed was created by Rustici Software to realize the xAPI vision of a next-generation learning ecosystem.

Why xAPI?

Prior technical standards for learning tools, such as SCORM or AICC, only allow you to track a limited set of learning events—namely, e-learning courses delivered in an LMS via a web browser that must be connected to the internet. In contrast, xAPI not only tracks online and offline experiences, individuals or groups, and formal or informal learning, but also consumes training and performance data.

What about an LRS?

xAPI defines a new class of learning software called a Learning Record Store (LRS). At its most basic, an LRS is the place where standardized data (in xAPI format) from learning tools is stored as a series of statements about learning activity. To be xAPI-conformant, an LRS must implement a specific set of APIs for other learning tools to store and retrieve data. In an enterprise data ecosystem context, an LRS is [a data lake](#) specifically for learning data.

Why choose Watershed?

With an impressive array of Fortune 500 clients, Watershed is the best-in-class xAPI-conformant LRS implementation, envisioned and developed by the people who invented the concept of an xAPI LRS. It is the product of years of R&D in partnership with some of the largest and most sophisticated companies in the world and [most sophisticated companies in the world](#).

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We invented this, too!

Enabling Technologies: LRS

Experience API (xAPI) is a modern technical standard that allows learning tools to publish their data in a common format that's easily consumed by other systems. xAPI is rapidly gaining traction among the latest generation of learning tools, opening an abundance of data possibilities for users.

How is an LRS different than an LMS?

Watershed's LRS is similar to an LMS's internal reporting system that records result data. But unlike an LMS, an LRS can track learning data from virtually any data-generating system, not just the learning events that happened in an LMS.

An LRS doesn't seek to manage learning activity, and learners typically never interact with an LRS like they do an LMS. Additionally, Watershed allows you to capture employee behavior and organizational performance in the same place as your learning data, so it is easy to understand whether your learning interventions are effective and improving the organization.

Does Watershed replace an LMS?

No, Watershed is just one part of the larger corporate data ecosystems. LMSs still have a lot of value for managed formal learning, such as compliance training. There's a lot of talk about

the next-generation learning ecosystem and how the LMS fits into this vision.

Specifically, there's a growing trend around how the primacy and centrality of the LMS is diminishing—but the LMS is not going away.

How does Watershed relate to LXPs?

Quite simply, LXPs—such as Degreed and EdCast—are the front end (delivery), while Watershed is the back end (analytics). These popular tools provide an elegant interface to a wide variety of learning resources from many different tools and vendors. Next-generation learning ecosystems often use both LXPs and LRSs as foundational systems.

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4&8

Learning Analytics Platform

An LRS on its own is only marginally useful; the real power comes from being able to extract meaningful insights from your learning data. Watershed excels by adding a reporting and analytics layer on top of the underlying LRS.

Watershed's LAP provides sophisticated reports and analytics tailor-made for L&D. Easy to use, automated, shareable, and available in real time, Watershed's reports address common L&D questions—such as “What’s the most popular content?” and “Which skills and competencies yield the best business impact?”. L&D gets the detailed analytics they need without having to rely on specialized analysts or IT.

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4&8 Learning Analytics Platform

How is Watershed different than a BI tool, such as Tableau or Microsoft BI?

Watershed is purpose-built for L&D, rather than for data scientists. Unlike general business intelligence tools, we know the first 50 questions you are likely to ask about your learning program and can answer many of them for you out of the box. You can address any remaining questions with some configuration and integration of your organization's unique KPIs and metrics.

Watershed works natively with xAPI, the new standard for representing learning data. xAPI is a flexible and relatively unstructured data format that BI tools—which operate with strict, structured data—have a hard time handling correctly. Conversely, Watershed is designed to process both structured and unstructured data with ease and doesn't require specialized training for your analyst.

Watershed is easy to use and its licensing model doesn't charge per analyst, which means you can give managers, executives, and team members access to the data they need.

Watershed also allows you to create real-time dashboards that you can publish and share, so you can disseminate information to executives, managers, and other teams.

Keep in mind, Watershed is not yet a full-feature BI tool. We recognize and understand that sometimes different reporting needs arise. That's why Watershed makes it easy for BI tools, such as Tableau, to query its data in a simple, normalized format the BI system can readily understand.



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Watershed and the Data Warehouse

Enterprise data is a beast because it comes from many places and in many forms. Organizations often maintain a centralized, clean, authoritative repository of data called the data warehouse. Data in the data warehouse is highly structured and regulated by IT.

Watershed's LRS is a data lake—a separate data repository specifically for learning with a separate structure and looser, or more targeted, regulations as compared to a data warehouse.

Watershed allows you to keep comprehensive learning data in the LRS data lake. When L&D is ready to use that data, Watershed will summarize it and push clean, high-level data into the corporate data warehouse.

To understand whether your work is effective, L&D needs access to data about employees' behaviors and performance—which can be accessed from the corporate data warehouse or be sent directly to the LRS via xAPI to sit alongside learning data.

Why not just use the corporate data warehouse?

Generally, a data warehouse only stores high-level summary data from a division that is relevant to other parts of the organization, while an LRS store all the detailed learning data that L&D needs to improve and optimize its offerings.

Because data warehouses don't typically support xAPI—the learning industry standard for exchanging learning data—an LRS is required to exchange this learning data with corporate data warehouses.

Furthermore, access to the data warehouse is often heavily guarded by IT, making it difficult for L&D to get the information they need.

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The Power of Clean

Data can be messy—it originates in many places and formats.

Watershed cleans it up by taking relatively unstructured xAPI data and normalizing it into easy-to-understand tabular formats. Watershed is inherently open—so all the data that comes in can also come out, eliminating vendor lock-in and isolated silos.

Putting data into a common format provides three big benefits:

- 1 Other tools know how to store and consume structured data. This allows you to feed data into a data warehouse as well as analyze your learning data with sophisticated tools—such as business intelligence, artificial intelligence, or machine learning.
- 2 By having an abstraction layer between the original learning system and the rest of the ecosystem, you can easily swap one tool for another. For example, if you're tired of your old LMS, swap it for a new one without losing data or investing in costly data integration.
- 3 xAPI allows for two-way communication between systems and for communication across learning experiences. That means all the data in the LRS is available to other tools to drive personalization of learning experiences.

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Drive Business Processes

Watershed contains a sophisticated events and triggers capability that allows for learning events to drive business processes. When certain conditions are met, Watershed can take action. For example, Watershed users can use these complex criteria sets to:

- inform managers about non-compliant employees;
- inform readiness systems about workforce preparedness;
- alter training plans based on competencies; and
- personalize learning paths based on demonstrated achievements and preferences.

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Want to see what your organization's data ecosystem would look like?

We'll create a diagram based on your current tools, systems, and processes—for free.

Contact us to get started: watershedLRS.com/contact-us