



Innovation  
Series

# The CIO's Guide to Data and Analytics Innovation

How to put your company's  
data to work.



  
workday.

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## The challenge of change.

The world is changing rapidly, and the force of change is felt acutely in IT. Continuous economic volatility has increased the pressure on IT teams to transform business models, accelerate digital initiatives, and enhance the employee and customer experience. In particular, we see CIOs tasked with creating a more agile organization while making sound decisions to support the company's long-term health.

To succeed, these technology leaders must cope with the evolving requirements of the digital business, the deepening impact of the cloud, and the increasing complexity of the data ecosystem. Today, data is more distributed than ever in multicloud, intercloud, and hybrid architectures.

We also continue to see unprecedented growth in data volume, variety, and velocity, fueled by technology advances for capturing and processing data at scale. Our appetites for always-on experiences at our point of need continue to fuel this data growth, and the criticality of data has naturally been elevated on the executive agenda. In fact, 83 percent of executives articulated the need to be more data-driven compared to before the pandemic.

Improved data access is meaningless, however, if the data isn't trustworthy. When it comes to people and financial data, it's critical that the right data gets into the right hands at the right time, with no latency, gaps, or inconsistencies that could lead to faulty decisions.

Today, IT teams need to simplify systems, reduce spend, and decrease the effort needed to maintain legacy systems. Organizations need to make faster, more data-driven decisions while ensuring their people have the tools and experiences they need to remain productive while remote.

These stakeholders need what Workday was created to provide.

Workday delivers core business systems built on a cloud architecture designed for change. It starts with a foundation of adaptability, scalability, and extensibility, simplifying the path to trusted people and financial decisions. All of this closes the acceleration gap—the mismatch between the demands of the business and the digital strategy that underpins it.

Workday embeds transactions and analytics into one system to ensure maximum context for business decision-makers, and it is built on a unified source of truth, with an extensible data model enabling transactions and analysis in real time. This architectural approach is necessary to:

- Ensure a connected view of data through applications with interoperability, creating a single view of the truth in the application or enabling data to coexist with third-party applications
- Exploit open, cloud-native solutions, where core data is governed by a single security and governance model
- Drive data democratization with integrity by keeping data close to where analytics, reporting, and ML-based decisions are made

Workday has established a unique approach to address these imperatives and empower the data-driven organization to close the digital acceleration gap and attain a previously impossible power to adapt.

This guide will help CIOs understand how Workday fits into an enterprise data strategy and how, through our trusted source for data, Workday can enable businesses to make faster, better decisions.





## Adaptable architecture and the intelligent data core.

The above imperatives are realized within our intelligent data core, which is the center of the Workday technology platform architecture. The intelligent data core is not a database, data lake, warehouse, or traditional system for storing data. It is a new data framework that enables you to ingest, manage, and deploy data with integrity.

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Workday’s architectural principles around the way data is organized is quite powerful and unique.”

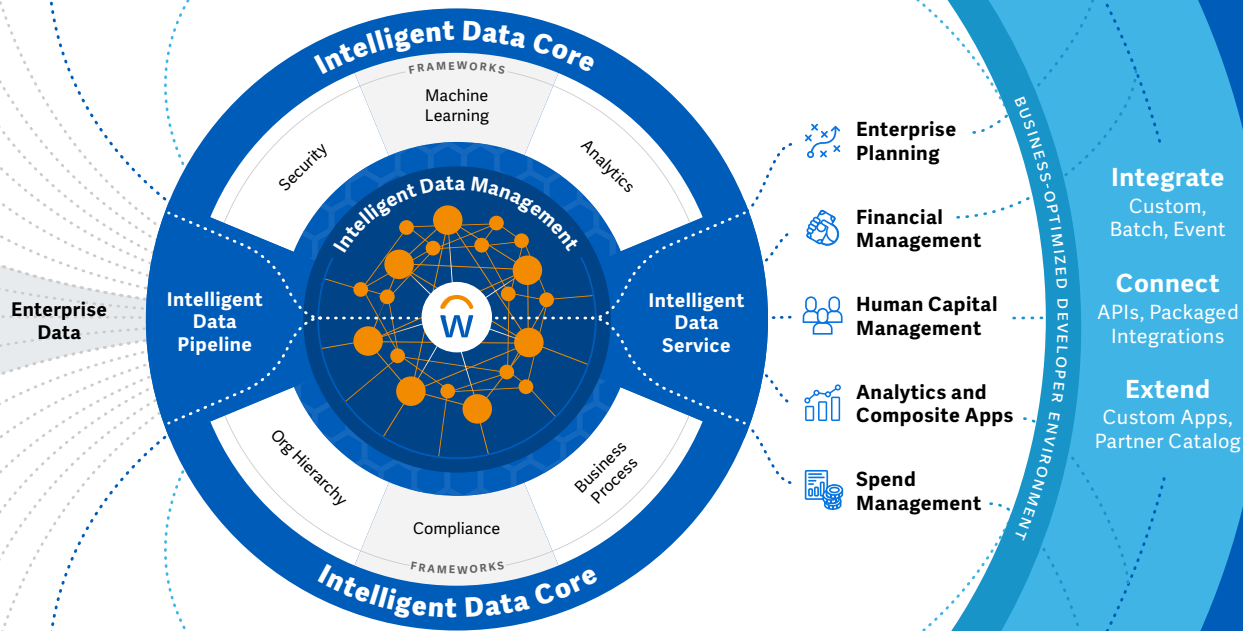
**Chief Technology Officer, Western Sydney Airport**

Our customers have a proven path to unify Workday people and financial data with non-Workday data to fuel optimal insights. From ingestion to deployment, you can operationalize data with confidence that it is protected by a robust and consistent security model. This is all complemented by our open and flexible technology platform, enabling you to extend the value of Workday data to more people and use cases.


**Workday Enterprise Management Cloud Platform:**  
the power to adapt

**The Workday Approach**





-  Unify
-  Secure
-  Democratize



**Technology Ecosystem**

-  IT
-  Customer
-  Industry
-  Collaboration

**Personalized, Omni-Channel Experience**

-  Collaboration
-  Messaging
-  Digital Workspaces
-  Mobile

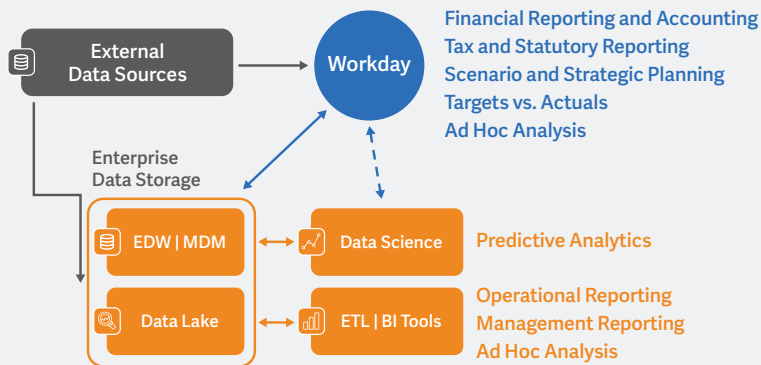
**True Cloud** Scale • Elasticity • Performance • Availability • Continuous Delivery of Innovation • Single Version

## The Workday approach in detail.

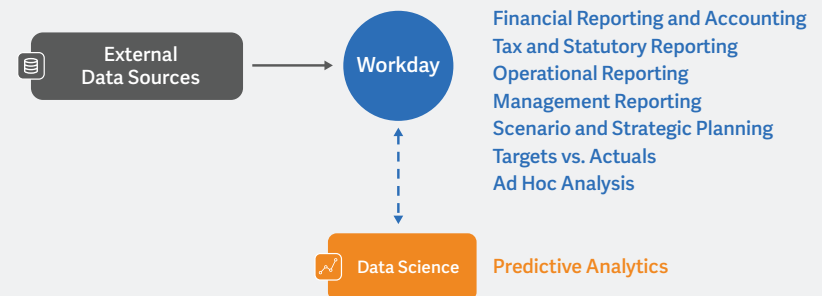
Workday is a critical piece of your data strategy. Three pillars of that strategy include whether to bring data into the platform or maintain data on the outside, how to ensure security and privacy, and how to ensure ideal access and availability to all relevant stakeholders. Fortunately, Workday is a flexible option that can support many frameworks and approaches, depending on an organization's needs.

As your hub for people and financial data, Workday Prism Analytics helps customers simplify their technology environments, reduce resources, and lower the number of manual processes. The result is empowered finance and HR teams closer to data governance and able to self-serve.

Now let's look at how Workday unifies, secures, and democratizes data.



Two data hubs built for different use cases.



Workday as a data hub for finance and HR.

# 1

## The value of a unified source of truth.

What does the business, especially the C-suite, care about when it comes to data? The CIO, CFO, and CHRO want access to current, secure, and relevant business data. This data should deliver contextual insights and be mapped to what's most important to business. Workday provides a comprehensive set of reporting and analytics tools that meet the needs of finance and accounting users, managers, lines of business, and executives.

Determining which data points to rely on when data resides in disparate source systems can be difficult. Decision-makers and employees across all departments should be able to use the same integrated source of truth.

A trusted data infrastructure, using a unified source of truth, can:

- Enable fast access to data for timely decision-making
- Significantly decrease time spent assessing data accuracy
- Enhance the business intelligence (BI) of the enterprise
- Deliver insights faster

To stay competitive and meet modern customer expectations, organizations must be adaptable, with a technology foundation that's ready for anything. Organizations running their businesses with multiple legacy systems and silos find difficulty supporting new business models, introducing technologies, meeting regulatory requirements, and ensuring reliability. The legacy approach to transactions and analytics residing in separate systems is broken. With such outdated architecture, companies have to follow the cumbersome process of extracting their data and transforming it into something usable.

Workday closes the legacy gap by combining transactions and analytics into one system. Because the system is based on an object-oriented

technology, our customers can run a report, drill down into details, and immediately take action on their two most important assets—people and finances. Workday customers never have to worry about having outdated data.

We recommend keeping data as close as possible to where decisions are being made.

Having the data located where transactions and analysis are happening ensures maximum context for business decision-makers and minimum time between decision and action.

By keeping human capital management (HCM) and financial data at its source, the office of the CIO—which bears ultimate responsibility for the well-being of this data—can ensure contextual security, always-on audit, data governance, and complete compliance. Datasets can be published in-memory, with analytics embedded in business processes or surfaced on common workspaces, such as a worker or customer profile.



Why Workday for HR, financial, and planning data?

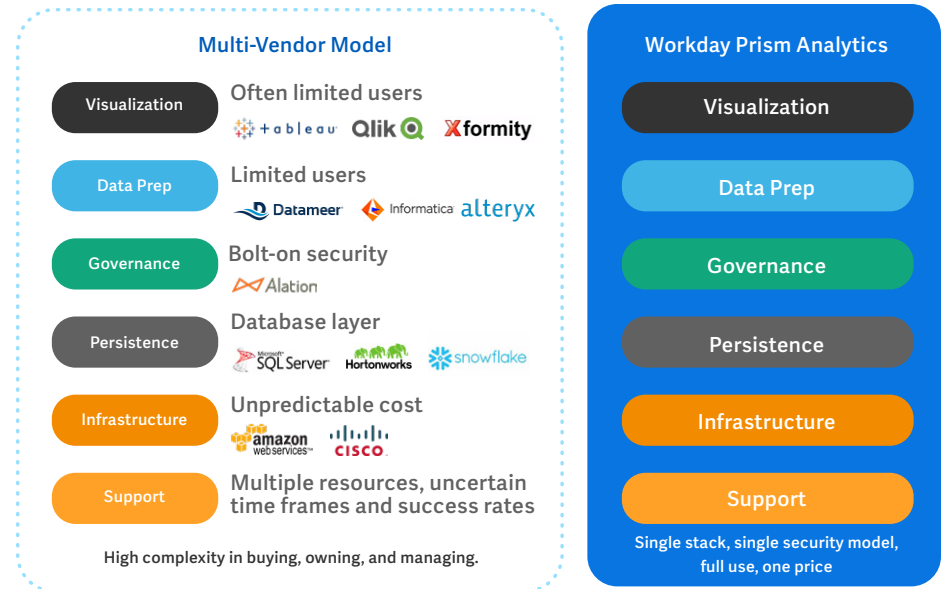
## Connecting to outside data.

Why do organizations blend core people and financial data with external data? Because new insights emerge when you combine diverse data sources, and critical information can lie outside of the core financial and employee system of record. To accomplish intelligent enterprise reporting, you should integrate data from multiple sources. After standardizing and enriching the data, it can be published in an easy-to-consume and visual way for business users. Having consistently available, rapid access to high volumes of financial, workforce, and operational data will drive more informed decision-making.

As many of us know, that's not easy in a complex data architecture. Not to mention the huge volumes of data with inconsistent formats and varying levels of transaction detail. Cobbling data together to uncover insights—through integrations, IT service requests, or even spreadsheets—can be time-consuming, if not impossible.

When using Workday Prism Analytics as a hub for people and financial data, you can blend external data from any source with trusted data from Workday. This could include data from supporting financial and HR apps, industry tools, CRM, marketing, service, contract labor, and subsidiaries, or external data from governmental or other sources.

Workday Prism Analytics prepares high volumes of operational and historical data, giving you the financial, HR, and operational analytics you need in one secure place. With an intuitive data prep environment, high-trust access management, and security control, Workday delivers a consistent data management experience that is quick to set up and use.

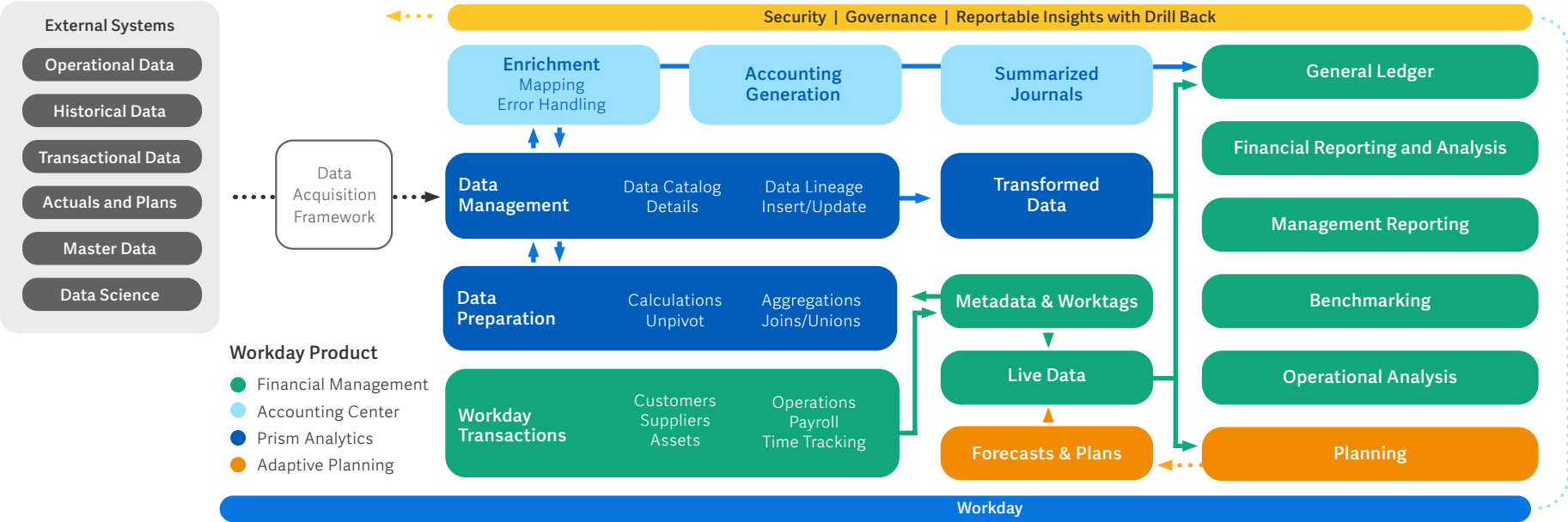


Why Workday Prism Analytics.

Providing access to data and insights based on a configurable security model, Workday delivers data to people in their natural workspaces. With an easy point-and-click interface, Workday Prism Analytics allows customers to quickly take action on insights derived from their business, operational, and people data.

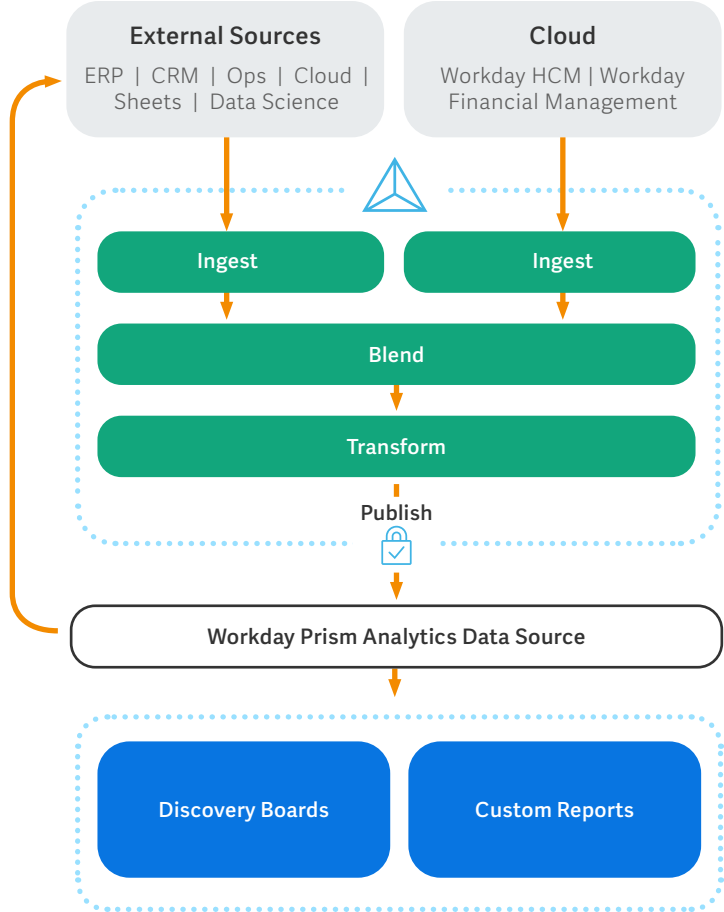
“ Consolidating multiple systems onto a single platform is helping Nasdaq drive a strategic growth pivot. Our future is in using all the information we have in Workday Financial Management, Workday Human Capital Management, and other surrounding systems, bringing that data together, and using it in the most powerful way. Over the past two years, we’ve unified our processes around the globe and unlocked tremendous scale and efficiency.”

CFO, Nasdaq



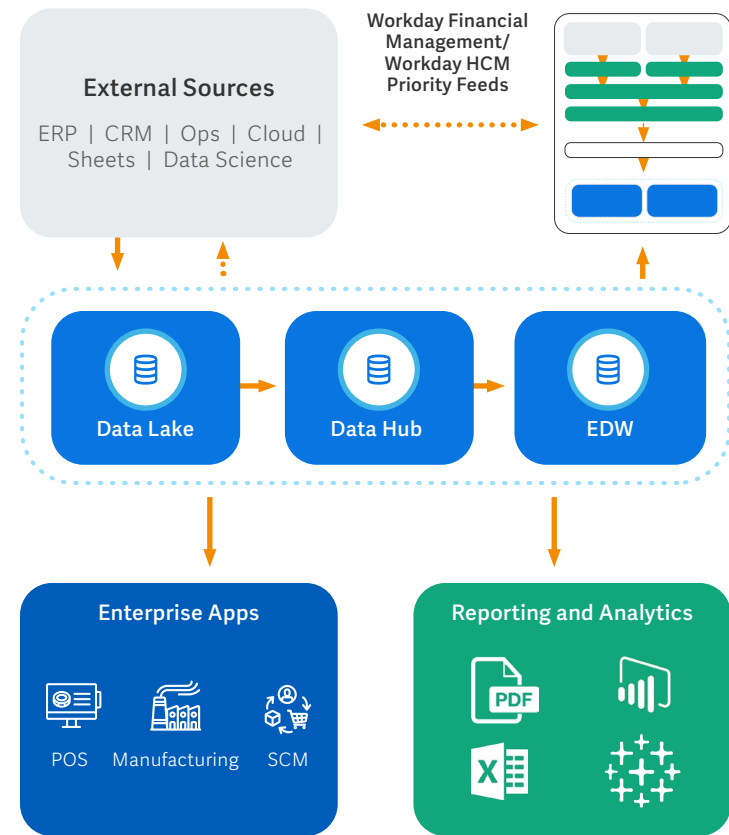
How Workday complements an enterprise data strategy.

For those who wish to maintain data outside of Workday, our APIs provide an opportunity to enrich that data with exported Workday data. Designed from the ground up with two-way interoperability in mind, Workday provides the ability to integrate and extend value without adding complexity, cost, or risk. Our integration tools cover a spectrum of use cases, from large data syncs to small transaction integrations.



Workday is architected to turn data into action. Many ERP systems require analytics and reporting solutions that sit outside the system of record, and data must be replicated from the ERP to a BI tool. With Workday, analytics is completely integrated with the system of record, enabling real-time reporting and ad hoc analysis on live transactions.

Workday provides a comprehensive set of reporting and analytics tools that meet the needs of finance and accounting users, managers, and executives, as well as lines of business—all connected with and secured by the same object data model, which is part of a single codeline shared with our HCM solution. Datasets can be published in-memory, with analytics embedded in business processes or surfaced on common workspaces, such as a worker or customer profile. The security model is based on each user's individual circumstances and applied to every field of every detail record, ensuring that in all circumstances, users only see data they are permitted to see. This means that everyone can access insights in a form that makes the most sense for their needs, but in a way that ensures data integrity and security.



## 2

### Consistent security, robust privacy, and adaptable governance.

At Workday, we employ rigorous security measures at the organizational, architectural, and operational levels to ensure that your data remains safe. Privacy is by design, and we are transparent about our privacy practices and innovate responsibly. Our configurable security and governance enables roles, rules, and updates to be inherited across the system, without manual intervention.

Because ours is a true cloud system, security is integrated into the Workday core. This includes encrypting customer data at rest and in transit, ensuring the physical security of our servers, and embedding role-based access permissions into the system. We make it easy to use multifactor authentication and work with our customers to help them stay on top of regulatory compliance. Audit capabilities are integrated into the fabric of our applications, enabling Workday to have pervasive, always-on auditing for customer data.

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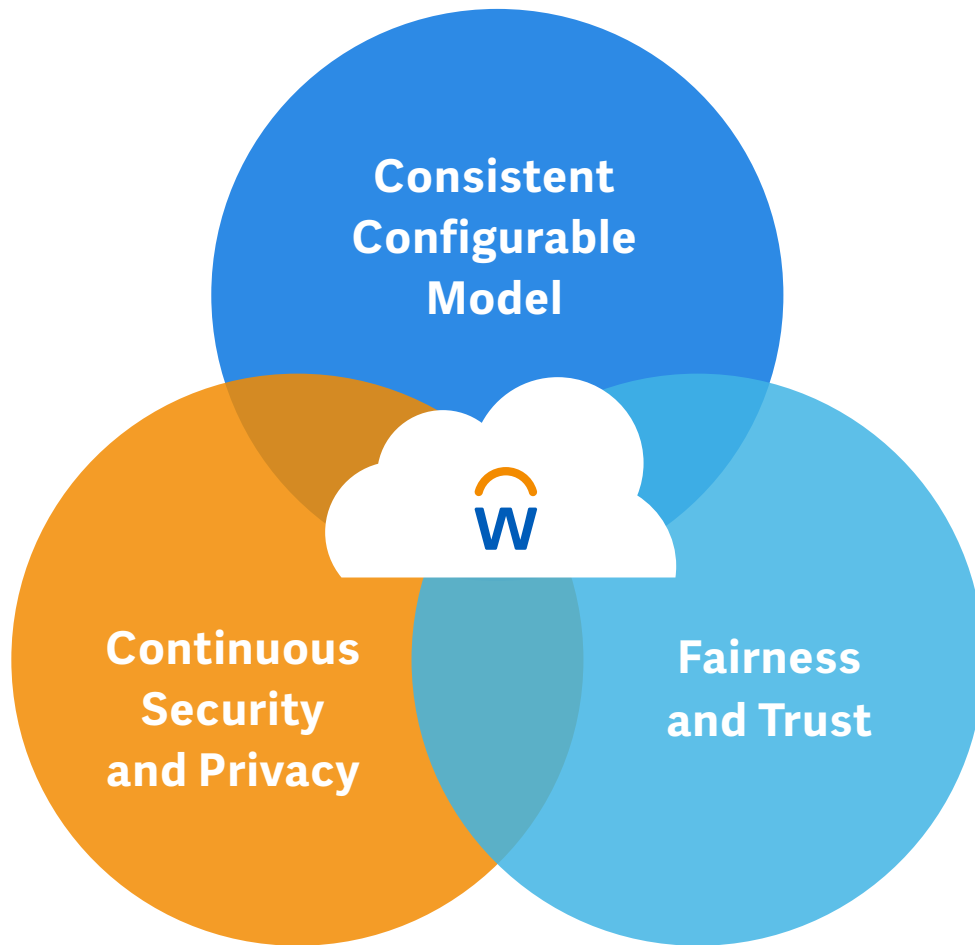
When we went to Workday, we saw an opportunity. The Workday product is unified. We wanted a solution that offers flexibility, scalability, and agility. Workday was aligned to our cloud strategy, too, as we wanted to continuously reduce our on-premise footprint.”

**VP of Financial Systems and Operations Governance, CNA**

Security continuously applies to data no matter how the data is used or where it is accessed. To maximize security for Workday enterprise products, all access to the database comes through Workday application services, and no customers have direct access to the database, including IT.

Workday exceeds industry norms by delivering an SOC 2+ report covering all five Trust Services Criteria, including privacy, encrypting all customer data before it is stored, and providing a complete audit trail with activity logs for every account.





This model enables us to deploy security at scale across all Workday services and ensures that security improvements for one customer benefit all customers. As a result, Workday is always:

- Managed and audited across the complete app and system lifecycle
- Ready for evolving compliance requirements
- Using encrypted, fully attested data whether in transit or at rest
- Transparent in its data use policies
- Adherent to ethical AI practices

Workday is an object-oriented in-memory system with an encrypted persistent data store. As a result, access events and changes are tracked and audited. Workers' data access is automatically controlled, even when they change roles. This adaptable and robust model, combined with the automatic ability to effectively date and audit all data updates, shortens the time and lowers the costs associated with governance and reduces overall risk.

# 3

## Democratize, optimize, and integrate.

Workday ensures data is made discoverable to only the right people. Decision-making and automation are enhanced with embedded machine learning (ML), which is at the very core of the Workday technology platform. Because Workday is a true cloud platform and a single version, we can train machine learning in a way that none of our competitors can. Data integrity is extended across the Workday ecosystem.

### Embedded machine learning.

With innovations such as machine learning, it's not just about having the algorithms, technology services, and APIs, but also about combining those algorithms with the right data and the knowledge of the challenges that our customers are working to solve. It's this combination of innovation, domain knowledge, and a rich data set that enables ML to light up new business value in Workday.

Our strategy has been focused on embedding a machine learning framework into the very core of Workday applications that leverages a reusable data core that is based on the data our customers share with us. We structure the data in a way that allows us to apply multiple use cases in different contexts to solve multiple problems using the same structured data. The same data structure is only possible because all customers are on the same version. With this solid, reusable core in place for ML, our customers see more use cases roll out at an accelerated pace.

“

We're very excited about our machine-learning journey and the many ways it can help us learn quickly from our data, so we can understand and manage behaviors.”

**Director of Operations and Process Improvement, Life Time**



### **Benchmarking.**

Workday uses a variety of data sources to enrich data. Benchmarking, for instance, uses data generated from Workday customers who have opted in to the Workday Innovation Services agreement. Some of our other services, such as GeoTag, Gladly, and IP Lookup, are supported with datasets licensed from third parties.

GeoTag provides geolocation services, such as mapping zip codes to addresses. Gladly provides auto-completion and suggestions for street addresses all over the world. IP Lookup returns the geographic location from IP addresses. All of this enables us to leverage the same foundational base to build a diverse but consistent set of applications—which simply isn't possible with siloed data sets.

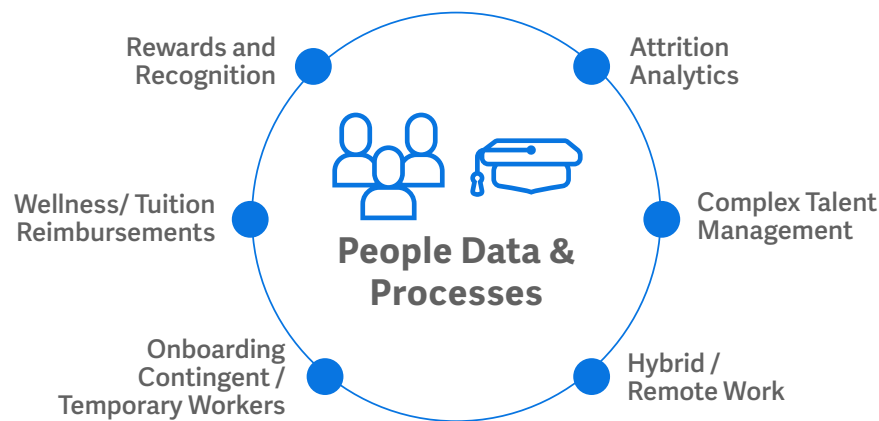


### Extending in the right place.

The Workday architectural design enables deep extensibility of Workday products. By using Workday Extend, our customers can build apps that extend the Workday object model to store, process, and secure their app data. These apps run alongside existing Workday applications on the same technology foundation, leveraging a common user experience, one trusted source of data, and the same consistent approach to security.

We call this “extending in the right place.”

By exposing the same underlying components that our own developers use, customers can rapidly build new experiences without worrying about underlying infrastructure, security, or durability of the apps because they are deep extensions of Workday.



Build new value in the “right place” by taking advantage of the close proximity to your people and financial data, and processes.



**Empowering HR and finance with self-service.**

For IT leaders, there has never been a better time to strengthen and expand strategic partnerships with finance and HR. Having withstood unprecedented disruptions to their businesses, priorities have certainly shifted. McKinsey & Company has found that employees across a range of functions can spend around one-third of their time on non-value-added tasks due to poor data quality and availability.

Business users need to efficiently manage and transform data for consumption. Standard requirements now include easily configurable integrations and APIs to connect to middleware and external applications, big data preparation and processing without the need to code, and the flexibility to structure data for any type of reporting, analytics, or planning use case. Shifting these processes out of IT and into the line of business, with an emphasis on automation, is a clear win for IT, finance, and HR. IT teams can reallocate resources toward high-value activities, such as creating ML algorithms, while finance and HR teams gain more control and scalability regarding critical business processes.

The data preparation capabilities in Workday are visual and intuitive, allowing analysts to create, maintain, and adjust data transformation pipelines without the need to write code. These pipelines are explicitly designed to adapt to change—for example, to accommodate the addition of new data


sources, adjustment of mappings, addition or removal of dimensions and attributes—all without the months of effort commonly required with legacy approaches.

The pressure is on to turn data into action. Legacy approaches centered on manual processes weren't built to handle the massive amounts of data being generated and captured by modern enterprises. Workday shifts data governance to the teams that are closest to the business, and business users control how data enrichment rules are defined and configured. With Workday, you reduce resources dedicated to manual processes, systems maintenance, and ad hoc requests from business users. This reduces IT dependence and empowers finance and HR with greater self-service.

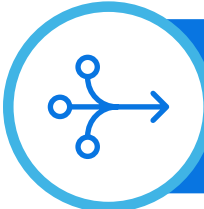


What we love about Workday is that it's not a roadblock to change, but an enabler to help us manage change effectively."

**Vice President of Human Resources, Cornell University**



**Increase Productivity**  
Flexible to the way you want to work.



**Focused on Simplicity**  
Reflects your expectations of how applications should work.



**Open and Extensible**  
Rapidly extend Workday to support the changing business.

## Conclusion

### **Achieving the power to adapt.**

As this guide has shown, Workday delivers the power to adapt so you can evolve your data and processes to solve your most pressing challenges—and thrive in times of extreme change.

Learn more about:

[workday.com](https://workday.com)

[Intelligent Data Core](#)

[Workday Analytics and Reporting](#)

[Enterprise Data Hub](#)





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