

Empowering IBM em with a reinvigorated i

The IBM Chief Information Officer organization modernizes the w3 homepage with generative AI

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Personalizing and augmenting the intranet experience

The IBM intranet—known as w3—serves as a central hub for employees to access information about the people, tools and applications that drive the company. To provide a more friendly and personalized experience to IBM employees, the team had to overcome dependency on older virtualized infrastructure in place. After a successful proof-of-concept, a Continuous Integration/Continuous Deployment (CI/CD) team and the Information Office (CIO) organization decided to

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However, revamping the platform required an overhauling of the infrastructure and application layers, while adopting a robust design system to deliver a consistent corporate intranet experience to IBM employees. This involved normalizing and harmonizing the IT stack into something more maintainable.

90%

More than 90% of IBM employees access w3.¹

“User actions tell a story about what’s important for prioritization and the work that needs to be done.”

Jay LaPlante

Product Lead, CIO AI, Automation and Data Platform
IBM

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The road to a reimaged w3

To unify and consolidate the w3 platform, the CIO used an agile development methodology.

First, the team moved from a legacy infrastructure to container infrastructure. The migration helped us better understand what goes into deploying applications and services. In turn, this introduced standardizing the release management process.

As part of the migration, the team rolled out these changes:

- The same service handles both reverse proxy and load balancing across the overall architecture.
- The shortest path routing algorithm directs users to the nearest edge location globally, contributing to faster response times.
- Asset compression and caching help boost performance by reducing bandwidth usage.
- The w3 cookie-less domain intends to expedite page loads by reducing the overall request size.

Second, the team assessed and refined the infrastructure, implementing a range of improvements to better align with business needs:

- Identifying outdated systems, duplicate solutions and inefficiencies.
- Formulating a well-defined roadmap for technology modernization.
- Monitoring, evaluating and adjusting performance metrics.

Third, the team brought together the data and user requirements to build a new platform, directory data, landing page and news feed. They evaluated various frameworks and practices, employing the IBM Cloud and ReactJS. The new framework illustrated user activity and interests, helping the CIO organization know where users have problems and what they are interested in. Having this information, the team prioritized the backlog, determine user interface (UI) and user experience (UX).

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Once the move to CIO Hybrid Cloud platform, technical refactoring were completed, the new w3 foundation [watsonx.ai™](#), [IBM watsonx Assistant™](#) and large language models [IBM Granite™](#). This resulted in a revitalized, reinvigorated platform.

Figure 1 below:

The screenshot shows the w3 homepage with a navigation bar at the top featuring links for Home, People, News, Apps, IT Support, AskIBM, and a search bar. On the left, there's a sidebar with 'Favorites' sections for Recent activity, Learning, and Shortcuts. The main content area includes:

- AskIBM**: A section for prompts and productivity workflows with buttons for Chat with documents, Translate text, and Summarize me.
- Favorites**: A grid of icons for AskHR, Your Learning, Your Career, and IBM Cybersecurity.
- Recent activity**: A list of recent events: "Set up my new device" (10 min ago) and "Reset your w3id password" (35 min ago), with a "View all" link.
- Accelerator Offerings**: A list of four items:
 - Drive sustainability and business value with AI (1 hour ago)
 - IBM Power modernizes infrastructure with AI (8 hours ago)
 - IBM's Most Advanced Quantum Computer (Yesterday)
 - Celebrating the IBM-Quantum Center (2 days ago)
- Shortcuts**: A grid of Pay statements and Recognition options.

Figure 1: w3 Homepage

The new w3 at IBM offers a range of advantages, for example:

Before: The search functionality was disjointed and confined to individual sections.

After: An integrated search interface to enable the user to search across people, news, applications or IT support information. It also allows to narrow down search results based on location, language, and more.

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Before: There were no adjustable settings.

After: Settings to control the platform's appearance, languages, locations, interests and more.

and notifications. Notification preferences encompass device and password management alerts, blog subscriptions, and trending topics.

Before: The employee directory was reachable via a separate web portal with restricted methods to connect with fellow IBM employees.

After: A People page to explore, engage, and initiate colleague interactions.

Before: News layout and profile options required modifications to facilitate navigation.

After: A News tab to help users stay updated and well-informed about IBM happenings, initiatives, and events relevant to their role through content curation.

Before: The applications details were available on multiple platforms per operating system, without a single licensing management location.

After: An Apps area to acquire, upgrade, administer, and return software licenses with application recommendations based on job roles and business units.

Before: Users requested IT support from a standalone website with limited dynamic and customized outage messages.

After: An IT Support hub with key resources and outages, and a display of current support tickets, contact information, and appointments. Additionally, it grants access to an AI-powered self-service system, AskIT⁴, to get answers for different IT-related questions.

Before: AskIBM⁵ was nonexistent.

After: An AskIBM link where IBM employees can use generative AI (gen AI) to accelerate and simplify routine business activities, such as drafting an e-mail, translating a document, searching for information, producing summaries, generating actionable ideas, and more. The AskIBM alpha release started production in early January 2024.

During the w3 digital evolution, the CIO organization collaborated with the watsonx product teams and [IBM Research®](#) to help scale IBM product offerings for enterprise release. The team also shared accomplishments and best practices with clients. These discussions addressed the IBM intranet development approach and the expertise of [IBM Consulting®](#) to replicate comparable environments.

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“Having a comprehensive service graph layered on a modern application stack enables us to deploy AI solutions on the IBM intranet.”

Jason Horwitz

Head of w3 Engineering, CIO AI, Automation and Data Platform
IBM

An enhanced and unified w3 platform at IBM

The IBM intranet had already won the Nielsen Norman Group (NN/g)⁶ Intranet Design Annual Award in 2006, 2017, 2019 and 2022. Moreover, the new work done using gen AI charted the course for other internal initiatives such as AskIT and AskIBM, applying IBM technology to deliver business value.

The experience with w3 has yielded valuable lessons that the CIO organization can share with IBM clients worldwide. These key take-aways include:

- Base the transformation journey on user-driven narratives and interaction. Observe user actions, then prioritize the work and incorporate feedback to the best of the team’s ability.
- Invest in cultivating relationships with the organization to manage complex decisions that might disappoint a greater good.

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In the future, the CIO organization plans to continue building IT support automation and using predictive data to tackle problems that might impact users. The team also aims to leverage [IBM Watsonx Orchestrate™](#) to maintain a consistent UX.



About IBM CIO Organization

The [IBM](#) Chief Information Officer (CIO) organization leads the internal IBM IT strategy and is responsible for delivering, securing, modernizing and supporting the IT solutions that IBM employees, clients and partners use to do their jobs every day.

The CIO organization's strategy encompasses creating an adaptive IT platform that makes IT tools, applications and systems easier to access across the enterprise. With a mission to catalyze business growth, the CIO organization accelerates problem-solving and serves as an innovation engine for IBM.

Solution components

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- [IBM® Watsonx.ai™](#) →
 - [IBM Watsonx Assistant™](#) →
 - [IBM Granite™](#) →
- Hello! How can we help you?

¹ Based on internal records and w3 usage reports.

² The CIO Hybrid Cloud platform enables teams to design, develop, manage and operate cloud-native applications. It utilizes Red Hat® technologies on OpenShift® and offers features for application delivery, integration, data handling and artificial intelligence.

³ Carbon is the open-source design system for all IBM software products. For more information, visit: <https://carbondesignsystem.com/> (link resides outside of ibm.com).

⁴ AskIT is a conversation-based IT support assistant, launched by the CIO organization in May 2023. For more information, visit: <https://www.ibm.com/case-studies/cio-watsonx-askit>.

⁵ AskIBM is an AI-powered digital assistant that is automating day-to-day business tasks. For more information, visit: <https://www.ibm.com/case-studies/askibm>.

⁶ NN/g is a team of global UX experts. For more information, visit: <https://www.nngroup.com/articles/intranet-design/2022/> (link resides outside of ibm.com).

Use generative AI to modernize your AI applications and empower your employees.

watsonx offers the support and tooling needed to deploy AI at scale.

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