Increasing employee productivity with Microsoft Search in Bing and PowerApps

In Microsoft Core Services Engineering and Operations (CSEO), formerly Microsoft IT, we empower employees to accomplish more by digitally transforming how they work. Our goal is to implement technologies and solutions to help Microsoft employees be their most creative, innovative, and productive. To improve the employee experience at Microsoft, we’re implementing Microsoft Search in Bing (formerly known as Bing for business) to enhance the discoverability of information, people, and apps. We’re also integrating PowerApps with Microsoft Search in Bing so that employees can find internal resources and complete common tasks in one place—conveniently within the context of their search results.

Delivering better search with task completion

Microsoft employees work in an ecosystem that includes numerous and disparate self-service tools and a sea of data. Although internet searches yield more relevant results than ever before, employees can still find it time-consuming and frustrating to locate the answers they need within the enterprise. Tools and data exist in difficult-to-find locations, or they’re hosted separately from related information sources—often requiring visits to multiple data sources to find all information required to complete a single task.

Microsoft Search in Bing is a new search offering that saves time and increases employee productivity by delivering more relevant search results, based on organizational context. Microsoft Search in Bing can be used with a browser on any device. It intelligently and securely retrieves information from enterprise resources—information such as company data, details about colleagues (as shown in Figure 1), shared files, team sites, and office and meeting locations, as well as public web results—and displays them in a single user experience.

**Figure 1. Employee search results in Microsoft Search in Bing.**

In addition to providing a unified web and work search experience, Microsoft Search in Bing integrates with PowerApps to enable users to complete common tasks from within their search-results pane, as shown in Figure 2.
Implementing Microsoft Search in Bing

Microsoft Search in Bing is available as part of Microsoft Office 365. Easy to deploy, it’s enabled simply by adding the Microsoft Search in Bing add-in to your Office 365 tenant from the Office 365 admin center. Employees don’t need to install anything on their devices—they just visit www.bing.com and sign in with their work account.

Microsoft Search in Bing offers enhanced protection for Bing web searches and treats enterprise data in a compliant way. Accessing Microsoft Search in Bing search results requires Azure Active Directory (AD) authentication. At Microsoft, we enabled Azure AD with Azure multifactor authentication to enhance security when employees access corporate resources.

*Note: Search queries are anonymized and separated from public Bing search traffic. They’re not used for displaying targeted ads or viewable by advertisers.*

Configuring the Microsoft Search in Bing experience

We used the Microsoft Search in Bing Admin portal to configure our Microsoft Search in Bing employee experience. The portal is organized around four functions:

- **Bookmarks.** Help your employees quickly find important tools and resources by putting them at the top of Bing search results.
- **Q&As.** Create answers for the most frequently asked questions in your company.
- **Users & permissions.** Define which people in your organization can manage or edit Microsoft Search in Bing. You can also use this function to restrict access to specific user groups within the organization.
- **Content settings.** Control the look and feel of Microsoft Search in Bing results in your organization.

Adding bookmarks to help employees find important resources

A bookmark is a combination of a URL and a list of queries to trigger that URL. It’s triggered when an employee is signed in to Bing with a work account and enters a query or search term associated with that bookmark. We added over 1,400 bookmarks in Microsoft Search in Bing for resources and tools across Microsoft.

We started manually, adding the most sought-after resources. For each bookmark, we added a description and keywords. To help create our list of key search words and queries, we used Microsoft Windows telemetry gathered...
from previous corporate searches. As we continued, we imported bookmarks using a simple comma-separated values (.csv) format that included our SharePoint Best Bets.

We then configured Microsoft Search in Bing to automatically expand the keyword list by including similar terms and common misspellings, providing a broader range of matching search terms. To refine searches, we also included the option to reserve keywords for a bookmark. When a keyword serves as a trigger for multiple bookmarks, we can designate, or reserve, one bookmark to be the top result, and the other results will show as related links.

Creating Q&As

In the Q&A section, we’ve begun creating quick answers for the most frequently asked questions by employees at Microsoft. To create our list, we used search telemetry to discover what people are searching for, and determine a set of enterprise keywords when they weren’t finding it.

At Microsoft, we have a team that gathers and maintains a set of internal enterprise keywords and URLs that identify authoritative content. This authoritative content includes the most sought-after services and content available to employees. Almost half of all search queries are for the top enterprise sites in the company. The top sites include a wide range of employee-service areas in which employees are seeking answers.

The answers that employees receive from these services need to be accurate and kept current. We regularly review searches performed on SharePoint to identify new employee needs for authoritative content, then work with content owners to confirm the right URL and assign the most effective keywords to those URLs.

Our goal is to promote authoritative content search results to the highest possible positions on the SharePoint and Microsoft Search in Bing search result pages.

The keywords for authoritative content are managed as Best Bets in Office 365. For our PowerApps integration, the keywords were used to help provide a seamless search experience for employees.

Adding users and granting permissions

The Users & permissions page of the Microsoft Search in Bing admin portal is where the Office 365 tenant admin defined administrators and editors. Once we added Microsoft Search in Bing to Office 365, all the users in our tenant gained access. But you can configure those permissions to assign roles and allow access to only certain people or user groups.

Configuring the look and feel

An Office 365 global administrator or a Microsoft Search in Bing administrator can use the Content Settings page to configure Microsoft Search in Bing with a familiar look and feel for corporate resources, such as SharePoint, OneDrive for Business, or the corporate intranet.

Integrating PowerApps

At Microsoft, we’ve been redesigning some of our business applications using PowerApps. The PowerApps development environment comprises templates, service connectors, and prepopulated data entities with an Excel-like formula language. With PowerApps, our engineers and business analysts can contribute to app development, and can configure and manage apps easily from a single point. We’re using PowerApps to offer a new employee experience during common activities. We’ve created Thrive, a company dashboard app, which uses PowerApps to unify the corporate app experience with a consistent user interface across traditional lines of business.

Outside of the Thrive dashboard app, we’re working on PowerApps experiences that can be accessed directly through Microsoft Search in Bing search results. It’s really easy to integrate PowerApps with Microsoft Search in Bing — all you need is your PowerApps ID and a Microsoft Search in Bing bookmark to associate with it.

We’ve integrated four PowerApps in our current implementation of Microsoft Search in Bing:

- View available vacation time, sick leave, and other time-accrual balances, and book time off, for employees in the United States.
• View available vacation time, sick leave, and other time-accrual balances, and book time off, for employees in regions outside of the United States.
• View the Microsoft holiday calendar for your region or other regions you're interested in.
• Communicate appreciation to other employees by sending kudos through Microsoft Search in Bing.

Prioritizing apps selection for PowerApps redesign
In deciding which apps to redesign as PowerApps, we targeted the ones most commonly used by employees. Our goal was to make employees more productive not only by improving app discoverability, but by putting the task itself at their fingertips.

Some of our most commonly used employee self-service apps were among the oldest apps still in use at Microsoft. Because they already appeared on our radar for modernization, they were excellent candidates for having their service functions moved to PowerApps—completely transforming how employees interact with them.

Configuring PowerApps to target specific audiences
PowerApps applications are secured by granting View permissions to security groups. Within Microsoft, we have security groups that cover operating systems, geographies, divisions, and roles. We use those security groups to help us target PowerApps to the right audience. As illustrated in Figure 3, users outside of a specified audience won’t even see applications that aren’t intended for them.

Figure 3. Microsoft Search in Bing search results display the appropriate version of the PowerApp for an employee in the United States on a mobile device.
Encouraging user adoption

Once we added Microsoft Search in Bing to Office 365, the search functionality was available to all of the 220,000 employees, vendors, and interns who work at Microsoft.

For many new Microsoft products, features, or technologies, we use our Elite program experiences to prepare products for release to market. This internal program includes thousands of employees who are ready to provide their feedback as early adopters. We used the Elite early-adoption program to test the first four PowerApps that we integrated and to get feedback.

The Elite early-adoption programs for the Microsoft Search in Bing integrated PowerApps have ended, and we’ve launched a communications campaign to encourage widespread adoption across Microsoft. As part of this campaign, we’ve sent emails that promote its availability and highlight its ease of use. We’ve also included reminder banners across popular internal websites. Now that Microsoft Search in Bing with PowerApps is available across the company, we’re sending out initial surveys to gather feedback about the user experience.

Best practices and lessons learned

During our early experiences with Microsoft Search in Bing and PowerApps, we faced some challenges and learned some lessons that might be useful to organizations that are thinking about implementing these solutions within their environment.

Deciding which PowerApps to include

You can implement Microsoft Search in Bing on its own to improve intra-organization search for your users. PowerApps integration, however, raises productivity to another level by including convenient, one-stop task completion. Selecting the correct suite of PowerApps maximizes user productivity and delights your employees. One approach is to aim for the broadest reach by including your employees’ most commonly performed self-service tasks—for example, requesting or entering time off and submitting expenses. Another approach is to select your apps so that the implementation aligns with other app-modernization and platform-simplification efforts within your organization.

Designing PowerApps for your most commonly used platform

When designing PowerApps, it can be challenging to create a great user experience for both mobile and desktop apps. A mobile interface doesn’t always provide a good experience in a desktop browser, or vice versa. Our strategy has been to build PowerApps based on our business needs and then decide how to serve them to users. For the PowerApps in our Thrive dashboard, we focused primarily on providing a good mobile experience. Conversely, the majority of employees using Microsoft Search in Bing to search for self-service tasks do so from the desktop browser and we focused on providing a good desktop experience.

Enabling more employee scenarios

We’re developing and testing six additional PowerApps for integration with Microsoft Search in Bing. We also have plans to redesign several existing internal applications to incorporate PowerApps. The list of top scenarios we’re working on enabling in the future includes:

- **Find and book a conference room.** Employees can easily find and book an available conference room in Microsoft buildings.
- **Transportation and walking directions.** Employees in the Puget Sound area can easily find and book Microsoft transportation services. They can also quickly find walking directions to campus locations and see points of interest within the different buildings.
• **Café, dining, and meal cards.** Employees can quickly find food served in the nearest campus café and manage their meal-card balance.

• **Help desk, support, and IT outage information.** Employees will have quick and easy access to technical support, the help desk, and information about companywide IT outages.

• **Facilities request.** Employees can quickly create a facilities service request (for example, vacuum my office or change my lightbulb).

• **Briefings and events.** Employees will be able to view information about companywide briefings and events.

In addition to integrating the top scenarios, we’re looking at some apps that have smaller audiences so that we can unify more experiences. It’s our goal to begin decommissioning individual apps as we achieve feature parity with PowerApps.

### Saving time and improving employee experiences

Reducing the time that a single employee takes to search for an internal tool or resource might be measured only in minutes, but when you multiply that time savings across all employees and searches within an enterprise environment, it becomes substantial.

The PowerApps we’ve integrated are modernizing and simplifying the ways employees interact with our HR systems. We look forward to taking those improvements to the next level as we begin releasing another wave of employee scenarios.

Are you ready to learn more about how Microsoft Search in Bing can improve search in your organization? Visit your Office 365 admin center and turn on Microsoft Search in Bing, or go to [Intelligent search for the modern workplace](microsoft.com/itsshowcase).

### For more information

**Microsoft IT Showcase**

[microsoft.com/itsshowcase](microsoft.com/itshowcase)

*Microsoft Search in Bing*

*Bing Blogs*

*Microsoft HR uses the Power Platform to transform employee experiences*

*Creating consistent and engaging corporate apps with PowerApps*

*Redesigning business applications at Microsoft using PowerApps*

*Performance considerations with PowerApps*

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