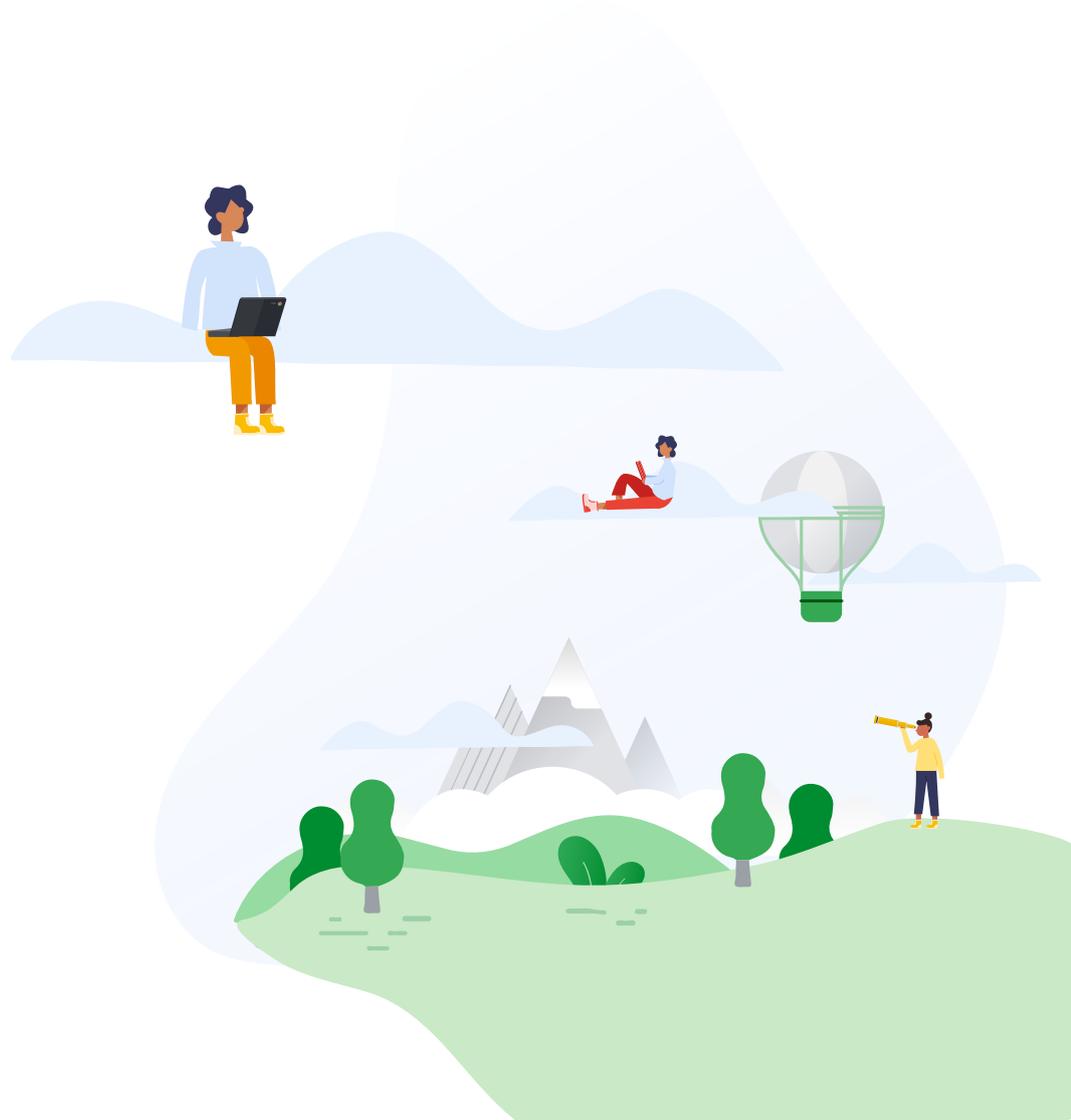




# Journey to a Cloud Workforce **Guidebook**

For organizations with legacy systems, those increasing their cloud endpoint investment, and every business in between

August 2019



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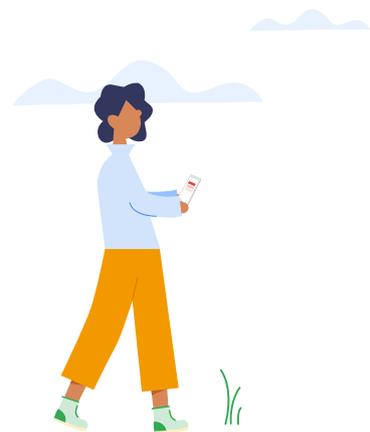
# The cloud worker

Successful digital transformation is an alluring destination for many organizations. By 2020, 83% of [enterprise workloads](#) will be in the cloud, according to a LogicMonitor study. Cloud applications and endpoints unleash team productivity and innovation. They have ushered in a fundamentally new way to work, as well as a new type of worker – the cloud worker.

Accustomed to using cloud technology in their personal lives to communicate and search for information, cloud workers also want access to cloud tools at work. Cloud workers expect agility, speed, and flexibility from their technology tools. Cloud apps and endpoints increase employee efficiency, contribute to more informed decision-making, and help organizations retain employees who want the tools to work from anywhere, anytime.

This modern way of working requires a modern approach to security. Legacy solutions and traditional devices are increasingly vulnerable to cybersecurity threats. By investing in secure-by-design technology solutions built for the cloud, IT decision-makers minimize security risks and support their cloud workers.

Both information workers who sit at desks in the corporate office and regularly mobile frontline workers who make and maintain products and interact with customers can and should be cloud workers.



## Cloud confusion

Transforming employees into cloud workers can be tremendously valuable. Organizations gain agility, flexibility and scalability.

But with the promise of cloud computing comes confusion about how to best harness the power of cloud across endpoints within an organization and increase the cloud workforce.

## Cloud confusion (continued)

IT departments busy managing legacy workloads, administering servers, releasing security patches, and deploying desktop computers may worry they don't have the time to modernize or even know where to start. It may seem like a monumental undertaking and there are plenty of questions when considering a journey to a cloud-enabled workforce. Among them:

- ❓ What kind of preparation is necessary to ensure a successful cloud endpoint implementation?
- ❓ How do I decide which employees are the best cloud worker candidates? Are there already cloud workers in my organization?
- ❓ What processes make the most sense to move to cloud – and what's the best strategy for moving them?
- ❓ How do I introduce cloud computing to my company's workforce in a way that inspires widespread adoption?
- ❓ What are the best strategies for measuring success once secure cloud endpoint technology is launched within my organization?

Just as planning a trip is both exciting and intimidating, with numerous details to nail down – itinerary, accommodations, food, activities, transportation – the journey to a cloud workforce can be equal parts thrilling and confusing for businesses. While it may seem intimidating, you're in the best position to make decisions that significantly impact the workforce and help them do their best work.

There's no one-size-fits-all approach or one route to success. But there are best practices that can identify the route that works best for your organization, learned from companies that have embarked on the same journey. Throughout this guidebook, you'll find tips, resources, and strategies to help you at every step of the journey, from wherever you may be starting.

Consider this a resource you can use in whatever way makes the most sense for your company's journey to a cloud workforce. Read it straight through, or dive into a section that holds special interest. Stages of the journey don't need to be completed in isolation. The work in different sections will likely overlap.

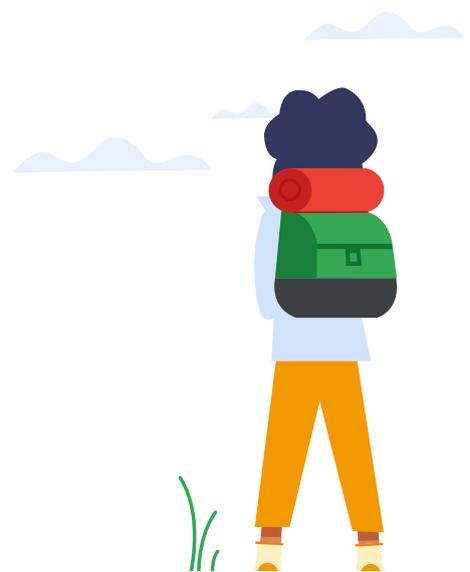
# Assess where your organization is on the cloud journey

As with any journey, you can't set off and expect success without understanding where you're starting and where you're going. Not without getting lost, anyway. Knowing your organization's place along the cloud workforce journey and where you want to go, will help you develop an effective action plan.

Whether it's for cost reduction or business advantage, knowing your organization's ultimate destination provides powerful motivation to stay on course. Then, you can set incremental goals to get there.

While every organization's cloud journey is a little different, we've identified five common stages of the journey as companies move toward a cloud-first endpoint model. They are: browser modernization; IT management workflow modernization; worker cloud-readiness assessment; cloud-native device migration; and optimization and expansion.

To help you avoid unexpected detours, we've assigned a type of cloud explorer to each of these cloud journey stages. Read on to determine which cloud explorer sounds the most like you and your organization.



# Which cloud explorer are you?

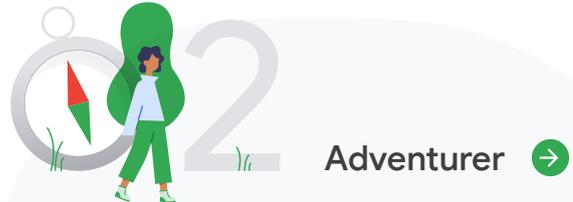
Pick the explorer you identify with the most to determine the right place for your organization to start its journey (and for the best place to begin exploring this guidebook).



## Pathfinder →

You feel stuck in Legacy Land. Your company's primary browser is probably outdated, along with the majority of applications used by people in your organization. Legacy Land is dragging employees down like quicksand, and you want to help.

If you're a Pathfinder, start at [Modernize your browser](#) →



## Adventurer →

You're excited by the cloud adoption possibilities beyond the horizon. Your organization has made a modern browser the default, but you may still use legacy management processes and manual updates. You want to modernize IT management workflows and speed toward success.

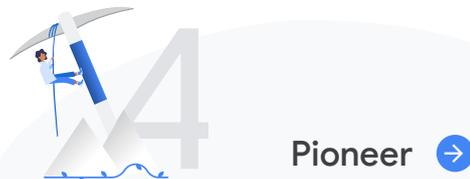
If you're an Adventurer, start at [Modernize IT management workflows](#) →



## Scout →

You're ready to explore who in your organization is the most cloud-ready. Your organization has a diverse user base and you want to give those ready for cloud-native devices the tools they need to successfully navigate any business challenges.

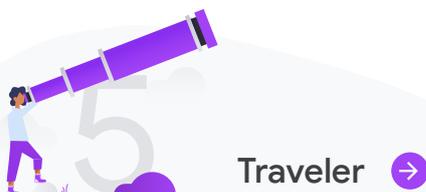
If you're a Scout, start at [Determine your workers' cloud readiness](#) →



## Pioneer →

You're eager to find promising use cases within your organization and help them take off during a pilot program for Chrome devices. You're also thrilled to fly employees connected to those use cases over User Adoption Mountain.

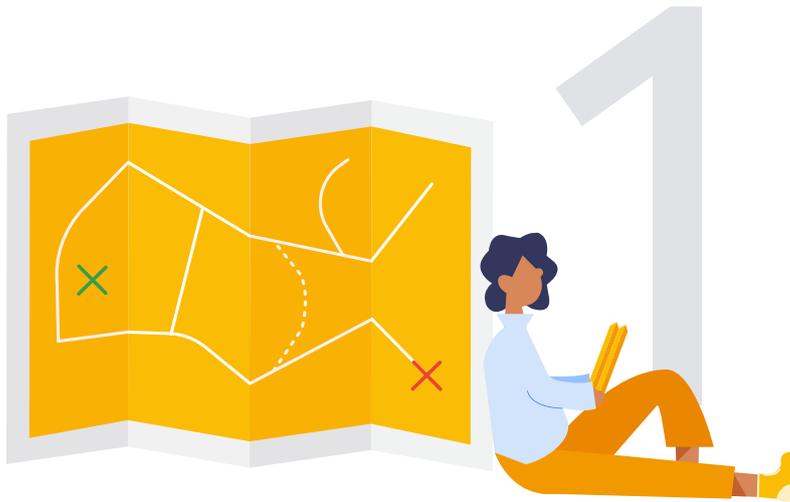
If you're a Pioneer, start at [Migrate to cloud-native devices](#) →



## Traveler →

You aim to help more people summit User Adoption Mountain. Your company has emerged on the other side of its cloud journey with many adopters and use cases for cloud-native devices. You're excited to guide even more employees and use cases over the summit.

If you're a Traveler, start at [Optimize and expand your cloud investment](#) →



## Pathfinder

# Modernize your browser

Whether they realize it or not, the web browser is often the beginning of the journey for cloud-minded organizations. It's where users are accessing an increasing number of web and cloud-based apps. Using the browser to complete work drives companies closer to their digital transformation while offering plenty of productivity, flexibility and management benefits – especially when compared to on-premises legacy applications.

### How important is the browser to businesses?

-  **73%** of IT decision-makers agree that the browser has become increasingly important to their IT strategy due to browser-based business apps
-  **67%** of workers rely much more heavily on web browsers than they did two years ago
-  **94%** of information workers feel browser-based business apps are just as easy or easier to use than desktop apps

Source: "[Rethink Technology In The Age Of The Cloud Worker](#)," a commissioned study conducted by Forrester Consulting on behalf of Google, May 2018.



## Why standardize on a browser?

If you haven't standardized on a browser, and many companies haven't, you likely employ a mix of modern and legacy browsers. This proves problematic for a few reasons:

- Makes it difficult to ensure every browser is up to date with the latest security patches and proper policies in place
- Requires managing each browser on each operating system (OS) separately since legacy and modern browsers often implement policies differently
- Risks out-of-date or unsanctioned extensions and plug-ins – if not being managed – since users may install browser extensions or plug-ins without IT's knowledge
- Jeopardizes security and compliance because of the lack of visibility into the number of browsers in use, the version of each browser, and which computers the browsers are running on

Increasingly, the browser is where employees check their email, take training courses, create business documents, collaborate on projects, track project status, and measure project success.

Choosing the right browser is critical, and we recommend standardizing on a modern browser. A modern browser is one that's fast, capable of rich, immersive experiences for users (no plug-in required), and displays websites using the latest web and security standards. It also represents a move away from the limits of legacy browsers.

Research your company's current browser landscape: Which browsers are installed on company computers and devices? What versions? Which extensions? For complex environments, the process of getting a full understanding of the landscape and getting alignment among teams to move to a standard modern browser may take several months.

Making a modern browser like Google Chrome Browser the default browser within your organization effectively kicks off your cloud journey. Not only are some of your end users probably familiar and comfortable with using Chrome Browser, either at home, in the workplace or both, but also the required IT investment costs are relatively low.

At this point, take two key steps forward by exploring your organization's browsers and the applications that end users need to complete their tasks within the browser today.

## Explore your app dependencies

Switching to a modern browser will likely require a modern app approach. This not only makes it easier to adopt and gain the benefits of a modern browser, but also provides a smoother employee experience and supports the cloud journey.



We'll focus on browser-based apps for now and get into a [broader spectrum of apps](#) later in the guidebook.

First, investigate whether your legacy browser apps are compatible with a modern browser. Many Chrome Browser customers discover that legacy apps are not as much of a blocker as expected. The North Carolina division of a US-based health insurance company (see [best practices](#)) worried that legacy applications wouldn't work with Chrome Browser. Out of more than 200 apps, only four weren't compatible.

While it's no quick fix and takes effort, you can come up with a long-term plan to replace the vast majority of legacy apps with web or cloud apps accessible from Chrome Browser.

Where you do have blockers, consider modern applications to replace business-critical, custom apps developed in-house if practical. Moving legacy on-prem or web apps to modern apps may not be possible immediately for all apps, or at all for certain business-critical legacy apps. In such instances, you require a workaround.





## Develop workarounds for legacy apps

As a stopgap, use [Legacy Browser Support](#) as a workaround for legacy apps. Managed through built-in policy, Legacy Browser Support lets you set Chrome Browser as your organization's primary browser, while automatically redirecting users to older browsers for specific legacy apps.

When they are ready to continue browsing, users will be dynamically taken back to Chrome Browser. We recommend limiting the number of apps you extend, as doing so can delay your cloud journey.

In order to meet your long-term objectives of moving your endpoints to the cloud, develop a plan for how to transition to modern apps or leverage desktop virtualization (find details on [app modernization](#) later in this guidebook). Weigh the options for modernizing your apps based on your company's unique needs, user requirements, and cloud journey timeline.



### Best practices from a customer that's been there

A US health insurance provider, had to overcome a legacy mindset to adopt Chrome Browser, with 90% of computers and laptops running on Windows operating systems. Users drove the change, after complaining about the performance, productivity, and efficiency of Windows browsers and requesting Chrome Browser as an alternative.

- **Keep motivation in mind:** The organization uses Workday for ERP, Salesforce for CRM and ServiceNow for incident management. These cloud services perform better on a modern, stable browser like Chrome Browser.
- **Don't assume legacy apps are a blocker:** The company worried that legacy applications wouldn't work with Chrome Browser. Out of more than 200 apps, only four weren't compatible, and Legacy Browser Support offered a solution.
- **Review template policies:** The company saved time by taking advantage of the more than 300 templates for user and device policies, modifying them as needed to meet organizational requirements and pushing them to employees with a Chrome-executable file.
- **Plan your rollout:** The company kicked off its Chrome Browser contract with a workshop, discussing its users, use cases and browser challenges, and establishing a plan for seamlessly rolling out the browser to employees.

For more, [watch this](#).



# Make the case for Chrome Browser

To help with your business case, share a few of the notable benefits of Chrome Browser with executives and internal champions as they promote Chrome Browser to other employees.

Those benefits include:

- **Centralized management:** Maintain tight oversight across the different devices and platforms used by employees for working in the cloud. Chrome Browser offers hundreds of policies in an easy-to-manage console or through Group Policy. This makes it easier to enforce business policies and compliance protocols across devices and platforms used by employees.
- **Built-in security:** Safeguard customer and business data across your business. Safe browsing warns users of malicious sites while they browse. Sandboxing and site isolation isolates processes to prevent potential threats from spreading.
- **Empowered users:** Enable employees to access data, apps, and cloud services across devices. For example, use Chrome Sync to sync an employee's browser history, bookmarks, apps, extensions and even open tabs across devices.
- **Chrome Browser Enterprise Support:** Opt for optional [24/7 assistance](#) to gain access to a team of Google experts who can troubleshoot potential issues. The paid service is available to companies with more than 1,000 employees.

Sharing the top benefits can be part of developing a business case for Chrome Browser, as can estimating the cost savings.

The IT team at a global home improvement supply company made a business case for Chrome Browser as the default browser after studying the additional time it took the company's developers to develop and test on non-Chrome browsers. The majority of developers were on Macs using [Chrome DevTools](#).

Testing and developing on another modern browser added 10% to the time it took on Chrome Browser while testing on a legacy browser added 10% to the time. Developing on that legacy browser added 30% to the time. With 200 developers, the company determined it could save \$20 million a year in developer time by switching to Chrome Browser.

The company also explored the cost savings resulting from fewer help desk requests, and estimated it could save as much as \$1 million in help desk request time by making Chrome Browser the company's default browser. Exploring the potential benefits for your organization can help you develop a compelling business case.

## Build a business case for Chrome Browser



**Rapid payback:** Over a three-year period, the potential return on investment (ROI) of Chrome Browser that may be realized is 1,344%, the net present value (NPV) is \$6.9 million, and the [payback period is less than six months](#).



**Proactive security:** Chrome Browser's built-in protections deflect threats and shield business data from potential breaches, reducing security threats by 97% by the end of the third year.



**Increased productivity:** Improved IT resource productivity results in approximately \$504,000 in savings over three years. Information workers reported at least 30 minutes of productivity savings each week.

Source: "[The Total Economic Impact™ of Chrome Browser](#)," a commissioned study conducted by Forrester Consulting on behalf of Google, July 2018.





## Adventurer

# Modernize IT management workflows

At this point in your journey to a cloud workforce, your browser is modern but your IT management workflows may not be. Your company is probably using legacy management processes requiring manual updates of all software, including the browser. Managing app access and policies may require numerous scripts, and probably takes significant time.

Modernizing **automatic updates, browser management, and identity management** should be your primary objectives at this stage.

Transitioning to continuous, automated updates will free up IT teams so they can focus on bigger projects. It also gets you ready for the next stage in the journey – adopting cloud-native endpoints.

## Make automatic updates company-standard

Even if you've made the move to a modern browser, you may be missing out on major benefits if you're not taking advantage of automatic updates. Manual browser updates are cumbersome and time-consuming for IT teams.

IT teams often fall into the trap of delaying updates in order to align with slow internal testing practices. But this can lead to users working on a browser that is not the latest and greatest version, and IT can get significantly behind on these updates.

Automatic updates eliminate the need for manual patching, keep users current and on the same version of the browser, and get fast protection for new known vulnerabilities (sometimes as fast as 24 hours).

In general, align IT, developers, and app owners to handle an automatic update model for the browser, as this is a significant part of a modern browser environment. Automatic, continuous updates are now a standard best practice, not only for browsers but for operating systems as well.

Desktop versions of Chrome Browser use Google Update to automatically update when a new version of the browser is available on a device.

Map out the process you used to align stakeholders and switch to automatic updates for Chrome Browser. This could come in handy later if you decide to apply them to Chrome OS updates, which require the same approach to testing. Find details in the ["Understanding your Chrome Browser update options"](#) whitepaper.





## Best practices for updates

If IT teams or employees delay an update because they're worried about how long it's going to take, it can leave the employee and company vulnerable to security breaches. Automating updates can eliminate this frustration for end users.

- **Understand the update cadence:** The Beta, Dev, and Canary channels can run side by side with the Stable channel on the same machine, making testing easier for enterprises. Most of your organization should be on the Stable channel.
- **Use Beta channel effectively:** We recommend keeping 5% of your organization on the Beta Channel, and 5% of each type of hardware on this channel, if you have more than one type.
- **Use Dev channel effectively:** Keep a few IT team members and developers on this channel so they can quickly identify potential issues before they reach the Beta or Stable channels.
- **Use Canary channel effectively:** Use this channel, which is the least stable, only if you require advanced testing.
- **Read release notes:** Chrome Enterprise [release notes](#) are your guide to new or updated policies.
- **Limit exceptions:** If you must make an exception to automatic updates for some users, such as those who require a specific browser version for app requirement, security or compliance reasons, you can pin those users to a browser version.



# Manage browser instances from the cloud

Chrome Browser Cloud Management gives administrators the ability to manage Chrome Browser deployments of any size from the cloud. It's an alternative to traditional policy management, which often involves complex Group Policy and scripts.

Browser management from the cloud offers several business advantages over traditional browser management:

-  **Manage centrally:** Single destination for applying Chrome Browser policies across Chrome OS, Windows, Mac, and Linux.
-  **Extension oversight:** Ability to manage extensions, including disabling extensions and controlling the types of permissions an extension can request.
-  **Gain insights:** Visibility into deployment, including policies, versioning, and extensions.
-  **Delegate management:** Ability to delegate browser management to others, especially useful in large organizations, separate from other platform management responsibilities.

Chrome Browser Cloud Management will familiarize your company with cloud-based policy management, positioning it well if your journey later takes you to a cloud-native operating system.



## Try Chrome Browser Cloud Management

Already a Google customer? Sign into Google Admin console at [admin.google.com](https://admin.google.com) to access this feature.

New to Google Cloud products? Create an admin account at [g.co/chromecloudmanagement](https://g.co/chromecloudmanagement) and test it for yourself.



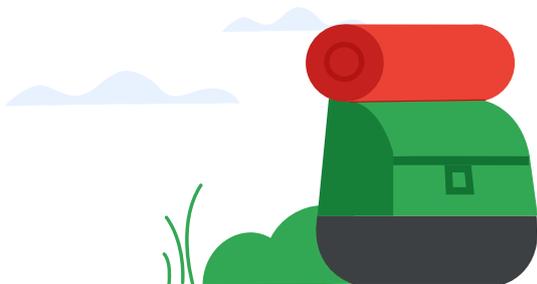
## Best practices from a customer that's been there

The browser is critical for the distributed workforce of a global coffee company based in the Pacific Northwest. Managing Chrome Browser with Chrome Browser Cloud Management decreased the time IT needs to manage the browser and created a consistent user experience across Windows, Macs, and Chromebooks for end users.

This modern approach to managing the browser gives IT a unified way to apply policies and report on browser status.

- **Create a test group:** The coffee company created a test group, easing employees into Chrome Browser, without requiring them to sign in.
- **Customize policies:** The company decided to start applying policies at the device level across the cloud. For example, it set up automatic client certificate selection on the company intranet; whitelisted several legacy tools so users don't receive unnecessary security prompts; and pushed out bookmarks.
- **Manage extensions:** To ensure that employees have the best browser experience possible, the company blocks unallowed extensions so they don't download something that impacts the experience.
- **Analyze browser information:** Using Chrome Browser Cloud Management, the company studies browser analytics, including the extensions being used, the browser versions being used, and how quickly browser updates are adopted.

For more information, watch the [video](#).



## Explore user identity options

No cloud worker journey conversation is complete without considering user identity requirements to manage users and access policies. While your organization has made Chrome Browser the default browser, you still might have a legacy way of managing users.

Microsoft developed Active Directory for secure authentication of users for its Windows operating system. If you're coming from a legacy environment and toward the beginning of your cloud journey, it's probably the directory service you've used to manage access across apps and data.

Active Directory uses Lightweight Directory Access Protocol (LDAP); however, Active Directory isn't cloud-based – user data is maintained on a company server – and poses challenges. The biggest are the necessity of maintaining infrastructure and committing IT people to maintain the servers.

These Active Directory challenges make alternatives appealing to investigate, especially as you transition other technology to the cloud. Active Directory structures can also be very complex and challenging to manage, and don't provide you with the ability to manage access to software-as-a-service (SaaS) apps.

Start considering how to simplify and modernize identity management. Does your company have the flexibility and desire to move away from Active Directory as the sole identity provider? Can you simplify how policies are applied to devices or groups of users? Does your company need to manage access to SaaS apps? Is your organization ready to embrace a cloud-based identity management approach?

One cloud-native alternative for identity and access management is [Cloud Identity](#), a unified platform that offers a secure, simple, and flexible approach to both identity management and device management.

Cloud Identity can be used as your sole identity provider (IdP) but can also sync with Active Directory through [Google Cloud Directory Sync](#). With Cloud Identity, your end users have one-click access to all of their SaaS apps, and accounts are secured with multi-factor authentication and machine learning-powered user security.

If you have Active Directory but want to enjoy modern identity capabilities, Chrome Browser offers support for multi-factor authentication and single sign-on (SSO) web standards. Consider a third-party IdP solution like Okta, Ping Identity, or OneLogin as a way to modernize your identity management.

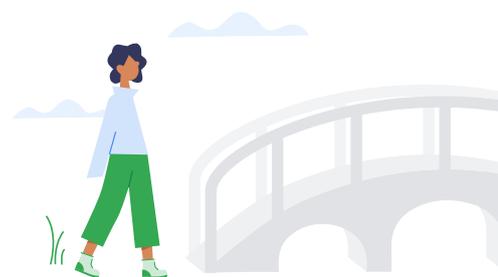


## User identity options

- **Simplified organizational units (OU) via Admin console:** Create simplified OUs to manage your browsers based on geographic location, high-level roles or other factors. You'll later be able to use a similar structure for Chrome OS management. Read [how-to](#).
- **Google's Cloud Identity:** Syncs with Chrome Browser across devices and auto-populates all users' extensions, settings, and applications. Group policy support in Chrome Browser allows admins to granularly manage browser policies at the user level. Read [more](#).
- **Third-party identity providers:** You can opt for third-party identity solutions that let you manage and secure user authentication in modern apps. Companies that offer such solutions include Okta and Ping. Chrome Browser offers support for multi-factor authentication and single sign-on (SSO) web standards.
- **Manage Chrome Browser on Windows computers:** As a Chrome Enterprise administrator, you can manage Chrome Browser on Microsoft Windows computers using Microsoft Intune or Group Policy based on Active Directory. This option leaves employees on traditional devices so consider a broader approach to identity if you want to continue on the cloud journey. Read [how-to](#).
- **Active Directory:** Active Directory offers secure authentication of users for its Windows operating system. Google Cloud Directory Sync is an add-on tool that lets you synchronize the data in your Google domain with the data in your Active Directory or LDAP server, keeping both. Read [how-to](#).

## Evaluate a transition to Chrome OS

At this point in your journey, most employees consider Chrome Browser the place to tackle work tasks and complete projects. They spend their days in the browser, using apps to collaborate on projects, check email, and meet with co-workers, partners and customers. And you're managing the browser in a more modern way.



Now that you've achieved all of this modernization across apps, workflows and management within your organization, you've paved the way to introduce a cloud-native operating system. Chrome OS is a versatile, cloud-native OS that is secure by design, easy to use and manage, and provides fast access to cloud apps, regardless of Chrome device or location.

[Chrome Enterprise](#) is the business-focused solution for Chrome devices, Chrome Browser, and Chrome OS. Chrome Enterprise offers cloud based tools, integrations with third party products, and 24/7 support for IT administrators. Added capabilities available through Chrome Enterprise Upgrade let you remotely manage, deploy, and implement policies to Chromebooks across your enterprise. It's a similar approach as one you may have used with Chrome Browser Cloud Management, making it easier for IT teams to take on.



## Business capabilities

We'll cover more details later in the guidebook, but here are some examples of the capabilities that Chromebooks can offer enterprises.



**Save time with automatic OS updates:** Updates take place in the background without causing downtime or interruptions for end users.



**Secure users with multi-layered security:** Chrome devices and Chrome OS are secure by design, enabling IT to provide trusted apps to their users and protect against existing threats.



**Configure more than 200 policies:** Including user policies, device policies, fleet management, bulk printer configuration, and access management.



**Choose from flexible EMM and identity options:** Including native integration with Active Directory; and with leading third-party EMM providers like VMware Workspace One (powered by AirWatch), Citrix Endpoint Management (formerly XenMobile), Cisco Meraki, IBM MaaS360, and ManageEngine.



**Curate apps:** Managed Google Play – secured by Google Play Protect – offers enterprise-grade curation of more than 2 million apps.

To understand if Chrome OS devices are the right fit for your organization, first understand the business value.

Explore ESG's [economic value validation report](#) for its analysis of the costs and benefits over three years of deploying Chromebooks with Chrome Enterprise and G Suite compared with deploying Windows-based PCs with Office 365 based on a modeled scenario for a medium enterprise.

- **High ROI:** 146% return on investment (ROI) - switching to endpoints and operating systems built for the cloud helps organizations reduce cost and complexity.
- **Cost savings:** Of the estimated \$1.5 million in total savings and benefits over three years, \$667,841 represents traditional TCO-related CapEx and OpEx savings.
- **Increased economic benefits:** Of the \$1.5 million in total savings and benefits, \$592K is savings due to more productive end users, \$127K is savings due to avoided downtime, and \$120K is from avoided costs through reduced risk.

Use the [Chromebook TCO Calculator for Enterprise](#) to build a business case for Chromebooks within your organization.





## Scout

# Determine your workers' cloud readiness

After deciding to transition the workforce to cloud-native devices, an organization must answer two questions before launching a pilot program. Which employees are good candidates to become early adopters of these devices? And what are the real blockers to adoption?

## Choose cloud-ready employees

Analyze your workforce's cloud and web app usage to find users who can most easily move to cloud-native devices. Some employees may be working primarily in the cloud already, with little to no legacy dependency. Evaluating good candidates for cloud technology will probably take two to four weeks.

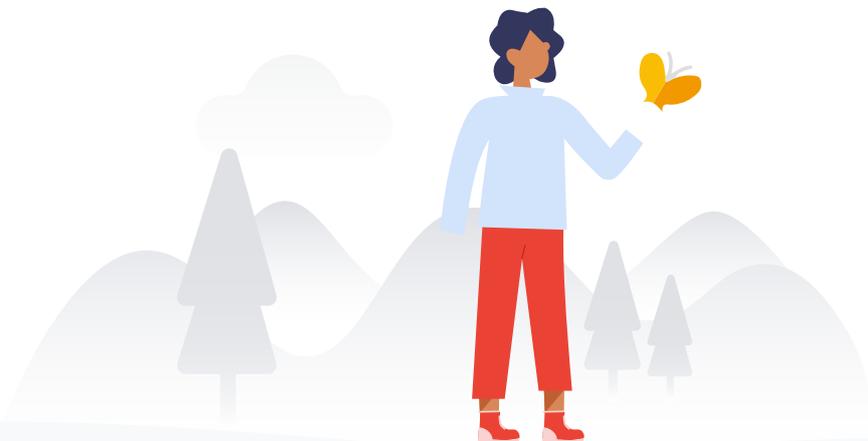
The traditional approach when introducing new devices is to [segment employees](#) by job function. However, this approach doesn't necessarily take into account the way workers complete their tasks or their technology preferences. It also misses potential cloud workers.

**Good candidates for early adoption programs typically possess some or all of these characteristics:**

- Already moved offline processes to the cloud
- If using legacy workflows, have cloud-native alternatives
- Potential to become cloud advocates (at [ATB Financial](#), for instance, the C Suite executives chosen as early adopters became IT's biggest fans)

One solution for analyzing your workforce is through Softwatch, which has products that provide in-depth analysis of your organization's app usage. Analyzing cloud-readiness will also help you understand additional legacy app dependencies outside of the initial analysis done during your move to a modern browser. Once you understand the extent to which legacy apps are used, you can then develop a plan to limit workforce reliance on these apps.





## Workforce segmentation best practices

How do you figure out which employees could benefit the most from the cloud-native capabilities of Chrome devices? As mentioned, segmenting by job title isn't the best approach. Frances Angulo, Google program manager for Chromebook adoption, suggests you do these five things instead.

- **Weigh employee needs:** Take into consideration the day-to-day activities of employees and their impressions of devices in order to better match each employee to a device.
- **Consider more variables:** Employees with the same job title may have different workflows and different technology needs. How much time do they spend on the browser? How often do they travel for work? Do they use collaboration software?
- **Identify those who aren't good candidates:** Some employees aren't good candidates for cloud-native devices because they have special software needs with no Chrome alternative or have a workflow that Chrome OS can't yet support.
- **Create a target cloud worker profile:** Look for intersections between employee interest in using a cloud-native device and workflows.
- **Develop pilot programs:** Use your target profile to identify cloud workers and invite them to join loaner programs, training, cloud communities or device demos.

Read our "[Workforce segmentation in the new era of cloud workers](#)" blog post for more insights.

# Plan your migration to cloud-based apps

By moving legacy apps to the cloud, not only are you preparing to move to cloud-native devices, but your workforce can also experience the benefits of real-time collaboration, anytime access and instant information.

G Suite, for example, can fully replace your legacy productivity suite while also providing greater collaboration. G Suite includes several popular cloud-native apps, including Gmail (email), Google Calendar (scheduling), Hangouts Meet (collaboration), Google Docs (word processing), Google Drive (storage), Google Sheets (spreadsheet), and Google Slides (presentation).

In addition to G Suite, high adoption of other cloud-based, business-critical applications, including Salesforce for CRM, QuickBooks for accounting and Asana for project management, gives workers anytime access to information on a cloud-based device.

If you have business-critical legacy apps you can't replace, one solution is desktop virtualization, including application virtualization and virtual desktop infrastructure (VDI). With this approach, users can access these business-critical legacy apps via a hosted desktop from Chrome OS while spending the majority of the workday in Chrome OS.

ATB Financial, a financial institution in Alberta, Canada, chose [VMware](#) Horizon for desktop virtualization so its SAP portal is available through VMware and Chrome Browser. The move also drove down support costs because employees didn't need IT to troubleshoot VPN problems.

Royal Technologies, an advanced plastics manufacturing company serving the furniture, automotive, and consumer products markets, standardized on Chrome OS to broaden access to legacy applications while supporting adoption of G Suite. At the same time, the company used VDI hosted by Cameyo to access quality management software MQ1 and other legacy Windows apps with just a click in the browser using their Chrome devices.

"We wanted to pull away from Microsoft apps in general," Royal Technologies IT Director French Williams said. "Because, from an IT perspective, if you've got a new application, and it's web-based, you don't have to do physical installs of the application. You literally just present a web link on our internet page, and everyone has access to the link. So it was really about the scalability of providing services in the future."



## Best practices from a customer that's been there

Soitec, a France-based international industrial company, switched all employees from Microsoft Exchange to Gmail in 2013, and introduced Google Drive in 2014 for certain data. In 2016, the company replaced Microsoft Office with G Suite. The company's ultimate goal is to move all of its infrastructure to the cloud, said Franck Fitouchi, project manager at Soitec.

- **Research the legacy footprint:** Softwatch OptimizeIT Enterprise Service provided Soitec with an in-depth analysis of employees using Microsoft Office and other legacy applications so the company could ask them what they need and why they never switched to G Suite.
- **Identify future cloud workers:** Soitec used [Softwatch Chromebook Adoption Readiness](#) (CBAR) solution to identify the 10% of employees ready to immediately move to cloud, and the group with the next highest potential – the 21% who use legacy apps just five to 10 minutes a day.
- **Set goals:** Based on that intelligence about cloud workers within the organization, Soitec set a goal of 100 employees using Chromebooks by the end of 2019.
- **Take a top-down approach:** One of the first people to switch to G Suite was the president of the company. Obtaining adoption from users at the top can trickle down and inspire others in the company.



### Try Softwatch CBAR

Any organization that [signs up](#) for Softwatch's Chromebook Adoption Readiness (CBAR) solution between now and Dec. 6, 2020, will receive a free 3-month subscription to CBAR.

Softwatch CBAR provides insights into an organization's application usage patterns to enable IT to segment the workforce and identify the teams and individuals most ready for cloud-native devices.





## Pioneer

# Migrate to cloud-native devices

Now that you've identified a group of workers that's cloud-ready and explored how you'll tackle those legacy apps, it's time to kick off a pilot program. First, you'll need to evaluate potential use cases for cloud-native Chrome devices.

Based on lessons learned during the pilot program, you can finesse your approach before rolling out cloud devices company-wide. If prioritized high, migrating employees to cloud-native devices can take 60 to 90 days.

[Chrome Enterprise Upgrade](#) is a subscription solution for Chromebooks. It unlocks additional enterprise capabilities built into Chrome OS for IT to secure, orchestrate and power the cloud workforce. It offers advanced security to keep corporate data safe, flexible access to resources regardless of use case, and simplified orchestration of Chrome devices and other critical infrastructure.

[Chromebook Enterprise](#) devices come with Chrome Enterprise Upgrade already on them. These devices combine the end user benefits of Chromebooks with the business capabilities of Chrome OS to deploy, orchestrate and power the cloud workforce to work securely and effectively from anywhere.



## Chrome Enterprise Upgrade capabilities



**Advanced security:** When end users misplace their Chromebook, IT can easily disable the devices, preventing access from potential bad actors and keeping corporate data safe. Devices can also be set as ephemeral, removing user data from the device at the end of a session.



**Flexible access:** Integrate with Active Directory and SAML SSO providers for flexible access to resources regardless of use case. Enable shared device use cases with managed guest sessions or kiosk mode.



**Simplified orchestration:** Chrome Enterprise Upgrade simplifies orchestration of Chrome devices and other critical infrastructure. IT gains access to device policies and fleet oversight capabilities, all from the easy-to-use, cloud-based Google Admin console or third party UEM solution.

# Choose business use cases

In conjunction with choosing the early technology adopters based on employee segmentation, determine which business use cases are good candidates for cloud-native devices and map them to relevant technology needs. As with users, it's easier to start with a more limited set of use cases in the pilot program.

The [Chromebook TCO Calculator for Enterprise](#) is useful for determining which use cases could most benefit your organization. Use cases that increase access to collaboration tools and communications for employees at the frontlines are a good starting point. For details on frontline worker use cases that have proven successful for other organizations, check out our "[Power Your Frontline Workforce with the Cloud](#)" whitepaper.

## We recommend focusing on use cases that:

- Are easily manageable and measurable
- Involve a smaller group of users
- Address a business challenge not resolved by legacy technology
- Are not likely to require much change management
- Feature users who are already cloud-ready, such as in instances where the apps used for a use case are either close to being cloud-based or are already there

## Potential use cases include:

- **Laptop loaners:** The [Grab and Go with Chrome Enterprise program](#) is a way to solve a business challenge – employees who need a temporary laptop because of a lost, forgotten or broken laptop – while gauging user response to Chrome devices (see [QAD's story for best practices](#)).
- **Customer self-service:** Chrome devices are easy to set up and for IT to manage remotely, making them a good choice when you want to let customers or patients search inventory, take surveys or complete transactions without having to wait for an employee for help.
- **Mobile employees:** Whether they're on the go on the factory floor, at a medical center or another location, or they frequently work in the field, mobile employees can benefit from rugged, lightweight devices with long battery life to complete work in the cloud.
- **Training and engagement:** Frontline employees, such as retail associates in shops, healthcare practitioners, and factory workers, need access to training and company communications but may not have designated devices. Shared devices accessible to these employees can give them that access. And it makes for a good starting point because it's limited in scope.
- **Fully VDI-based workers:** Information workers, sometimes called knowledge workers, want to work from anywhere, anytime, and don't want to be slowed down by legacy apps and devices. Those who are already using VDI-based workflows can be easily migrated to Chrome devices.

# A customer's experience with Neverware CloudReady

For customers that want to adopt Chrome Enterprise for their cloud workers but cannot buy new Chrome devices soon, Neverware's CloudReady offers a solution for converting legacy laptops and desktops into managed Chrome devices.

Mercado Libre, an e-commerce company in Latin America wanted to transition its 3,000 contact center employees in 18 countries from PCs to cloud. The PCs could take five minutes or more to boot up. Across all of its contact centers, that added up to 250 hours of lost productive time each shift.

Mercado Libre couldn't replace all of those devices at once, so it added Neverware CloudReady, which is based on Google's Chromium OS, the same open-source architecture as Chrome OS, to its existing laptops and desktops. With Chrome Browser and CloudReady on every contact center computer, employees aren't tied down to specific devices and offices.

It's also reduced IT management time, with no need to buy and manage storage systems since everyone is working in Google Drive, and eliminated support tickets about lost files. One operational support person can now support twice the contact center workers supported previously – 300 vs. 150.

Based on the initial success, contact center team leaders at Mercado Libre are trialing Chromebooks.



## Learn more about Neverware CloudReady

Neverware CloudReady is designed to be installed on existing PC and Mac hardware for companies that aren't ready to transition all their devices to Chrome OS. Note that there are some limitations to CloudReady's features. Also, to ensure a consistent and high-quality experience, Neverware individually certifies models for use with CloudReady. Only models [listed here](#) and that have at least 2GB of RAM are guaranteed to work with CloudReady.

For more information on CloudReady, visit Neverware's [website](#) and [click here](#) for a comparison of Neverware with Chrome devices and Chrome management features.



## Measure the results

Monitor and measure the success of your company's cloud investment in these use cases. Take feedback from users during the pilot program and early stage use cases and apply any lessons learned to an expanded roll-out of cloud-native devices. User feedback can also help you hone your user adoption strategy.

**Consider which benchmarks are valued most by senior executives and IT team members and should be measured. Other companies have gained useful insights by measuring:**

- Number of active users
- Number of participants who have completed user adoption training
- Number of help desk tickets before launch and after launch
- User survey data, such as Net Promoter Score (NPS) or customer satisfaction (CSAT)
- Deployment happiness data
- Average cost for performance per employee
- G Suite usage by employees compared with before launch





## Best practices from a customer that's been there

[QAD](#), a provider of cloud-based software and services for global manufacturing companies, has 31 offices around the world. About half of those offices don't have IT team members, making it problematic when employees traveled to different offices and forgot their laptops or needed IT to repair theirs.

The company launched Grab and Go with Chrome Enterprise, the Chromebook loaner program, which has saved employees hours or even days waiting for a replacement.

- **Choose locations strategically:** QAD started by placing Grab and Go racks with Pixelbooks in the Santa Barbara headquarters and the Mount Laurel, New Jersey, office, two locations that global employees are most likely to visit on business.
- **Encourage Chrome device adoption:** Grab and Go enables employees to see how seamlessly Pixelbooks work with Chrome Browser and G Suite, supporting user adoption and helping IT gain constructive feedback on Pixelbooks to help future device rollouts go smoothly.
- **Analyze cloud adoption:** QAD plans to use the [Softwatch Chromebook Adoption Readiness tool](#) to understand which workers and teams use cloud apps the most, and therefore would be good candidates to use Pixelbooks as their primary devices.
- **Try other use cases:** After experiencing program success with employees, QAD extended the program to vendors or other visitors who needed a laptop, enabling the [managed guest sessions](#) feature.





## Traveler

# Optimize and expand your cloud investment

When you've reached this place in your journey to a cloud workforce, you've earned the right to take a breath, pat yourself on the back, and enjoy the exciting view of the fast-approaching transformation before you. It's taken a lot to get here and you should be proud of what you've achieved.

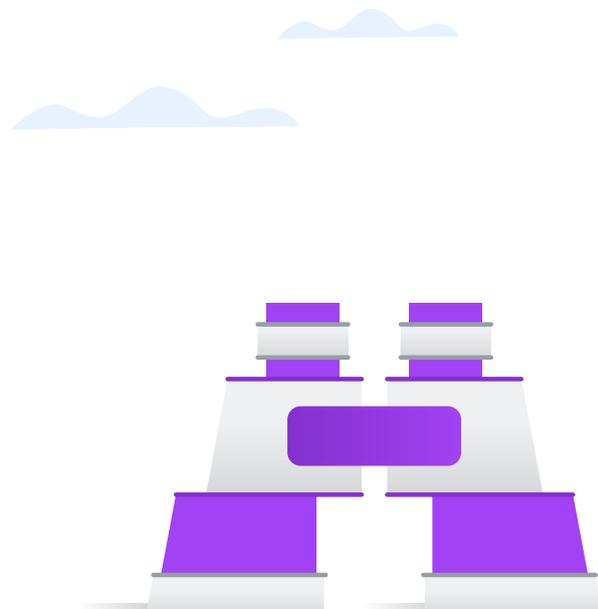
But this isn't the time to put the brakes on your efforts. Keep the momentum going to optimize cloud success. Finesse the great work you've already done. Build a business case for new use cases using the [Chromebook TCO Calculator for Enterprise](#). And do what you can to get your users to love Chrome devices, becoming advocates for new employees.

## Set a long-term goal

Every organization has its own idea of how to measure success. It could be transitioning specific departments to Chromebooks. It could be moving a specific percentage of employees over to Chromebooks. It could be achieving a full cloud workforce. Give yourself a deadline for achieving the goal to stay focused.

Some organizations, including Whirlpool Corporation, ATB Financial and Veolia, have set ambitious goals. Home appliance manufacturer Whirlpool Corporation made Pixelbooks the default device for workers, with a goal of 20% of employees using them.

By July 2018, Veolia, a global water, waste, and energy management company headquartered in Paris, had deployed Chromebooks to 3,000 employees. The company's goal is to roll out Chromebooks to the rest of its nearly 170,000 employees by the end of 2019. New employees automatically get a Chromebook.



# Maximize user adoption with an effective change management plan

Companies like ATB Financial (see [story](#)) that succeed with transitioning employees to Chromebooks develop a change management plan. The best plans happen alongside project management, and include timelines, methods for involving internal advocates, and strategies for encouraging user adoption. It'll probably take two to three weeks to develop a change management plan.

Employees who embrace Chromebooks are fantastic advocates for cloud technology. And the way that people are introduced to new technology plays a significant role in how comfortable they are with it moving forward.

Widespread user adoption is critical to any organization's successful technology shift. That's true at Alphabet, the parent company of Google, as well. From 2017 to 2018, Alphabet Inc. tripled the number of Chromebooks used by employees, according to Frances Angulo, program manager for Chromebook adoption at Google.

85% of Alphabet employees assigned a Chromebook in 2018 had little to no experience with Chrome OS previously, Frances said. In "[5 Google IT tips for driving and sustaining Chromebook adoption](#)", she offers guidance based on her experiences, including the importance of gradually introducing users to the features of Chromebooks. In her blog post, she recommends a timeframe based on what's worked best at Alphabet.

A major consideration is whether to make user adoption a business mandate or give employees a technology choice while then influencing their decision in favor of the company's preferred device choice. Alphabet balanced its approach, influencing at a large scale and requiring Chromebook adoption where it perceived the least friction and the highest return, according to Frances.

## Business default

**Pros:** Speeds adoption and easier for IT teams to manage. Expedites your time to ROI because the sooner you can get employees on Chromebooks, the sooner you can reduce the complexity of their work environment.

**Cons:** More education and community efforts needed to minimize issues. Any friction employees experience will be a reminder of this thing happening to them that they didn't choose themselves.

## Employee decision

**Pros:** When you use education, community efforts, and peer support to drive adoption, users own their choice, which makes them more receptive to the changes that come with it. Onboarding is also much faster.

**Cons:** Adds complexity for IT teams as they have more devices to manage, some that require more involved setup than Chromebooks. Makes it more challenging to predict your time to ROI. May slow the cloud journey.



## Best practices from a company that's been there

Recognizing that users can resist technology changes, [ATB Financial](#), a financial institution in Alberta, Canada, developed a change management plan to ease its more than 5,500 employees from Windows and Microsoft Office to G Suite and Pixelbooks.

- **Identify useful tools:** ATB Financial used [Softwatch](#), a tool for monitoring application usage, to identify which Office tools employees commonly used. With that data, the IT team could suggest comparable G Suite tools to use instead.
- **Build a team of evangelists:** ATB selected 50 employees – across departments, job levels, locations, ages, and genders – to receive training from implementation partner Onix and act as internal G Evangelists.
- **Go live with plenty of support:** Besides the G Evangelists, 450 other ATB employees helped transition employees when the company went live with G Suite in mid-2017, answering questions or providing roaming support.
- **Enlist early adopters:** After launching G Suite, ATB chose business unit leaders to try out Pixelbooks since their regular travel meant they could test Pixelbooks' mobility benefits, like long battery life, fast boot time, and offline capabilities.





## Chromebook user adoption tips

The [Chromebook adoption kit](#) is regularly updated and provides resources and a timeline with the steps Alphabet took to evaluate and deploy Chromebooks to employees. Frances Angulo, Google program manager for Chromebook adoption, offers the following [user adoption tips](#):

- **Ask your employees what they want and need from their devices:** Consider device performance and specifications, and the kind of work your users do on their devices. But don't forget to ask users their priorities before selecting devices.
- **Decide whether Chromebooks should be the default or a choice:** If you make it the business default, consider the change management process. If you decide to let people choose their devices, there are a few strategies for influencing employees' adoption, such as flexible trade-in policies or a [Grab and Go with Chrome Enterprise program](#).
- **Train first-time users to be Chromebook pros:** We've found that a certain timeframe works best for gradually introducing new Chromebook users to Chromebook information.
- **Monitor user adoption moving forward:** Develop a dashboard to track information like the number of users with a Chromebook and how many use it as their primary device, how many users choose Chromebook at device refresh, and why users leave Chrome OS.
- **Share your feedback with us:** We want to help you figure out why people can't use Chrome OS or don't want to, and make Chrome OS the best possible platform for all users. If you run into recurring issues, file a Chrome bug with Google. You can also stack-rank and prioritize your requests.

## Retrace your steps

Re-evaluate your cloud worker strategy every six months to adjust as needed, perhaps by introducing cloud technology for new use cases or moving a new group of employees to the cloud.

Revisit the segments of your workforce that you identified earlier in your journey and start to figure out how you move them; continue to evaluate new use cases for cloud-native devices.



# Embark on your cloud journey

We've reached the end of the road for this guidebook but not for your cloud journey. We hope this guidebook will be a useful resource during your cloud explorations and help give you direction on the actions to take – and the tools available – at every point along the way. To get started at any point on your journey, [contact our team](#).

Enjoy your journey!

