Businesses at Work

okta

What's inside

Staying strategic in uncertain times

This year is all about selecting the right tools and strategies to navigate uncertainty. Macro headwinds such as a tight labor market, high inflation, and rising interest rates abound, making it an undeniably challenging time to run and grow a business.

To thrive in a climate like this, organizations have to get strategic. They need to double down on workforce efficiency, invest more heavily in security, and innovate around revenue-facing initiatives. The anonymized data from Okta's more than 17,000 global customers and the Okta Integration Network — which includes over 7,000 integrations with cloud, mobile, web apps, and IT infrastructure providers — shows us that companies are doing just that.

We see that organizations worldwide are investing in workflows for greater efficiency, enhancing the productivity of remote workforces with cloud-first tools, and prioritizing security to mitigate threats. We also see the stunning rise of the travel app category in early 2022 (time will tell how that plays out), and we award the title of the fastest growing app to Kandji, an Apple mobile device management solution.

Some trends continue to hold steady or gain steam: Notably security is still top-of-mind for most organizations as they find new ways to better safeguard remote access, including graduating to higher-assurance factors in their multi-factor authentication (MFA) solutions. And we see that Zero Trust, once merely a philosophy, is already becoming a way of life for many organizations.
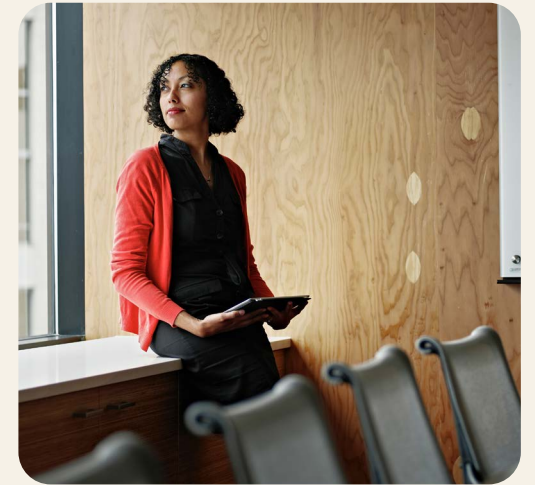
Let's take a deep dive into the data to identify which apps and digital strategies are gaining traction in these undeniably unique times.

Summary of key findings

Categories at work

Buckle up, we're going for a ride. Travel has rebounded in a big way: We're talking 43% year-over-year (YoY) growth by number of customers and 197% growth by unique users across all industries.

> " Travel has rebounded in a big way: We're talking 43% YoY growth by number of customers and 197% growth by unique users across all industries.

Business supplies — a category that didn't even break the top 10 in last year's report — showed tremendous year-over-year growth, with a 35% increase in customers and a 77% increase in unique users. Design software is still on the rise, the third-fastest growing category this year with 31% YoY growth by number of customers, after chart-topping 39% YoY growth last year. Sales and marketing tools are gaining, with the

most notable growth coming from Europe, the Middle East, and Africa (EMEA). Of course, security remains a major global concern, and we see the strongest YoY growth for this sector in the Asia Pacific (APAC) region.

Fastest growing apps

This year's fastest growing list features a diverse pool of apps, ranging from tools for collaboration, communication, corporate travel, and HR to a cloud platform, a developer tool, and a security tool. The champion this year is Kandji, with 172% YoY growth by number of customers. We cruise through the fastest growing apps overall by number of customers and unique users and take a deeper look into the high performers by industry, region, and country.

Best tools for the job

Organizations rely on a large, diverse set of apps to deliver on their mission, and large companies (≥ 2000 employees) lead the pack with an average of 211 apps apiece. Companies continue to add best-of-breed apps — such as Zoom, Slack, and Box — on top of productivity suites: Among Okta's Microsoft 365 customers in North America, 51% now also deploy Zoom, and globally, 42% of Okta customers with Microsoft 365 also deploy Google Workspace, up from 38% last year. We look at the top HR tools, developer tools, remote access solutions, and charitable giving apps, as well as the increasing adoption of automated workflows that keep everything running efficiently.

Rise of multi-cloud

"If one cloud platform can cut our work in half, maybe we should get two!" This year's data shows that the growth in multi-cloud adoption that's been visible since 2017 shows no sign of slowing down, and the favorite pairing of Amazon Web Services (AWS) and Google Cloud Platform (GCP) continues to grow. We explore how many companies now have one, two, or three cloud solutions and the factors driving that adoption.

Apps for our lives

The line between work and personal life is blurrier than ever. Looking at combined corporate and personal app use, digital payment gateway Paypal and newcomers Venmo and Stripe are finding strong footing in our top finance and banking apps. Among health and wellness, FitBit is king, but our two fastest growing apps by number of customers — LiveWell (up 32% YoY by number of customers) and Modern Health (up 30%

YoY by number of customers) — focus on mental health. And in the world of social media, LinkedIn holds the top spot, while TeamSnap is the fastest growing by number of customers.

Security at work

Remote and hybrid workforces are here to stay, so protecting network access from the home office (and the coffee shop office, and the Airbnb office …) is a top priority. Companies are stepping up to higher-assurance factors in their MFA deployments: Low-assurance security questions are experiencing the slowest growth across the board (3% YoY by number of customers), while high-assurance security keys/biometrics (including WebAuthentication) are growing more quickly: 46% YoY growth by number of customers, and a chart-topping 211% by unique users. The Zero Trust security framework continues to gain ground, with companies adding more configurations to protect their users, devices, and networks; 22% of all Okta customers now deploy one or more Zero Trust configurations.

Methodology

How did Okta create this report?

To create our Businesses at Work reports, we rely on data from Okta customers. We anonymize Okta customer data from our network of thousands of companies, applications, and IT infrastructure integrations, as well as millions of daily authentications and verifications from countries around the world. Our customers and their employees, contractors, partners, and customers use Okta to securely log in to devices, websites, apps, and services, and leverage security features to protect their sensitive data. They span every major industry and vary in size, from small businesses to some of the world's largest organizations, with hundreds of thousands of employees and millions of customers.

As you read this report, keep in mind that this data is only representative of Okta's customers, the applications and integrations they connect to through the Okta Integration Network, and the ways users access these tools through our service. The terms "app" and "tool" are used throughout this report to refer to applications, services, and integrations available through the Okta Integration Network. The trends we describe for Okta's Microsoft 365 customers may differ from those of Microsoft 365 customers that do not use Okta (i.e., those using Azure Active Directory or other Identity platforms that do not provide strong cross-app integration support.)

Each year, we look at app popularity in three different ways. Most charts present the number of customers that have deployed apps from the Okta Integration Network. A few charts look at the number of active unique users, defined as users who have logged in to an app via Okta at least one time in the past 30 days. In our Apps for Good section, we count users assigned, defined as users who have access to the application.

We have worked carefully to standardize our data. Unless otherwise noted, this report presents and analyzes data from November 1, 2021, to October 31, 2022, which we refer to as "this year," "today," and "in 2022." Similarly, when we refer to "last year" or "in 2021," we are referring to data from November 1, 2020, to October 31, 2021. "2020" refers to the same period in its respective year.

When referring to company size, Okta uses the term "small" to refer to companies with 1,999 or fewer employees and "large" to refer to companies with 2,000 or more employees.

We use the term "Workforce Identity" to signify Okta customers that are deploying Okta services to their employees. We use the term "Customer Identity" to signify Okta customers deploying Okta services to their own customers. Okta also offers products that allow Workforce and Customer Identity use cases in the same environment. These products are excluded when we discuss Workforce Identity and Customer Identity in isolation.

Unless otherwise specified, the data included in this report is limited to Okta customers that have deployed at least one app to users through the Okta Integration Network. Also, unless otherwise noted, this report looks at apps deployed for corporate use. This report focuses exclusively on Okta data and does not include Auth0.

Categories at work

2022's most popular app categories

Judging by 2022's most popular app categories, we're on the move, redesigning our products, reimagining our businesses for a changed world, and building them back stronger across all industries, countries, and regions. We see particularly strong performances by travel apps, design software, and developer tools.

Categories at work

Up, up, and away: Travel takes off on a historic solo flight

Neither flight delays, high gas prices, nor hospitality worker shortages can keep us from going… well, everywhere we can possibly go. Two years of quarantining and staying close to home left us hungry to rub elbows with our colleagues and clients, so it's no surprise that travel is the No. 1 fastest growing app category this year. But wow — what a jump. Travel posted 43% YoY growth by number of customers and 197% YoY growth by number of unique users, making it far and away our top growth leader. Since our data focuses on growth this year, we expected to see travel rebounding from a pandemic lull over the past few years. But it turns out that travel started gaining momentum in 2020 and, in our mostly post-quarantine climate, has rocketed up from there: After below-average category growth from 2017 to 2019, the travel category grew 32% YoY by number of customers in 2020, putting it above average for customer growth, and in 2021, travel grew 41% YoY by number of customers and 231% by unique users, putting it in a similar far-top-right growth leader position, similar to what we see in the 2022 acceleration matrix. That's three consecutive years of above-average growth, which is impressive in its own right.

Business has fully embraced hybrid collaboration, with top app categories reflecting a return to offices as well as the continuation of remote work. Business supplies — a category including 5.11 Tactical (uniforms), Amazon Business, Pitney Bowes, 4imprint (promotional merchandise), Staples, Vistaprint, Dell, and Apple Business Manager — which didn't even break the top 10 app categories in last year's report, showed tremendous year-over-year growth, with a 35% increase in customers and a 77% increase in unique users. Design software, the fastest growing category in last year's report with 39% YoY customer growth, stays sharp and on-brand this year with an additional 31% growth in customers (and 60% growth in users). This category has been a solid performer for the past five years, since logging 58% YoY growth by number of customers and chart-topping 185% YoY growth by number of unique users in 2017. Categories like content collaboration

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Two years of quarantining and staying close to home left us hungry to rub elbows with our colleagues and clients, so it's no surprise that travel is the No. 1 fastest growing app category this year.

Growth of app categories

Legend

- Content Collaboration
- Security
- Sales & Marketing
- Cloud Platforms
- Developer Tools
- Video Conferencing
- Networking & Infrastructure
- HR
- Project Management
- Design Software
- Analytics
- Electronic Signature
- Expense Management
- ITSM & Helpdesk
- E-Learning
- Productivity
- Banking
- Web Design & Hosting
- Finance
- Social Media
- Business Supplies
- Travel
- Consumer
- Shipping
- Telecommunications
- Healthcare
- News
- Job Board
- Apps for Good

You may notice a difference in how we're presenting our most popular app categories this year. Instead of a simple trend line chart limited to 15 categories, we've adopted an acceleration matrix, giving us space to feature all 29 of our categories. This matrix captures the year-over-year percentage growth by number of customers and unique users. We still track category rank by number of customers in the legend and the relative sizes of the colored circles. The top-right quadrant is where our growth leaders sit; meanwhile, the top-left and bottom-right quadrants show above-average growth by number of unique users (top left) and by number of customers (bottom right).

Note: In this view of app usage, we count the number of customers deploying one or more apps or tools in each category.

and video conferencing — which were strong performers last year — continued growing, although not quite as rapidly: This year, content collaboration grew 21% YoY by number of customers (compared to 28% last year) and video conferencing grew 19% YoY by number of customers (compared to 23% last year).

Companies remain highly focused on both security and sales and marketing, which have been ranked the No. 2 and No. 3 categories since mid-2018. Deployment of security tools grew 23% YoY by number of customers and 43% YoY by unique users — no surprise in a world where the threatscape continues to grow, and every company is at risk of a data breach. As companies redoubled efforts to grow their businesses, sales and marketing apps grew 23% by number of customers and 53% by number of unique users over the past year.

Likewise, organizations continue to add cloud platforms, developer tools, and productivity apps to their digital toolboxes at a steady pace, keeping these categories in the "growth leader" quadrant. However their growth rate has cooled slightly over the past five years. Cloud platforms drifted up another 27% YoY by number of customers this year; the category has continued growing since a 54% YoY growth spurt in 2017 (its five-year growth peak). The developer tools category isn't far behind, with 26% YoY customer growth, compared to 51% growth in 2017. And productivity tools enjoyed 22% YoY growth by number of customers, compared to 57% YoY in 2017. ∎

Industries invest in key categories

Building a better toolbox

When we look at the growth of app categories broken out by customer industry, a number of interesting trends emerge. Design software boasts strong year-over-year growth across many sectors — notice the dark vertical band in this heat map. Design software posts its strongest

> Digging deeper, we see that travel's growth is driven mainly by the tech sector, which posted 62% YoY growth by number of customers and 258% by unique users.
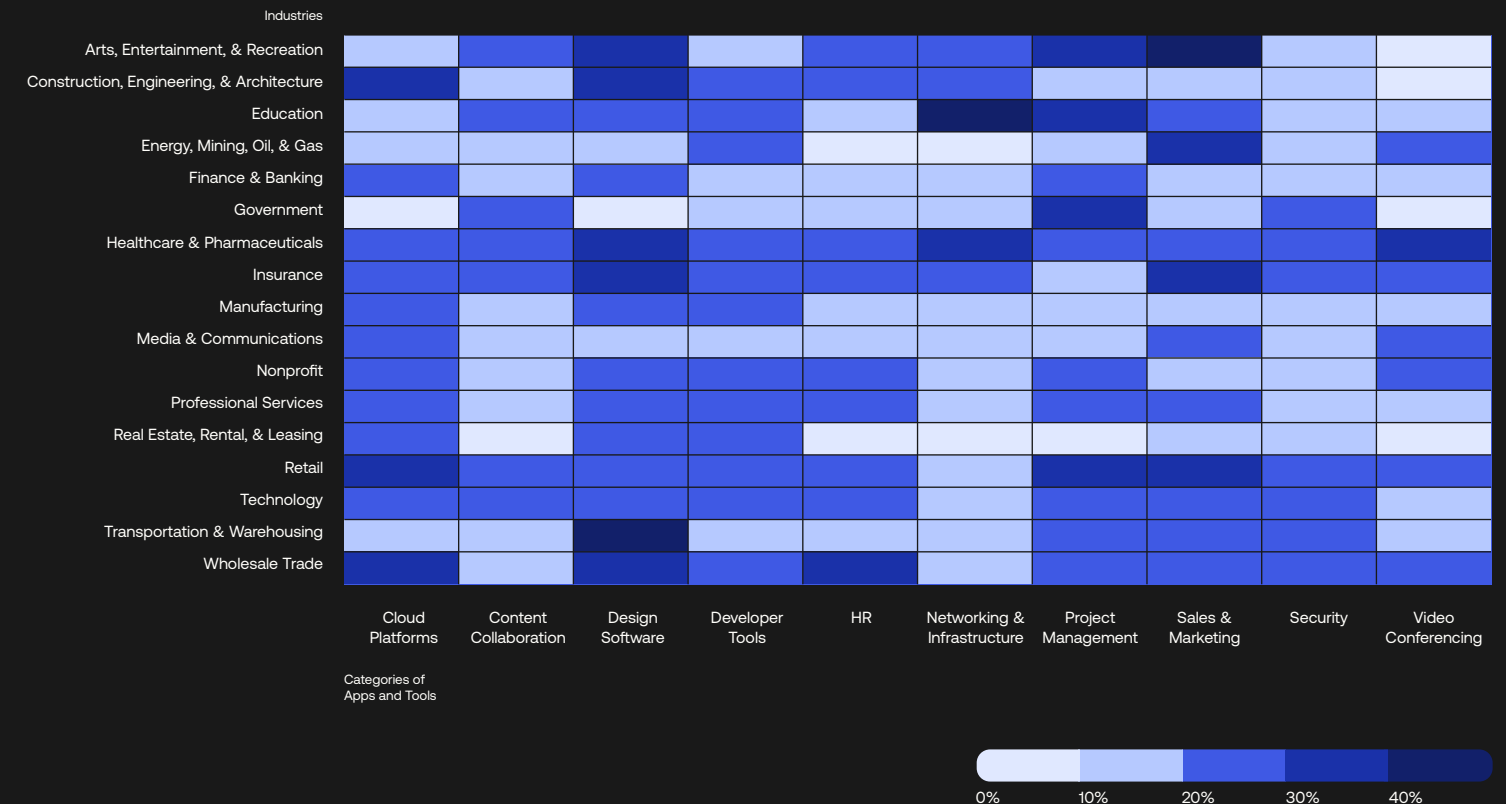
gains by number of customers among transportation and warehousing (45% YoY growth); insurance (38% YoY growth); healthcare/pharmaceuticals (35% YoY growth); arts, entertainment,

and recreation (33% YoY growth); and construction and engineering (33% YoY growth).

We also see strong growth in sales and marketing tools across many sectors. At the high end of growth, arts, entertainment, and recreation increased their investment in sales and marketing tools 41% YoY by number of customers. Many other categories made sales and marketing tools a priority, including retail (32% YoY growth by number of customers), education (29% YoY growth), and healthcare and pharmaceuticals (28% YoY growth).

The education and nonprofit sectors seem to be focusing on basic infrastructure and core capabilities: Education has high growth rates across all categories and tops the chart with 42% YoY growth in the number of customers deploying

networking and infrastructure apps. Meanwhile, nonprofits leaned most substantially into the design software category, with adoption increasing 29% YoY by number of customers.

Note that the heatmap above only has room to show the 10 largest app categories, but multiple industry sectors leaned into smaller app categories as well. As shown in our acceleration matrix, travel is the fastest growing app category by number of customers and unique users.

Digging deeper, we see that travel's growth is driven mainly by the tech sector, which posted 62% YoY growth by number of customers and 258% by unique users. (In last year's report, the tech sector was the bellwether for travel's rise: Navan (formerly TripActions) was the sector's fastest growing app by unique users, with a first-class 1647% YoY growth rate.) The finance and banking sector also ranks travel as their top priority, with 33% YoY growth by number of customers. ■

App category growth by industry
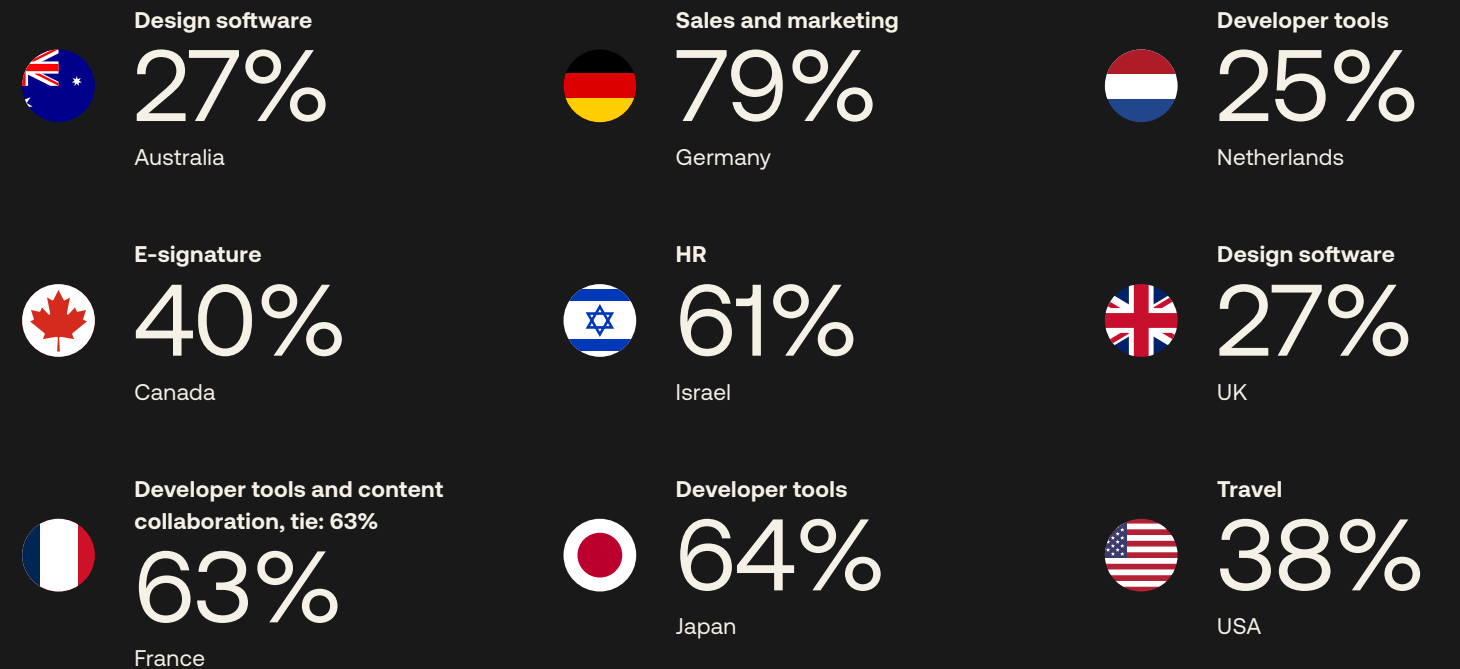
Top app categories globally

It's an app world after all

Breaking down app category growth by country also yields some interesting results: The top app categories vary as widely as their spoken languages. In the UK, it's all about design software, which grew 27% YoY by number of customers. For France and the Netherlands, the terrain and the terroir are very different, and so, too, are their fastest growing app categories: In France, content collaboration leads the way with 63% YoY growth, while the Netherlands favors developer tools, which grew 25%.

Elsewhere in Europe, sales and marketing apps take the top spot in Germany with a 79% gain. Moving east to Japan, we see our highest rate of category growth by country: Developer tools grew 64% YoY by number of customers, which is not surprising considering the amount of venture capital funding in Japan has increased tenfold over the past decade. In Israel, human resources grew 61%. Moving down under to Australia, design software leads the way with a 27% kangaroo bounce in YoY growth. In North America, travel is the fastest growing app category for shutdown-weary Americans, clocking 38% YoY growth. Meanwhile in Canada, e-signature is in the lead, signing up 40% more customers YoY.

App category growth by country

Design software
27%
Australia

Sales and marketing
79%
Germany

Developer tools
25%
Netherlands

E-signature
40%
Canada

HR
61%
Israel

Design software
27%
UK

Developer tools and content collaboration, tie: 63%
63%
France

Developer tools
64%
Japan

Travel
38%
USA

Different accents on business needs: Regional app category growth

In terms of regional differences, most of this year's impressive growth in the travel category has been driven by North America and EMEA, where YoY travel app growth by customers measures 39% and 78%, respectively.

The growth of the business supplies category is another success story. As hybrid workers return to offices and start stealing staplers again, we see renewed demand for office supplies in North America (78% YoY increase in unique users) and EMEA (162% YoY increase in unique users). Sales and marketing apps are also superhot in EMEA, reporting 313% YoY growth in unique users.

APAC is driving significant growth in security, electronic signature apps, developer tools, cloud platforms, and analytics tools, most notably at the unique user level. Ranking at the top, use of security tools increased 85% YoY by unique users. The use of electronic signature tools and developer tools by unique users increased 61% and 55% YoY, respectively. Cloud platforms grew among unique users by 50% YoY, while use of analytics tools increased among unique users by 47% YoY.

Next, we'll uncover the specific apps, tools, and platforms companies are choosing to make their organizations stronger, safer, more resilient, and better prepared for the future. ■

Most popular and fastest growing

Top-performing apps

Our annual list of the fastest growing apps showcases two kinds of growth success stories: The ever-popular, crowd-pleasing workhorse apps that organizations still can't seem to get enough of, and the new rising stars of the app world, shooting to the pinnacle of fame and leaving only a trail of stardust. Nothing can hold these growth champions back. So, let's start with a hearty round of applause for this year's all-star team.

See how they grew

The 50 most popular apps of 2022

No one can resist news about how big the big stars have gotten, right? So let's start with our exclusive exposé of how the established apps, with the largest customer bases, have grown this year. Which are still pulling in new customers, and which are cooling off? Yes, it's time to dish about the most popular apps.

" Outstanding players [among our top 50 apps] include Figma, boasting chart-topping 81% YoY growth by number of customers, and Sentry, the growth leader among unique users at 128% YoY growth.

In previous reports, we've highlighted only the top 15 apps, ranked in simple trendline charts by number of customers. This year, we're blowing it out in an all-star extravaganza, showcasing the top 50 apps in a single acceleration matrix that captures growth by customers and unique users, while still tracking app rank in the legend (and in the relative sizes of the colored circles). Lights… camera… action!

The real box office smashes occur in the top-right quadrant of this chart, where apps and tools are growing quickly both in customers and unique users. The top right is where our growth leaders hang out, and there's not a single app there with less than 30% YoY customer growth and 43% YoY unique user growth. These apps that have earned enough customers to rank in the top 50 are finding ways to keep up substantial growth. Outstanding players here include Figma, boasting a chart-topping 81% YoY growth by number of customers, and Sentry, the growth leader among unique users at 128% YoY growth.

Interestingly, 13 of the 15 apps in our top-right growth-leader quadrant first debuted on our fastest growing apps list in prior Businesses at Work reports: We identified their early rocket trajectories, and now they rank as established players. Our growth leader quadrant stars reach back as far as

our first report in early 2015, in which PagerDuty was the second-fastest-growing app, behind Slack. (Remember that for trivia night.) After PagerDuty (2015), we welcomed Zscaler (2017), KnowBe4 (2017-2019, No. 1 in 2018), LastPass (2018), Datadog (2018), Freshworks/Freshservice (2018, 2019), Snowflake (No. 1 in 2019), Amazon Business (No. 1 in 2020), 1Password, Sentry (2020), GitHub (2020, 2021), and Figma and Miro (both 2021). In fact, only two of this year's high-growth-quadrant apps haven't previously ranked as fastest growing apps: customer relationship management platform HubSpot and project management app Asana.
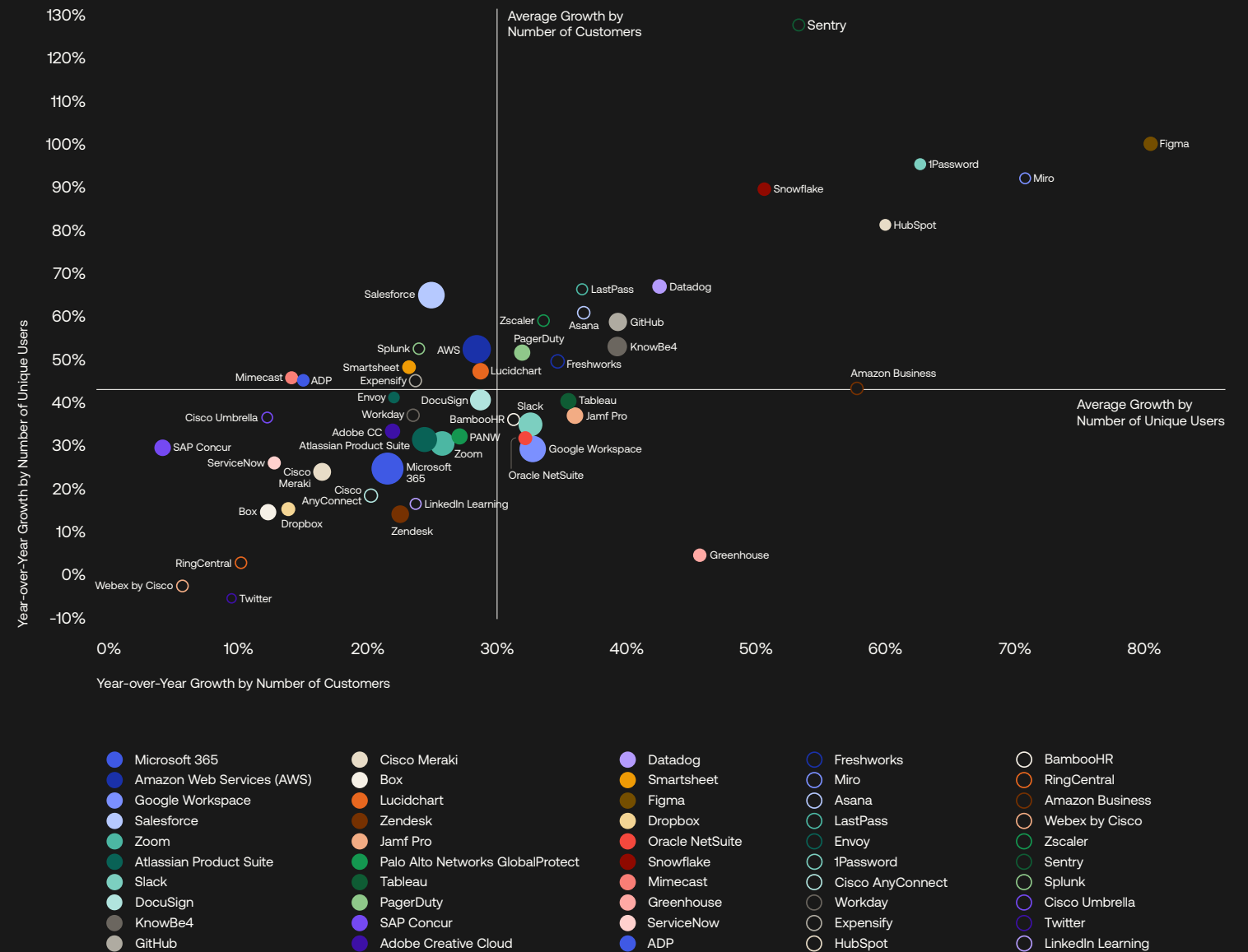
What do our growth leaders have in common? Three categories each claim three or more apps in the high-growth quadrant: collaboration (Figma, Miro, Asana), security (1Password, LastPass, Zscaler, KnowBe4), and developer tools (Sentry, Datadog, GitHub, PagerDuty). It's interesting to note that these three categories rank in the top five app categories described above. With HubSpot representing sales and marketing, the only top-five category we don't see in the top-right quadrant here is cloud platforms.

Can we keep bragging about our fastest growing alums for a moment? Thanks for indulging us, because the top-left and bottom-right quadrants of the acceleration matrix are stellar places to rank as well. In the bottom right (above-average growth by customers), we tip our hats to Slack (the No. 1 fastest growing app in 2015), Tableau (a fastest growing app in 2015 and 2016), BambooHR (2016), and Jamf Pro (No. 1 in 2017) for their continued success. And in the top left (above-average growth by unique users), we salute AWS (2015), Lucidchart (2016), and Splunk (2019).

Turn your eye to the legend for a moment, which ranks the top 50 apps based on number of customers. For our perennial readers, this list looks familiar: Microsoft 365 remains the top app by number of customers, followed by AWS, Google Workspace, Salesforce, and Zoom. In fact, the top nine apps hold the same ranks they did last year. However, GitHub has climbed two spots to reach No. 10, and Jamf Pro reaches No. 15 for the first time.

If we were to peek at a list of top apps ranked by number of unique users, we would see it's also much the same as last year's chart. Microsoft 365, Workday, ServiceNow, Google Workspace, and Salesforce still hold the top five ranks by number of unique users. The biggest news is that Zscaler moves up a notch to claim sixth place.

Growth of the 50 most popular apps

Average Growth by Number of Customers

Average Growth by Number of Unique Users

Year-over-Year Growth by Number of Unique Users

Year-over-Year Growth by Number of Customers

130%
120%
110%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
-10%

0%   10%   20%   30%   40%   50%   60%   70%   80%

Chart data points: Sentry, Figma, 1Password, Miro, Snowflake, HubSpot, LastPass, Datadog, Zscaler, Asana, GitHub, Salesforce, KnowBe4, Freshworks, Splunk, AWS, Lucidchart, Amazon Business, Smartsheet, Expensify, Mimecast, ADP, Envoy, DocuSign, Tableau, Workday, BambooHR, Slack, Jamf Pro, Cisco Umbrella, Adobe CC, PANW, Atlassian Product Suite, Zoom, Google Workspace, SAP Concur, ServiceNow, Oracle NetSuite, Cisco Meraki, Cisco AnyConnect, Microsoft 365, LinkedIn Learning, Box, Dropbox, Zendesk, Greenhouse, RingCentral, Webex by Cisco, Twitter

Legend:
Microsoft 365, Amazon Web Services (AWS), Google Workspace, Salesforce, Zoom, Atlassian Product Suite, Slack, DocuSign, KnowBe4, GitHub, Cisco Meraki, Box, Lucidchart, Zendesk, Jamf Pro, Palo Alto Networks GlobalProtect, Tableau, PagerDuty, SAP Concur, Adobe Creative Cloud, Datadog, Smartsheet, Figma, Dropbox, Oracle NetSuite, Snowflake, Mimecast, Greenhouse, ServiceNow, ADP, Freshworks, Miro, Asana, LastPass, Envoy, 1Password, Cisco AnyConnect, Workday, Expensify, HubSpot, BambooHR, RingCentral, Amazon Business, Webex by Cisco, Zscaler, Envoy, Sentry, Splunk, Cisco Umbrella, Twitter, LinkedIn Learning

Regional app trends: Differences emerge in the acceleration matrix

When we slice and dice the top 50 apps acceleration matrix by region, different trends and patterns emerge. Microsoft 365 remains the most popular app by number of customers across all three regions: North America, EMEA, and APAC. In North America, AWS ranks No. 2, and Zoom seizes the No. 3 spot (as we predicted in last year's report). In EMEA, Google Workspace is notably No. 2 (ranking higher in EMEA than globally), and AWS is No. 3. In APAC, those spots are reversed, matching global ranks.

In North America, security, sales and marketing, data analytics, and recruiting take center stage. 1Password shows the highest growth among security tools, with 59% YoY customer growth and 93% YoY growth in unique users. Hubspot, with 60% YoY customer growth and 96% YoY growth in unique users, leads the way in the sales and marketing category. And among analytics tools, data collaboration tool Snowflake (50% YoY customer growth and 89% YoY growth in unique users) grew most quickly. These three tools, along with Miro and Figma, make up the top five apps with the most YoY growth in unique users in North America. Interestingly, North America is the only region driving growth in recruiting app Greenhouse, which increased its number of customers here by 44% YoY.

In EMEA, the most notable ranking is Salesforce, which grew an impressive 461% YoY by unique users (and 27% by customers). Also in the sales and marketing category, Hubspot reports a respectable 68% YoY customer growth and

45% YoY growth in unique users. 1Password takes the security tools prize in EMEA (in addition to North America), with 77% YoY customer growth and 104% YoY growth in unique users. We also see strong growth from developer tool Sentry (57% YoY customer growth and 175% YoY growth in unique users). Other hot categories for this region include HR (Bob delivered chart-topping 90% YoY customer growth and 115% YoY growth in unique users) and data analytics (Snowflake accumulated 66% YoY customer growth and 93% YoY growth in unique users).

The APAC region is heavily focused on security and developer tools this year. Jamf Pro, Netskope, LastPass, and ZScaler battled for supremacy in the security category: Jamf Pro posted 57% YoY customer growth and 118% YoY growth in unique users, jockeying for position with Netskope (51% YoY customer growth and 56% YoY unique user growth) and LastPass (43% YoY customer growth and a powerful 272% YoY growth in unique users). ZScaler, too, delivers remarkable growth in unique users — 280% YoY, coupled with 36% YoY growth in customers. On the developer tools workbench, Datadog leads the way (60% YoY customer growth and 77% YoY unique user growth), while GitHub boasts 47% YoY customer growth and 64% YoY growth in unique users.

It's interesting to note that Figma and Miro show consistent YoY growth across all regions, especially by number of customers. Figma reaches peak acceleration in EMEA with 89% YoY growth by number of customers and in

APAC with 88% YoY growth. Miro's overall jump in customers is driven by 78% YoY growth in EMEA and 71% YoY growth in APAC. These two collaboration tools see the most user growth in EMEA, with the number of unique users accessing Miro up 178% YoY, and the number of unique users collaborating via Figma up 146% YoY.

The right tools for the job: Top apps by industry

The top app lists by industry reveal big changes. In the tech sector, AWS has been the top app by number of customers since June 2019. Slack has now grabbed the No. 5 spot. AWS has just entered the top ranks for the healthcare and pharmaceuticals sector at the No. 4 spot. In the retail space, Google Workspace has risen to No. 2. Among the education sector, Salesforce moved up to No. 4, with AWS and the Atlassian Product Suite tied for No. 5. ■

Meet the rising stars

The fastest growing apps of 2022

If apps had a star-studded awards show — and they definitely should — the top 10 fastest growing apps would be the freshest faces getting mobbed by the paparazzi on the red carpet. And this year's hot up-and-comers are an unusually diverse bunch. "Way back" in 2019, data analytics and security tools ran the show; in 2020, remote work and the tools that made it possible led the way; and last year was all about collaboration. This year, the fastest growing apps feature a truly diverse cast, providing expertise in security, communication, corporate travel, HR, cloud-app development, and, oh yes — collaboration too.

What these young upstarts all have in common is tremendous growth, ranging from 81% to 172% YoY growth by number of customers. The No. 1 fastest growing app of 2022 award goes to... Kandji, an Apple mobile device management tool, which posted 172% YoY growth by number of customers. Kandji, an Okta

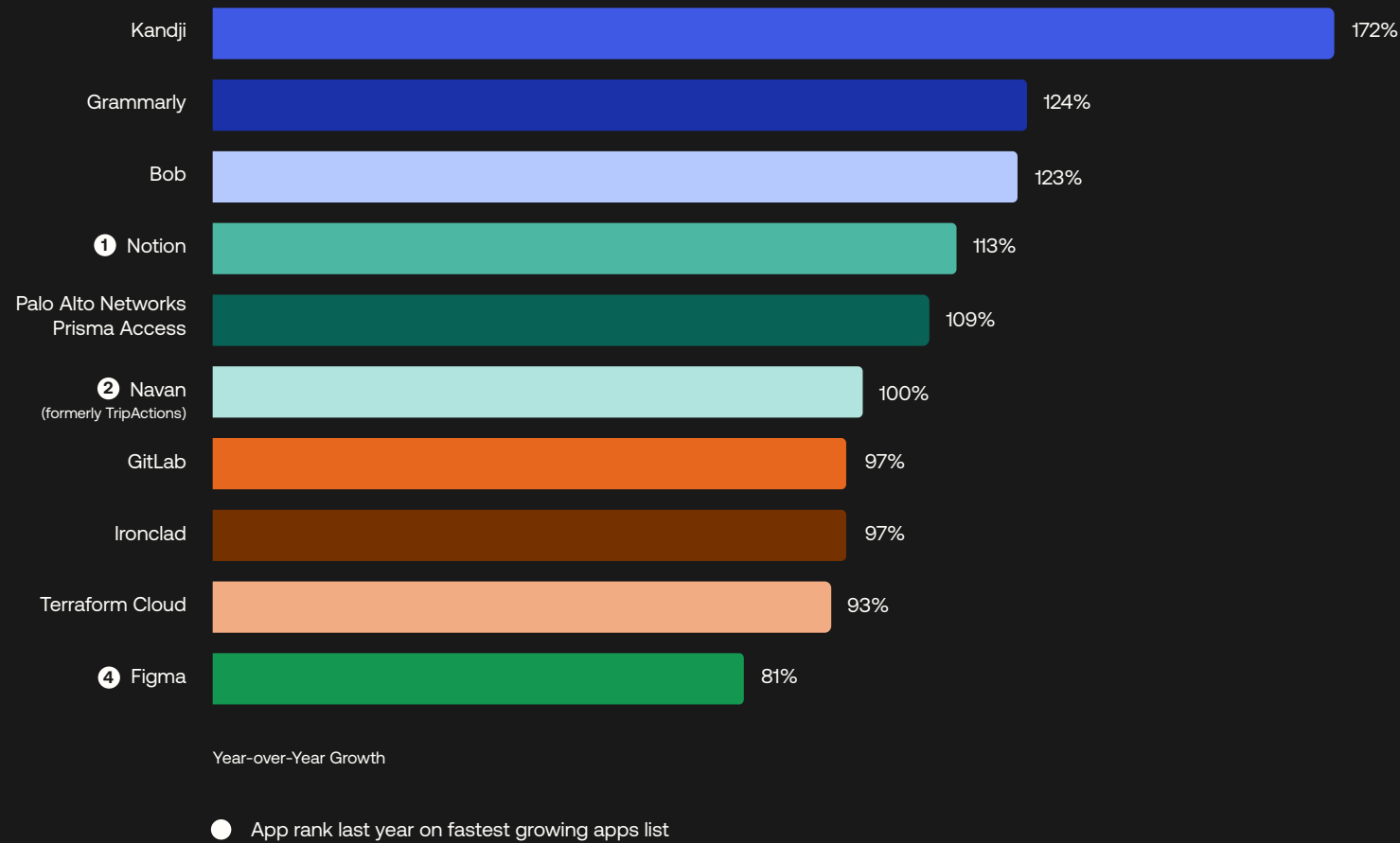Ventures portfolio company, enables IT administrators to automate repetitive tasks and introduce new features to the device management space. Arriving in the top spot is truly an awesome debut. Kandji's rapid ascent suggests that automation is in high demand as IT teams try to do more with less. The hybrid work wave is also likely at play here with IT teams scouting new solutions to manage and secure remote devices.

Grammarly hits the board at No. 2, with 124% YoY customer growth. In an increasingly dynamic, remote, and global workforce, it makes more sense than ever for companies to prioritize clear communication. Our No. 3 spot is claimed by HR tool Bob. This newcomer has been quietly creeping up in the ranks: We noticed it gaining popularity in EMEA back in 2021 when it grabbed second place among HR tools in the region, and this year it racked up 123% YoY customer growth globally.

Fastest growing apps by number of customers

App	Growth
Kandji	172%
Grammarly	124%
Bob	123%
① Notion	113%
Palo Alto Networks Prisma Access	109%
② Navan (formerly TripActions)	100%
GitLab	97%
Ironclad	97%
Terraform Cloud	93%
④ Figma	81%

Year-over-Year Growth

● App rank last year on fastest growing apps list

> The No. 1 fastest growing app of 2022 award goes to Kandji, an Apple mobile device management tool, which posted 172% YoY growth by number of customers.

While the top three apps on our list are all newcomers, there are some familiar faces. Our No. 4 and No. 10 apps, collaboration tools Notion and Figma, took No. 1 and No. 4 last go-round. (Last year, Notion had remarkable 240% YoY growth by number of customers, and Figma clocked in at 159% growth, so it's quite an accomplishment for these two apps to post 113% and 81% YoY growth this year, respectively.) Our third repeat performer is No. 6 app Navan, which was last year's No. 2 with 178% YoY growth by number of customers. It's no surprise Navan made the list again this year, with a cooped-up world happily jet-setting around again at last.

Fastest growing apps by number of unique users

Looking at the fastest growing apps by growth in unique users reveals that companies are really leaning into security, travel, and collaboration. Interestingly, four of the top 10 fastest growing apps by unique users also appear in the top 10 fastest growing apps by number of customers: These overachievers are Navan, Palo Alto Networks Prisma Access, Notion, and Terraform Cloud by HashiCorp.

We also recognize some repeat performers from last year's list of fastest growing apps by unique users, always remarkable as maintaining high growth rates is especially hard to do. Netskope, our No. 1 app from 2021, takes first place again this year, with a whopping 250% YoY growth in unique users. Navan makes the journey up one slot to take third place this year with 207% YoY growth by unique users, while Calendly drops from No. 2 last year to No. 8 this year with a still-admirable 169% YoY growth. Notion, our fifth-fastest growing app by unique users with 201% YoY growth, held the No. 3 spot last year. Postman is another repeat performer, coming in at No. 9 with 168% YoY growth by unique users this year, after 363% last year.

We're happy to welcome new entrants Twilio SendGrid (219% growth YoY by unique users), Palo Alto Networks Prisma Access (205%), Keeper (195%), Terraform Cloud (192%), and Contentful (159%). All of these apps posted more than 150% YoY growth in unique users, which is nothing to sneeze at. ∎

Tools that fit

Fastest growing apps by company size

> Larger organizations seem more focused on IT support, project management, and collaboration tools... Smaller organizations, on the other hand, are all about budgets.

When it comes to priorities and app usage, size really does matter. Looking at the data, we see that larger companies (those with 2,000 or more employees) have entirely different needs and priorities than smaller companies. And when we say entirely different, we mean it: The fastest growing apps for large and small organizations have zero overlap.

Looking at the data this way, it becomes clear that smaller organizations bear most of the responsibility for driving the growth

of our fastest growing apps. Three apps on the small-organization list — No. 5 app Kandji, No. 8 Grammarly, and No. 9 Bob — all appear on our overall fastest growing app chart. On the other hand, the top 10 list for larger organizations claims only one overall fastest growing winner — collaborative interface design tool Figma, which has 50% YoY customer growth among larger organizations.

Larger organizations seem more focused on IT support, project management, and collaboration tools. IT support tool TeamViewer tops the larger organizations' list of fastest growing apps by number of customers, with 60% YoY growth. Second place goes to project management tool monday. com, with 55% growth by number of customers, while collaboration tool Airtable is a close third with 54% growth. It's interesting that
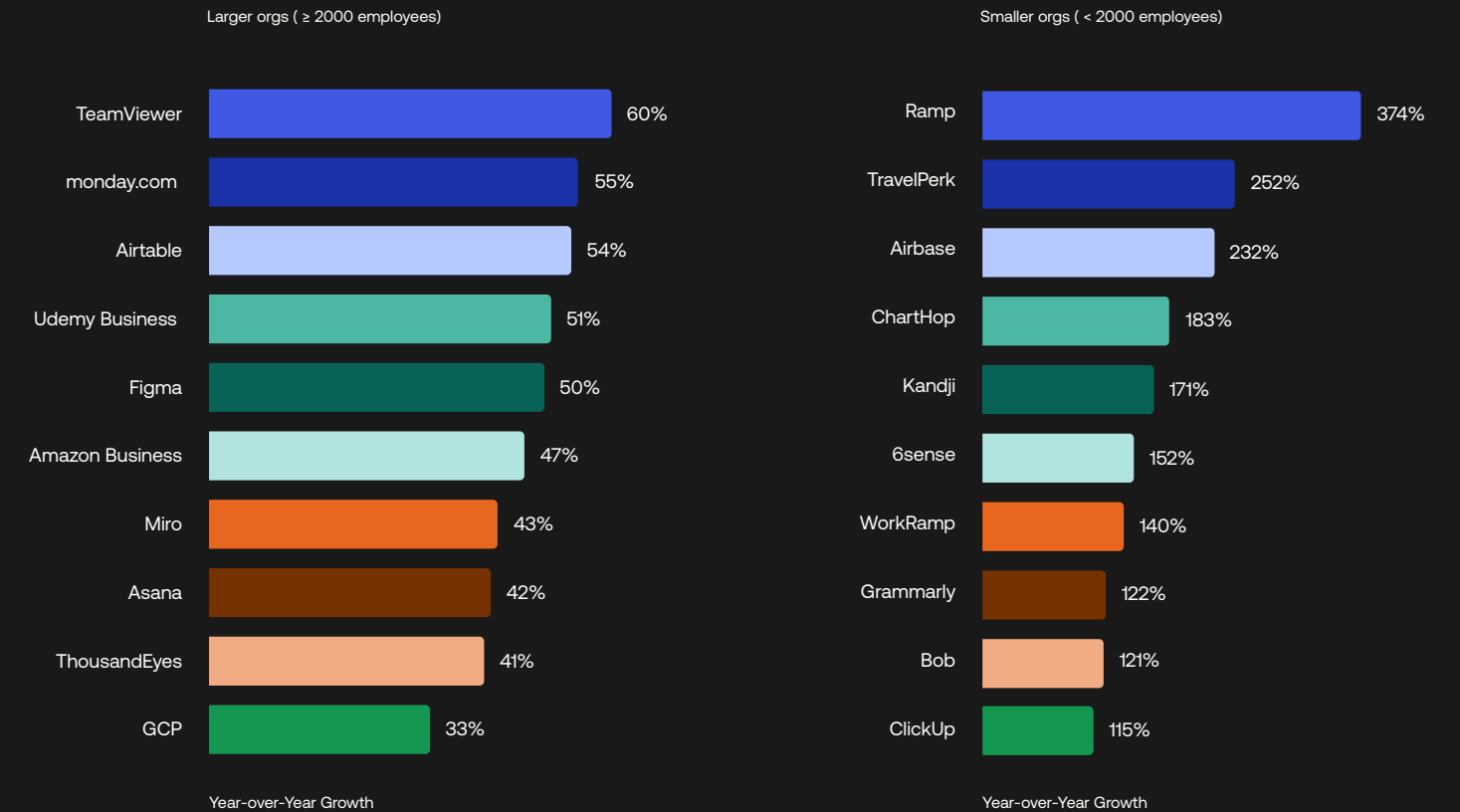
four collaboration tools (Airtable, Figma, Miro, and Asana) crowd the larger organizations' fastest growing charts, joining apps for learning (Udemy Business), business supplies (Amazon Business), network intelligence (ThousandEyes), and cloud (GCP).

Smaller organizations, on the other hand, are all about budgets: The top three fastest growing apps by customers for smaller organizations are all geared toward keeping an eye on spending. The No. 1 and No. 3 apps, Ramp (374% YoY growth by number of customers) and Airbase

(232% YoY growth by number of customers), are expense and spend management tools, while travel expense management tool TravelPerk (252% YoY growth by number of customers) takes No. 2. Smaller organizations are leaning in to ClickUp for project management over monday.com, and Workramp for training rather than Udemy Business. ∎

Fastest growing apps by company size

Larger orgs (≥ 2000 employees)

App	Year-over-Year Growth
TeamViewer	60%
monday.com	55%
Airtable	54%
Udemy Business	51%
Figma	50%
Amazon Business	47%
Miro	43%
Asana	42%
ThousandEyes	41%
GCP	33%

Smaller orgs (< 2000 employees)

App	Year-over-Year Growth
Ramp	374%
TravelPerk	252%
Airbase	232%
ChartHop	183%
Kandji	171%
6sense	152%
WorkRamp	140%
Grammarly	122%
Bob	121%
ClickUp	115%

An app for every sector

Fastest growing apps by industry

We can count on three things in this world: The earth will keep spinning, the sun will come up tomorrow, and our fastest growing apps by industry and region will change every year.

When we look at the data by industry sector, we get a pretty good picture of what industries are prioritizing. Whereas last year the tech sector was all about collaboration (Notion) and travel planning (Navan), this year it's turned its attention to security (Kandji) and streamlining meeting management (Calendly). The education sector is continuing to facilitate collaboration with tools like Google Workspace but is now adding CRM to the mix with Salesforce. Healthcare and pharmaceutical companies are moving away from last year's darling Salesforce and focusing more heavily on security (KnowBe4) and collaborative work (AWS, Microsoft 365). The finance and banking sector is keeping a tight grip on security, prioritizing DigiCert last year and Netskope this year, while adding collaboration to the mix with Figma. Retail continues to lean in to app development, moving from GitHub last year to the Atlassian Product Suite this year, while adding DocuSign to its toolkit. And government? That sector continues to rely on Microsoft 365. ■

Fastest growing apps by industry

Industry	By Number of Customers	By Number of Unique Users
Technology	Kandji **155%**	Calendly **269%**
Finance & Banking	Figma **73%**	Netskope **1100%**
Nonprofit	Asana **40%**	Asana **187%**
Retail	DocuSign **49%**	Atlassian Product Suite **74%**
Healthcare & Pharmaceuticals	KnowBe4 **43%**	AWS, Microsoft 365 (Tie) **68%**
Education	Google Workspace **31%**	Salesforce **106%**
Government	Microsoft 365 **24%**	Microsoft 365 **93%**

Year-over-Year Growth

Touring the world

Fastest growing apps by region and country

Digging into the fastest growing apps by region, we see yet more change. Last year, North America prioritized travel and scheduling with Navan and Calendly, but this year security is the top priority, with Kandji and Netskope leading the way. Kandji boasts 182% YoY customer growth in North America, while Netskope has grown 521% YoY by unique users. Collaboration tool Notion is No. 2 for the region in both customers and unique users, with 121% YoY customer growth and 263% growth in unique users.

EMEA has turned its attention from e-signatures and app development (DocuSign and GitHub, which led last year) to travel booking and expense management. This year's leading app in the region, TravelPerk, posts 255% YoY customer growth and 516% growth in unique users.

Last year, APAC prioritized collaboration and productivity with Google Workspace and Zoom. This year, the regional focus has shifted to collaborative design, with Figma (88% YoY growth in customers), and security, with ZScaler (280% YoY growth by unique users). Breaking

the regional data down even further to look at fastest growing apps by individual country, we find these countries are prioritizing collaboration, development, spending, and security, though they're choosing different apps.

The US and Australia are focusing on security. Americans are banking primarily on Kandji, with 176% YoY growth in customers, while Australia is securing its connections with Cisco Meraki, which posted 27% YoY customer growth.

Collaboration leads the way across countries in Europe and in Japan. In the UK, Miro is the top collaboration tool, while Google Workspace continues its global march to victory in France, the Netherlands, Germany, and Japan.

Where there are start-ups, there will be developer tools. Canada's startup scene has been growing exponentially in the last few years, with an average of 95,000 new businesses started per year. So it's no surprise the country is prioritizing developer tools, pushing GitHub to its top spot with 70% YoY customer growth. Known as the startup nation, Israel is estimated to have over 6,000 active startups, and its fastest growing app is the developer-friendly Atlassian Product Suite, logging 55% YoY customer growth. ∎

Fastest growing apps by region

Region	By Number of Customers		By Number of Unique Users	
North America	Kandji **182%** (Followed by Notion, 121%)		Netskope **521%** (Followed by Notion, 263%)	
EMEA	TravelPerk **255%** (Followed by Grammarly, 159%)		TravelPerk **516%** (Followed by Salesforce, 461%)	
APAC	Figma **88%** (Followed by Miro, 71%)		Zscaler **280%** (Followed by LastPass, 272%)	

Year-over-Year Growth

Fastest growing app by country

AUSTRALIA
Cisco Meraki, 27%

CANADA
GitHub, 70%

FRANCE
Google Workspace, 84%

GERMANY
Google Workspace, 100%

ISRAEL
Atlassian Product Suite, 55%

JAPAN
Google Workspace, 65%

NETHERLANDS
Google Workspace, 19%

UK
Miro, 71%

USA
Kandji, 176%

The best tools for the job

The pandemic's impact on the workforce continues to evolve. Today's hybrid workforce is global, distributed, empowered … and soberly reevaluating its relationship to work itself. Fully half of all employees underlined surveyed by Gartner say the pandemic "changed my expectations toward my employer."[1] The right digital tools can help companies meet rising employee expectations: Organizations that rapidly adopt new tools to support their workers see a boost in employees' productivity, sense of well-being, and job satisfaction. Now, more than ever, it's incumbent upon organizations to provide the best tools for the job, including powerful, easy-to-use business technology.

An increasing number of companies augment productivity suites with single-function best-of-breed apps, and even additional productivity suites. Companies provide their developer teams with a growing array of top tools. They improve efficiency and raise job satisfaction wherever possible by supporting secure and unhindered remote work, automating mundane tasks through workflows, and helping workers take meaningful roles in their community through charitable giving apps.

Healthy app-etite:
The average number of apps stays strong
Companies may be facing an uncertain economic future, but they still need robust app toolboxes to keep workers productive. This year, the average customer used 89 different apps, the same as last year. Note that this data includes Okta Integration Network and non-Okta Integration Network, personal and corporate apps. So yes, that includes everything from Google Workspace and Slack to UberEats and Netflix.

Longstanding Okta customers and larger organizations deploy the highest average numbers of apps. Customers that have been with Okta for 4+ years deploy an average of 196 apps each. And larger organizations — defined as those with 2,000 or more employees — have increased the average number of apps they deploy. (Note that this data may change yearly because companies change in size and move from one designation to another.) Based on this year's data, we see that large organizations deploy an average of 211 apps (up from 195 apps in the previous year, based on this year's size designations), an increase of 8%. Among smaller companies, the average number of apps dropped from 70 last year to 69 this year.

North America is the most app-diversified region, deploying an average of 98 apps per company, a very slight increase over last year's 97. EMEA maintained an average of 65 apps, and APAC held steady at 56.

[1] Gartner®, "Employees Seek Personal Value and Purpose at Work. Be Prepared to Deliver.," Jackie Wiles, January 13, 2022. Gartner is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally, and Hype Cycle is a registered trademark of Gartner, Inc. and/or its affiliates and are used herein with permission. All rights reserved.

"

Customers that have been with Okta for 4+ years deploy an average of 196 apps each.
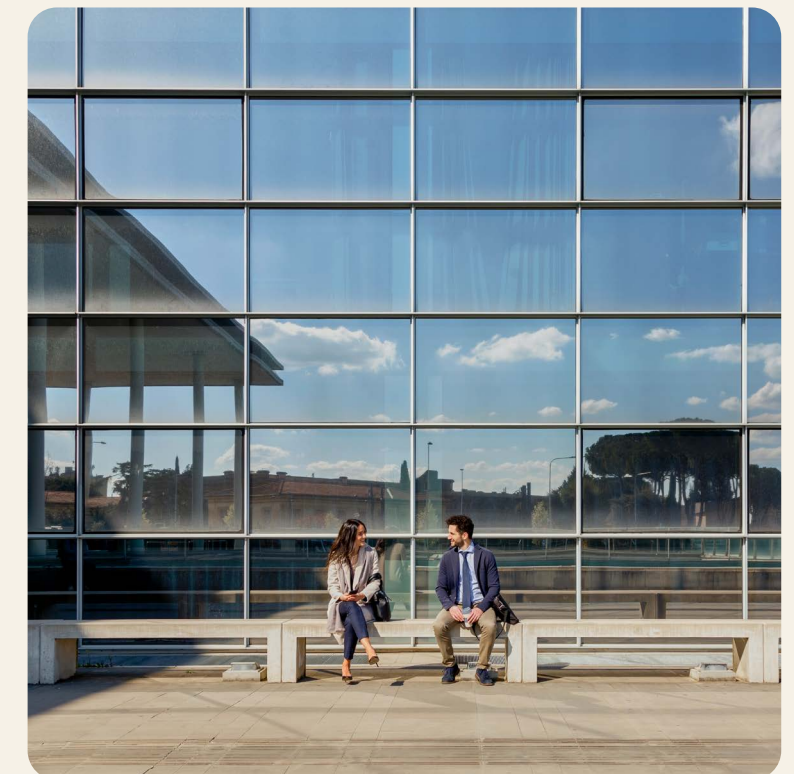
The growth of these productivity suites has cooled between 6 to 13 percentage points since our last report. In our 2021 data, Google delivered 38% YoY growth in number of customers and 42% by unique users, compared to Microsoft's 29% YoY growth in number of customers and 36% by unique users. That impressive momentum proved difficult to sustain, but growth is still strong as companies continue their digital transformations. And there's still room to grow: Gartner predicts that through 2026, the market for cloud platform as a service is projected to almost triple in size, from $62 billion in 2021 to more than $237.6 billion.[2]

Small organizations continue to drive the greatest increase in Google Workspace adoption (as they did a year ago), this year boasting a 35% increase in customers YoY, while large organizations' usage of Google Workspace grew just 18% YoY. The story is similar for Microsoft 365, which grew its customer base by 23% among small organizations and 11% among large organizations. ■

Battle of the bundles

Google grabs the gold

Google and Microsoft continue to duke it out for supremacy in the cloud-based office productivity suite battle. Microsoft 365 continues to take first place by number of customers, and Google again takes the gold for growth. Google Workspace boasts a 32% YoY increase in number of customers, 11 percentage points higher than Microsoft 365's 21% YoY growth. The growth by unique users has a 5 percentage-point spread, with 29% YoY growth for Google and 24% YoY growth for Microsoft.

Top productivity suites

	By Number of Customers	By Number of Unique Users
Microsoft 365	21%	24%
Google Workspace	32%	29%

Year-over-Year Growth

[2] Gartner®, "Hype Cycle™ for Cloud Platform Services, 2022" Yefim Natis, Fabrizio Biscotti, July 19, 2022.

Souring on the suite life

The rise of best of breed

Sometimes, a single suite just isn't sweet enough to deliver the superior productivity teams demand. Companies continue to add best-of-breed apps, such as Zoom, Slack, and Box, even when their preferred suite's bundle offers tools with nominally similar functionality. We define "best-of-breed apps" as those that dominate their categories for the standalone functionality they provide. Sometimes, only the best will do.

Okta's customers have gradually been supplementing their suites with an increasing number of best-of-breed apps. This year, a full 36% of Okta's Microsoft customers use four or more best-of-breed apps (up from 20% just five years ago).

First, let's talk about two collaboration favorites whose deployment continues to increase. The most common best-of-breed app we see added to productivity bundles is Zoom: 48% of Okta's Microsoft 365 customers also deploy

Zoom, up from 45% last year. And 36% of Okta's Microsoft 365 customers are deploying Slack to add extra collaboration functionality, up from 33% last year.

Some companies find they are best served by double bundling — deploying more than one productivity suite — and it's a trend that's on the rise. This year, 42% of Okta's Microsoft 365 customers also deploy Google Workspace, an increase of 4 percentage points YoY and 12 points over the past four years.

We continue to see that companies resist locking in one vendor for all their tools. For example, 47% of Okta's customers with Microsoft 365 are also deploying Salesforce, up from 45% a year ago. And 46% of Okta customers that deploy Microsoft 365 are also deploying AWS, an increase over last year's 43%. (More information about how many companies deploy multiple cloud platforms is available in our multi-cloud section.)

Okta's Microsoft 365 customers with best-of-breed apps

AWS: 36% 38% 41% 43% 45%
Box: 22% 24% 26% 29% 32%
Google Workspace: 30% 33% 36% 38% 42%
Salesforce: 44% 45% 47%
Slack: 28% 31% 32% 33% 36%
Smartsheet: 13% 15% 16%
Tableau: 10% 13% 14% 16% 18%
Zoom: 23% 32% 42% 45% 48%

0%   10%   20%   30%   40%   50%

Percentage of Okta's Microsoft 365 Customers with App

● 2018   ● 2019   ● 2020   ● 2021   ● 2022
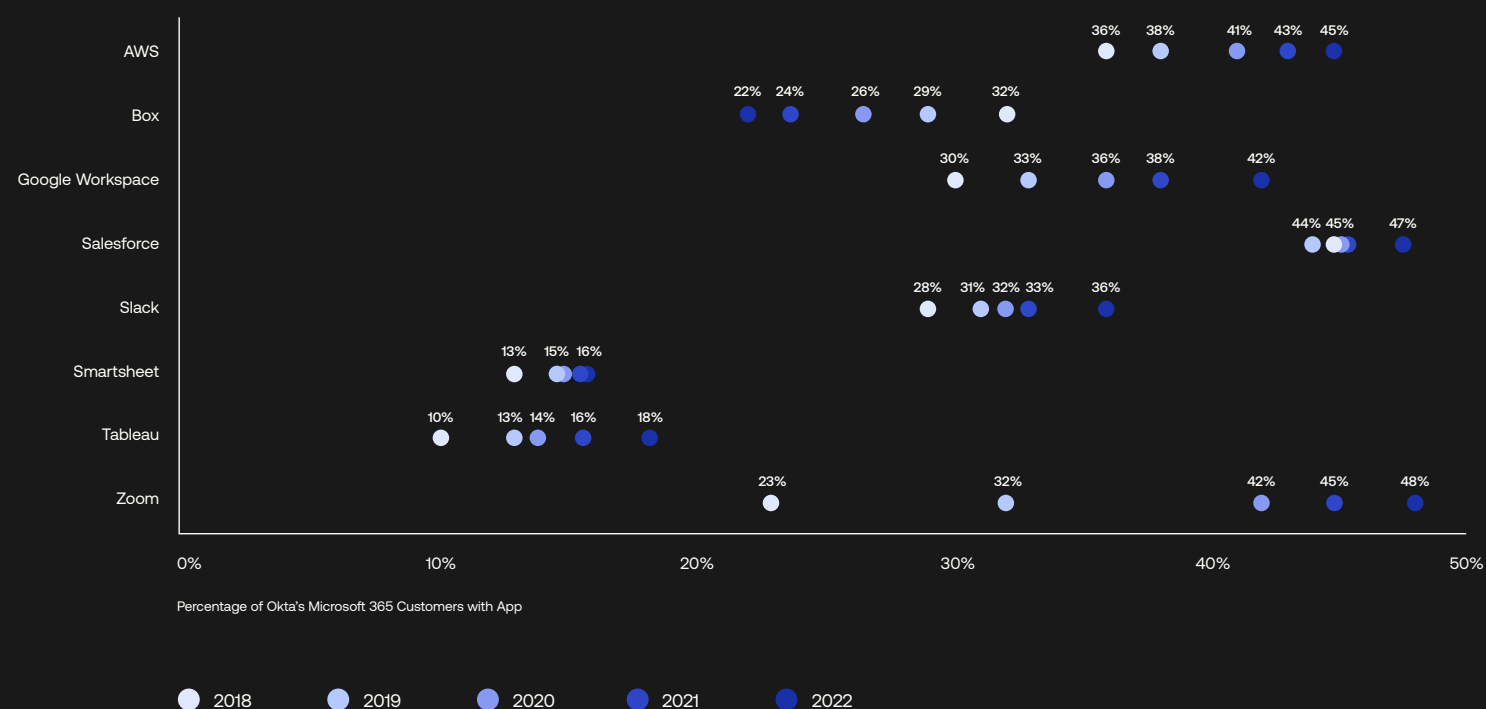
Note: Salesforce data for 2018, 2020, and 2021 are the same at the time of this report. Smartsheet data for 2019 and 2020 are the same at the time of the report, as are 2021 and 2022.

> " The most common best-of-breed app we see added to productivity bundles is Zoom: 48% of Okta's Microsoft 365 customers also deploy Zoom.

When we look at the data regionally, some interesting patterns emerge. The use of Zoom in North America is chart-topping — more than half (51%) of Okta customers that deploy Microsoft 365 in North America also deploy Zoom, 3 points higher than a year ago, and higher than any other best-of-breed data point.

In EMEA, we continue to see the rise of cloud infrastructure and cloud-based collaboration apps. An impressive 46% of Okta's Microsoft 365 customers in EMEA also use Google Workspace, an increase of 5 points compared to last year. Slack use is also increasing among this group, rising to 37% of Okta's Microsoft 365 customers in EMEA this year — a 5-point increase over last year. On the other hand, deployment of Zoom increased "only" 1 percentage point, from 34% last year to 35% this year.

The APAC region shows the highest deployment of AWS among Okta's Microsoft 365 customers, at 48%. The region is also heavily investing in multiple productivity suites, with 41% of Okta's Microsoft 365 customers now deploying Google Workspace (an 8-point YoY increase). Slack usage among Okta's Microsoft 365 customers is also on the rise in APAC, reaching 31% (a 4-point YoY increase). Box usage is up 2 points over last year in this region, and the app is now deployed by 19% of Okta's Microsoft 365 customers.

Parsing the data by company size, we can see that, among Okta customers deploying Microsoft 365, smaller companies (with fewer than 2,000 employees) are more likely to supplement their Microsoft 365 bundle with best-of-breed apps and by double bundling. Zoom usage, for example, at 49% is 8 percentage points higher among smaller companies than among larger organizations (41%). A full 37% of small companies that deploy Microsoft 365 are also deploying Slack, versus 33% of large companies. This trend holds on the double-bundling front too: 42% of smaller companies that deploy Microsoft 365 also deploy Google Workspace, versus 39% of larger companies. ∎

Growth of developer tools

We see you… monitoring apps on the rise

The category of developer tools is clearly maturing. No longer are SDKs and other coding software the leading tools; rather, we're seeing the rise of monitoring and testing apps. No surprise in a security-focused world where the next major breach could be one bad line of code, unpatched server, or open port away.

"

> The Atlassian Product Suite is the most popular developer 'tool' by number of customers and has dominated this chart for years.

This year, we see substantial growth in apps that help organizations monitor their systems and respond quickly, suggesting that developers have increased their focus on the latter stages of development. In fact, our customers' 10 most popular developer tools all provide resources for monitoring, incident response, and testing.

The Atlassian Product Suite is the most popular developer "tool" by number of customers and has dominated this chart for years. (In our OIN data, it's a roll-up of apps that includes Confluence, Jira, Trello, and Bitbucket, all accessed by a subscription to Atlassian Access.) Despite its existing large customer base, the Atlassian Product Suite boasted significant 36% YoY growth in number of customers last year, and continues that trend with 27% growth this year.

The prize for fastest growing developer app goes to API-testing tool Postman, triumphing in both growth categories. Last year, Postman was our third-fastest growing app overall by number of customers, and our fifth-fastest growing app overall by unique users. This year, it wins Developers' Best of Show as the clear growth leader on the acceleration matrix, displaying YoY growth of 78% by customers and 168% by unique users.

Growth of the most popular developer tools

Average Growth
by Number of Customers

Postman

160%

Sentry

120%

Twilio Engage   LaunchDarkly

BrowserStack

80%

Jenkins

Datadog

Rollbar   Splunk

GitHub

PagerDuty

Average Growth by
Number of Unique Users

40%

Atlassian Opsgenie

Atlassian Statuspage   Atlassian Product Suite

New Relic

Jfrog Artifactory

JetBrains   Sumo Logic

MuleSoft Anypoint Platform

Bugsnag

0%   Apple Developer   LogicMonitor

Docker Hub   CoderPad   GitLab

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

Year-over-Year Growth by Number of Customers

(y-axis label) Year-over-Year Growth by Number of Unique Users

Legend

- Altassian Product Suite
- GitHub
- PagerDuty
- Datadog
- Sentry
- Splunk
- Jenkins
- New Relic
- Altassian Statuspage
- Sumo Logic
- Altassian Opsgenie
- BrowserStack
- Postman
- Twilio Engage
- LaunchDarkly
- LogicMonitor
- GitLab
- JetBrains
- MuleSoft Anypoint Platform
- Jfrog Artifactory
- Apple Developer
- CoderPad
- Bugsnag
- Docker Hub
- Rollbar

Note: The Atlassian Product Suite includes Confluence, Jira, Trello, and Bitbucket, which are frequently accessed together via a subscription to Atlassian Access.

Feature management tool LaunchDarkly also posted some impressive numbers, with 74% YoY growth by customers and 97% growth by unique users. Monitoring tool Sentry, another fastest growing app in 2020, moved up from No. 8 last year to No. 5 on this year's list of top developer tools, growing 53% by customers and 128% by unique users YoY. And Twilio Engage — a combination of Twilio's Customer Engagement Platform and Segment's Customer Data Platform — is another growth leader, reporting YoY growth of 58% by customers and 99% by unique users.

Other high-performing developer apps include DataDog, another monitoring tool, which grew 42% YoY by number of customers and 67% YoY by unique users. Also deserving attention: development platform GitHub, a steady performer that has made it into our top 15 apps overall since 2019, and this year racked up impressive 39% YoY growth in customers and 59% YoY growth in unique users. GitLab, the seventh-fastest growing app among our overall fastest growing apps, blew us away with 97% YoY growth in customers. Note that in the OIN, Gitlab is configured to only support user provisioning and not authentication, so we do not see the number of unique users accessing the tool (hence the display of 0% growth by unique users). ∎

Most popular HR tools

The apps powering people success

Many companies did a laudable job of scrambling to meet their employees' changing needs during the Covid crisis and beyond. But evolving employee engagement continues to be a high priority for HR departments — and with good reason. As Deloitte Consulting puts it: "The development of emotional connections between employees and their place of work, post-COVID, will lead to lower employee turnover, improved productivity, and motivation."

This year, we see employee engagement tools that support remote work posting big gains in the HR category. Workday is the category's "gorilla in the room" — this HR pack leader is also the No. 2 overall app by number of unique users, second only to Microsoft 365. BambooHR, which describes itself as "software for small and medium businesses" is quickly closing the gap on Workday, just barely trailing the industry leader as No. 2 by number of customers. Last year, employee engagement platform Lattice was our No. 4 HR app, and this year

they've posted an astounding 75% YoY growth in number of customers to claim third place.

Bob, the HR platform you might accidentally invite to a meeting, isn't just an HR up-and-comer... it's one of our fastest growing apps overall this year, boasting 123% YoY growth in customers. UKG (a rebranding and combining of Kronos and Ultimate Software that includes Kronos and UltiPro) has always performed well on our charts, consistently ranking as one of our most popular apps by unique users. It continues to turn in strong numbers, ranking as the No. 4 HR app this year by number of customers, but No. 5 Culture Amp seems eager to steal its seat.

Breaking down the numbers by industry, we see that Workday ranks first by customers among the majority of industries, but among tech and professional services industries, BambooHR securely holds the top spot. ∎

Most popular HR tools

Number of Customers

2016 2017 2018 2019 2020 2021 2022

- ● Workday
- ● BambooHR
- ● Lattice
- ● UKG
- ● Culture Amp
- ● Paylocity
- ● SAP SuccessFactors
- ● Bob
- ● 15Five
- ● Namely
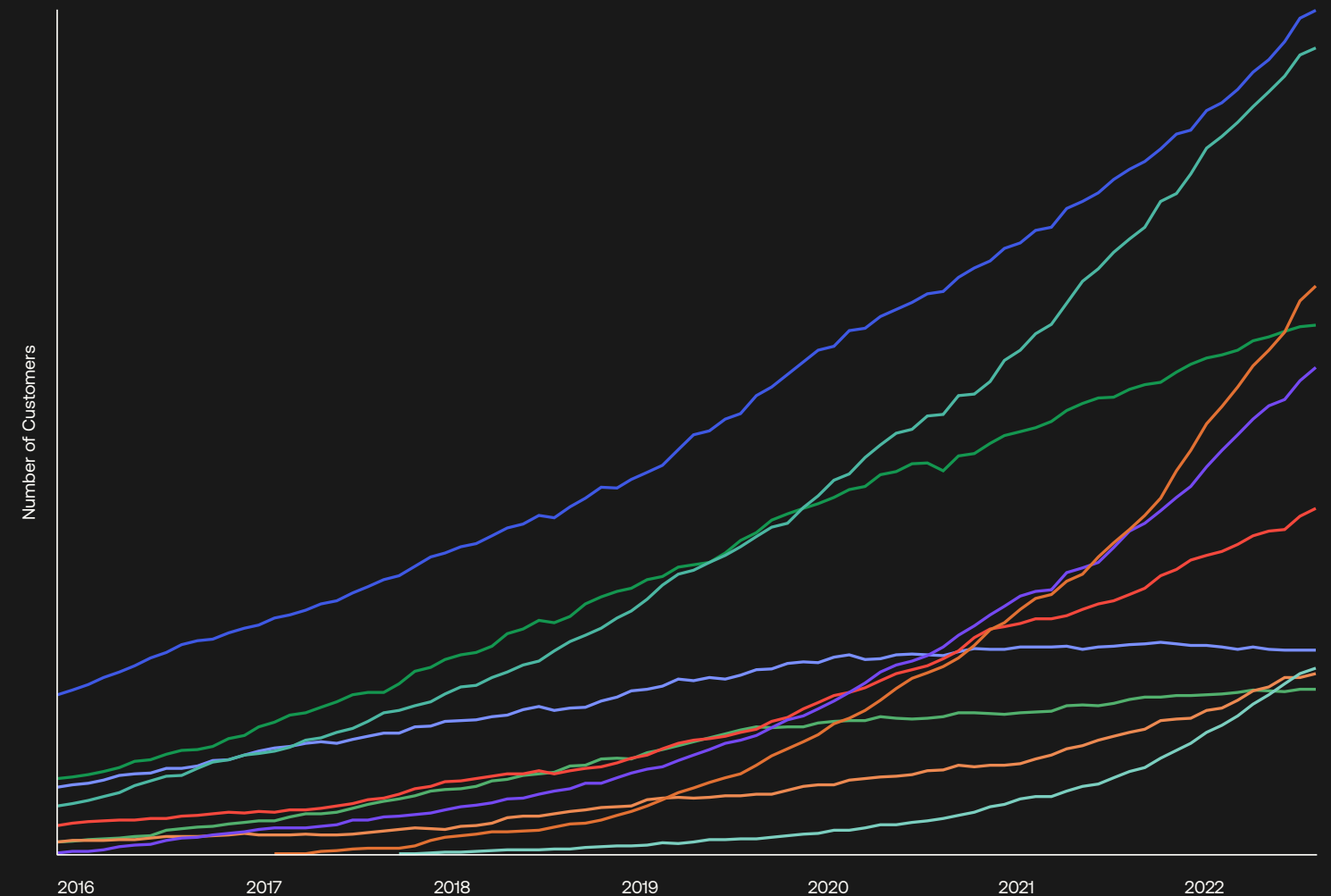
" BambooHR[...] is quickly closing the gap on Workday, just barely trailing the industry leader as No. 2 by number of customers.

Growth of remote access solutions

Secure access starts at home

Recent circumstances drove companies across all industries to explore remote work. And when those circumstances changed … well, remote work dug in its heels. According to projections from data scientists, a full 25% of all professional jobs in North America will be remote by the end of 2022, and remote opportunities will continue to increase through 2023. HR departments, ever in competition for the best workers, are eagerly supporting this hybrid work environment, and IT departments are making it happen. We're seeing the number of customers using remote access tools continue to increase, long after the pandemic peak. Looks like button-down shirts tucked into yoga pants outside the Zoom frame are here to stay.

In terms of remote access solutions, Palo Alto Networks GlobalProtect, which provides enterprise security protection

to mobile users, is still the clear category leader, boasting 26% growth in customers YoY and 79% growth since 2020. Cisco AnyConnect, which provides secure endpoint access, takes our second spot, boasting notable 20% YoY growth in customers (another solid year for an app that logged 32% growth last year). Our third-place remote access tool, AWS Client VPN, claimed the fastest growth in the remote-access pack this year, scoring a substantial 68% growth by number of customers YoY. But it'll have to keep up the pace: Last year's fifth-place finisher, Zero Trust network access (ZTNA) solution ZScaler, moves up to fourth place this year. And a bit further down, Palo Alto Networks Prisma Access (another ZTNA solution) makes its debut on the remote access tools list this year, jumping straight to the No. 8 spot. ∎

Most popular remote access solutions

- Palo Alto Networks GlobalProtect
- Cisco AnyConnect
- AWS Client VPN
- Zscaler
- Fortinet FortiGate
- Netskope
- OpenVPN
- Palo Alto Networks Prisma Access
- Tailscale
- Pulse Secure
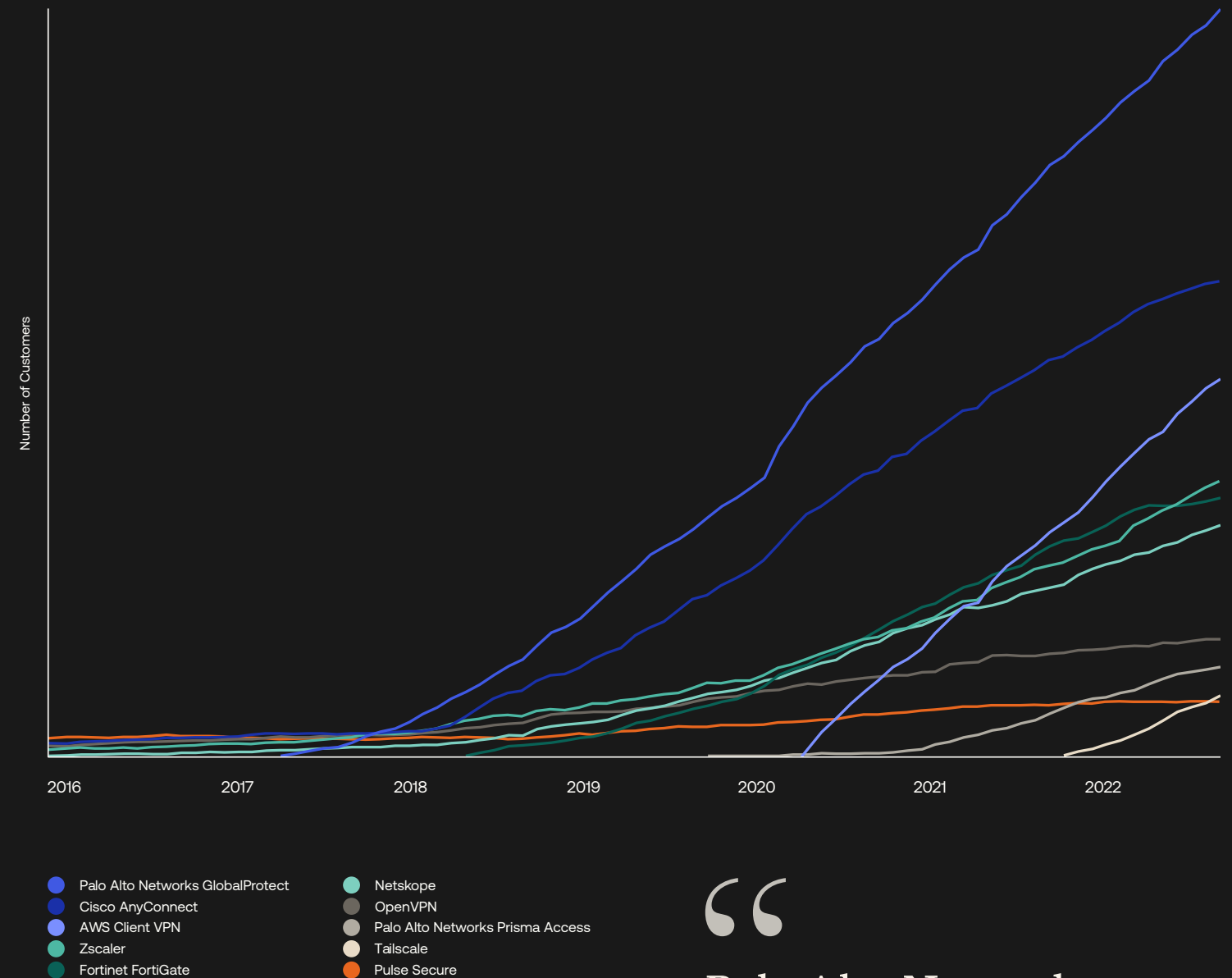
" Palo Alto Networks GlobalProtect […] is still the clear category leader, boasting 26% growth in customers YoY and 79% growth since 2020.

Apps for Good

Making a positive impact

The world today seems to be particularly unsettled. Between the war in Europe, climate change wreaking havoc, rising awareness of racial and ethnic inequality, and the unwelcome return of global inflation, it would be easy to throw up our hands and return to our pandemic bunkers. But rather than hunker down, workers around the world are fighting back — striving to do good through donations, volunteering, and mentoring.

According to Giving USA's "Annual Report on Philanthropy," Americans have become more philanthropic than ever: Individuals, bequests, foundations, and corporations gave an estimated $485 billion to US charities in 2021, representing 4% YoY growth over the previous record total of $466 billion contributed in 2020.

It's clear that both companies and employees want to give back, and Okta Apps for Good makes donating and volunteering easier than ever before, contributing to a growing global pool of generosity. In all, more than 1.6 million Okta users have access to these apps — a whopping 26% increase over last year's 1.2 million users. In fact, each of this year's top four Apps for Good has more than 40,000 active unique users assigned. (Last year the top apps each had more than 10,000 active users assigned.) That's a record of growth donors can be proud of. Note that our totals include users assigned at the organizational level as well as individuals who chose to add the apps to their own Okta dashboard.

Last year's leader, Benevity — a charitable donation and grant management platform — continues to hold the top spot, claiming by far the largest number of users assigned. Among Okta customers deploying an App

Most popular charitable giving apps by number of users assigned

1.	benevity
2.	YourCause® from Blackbaud
3.	CareerVillage
4.	Bright Funds
5.	VolunteerMatch
6.	Visit.ORG
7.	kindlink
8.	Vote.gov
9.	VIO
10.	kiva

Note: Data includes both personal and corporate apps

for Good, 23% deploy Benevity. The No. 3 charitable app on our list, CareerVillage — a nonprofit organization that connects high school students to real-world professionals for career advice — is on a tear, jumping up from No. 9 last year. Now 48% of Okta customers that deploy an App for Good deploy CareerVillage, followed by 28% deploying Vote.gov, and 25% deploying the corporate social responsibility app KindLink. The three apps with the highest rates of YoY growth of total assigned users are CareerVillage, Visit.org, and Vote.gov, in that order. ■

Workflow adoption by industry
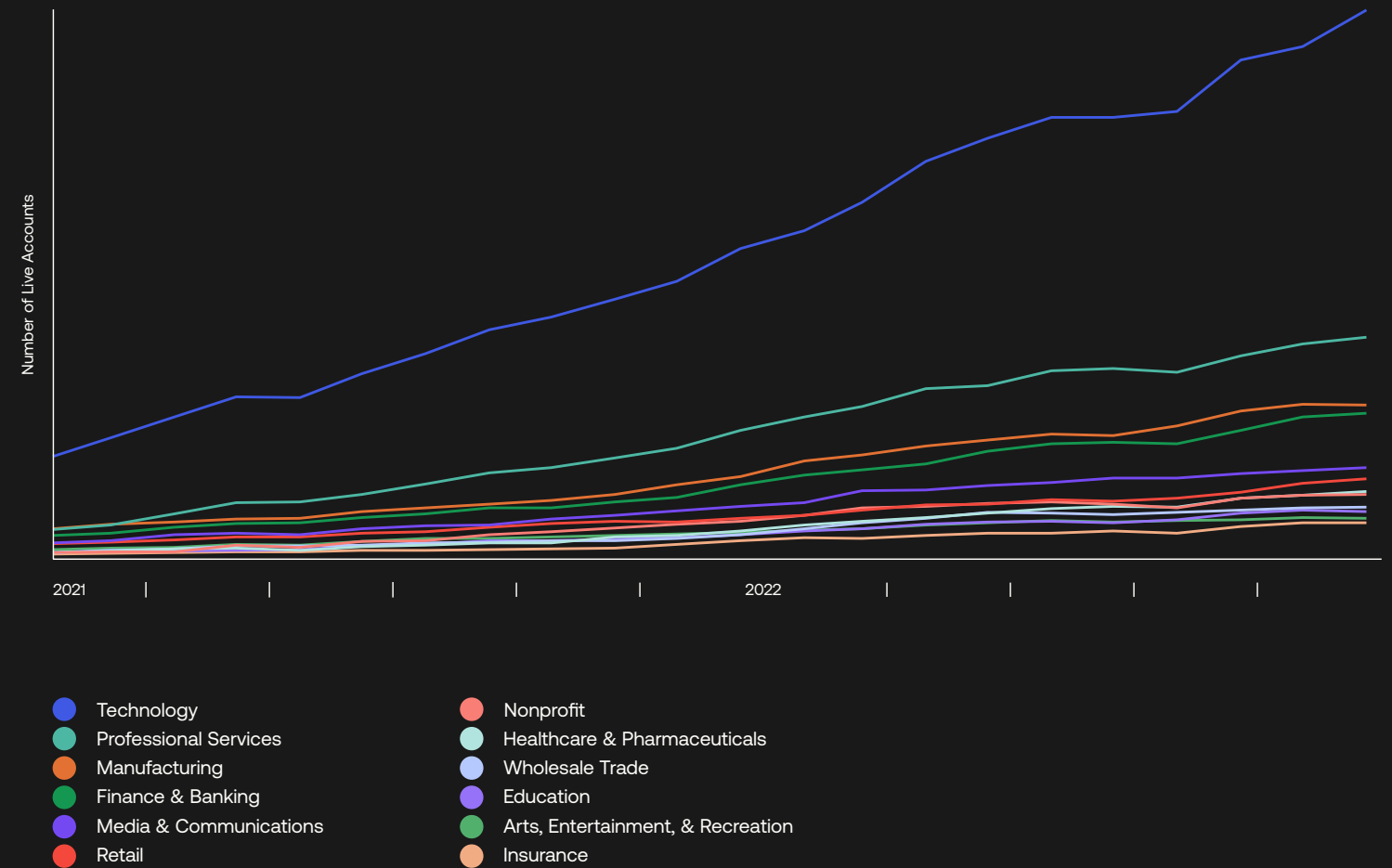
Go with the flow

IT staff are often stretched thin, dealing with an ever-growing set of manual tasks to tighten security, enable remote work, onboard new employees, and so on. That's why so many organizations across a variety of industries are turning to workflows, to securely automate routine processes wherever they can. Okta Workflows, for example, make it easy to automate Identity management processes at scale without writing code. This frees up IT staff to focus on higher-level tasks, while hardening security and improving efficiency.

Let's look into how different industries are adopting workflows. (Note that we define live accounts as customers that deploy workflows and are actively using them.) In this inaugural section of our report, tech leads in the number of live accounts deploying workflows and ranks

second for workflows per live account with an average of 38. (The insurance industry averages even higher workflow deployment at 40 workflows per account.) Professional services, which boasts an average of 30 workflows per account, comes in second. Manufacturing, financial services, and banking finish close behind at No. 3 and No. 4, respectively, by number of live accounts.

Many sectors are starting to catch up to tech. Looking at the growth of accounts using workflows over the past six months, the healthcare and pharmaceuticals sector leads the way, with 58% growth by number of live accounts, and finance and banking comes in second, with 52% growth. We expect workflow adoption to continue growing at a steady clip as companies across industries catch on to this efficiency play. ∎

Workflow adoption by industry

Number of Live Accounts

2021   2022

- Technology
- Professional Services
- Manufacturing
- Finance & Banking
- Media & Communications
- Retail
- Nonprofit
- Healthcare & Pharmaceuticals
- Wholesale Trade
- Education
- Arts, Entertainment, & Recreation
- Insurance

"

Many sectors are starting to catch up to tech. Looking at the growth of accounts using workflows over the past six months, the healthcare and pharmaceuticals sector leads the way… and finance and banking comes in second.

The rise of multi-cloud

One is the loneliest number …

At this point, most companies are deep into their digital transformation journeys, with the goal of providing secure anytime-anywhere access for their employees. If they hadn't already started moving to the cloud by the spring of 2020, the Covid-19 pandemic likely gave them the boost — and business justification — they needed. Companies are turning to cloud solutions in droves and for a wide variety of reasons including: more efficient hybrid workforce support, faster data access, shorter app deployment times, more reliable security, and more seamless global collaboration. Gartner forecasts that worldwide public cloud end-user spending will reach nearly $600 billion by the end of 2023.[3]

But for many companies, cloud platforms are like potato chips — you can't stop with just one. Our data shows that the growth in multi-cloud adoption we've been seeing since 2017 shows no sign of slowing down anytime soon. While AWS remains dominant as both a single-cloud platform and as part of many organizations' multi-cloud strategies, we see exciting growth from other providers on the horizon.

[3] Gartner®, "Gartner Forecasts Worldwide Public Cloud End-User Spending to Reach Nearly $500 Billion in 2022", April 19, 2022.

The most popular cloud platforms

Forecasting more cloud cover

Remember way back when shifting your enterprise to the cloud was a stretch goal? Ah, memories. Organizations today need to be able to safely provide their workforce with anytime, anywhere access to data, workflows, productivity, and collaboration tools — and the cloud makes that possible. Cloud migration is no longer a trend; it's a business imperative. And companies that are only partly cloudy risk being blown off course.

AWS continues its reign as the most popular cloud platform as a service, with nearly eight times as many customers as second-place Microsoft Azure. This go-round, AWS boasts 27% YoY growth in customers and 50% growth in unique users (on top of the 32% YoY growth in customers it posted last year). Seems like there's no stopping AWS. Last year's second-place finisher, Microsoft Azure, is still holding on to that rank, but by the slimmest of margins, with GCP

nipping at its heels. GCP is growing at an impressive clip, with a 40% YoY increase in number of customers and 60% increase in unique users, and will likely overtake Azure before the virtual ink dries on this digital page. By comparison, Azure grew its customer base by 10% YoY and its unique users by 16% YoY.

Last year, we gave two thumbs up to Terraform Cloud by HashiCorp — then our eighth-ranked cloud platform — for posting 70% growth in just six months. If we had a third thumb, it would be up now too: Terraform Cloud is clearly the growth leader in our cloud platform acceleration matrix, with 93% growth in customers YoY and 192% growth by unique users. That customer growth earns Terraform Cloud the title of seventh-most-popular cloud platform and ninth-fastest growing app overall this year. Who knows what next year will bring for this plucky upstart? We may need more thumbs (and custom gloves). ■

Growth of the most popular cloud platforms
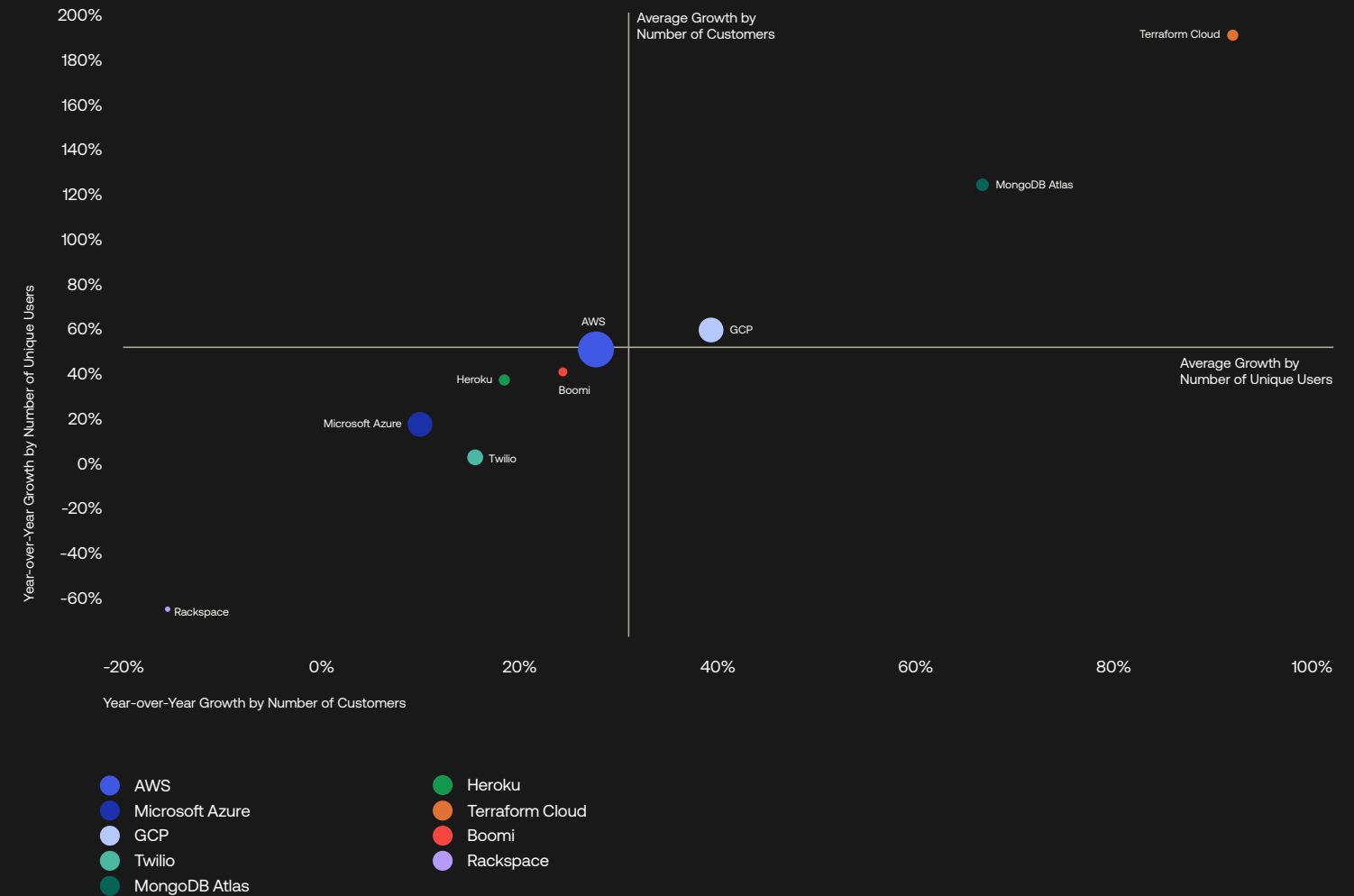
> "Terraform Cloud is clearly the growth leader in our cloud platform acceleration matrix, with 93% growth in customers YoY and 192% growth by unique users.

The most popular cloud combos
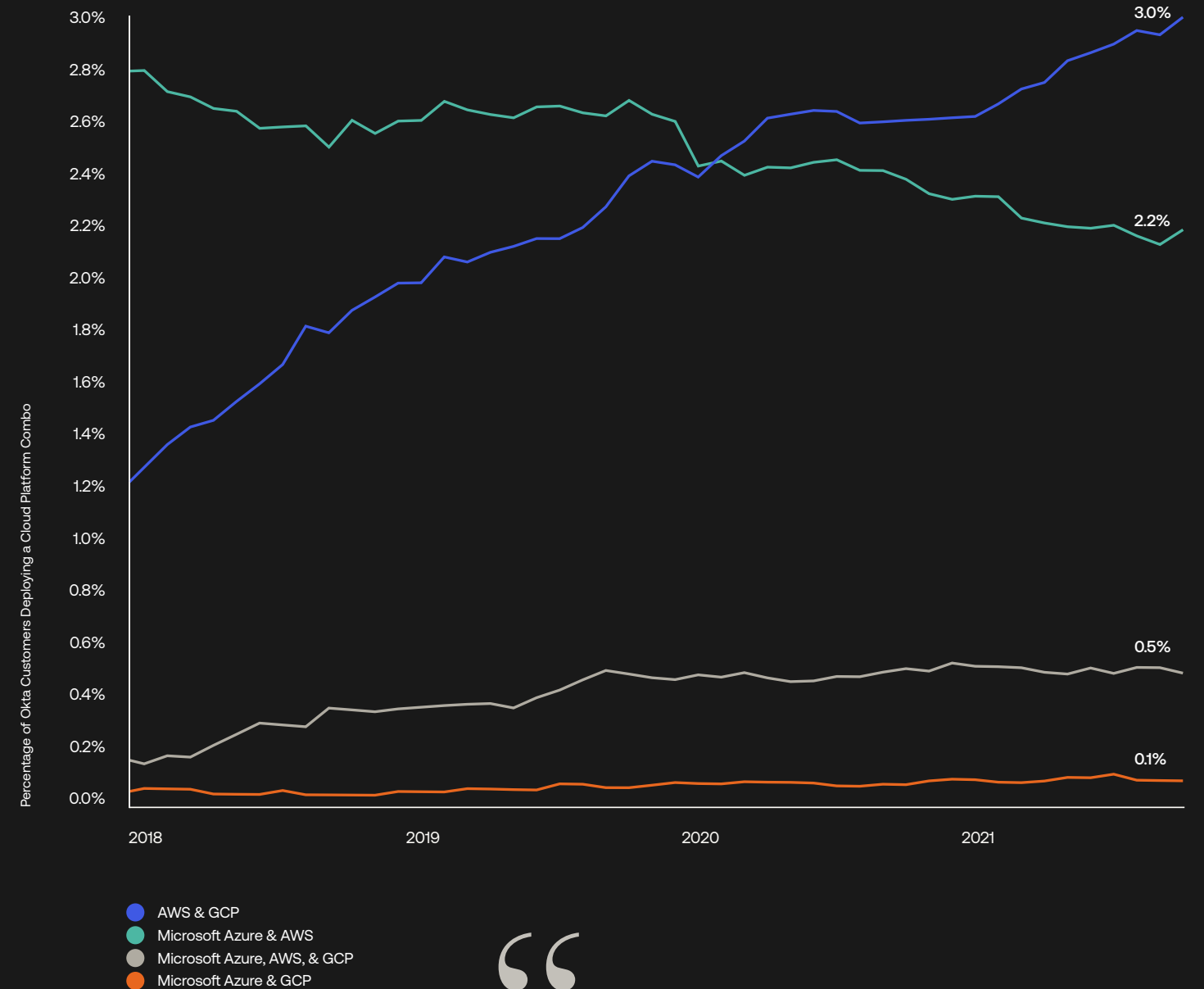
Two is better than one

The number of customers integrating at least one cloud platform with Okta has been slowly on the rise. But enterprises are complex, and many companies aren't just deploying a single cloud platform — they're choosing more than one, a trend we first reported on in 2019. Of those customers deploying at least one cloud platform through the OIN in 2022, 14% are deploying two or more of them.

The number of possible cloud platform combos might boggle the mind, but there is a clear leader: More customers are deploying AWS and GCP than any other pairing. The percentage of customers deploying both AWS and GCP has risen to 3% from 2% two years ago. As a standalone cloud service, AWS usage continues to grow; however, the combo of AWS plus Microsoft Azure has declined from 3% two years ago to 2% today. Fewer than

1% of customers deploying a cloud platform combo are choosing Azure plus GCP or Azure, AWS, and GCP, a number that's unchanged from last year.

So why do companies choose a multi-cloud strategy? Some may be looking for vendor-specific capabilities or best-of-breed functionality — for example, they may want to leverage Google's strength in application container deployments. (Google developed the Kubernetes app management standard.) In some cases, it may come down to better integration of on-premises software running mission-critical apps, cloud deployments inherited through mergers and acquisitions, or cost-cutting measures. Multi-cloud use is growing YoY, but not like a gathering storm front — more like a gentle billowing. ◾

Customers deploying multiple cloud platforms

Percentage of Okta Customers Deploying a Cloud Platform Combo

3.0%
2.8%
2.6%
2.4%
2.2%
2.0%
1.8%
1.6%
1.4%
1.2%
1.0%
0.8%
0.6%
0.4%
0.2%
0.0%

2018   2019   2020   2021

3.0%
2.2%
0.5%
0.1%

● AWS & GCP
● Microsoft Azure & AWS
● Microsoft Azure, AWS, & GCP
● Microsoft Azure & GCP

"

The number of possible cloud platform combos might boggle the mind, but there is a clear leader: More customers are deploying AWS and GCP than any other pairing.

Apps for our lives

The line between work life and personal life has blurred, possibly forever. Some personal tasks can only be completed during standard business hours. Companies know that their employees are tending to their lives during work hours, and employees who need to be reachable on nights and weekends may feel a bit less guilty about occasionally surfing the web like no one is watching. Wherever we are, we're managing our finances, tracking our health and fitness, and coordinating our social lives. After all, the work day is long, time off is short, and that 5K race time isn't going to log itself.

In this section, we look at apps deployed company-wide as well as apps individual employees have added to their dashboards. (We refer to this combo as "corporate plus personal.") It seems like we're paying for everything online now, and in fact, digital payment platforms are on the rise. Enough people are getting serious about fitness that we see a great increase in the use of fitness and mental health trackers as well. And finally, if you're going to put all the work into getting fit, why not share the videos with the world? Video-sharing tools are growing fast, while micro-blogging tools are losing ground. Connect away, we won't tell your boss.

Most popular banking and finance apps

What's in your e-wallet?

A lot has changed since we last checked in with the big-money apps three years ago. In 2019, PayPal was the only player in the digital payment space to make it into our top 10. Today, there may well be more digital payment apps than dollars left in your digital wallet — thanks, inflation — and two more have gained enough critical mass to make

> " PayPal, the most popular banking and finance app [...] continues to hold a tight rein on the top spot, but digital payment apps Stripe and Venmo now claim a seat at the counter as well.

it onto our list. PayPal, the most popular banking and finance app in 2019, continues to hold a tight rein on the top spot, but digital payment apps Stripe and Venmo now claim a seat at the counter as well. (Neither ranked in the top 10 three years ago.) These "new money" apps are

growing at a faster rate than PayPal: Looking at the YoY growth by number of customers, Stripe has jumped 33%, and Venmo is up 26%. PayPal is still growing, though, at 20% YoY.

As for the rest of the field? Conventional banking and finance app Bank of America had just snagged the rank of No. 2 among banking and finance apps in 2019, and it's held on to its silver medal since then. But with just an 11% increase in customers YoY, it's leaving room for competitors to eventually close the gap. Fidelity has bypassed American Express and Wells Fargo to seize the No. 3 spot with 16% YoY customer growth, so we'll keep our eyes on this tightening race.

When we look at the data by number of unique users, Shareworks by Morgan Stanley is by far the most popular app. Over the past three years, this tool that enables individuals to manage their employee stock options has grown 291% by number of unique users. ∎

Most popular banking and finance apps

Number of Customers

2016   2017   2018   2019   2020   2021   2022

- PayPal
- Bank of America
- Fidelity
- American Express
- Stripe
- Wells Fargo
- Intuit Mint
- Chase
- Schwab
- Venmo
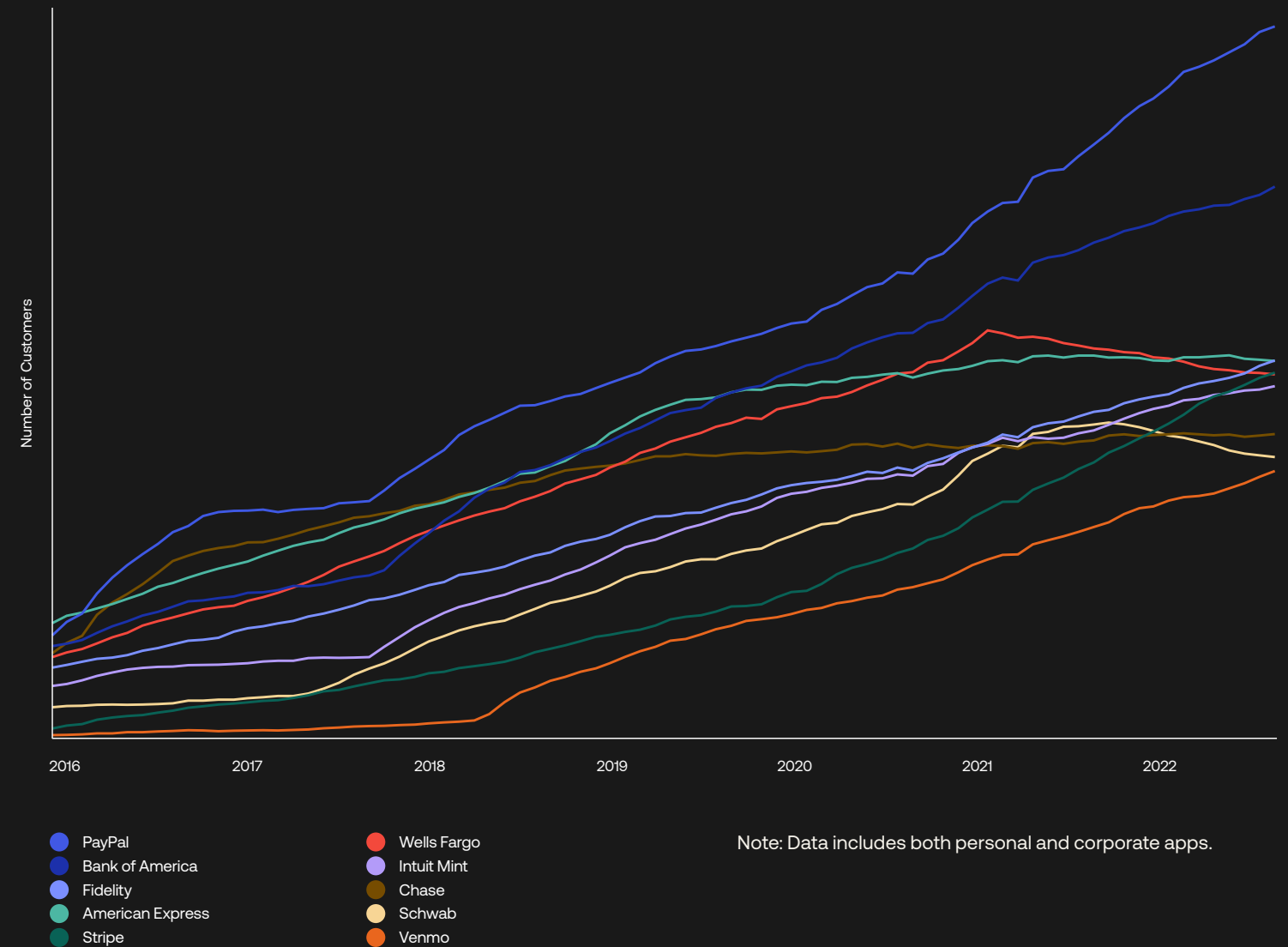
Note: Data includes both personal and corporate apps.

Fitness flexes, dieting slims down

Health and wellness apps show improved vigor

Fitness is running away with this category, and diet culture is looking a little lean. Six of the top 10 apps in this year's top ranks focus on exercise in one form or another. Our top four apps — Fitbit, MyFitnessPal, Strava, and Garmin Connect — all give users a way to track exercise, activity, and performance. Their robust progress shows that even data nerds like us are leaving the office sometimes. Among the fitness apps, the exercise performance tracking app Nike Run Club is experiencing the largest burst of speed, increasing its customer base 23% YoY.
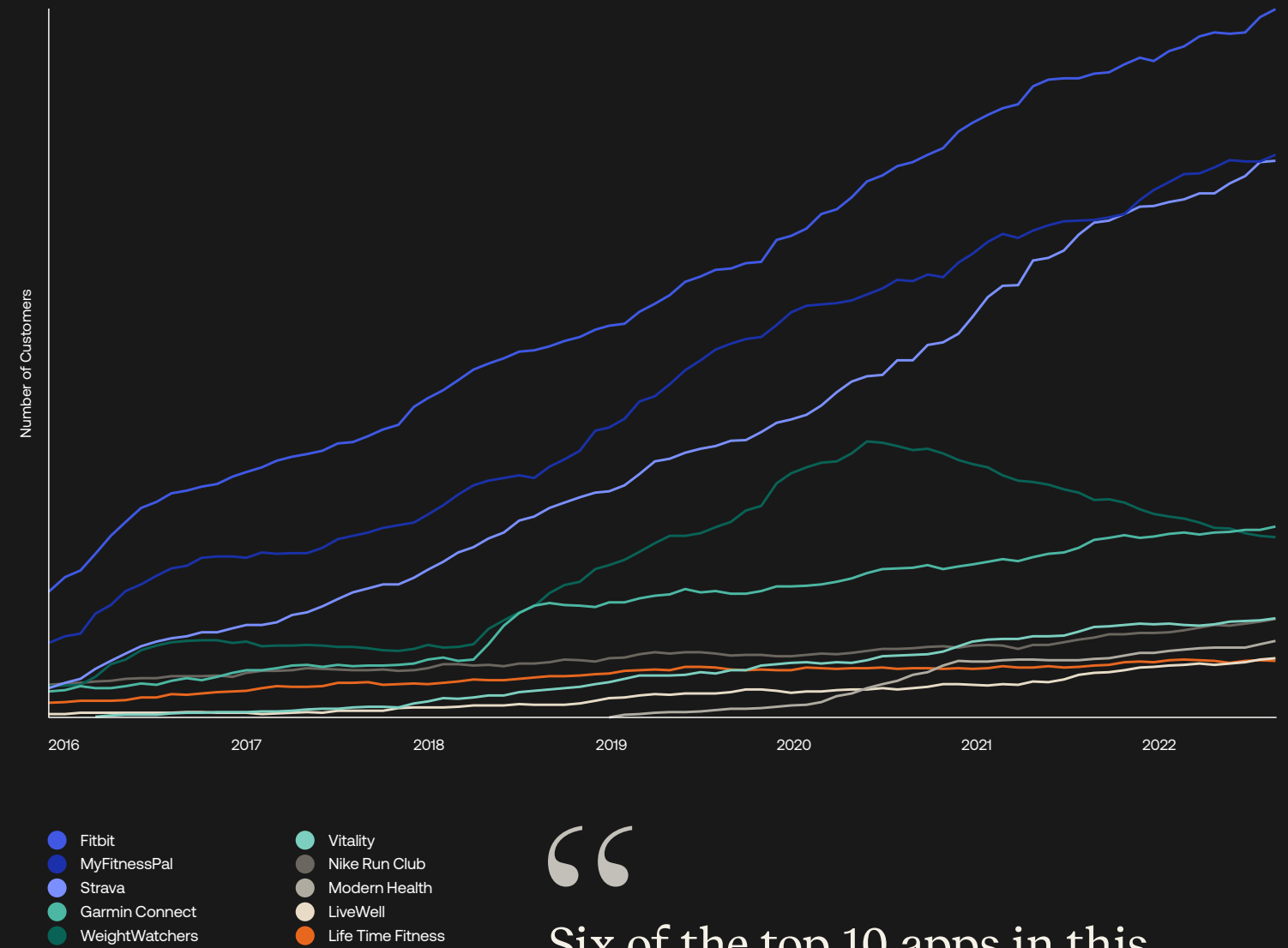
Dieting, on the other hand, seems to be falling out of favor as a stand-alone practice. WeightWatchers, which had a moment in June and July of 2020 (after we gorged ourselves during the "make all the pretty food" days of the pandemic), is sinking like a bad-decision donut. It's lost a lot of heft in our report as well, dropping 17% of its customers YoY.

And which apps are covering ground rapidly? Our two fastest growing apps by number of customers, LiveWell from Optum (up 32% YoY in customer growth) and Modern Health

(up 30%), help us improve our mental health, resiliency, and work-life balance. Mental health is a growing priority for companies, with 78% of organizations currently offering mental health resources or planning to add them in the next year. The World Health Organization estimates that "Globally, an estimated 12 billion working days are lost every year to depression and anxiety at a cost of $1 trillion per year in lost productivity," making mental health an important issue for both socially-minded and fiscally-minded companies to address.

Of course, health and wellness all comes down to the individual, right? Looking at health and wellness apps by the number of unique users, we see Modern Health far and away claims the gold, propelled to No. 1 by impressive 228% growth over the past two years. Health engagement platform Vitality takes the silver for number of unique users and claims 73% growth over the past two years. Exercise tracker Strava is the third-most-popular app by unique users, with Fitbit breathing down its neck in fourth place. ∎

Most popular health and wellness apps

Number of Customers

2016   2017   2018   2019   2020   2021   2022

● Fitbit   ● Vitality
● MyFitnessPal   ● Nike Run Club
● Strava   ● Modern Health
● Garmin Connect   ● LiveWell
● WeightWatchers   ● Life Time Fitness

Note: Data includes both personal and corporate apps.

"

Six of the top 10 apps in this year's top ranks focus on exercise in one form or another. Our top four apps — Fitbit, MyFitnessPal, Strava, and Garmin Connect — all give users a way to track exercise, activity, and performance.

Most popular social media platforms

The leaders of likes, follows, and shares

So many browser tabs open, so little time to stay updated on life outside of work. Who can resist the lure of friends' vacation videos, hot new restaurant reviews, and the fleeting chance to sign up for the easy snacks for the soccer game? It's okay; we all do it.

Of our top 10 social media apps, only list-leader LinkedIn has a clear-cut business function — though some might use it more to find their next employer than to promote their current one. (Personal emails go in the "Contact" field, right?) The rest of our list... well, those apps are generally more focused on connecting with others and sharing opinions and content.

LinkedIn has been the leader on our social media charts for as long as we've kept track and continues its upward trajectory. This year, it's our fourth-fastest growing s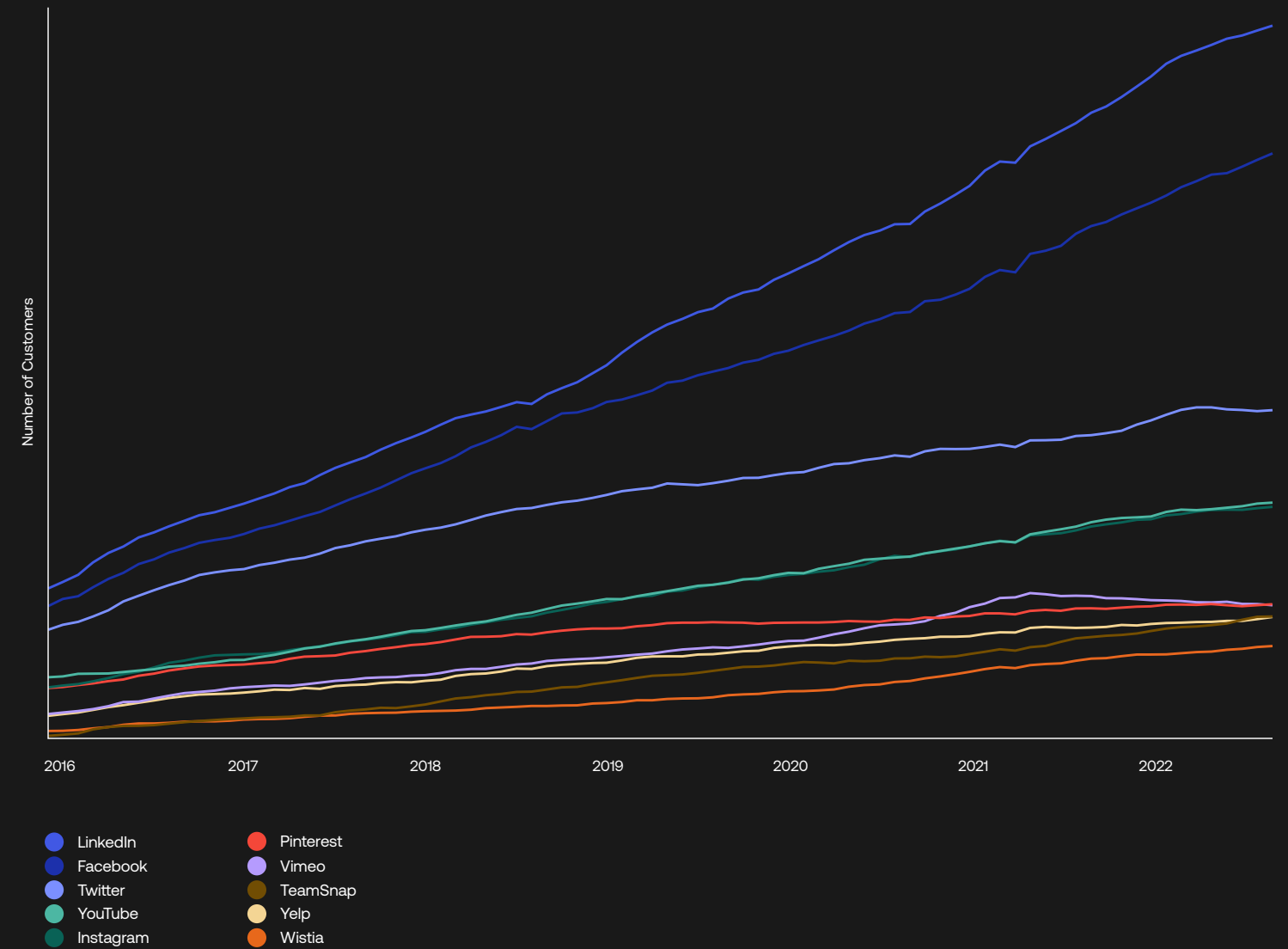ocial media app as well, enjoying 14% YoY growth in number of customers. Our perpetual second-most-popular app, Facebook, is gaining customers at the same rate. As for our traditional No. 3, Twitter? Well, that growth peaked in May, shortly after Elon Musk announced his intentions to buy the company. By the time the deal finally went through in October, we had already started to see unfollowers flatten Twitter's customer growth. Still, Twitter remains one of our top 50 apps by number of customers, squeaking in at No. 49. #top50

TeamSnap, No. 8 on our social media list, is experiencing impressive 20% YoY growth in customers — no surprise for those whose kids are juggling multiple sports commitments and schedules more complex than a NASA rocket launch. At No. 10 on our list, video hosting platform Wistia posted 15% customer growth YoY, while popular video-sharing hub Vimeo's growth has slowed dramatically this year. That's the fickle nature of ever-changing content-sharing preferences for ya.

What happens if we look at social media apps by unique users, instead of by customers? Our No. 1 tool becomes Employee Advocacy by Sprout Social (formerly Bambu by Sprout Social), a platform that enables employees to easily post approved content to their social networks. Employee Advocacy by Sprout Social even pulls ahead of LinkedIn thanks to astounding 745% growth by unique users over the past three years. (During this same time period, the number of unique users at LinkedIn has grown 66%, and Facebook a similar 64%.) From this unique-user lens, Twitter takes seventh place overall, with the number of unique users accessing Twitter growing 50% from October 2019 to a peak in June 2022 before reversing course and shrinking by 20% between June and October 2022. ∎

Most popular social media platforms

Number of Customers

- LinkedIn
- Facebook
- Twitter
- YouTube
- Instagram
- Pinterest
- Vimeo
- TeamSnap
- Yelp
- Wistia

2016 2017 2018 2019 2020 2021 2022

Note: Data includes both personal and corporate apps.

> " LinkedIn has been the leader on our social media charts for as long as we've kept track and continues its upward trajectory.

Security at work

Perimeter-based security was never designed for dynamic, cloud-driven environments and has struggled to meet modern security needs. Instead, the market prioritizes Identity security, a best practice backed by new requirements and mandates in some markets. Many cybersecurity teams now view Identity-first security as the only reliable way to safeguard a growing cloud-first business.

The death of hybrid work has been greatly exaggerated in popular media, and we have the data to prove it. The fastest growing security categories continue to be those that help safeguard users connecting from outside the corporate network, while blocking bad actors from gaining access. Firewalls, VPNs, cloud security tools, and endpoint management apps are all top of mind for workforce security teams. Today's security and threat environment demands diverse solutions, and we see that in the data.

Organizations are stepping up their authentication game, choosing higher-assurance Identity factors more and more frequently, and leaving those old-school password/security question combos behind. Moving past human-error-riddled passwords remains one of the best practices for corporate security. Fun fact: "Password" supplanted "123456" to become the most common password of 2022, according to an annual survey released by NordPass. But the number of people using those two passwords has fallen dramatically since the previous year's report, aided in part, perhaps, by the rise of password filters and automated password policy enforcers that require lazy or stubborn users to dig a little deeper.

Okta's customers aren't just embracing higher-assurance factors: They're increasingly going all-in on Zero Trust. Four years ago, just 16% of companies surveyed said they either had a Zero Trust initiative in place or

would have one in place in the coming 12–18 months. As we revealed in Okta's "State of Zero Trust Security 2022" report, now that number is 97%.

Ensuring that each person always has the right level of access to the right resource at the right time has never been more important for security, management, compliance, and other core business concerns. Each organization's Zero Trust journey is unique — different business imperatives, different tech stacks, and different strategic priorities lead to different solutions. But there is now a growing global consensus that pairing Zero Trust with an Identity Access Management solution can result in a powerful central control point for governing access among users, devices, data, and networks.

Context-based access policies — which assess factors such as how much a device is trusted at the time of user access, the location of the access attempt, the user and/or resource itself, and other critical inputs — are critical to Zero Trust configurations. Our data shows that almost one-quarter of our customers are deploying at least one Zero Trust configuration, and that number is growing. When we look at

improving access configurations, an increasing volume of adaptive MFA events, and the rise of biometrics and Web Authentication (WebAuthn), we see Zero Trust in practice.

This year, to dive deep into the security trends driving change across workforces globally, we're focusing exclusively on Workforce Identity customers. For more information on Customer Identity, see our "2022 State of Secure Identity" report. Now, let's jump right into that Workforce data.

Protecting the prize

Security categories battle it out

In this era of the distributed, hybrid workforce, it's more important than ever to secure remote workers' internet connections. If companies can keep surging seas of threat actors from breaching the most vulnerable entry points to their networks, they stand a much better chance of keeping their digital assets safe. And success against ever-evolving threats requires mastering an ever-evolving toolset. Let's look at what tools companies are using to protect their workforces.

It's no surprise that VPN and firewall tools have been steadily growing in popularity, rising from the sixth-most-popular category in 2016 to third in 2018 and second in 2019. When the pandemic sent everyone home in March 2020, the increased demand for VPNs and firewalls propelled this category to the top, where it's flourished ever since. And even with all those years of steady growth behind them, VPNs and firewalls, like Palo Alto Networks GlobalProtect and Prisma Access, and stand-alone Zero Trust network access (ZTNA) solutions that provide remote access, like Zscaler and

Netskope, are still today's most-needed security tools, boasting 31% YoY growth in number of customers.
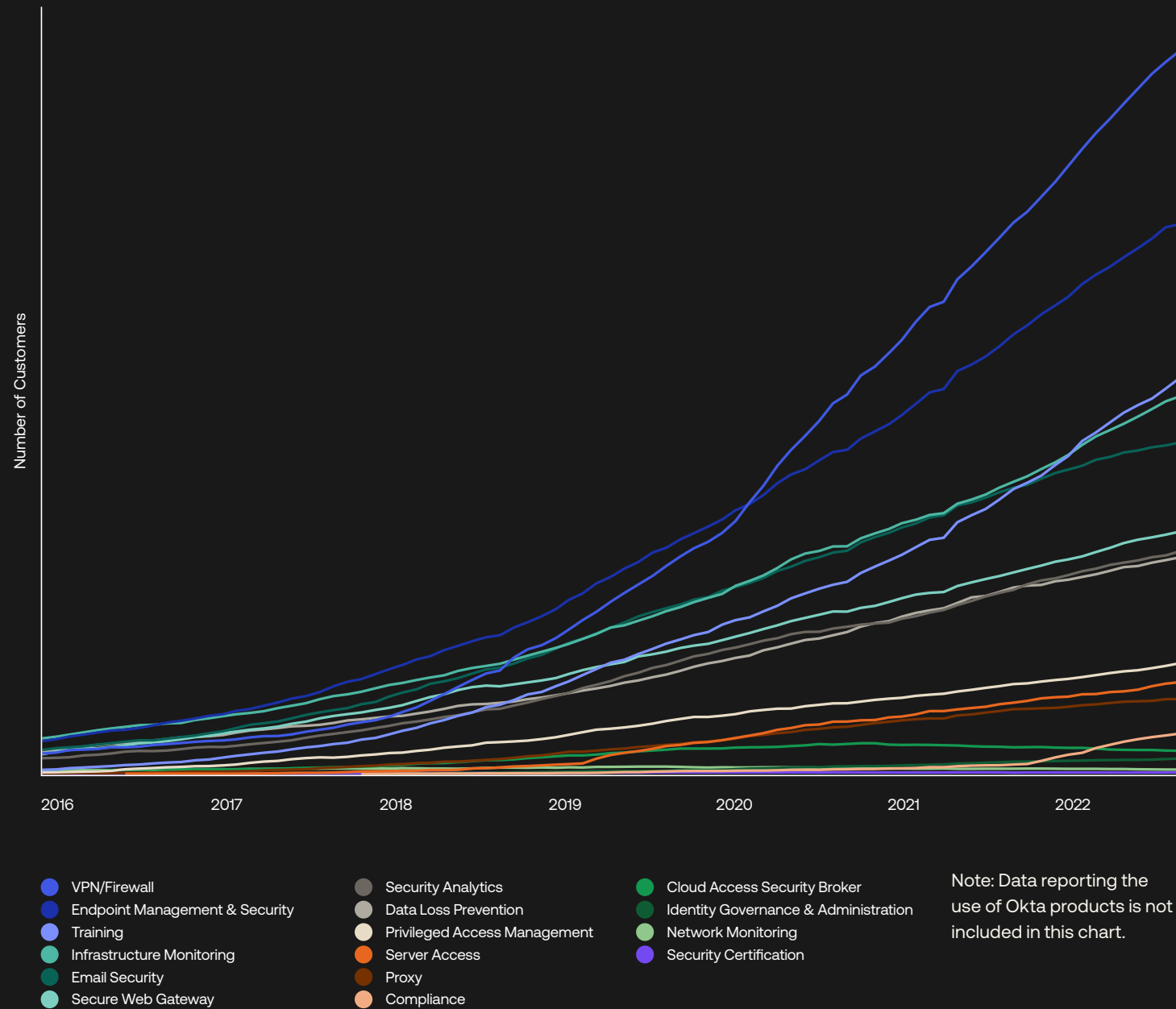
Second-ranked endpoint management and security isn't far behind, with 25% YoY customer growth as corporate environments increasingly support bring-your-own-device (BYOD) policies. Forrester data shows that adoption rates of BYOD are more than 50% for computers, tablets, and smartphones, and this is not expected to decrease.[4] Organizations, therefore, need a way to ensure that all these personal devices — whether owned by third-party contractors, vendors, or employees — are not introducing risk.

Organizations that think about Identity as a primary cloud are no longer tied to one technology ecosystem — they can enjoy a greater choice of operating systems and applications. This change seems to have opened corporate doors for Apple devices. Computerworld declared 2021 "the year Apple truly entered the enterprise market," noting that Mac laptop use across the enterprise climbed

[4] "The State of Endpoint Security, 2022," Forrester Research, Inc., July 21, 2022.

Most popular security categories

Number of Customers

2016 2017 2018 2019 2020 2021 2022

● VPN/Firewall
● Endpoint Management & Security
● Training
● Infrastructure Monitoring
● Email Security
● Secure Web Gateway

● Security Analytics
● Data Loss Prevention
● Privileged Access Management
● Server Access
● Proxy
● Compliance

● Cloud Access Security Broker
● Identity Governance & Administration
● Network Monitoring
● Security Certification

Note: Data reporting the use of Okta products is not included in this chart.

63%. IDC reports that by 2021, "macOS device use across US enterprises reached 23%, while iPhones accounted for 49% of business smartphones, and iPads accounted for most tablets used in the workplace."[6] And in fact, two of our hottest endpoint management and security tools are Jamf Pro and Kandji, both of which protect Apple devices.

So let's double-click on our endpoint management and security tools. The category is dominated by Jamf Pro, which has driven hard-to-beat 428% customer growth over the past four years. Jamf Pro now claims more than three times as many customers as any other tool… yet still managed to achieve solid 37% growth by number of customers this year. Kandji, our fastest growing app overall, makes its mark with notable 172% YoY growth by number of customers. Jumping from ninth place a year ago to fourth place today among endpoint management and security tools, Kandji is quickly entering the popularity realm of second- and third-place VMware Workspace ONE and VMware Carbon Black Endpoint. This category is clearly the place to be. In fact, among the tech sector, endpoint management and security has been the most popular security category by number of customers since August 2020.

With cyberattacks still on the rise, training tools, such as KnowBe4, Cofense PhishMe, and Proofpoint Security Awareness Training,

are putting some impressive numbers on the chalkboard. Even from the back of the classroom, we can't help but sit up and take notice of training tools' 39% growth in customers over the past year and noteworthy 436% growth over the past four years. Investing in staff security training just makes sense at a time when ransomware attacks are up 25%, according to the Verizon 2022 Data Breach Investigations Report.

"
When the pandemic sent everyone home in March 2020, the increased demand for VPNs and firewalls propelled this category to the top, where it's flourished ever since.

The perimeter has shifted to Identity, but that doesn't mean that the network is now irrelevant. Infrastructure monitoring and server access tools round out our top four fastest growing security categories. Infrastructure monitoring posted 29% growth in customers YoY and 66% growth over the past two years. Similarly, server access tools clocked in at 29% growth in customers YoY and 75% growth over the past two years. ∎

[6] IDC, "IDC MarketScape: Worldwide Unified Endpoint Management Software for Apple Devices 2021 Vendor Assessment," January, 2021.

Most popular types of assurance factors

Not all MFA is created equal

Social engineering and credential-based attacks have long been favorite tactics of threat actors. While it is understood that implementing MFA is a giant leap in thwarting these kinds of attacks, we also know that not all MFA is created equal.

Once, MFA was just another trio of letters in the alphabet soup of security acronyms. But today, most organizations have come to appreciate the importance of MFA. Any companies not using high-assurance factors are missing a key piece of their MFA security puzzle. Thankfully this year, we're seeing our Workforce customers relying less on lower-assurance factors.

Two years ago, 14% of customers were still deploying low-assurance security questions as one of their MFA factors. That number is falling, which is a good thing. (Thanks to social media, pretty much everyone knows you went to Central Elementary School and your first pet's name was Whiskers.) In 2022, that number has dropped to 10%. That's one small step for humankind, one giant leap for the gradual improvement of access security.
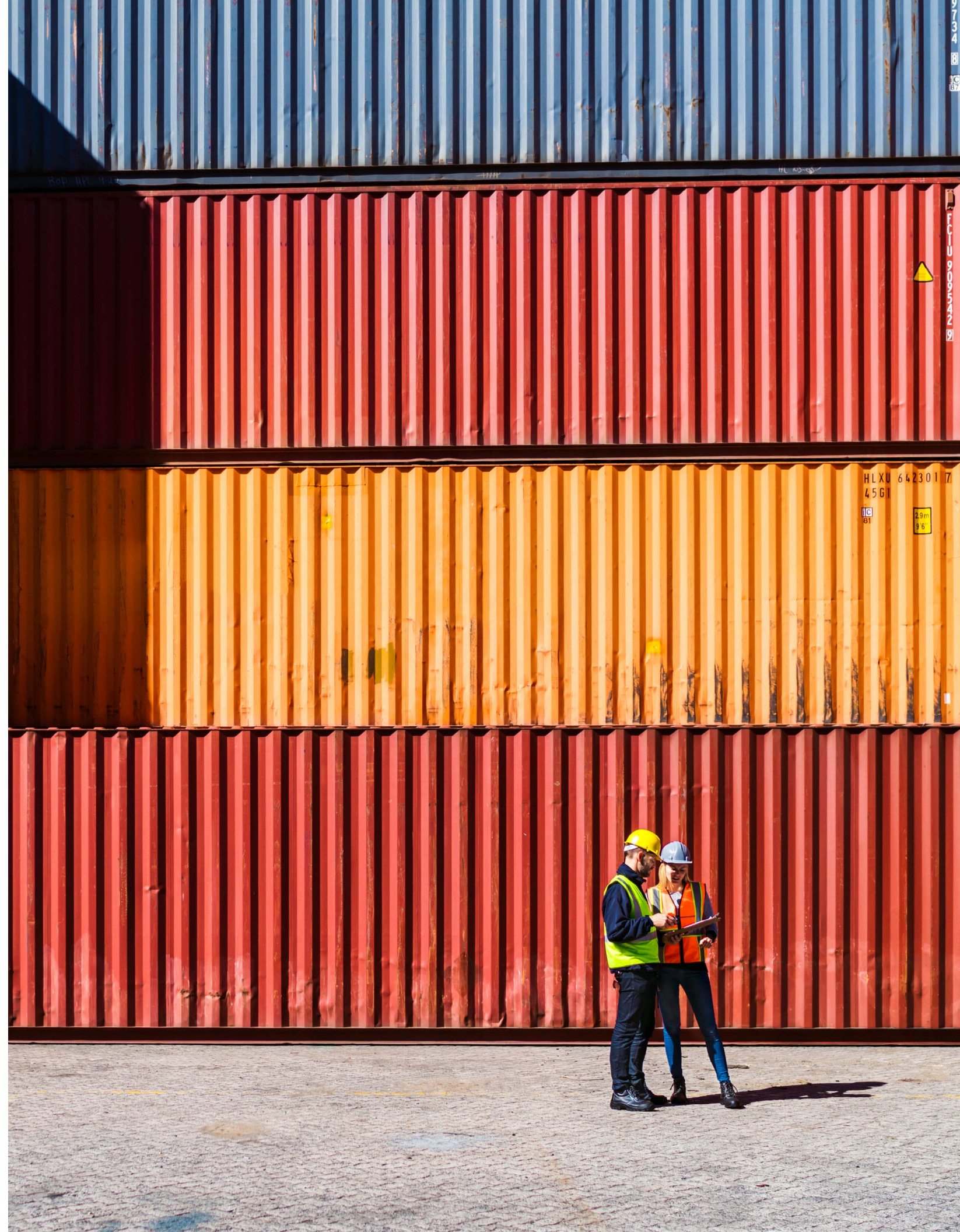
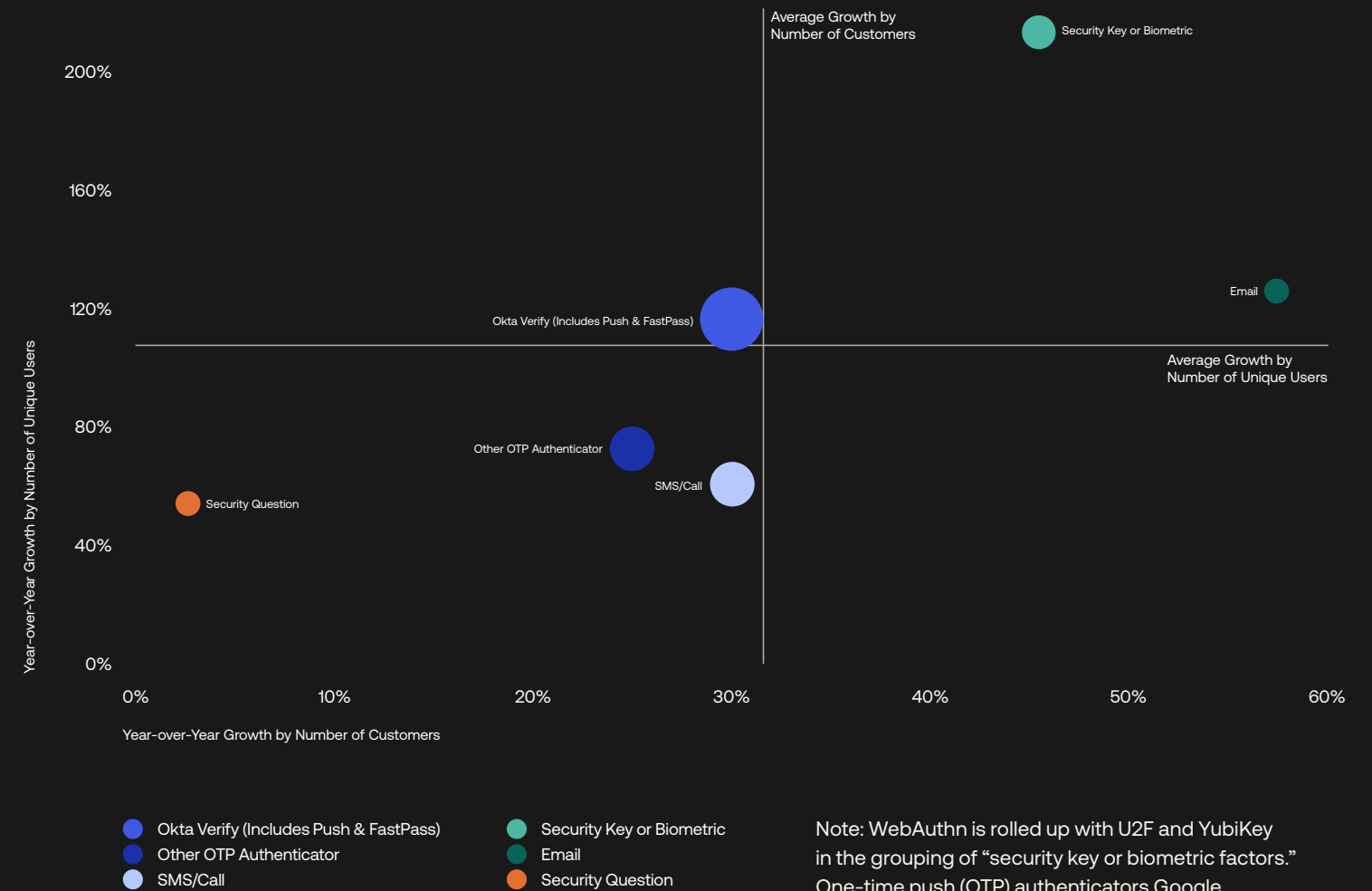| Factor Grouping	Factors Included	Assurance Level
Email	Email	Low
Okta Verify	Okta Verify (Including Okta Verify with Push Notifications and FastPass)	High
Other OTP Authenticators	Duo Security, Google Authenticator, HOTP, RSA SecurID, Symantec VIP	Medium
Security Key or Biometric	WebAuthn (FIDO 2.0), U2F (FIDO 1.0), YubiKey	High
Security Question	Security Question	Low
SMS/Call	SMS, Voice Call	Low
Third-Party IdP	Third-Party IdP	Medium

The use of higher-assurance security keys and biometrics (including WebAuthn) has ticked up to 24% in 2022, up from 21% a year ago. And, as a category, it's growing rapidly with 46% growth YoY by number of customers and an eye-popping 211% growth by unique users. In other promising news, the high-assurance factor Okta Verify (which includes Push and FastPass) is now deployed by 88% of customers, up 6 percentage points from two years ago.

Unfortunately, we're seeing the use of low-assurance email on the rise. With inboxes vulnerable, email as a factor is too. Before the pandemic, fewer than 2% of customers were using email for MFA assurance; today that number has risen to 12%, a growth of 58% by number of customers YoY. ∎

Growth of factor groupings

Year-over-Year Growth by Number of Unique Users

Year-over-Year Growth by Number of Customers

- Okta Verify (Includes Push & FastPass)
- Other OTP Authenticator
- SMS/Call
- Security Key or Biometric
- Email
- Security Question

Note: WebAuthn is rolled up with U2F and YubiKey in the grouping of "security key or biometric factors." One-time push (OTP) authenticators Google Authenticator, Duo Security, RSA SecurID, HMAC-based one-time passwords (HOTP), and Symantec VIP are rolled up as "other OTP authenticators." We group SMS with voice call authentication for a factor grouping of "SMS/call."

Questioning security questions

Growth of factor groupings by industry

In a share-everything social media world — that even documents your drive-through breakfast sandwich — it's increasingly likely that a dedicated attacker can answer your security questions. (First car make? Hmm, there was a Toyota logo on the steering wheel in that Insta.) But there's good news: We're pleased to report that companies across a variety of industries are catching on to how insecure security questions really are.

This year, we see the education and media and communications sectors taking the biggest step away from security questions, each reducing their use by 13% YoY. Real estate, rental, and leasing aren't far behind, with an 11% drop. Other industries wising up to the diminishing reliability of security questions include finance and banking (down 3%) and retail (down 2%). Security questions are the only factor where we're seeing negative growth — and we're glad to let go of this particular insecurity.

The use of security keys and biometrics is on the rise, further improving Identity assurance. We're seeing the strongest growth in the transportation and warehousing industry, which posted a 67% increase YoY in the use of these high-assurance factors, as well as education (which drove 53% growth) and finance and banking (46% growth). Even the sector clocking the slowest growth, nonprofit, is still growing its use of security keys and biometrics 22% YoY.

It's key to note that the industries with the largest reductions in the deployment of security questions also show more than 30% growth among security key and biometric factors. Education reports -13% growth in security questions and 53% growth in security key and biometrics. Finance and banking reports -3% growth in security questions and 46% growth in security key/biometrics. Media and communications: -13% deployment of security questions against 31% growth of

Factor grouping growth by industry
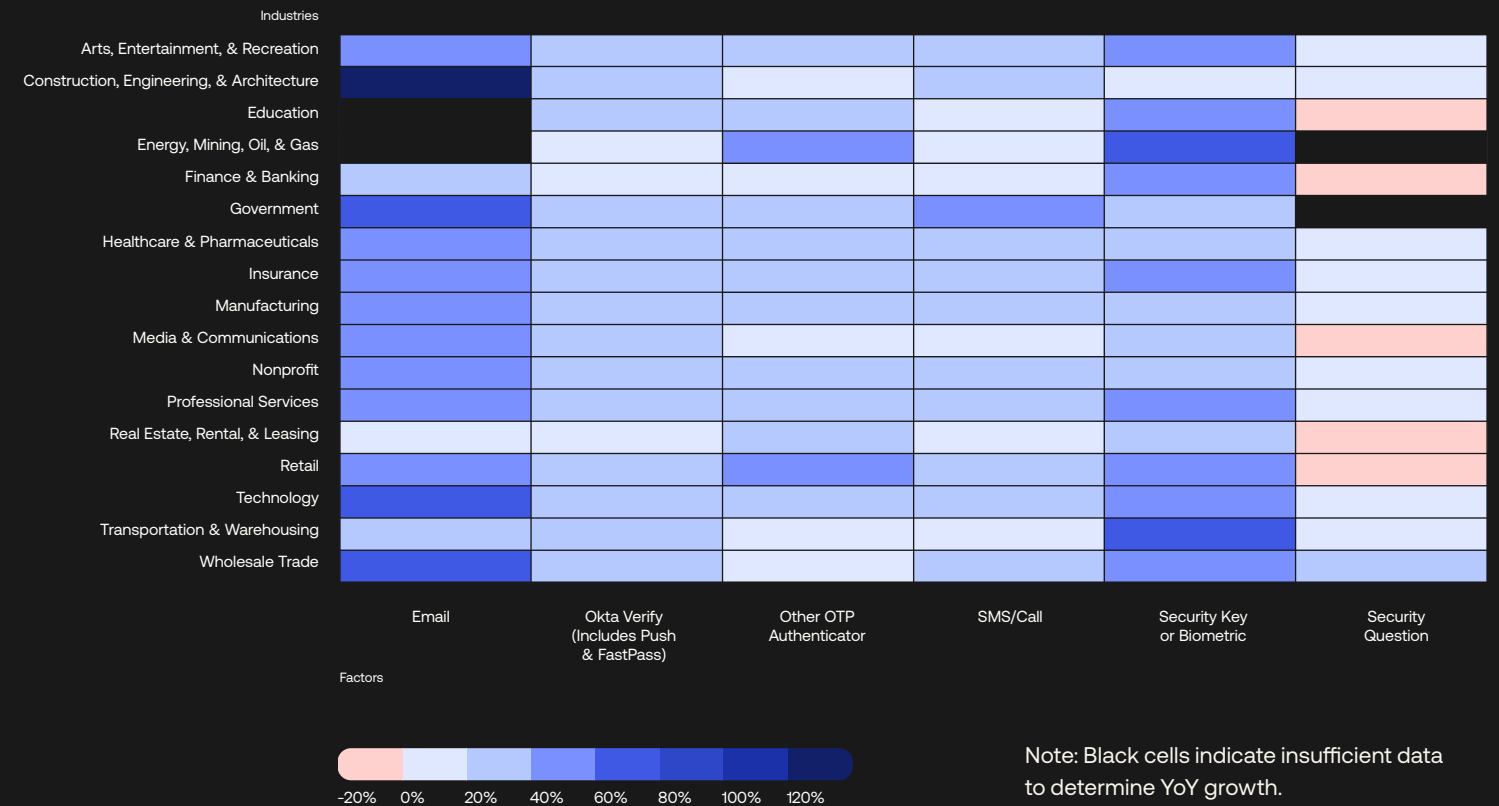
Note: Black cells indicate insufficient data to determine YoY growth.

> " Companies across a variety of industries are catching on to how insecure security questions really are. This year, we see the education and media and communications sectors taking the biggest step away from security questions, each reducing their use by 13% YoY.

security key/biometrics. Real estate, rental, and leasing: -11% deployment of security questions against 36% growth of security key/biometrics. And retail: -2% deployment of security questions against 45% growth of security key/biometrics.

A broad swath of industries — including healthcare and pharmaceuticals, government, retail, technology, and nonprofits — are catching on to the importance of MFA and show solid growth across more than one factor. Healthcare and pharmaceuticals, for example, posted notable growth across the board: 36% YoY in the use of security keys/biometrics, 33% in the use of voice calls and SMS, 31% in the use of Okta Verify, and 38% in the use of other one-time-password (OTP) authenticators. These are huge steps for an industry dedicated to protecting patients' personally identifiable information.

Use of email as a factor started growing during the pandemic, when organizations couldn't issue physical devices to use for other factors. We continue to see strong growth in email almost across the board. Which sectors are driving this increase? We're looking at you, construction, engineering, and architecture (reporting a sizable 140% YoY increase)! These are followed by wholesale trade (74% YoY), government (73% YoY), and the technology sector (61% YoY). ∎

Charting a more secure future

Progress in Zero Trust adoption

The philosophy behind Zero Trust is never trust, always verify — particularly at the point of access. Reports show that more than 80% of web app breaches last year resulted from credentials abuse, and stolen credentials were the number one tactic used in ransomware attacks. In the face of disappearing traditional network perimeters, every organization with a digital footprint needs to establish bulletproof Identity protection, largely through the use of context cues and access policy configurations. Companies across all verticals are adopting the Zero Trust philosophy, and many organizations are making meaningful progress on this journey.
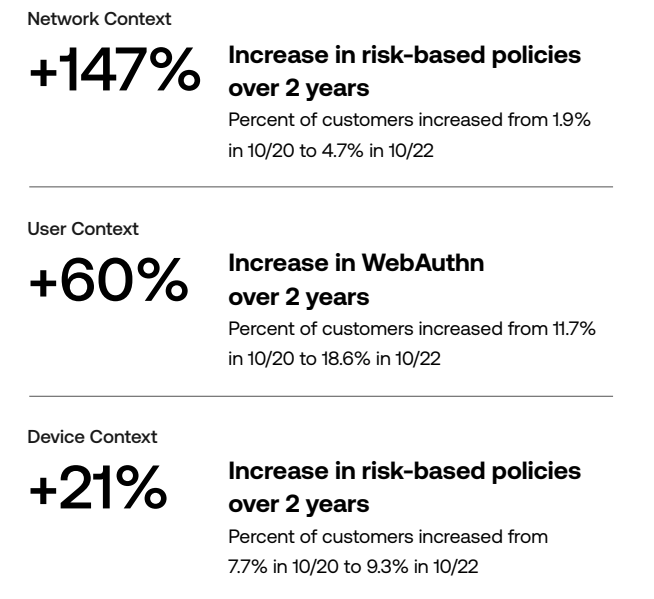
Just how important Is Identity? Looking at this year's survey, 80% of all organizations say Identity is important to their overall Zero Trust security strategy, and an additional 19% go so far as to call Identity business critical. That's a full 99% of organizations naming Identity as a major factor in their Zero Trust strategy.

Okta customers are approaching Zero Trust strategically, with solutions that target user, device, and network perspectives. In the network context, we're seeing a 147% increase in the use of risk-based policies over the past two years. From a user context, we're seeing

60% growth in the number of customers implementing WebAuthn, the new global standard for password-free web authentication. And on the device front, we're seeing a 21% increase in the number of customers deploying device-trust configurations.

It all adds up to promising progress toward truly securing modern enterprises from an ever-evolving threatscape. ∎

Progress in adopting Zero Trust

Network Context

+147%   **Increase in risk-based policies over 2 years**
Percent of customers increased from 1.9% in 10/20 to 4.7% in 10/22

User Context

+60%   **Increase in WebAuthn over 2 years**
Percent of customers increased from 11.7% in 10/20 to 18.6% in 10/22

Device Context

+21%   **Increase in risk-based policies over 2 years**
Percent of customers increased from 7.7% in 10/20 to 9.3% in 10/22
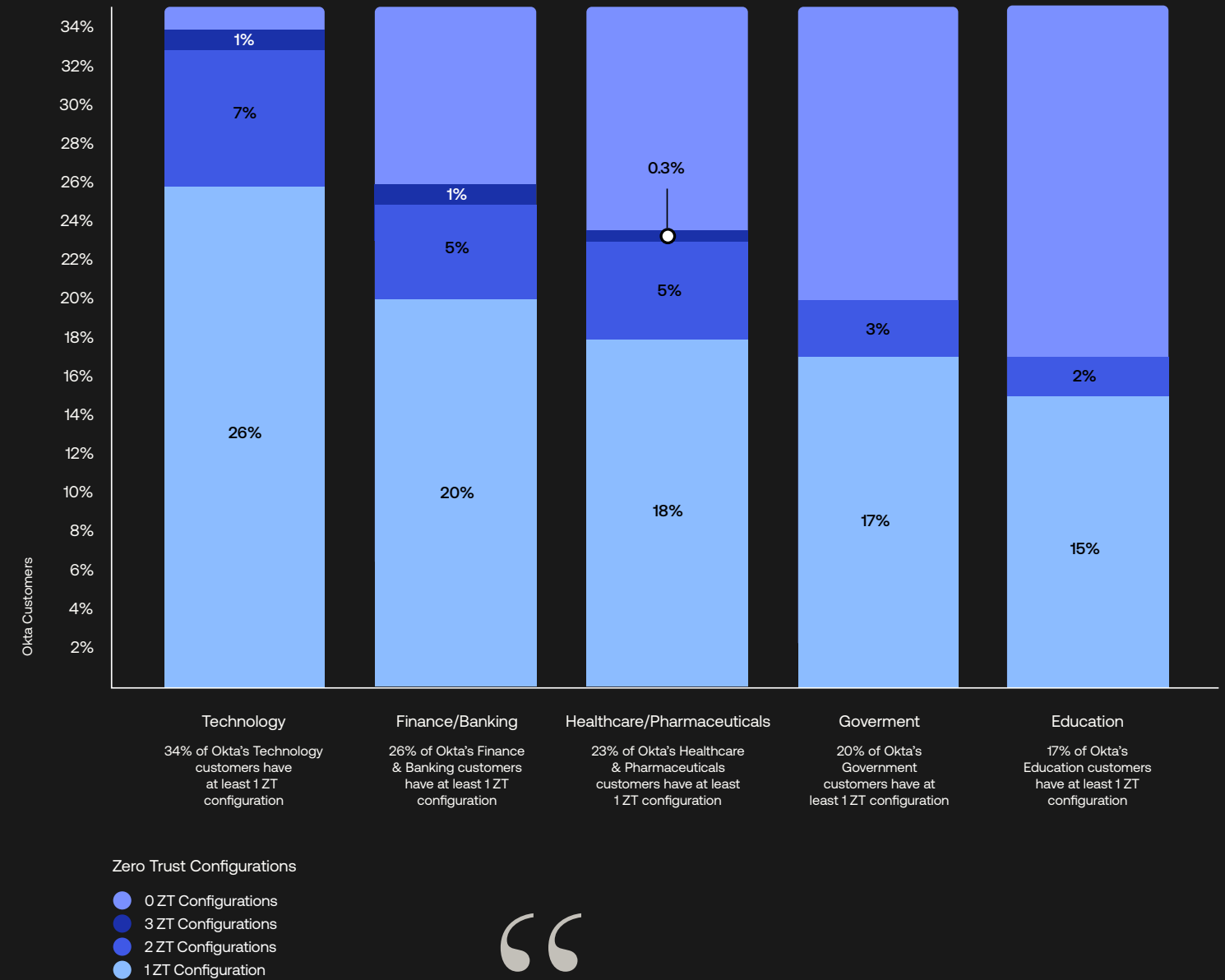
Never trust, always verify

Zero Trust configurations gain ground

Zero Trust is quickly evolving from philosophy to business imperative in today's remote and hybrid business environments. So let's explore the configurations companies are investing in to keep their organizations safe. (Zero Trust configurations are defined as those that use Zero Trust's "never trust, always verify" approach in a network, user, or device context.)

All told, 22% of Okta customers deploy one or more Zero Trust configurations, an increase of 10% from two years ago. That still leaves a large number of companies that haven't yet gotten on the Zero Trust train — or haven't put their Zero Trust plans into action — but it's progress.

Perhaps unsurprisingly, tech is the leader in adoption. This year we see more than one-third of technology companies adopting Zero Trust configurations: 34% are deploying at least one Zero Trust configuration, while 7% are deploying two. At the industry level, more than one-quarter of finance and banking companies (26%) deploy at least one Zero Trust configuration, and 5% deploy two. In the healthcare and pharmaceuticals sector, 23% of customers deploy one Zero Trust configuration and 5% deploy two. ∎

Number of Zero Trust configurations deployed by industry

Okta Customers

	Technology	Finance/Banking	Healthcare/Pharmaceuticals	Goverment	Education
	1%		0.3%		
	7%	1%			
		5%	5%	3%	2%
	26%	20%	18%	17%	15%

Technology
34% of Okta's Technology customers have at least 1 ZT configuration

Finance/Banking
26% of Okta's Finance & Banking customers have at least 1 ZT configuration

Healthcare/Pharmaceuticals
23% of Okta's Healthcare & Pharmaceuticals customers have at least 1 ZT configuration

Goverment
20% of Okta's Government customers have at least 1 ZT configuration

Education
17% of Okta's Education customers have at least 1 ZT configuration

Zero Trust Configurations

● 0 ZT Configurations
● 3 ZT Configurations
● 2 ZT Configurations
● 1 ZT Configuration

❝

All told, 22% of Okta customers deploy one or more Zero Trust configurations, an increase of 10% from two years ago.
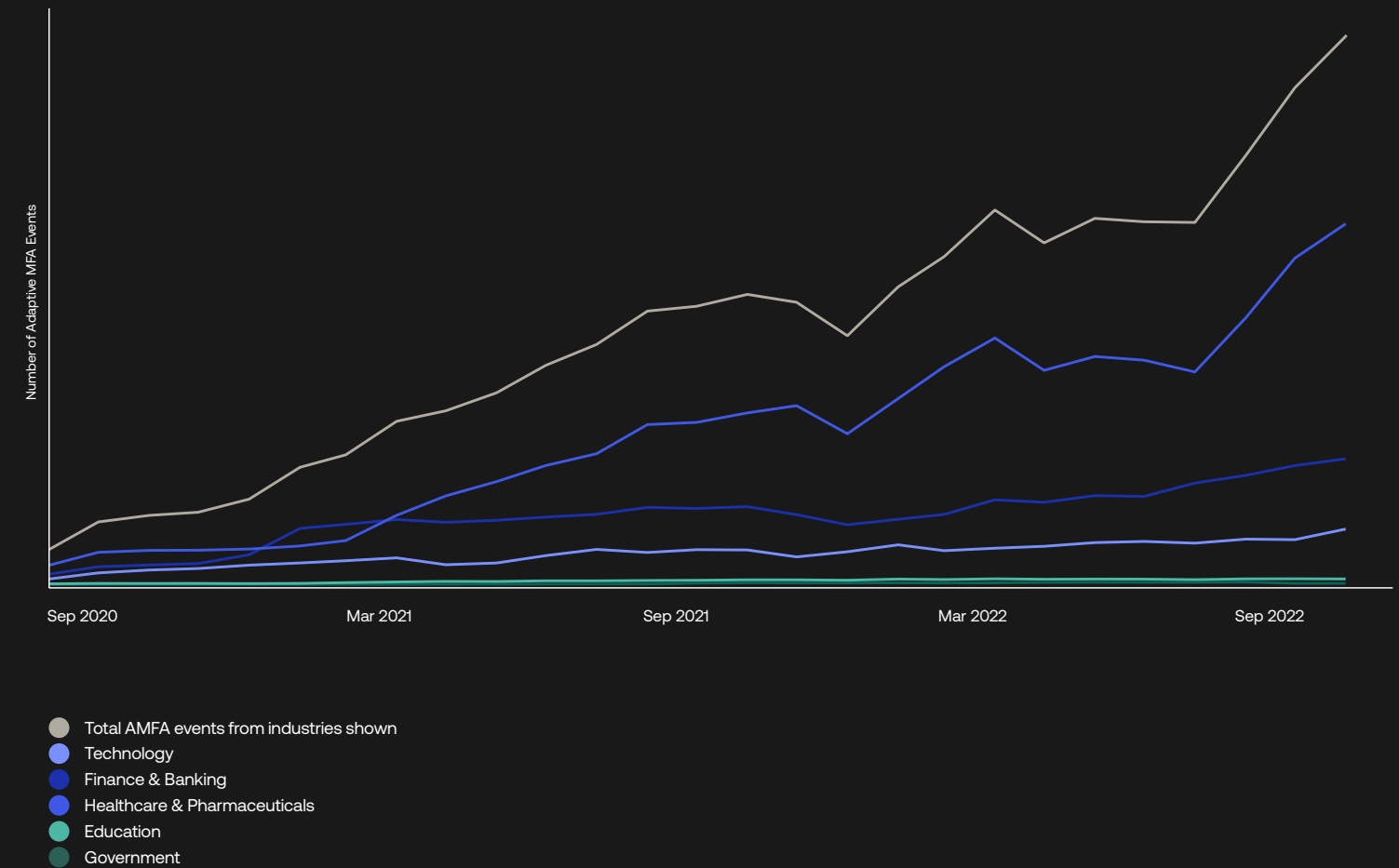
Adaptive MFA events by industry

Zero Trust at work

Every time you log in from a new device or a new address and are prompted to present an additional authentication factor, that's Zero Trust at work. And access policies that evaluate the risks associated with authentication requests are growing rapidly. These evaluations look at user behaviors, context from device and IP, rate of requests, and other indicators of suspicious activity. As companies tighten controls, the number of adaptive MFA events (logins that dynamically generate a request for step-up authentication in response to user changes and device behavior, location, or other contexts) is increasing dramatically. Events rose from 4 million in October 2020 to 29 million in October 2022 — a 640% increase.

By this measure, not all industries are improving their access policies at the same rate. Tech leads the way, with 110% YoY growth in the number of adaptive MFA events. Finance and banking is rapidly strengthening access policies as well, resulting in an impressive 61% YoY growth. The healthcare and pharmaceuticals sector is in third place in this access-tightening race, followed by education and government. ◼

Adaptive MFA events by industry

- Total AMFA events from industries shown
- Technology
- Finance & Banking
- Healthcare & Pharmaceuticals
- Education
- Government

" As companies tighten controls, the number of adaptive MFA events is increasing dramatically. Events rose from 4 million in October 2020 to 29 million in October 2022 — a 640% increase.

WebAuthn use by industry

Goodbye, passwords. Hello, secure auth

As important as MFA is, by itself, it isn't an impenetrable security fortress, and hackers have recently been gaming the MFA systems of some big-name companies, breaching IT systems and exposing customer data. Hackers are breaking in through social engineering attacks that rely on "MFA fatigue" and phishing attacks that trick employees into providing their passwords or login credentials. That's why a number of industries are embracing phishing-resistant factors and/or the Web Authentication API (also known as WebAuthn). The WebAuthn specification, written by the W3C and FIDO, allows servers to register and authenticate users with public key cryptography instead of a password. This strong, simple, phishing-resistant standard for secure authentication reduces dependence on risky passwords on the web.
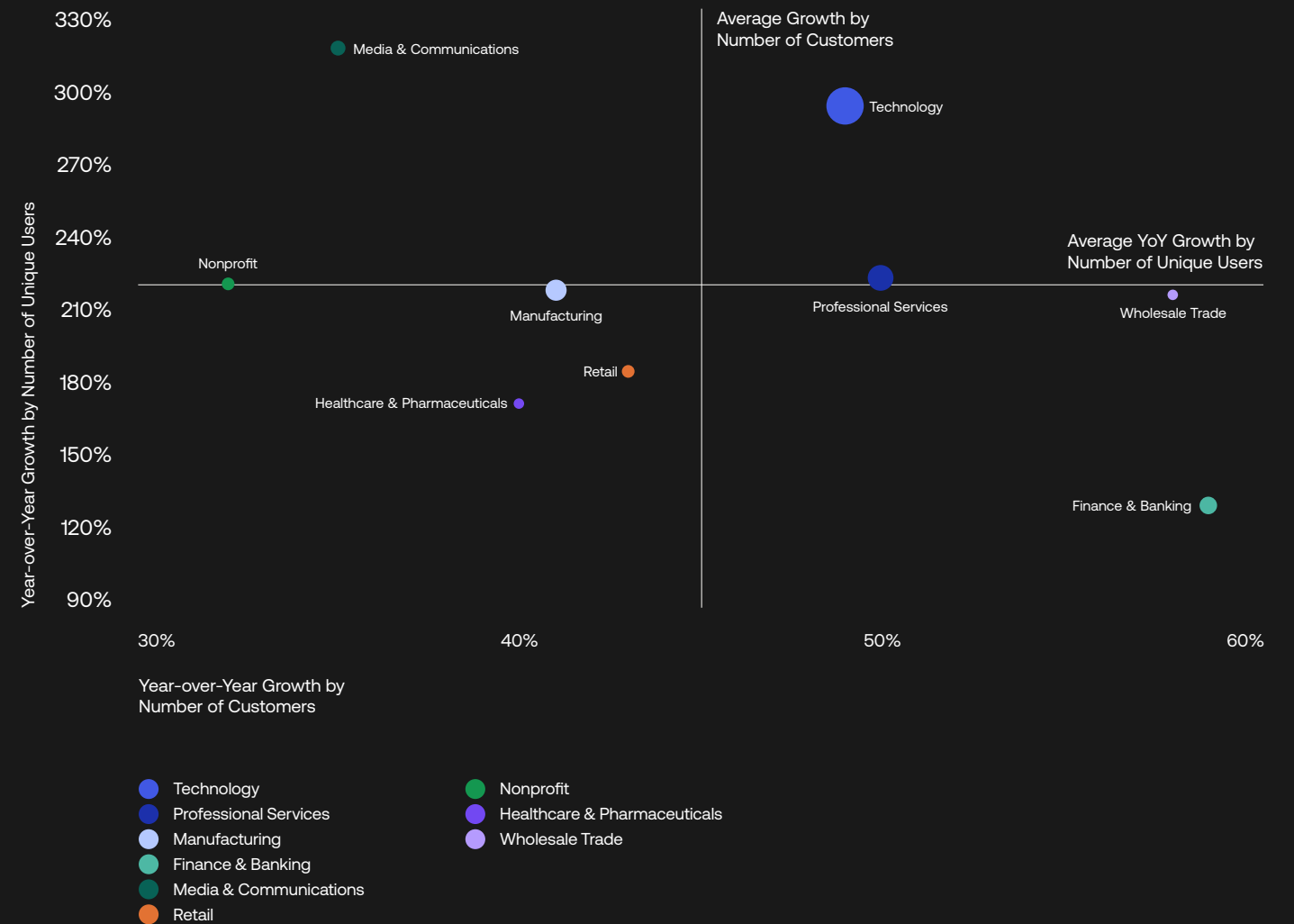
Overall, 19% of Okta's Workforce customers are deploying WebAuthn, an 8 percentage-point increase over just 11% two years ago. Looking at the data

by sector, we can see that 31% of Workforce customers in technology now deploy WebAuthn, up from 26% last year and 20% two years ago. And hold the presses: An impressive 27% of media and communications companies are embracing the new standard as well. WebAuthn is currently deployed by 15% of customers in the finance and banking sector, and 16% in healthcare and pharmaceuticals.

In terms of growth, the number of customers in the tech sector deploying WebAuthn has grown 48% YoY, and a staggering 174% over the past two years. And in the finance and banking sector, WebAuthn is money, baby — we're seeing a remarkable increase of 59% YoY and 254% over the past two years.

With solid progress like this, organizations are making phishing expeditions less fun and less profitable for threat actors every year. ■

Growth of WebAuthn implementation by industry

Legend:
- Technology
- Professional Services
- Manufacturing
- Finance & Banking
- Media & Communications
- Retail
- Nonprofit
- Healthcare & Pharmaceuticals
- Wholesale Trade

" Overall, 19% of Okta's Workforce customers are deploying WebAuthn, an 8 percentage-point increase over just 11% two years ago.

That's a wrap

While we highlight the fastest growing apps and app categories, all of the apps featured in our ranks provide valuable functionality. Employees, customers, and partners worldwide rely on them to stay secure, productive, and efficient. What's more, our app choices often reflect our current economic, business, and cultural priorities. Those selections can be particularly illuminating over time.

This year, our data shows that organizations are prioritizing strong Identity access controls across entire ecosystems — maximizing security as the stakes and threats rise, while increasing efficiency in a more austere economy. Companies are also prioritizing their people by supporting more flexible work environments and investing in mental health and wellness apps.

While each company is unique, these over-arching trends caught our eye:

- Companies' enduring commitment to content collaboration apps, security tools, and sales and marketing tools, complemented by a newer focus on travel, business supplies, and design software

- The increasing importance of best-of-breed apps and tools, regardless of what a particular software suite provides

- Continued enterprise migration to the cloud, increasingly supported by multiple clouds

- A wrap-around approach to secure remote work through remote access solutions and higher-assurance factors in MFA deployments

- Continued progress toward a Zero Trust future with the increased deployment of Zero Trust configurations

And if we had to make a few predictions for the rest of 2023, we'd say...

- Watch out for increased workflow adoption

- Expect continued cloud migration and best-of-breed augmentation

- Look for additional Zero Trust configurations as companies of all sizes continue and complete their journey to the cloud

We'd also say, expect surprises — like an all-new lineup of fastest growing apps as this year's growth hotshots mature into next year's top stalwarts.

And that really is a wrap. We'll see you next year for another data-filled edition of Businesses at Work.