

THE COMPLETE GUIDE TO **CLOUD STORAGE 2019**



In the clouds



You may not think about it that often, but the rise of cheap and easily available cloud storage has changed your life dramatically. The idea of storing all your documents and media in the cloud is a relatively modern phenomenon, but one that has become so ubiquitous that many of us willingly forget what life used to be like in the days of USB thumb drives and relying on your laptop's limited hard drive.

The beauty of cloud data storage in the enterprise environment is that it's one of the few technologies that many users will have encountered in a consumer domain before it was made available to them at work. A lot of the credit for this can be aimed at Dropbox, as Drew Houston's company made cloud storage simple for millions of users. That firm is now a giant in the enterprise space, and competes healthily with its enterprise-only rival Box and the tech giants Microsoft with OneDrive and Google with Drive.

Today, more and more companies are turning to cloud storage as an alternative to on-premise data storage, cutting costs, boosting collaboration and aiding mobile working in the process. Not only is cloud storage proven as secure and robust, with myriad admin controls, it now comes with more and more smart collaboration options layered on top.

The big cloud storage players are also gradually pivoting towards providing a central 'content hub' with a set of workplace automation solutions built around it for enterprises looking to streamline typical workflows, such as the signing of contracts to the process of handling

suppliers. This requires investment in machine learning technology and deep domain expertise around typical enterprise pain points, and appears to be where vendors like Box and Dropbox see themselves going in the future beyond a simple content hub.

Here we compare the two biggest players in the market – Dropbox and Box – as well as the solutions provided by Microsoft and Google, and some of the best free options to get started with, finishing with a useful case study and some industry commentary. **Scott Carey**

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Credit: iStock

Dropbox vs Box: Which is best for the enterprise?

We compare the features, integrations, admin tools and pricing for the two independent cloud storage platforms

Box and Dropbox are often described as arch rivals, but the two cloud storage giants have historically served very different customers, with Box laser-focused on the enterprise, and Dropbox on consumers and small business users or freelancers.

Dropbox has, however, been ramping up its business product in recent years, culminating in 2015 with the

announcement of an enterprise tier of its product to compete with Box's more established cloud content management service.

So, with both vendors targeting the lucrative enterprise market, which cloud storage option is the best choice for your business?

Features

Dropbox's entry into the enterprise space put it into direct rivalry with Box. Both offer unlimited file storage, secure access to files across devices and collaboration tools as standard.

The enterprise-grade Dropbox brought domain management tools, greater admin controls for IT departments, granular collaboration insights for managers, a range of custom integrations, and deployment support, as well as setting up a team of 'customer success' managers.

Both vendors continue to enhance their enterprise products with new features. At Box's BoxWorks 2018 conference, the company unveiled Box Feed, a new feature which provides personalized real-time updates, comments and recommendations about the files and folders on which a user is working. These are then tailored to their relationships with the people and content in their organization.

Box also launched a new set of workflow automation tools, which now sits under the Box Relay banner. The vendor then announced that this set of capabilities was "rebuilt from the ground up" in May 2019 to include better visibility into automated processes, mobile push notifications and a new set of triggers for 'if this then that' situations and when new content is uploaded.

“The new Box Relay brings powerful automation to improve these critical business processes, whether it’s creating sales proposals and marketing assets, or driving budget sign-offs and contract renewals, and more. Enterprises now have one platform for secure content management, workflow, and collaboration that’s built for how we work today,” explained Jeetu Patel, chief product officer at Box, as part of a press release.

Box offers a range of machine learning capabilities known as Box Skills, which allow users to automatically structure their content with intelligent labelling, classifying, transcribing and other features. The first three skills were for audio, video and image intelligence, which together make it easier categorize and search for multimedia content within Box.

Developers can use the Box Skills Kit to build their own custom skills, for example, by combining IBM Watson’s Speech to Text and Natural Language Understanding services to process customer service recordings and surface priority issues.

The vendor also offers a workflow tool called Shuttle, which aims to solve the unglamorous issue of moving enterprise volumes of files from a complex legacy system into the cloud. Another tool, called Relay, allows users to create custom workflows for repeatable tasks like processing invoices or on-boarding new employees.

Dropbox made its most significant step towards being more of an enterprise content hub in June 2019, when it revealed ‘the new Dropbox’. “It’s a single workspace to organize your content, connect your tools, and bring everyone together,” the vendor outlined in a blog post.

This includes the early access launch of two new standalone Dropbox apps for business users, which

aim to become your workplace hub instead of quietly being embedded within Windows and macOS native file systems, which you can still do if you prefer.

Imagine a combination of Google Drive with a set of integrations with the likes of Atlassian, Slack and Zoom, as well as the ability to work on documents, regardless of what productivity suite you use, natively within the app. The app also shows you what your colleagues are working on in real time, and has boosted search to include the contents of a document.

Speaking to Fast Company in June, Dropbox CEO Drew Houston said this was aimed at “turning Dropbox from the filing cabinet to the conference room. There’s people, and there’s content, and you can have conversations, and it can be on the whiteboard. That’s metaphorically the evolution of the experience we thought no one was really building.”

Alternatives

Tech giants Google and Microsoft offer similar content hub products of their own, but with certain drawbacks. The advantage of products such as Google Drive and Microsoft OneNote is that employees are working with these systems and apps already, so they can stay in the same environment. The drawback is that these apps can be unresponsive when it comes to storing and collaborating on non-native file types, so video files or text documents that aren’t Google or Microsoft documents can be tricky to work with.

Dropbox tries to solve these problems for customers with the release of Smart Sync (formerly Project Infinite) and Paper. It promises a means for accessing all of your files, whether stored locally or in the Dropbox cloud,

from Windows File Explorer (Windows 7 backwards compatible) or Mac OS X Finder without the lag of a network drive.

In practice this means files saved locally will display with the familiar green tick and files stored in Dropbox will appear alongside, but with a grey cloud symbol. Your computer will download these files when you need to access them, taking up less precious hard drive space.

Then there is Paper, in essence the Dropbox answer to Google Docs. This standalone app allows teams to create and collaborate on documents in real time, either in a web browser or mobile app.

Integrations

Both companies are keen to be the ‘content hubs’ for their customers, meaning deep integrations with other office software is imperative.

Dropbox formalized this in November 2018 with the launch of Dropbox Extensions. This is a set of integrations with vendors such as Adobe, DocuSign and Vimeo, which let users seamlessly launch actions like editing a file, directly from Dropbox.

In a blog post on the subject, SVP engineering, product and design Quentin Clark used the example of getting a contract signed. “You have to send someone the contract, they download it, sign it virtually, probably save it somewhere, then send it back to you before you finally save the signed version back to Dropbox,” he said.

This is similar to what we heard from chief product officer at Box, Jeetu Patel, a few months earlier, again showing the priority alignment between the two vendors. He told us that Box is looking to combine deep vendor

integrations with a layer of automation to allow for seamless handoffs between actions. For example, “this article you may write, you might want to share it with a couple of colleagues and send to your editor, and when that happens it is all manually done in an email, so we wanted to go after that workload and make it lightweight and solve that problem,” he said.

Box unveiled the public beta versions of the Box for G Suite integration in 2018, allowing users to create, open, and edit Google documents from their Box account.

Dropbox soon followed suit, unveiling its own deep integration with G Suite in April 2019, which allows users to create and store Google Docs, Sheets and Slides.

It introduced Microsoft Office integration back in November 2014 and Box followed suit by partnering with a newly open Microsoft in June 2015. As members of Microsoft’s cloud storage partner programme, both Box and Dropbox announced a string of integrations in 2016.

Users of both services can now co-author Microsoft documents and have changes saved back to Box/ Dropbox in real time. A new iOS integration means documents can be created, edited and saved back to Box or Dropbox via the popular Microsoft apps for iOS. Finally, customers can attach content saved to Box or Dropbox into emails in Outlook, instead of having to tediously save items to your desktop beforehand.

Dropbox Basic, Pro and Business users with a paid Microsoft Office 365 licence can use these integrations immediately. The same applies for Box personal and business users. Both Box and Dropbox also integrate with Google apps and Salesforce.

Box was the first of the two companies to launch a Windows 10 app (compatible back to Windows 8),

allowing customers to integrate their box files with the Windows file picker. This means users can work on a Microsoft Office Word, Excel or PowerPoint file, and have those changes saved back to Box without leaving the Windows 10 environment, whether on mobile, tablet or desktop.

Dropbox launched a free Windows 10 app (compatible back to Windows 7) in January 2016. Similar to Box, users can access and work on files saved in Dropbox seamlessly within the Windows 10 app. Users can also utilize Windows Hello access controls instead of a password to unlock their Dropbox.

At Box World Tour Europe 2016, Box announced Box Zones, taking advantage of current partnerships with Amazon Web Services (AWS) and IBM Cloud to allow users to store content in numerous locations across the globe, such as Germany, Ireland, Singapore and Japan. Then, in 2019, Box announced that its UK zone was live, allowing customers to store all their content in UK data centres.

Admin tools

In August 2016, Dropbox revamped its admin tools, called AdminX, before adding new functionality in May 2018.

The original admin console gave IT teams granular file event logging, down to individual edits, additions and deletions, which can be filtered into an admin log, so your boss can check if you have opened and read that TPS report. Now admins can manage membership down to sub-folder level to ensure that people inside and outside the company can only access specific folders.

Device management has also changed, so that IT can limit the number of linked devices an employee

can have for work documents. This capability is built to complement, not compete with, existing enterprise mobility management (EMM) offerings.

Then in May, the company announced that AdminX was getting a bunch of new features. “With so many different kinds of teams, a cookie cutter approach to management, security, and deployment doesn’t work,” Rohan Vora, senior product manager at Dropbox wrote in the blog post.

The features include simplified team management, allowing admins to export member data reports to CSV files to analyse roles, data usage, group membership, and two-step verification status, as well as the ability to convert individuals’ Dropbox Business accounts to personal accounts when removing them from your team.

This allows users to keep their unshared files and folders, and shared folders they own, while removing access to team-owned folders.

There are also enhanced sharing options, giving teams the ability to disable downloads of shared links, limiting access to a preview on dropbox.com or the mobile apps. Dropbox has also added directory restrictions to help protect the identities of people on your team when external stakeholders are accessing shared files.

There are two new features aimed at saving storage space: selective sync and member space limits. Selective sync lets admins specify which team folders will be synced to users’ computers by default. With space limits, admins don’t have to worry about individuals using up a disproportionate amount of space by setting caps.

Member data reports, individual account conversion, and directory restrictions were made immediately

available, while team selective sync is available through the early access programme.

For security, managers can unlink employees devices and even perform an online wipe if a device is lost. Admins can also enable single sign-on, two-step verification, password resets and sharing options for all groups and individual members' documents.

When it comes to off-boarding admins can remotely suspend or delete an entire account. They can then move all of that employee's files onto a new team member or remotely wipe the account.

Dropbox also partners with a range of best in breed cloud security companies in a bid to boost identity access management, data governance and device management. This includes Google Cloud Identity, BetterCloud, Proofpoint, and SailPoint.

"Businesses today are using multiple tools to protect their content, and we're making it easier for them to securely deploy Dropbox alongside their existing security standards," said Quentin Clark, SVP of engineering, product and design at Dropbox.

The Google Cloud integration in particular allows users to access their Dropbox account using their Google login, complete with multi-factor authentication, the Google Authenticator app and Titan Security Keys.

Box has a similarly robust set of admin tools across its products. Managers can download detailed audit reports, manage usage and permissions, even on mobile, and control corporate content.

In terms of compliance, Dropbox has made sure that its enterprise product is in line with governance standards and regulations. This has traditionally been a strength of Box, but now both companies comply

with the likes of HIPAA/HITECH, ISO 27001, ISO 27018, SOC 1 and 2, PCI DSS, US-EU & Swiss Safe Harbor, and are Cloud Security Alliance members.

Pricing

Both business products are priced similarly: Box at £12 per user per month; while Dropbox is £10 per user per month for the basic level, and £15 for unlimited storage and advanced admin controls. Both enterprise products are priced on a bespoke basis.

The numbers

It has been difficult to make an apples for apples comparison of Box and Dropbox over the years, as Box went public in 2015 and Dropbox only filed for an initial public offering in 2018. Now, though, we can start to compare the user numbers a little better, as both companies are obliged to report results.

For the fiscal year 2018 Box reported it had 82,000 businesses as paying customers, accounting for revenues of \$506 million. Dropbox doesn't break out its paying users by tier, so individual users and businesses are lumped into the same figure, but it did report 11 million paying users averaging \$112 per user in 2017.

Dropbox had \$1.1 billion in revenues in 2017, with Dropbox for Business accounting for \$300 million annually according to its S-1 filing ahead of a March 2018 IPO. It priced its IPO at between \$16 and \$18 per share, valuing the company at between \$7 to \$8 billion. Shares then popped on opening day, up by as much as 35 percent, valuing the company at around \$10 billion.

Box opened at around \$20.50, far above its \$14 IPO price, valuing the company at around \$2.5 billion

back in January 2015. It has a market cap of \$2.8 billion at the time of writing.

Customers

Box counts the likes of BT and the Metropolitan Police as customers here in the UK, as well as multinationals including Coca-Cola, AstraZeneca and Oxfam.

In 2018, the Metropolitan Police Service shared some details regarding a 50,000 staff member roll-out of Box, with the aim of reducing its reliance on CDs and improving the security of its file-sharing practices.

Angus McCallum, CIO at the Metropolitan Police said that they opted for Box because of its “ease of use and simplicity. Secondly was [Box’s] willingness to engage with us and help us through the pilots.”

Security was also a pressing concern, with the Met conducting its own penetration tests to ensure the solution was up to scratch. McCallum added that the ability to hold its own encryption keys was attractive. For more on this, go to [page 29](#).

Another customer is News Corp. Dominic Shine, former CIO at the firm, told us that he felt a transition to Dropbox would be smoother than trying to educate the media giant’s 25,000 members of staff to use an unfamiliar product. “The reason we chose Dropbox was because we already had a strong usage of the product amongst our employees,” he said. “People were bringing their personal Dropbox into work. We already had 7,000 employees using it, and since roll-out we have half the organization taking it up.”

Video file sharing has been particularly successful, as Shine cites the example of *Wall Street Journal* journalists “using Dropbox as their entire solution

for creating video in the field, sharing, commenting, previewing, editing and storing the final cut there”.

Shine was personally responsible for moving News Corp into the cloud and using Google Apps. He said the company “found [Google Drive] wasn’t strong for collaboration for all sorts of other content files that aren’t Google docs. We found people don’t enjoy using Drive for that experience and started to use other tools. So the employees voted with their feet essentially.”

Verdict

Dropbox and Box are clearly moving in the same direction, away from being a discreet cloud storage service to more of a workplace ‘hub’ with a set of collaboration tools built in. Both also now offer the same depth of admin controls, regulatory standards and best of breed integrations, and are investing in machine learning to automate more mundane workplace tasks.

Dropbox continues to struggle to attract true enterprise customers though, with very few reference customers who have gone all-in with the vendor, with its financials also pointing in this direction. It will always have its evangelists that enjoy using a familiar product, but it continues to be a tool that employees use, rather than an enterprise hub to be built around. It will hope that ‘the new Dropbox’ will start to change this. Box has more of a heritage catering to enterprise customer needs, both in its feature set and through its customer success team, meaning Dropbox is still playing catch up to an extent. **Scott Carey & Thomas Macaulay**



Credit: iStock

G Suite vs Office 365: Which is best for business?

Microsoft and Google's productivity suites both offer excellent applications, storage capacity and user interfaces, but which is best?

When people think of an office productivity suite Microsoft and Google tend to spring to mind. And for good reason: while there are other alternatives on the market, they remain the most popular tools for business users.

Both offer similar functionality – such as word processing, spreadsheets and file storage – but differ in many respects. For example, Microsoft offers both

desktop and cloud deployments of its Office suite, while Google's G Suite – formerly Google Apps – is cloud only.

So, if you're currently looking for a new productivity suite or are using either Office 365 or G Suite and want to know if the grass is greener on the other side, this guide is for you. We'll break down the key areas and offer a balanced review of both products.

Should I buy Office 365 or G Suite?

Selecting an office suite for your own personal device is one thing, but making a decision that will impact a whole team or company is much harder.

It's not just the features that are important, but the price and how easy it is to roll out across whole departments and for larger businesses, territories.

Choosing between the two companies ultimately depends on the needs of your individual business. Price, storage and ease of use will be big deciding factors, and making that decision isn't always straightforward.

For smaller companies with little legacy infrastructure, a fully cloud-based office suite will be a less daunting choice, while other, larger businesses may find the transition period a lot harder.

Both options from Microsoft and Google provide cloud and on-premise suites, so it isn't as straightforward as cloud vs on-premise like it once was. Although, there is still a clear distinction between the companies in their online word processors and spreadsheet applications.

You'll find that Google takes a real-time collaboration approach, while Microsoft can play on the fact that most people will know how to use its products, so learning and transition time will most likely be less. All things businesses should consider before making the leap.

To help you make your decision, we look at which office suite is the best for business users, assessing the word processors, email clients, spreadsheet programs and collaboration tools of both companies.

Overview

G Suite is Google's productivity suite, comprising of a range of applications, the most widely used of which are its Slides presentation app, Sheets spreadsheet editor, Docs word processor and file storage platform Drive. It also offers excellent integration of third-party apps, which can be downloaded from the Google Web Store.

Microsoft Office 365 also comes equipped with a range of well-known tools. This includes cloud-native versions of the popular Word, Excel and PowerPoint apps, as well as email client Outlook and cloud storage platform OneDrive, along with other features such as Skype and Microsoft Teams, its instant messaging and collaboration tools.

If you're wondering what the difference between Office 365 and Microsoft's current office software, Office 2019 is, it's relatively simple. Office 2019 is Microsoft's on-premise productivity suite. Office 365 is the cloud-based version, which is paid for on a subscription basis.

We'll be looking primarily at Office 365 as a subscription service, however, most of the features we review are part of Office 2019, so it is also worth reviewing if you are choosing between an on-premise service and G Suite's cloud-based programs.

Both Office 365 and G Suite come packed with lots of additional features, not mentioned here, but these are the main ones that the majority of business users will look for when choosing a new productivity suite.

In terms of deployment options, G Suite can be accessed via the Internet and shortcuts can be made for the desktop. There is no downloadable software.

On the other hand, Microsoft's Office suite has historically been downloaded to the desktop and accessed offline via Microsoft's software on your PC or laptop. However, in an attempt to take on Google's cloud suite, Microsoft Office 365 packages contain both, so users can choose and switch between the desktop and an online version of Office.

Another area where the two suites differ somewhat is in design and usability. Some companies will prefer the simple and clean feel of G Suite, while others will be drawn to the more feature-heavy Office 365. For example, Microsoft's flagship programs, Excel and Word are packed with useful features, but this can make navigating its desktop software tricky for light users. However, if you like the overall feel of Microsoft's applications, perhaps try its online version of Word or Excel as this offers a more simplistic suite.

G Suite apps are simple and while it lacks some of the features and functions of Office 365, you can download browser add-ons for most tasks that aren't internally supported by Google Docs, Sheets or Slides.

Price

Price is probably one of the biggest deciding factors when purchasing any business software, and both Google and Microsoft are priced competitively.

Google offers a three-tiered pricing option for business users: Basic, Business or Enterprise. However, as of April 2019, two incremental list price updates

were introduced to better ‘reflect [the] value’ offered by G Suite. Small businesses could still comfortably go for the Basic option, which offers 30GB of storage, business email address, video and voice conferencing, shared calendars and Docs, Sheets and Slides for £4.63 per user per month.

For larger organizations, the Business option will suit. It offers all the above features but unlimited cloud storage, audit reports, e-discovery for emails and chats, and archiving policies for £9.26 per user per month. Its Enterprise model isn’t impacted by the price increase and continues to cost £20 per user, per month; including all the same features as the Business option but with advanced security features.

Microsoft Office 365 also offers three pricing options, Business Essentials, Business and Business Premium.

Business Essentials gives users access to Microsoft’s online Office 365, a 50GB mailbox, 1TB of file storage, Skype and Microsoft Teams for £3.80 per user per month. The next package up, Business offers the full desktop version of Office 365, 1TB of file storage and tablet/phone apps but does not include email for £7.90. The Business Premium package offers all the features of Business and Business Essentials for £9.40.

Microsoft also offers a range of enterprise packages offering different sizes of mailboxes and storage.

We’ve compared both G Suite Business and Microsoft Office 365 Business Essentials, back to back, on storage, price, users and applications.

As there are plenty of options out there, we found that G Suite Business and Microsoft Office 365 Business Essentials were the most comparable for medium-sized businesses as both offer online-only suites.

Microsoft Office 2019

Microsoft released Office 2019 on 24 September 2018, differing from the traditional Office 365 suite in that it is not a subscription service. Office 2019 is sold as a one-time purchase, which means you pay a single, up-front cost to get Office apps for one computer.

While it provides a good option for consumers who are still unwilling to take the plunge with a fully cloud-based platform there are no upgrade options, which means if you plan to upgrade to the next major release, you'll have to buy it at full price. Security updates are included in the purchase, though ongoing technical support after your initial installation period is not.

The one-time purchase price for the Office 2019 Home and Business offering will cost you £249.99.

Verdict

Both G Suite and Microsoft Office 365 can compete with one another across the board. Google comes out on top in terms of collaboration and ease of use, while Microsoft's strengths lie in offering a suite that is feature rich and capable of processing detailed documents and large amounts of data. Organizations currently using Google's email client will find it an easy transition to move further down the G Suite path, with the same being relevant for those currently using Microsoft's Outlook email client. For businesses wanting an online suite that is most simple to use, Google is the ideal option. Its one-stop-shop approach is particularly attractive to businesses starting out and those looking for a clean and responsive suite. Yet Office 365's user interface is one that most will be familiar with, drawing on Microsoft's experience with productivity tools. **Computerworld Staff**



Credit: iStock

Best free cloud storage

Data rich but cash poor? Here are the best free cloud storage solutions out there today

The cloud storage market is getting crowded and with a growing number of options comes a ramping price war among providers aiming to entice new customers with gigabyte giveaways. Here, we list some entirely free alternatives to the big four we have detailed already.

pCloud

pCloud (pcloud.com) is a cloud file storage platform that offers a fairly generous 10GB free storage when you

sign up. You can also easily upgrade to a plan offering a vast 500GB of storage for a one-off payment of £160 (subscription plans are also available, but obviously you end up spending more).

In terms of security, pCloud offers TLS/SSL channel protection, 256-bit AES encryption for all files and five copies of files on different servers with impressive backup and file recovery features, too. It's also a good option for sharing files with family and friends, as there is no limit to the file size for sharing.

There are also business options available here:

pcloud.com/business.

Mega

Mega (**mega.nz/mobile**) is a paid-for cloud storage solution that boasts a substantial free offering too: 50GB to be precise. Its super simple drag-and-drop interface is available through the platform's mobile app, where you can upload photos and files.

The next tier up is a meaty 200GB of storage for around £4.50 per month. Privacy is the company's stated forte, claiming that your files will be encrypted before being reaching the cloud, and even running with the tag line, 'the privacy company'.

Apple iCloud

Apple's iCloud (**iCloud.com**), which comes with any Apple ID account, has a pretty stingy free allowance of 5GB of storage. Users can access their files from a browser by logging into their iCloud account or on any Apple device. You can increase the storage capacity to 50GB for £0.79 per month, to 200GB for £2.49 per month, and to 2TB for £6.99 per month.

Amazon Drive

Cloud computing giant Amazon also offers 5GB of free storage with its Drive product (fave.co/2xXARxg). Users can store a whole range of files using the desktop or mobile Drive app and using their Amazon login.

You can then pay £16.99 per year for 100GB, £79.99 for 1TB, all the way up to 30TB for £2,399.70.

MediaFire

Texan company MediaFire (mediafire.com) provides a simple cloud storage solution that can be used through a web or mobile app. It offers 10GB of free storage and up to 4GB per file for the ad-supported version, or up to 50GB with 'bonuses'. You can upgrade to 1TB of storage with a Pro plan too, which costs \$3.75 (around £3) per month, or a business plan with up to 100TB of space for \$40 (around £32) a month. **Computerworld staff**



Credit: iStock

Box puts automation at heart of its product vision

The company is veering into the automation space thanks to its machine learning work with Box Skills and the Box Skills Kit

Enterprise cloud storage vendor Box is increasingly looking to help its customers automate repetitive or mundane business tasks.

Speaking during a UK visit, Jeetu Patel, chief product officer and chief strategy officer at Box, explained how the company's product road map aligns with three goals.

"If you think of the higher order problems that we are solving right now there are three categories," Patel explained. "The first one is helping our customers with

building a better digital workplace, so giving employees the tooling to be more productive, transparent and collaborative with each other, so their organization can operate in a more efficient and agile manner, and innovate faster. That's probably the one we have been solving for the longest amount of time, that's the core of what we do."

"The second area is what we call digital business, so helping the company itself operate as a digital company rather than an analogue company. So everything from how they engage with customers to business processes and supplier and partner networks, and how they engage with those people and create a level of agility in those external engagements and automate business processes. That's probably the newest venture we have gotten in to over the past three years, and we have been investing pretty heavily in that area."

"The third is security, data protection, privacy and compliance to make sure we can continue to keep innovating there in a meaningful way."

So while Box is still a content management and collaboration specialist at its core, it is steadily moving more into building a layer of what is called robotic process automation (RPA) software to help its customers manage these very manual business processes.

Building an automations engine

The vendor announced a range of product news at BoxWorks in San Francisco in 2018, which covered all three of these areas, from core product enhancements like activity feed and recommended apps, to new security and compliance features, including two-factor authentication for third-party collaborators.

Like every other enterprise software vendor worth its salt, Box is exploring machine learning techniques to improve its core product, and clearly sees the technology's ability to automate mundane processes as the most valuable application for customers.

The result is what Patel calls "an automation layer" which is built on a simple action/event framework, so when a certain event occurs regarding a piece of content within Box, that triggers a resulting action.

"So if a file gets uploaded to this folder, it will assign a task to this team member. Those kind of single task automations can be hugely useful in a multitude of different tasks," he explained. These capabilities will start to be rolled into the base Box product early next year.

He uses an example tailored for me in order to illustrate this. "This article you may write, you might want to share it with a couple of colleagues and send to your editor and when that happens it is all manually done in an email, so we wanted to go after that workload and make it lightweight and solve that problem," he said.

The result is essentially an automated copy approval process, automating the handoff of a project from the copywriter to the client and to legal, without having to attach it to an email every time. It's a simple use case with huge potential productivity gains, not just for media organizations, but for marketing teams and legal practices around the globe. By being a neutral platform, Box can tie that process into other SaaS apps such as Salesforce CRM or Adobe Sign, making these handoffs seamless thanks to API connections.

"That all happens manually right now, so with automations you can create those actions within the system," Patel added.

Box skills

The work the vendor has been doing with Box Skills is a key example of this subtle shift into workplace automation. The machine learning powered skills, and the open Box Skills Kit for more bespoke models, both allow customers to build more automated workflows around their content.

“Box Skills is a first-of-its-kind framework that will make it possible to digitize almost any business process on Box,” CEO Aaron Levie said at the time of release.

The initial Box Skills focused on Audio Intelligence, which uses IBM’s Watson technology to show how audio files can be used to create and index a text transcript, which can then be searched; Video Intelligence using Microsoft’s Cognitive Services to provide transcription, topic and people detection; and Image Intelligence, which uses Google Cloud to detect objects and concepts in images, capturing text using optical character recognition (OCR) and automatically adding labels to images to build metadata on image catalogues.

The difference between Skills and Skills Kit can be illustrated by the example of a white trainer. The basic Box Skill can tag an image of a white trainer with ‘shoe’, ‘white’, ‘trainer’ and so on, whereas a custom-built Box Skill from Nike could identify that shoe as a 1997 Air Jordan XII.

Data entry, digital asset management and metadata tagging are all automation use cases being built via Box Skills already. **Scott Carey**



Credit: iStock

Met switches burned CDs for Box cloud storage

The police service for Greater London has completed a force-wide roll-out of the cloud file storage solution

The Metropolitan Police Service has rolled out cloud file storage to 50,000 members of staff as it looks to reduce its reliance on CDs and improve the security of its file sharing practices.

Speaking to the press during the official opening of Box's new London office just off the Old Street roundabout in Shoreditch last year, Angus McCallum, CIO at the Metropolitan Police Service, revealed that the 50,000 seats would be available to officers by

the end of Q2 2018. The deal was announced back in September 2017.

He added that the Met would be moving away from “other document storage systems”. It is an existing Microsoft Azure customer, where it will continue to store body-worn camera video footage.

Examples of Box in action

McCallum shared cases of how the Met will leverage Box’s cloud storage to help save the valuable time of its officers. Previously, for example, if there was an incident on a bus, the Met would have to request that the bus garage copy the CCTV footage to a CD or USB drive, and then either send it via courier, or an officer would need to collect it. Now the service wants to set up Box folders for each bus garage, so footage can be sent digitally via secure links.

“We are doing a similar thing for 999 calls,” McCallum revealed. “Before when we got a 999 call that wants to go to court, we would burn CDs that would be shared with defence lawyers and the Crown Prosecution Service [CPS]. Now that is shared through electronic links.”

In short: “Box allows us to share links in a very secure way, see who has access – who has seen it – and we can control what people do with it.”

The Met will also increasingly use Box internally for document storage, helping the service move away from a cultural propensity to rely on email as a document repository, McCallum explained.

Why Box?

When asked why the Met opted for Box instead of a rival solution such as Dropbox or Microsoft SharePoint, for

example, McCallum explained: “A large part was ease of use and simplicity. Secondly was [Box’s] willingness to engage with us and help us through the pilots.”

Security was also a pressing concern, with the Met conducting its own penetration tests to ensure the solution was up to scratch. He added that the ability to hold its own encryption keys was attractive.

Naturally, the ability of Box to give the Met’s IT team visibility into who is accessing which files, set access controls and set expiry thresholds on links gives the force far greater security control than sending CDs around London via couriers.

The Met also liked the fact that Box allows for file sharing without third parties needing a Box licence.

Finally, the Box road map gives the Met access to cutting-edge innovations without having to constantly reinvest in technology or people. “It is an off-the-shelf product with development coming and [we] are going to take advantage of it as it comes, without having to reinvest,” he explained.

In particular, the AI-powered features, called Box Skills, piqued McCallum’s interest. “The road map and ability to search metadata and things like that is very important,” he said. **Scott Carey**



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