



THE COMPREHENSIVE GUIDE TO THE CLOUD

FOR SMALL BUSINESSES

Google Cloud



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WELCOME TO THE AGE OF DATA

Doing business today differs from a decade ago in one big way: data. The sheer volume of data created—an estimated 44 trillion gigabytes by 2020—has opened up entire new markets and shifted business strategies in every industry. The new data landscape isn’t just vast—it’s also complex. Devices ranging from toothbrushes to smartphones to cars are creating distinct forms of data that must be collected, stored, processed, and analyzed strategically.

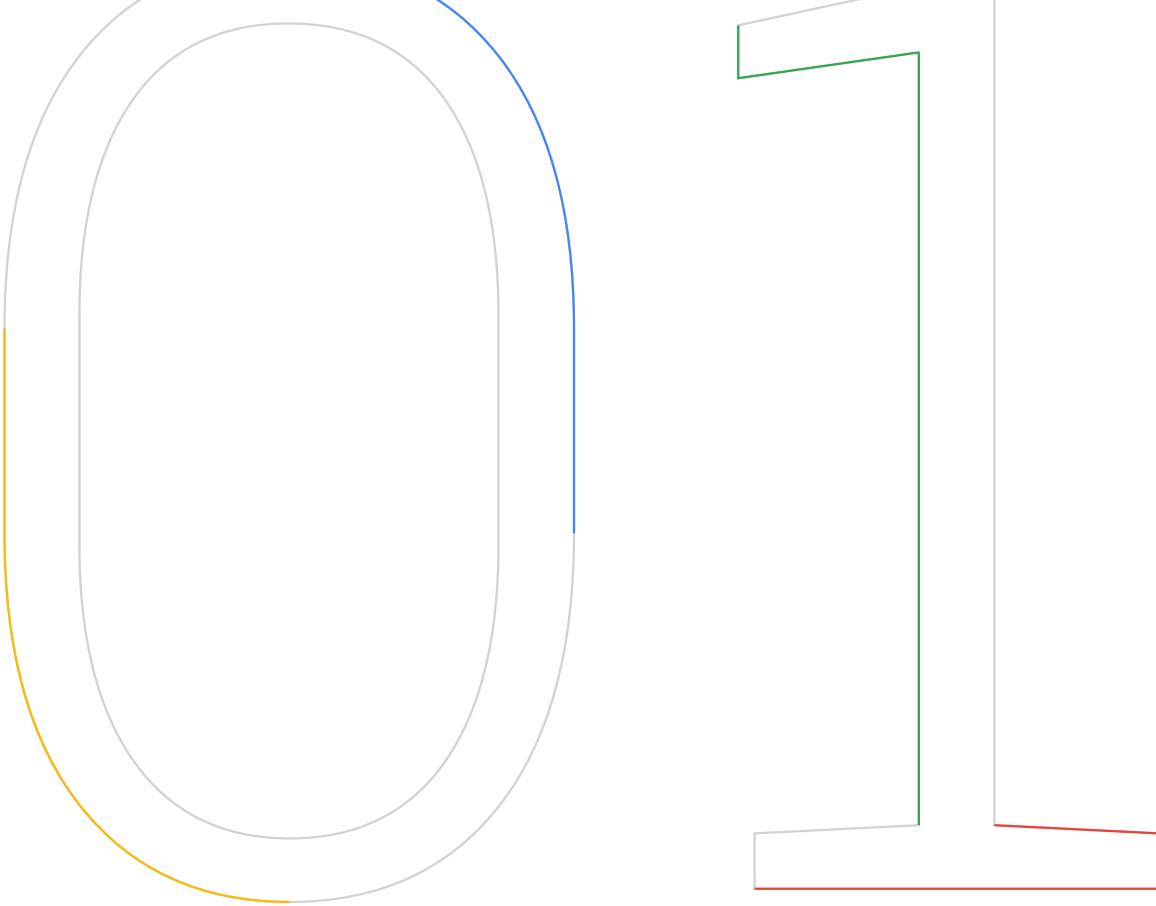
Before cloud computing, Big Data, and the Internet, storing even modest amounts of data was expensive, complicated, and time-consuming. Companies had to build their own on-premises data centers to store and manage their data. As data processing needs grew, IT teams had to figure out how to manage an increasing number of increasingly complex data-related workloads. Storage could get really expensive, really fast, and predicting future data-warehousing needs became a full-time occupation.

Enter the cloud. Put simply, cloud computing enables companies to outsource the boring, nondifferentiated work—like provisioning and managing servers—to cloud providers, and focus exclusively on creating differentiated business value. But in order to take full advantage of the cloud, it’s essential that business leaders understand what it is and how it works.

This ebook focuses on cloud computing for small and medium-sized businesses and is divided into four chapters that address common questions:

- **WHAT IS CLOUD COMPUTING?**
- **WHY SHOULD SMALL BUSINESSES USE THE CLOUD?**
- **WHERE AND HOW DO YOU START USING THE CLOUD?**
- **HOW CAN GOOGLE HELP?**

After reading it, you’ll be cloud-ready—and primed to be a leader in the Age of Data.



CHAPTER 1

WHAT IS CLOUD COMPUTING?

The concept of cloud computing is simple: Instead of using on-premises servers to store, manage, and process data, cloud computing involves remote servers, managed either internally or by a public cloud provider. Public cloud providers provision servers to create efficiencies at scale that allow the platforms to offer data storage and security at reduced cost.

There are other advantages, too: Because data is no longer tied to a single server or machine, employees can access the business data they need from anywhere at any time. Cloud computing is what enables two users in different offices to collaborate on a document in real time with both users' edits appearing immediately.

Cloud offerings range from full-service data and IT management solutions to simple, plug-and-play software apps (like Gmail). Given all the options out there, how can businesses make sense of it all?

SaaS, PaaS, AND IaaS

In general, cloud providers divide their offerings into three main categories: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Each primary cloud service level has different responsibilities for both the user and the cloud vendor.

HERE'S WHAT EACH TERM MEANS:

SaaS

With SaaS, you may be using the cloud without even realizing it. SaaS is just standard software, but instead of something you buy and install and then have to update, SaaS is cloud-based software that's generally sold as a monthly or annual subscription. Some examples include email services like Gmail or cloud-based CRM providers like Salesforce. The benefits of SaaS can include lower prices, more flexibility (buy only what you need), and automatic software updates (rather than waiting for the vendor to release a new version, then having to buy and install it).

RESPONSIBILITIES:

YOU

n/a

CLOUD VENDOR

Applications, Data, Runtime, Middleware, OS, Virtualization, Servers, Storage, and Networking

PaaS

PaaS happens lower in your tech stack. Generally, PaaS solutions offer companies a subscription-based platform for building applications. This means that instead of having to worry about platform infrastructure, developers can build applications and services over the Internet, hosting them in the cloud so users can access them from anywhere.

YOU

Applications and Data

CLOUD VENDOR

Runtime, Middleware, OS, Virtualization, Servers, Storage, and Networking

IaaS

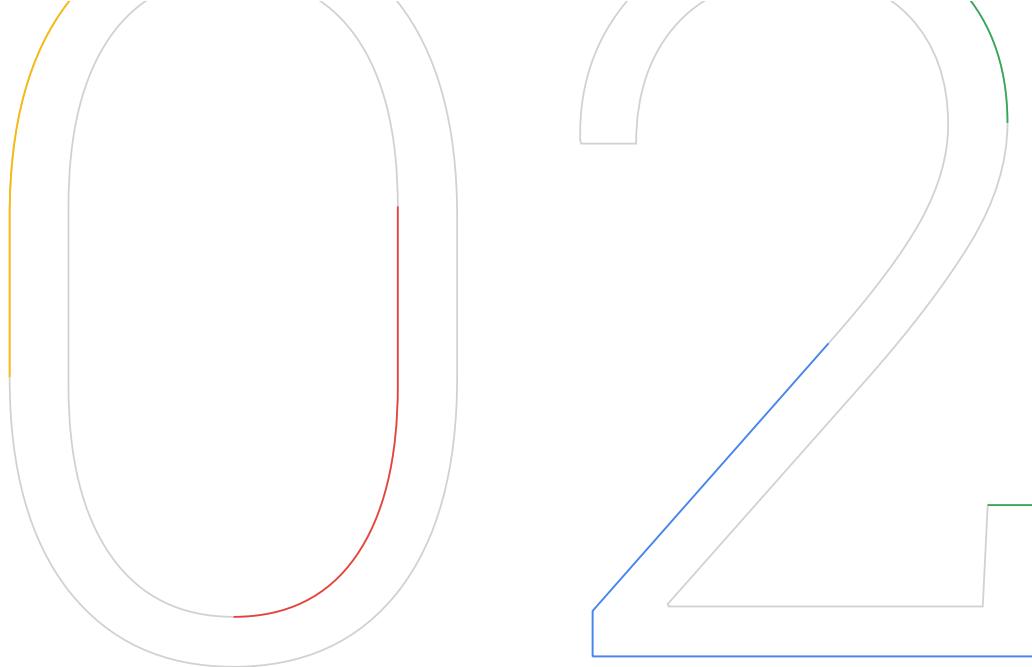
IaaS includes services at the most fundamental levels of IT, offering building blocks like virtual machines and big disks that companies can rent instead of building and maintaining their own. You pay for the resources you use, and your cost covers all of the necessities like power, networking, and cooling. You can maintain full control at the infrastructure level, but then you're responsible for everything between the hardware layer and your app—things like the operating system, database server, load balancing, monitoring, and upgrades.

YOU

Applications, Data, Runtime, Middleware, and OS

CLOUD VENDOR

Virtualization, Servers, Storage, and Networking



CHAPTER 2

WHY SHOULD SMALL BUSINESSES USE THE CLOUD?

Organizations using the cloud grow 26% faster and are 21% more profitable than organizations that do not, [according to Deloitte](#). And we're not just talking about startups: 79% of relatively mature companies—that is, those older than five years, growing at less than 10% per year—rely on cloud technology to gain access and exposure to new markets and revenue streams.

For companies working with demanding business partners in a fast-moving marketplace, having the right tools is essential to building a culture of efficiency, collaboration, and trust.

Still, how do you choose the tools that won't just solve your business challenges today, but will also allow you to anticipate tomorrow's needs and adapt for the future? And how do you handle the risks inherent in big change?

Surprisingly, part of the answer lies in the increasingly blurred lines between personal and business tech. Today, the apps and devices we use in our personal lives are setting new expectations for the look, feel, and functionality of business technology. When business tech doesn't measure up, your employees will resort to bringing personal tech into the office—a trend known as "[shadow IT](#)."

While the rise of shadow IT creates vulnerabilities, it also presents an opportunity for businesses to improve productivity by rethinking their traditional tools and processes. Instead of fighting shadow IT, you can embrace it by introducing a legitimate technology that's intuitive, familiar, and integrated with tools your employees use every day. Increasingly, these consumer tools are cloud-based—which means that, in order to adopt them, your organization must have a plan in place for integrating existing tools and processes with cloud technology.

How the Cloud Supports Growing Businesses

Cloud services are most popular as substitutes for workloads that previously required expensive infrastructure, such as document storage and disaster recovery. SaaS applications that reduce cost and complexity are also popular among businesses of all sizes. These cloud-based apps improve productivity in business functions at an earlier stage than would have been possible five years ago.

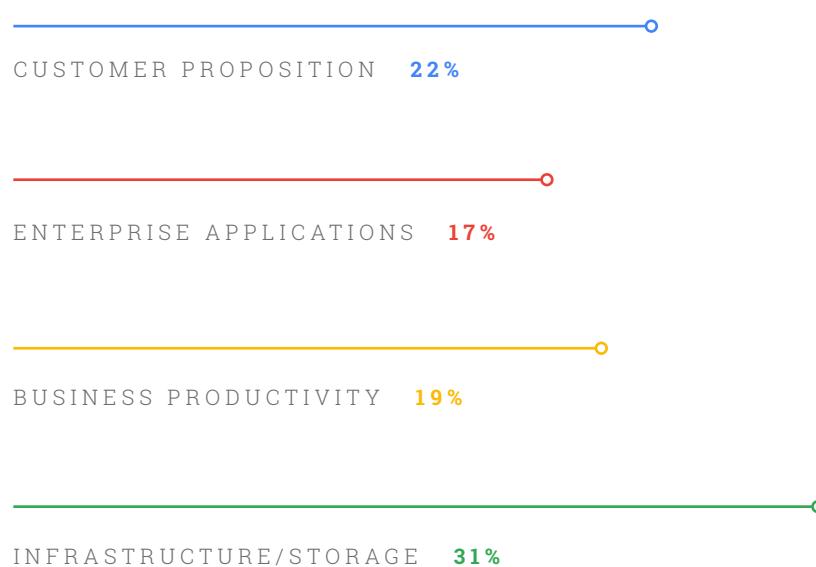


How the Cloud Supports Growing Businesses

This contents of this chapter are derived from a report commissioned from Deloitte: Small Business, Big Technology: How the Cloud Enables Rapid Growth in SMBs.

[Read the Full Report](#) 

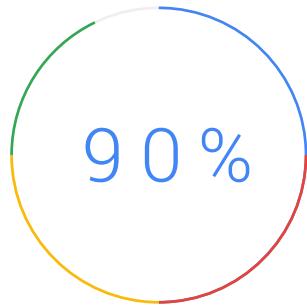
USAGE OF CLOUD-BASED APPLICATIONS



The cloud supports business growth in different ways, depending on how mature a business is:

Just Starting Up

Seeking to survive and win market share: Cloud technology enhances growth and promotes sustainability by enabling limited resources while also reducing the need for up-front capital investment. Focus on your business strategy and your customer experience while gaining access to otherwise inaccessible specialist technology talent.



OF SMBs BELIEVE CLOUD HAS ENABLED THEM TO SCALE AND GROW FASTER.

Achieving Rapid Growth

Testing scalability, managerial control, and sustainability: Companies achieving rapid growth use more cloud products, and according to Deloitte, 90% of these SMBs believe cloud has enabled them to scale and grow faster. Cloud tools are flexible enough to adapt to the needs of the business as it expands, and so do not hold the business back: They enable efficient management of a growing and more complex workforce.

Restarting Growth

Mature businesses seeking to optimize and innovate for the future: Cloud technologies enable mature small businesses to reduce non-essential systems. Cloud technologies also enable you to experiment with new business models, products, and services that need to be flexible, scalable, and able to rapidly address new opportunities.

BENEFITS OF CLOUD TECHNOLOGY

COST

Cost savings: Businesses can instantly reduce their IT spend by approximately 54% by moving to a cloud-based solution, according to IDC. Cloud-based subscription services also let you scale as needed.

MOBILITY

Improved productivity: Employees can access documents and emails while away from the office. If your business demands mobility and flexibility, the cloud is a straightforward and affordable way to address these needs.

SECURITY

Better security: Cloud computing can be more secure than traditional IT. It's all about economies of scale—certain cloud providers (like Google Cloud) employ leading security experts, invest vast amounts of money into securing their applications, and develop technology beyond the means of any small business. In addition, using cloud storage and data-management tools reduces the risk of losing confidential data when an employee misplaces a laptop or USB stick.

WORKFORCE

A happier, more collaborative workforce: Using cloud computing applications, people can work more closely together, accessing and working on the same documents in real time without the need for hundreds of emails with attachments. Improved knowledge sharing and communication encourages creativity. In addition, adopting tools your employees already use—such as Gmail and Google Docs—can speed adoption and increase engagement.

CHOICE

More choice: In contrast to traditional IT models, which can involve expensive software licenses and long lock-in contracts, some cloud providers offer more flexibility and interoperability so that you can pursue the tools that work best for your business.



CHAPTER 3

STARTING YOUR JOURNEY TO THE CLOUD

Getting started with the cloud means different things to different businesses. For startups, it might mean storing data with a public cloud provider from the beginning. For more established companies, it might mean switching to cloud-based productivity tools, like G Suite. In either case, cloud computing presents an opportunity for businesses to reevaluate where they're focusing IT budget and talent. Managed cloud services enable IT to worry less about the underlying infrastructure required for core business processes, and more about adding differentiated business value through optimization and innovation.

The established thinking about technology economics is obsolete. SaaS, for instance, reverses the traditional IT spending model by replacing large, sporadic investments with smaller payouts, smoothed over time. Investments and value ebb and flow based on the dynamics of actual business conditions and technology demands. The real power of cloud is in the business technology agenda—a *focus on making money, not just saving money*.

Cloud Services Partners Can Help Businesses with Their Struggle to Find Skilled Resources

Good collaboration solutions don't exist in a vacuum. They are part of a rich ecosystem that extends way beyond the Google domain. To help you thrive in that ecosystem, we have a library of closely vetted third-party apps that sync tightly with G Suite, we work closely with key enterprise partners to ensure compatibility, and we offer a robust Google Drive API.

According to *Understanding the Cloud Services Provider Landscape*, a December 2016 Forrester report, "the cloud market is changing quickly, and businesses face a fragmented and diverse technology landscape." Despite movement toward cloud standards and open cloud, many solutions are still based on proprietary technology. These market dynamics make it hard for organizations to staff the right skills in-house. Worse, even when an organization invests in an in-house resource, competitors can poach that resource. To get the right skills quickly and to alleviate the costs and risks associated with staffing skills for this fast-moving market, IT can look to partners for help. Specifically:

- Businesses can expect more help from their cloud services provider (CSP) than they expect from their traditional technology vendors. Cloud solutions physically reside off-site and are highly standardized as service offerings, so businesses rely on CSPs for the expertise they need (either included in the subscription price or available for an extra fee).
- Businesses are demanding that their existing services partners evolve to meet cloud needs. For skills that don't come from the CSP, clients are turning to services partners to fill the gaps.



Data from: *Understanding the Cloud Services Provider Landscape* (Forrester Report)

[Download the Report](#)



People, Processes, and Technology Issues for Cloud

To successfully implement any cloud service, you'll need the right people, processes, and technologies. In the discovery and planning phases, focus on:

People: Prepare the people involved. Cloud is a progressive development that can automate certain manual tasks, but can open up new opportunities for employees to pursue more value-additive work.

Processes: Cloud technology enables businesses to move faster—but workflows must be agile enough to seize this opportunity. Don't limit process and governance to your own workforce; consider, too, the partners, vendors, and service providers you work with.

Technology: Choose cloud tools that integrate easily with existing, especially proprietary, technologies. One of cloud's benefits is the potential for interoperability among disparate systems—before moving forward with a cloud provider, ensure that you're getting this benefit.



CHAPTER 4

WHAT SETS GOOGLE CLOUD APART

Google Cloud Is More than Products

Google Cloud spans every layer of the business, including all of Google Cloud Platform; our user-facing collaboration and productivity applications, G Suite; all of our machine learning tools and APIs; the enterprise Maps APIs; and the Android phones, tablets, and Chromebooks that access the cloud. Google Cloud products are built for the cloud and designed to fit customers of all sizes: from the smallest startup to the world's largest enterprises, including Google itself.

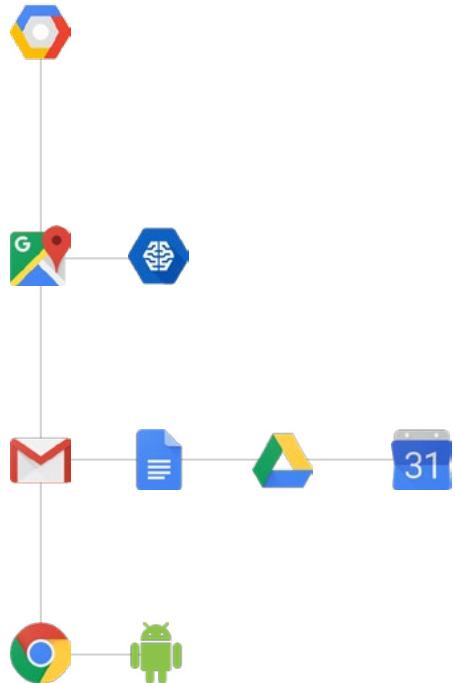
But Google Cloud is more than products. It also embodies how we work alongside companies in an engineering-centric way. Because digital transformation is a technical process, we've invested heavily in our team of dedicated customer engineers, customer reliability engineers, site reliability engineers, and product engineers. We're there to support our customers as they migrate, deploy, and evolve. Our approach and our commitment to Google Cloud customers is simple: We're in it together.

Underneath this investment in our customers is a simple, deeply held belief: No company should undergo digital transformation alone, and the cloud partner you choose really matters. It's a long-term bet on the technological capability and strategic vision of your cloud provider—and cloud is where we've been building since Google was born.



Google Cloud Platform

Securely run your business on the most advanced cloud platform ever built. Powerful data and analytics solutions and machine learning deliver real-time insights for more informed, more effective decisions.



Maps and Machine Learning APIs

Use Google Maps APIs to leverage location data in amazing ways. Make your business smarter and faster with machine learning models for any type or amount of data.

G Suite

Enable your teams to collaborate, iterate, and innovate together, from anywhere, in real time, with G Suite—our cloud-based productivity suite.

Chrome and Android

Mobilize your workforce with Chrome and Android devices that deliver security, choice, and flexibility.

Scale with Efficiency and Open Standards

Google Cloud Platform was engineered to handle the most data-intensive work on the planet. It's the ideal environment for your business-critical applications and data, giving you the power to quickly scale and improve performance with capabilities like machine learning. And unlike other cloud providers, we're committed to building and integrating open-source capabilities to preserve your control and prevent lock-in.

Uncover Insights You Can Use

Google Cloud Platform delivers real-time data analysis and meaningful insights in seconds with BigQuery to help you make more informed decisions. Machine learning—the same technology used for voice search and web translation—efficiently processes the volumes of data now streaming into your business, so you can build smarter products, drive productivity, and reduce costs.

Collaborate to Innovate Faster

Great things happen when people work together. G Suite, our suite of intelligent apps, is the only pure cloud toolset built with real-time coworking and native sharing. G Suite apps enable anytime, anywhere productivity for all employees across desktop and mobile devices, including Chromebooks, Chromebox for meetings, and Android.

Your Security Is Our Priority

Unparalleled Scale

G Suite was built as a 100% cloud-based solution from the very start, leveraging the same cloud infrastructure that allows Google to return billions of search results in milliseconds, serve 6 billion hours of YouTube video per month, and provide storage for 900 million Gmail users and services to more than 5 million businesses that have chosen G Suite.

Making Security a Priority

Google employs more than 750 full-time engineers—including some of the world's most recognized security experts—to protect customer data. And all of our data centers have received ISO 270110 certification. But it's not just about our security—we also give our customers the tools to be more secure. We've recently launched many security enhancements, including Information Rights Management (IRM), custom audit alerts, new sharing controls, Password Alert, new password recovery options, Whitelisted Domain sharing, [increased email security and compliance with attachment scanning and file type detection](#), and the [Security Key](#). Google and our partners are always here when you need us, offering you the right support, 24/7.

What About Privacy?

Google Cloud customers own their data, not Google. The data that companies, schools, and students put into Google's systems is theirs; Google does not access this data or sell it to third parties. We offer a detailed [Data Processing Amendment](#) to elaborate on this commitment.

[Read More About How Google Protects Your Data](#) 

"[Google's] ability to build, organize and operate a huge network of servers and fiber optic cables with an efficiency and speed that rocks physics on its heels ... This is what makes Google Google: its physical network, its thousands of fiber miles, and those many thousands of servers that, in aggregate, add up to the mother of all clouds."

—WIRED Magazine

[Keep Reading](#) 



Integration, Migration, and a World of Possibilities

Every company has its own needs and tools, which is why we've worked so hard to seamlessly replace or add on to your current solutions to get the most out of your data, systems, and processes. For instance, if the Microsoft® Office Suite has been the backbone of your productivity until now, you are probably wondering how it will integrate with G Suite. Our partners and teams have a proven methodology for this.

Easy, Secure Email Migration

This is often a big question for companies looking to move to the cloud. If you're using Microsoft Exchange servers now, we have the tools to migrate your email system to Gmail in a stress-free way that won't mean lost data or a big installation production.

Microsoft Office Interoperability

Some collaborators within your organization may still be using Microsoft Office files. Not a problem with G Suite. They can edit, download, and convert Office files in Google Docs, Sheets, and Slides. To edit an Office file, they can either:

- Edit the file using Office Compatibility Mode (OCM)
- Convert the file to Google Docs, Sheets, or Slides
- Use the Google Drive plug-in for Microsoft Office: Open Word, Excel, and PowerPoint documents stored in Drive, and save changes back to Drive (Windows)

Once they've edited a Google Docs, Sheets, or Slides file, they can then save and export it as an Office file to share with others.

[Read More !\[\]\(9f63f5ec98cc2eddf66038fdc55c1091_img.jpg\)](#)



THIS IS JUST THE BEGINNING.

We look forward to building this future together.

Get Started with G Suite

Find a Local Expert to Work With

Get Started with Google Cloud Platform



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