SADA

7 BUSINESSES THAT ARE BUILDING, SCALING & INNOVATING WITH GOOGLE CLOUD PLATFORM

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Table of contents

//// Introduction

Build for tomorrow - faster, safer, and better
The Google Cloud Platform (GCP) is built to take your organization into the future, no matter where the future takes your business. Because you're no longer tied to the limits of legacy systems, you can respond rapidly to change and scale up as quickly as needed in a stable, secure, cost-effective computing environment.

Unlimited scale

With no onsite servers to worry about, you are freed from the limits of server capacity. You can scale up via Google's global computing power as quickly as you need to.

Better analytics and insights

GCP gives you better data warehousing and more effective ways to explore your Big Data with tools like BigQuery. Combined with the power of Artificial Intelligence (AI) and Machine Learning (ML), you get insights faster for better business decisions.

Constant innovation

Google is constantly innovating in cloud-based computing and GCP users benefit from its commitment to nonstop improvement in reliability, security, performance and creative solutions.

Boost your organization's performance with GCP's superior capabilities

Global reach
You get access to the largest and most sophisticated networks in the world, which makes it fast, stable, and scalable.

Redundancy
Your data is mirrored across storage devices worldwide, meaning that it is protected, no matter what happens.

Integration
Build the way you want. Google integrates with familiar development tools to make it easy to build within GCP.

Versatility
Mix and match to meet your business needs. Flexible virtual machines and a fully managed platform allow for greater computing, services, and storage options.

Scalability
Your applications automatically scale up to handle heavy loads and scale down when traffic is lower.

Functionality
GCP provides a wide range of powerful APIs and services that increase development cycles – no more building from scratch.

SADA, a Google Cloud Premier Partner, has helped leading companies embrace innovation and optimize Google Cloud Platform. Read on for 7 inspiring examples that showcase how SADA and Google Cloud Platform are helping businesses modernize their infrastructures.

FoodJets drives innovation with Google Cloud & SADA

1. Food Jets

Allied Market Research forecasts that the global food delivery mobile app market will reach $16.6 billion by 2023, a compound annual growth rate of 27.9%[1], and UBS predicts that by 2030, most meals currently cooked at home will be ordered online for delivery.[2] However, the relatively low entry barriers to starting up an online food delivery platform have resulted in an increasingly crowded marketplace populated not just by third-party delivery platforms, but branded restaurant apps. New entrants need a unique selling proposition to attract and retain users.

Startup food delivery platform FoodJets differentiates itself from its larger competitors through its commitment to the local communities where it operates. In addition to partnering with high-quality local restaurants, the company supports local schools and civic organizations, hosting events and fundraisers, and it develops close relationships with other businesses within local communities. FoodJets is also heavily focusing on its B2B concierge and catering services, in contrast to competitors' emphasis on individual delivery in the B2C market.

[1]https://www.qsrmagazine.com/technology/fighting-share-166-billion-delivery-app-market
[2]https://www.ubs.com/global/en/investment-bank/in-focus/2018/dead-kitchen.html

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"The bigger fish focus on quantity; we're focused on quality and being community-centric. We grow by developing strong relationships with our customers, employees, and business partners and keeping all of them happy, as well as by being flexible and willing to adapt to market changes. We're shifting our attention to business catering because we saw an unfilled need there, and we've got a lot of B2B projects in the pipeline."

Veer Singh
CTO, FoodJets

Challenges

FoodJets has made many pivots, Singh says. Its developers have had to be adaptable to change and able to easily identify areas for enhancement and improvement for both FoodJets' customers and its internal staff. To enable flexibility and innovation, the company doesn't want app devs bogged down in infrastructure management tasks; it wants them to be able to write, enhance, and scale applications without having to wrestle with overhead.

The company had been using Amazon Web Services (AWS) for four years until Singh learned more about Google Cloud and its benefits. Singh recalls. "I'm always interested in hearing about ways we could make our devs' lives easier. We had a great call with Google Cloud representatives who then introduced us to SADA, a Google Cloud Premier Partner. It was great to hear about the great things SADA had done for other companies."

Solution

SADA introduced FoodJets to Google App Engine and explained benefits and ease of use. "SADA provided me with a lot of evidence of their technical know-how and examples of work they'd done for other companies."

App Engine was especially appealing to Singh because of its simplicity and use, along with its ability to handle heavy loads with ease. "I didn't want our developers to

need a lot of knowledge of DevOps or have to worry about things like load balancing, configuring Kubernetes clusters, or configuring new machines. App Engine would let them write code, push it, and let the system run. I was also impressed with examples of how other big companies, like SnapChat, were using App Engine and obviously getting a big load on it. That was our catalyst."

Results

Singh says that "using GCP is like having a black box. We just push the code, and GCP does what it needs to do to keep the system running. Once we push the code, App Engine and the other services scale automatically, which saves us a lot of debugging time. It's just a super simple system to use, with super simple services." FoodJets staff can now do a lot more in less time, which means they have the bandwidth to develop new services and features to drive a better experience for their customers.

FoodJets is also making heavy use of GCP's machine learning features to enhance their end users' experience and make it simpler and smoother. "We're using AutoML because we don't have data scientists on our team. We can have our developers train models, then use trial and error to refine them. It's very powerful and easy to use." Among other use cases, FoodJets is using Auto ML Vision to classify photos of food and provide customers with better search results.

Although cybersecurity is a top priority for FoodJets, as a small company, it doesn't have the luxury of an in-house security team. GCP's security solutions provide the company with a lot of peace of mind. "It offers all the main, basic security features that we need. For example, if we make a mistake while setting up a system, GCP sends us an email alert, and we can resolve it."

Singh and the rest of the FoodJets team also appreciate the work SADA and its Technical Account Management (TAM) team performed during and after the migration process. "SADA used their technical expertise, guidance, and years of experience working with companies in related spaces to make our migration from AWS smooth, and they continue to help us make the most out of GCP and minimize our costs. I have a call with our TAM manager every two weeks to make sure we're always on top of things."

SADA's TAM services were invaluable in getting FoodJets' systems back up after a sudden outage. "It was in the middle of the day, and our SSL certificate had expired. It happened all of a sudden, and we had no idea what had happened. Our website and systems

went down, and alerts were going off all over the place," Singh recalls. Even worse, no internal staff were available to diagnose the issue. "I was on a flight, and our main devs were out all day. All I could do was make phone calls, so I reached out to SADA's TAM team. They were able to immediately identify what had happened and relay the information back to me. I told another person on our team, and we got it all resolved within 20 minutes. Thanks to SADA's quick response, we got results very quickly. If it wasn't for SADA, it may have taken much longer."

Because of the excellent service they have received from both SADA and Google, Singh says, "We plan to be on GCP indefinitely. Google's internal team and the TAM team at SADA both work with us very closely; they're a phone call away if we have any questions. Other services, like AWS, didn't give us anywhere near the customer service we get from SADA and Google Cloud, and the GCP infrastructure and services have been running flawlessly. We have no complaints, and no plans to switch."

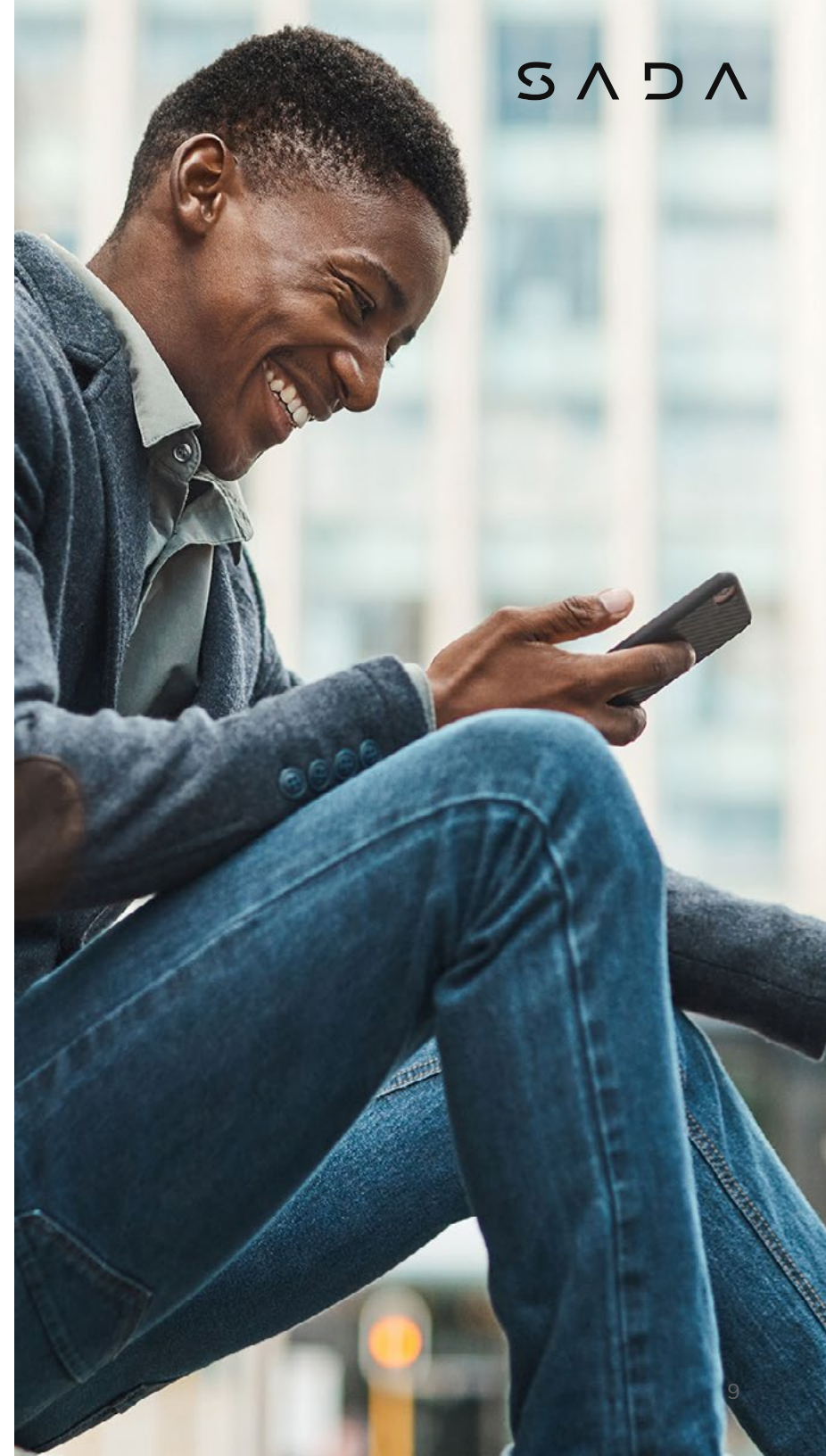# SADA helps FUN-GI fine-tune GCP & Google App Engine

2. FUN-GI

FUN-GI was founded five years ago on a philosophy of "purpose, fun, and design." The 12-person company is a game studio, "but not in the traditional sense, as we're mobile first," explains CEO Alfred Fung. "FUN-GI designs and publishes fun games for growing brands. We live by certain credos, but ultimately, our mission is to create content that's brand-forward, truly innovative, and incredibly broad-appealing, not just to traditional gamers but to a variety of audiences."

FUN-GI saw an opportunity to stand out in a crowded marketplace by targeting an underserved niche: female players in what the industry calls the "midcore" market, referring to gamers who enjoyed playing (or discover they enjoy playing) games, but don't have much dedicated time to the activity. The company's flagship title, House Flip, is a role-playing simulation game, something that Fung says is unique. "The typical role-playing game is often associated with male players," Fung says. "We felt that women weren't being served very well in this category and recognized a market opportunity where we could define the home renovation game genre while making a midcore experience accessible to female players."

[1]https://www.qsrmagazine.com/technology/fighting-share-166-billion-delivery-app-market
[2]https://www.ubs.com/global/en/investment-bank/in-focus/2018/dead-kitchen.html

9

In addition to being a game developer, FUN-GI is also a game publisher. "We have every intention of growing House Flip," Fung says. "We're always updating our live operations with fresh content and new features. We are living in an age where software is no longer a consumer packaged good; it's a truly living service. We effectively service our audience by anticipating their desires, listening to their feedback, and incorporating it into the game's design."

House Flip has been wildly successful in Apple's App Store and Google Play. In just over a year, it's accumulated over 11 million downloads and more than 200,000 reviews, with an average rating of over 4.5-stars. "Eleven million is relatively small given that we are on mobile, but it's pretty rare that a game made by 12-person company gets to eight-figure downloads," explains Fung.

Challenges

FUN-GI initially developed House Flip on an off-the-shelf platform and continued using it thru the game's soft launch period. However, FUN-GI found that the platform wasn't the right fit for their needs. "We didn't have direct access to the database," Fung recalls. "While the platform provided a lot of things on the front end, like the console, it was still just a layer atop AWS." FUN-GI also found that it was limited to the data analytics and metrics they could acquire, as it didn't allow them to access the source code. Additionally, at the time, the platform didn't support versioning, which presented a challenge when FUN-GI needed to deliver multiple versions of server code for game updates.

With House Flip's global launch on the horizon, FUN-GI knew it needed a more flexible, scalable platform.

Solutin & results

FUN-GI chose to migrate to Google Cloud Platform (GCP) and host House Flip on Google App Engine. The team was immediately impressed by GCP's ease of deployment and scaling. "We went from thousands of players and a lot of issues during soft launch, to a global launch on GCP with 11 million downloads while maintaining excellent data integrity and server performance," Fung notes. "We don't have to worry about scaling; GCP auto-scales. It just works."

Now that FUN-GI can access server code, Fung reports they can gather "almost any data we want" and run customized business intelligence analysis. Production is faster now that developers are freed from backend infrastructure maintenance tasks. "A lot of larger companies have DevOps engineers. We're still small and don't have the resources to hire those types of engineers, so it's great that GCP handles all of that for us."

FUN-GI's partnership with SADA began in September 2018. The company had Google's Gold SLA Plan, and an account executive suggested that FUN-GI partner with SADA for consulting and support. "It was great to know that we could partner with SADA, and maintain the same SLA level, but not have to pay extra," Fung says.

SADA helped FUN-GI optimize their GCP deployment. "One of the main things that SADA helped us with was streaming assets from storage and delivering them to players. Our Technical Account Manager recommended implementing an internal load balancer. This allows Google to cache the assets faster and distribute them across their load balancer more efficiently," Fung recalls. "We've also gotten advice from SADA on setting up our Google App Engine products, such as whether we should use a flex or standard environment, and they've given us guidance on GCP products that we can use to scale our features."

Gamers are a notoriously demanding and fickle customer base, so it's not surprising that FUN-GI's biggest KPIs for their GCP deployment were server uptime and consistency of delivery. "We've integrated Stackdriver Monitoring, which sends us email notifications when things go wrong. Luckily, nothing has gone wrong on our end, only on Google's end, but they've been very good about fixing problems."

The FUN-GI team is very pleased with both GCP and SADA's services, and Fung plans to incorporate more of GCP's features as the company expands and releases more games. "In our next update, we plan to use Firebase's Firestore database, which will be much better for concurrency." The company also wants to utilize Firebase ML in conjunction with Remote Config to help with A/B testing.

"Our experience with GCP has been so positive that it has built a tremendous amount of trust from our team. There's a strong relationship element. It's not just that SADA is there when things break; Google is there on the regular as well. Having great relationships with GCP and SADA emboldens us. We have the relationships in place that enable us to be ambitious and continue pushing the envelope."

Alfred Fung
CEO, FUN-GI

SADA helps DroneDeploy take flight with Google Cloud

3. DroneDeploy

In many industries, using commercial drones is a matter of when, not if. The global commercial drone market is expected to exceed $43 billion in 2024, up from $14 billion in 2018, with software the fastest-growing segment of the drone industry.

Drone software platform developer DroneDeploy is a startup with a mission to put a drone on every job site. "We try to make drones actually useful in our world, as opposed to them being expensive toys," says Joseph Mente, Engineering Manager, DevOps, DroneDeploy. "Right now, there is very little market penetration; using drones to capture images and data is a novel idea. Our expectation is that in 5 to 10 years, commercial drones will be the norm."

One of DroneDeploy's major investors is in the energy industry, but DroneDeploy's software is used by businesses in an array of industries, including agriculture, construction, insurance, utilities, and green energy. Inspections are currently the most common application for commercial drones, but there are unlimited potential use cases for a camera in the sky. Mente sees great promise for land-based drones as well, so that companies can get comprehensive, bird's eye and ground-level views of their job sites, equipment, and other assets.

Challenges

In addition to enabling users to control drones in the air and take aerial photographs, DroneDeploy's drone software platform allows drones to capture any type of drone media, including maps, videos, and panoramas, as well as detect and count objects such as cars and trees. The software also processes and analyzes collected data, and lets users generate reports with detailed maps, models, and videos. The solution also utilizes artificial intelligence to learn what individual users need; with each flight, results become more tailored to their specific industries and use cases.

"The drones are only one part of the picture; they're just the entry point to collect information," says Mente. "DroneDeploy's platform doesn't just offer our customers the ability to fly their drones and collect data; we analyze it so that they can make critical decisions. Farmers need to know where to place fertilizer. Historically, they would get an aerial view of their crops infrequently, but now, they can get a map every day for less than the price of a single helicopter flight. The same is true for construction, real estate, insurance, oil and gas, and other industries. We enable our customers to understand their physical assets and infrastructure."

DroneDeploy's platform requires enormous quantities of storage and computing power, along with high performance and availability. "We're storing not just

source imagery but things like point clouds and 3D models," Mente notes. "Everything needs to be stored efficiently and available to the customer when they need it." Protecting both their customers' data and their own digital intellectual property from data breaches is also a top concern.

Prior to deciding to migrate to Google Cloud Platform, DroneDeploy performed data processing in a colocation data center, where they ran nearly all of their compute loads on Kubernetes clusters, and used Amazon Web Services (AWS) for storage and web traffic. While DroneDeploy was very pleased with how Kubernetes worked for them, they found it very time-consuming to maintain. Time spent managing their Kubernetes installation was time that wasn't being spent working with customers or on internal projects to drive and grow the business.

DroneDeploy knew that to move forward strategically, they needed to shift to a cloud-based, managed Kubernetes solution.

Solution

When DroneDeploy began evaluating managed Kubernetes solutions, Google Kubernetes Engine was the one available solution that fit their needs and, Mente said, "was by far years and years ahead of the competition. Nothing else even came close."

GKE wasn't the only determining factor in choosing Google Cloud Platform. DroneDeploy was also impressed by GCP's artificial intelligence capabilities and security features. "GCP's AI features were years ahead of what others offered, and the platform is secure by default," Mente notes.

DroneDeploy executed its migration in stages. The first step was to move their Kubernetes clusters out of their colocation data center, which they did on their own.

Moving the data, Mente says, was a challenge in itself -- DroneDeploy had 3 petabytes stored on S3 -- and their new GCP environment needed to be configured properly. "You can't just replace S3 with GCP and have it be exactly the same; they have different features," Mente explains. "For example, our users could directly and securely upload data to S3, and we had to write code so that they could keep doing that once we moved the platform to GCP."

During the migration process, Mente says, SADA's Technical Account Management (TAM) representative helped DroneDeploy with very specific, highly technical questions about the migration itself as well as particular GCP features. SADA also wrote a script to call the API for Google's migration tool. "We had to split up our storage in a particular way that required many calls to this system; we had to change the architecture of our storage system during the migration. We had data in Amazon buckets that we knew we didn't need to transfer because they were expired. There was a lot of complexity to this, and SADA wrote the majority of the code, which was very helpful."

"It's very expensive to move data, so we had left all of our image assets on Amazon S3, but once all of our compute was on GCP, that wasn't sustainable. The data transfer costs were too expensive, and it didn't fit where we wanted to be in the long-term. So, we approached Google, and that's when we partnered with SADA for technical assistance with migrating data from Amazon S3 to GCP Cloud Storage."

Joseph Mente
Engineering Manager, DevOps, DroneDeploy

SADA

Results

Since migrating to GCP, DroneDeploy's infrastructure team no longer has to maintain an on-prem Kubernetes installation, which gives them more time to innovate and work on internal projects. "Our team can now manage more clusters on GCP than they did on-prem, and do so in less time," Mente explains.

DroneDeploy has "drastically reduced" their year-over-year costs, and a large part of this is due to the easy scalability they enjoy on GCP. "In the data center, we couldn't autoscale. On GCP, it's just a click of a button," Mente says. "I don't have to write fleet management software. We did have to modify our software to support autoscaling, but we didn't have to write infrastructure code, and infrastructure code can be tricky. Using GCP, we know we won't have issues." Mente also reports that they used to have to ensure they had 50% extra capacity at any given time in case of zonal failure. On GCP, they can run at 100% utilization, because if one zone goes down, the others will autoscale up.

Mente also reports that compliance and security are also easier on GCP. "Some of our quarterly compliance requirements weren't possible before, like rolling all of our machines to make sure they have all the latest patches. Now, we just do them. It's also great to be able to use the same infrastructure and IAM management as we do on Google Workspace. We can use SSO for both GCP and Google Workspace. Google Workspace acts as the source of truth, and everything derives from that. Security is very complicated, but Google makes it easy."

DroneDeploy continues to make use of SADA's Technical Account Manager services, including a monthly check-in with their SADA TAM.

"This is a great point of contact for any questions we have, technical or business-related. It's helpful to have connections within Google, not just for GCP but anything Google offers. We had Google Workspace management questions that we didn't have internal expertise on, and SADA connected us with a Google Workspace expert."

DroneDeploy also has a monthly budget check-in with SADA, which Mente reports is helpful to ensure that anomalous spending is identified. At one point, DroneDeploy had misconfigured a Kubernetes pod. They had caught this internally, but SADA also brought it up independently. "Knowing that we have a second set of eyes looking at things provides peace of mind," says Mente.

Mente reports that DroneDeploy is very happy with GCP and utilizes quite a few features, including heavy use of machine learning tools for new products and features the company is developing. In the future, DroneDeploy would like to take further advantage of Stackdriver for logs and metrics and BigQuery for data warehousing.

4medica® chooses Google Cloud Platform to host clinical data exchange and big data management solutions

4. 4medica

Patient record duplication is a serious problem in the healthcare industry, resulting in billing inefficiencies, incomplete data for predictive analytics tools, and even clinical errors that put human life and health at risk. 4medica, Inc., a company that specializes in real-time clinical data exchange and big data management solutions, is dedicated to solving this problem by using technology to address a major contributing factor: the enormous amount of paperwork generated by healthcare organizations.

With a mission to deliver a solution that ensures "One Patient...One Record," 4medica created the industry's leading SaaS (Software-as-a-Service) big data master patient index (BDMPI™) and clinical data exchange (ClinXdata) platform. The 4medica Big Data MPI™ and ClinXdata platform minimize duplicative records, provide a seamless, comprehensive view of patient care history across facilities and providers, securely and efficiently share patient data, and promote better health outcomes.
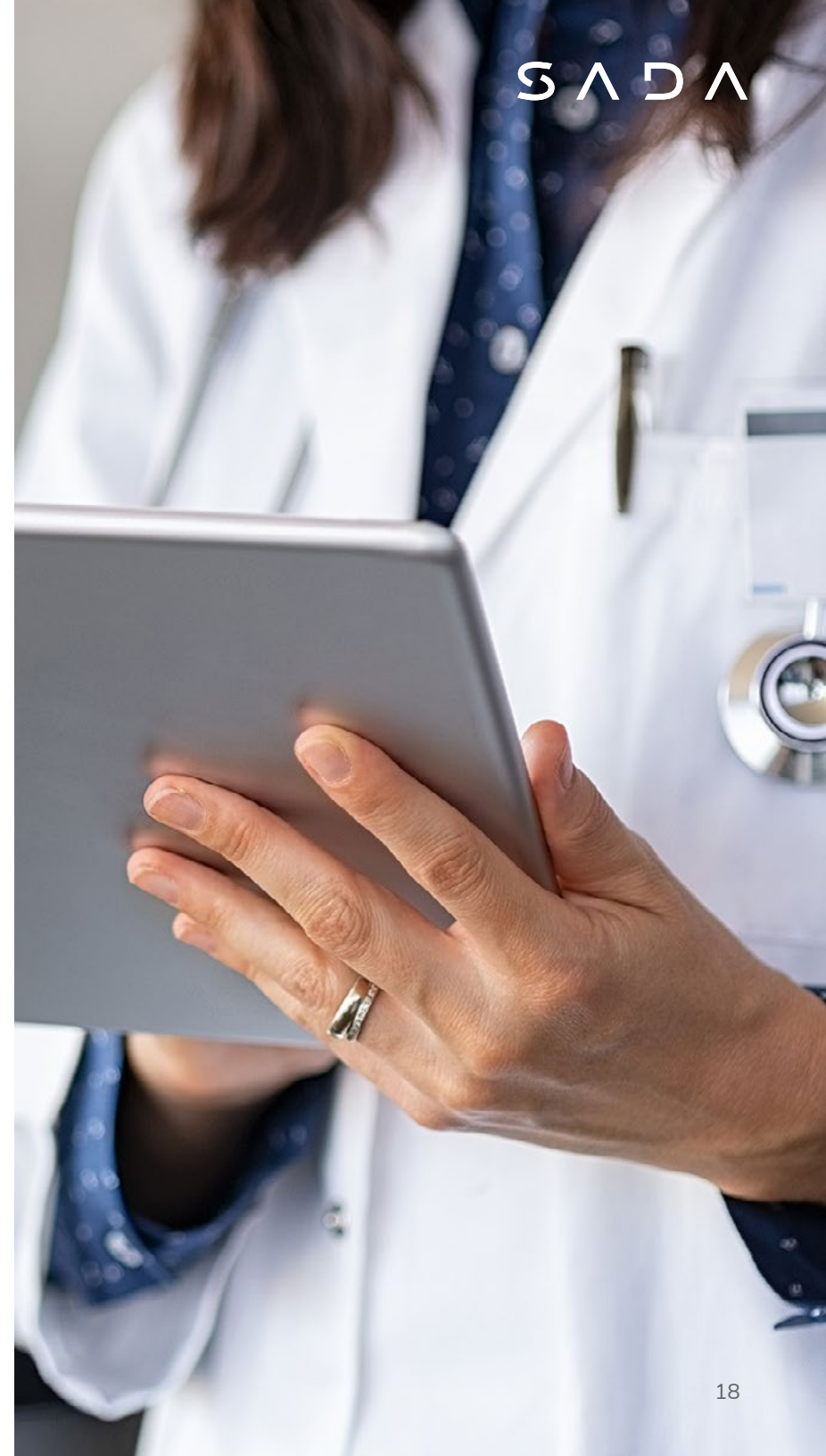
4medica's cloud-based SaaS solution offers organizations the ability to deploy its health information exchange platform without installing special hardware or software at customer locations. 4medica builds upon and integrates with existing electronic health record (EHR) systems, practice management software, health information exchange (HIE) platforms and other clinical and administrative applications.

4medica's best-in-class technology has received unrivaled acceptance in the healthcare community. The company processes millions of clinical transactions per month, manages over 70M patient identities, serves over 40,0000 physicians and has over 100 institutional clients across the healthcare industry, including accountable care organizations (ACOs), health information exchanges (HIEs), hospitals, health systems, laboratories, and radiology imaging centers.

Solution

After evaluating other cloud service providers, Church and Kuttalingam chose Google Cloud Platform (GCP) due to its affordability, machine learning capabilities, HIPAA compliance, and the company's dedication to the healthcare space. In particular, Church and Kuttalingam saw great potential for the GCP Healthcare API to become the backbone of everything 4medica was planning to do.

After a negative experience contracting with another company for migration and implementation, 4medica was referred to SADA, a Google Cloud Premier Partner, by Google. "I wish we'd called SADA

sooner," Church said. "Things didn't go well with the first company, and our team had to learn everything themselves, the hard way, including how to migrate and come up with a strategy. Finally, we turned to Google for help, and they immediately recommended that we bring in SADA. They told us, 'These guys are great, they know what they're doing, and they'll make sure you get to the finish line.'"

SADA came into the project a couple of months before 4medica was set to go live with GCP. 4medica needed training on Kubernetes and assistance with networking and deployment. SADA ensured that 4medica's network was partitioned so that all of their customers' data was securely isolated in their own zones.

Additionally, SADA helped 4medica optimize their cloud billing. They ensured that 4medica could see how much they were spending on each customer -- a metric they had never had visibility into previously.

Results & benefits

With SADA's consultation, 4medica successfully completed its GCP migration and deployment in June 2018. "Our customers didn't even realize that we'd migrated," Church remarked. "We didn't get a single customer call that day; it was a non-event for them. The migration took place without any problems. Kudos to the SADA team and everyone involved, because a major project like this could have been very disruptive."

4medica has realized numerous benefits since migrating to GCP, including:

- A 50% increase in performance. "We didn't know what to expect; we were hoping that GCP would perform at least as well as the data center did. Instead, it performed significantly better," said Church.
- The ability to provision new storage within minutes instead of the two to three months the process took when using a data center.
- A significant cost savings on storage. Previously, 4medica employees would think twice before saving data; the reduction in cost now makes this a non-issue.
- A significant time savings on application deployment; what took several days previously can be accomplished in two hours or less in GCP's containerized environment.

As 4medica closes in on its one-year anniversary of migrating to GCP, Church and Kuttalingam are looking towards a long, fruitful relationship with both Google and SADA. The choice to use GCP, Church stated, was one of the company's key growth strategies, and Google technologies have a significant role in the company's three- to five-year plans. 4medica is currently using BigQuery, and delving more deeply into GCP's machine learning tools is a priority for next year. Right now, 40% to 50% of laboratory orders are processed from paper requisitions. 4medica has developed and released a revolutionary patented ML-powered solution to deliver all lab orders electronically, at a lower cost and with greater reliability.

SADA continues to provide support and training services to 4medica, including coordinating in-person training sessions for 4medica's staff at Google's Los Angeles office. "Since we're a small company, our internal resources are limited. Having a good tech advisory partner like SADA helps offset what we have to manage and monitor. It's a great extension for our company. That's what a good partner should be. When partnerships are developed how they should be, it makes our lives easier," said Church.

> "In this industry, there is no such thing as 'down for maintenance. There is no 'off-season.' There is no window where we can be offline, not ever."

Douglaus Pearson
Co-founder & CTO, FlowPlay

SADA's TAM services help FlowPlay get ROI on Google Cloud Platform

5. FlowPlay

The online gaming industry is growing rapidly. According to NewZoo, global gaming spend reached nearly $135 billion in 2018, yet many game developers struggle to turn a profit. Developers in the mobile market must share a significant cut of their earnings with app stores just to get their games in front of potential players. Once consumers engage in a game, keeping them playing requires constant innovation and nothing less than world-class performance.

FlowPlay, which was founded in 2006, stands out for its unique, community-first approach to game development and its avoidance of the crowded mobile game market and its pricey app stores. FlowPlay's self-published games are primarily played in-browser, and instead of depending on external platforms, such as Facebook, to provide social experiences outside of their games, FlowPlay builds intricate virtual worlds within their game platforms.

The over 75 million gamers worldwide who play FlowPlay titles such as OurWorld and VegasWorld don't just play the games; they make friends and immerse themselves in communities. These in-game connections are deep, meaningful, and keep gamers coming back for months, even years. Tens of thousands of couples have participated in "virtual marriages" in-game in VegasWorld, and more than a few of these relationships have transcended the internet and resulted in real-life weddings.

Challenges

The back-end technology that makes FlowPlay's virtual worlds possible is robust. So that players have a flawless experience each time they enter the game, FlowPlay must maintain the highest standards for system uptime, latency, and performance -- at a cost that keeps the company profitable. With an international audience base playing 24/7, anything less than 100% uptime is unacceptable.

Game elements must load instantaneously and accurately. People might accept a two-second lag when waiting for a news article to load, but not when playing a game. They also won't accept transaction errors or other glitches that detract from their in-game experience. "Our games are very detailed, with many small transactions," Pearson explains. "Every time a player hits a button on a slot machine in VegasWorld,

lots of things happen on the back end. It's almost like running a bank; every coin has to be accounted for."

Having used servers in a data center for years, FlowPlay had reached a crossroads. The company owned its servers outright, but the equipment was approaching its end of life. Buying new servers didn't seem prudent in a world that was increasingly cloud-driven, and continuing to rely on physical servers would slow the company's growth plans. It can take weeks to purchase new servers and get them up and running, while provisioning cloud servers is a 15-minute process.

The company made the decision to migrate to the cloud. They just had to pick the right time to make the switch and ensure that their performance and cost requirements would be met.

Solution

After evaluating Microsoft Azure, AWS, and Google Cloud Platform, FlowPlay's leadership chose GCP for its user friendliness, flexibility, and performance. "We eliminated Azure pretty quickly because it depended on the Microsoft stack, and that didn't fit anything we were using internally. That left AWS and GCP," Pearson notes. "Most of the money we were spending prior to migrating to the cloud was on our databases. Our main driver was how many operations could be made on a drive per second. GCP offered higher disk speeds (IOPS) than AWS, meaning that we'd get the same performance from our databases at a lower cost."

The company also liked that GCP wouldn't tie them to a specific server configuration. "AWS requires customers to choose a specific server configuration when buying a long-term contract. With GCP, instead of renting a specific server, we buy computing power," Pearson said. "This allows us to experiment with servers, drives, configurations, and RAM to optimize performance. We couldn't have done that as easily with AWS."

After selecting GCP as cloud platform of choice, partnering with SADA and taking advantage of their Technical Account Management (TAM) services was, in Pearson's words, a "no-brainer."

"Once we chose to move forward with GCP, we partnered with SADA for technical support at no extra cost to us," Pearson says. "That's a very strong offering." FlowPlay liked the idea of getting an immediate point of contact who could respond to their questions and help them work through issues. FlowPlay was looking for help addressing key questions about GCP and their environment that they couldn't address on their own. SADA's TAM team was there to help.

Results & benefits

FlowPlay took advantage of SADA's TAM services early on when individual servers were spontaneously restarting; SADA helped FlowPlay's staff address the error codes and get them back on track.

SADA's TAM services also proved invaluable in fixing a very serious problem with FlowPlay's master and replica databases. The two databases must be kept perfectly in sync so that in the event of a catastrophic crash, no player data is lost. FlowPlay noticed that the replicas weren't keeping up with the masters; even if they were only a bit behind, user data could be lost in a crash. SADA's TAM representatives quickly evaluated the situation, then escalated the issue to the Google engineering teams who were able to provide detailed assistance on the low level file I/O issues.

Pearson is also very happy with GCP as their cloud platform. He noted that FlowPlay has seen both quantitative and qualitative benefits to moving away from the data center. Between May 2018 and May 2019, the company saw a 50% increase in traffic -- and load. Yet their system response speed had literally doubled, improving performance. "That's a huge boost in performance, especially since we have significantly more players. When I looked at the numbers, they seemed too good to be true, so I rechecked them! The performance boost means our end users will be delighted with faster performance, and we are, too."

One area where FlowPlay has seen a very visible cost savings is cybersecurity. When they were using a data center, they were exposed to DDoS attacks and had to spend a significant amount of money on DDoS protection. Since switching to GCP, they haven't had any need to purchase this service. "Google Cloud takes care of that for us. They take security very seriously," says Pearson.

"GCP has worked for us the way it is meant to work, and we're very happy with it," Pearson says. Now that they're not bogged down with maintenance tasks, FlowPlay's internal staff is able to devote more time to internal projects such as new features and new games. Since migrating to the cloud, FlowPlay has launched an additional game and are working on multiple products for future launch. "Working with SADA's Technical Account Managers, we're looking forward to using more of GCP's features to extend our abilities and offerings."

"FlowPlay doesn't just create captivating games, we create virtual worlds where millions of global players reside on a daily basis," says Derrick Morton, CEO of FlowPlay. "When we migrated to GCP, SADA's TAM services allowed FlowPlay to focus on creating more immersive gaming experiences, while SADA focused on the important factors that keep our gameplay smooth and uninterrupted from downtime or data loss, while providing success metrics to ensure FlowPlay's ROI."

SADA helps TVG network scale with Google Cloud Platform

6. TVG Network

TVG Network is a U.S.-based online horse racing wagering business and sports-oriented digital cable and satellite television network that is owned by Dublin-based Paddy Power Betfair.

Challenges

The first Saturday of May is the biggest horse racing event in North America each year. Minutes before the race, millions of dollars in online bets will flow in through advanced deposit wagering (ADW) operators such as TVG Network. For TVG's IT team, it's a high-stakes game: If wagering systems can't handle thousands of requests per second, revenue and customers will be lost.

To avoid downtime before a major race, TVG used to bombard its systems with ad-hoc load tests a month in advance. Before each big race event, a team of seven people spent eight hours a week deploying new infrastructure and testing various scenarios. But with complex legacy systems and manual processes, the team's efforts could only go so far. If an unexpected system issue or undetected bottleneck was found during the run-up to the big race, all bets were off.

Solution

After a brush with downtime in 2016, TVG decided to move its ADW application to the cloud, taking the opportunity to rewrite the application to take advantage of modern, container-based architectures. After a short period of development on a different cloud services provider, TVG moved to Google Cloud Platform using Google Kubernetes Engine to automate container management and orchestration.

"We chose Google Cloud Platform because it was the most reliable, cost-effective, and automated cloud solution available," says Tim Morrow, CTO at TVG Network. "We get better security, strong compliance, and the peace of mind that when the biggest race day rolls around, we won't have any downtime."

Results & benefits

To keep its IT team focused on value-added tasks, TVG uses Google Cloud managed services such as Cloud Bigtable, a highly scalable NoSQL database, as well as Cloud Storage for backups and Cloud Pub/Sub for real-time messaging between applications.

Google Cloud benefits

- Maximizes revenue by allowing customers to place bets faster and more confidently
- Scales for major racing events with 80% less IT involvement and up to $500,000 annual savings
- Improves time to market for new product releases by more than 30x
- Helps enable richer mobile experiences to keep fans engaged

"SADA helped us gain a deeper understanding of the advantages of Google Cloud Platform so we could make better decisions about how our application would perform and scale. They provided the facilitation, follow-up, and expert advice we needed to make our deployment a success."

Saeid Vafaeisefat
Vice President of IT, TVG Network

SADA helps MadHive deliver blockchain ad tech with privacy by design

7. MadHive

MadHive is the blockchain ad-tech firm that developed the MadNetwork protocol, for accurate, efficient, and completely private ad serving. Using blockchain technology, machine learning models, and artificial intelligence agents deployed to users' devices, MadHive has created a platform where the traditional ad tech intermediaries are unnecessary, and advertisers can target consumers more effectively without ever accessing their personally identifiable information. As consumer privacy regulation mounts in key ad markets, MadNetwork's technology marks a major step forward, allowing advertisers and publishers to reach their intended audience while simultaneously delivering complete privacy to the consumer.

Challenges

MadHive's technology is a completely new approach for ad tech. Leveraging blockchain and technology at scale can be a real challenge, requiring serious scalability coupled with reliably low latency and massive processing power. Add to that MadHive's sophisticated machine learning requirements and a short timeline to get to market, and you've got a tall order for a cloud provider. The MadHive team knew not just any cloud provider would suit their needs.
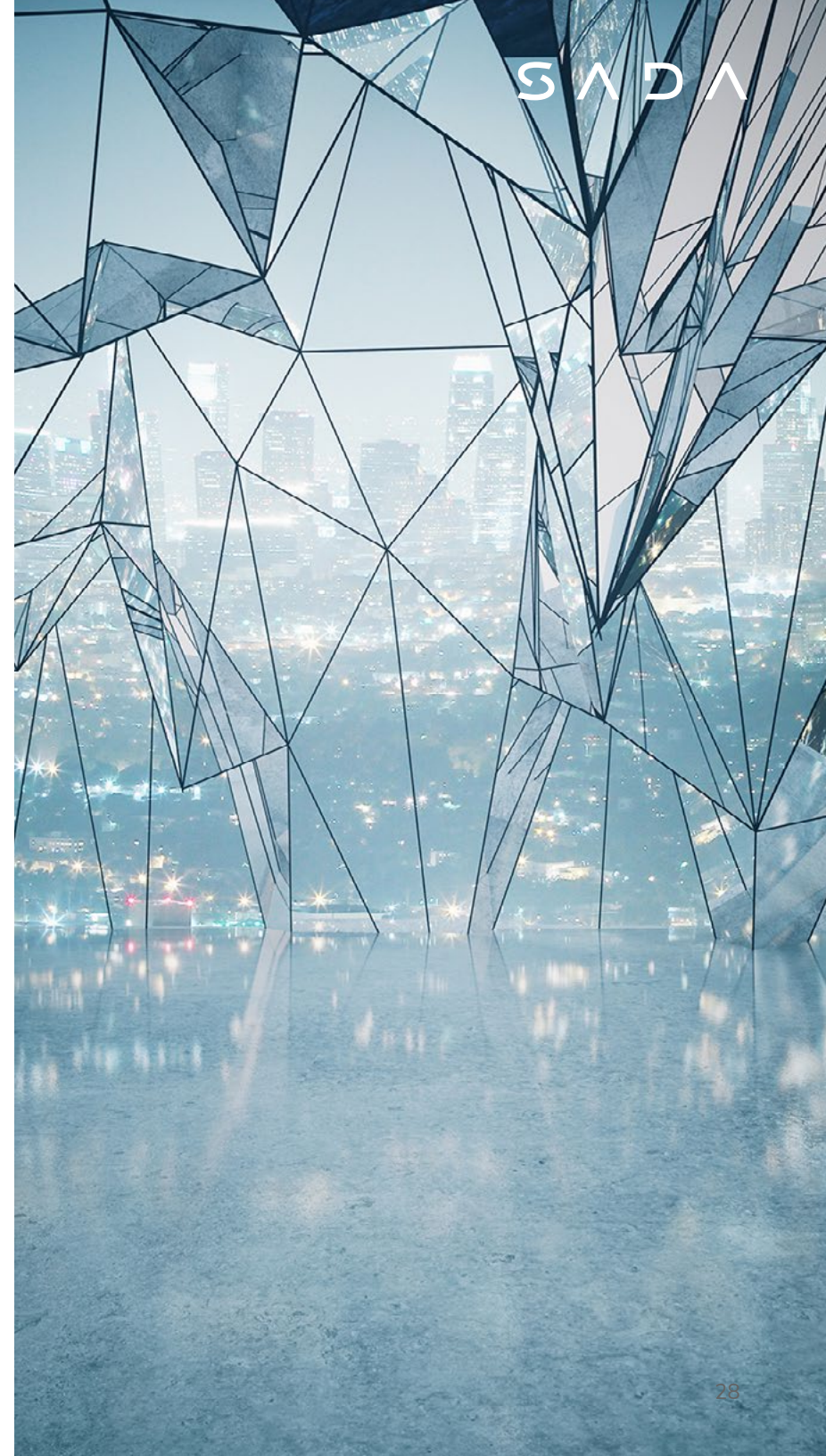
Solution

To face this challenge, SADA recommended Google Cloud Platform (GCP), based on the cloud provider's reputation for handling huge-scale data and low latency requirements.

"Google definitely had the right solution," says Tom Bollich, MadHive CTO and former Zynga founding team member. "At Zynga our products generated so much demand that we had to scale out our infrastructure to match all of Facebook's. AWS was too piecemeal to do that effectively. Google has 'recipes' for everything we need to do at scale with data."

GCP's industry-leading machine learning engine, as well as its large suite of plug and play tools, makes them a natural partner for MadHive.

SADA's consultants first analyzed the limits of the Kubernetes and Docker-based implementation MadHive had previously used for prototypes. Then they applied their in-depth knowledge of GCP to help MadHive redesign the entire platform using Google BigTable, Google App Engine, and TensorFlow.

SADA assisted on the research side as well. "Blockchain gave us a platform to push machine learning out to the edge," says Aaron Brown, MadHive's VP of Engineering. "Google's TensorFlow and Cloud ML were the perfect tools to build on. It let us focus on our core tech: fully private targeting through collaborative and anonymous machine learning."

Results & benefits

It began with an analysis and a redesign, but SADA work with the ad tech company continues. MadHive continues to reap the benefits of SADA's expertise and the GCP toolkit at every stage.

- MadHive's network responds to traffic surges while maintaining extremely low latency and high availability for all users.
- MadHive is saving 60% on cloud services with GCP, due to building more efficient scaling and lower latency reads and writes.
- When MadHive hits limits of certain Google products, SADA is immediately available to assist, either by suggesting an alternate implementation or connecting MadHive engineers directly with Google Cloud engineers to work on problems together, quickly.
- The MadHive team spends its time researching, iterating, and deploying, instead of patching scaling issues and performing DevOps.

Ultimately, MadHive's success will benefit consumers, advertisers, and publishers, delivering full compliance for regulations like the EU's General Data Protection Regulation (GDPR) which goes into effect in May 2018. Using the collaborative machine learning models enabled by TensorFlow, and deploying those models to the MADNetwork's blockchain, Madhive is recreating digital advertising with privacy by design. SADA is proud to be part of such a transformative moment in advertising technology.

"The solution SADA suggested has been working amazingly well, we process and analyze terabytes of data in real time. When our traffic suddenly spikes 10 times, we can boot new instances — and use them to handle requests — in under 200ms. It's the first platform that's truly elastic under intense loads."

Denis Kezerashvili
SVP of Engineering, MadHive

SADA

About SADA

At SADA, we climb every mountain, clear every hurdle, and turn the improbable into possible – over and over again. Simply put, we propel your organization forward.

It's not enough to migrate to the cloud, it's about what you do once you're there. Accelerating application development. Advancing productivity and collaboration. Using your data as a competitive edge. When it comes to Google Cloud, we're not an add-on, we're a must-have, driving the business performance of our clients with its power.

Beyond our expertise and experience, what sets us apart is our people. It's the spirit that carried us from scrappy origins as one of the Google Cloud launch partners to an award-winning global partner year after year. With a client list that spans healthcare, financial services, media and entertainment, retail, manufacturing, public sector and digital natives – we simply get the job done, every step of the way.

Your challenges are ours. We're ready. Let's go.

"Working with SADA has enabled us to grow rapidly. Reltio's vision is to fuel the experiences of the future that matter most to our customers. Thanks to GCP and SADA, we are able to fulfill our mission and vision faster."

Zoltan Gombosi
VP Engineering, Reltio

"We wanted to throw everything into a data lake, and we had a unique approach tomanaging and leveraging it. We talked to Google, and they recommended SADA. SADA engaged their consulting and technical resources and delivered."

Harrison Lewis
Chief Information and Privacy Officer, Northgate Market

"SADA was a guarantee that our GCP migration was going to work. We didn't just get a bunch of help tickets and credits; we could actually pick up the phone and talk to someone — it's a partnership."

Jim Hefner
CTO, ME.ME

A few of our clients

PIZZA PAPA JOHNS   dish   COLGATE-PALMOLIVE   ✕•◻ MADHIVE   Reltio

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