THE CLOUD ADOPTION JOURNEY: BEYOND THE TECHNOLOGY

creating a cloud adoption roadmap that **actually** meets business needs
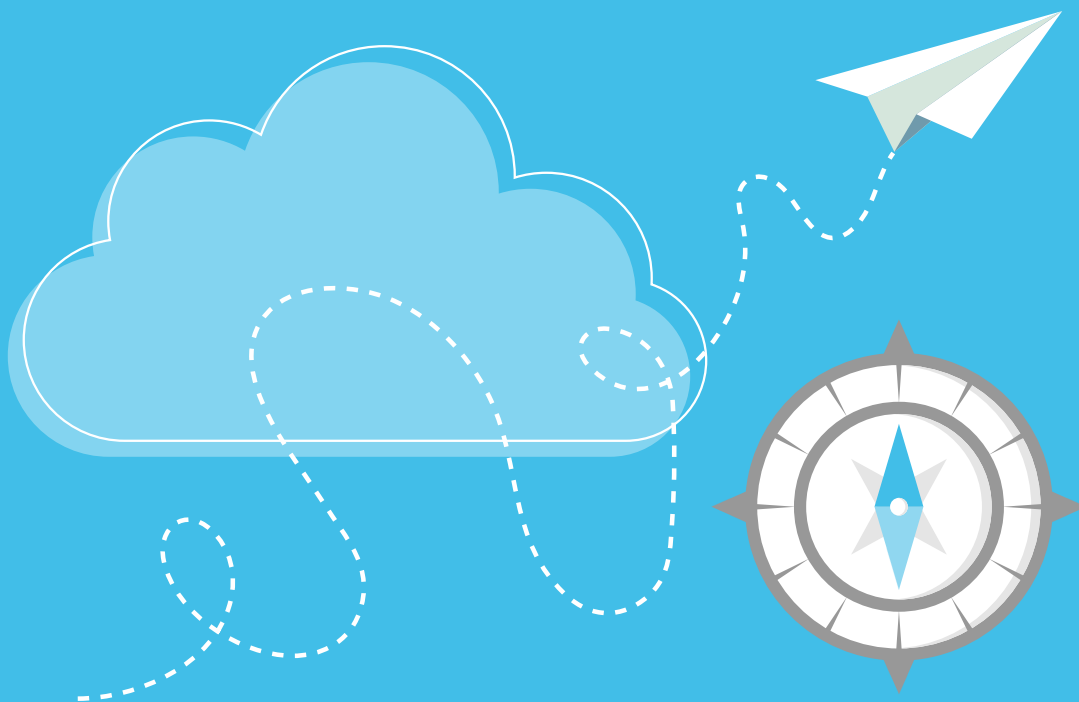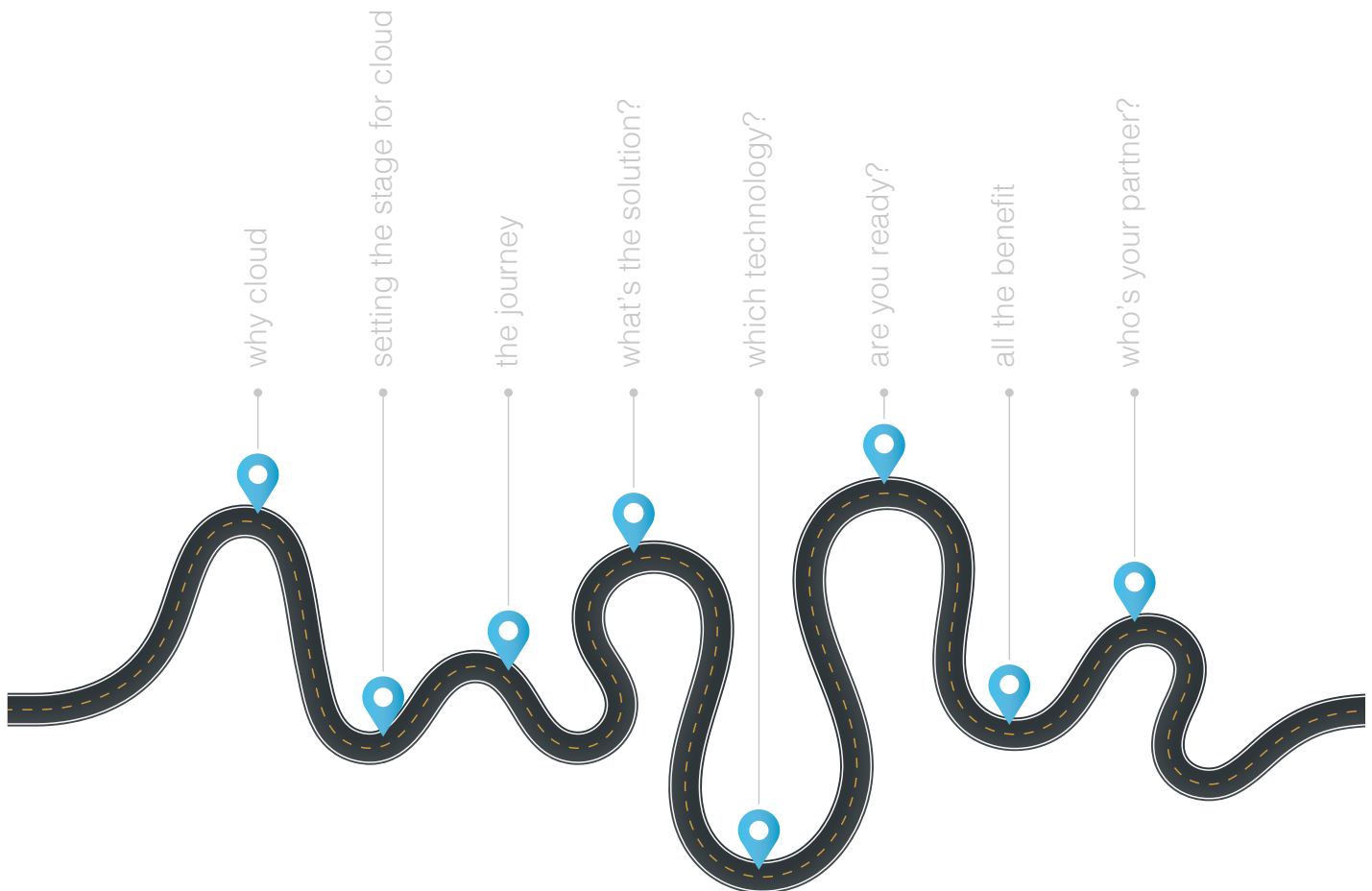
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INTRODUCTION

What's the first thing that comes to mind when you think about cloud technology? It might be Amazon Web Services, Microsoft Azure, or Google Cloud Platform — the leaders according to Gartner's 2019 Cloud Infrastructure Magic Quadrant. All three of these providers have different tools, strengths, and solutions to help your business move into the cloud, but is selecting a specific technology the right starting point for your cloud journey?

This e-book will explore what it takes to formulate a mature cloud adoption process, the steps along the way, and the considerations that might make the journey to the cloud more complicated — but incredibly more valuable — than originally expected.

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WHY CLOUD

Cloud hype has been around for years, but more recently, the idea of shifting business to the cloud has gotten real attention and movement in many organizations. According to Right Scale's annual State of Cloud Report for 2019 from Flexera, 91 percent of businesses use some type of public cloud, whereas 72 percent utilize a private cloud — most with a combined, or hybrid, model.

So, why are we still asking, "Why cloud?" Because some organizations don't ask; they migrate to the cloud without putting much thought into it, and it can give cloud a bad rap. In fact, 55 percent of IT professionals in one survey named a lack of clearly-identified business objectives for cloud migration as one of the top three reasons their initiative failed.

It's time for companies to start looking at their technology infrastructure as an integral, strategic part of their business. Strategically, holistically business-driven infrastructure — rather than forced cloud — will drive serious business value. Gartner recommends organizations formulate a cloud strategy in the context of their overall business strategy and understand that a cloud strategy requires support and sponsorship across the organization, involving business, technology, operations, finance, legal, sourcing, etc., to succeed.

WHAT WE'VE SEEN:

Some companies sell the cloud short and don't build it out throughout the organization. One of the easiest ways to experience the cloud is through stand-alone applications, or software as a service (SaaS). Examples of this are Salesforce, Office 365, or Oracle NetSuite. But just having an ERP set up in the cloud doesn't mean these organizations are fully leveraging the cloud. There are many benefits of the cloud waiting to be untapped. Recognizing how to adopt and fully leverage the cloud throughout the organization will drive value and user satisfaction.

WHY CLOUD ADOPTION

Changing the question from "Why cloud?" to "Why cloud *adoption*?" opens up a new perspective — one that asks less about the technology alone and more about how a business-wide adoption of the technology and its benefits can change the course of success.

Cloud adoption answers the question: How can we strategically leverage the cloud — to its fullest capabilities — to get the most value, help the business grow, be more profitable, and beat out the competition? Similar to starting a new company, a plan needs to be built out. But like we discussed earlier, before a plan is built, the goals and expectations of both IT and business leaders and users need to be defined to measure success later. Understanding where the current technology services fall short of meeting business demand is an important exercise before starting the cloud journey.

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SETTING THE STAGE FOR CLOUD

LEADERSHIP BUY-IN

The cloud should be thought of as a tool, or an enabler of technology, to improve the overall business and streamline processes to be more efficient and successful, one of the many cloud adoption benefits. For a cloud adoption strategy to be successfully implemented, buy-in from senior management, affected business units, and other decision makers in the organization is a must. When it comes to justifying the costs, downtime, application changes, and other impacts, a lack of leadership buy-in can stall or completely stop progress into a cloud service.

CLOUD ENABLEMENT

An important part of cloud adoption is having a team of advocates dedicated to owning cloud services. A Cloud Enablement Team (CET) should be assembled to set direction and define best practices for cloud usage throughout the organization. Without this team, usage and costs can get out of control quickly. This team should consist of open minded, eager-to-learn individuals from all areas of the organization such as leadership, operations, infrastructure, security, and applications. In order to provide guidance on industry best practices, a cloud solutions partner that is well versed in cloud solutions should also be included on the team. The CET can start small in order to get established, but may grow with the organization as cloud becomes adopted throughout the organization.

It's important to establish the team correctly in the very beginning due to the decisions, standards, and direction that need to be made and established. These decisions, standards, and direction will continue to grow and evolve as the cloud environment becomes more and more established.

The CET should also focus on educating and training staff around all the cloud has to offer. Team members should be the go-to experts for cloud questions within the organization. Cloud providers offer a library of training materials for team members to start learning. A cloud solutions partner can also provide guidance and training for the CET members.

CREATING A PLAN

That's where a defined strategy and roadmap come in. A strategy and roadmap provide the vision for the future and an actionable plan to achieve that. Before a strategy can be laid out, a thorough evaluation of requirements and processes needs to be completed to understand the business drivers and goals along with the current infrastructure, services, and applications to get an understanding of the current state and align it to where the business needs to go.

The strategy will take the analysis output and document it into a plan for the future architecture. Priorities such as data center contracts, legacy applications, and the interdependencies between applications and departments should all be well thought out and documented in the strategy.

WHAT WE'VE SEEN:

Some organizations opt for a quick lift-and-shift into a public or private cloud model. For an application or two, this is a great proof of concept and provides some limited business value, but for most organizations, a lift-and-shift does not leverage the true strength of the cloud to improve business outcomes and the services.

Once goals are defined, it's time to lay out the roadmap to launch the journey to the cloud.

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THE JOURNEY

In many ways, cloud adoption can be seen as a journey — not a destination. It's always changing. This journey needs to have different milestones, or phases, to be successful. How it's mapped will be based on goals, timelines, and expectations, and it will be dependent on staff and other initiatives going on in the organization. Ultimately, having a poorly planned adoption strategy will lead to spending more time and money, while not meeting the business needs. Forty-two percent of IT professionals who experienced a failed cloud initiative cited lack of planning as a top cause.

Whether just starting the cloud journey, sitting around the half-way mark, or checking off the final boxes, it isn't over. No matter the stage in the cloud journey, it's critical for organizations to continually review their strategy to ensure they are getting the most out of the services they aim to provide to the business.

Organizations must strive to continually improve the business using technology and services, as they are ever-changing — making things easier, faster, and better. To continue to be competitive, grow the business, and ultimately be more successful, constant change in how the journey goes is required.

Now is the time for organizations to create or review their cloud adoption strategy to ensure they are on the right journey and improving their overall business acumen. If you are already down the path, reviewing best practices around security, availability, automation, and cost management will ensure you are getting the most out of your investment. Once the journey is understood and a roadmap is framed up, it is time to define what the solution looks like and fill in the details.

WHAT'S THE SOLUTION?

Before jumping into the technology aspect full bore, consideration needs to be made as to what the solution looks like. Getting a handle on how the solution is built will better determine the correct technology alignment. The solution will change throughout the journey and may start out as hyper-converged infrastructure to reduce the overhead of a virtualization platform, then migrate to leveraging a public platform or software solution when services or applications are refactored or rebuilt.

An exercise to fully understand the current technology, services, and processes that define how the technology is used and consumed by the business will enable alignment to the proper solutions. These solutions can be focused on improving performance, reducing risk, increasing efficiency, or simplifying operations, depending on what the defined goals and expectations are.

Once the current state is known, see how it aligns with the current business goals. Where are there shortcomings? Where can the organization benefit the most from a cloud adoption? Are there some immediate solutions that can be put in place to show value more quickly? Maybe there are still too many manual processes being completed and automation needs to be implemented. The answers to this exercise are unique to every organization, but these considerations are important no matter the stage of an organization's cloud journey.

Once the current state is well defined, the fun begins: developing proper solutions that align with the business goals and drivers, putting the overall organization in the best position to shift with current and future business demands. The old way of doing things won't work in the future state, so starting to think of new creative ways to solve problems is key. Business leaders need to focus on how to make their company the best it can be for its customers rather than how many people need to sign off on a specific change. Once they think past the current restrictions and challenges, then solutions become more about the business success. With an idea around the solution and validation of the current state, it is time to review how to align technology.

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WHICH TECHNOLOGY?

As stated in the introduction, typically when cloud is discussed, it is in context of the technology, tools, and solutions within specific cloud service providers. Whether it is AWS Beanstalk to reduce infrastructure overhead, Azure SQL Server to simplify database management, or Dell EMC VxRail to support VMware private cloud service, the right technology is critical to making cloud adoption successful and goes hand-in-hand with the solution outlined.

Aligning the right technology and strategy to the solution is important. Decisions need to be made for every service to either rehost, replatform, refactor, or rebuild the service within a private or public cloud service. There will be different plans for different applications. To better understand the four target models, we will review each one and understand the impact and technology considerations.

REHOSTING

The simplest option with the least amount of change is rehosting, which takes the current application as-is and moves it from the current physical or virtual on-premises environment to a private or public cloud service. One example of rehosting would be taking 10 existing physical servers and doing a physical to virtual (P2V) migration to a consolidated VMware environment hosted and managed by a third party. Another example would be leveraging migration tools, such as AWS CloudEndure, to move application workloads from on-premises to AWS. This tool completely replicates the physical server and services to the cloud environment, which can be done with the application online and a small cutover window once the final migration is ready — reducing the impact to the business. There are multiple options to rehost services, so selecting a target platform that aligns with company systems and goals will determine which migration tools make the most sense.

REPLATFORMING

A second model to consider is replatforming, which allows some optimization and minor modifications to applications or services without a huge amount of change to the application. This model utilizes more cloud benefits than the rehosting model but does not impact the existing application as much as refactoring or rebuilding.

Replatforming to a cloud-based service would be the best option to leverage benefits such as auto-scaling, serverless compute, or other cloud features unavailable with rehosting, if the application would not refactor well or if building it in a new target system is not ideal. One example would be leveraging Azure's Application Service to host an existing public website running PHP. Replatforming will remove the need to manage the website's servers and storage and instead allow for more focus on enhancements to the website's performance and user experience.

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REFACTORING

The third model is refactoring, which is considered one of the more complex options. Refactoring is rebuilding the application, including its architecture, language, and overall design, to leverage a cloud specific service. One of the greatest benefits of refactoring is the ability to fully leverage advanced cloud tooling and automation. This method typically allows for a lower cost with higher performance, scalability, and elasticity within the cloud.

There are different methods of refactoring, from minimum to complete refactoring, or just doing containerization or serverless refactoring. To understand the right path, we need to start with defining the goals and why refactoring is important; this will help define the target and process to get there. An example would be migrating a node js chat service to AWS Serverless Express running on AWS Gateway and Lambda services. This will require code changes and additional libraries, but in the end, there is no server or operating system to worry about, and auto-scaling can be set up and easily run in a pay-as-you-grow model to adjust the services throughout the year as workloads ebb and flow.

REBUILDING

Rebuilding is the final option to consider, which involves rebuilding the application within a completely new cloud-based service. This requires redesigning and building the application from scratch using new cloud native language, tools, and capabilities. Depending on the complexity of an application or service, this could be a sizable undertaking, but in the end could be very rewarding. The decision to rebuild over refactor depends on the time and cost difference between the two. It may actually be less work to start from scratch due to a variety of factors, such as lack of knowledge of the existing code. In those cases, refactoring would take much longer than rebuilding in a cloud service.

It is not one-size-fits-all for the entire IT environment. The decision as to which model and technology to use must be done on a case-by-case basis for each application and service. This is where understanding your applications, their longevity, and their importance to the business is critical to the cloud adoption journey.

WHAT WE'VE SEEN:

Companies who take the time to analyze all application and service needs will get the most out of their cloud adoption strategy. Some may rehost 60 percent of their environment and replatform the rest, or simply refactor their public-facing web services. Understanding their needs and capabilities leads them to the best decision.

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ARE YOU READY?

What does all of this mean for you, your business, and its users?

You have the journey defined, solutions understood, and the technology and migration tools — now get to the cloud! Sounds pretty simple, but this could be a large endeavor, taking teams months to refactor web services or build out a hosted VMware cluster to support 60 percent of the environment that is being rehosted to an on-premises virtualization platform. It becomes critical for milestones and phases to be well-defined to ensure resources and applications are available at the right times. Failure to do so can cause a lot of disruption throughout the organization and potential loss of business. The goal is to build out a plan to meet reasonable objectives in short iterations to minimize impact on each service that is moving. Services may be grouped up based on various elements, such as similar technology stack, destination, or availability requirements. An example grouping may be all the public-facing web services moving at the same time to AWS using WordPress. Again, building this out in a phased approach, with milestones defined and measured, will ensure risk can be managed and benefits can be achieved more quickly.

Once the plan is fully defined and resources are identified, now you can go! Well, *technically* you can go. But there is still one piece missing. Have you identified the processes that will be impacted as part of the solution? Do you have monitoring, security, and cost management processes defined? These are all elements that need to be taken into consideration with the solution and part of the plan that is being executed. Steps to review the security, test out the availability, and ensure monitoring is notifying the appropriate people are all part of the validation phase to make sure nothing is left out. This needs to be reviewed very closely.

Now that you have everything checked and you are prepared to validate everything, it may be a good time to have another set of eyes look at things, especially if you haven't had someone working with you throughout the project. According to Gartner, 75 percent of all cloud migrations will leverage a cloud managed services partner by 2022. Finding the *right* people to help you along your journey is vital. Having a partner specialized in the solutions and technologies being implemented will ensure your time and investment are all worth it, locking in the most value possible from the cloud. A strong partner is a great value for providing direction upfront and throughout the project, while continuing to provide guidance on up-to-date technology best practices and new solutions available.

Finally, don't forget your cloud enablement team. This team should be established at the beginning and grow as you trek through the cloud adoption journey. Initially it will be set up with people who are trying to understand the current state, define goals, and start leading the development of the solutions. Once the project begins, the team's priorities will shift to selecting the technology and models for each application and service following a strong execution plan. And it doesn't stop there. Through the execution of the project, the CET will ensure the correct training is established for each application and department, the leadership team is kept up-to-date, and the cloud adoption project is prioritized appropriately among other initiatives within the company. Overall, the cloud enablement team members are champions and advocates for the cloud adoption process throughout the company, dedicated to making it — and therefore the business goals it will drive — successful.

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ALL THE BENEFIT?

Ahh, you've reached cloud nirvana. You have moved to the cloud; you have a mature hybrid model with many services housed within a hosted VMware infrastructure managed by a managed services provider; you have your ERP system hosted with a SaaS vendor that manages everything as well as Office365 and web services hosted in Microsoft Azure.

This may feel like the end of the project, but it shouldn't be. The goal of the cloud journey will shift from migration to enhancement. Your cloud enablement team and strategic partner should continue to look for ways to improve processes, services, and applications — evaluating ways to continue to automate and ensure availability and flexibility for all services.

This may spur smaller projects to focus on new initiatives, such as moving additional workloads from the virtualization environment to private or public cloud platform services, or continuing to look at ways to reduce the hardware and operating service resources to simplify operations further, enabling staff to focus on more strategic business initiatives. The goal is to be ever-vigilant and aware of ways to continue to enhance and improve how things operate and are managed, continuing to enable the business to grow and be more successful.

If after reading this you aren't excited to figure out ways to make your organization and business more successful, improve daily operations, enable your staff to be more strategic, and eliminate the IT bottleneck, then it may be time to look internally at why this isn't important to you, your leadership team, and ultimately the business.

The number one way to prevent success or growth is by doing nothing, by not changing, not adapting to new ways to do things. Many organizations are resistant to change, which may lead to their ultimate demise. A great example of this is Blockbuster Video. Many of us recall going into Blockbuster to rent movies in the late 90s and early 2000s as the only real way to get access to videos, at least for a while. Then this company named Netflix started shipping DVDs to customers at their homes, which was a very good way for consumers to easily get access to movies. In 2000, the founder of Netflix approached Blockbuster to create a partnership allowing the two companies to benefit from one another's strengths, but John Antioco, the CEO of Blockbuster, thought it was ridiculous and that Netflix was a "niche business," which came back to bite him 10 years later when Blockbuster filed for bankruptcy. And of course, Netflix is now a multi-billion dollar company.

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WHO'S YOUR PARTNER?

While change isn't always quick, easy, or simple, it is necessary for survival. Considering a cloud adoption strategy is a key way to innovate and leverage technology to improve the future of your business. Using an external partner can be a crucial component to make your cloud adoption strategy successful. Forbes cites utilizing only internal resources as one of the biggest reasons cloud migration projects fail. They say, "It is next to impossible for people to create a thorough, comprehensive cloud implementation plan when they haven't done it before."

As a long-standing service provider, Zirous has a strong focus on understanding our customers and their business, helping them design solutions to meet their business demands and architect services that will help them continue to innovate and grow. We understand what it takes to design and execute a successful end-to-end cloud implementation plan.

Zirous will help define your roadmap to ensure your cloud adoption and migration strategy is fully vetted and has your business goals at the forefront. Our Catalyst process works through all the necessary steps to get a roadmap defined and ready to implement. We are partners of many technologies and view it critical not to be stuck to a single technology mindset when reviewing an adoption strategy. The technology needs come after the solution is understood — not the other way around. Let us start with our Cloud and Croissants presentation; we'll enjoy an engaged discussion at your office over free breakfast, and then you can see how Zirous can help your organization get the most of your cloud strategy!

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A LITTLE ABOUT ZIROUS

WHO IS ZIROUS?

For over 30 years, Zirous has been providing technology solutions to clients in infrastructure, data management and advanced analytics, identity and access management, enterprise integration, and custom development.

Zirous' cloud team is stacked with world-class infrastructure engineers, business analysts, and application developers.

WHY ZIROUS?

Our clients love us for three resounding reasons:

- We provide local and accessible experts that fit company culture.
- We're a partner who understands their business even better than they do.
- We are strategy-focused and not afraid to challenge the status quo.

We know these are true — because we asked! Our clients tell us that we're an essential part of their team and their success because we work **with** them to reach their goals.

All of these things align with our values, which makes this even better news. We're not an in-and-out, one-size-fits-all provider working through as many clients as possible as quickly as possible. We are truly custom solution providers, working through your specific business problems to provide the answers and resources you need to do your job best and boost your bottom line.
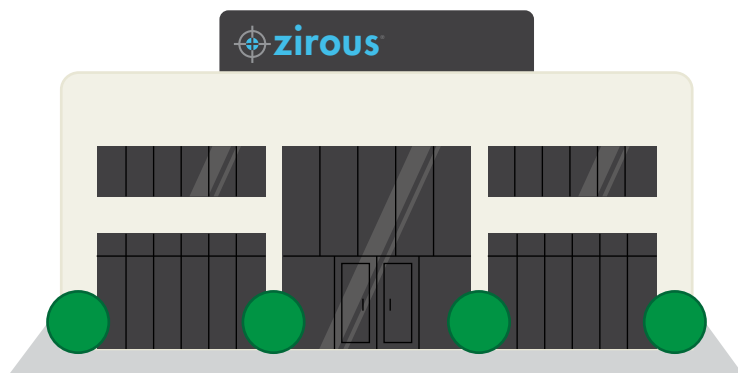
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