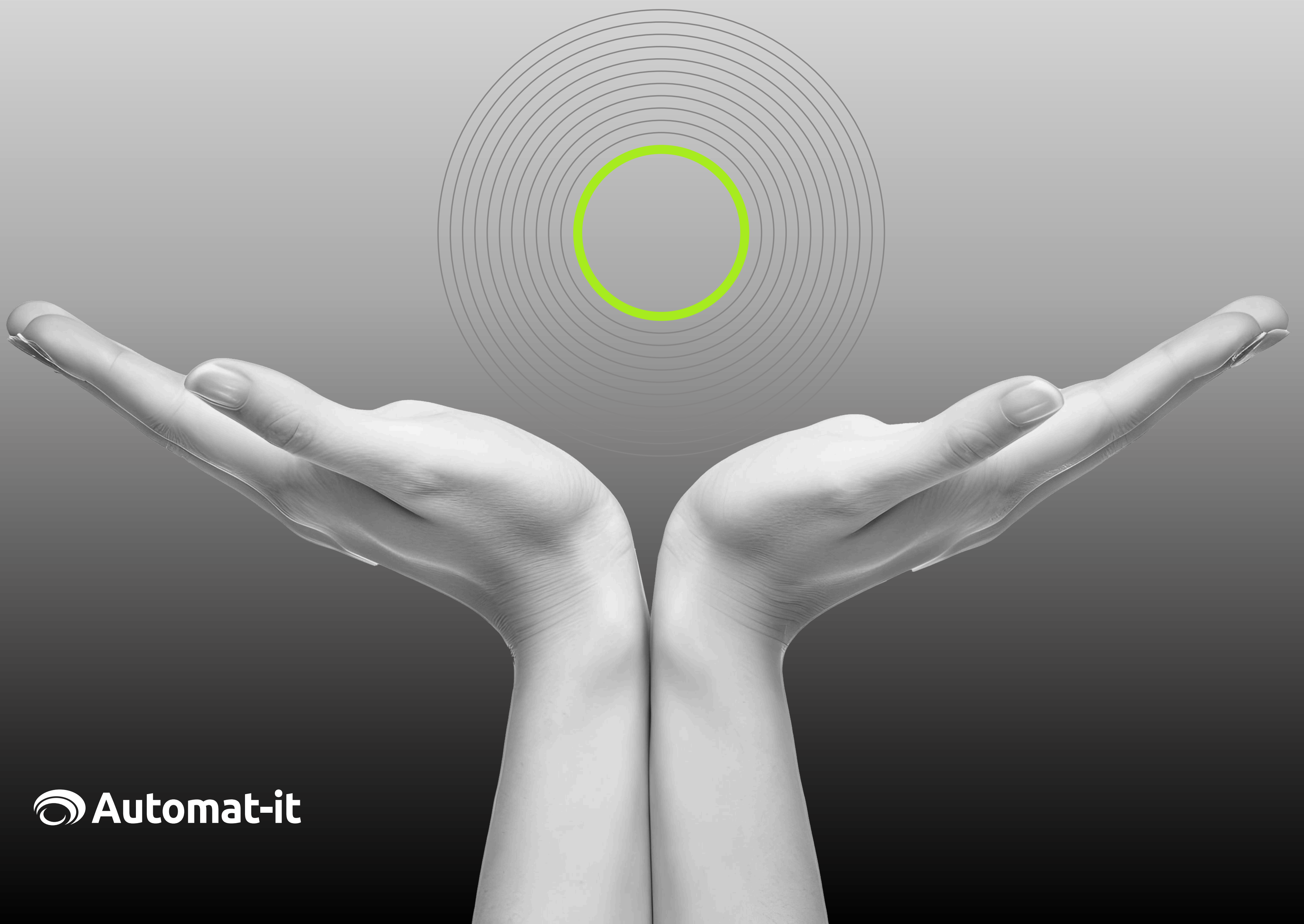


DevOps for Startups:

The Hiring vs. Outsourcing Dilemma

How to Scale Efficiently Without
Breaking the Bank



INTRODUCTION

Implementing DevOps methodologies is one thing if you're a large business with mature cloud infrastructure, well-organized processes and clear business objectives that don't change frequently.

For startups, however, getting started with DevOps can be a different game altogether. Often, building a DevOps practice isn't a primary focus during the early stages of a company still trying to get off the ground. Also, it's common for smaller teams to "wear multiple hats", and the R&D roles might simply take on DevOps functions in addition to their main responsibilities.

Although startups stand to gain just as much from DevOps as any other kind of business, they face unique challenges that can make it difficult to kick off a DevOps journey. For example, the typical startup doesn't have lots of time to spend finding, hiring and onboarding qualified DevOps staff. Nor does it enjoy deep pockets that allow it to toss money at DevOps implementation challenges until they go away.

Plus, whereas failure to launch successful DevOps services at a larger company simply means being stuck with the status quo, a stunted DevOps strategy at a startup could place the entire business in jeopardy by hindering its ability to continue scaling and growing. There are also significant compliance and security risks from using a DevOps strategy that hasn't been implemented correctly. These types of errors could expose your startup to security breaches which can have extensive repercussions.

For these reasons and more, startups need to approach DevOps implementation in a particularly strategic way. The DevOps adoption playbook that works well at larger companies is not always the best fit for startups.

As seasoned DevOps engineer Romaric Philogène writes, "DevOps is especially advantageous for startups." But he adds that "startups face unique challenges in their DevOps journey, including tight budgets, rapid development cycles, and limited resources."

This eBook offers guidance on how startups can thrive at DevOps. In the following pages, you'll learn what startups need to prioritize when it comes to DevOps, which special challenges they face and how creative approaches to DevOps – like a "Dedicated DevOps" strategy – can help accelerate and scale DevOps for startups.

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CHAPTER 1

What it takes to get started with DevOps services

At its core, DevOps is a philosophy that emphasizes smooth collaboration between multiple teams. This includes: software developers, IT operations, and even business roles like project managers who are responsible for the “Plan” phase in the DevOps infinity cycle. Exactly what that means in practice can vary a bit from one organization to another.

In general, however, integrating DevOps into a startup – or, for that matter, any other type of business – boils down to implementing the following three key assets and practices.

1.

Scalable infrastructure

To collaborate efficiently and bring new software products to market quickly, startups typically need scalable cloud infrastructure. Scalable means an infrastructure that is flexible and nimble, making it possible to launch new applications and deploy updates with ease.

Typically, scalable infrastructure is founded on a microservices architecture. Microservices enable scalability for DevOps teams because they allow engineers to add new features or roll out updates to individual application services without disrupting the rest of the application.

When using microservices architecture combined with DevOps security practices, this ensures not only scalability but also resilience against emerging threats. It helps teams deliver secure and reliable applications faster.

2.

Continuous Integration and Delivery (CI/CD)

Continuous Integration/Continuous Delivery (CI/CD) complements scalable infrastructure by enabling the software development and deployment practices that DevOps teams need to implement new applications and updates quickly.

That is because CI/CD allows engineers to add features and roll them out on a continuous basis. Instead of releasing updates occasionally, CI/CD means you can enhance your software on a weekly or even daily basis. The result is faster time to market and a greater ability to adapt to evolve products – both of which are key capabilities for startups in particular.

The CI/CD pipeline is an attractive target for bad actors because flaws can provide easy access to the system. Therefore, it's important to ensure proper security controls to prevent financial loss and reputational damage. Often, this is also required for regulatory compliance.

3.

Automation and monitoring

In addition to deploying software regularly and quickly, DevOps teams must ensure they can monitor it effectively to deliver a great experience for end-users. To this end, most DevOps engineers implement automations to handle tasks like collecting performance data and generating alerts when something goes wrong. DevOps automation also includes integrating security checks and monitoring tools to mitigate cyber threats. In some cases, incident resolution can be automated, too, using tools that fix problems proactively, without waiting on a human to respond.

Automating repetitive maintenance tasks delivers value in two key ways. First, it saves time, which is especially valuable for startups whose personnel tend to be overstretched. Second and just as important, automation breeds consistency and reliability by eliminating the risk of introducing mistakes during manual processes.

CHAPTER 2

The 3 approaches to creating DevOps teams

We just described what an effective DevOps initiative typically looks like. Now, let's talk about how businesses can gain access to the personnel they need to implement DevOps.

There are three basic approaches: In-house, DevOps hours and dedicated. Here's a look at what each model entails, along with its pros and cons.



1. In-house DevOps

In-house DevOps is what it sounds like: A DevOps implementation strategy that involves hiring and managing an in-house team that is responsible for overseeing DevOps within the organization. This is the approach that companies tend to default to because hiring employees is the most common way for businesses to implement and scale operations.

But that doesn't mean in-house DevOps is always the right strategy. Although it provides the benefit of giving you the greatest level of control over DevOps personnel, it comes with steep challenges, especially for startups.

Early-stage startups often have team members who perform DevOps functions in addition to their main R&D roles. Even if there are a handful of DevOps hires, those few employees don't typically capture all of the functions of a larger and more mature team. An integral part of DevOps success comes from following best practices and implementing proper DevOps methodologies for a well-oiled CI/CD pipeline. This requires a commitment to creating the internal DevOps framework and experts in related disciplines such as security, data, or public clouds like AWS. Furthermore, building all of the DevOps best practices and procedures with an in-house team isn't typically a focus for startups that are in the early stages of rapid growth.

Finding, hiring and onboarding in-house DevOps engineers can take a long time – time that fast-moving startups often don't have. It also requires an extensive budget, which also tends to be in short supply at new companies.

2. DevOps Hours service provider

Sometimes, companies turn to a DevOps Hours model to provide specific expertise or fill gaps in their current DevOps team. DevOps Hours means working with a third-party company, like a professional services firm. It could also be working with individual hands-on consultants who provide DevOps services on an as-needed or per-project basis.

With a DevOps Hours model, there's a lot of planning and involvement that needs to be provided from the startup's side. The startup would need to define strategy in terms of infrastructure, architecture, security framework, and artifact/release management.

This approach is best suited to implementing DevOps, rather than building the strategy and practice. What's great about DevOps Hours is that it expedites the process and reduces the upfront cost because you can typically pay as you go.

But occasionally there are drawbacks to a DevOps Hours model.

It could mean working with a revolving cast of engineers because a professional services firm will assign a different employee each time a task or incident arises. So, sometimes, the staff who perform DevOps services won't gain deep experience with a particular client's environment.

Also, if you hire an individual consultant, you might be limited to individuals who only offer specific specialties or have availability issues for completing repeat projects. Based on these considerations, DevOps Hours often works best for individual tasks with a narrow scope.

3. Dedicated DevOps

There's a third approach that offers the advantages of in-house and outsourced DevOps service providers without the drawbacks. It's called Dedicated DevOps, and it gives businesses access to DevOps experts who are devoted to your company – but whom you don't have to hire, train and manage on your own. It's an end-to-end solution that includes strategy as well as infrastructure & architecture, delivery management, environment management, and security framework.

This means that Dedicated DevOps gives you instant access to engineers who are deeply versed in DevOps technologies and tools. There's also an option to work with SMEs with specific expertise and experience in DevOps, such as DBAs, network engineers, or security & compliance experts, who are available on an as-needed basis in your same contract scope.

With Dedicated DevOps you can benefit from the automation and knowledge bases that a professional services company has already established – which means there is no need to build a DevOps team and supporting resources from scratch. Plus, Dedicated DevOps delivers the same level of control over how your DevOps personnel work as you'd get from an in-house team, but without the complexity and time required to build your own team. You also don't need to make a long-term commitment to DevOps staff if you don't want to. You pay as you go.

TYPICAL APPROACHES TO DEVOPS BASED ON STARTUP STAGE

Mature stage

3

In-house DevOps Complimented by DevOps Hours or Dedicated DevOps
Full internal DevOps practice, with additional resources when needed

Growth stage

2

Dedicated DevOps from MSP (managed service provider) -
Provides end-to-end hands-on service, from strategy to implementation for scaling faster

Early stage

1

DevOps Combined with Development - Often done by R&D team covering DevOps roles or small number of employees

CHAPTER 3

How Dedicated DevOps consulting and implementation drives startup success

Dedicated DevOps can benefit any business that is struggling to hire and retain skilled in-house DevOps staff – and that doesn't want to settle for the lack of control and limited expertise that comes with a DevOps Hours model.

From the perspective of startups especially, however, Dedicated DevOps offers a variety of unique advantages that help newer and smaller businesses work around the challenges they face during DevOps adoption.

1. Deep expertise

A Dedicated DevOps service provider gives startups access to a pool of experienced DevOps engineers who really know their stuff – who understand concepts like secure architecture, cloud management best practices and DevOps process optimization. This existing knowledge, gained from completing hundreds of projects, can drastically speed up timelines and help startups immediately implement best practices. These experienced DevOps engineers have the advantage of bringing their own “tool kit” of solutions, like an existing automation library. The work to figure out automations or other solutions was already done during previous projects, so you gain the benefit of it taking less time for your startup. In addition, because Dedicated DevOps engineers specialize in specific technology niches, they deliver expertise aligned with the cloud environments and platforms (like Amazon Web Services) that startups use.

This means that, with a Dedicated DevOps team, startups enjoy much more than staff who will simply “sit in the trenches.” They enjoy access to consultants and implementation staff who can help plan and optimize overall DevOps strategies.

2. Knowledge sharing

Along similar lines, a Dedicated DevOps model provides startups with access to a deep well of technical knowledge, without requiring them to find and hire skilled DevOps experts on their own. As a result, startups can benefit from the latest technological innovations and best practices – but they don't need to spend their own precious time following trends or learning how to optimize their cloud deployments and infrastructure.

Dedicated DevOps allows startups to focus on what matters most – scaling and enhancing the business – while external experts guide the company on its technical cloud.

3. Integration between internal and external teams

Since the core focus of DevOps is on achieving collaboration between different technical teams, external DevOps staff should be able to work seamlessly with your startup's staff. This is challenging to do when the external employees are external staff who are engaging with multiple companies at once.

But when you have a dedicated DevOps partner, you get external staff who are trained to integrate seamlessly into your teams and with your processes and have done this successfully many times before. They can use the same communication methods and project management systems as your internal employees, and they can work based on schedules you set.

Dedicated DevOps as a "cheat code" for startup success

In each of these ways, Dedicated DevOps mitigates the biggest challenges startups face:



Staff hiring and onboarding:

With Dedicated DevOps, startups get instant access to a team of DevOps experts, without having to invest considerable time and financial resources into hiring and onboarding their own staff. This benefit also means you can work with a Cloud Center of Excellence (CCoE), which includes a variety of DevOps SMEs who have additional areas of knowledge and abilities.



Business risk:

Because Dedicated DevOps teams can scale up or down at any time, and because they bring deep technical expertise that the business might otherwise lack, they reduce the risk of letting a failed DevOps initiative stunt startup growth or trigger inefficiency.



Technical expertise:

Dedicated DevOps means startups get the highest possible level of technical expertise in a simple, seamless way. In addition, a dedicated DevOps team comes with extensive experience gained from completing hundreds of other projects, which includes bringing their own existing automation libraries.



Operations scalability:

With Dedicated DevOps, startups can add (or remove) DevOps staff resources whenever they need. This translates to maximum scalability of operations because the business can easily adapt its DevOps teams to support new applications or processes.



Budget management:

By eliminating the need for long-term financial commitments, Dedicated DevOps helps to keep startup budgets lean and nimble.



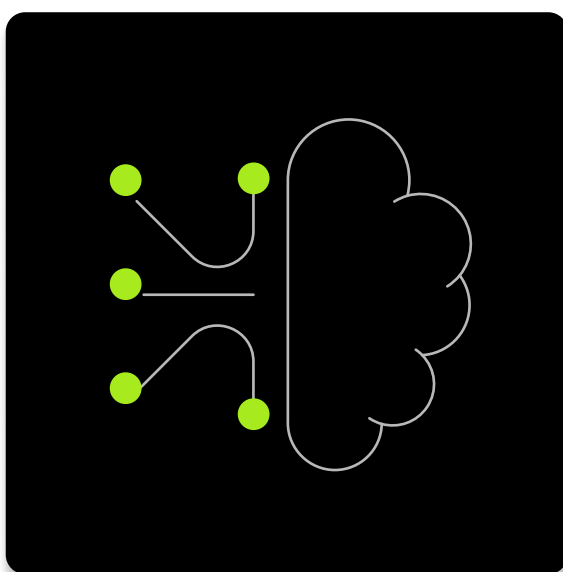
Time-to-market:

By reducing the trial and error necessary to implement and manage products, Dedicated DevOps teams add cost-efficiency and speed time to market.

CHAPTER 4

Getting the most from DevOps services for startups

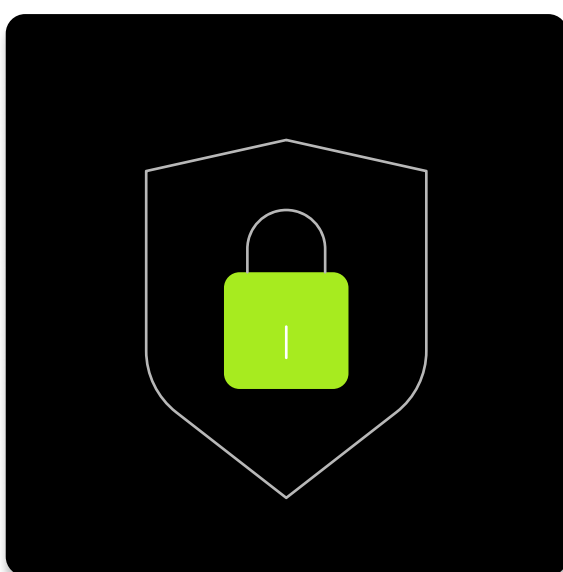
We've covered how startups can get started with DevOps, and why Dedicated DevOps delivers unique benefits. Now, let's go a step further by discussing examples of how startups can get even more value out of DevOps once they have a DevOps strategy in place – and how Dedicated DevOps can help with the DevOps optimization process.



1. Cloud consumption efficiency

One way that Dedicated DevOps can maximize the value of DevOps for startups is by minimizing cloud bills – which is what happens when external DevOps experts are able to provide guidance on optimizing cloud architectures and consumption models.

In-house staff at startups typically have little time to look for and correct inefficiencies in the way their businesses use cloud resources. However, a Dedicated DevOps model provides access to external consultants and implementation experts who specialize in this task, among others. They can help the business minimize cloud resource consumption – and, by extension, cloud bills – without compromising on performance or reliability. This is achieved through both technical optimization and collaborating with FinOps to utilize any special funding programs or discounts.

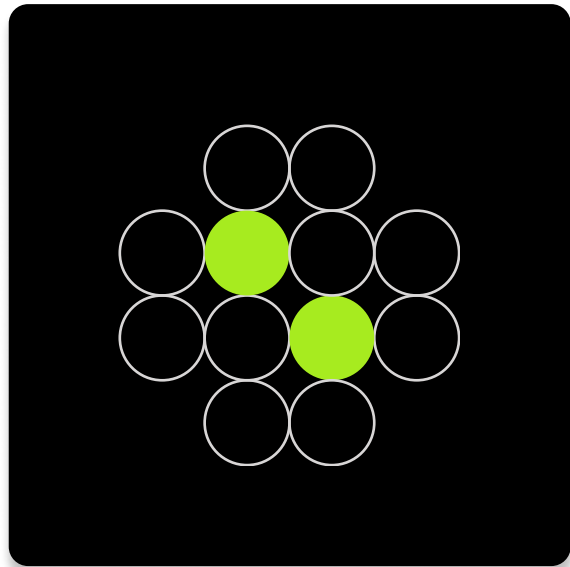


2. Aligning DevOps services with startup priorities

At startups in particular, needs and priorities tend to change constantly. For example, the business might drop a product and pivot toward a new one, resulting in major changes to its cloud deployments or software delivery pipeline. Or, a new funding round could lead to an infusion of cash that drives the rapid scaling up of product implementation. There might also be challenges with meeting compliance requirements, such as ISO, SOC 2, or others, which can be critical for obtaining the next round of investment or being part of a successful acquisition.

For companies that already have DevOps initiatives in place, keeping them aligned with changing needs can be tricky. It's not always obvious how to modify operations practices in response to new business priorities. This is a risk because, as Forbes [notes](#), "a lack of alignment between business goals and the DevOps strategy is a concerning sign" of impending DevOps failure.

Here again, however, Dedicated DevOps teams can help. External experts who are seasoned in adapting DevOps practices based on changing business requirements provide the critical guidance necessary to keep DevOps services and business goals in alignment, freeing startup founders and managers from having to navigate these challenges on their own.



3. Minimizing DevOps costs

Businesses typically embrace DevOps, at least in part, to achieve a better tradeoff between IT spending and outcomes. But when DevOps practices become misaligned with business needs – which is often the case in fast-moving startups – the result can be wasted budget. The business might keep paying for services or staff it doesn't need, for example.

Dedicated DevOps helps prevent risks like this. When startups can easily add or remove DevOps services and staff, they don't need to worry about wasted spending. They get the DevOps solutions they need, when they need them, without the costs or management complexity of full-time staffing. Because using Dedicated DevOps functions like part of a startup's existing team with knowledge of the business's goals and strategy, it's possible to get proactive suggestions for optimizations.

CHAPTER 5

A Case Study in Dedicated DevOps

Skai, a fast-growing ad-tech company, faced scaling challenges and high operational costs due to outdated infrastructure. Automat-it partnered with Skai to migrate its systems to AWS, replace legacy software, and optimize cloud performance. With Automat-it's dedicated DevOps team, Skai reduced customer onboarding time from 8 hours to 30 minutes, while also enhancing scalability and reducing costs.

Performance Gains:

✓ UI speed increased by 2.5x

✓ Backend processing improved by 4x

✓ Event processing capacity boosted by 4.5x

✓ 94% reduction in onboarding time

skai



Automat-it's AWS expertise transformed our infrastructure and improved our customer experience. Their team enabled us to onboard new clients faster, scale efficiently, and operate more cost-effectively.

Danny Zalkind

Senior Director | Infrastructure Engineering at Skai

Conclusion

To recap: There are several methods for implementing DevOps. In some cases, investing in an in-house DevOps team makes sense, especially for businesses that don't need to adapt or scale quickly. Traditional DevOps Hours may also work for companies that don't require DevOps personnel to become integral extensions of their internal teams or have specific tasks to complete, which fit the benefits of this model despite its drawbacks.

But for businesses that prioritize scalability and adaptability – yet have limited time or resources to build in-house DevOps teams – the optimal solution is Dedicated DevOps. Dedicated DevOps delivers exclusive access to specialized skills on an as-needed basis, using engineers who integrate seamlessly with your company's employees, systems and processes.

Contact us

Learn more about how to get started with
a Dedicated DevOps solution tailored to your business.