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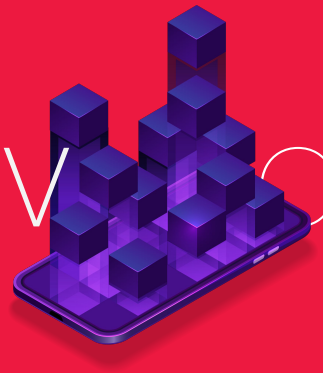
DEVOPS



TIME FOR A RETHINK

CI&T

DEVOPS



Maturing in many ways, DevOps remains freshly innovative in others, representing a huge opportunity for business transformation today—if approached correctly

DevOps can seem so frequently discussed and familiar that it no longer merits special consideration. The stories around rapid release cycles, customer delight, and the need for cultural change certainly have become integral to forward-thinking IT and product discussions.

If you're not among that rare 20% of DevOps performers rated Elite,* you might even harbor a little developer envy of the admirable performance standards they routinely achieve:

- **Deploy on demand,** multiple times a day
- Have a change **failure rate** no higher than 15%
- **Restore service** interruptions in less than one hour
- Require less than **a day's lead time** from code commit to code reliably in production

* Source: Accelerate: State of DevOps 2019

RETHINK

There's a hard truth that might make you feel better about your own organization's efforts. The superlative technical achievements of the Elites are not, in fact, the primary signs of their success. At the very least, we should not fall into the trap of measuring success by this yardstick—because the value of DevOps is not in the quantitative product measurements but in the progress towards business success.



Without this business orientation, you risk falling into frustration and anxiety in your operations and culture by pursuing technical achievements that aren't recognized or rewarded by your stakeholders—or worse, your customers.

DevOps done right provides an immediate and lasting improvement in the performance of the entire organization, not just of particular products or projects.

Take a close look at your entire business. Have you been able to:

- Increase business resiliency by increasing the **frequency of improvements?**
- Shift from company-centric to **customer-centric** goals?
- **Create a cycle of value discovery and delivery** instead of simply racing to finish lines?
- **Strengthen shared goals** and a team mentality while rejecting silos and "territories"?

If you haven't realized gains like this to your satisfaction—Elite performer or not—you have much still to get out of DevOps, and this guide is for you.

WHY HAVEN'T WE ACHIEVED MORE?

Lack of truly meaningful DevOps impact can be rooted in two causes: becoming overwhelmed by the complexity of implementing or refining a DevOps program, and sometimes, accidental complacency in organizations that have already had some technical/process success. The solution in both situations is simply the foundational alignment of DevOps implementations with business outcomes.

In either case, the heart of the issue lies in the long list of elements that makes up DevOps. We now undeniably have a well-developed understanding of DevOps, with many excellent resources that provide welcome, helpful depth and detail on the many facets of a full DevOps implementation.

WHY HAVEN'T WE ACHIEVED MORE?

For example, here are some of the capabilities that are very commonly mapped out in organizations working to improve their practice of DevOps:



Requirements

- Hypothesis-driven dev
- MVP
- INVEST breakdown
- KPI & OKR to features
- Business complexity points
- Value engineering
- Design Thinking



Software Development

- Quality built in
- Single Dev Flow
- Airplane development
- Automated code analysis
- 15m feedback build
- Cloud native apps
- 12 factors
- Erosion and entropy monitoring
- TDD
- Microservices
- Database per app



Software Config. Mgmt

- Trunk-based dev
- Config per environment
- Config server
- Automated DB migration
- Feature toggle



Build & Integration

- Automated pipeline
- Build once deploy anywhere
- Pipeline as a code
- Quality profile for business, security & RNF
- Build on Commit



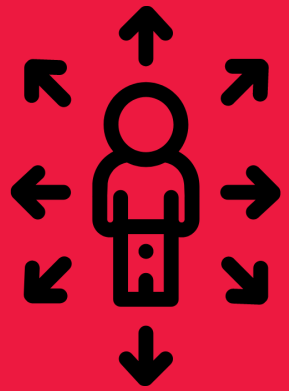
Test & Quality Mgmt

- Test pyramid
- Code review
- Code analysis
- Security analysis
- Architectural validation
- Performance loading test
- Debugging quality



Run

- Infrastructure monitoring
- Logging analytics
- Application performance monitoring
- Business analytics
- Deployment automation
- Rollback automation
- Self-healing apps
- Active monitoring
- Circuit breaking / fallback
- Immutable Infrastructure
- Infrastructure as a code



Faced with so many options, how do you decide **where to start?** More importantly, how do you know when—or if—**DevOps adoption comes to an end?**

A BUSINESS PERSPECTIVE

If we're not careful, we can fall into the trap of approaching DevOps from the practice/implementation adoption perspective instead of the business perspective. You can easily choose where to start or in which direction to move based on those quantitative product measurements of number of features, time to production, and failure rate. But then months later, you may find yourself working just as hard as at the beginning to secure continued recognition, support, and funding for your DevOps project.

You can face these challenges even after you've already had success with DevOps, because as you press forward into more advanced areas, you are more likely to miss the mark if your focus is on technical progress instead of business value.

How do you find **significant opportunity for progress** in DevOps, whatever your maturity level?

According to Gartner, 90% of the DevOps initiatives will fail to fully meet expectations by 2023

Source: The Digital Group 2020

HERE'S WHAT WE BELIEVE

CI&T's perspective is that successful DevOps starts with desired business outcomes and goes from there.
By bringing your business goals, not just your business processes, into the conversation, you'll have a much clearer idea of which steps forward are most productive and you will deliver the most value to your organization as a whole. This is especially the case given the rapid increase in remote work and the heavier-than-ever economic pressures driving efficiency and rapid market response.

When approached from a business perspective first and foremost, the right improvements are easier to determine and faster to reap benefits than many realize.

Truth: You can make **simple yet strong** advances in DevOps while **delivering value along the way.**



THE **RULE OF THREE** FOR IMPROVING RESPONSIVENESS AND INNOVATION

The path to a strong advance in DevOps, then, starts by coming to three key understandings. Applying this simple Rule of Three gives your organization the means to start delivering value even as you are going through change.



#1

START WITH THE WHY

(Not "Let's adopt 'best practices.'")

The real "why" in DevOps comes from connecting the practices with desired business outcomes and resiliency. This requires digital initiatives, a nimble mindset, and operational efficiency. At the same time, the customer experience moves to the start and finish of nearly every interaction. With that, consider this:



Double down on digital

Agility and innovation are key ingredients, especially for the "new normal" we must now build.



Promote the customer-centric mindset

Focus on outcomes, not outputs. This should be a shared goal between business and IT. Simply adding more features is not, fundamentally, a success metric. Successful projects can be measured solely by delivery; successful products cannot.



Most of the time, it's about speed

Customer experience can be tricky and the best way to make it right is through **experimentation**. A short lead time is imperative.

#2 ASK YOURSELF: WHERE ARE YOU IN DEVOPS?

(And what have you yet to achieve?)

Different organization are in different places when it comes to people, culture, and tools. When you work with an outside consultant, it is important to find one who can meet you where you are. But no matter how much you want progress, you must start with a clear definition of your current state. With that, consider this:



Map your value stream

This process spots current gaps and bottlenecks. Key stakeholders must understand and achieve consensus on how your value stream is operating today, not just how it operated when you began implementing DevOps.



Identify and prioritize bottlenecks

Use the value-stream map to prioritize the problem to be solved. Establish ambitious but feasible goals.



Focus on the practices that will create results

Once you have clarity on the bottlenecks and goals, look at the available DevOps practices and focus on the ones that will close gaps. Forget the others.

#3 TAKE IT AS A JOURNEY, NOT A DESTINATION

(Enable an improvement mindset)

If you're doing DevOps "right," the status quo is that there will no longer be a status quo. This can be unsettling, disorienting, or frustrating, even to those promoting its adoption! —Let alone those people and organizations comfortable with a more traditional approach. With that, consider this:



It's an ongoing process

The DevOps journey is dynamic, and there is no static end state. Learn to welcome change and embrace the need to continuously evolve.



Shorten improvement cycles to 90 days

Define your priorities and focus on what can be achieved in the next 3 months. Then, review the priorities and do it again.



Become a "culture of learning" organization

To promote continuous improvement and collaboration, it's critical to create a safe environment for people to learn, fail and improve.

CONTINUING YOUR PROGRESS AS DEVOPS INNOVATION CONTINUES

Right now, one of the highest-profile developments in DevOps has been the original methodology spawning specialty branches. What exactly should you make of DevSecOps, DevMLOps, DevDataOps, and any other Dev-Whatever-Ops? These expansions might look suspiciously like slick marketing (just like for a while, everything got "aaS" slapped on it), but in fact it is one of two strong signals of continued innovation in the practice of DevOps. The other signal is rapid development of end-to-end toolsets.

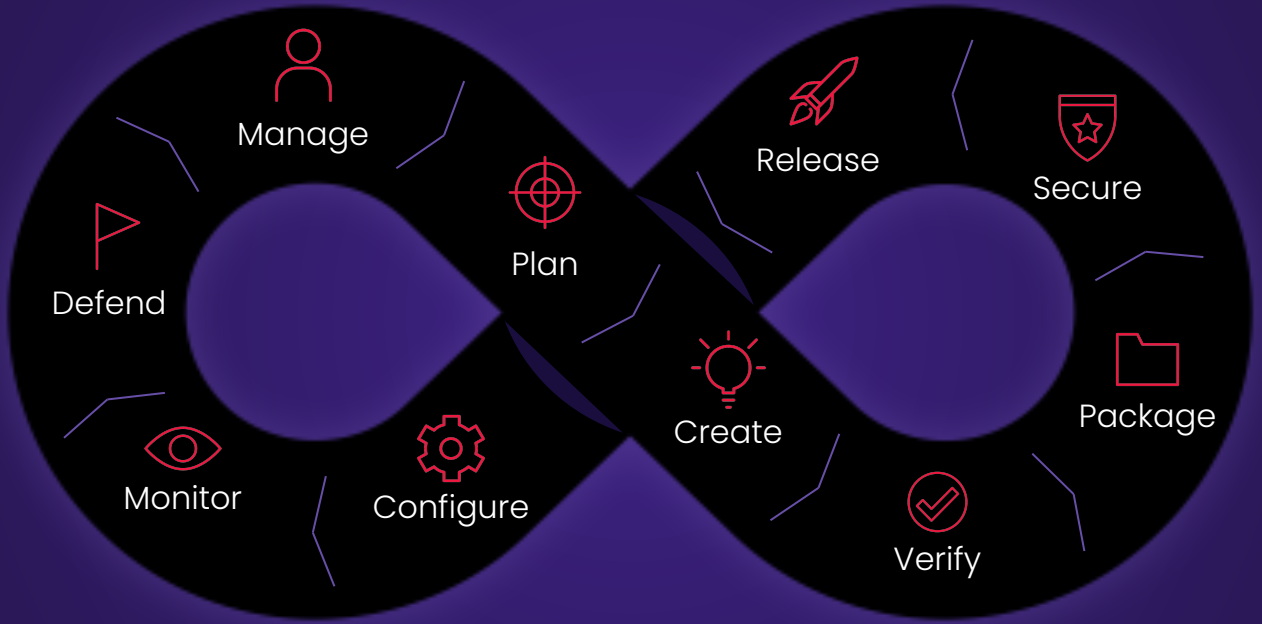
Let's take a quick look at both:

Just as DevOps integrates development and IT operations into single cohesive teams, we are now beginning to perform similar mergers of specialized development and aligned specialized IT operations functions. The DevOps principles remain the same, but their application to specialized areas becomes similarly specialized, and each is following its own maturity path.

Meanwhile, there is continued innovation in DevOps with regards to toolsets. The three biggest DevOps dilemmas typically center around the areas of collaboration, speed, and security. By deploying a complete continuous-integration/ continuous-development (CI/CD) toolchain in a single application such as GitLab, teams have one interface, one conversation and one permission model—yet access to thousands of features.

CI&T'S APPROACH WITH GITLAB

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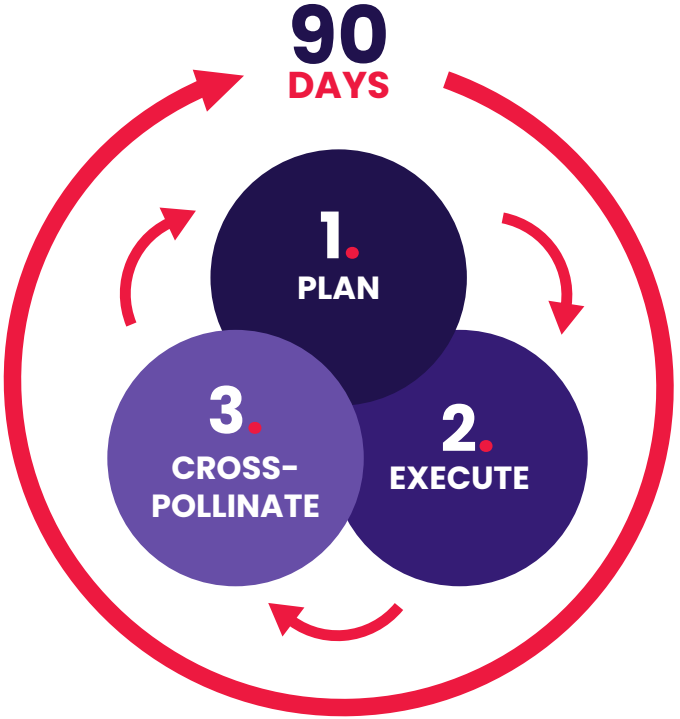
In our experience, shifting away from practice adoption and IT metrics and instead making your business performance the focus of the conversation, provides the guidance you need to take full advantage of these innovations at the right moment for your organization.

GitLab

END-TO-END PLATFORM

CONTINUOUSLY ADD CAPABILITIES TO ENABLE EVERY STAGE IN DEVOPS:

We believe the ultimate goal of good DevOps is to deliver what matters most, early and often. To accomplish this, CI&T focuses on developing insights about your organization to uncover the first improvements that can be made in the areas that are core to high-functioning DevOps. We use a three-phase process to plan, execute, and begin the cross-pollination of these new practices on a 90-day cycle—which can then be repeated and scaled at greater depth.



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END-TO-END PLATFORM

CONTINUOUSLY ADD CAPABILITIES TO ENABLE EVERY STAGE IN DEVOPS:

Currently you are at a given stage in your DevOps deployment, from early to more mature practices. Perhaps you have adopted DevOps principles and are now looking to consistently put them into practice. Or you may have implemented the basics and need help getting to the next stage. Whatever your DevOps stage, from adoption of first principles to pervasive cultural change, CI&T and GitLab's goal is to move clients along the journey to continuous deployment, resilience, and complete team cohesion that unites day-to-day operations with desired business outcomes.

1. PLAN

2-4 weeks

- **Deep dive into current software development cycle.**
- **Map business goals to capabilities, identify bottlenecks**
- **Plan de first 9 0-days development cycle**

2. EXECUTE

90-day cycle

- **Work side-by-side with your internal team to create a new operating model**
- **Execute planned deliverables from phase 1**

3. CROSS-POLLINATE

90-day cycle

- **Cross-pollinate new practices and learnings across multiple teams**
- **Deploy PDCA (plan, Do, Check, Adapt) continuous improvement cycles**
- **Plan the next 90-days clycle**

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CONTACT YOUR CI&T REPRESENTATIVE TODAY

With over 2,500 digital business strategists, designers and engineers deployed around the globe, CI&T is big enough to scale to the needs of Fortune 100 clients yet agile enough to achieve the speed to market today's customers demand. To get our team started on uncovering your opportunities for sustained business improvement through new or reimagined DevOps practices,

contact us at viveiros@ciandt.com



THANK YOU