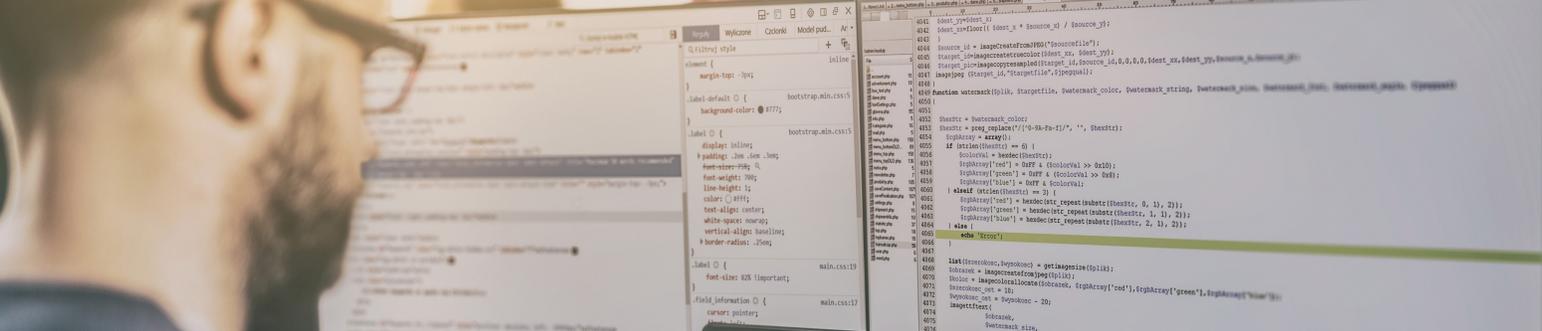




# SmartDraw DevOps Visibility Survey Report 2019

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# Introduction

DevOps is here to stay, with an overwhelming percentage of businesses reporting they are moving towards or have already converted to a DevOps methodology<sup>1</sup>. The most commonly stated goals for DevOps? Faster software delivery and better software quality.

What gets in the way of these goals? The 2019 State of Work Report<sup>2</sup> from Workfront sheds some light on this question. They asked 2,010 workers a simple question: “What gets in the way of work?” There were a dozen things, but three of the most common provide insight into our DevOps question:

- Time wasted trying to communicate with team members (wasteful meetings, excessive emails, unexpected phone calls)
- Excessive oversight
- Poor project prioritization

What do these have in common? All are effects of lacking meaningful visibility into projects.

- *“How are we doing on the latest sprint? Let’s all meet and discuss.”*
- *“I am concerned because nobody can tell me when this project will be done, so I will be managing things from now on.”*
- *“I have no idea which task you should tackle next. Let’s just go in alphabetical order.”*

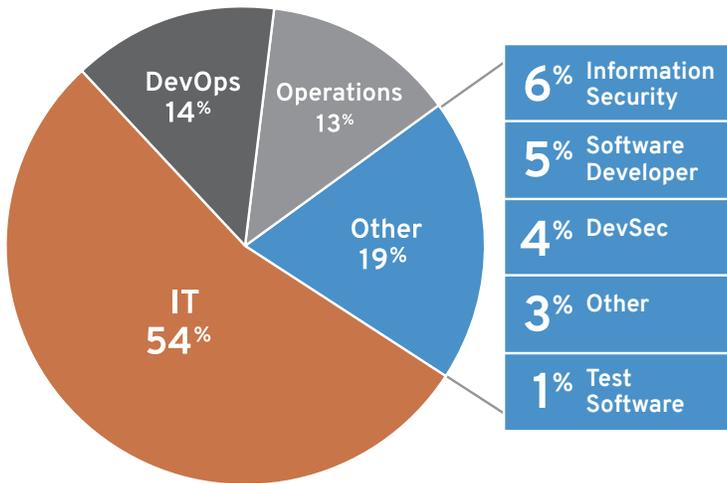
And while this lack of visibility is merely annoying for the typical enterprise team (for example, finance or sales), it is especially devastating for DevOps whose entire mission is to be more efficient.

In order to explore precisely how organizations are grappling with real-time visibility into DevOps projects SmartDraw commissioned the 2019 DevOps Visibility Report. ReRez Research, of Dallas, TX surveyed 200 DevOps professionals in the US and Canada during February of 2019.

<sup>1</sup> Statista research, 2019

# Demographics

## What is your role?



## How much of your role is related to implementing your company's DevOps philosophy?

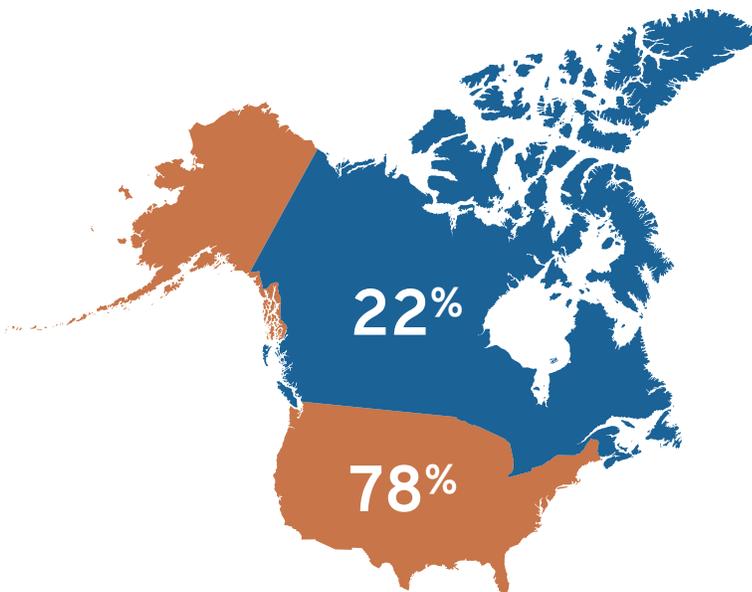
76-100 percent

42%

51-75 percent

58%

## 200 Responses in the United States and Canada



1,000

Median number of employees

Top-tier: 3,250

Bottom-tier: 647

351,400

Median of respondents that use DevOps to accomplish their work

Top-tier: 500+

Bottom-tier: 201-250

# Visibility Matters

The first thing we found is that obtaining real-time visibility into DevOps projects is of great importance to DevOps teams. First, it was a top three goal, with 84 percent reporting that providing real-time DevOps visibility across their DevOps ecosystem was somewhat to extremely important to their organization.

What's more, every single organization is currently trying to find a way to provide real-time DevOps visibility for three important reasons:



**Improve DevOps efficiency**



**Improve the quality of our software releases**



**Make better decisions**

“It is important to identify problems in advance and eliminate problems proactively. Visibility helps with troubleshooting and detecting errors. Sometimes I've had to do a rollback.”

*- IT process manager in the auto software industry*

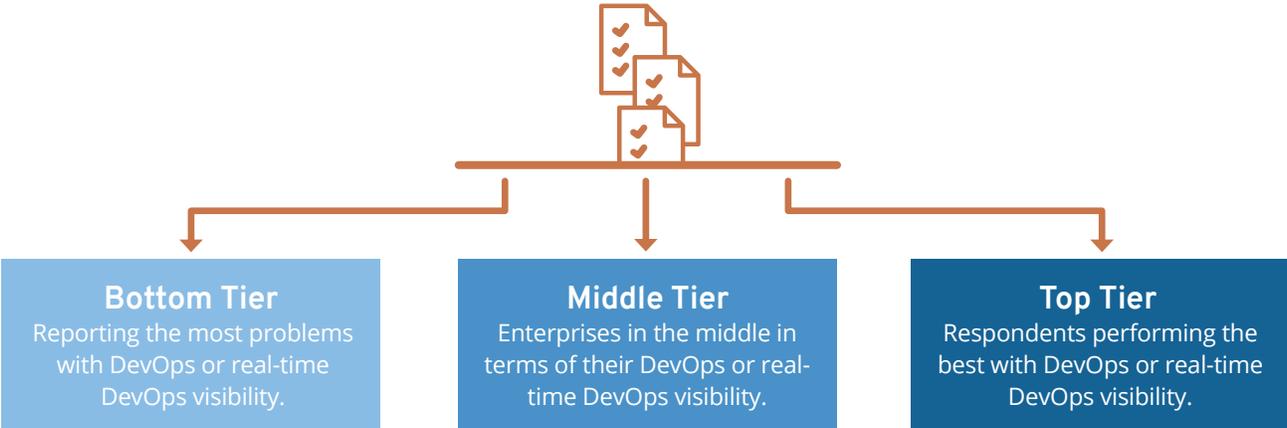
# Visibility Is Difficult To Achieve

We found there was a gulf between those DevOps professionals that were doing the best at providing visibility and those doing the worst. To better understand this phenomenon, we tiered the results. We scored each respondent on each response having to do with how well they were doing with either general DevOps goals or specific real-time DevOps visibility goals. Those whose aggregate score was in the top 33 percent we called “Top Tier” and those in the bottom 33 percent we called the “Bottom Tier.”

We then compared the results of the “Top Tier” to the results of the “Bottom Tier.” We knew, of course, that the top tier would post better results. That’s how they got tiered into the top tier. The question was how much better would their results be?

## Calculating the Tiers

To determine which companies are top-tier performers, SmartDraw asked specific questions about basic DevOps performance as well as real-time DevOps visibility. The survey then compared the relative differences between the top-tier organizations and the bottom-tier organizations to determine exactly how much better the best organizations are performing.



## General DevOps Performance (top-tier vs. bottom-tier)

In fact, the differences were substantial, both in general DevOps performance and in how well they were able to attain real-time visibility into DevOps projects.

For example, 59 percent more top-tier respondents say they are doing somewhat to extremely well at achieving strategic and operational goals, one of their top DevOps goals overall. They also reported doing far better in a variety of general DevOps areas:

- DevOps efficiency (57 percent better)
- DevOps quality (i.e., the quality of our software releases) (49 percent better)
- DevOps productivity (47 percent better)
- Keeping key stakeholders satisfied with DevOps in general (43 percent better)
- DevOps pace (how quickly you deliver software) (41 percent better)
- Keeping upper management satisfied with DevOps in general (39 percent better)



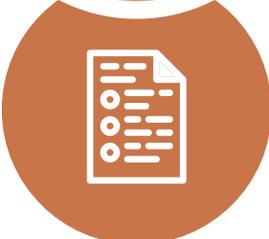
In terms of attaining real-time visibility into DevOps projects, the top tier also reported much better performance. For example, 64 percent more top-tier respondents say they are doing somewhat to extremely well at providing a single operational view. They also reported better results in a variety of other visibility-related areas:



**Providing reports that pull information from various DevOps data sources (58 percent better)**



**Contextualizing information to provide actionable insights (57 percent better)**



**Producing real-time reports (55 percent better)**



**Enabling upper management and others to request their own reports (52 percent better)**



**Automatically monitoring DevOps projects and producing alerts when something goes wrong (41 percent better)**

# Achieving DevOps Visibility Isn't Easy

One surprise from the survey is that while the top tier was able to produce the real-time visibility into DevOps they needed, it was coming at a high cost and the top tier is hungry for a better way to get this visibility. The biggest issues they face are:

## **It takes skilled workers away from more important work**

DevOps teams are lean by design, and pulling skilled workers off deadline-driven tasks has an immediate and significant impact of the team's performance.

## **The reports produced present information in ways that are difficult to read and understand**

DevOps information is not always easy to visualize. Look at some of the things one might be called upon to portray in a given DevOps project:

- A project org chart
- A project roll-up
- Jira blocking issues

These are not easy to understand when presented in a typical table format.

## **The reports are based on stale data**

This is perhaps the worst problem. DevOps projects move fast. Visualization based on stale data is essentially useless.

“It is very common to have different reports for different levels of management and it can become very excruciating for management to get an accurate report. But we still need visibility to proactively eliminate problems. If you have higher visibility, you have higher reliability.”

*- IT project manager from a large telecommunications company*

So, we asked the top-tier DevOps managers what features they would like to see in a tool that provided real-time visibility into DevOps:



Integrate the reports I need within the DevOps tools I already use (ex: Jira)



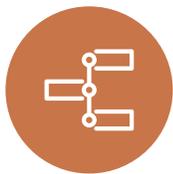
Data source agnostic – works with all of our DevOps data



Ability to drill down through an image to get to the source data



Real-time reporting



Needs to present common DevOps information (such as timelines, flow charts, dependency mapping, etc.) visually in a way that is easy to comprehend



Self-service ... i.e., allow managers to hit a button and get what they want without involving DevOps team members

**“I think it is important to have the ability to create our own interactive data. What’s important is that the data is customizable according to the level of reporting that we want to show.”**

*- IT project manager from a large telecommunications company*

# Summary

It makes sense -- the features the top-tier DevOps managers are looking for directly mitigate the time wasters found in the Workfront 2019 State of Work survey. High-quality real-time visibility into DevOps projects reduces or eliminates the time teams waste in archaic, inefficient communications methods, such as status meetings, email requests for update and urgent phone calls. Further, this visibility provides leads to better insights which leads to better project prioritization. And all of that allows upper management to back off and let team leaders manage their projects at ground level.

At the most basic level, high-quality real-time visibility into DevOps projects enables DevOps teams to deliver software faster and at a higher quality.



# Recommendations

The study uncovers key insights to continue increasing operational visibility and efficiency with expanded real-time DevOps data visualization:



## Avoid manually built reports in spreadsheets to prevent decisions based on stale data

Spreadsheets have served the business community well, allowing for analysis of data for a wide range of users. But it is from the old world, based on files on disks. The data can quickly become out of date. It is almost a meme, with people running down the hall, holding the latest print out. In today's modern business landscape of rapid change and competition, any manual work becomes a risk to an organization's decision-making ability.

*Example: Major satellite provider coordinating acquisition of new programs with editorial team and researchers via weekly email summary.*



## Present common DevOps information (such as issue dependencies, release schedules, product roadmaps) visually in a way that is easy to comprehend by wider audience

As we talked to professionals that live DevOps, we found a common issue was getting data formatted in a way that a variety of audiences could comprehend. They very often have a mixture of business or marketing personnel looking at reports from engineering, and becoming hung up on jargon. The groups that felt successful here had taken a page out of Ikea's book and focused on visuals that anyone could understand.

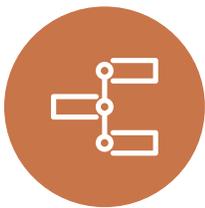
*Example: Issue dependency web's where critical tasks are bright red.*



## Adopt low or no-code solution for visualizing unique relational data produced by DevOps activities to free skilled workers for more important work

We spoke with a large mortgage provider about their struggles with classic data viz tools and their dependency on data cubes. They often had to wait over night for the cube to run and then do complex coding to infer relationships in reports. Really wrong tool for the job. What they wanted to do is regularly pull data, with a small amount of code, and let a sort out the relationships.

*Example: Same organization estimated this saving them 4 hours a week.*



## Create self-service reports that enable non-engineers to visual DevOps data without submitting change requests to engineering

Arm is famous for their mega program increment planning sessions, multiple teams across projects sync on work to be done over next quarters. A small team, the deliver management office, has been responsible for creating the program make this happen at scale. Their initial efforts required a lot of engineering effort to make small changes to reports, often specific to a team. By standardizing, then generalizing the reports code, they were able to provide stakeholders a self-service set of reports. Now instead of asking for small changes, they simple enter new parameters and see the new data visualization in real-time.

*Example: Arm digital program increment board.*

**For more information visit [www.visualscript.com](http://www.visualscript.com)**



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