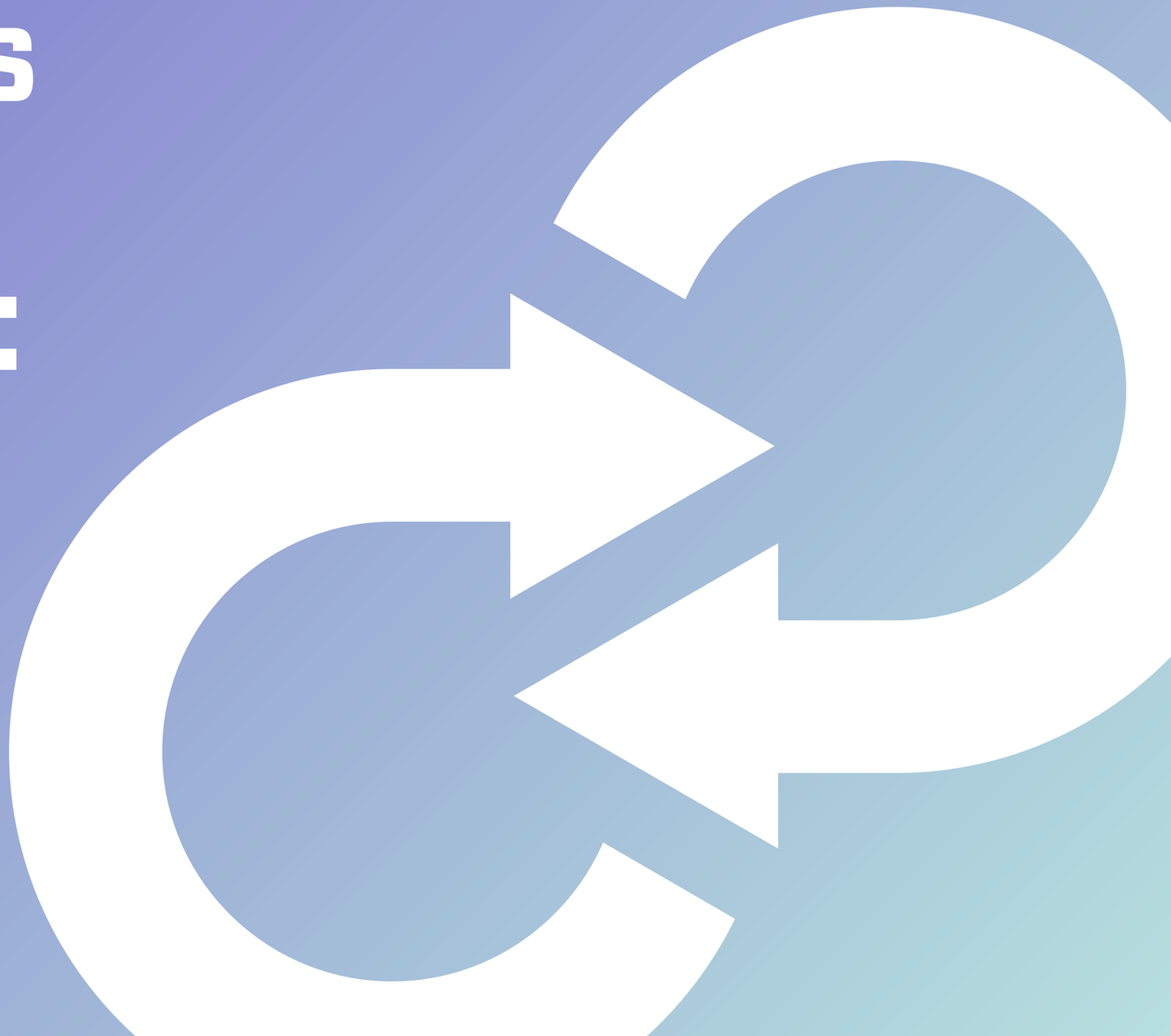
Make DevOps a Reality at Your Agency: In Brief

Quick tips to implement DevOps



govloop

Hewlett Packard Enterprise

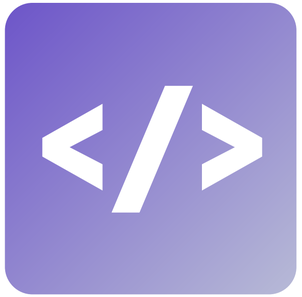
carahsoft

Executive Summary

Agencies are embracing digital channels to better engage their audiences, increase their reach, become more transparent and even improve efficiency. As a result, daily operations and IT teams are more closely tied to developers and the production cycles they leverage. That process of collaboration and coordination, when executed effectively, is called DevOps and it's the future of government digital services.

This GovLoop In Brief will explain why DevOps is taking root in agencies and what components you'll need for a successful DevOps implementation.

The Handoff Problem



DEVELOPERS

Create code for a service or application, based on broad parameters

Traditionally there are two teams who toss code back and forth "over the wall" in a linear service development process. That lack of transparency between teams leads to misunderstandings, coding errors, and even halted operations when developed services don't meet real-world requirements.

IT OPERATIONS

Deploy and manage digital services after development

The DevOps Solution

DevOps is the melding of developers and operations staff operationally, culturally and technically.

"These principles provide a lens to compare our internal processes to an ideal, allowing us to grow over time in an effective manner to achieve our mission. As a government innovation shop, we value experimentation immensely."

ADRIAN WEBB

Strategist at General Service Administration's 18F

>25%

of global companies are already using DevOps

SOURCE: GARTNER

Benefits of DevOps

QUICKER DEVELOPMENT.

Since dev and ops teams don't have to waste time throwing code back and forth over the metaphorical wall, they can release iterations of their product sooner.

GREATER QUALITY ASSURANCE.

Even as workers deliver more services faster, they don't have to sacrifice quality. DevOps allows both teams to see the full scope of a project. Plus, automation replaces many human processes in development that lead to errors.

BETTER END PRODUCTS.

By constantly sharing knowledge, both Dev and Ops teams can make better decisions about how to build and deploy services, resulting in a better product overall.

HAPPIER END USERS.

Ultimately, DevOps helps government agencies better serve citizens in the digital age.

DevOps Misconceptions

MYTH	REALITY
You can't measure success.	DevOps is all about measuring outcomes!
There are no deadlines.	With DevOps you have more frequent deadlines.
There's too much risk.	DevOps reduces the risk of errors & misinformation among teams.
Tech is too expensive.	DevOps requires tools to share code and automate processes, but over time it will reduce your cost per product.

The Components of DevOps

One widely used model, developed at a Silicon Valley DevOps conference in 2010, defines four core tenets to any DevOps approach:

Culture that embraces collaboration & sharing
Automation of code development, testing & deployment
Measuring the progress & outcomes of DevOps initiatives
Sharing knowledge, tools & best practices

CAMS

Culture

WHAT IS IT?

An understanding that rapid, stable development requires collaboration and information-sharing across department silos

WHY IS IT IMPORTANT?

To achieve continuous development without sacrificing quality, dev and ops teams have to maintain a shared understanding of the goals and mechanics of each project. A collaborative culture helps everyone keep pace with rapid, iterative development and ultimately create better products.

CAMS

Automation

WHAT IS IT?

The replacement of manual processes related to code development, testing and deployment with autonomous controls and processes

WHY IS IT IMPORTANT?

Automation reduces the potential for human error in development. Plus, it improves efficiency. It allows your developers and operations staff to ignore the turnkey components of the development process so they can focus on high-level strategy and development.

CAMS

Measuring

WHAT IS IT?

Monitoring the progress and success of individual projects that are executed with a DevOps approach with metrics like volume of code defects, resources per product release, volume of user tickers or uptime of deployed services

WHY IS IT IMPORTANT?

By measuring the outcomes of your projects, as well as how efficiently you get there, you can prove the value of the process to others in your organization. Measurements also allow you to course-correct in real time, as metrics negatively change with alterations to your process.

CAMS

Sharing

WHAT IS IT?

Creating and pulling from a common set of tools, best practices, knowledge and code across teams

WHY IS IT IMPORTANT?

Sharing improve efficiencies by reducing duplication in both services and efforts. That saves money and labor for agencies. Additionally, sharing allows workers to make better, in-the-moment decisions because everyone has a common understanding of the processes and goals of their shared work.

Conclusion

"DevOps practices bring two sides together: the need for agility to meet business needs quickly, while also being mindful of policy, standards of security and legislation. We couldn't get to where we are today doing things the traditional way."

BILLY HYLTON
Digital Services Director, North Carolina

As government creates digital services to meet citizen demands and increase employee productivity, DevOps will be a crucial approach to optimizing the development, testing and deployment of new tools.

Thank you to HPE and Carahsoft for their support of this valuable resource for public sector professionals.

govloop

Hewlett Packard Enterprise

carahsoft