

ed.RegisterV  
ered.IsAll  
ered for  
ableV  
PI /



**RED HAT  
OPEN INNOVATION LABS**

**THE CATALYST FOR  
GOVERNMENT I.T. TRANSFORMATION**



# CATALYZE INNOVATION

Jump-start modern application development.  
Learn to build software the Red Hat® way.

Page 1  
**THE RACE TO KEEP UP WITH  
ACCELERATING CHANGE**

Page 2  
**DEVOPS**

Page 3  
**OPEN INNOVATION LABS:  
A SPACE TO CATALYZE CHANGE**

Page 4  
**TRADITIONAL I.T. VS.  
OPEN INNOVATION**

Page 5  
**PICTURE YOURSELF  
AS A RESIDENT**

Page 7  
**RED HAT OPEN  
INNOVATION LABS**

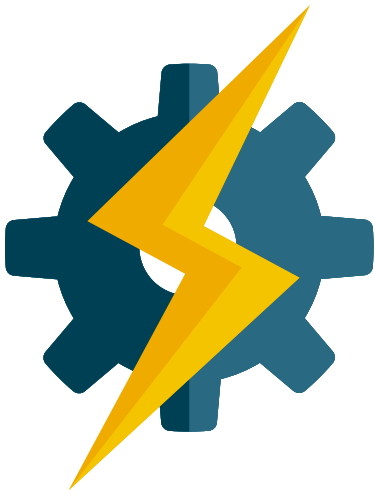
Page 8  
**WHAT WE BELIEVE**

Page 9  
**LESSONS WE'VE LEARNED**

Page 11  
**SCHEDULE A SESSION**

# THE RACE TO KEEP UP WITH ACCELERATING CHANGE

## How can government IT move faster?



Today's citizens can make a reservation at a nearby restaurant, order a driver, or join an online class with a few clicks in a mobile app or browser. They expect interactions with government to be just as convenient. Picture self-service web portals for checking tax refund status. Mobile apps for reporting emergencies or infrastructure in need of repair. New ways of crowd sourcing data to increase situational awareness during disasters.

**Federal agencies urgently need to modernize aging legacy applications:**

**78%** of IT budgets go toward operations and maintenance (O&M)<sup>1</sup>

**O&M spending increased** from 2010-2017, leaving less budget for development, modernization, and enhancement (DME)<sup>2</sup>

**Lack of support** for older systems increase security risks

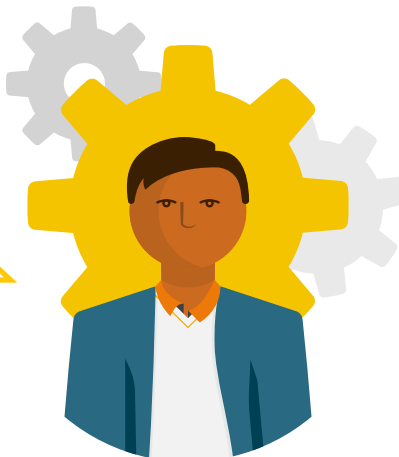
**Old IT makes it harder to compete** with the private sector for top talent

**But developing government applications can take years and cost millions.**

Security, compliance, and privacy requirements stall progress. IT projects can become irrelevant before they're even complete.

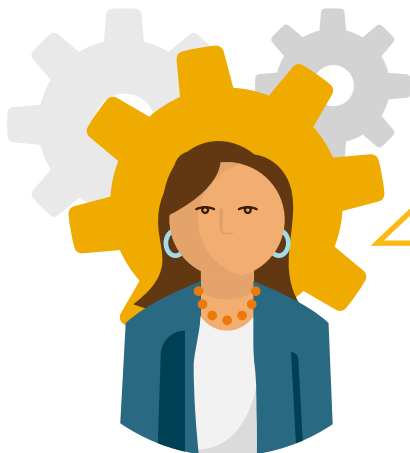
*Everything development and operations teams need to know to work together is **RIGHT HERE IN THIS 400-PAGE DOCUMENT.***

*The infrastructure for your project **WON'T BE READY FOR A COUPLE WEEKS.***



*That feature was a project requirement when we started, but **NOBODY NEEDS IT ANYMORE.***

*How can I quickly get a **FEDRAMP AUTHORIZATION TO OPERATE (ATO)?***



# DEVOPS

Go faster, with better quality

DEVOPS IS ABOUT BREAKING DOWN WALLS BETWEEN YOUR TEAMS, NOT ONLY BETWEEN DEVELOPMENT AND OPERATIONS, BUT ALSO BETWEEN TEST, SECURITY, AND STAKEHOLDER.

Digital leaders in government are innovating faster and improving quality with DevOps.

The approach is to make large-scale changes iteratively, instead of all at once—adjusting direction as you go. DevOps and open source have much in common. Both depend on cultural transformation as much as code. The principles:



#### Everyone participates

Engaged communities are better at adopting change.



#### Open

Open standards preserve business agility.



#### Transparent

Transparency promotes honesty and authenticity.



#### Shared

Shared problems are solved faster.

As the leading enterprise open source company, Red Hat has been living these principles since 1993.

Now you can experience what we've learned during a residency at Red Hat Open Innovation Labs.



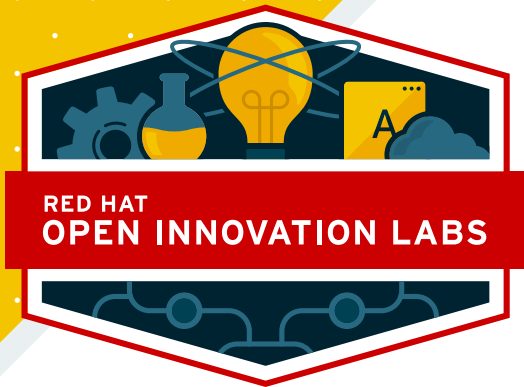
““”

*“At the end of the day, when we talk about technology change ... it's really about people and organizational cultures, first and foremost. Then it's about how those people get stuff done together.”*

**Dr. David Bray**

Chief venture officer, National Geospatial Intelligence Agency





## A SPACE TO CATALYZE CHANGE IN GOVERNMENT I.T.

Innovation flourishes in an environment where:

- » **The watchwords are “try,” “learn,” and “modify.”**
- » **You can make a small investment and either win quick—or fail fast and pivot.**
- » **It’s okay to not know everything in advance.**

Red Hat Open Innovation Labs is that kind of space. We’ve distilled the best of open source tools, methods, and culture into an environment designed for speed and innovation. Join us for a collaborative residency designed to help you deliver innovative software faster.

### **Who**

3-6 of your engineers and product owners. Work alongside Red Hat mentors. Learn by doing. Then bring your knowledge back to your team.

### **Where**

Join us at Open Innovation Labs in Boston, London, or Singapore. We can also bring Labs to your offices or an offsite facility.

### **What**

The infrastructure and software tools you need for rapid experimentation and prototyping—either modernizing existing applications or developing new, cloud-native applications. Expect 1-3 months to build a prototype or migrate an existing application to a modern, cloud-based platform.

### **Why**

Tools alone don’t transform application development; it’s what you do with the tools that matters. Labs is a space where it’s safe to test a hypothesis. Quickly prove it and move ahead. Or swiftly disprove it and try a new approach.

#### **LOW CYCLE TIME**

We’ve automated just about everything to make it easy to experiment and quickly get feedback.

#### **HIGH CODE QUALITY**

Testing is built into the pipeline.

#### **REPEATABILITY**

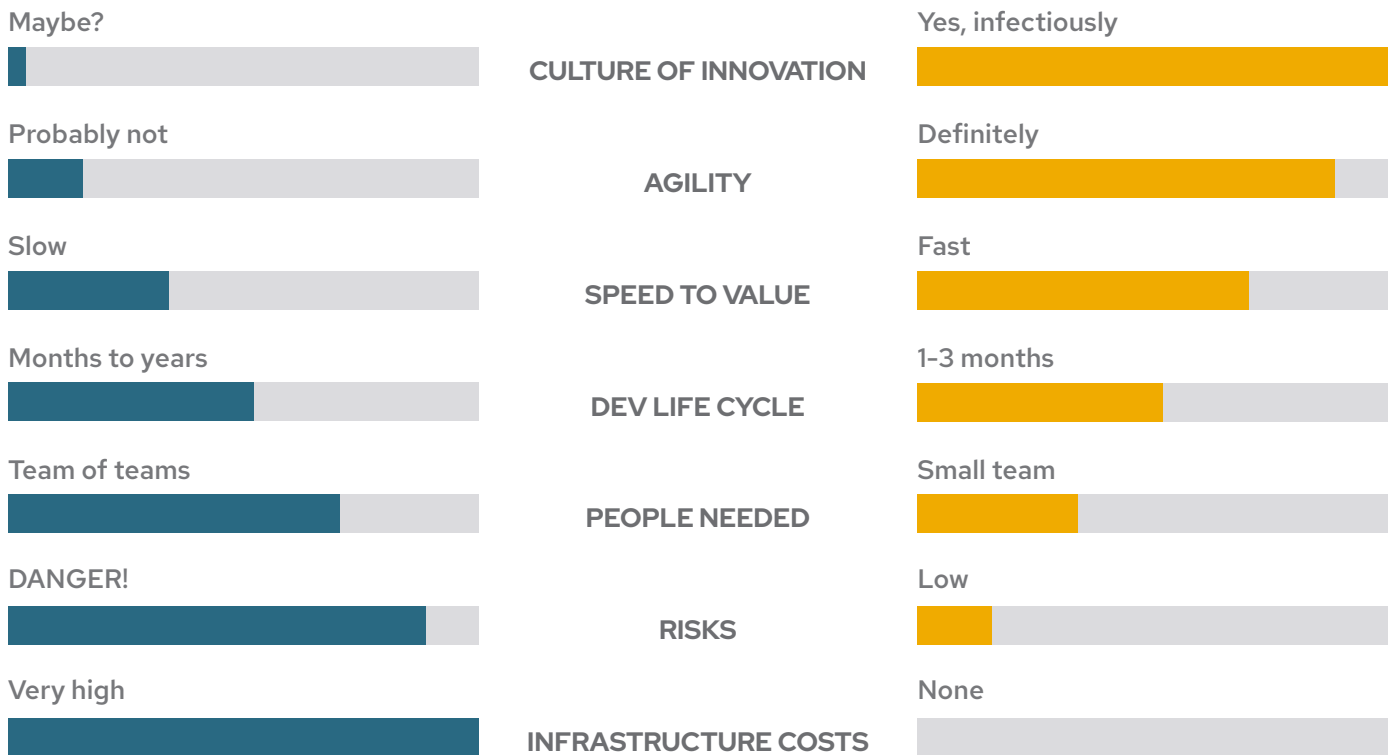
You’ll learn to use containers and image management throughout the pipeline. Applications work the same way in production as they do in development or test.



# TRADITIONAL I.T. VS. OPEN INNOVATION



VS.



*“By creating a shared space for testing and developing new open source solutions, I hope that [the CA Innovation Lab] will spur a culture of innovation within state government and lead the nation in using technology to bring the government closer to the people.”*

**Gavin Newsom**  
Lieutenant governor of California



# PICTURE YOURSELF AS A RESIDENT

## Apply DevOps to a real business need

In Red Hat Open Innovation Labs, you can work on any type of project: legacy or greenfield.

Our platform bridges both environments.

### » Modernize legacy applications

- Extend, optimize, scale, and orchestrate
- Connect to modern frameworks to make legacy applications easier to manage, test, and automate

### » Develop cloud-native applications

- Develop on Platform-as-a-Service and Infrastructure-as-a-Service
- Transform how you design
- Adopt lean and agile principles
- Learn DevOps practices
- Learn to use microservices

## Step 1

### Decide what type of journey you'll take



#### Disruption.

Co-create an innovative service or prototype.



#### Digital transformation.

Initiate meaningful change in your organization.



#### Road trip.

Experience modern application development and DevOps with an expert coach by your side.

## Step 2

### Craft the plan for your journey

*"I want [feature] so that I can [reason]."*

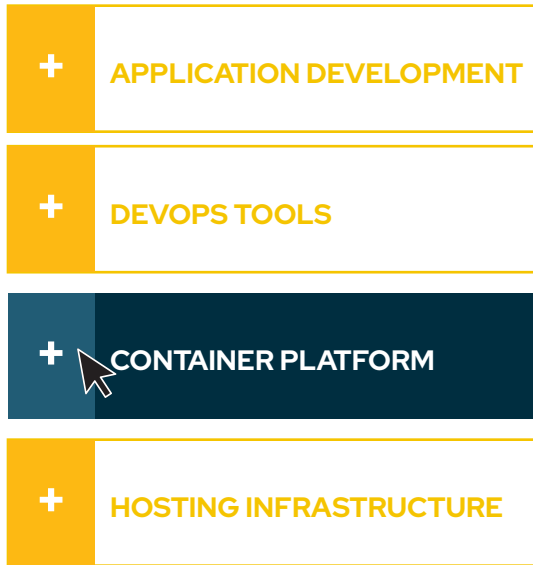
- » Decide which features you'll develop in Labs to create the minimum viable product (MVP) that satisfies the need.
- » Learn design techniques like event storming, impact mapping, and domain-driven design.

## Step 3

### Begin development right away

Build your environment in minutes, using the Ansible automation engine. Set up in a public cloud (Amazon Web Services, Microsoft Azure, Google Cloud) or a private cloud (Red Hat Virtualization, OpenStack®, bare metal). Select the right application framework, tools, and platforms for your agency with a few clicks. Then watch your ideas come to life.





**\* DESIGN YOUR OWN  
OPEN INNOVATION LABS  
TECHNOLOGY STACK AT:  
[RED.HT/LABSTECHSTACK](https://red.ht/labstechstack)**

### Step 4 Regularly evaluate progress

We'll work in a timeboxed fashion. Work for a period of time to complete a goal, then stop and evaluate. Continue or shift direction.

Get fast feedback. You'll demo at every sprint interval, presenting what you've built to your stakeholder community.

### Step 5 Demo your product

At the close of the residency, share the MVP with your larger team—and celebrate.

### Step 6 Become the catalyst for innovation

Bring what you've learned in Labs back to your organization:

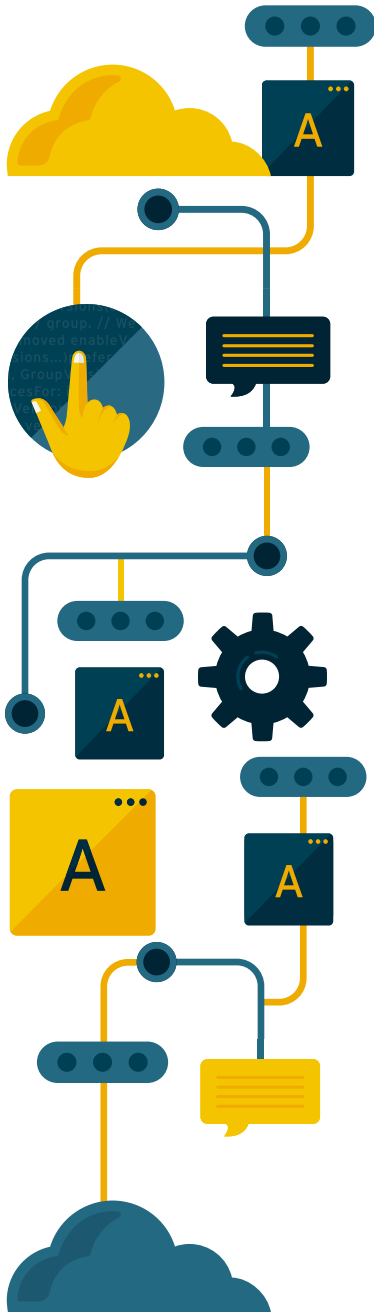
- » **People**
  - Experience with agile, DevOps, and modern application development
  - Access to Red Hat Learning Subscription and Red Hat Certifications
- » **Technology**
  - Working prototype application
  - Infrastructure as code (IaC)
  - Feature backlog
- » **Methodology**
  - Community-powered DevOps
  - Container-based delivery pipeline





# RED HAT OPEN INNOVATION LABS

More choice. More resources. More than tools.



## » Choice

Modernize legacy applications or develop new cloud-native apps. Our stack provides the tools for both types of development.

## » Culture

Immerse yourself in open source culture. The same principles that helped you decide *what* to develop also apply to *how* to develop.

## » Learning

Enjoy access to the full Red Hat stack and Red Hat Learning Subscription for 12 months.

## » Innovate anywhere

Come to our Labs, or let us come to you—your offices or an offsite facility.

## » Mentoring

Work with leading open source experts.

## » Full stack of open source software

The infrastructure you'll use during your residency is open source from top to bottom—not just at the core. Everything you create during your residency uses open standards and application programming interfaces (APIs), giving you flexibility to avoid vendor lock-in.

An immersive residency with  
Open Innovation Labs gives you everything  
you need for modern application development.



# WHAT WE BELIEVE

Open source culture powers open innovation



“““

*"[Open Innovation Labs] really helped us jumpstart things and have absolutely exceeded our expectations ... take advantage of it if you have the opportunity."*

**John Hodgson**, Senior director, Optum

“““

*"The new techniques and tools ... and Red Hat experts [allow] us to move at a pace I never thought would be possible. I couldn't speak more highly of the whole experience."*

**K.L.**, Manager, Government Healthcare company



# LESSONS WE'VE LEARNED

From customers around the world on their journey to DevOps

- » Start small
- » Pick the right project: straightforward and not mission-critical
- » Experiment and iterate
- » Fail fast
- » Win quick
- » Market the success internally to bring about a change in culture
- » Build momentum with more investments

## THE RED HAT CREDO

### INDIVIDUAL ACTION

Innovation begins with individual action.

### TOGETHER

Open source is about individuals coming together.

### CULTURE

Open source is about more than tools; it's culture—one that enables innovation.

### MERITOCRACY

Open source is driven by meritocracy: Let the best ideas win.

### AUTOMATION

Automation leads to quick results.

### MENTORING

Mentoring is important. When people exit our Labs, they're good stewards of DevOps, prepared to catalyze innovation in your organization.



# TAKE THE FIRST STEP

Join us and map your journey in a day-long, complimentary Red Hat Consulting discovery session:

## » COLLABORATE

Your stakeholders and Red Hat consultants

## » CAPTURE

Your vision, challenges, opportunities, and goals

## » ROADMAP

Learn how others have done it—and how you can too



///

# **SCHEDULE A COMPLIMENTARY DISCOVERY SESSION AT YOUR LOCATION.**

[red.ht/labs](https://red.ht/labs)





```
func init() { register  
    externalVersions { if regist  
        ("No version is regist  
        { panic(err)} if err := en  
        er than spread in each A  
    .RegisterGroup once we have  
    VersionsToScheme(externalV  
    version: preferredExternalVer  
    runtime.SelfLinker(accessor),  
    } func addVersionsToScheme  
    (kapi.Scheme) // add the ena  
    .Errorf("Version %s is not en  
    toScheme(kapi.Scheme) defa  
    lists all known external vers  
    ion{v1.SchemeGroupVersion)  
    ion{} for _, v := range avail  
    alVersions) == 0 { glog  
    rnalVersions...); err !=  
    should be centralized  
    ons and// regist  
    (version) error {  
    upMeta{ Gro  
    elfLinker  
    } return  
    oSch  
    {
```