



# Enterprise DevOps: What Ops Teams Need to Consider for Faster App Releases

May 17, 2016

Brought to you by



**Hewlett Packard  
Enterprise**



# Hosted By



Rocky Pisto

Chicago, Indiana, Kentucky, Pittsburgh, Ohio,  
and Michigan Chapter Leader  
BSM and Big Data SIG Leader



# Today's Speakers



Ashish Kuthiala  
Sr. Director, Marketing and  
Strategy - DevOps  
Hewlett Packard Enterprise



Eric Odell  
Sr Product Marketing Manager  
Hewlett Packard Enterprise



Keri Sprinkle  
Senior Product Marketing Manager  
Hewlett Packard Enterprise



# Housekeeping

- This “LIVE” session is being recorded  
Recordings are available to all Vivit members
- Session Q&A:  
Please type questions in the Questions Pane



# Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions



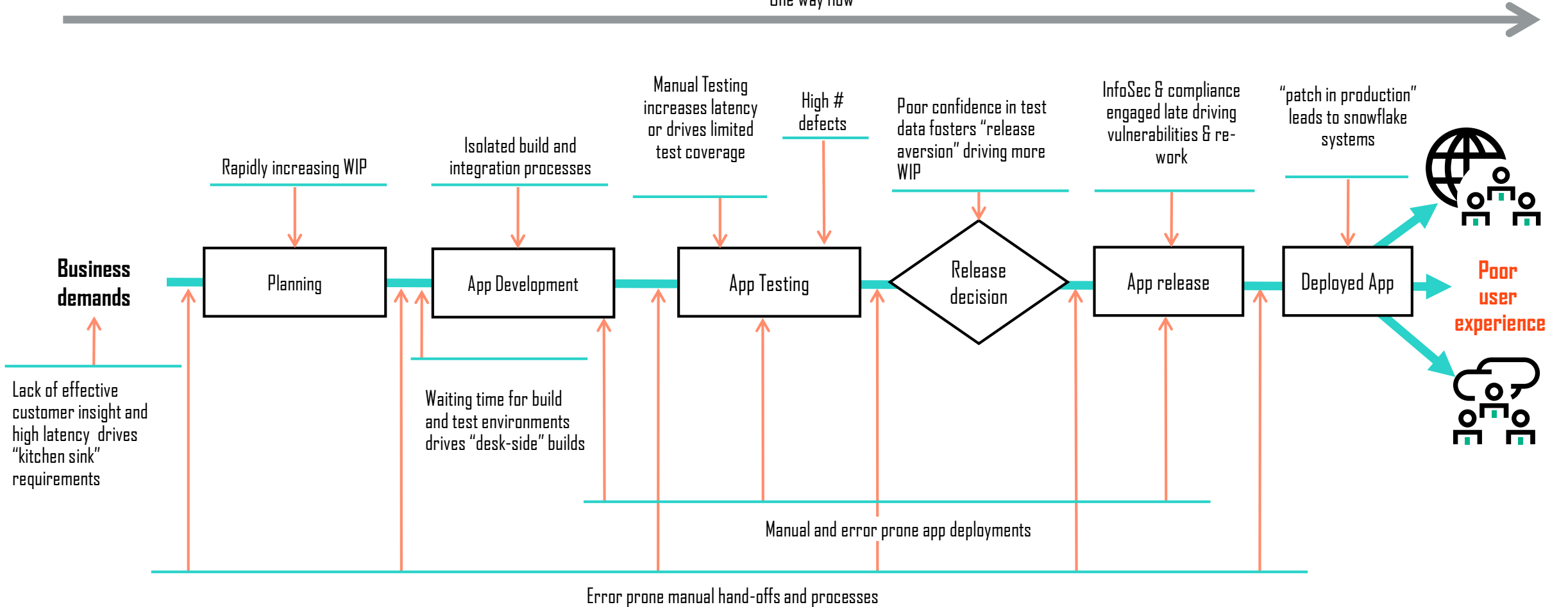
---

**Software creates DIFFERENTIATION**



# Multiple constraints to high velocity innovation

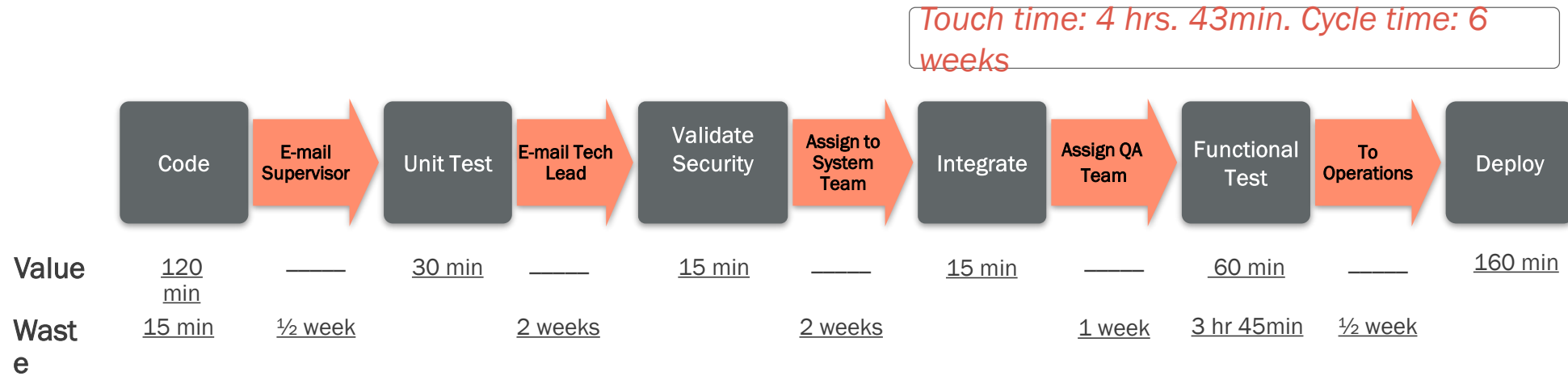
One way flow



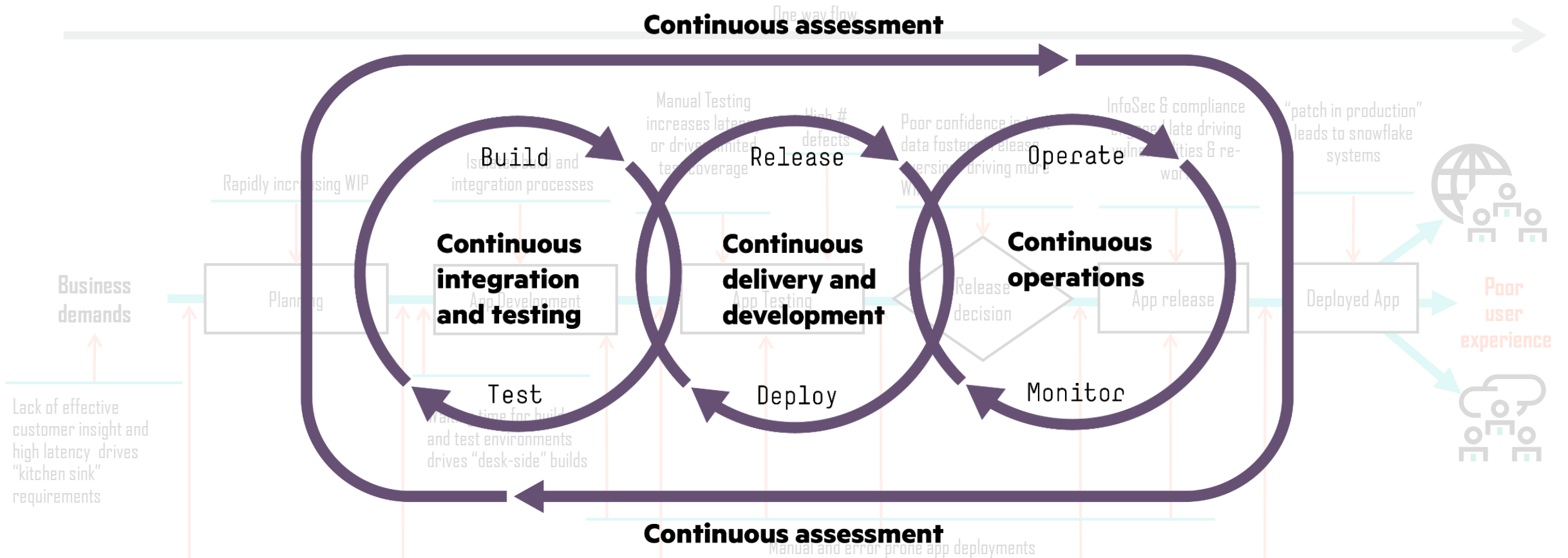
**Locally optimized teams, measures and tools drives escalating WIP, lack of end-to-end visibility and trust**



# Wastage ...



# DevOps enables high velocity innovation



DevOps allows development, quality assurance, and IT operations to meet customer needs.

This integrated team approach facilitates communication, collaboration and integration to manage today's rapidly changing business demands.

Locally optimized teams, measures and tools drives escalating WIP, lack of end-to-end visibility and trust



**Hewlett Packard**  
Enterprise

# Accelerating application releases

with HPE Codar

# What is slowing the release process?

## Siloed teams

- Lack of visibility and control
- Limited knowledge sharing
- Dev & QA always searching for resources

## Different environments

- Multiple dependencies
- Hundreds of artifacts
- Composite apps
- Error-prone manual steps
- Inconsistent deployments

## Different tools

- Manual steps required from one environment to next
- Lots of deployment docs and checklists
- Handoff delays

## Complex applications

- Many existing tools within and across the silos
- Very difficult to integrate and automate

# But if you could ...

Declare the end state of your application...

So it will be automatically deployed...

To the right environment at the right time...

Based on the application requirements...

Across all lifecycle stages...



Then you could release  
applications at  
**hypersonic speed**

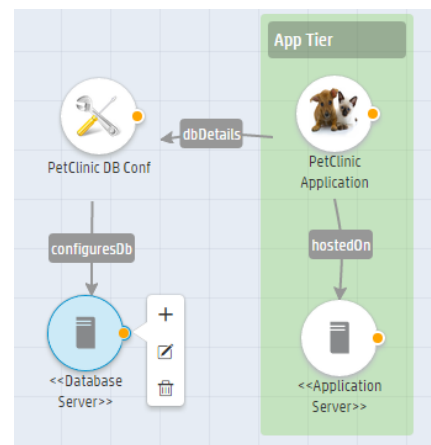
# Continuous Delivery with HPE Codar

Accelerate application release with automated application deployment and release management

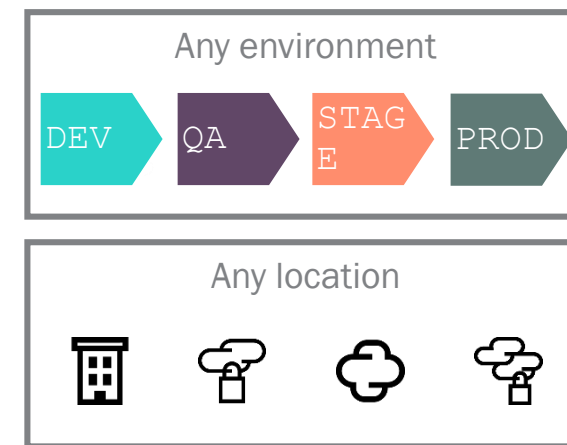
## Design complete application topology

- Define application service components and infrastructure once
- Reuse with consistency
- Make application resources available anywhere (Dev, QA, prod across private, hybrid, and public cloud)

## Define once



## Deploy anywhere



## Manage application pipeline

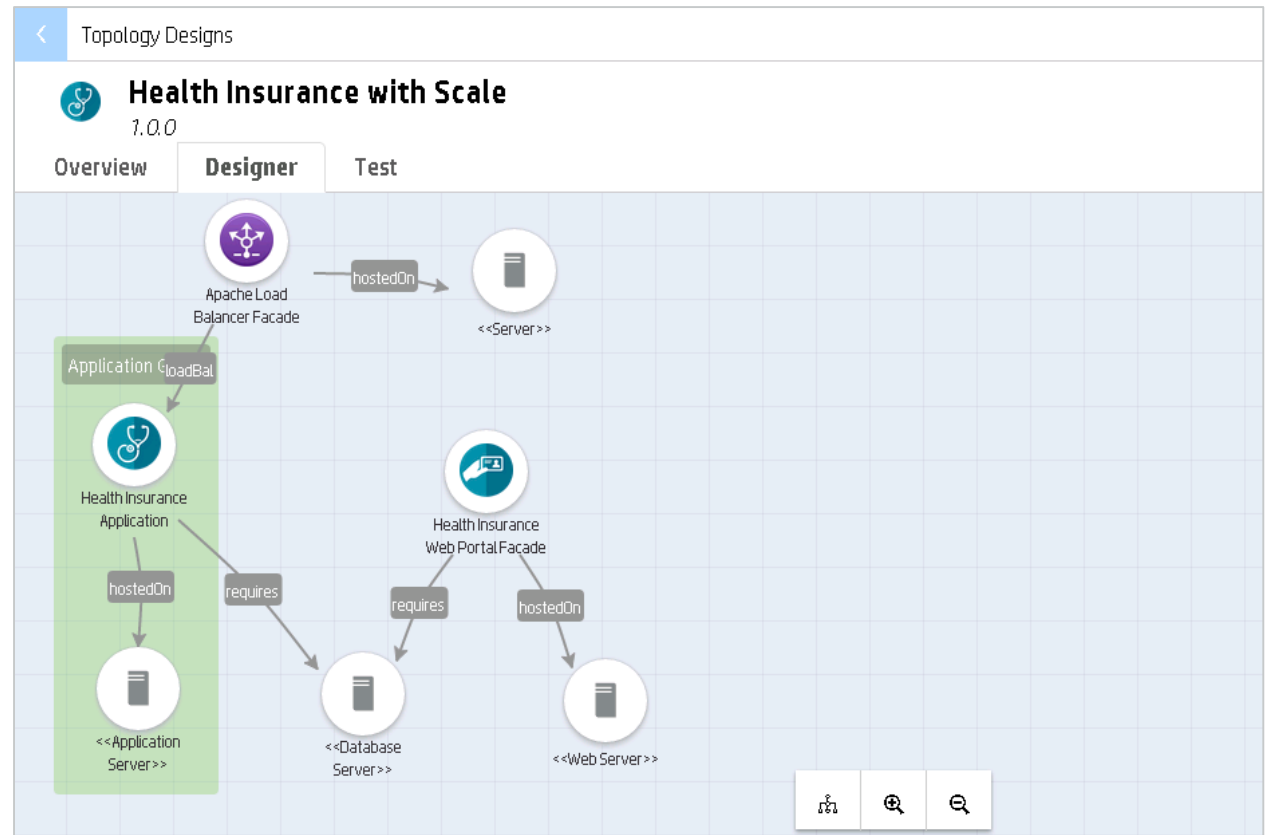
- Just in Time test execution as application builds become available
- Visibility into **what** changed, **who** changed it, and **where** it was changed
- Manage the delivery pipeline by promoting and rejecting builds



# Why HPE? The Codar advantages

## Unique modeling

- Visual topology modeling
- Drag and drop interface
- Group components for *scale out*
- Matches application requirements with infrastructure *at time of deployment*

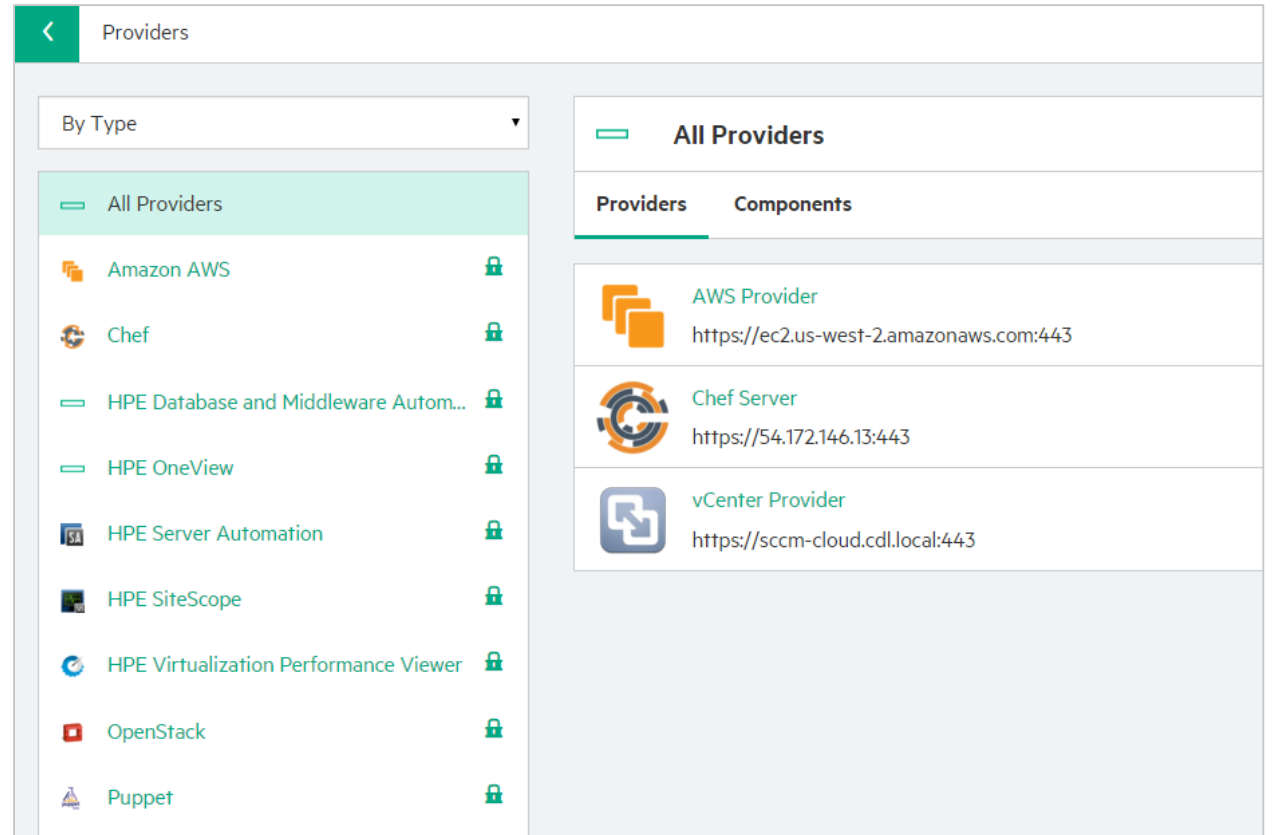


# Why HPE? The Codar advantages

Unique modeling

Embraces external content

- **Import infrastructure configurations** from cloud providers, enterprise infrastructure providers, and open source tools
- **Import application components** such as Chef recipes and Puppet manifests





# Why HPE? The Codar advantages

Unique modeling

Embraces external content

Extensive OOB integrations & open APIs

Jenkins

HPE

Docker

Amazon EC2

Chef

OpenStack

Helion

VMware

Puppet

app-design : Operations for Application Design		Show/Hide	List Operations	Expand Operations	Raw
POST	/codar/app-design/{applicationDesignId}/associateToCodar	Associate a design to Codar pipeline management process. The design will be assigned to CODAR Application tag			
POST	/codar/app-design/import	Import an application design. An error is thrown if it already exists.			
PUT	/codar/app-design/{applicationDesignId}	Update application design			
GET	/codar/app-design/{applicationDesignId}	Export an application design			
DELETE	/codar/app-design/{applicationDesignId}	Delete an application design			
GET	/codar/app-design/list	List all Application Designs			
POST	/codar/app-design/importNew	Import application design only if it does not exist. If exists no action is taken and the original design will be returned			
app-package : The API to Manage Packages		Show/Hide	List Operations	Expand Operations	Raw
POST	/codar/app-package/{packageId}/promote	Promote a package to the next lifecycle stage			
PUT	/codar/app-package/{packageId}/properties	Update Package Properties			
GET	/codar/app-package/{packageId}/properties	Get component properties			
POST	/codar/app-package/createWithProperties	Create Package with Properties			
GET	/codar/app-package/states	List All Package States			

# Why HPE? The Codar advantages

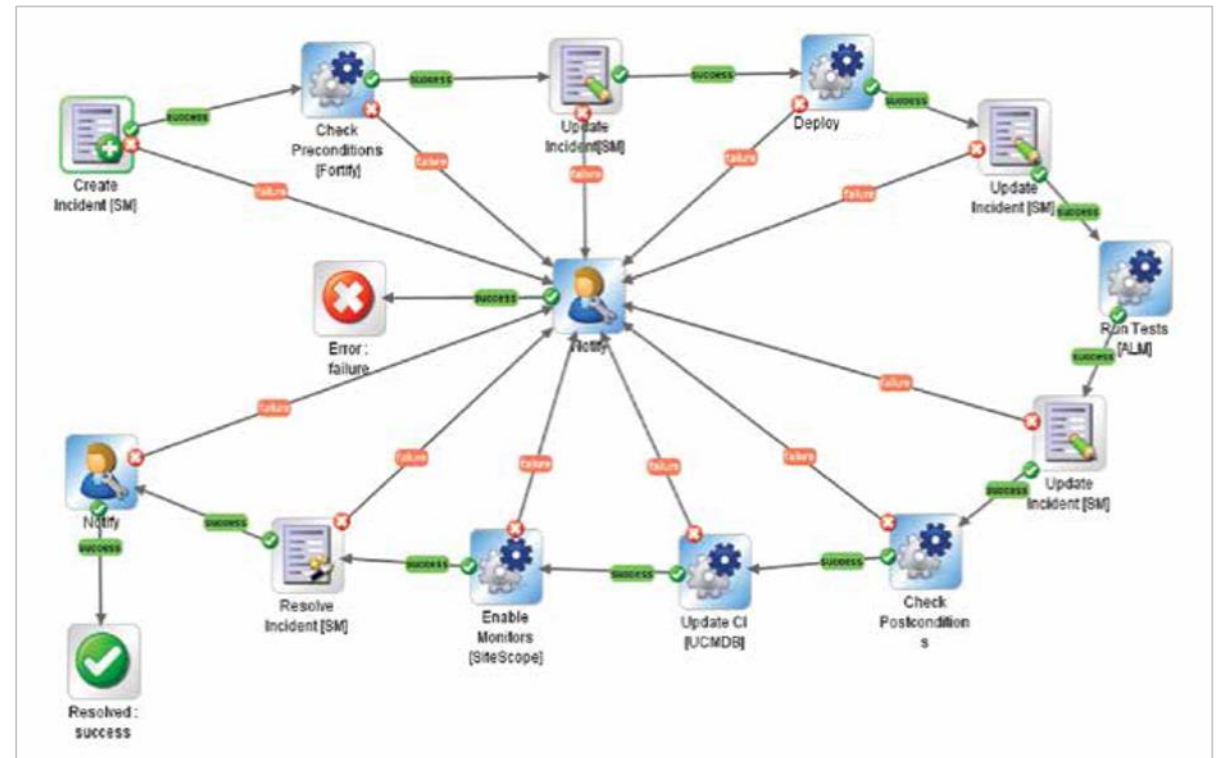
Unique modeling

Embraces external content

Extensive OOB integrations & open APIs

HPE Operations Orchestration engine

- Industry-leading orchestration engine
- Provides *behind the scenes* orchestration of application and infrastructure components for deployment



# EMEA – Retail customer

## Challenge

- Too many manual steps in the deployment process
- Lack of quality in the deployment process, every deployment had a different end result
- Deployment takes too long

## Before HPE

- 150 Applications deployed in 2014
- 0 went right in the first run
- 3 month manual process preparing for release
- 5 hours to deploy application

## After HPE (Pilot: 2 most critical apps)

- 20 minutes of manual effort preparing for release
- 2 ½ minutes to deploy application with multiple daily deployments
- Improved quality, better integration within development and testing
- No more production incidents

---

# Continuous delivery with HPE Codar

Hypersonic application delivery for your business



Accelerate time to market



Improve application quality



Increase team efficiency



Quick time to value

A photograph of three people in a meeting. On the left, a woman with short blonde hair and glasses, wearing a red hoodie, is looking at a laptop. In the center, a man with a beard and a light blue shirt is looking at a document. On the right, a woman with long dark hair, wearing a green jacket, is leaning over the laptop, looking at the screen. The background is a bright, modern office with large windows.

# DevOps and App Performance Monitoring

Bad UX is bad for business

Eric Odell, Sr PMM Digital UX

---

# Users expect the world of your apps – Better give it to them

Instant gratification. It's the new norm

80%

Will abandon apps after only three attempts or less

---

69%

Say poor application issues give lower opinion of company that created



# Focusing on UX improves the app & increases DevOps success



Objective of DevOps is to leverage automation and feedback to remove bottlenecks and eliminate waste

85%

Of DevOps say they are focused on the user experience

53%

Do not have full access to APM tools

# Business impact of UX: The Good, the Bad & the Ugly

96%

Of users say app performance is important

Only 16% will continue to use a slow performing app

- If users see app improvement – they love you for it
- If they don't see UX improvement – they seek alternatives
- If you fake it – you pay the price

The image is a screenshot of a CBC News article. At the top, it says 'CBCnews | Business'. Below that is a navigation bar with links for Home, World, Canada, Politics, Business, Health, Arts & Entertainment, and Technology & Science. The article title is 'Bell hit with \$1.25M fine for planting 5-star reviews for phone apps'. The sub-headline is 'Competition Bureau tells Bell to stop encouraging workers to write rave reviews'. The byline is 'By Sophia Harris, CBC News' and the date is 'Posted: Oct 14, 2015 5:15 PM ET | Last Updated: Oct 14, 2015 5:26 PM ET'. The main image shows a Bell store with a blue sign. Below the image is a caption: 'Canada's Competition Bureau took issue with the fact some Bell Canada employees wrote glowing reviews for a company app without disclosing where they worked. (Garit Rodan/Canadian Press)'. To the right of the image are social media share buttons for Facebook, Twitter, Reddit, Google+, and a general share button. Below the share buttons is a section with 408 shares and a list of related articles: 'Canada's Competition Bureau has slapped Bell Canada with a \$1.25 million fine for encouraging employees to plant glowing online reviews for two company phone apps.', 'Bell says positive employee-planted reviews will stop, but critics unsure', and 'Bell employees planted glowing online reviews of new Bell app'. At the bottom, there is a paragraph: 'The legitimacy of online reviews has become a growing concern in the digital world where reviewers often remain anonymous.' and another paragraph: 'The Bell and Virgin mobile apps were launched in November 2014 and immediately garnered four-star reviews on Apple's iTunes App Store and'.

Source: CBC News, October 14, 2015, "Bell hit with \$1.25M fine for planting 5-star reviews for phone apps" by Sophia Harris



# What exactly is the user experience?



Utility  
Usability  
Aesthetics  
Playfulness



Identification  
Stimulation  
Value  
Empowerment

“UX is the perceived quality when the user is doing a work task.”

Used with permission –

“Delivering User Experience with Agile Development Teams” by Magnus Revang  
Gartner, June 25, 2015

# Multiplying sources of UX feedback

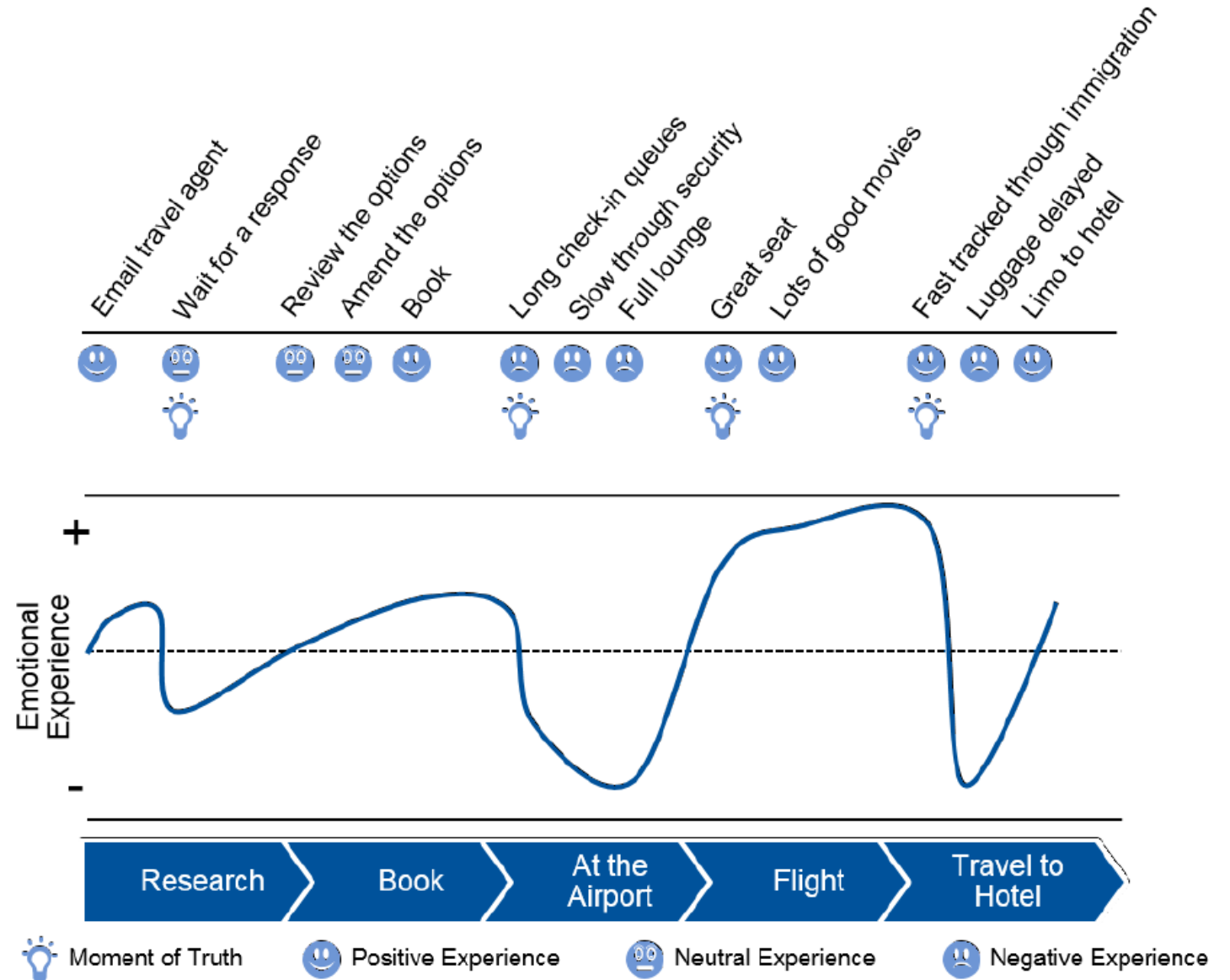


- Application Performance Monitoring Tools
- User Voice
- App Store & Social Media feedback & ratings

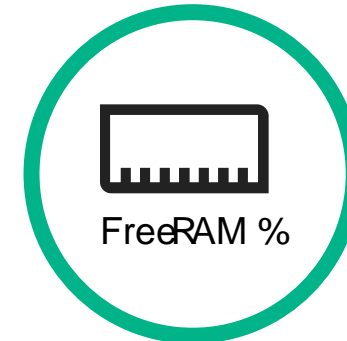
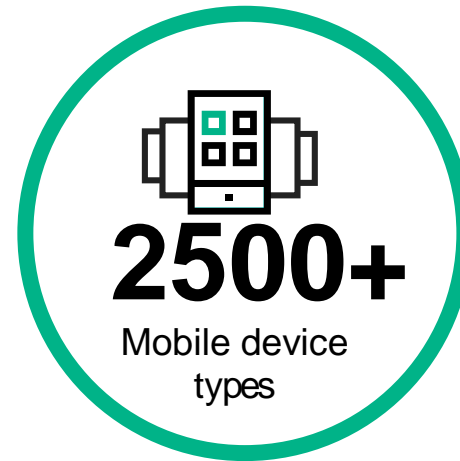
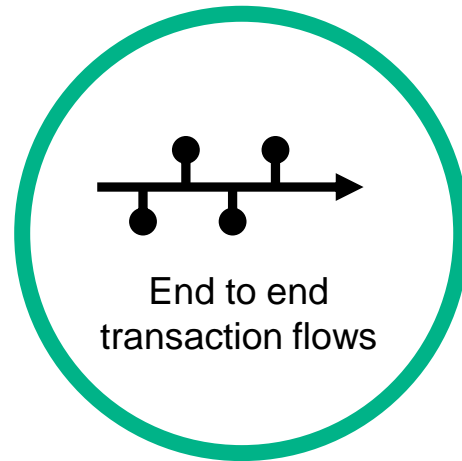
# Who exactly are your users; What are they doing?

## Create a journey map or user flow

- Observe their interactions with your app
- What steps do users take to achieve their goal?
- Collect metrics about typical user actions

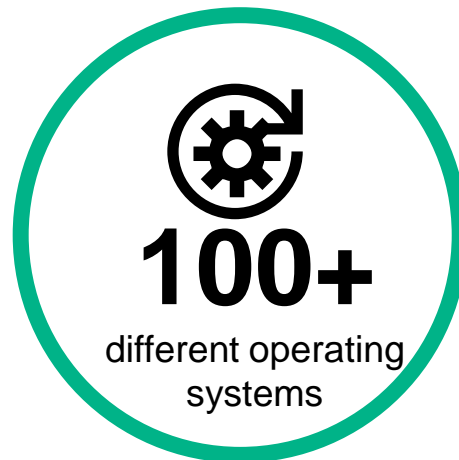
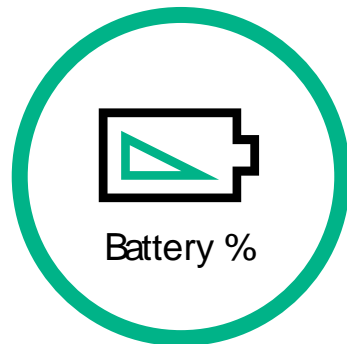


# Do rising expectations give you a sinking feeling?



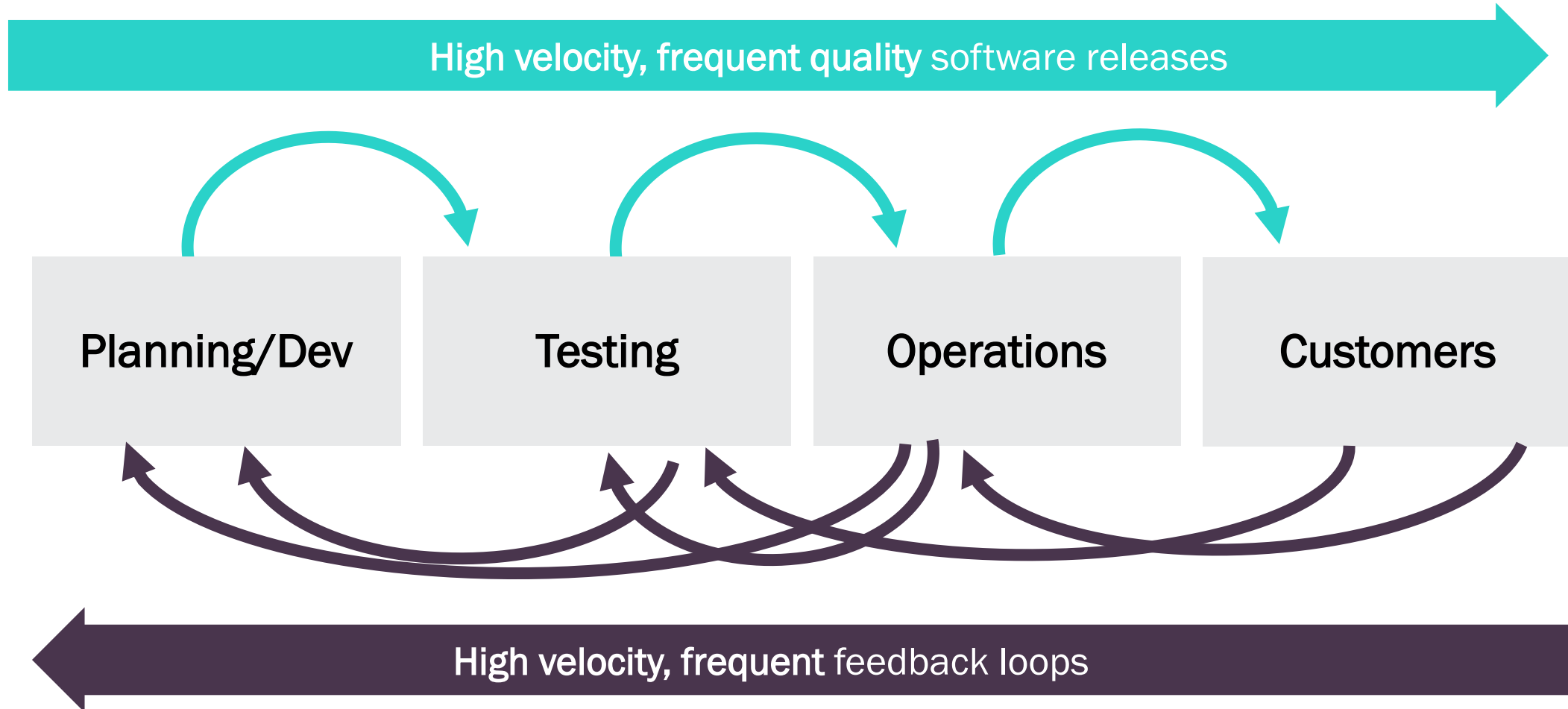
**Dozens to hundreds**

of possible end to end user flows for each mobile and web app



# UX design requires a lifecycle approach

DevOps enhances feedback at all steps in the lifecycle



# A great UX requires continuous assessment



## App monitoring is more important than ever:

- **Hybrid infrastructure** requires tighter control of development, testing & QA
- **Enterprise IT** needs visibility into all company's apps including "Shadow IT"
- **Smaller companies** need APM solutions that grow with them
- **Explosion of variable** includes thousands of device/OS/user flow combinations
- **The UX** determines the success of your app – without monitoring what do you prioritize

Lack of end-to-end monitoring tools can lead to "locking in ignorance"... It is difficult to change the UX to reflect actual user feedback.

# Monitoring in the era of agile development and DevOps



DevOps seek visibility to mobile app user experience and tools for improving it

57%

lack APM featuring user experience dashboards

61%

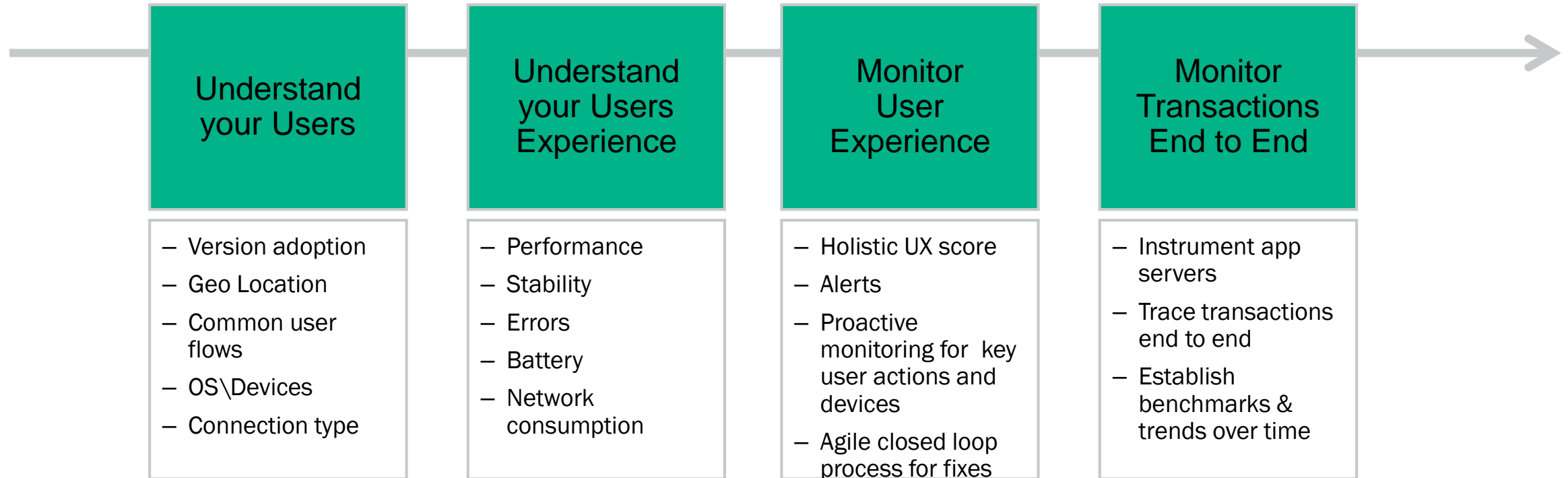
lack end-to-end visibility from the backend, to the network request, to the user action

67%

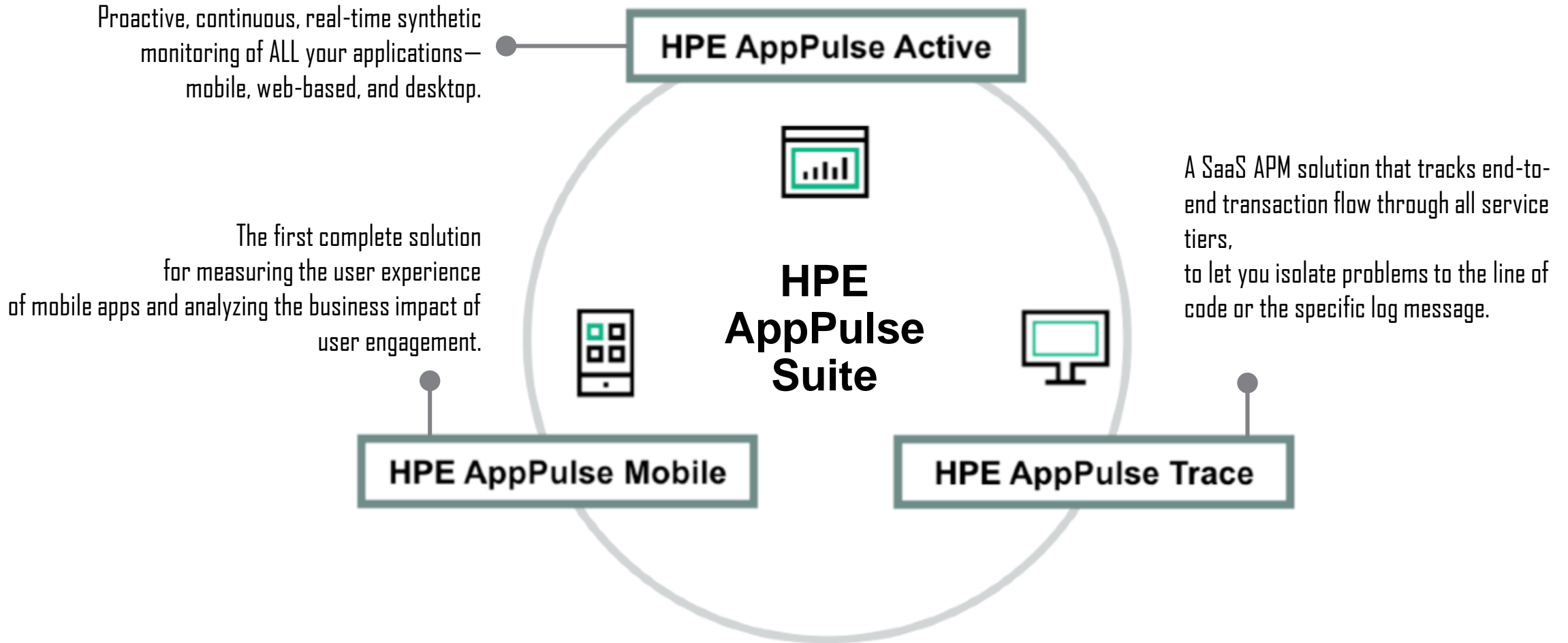
have no insight into the line of code that is causing the slow performance or crash



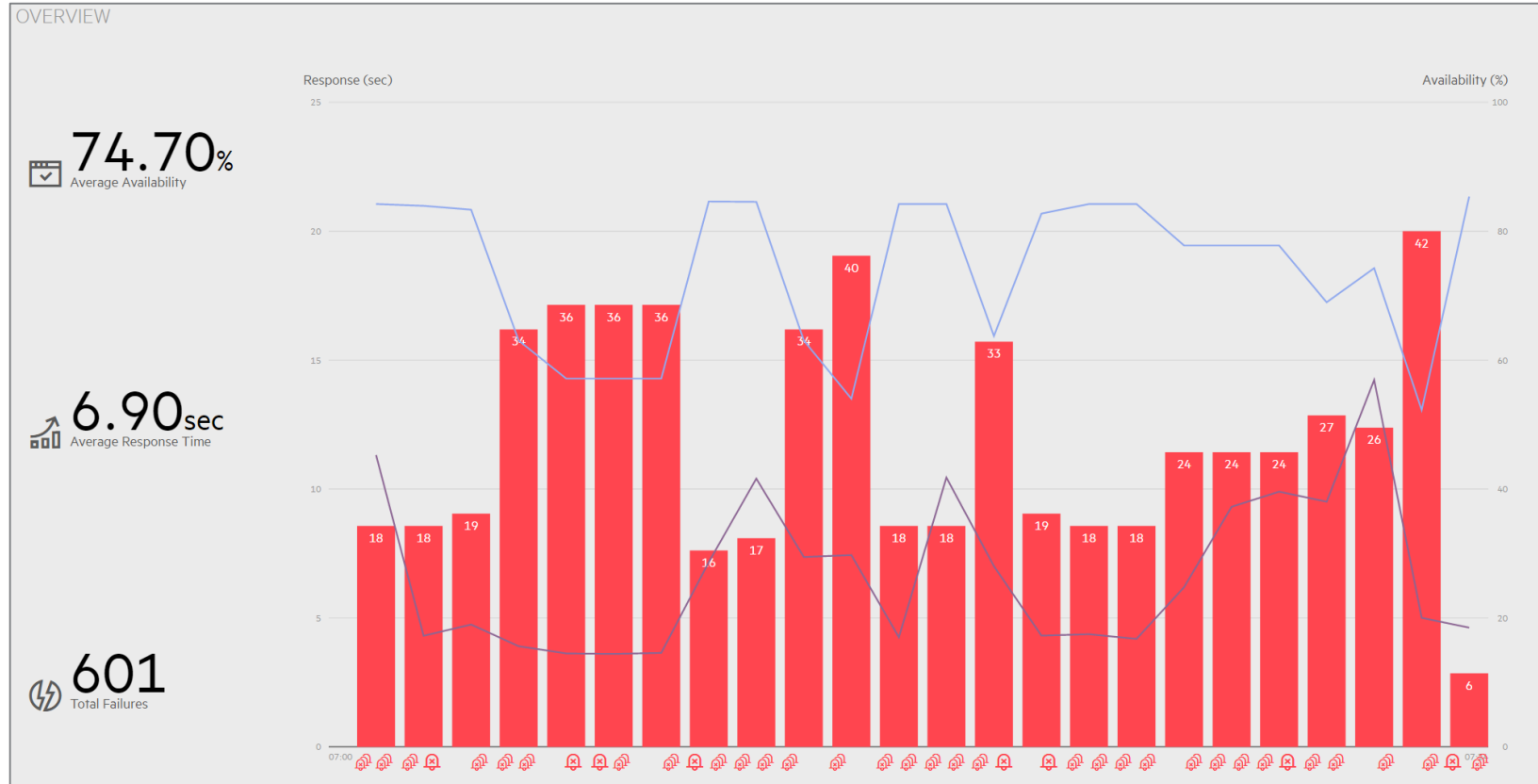
# What does merging UX into the DevOps lifecycle entail?



# Introducing a smarter solution for end-to-end monitoring



# HPE AppPulse Active—proactive synthetic monitoring

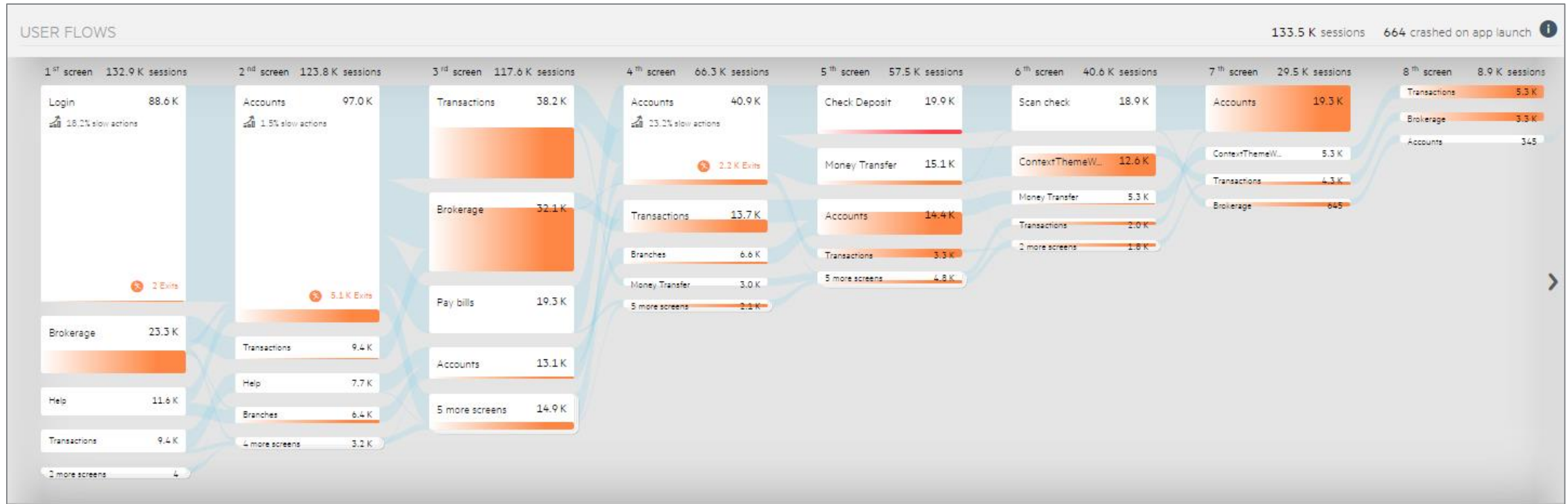


See one view for all critical data and alerts

Single-pane-of-glass: failures, response time and availability



# HPE AppPulse Mobile—real user experience monitoring

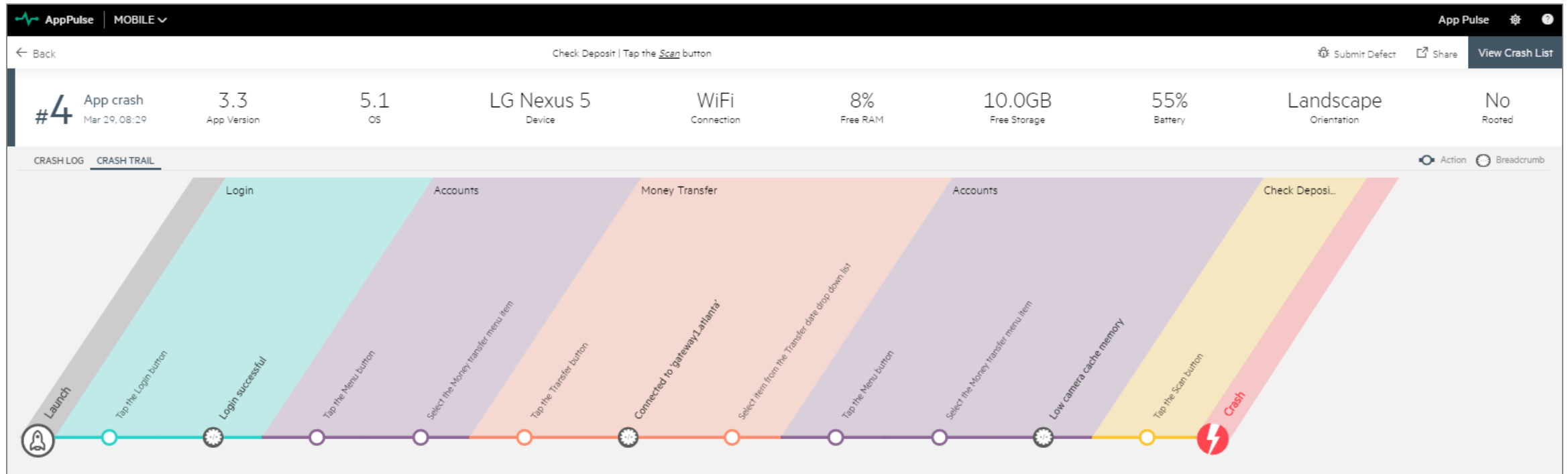


See what users are doing in your app

User Flows: know where they entered & where they exited



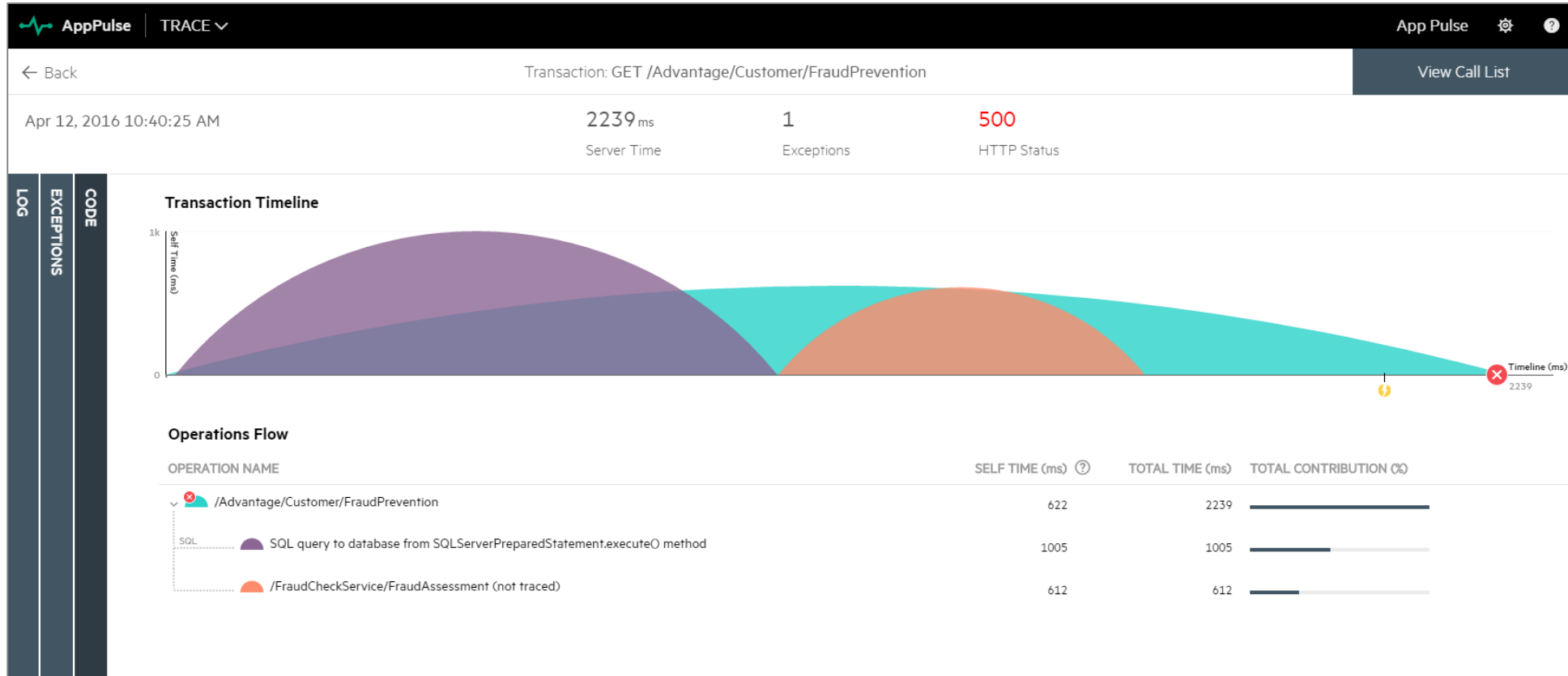
# HPE AppPulse Mobile—real user experience monitoring



**Know when and why it crashed**

**Crash Trail:** capture all user actions prior to the crash

# HPE AppPulse Trace—transaction analytics



Get the full picture for issue isolation

Trace 360: a holistic and intuitive transaction monitoring view

# HPE AppPulse Suite Synergies—real user to transaction trace

The screenshot shows the HPE AppPulse Mobile error report interface. At the top, it displays 'AppPulse MOBILE' and 'App Pulse'. The main header includes 'Money Transfer | Tap the *Transfer* button', 'Submit Defect', 'Share', and 'View Error List'. Below this, a summary card shows '#1 Failed Action' on 'Apr 12, 08:18', '3.3 App Version', '5.0 OS', and 'Samsung Galaxy S5 Active Device'. The 'ERROR DETAILS' section features a mobile phone icon with an error message: 'Transaction couldn't be completed. Internal server error'. It also lists 'Failed HTTP requests' with 'HTTP response code 500' and a URL: 'http://amb.hpswidemportal.com/Advantage/Customer/FraudPrevention'. A 'Trace Server Error' link is provided.

HPE AppPulse Trace isolates the root cause of the HTTP request failure

HPE AppPulse Mobile error report detects failed HTTP Request

The screenshot shows the HPE AppPulse Trace interface. The top bar indicates 'AppPulse TRACE'. The main header shows 'Transaction: GET /Advantage/Customer/FraudPrevention' and 'Go to Transaction Over Time'. Below this, transaction details are listed: 'Apr 4, 2016 9:27:36 AM', '2219ms Server Time', '1 Exceptions', and '500 HTTP Status'. The 'Transaction Timeline' section features a waterfall chart showing the breakdown of the transaction's self-time (ms) into three segments: a purple segment (611ms), a teal segment (1002ms), and an orange segment (606ms). A red 'X' marks the end of the transaction at 2219ms. The 'Operations Flow' table below provides a detailed breakdown of the operations.

OPERATION NAME	SELF TIME (ms)	TOTAL TIME (ms)	TOTAL CONTRIBUTION (%)
✓ /Advantage/Customer/FraudPrevention	611	2219	
SQL query to database from SQLServerPreparedStatement.executeO method	1002	1002	
✓ /FraudCheckService/FraudAssessment (not traced)	606	606	

# Continuous innovation practices



– A/B testing



– Canary rollouts



– Feature toggling

Real time market insight

Smarter releases

Improved user experience



# HP Enterprise DevOps Monthly Online Meetup



Learn from and Share with your peers

50+ members

Knowledge Sharing

YOUR agenda!

Roundtable Topic

LinkedIn Group coming soon

Send email to  
[drdevops@hpe.com](mailto:drdevops@hpe.com) to  
join



Hewlett Packard  
Enterprise

# Discover 2016

Las Vegas June 7-9



## Discover 2016 is Hewlett Packard Enterprise's must-attend global customer and partner event. Why attend?

- Explore how Hewlett Packard Enterprise is delivering IT solutions for the New Style of Business to help you go further, faster
- Network with 10,000+ attendees, including C-level executives, IT directors, engineers and HPE experts
- Find content for you, choosing from our broad array of technical and business sessions
- Explore the latest innovations from HPE in the Transformation Zone
- Find thousands of experts on hand to answer your questions and address your challenges
- Exchange ideas, information and best practices with other IT professionals and industry leaders

Register Now and receive your member discount with this Vivit registration link:

<https://www.hpe.com/events/discoverSWVivit>



## Discover overview – DevOps track

- DevOps CAC
- 11 breakout sessions
- 3 Discover Theatre sessions
- 4 Discover Forum sessions
- 1 Digital Session
- 2 Demos in Discover Zone Showcase
- Demo Self guided tour
- Including speakers:
  - James Governor
  - Gary Gruver
  - Gene Kim



# Discover 2016 Las Vegas - Vivit Deep Dive Sessions

## Solutions for Operations Management:

[ID V8114](#) - OMi 10 tips and tricks from the field: Migration, customization, automation

[ID V9250](#) - Accelerate hybrid cloud delivery with the HPE Cloud Orchestration Suite

[ID V9226](#) - Get smart; go hands –on with HPE Business Value Dashboard

[ID V9244](#) - HPE CMS: Technical deep dive, solution value and best practices

**When:** Monday, June 6, 1:00 - 5:00 pm

**Cost:** \$99

**How:** Log back into the [registration system](#) and add one to your schedule



# Thank you

- Complete the short survey and opt-in for more information from Hewlett Packard Enterprise.

[www.hpe.com](http://www.hpe.com)

[www.vivit-worldwide.org](http://www.vivit-worldwide.org)

