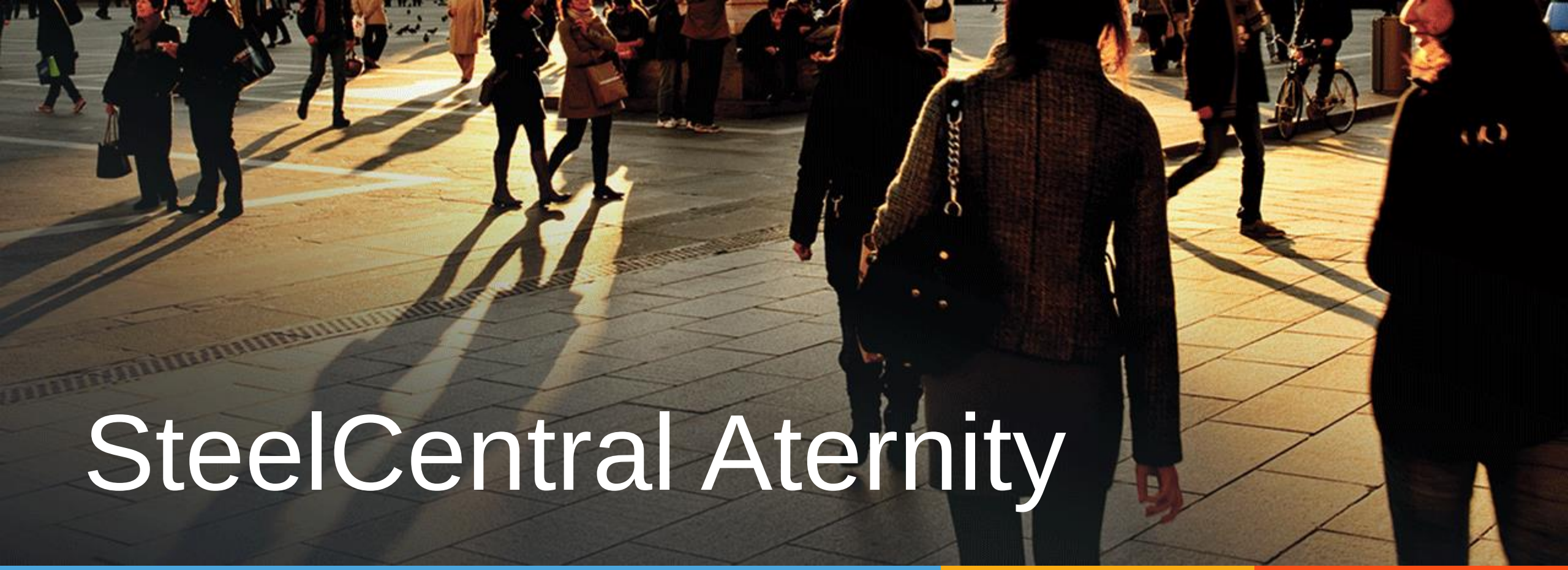


SteelCentral Aternity

End user experience monitoring for any app and any device

November 2016

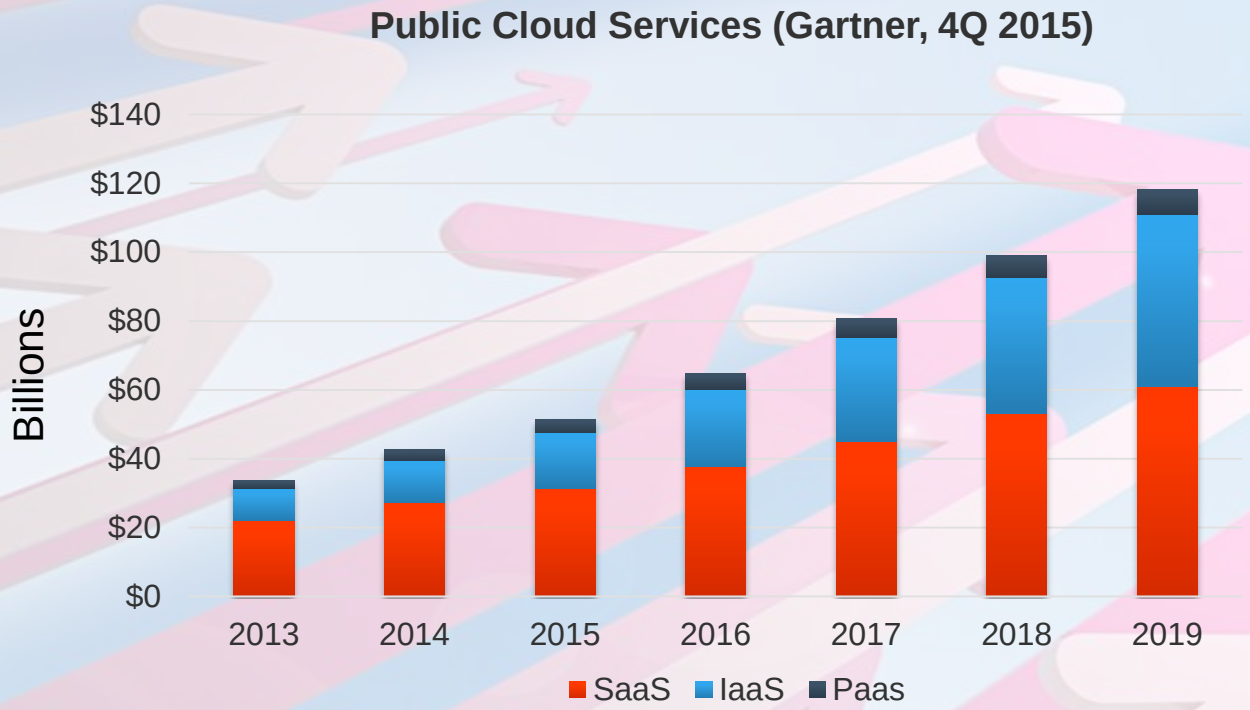
riverbed®

Topics

1. Industry Challenges
2. SteelCentral Platform
3. Aternity Overview
4. Use Cases
5. Case Studies
6. Supplementary

Industry challenges

The move to cloud continues



CAGR (2014-2019): 22%

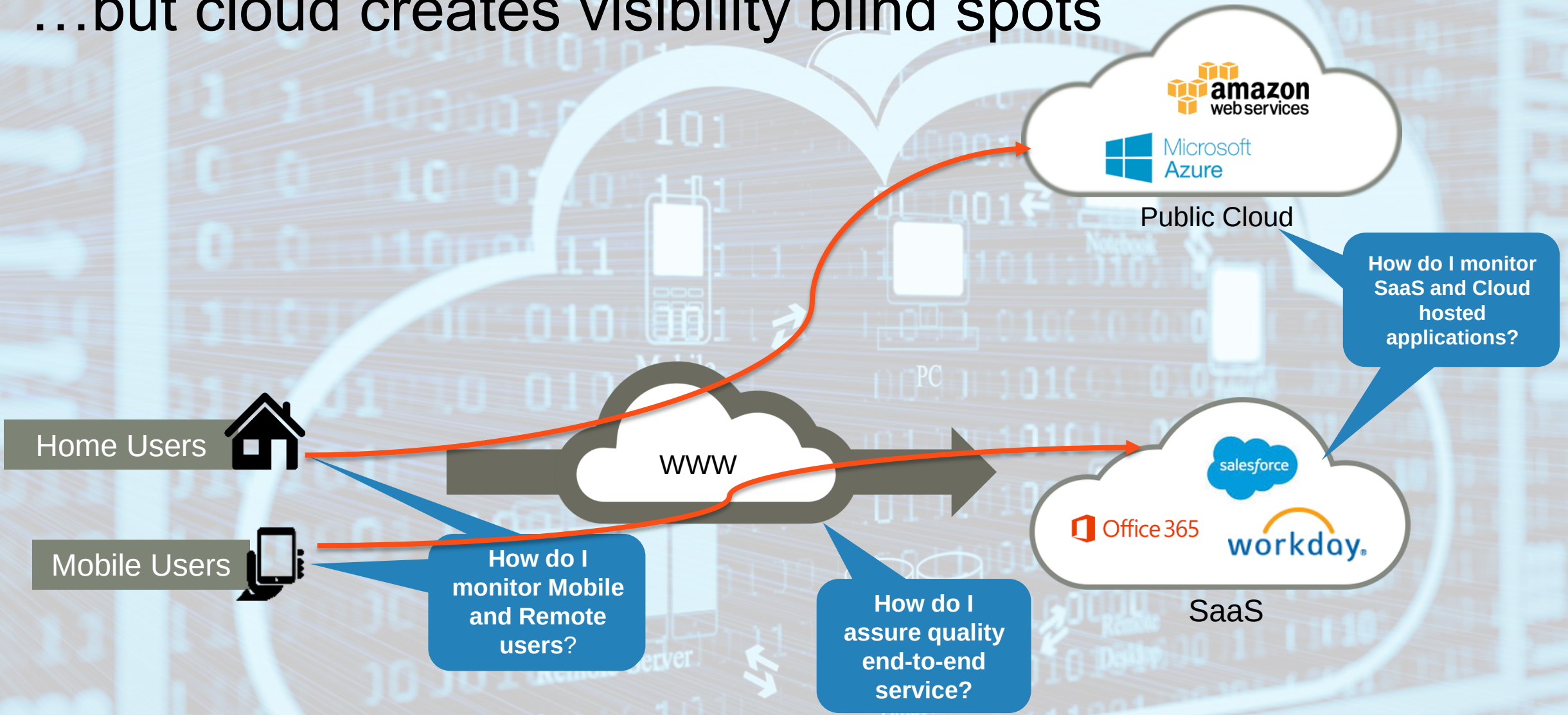
*Why are Cloud Services the First and Preferred Option for IT Investments?**

Cost Reduction
Business Growth
Agility
Scalability

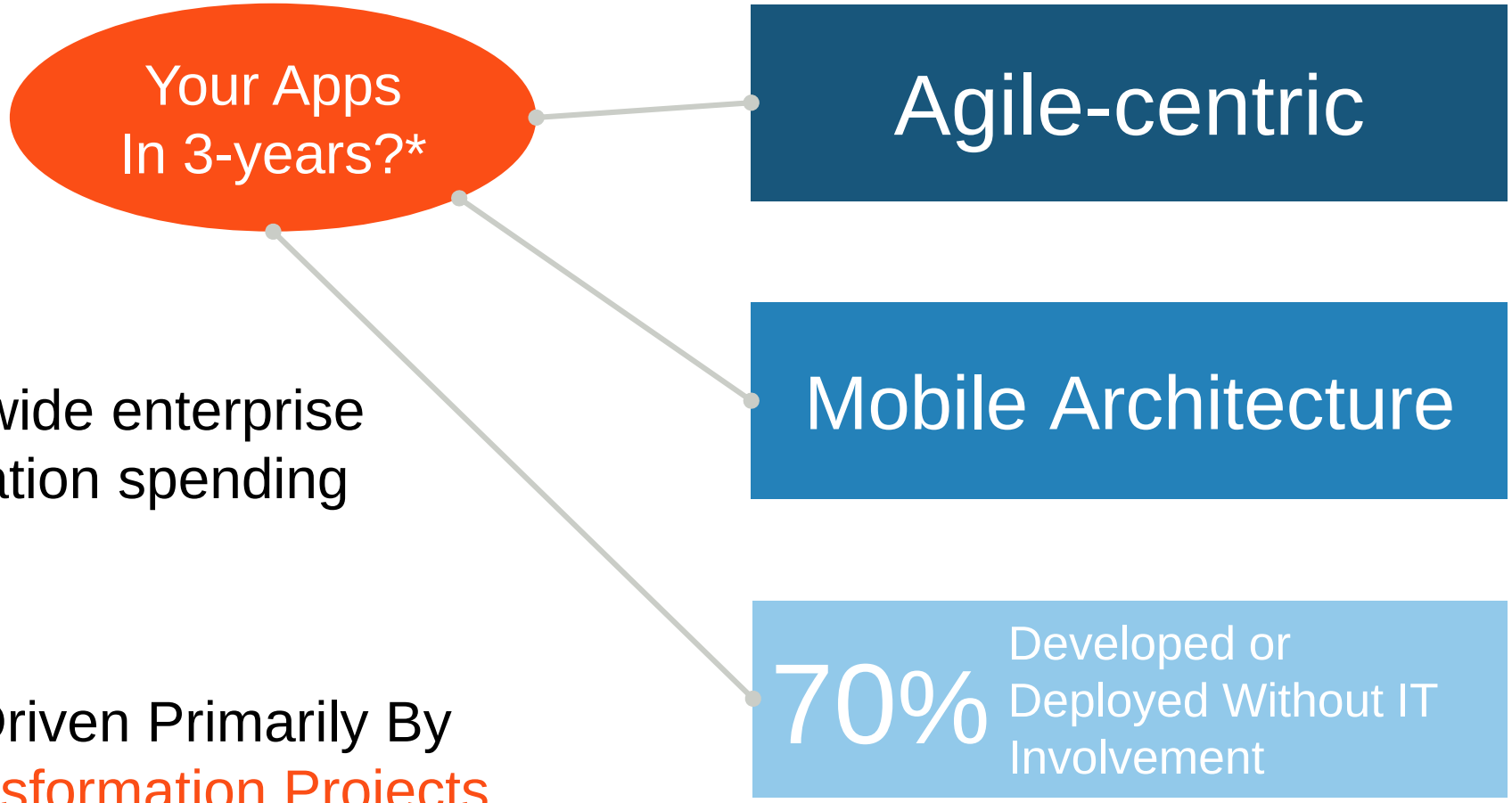
65%

*Gartner Survey

…but cloud creates visibility blind spots



Apps are more important than ever…



$201B Worldwide enterprise application spending

Spending Driven Primarily By
Digital Transformation Projects

**Gartner forecast*

…but there is a performance gap

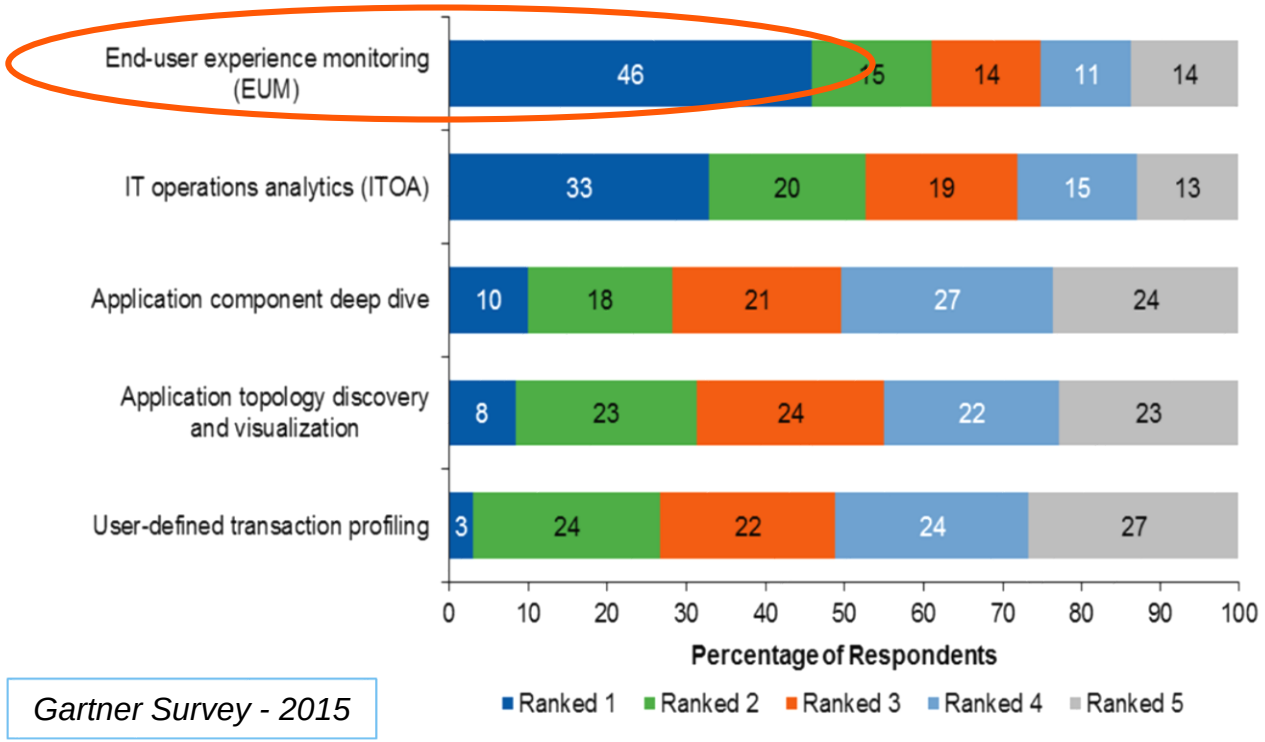
98% application performance is essential to achieving optimal business performance*

And yet...

89% poor enterprise application performance negatively impacted their work*

*Riverbed IT Executive Survey 2015

EUE monitoring is a top priority



Gartner Survey - 2015

Which is the most important objective for your organization's digital transformation initiative in the coming 12 months?

51% Improved end-user or customer experience

EMA Survey - 2015

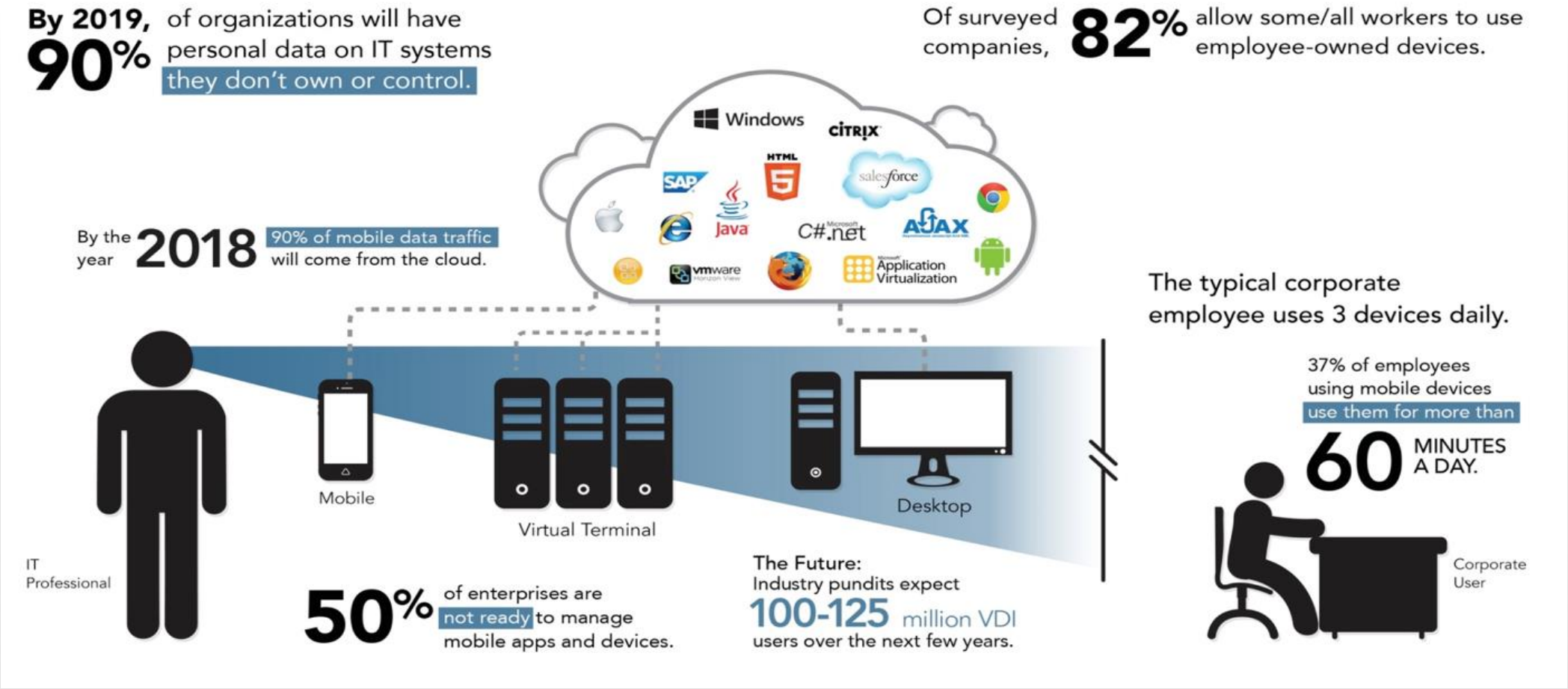
…but most companies lack the right tools

5% of global enterprises have strategically implemented EUEM technologies or services*

** Gartner research*

Next generation end user computing challenges

Managing the convergence of cloud, mobile, and virtualization



The impact of the IT monitoring visibility gap

Eight areas of pain for IT and the business

(1) **Reactive** response to problems, and only when users report them

(2) **Too much time** simply validating user complaints of problems

(3) **Finger pointing** between teams produces delays in problem resolution

(4) **Challenges** in actually solving the problem

(5) **Poor perception** of service by internal and external customers

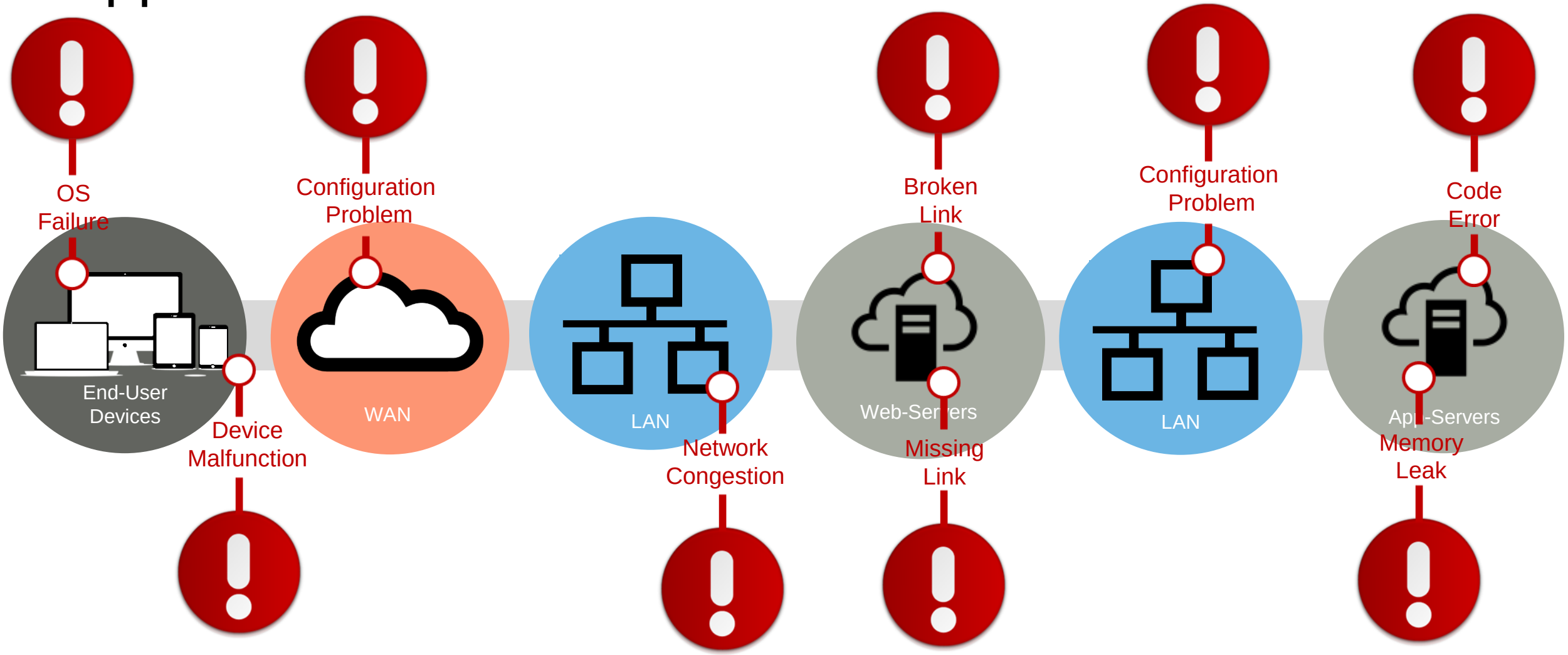
(6) **Limited ability** to establish SLAs that are meaningful to the business

(7) **Guesswork** on the need for change and its effect on the business

(8) **Poor insight** to IT's impact on customer service & workforce productivity

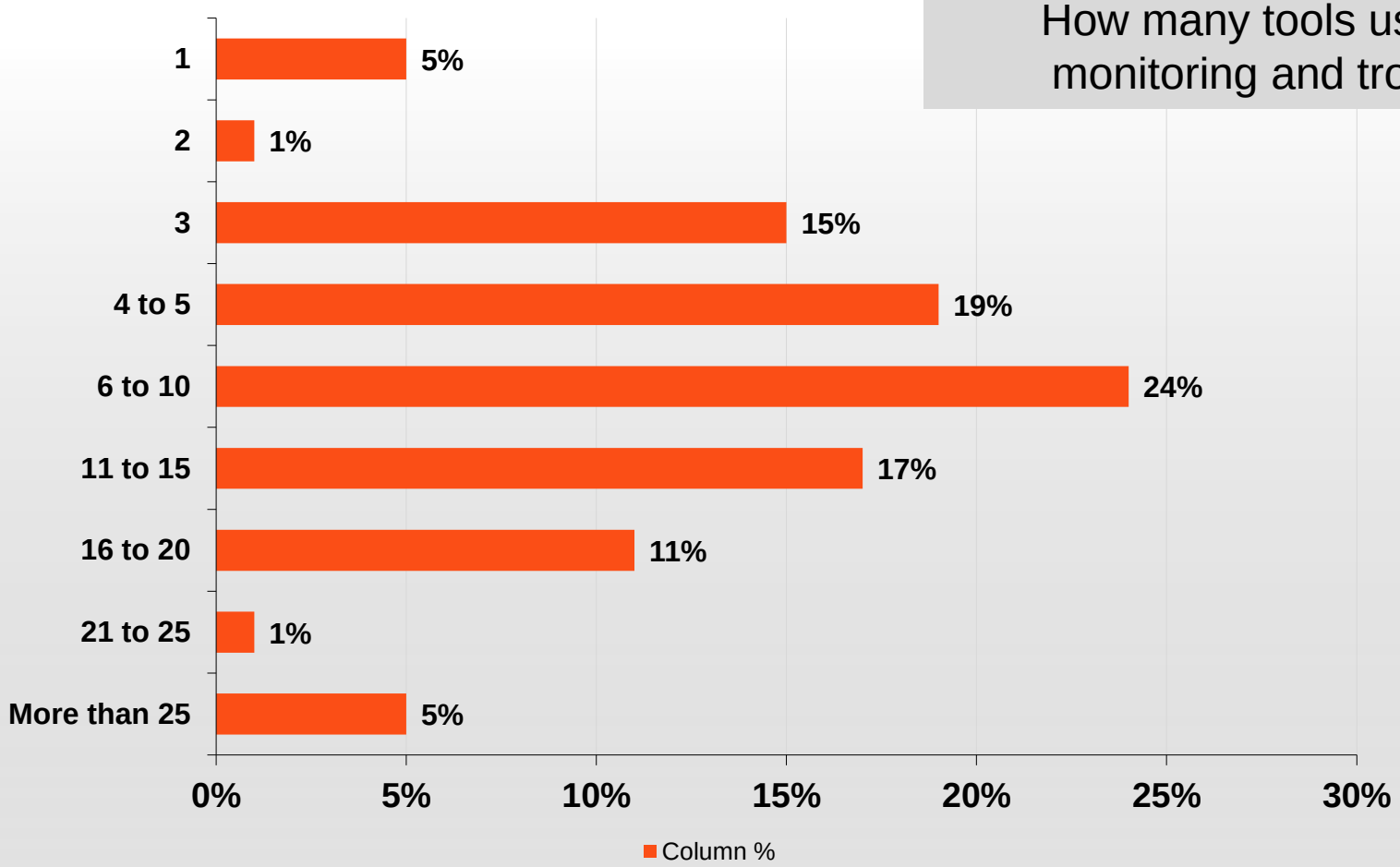
The need for holistic performance monitoring

Apps can break for a lot of different reasons



Many point tools in use

How many tools used for network monitoring and troubleshooting?



Source: Enterprise Management Associates, Inc.

Siloed tools don’t capture end user experience

Tools show the infrastructure is all “green”…

Siloed tools don’t capture end user experience

…but users are still complaining

New technologies increase potential blind spots

83% of execs think troubleshooting issues with enterprise applications is more difficult in a hybrid network.[1]

51% of companies say that application complexity is primary obstacle to mastering application performance.[2]

[1] "Riverbed Global Application Performance Survey," October 2015
[1] Forrester, "Think You've Mastered Application Performance? Think Again," July 2013

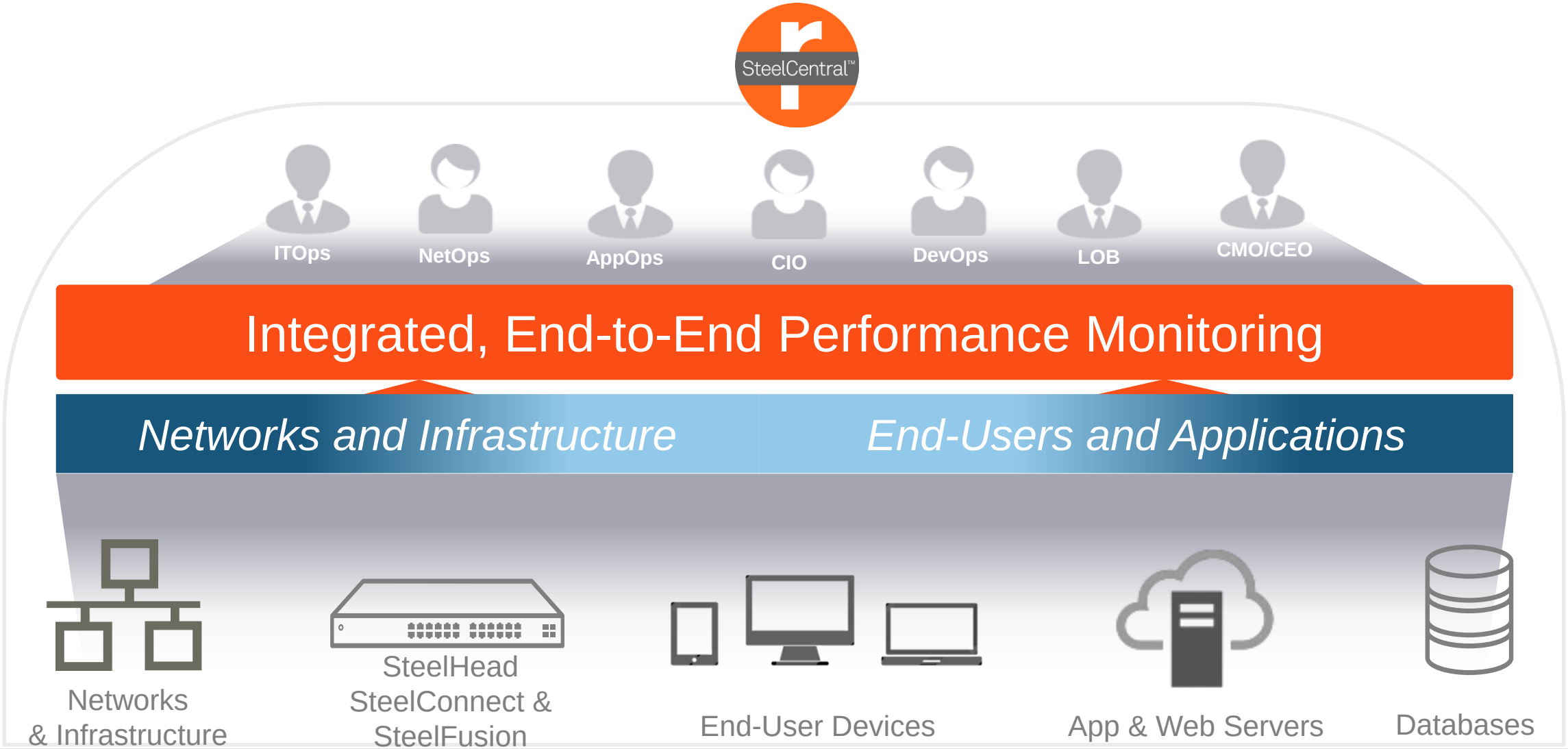

SteelCentral platform

SteelCentral Vision & Mission

Vision: Deliver the most complete, modular and integrated performance monitoring solution in the industry

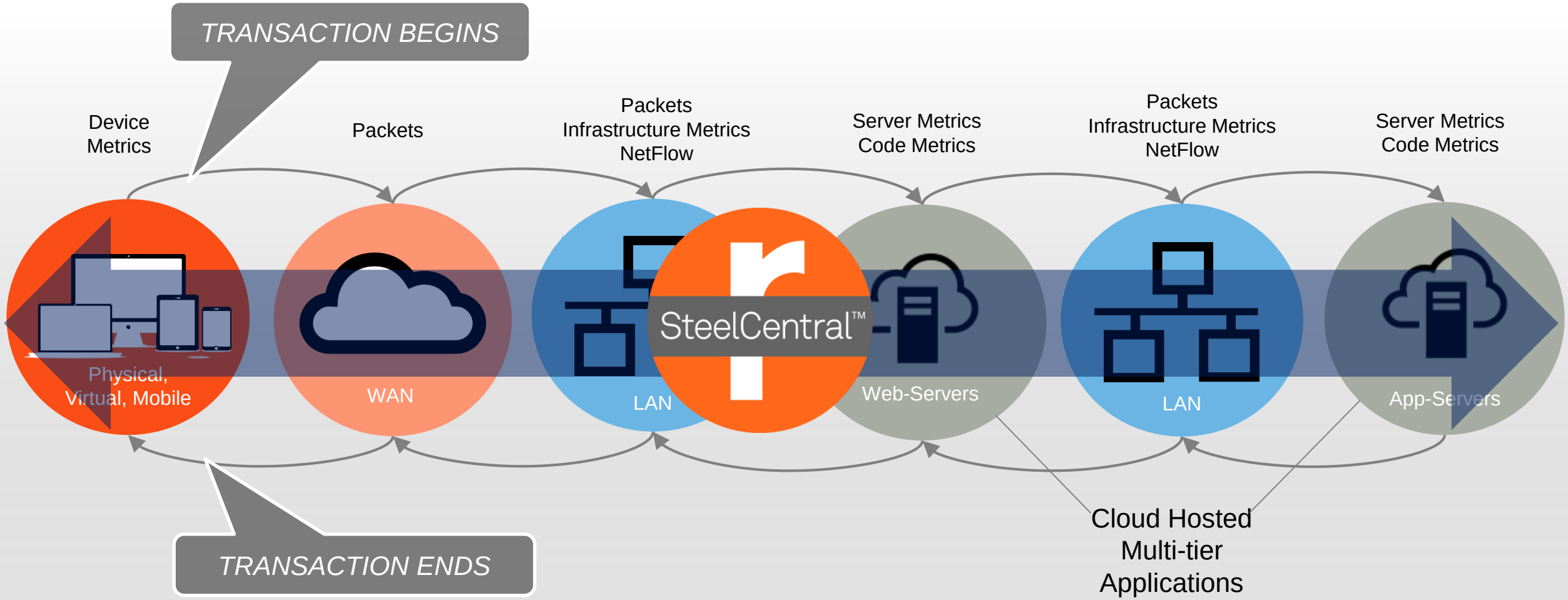
Mission: Monitor all types of end-user devices, apps, networks and infrastructure, wherever they are. Specialize in two core solutions: 1) App and EUE monitoring & troubleshooting, 2) Network and infrastructure monitoring & troubleshooting

The Command Center for Application Performance

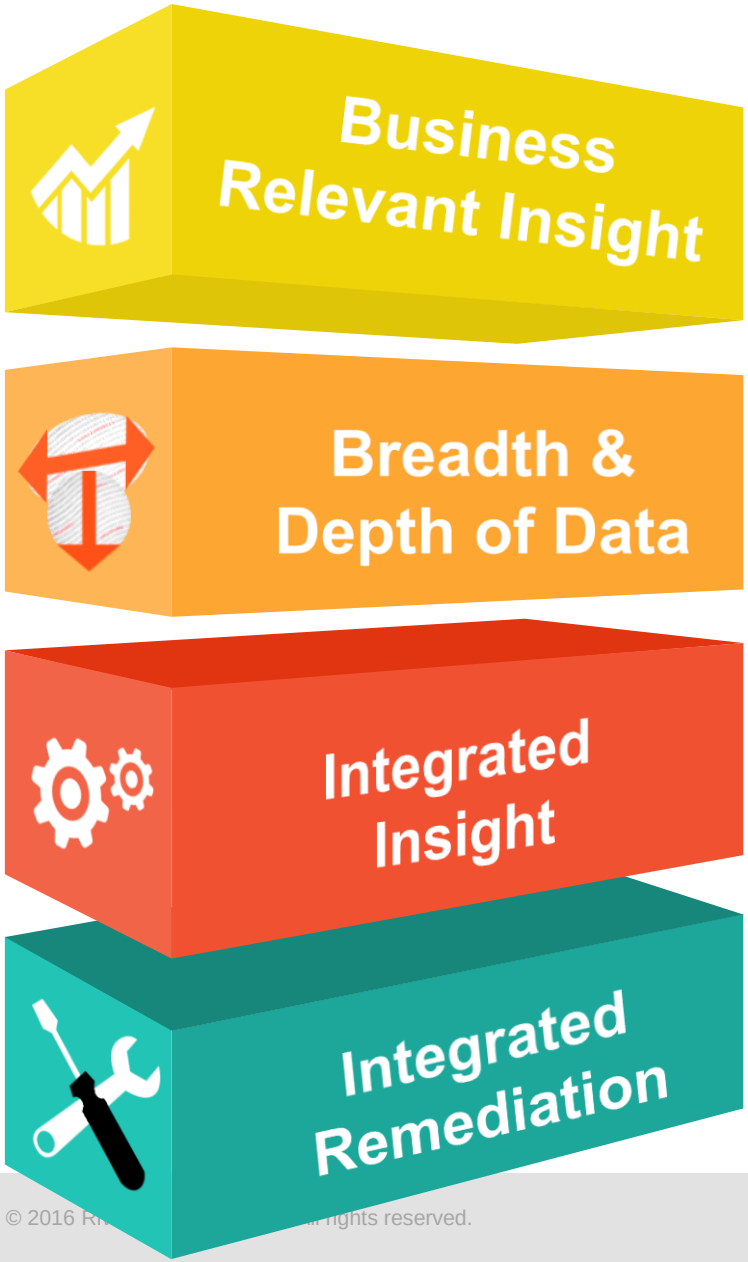


Integrated Monitoring

…is more than just monitoring everything



What makes SteelCentral different



Business insight, not just data.

Measures the **business impact** of poor application performance, provides rapid root-cause analysis and guides remediation

The most comprehensive and granular data set

Capturing data and transactions from all end-user devices, networks, infrastructure all the time at the most granular level for **100% effective Root-cause Analysis**

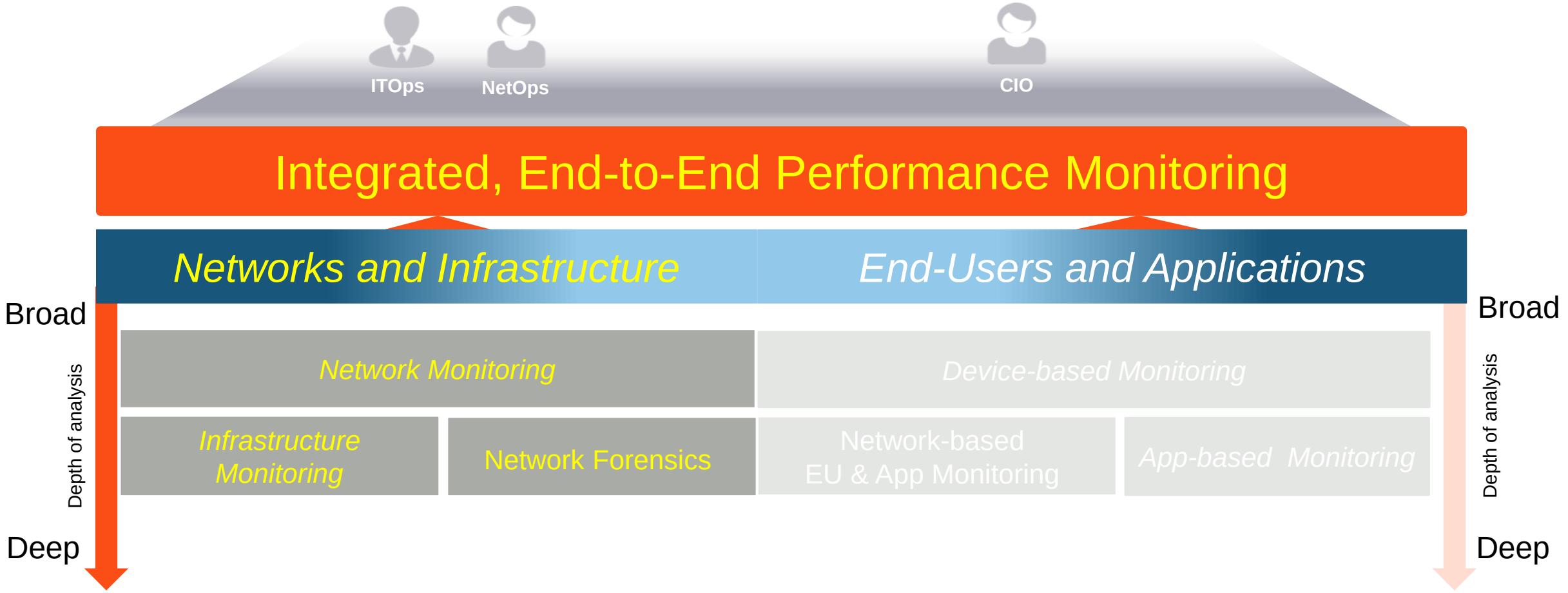
Fully integrated & custom insights for each stakeholder

Integrated, role-specific performance insights, blending & correlating analysis from all domains, providing a **one stop solution** for managing performance

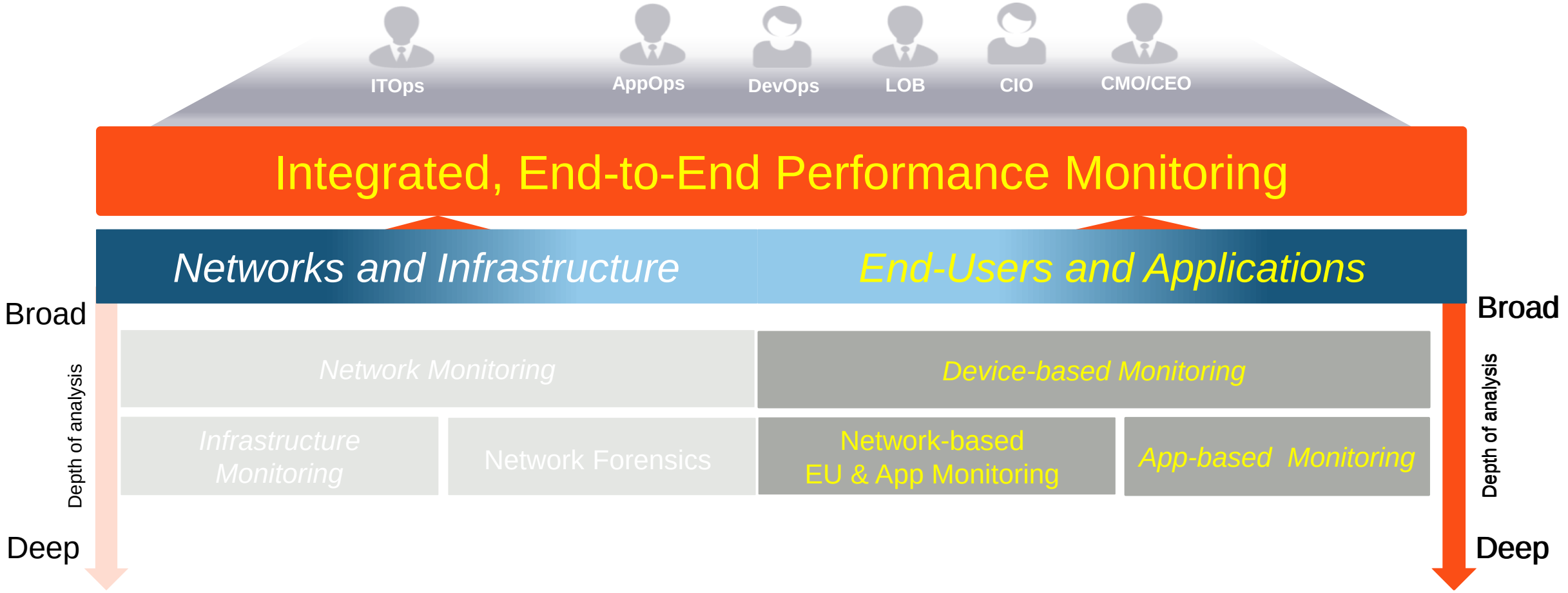
Detect and fix problems, before they impact the business

SteelCentral performance insights guide **fixing, optimizing and prioritizing application and network performance** by SteelConnect, SteelHead and SteelFusion

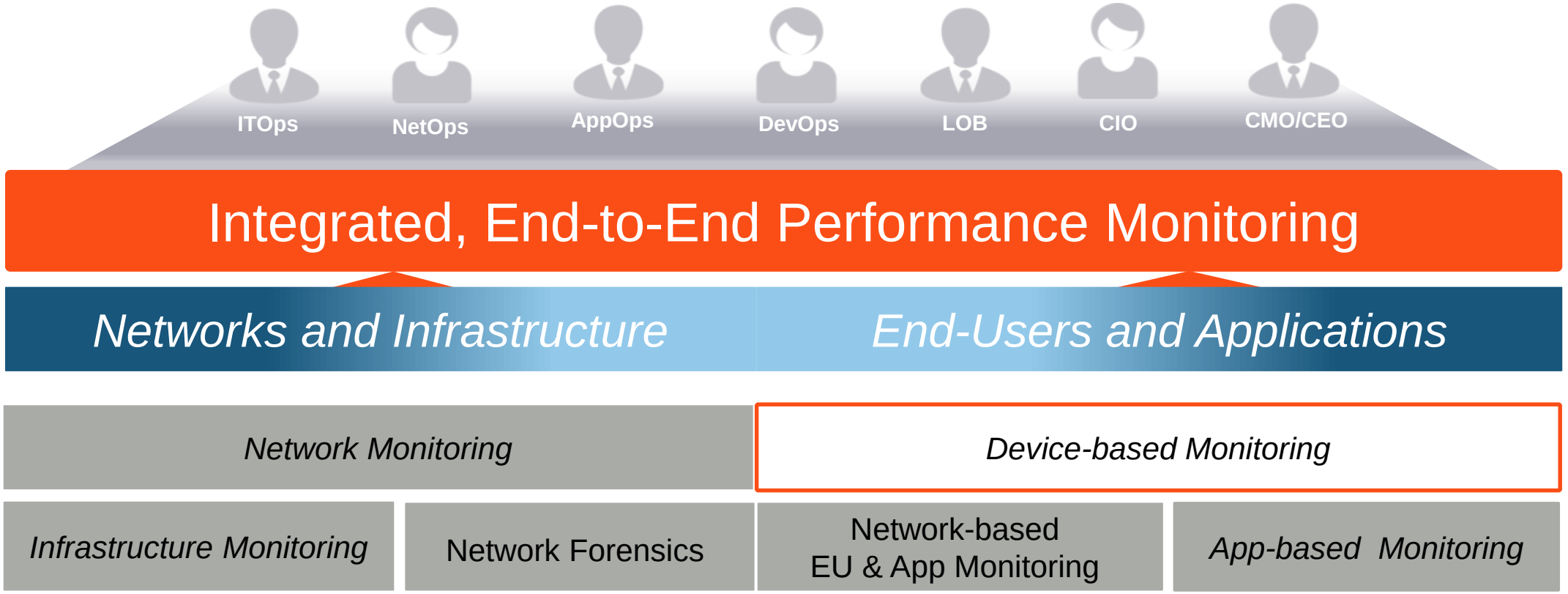
Network and Infrastructure Monitoring & Troubleshooting



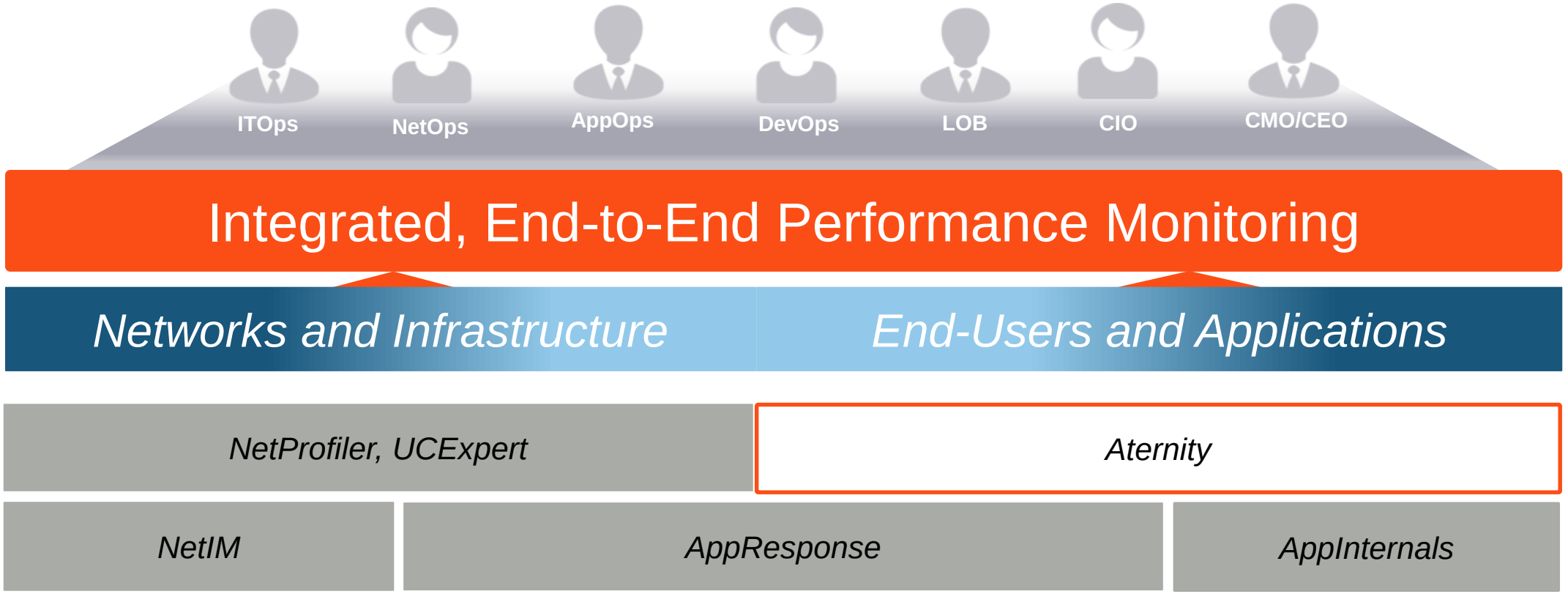
End-User and App Monitoring & Troubleshooting



SteelCentral Platform Components

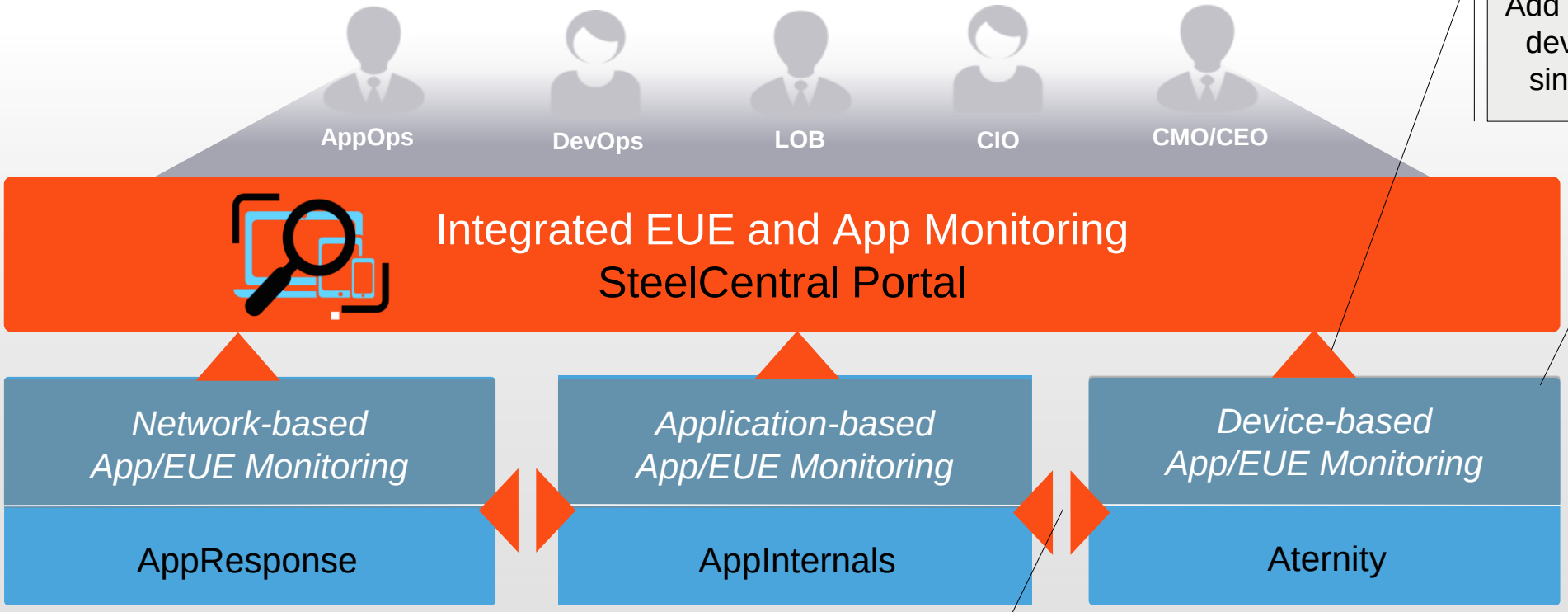


SteelCentral Platform Components



SeelCentral Platform and Aternity

1H 2017 Integration



2. **Portal Integration**: Add and blend end-user device insights to the single pane of glass.

1. Added Aternity to the suite

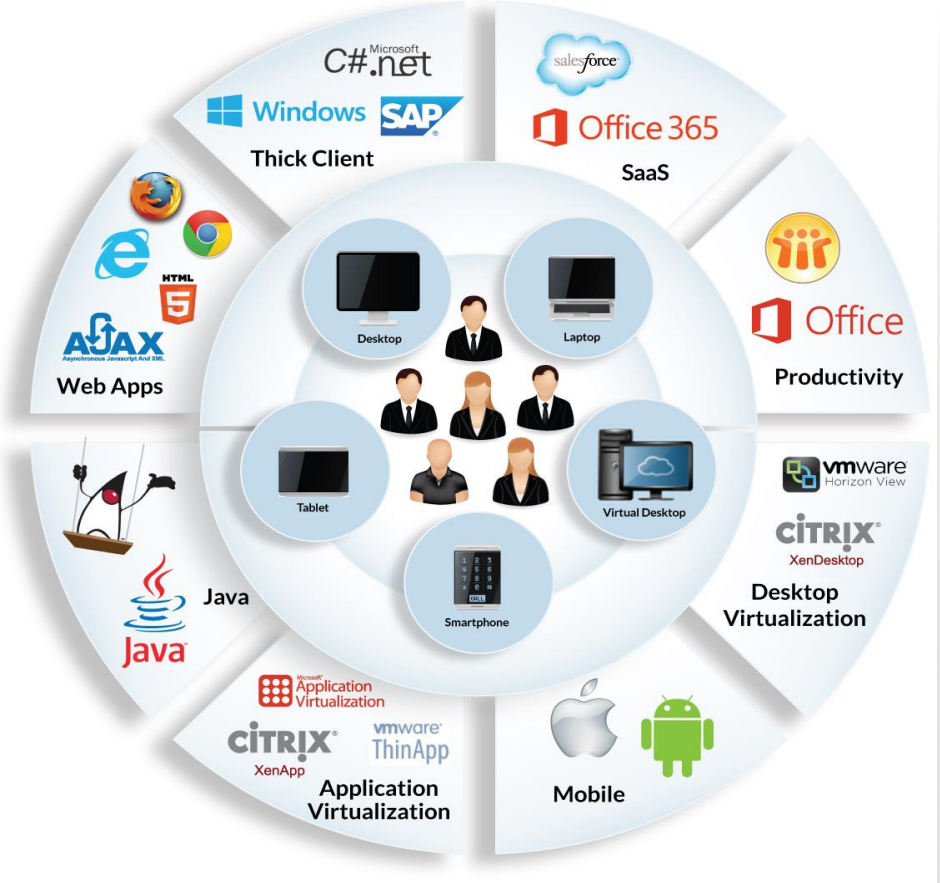
3. **AppInternals Integration**: Troubleshoot application performance issues identified from the user point of view.
Prioritize transaction problems based on Business Activities data

SteelCentral Aternity Overview

Aternity's approach to End User Experience Monitoring

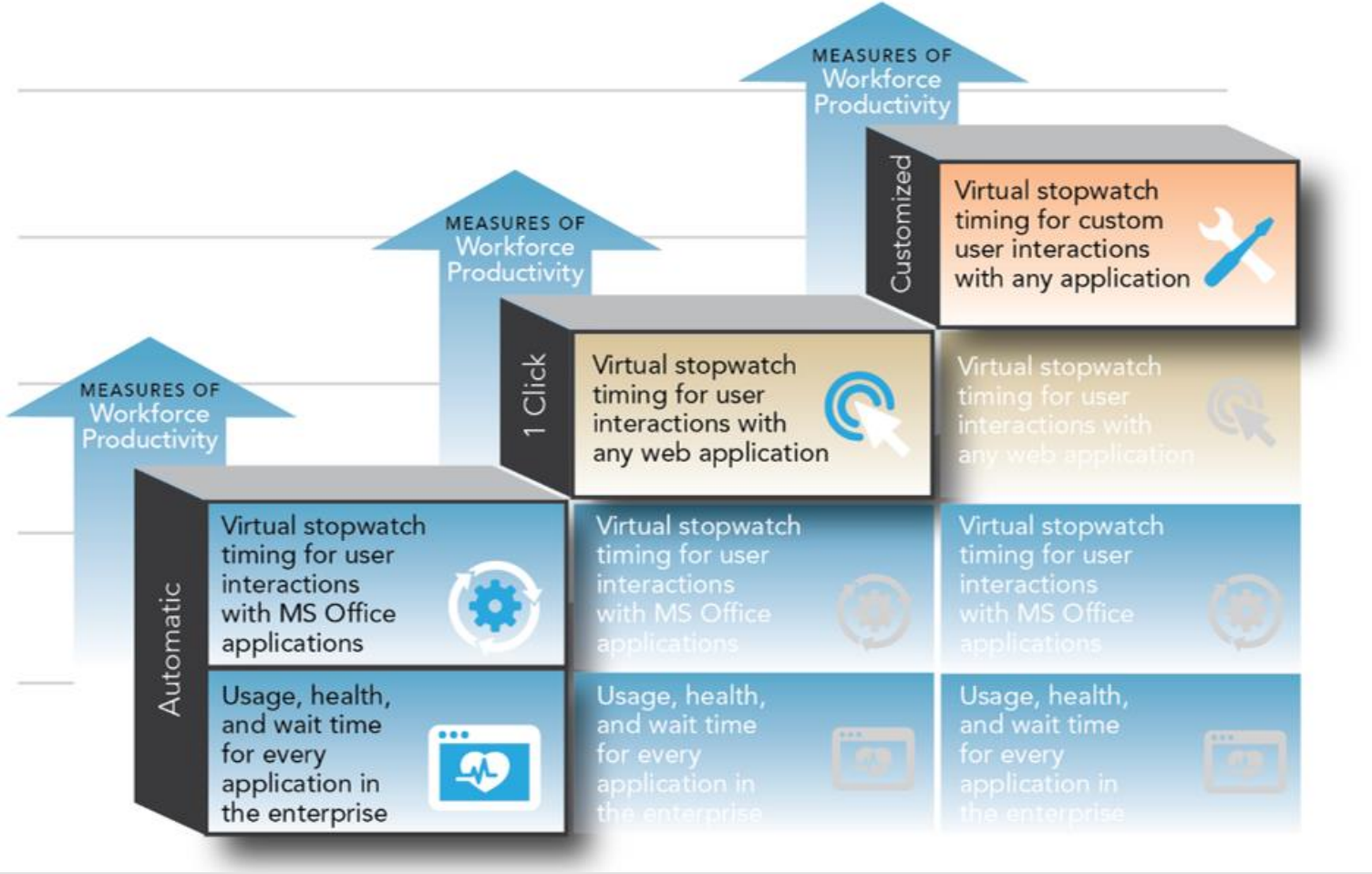
Monitoring from the point of IT consumption – the user's device

- Aternity monitors EUE for every application on any physical, mobile, or virtual device
- APM products focus on specific web-based and mobile applications, from the vantage point of the data center
- Device monitoring products have no insight into actual end user experience with applications



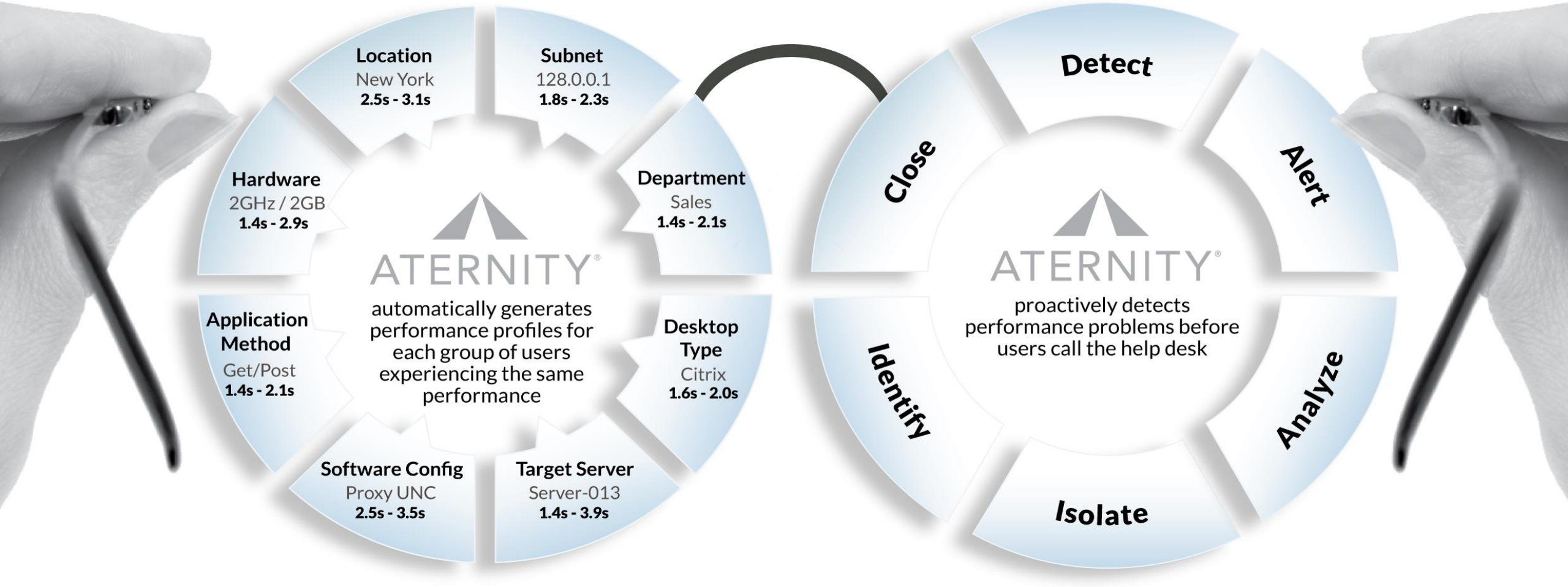
Tracking the impact of IT on workforce productivity

Automatic, 1-click, and customized measures



Behavior learning & incident lifecycle management

Proactive notification of performance deviations



Addressing challenges with four technology initiatives

Cloud

I'm **held responsible** for the performance of cloud-delivered apps

How do I ensure reliable service with no access to the infrastructure on which they run?

Mobile

Rolling out mobile apps is expected to **drive up workforce productivity and customer service**

How do I ensure a quality user experience to achieve these results?

Change Management

I'm under **constant pressure** to ensure a app/infrastructure migrations **deliver better service**

How do I know the new platform will deliver better service to my users?

Virtualization

My **virtualization project is stalled** because of user complaints

How do I resolve the issues & convince the business to expand?

Aternity provides value across the enterprise

End User Services

RESOLVE ISSUES QUICKLY

- Diagnose user experience
- Isolate end user problems
- Troubleshoot app & device problems

Eliminated over 220 monthly calls from 6,000+ remote laptop users

IT Operations

GUARANTEE SERVICE DELIVERY

- Proactively identify & resolve problems
- Prioritize problem resolution
- Optimize app & device performance

Reduced MTTR by 95% on patient care application

App Owners

IMPLEMENT CRITICAL APPS

- Drive app adoption
- Asses the impact of change
- Improve app performance

Verified 100% compliance to application SLA targets after migration to VDI

IT & Business Execs

TRANSFORM THE BUSINESS

- Enhance customer service
- Improve workforce productivity
- Align resources to workload

Improved contact center staff productivity by 20%


Customer Case
Studies

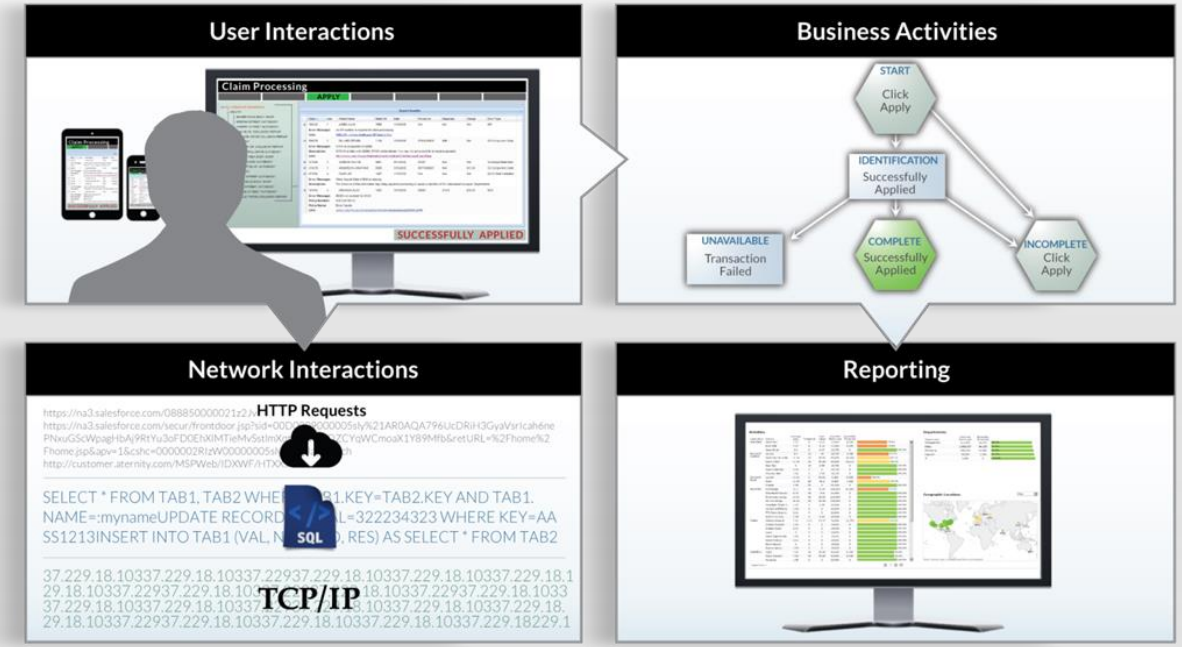
Cloud

Healthcare

- **Customer**
  - A not for profit US regional healthcare provider
- **Challenge**
  - Ensuring excellent end user experience for medical staff using cloud-hosted Allscripts app is a necessary component to providing fast and reliable patient care
  - IT staff had no visibility into hosting provider's IT infrastructure to monitor the application
- **Solution – Business Activity Analytics**
  - **80% faster** patient care business activities

Impact

Reduced the time for medical staff to execute Allscripts business activities by 80%, improving satisfaction and freeing up staff to care for patients



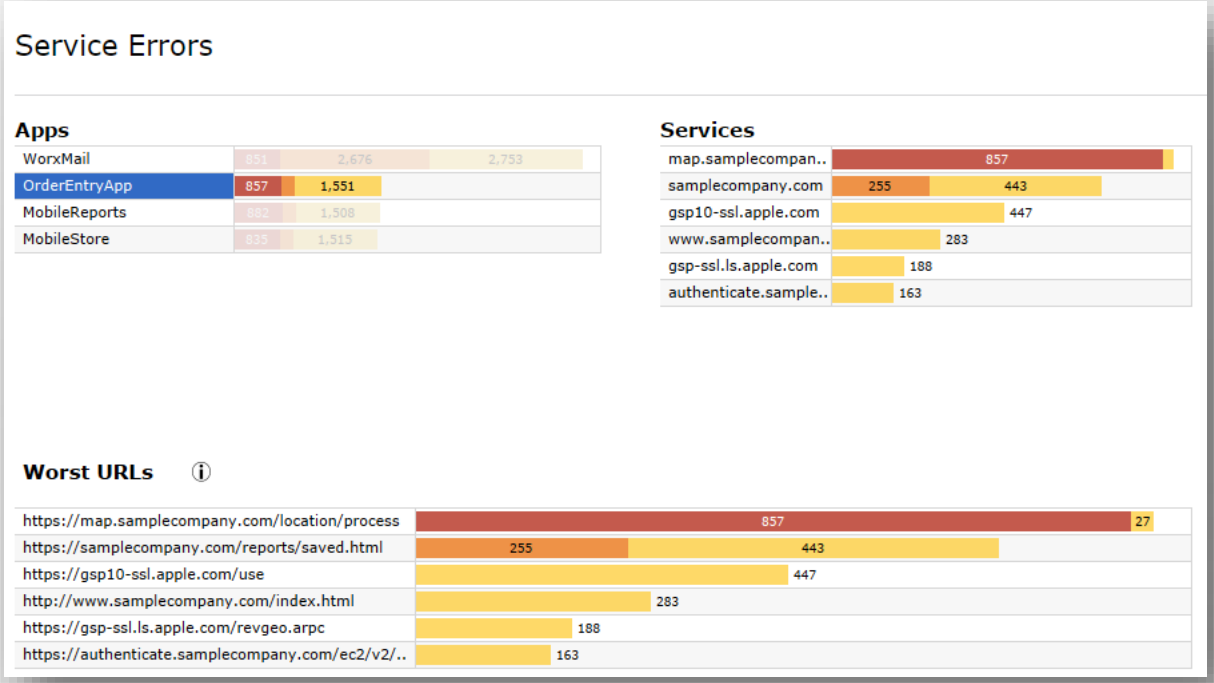
Mobile

Financial Services

- **Customer**
  - $B global retail banking division
  - Deploying mobile teller apps on tablets to personalize service, improve customer satisfaction, and reduce customer wait-time in full-service branches
- **Challenge**
  - Excessive errors in mobile teller app
  - Slow page load times on branch tablet devices
- **Solution – Mobile APM**
  - **Reduced service impacting HTTP errors by 86%** by identifying and fixing an incorrect proxy configuration

Impact

Reduced service impacting HTTP errors by 86% - improving customer satisfaction, retail branch staff productivity, and workforce confidence in using mobile



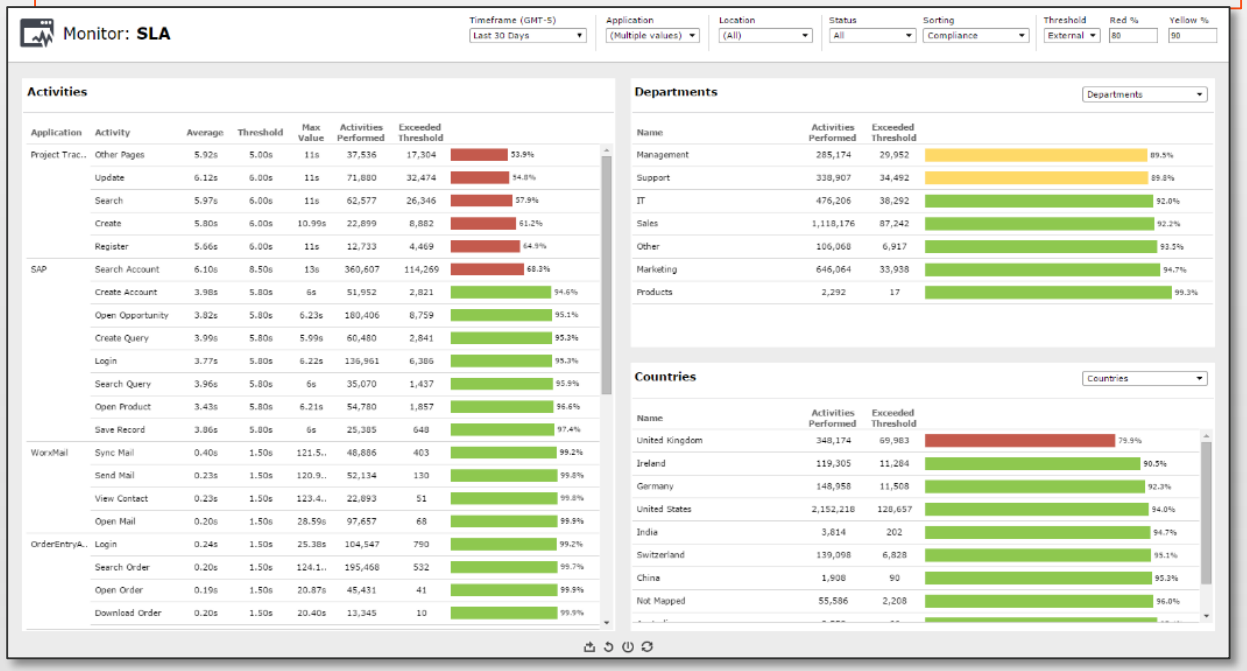
Change Management

Financial Services

- **Customer**
  - The Quality and Productivity Team of a $B global financial services company with a corporate-wide Six Sigma Program
- **Challenge**
  - Identify IT projects that drive continuous improvement of workforce productivity and customer service
- **Solution – Business Activity Analytics**
  - Six Sigma team monitors business activity performance relative to customer driven SLA targets to drive **enterprise-wide productivity improvement of 20% over 3 years**

Impact

The Six Sigma team identified IT projects that have delivered an **enterprise-wide 20% increase in workforce productivity over 3 years** in support of the company's corporate continuous improvement program

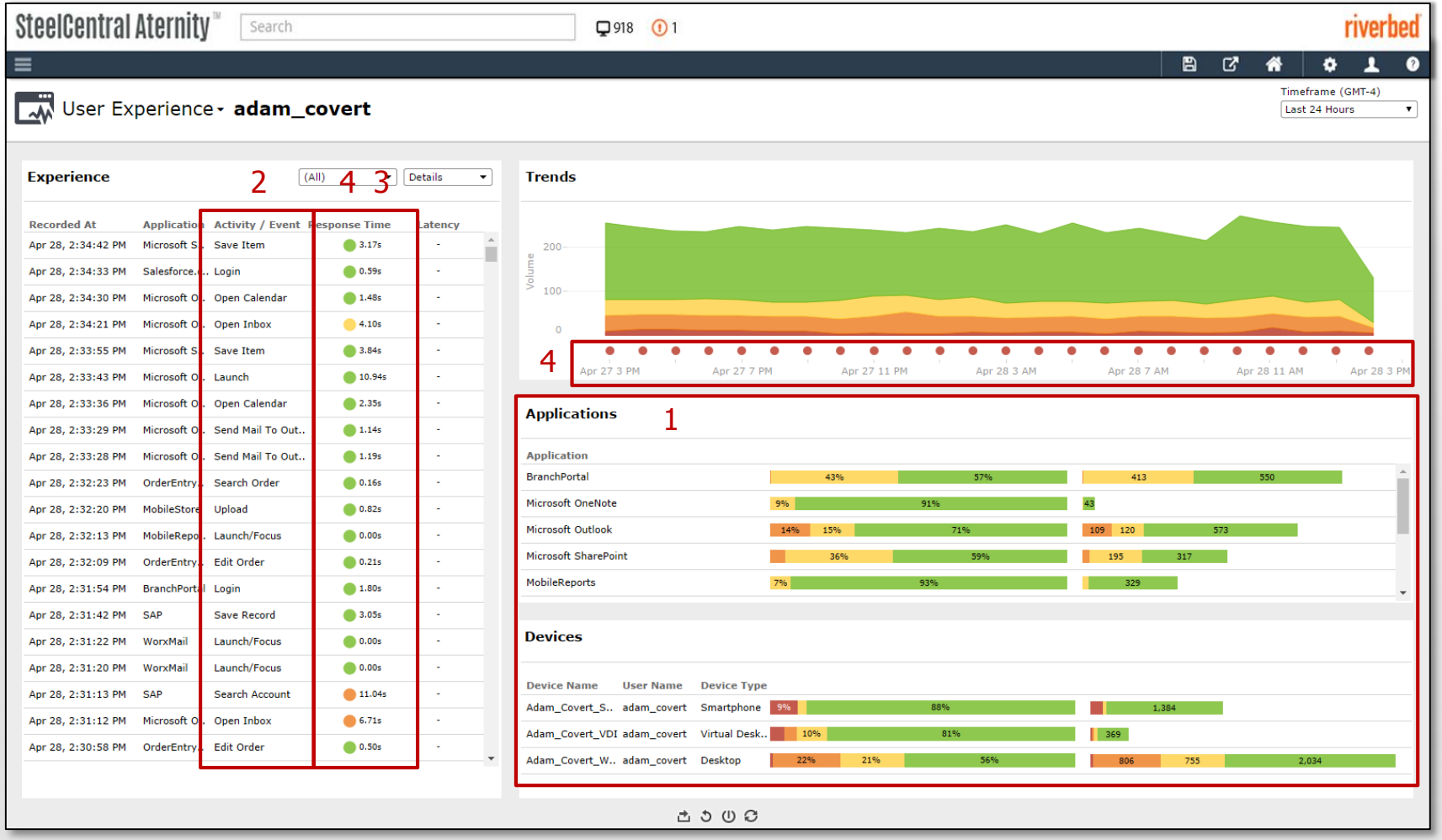


Use Cases

Service Desk

Immediately diagnose user experience

1. Review all of a user's applications running on any device
2. Identify every business activity performed
3. Track response time vs. baseline, as seen by the user
4. Use color-coded status to **immediately validate** complaints of poor application performance



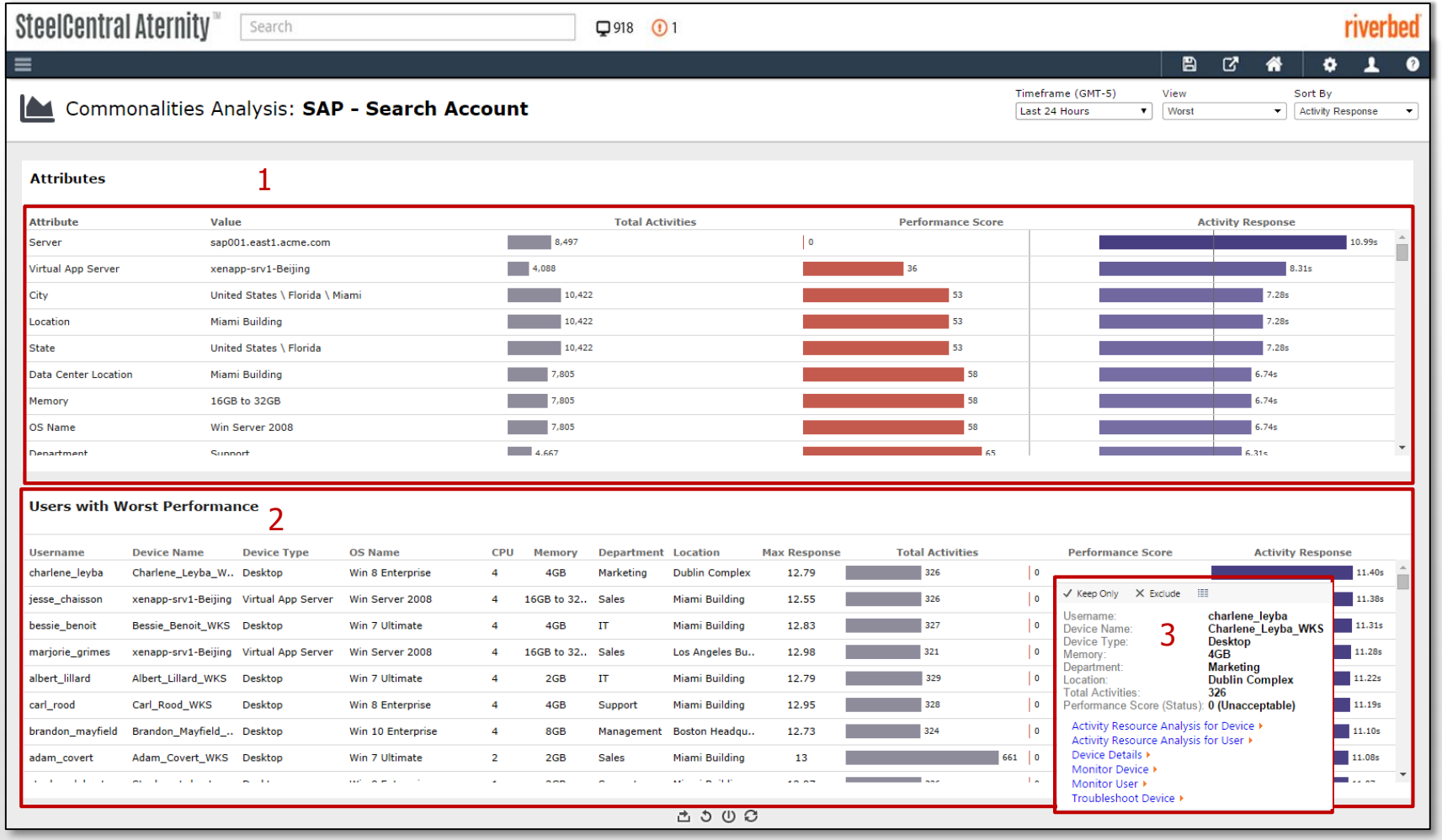
Service Desk

Analyze commonalities to isolate end user problems

1. Analyze the characteristics shared by affected users **to quickly resolve firm-wide problems**

2. Identify the users most impacted by problems

3. Drill down into details of the application or device to troubleshoot individual user issues



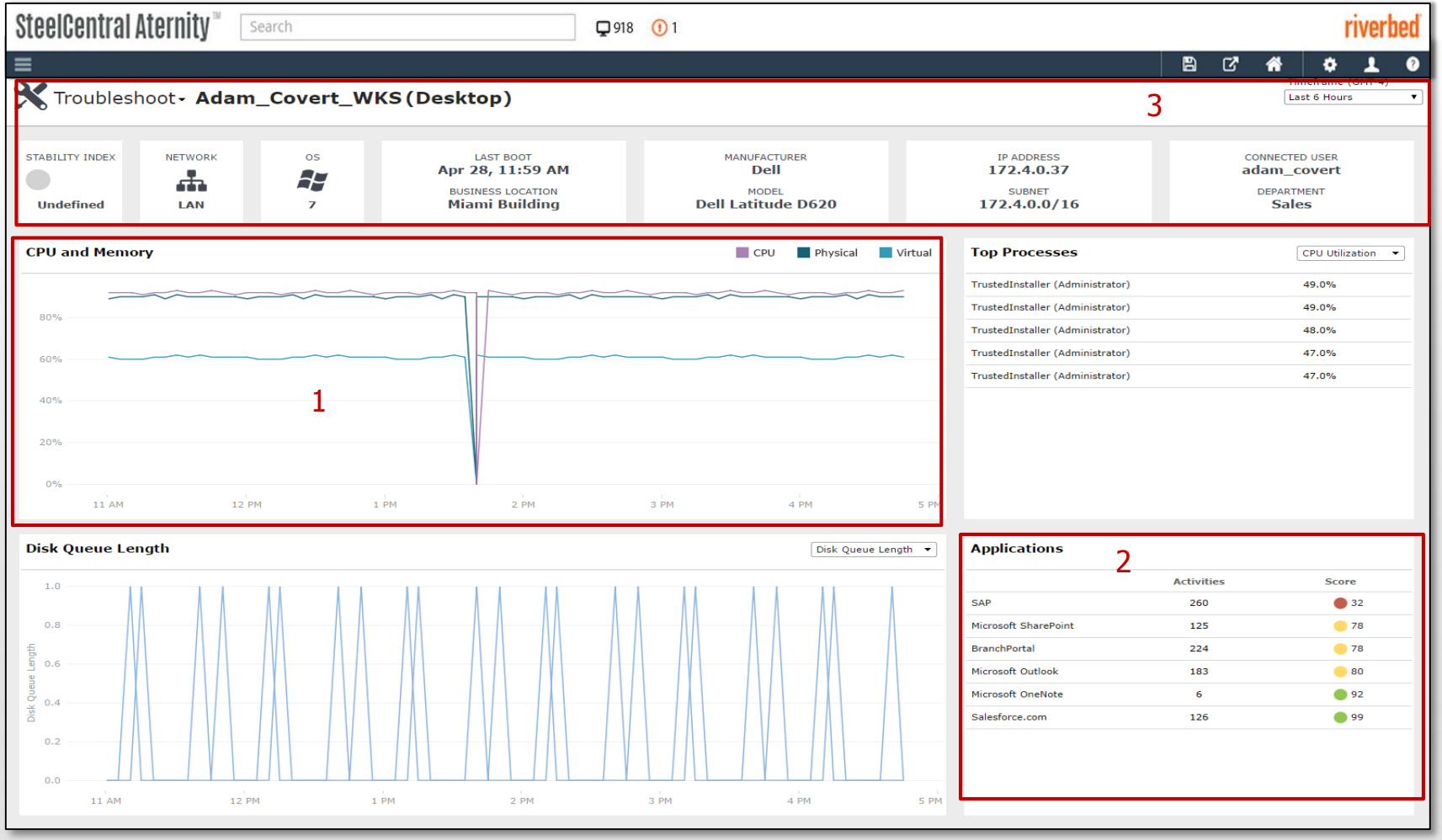
Desktop Services

Troubleshoot device problems without affecting users

1. Profile the user's device and analyze resource consumption

2. Determine the impact on all of the user's applications

3. Review health events, recently installed apps, and boot history to troubleshoot **non-invasively, without affecting the user's productivity**



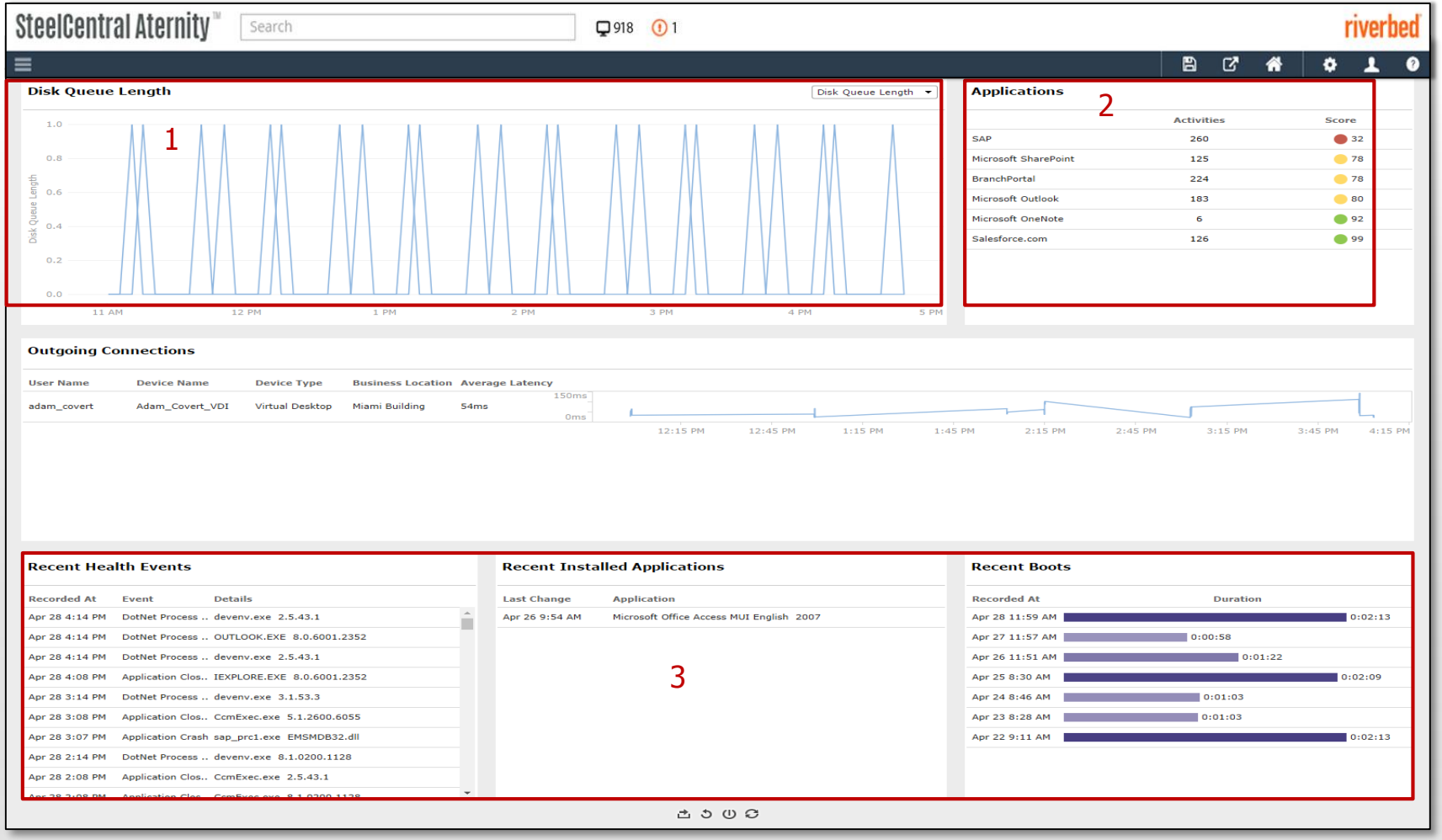
Desktop Services

Troubleshoot device problems without affecting users

1. Profile the user's device and analyze resource consumption

2. Determine the impact on all of the user's applications

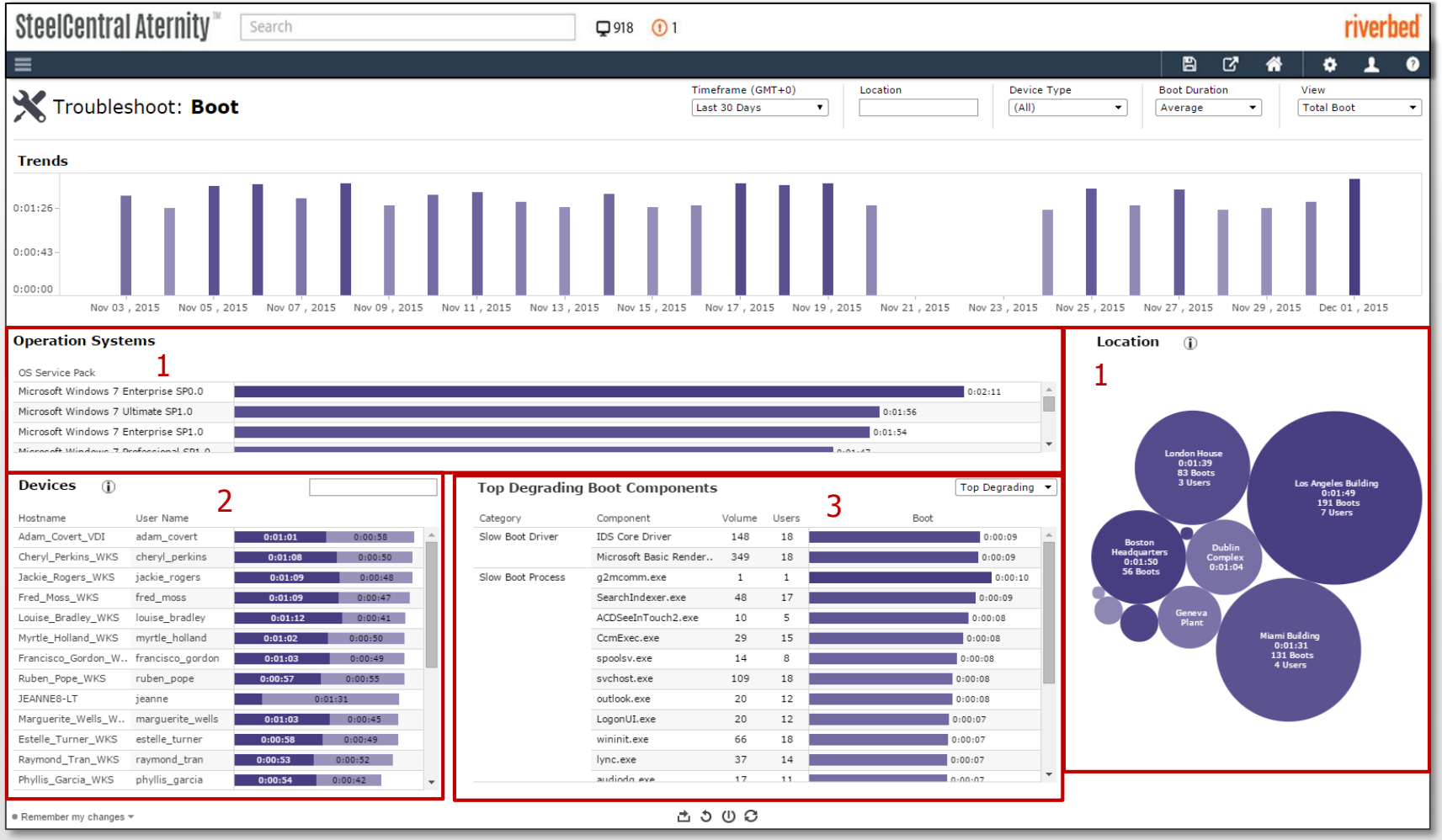
3. Review health events, recently installed apps, and boot history to troubleshoot **non-invasively, without affecting the user's productivity**



Desktop Services

Troubleshoot the cause of slow boot and log-on times

1. Analyze boot and logon performance by OS and location
2. Track devices with the worst boot and logon times to identify the users most impacted
3. Identify **components responsible for excessive boot and logon times**



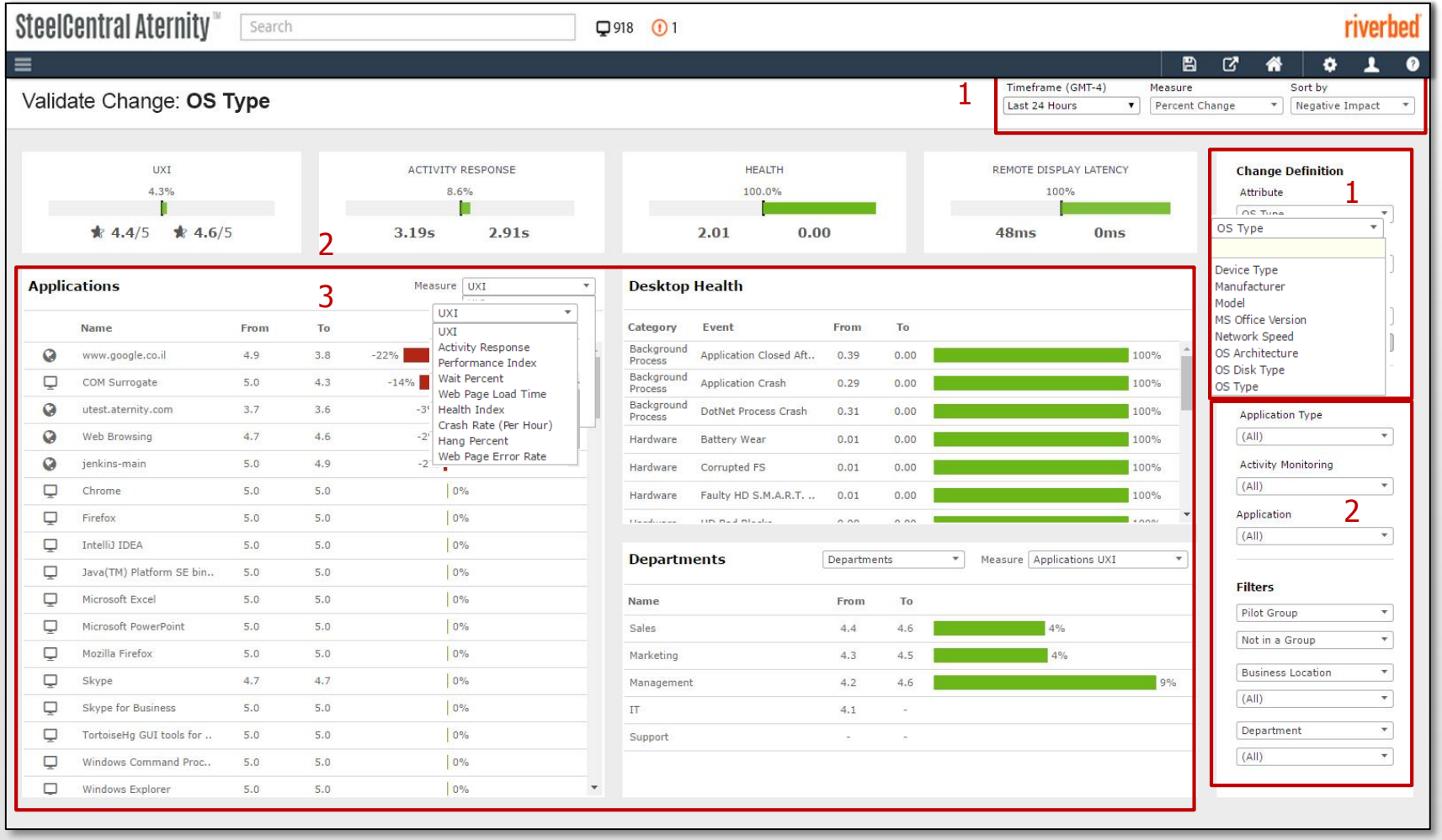
Desktop Services

Compare end-user experience, device health before and after a change

1. Identify the type of change and the analysis parameters

2. Determine the applications to be analyzed and how the results should be filtered

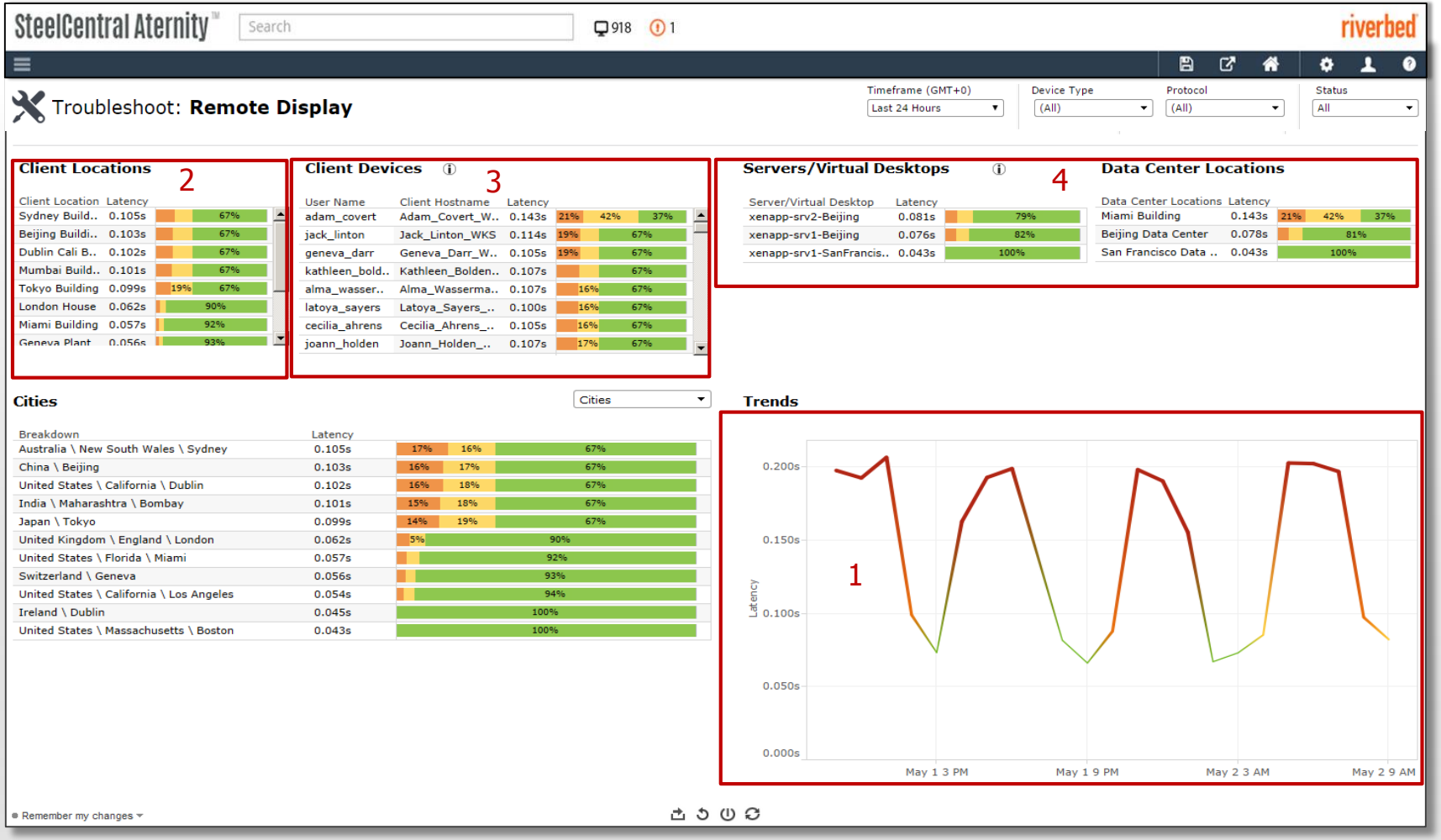
3. Analyze app performance and device health to **quantify the impact of change**, by department, geography, device metric, etc.



Virtual Desktop Teams

Diagnose problems in the virtual infrastructure

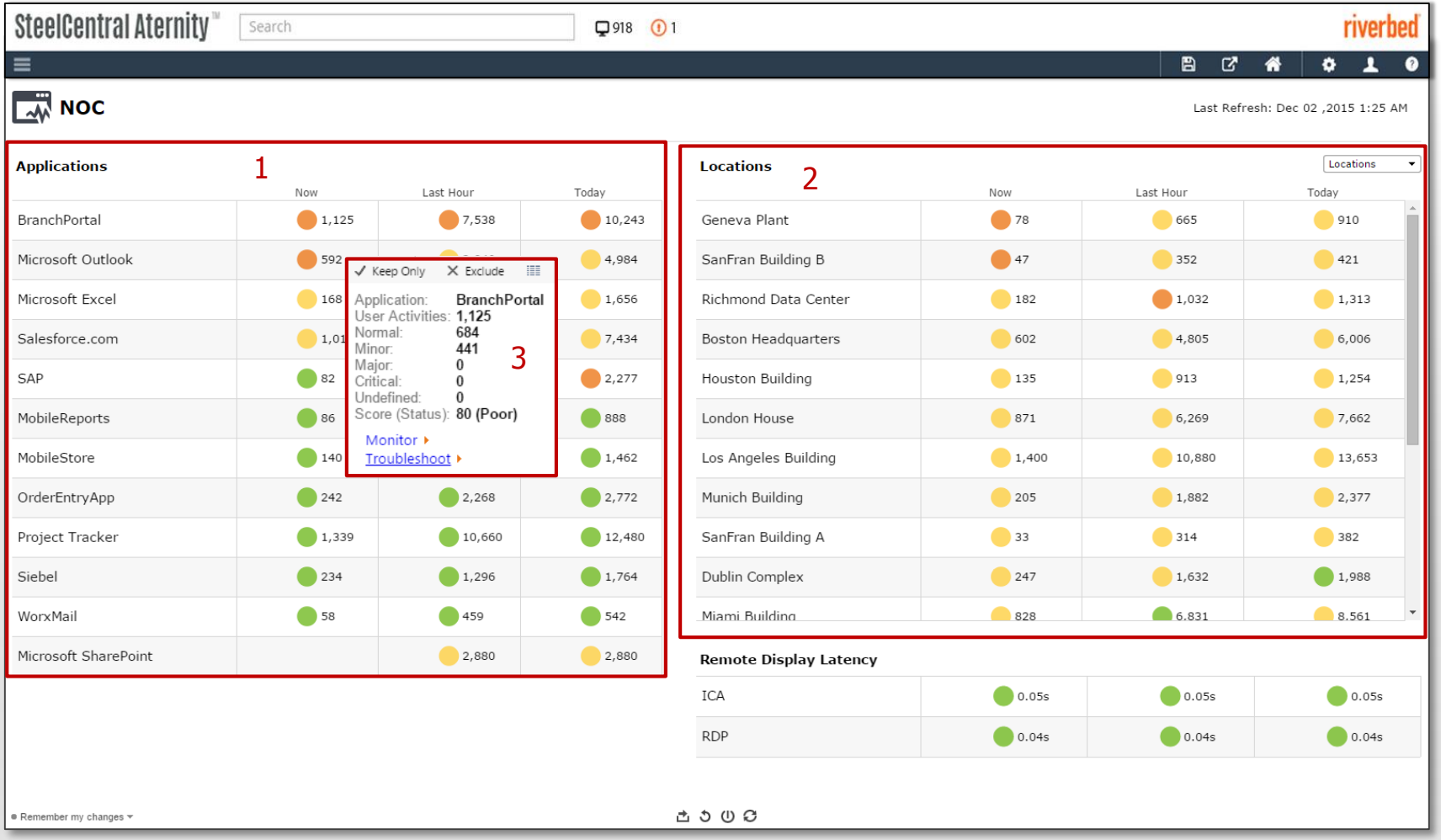
1. Trend Remote Display Latency for ICA, RDP and PCoIP
2. Analyze response by the end users' location
3. And by the individual user device
4. Localize problems by **correlating application performance to the virtual system** users are accessing



IT Operations

Prioritize problem resolution to where the impact is greatest

1. Monitor the recent performance of any application in the enterprise
2. Understand the severity and impact of app problems by location, department, or region
3. Drill down to **proactively troubleshoot the most urgent problems**



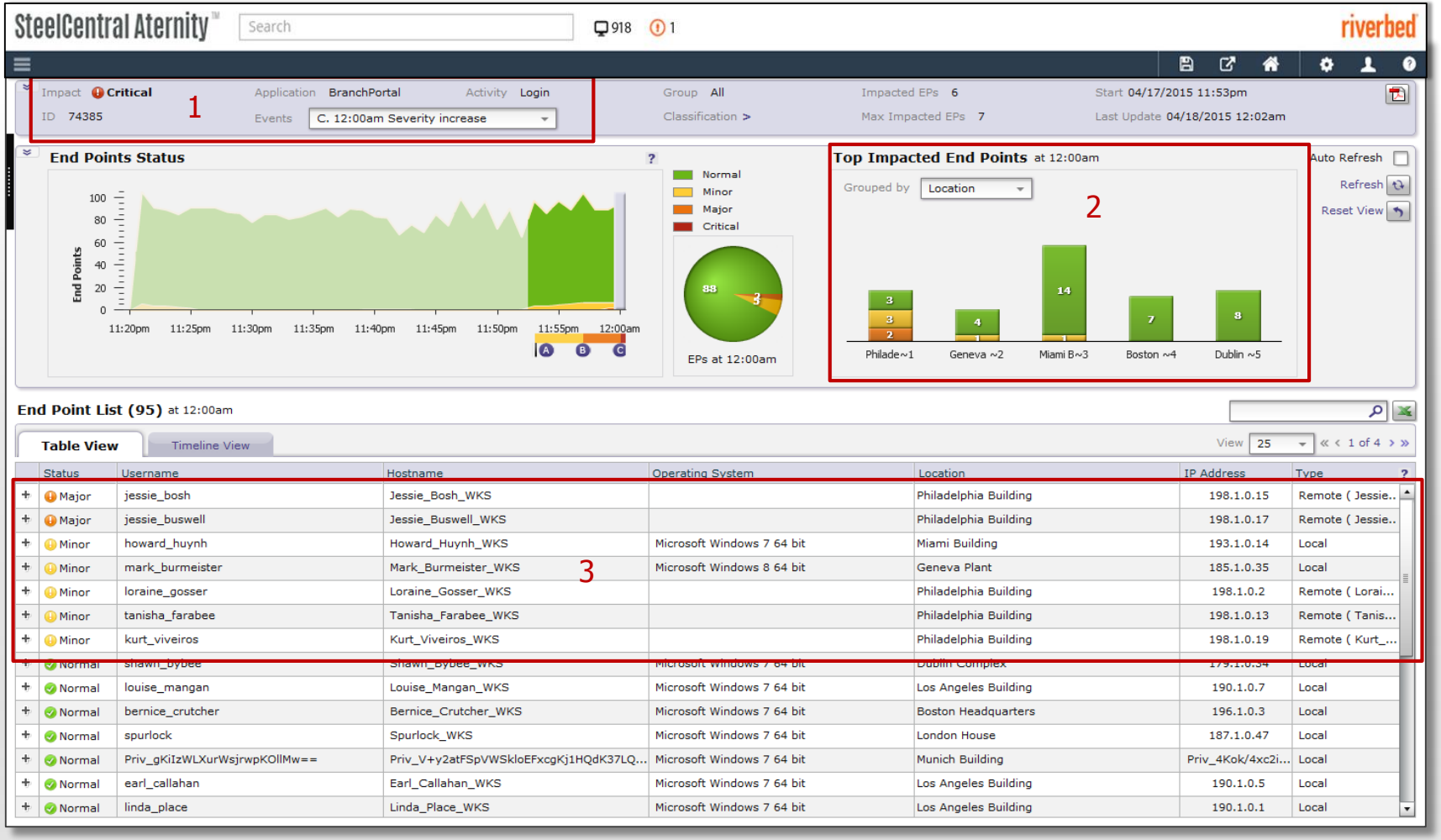
IT Operations

Proactively identify and resolve problems

1. Automatically receive alerts of incidents, classified by severity

2. Analyze the impact by location, office, department, or subnet

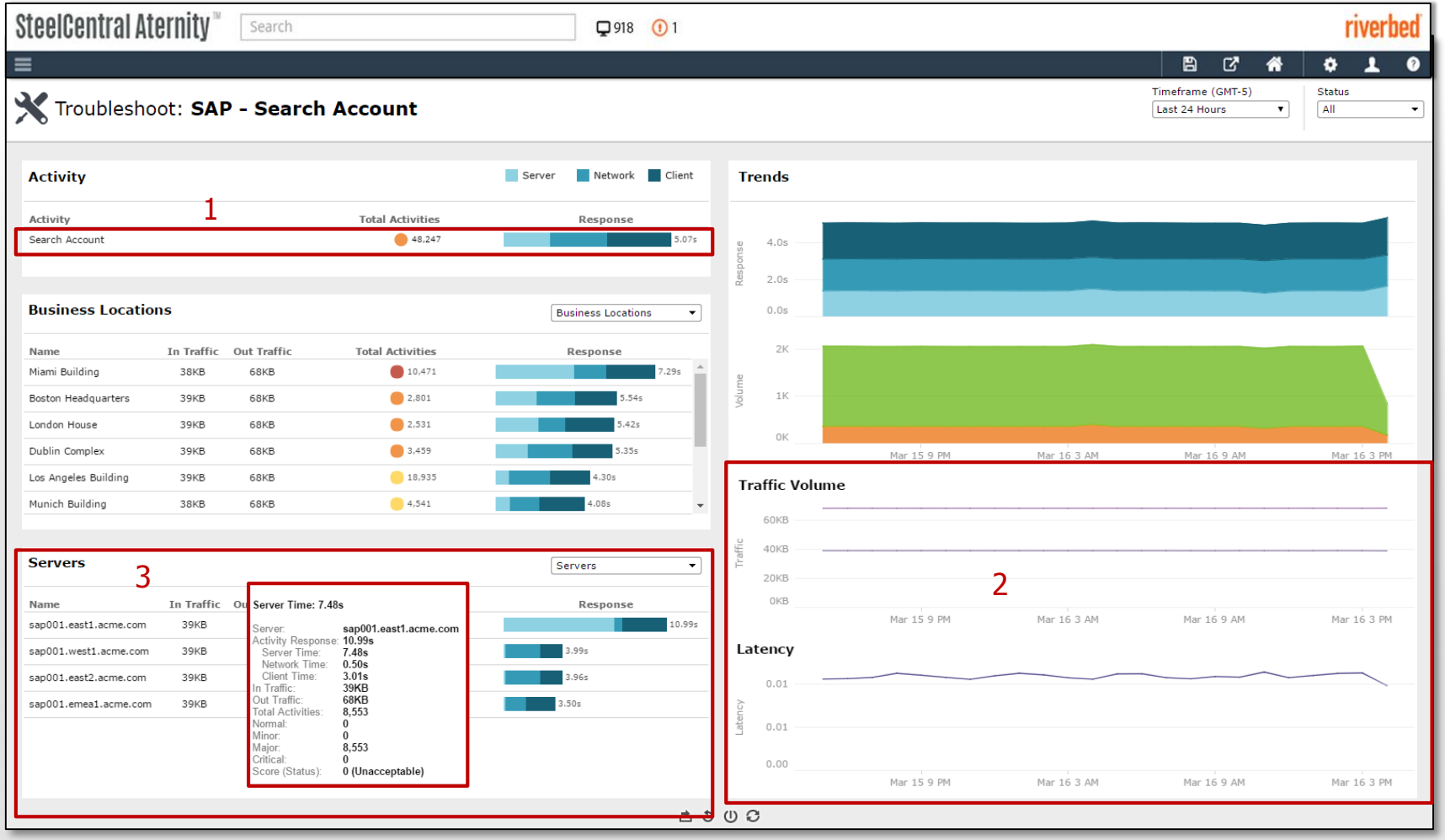
3. Proactively identify affected users and **address their issues before they call the Help Desk**



IT Operations

Isolate problems to the user's device, network, or server

1. Analyze response time between the end user's device, the network infrastructure, and the server **to reduce finger pointing**
2. Understand how **traffic volume** impacts performance
3. Isolate delay to a specific server or network, whether or not they are under your control

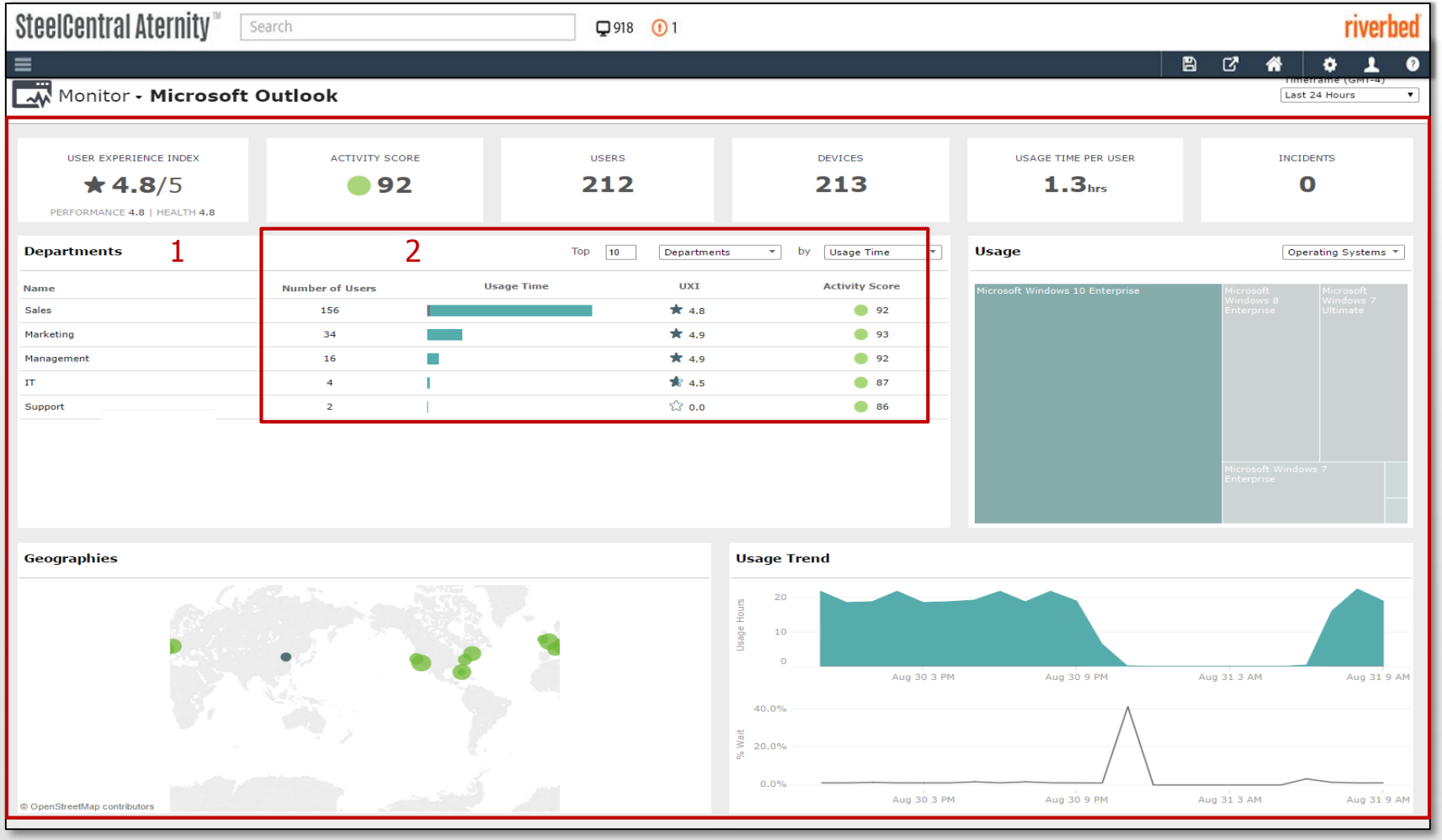


Level 3 application teams

Improve app and business performance

1. Trend application health, and performance by OS, department, geography, and device type to identify opportunities for improvement

2. Evaluate business activities by performance score and number of users **to prioritize efforts to improve productivity**



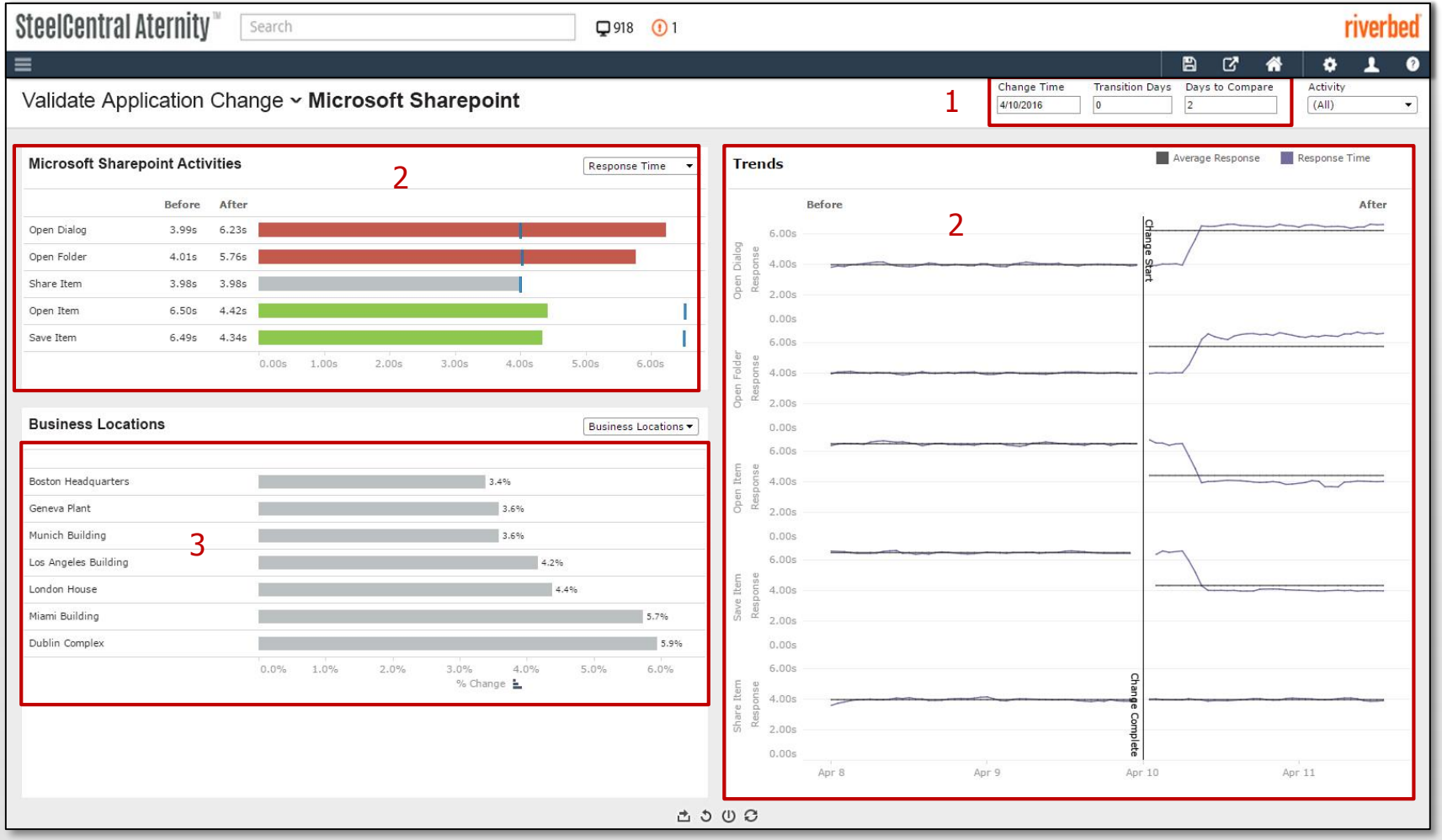
Level 3 application teams

Assess the impact of change on business activity performance

1. Identify the timeframe of the change and the analysis window

2. Assess business activity volumes and response time relative to SLA targets, before and after the change

3. Use response time, as seen by the end user, to **quantify the impact of the change** by location, server, or device type



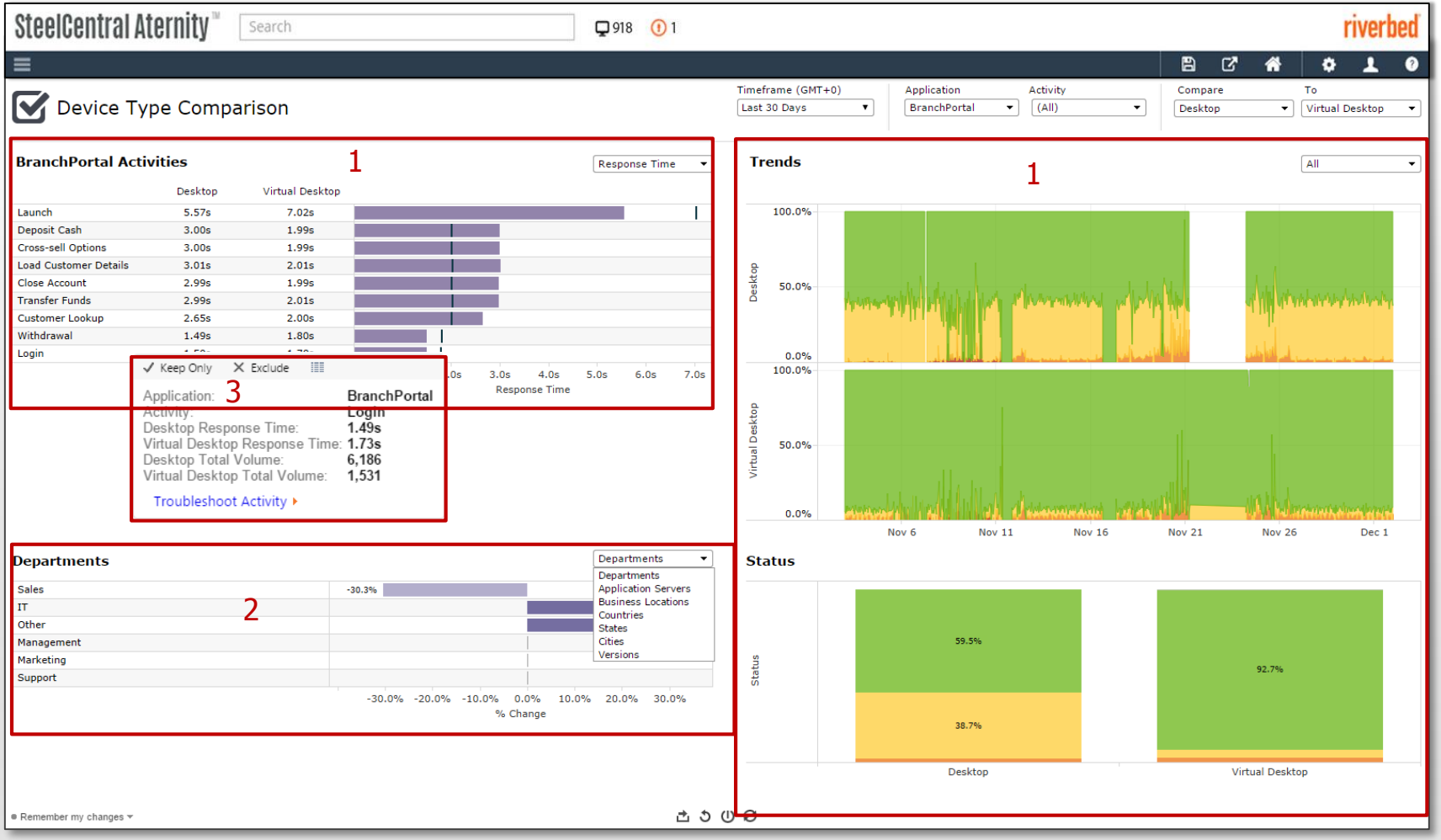
Level 3 app and virtualization teams

Assess the impact of virtualization on end user experience

1. Compare performance by business activity response time and by SLA conformance

2. Analyze performance by department, application server, geography, etc. **for fact-based decision making**

3. Drill-down into poorly performing activities for further investigation



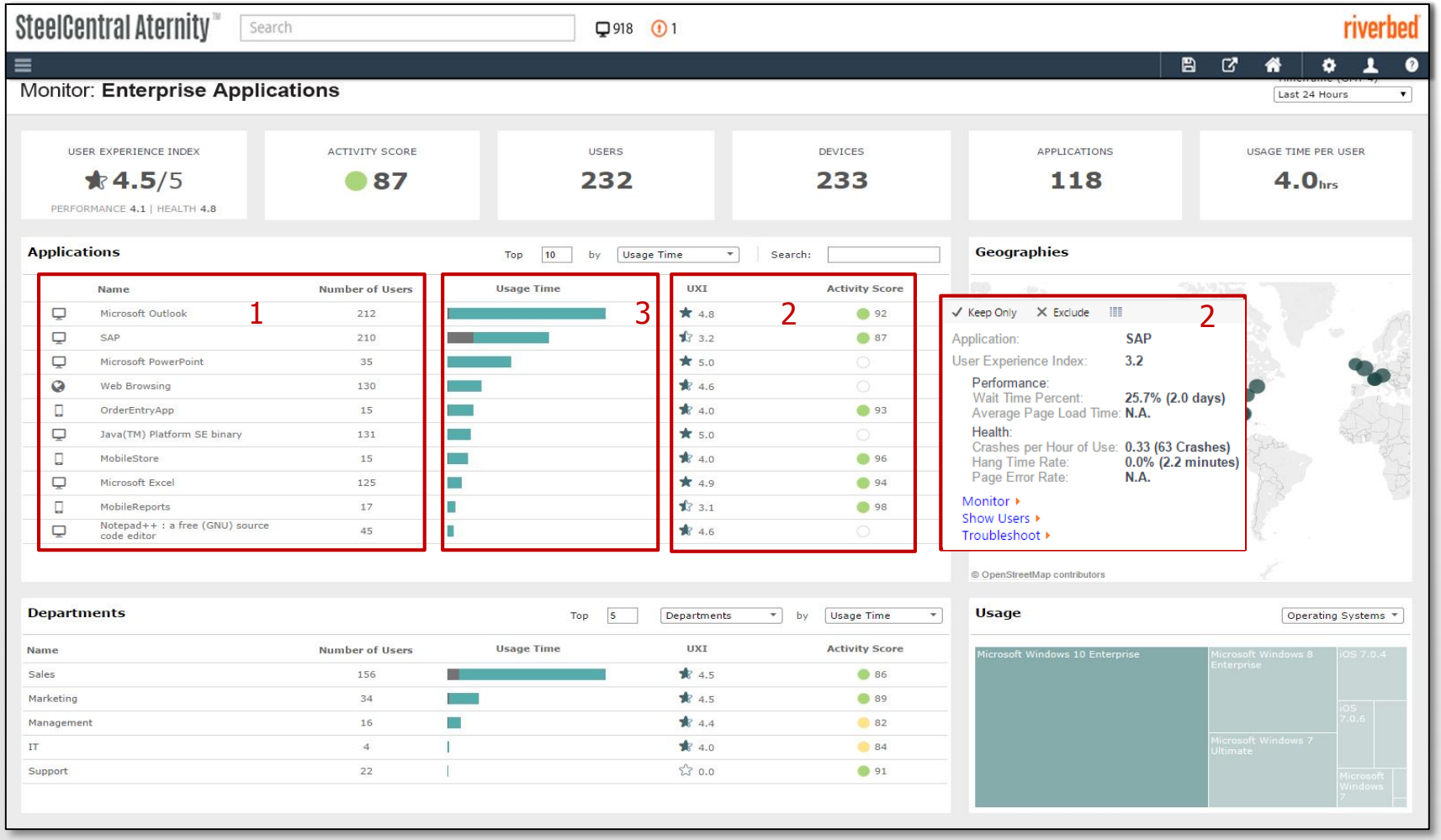
App owners

Assess app performance and adoption across the enterprise

1. Discover every local, cloud, and mobile application, to **verify actual license usage and combat "Shadow IT"**

2. Immediately evaluate application health, to **prioritize problem investigation**

3. Instantly view every application's performance to assess the impact on **enterprise-wide productivity**



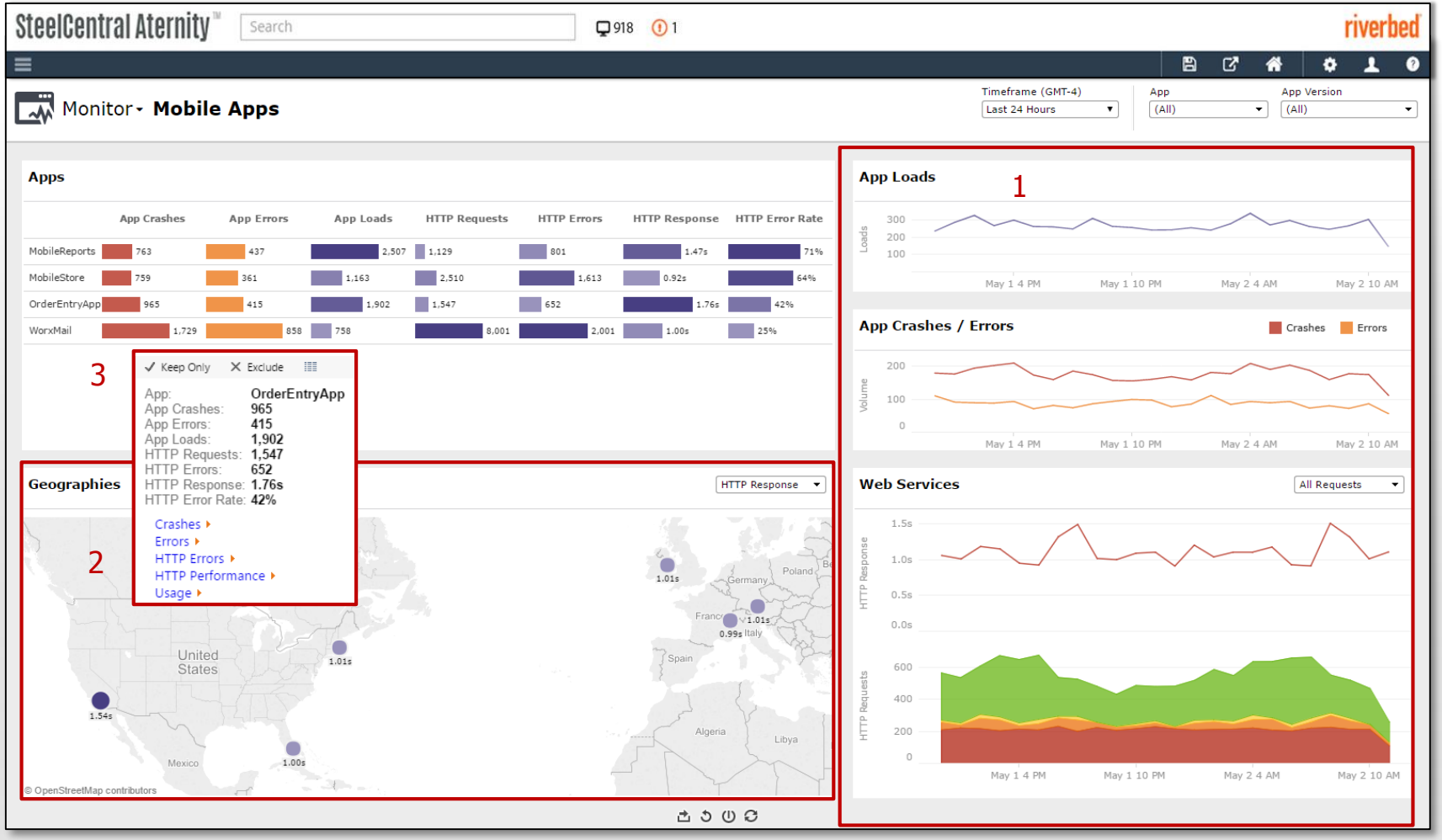
Mobile app developers

Troubleshoot app problems impacting user experience

1. Analyze the overall performance of any app in the portfolio

2. Assess performance by geographic location to evaluate the impact

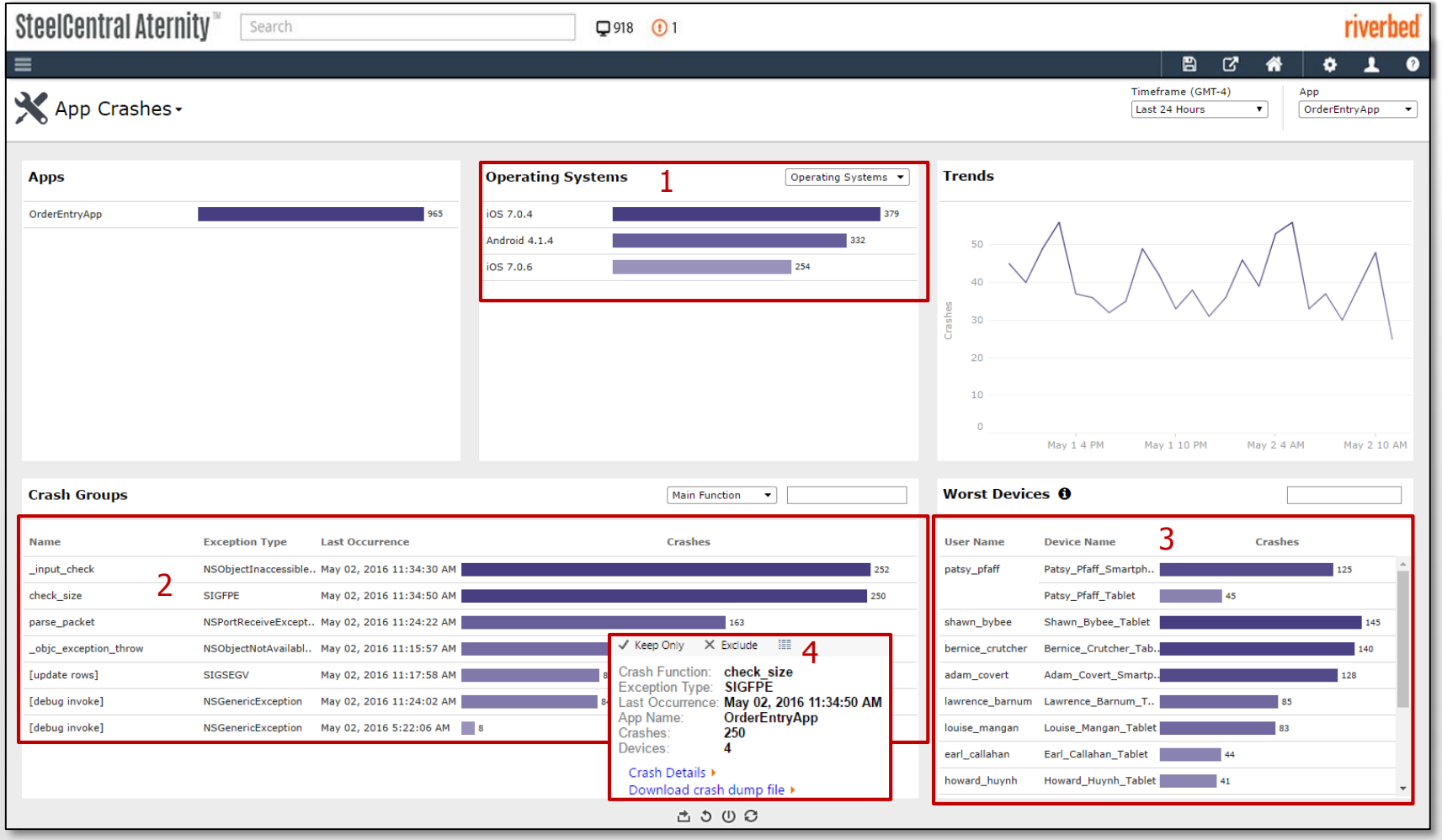
3. Drill down for more **detailed analysis of key metrics to speed up problem resolution**



Mobile app developers

Investigate the cause of app crashes

1. Review crashes by OS, carrier, app version, or location
2. Investigate the most frequent crashes by function, device type, OS, or carrier
3. Identify the most impacted devices
4. Analyze exception type, full stack trace & crash dump to **pinpoint the problem**



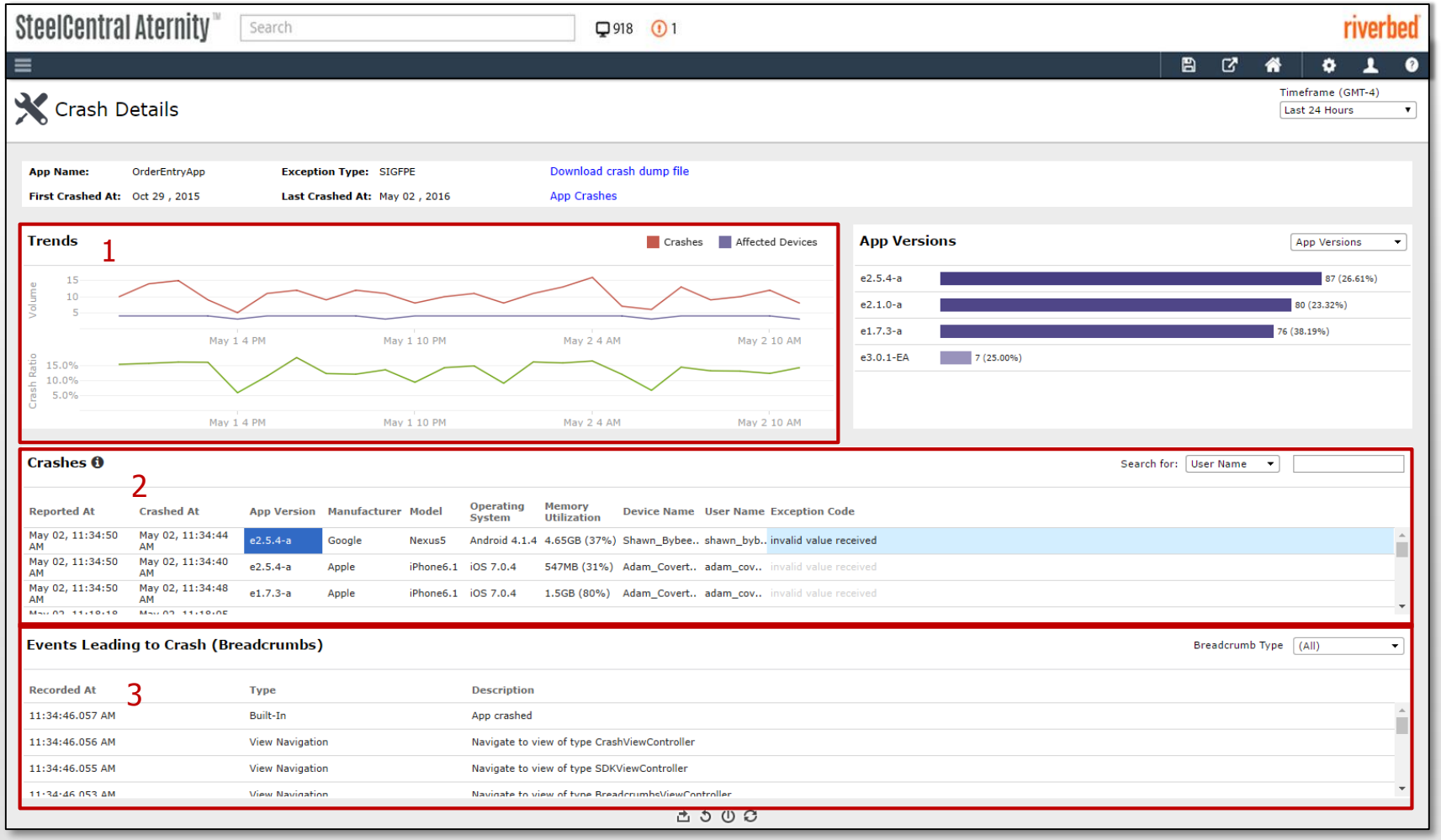
Mobile app developers

Drill down into app crashes to determine the cause

1. Trend the number of crashes, the number of affected devices, and the percentage of app launches resulting in a particular crash

2. View specific crash snapshot information across users and devices

3. Review breadcrumbs to analyze the steps leading up to the crash to **rapidly determine the probable cause**



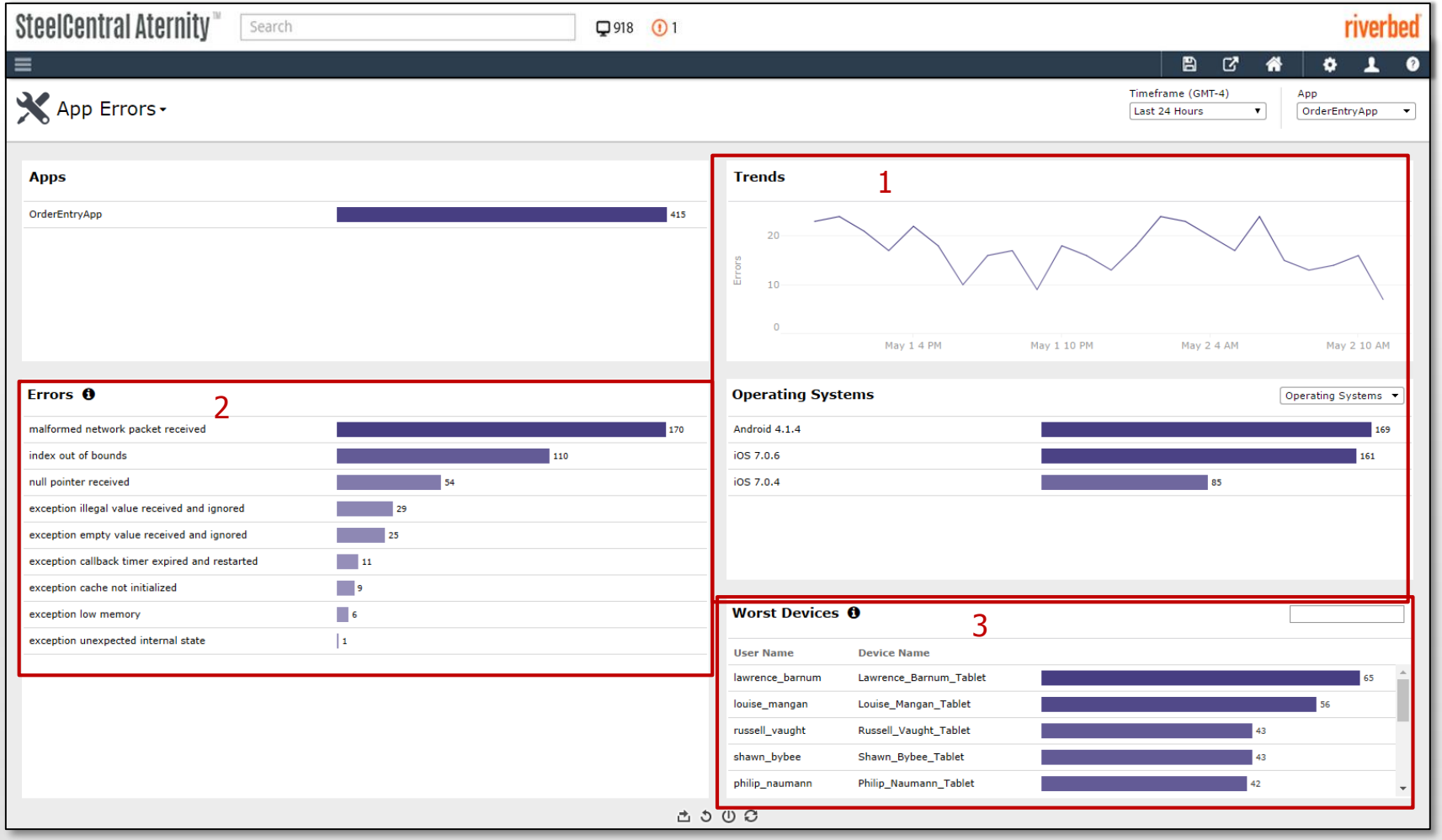
Mobile app developers

Diagnose errors to restore service

1. Analyze error trends by OS, carrier, app version, or location to determine the extent of the problem

2. Identify the most frequently occurring errors to **prioritize resolution on the worst problems**

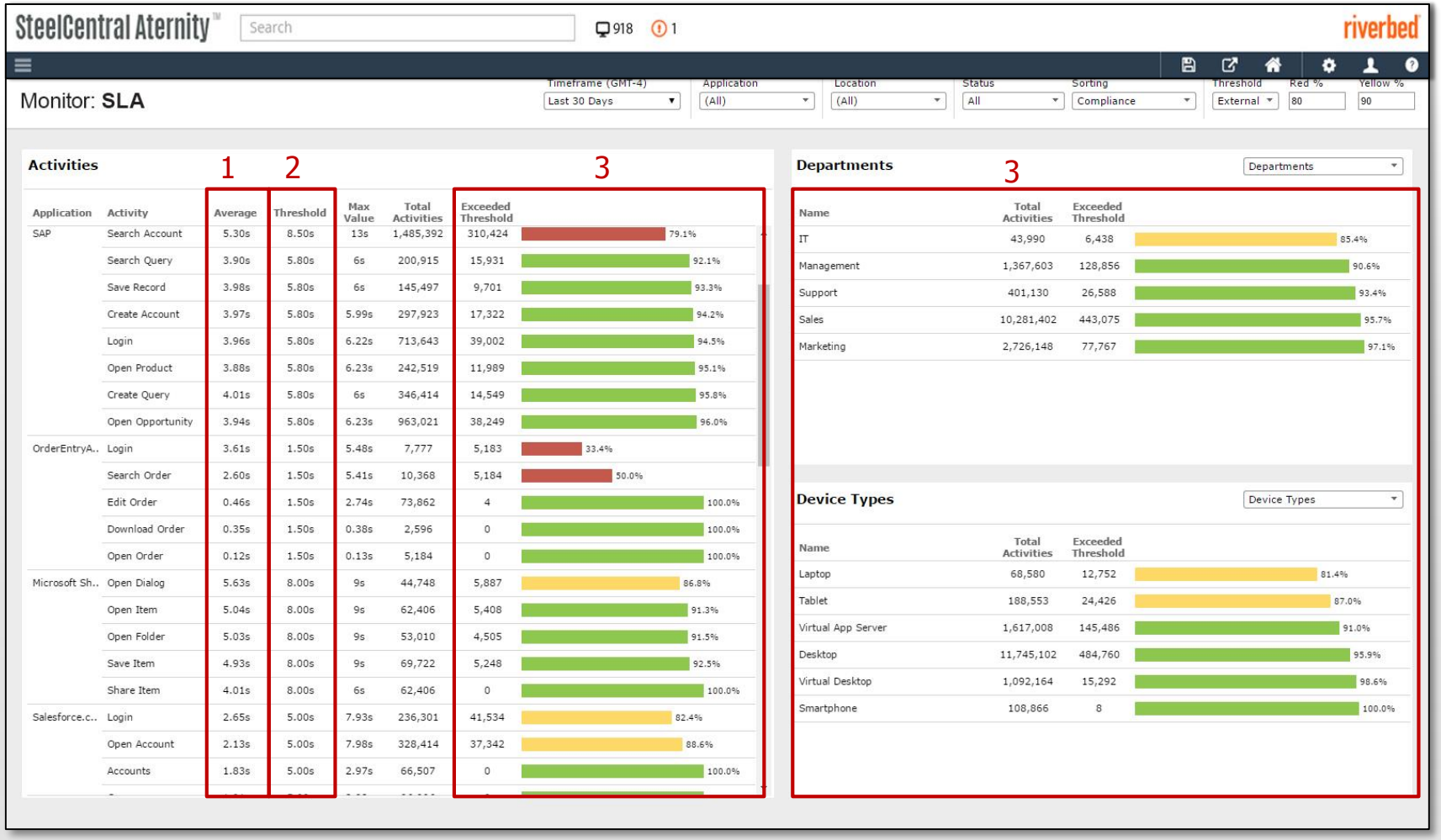
3. Identify the impacted users to resolve problems before they complain



Business & IT executives

Monitor application performance SLAs to improve customer sat

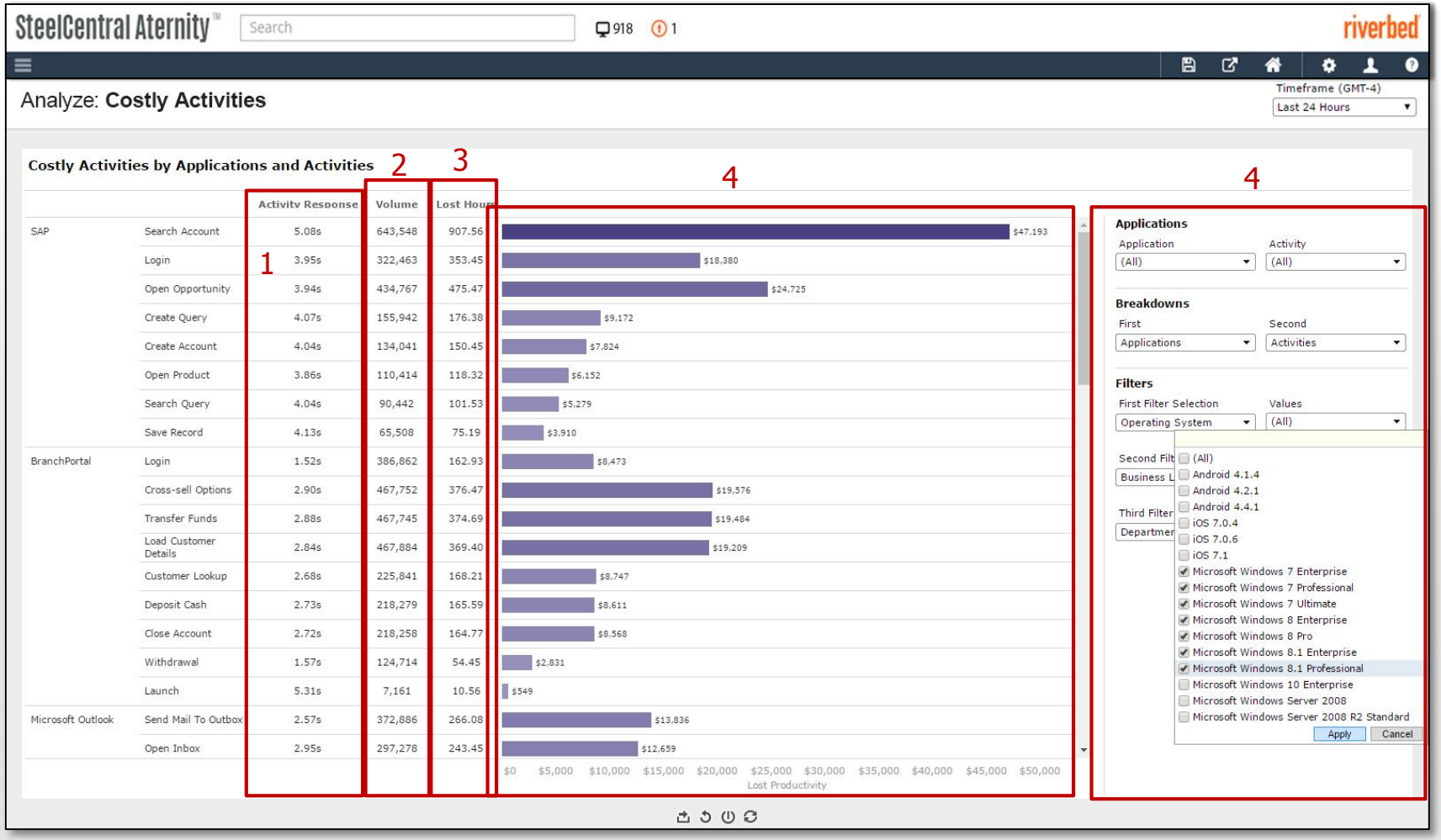
1. Identify normal app performance for groups of users
2. Set **SLAs that meet customer expectations for key business activities**
3. Compare **each instance of every user's execution** of these activities to the SLA, for enterprise-wide application performance service level management



Business & IT executives

Assess the impact of app performance on workforce productivity

1. Understand normal response times for business activities done by the workforce
2. Track the volumes of business activities
3. Identify the productivity loss in hours due to poor app performance
4. Quantify the **productivity loss in financial terms**, by department, location, OS, etc.



Key Takeaways

- End User Experience Monitoring for any app and any device
- Monitor applications, as they render on the screen of the user's device
- Monitor user's interactions with applications in the context of a business workflow
- Hold Cloud and SaaS vendors accountable to SLAs based on business processes
- Validate the impact of IT changes on end user experience

Thank You


Technology Initiatives

Cloud

- Business pain
  - How do I hold my provider accountable to SLAs when I don't control the infrastructure?
  - How do cloud-delivered apps compare to those run in our data center?
  - How does the performance of cloud-delivered apps vary across my worldwide workforce?
- Technical challenges
  - How do I measure end user experience without access to the infrastructure on which my apps run?
  - Users complain of slow app response. How do I know where the problem is?
  - My cloud provider just did an upgrade. Did performance actually improve?

A regional healthcare provider used Aternity to reduce the time to execute critical patient care business activities on their cloud-hosted Allscripts application by 80%

Mobile

IT Operations

- How do I troubleshoot user complaints so I can quickly resolve the issues?
- How do I proactively detect and prioritize incidents?
- How do I monitor user experience for 3rd-party developed apps?

Developers

- How can I be alerted quickly to app performance issues?
- How do I pinpoint the cause of app issues?
- How do I optimize performance across devices, OS's, carriers, etc?

Line of Business

- How do I deliver the best user experience?
- How do I confirm that our mobile initiative delivers the expected gains in productivity?
- How do I meet users' expectations as we transition to mobile?

A global communication provider uses Aterniy to monitor its Point of Sale applications in retail locations to ensure revenue, customer satisfaction, and workforce productivity

Change Management

- Business pain
  - How do I cost justify the investment to improve performance?
  - Has my recent technology refresh had the desired impact on performance?
  - How does performance of business critical applications vary across geographies?
- Technical challenges
  - Users are complaining of slow response. How do I know where the problem is?
  - What desktop configuration will result in the best service for my users?
  - Users do not always report issues right away, so when I am alerted the data I need is gone

A global technology company used Aternity to validate performance and eliminate 98% of manual stop watch testing after migrating Siebel from Tokyo to a new Sydney data center

Virtualization

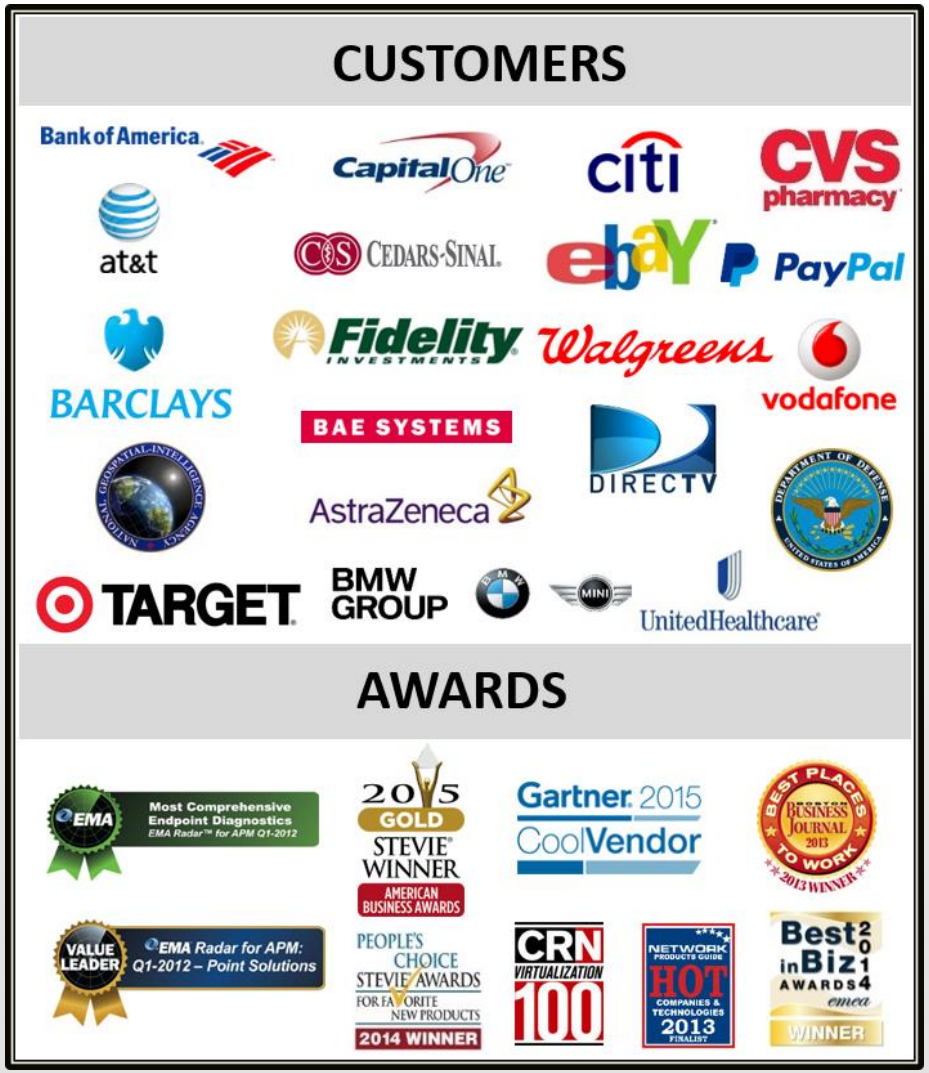
- Business pain
  - How do I maintain SLA compliance on after migrating apps to VDI?
  - Has performance suffered after migrating to a centralized virtual infrastructure?
  - How does the performance of critical business activities vary across geographies and office locations?
- Technical challenges
  - Users complain that VDI migration caused their apps to slow down. How do I determine if that's true?
  - How can I determine whether user complaints are caused by an app issue or a remote display latency problem?
  - How do I resolve VDI problems before users are impacted?

A $34B chemical provider used Aternity to validate 100% compliance to application SLAs after migrating SAP and productivity applications to a Virtual Desktop Infrastructure

Supplementary

Aternity background

- Global 2000 customers in every industry
- Installed on millions of enterprise devices
  - Physical & virtual desktops
  - Mobile devices
- Deployments from 1K to 100K+ devices
- End User Experience Monitoring
  - Any application
  - Any device
  - Any user



Tag-free mobile app instrumentation

Instrumentation for business activities with no developer required

Any Workforce Device

- Aternity support for workforce mobility extends from Android and iOS through Windows Surface and VDI

Mobile App Wrapper

- Support for iOS & Android
- Run-time instrumentation for Windows Surface apps
- Partnerships with IBM, Citrix, MobileIron, Good

Mobile Web Viewer

- Support for monitoring any web app
- Transforms URLs to hybrid apps for ease of use
- Correlates device and network health

Aternity platform architecture

Enterprise-wide scalability