

# From Screaming to Streaming – A journey to DevOps

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VP Product Management , Portfolio and Lifecycle Management, ADM

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# Micro Focus Today

Built on stability, innovation and delivering for customers over the long term

Novell.

NetIQ.

Borland

Attachmate

SUSE

SERENA

COBOL



40  
YEARS

Content Manager  
Network Management  
Data Protector

OPSWARE INC.  
Automating IT™

FORTIFY

VERTICA

Peregrine  
SYSTEMS.

MERCURY™

SHUNRA

Voltage  
security

ArcSight

# Micro Focus ADM – Our own DevOps Transformation

Practice what we preach, drinking our own Champagne

From

8 products

Major release every **18-24 months**

Build to QA every **2-4 weeks**

Automation runs **on demand** for specific areas



To

**15+ products** with web and mobile

Quarterly on-premises release and a SaaS release every **month**.

**Daily/hourly** and **continuous** builds to QA

**Continuous** automation in DevOps pipeline

# Three transformation aspects



Manage the  
Change



Quality @  
Speed



DevOps  
Insights

# Manage

Focus on What Matters



“What if we don’t change at all ...  
and something magical just happens?”

# Manage the Change

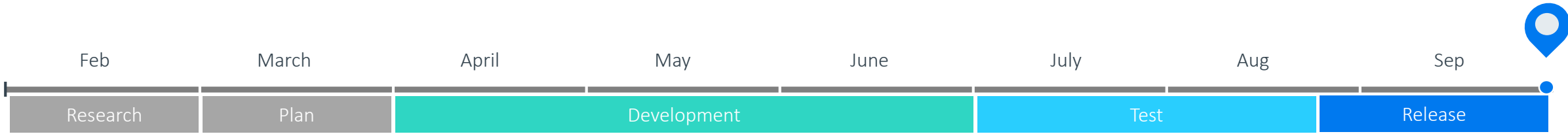
DevOps is a change in mind set.

- Focus on the Right Thing
- Incremental progress
- Different Success Factors

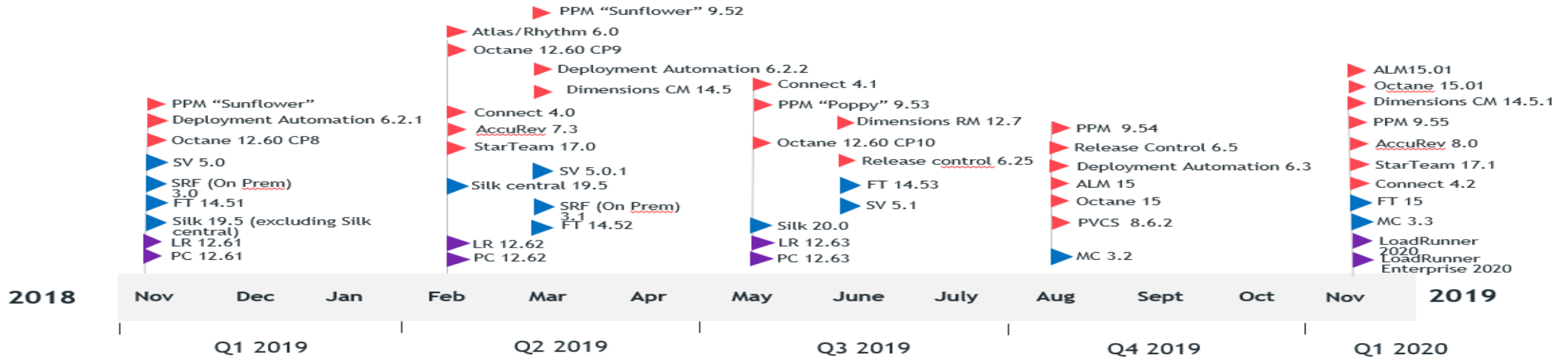
## Shift of Critical Success Factors:

FROM	TO
Content followed by Stabilization and Quality	Sprint Quality & Stability before content (DoD)
Successful regression cycles	CI stable at all time
How much time it will take to test/stabilize (weeks)	How fast we can deliver input back to developers (minutes)
What is the release status	Cont. updated status on readiness and projection
Release when all planned content is done	Fixed release trains, continuously deliver based on priorities

# Going from:



# To:







Backlog

OVERVIEW

EPICS

**FEATURES**

BACKLOG ITEMS

TESTS

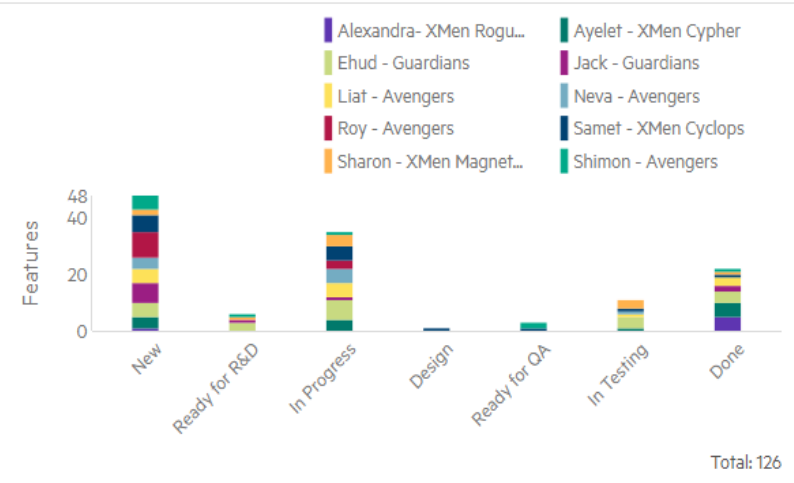
+ Feature ▾



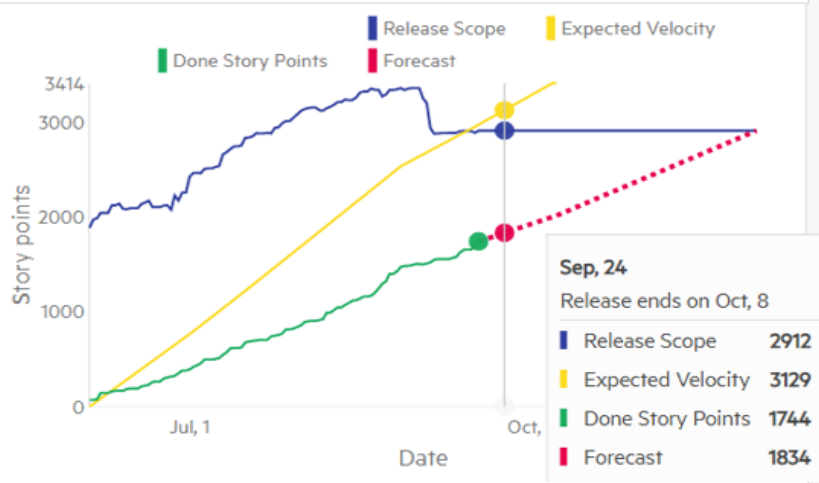
ID	Name	Tags	Rank	Progress	Test Coverage	Defects	Risky Commits	Vulnerabilities
152009	<span>F</span> Account Search	commitment	1	<div style="width: 91%;"><div style="width: 91%;"></div></div> 91%	<div style="width: 91%;"><div style="width: 91%;"></div></div>	0	<span>⚠️</span>	<span>⚠️</span>
152012	<span>F</span> Mobile Store Database	commitment	2	<div style="width: 84%;"><div style="width: 84%;"></div></div> 84%	<div style="width: 84%;"><div style="width: 84%;"></div></div>	1		
152015	<span>F</span> Mobile Store Purchasing	commitment	3	<div style="width: 87%;"><div style="width: 87%;"></div></div> 87%	<div style="width: 87%;"><div style="width: 87%;"></div></div>	0	<span>⚠️</span>	
152013	<span>F</span> Mobile Store Sea...		4	<div style="width: 78%;"><div style="width: 78%;"></div></div> 78%	<div style="width: 78%;"><div style="width: 78%;"></div></div>	0	<span>⚠️</span>	<span>⚠️</span>
152008	<span>F</span> Online Store Database	commitment	5	<div style="width: 73%;"><div style="width: 73%;"></div></div> 73%	<div style="width: 73%;"><div style="width: 73%;"></div></div>	0		
152026	<span>F</span> Online Store on Cloud Datab...		6	<div style="width: 52%;"><div style="width: 52%;"></div></div> 52%	<div style="width: 52%;"><div style="width: 52%;"></div></div>	0		
152030	<span>F</span> Online Store on Cloud Purch...	commitment	7	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	23	<span>⚠️</span>	<span>⚠️</span>
152011	<span>F</span> Online Store Purchase		8	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	0		
152029	<span>F</span> Chat		9	<div style="width: 12%;"><div style="width: 12%;"></div></div> 12%	<div style="width: 12%;"><div style="width: 12%;"></div></div>	0		
152028	<span>F</span> CheckCredit	commitment	10	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	0		
152021	<span>F</span> Personal Preferences		11	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	0		
152027	<span>F</span> Login		12	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	0		
152009	<span>F</span> Account Search		20	<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	<div style="width: 0%;"><div style="width: 0%;"></div></div>	0		



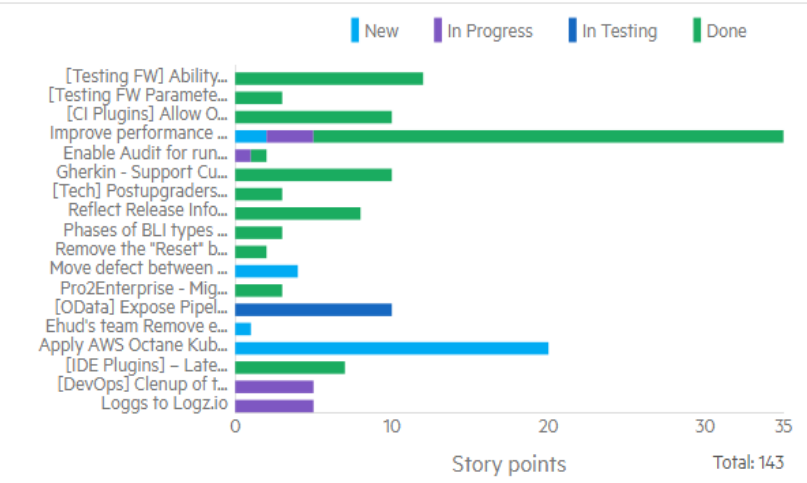
### FEATURES WIP PER TEAM



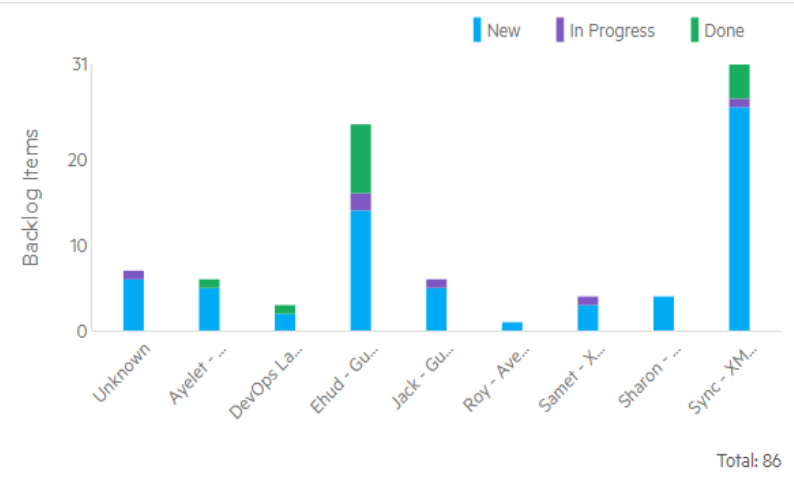
### RELEASE FORECAST



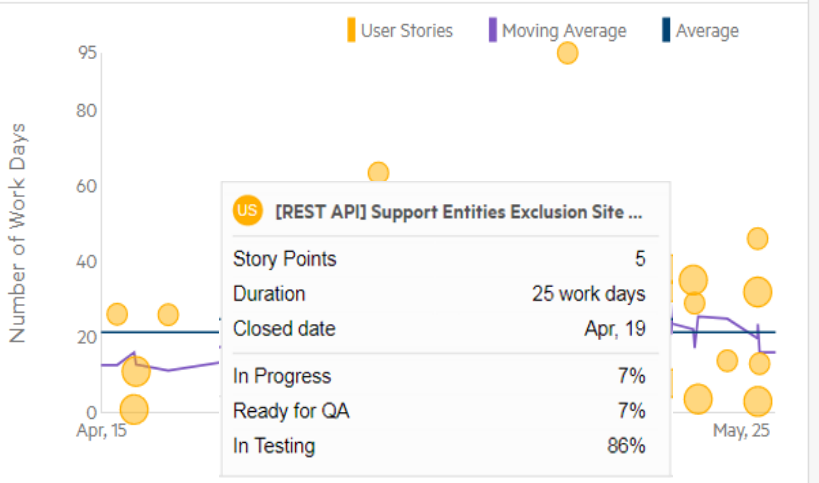
### FEATURE STATUS IN ORDER OF RANK



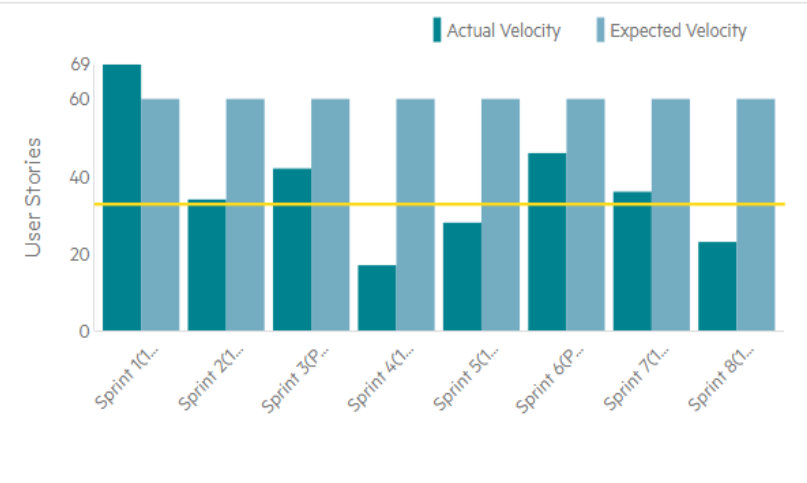
### AUTOMATION EFFORT PER TEAM



### CONTROL CHART



### VELOCITY TRACKING



# Culture Change

## Collaboration & Communication at the core

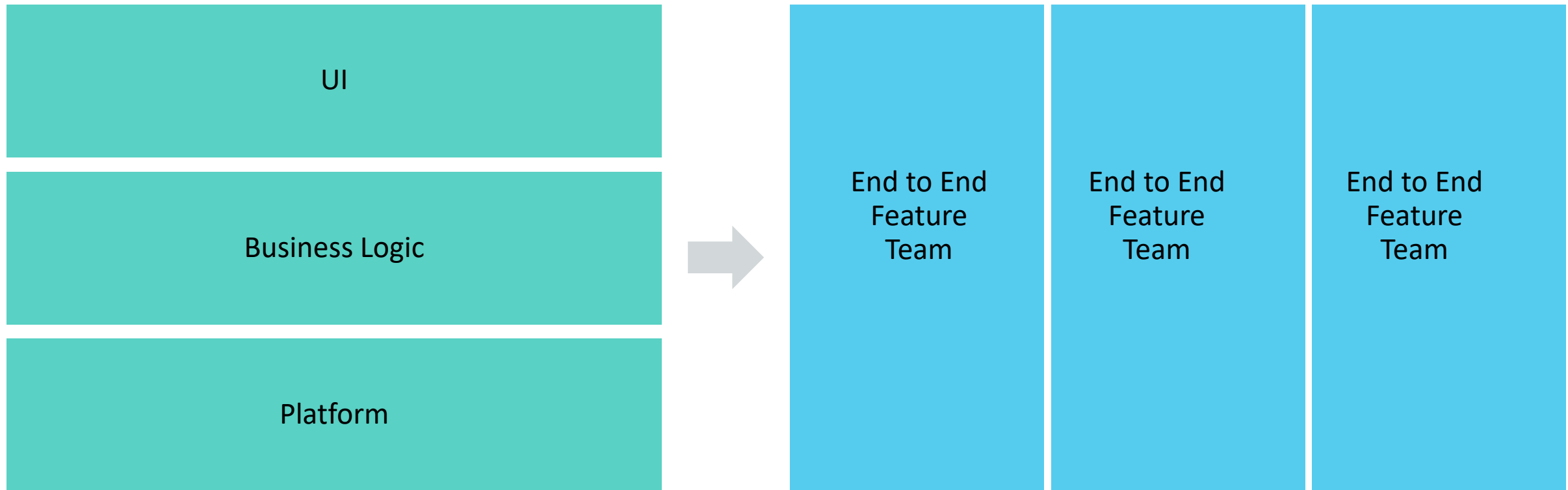
- Breaking the Silos
- Involve all stakeholders at early phases
- Structural changes



“What if, and I know this sounds kooky, we communicated with the employees.”

# Organizational Structure Change

Agile Team Structure – Move from Horizontal to Vertical Teams



# Continuous Learning



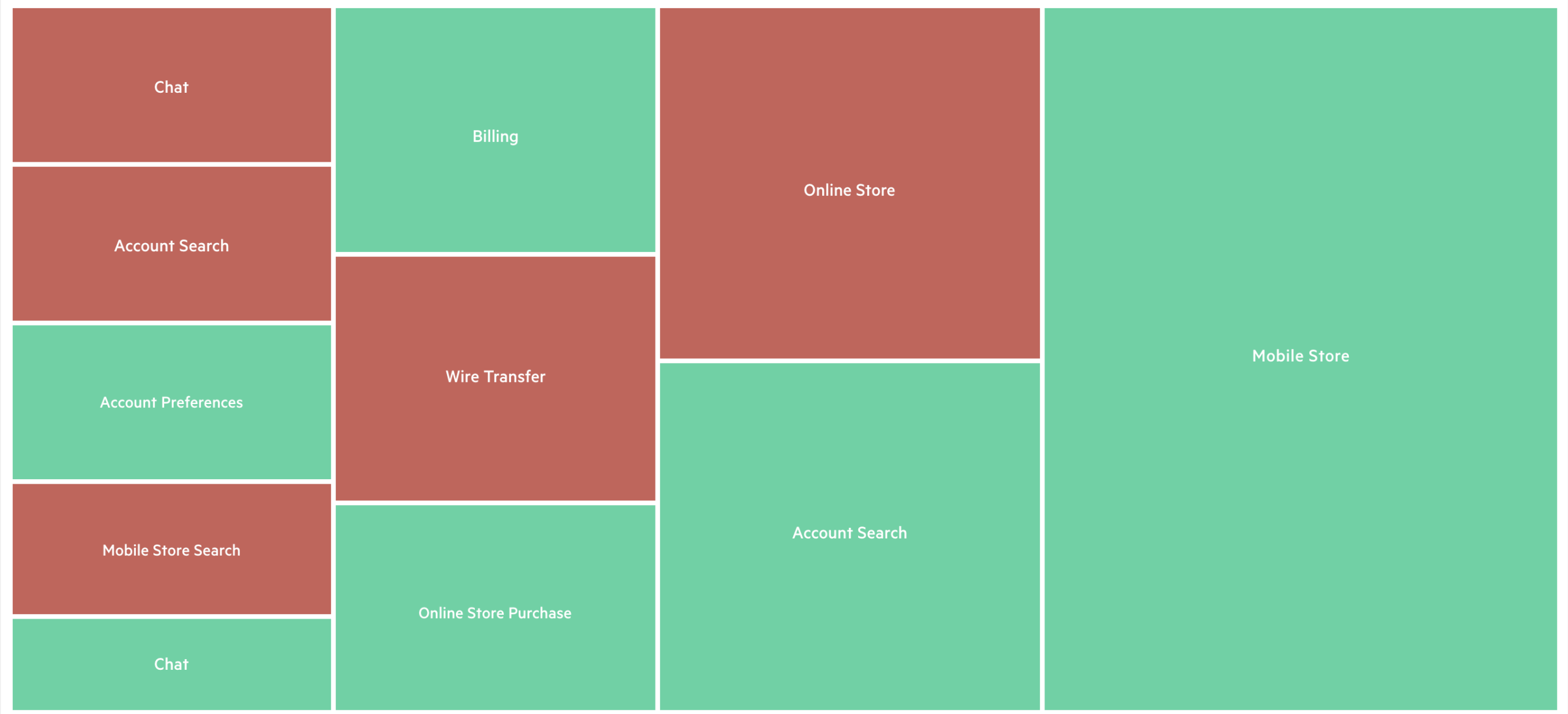
Quality  
at  
Speed





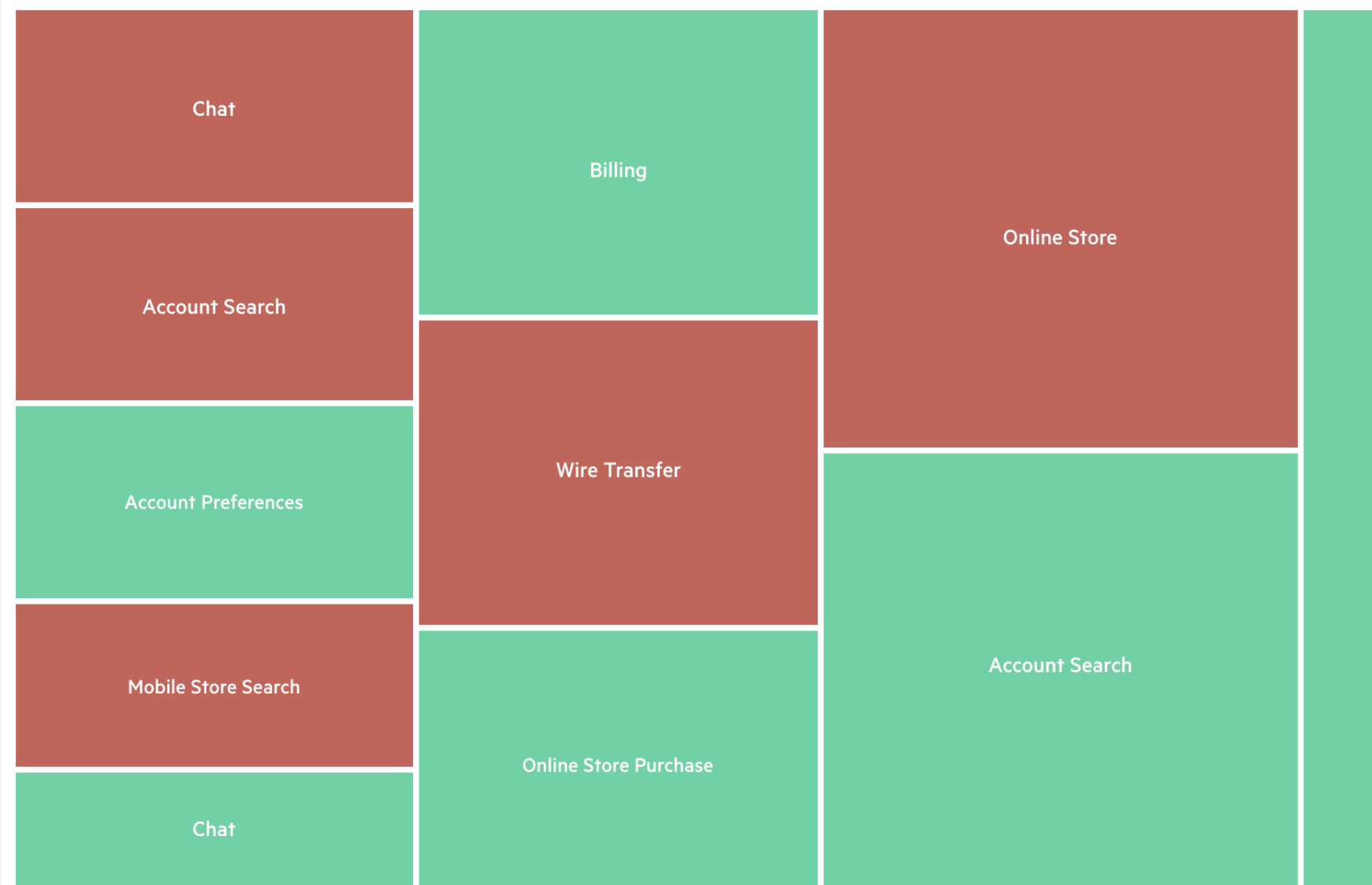
Overall Quality & Automation Effectiveness

Quality Per Application Module



Overall Quality & Automation Effectiveness

Quality Per Application Module



### Configuration

**Define problematic application modules**

- More than 0 defects matching filter
  - Severity: Critical, Very High
  - Phase: New, Opened
- Less than 0% Automation
- No test coverage
- More than 50% Risky commits

---

**Last runs**

- More than 5% failed last runs matching filter
  - Latest Pipeline Run: Yes
  - Pipeline: Full Master

---

**Problematic tests**

- More than 5% Continuously Failing
- More than 5% Oscillating
- More than 5% Regression
- More than 5% Continuously Skipped
- More than 5% Unstable



# Quality at Speed

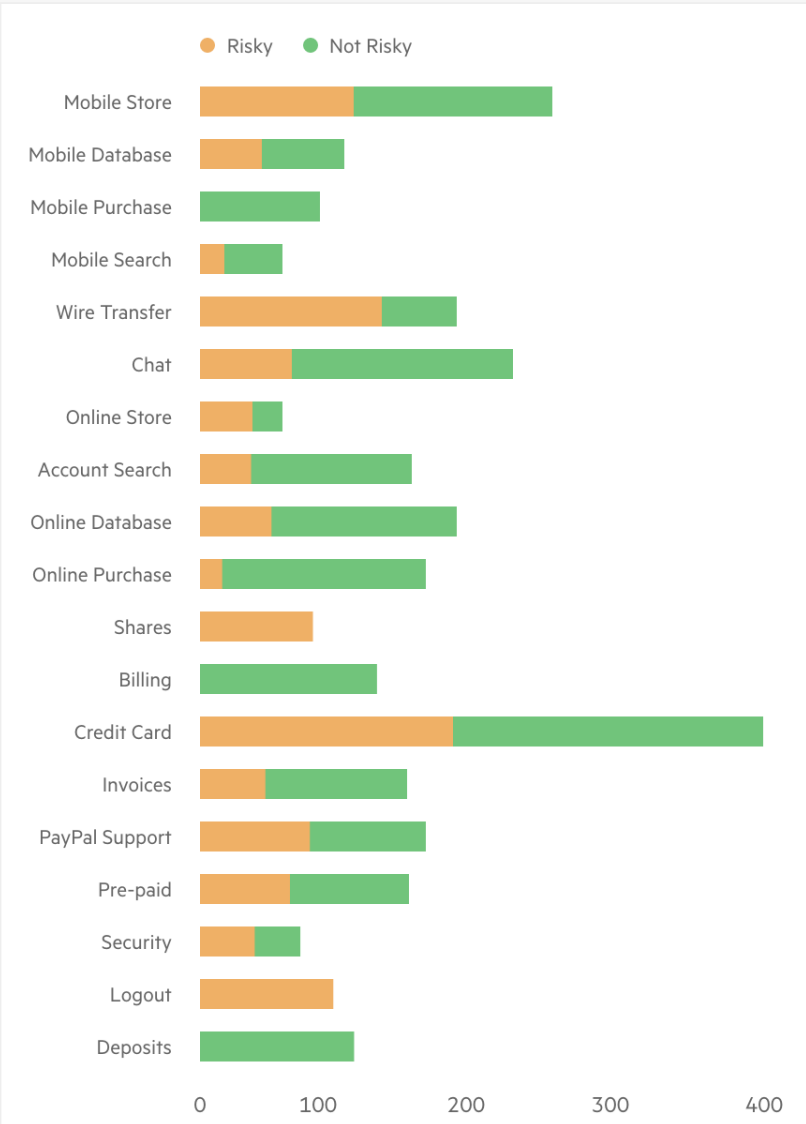
## Test Early and Automate

- Automation – where to start from...?
  - Don't go from 0% to 100% automation at once – very fast you will lose control!
  - Measure automation investments and cost
- Automation Effectiveness & Stability
  - Where to focus your testing effort?
  - How to identify false positives/unstable tests?
  - How to provide fast feedback to developers?
- Who writes automation ?

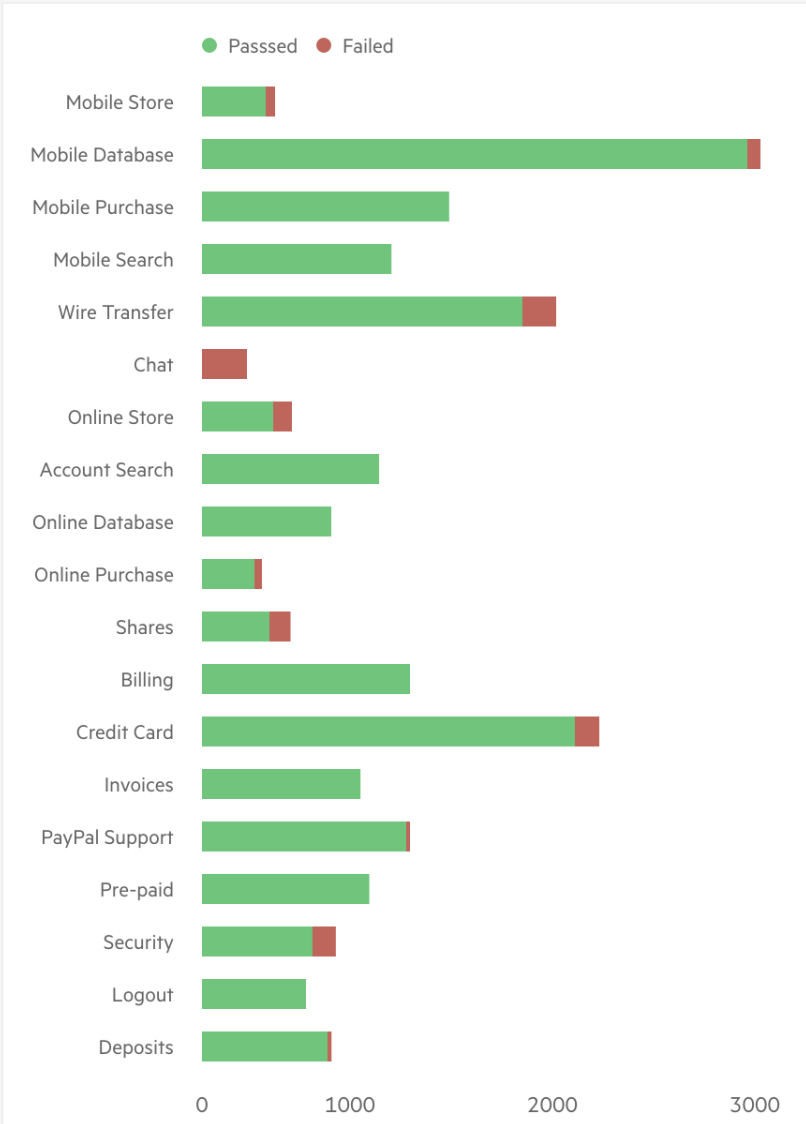


Risk Identification

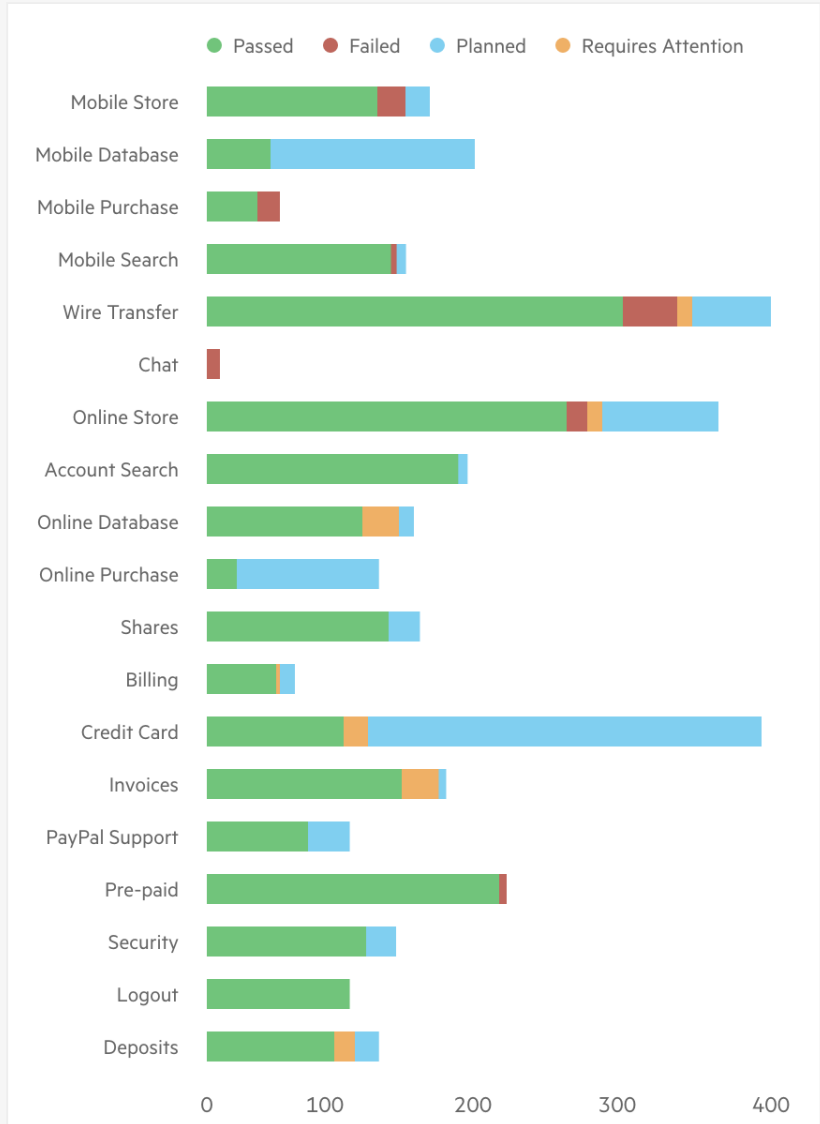
Risky Commits Per Application Module



CI Automation Tests Per Application Module

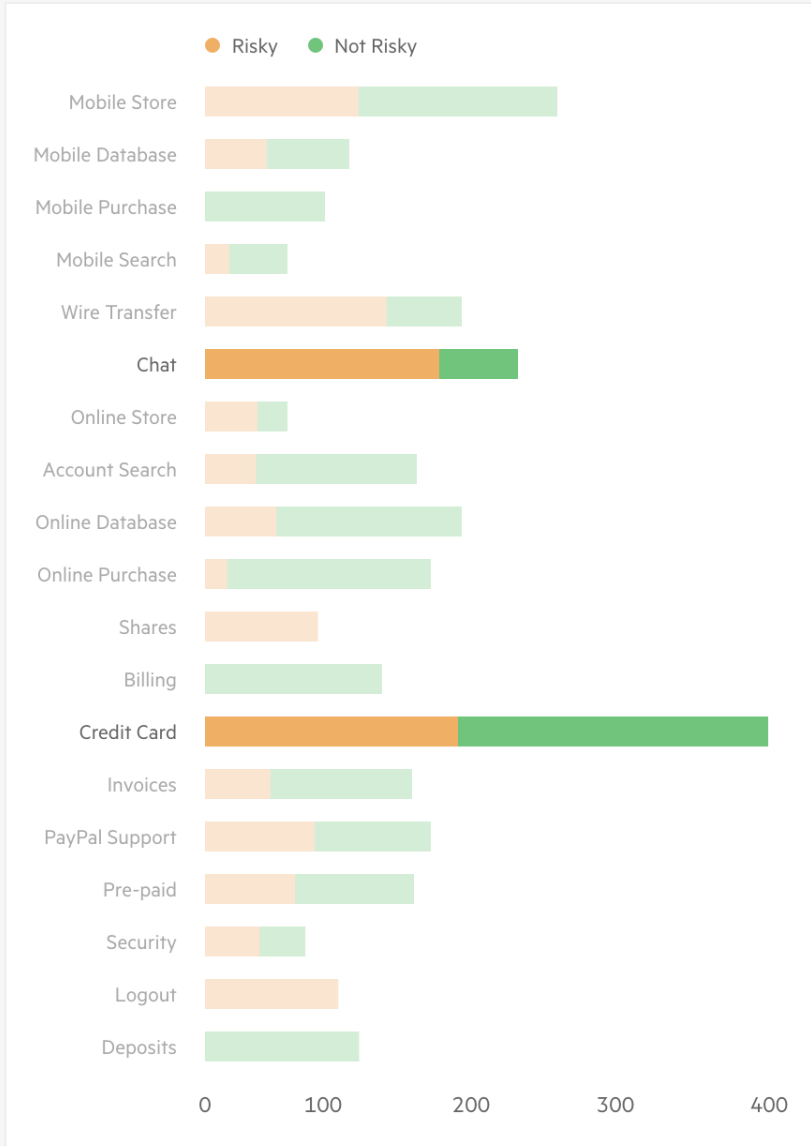


Manual Tests Per Application Module

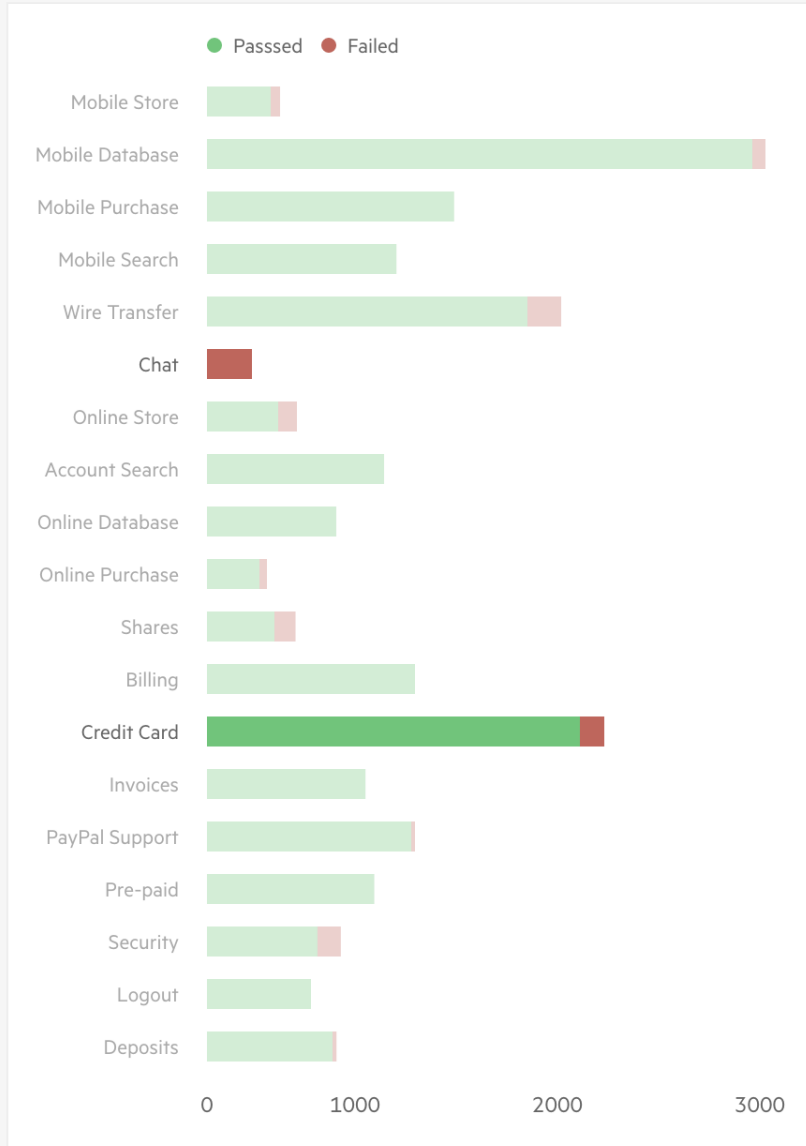


Risk Identification

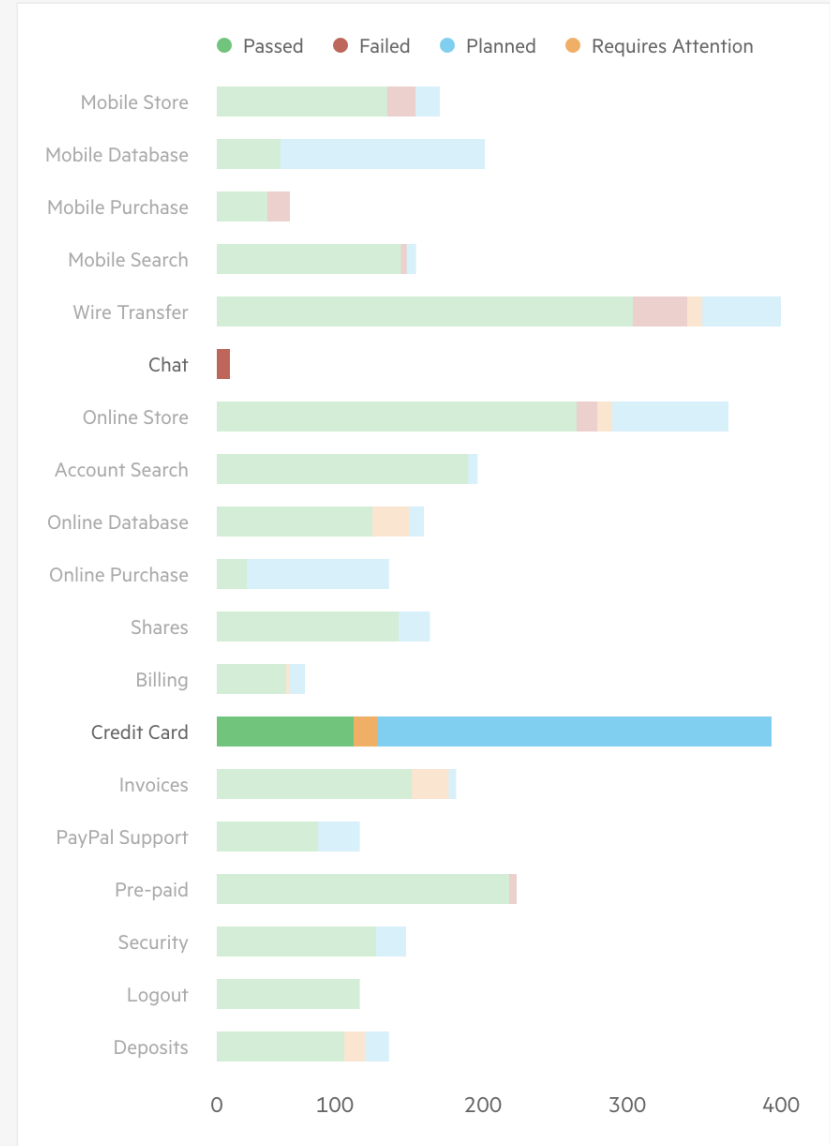
Risky Commits Per Application Module



CI Automation Tests Per Application Module

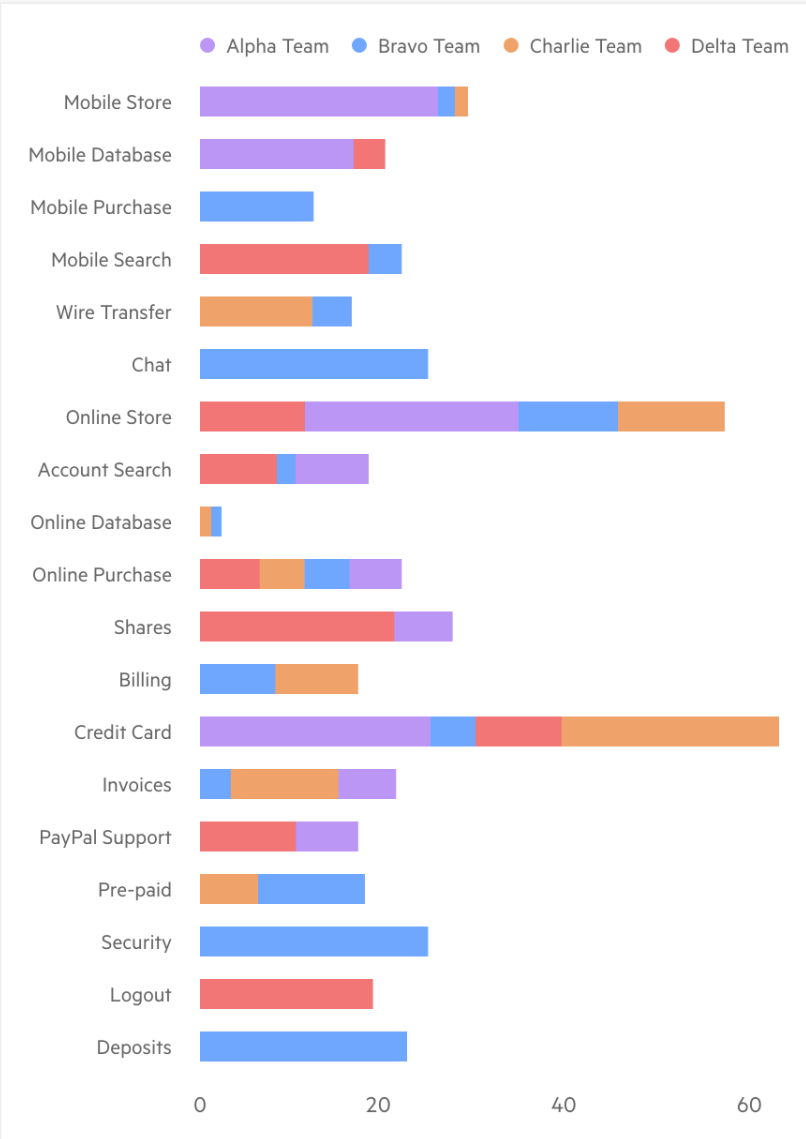


Manual Tests Per Application Module

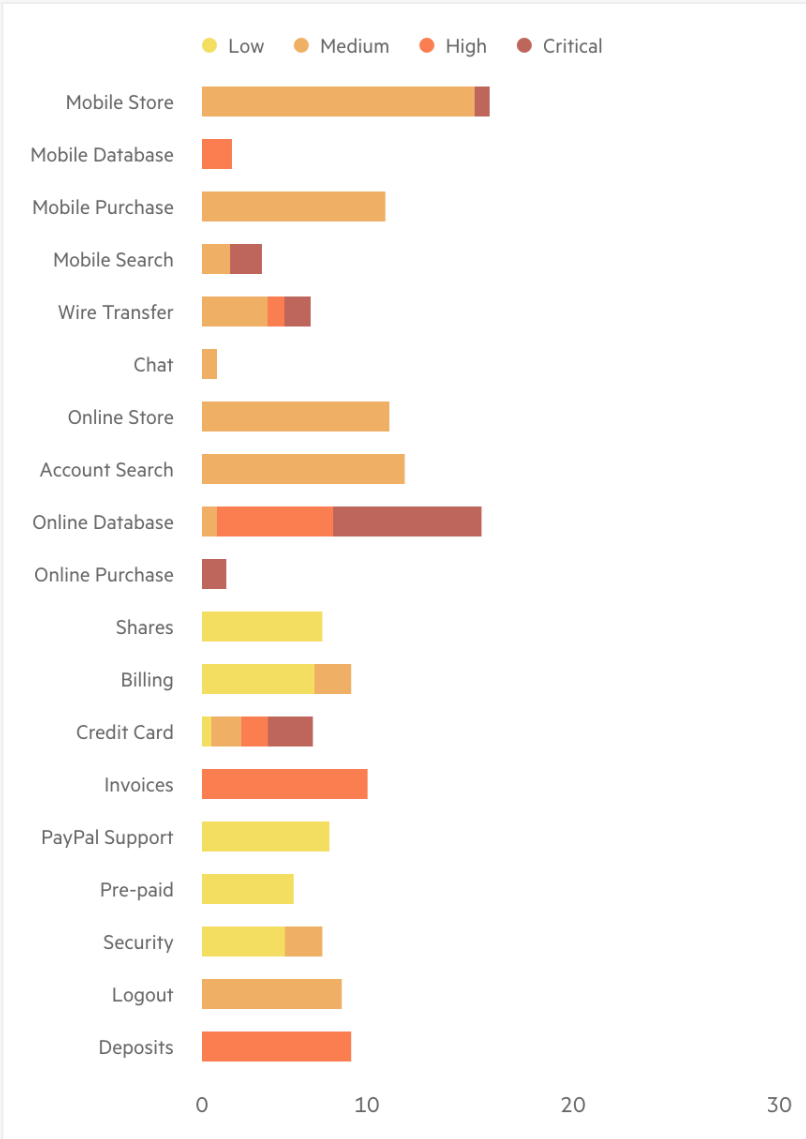


Quality Analysis

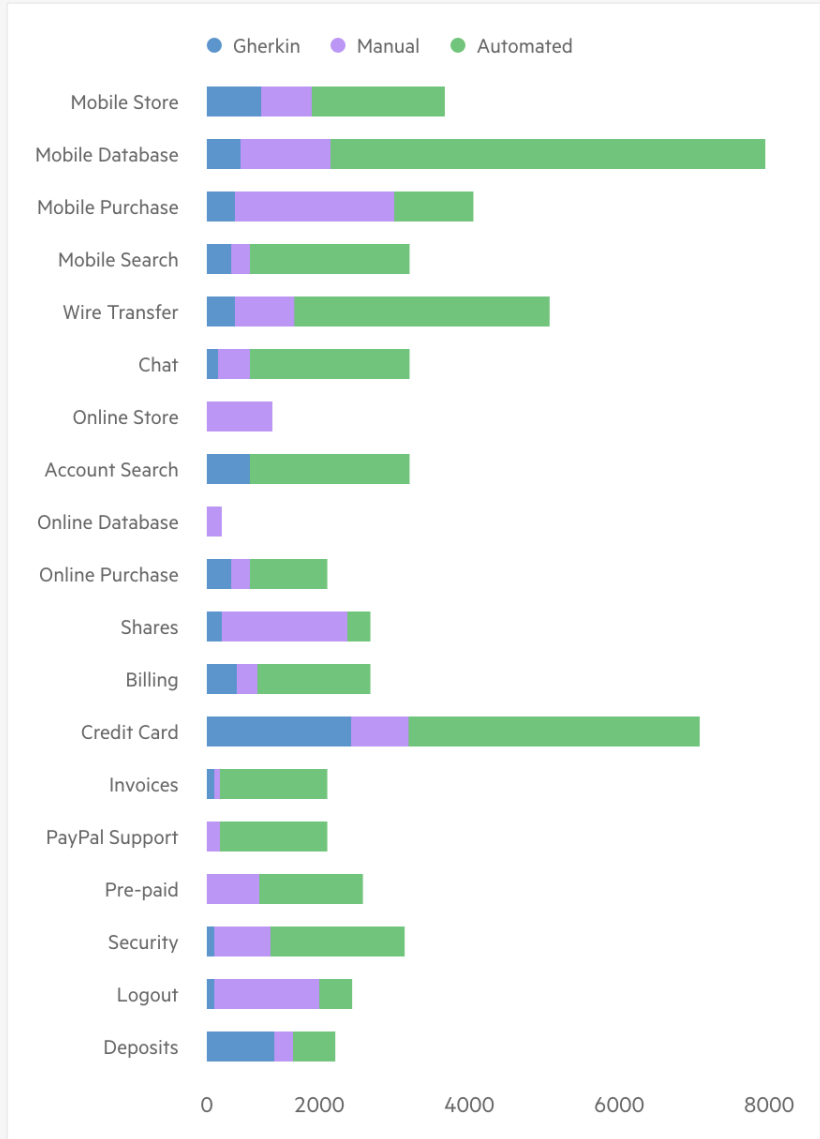
Features Per Application Modules - By Team



Open Defects Per Application Module

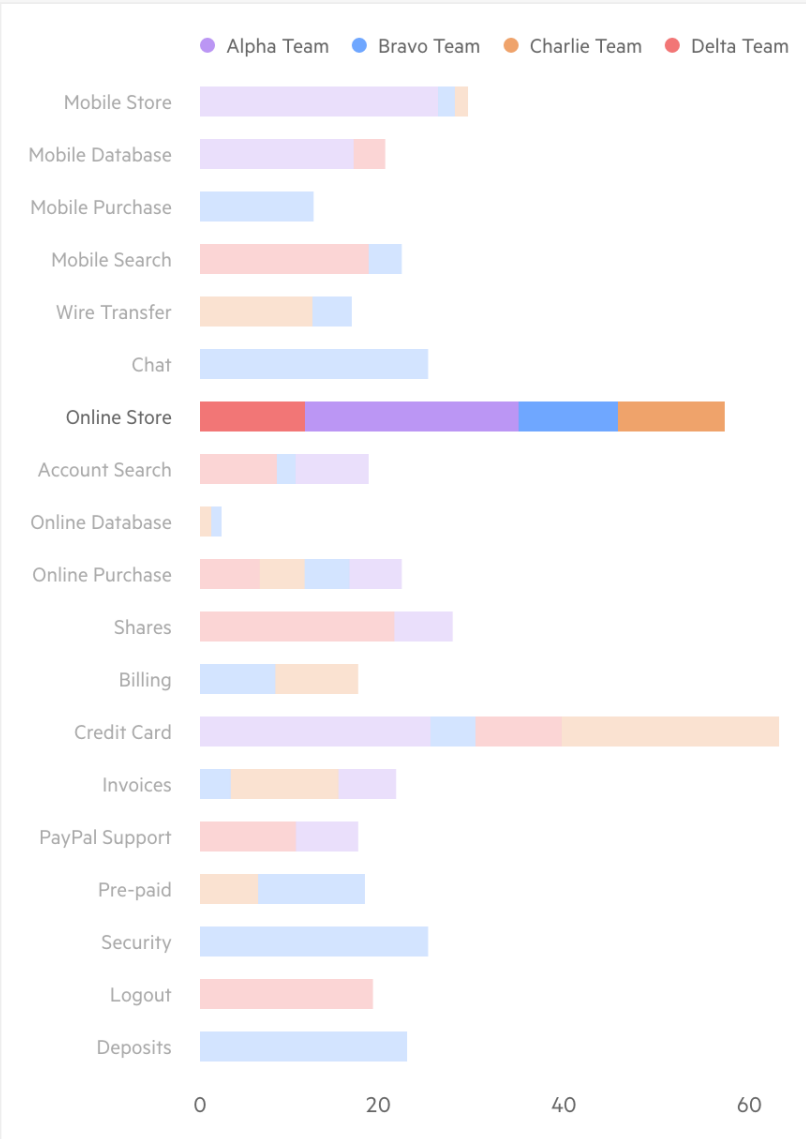


Tests by Type

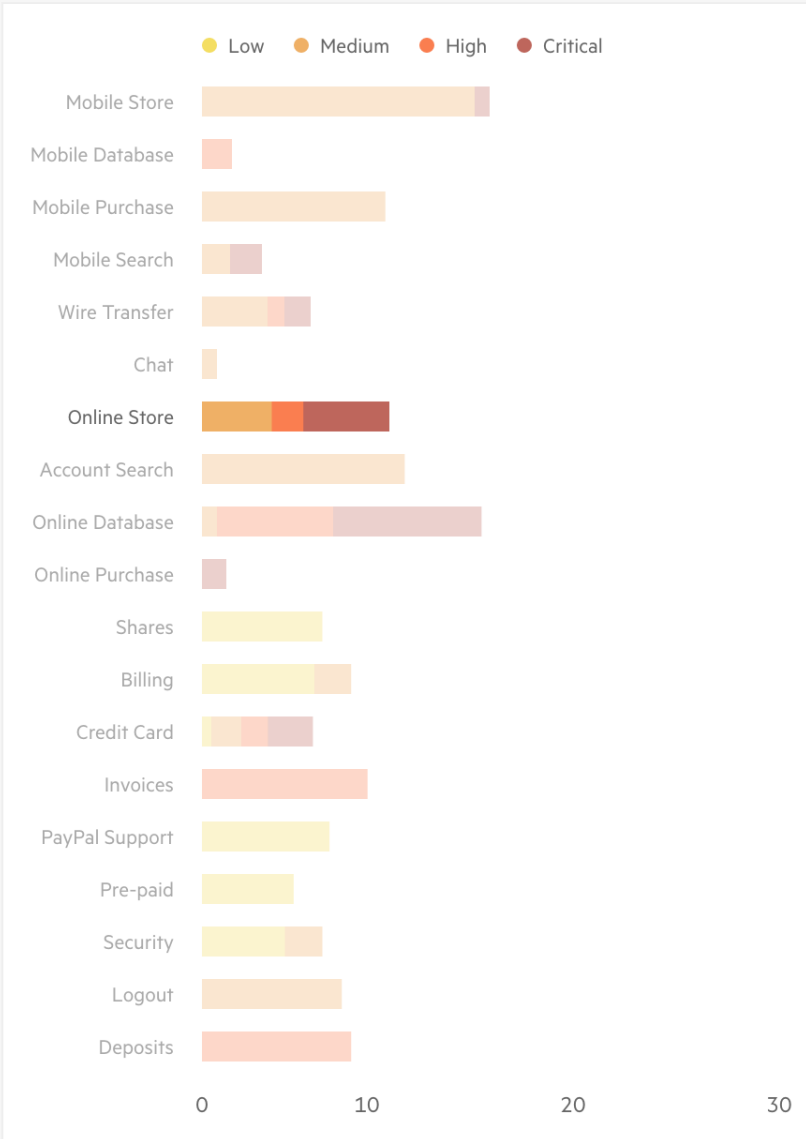


Quality Analysis

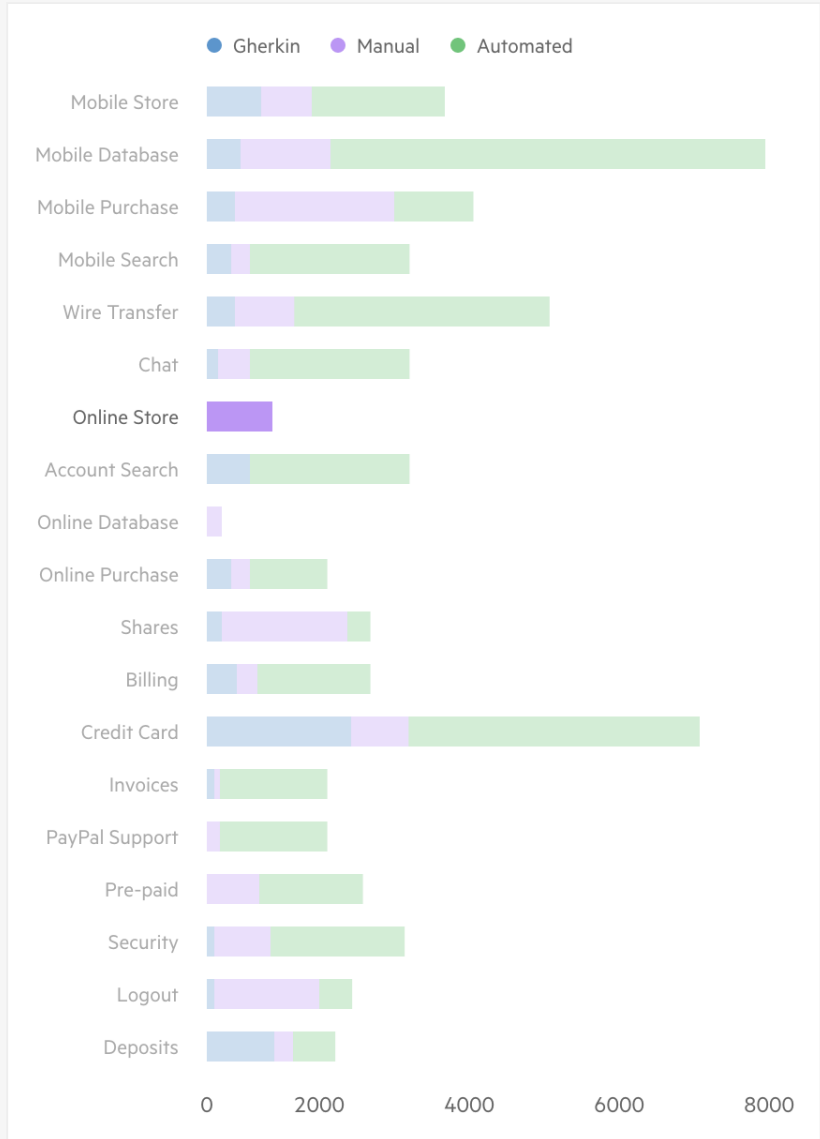
Features Per Application Modules - By Team



Open Defects Per Application Module



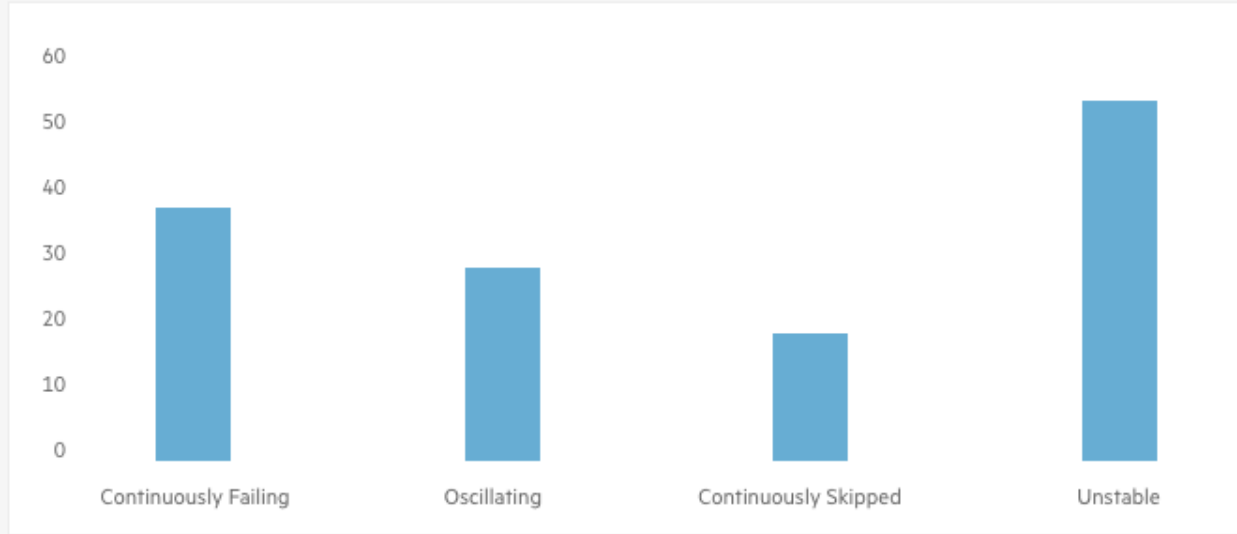
Tests by Type



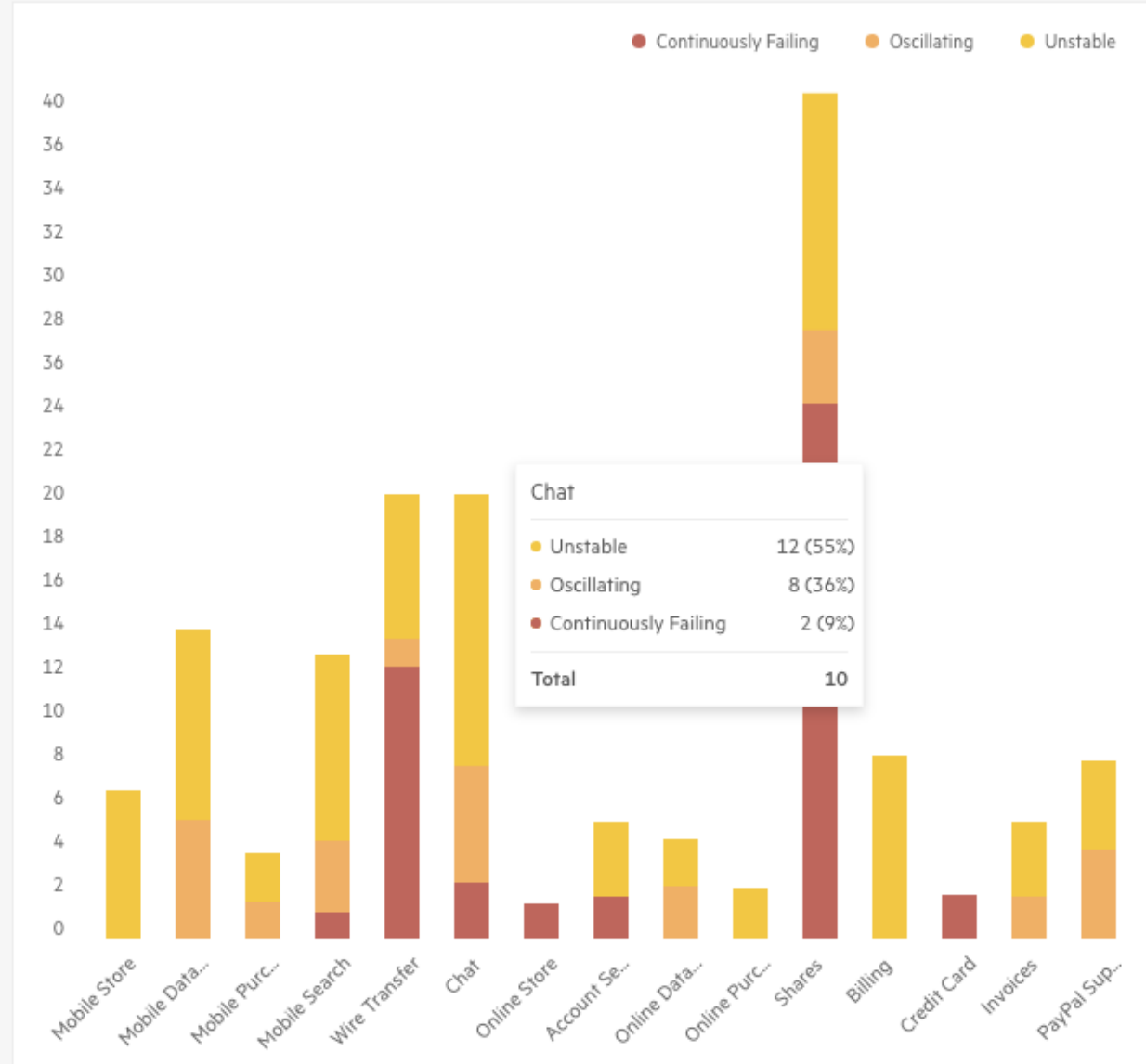


Automation Effectiveness

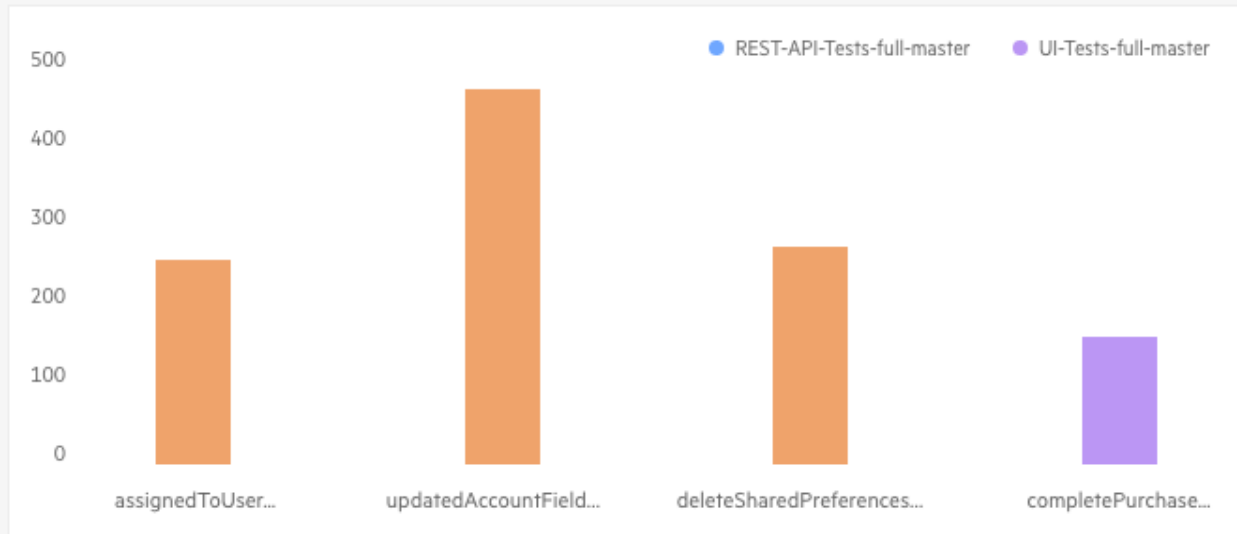
Problematic Tests



Unstable Tests per Area

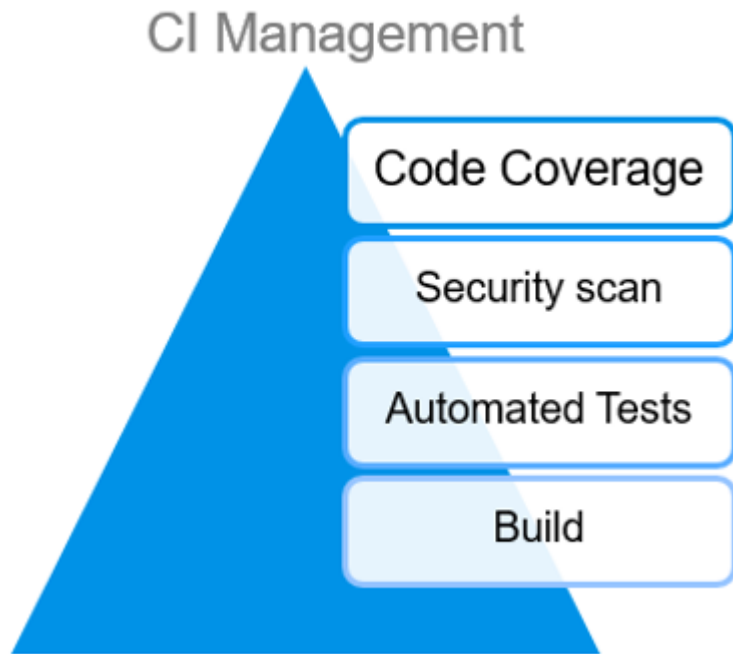


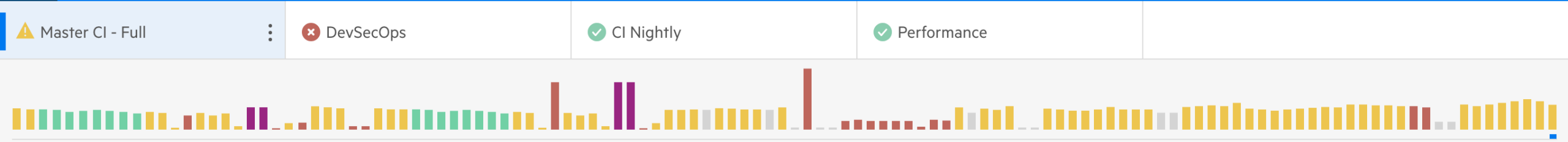
Automated Tests with Long Duration



# Quality at Speed

Continuous Quality – Keep it Stable and Simple





Master CI - Full #56

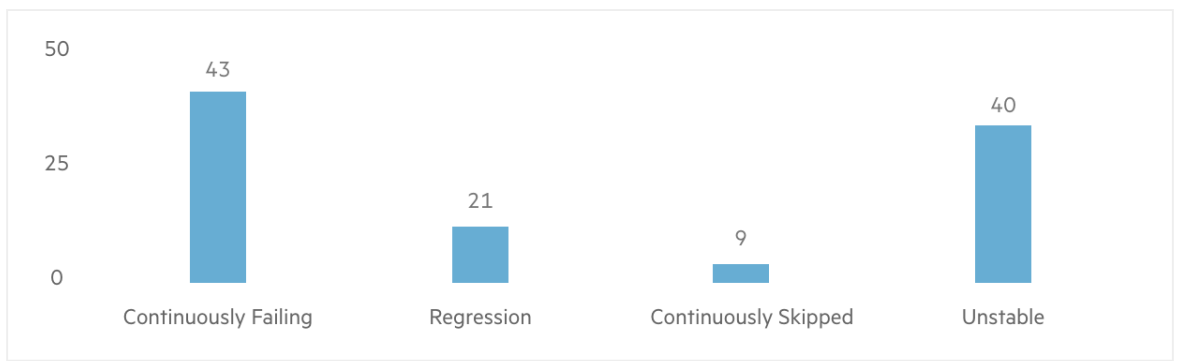
OVERVIEW BUILDS TESTS LOGS



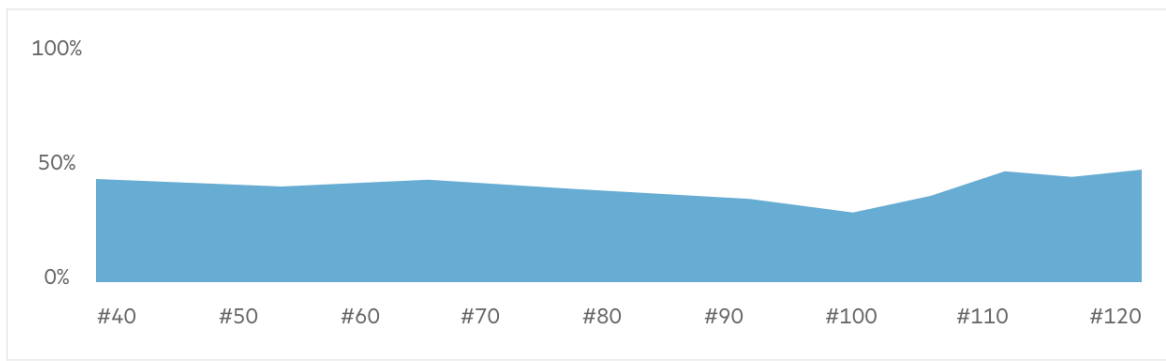
### Failed Builds Classification



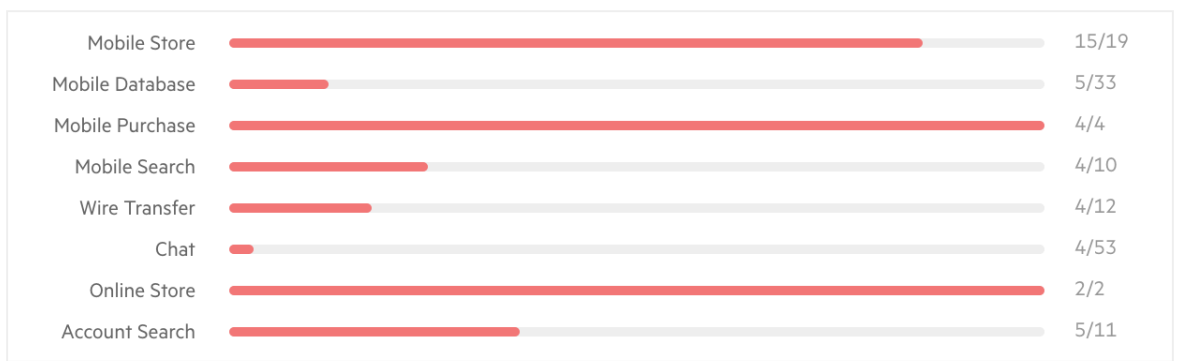
### Problematic Tests in Recent Runs



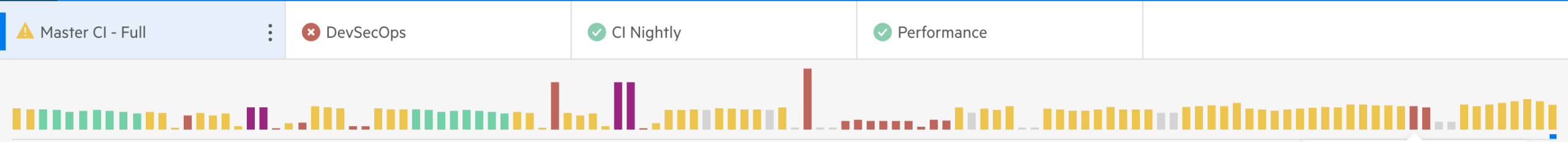
### Code Coverage by Pipeline Run



### Application Modules with Failed Test Runs







Master CI - Full #56

OVERVIEW BUILDS TESTS LOGS

Run #48

Duration 1h 17m

Started 03/07/2019 11:25

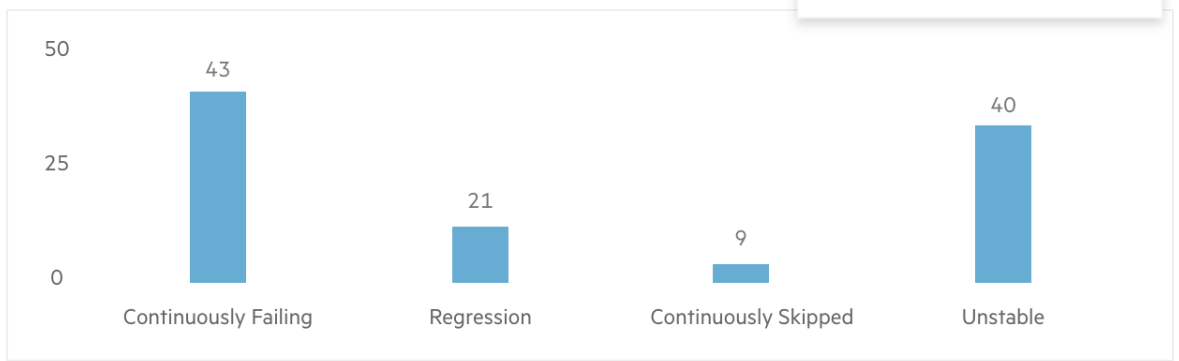
Commits 10

6017 1019 20

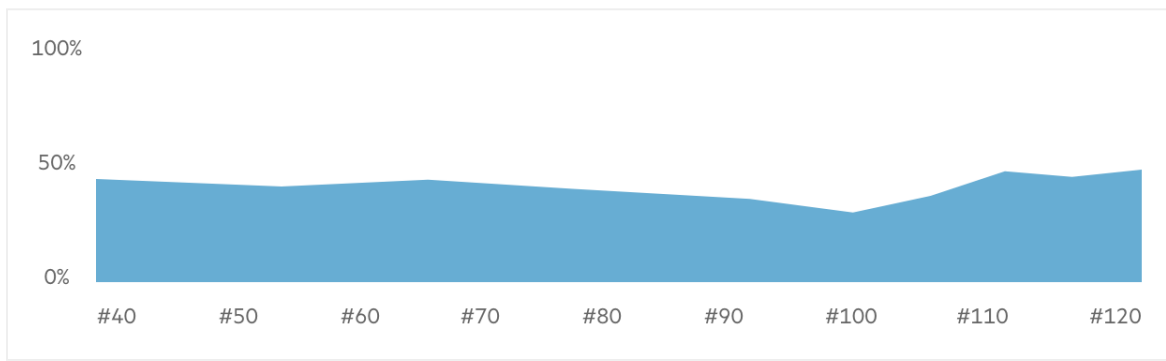
### Failed Builds Classification



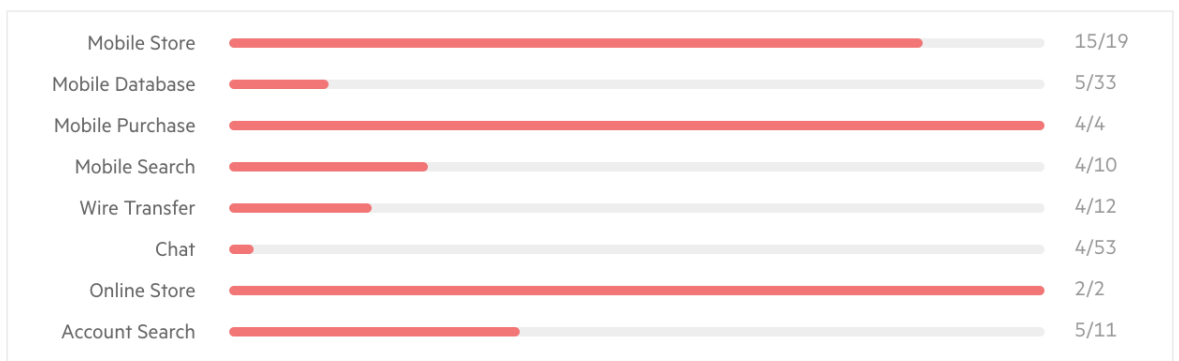
### Problematic Tests in Recent Runs

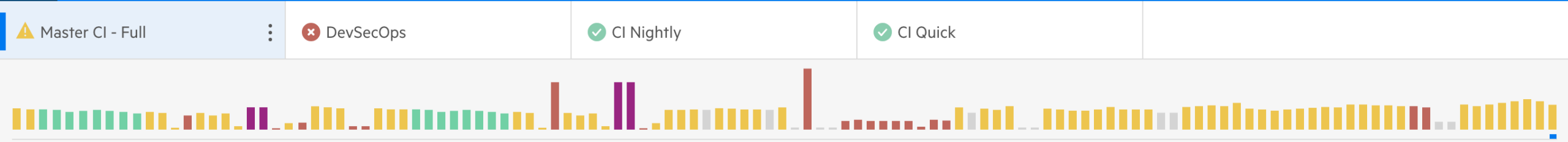


### Code Coverage by Pipeline Run



### Application Modules with Failed Test Runs





> Master CI - Full #56

OVERVIEW **BUILDS** TESTS LOGS

ID	Name	Class Name	Failure Age	Past Status	Error Message
Cluster A	5 tests	common error message: Expected status code (200) is not equal to actual status code (403) Error details from server: 1) Current user is not authorized to perform this o...			
<input type="checkbox"/> 152009	addAndRemoveAccountInfo...	AccountUpdate	41	-----	Expected status code (200) is not equal to actual status c...
<input checked="" type="checkbox"/> 152012	createAccountPermission	AccountUpdate	41	-----	Expected status code (200) is not equal to actual status c...
<input type="checkbox"/> 152015	viewAccountDetails	AccountUpdate	41	-----	Expected status code (200) is not equal to actual status c...
<input type="checkbox"/> 152013	viewAccountBalance	AccountUpdate	41	-----	Expected status code (200) is not equal to actual status c...
<input type="checkbox"/> 152008	updateAccountPassword	AccountUpdate	41	-----	Expected status code (200) is not equal to actual status c...
> Cluster B	4 tests	common error message: Cannot locate an element using By.chained({By.cssSelector: [data-aid='masthead-view'],By.cssSelector: [data-aid='open-user-profile']}) For docu...			
> Cluster C	4 tests	common error message: java.lang.NullPointerException			
> Cluster D	3 tests	common error message: Before Class failed			
> Cluster E	3 tests	common error message: Cannot locate an element using By.chained({By.cssSelector: [data-aid='alm-entity-grid-grouping-dialog'],By.cssSelector: [data-aid='alm-entity-gr...			
> Cluster F	2 tests	common error message: java.lang.AssertionError			
> Cluster G	2 tests	common error message: Before Class failed			

> PLANNING **FILTER** PREVIEW

**Recommendation:** **Kyle Reyes**

User's commit message mentioned tokens from this test run's error message

Search users by file, commit message 🔍

- > **Marie Hart**
- > **Bruce Lucas**
  - Commit message: Account permissions update - after saving message should be displayed notifyi...
  - ... /account-permissions-controller.ts
  - .../database-access.ts
  - .../account-customization.ts
  - .../account-display.ts
  - Commit time: 2 Jan 2019 8:29
  - Revision: dfcd15ed98a652d8a3bd6...
- > **Julie Powell**

# Insights make work visible



Actionable  
Insights



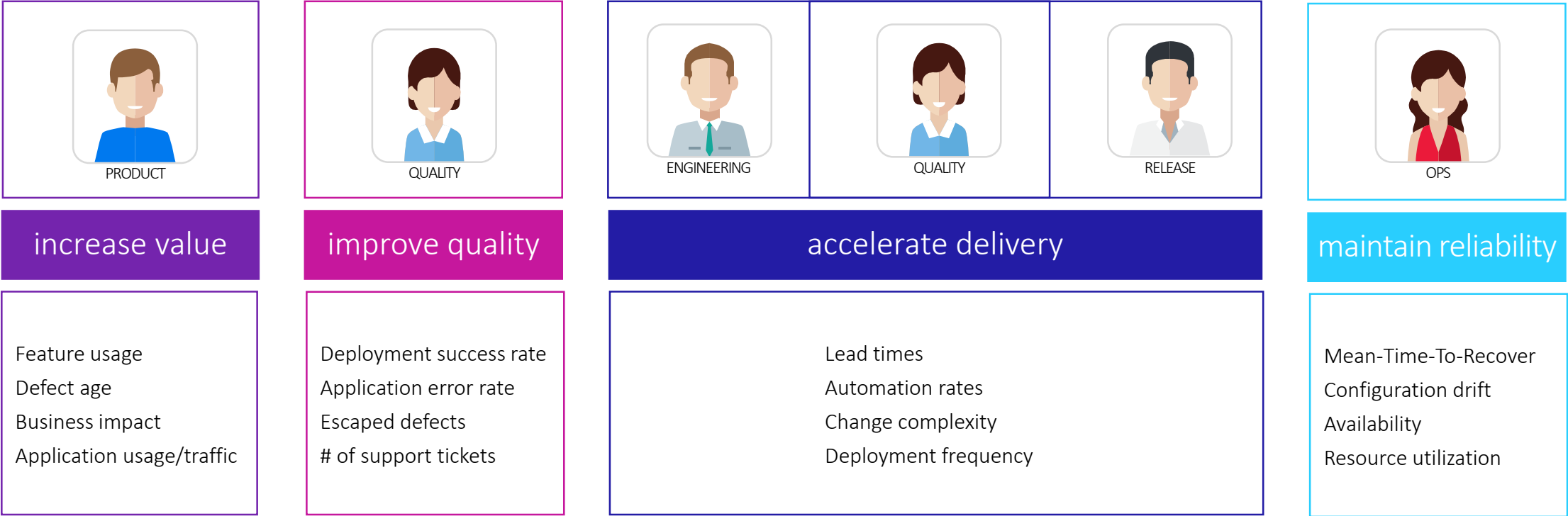
Measure what  
Matters



Single source of  
Truth



# Define key metrics with traceability to root cause



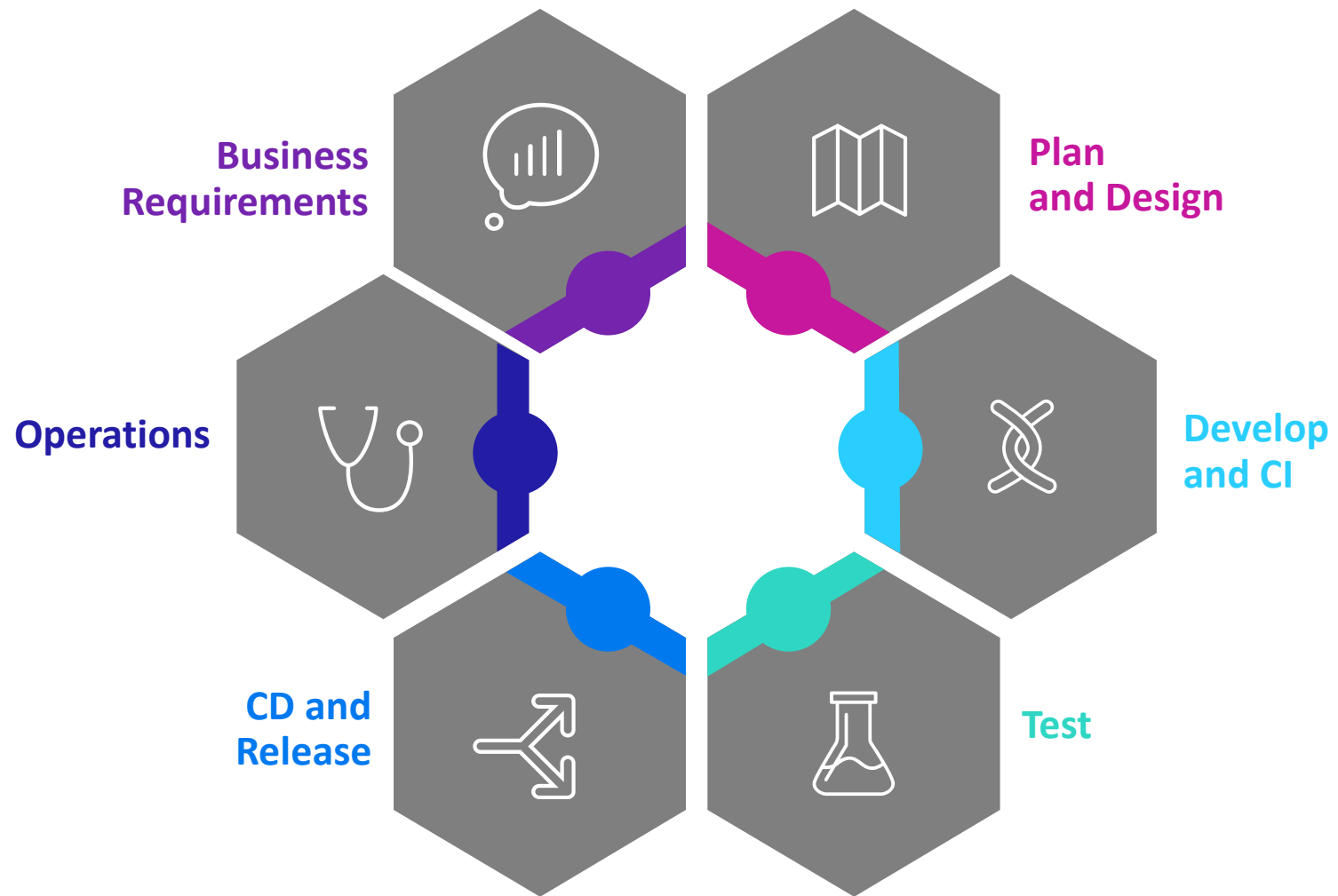
Get the momentum going



Choose metrics aimed at goals or process issues



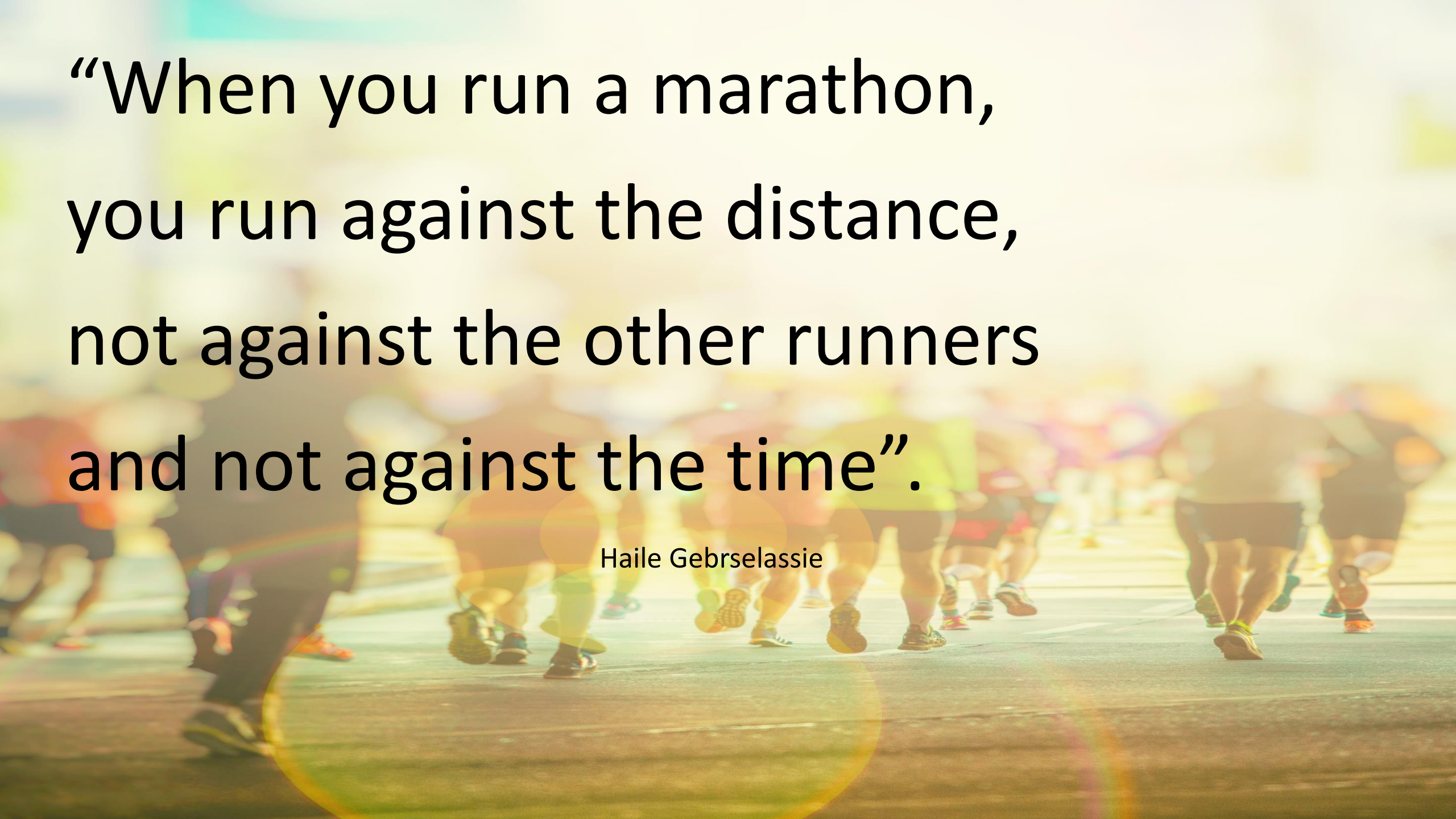
Measure fast to enable real-time feedback loops



# From Screaming to Streaming

Have Fun!





“When you run a marathon,  
you run against the distance,  
not against the other runners  
and not against the time”.

Haile Gebrselassie



**Thank You.**