

2023

State of Digital Quality in Retail

APPLAUSE^o



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For recommendations on how retailers can improve digital quality, read our blog post.



Methodology

We analyzed results from a representative sample of closed test cycles executed between January 1, 2022 and December 31, 2022. A test cycle is how Applause defines each unique set of tests: a client sends us testing parameters — builds, scope, coverage, etc. — and we create a test cycle that includes the specific test cases and scenarios to be tested.

We analyzed global retail data across testing categories and regions spanning more than 71,000 bugs, as well as thousands of devices and device/OS/browser combinations. Testing included websites, apps, mobile web and mobile apps in real-world scenarios.

Device coverage

The figures in this report reflect retail tests across the following scope worldwide:



Mobile Devices

Mobile makes	82
Mobile models	1,170
Mobile OSes	9
Mobile OS versions	264
Mobile web browsers	32
Mobile carriers	395



Payment Methods

Credit/debit cards	415
E-Wallets	12
Mobile wallets	17
Alternate payments	24



Desktop

Desktop web browsers	27
Desktop OSes	7
Desktop OS versions	142

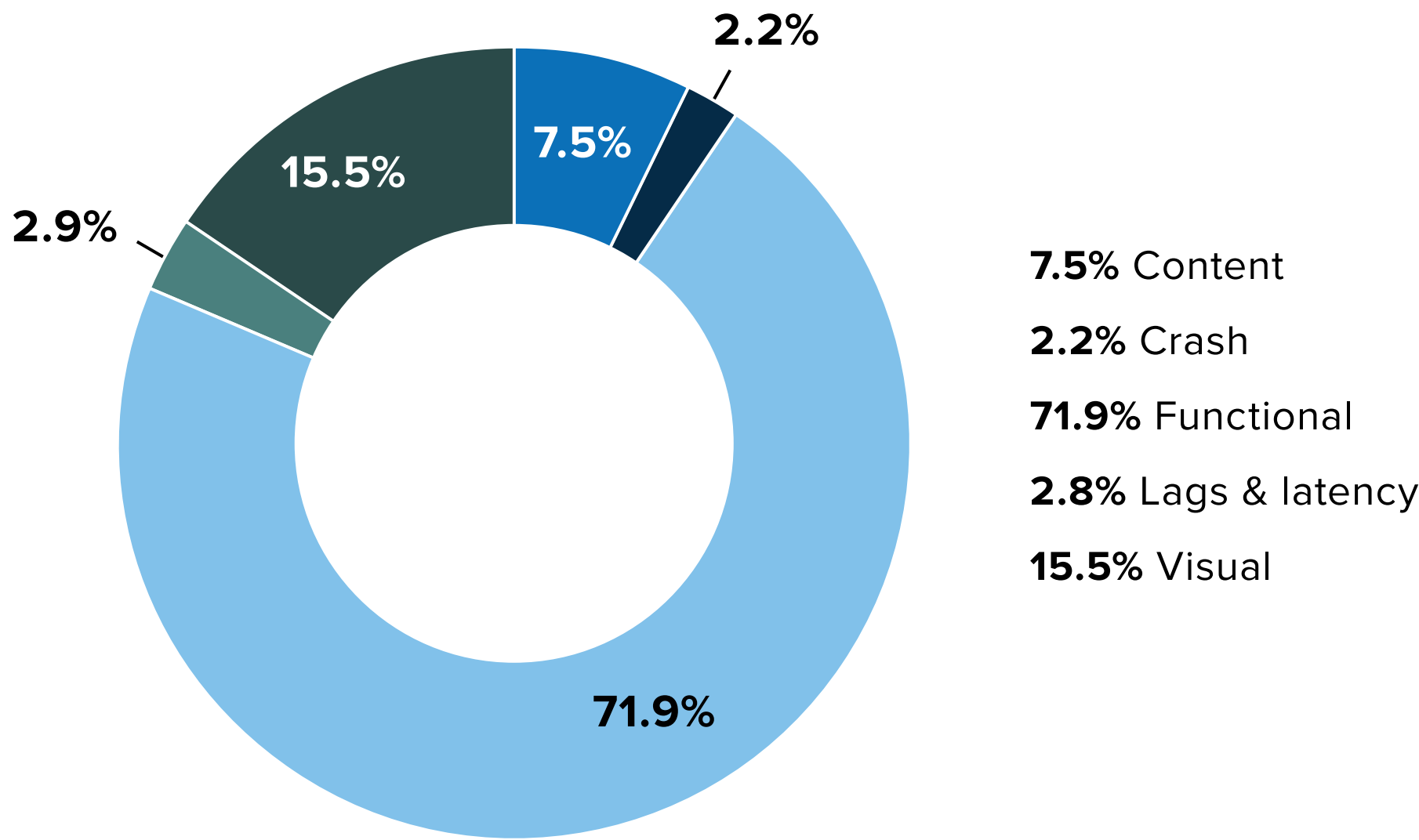
Functional testing

Bug type definitions

Bug Type	User Experience
Content	“This doesn’t read right” Typos, grammatical issues
Crash	“The app shut down” App closes or quits unexpectedly
Functional (workflow errors)	“This doesn’t work right” Buttons don’t respond when clicked, searches return incorrect results
Lags and latency	“This is taking too long” Sluggish performance, freezes
Visual	“This doesn’t look right” Misaligned content or page elements, content doesn’t fit an area

Bug type breakdown

See the prevalence of each type of bug across the data we analyzed:



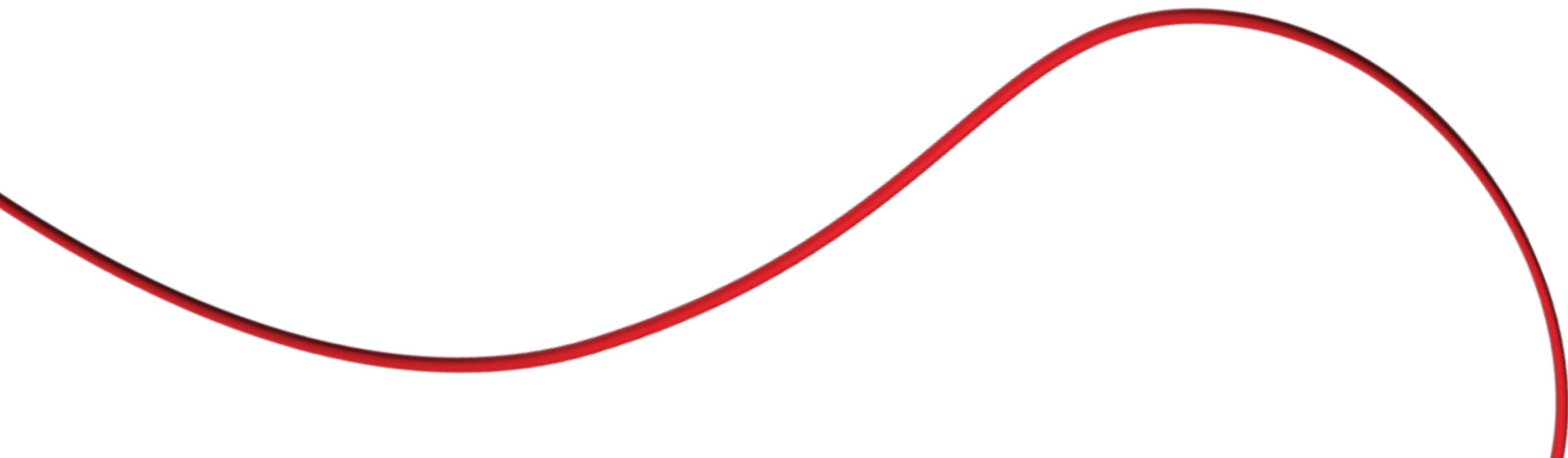
The majority composition of bug types – functional, visual and content – identified since last year is down just slightly, by .7%, comprising 94.9% of all bugs found.

Crashes are the most critical flaw, but this year we saw a 1% drop from 3.2% to 2.2%. While this is a small slice of the overall pie, it is a one-third improvement year over year for this specific flaw.

Average device coverage: retail vs all industries

In this table, a configuration refers to a unique browser and OS combination (desktop) or device and OS combination (mobile & tablets).

Industry	Test cycles	Average number of desktop configurations tested per cycle	Mobile & tablet configurations tested per cycle	Credit & debit cards tested per cycle	E-wallets tested per cycle	Mobile wallets tested per cycle
ALL	37,117	9.2	14.8	4.8	1.8	2.6
Retail	23.10%	9.3	13.8	4.4	2.5	4.5



Most popular device configurations tested

While these were the configurations Applause tested most for retailers in each region, it’s vital to review and prioritize your customer data and preferences to develop your test plan per build or release. Also, consider OS adoption rates in your plan – for example, iOS users upgrade OSes far more frequently than Android users. Determine what portion of testing resources you want to allocate to current versus older OS versions.

Region	Desktops	Mobile & tablet
Africa	Windows 10, Chrome Windows 10 64-bit, Chrome Windows 11, Chrome Windows 10 64-bit, Firefox Windows 10 Professional 64 bit, Chrome	1. Huawei Mate 20 Lite, Android 10 2. Xiaomi Redmi Note 9 Pro, Android 11 2. Huawei P30 lite, Android 9.0 (Pie) 3. Samsung Galaxy A20, Android 11 3. Apple iPhone 8 Plus, iOS 14.7.1
Asia	Windows 10, Chrome Windows 10 64-bit, Chrome Windows 11, Chrome Windows 10, Firefox Windows 11 Home, Chrome	1. Apple iPhone 7, iOS 14.5.1 2. Samsung Galaxy S8, Android 9.0 (Pie) 3. Xiaomi Redmi Note 7, Android 10 4. Samsung, Galaxy S10, Android 12 5. Umidigi F2, Android 10
Europe	. Windows 10, Chrome 2. Windows 10 64-bit, Chrome 3. Windows 10, Firefox 4. Windows 10 64-bit, Firefox 5. Windows 10, Microsoft Edge	1. Samsung Galaxy S8, Android 9.0 (Pie) 2. Samsung Galaxy S9, Android 10 3. Samsung Galaxy S21 5G, Android 12 4. Samsung Galaxy S10 Plus, Android 12 5. Samsung Galaxy A52s 5G, Android 12

Most popular device configurations tested (continued)

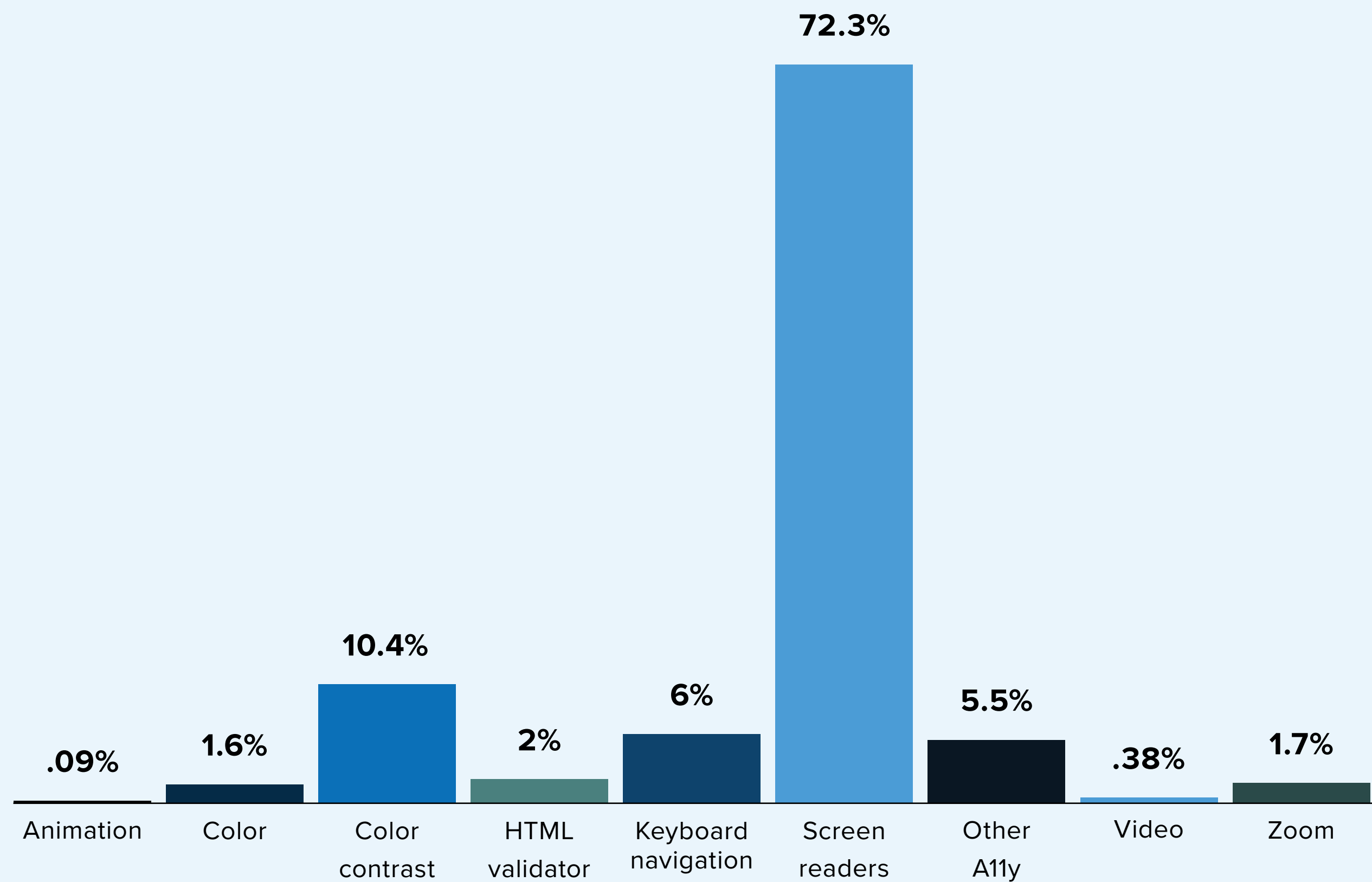
Region	Desktops	Mobile & tablet
Oceania	<div>1. Windows 10, Chrome</div> <div>2. Windows 10 64-bit, Chrome</div> <div>3. Windows 10 64-bit, Firefox</div> <div>4. Windows 10 Home, Chrome</div> <div>5. Windows 10, Microsoft Edge</div>	<div>1. Samsung Galaxy Note 9, Android 10</div> <div>2. Apple iPhone 7 Plus, iOS 15.1</div> <div>3. Samsung Galaxy S8, Android 9.0 (Pie)</div> <div>4. Samsung Galaxy A20, Android 11</div> <div>5. Huawei Mate 20 Pro, Android 10</div>
North America	<div>1. Windows 10, Chrome</div> <div>2. Windows 10 64-bit, Chrome</div> <div>3. Windows 11, Chrome</div> <div>4. Windows 10, Firefox</div> <div>5. Windows 11 Home, Chrome</div>	<div>1. Samsung Galaxy S9, Android 10</div> <div>2. Google Pixel 3a, Android 12</div> <div>3. Google Pixel 4a, Android 12</div> <div>4. Samsung Galaxy S21 Ultra 5G, Android 12</div> <div>5. Samsung Galaxy S20 FE, Android 12</div>
South America & LATAM	<div>1. Windows 10, Chrome</div> <div>2. Windows 10 64-bit, Chrome</div> <div>3. Windows 11, Chrome</div> <div>4. Windows 10, Firefox</div> <div>5. Windows 10 Home, Chrome</div>	<div>1. Apple iPhone SE (2020), iOS 15.1</div> <div>2. Samsung Galaxy S9, Android 10</div> <div>3. Samsung Galaxy S20 FE, Android 12</div> <div>4. Samsung Galaxy S21 Ultra 5G, Android 12</div> <div>5. Google Pixel 2, Android 11</div>

Accessibility testing

Bug type definitions

Bug Type	User Experience
Animation	“I don’t know what’s happening on the screen” A user can’t see content that moves, such as animation telling users to perform an action
Color	“This doesn’t make sense” Users can’t identify information communicated only through color
Color contrast	“This all looks the same” Insufficient color contrast ratio
HTML validator	“This page seems like something is missing” Issues in HTML code that do not impact the keyboard navigation and screen reader behavior
Keyboard navigation	“I can’t use my keyboard to navigate” People using alternative keyboards or speech input devices as keyboard emulators cannot navigate a page

Bug Type	User Experience
Screen readers	“My screen reader isn’t working” Readable text for screen readers is missing
Other A11y	“This isn’t working for me” Poor user experience for PWD
Video	“I can’t tell what’s going on in this video” Missing closed captions or audio descriptions
Zoom	“I can’t see what I need to” Text gets cut off when a user zooms in beyond a certain point



Bug type breakdown

See the prevalence of each type of bug across the data we analyzed.

Screen reader defects continue to make up the vast majority of all accessibility errors. Bug type distributions remained consistent, typically fluctuating less than 2% +/- from last year.

As companies work to comply with local regulations and conform to industry- and region-specific requirements, in-market testing on the most common devices, browsers and networks is a crucial component in delivering fully accessible experiences for all shoppers.

Average device coverage: retail vs all industries

In this table, a configuration refers to a unique combination of browser, OS and screen reader.

Industry	Test cycles	Average number of desktop configurations tested	Average number of mobile & tablet configurations tested
ALL	1,273	3.4	3.1
Retail	482	3.6	2.4

Most popular device configurations retailers tested

Region	Desktops	Mobile & tablet
Asia	<div>1. Windows 10, Chrome</div> <div>2. Windows 10, Firefox</div> <div>3. Windows 10 64-bit, Chrome</div>	<div>1. Motorola One Fusion Plus, Android 11</div> <div>2. Apple iPhone 11, iOS 15.4</div> <div>3. Motorola One Fusion Plus, Android 10</div>
Europe	<div>1. Windows 10, Chrome</div> <div>2. Windows 10, Firefox</div> <div>3. Windows 10 64-bit, Chrome</div> <div>4. Windows 10 64-bit, Firefox</div> <div>4. Windows 7, Firefox</div>	<div>1. Apple iPhone SE (2020), iOS 15.1</div> <div>2. Google Pixel 2, Android 9.0 (Pie)</div> <div>3. Apple iPhone SE (2020), iOS 14.5.1</div> <div>4. Apple, iPhone X, iOS 15.0.2</div> <div>5. Samsung Galaxy Note 9, Android 10</div>
North America	<div>1. Windows 10, Chrome</div> <div>2. Windows 10, Firefox</div> <div>3. Windows 10 64-bit, Chrome</div> <div>4. Windows 11, Chrome</div> <div>4. macOS Mojave 10.14, Safari</div>	<div>1. Samsung Galaxy S10, Android 11</div> <div>2. Apple iPhone SE (2020), iOS 15.0.2</div> <div>2. Apple iPhone X, iOS 15.3.1</div> <div>3. Samsung Galaxy A32, Android 11</div> <div>4. Apple iPhone XR, iOS 14.8</div>

Most popular device configurations retailers tested (continued)

Region	Desktops	Mobile & tablet
Oceania	<div>1. Windows 10 64-bit, Chrome</div> <div>2. Windows 10 64-bit, Firefox</div> <div>3. macOS Catalina 10.15.4, Safari</div>	<div>1. Xiaomi Mi A1 (5X), Android 9.0 (Pie)</div> <div>2. Apple iPhone 6S, iOS 15.4.1</div> <div>3. Apple iPhone 6S, iOS 15.1</div>
South America & LATAM	<div>1. Windows 10 64-bit, Firefox</div> <div>2. Windows 10 64-bit, Internet Explorer 11</div> <div>3. macOS X 10.11.4, Safari</div>	<div>1. Huawei Y5 lite, Android 8.1</div> <div>2. Nokia 6, Android 9.0 (Pie)</div> <div>3. Apple iPhone SE (2016), iOS 13.1.2</div>

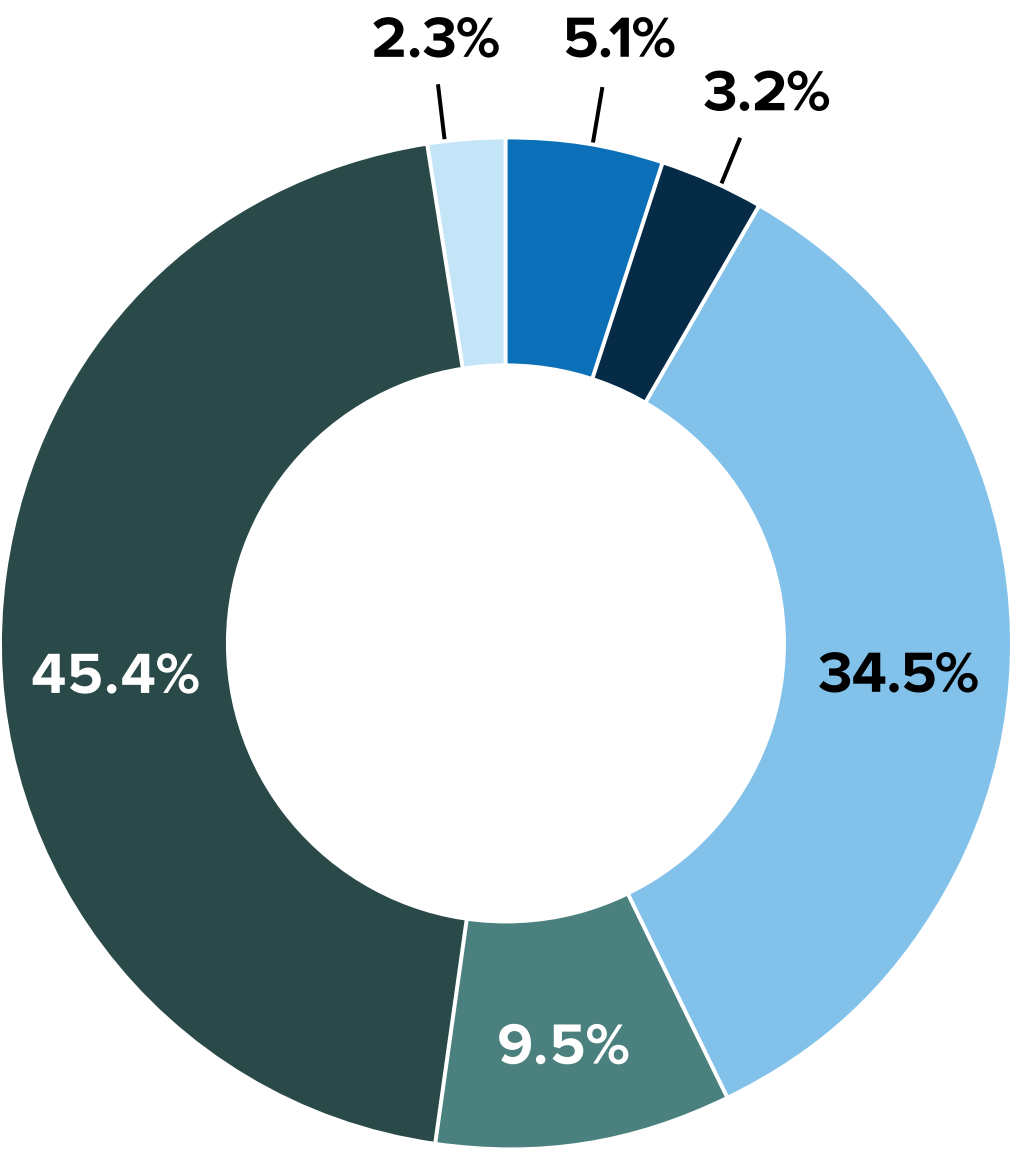
Localization Testing

Bug type definitions

Bug Type	User Experience
Corrupted characters	“This doesn’t look right, where are the accent marks?”
Currency and number format	“That date seems wrong for the holiday they’re promoting”
Missing translation	“I’m not sure what this says, there’s no translation”
Other/general	“That photo is offensive, this brand doesn’t understand me”
Poor translation	“I don’t think that’s the right word here”
Truncation & overlap	“The text on this button is cut off”

Bug type breakdown

See the prevalence of each type of bug across the data we analyzed:



- 5.1% Corrupted characters
- 3.2% Currency & numbers
- 34.5% Missing translation
- 9.5% Other/general
- 45.4% Poor translation
- 2.3% Truncation & overlap

Average device coverage: retail vs all industries

In this table, a configuration refers to a unique browser and OS combination (desktop) or device and OS combination (mobile & tablets).

Industry	Test cycles	Average number of desktop configurations tested	Average number of mobile & tablet configurations tested
All	273	11	27.2
Retail	32	13.6	17.2

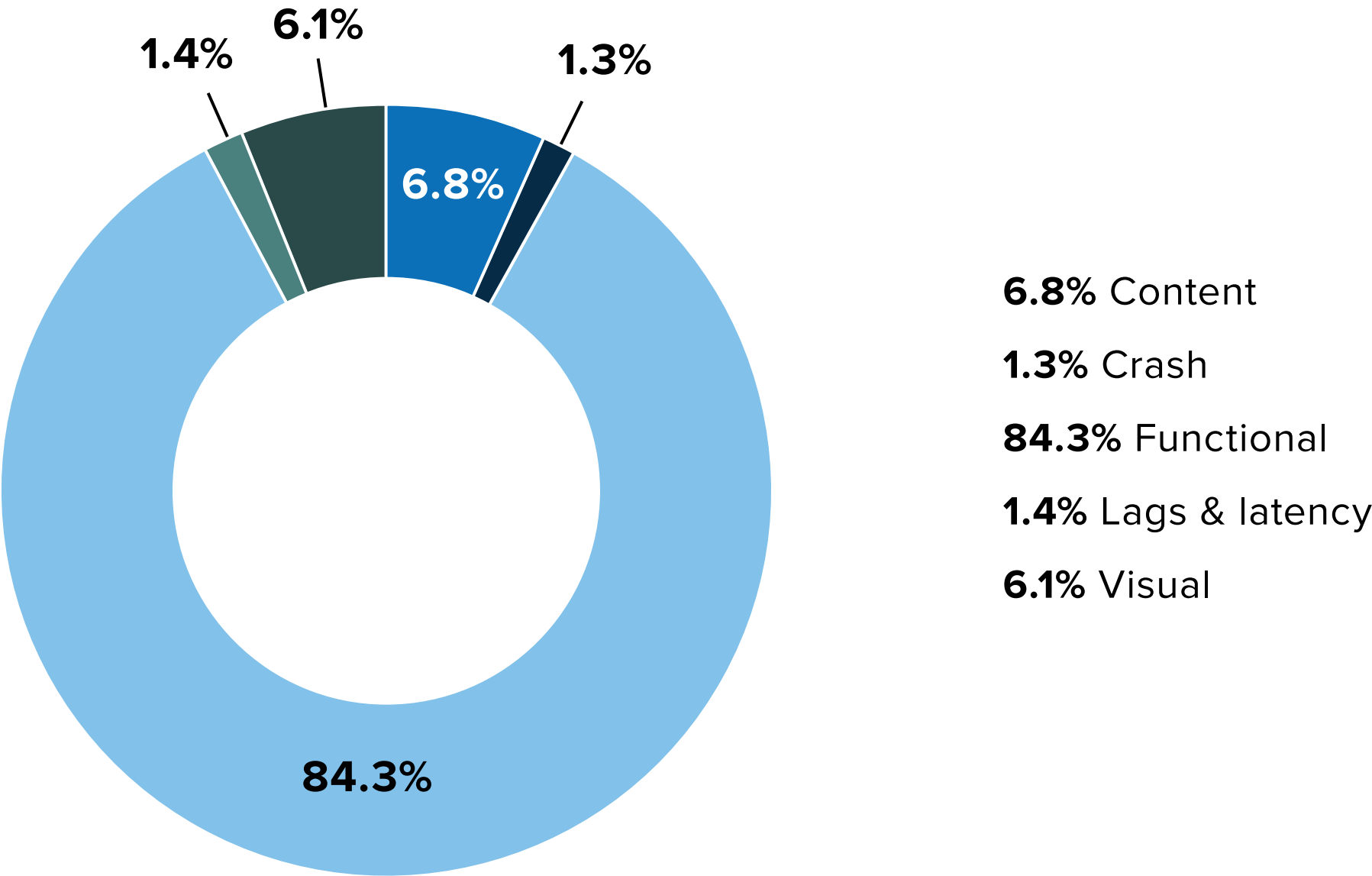
Payment testing

Bug type definitions

Bug Type	User Experience
Content	“This doesn’t read right” Typos, grammatical issues
Crash	“The app shut down” App closes or quits unexpectedly
Functional (workflow errors)	“This doesn’t work right” Buttons don’t respond when clicked, searches return incorrect results
Lags and latency	“This is taking too long” Sluggish performance, freezes
Visual	“This doesn’t look right” Misaligned content or page elements, content doesn’t fit an area

Bug type breakdown

See the prevalence of each type of bug across the data we analyzed:



The prevalence of each type of payment bug remained remarkably consistent with last year, varying less than 1% from year to year.

With a whopping 84% of all payment bugs classified as functional bugs or workflow errors, without corrective action, transactions will fail, delivering a serious hit to revenue.



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