

# The Digital Experience Report



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# BEST OF THE WEB

## Digital performance matters

Digital consumers are driving a major transformation across all industry sectors. They eat, sleep, and breathe with their mobile device and expect the same high quality experience whether they are on their desktop, in store or branch office, or mobile. Eighty percent of them check their smartphone within 15 minutes of waking<sup>1</sup>, and 90% use multiple screens to complete a task<sup>2</sup> — jumping from desktop to phone to tablet and back.

With all the extra attention, web, mobile web, and mobile applications are becoming increasingly complex to manage. Sites are getting heavier, slower, and are relying on more 3rd parties than ever before.

- > Website speed slowed 15 percent from an average of 6.46s in 2014 to 7.45s in 2015.<sup>3</sup>
- > 3rd party usage increased last year by 26%, to an average of 40 from 32 in 2014.<sup>4</sup>
- > Average page size also increased — 16% to 2232 KB from 1931 KB in 2014.<sup>5</sup>

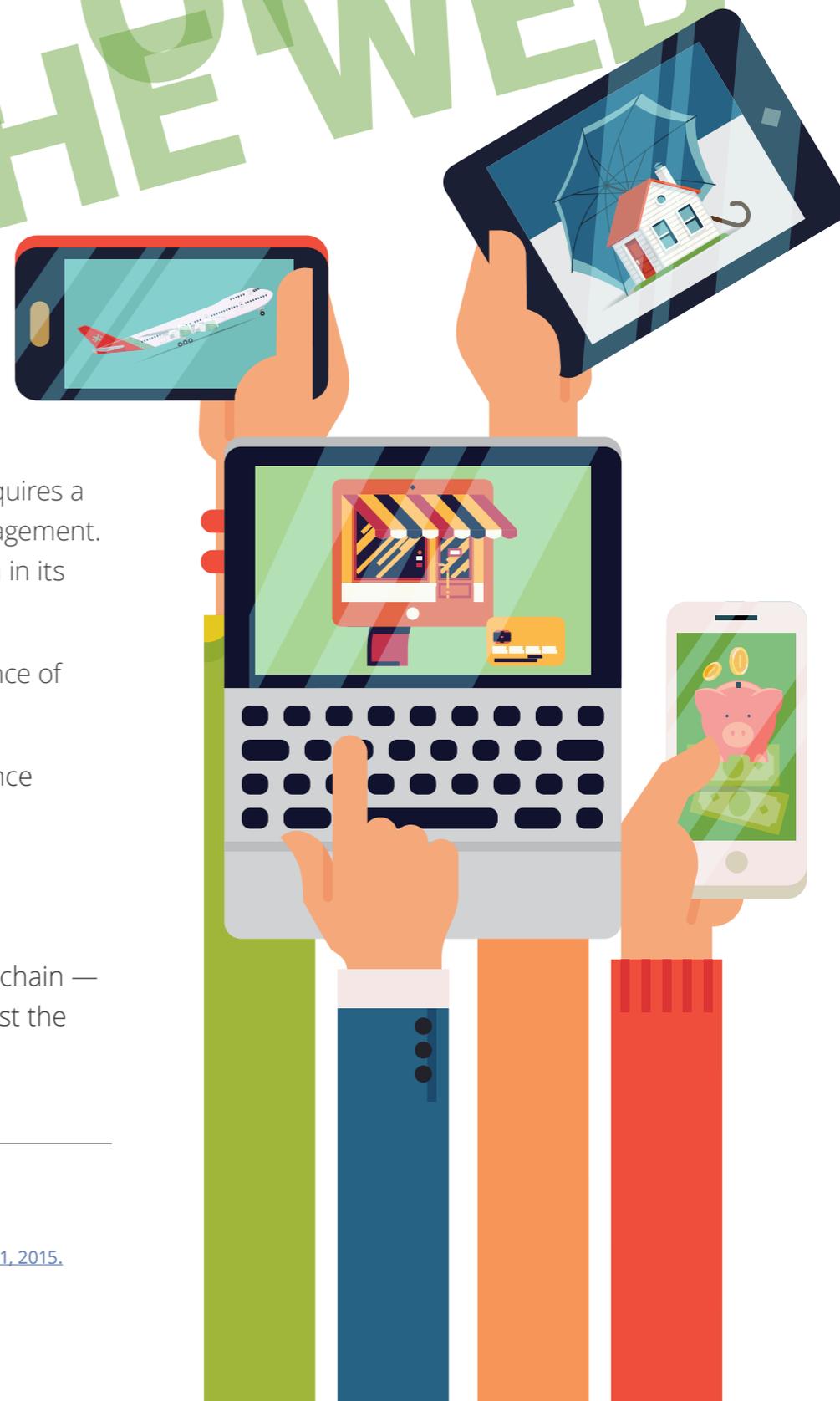
Today, understanding customer experience requires a modern approach to digital performance management. This does not mean managing each application in its individual silo.

It means managing the entire digital performance of your business. And, it requires:

- > A comprehensive view of customer experience across every digital interaction
- > An understanding of the business impact of performance problems
- > Gapless insight into the application delivery chain — mapping the user journey as a whole, not just the bits and pieces

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1. IDC, Always Connected, March, 2013.  
2. Google, [The New Multi-Screen World](#).  
3. Dynatrace Benchmarks analysis, 2014 to 2015.  
4. Dynatrace Benchmarks analysis, 2014 to 2015.  
5. HTTP Archive, [average page size on January 1, 2014 vs. January 1, 2015](#).



## WHAT WE MEASURE

### LOAD TIME

the end-to-end time elapsed while downloading each web page or the entire multistep transaction process.

### AVAILABILITY

the percentage of successfully completed tests out of total test attempts for the period.

### CONSISTENCY

the standard deviation of the response time of successful tests. A low number means a more consistent load time.



## About this report

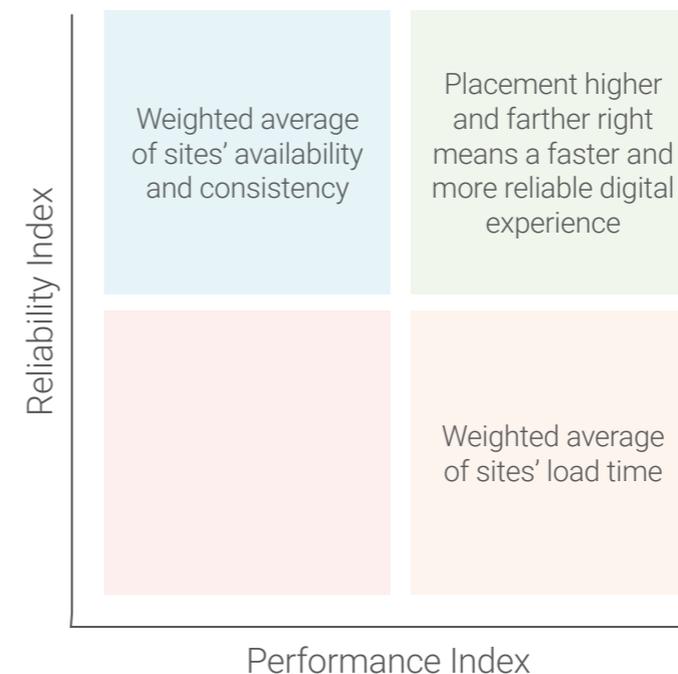
The 2016 Digital Experience Report provides a comparative performance assessment for the largest companies across six major industries<sup>6</sup> — banking, brokerage, insurance, media, retail, and travel. This year's report evaluates each company's digital experience delivery throughout 2015, based upon a weighted comparison of Dynatrace Benchmarks measurements across key channels that reflect the ways customers browse the web and mobile web today.

Companies in the top right quadrant have the best overall performance, and are recognized as the Best of the Web. These companies distinguish themselves from their peers in both performance and reliability.

They perform well in multiple areas:

- > In synthetic tests of home page performance,
- > In the most critical multi-step user transaction<sup>7</sup> from the Internet Backbone,
- > On their mobile website<sup>8</sup>,
- > In terms of real end-user experience, measured from the Dynatrace Last Mile network of tens of thousands of consumer-grade computers connecting over local ISPs.

The Performance Index (horizontal axis) combines each benchmark participant's mobile, Last Mile, transaction, and backbone load time while the Reliability Index (vertical axis), combines availability and consistency rates.



6. Benchmark participants are selected via 3rd party ranking of the top participants in a region and industry (e.g., the US Retail benchmark participants are based on the Internet Retailer Top 500 eCommerce sites per online revenue). Other benchmarks are determined by descending order of traffic, assets held or another similar ranking methodology.

7. E.g., ordering a product for retailers, or making a trade for brokerages. All industries are measured using a representative business transaction for this report, except Insurance.

8. Brokerage was not tested on mobile web.

RETAIL  
BANKING

Customer service has long been the primary competitive advantage that banks have, a battleground that is increasingly digital. Consumers have many banking choices these days, including a growing number of options that are exclusively on-line. They are demanding convenience and personalized services. And, almost 70% of Gen X are now banking on their smartphone.<sup>9</sup> Gen X, and all consumers for that matter, have high expectations for their digital interaction with their financial institution, and have zero patience for a slow online experience or a crashing mobile app.

9. Apptentive, "[Money is Going Mobile](#)", 2015.

# RETAIL BANKING

 Considering the industry's intense focus on customer service, it is perhaps not surprising that a majority of banks fall into the Best of the Web top performers' quadrant, with US Bank and Wells Fargo leading the way. While banking has the highest availability of any industry we analyzed, the average Last Mile home page load time for banks was 24% slower (1.3s) than in 2014.<sup>10</sup>

BANKING	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	3.13 sec	1.89 sec	5.19 sec
Home Page, Last Mile Load Time	6.83 sec	4.27 sec	11.16 sec
Home Page, Mobile Load Time	6.01 sec	2.47 sec	9.13 sec
Mobile Page Weight	795 KB	308 KB	1,288 KB
Online Banking Transaction Load Time	12.47 sec	5.42 sec	21.93 sec
Availability	99.23%	99.60%	98.41%
Consistency	5	3	7



10. Each of the 2015 to 2014 comparisons is limited to comparable sites. There may be occasions when some sites in the 2015 study were excluded from the YoY comparison, having not been part of the 2014 study (and vice versa).

# BROKERAGE

The online brokerage industry has matured over the last several years. Gone are the days when cheapest wins. These days customer experience is king, with web and mobile performance being a critical component.

BROKERAGE	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	2.77 sec	1.63 sec	3.83 sec
Home Page, Last Mile Load Time	6.21 sec	3.83 sec	8.57 sec
Trade Quote Transaction Load Time	9.39 sec	4.12 sec	15.18 sec
Availability	99.18%	99.53%	98.65%
Consistency	5	3	7



# BROKERAGE



 Half of the brokerages we measured landed in the top performers' quadrant, with Fidelity clearly emerging as the leader. The trade quote used to assess transaction performance in brokerage delivered the fastest business transaction performance (at 4.12s for the Top 3) across all industries. Brokerages also have the fastest average performance for the Last Mile across all industries. They have clearly made it a priority to optimize real user experience.



# INSURANCE

## AUTO & PROPERTY



Consumers interact less often with insurers on their mobile devices than with other industries, with only 24% having completed an insurance task on their mobile device in a three-month period. However, these numbers don't reflect actual consumer interest: among smartphone owners, a whopping 81% are interested in mobile insurance<sup>11</sup>. This represents a big opportunity for insurers to offer innovative digital solutions to insurance tasks and provide a differentiated digital experience that performs well.

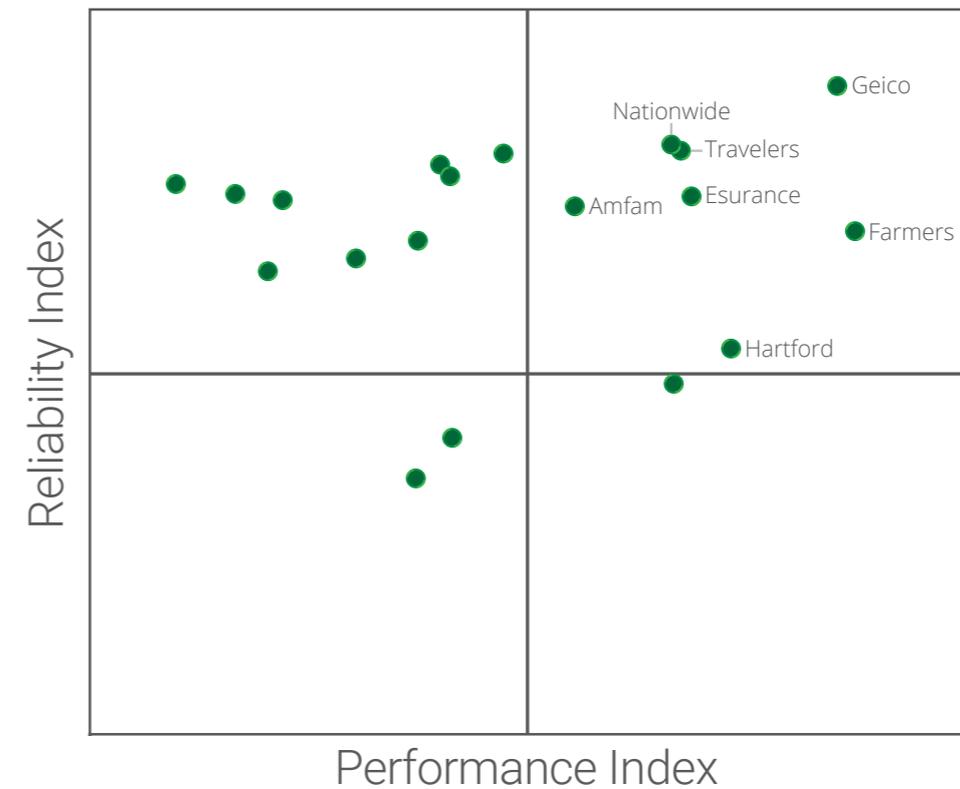
11. Forrester Research, "The State Of Mobile Insurance", 2015, July.

# INSURANCE

## AUTO & PROPERTY

 Geico was the overall leader among insurers, with only Farmers being slightly faster. There are fewer insurers in the upper right quadrant than for other industries, and the Last Mile load time was 1.1s slower than in 2014.

INSURANCE — AUTO & PROPERTY	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	3.29 sec	1.64 sec	4.42 sec
Home Page, Last Mile Load Time	7.03 sec	3.81 sec	9.6 sec
Home Page, Mobile Load Time	5.56 sec	2.61 sec	9.08 sec
Mobile Page Weight	656 KB	343 KB	1,100 KB
Availability	98.84%	99.55%	97.53%
Consistency	5	3	7



# NEWS MEDIA

2015 was a banner year for mobile in news media. Thirty-nine of the 50 biggest news sites saw more of their traffic originate from mobile devices in 2015. However, viewers spent more time on news sites from their desktops.<sup>12</sup>



NEWS MEDIA	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	7.14 sec	2.14 sec	14.23 sec
Home Page, Last Mile Load Time	11.83 sec	4.53 sec	23.69 sec
Home Page, Mobile Load Time	10.42 sec	2.93 sec	19.45 sec
Mobile Page Weight	1,953 KB	534 KB	4,271 KB
Article Search Transaction Load Time	16.94 sec	7.06 sec	31.35 sec
Availability	98.44%	99.43%	97.10%
Consistency	10	5	17

12. Pew Research Center, [State of News Media 2015](#).

# NEWS MEDIA



All but three of the Media News properties fall into the top performers' quadrant, with Reddit and Google News leading the way. These businesses are now selling a digital product and know that performance is a critical dimension of quality. Viewers will drop off as soon as they encounter even a single slow piece of content. With consumers continuing to shift to mobile, the complications of managing social integration and the demand for more dynamic content, media cannot afford to lose focus on user experience.



# RETAIL



More and more consumers are shopping online, with eCommerce driving more than half of all retail sales growth (66.4%) in 2015.<sup>13</sup> This makes retailers' digital experience more important than ever.

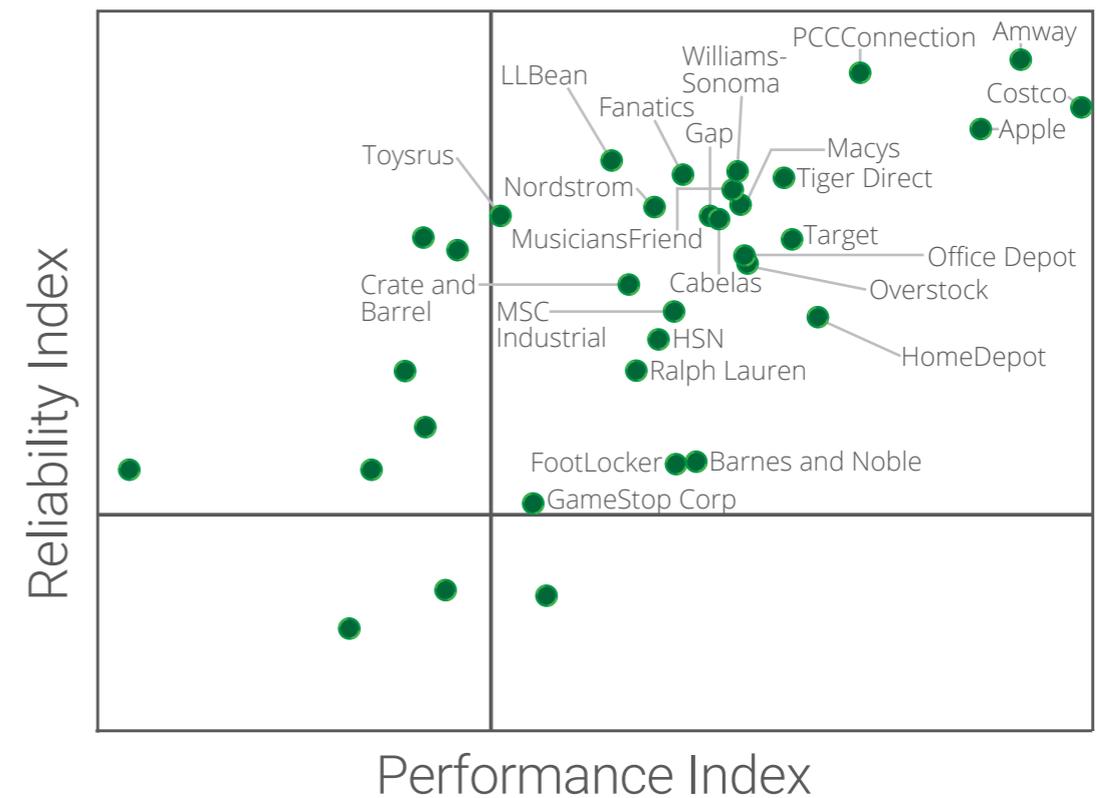
Consumers expect retailers to provide the same high quality and consistent experience throughout their journey from web to mobile web or app, to store. Most of them (75% of all users) will abandon and shop elsewhere if they encounter a mobile site or app that is buggy, slow or prone to crashes. Millennials are even more finicky — 81% will abandon when there are problems.<sup>14</sup> While mobile represents a relatively small share of on-line sales, recognizing the role it plays in the real-time omnichannel experience makes mobile performance a high priority.

13. [Internet Retailer](#) reporting on U.S. Commerce numbers.  
 14. Dynatrace, 2015 Consumer Mobile Holiday Shopping Survey.

# RETAIL

 A majority of retailers met our criteria for the top performers' quadrant, with Amway, Costco, and Apple leading the way. This reflects the maturity of the online retail industry: they understand how critical performance is to converting sales.

RETAIL	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	4.22 sec	1.40 sec	7.59 sec
Home Page, Last Mile Load Time	7.97 sec	3.20 sec	14.75 sec
Home Page, Mobile Load Time	6.08 sec	2.50 sec	11.27 sec
Mobile Page Weight	1,106 KB	371 KB	1,629 KB
Online Shopping Transaction Load Time	27.22 sec	13.13 sec	45.32 sec
Availability	98.33%	99.39%	96.02%
Consistency	7	4	11



# TRAVEL AIRLINES

Website and mobile web customer experience are important throughout the traveler's buying cycle and the actual journey. Consumers use web and mobile sites to plan a trip and a myriad of mobile apps to manage the trip, from checking flight information, to presenting boarding passes, to quickly responding to travel disruptions.



TRAVEL — AIRLINES	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	5.32 sec	2.56 sec	9.56 sec
Home Page, Last Mile Load Time	8.07 sec	5.36 sec	10.89 sec
Home Page, Mobile Load Time	5.31 sec	2.71 sec	9.05 sec
Mobile Page Weight	616 KB	233 KB	964 KB
Book Flight Transaction Load Time	21.28 sec	11.42 sec	33.88 sec
Availability	98.72%	99.46%	97.94%
Consistency	6	4	8

# TRAVEL AIRLINES



✈ Four airlines are clustered together in the upper right of the top performers' quadrant. Every second counts with travelers checking their phones en route, and airlines recognize this, delivering the fastest overall mobile load time of any industry.



# TRAVEL HOTELS



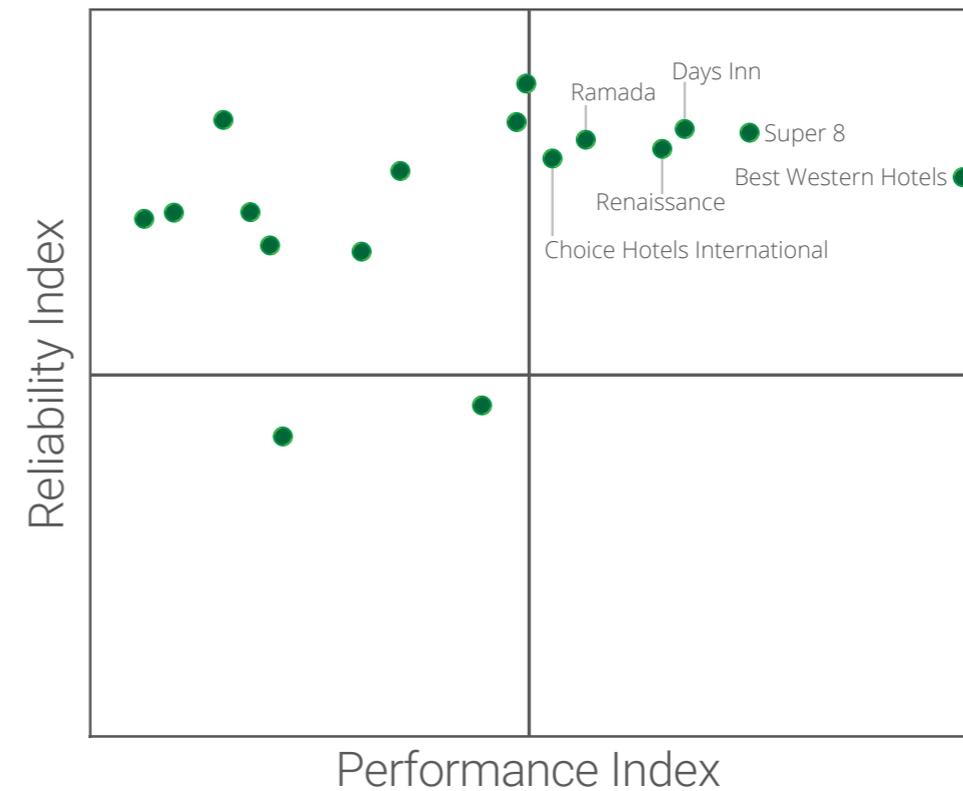
Consumers use hotel websites to research and make reservations, manage their loyalty program membership, and research their travel destination. Mobile apps come into play when travelers are on the road. When web and mobile sites perform well, they offer convenience for guests, and enable hotels to offer more personalized, responsive service, thus enabling them to compete more effectively.



Best Western had by far the fastest performance. Most hotels in the top performers' quadrant delivered comparable levels of reliability. The Wyndham Hotel Group had multiple brands among the top performers, including Ramada, Super 8, and Days Inn.

# TRAVEL HOTELS

TRAVEL — HOTELS	AVERAGE	TOP 3	BOTTOM 3
Home Page, Backbone Load Time	3.92 sec	2.42 sec	5.10 sec
Home Page, Last Mile Load Time	8.03 sec	5.17 sec	10.12 sec
Home Page, Mobile Load Time	5.86 sec	3.54 sec	8.61 sec
Book Room Transaction Load Time	14.33 sec	7.81 sec	19.31 sec
Booking Transaction Page Weight	3,436 KB	2,079 KB	6,242 KB
Availability	98.84%	99.46%	97.58%
Consistency	8	6	12



# HOW YOU CAN BECOME THE BEST

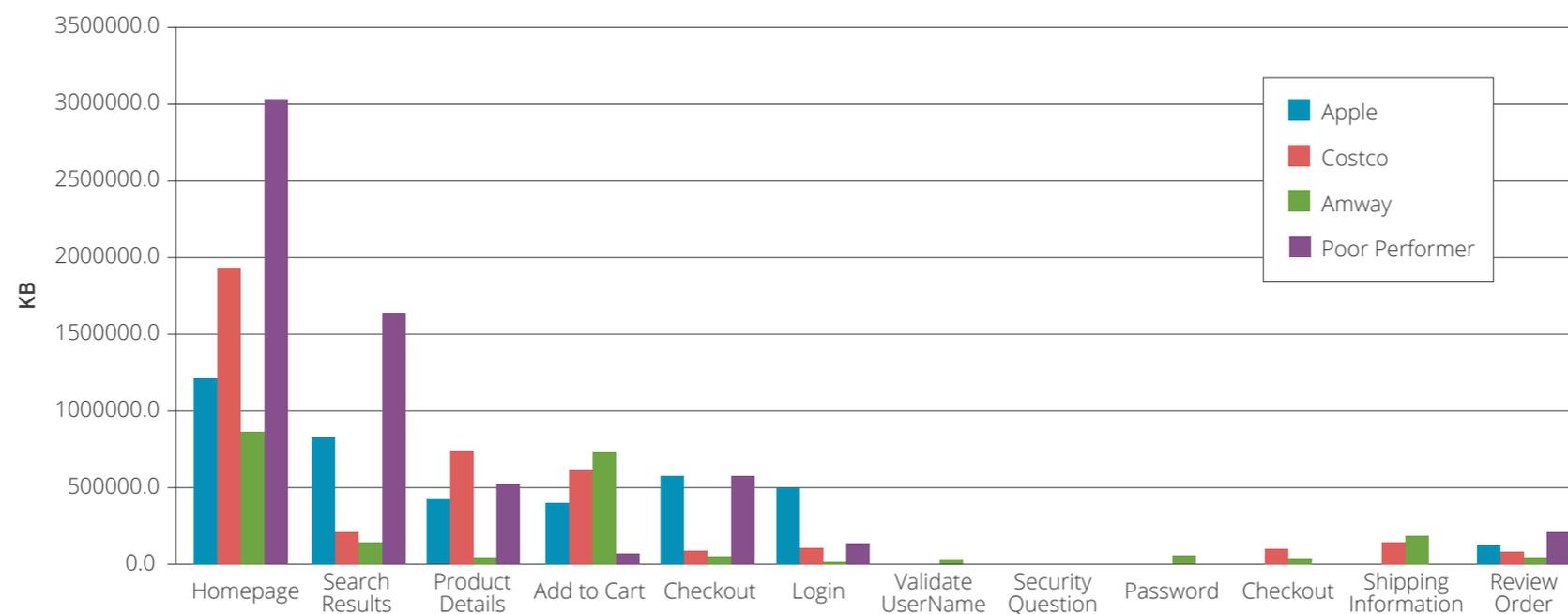


## A deep-dive performance analysis

The first step to improvement is to assess how your digital performance compares with that of the top performers in your industry and overall. However, you can't stop there if you want to satisfy consumers. You need to understand how your site design is affecting performance and take the steps necessary to optimize it. We analyzed the top retail performers to uncover tips for improving your own performance.

## Page size

One of the simplest ways the best performers keep their end-to-end times fast is by limiting the size of their pages. We mapped each step in the product order transaction, to find out how the best do it. As you can see from the chart, the best performers download a large portion of the total content upfront on the homepage and very limited amounts in the subsequent steps. They also limit the number of steps in the transaction.



# HOW YOU CAN BECOME THE BEST

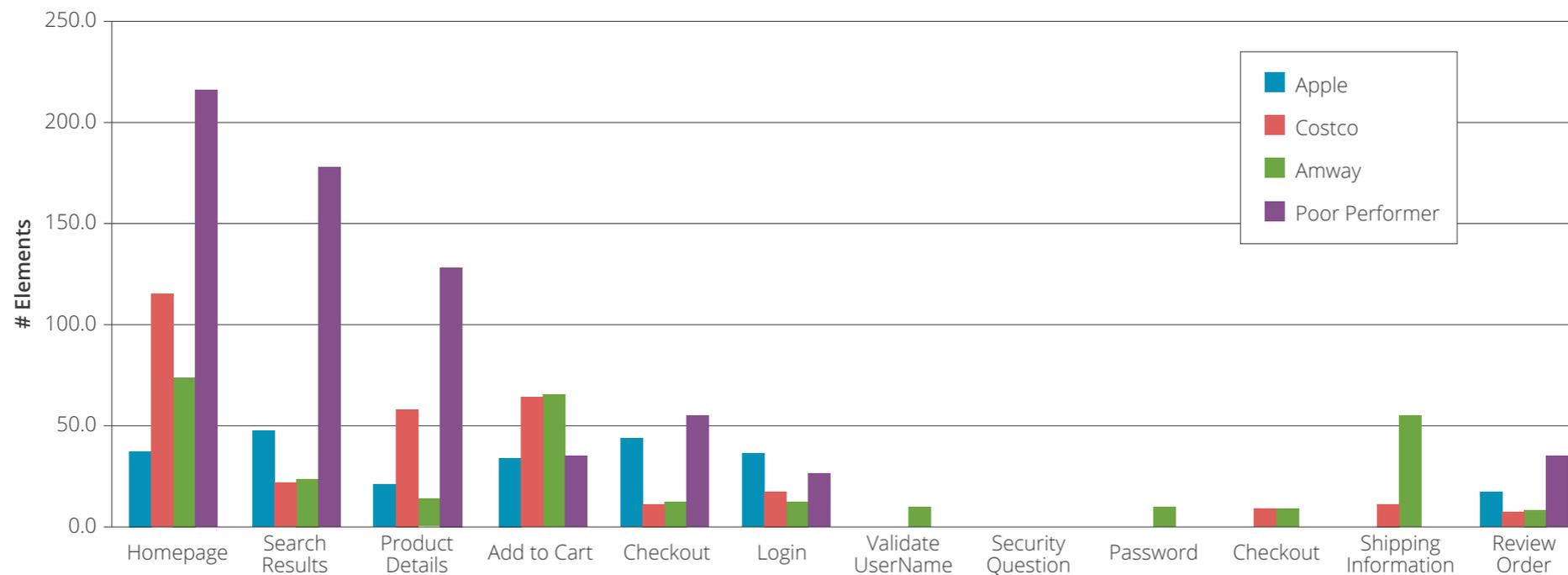


## Number of page elements

Comparing element count reveals even greater differences between the top performing sites and the poorer performing competitor.

## User journey design

Apple and Costco had the lowest average end-to-end times of all participants. Apple is able to complete the process in just seven steps while Costco uses nine. The two extra steps cost Costco approximately 3s.



# HOW YOU CAN BECOME THE BEST



## Apple: A study in simplicity and responsive design

Apple was one of the overall best performing sites in 2015 and a great example of a responsive design approach. They achieved a very fast response time on their home page on Backbone and Last Mile tests, while maintaining a Mobile response time more than a full second below the average.

Apple's secret to a single high performing responsive design site is in its simplicity. When we compared Apple with another responsive design site with Mobile response time near the category average, we found a few key differences.

	Apple		Competitor	
	Count	Size (KB)	Count	Size (KB)
Images	18	88	89	951
Applications	10	589	0	0
Text	7	43	40	177
JavaScript	5	261	43	674
<b>Total</b>	<b>40</b>	<b>981</b>	<b>172</b>	<b>1801</b>

Apple kept the number and size of page elements low, keeping the page simple and clean. This included only 18 images (compared with the competitor's 89), and Apple used JavaScript sparingly, with only five scripts on the homepage compared with the competitor's 43.

Additionally, all of the content comes from three Apple-owned domains — and no external 3rd parties — whereas the competitor used 60 domains with 56 of them being 3rd parties. Apple's approach here limits the overhead required for DNS, connections, SSL, etc. and — helps them gain their top performer status.

	Apple	Competitor
Domains	3	60
3rd Party Domains	0	56



## Additional resources

The Best of the Web top performers provide consumers with a responsive digital experience that embraces their ever-increasing expectations. To compete, you must develop gapless insight across your customer's real user experience and gain insight into how performance problems impact your business results. We provide additional resources to help you on your journey to improve your digital performance management practices and to become the best.

## Performance test

Evaluate your performance today and find out how it compares to the leaders.

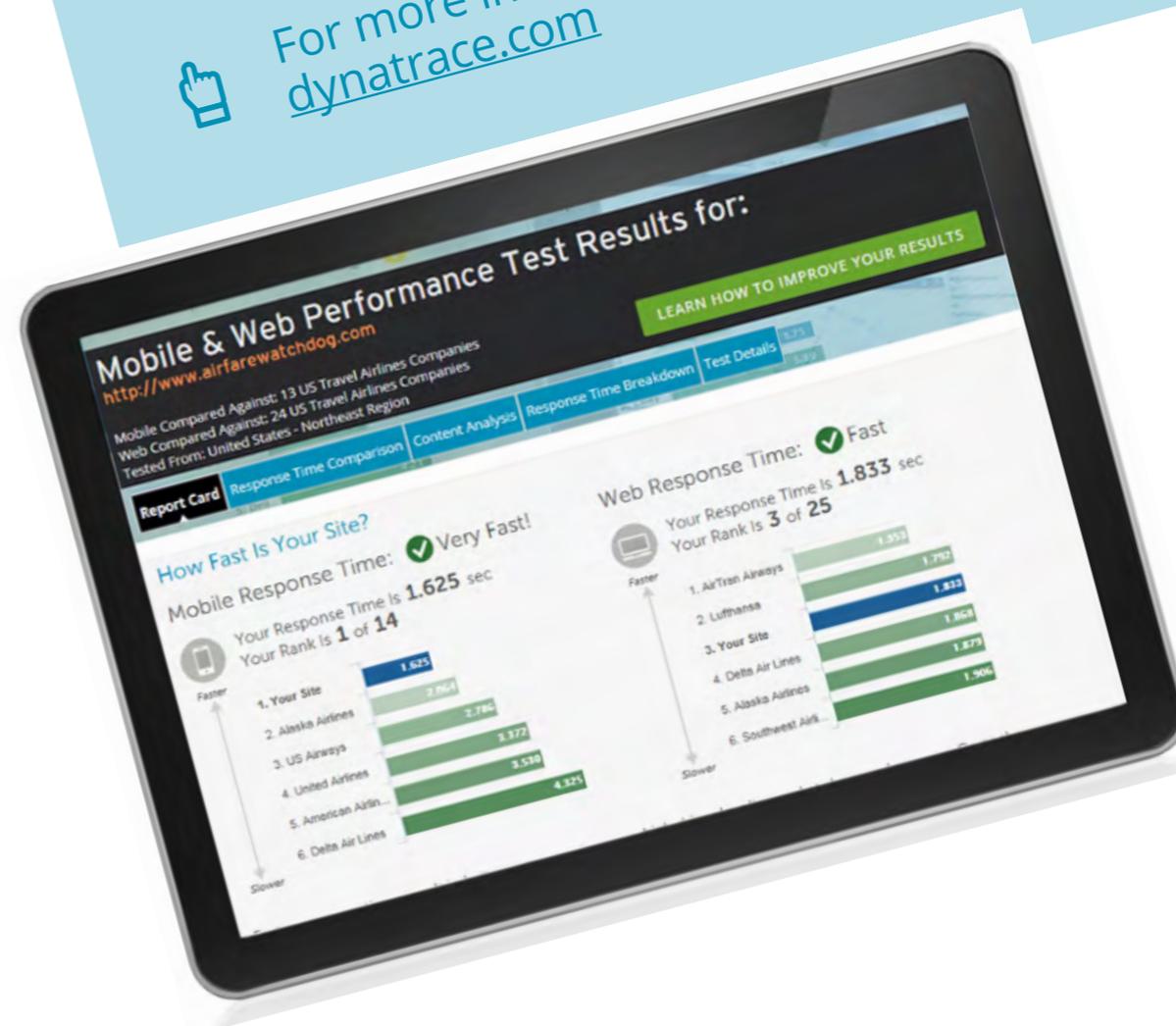
- > Understand how your website is performing for web and mobile web users
- > Analyze the performance impact of your website design
- > Know how your web and mobile web sites' speed compares to the best in your industry

Click here for your  
**FREE MOBILE & WEBSITE  
PERFORMANCE TEST**

# BEST OF THE WEB

## ADDITIONAL RESOURCES:

-  For a replay of the 2016 Best of the Web Webinar [visit here](#)
-  For more information on Dynatrace visit: [dynatrace.com](http://dynatrace.com)



## Resources

### Recommended viewing

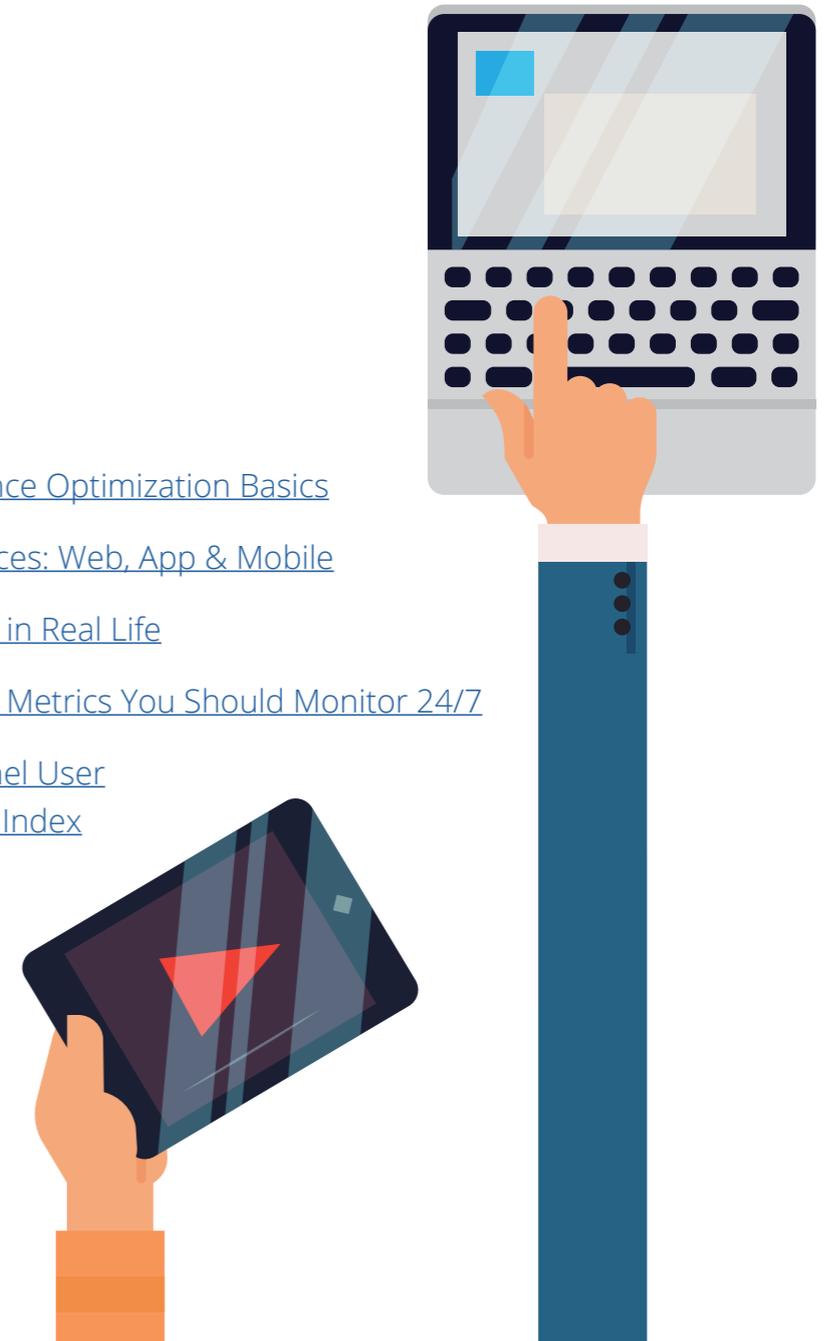
- > [2016 Best of the Web](#), webinar replay
- > From [Building Websites to Building Digital Experiences](#) — Walgreen's Story

### Recommended reading

- > [Brief: Take Application Performance To The Next Level With Digital Performance Management](#), Forrester
- > [Dynatrace Benchmarks](#) page
- > [Going beyond page load speed to optimize customer experience](#) — How T-Mobile mastered digital performance to boost ROI
- > [Micro-Moments: Your Guide to Winning the Shift to Mobile](#), Google
- > [The Mobile Mind Shift](#) by Ted Schadler, Josh Bernoff and Julie Ask

### Blogroll

- > [Tim Kadlec](#)
- > [Lara Hogan](#)
- > [Can't Miss Web Performance Optimization Basics](#)
- > [Comparing User Experiences: Web, App & Mobile](#)
- > [Omni-Channel Monitoring in Real Life](#)
- > [Top 4 Digital Performance Metrics You Should Monitor 24/7](#)
- > [The Essential Omni-Channel User Experience Measurement Index](#)





Learn more at [dynatrace.com](https://www.dynatrace.com)

Dynatrace is the innovator behind the industry's premier Digital Performance Platform, making real-time information about digital performance visible and actionable for everyone across business and IT. We help customers of all sizes see their applications and digital channels through the lens of their end users. Over 7,500 organizations use these insights to master complexity, gain operational agility, and grow revenue by delivering amazing customer experiences.

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