Rediscover Google AMP

Learn to integrate AMP with your Drupal project

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10
U. S. COAST GUARD
10

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The Nerdery

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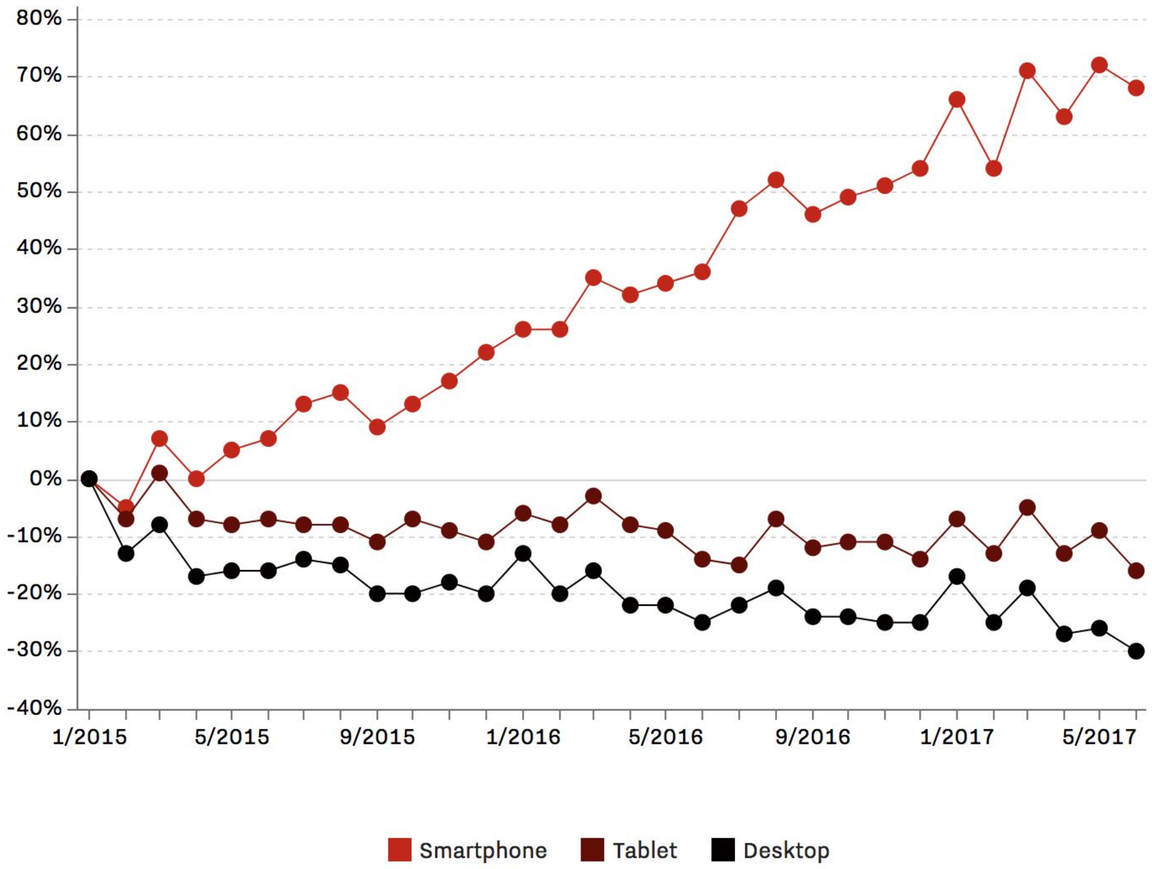
1. Historical Context
2. What is AMP?
3. Drupal & AMP
4. Your Drupal Project

Historical Context

Change in U.S. website visits by device



Source: Adobe Analytics

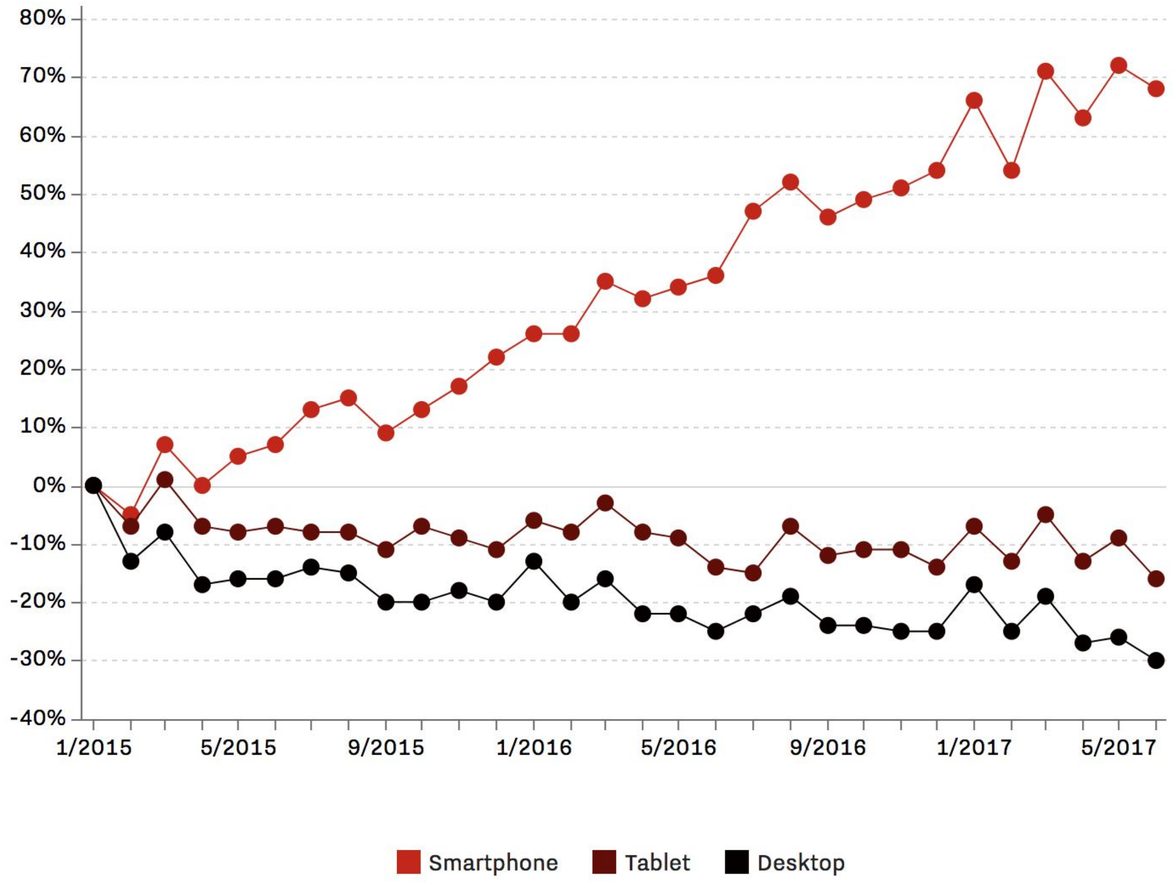
recode

[Smartphones are driving all growth in web traffic]

Overall, website traffic growth has been flat.

68% Increase
Smartphone Traffic

Change in U.S. website visits by device



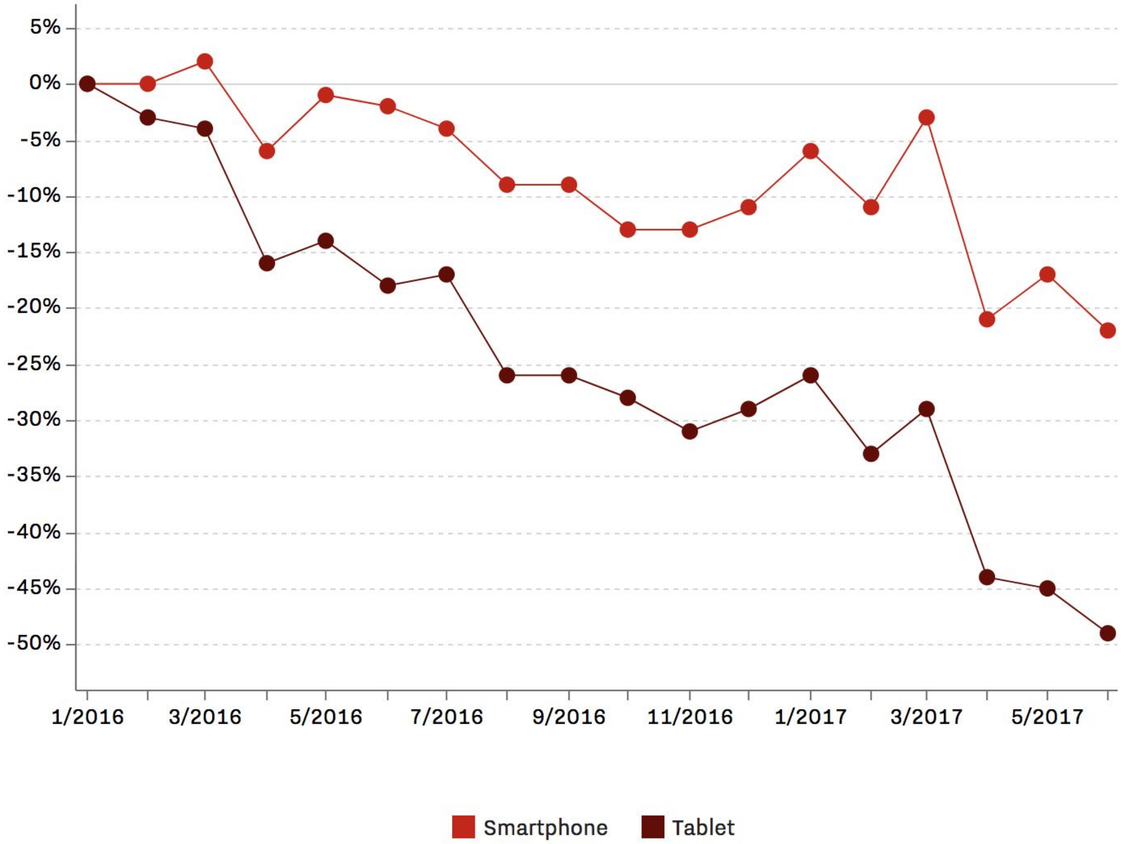
Source: Adobe Analytics

recode

[Smartphones are driving all growth in web traffic]

61% of referral traffic came from Google

App launches have declined on phones and tablets



Source: Adobe Analytics

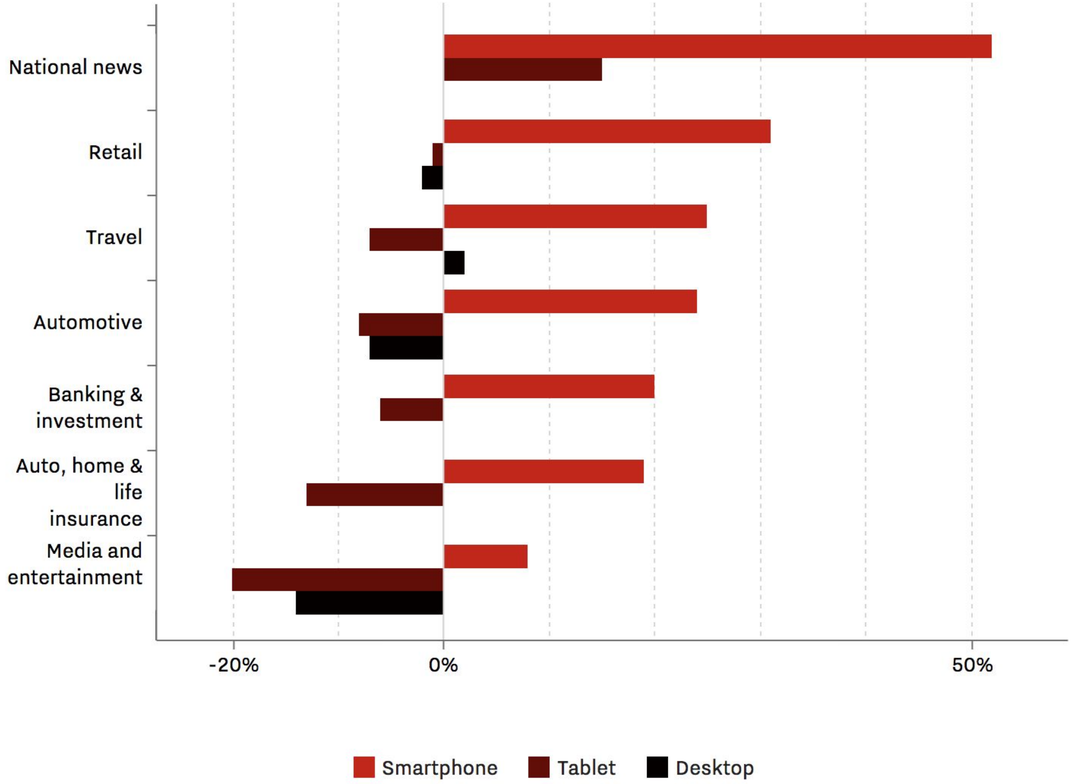
recode

[Smartphones are driving all growth in web traffic]

22% fewer

smartphone app opens

Change in website visits by industry in Q2 2017 compared with a year earlier



Source: Adobe Analytics

recode

[Smartphones are driving all growth in web traffic]

News websites

have seen the highest increase

Before > 2016 > 2017 > 2018

2010 & 2012: **Flipboard** iOS and Android apps launched

04/2013: **Feedly** attracts Google Reader users as it closes

05/2015: **Facebook Instant Articles** announced

09/2015: **Apple News** released with iOS 9

10/2015: **Google AMP** announced

Before > 2016 > 2017 > 2018

02/2016: **AMP** versions appear in mobile search results: top stories

03/2016: **Facebook IA** support native ads

04/2016: **Facebook AI** announce availability to all publishers

08/2016: **AMP** preview for AMPed search results

09/2016: **Apple News** 2 released with iOS 10

09/2016: **AMP** in global mobile search results

10/2016: **AMP** celebrates its first birthday 🎂

Before > 2016 > 2017 > 2018

WordPress — AMP’d up tens of millions of websites

Reddit — Announced tens of millions of pages in AMP

Bing — iOS and Android app supports AMP

Ebay — AMP’d up 15 million product category pages

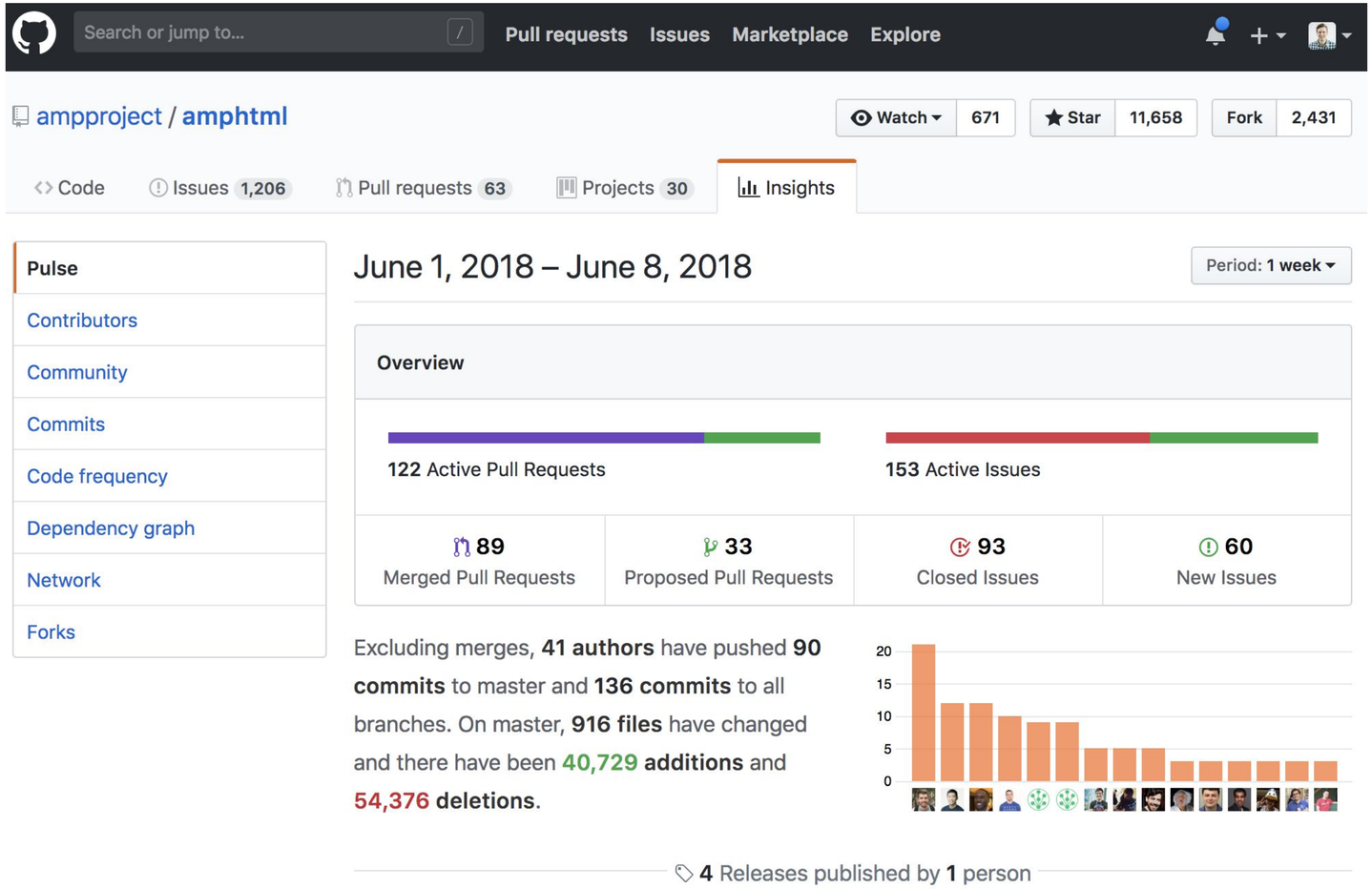
What is AMP?

“AMP is an **open-source library** that provides a **straightforward way** to create **web pages** and **email** that are compelling, smooth, and load near instantaneously for users.”

“AMP builds on your existing skill sets and frameworks to create web pages. AMP is supported by many different platforms, and it's **compatible across browsers**.”

Source: What is AMP? (emphasis mine)

AMP: An open-source library



AMP: Three core pieces

- **AMP HTML** is HTML with some restrictions for reliable performance.
- The **AMP JS** library
  - Implements all of AMP's best performance practices
  - Manages resource loading via asynchronous requests
  - Sandboxing of all iframes
  - Pre-calculating layout of every element
  - Disabling of slow CSS selectors
- **Google AMP Cache**
  - proxy-based content delivery network
  - Assets load from the same origin via HTTP 2.0
  - Built-in validation

AMP: A straightforward way to create web pages

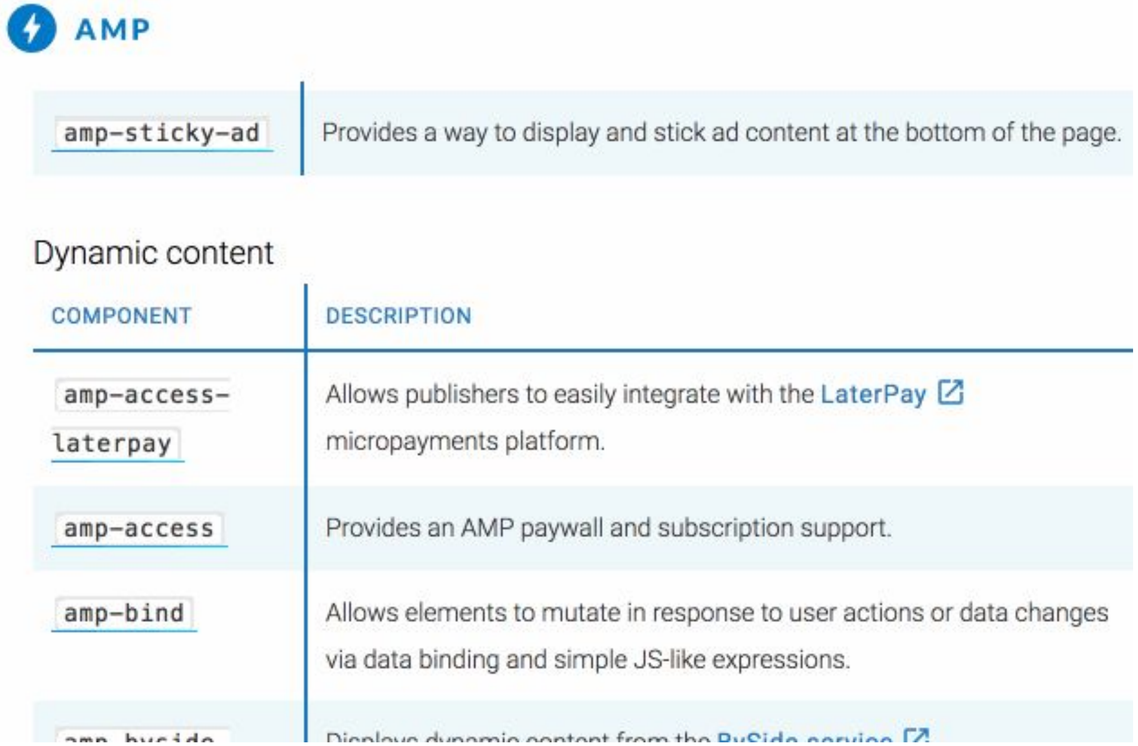
Must Have

```
<!doctype html>
<html ⚡>
 <head>
   <meta charset="utf-8">
   <link rel="canonical" href="hello-world.html">
   <meta name="viewport" content="width=device-width,minimum-scale=1,initial-scale=1">
   <style amp-boilerplate>body{-webkit-animation:-amp-start 8s steps(1,end) 0s 1 normal bot
   <script async src="https://cdn.ampproject.org/v0.js"></script>
 </head>
 <body>Hello World!</body>
</html>
```

AMP: No JavaScript, but AMP Components

AMP Components include their own JavaScript

- amp-sidebar
- amp-carousel
- amp-lightbox
- amp-bind
- amp-date-picker
- amp-live-list



AMP

`amp-sticky-ad`	Provides a way to display and stick ad content at the bottom of the page.

Dynamic content

COMPONENT	DESCRIPTION
`amp-access-laterpay`	Allows publishers to easily integrate with the LaterPay micropayments platform.
`amp-access`	Provides an AMP paywall and subscription support.
`amp-bind`	Allows elements to mutate in response to user actions or data changes via data binding and simple JS-like expressions.
`amp-byside`	Displays dynamic content from the BySide service

AMP: No External CSS or Inline Element Styles

Instead use inline stylesheet.

```
<style amp-custom>
    … Max 50 KB of inline styles
</style>
```

AMP: Custom fonts via <link> or @font-face

Using <link> tag with fonts from:

- Typography.com: https://cloud.typography.com
- Fonts.com: https://fast.fonts.net
- Google Fonts: https://fonts.googleapis.com
- Typekit: https://use.typekit.net
- Font Awesome: https://maxcdn.bootstrapcdn.com

Using @font-face with amp stylesheet.

```
<style amp-custom>
  @font-face {
    font-family: "Bitstream Vera Serif Bold";
    src: url("https://somedomain.org/VeraSeBd.ttf");
  }

  body {
    font-family: "Bitstream Vera Serif Bold", serif;
  }
</style>
```

AMP: Disallowed CSS

- margin: 0 !important
- filter: greyscale(20%);
- -amp- class and i-amp- tag names
- Transition property & @keyframes: Only GPU-accelerated properties (currently opacity, transform)
- None of the more exotic properties, e.g. behavior, moz-binding

AMP: Disallowed HTML

Disallowed HTML

- <img>
- <video>
- <audio>
- <iframe>

AMP Replacements to prioritize content loading

- <amp-image>
- <amp-video> or other player components, e.g. <amp-jwplayer>, <amp-youtube>
- <amp-audio>
- <amp-iframe>

AMP: Forms

Require use of <amp-form>

- Requires amp-form-0.1.js
- Allowed inputs and fields: Other form-related elements, including: <textarea>, <select>, <option>, <fieldset>, <label>, <input type=text>, <input type=submit>, and so on.
- Also allowed inside of <form method=POST action-xhr>, <input type=password> and <input type=file>
- Disallowed <input type=button>, <input type=image>
- Also disallowed, Most of the form-related attributes on inputs including: form, formaction, formtarget, formmethod and others.

AMP: <amp-sidebar>

- A sidebar provides a way to display meta content intended for temporary access (navigation links, buttons, menus, etc.).
- The amp-sidebar should be a direct child of the <body>.
- It must have a layout of nodisplay

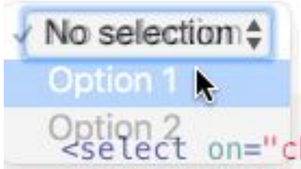
```
<amp-sidebar id="sidebar"
  layout="nodisplay"
  side="right">
  <amp-img class="amp-close-image"
    src="/img/ic_close_black_18dp_2x.png"
    width="20"
    height="20"
    alt="close sidebar"
    on="tap:sidebar.close"
    role="button"
    tabindex="0"></amp-img>
  <ul>
    <li>
      <a href="/">Home</a>
    </li>
    <li> Nav item 1</li>
    <li>
      <amp-fit-text width="220"
        height="20"
        layout="responsive"
        max-font-size="24">
        Nav item 2 - &lt;amp-fit-text&gt;
      </amp-fit-text>
    </li>
```

AMP: <amp-carousel>

```
<amp-carousel width="400"
  height="300"
  layout="responsive"
  type="slides"
  autoplay
  delay="2000">
  <amp-img src="/img/image1.jpg"
    width="400"
    height="300"
    layout="responsive"
    alt="a sample image"></amp-img>
  <amp-img src="/img/image2.jpg"
    width="400"
    height="300"
    layout="responsive"
    alt="another sample image"></amp-img>
  <amp-img src="/img/image3.jpg"
    width="400"
    height="300"
    layout="responsive"
    alt="and another sample image"></amp-img>
</amp-carousel>
```

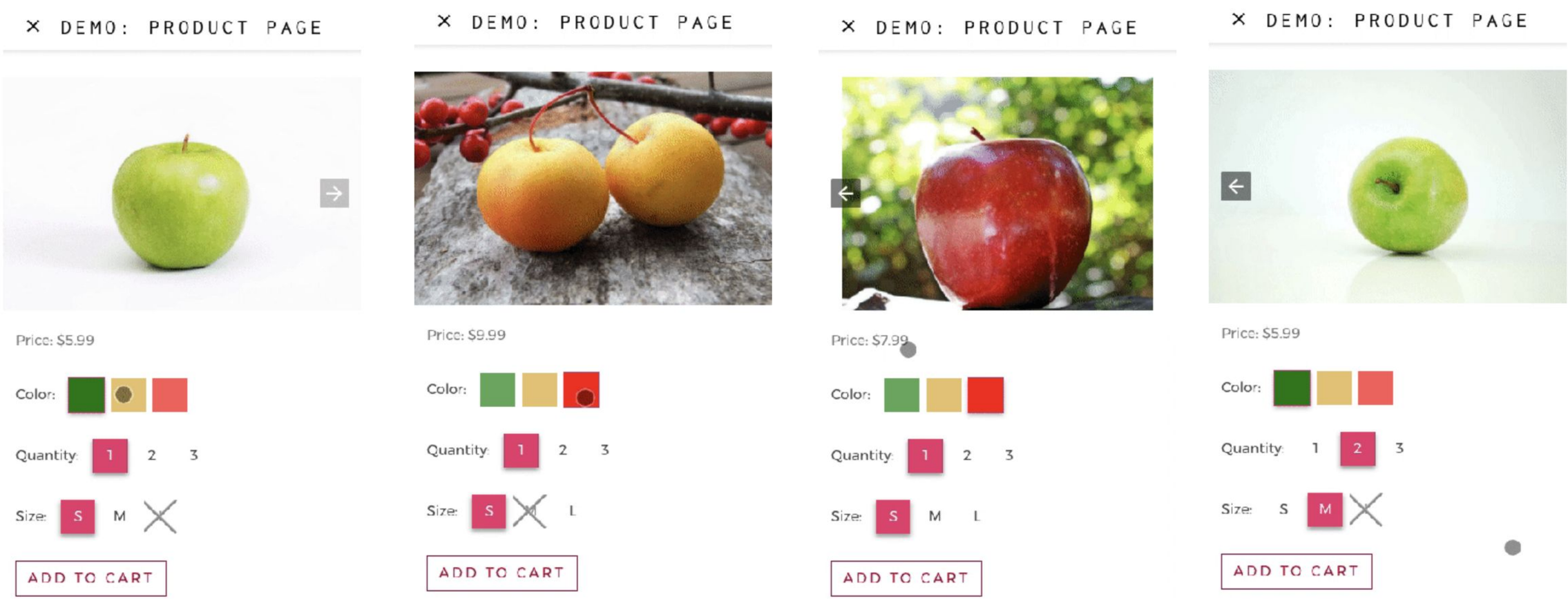
AMP: <amp-bind>

- allows you to add custom interactivity to your pages beyond using AMP's pre-built components.
- It works by mutating elements in response to user actions via data binding and JS-like expressions.




```
<select on="change:AMP.setState({ option: event.value })"
  class="m1">
  <option value="0">No selection</option>
  <option value="1">Option 1</option>
  <option value="2">Option 2</option>
</select>
<div hidden
  [hidden]="option != 1"
  class="p1 m1 bg-yellow">
  Option 1
</div>
<div hidden
  [hidden]="option != 2"
  class="p1 m1 bg-green">
  Option 2
</div>
```

AMP: <amp-bind> Product Page



Before > 2016 > 2017 > 2018

WordPress — AMP’d up tens of millions of websites

Reddit — Announced tens of millions of pages in AMP

Bing — iOS and Android app supports AMP

Ebay — AMP’d up 15 million product category pages

Before > 2016 > 2017 > 2018

01/2017: **AMP** announces TripleLift serving AMP Ads

02/2017: **AMP** provides access to the canonical URL

04/2017: **AMP** announces <amp-install-serviceworker> for PWA

05/2017: **AMP** announces enhanced analytics support

08/2017: **AMP** launches Fast Fetch ads

09/2017: **AdWords** announces AMP page delivery from the Google AMP Cache

Before > 2016 > 2017 > 2018

01/2018: **AMP** announces new version of AMP Cache based on Web Packaging

02/2018: **Google** announces AMP email

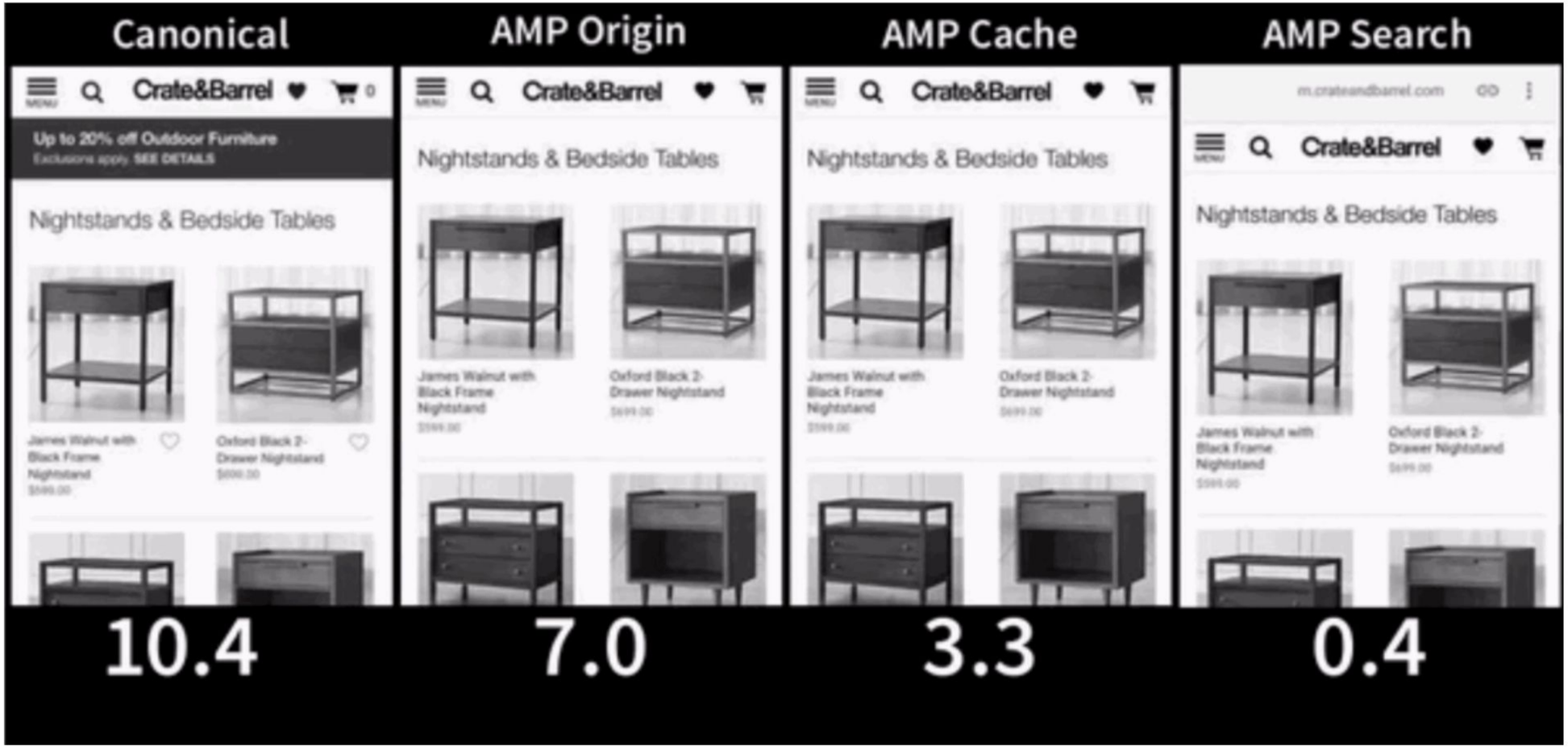
03/2018: **AMP** communicates AMP-based tech and web standards

04/2018: **AMP** announces <amp-consent> for GDPR

05/2018: **AMP** promotes <amp-geo> component for dynamic geo-personalization

07/2018: **Google** mobile search includes page speed as ranking factor

AMP: It’s Fast!


Canonical
AMP Origin
AMP Cache
AMP Search
Crate&Barrel
Up to 20% off Outdoor Furniture
Exclusions apply. SEE DETAILS
Nightstands & Bedside Tables
James Walnut with Black Frame Nightstand
Oxford Black 2-Drawer Nightstand
m.crateandbarrel.com
10.4
7.0
3.3
0.4

AMP: Resources

- AMP Roadshow Events: Seattle, Austin, New York, Cambridge, Vancouver
- AMP Project site: docs, references, tools, blog, etc.
- AMP by Example: A hands-on introduction to Accelerated Mobile Pages (AMP) focusing on code and live samples. Learn how to create AMP pages and see examples for all AMP components.
- AMP Start: Starter templates and components
- Google Code Labs: search for AMP and find AMP related tutorials for download
- AMP Playground: live sandbox demonstrations
- Chrome AMP validator extension

Drupal & AMP

Drupal & AMP: What's Required

All code supported by our friends at Lullabot

- Drupal AMP Theme 7.x-1.0, **8.x-1.1** (recommended) and 8.x-3.x versions
- Drupal AMP Module 7.x-1.0, 8.x-1.2, **8.x-2.1** (recommended) and 8.x-3.x versions
- AMP Library 1.1.3

Drupal & AMP: The D8.1 AMP Theme

- What you get
  - Strips incompatible markup, element attributes and JavaScript
  - Adds boiler plate AMP HTML, JS and CSS requirements
  - Method for adding inline CSS stylesheet
  - Prepared template files to render valid AMP HTML
    - A field image.html.twig template to render <amp-image> element.
- What you don’t get
  - Any other configuration options
  - A method for adding <amp-sidebar> for off-canvas navigation

Drupal & AMP: The D8.2x AMP Module

- What you get
  - Provides ability to enable AMP display modes for content types
  - Provides AMP formatters for text, image, and video fields to prepare as AMP components/markup
  - Adds <link rel=”amphtml”> to point to AMP path at node/article-title?amp=1
  - Provides services to render the AMP display mode using the configured AMP theme
  - Google Analytics, AdSense Publisher ID, oogle DoubleClick for Publishers Network ID configuration
  - <amp-pixel> configuration
- What you don’t get
  - Other AMP components, e.g. <amp-sidebar> for navigation
  - An AMP first approach

Drupal & AMP: The D8.3x AMP Theme & Module

- Experimental Features for an AMP first approach
- Adds flexibility to formatter development with new traits
- Adds new AMP carousel and image formatters
- Add <amp-sidebar> logic and uses the admin toolbar as an example
- Adds <amp-*> social sharing provider formatters
- And many more improvements

Your Drupal Project

Your Drupal Project: AMPing it

Existing Project

- Ok, with limited site parity on AMP page versions, use recommended project versions
- Need more parity, use recommended project versions with more custom theme logic
- Lots of parity, consider recommended or 3.x project versions
  - Prioritize AMP components and coordinate with project maintainers

New Project

- Ok, with limited site parity on AMP page versions, use recommended project versions
- Need more parity, consider recommended or 3.x project versions
  - Prioritize AMP components and coordinate with project maintainers

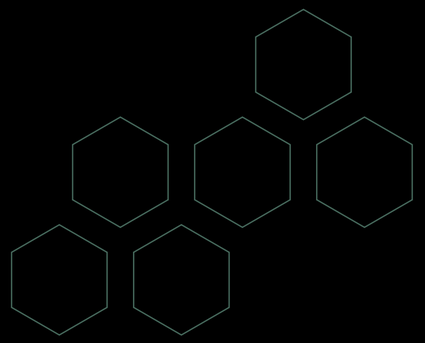
Your Drupal Project: Performance

Existing Solutions

- Using component based rendering with use of my_module.libraries.yml or my_theme.libraries.yml to minimize the per-page CSS and JS assets
- Responsive and optimized image assets
- Using performance audit tools, e.g. Chrome Lighthouse Audit
- DrupalCon Nashville 2018: Get a perfect 100 in Google PageSpeed by Mike Carper

Thank you!

@jasonawant

Q & A

Code Sprints