

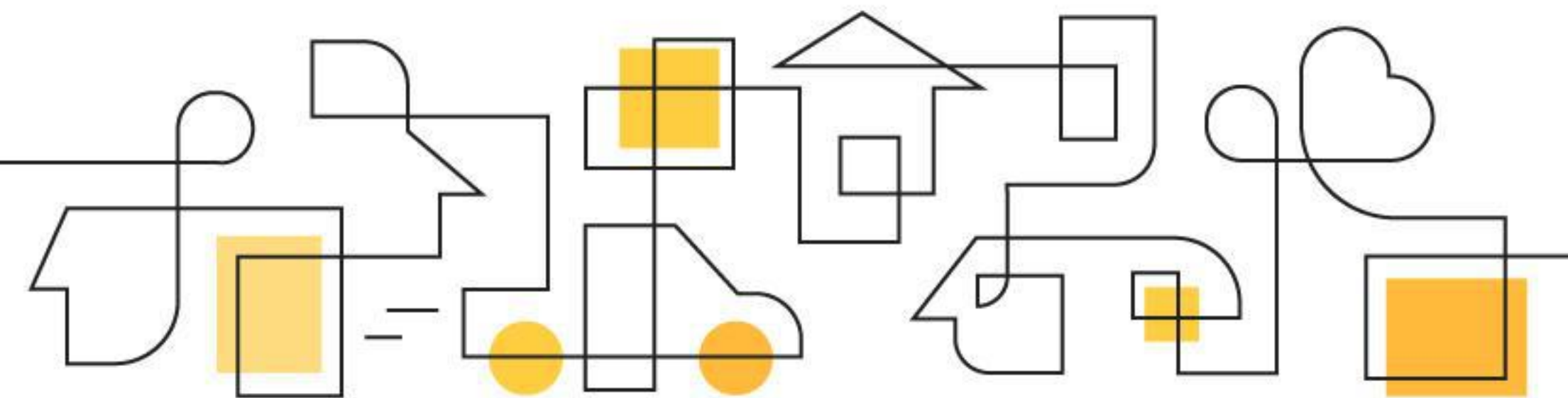
# Progressive Content Management Systems



Alberto Medina  
@iAlbMedina



Weston Ruter  
@WestonRuter



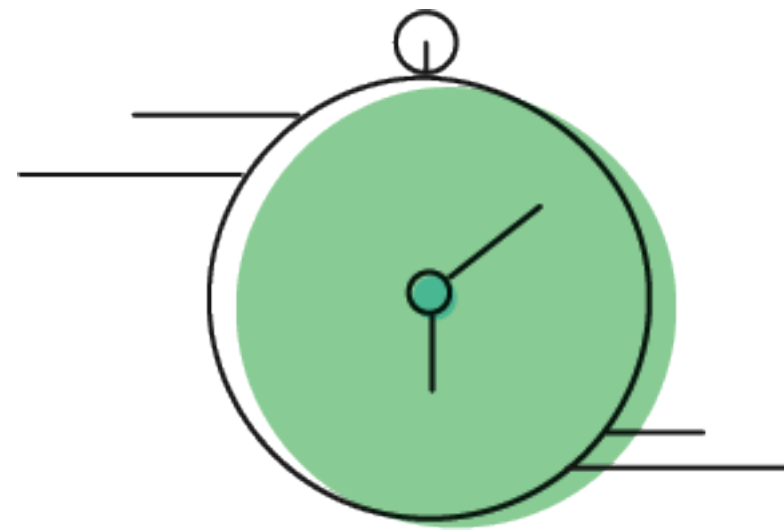
# User eXperience

💧 A person's **emotions** and **attitudes** about using a particular product, system or service 💡

— User Experience, Wikipedia



# Pillars of a delightful UX



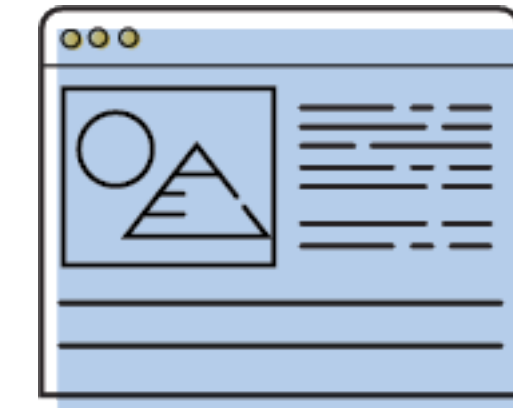
Performance and  
Reliability



Trust and Safety



Accessibility  
and Integration

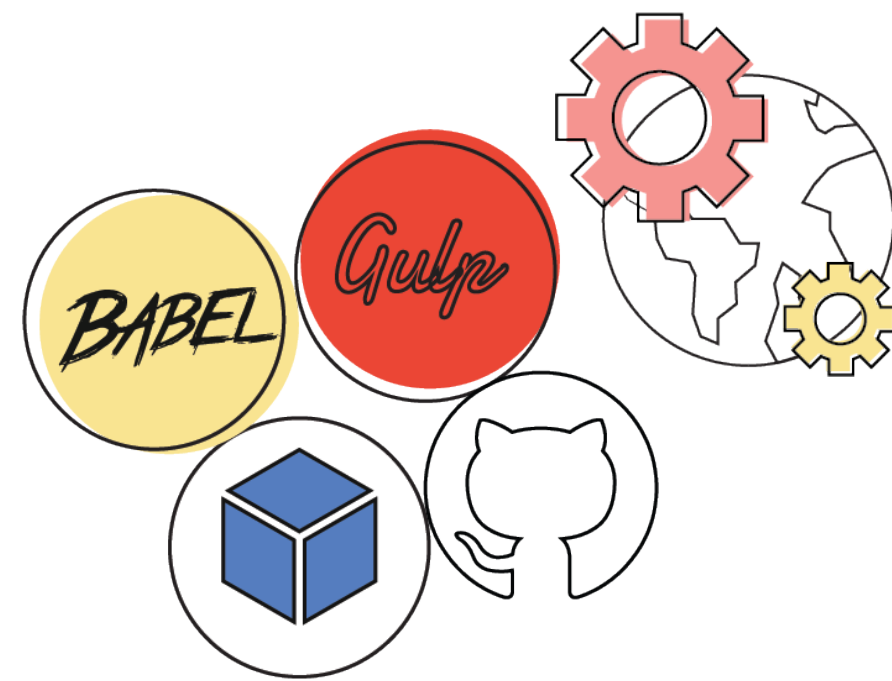


Great Content  
Quality

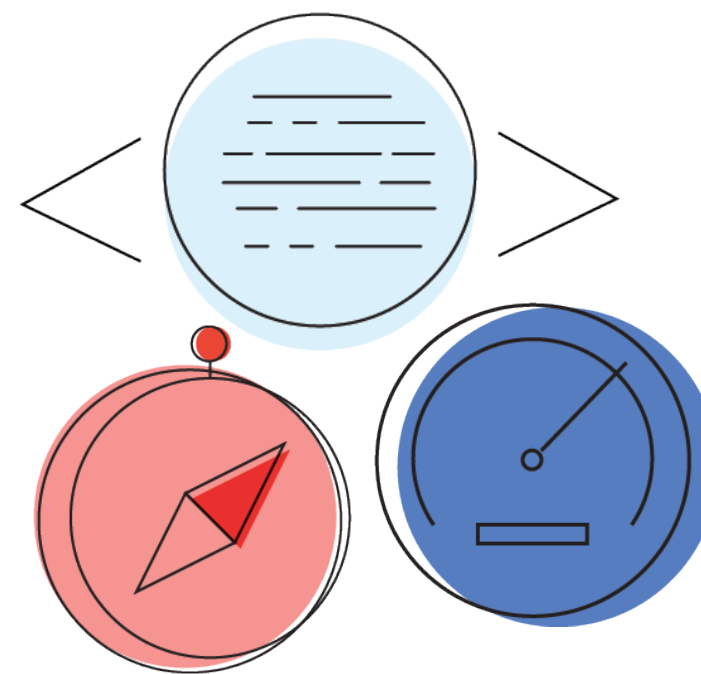


# Progressive Web Development

Developing **user-first** experiences using...



Modern Workflows  
and Web APIs



Coding and Performance  
Best Practices

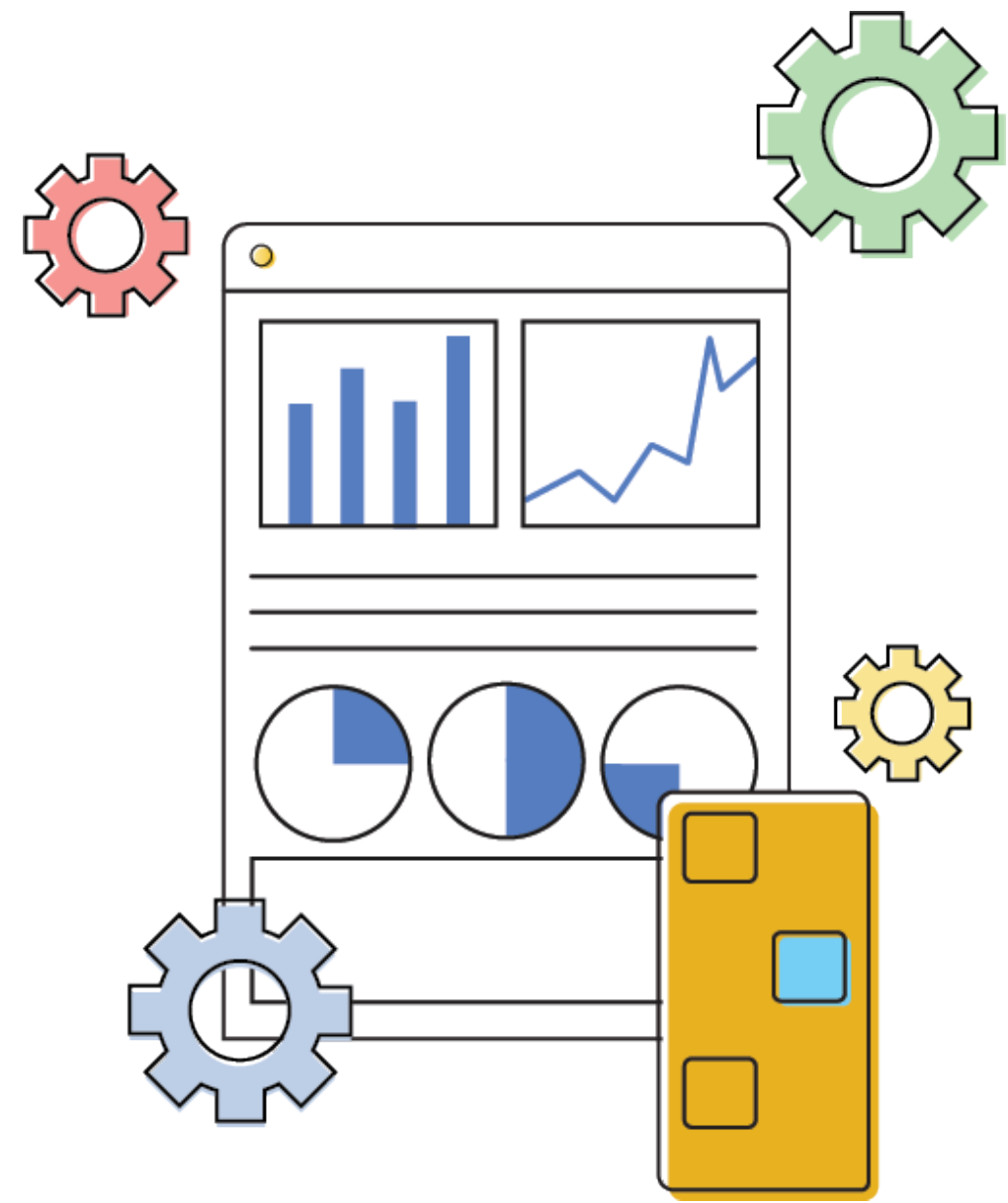


Effective Incentives  
and Validation Structures





# The Creative Process in the Web

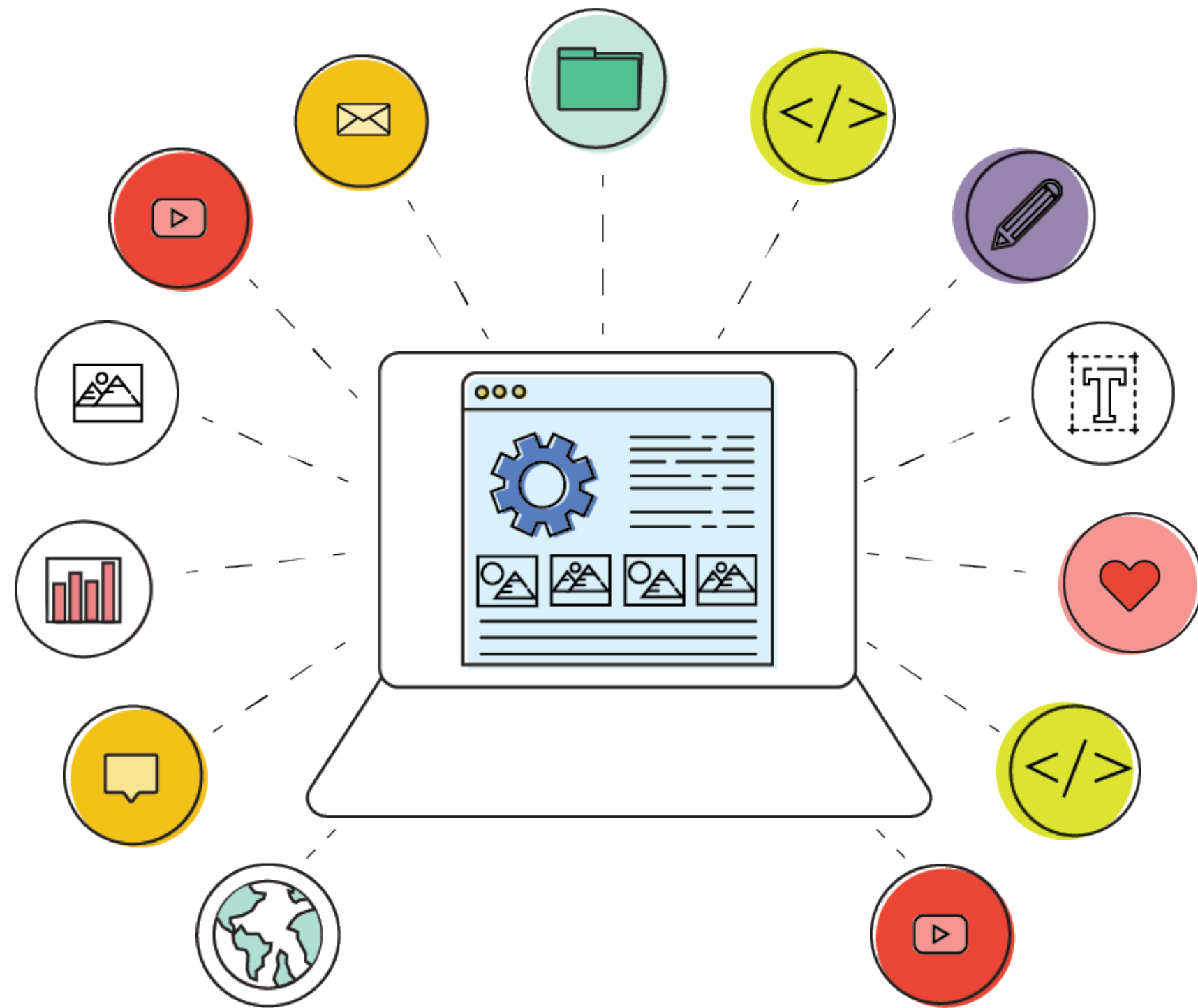


Web Sites/Apps



Content Management  
Systems





**54%** of sites built on a CMS  
( **11%** YoY growth! )

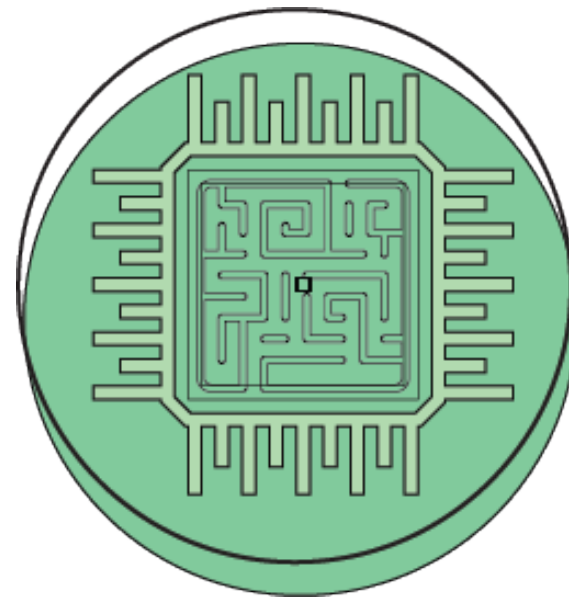
[bit.ly/w3tech-stats](https://bit.ly/w3tech-stats)



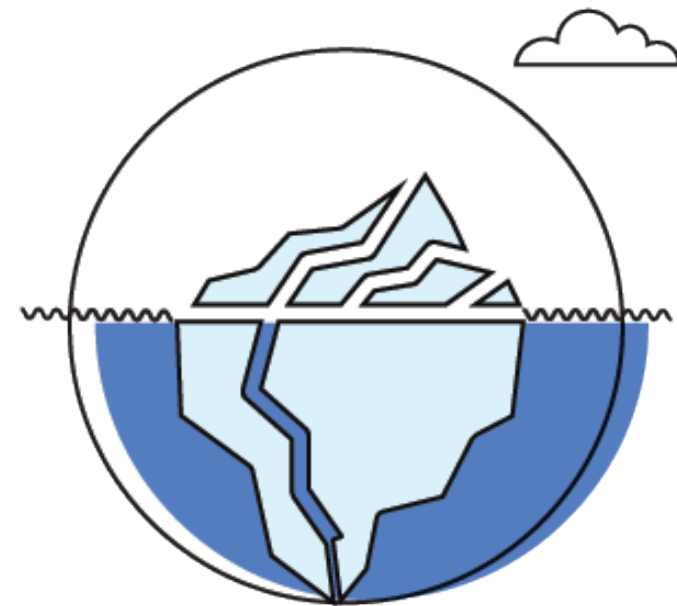


# CMS Ecosystem Challenges

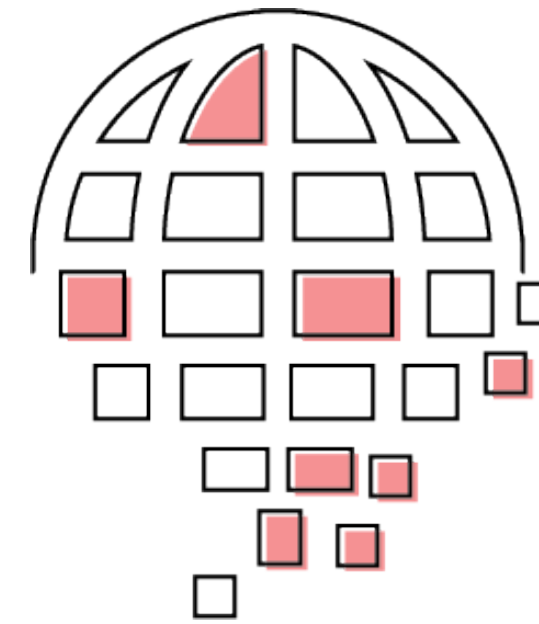
On advancing along the progressive road...



High  
Complexity



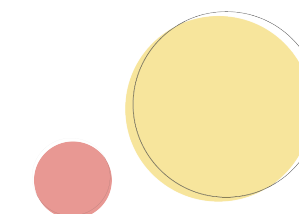
Architectural  
Choices



High levels of  
Fragmentation



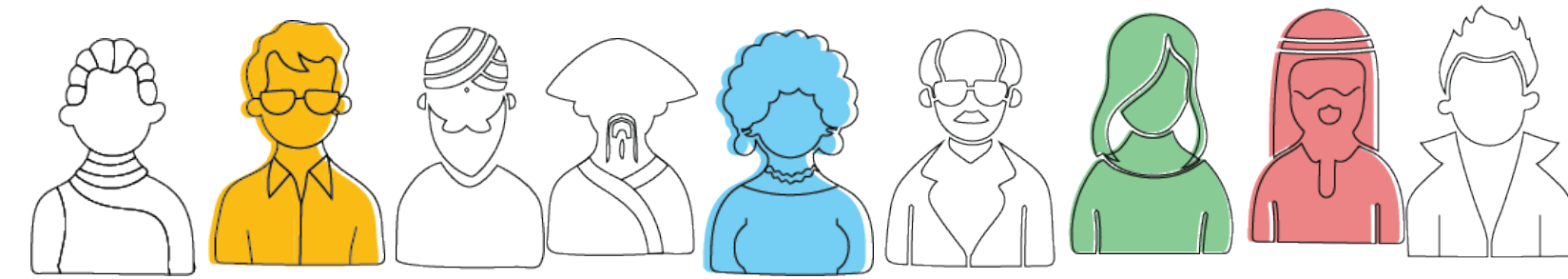
Lack of effective  
incentives



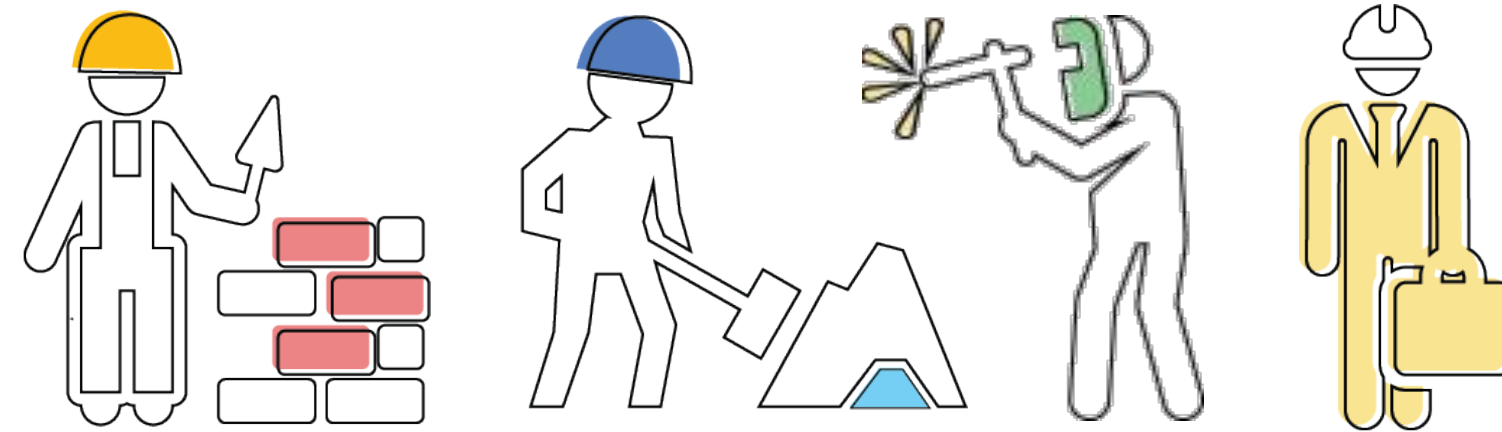


# A CMS Ecosystem

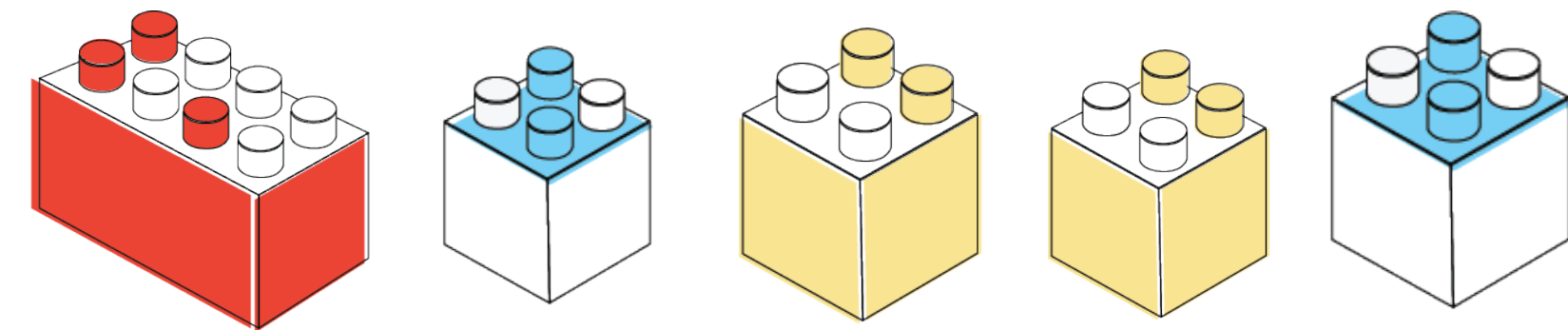
Users



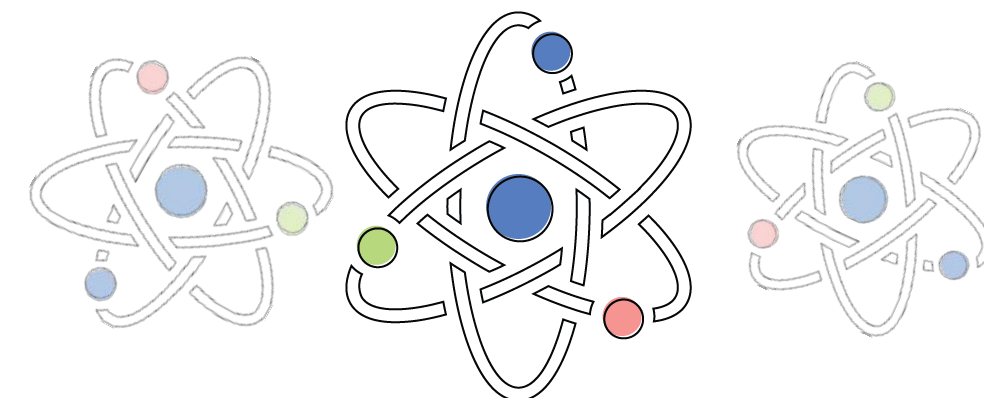
Developers



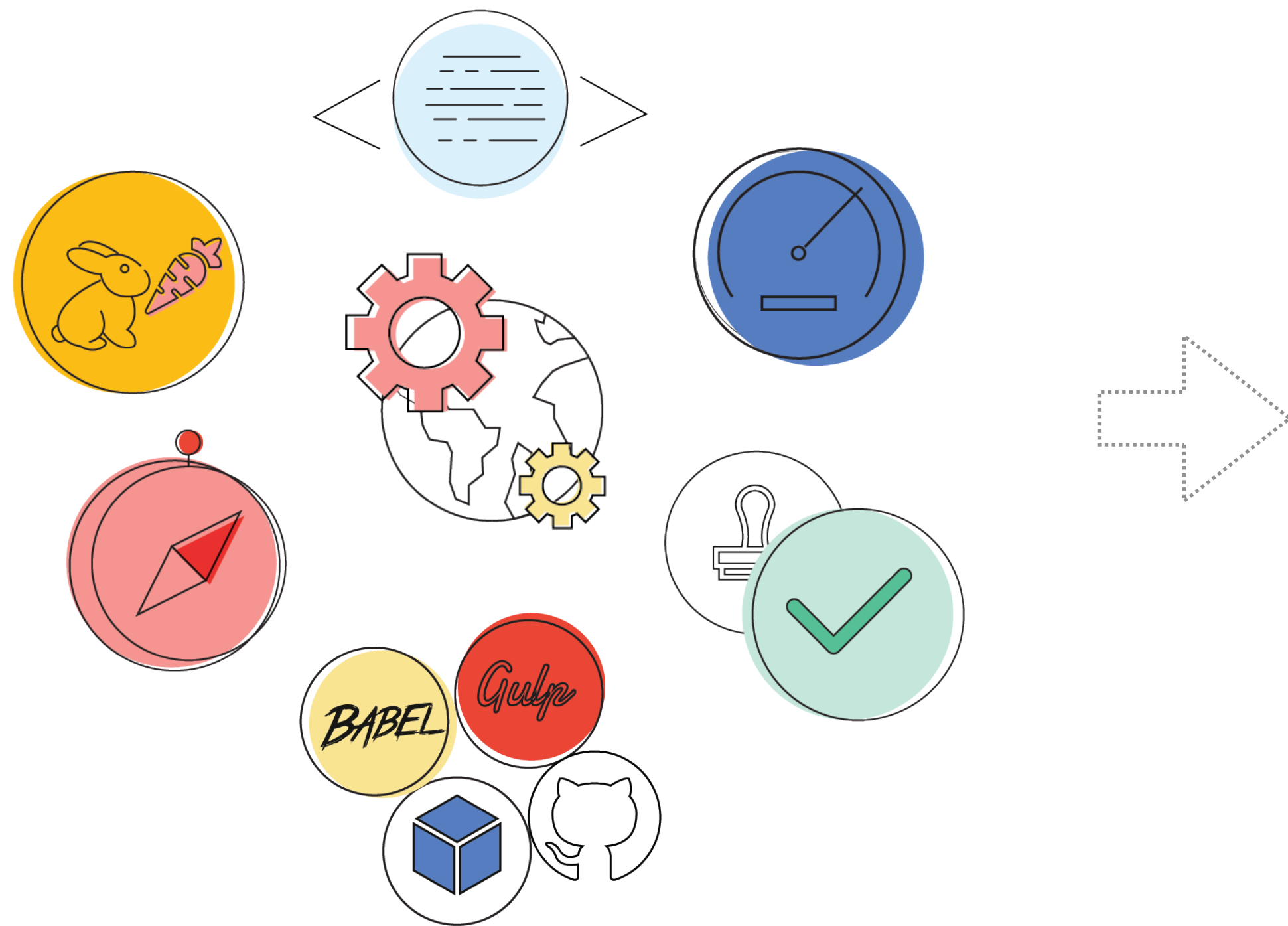
Extensions



Core



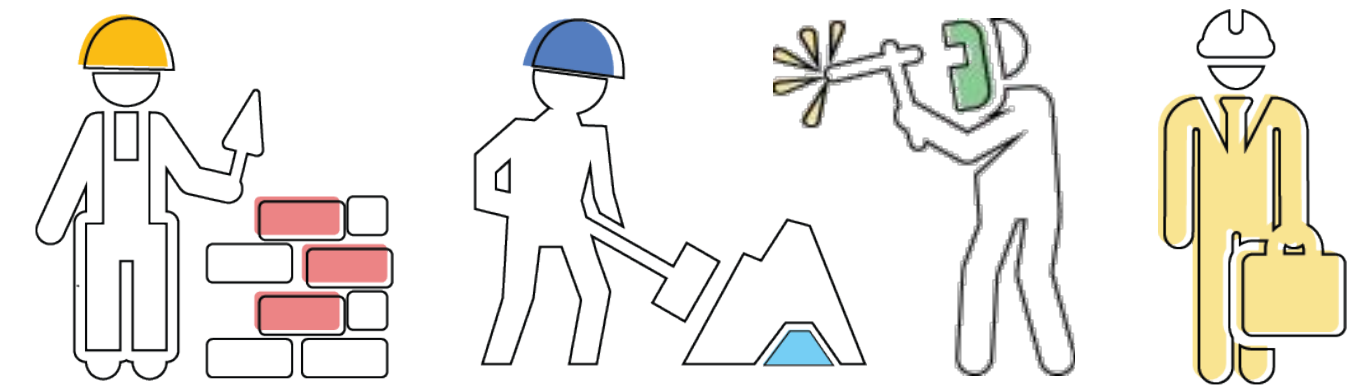
# Progressive Content Management Systems



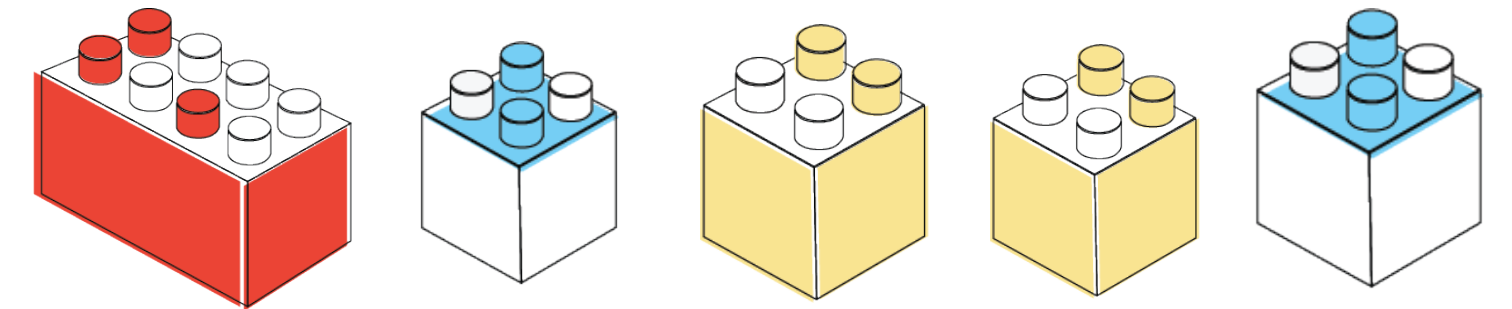
Users



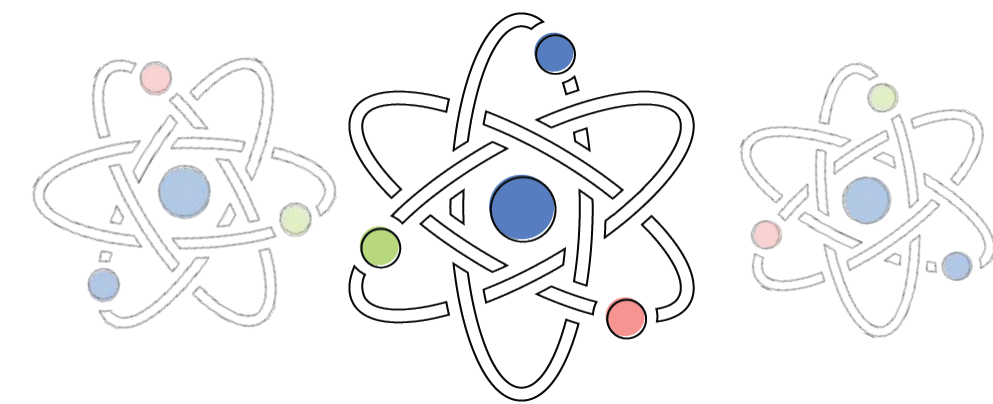
Developers



Extensions



Core

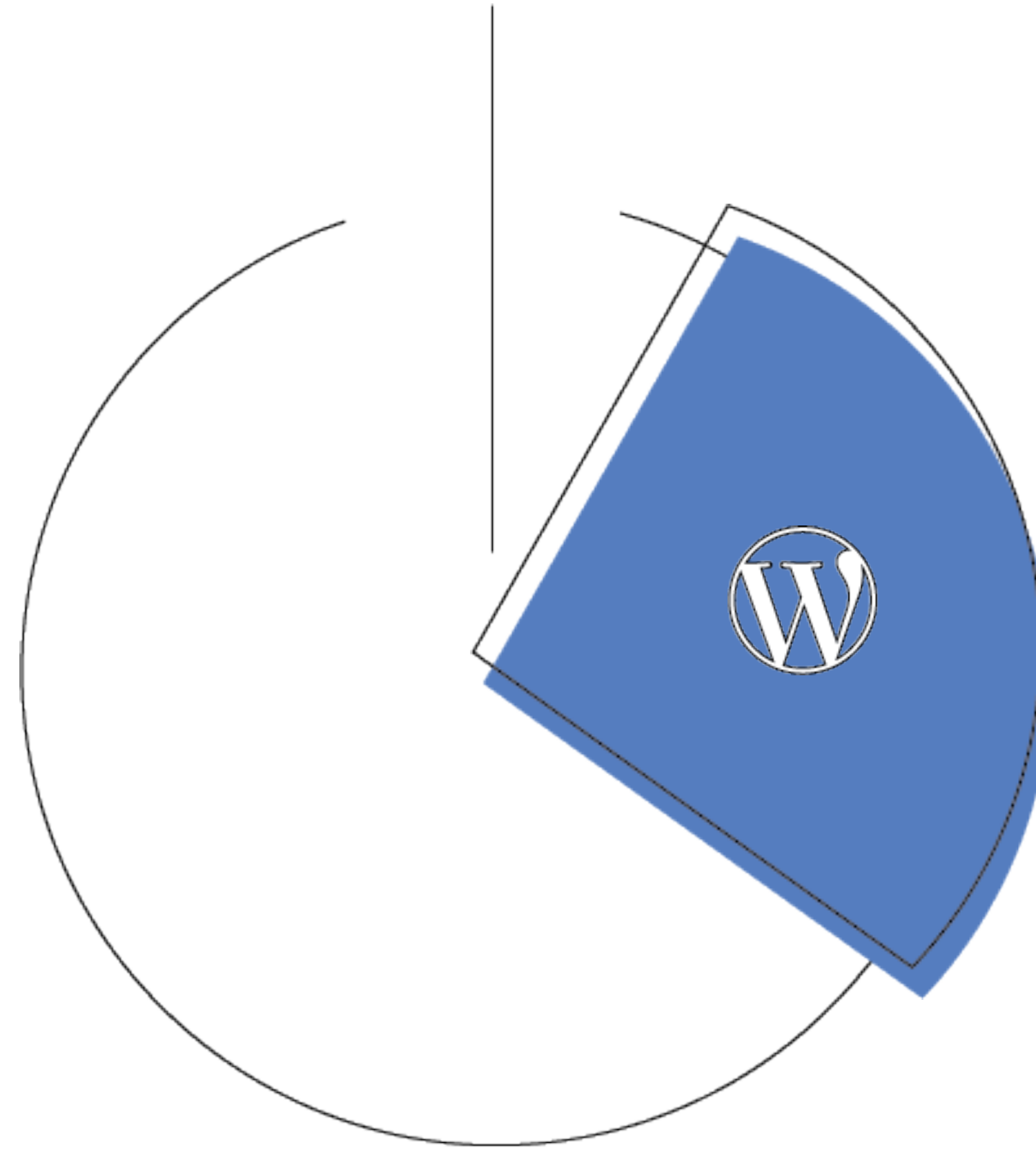




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# WordPress powers 30% of the web

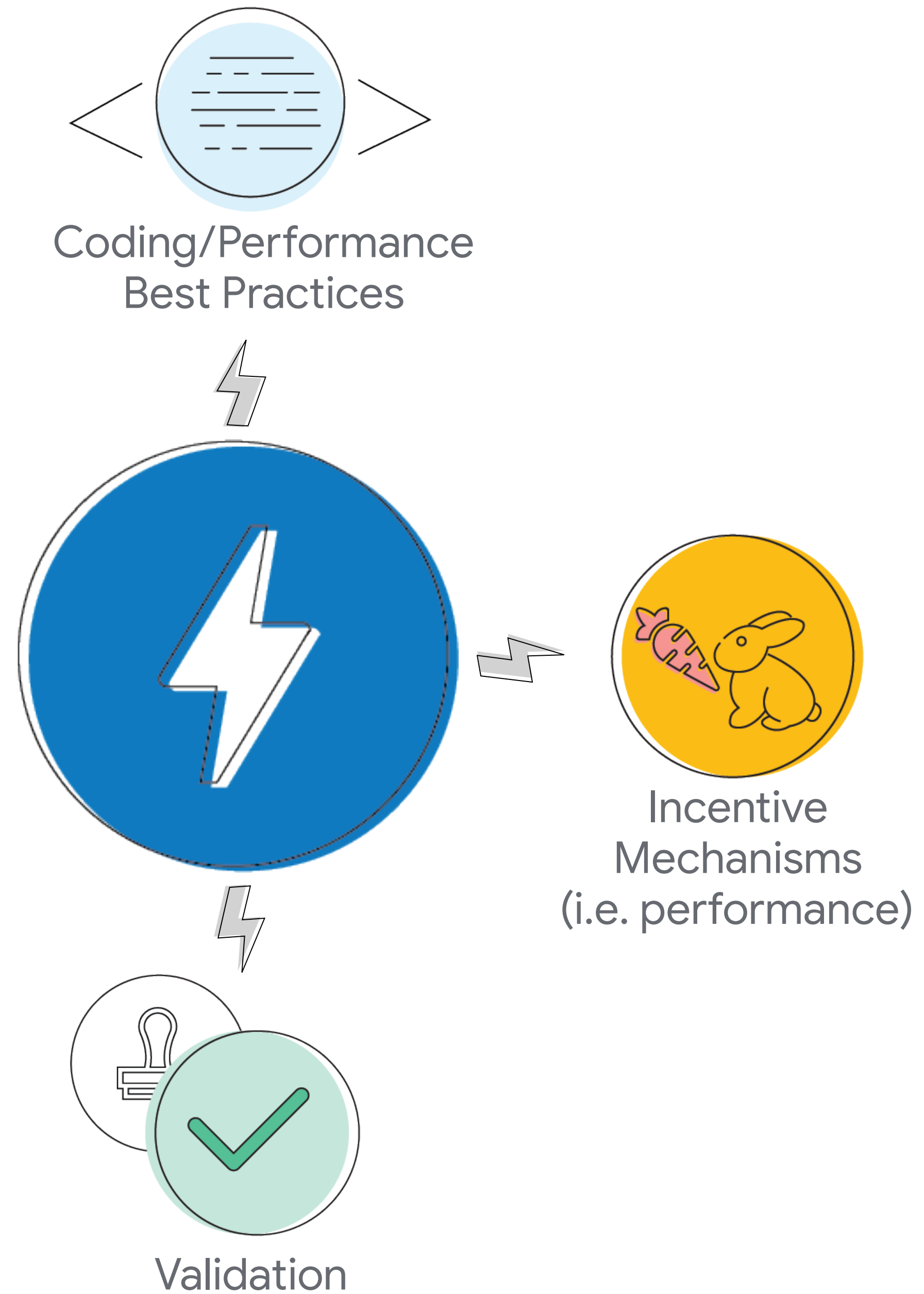
w3techs.com





# AMP: a well-lit path to modern web development

[ampproject.org](http://ampproject.org)



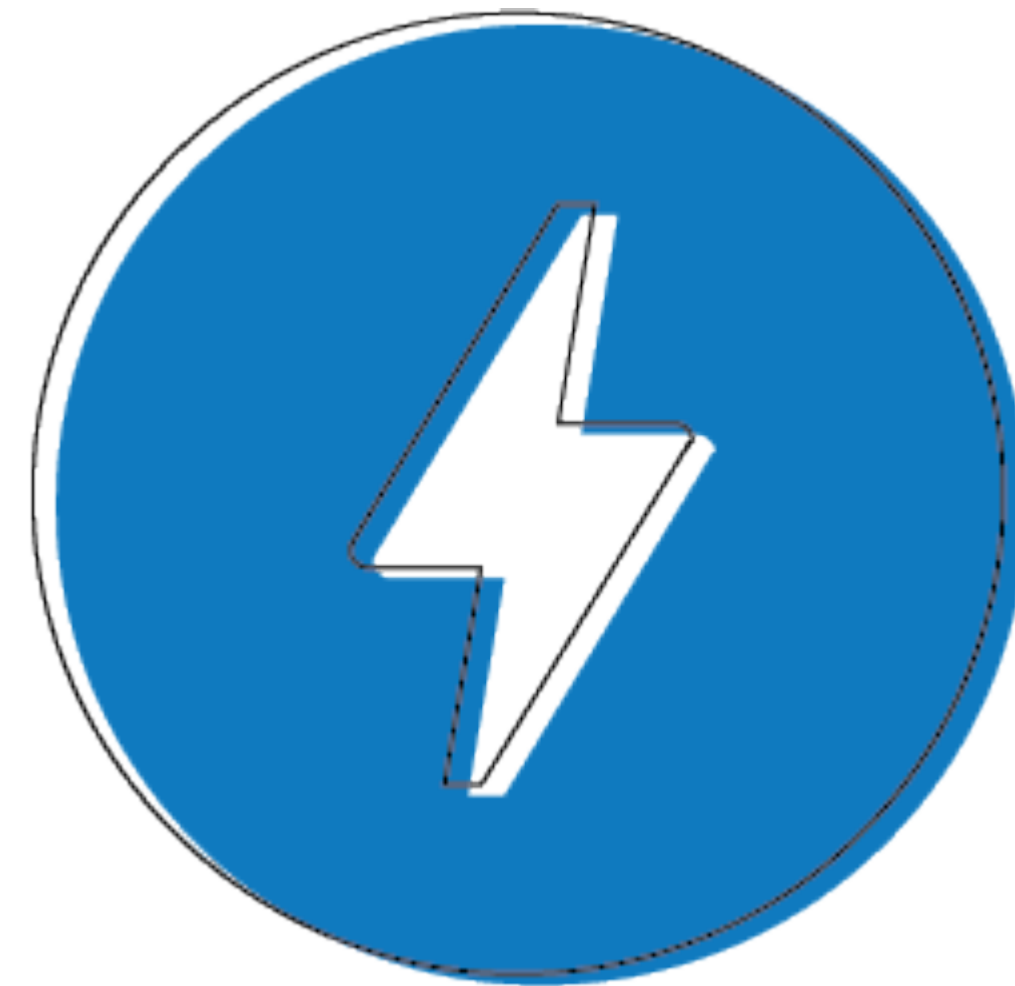


# AMP in WordPress

Plugin: v1.0 RC2



[github.com/Automattic/amp-wp](https://github.com/Automattic/amp-wp)



My Sites Reader Write Screen Options

### AMP Validated URLs [View Error Index](#)

The site is using native AMP mode, the validation errors found are already automatically handled.

All (12) | Published (12)  Search validated URLs

Bulk Actions Apply All Statuses All Error Types All dates Filter 12 items

<input type="checkbox"/> URL	★	Status ?	Invalid	Sources	Last Checked
<input type="checkbox"/> <a href="/2018/09/09/web-content-ecosystems-google/">/2018/09/09/web-content-ecosystems-google/</a>	0	✓ Accepted: 17	meta , script (7), [pubdate] (8)	wp-includes	2 mins ago
<input type="checkbox"/> <a href="/2018/02/11/amp-in-wordpress/">/2018/02/11/amp-in-wordpress/</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/11/04
<input type="checkbox"/> <a href="/2017/05/16/the-perils-of-mobile-web-performance/">/2017/05/16/the-perils-of-mobile-web-performance/</a> <a href="#">Details</a>   <a href="#">View</a>   <a href="#">Recheck</a>   <a href="#">Forget</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/10/25
<input type="checkbox"/> <a href="/2017/11/26/progressive-web-in-latam/">/2017/11/26/progressive-web-in-latam/</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/10/25
<input type="checkbox"/> <a href="/2017/12/03/the-perils-of-mobile-web-performance-part-ii/">/2017/12/03/the-perils-of-mobile-web-performance-part-ii/</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/10/25
<input type="checkbox"/> <a href="/2017/12/03/the-perils-of-mobile-web-performance-part-iii/">/2017/12/03/the-perils-of-mobile-web-performance-part-iii/</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/10/25
<input type="checkbox"/> <a href="/2017/12/04/consequences-of-bad-mobile-performance/">/2017/12/04/consequences-of-bad-mobile-performance/</a>	0	✓ Accepted: 9	meta , script (7)	wp-includes	2018/10/25





# Integration of Modern Web Capabilities and APIs

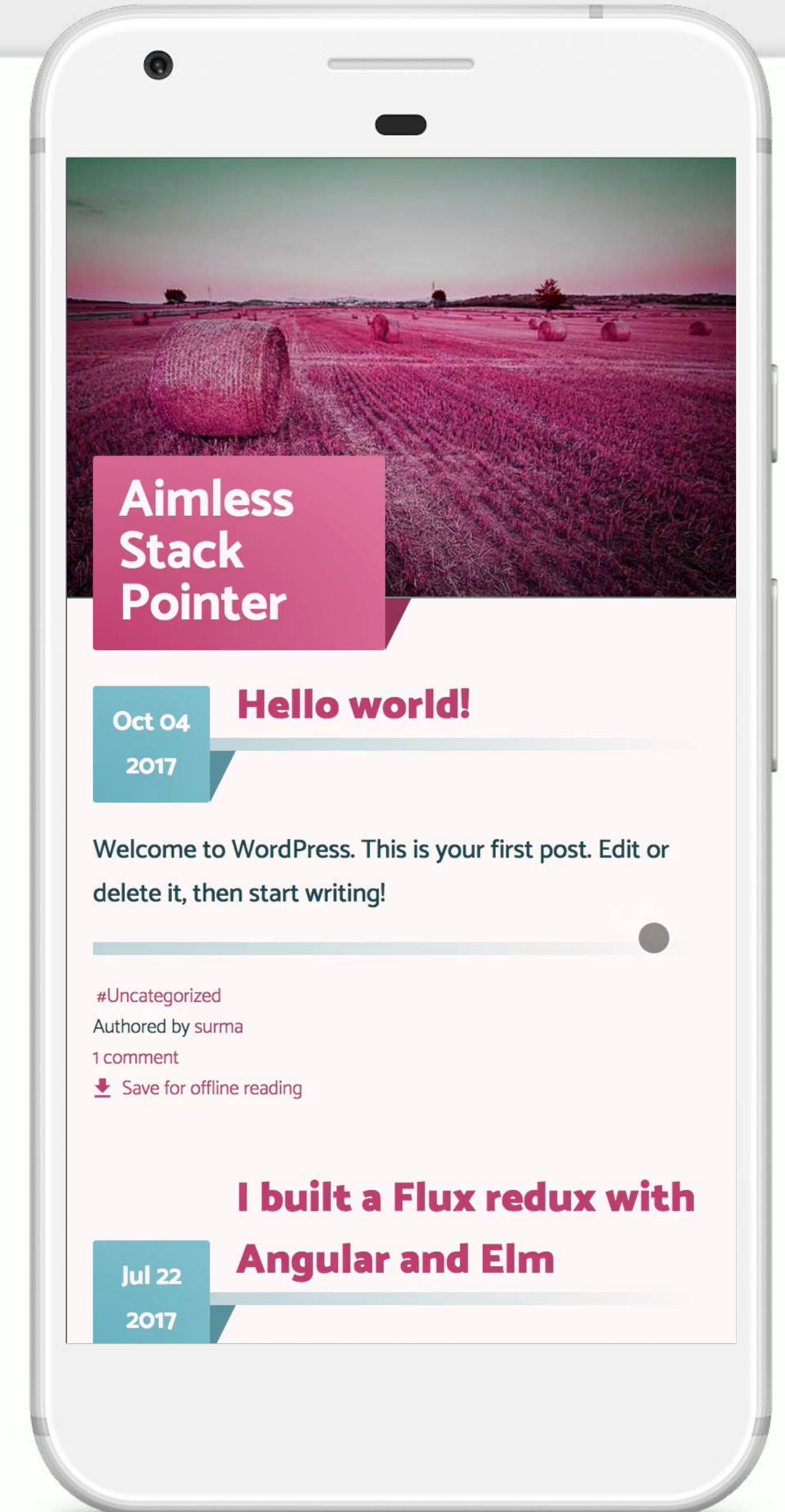




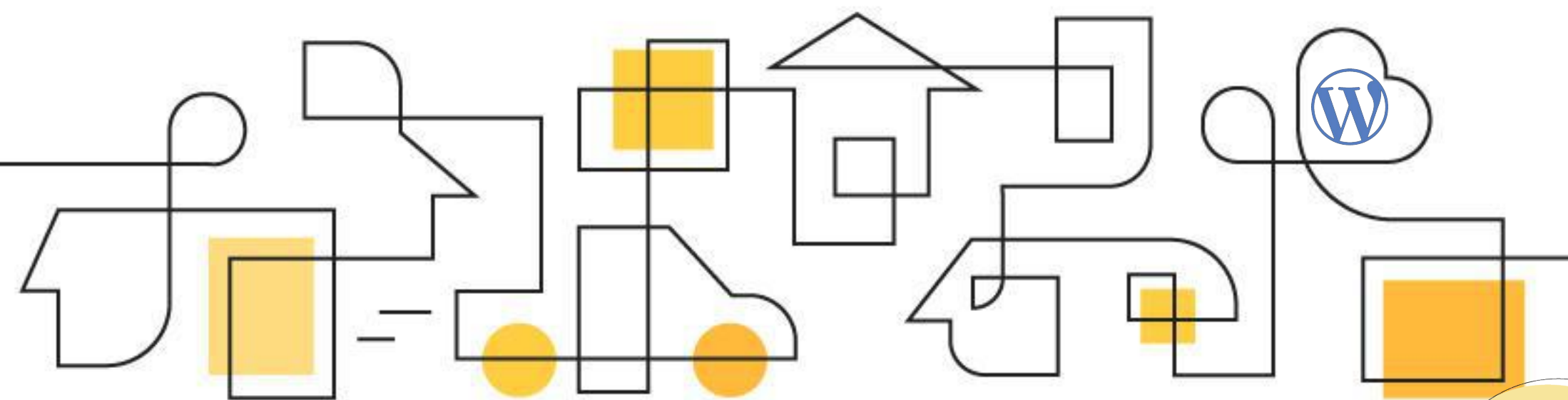


I want to show that “PWA with WordPress” is possible by building a WordPress theme that does all the things™.

-@DasSurma, CDS 2017



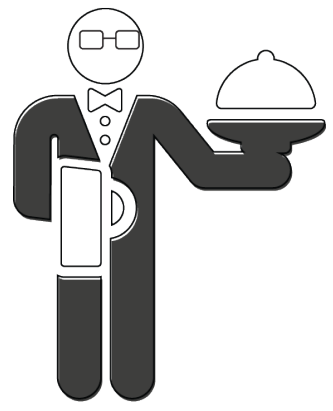
# Progressive WordPress, the WordPress Way



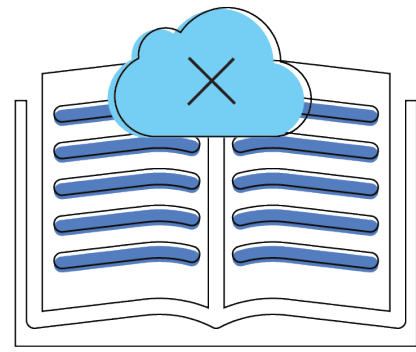


# PWA in WordPress

## Proof of Concept



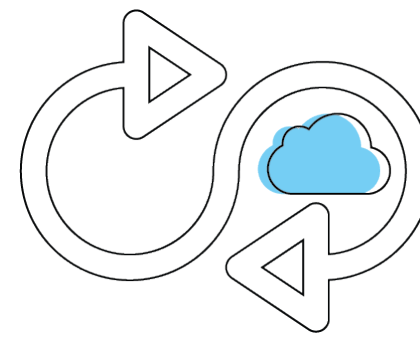
Service Workers



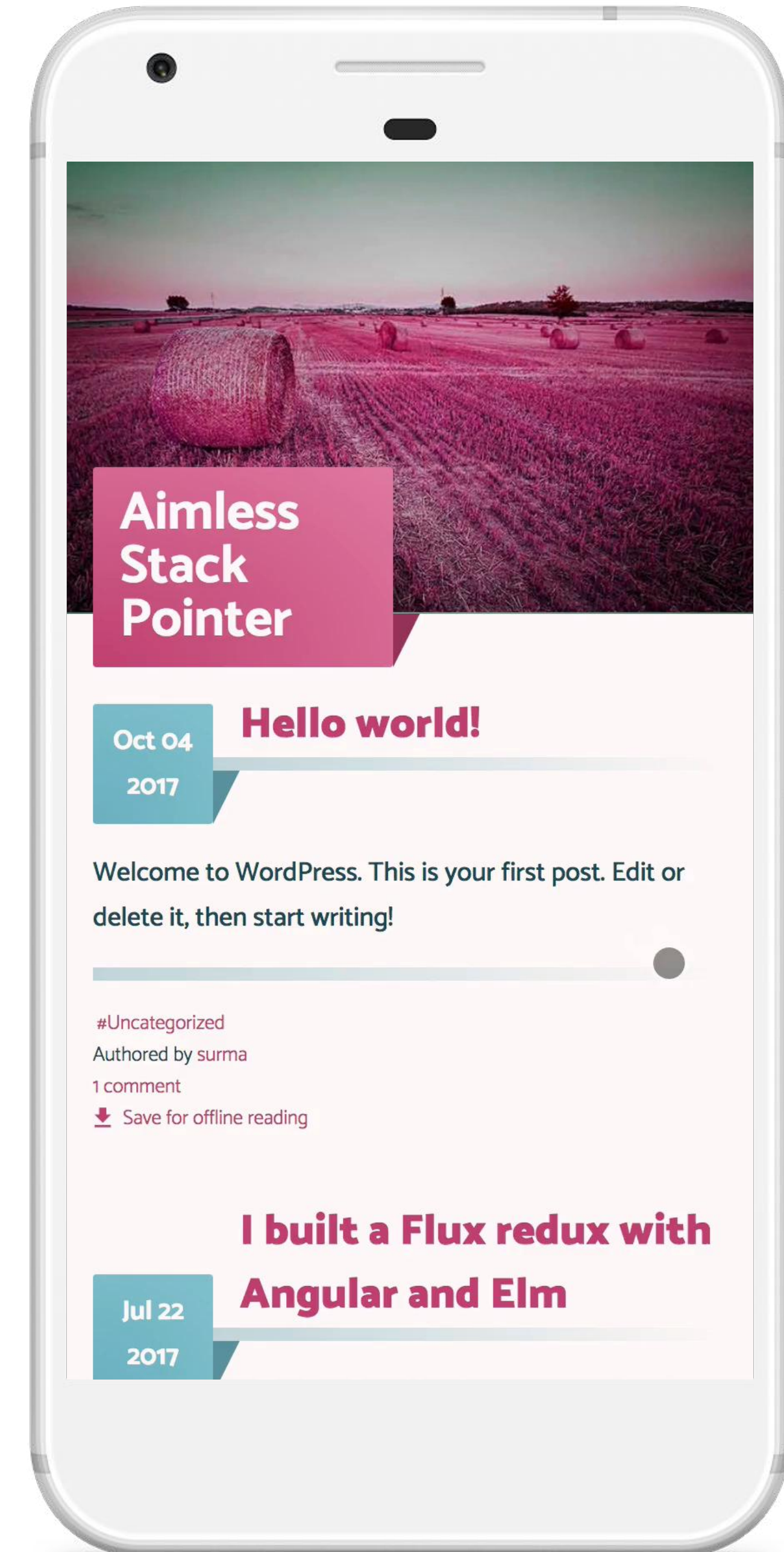
Offline Capabilities



Background Sync

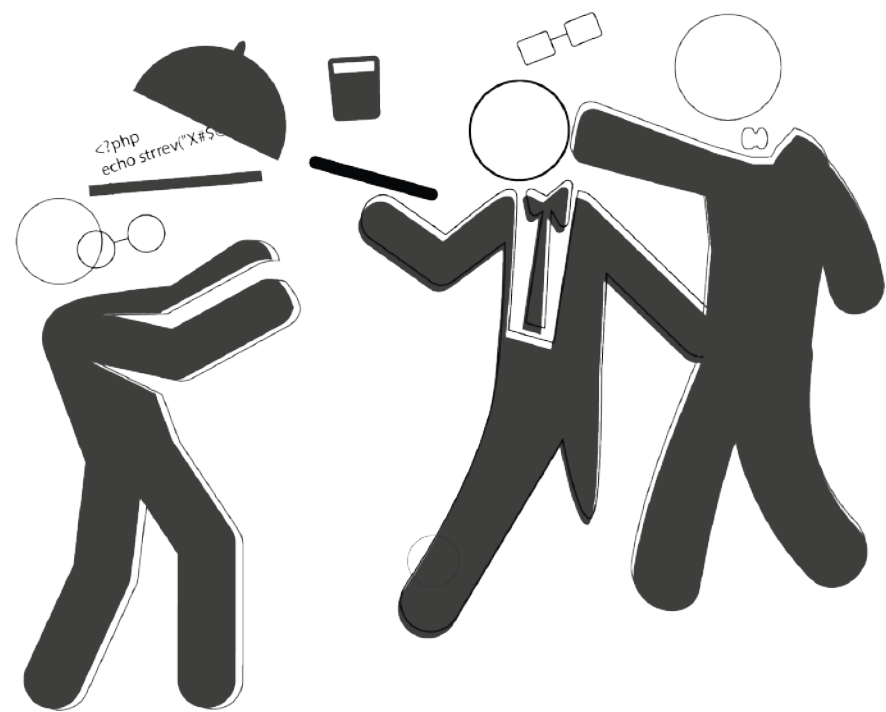


Smooth Transitions



# PWA in WordPress

## POC Challenges to Success



No Unified Access to SW API  
(e.g. a single SW)

```
<!--?php if ( is_active_sidebar  
class="widget-area"( 'bottom-widget  
<!--?php if ( is_active_sidebar( 'bottom-widget-area'  
) ) : ?><div id="bottom-widget-area" class="widget-  
area" role="complementary"><!--?php  
dynamic_sidebar( 'bottom-widget-area' ); ?--><!--/  
div><!-- .bottom-widget-area --><!--?php endif; ?>  
<script type="text/javascript">if(typeof jQuery ==  
'undefined' || typeof jQuery.fn.on == 'undefined')  
area" role="complementary"><!--?php dynamic_  
sidebar( 'bottom-widget-area'
```



High Complexity  
(e.g. working with SW is hard)



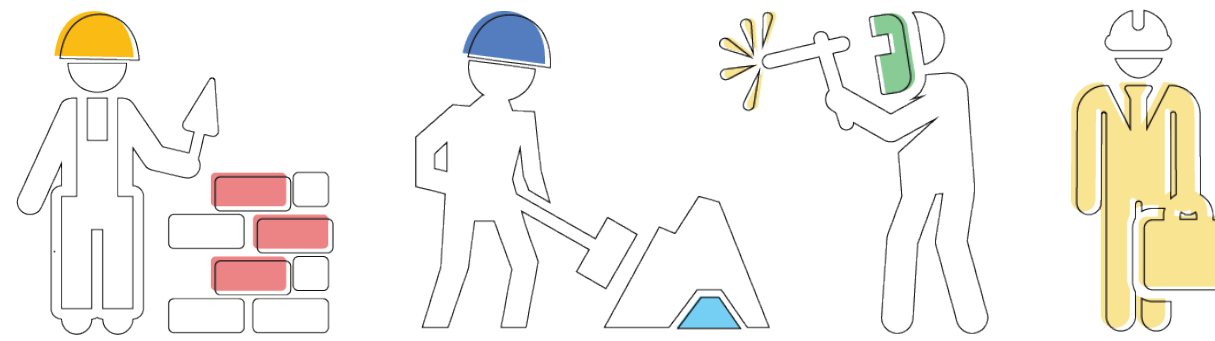
Lack of Constraints  
(e.g. no sandboxing)



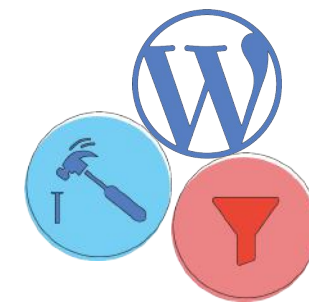


# Service Worker API Core Integration

PHP Developers



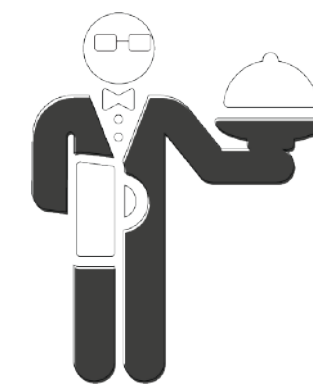
WordPress Core (Actions and Filters)



Abstraction Library (Workbox)



Service Worker API



## Caching Strategy

```
$service_workers->caching_routes()->register(  
    '^https://\./cdn\.ampproject\.org\./.*',  
    array( 'strategy' => 'staleWhileRevalidate' )  
);
```

## Pre-caching

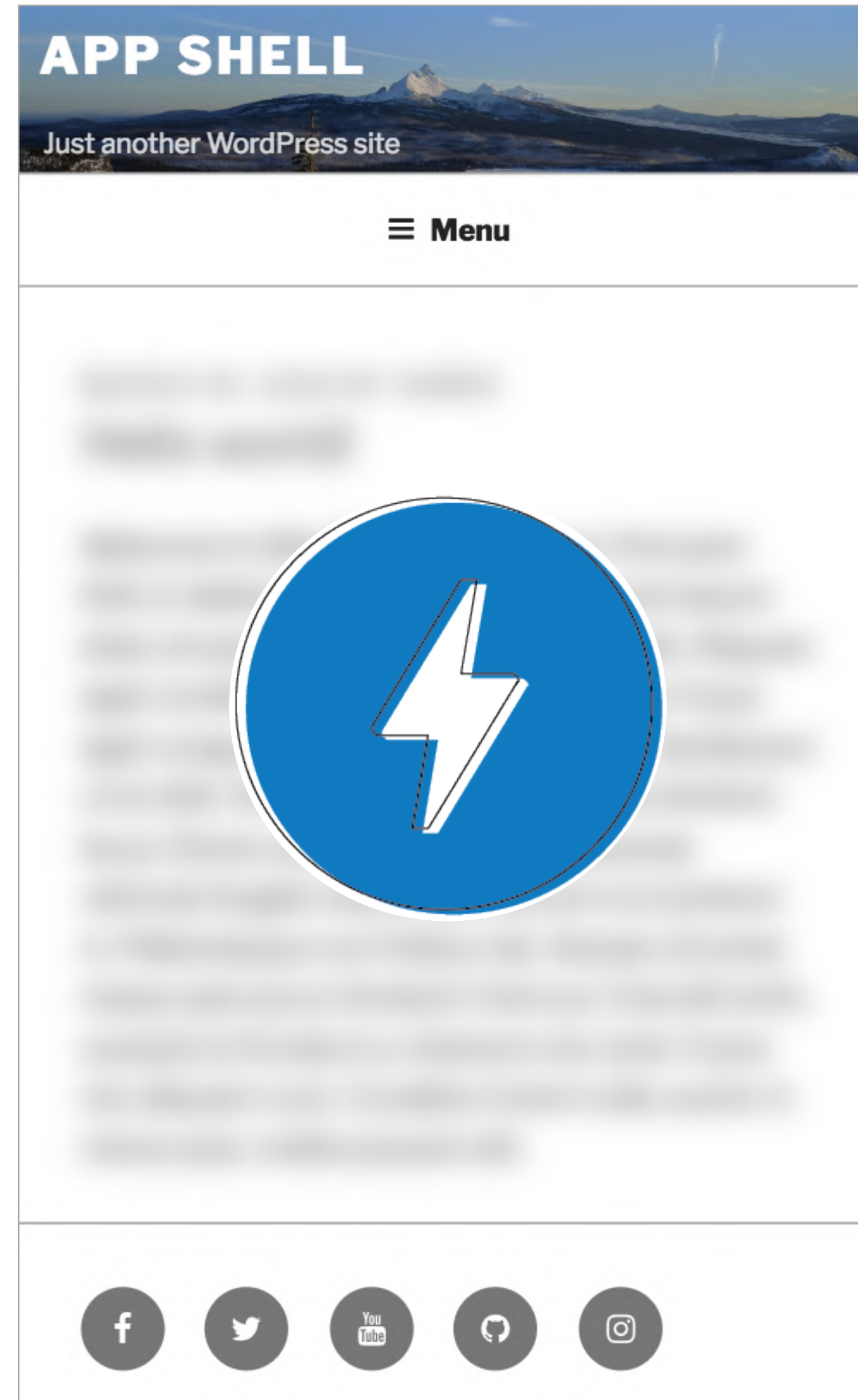
```
$url = $template_url . '/map.svg';  
$revision = md5( file_get_contents( $template_dir . '/map.svg' ) );  
$service_workers->precaching_routes()->register( $url, $revision );
```

## Add Custom JS

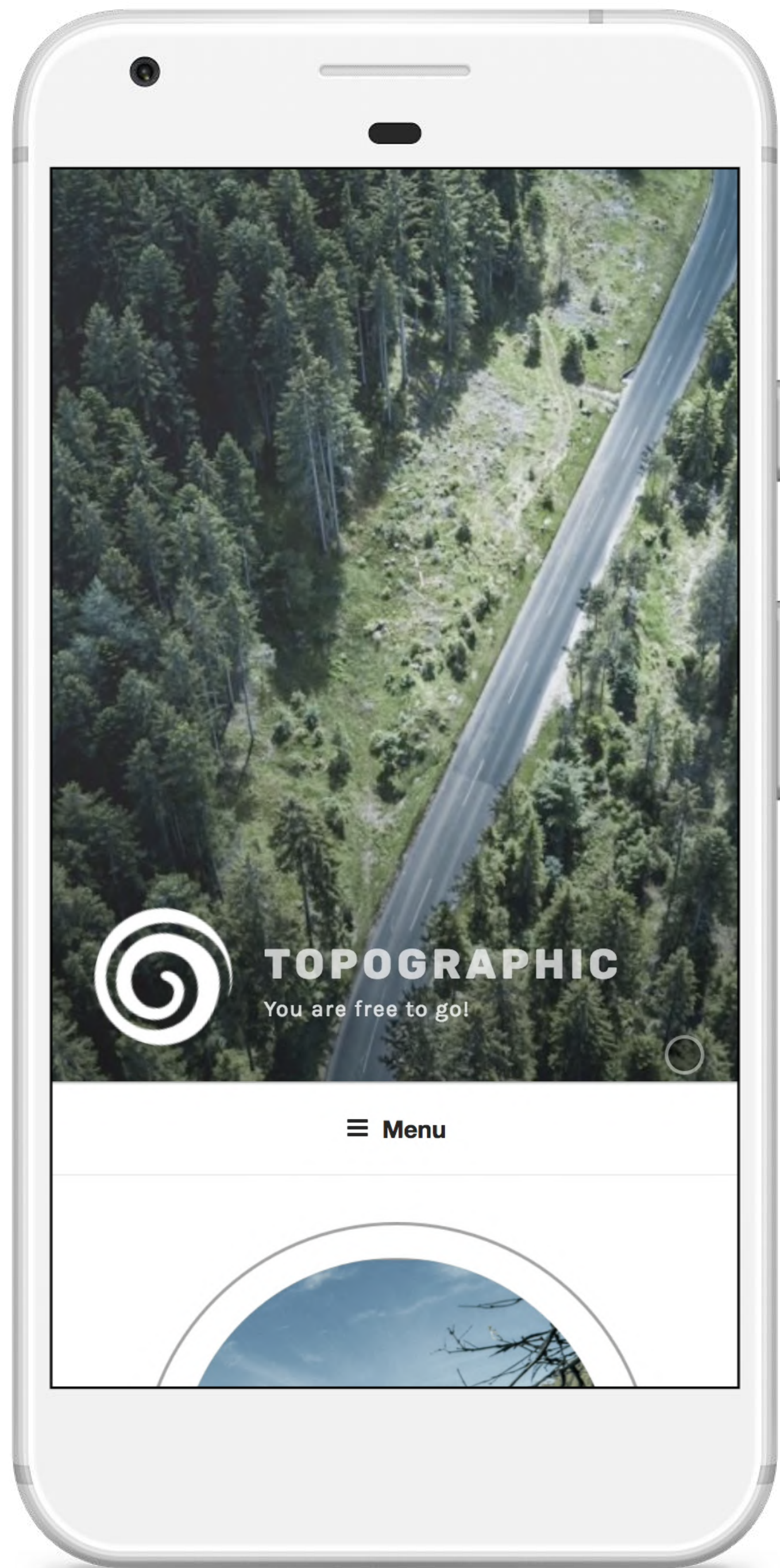
```
$service_worker_registry->register(  
    'image-fallback-response',  
    $template_url . '/image-fallback-response.js'  
);
```

# App Shell Model

A way to build a Progressive Web App that reliably and instantly loads, similar to what you see in native applications.







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Declare

AMP Support

```
add_theme_support( 'amp' );
```

Content

Container

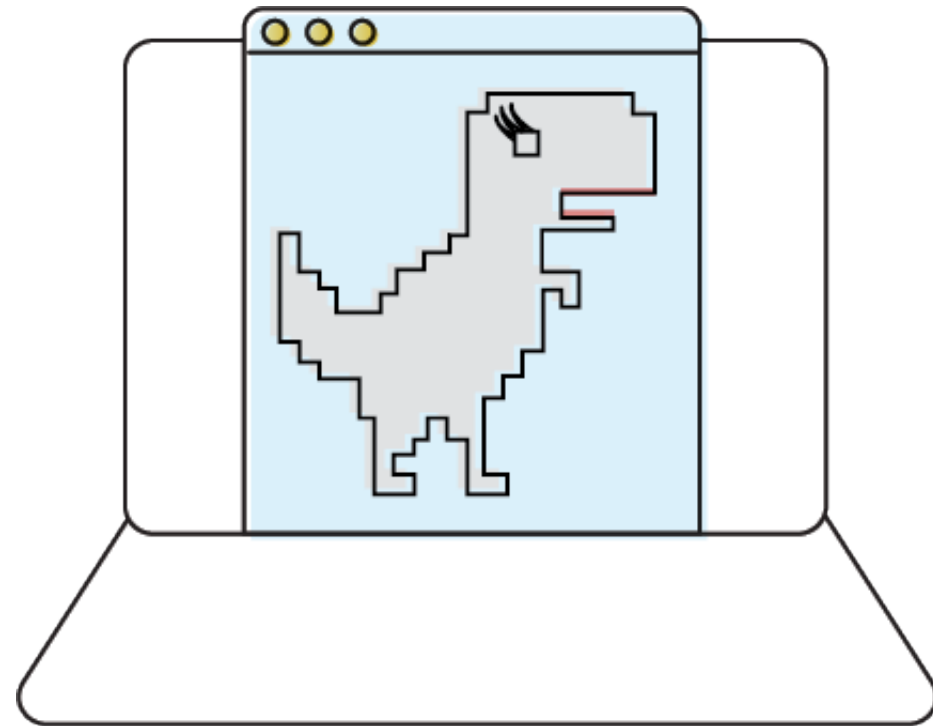
```
<?php amp_start_app_shell_content(); ?>  
...  
<?php the_content(); ?>  
...  
<?php amp_end_app_shell_content(); ?>
```

App Shell

Opt-in

```
add_theme_support(  
    'amp',  
    array(  
        /* ... */  
        'app_shell' => true  
    )  
);
```

# Offline WordPress Template

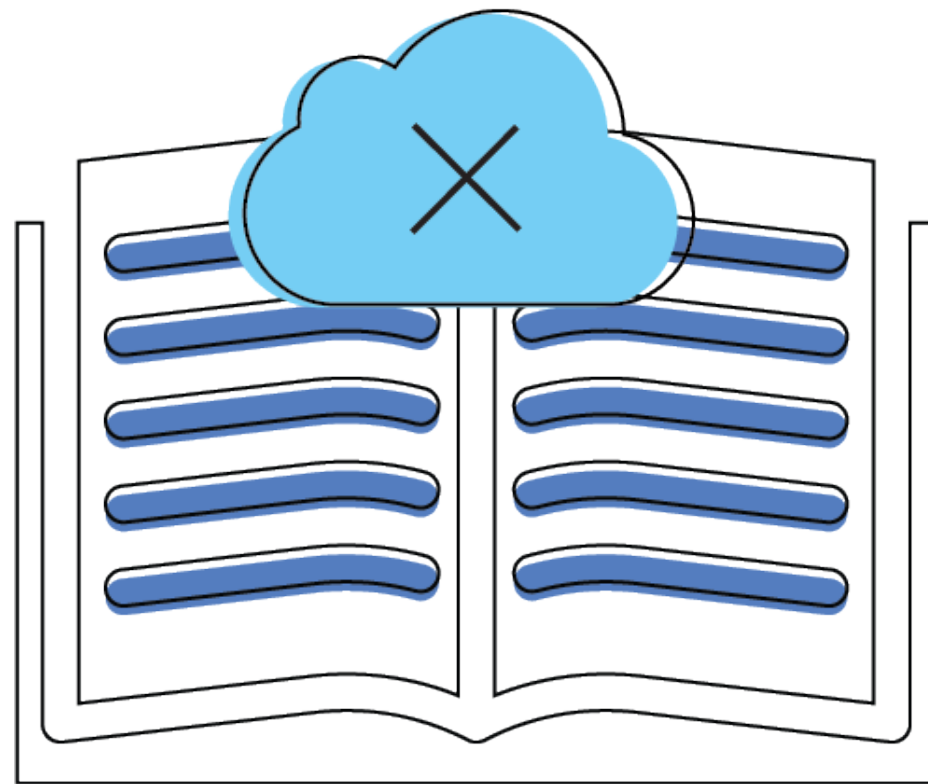


offline.php

```
<?php get_header(); ?>  
    <h1>Oops! You're offline.</h1>  
<?php get_footer(); ?>
```



# Offline Content Consumption



Filter: Workbox Caching Strategy

```
add_filter(  
  'wp_service_worker_navigation_caching_strategy',  
  function() {  
    return 'staleWhileRevalidate';  
  }  
);
```



# Offline Commenting

Comment submission by SW via background sync



Comment

**Your comment will be submitted once you are back online!**

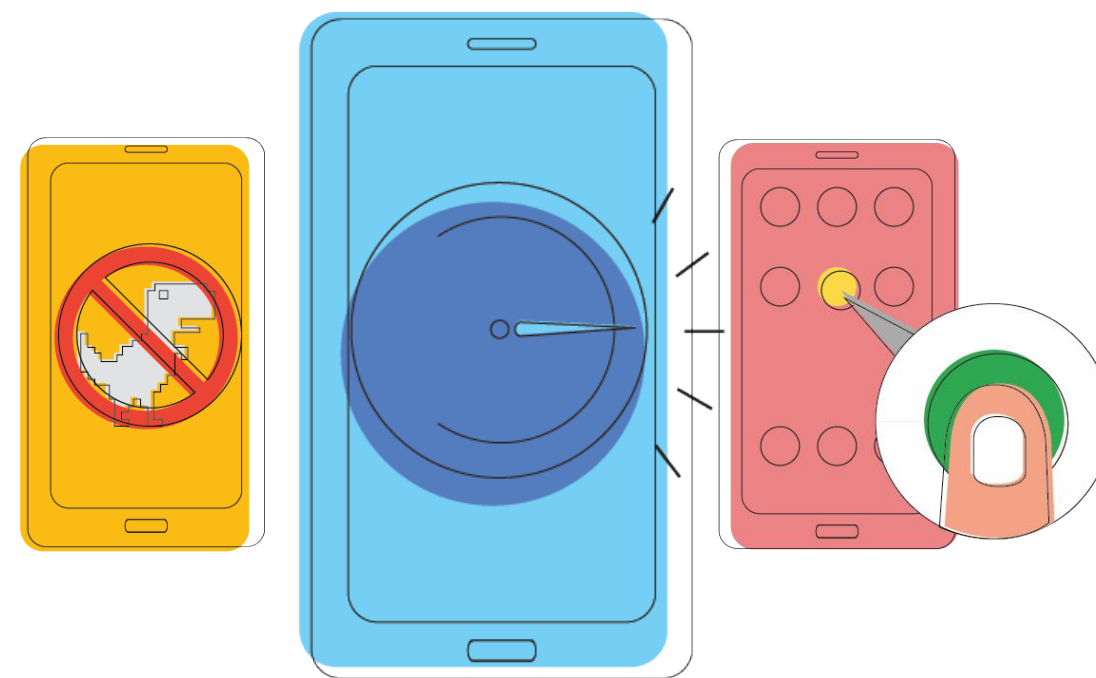
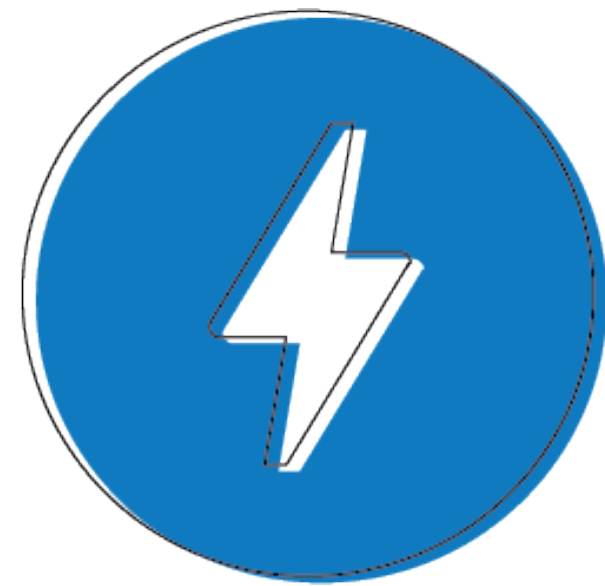
Post Comment





# The Road Ahead...

# Progressive WordPress: Road Ahead



 [github.com/Automattic/amp-wp](https://github.com/Automattic/amp-wp)

 [github.com/xwp/pwa-wp](https://github.com/xwp/pwa-wp)

Ecosystem **Activation**



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SHARE

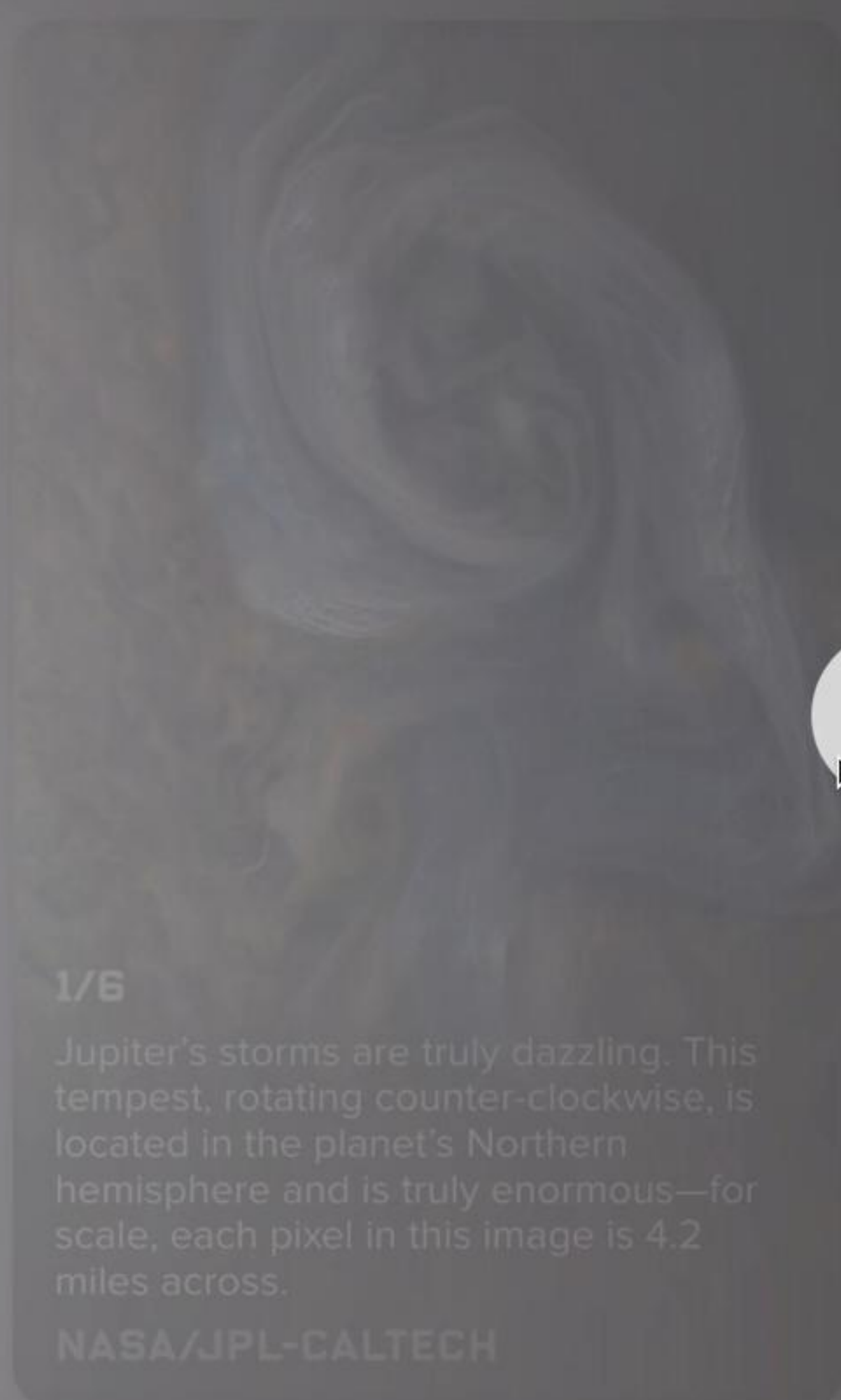
## SCIENCE

### SPACE PHOTOS OF THE WEEK

A close-up look at the universe's many wonders, from nearby planets to faraway galaxies.

BY SHANNON STIRONE

PHOTO: HUBBLE AND NASA ESA



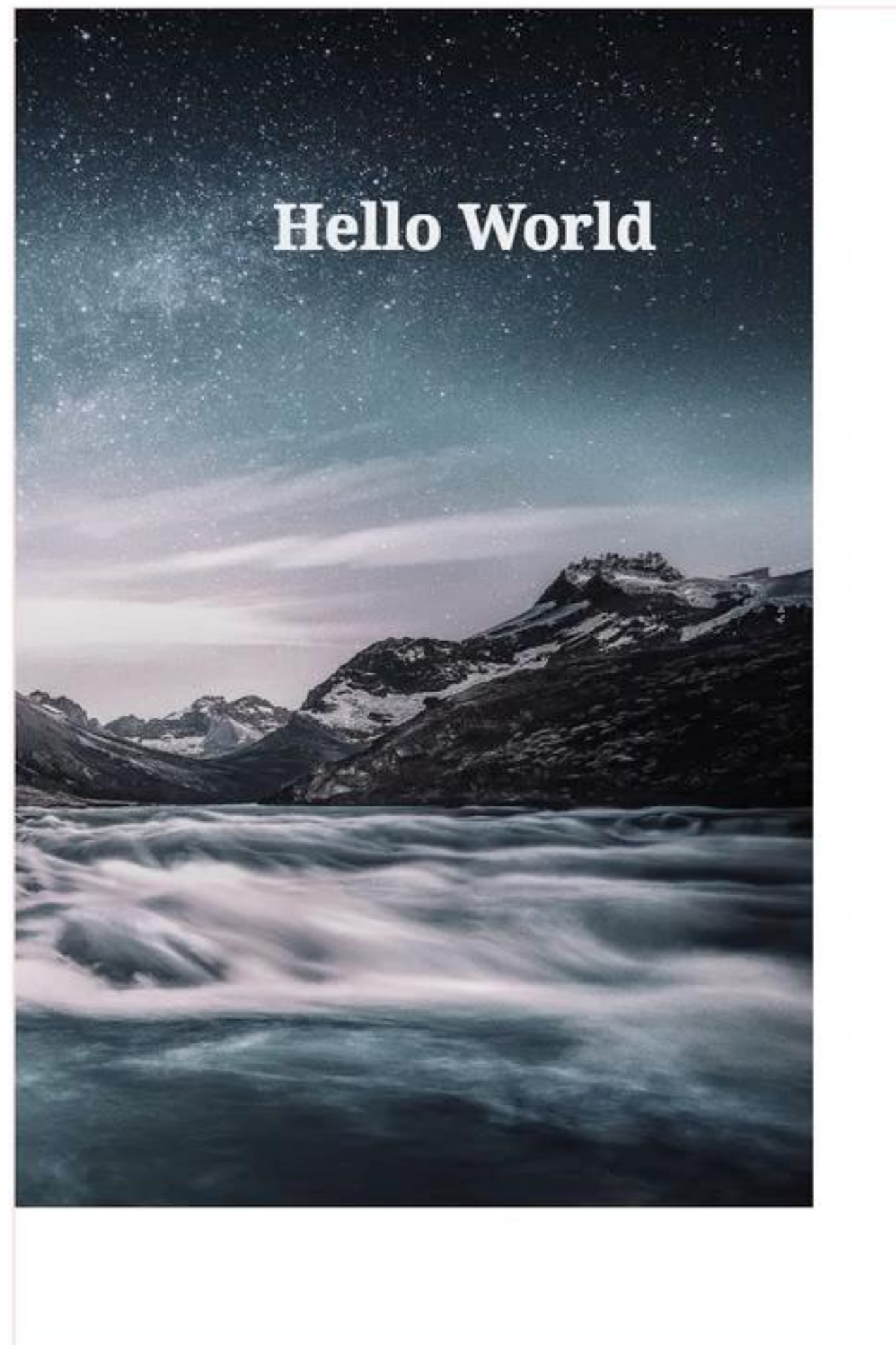
1/6

Jupiter's storms are truly dazzling. This tempest, rotating counter-clockwise, is located in the planet's Northern hemisphere and is truly enormous—for scale, each pixel in this image is 4.2 miles across.

NASA/JPL-CALTECH



# Add title



- ⊕
- ☰ Layer 2
- Layer 1
- ▣ Page

Document Block ×

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Enable AMP

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**Featured Image** v





# Progressive CMS highlights



Drupal

[bit.ly/amp-drupal](https://bit.ly/amp-drupal)

[bit.ly/pwa-drupal](https://bit.ly/pwa-drupal)



Magento

[pwastudio.io](https://pwastudio.io)



Adobe Experience  
Manager

[bit.ly/aem-spa](https://bit.ly/aem-spa)



EC-CUBE

[en.ec-cube.net](https://en.ec-cube.net)



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# Special thanks to...



... for their contributions to AMP and PWA in WordPress





# Thank you!



**Alberto Medina**  
@iAlbMedina



**Weston Ruter**  
@WestonRuter

