adaptTo()

EUROPE'S LEADING AEM DEVELOPER CONFERENCE

27th – 29th SEPTEMBER 2021

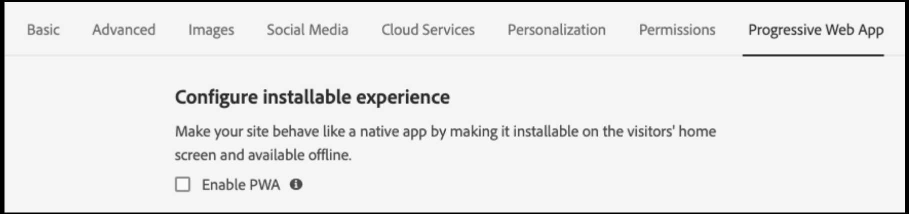
Future of AEM Core Components

Jean-Christophe Kautzmann, Adobe

Features released over the last 12 months

- Link Handling
- Dynamic Media support (image)

  image modifiers, image presets, and smart crops
- PWA support (page)



Configure installable experience

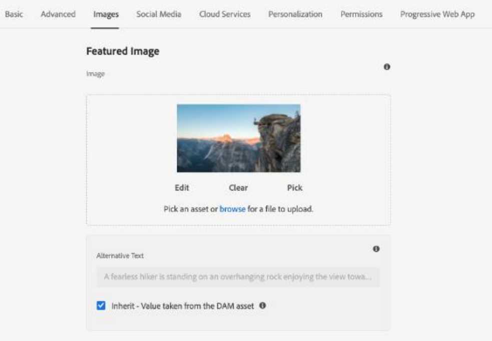
Make your site behave like a native app by making it installable on the visitors' home screen and available offline.

□ Enable PWA

- Accessibility improvements

Features released over the last 12 months

- Featured Image (Tech Preview)



Featured Image

Image

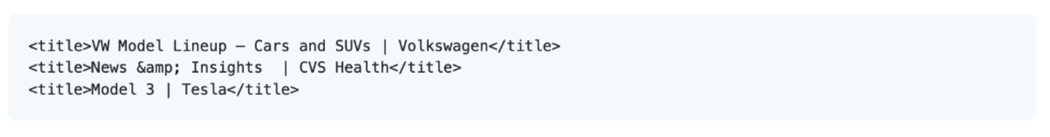
Pick an asset or browse for a file to upload.

Alternative Text

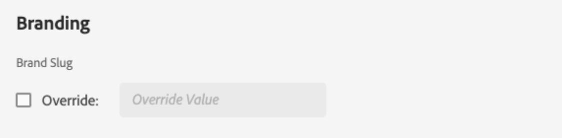
A fearless hiker is standing on an overhanging rock enjoying the view towa...

☑ Inherit - Value taken from the DAM asset

- Data Layer 2.0.2
- Brand Slug (page)



```
<title>VW Model Lineup – Cars and SUVs | Volkswagen</title>
<title>News &amp; Insights  | CVS Health</title>
<title>Model 3 | Tesla</title>
```



Branding

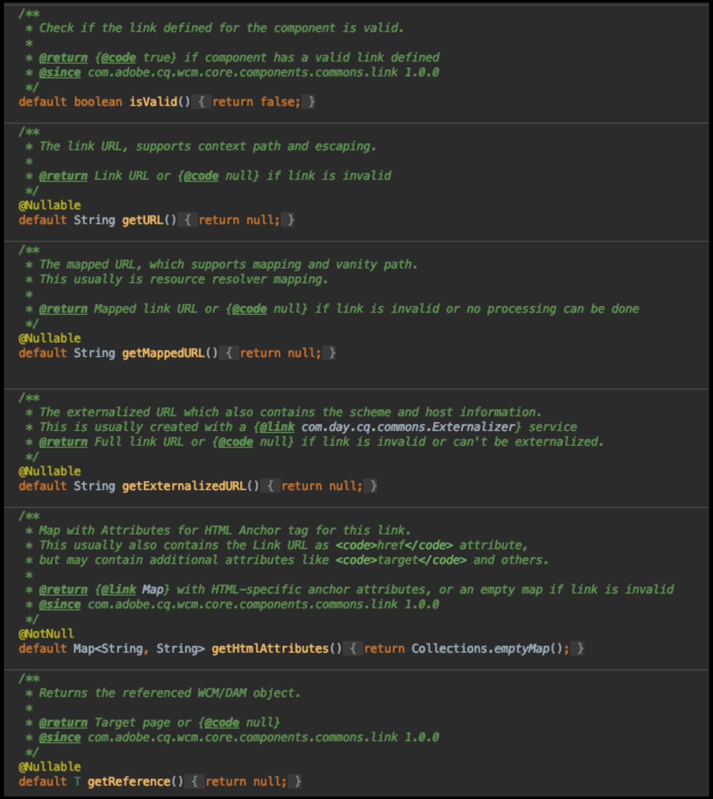
Brand Slug

□ Override: Override Value

Focus on the new link handler

- Contributed by the community (Stefan Seifert)

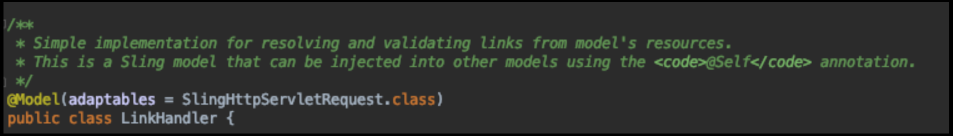
- Link API:
  - Validity: `link.isValid()`
  - URL: `link.getURL()`
  - HTML attributes: `link.getHtmlAttributes()`
  - Link reference: `link.getReference()`



```java
/**
 * Check if the link defined for the component is valid.
 *
 * @return {@code true} if component has a valid link defined
 * @since com.adobe.cq.wcm.core.components.commons.link 1.0.0
 */
default boolean isValid() { return false; }

/**
 * The link URL, supports context path and escaping.
 *
 * @return Link URL or {@code null} if link is invalid
 */
@Nullable
default String getURL() { return null; }

/**
 * The mapped URL, which supports mapping and vanity path.
 * This usually is resource resolver mapping.
 *
 * @return Mapped link URL or {@code null} if link is invalid or no processing can be done
 */
@Nullable
default String getMappedURL() { return null; }


/**
 * The externalized URL which also contains the scheme and host information.
 * This is usually created with a {@link com.day.cq.commons.Externalizer} service
 * @return Full link URL or {@code null} if link is invalid or can't be externalized.
 */
@Nullable
default String getExternalizedURL() { return null; }

/**
 * Map with Attributes for HTML Anchor tag for this link.
 * This usually also contains the Link URL as <code>href</code> attribute,
 * but may contain additional attributes like <code>target</code> and others.
 *
 * @return {@link Map} with HTML-specific anchor attributes, or an empty map if link is invalid
 * @since com.adobe.cq.wcm.core.components.commons.link 1.0.0
 */
@NotNull
default Map<String, String> getHtmlAttributes() { return Collections.emptyMap(); }

/**
 * Returns the referenced WCM/DAM object.
 *
 * @return Target page or {@code null}
 * @since com.adobe.cq.wcm.core.components.commons.link 1.0.0
 */
@Nullable
default T getReference() { return null; }
```

The LinkHandler API

- The link handler can be adapted from the request



```
/**
 * Simple implementation for resolving and validating links from model's resources.
 * This is a Sling model that can be injected into other models using the <code>@Self</code> annotation.
 */
@Model(adaptables = SlingHttpServletRequest.class)
public class LinkHandler {
```

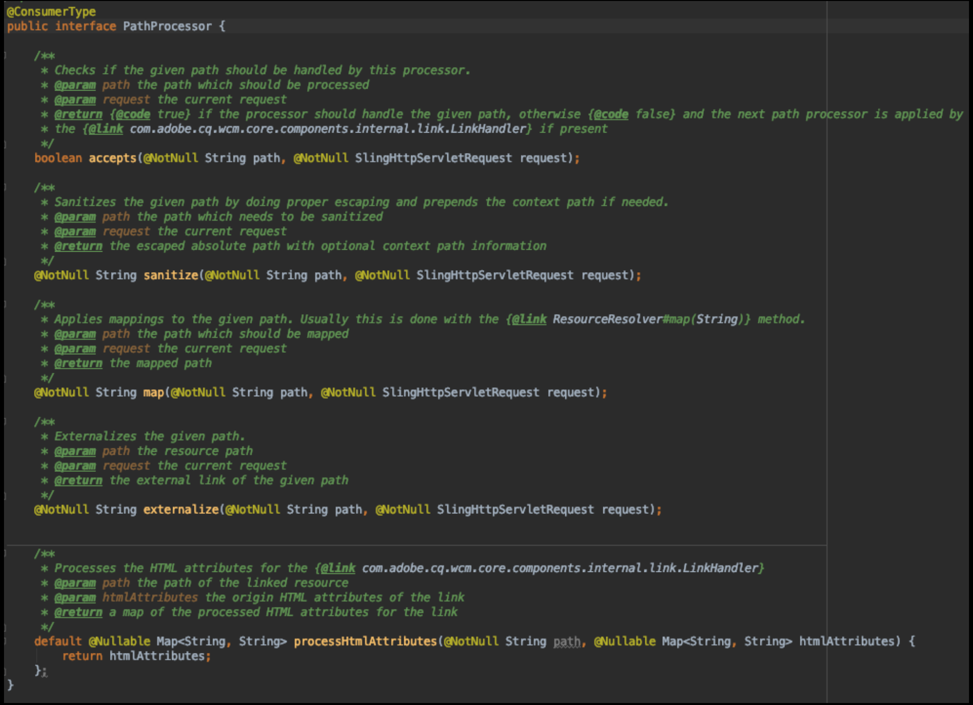
- Usage:
  - linkHandler.getLink(resource)
  - linkHandler.getLink(resource, linkURLPropertyName)
  - linkHandler.getLink(page)
  - linkHandler.getLink(linkURL, target)
  - linkHandler.getLink(linkURL, target, linkAccessibilityLabel, linkTitleAttribute)

Customizing the link handling

- Customize the handling of links: the PathProcessor

- Customize how the links are sanitized, mapped and externalized

- Customize the HTML attributes

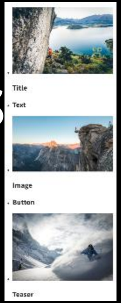


```java
@ConsumerType
public interface PathProcessor {

    /**
     * Checks if the given path should be handled by this processor.
     * @param path the path which should be processed
     * @param request the current request
     * @return {@code true} if the processor should handle the given path, otherwise {@code false} and the next path processor is applied by
     * the {@link com.adobe.cq.wcm.core.components.internal.link.LinkHandler} if present
     */
    boolean accepts(@NotNull String path, @NotNull SlingHttpServletRequest request);

    /**
     * Sanitizes the given path by doing proper escaping and prepends the context path if needed.
     * @param path the path which needs to be sanitized
     * @param request the current request
     * @return the escaped absolute path with optional context path information
     */
    @NotNull String sanitize(@NotNull String path, @NotNull SlingHttpServletRequest request);

    /**
     * Applies mappings to the given path. Usually this is done with the {@link ResourceResolver#map(String)} method.
     * @param path the path which should be mapped
     * @param request the current request
     * @return the mapped path
     */
    @NotNull String map(@NotNull String path, @NotNull SlingHttpServletRequest request);

    /**
     * Externalizes the given path.
     * @param path the resource path
     * @param request the current request
     * @return the external link of the given path
     */
    @NotNull String externalize(@NotNull String path, @NotNull SlingHttpServletRequest request);


    /**
     * Processes the HTML attributes for the {@link com.adobe.cq.wcm.core.components.internal.link.LinkHandler}
     * @param path the path of the linked resource
     * @param htmlAttributes the origin HTML attributes of the link
     * @return a map of the processed HTML attributes for the link
     */
    default @Nullable Map<String, String> processHtmlAttributes(@NotNull String path, @Nullable Map<String, String> htmlAttributes) {
        return htmlAttributes;
    };
}
```

Currently in the making

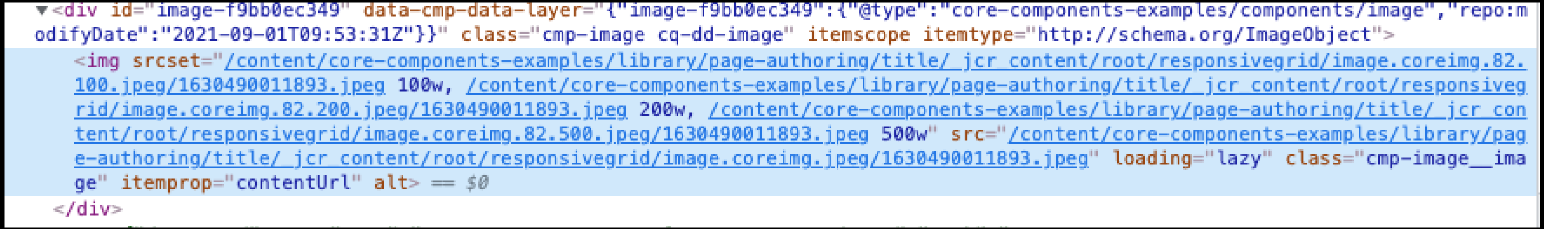
- Capability to define a featured image at page level, with the image and the teaser components inheriting from this image by default (see upcoming demo).

- Extended list component, rendering the items as teasers.



Currently in the making

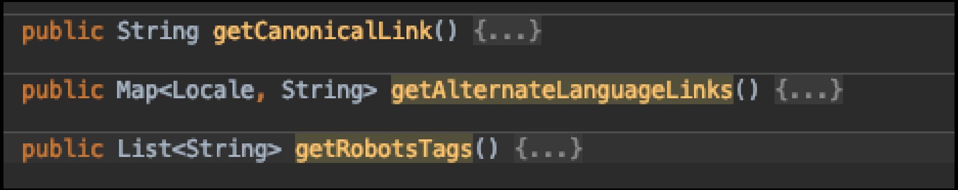
- Modernized and simplified image markup with srcset attribute
- Native lazy loading with loading="lazy" that no longer relies on component specific javascript.



```
▼<div id="image-f9bb0ec349" data-cmp-data-layer="{"image-f9bb0ec349":{"@type":"core-components-examples/components/image","repo:m
odifyDate":"2021-09-01T09:53:31Z"}}" class="cmp-image cq-dd-image" itemscope itemtype="http://schema.org/ImageObject">
    <img srcset="/content/core-components-examples/library/page-authoring/title/_jcr_content/root/responsivegrid/image.coreimg.82.
    100.jpeg/1630490011893.jpeg 100w, /content/core-components-examples/library/page-authoring/title/_jcr_content/root/responsiveg
    rid/image.coreimg.82.200.jpeg/1630490011893.jpeg 200w, /content/core-components-examples/library/page-authoring/title/_jcr_con
    tent/root/responsivegrid/image.coreimg.82.500.jpeg/1630490011893.jpeg 500w" src="/content/core-components-examples/library/pag
    e-authoring/title/_jcr_content/root/responsivegrid/image.coreimg.jpeg/1630490011893.jpeg" loading="lazy" class="cmp-image__ima
    ge" itemprop="contentUrl" alt> == $0
  </div>
```

Currently in the making

- Improved SEO capability for the page component



```
public String getCanonicalLink() {...}

public Map<Locale, String> getAlternateLanguageLinks() {...}

public List<String> getRobotsTags() {...}
```

- More accessibility improvements after a detailed accessibility review of all the components.

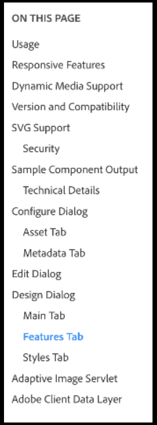
- More consistent building blocks across components on new version: HTML, JSON, data layer, dialogs, etc

What’s next?

- Release 3.0.0 with new versions for the page, image, teaser and list components.
- Optimize page and image HTTP cache control headers for improved page performance.

What’s next?

- New table of content component.
- New modal component.
- Modernized grid component.



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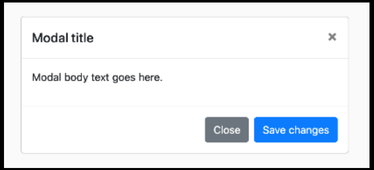
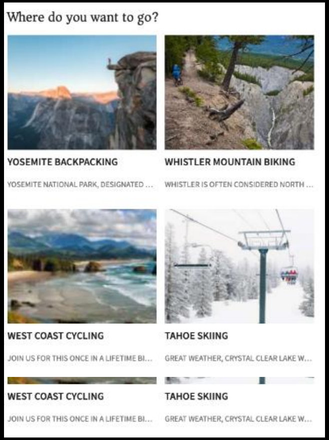


Modal title

Modal body text goes here.



Where do you want to go?

YOSEMITE BACKPACKING

YOSEMITE NATIONAL PARK, DESIGNATED ...

WHISTLER MOUNTAIN BIKING

WHISTLER IS OFTEN CONSIDERED NORTH ...

WEST COAST CYCLING

JOIN US FOR THIS ONCE IN A LIFETIME BI...

TAHOE SKIING

GREAT WEATHER, CRYSTAL CLEAR LAKE W...

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JOIN US FOR THIS ONCE IN A LIFETIME BI...

TAHOE SKIING

GREAT WEATHER, CRYSTAL CLEAR LAKE W...

Resources

- Github repo:
  https://github.com/adobe/aem-core-wcm-components

- Discussions:
  https://github.com/adobe/aem-core-wcm-components/discussions

- Road map, dev guide, style guide:
  https://github.com/adobe/aem-core-wcm-components/wiki

Demo

Q & A

Thank you!