



# Bootstrap 5

**“I can do this all day”**

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# The process

- 4.4 **PopperJS** upgrade
- SCSS Deprecation** process
- BS4 **Refactoring** in advance
- 4.5 Create a BS5 **“bridge”**
- 4.6 **BS5 upgrade**
- BS4 **compatibility layer**
- Final deprecation**

# The process

## *Status*

- **PopperJS** upgrade [MDL-75673](#)
- **SCSS Deprecation** process [MDL-78334](#)
- **BS4 Refactoring** in advance [MDL-79914](#)
- Create a BS5 “**bridge**” [MDL-79917](#)
- **BS5 upgrade** [MDL-75669](#)
- **BS4 backward-compatibility layer** [MDL-80519](#)
- **Final deprecation**

# PopperJS upgrade

- We are **currently** using popperJS **version v1.12.6**
  - Bootstrap 4 requires Popper v1.x.
  - Bootstrap 5 requires Popper v2.x.
- Previous to the Bootstrap 5 upgrade **Popper v2.11.8** will be **added** to Core.
- Both v1.12.6 and v2.11.8 will **co-exist** until all PopperJS usages are migrated to v2.
- When BS5 upgrade starts, Popper will be already in v2 in the current codebase.

*PopperJS migration example:*

```
import Popper from 'core/popper';  
...  
new Popper(referenceElement, popperContent,  
  {placement: 'bottom'});
```



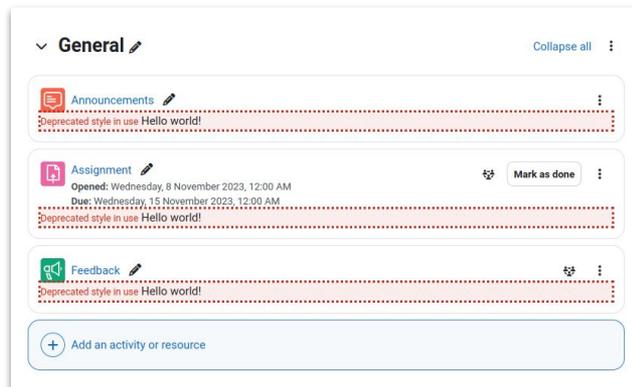
```
import {createPopper} from 'core/popper2';  
...  
createPopper(referenceElement, popperContent,  
  {placement: 'bottom'});
```

# SCSS Deprecation process

- A SCSS deprecation process will be needed for the cleanup after BS5 upgrade.
- Styles to deprecate will be moved to **deprecated.scss file**.
- A **@mixin** will be available for those styles.
- In “**theme designer mode**” and **Behat** tests (`--scss-deprecations` on `init`), styles that have been deprecated will be detected.

*theme/boost/scss/moodle/deprecated.scss*

```
// Example:
.foo {
  .bar {
    color: $blue;
    @include deprecated-styles ();
  }
}
```



# BS4 Refactoring in advance

- The goal is to **refactor** all the BS5 migration **breaking changes** that don't need specific BS5 code.
- Refactor them in **every occurrence** in the current codebase, that will be mainly in mustache **templates**.
- This will mitigate the changes needed in the migration.

<https://getbootstrap.com/docs/5.0/migration/>

- **Breaking** Dropped all `.badge-*` color classes for background utilities (e.g., use `.bg-primary` instead of `.badge-primary`).
- **Breaking** Dropped `.badge-pill`—use the `.rounded-pill` utility instead.

*Refactor example:*

```
<span class="badge badge-primary badge-pill">14</span>
```



```
<span class="badge bg-primary rounded-pill">14</span>
```

# Create a BS5 “bridge”

- A BS5 “bridge” will be created to start **migrating** some breaking changes even **before BS is upgraded**.
- Some simple helper classes, mixins, etc will be added to a “bridge” SCSS.
- With that bridge will be possible to migrate many occurrences in the current codebase.
- When BS5 is upgraded the bridge SCSS will be removed.

<https://getbootstrap.com/docs/5.0/migration/>

- **Breaking** “Screen reader” classes are now “visually hidden” classes.
  - Changed the Sass file from `scss/helpers/_screenreaders.scss` to `scss/helpers/_visually-hidden.scss`
  - Renamed `.sr-only` and `.sr-only-focusable` to `.visually-hidden` and `.visually-hidden-focusable`
  - Renamed `sr-only()` and `sr-only-focusable()` mixins to `visually-hidden()` and `visually-hidden-focusable()`.

Bridge example:

```
<div class="sr-only">
```

```
/* Bootstrap 5 bridge classes */  
.visually-hidden {  
  @extend .sr-only;  
}
```

```
<div class="visually-hidden">
```



# BS5 upgrade

- Let's upgrade Bootstrap!
- Pay attention to all the **Breaking changes** that were not tackled in "BS4 refactoring" or "BS5 Bridge".
- **Fix** all the Behat **errors** that most likely will appear.
- Upgrade **Component Library**
- **Remove BS5 bridge**



# BS4 backwards-compatibility layer

- A selection of the main used BS4 helper classes, mixins, ... will be added to a **backwards-compatibility layer**.
- That will help and give some time to **third party plugins** to migrate to BS5.
- It is being updated during the hole process.

<https://getbootstrap.com/docs/5.0/migration/>

- **Breaking** Renamed several utilities to use logical property names instead of directional names with the addition of RTL support:
  - Renamed `.left-*` and `.right-*` to `.start-*` and `.end-*`.
  - Renamed `.float-left` and `.float-right` to `.float-start` and `.float-end`.
  - Renamed `.border-left` and `.border-right` to `.border-start` and `.border-end`.
  - Renamed `.rounded-left` and `.rounded-right` to `.rounded-start` and `.rounded-end`.
  - Renamed `.ml-*` and `.mr-*` to `.ms-*` and `.me-*`.
  - Renamed `.pl-*` and `.pr-*` to `.ps-*` and `.pe-*`.
  - Renamed `.text-left` and `.text-right` to `.text-start` and `.text-end`.

*Retro-compatibility example:*

```
/* Bootstrap 4 retro-compatibility classes */  
.text-right {  
  @extend .text-end;  
}  
.float-left {  
  @extend .float-start;  
}
```



# Breaking changes

## Strategy

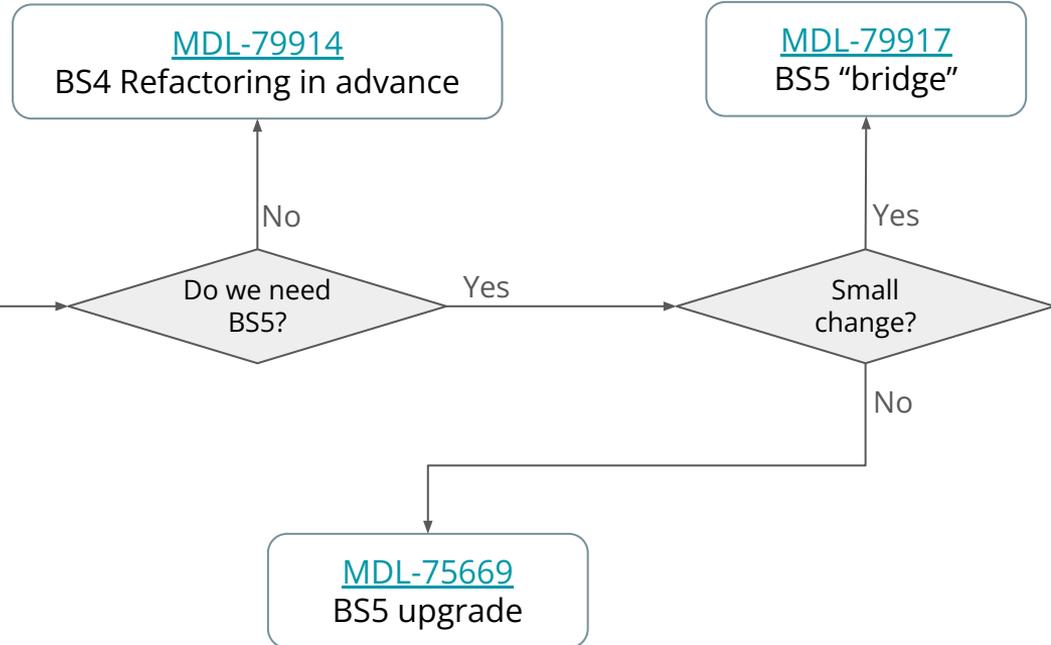
<https://getbootstrap.com/docs/5.0/migration/>

### Grid updates

- **New breakpoint** Added new `xxl` breakpoint for 1440px and up. No changes to all other breakpoints.
- **Improved gutters.** Gutters are now set in rems, and are narrower than v4 (1.5rem, or about 24px, down from 30px). This aligns our grid system's gutters with our spacing utilities.
  - Added new gutter class (`.g-*`, `.gx-*`, and `.gy-*`) to control horizontal/vertical gutters, horizontal gutters, and vertical gutters.
  - **Breaking** Renamed `.no-gutters` to `.g-0` to match new gutter utilities.
- Columns no longer have `position: relative` applied, so you may have to add `.position-relative` to some elements to restore that behavior.
- **Breaking** Dropped several `order-*` classes that often went unused. We now only provide `order-1` to `order-3` out of the box.
- **Breaking** Dropped the `media` component as it can be easily replicated with utilities. See #28265 and the flex utilities page for an example.
- **Breaking** `bootstrap: grid: css` now only applies `box-sizing: border-box` to the column instead of resetting the global box-sizing. This way, our grid styles can be used in more places without interference.
- `enable-grid-classes` no longer disables the generation of container classes anymore. See #22146.
- Updated the `make-col-mixin` to default to equal columns without a specified size.

### Content, Reboot, etc

- **BS5 is now enabled by default.** Headings using the `font-size()` mixin will automatically adjust their `font-size` to scale with the viewport. This feature was previously opt-in with `v4`.
- **Breaking** Overhauled our display typography to replace our `$display-*` variables and with a `$display-font-size` Sass map. Also removed the individual `$display-*` `font-weight` and adjusted `font-size`.
- Added two new `display-*` heading sizes, `display-5` and `display-6`.
- **Links are underlined by default** (not just on hover), unless they're part of specific components.
- **Redesigned tables** to refresh their styles and rebuild them with CSS variables for more control over styling.
- **Breaking** Nested tables do not inherit styles anymore.



# Other important links

- MDL-71979 Tracker Epic
  - <https://tracker.moodle.org/browse/MDL-71979>
- Bootstrap Migration in DevDocs
  - <https://moodledev.io/docs/guides/bs5migration>



# Thank you!



