



```
<arcgis-map zoom="4" center="[-118,34]">  
  <arcgis-search position="top-right" />  
</arcgis-map>
```

Do Accessibility or Do Not – There is no Try

Kitty Hurley

```
<arcgis-map zoom="4" center="[-118,34]" />
```

```
view.goTo({  
  center: [-126, 49]  
})  
.catch(function(error) {  
  if (error.name !== "AbortError") {  
    console.error(error);  
  }  
});
```



Top 5 Map Accessibility Tips

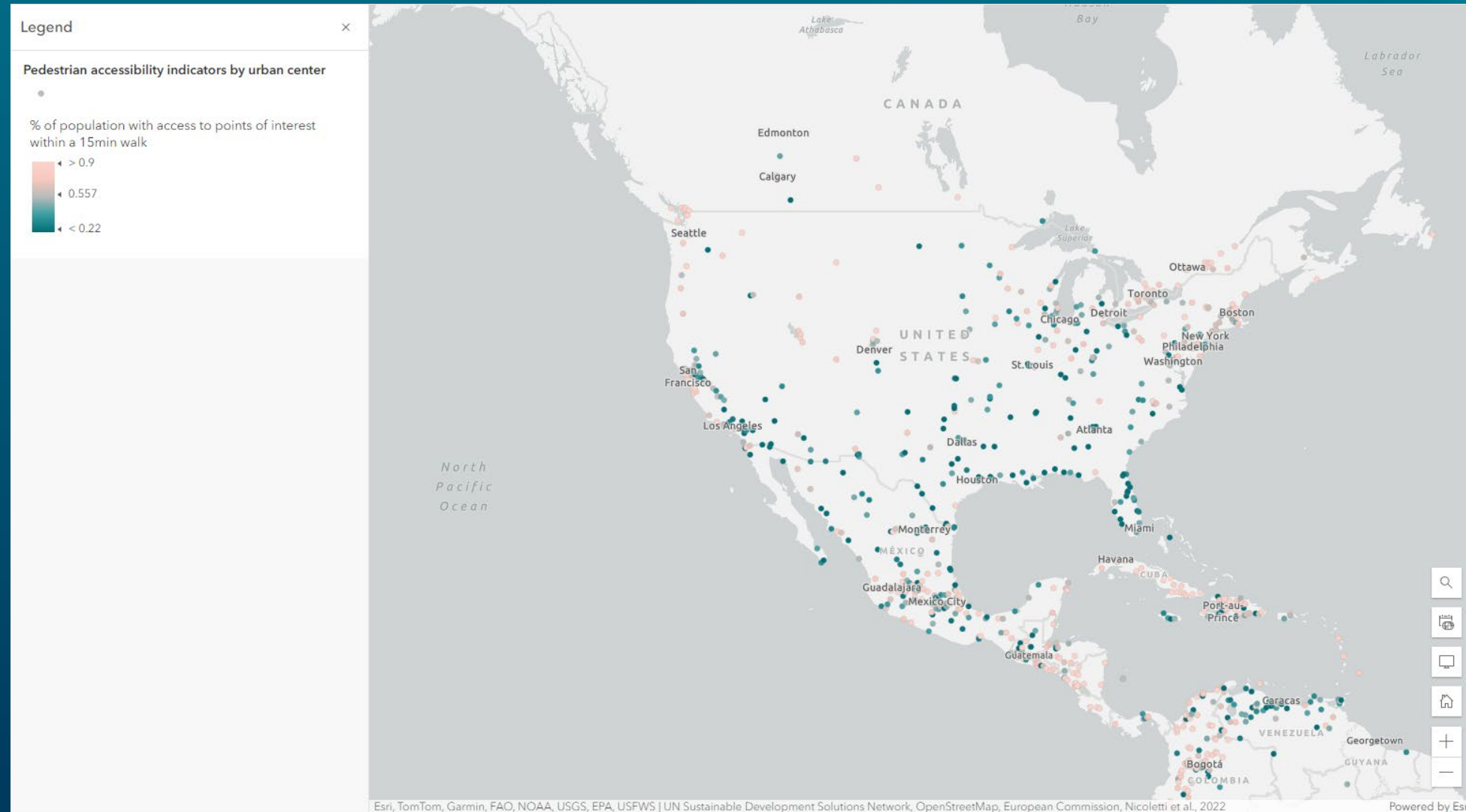
1. Design with intent
2. Color contrast
3. Focus states
4. Map alternative text
5. Testing throughout design and development

Design with intent

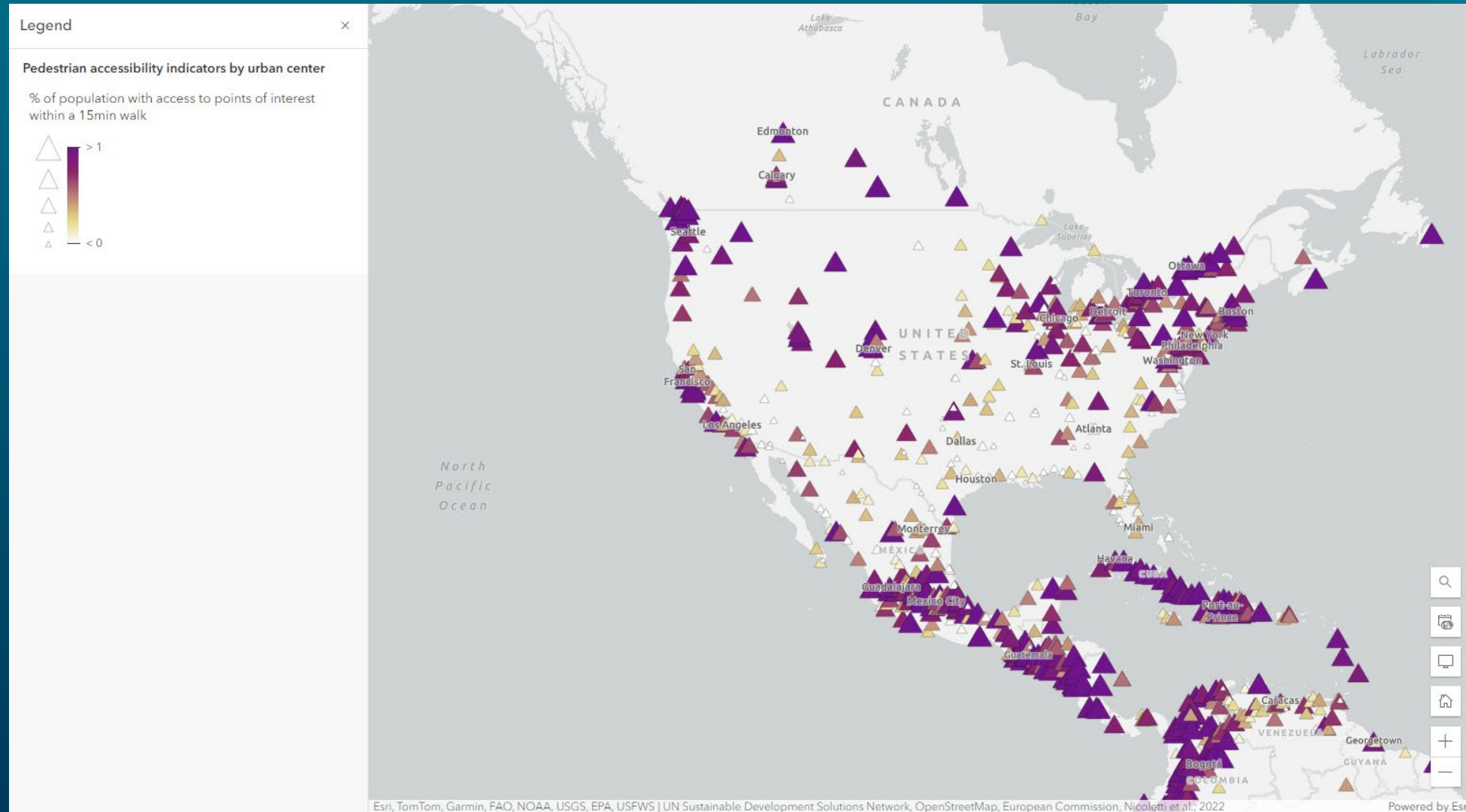
- Who is the audience?
- What is the app's ~~map's~~ purpose?
- What is the best format to display your data?



Color contrast



Color contrast continued



Color contrast checker



Foreground
Hex Value
#FCD2CA
Color Picker
Alpha 1
Luminance

Background
Hex Value
#F2F2F2
Color Picker
Luminance

Contrast Ratio
1.23:1
[permalink](#)

Normal Text

WCAG AA: **Fail**
WCAG AAA: **Fail**

The five boxing wizards jump quickly.

Large Text

WCAG AA: **Fail**
WCAG AAA: **Fail**

The five boxing wizards jump quickly.

Graphical Objects and User Interface Components

WCAG AA: **Fail**

Text Input

Foreground
Hex Value
#0D0D0DBD
Color Picker
Alpha 0.74
Luminance

Background
Hex Value
#F2F2F2
Color Picker
Luminance

Contrast Ratio
8.16:1
[permalink](#)

Normal Text

WCAG AA: **Pass**
WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Large Text

WCAG AA: **Pass**
WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Graphical Objects and User Interface Components

WCAG AA: **Pass**

Text Input

Color contrast checker continued



Foreground

Hex Value
#0B777E

Color Picker

Alpha
1

Luminance

Background

Hex Value
#F2F2F2

Color Picker

Luminance

Contrast Ratio
4.74:1
[permalink](#)

Normal Text

WCAG AA: **Pass**

WCAG AAA: **Fail**

The five boxing wizards jump quickly.

Large Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Foreground

Hex Value
#731888

Color Picker

Alpha
1

Luminance

Background

Hex Value
#F2F2F2

Color Picker

Luminance

Contrast Ratio
8.46:1
[permalink](#)

Normal Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

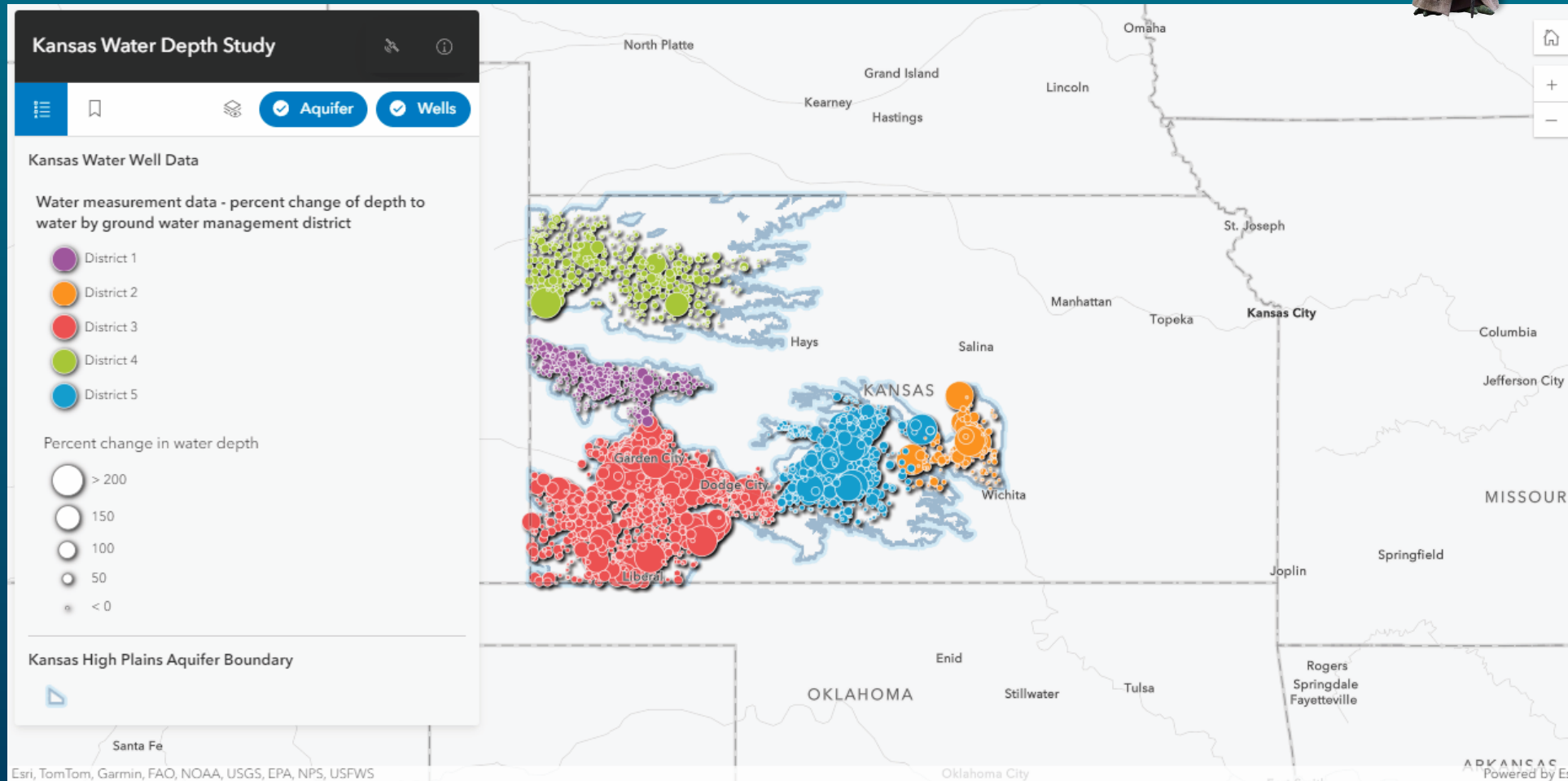
Large Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Focus states



Map alternative text

ArcGIS Web Apps (Instant Apps, Dashboards, StoryMaps)

The screenshot displays the ArcGIS 'Configure Sidebar' interface for a web app titled 'Global Pedestrian Access - Sidebar'. The interface includes a left sidebar with navigation options like 'Express', 'Search settings', 'Map', 'About', 'Sidebar', 'Interactivity', 'Theme & Layout', and 'Language Switcher'. The main content area shows 'App details' with fields for 'Header', 'App title' (set to 'Global Pedestrian Access - Sidebar'), 'Custom header', 'Introduction window', and 'Map accessibility'. A 'Text alternative for the map' dialog box is open, containing the text: 'Map displaying pedestrian accessibility indicators for urban centers globally. Point symbols indicate percentage of population with access to points of interest within a 15 min walk. Open Layer list to view and export data as a table.' Another 'Web map options' dialog box is also open, with the 'Alternative text' field containing: 'Interactive web map showing pedestrian access in urban cities worldwide. Describe this map for screen readers and search engines. This text is shown to readers if the map can't be loaded.' The background shows a map of the world with purple and yellow triangle markers representing urban centers and their pedestrian accessibility. A small Yoda character is visible in the bottom right corner of the map area.

Global Pedestrian Access - Sidebar

App details

Configure tools that provide users with information about the app and its purpose

< Back

App details

Header ☒

App title

Custom header ☐

Introduction window ☐

Map accessibility

Text alternative for the map

Close

Global Pedestrian Access - Sidebar

Pedestrian accessibility indicators by urban center

% of population with access to points of interest within a 15min walk

> 1

< 0

Web map options

Alternative text

Interactive web map showing pedestrian access in urban cities worldwide.

Describe this map for screen readers and search engines. This text is shown to readers if the map can't be loaded.

Cancel Save

Pedestrian accessibility indicators by urban center

% of population with access to points of interest within a 15min walk

> 1

< 0

<https://esriurl.com/a11y-labels-blog>

Map alternative text: Custom app

ArcGIS Maps SDK for JavaScript



```
<arcgis-map id="mapEl" item-id="210c5b77056846808c7a5ce93920be81"></arcgis-map>  
<div id="mapDescription" class="sr-only"></div>
```



```
const arcgisMapEl = document.getElementById("mapEl") as HTMLArcgisMapElement;  
const mapDescriptionEl = document.getElementById("mapDescription") as HTMLElement;  
  
arcgisMapEl.addEventListener("arcgisViewChange", () => {  
  mapDescriptionEl.innerHTML = arcgisMapEl.map.portalItem.snippet;  
  
  const rootNode = document.getElementsByClassName("esri-view-surface");  
  
  for (let i = 0; i < rootNode.length; i++) {  
    rootNode[i].setAttribute("aria-describedby", "mapDescriptionEl");  
  }  
});
```

Testing

- Test throughout development cycle
- Manual and automated testing
 - Automated testing – 30% coverage
 - Color checkers
 - No mouse, or keyboard only testing
 - Screen readers (JAWS, NVDA, VoiceOver)
 - People living with impairments to better understand their perspective




```
// show the compass and pass the  
mapRotation state data  
Compass(rotation = mapRotation) {  
  // reset the ComposableMapView point  
rotation to point north using the  
mapViewModel  
  mapViewModel.setViewpointRotation(0.0)  
}
```



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```
const layerList = new LayerList({  
  view: view  
});  
  
// Add widget to the top right corner  
of the view  
view.ui.add(layerList, "top-right")
```

```
<arcgis-map zoom="4" center="-118,34">
```