

Esri Developer Summit

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Story Maps: Configuring and Customizing Web Apps

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Agenda

- **Introduction to Story Maps**
- **Technical Architecture**
- **Customization Examples**
- **Story Maps Developers' Corner**
- **Dive in a customization**
- **Create stories without the builders**
- **Road Ahead**
- **Conclusion**
- **Questions and Discussion**

Introduction to Story Maps



What are Story Maps?

Your text,
photos,
video

Open
Source

- Story maps are simple **web apps** that combine **web maps** with **multimedia content** to tell geography-based stories.
- Story maps inform, educate, entertain, and inspire people about a wide variety of topics.

ArcGIS
Online

Story Maps are...



Sophisticated?



Multi-purpose?



PC Only?



Passive?



For Advanced Users?



Simple



Single Purpose



Responsive



Engaging



For Everyone

Technical Architecture



Overview

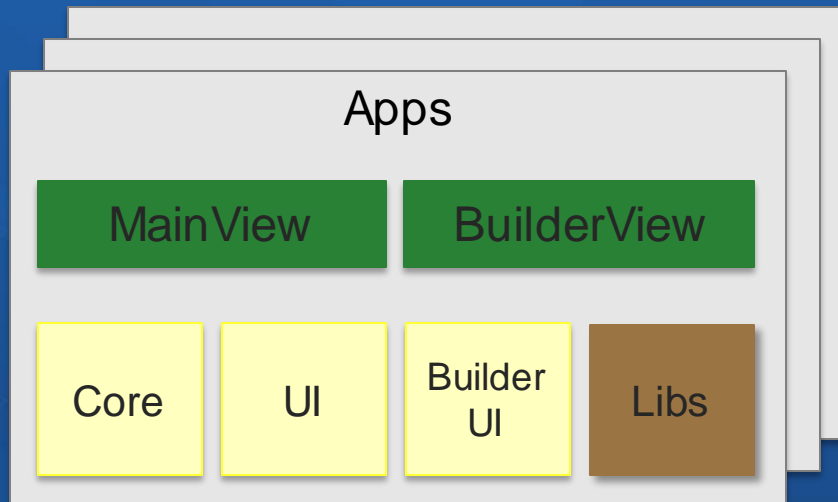
- **Focused, lightweight, responsive design**
- **WYSIWYG builder**
- **Good default, some options, easy to customize**
- **Integrated in ArcGIS Online and Portal for ArcGIS**
- **OpenSource on GitHub**

Technology

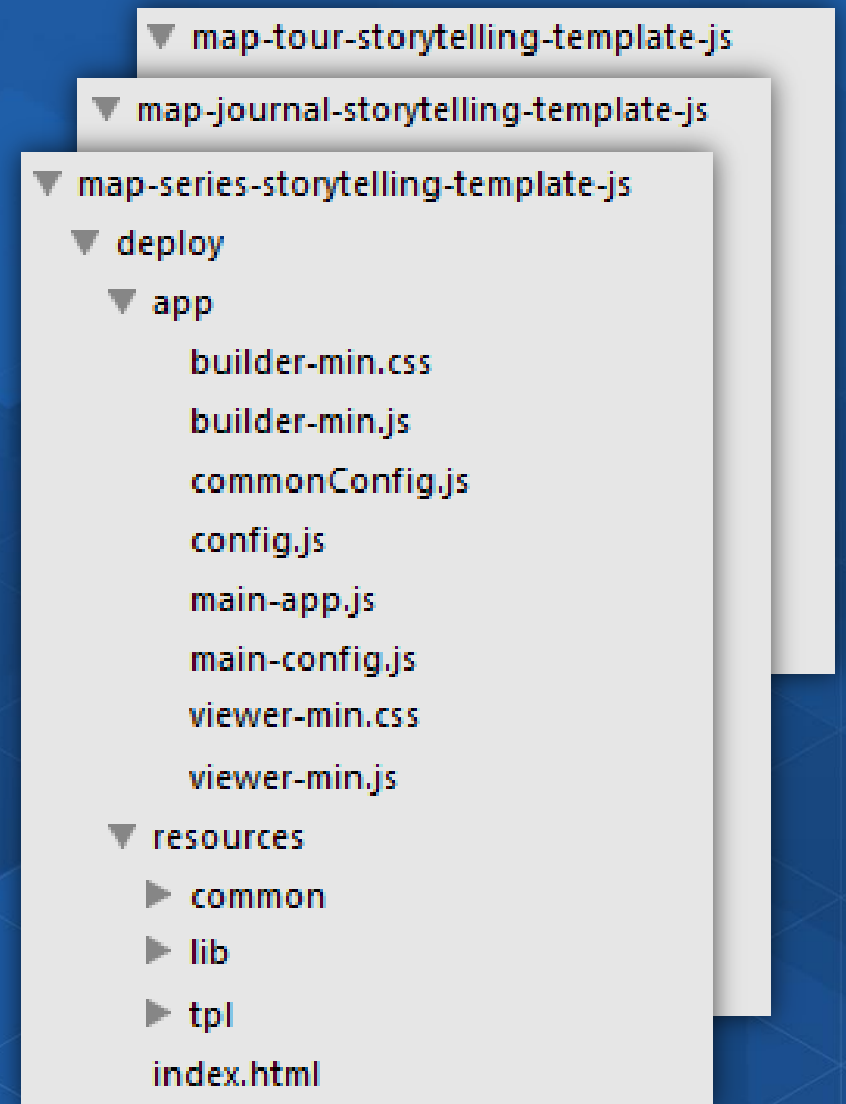
- Modular design (AMD)
- No JavaScript framework
- Views use lodash template
- Build chain with node and grunt



Architecture overview

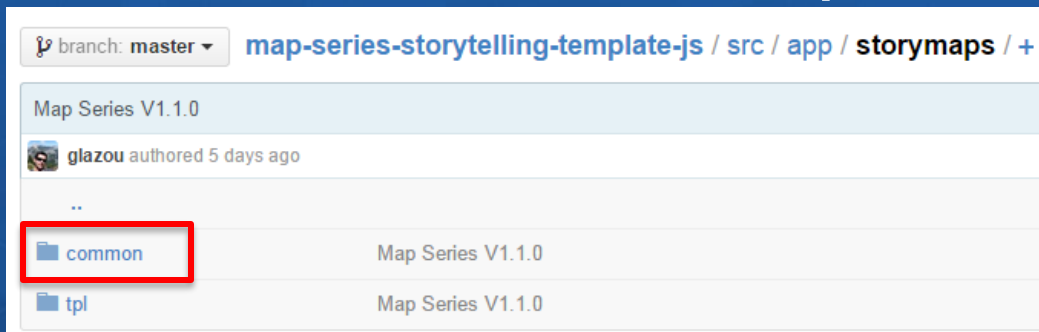


Node
Grunt
JSHint
Require.js Optimizer

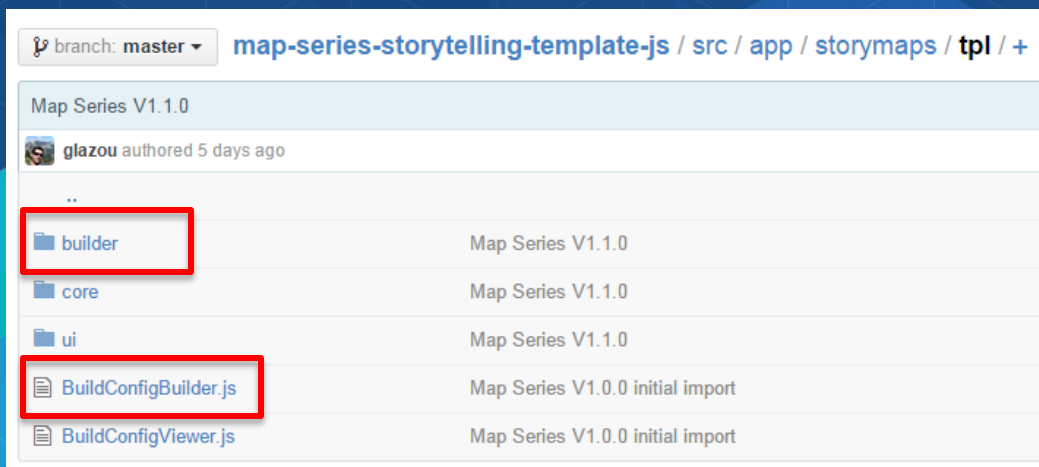


Architecture detail 1/2

- Common framework across templates



- Integrated viewer and builder



Architecture detail 2/2

NavBar.css
NavBar.html
NavBar.js
NavBarEntry.html
NavBarEntryMore.html

```
<div class="nav-bar">  
  <div class="entries">  
    <ul class="nav nav-tabs">  
      <!--  
        tabs and the more button are injected here  
      -->  
    </ul>  
  </div>  
</div>
```

```
<li class="entry <%= optHtmlClass %>" data-title="<%= tooltip %>">  
  <a class="entryLbl" tabindex="0"><%= value %></a>  
</li>
```

```
define(["lib-build/tpl!./NavBar",  
  "lib-build/css!./NavBar",  
  "lib-build/tpl!./NavBarEntry",  
  "lib-build/tpl!./NavBarEntryMore",  
  "dojo/topic",  
  "dojo/has"],  
function(  
  viewTpl,  
  viewCss,  
  viewEntryTpl,  
  viewEntryMoreTpl,  
  CommonHelper,  
  topic,  
  has  
)  
{  
  return function NavBarTab(container, isInBuilder, navigationCallback)  
  {  
    var _this = this,  
        _entries = null,  
        _entryIndex = null;  
    container.html(viewTpl({ }));  
    this.init = function(entries, entryIndex, layout, layoutOptions, colors)  
    {  
      _entries = entries;  
      _entryIndex = null;  
      render(layout, layoutOptions, colors);  
      this.showEntryIndex(entryIndex);  
      initEvents();  
      isInBuilder && initBuilder();  
    };  
    this.update = function(layout, layoutOptions, colors)  
    {  
      render(layout, layoutOptions, colors);  
      this.showEntryIndex(_entryIndex);  
    };  
    this.resize = function()  
    {  
      container.find(".nav-tabs > li").addClass("visible");
```

API for developers

```
<script type="text/javascript">
  require(["dojo/topic"], function(topic) {
    // The application is ready
    topic.subscribe("tpl-ready", function(){
      /* */
    });

    // When an entry is being loaded (don't wait for the Main Stage media to be loaded)
    topic.subscribe("story-load-entry", function(index){
      /* */
    });

    // After a map is loaded (when the map starts to render)
    topic.subscribe("story-loaded-map", function(result){
      /* */
    });
  });
</script>
```

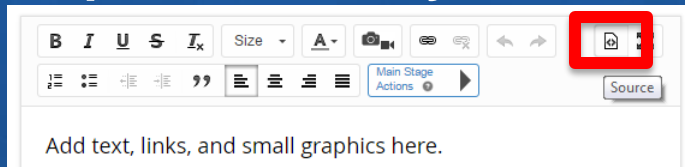
```
<script type="text/javascript">
  require(["dojo/topic"], function(topic) {
    // Navigate to an entry
    topic.publish("story-navigate-entry", 2);

    // Reload the content panel
    topic.publish("story-update-entries");
  });
</script>
```

```
> app
< ▼ Object {version: "1.1.0", pathJSAPI: "///js.arcgis.com/3.13/",
  Object...}
  ▶ appCfg: Object
    builder: undefined
    cfg: Object
    data: Object
    indexerg: Object
    isDirectCreation: false
    isDirectCreationFirstSave: false
    isGalleryCreation: false
    isInBuilder: undefined
    isLoading: false
    isPortal: false
    isProduction: true
    lastMapExtent: Object
    loadingTimeout: null
    map: Object
    mapConfig: Object
    mapItem: Object
    maps: Object
    pathJSAPI: "///js.arcgis.com/3.13/"
    portal: Object
    ui: Object
    version: "1.1.0"
```

Multiple levels of customizations

1. In Map Journal only: customize CSS in builder through editor source view mode



2. CSS in index.html

```
</head>
<body class="claro">
  <style>
    /* CUSTOM CSS RULES */
  </style>
```

3. JavaScript using the app's API in index.html

```
<script type="text/javascript">
  require(["dojo/topic"], function(topic) {
    /*
     * Custom Javascript to be executed while the application is initializing goes here
     */

    // The application is ready
    topic.subscribe("tpl-ready", function(){
      /*
       * Custom Javascript to be executed when the application is ready goes here
       */
    });
  });
</script>
```

4. Modify the source code and build

Customization Examples



Customization examples

- **Map Tour**

- <http://officearchitect.virginia.edu/greenguide/index.html>
- <http://www.lisboa2baku.com/>
- <http://www.nps.gov/gis/storymaps/maptour/v1/?appid=0362fefbc5a94c75b0b812f5ed2ef1f1>
- <http://maps.simcoe.ca/Trails/?TRAIL=MatchedashBayLoopTrail>

- **Map Journal**

- <http://www.animalplanet.com/tv-shows/ice-cold-gold/episode-journals/prelude/>
- <http://www.unaids.org/citiesreport/>

- **Map Series**

- <http://kygeonet.ky.gov/StoryMaps/KyFromAbove/>
- <http://www.vaseline.us/thehealingproject>
- <http://storymaps.esri.com/stories/2015/circles/>
- <http://www.wri.org/applications/maps/rights-to-resources/>

- **Custom**

- <http://storymaps.esri.com/stories/2015/twelve-places-of-christmas/>
- <http://storymaps.esri.com/stories/2014/zoo-babies/>
- <http://www.directrelief.org/voices/>

<http://storymaps.arcgis.com/en/gallery/#s=0&md=storymaps-format:customized>

Story Maps Developers' Corner



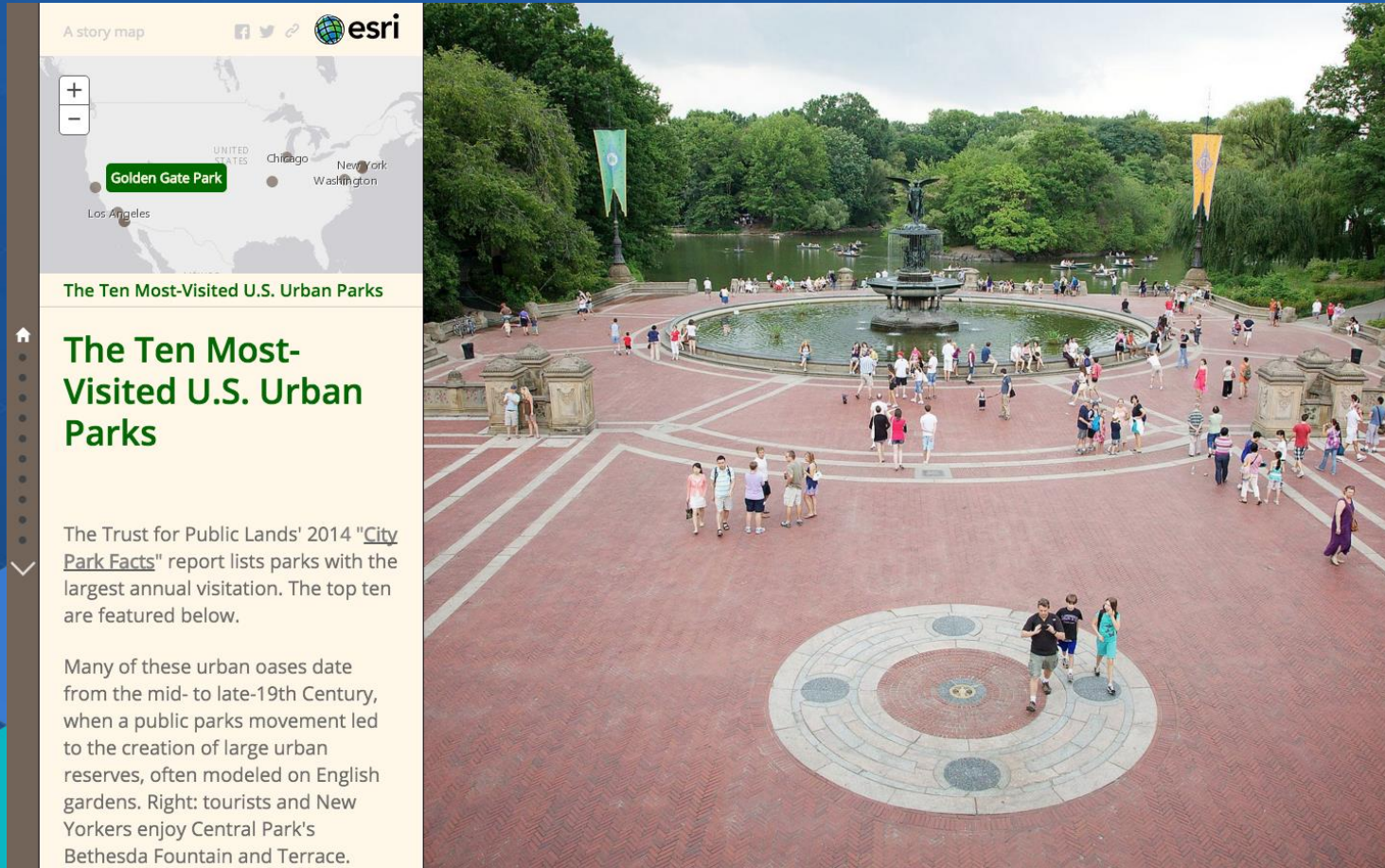
Story Maps Developers' Corner

developerscorner.storymaps.arcgis.com

- **Get started**
- **Customization tutorial**
- **Tips less known features**
- **Security, deployment**
- **What's new**

Dive in a customization

Add an Index Map to Story Map Journal



- View Completed Demo:
 - <http://storymaps.esri.com/stories/2014/most-visited-parks/>
- Instructions:
 - <https://developerscorner.storymaps.arcgis.com/add-context-to-story-map-journal-with-an-index-map-ccc3c8ca12b5#.1tzowv447>

**Create stories without the
builders**



Apps can be categorized in two groups

- Apps who store the story as a web map layer
 - Map Tour, Shortlist, Swipe
 - Drive story through Feature Services or CSV hosted/generated on your own server
 - Generate a web map dynamically (specification to be released soon)
 - Modify the app to plug any data

- Apps who store the story in application item
 - Map Journal, Map Series
 - Demo how to generate a Map Journal from a simple JSON
github.com/glazou/story-map-journal-generator
 - Modify the app to plug any data

Story Map Journal generator

```
{
  "title": "Mountains of Fire (generated demo)",
  "sections": [
    {
      "title": "<p><span style='color:#ff9900'>Mountains</span> <span style='color:#ff6633'>of Fire</span></p>",
      "mainstage": {
        "type": "image",
        "url":
"http://upload.wikimedia.org/wikipedia/commons/thumb/3/37/Fimmvorduhals_2010_03_27_dawn.jpg/1280px-Fimmvorduhals_2010_03_27_dawn.jpg"
      },
      "panel": {
        "text": "<p><span>Touring the world's deadliest and most active volcanoes</span></p><p></p><p>Content extracted from <a href='http://story.maps.arcgis.com/apps/MapJournal/?appid=4c77a56bbcd743b69232cf3fd9c7a61c' target='_blank'>Moutains of Fire Map Journal</a></p><p></p><p><span style='font-size:20px'><span>They're strung across the breadth of the Earth like glowing necklaces. They cluster densely along geologic boundaries where tectonic plates collide. They threaten millions of people who live within their shadows. They may lie dormant for centuries and then, overnight, spew cubic miles of molten rock and ash.</span></span></p><p></p><p><span style='font-size:20px'><span>Scroll down to peer into the planet's most dangerous mountains.</span></span></p>"
      }
    },
    {
      "title": "<p>Second <strong style='color:red'>section</strong></p>"
    }
  ]
}
```

Generate the Map Journal Open the Map Journal

Road Ahead



Road ahead

- New apps
 - Shortlist
 - Cascade
 - Crowdsource
- New features
 - 3D
 - Data driven Journal/Series

- Updated Map Tour

The screenshot displays an Esri Story Map interface. At the top, the title 'San Diego Shortlist' is shown, along with a subtitle: 'Rupert Essinger from the Esri Story Maps team shares a selection of cool places to go in this Southern Californian beach city where he lives.' There are social media icons and the Esri logo. Below the title, there are tabs for 'Fun' and 'Food'. The main content area is titled '8 Train trip by the sea' and features a large image of a train on a coastal track. Below the image, there is descriptive text about Amtrak California's Pacific Surfliner and the Encinitas Coaster. To the right of the text is a map of San Diego with numbered blue markers (1-42) indicating various locations. A yellow line on the map highlights a route along the coast. The map includes a zoom control and the Esri logo at the bottom right.

San Diego Shortlist
Rupert Essinger from the Esri Story Maps team shares a selection of cool places to go in this Southern Californian beach city where he lives.

Fun Food

8 Train trip by the sea

From San Diego's main train station, take a ride up the coast.

You can take Amtrak California's Pacific Surfliner up the coast to Orange County, Los Angeles, Santa Barbara, and San Luis Obispo. This train is a great way to travel, with free Wi-Fi, power outlets, Cafe Car, and a Business Class with reserved seating.

For an inexpensive and fun day or half-day excursion, try a shorter ride on the comfy Coaster commuter train, which serves the seaside towns between San Diego and Oceanside. We recommend the 35 minute trip up to Encinitas, a lively small beach town.

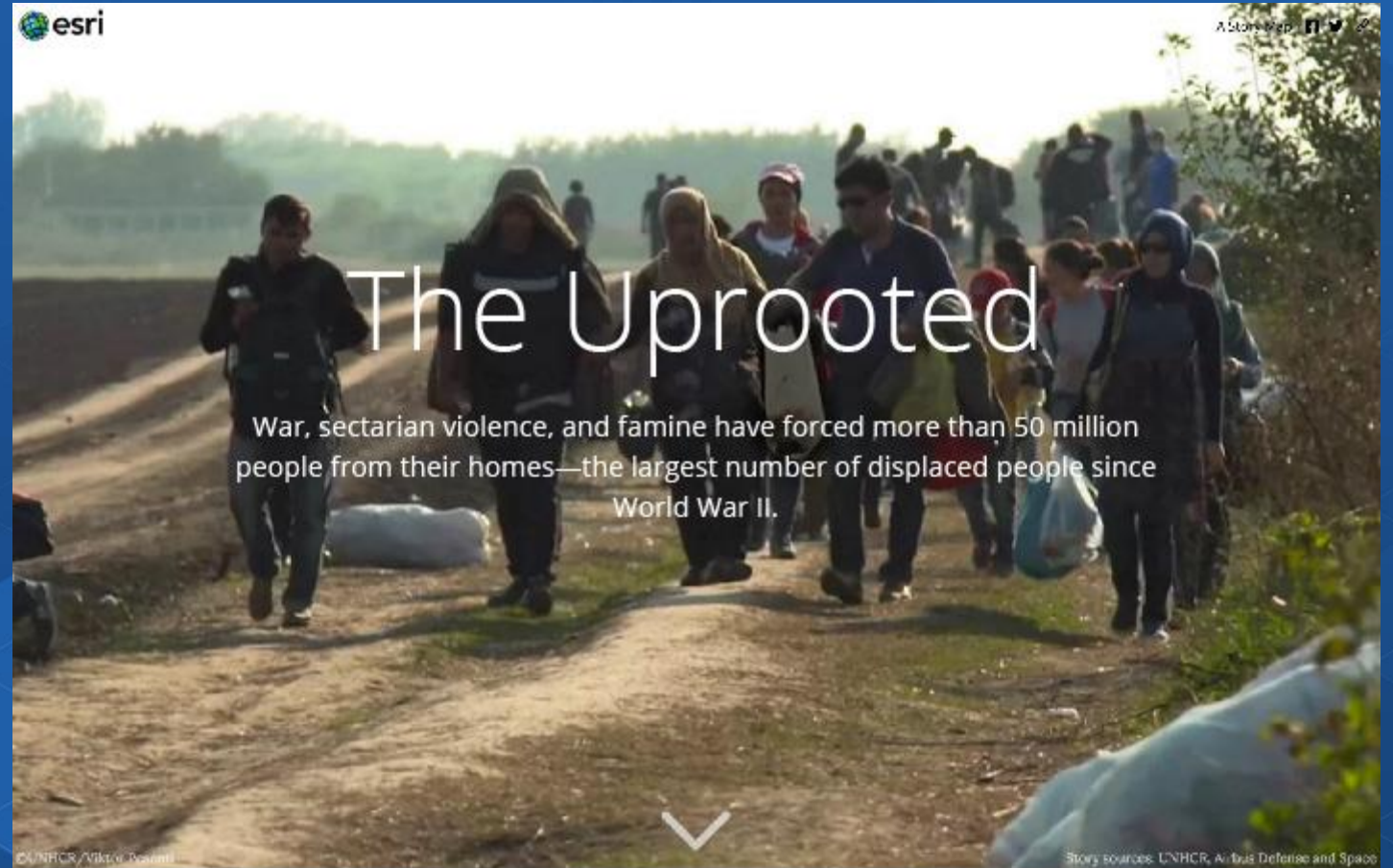
There are lovely coastal views from the train, and the Encinitas Coaster station is in the old-fashioned, gentrified downtown along South Coast Highway. Moonlight State Beach is just a

Esri, HERE, DeLorme, NGA, USGS

<http://storymaps.esri.com/templates/shortlist-2-beta/>

Road ahead

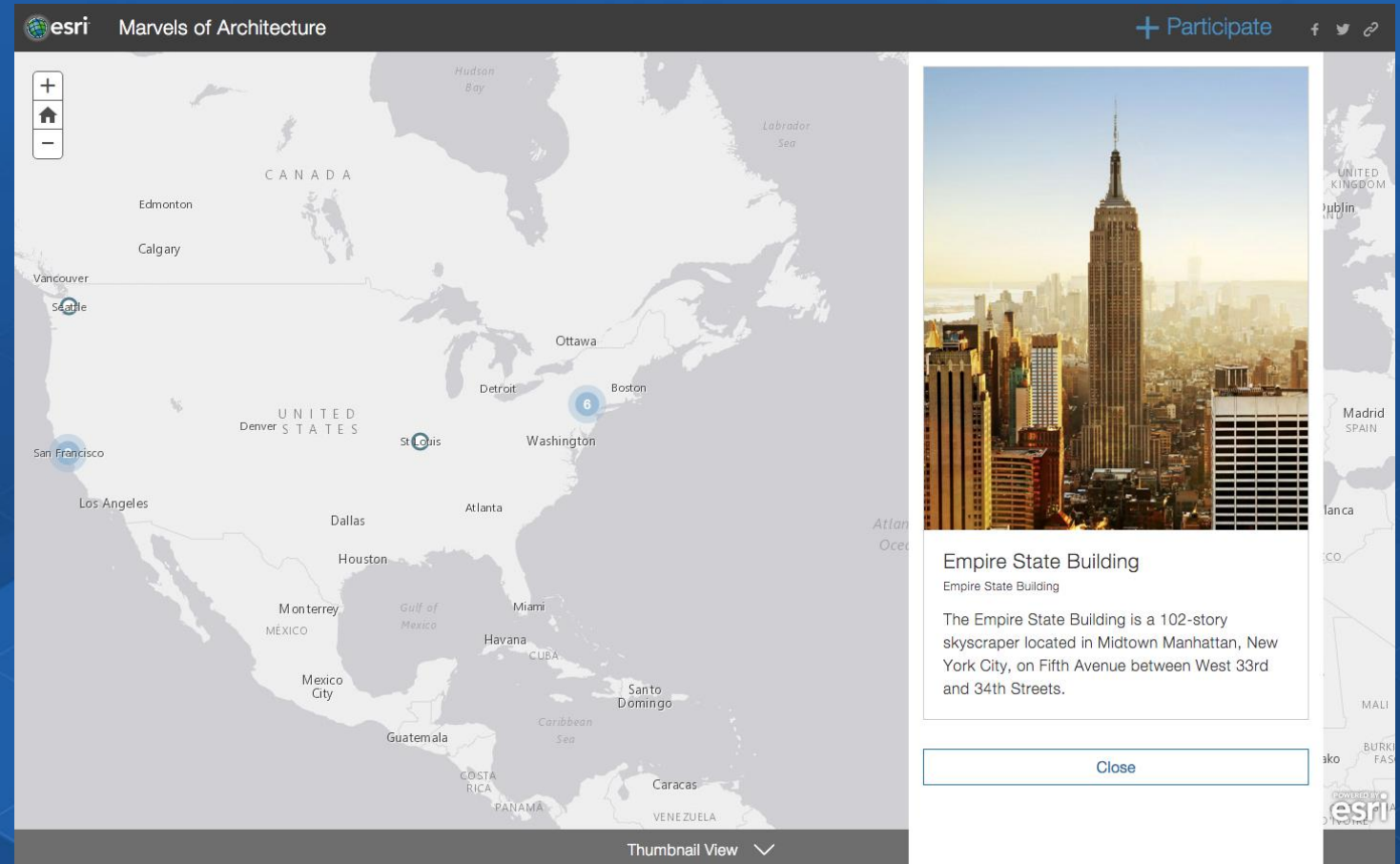
- **New apps**
 - Shortlist
 - Cascade
 - Crowdsource
- **New features**
 - 3D
 - Data driven Journal/Series
- **Updated Map Tour**



<http://storymaps.esri.com/stories/2016/the-uprooted/>

Road ahead

- **New apps**
 - Shortlist
 - Cascade
 - Crowdscore
- **New features**
 - 3D
 - Data driven Journal/Series
- **Updated Map Tour**



Demo: <https://storymaps.esri.com/templates/crowdscore-alpha/>

Sign-Up: <http://esriurl.com/CrowdscoreBeta>

Conclusion



Conclusion

- **We'd love to hear from you!**
 - Visit our website storymaps.arcgis.com
 - Submit your app to the gallery storymaps.arcgis.com/gallery/
 - Checkout the forum storymaps.arcgis.com/en/support/
 - Visit our blog for developers developerscorner.storymaps.arcgis.com
 - Get in touch on GitHub esri.github.io/#Storytelling
 - Watch the repos for updates
 - Open issues
 - Contribute with pull-requests

Story Maps: How to Tell Your Story Using Storytelling Apps

Wednesday, March 9

2:30 PM – 3:30 PM

Demo Theater 3 - Showcase

Palm Springs Convention Center

Questions and Discussion



Don't forget to complete your digital session survey

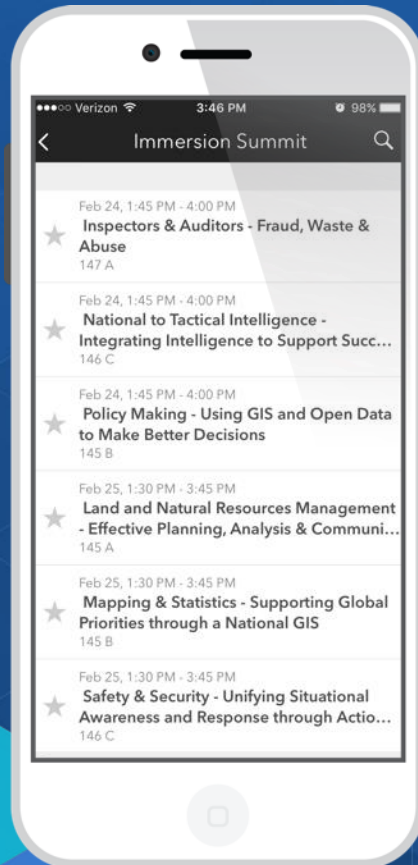
Download the [Esri Events app!](#)

Please Take Our Survey!

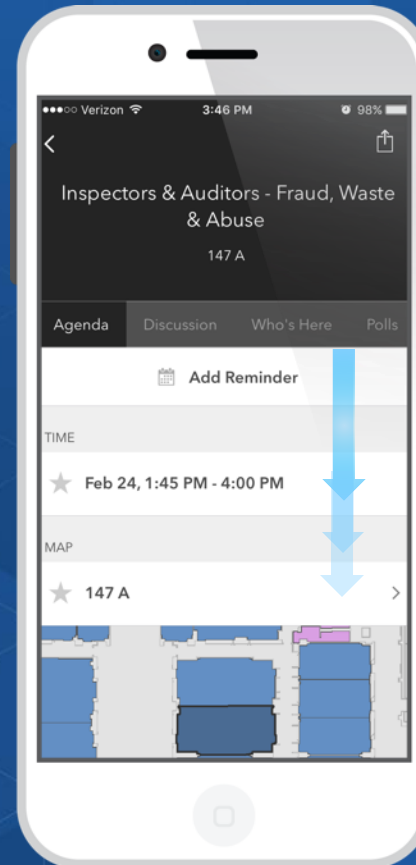
Download the Esri Events app and find your event



Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"

