Creating Custom Native Apps with AppStudio App Templates

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2021 ESRI DEVELOPER SUMMIT

ArcGIS AppStudio is a low-code / no-code solution for creating native apps

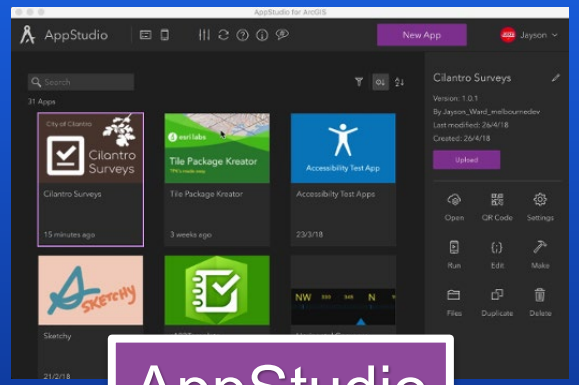
Why Native Apps?

Offline

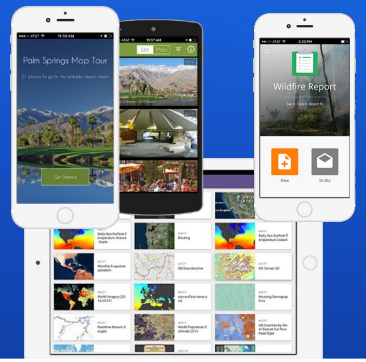
Device Capabilities

App Stores

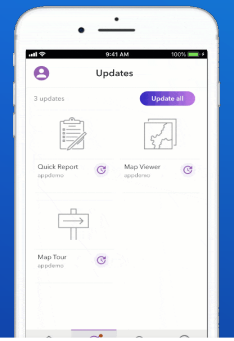
The AppStudio suite of productivity tools



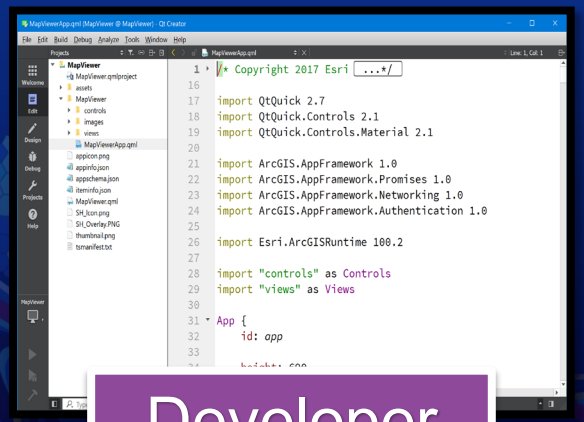
AppStudio Desktop



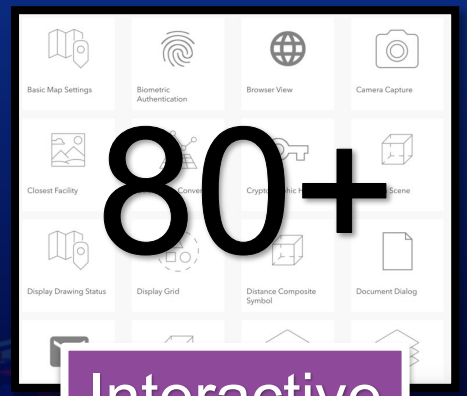
Configurable Templates



AppStudio Player



Developer Environment



Interactive Samples

Advanced Templates

Cloud Make Service

What are Templates?

- Fully functional apps for common workflows
- Easy to configure without code
  - Add images and text
  - Change colors and icons
  - Connect your data sources (maps, features)
- Source Code is available

Why use Templates?

- Build apps faster (less time, less resources)
- Anyone can configure an app (developer skills not required)
- Maintain Branding of your organization
- Stability benefits – tested on many devices
- Customize the code if needed
  - ”…we just need that one extra button to do xyz…”

Overview of Templates

AppStudio Templates

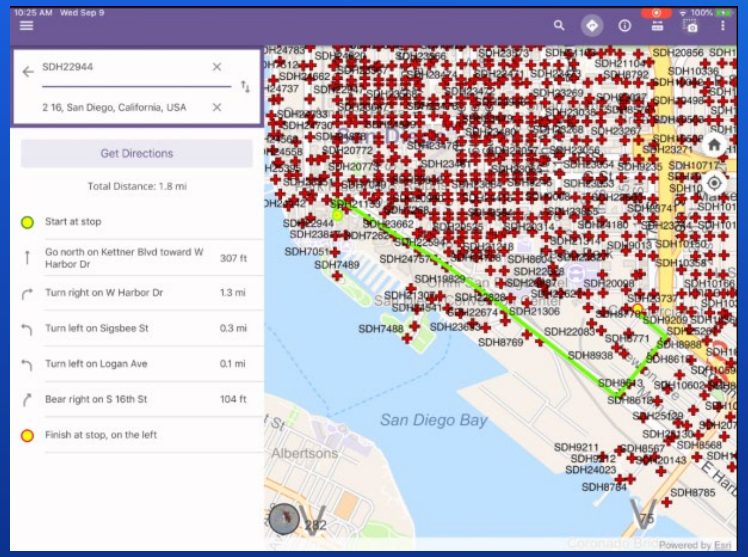
Map Viewer

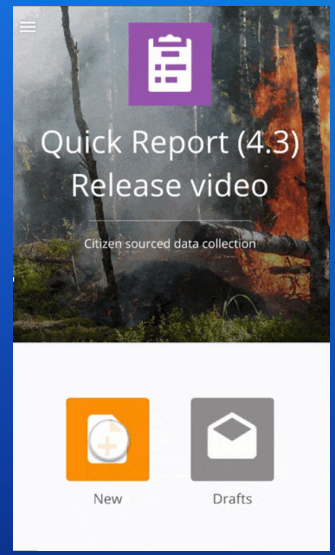
Map Tour

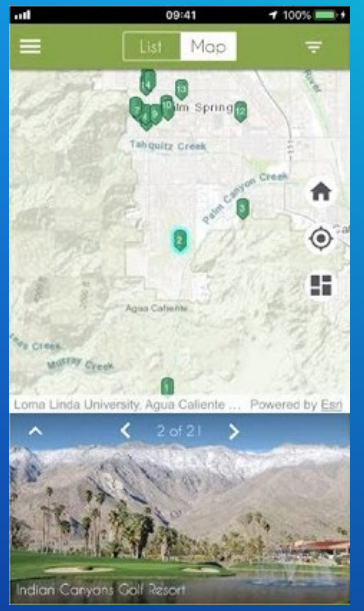
Quick Report

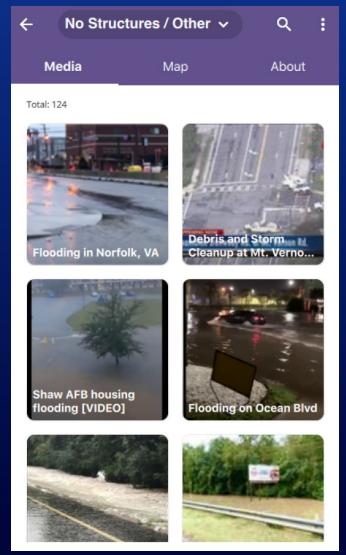
3D Scene Viewer

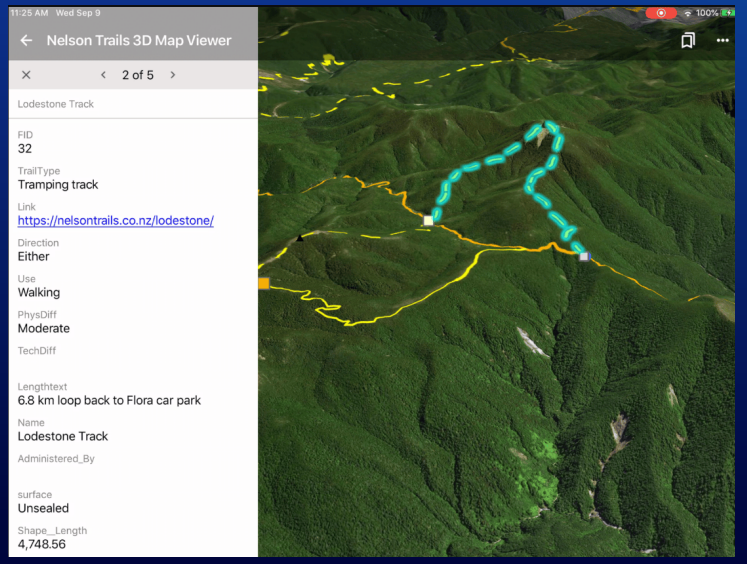
Attachment Viewer





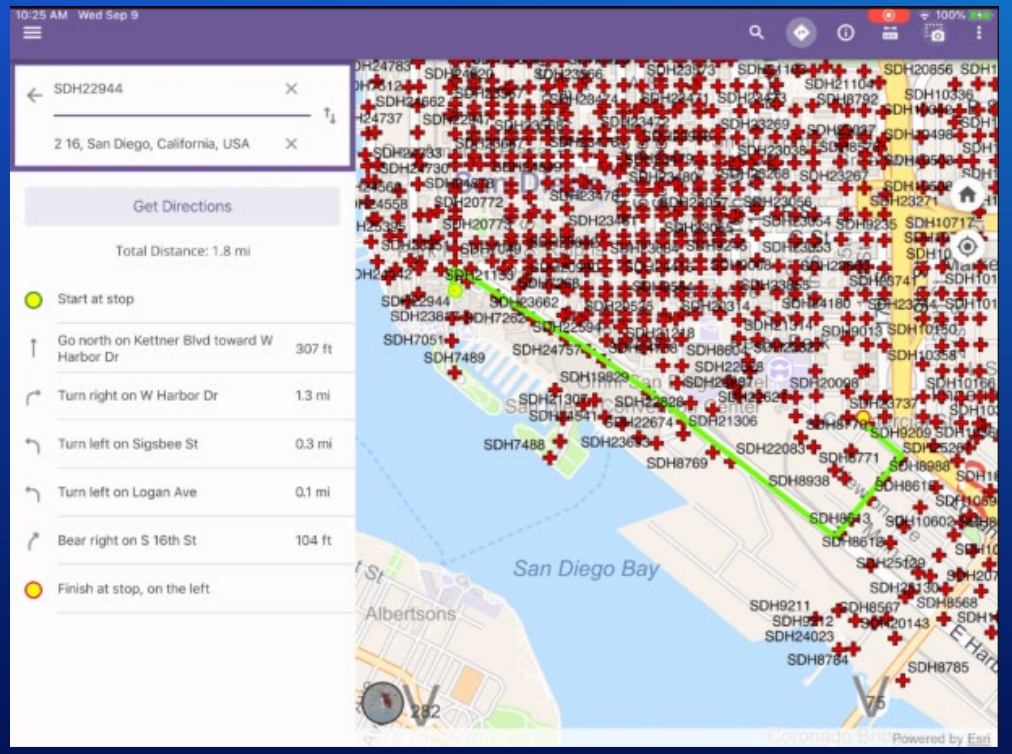






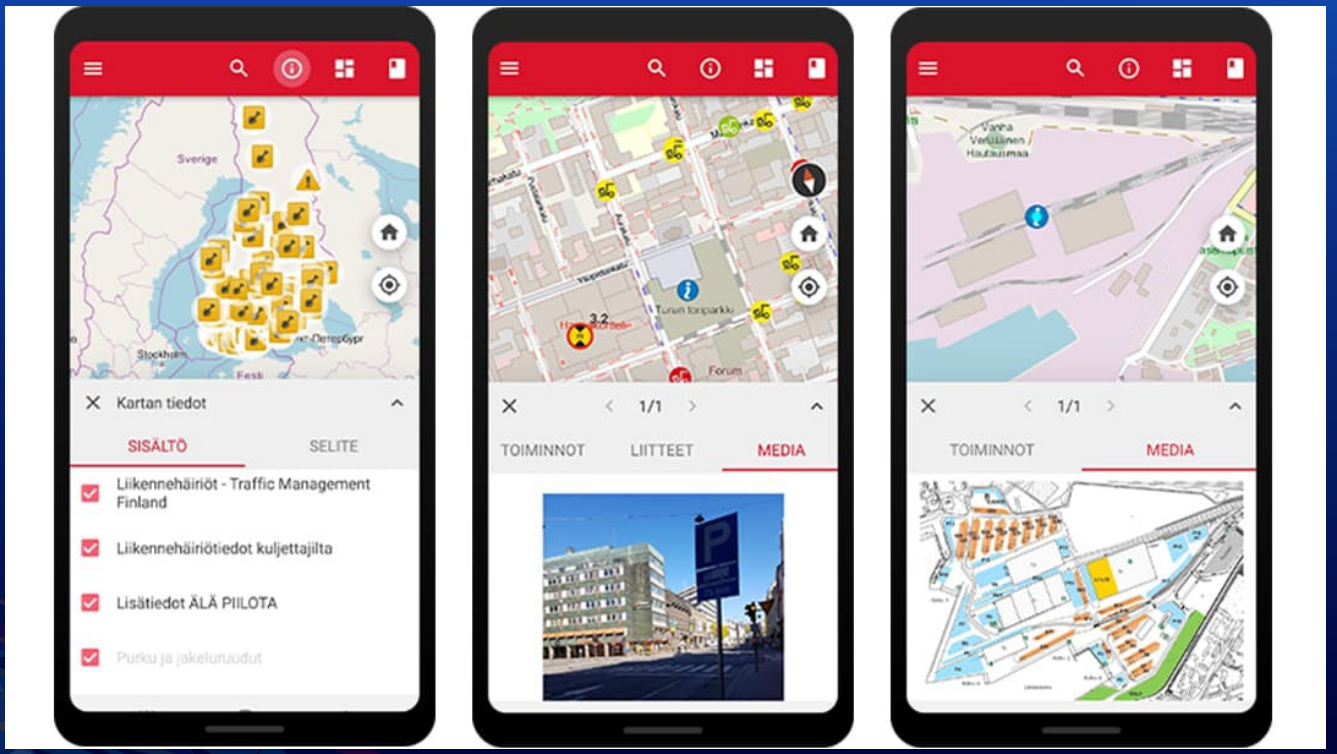
Map Viewer Template

- **Works with a web map or mobile map package**
- **Single map or gallery of maps**
- **Online or offline**
- **Tools include:**
  - **Pop-up feature information**
  - **Bookmarks**
  - **Measure**
  - **Sketching and Screenshot**
  - **Attribute edition**
  - **Routing**



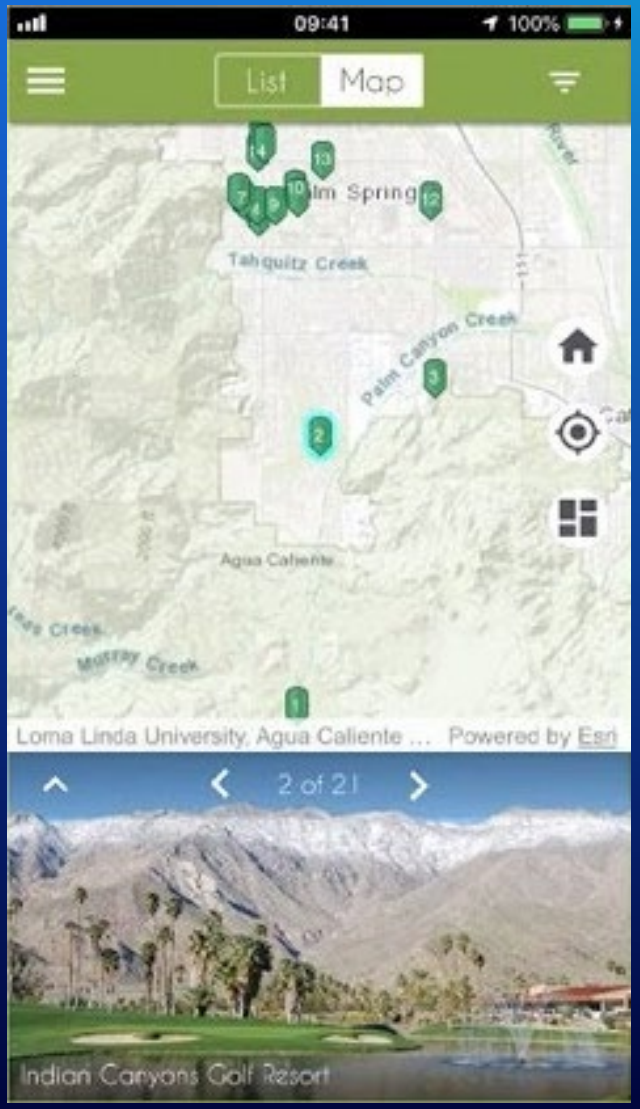
Example: Map Viewer Template

- Tietorahti Oy
- Information for Truck Drivers in Finlands



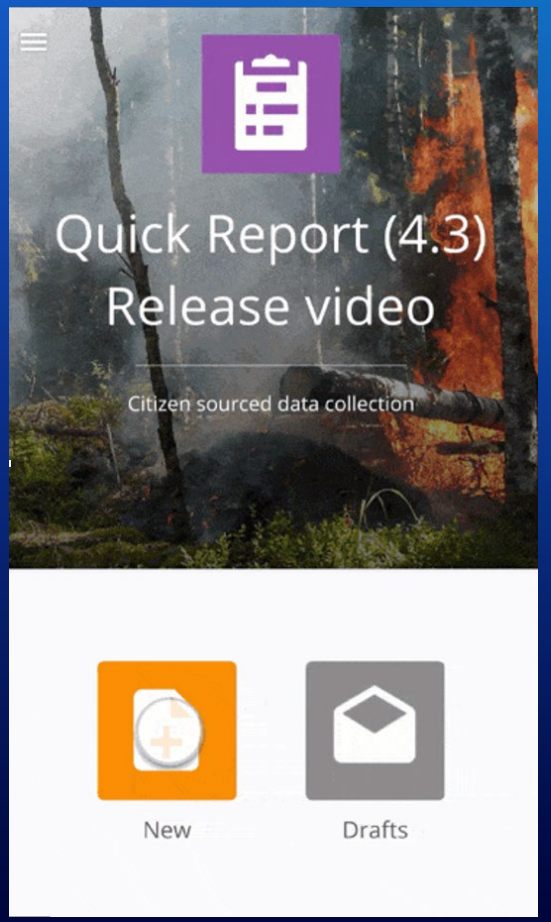
Map Tour Template

- **Works with a classic Story Maps Map Tour**
- **Displays locations in a specified order or by distance**
- **Displays photos and description information for each location.**



Quick Report Template

- **For public data collection** (crowd source/citizen science)
- **Works with an existing feature layer**
- **Uses domains and field types to create an easy-to-use data collection experience**
- **Works online and offline**
- **Capture text, photos, audio and more**

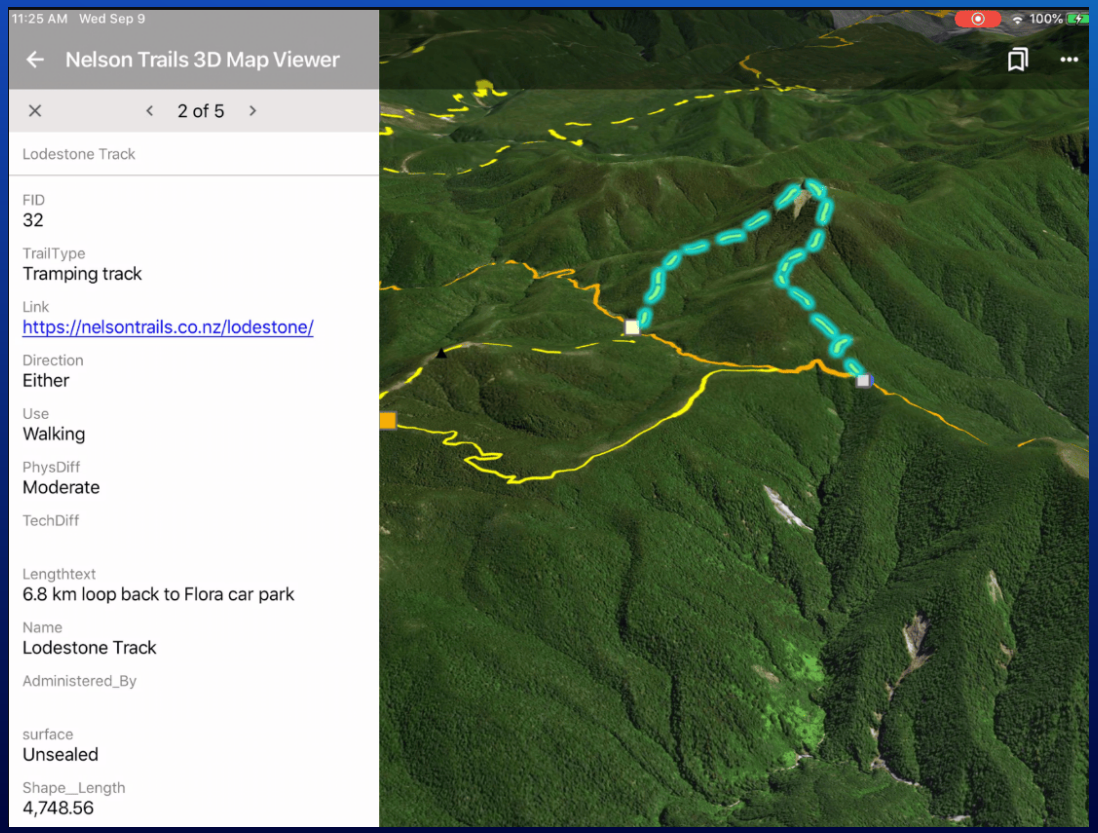


Example: Quick Report Template

311 Apps

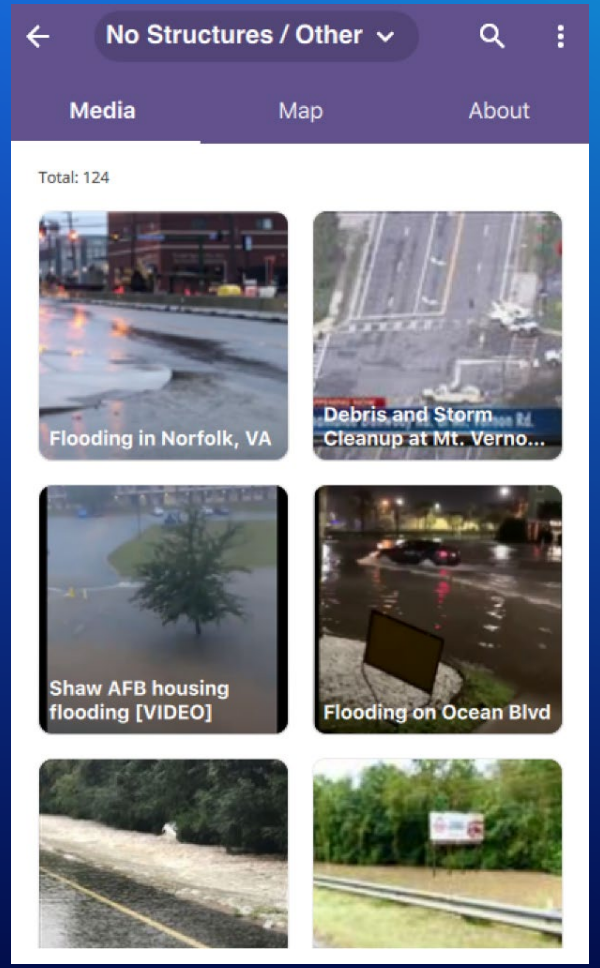
3D Scene Viewer Template

- **Works with a web scenes or mobile scenes packages**
- **Single scene or gallery of scenes**
- **Online or offline**
- **Tools include:**
  - **Pop-up feature information**
  - **Bookmarks**
  - **Daylight effects tool**



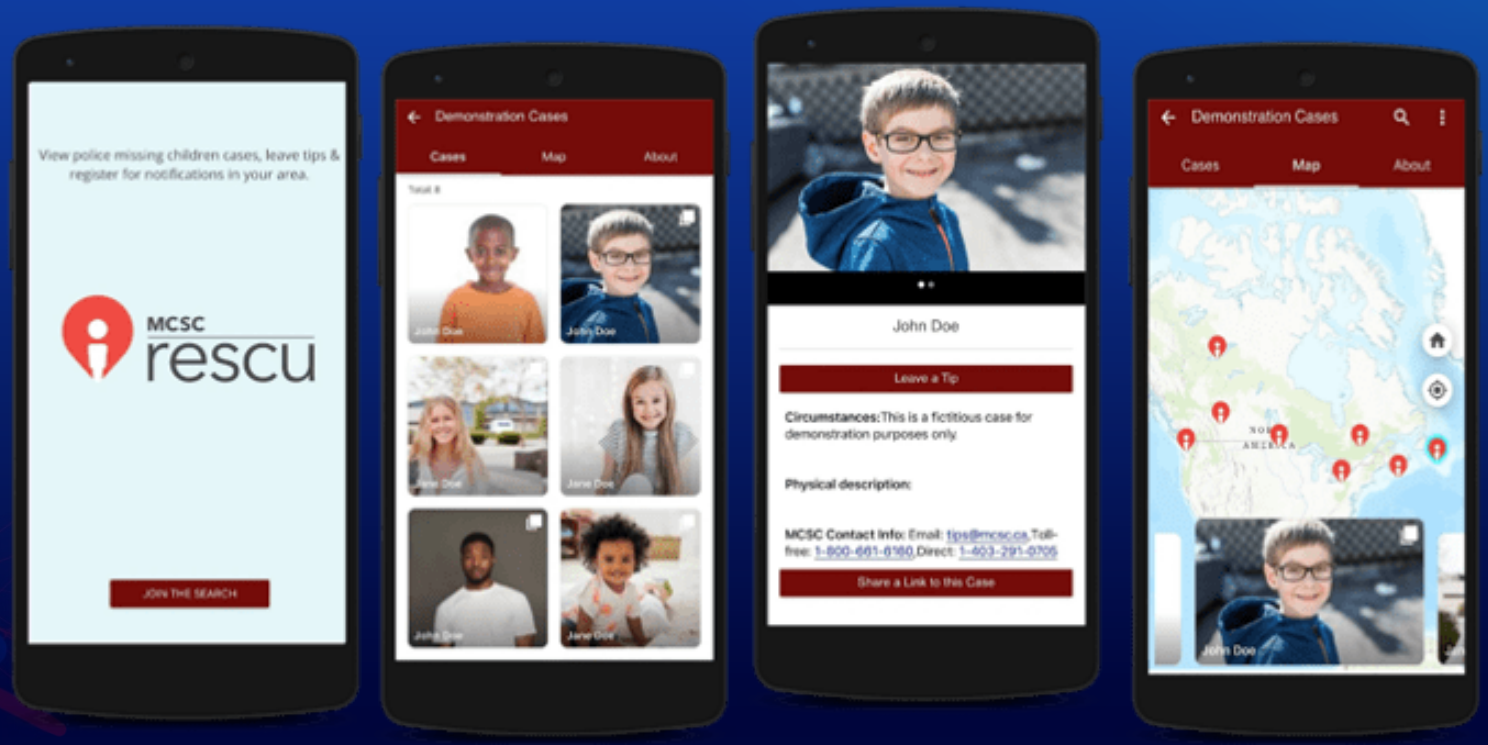
Attachment Viewer Template

- **Based on the Attachment Viewer Configurable Web App**
- **Media focused experience**
- **Switch between attachments, attributes, map**



Example: Attachment Viewer Template

- MCSC rescu Mobile App
- Missing Children Society of Canada (MCSC)



Configuring a Templates

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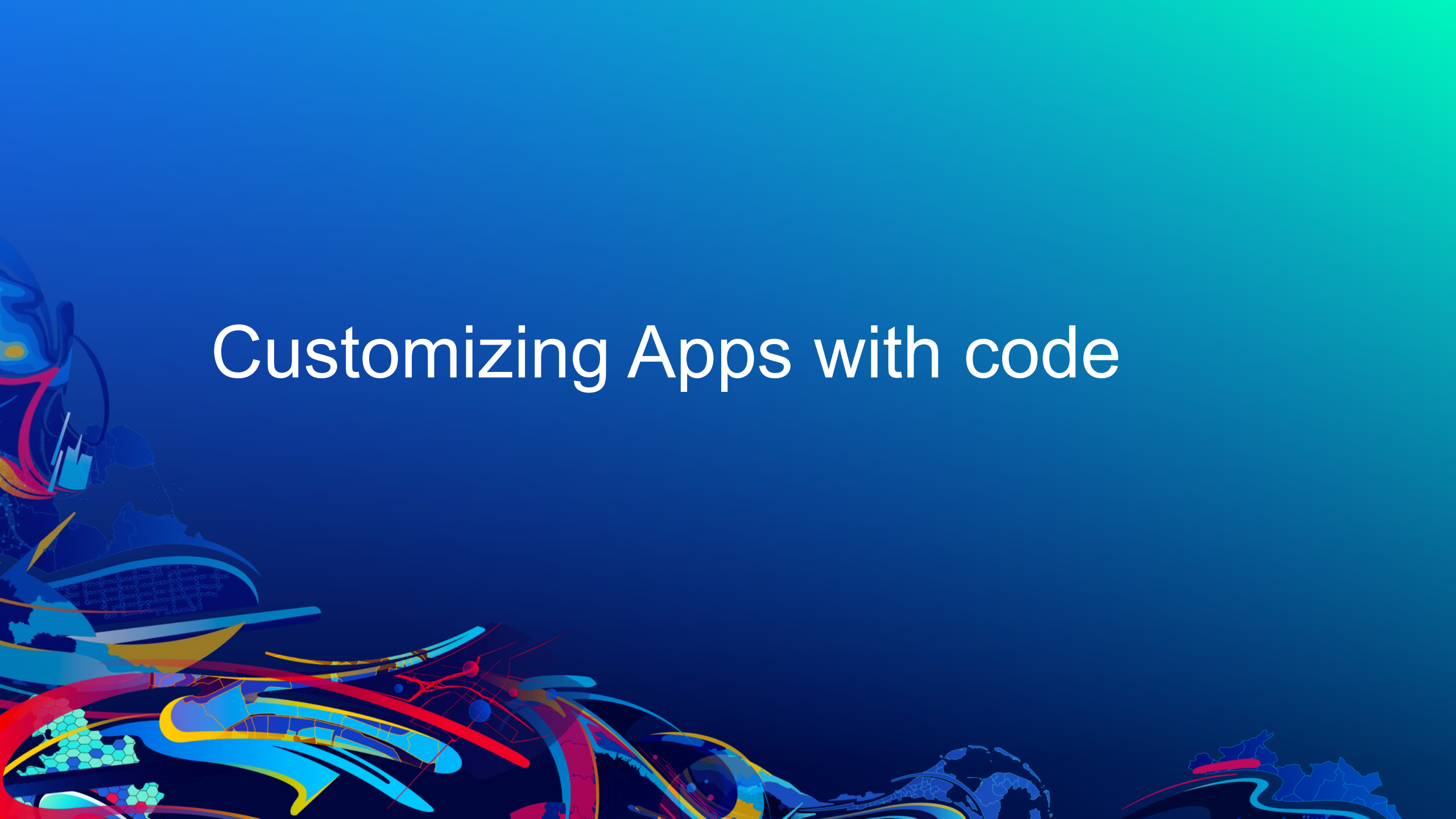
Customizing Apps with code



Programming Language

- QML
  - Qt Modeling Language
  - Declarative Language designed to build apps
  - QML is used to define the user interface (Similar to HTML and CSS)

- Javascript
  - Javascript ECMA-262 7th Edition.
  - Javascript is used to define business logic (events, functions)

Customizing Apps with code

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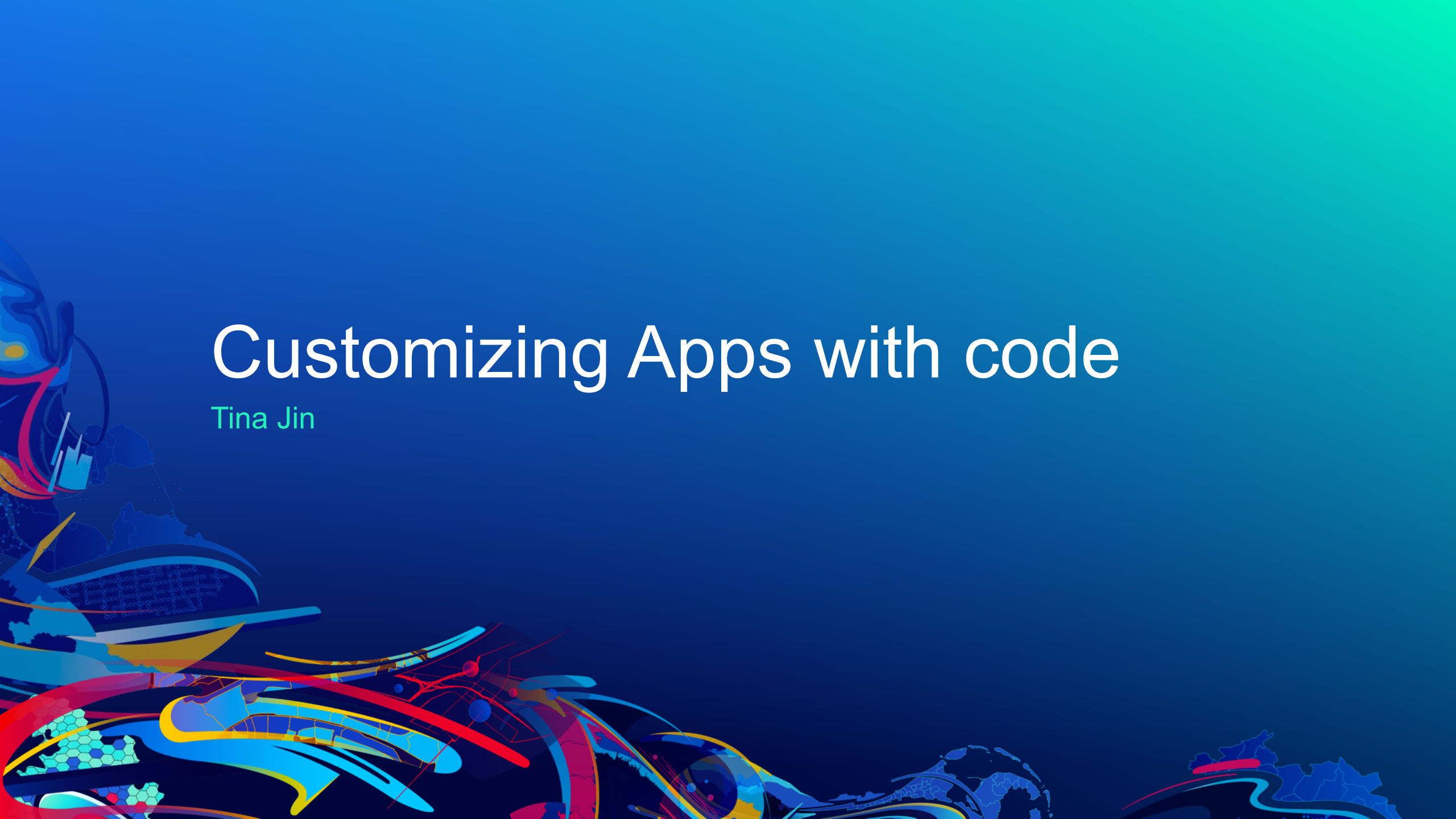

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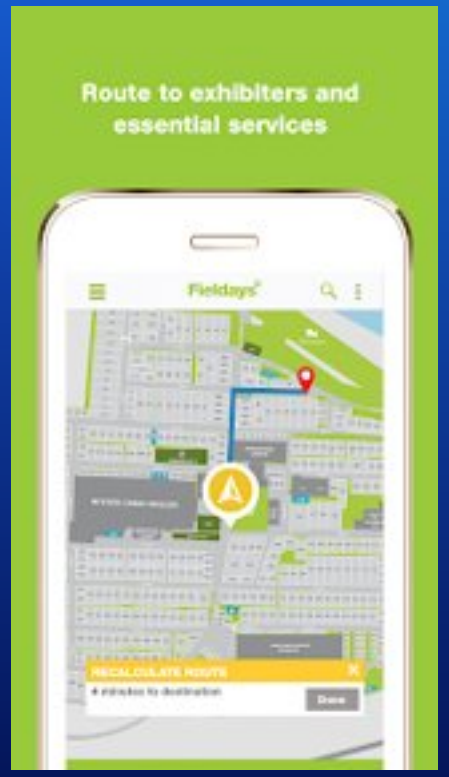
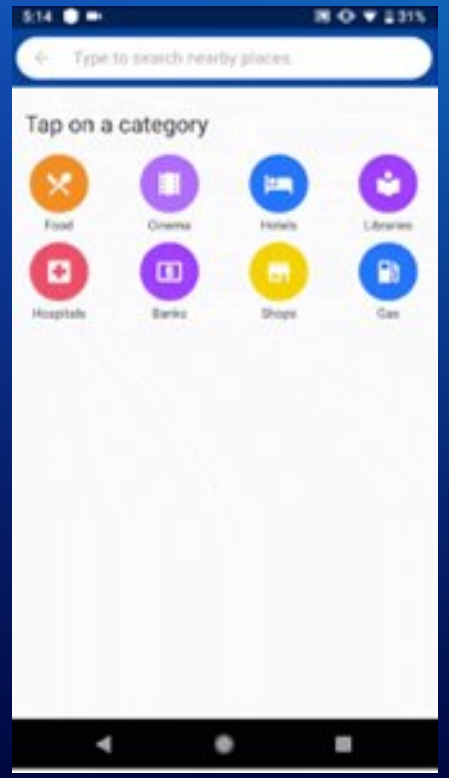
Coming in 2021 - Nearby App Template

- Search for Points-of-interest
- Sort by distance
- Show as list or on the map
- Provide directions





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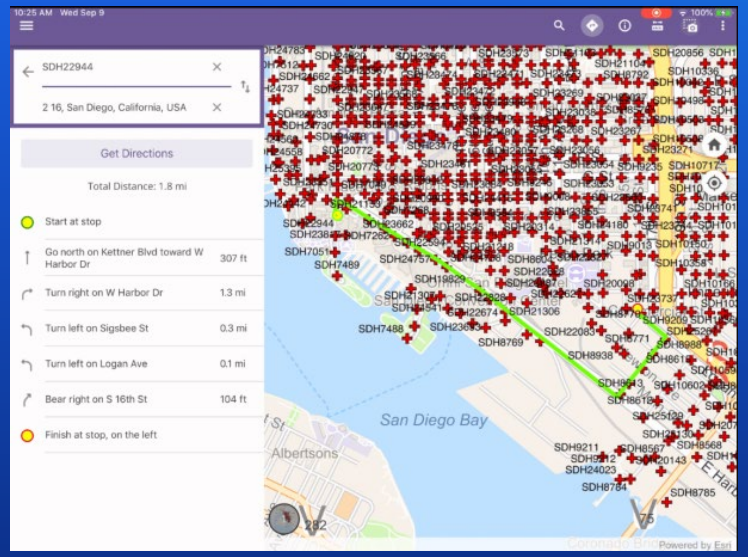

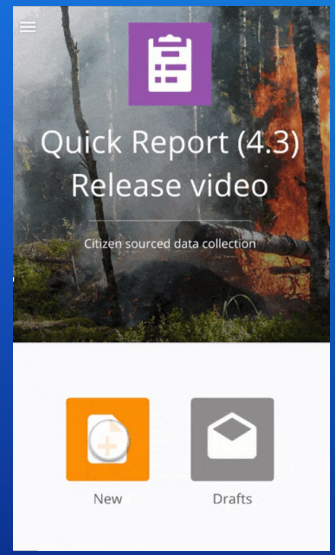

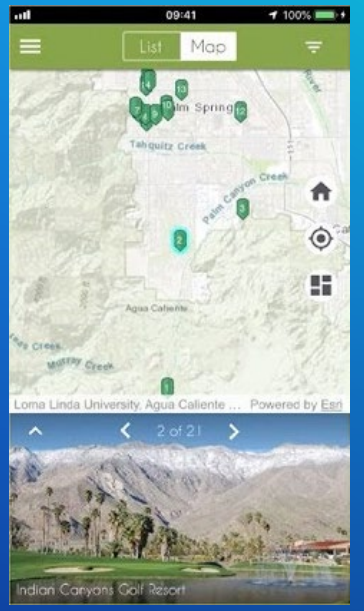

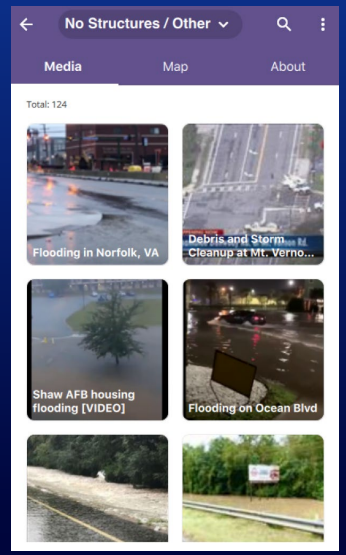

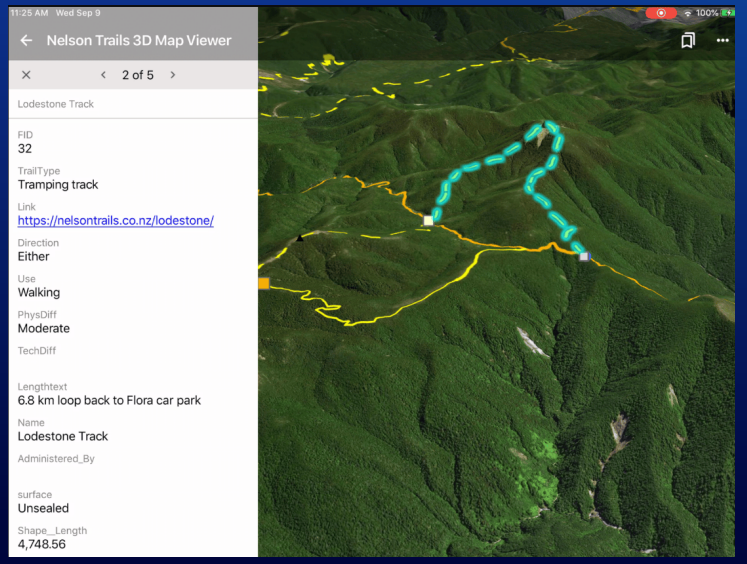

Thank You!

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ArcGIS AppStudio Technical Sessions

- ArcGIS AppStudio An Introduction
- ArcGIS AppStudio: What's New
- Creating Custom Native Apps with AppStudio App Template
- AppStudio and TensorFlow Lite -- Machine Learning on Edge Devices

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