Building Apps with the ArcGIS Runtime SDK for iOS

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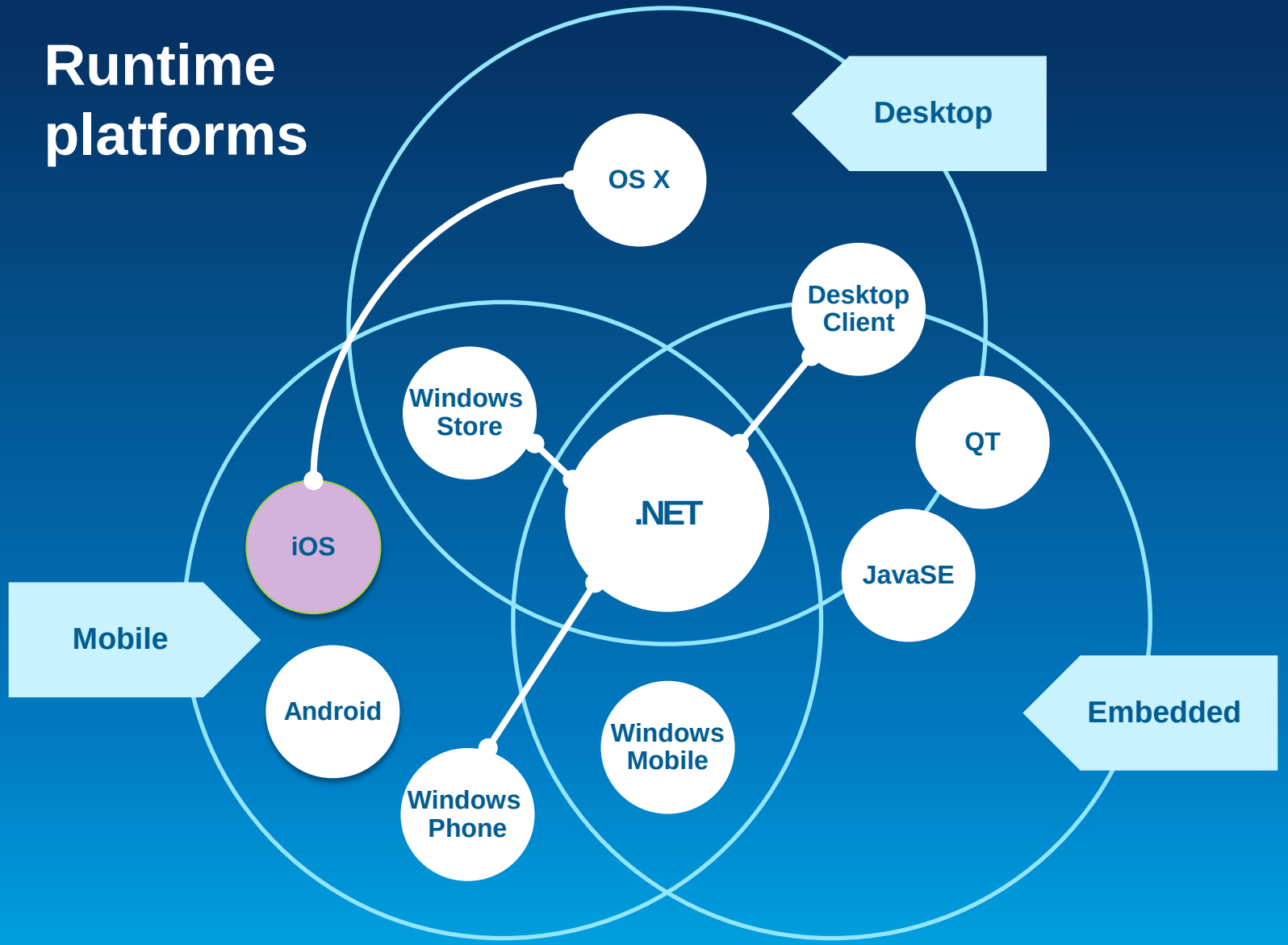
ArcGIS Runtime SDKs

10.2 Released!

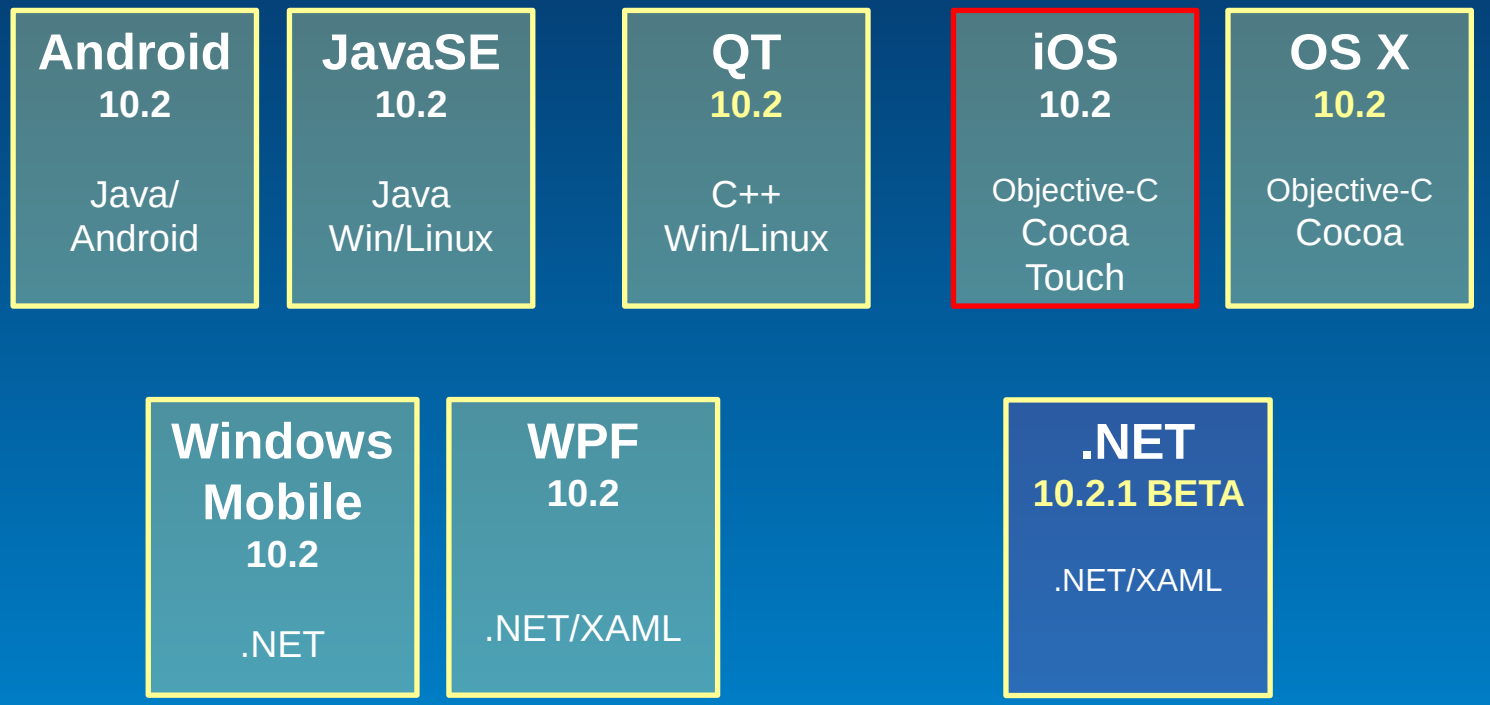
Runtime platforms



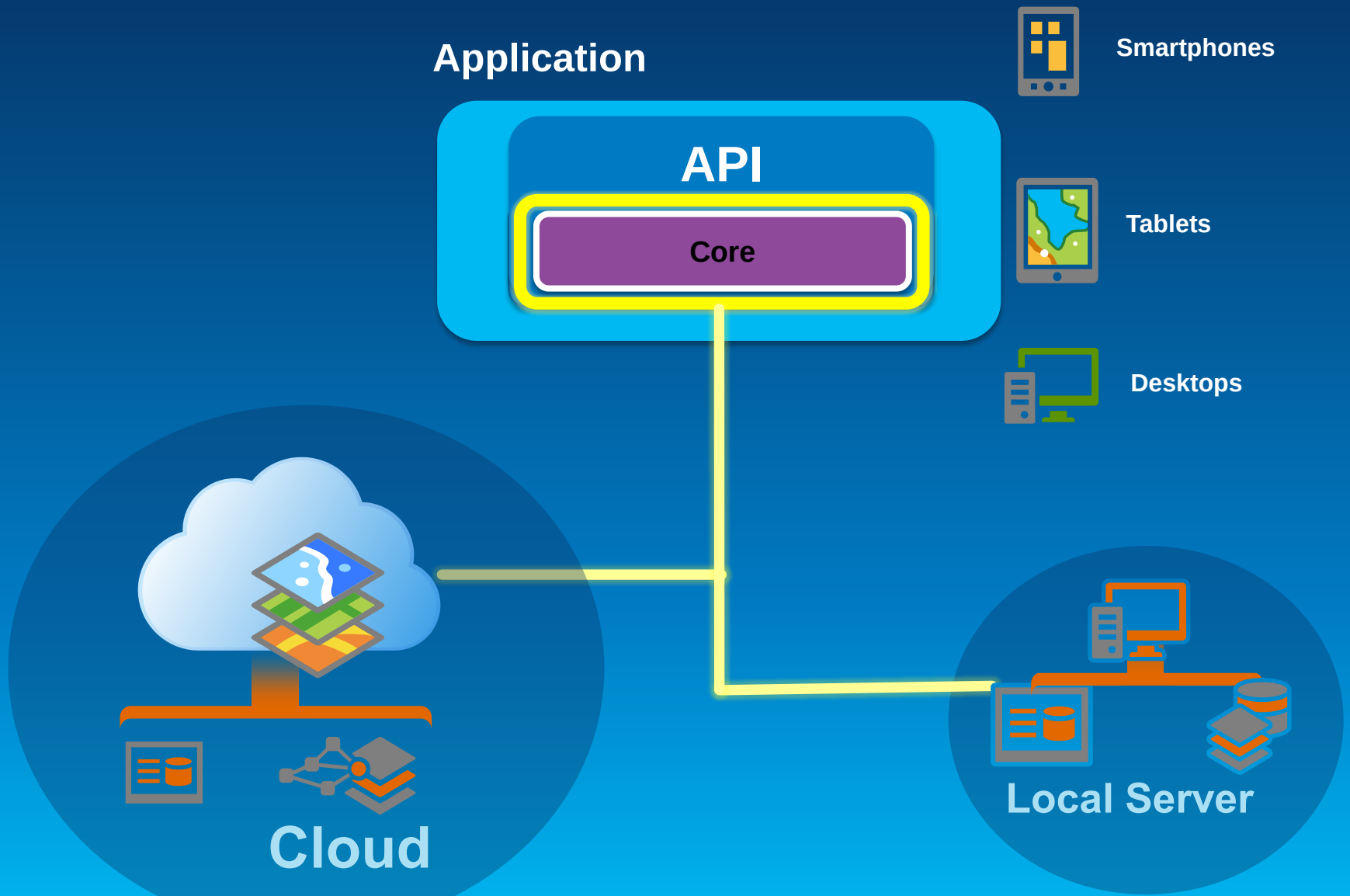
They do lots…

- Blazing fast maps
- High-quality cartography and symbology
- Use maps, layers, and data from the ArcGIS cloud
- Edit, geocode, route, and query
- Perform analysis
- So much more

SDK Platforms



Runtime API Architecture



Before you begin…

- Intel-based Mac
  - OSX 10.7, 10.8 and 10.9
    (Lion, Mountain Lion
    & Mavericks)

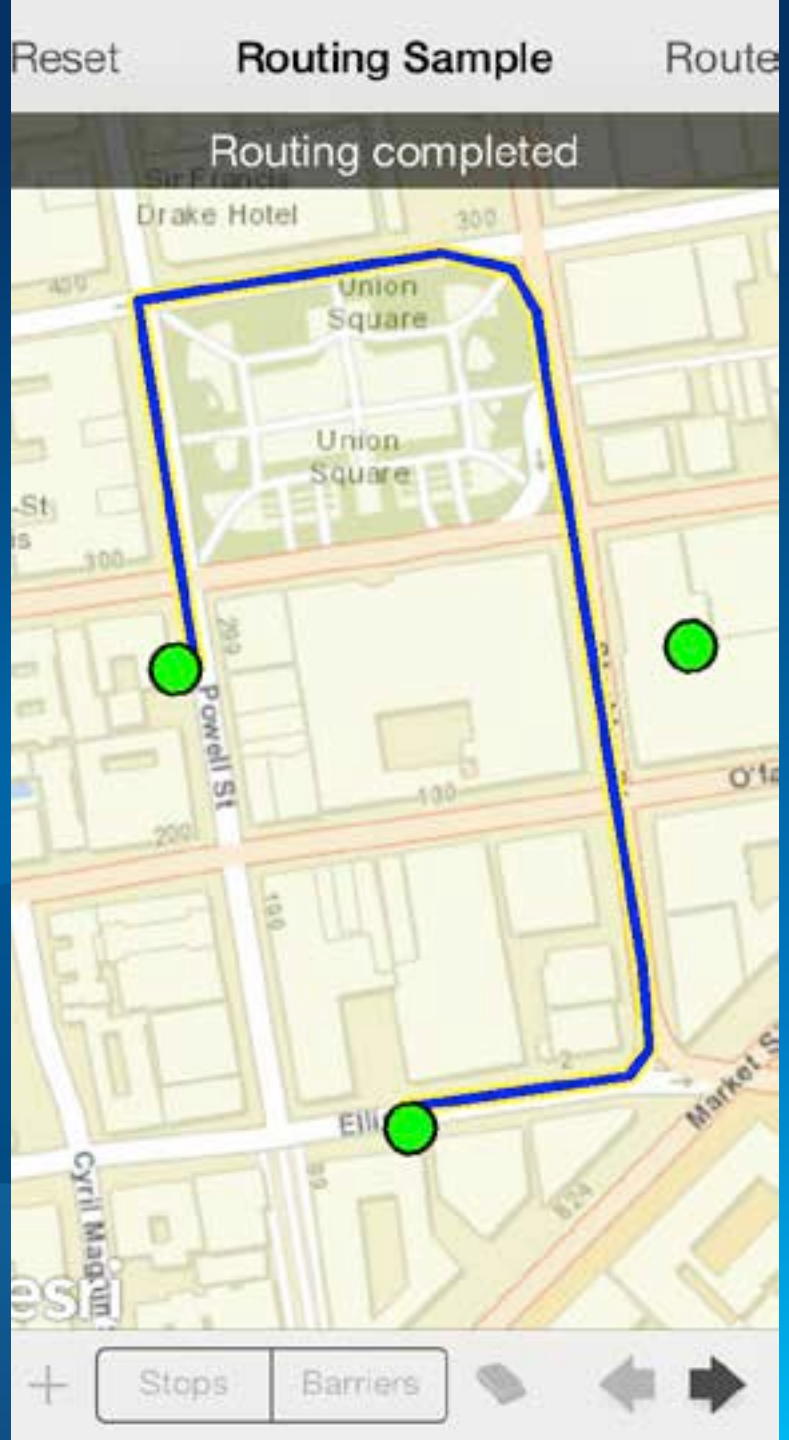
- Xcode from the App Store
  - Simulator
  - iOS SDK

- ArcGIS Runtime for iOS v10.2 Update 1

To test and deploy on actual hardware or older iOS…

- Join Apple's iOS Developer Program
  - Standard : AppStore distribution
  - Enterprise : In-House distribution

The ArcGIS Runtime SDK for iOS



ArcGIS Runtime SDK for iOS

- **Build native applications using Objective-C**
  - **iPhone 3G, 4/4S, 5/5S/5C, iPod Touch, iPad**
  - **iOS 6.0 and up**

What you can do with the SDK

- Display maps
- Perform analysis
- Visualize results
- Collect data

Displaying a Map

- UI Component : AGSMapView
  - Responds to gestures
    - Pinch to zoom & rotate
    - Drag to pan
    - Tap & Hold to magnify
  - Displays GPS location
    - Auto pan
      - Default (pan as necessary)
      - Driving
      - Walking

Adding data to your map

- Mashup layers
  - ArcGIS Server Tiled layer
  - ArcGIS Server Dynamic layer
  - ArcGIS Server Image
  - Open Street Map
  - Graphics
  - Sketch
  - Bing (BYO Key)
- Display WebMaps
  - ArcGIS.com
  - ArcGIS Portal (your server)

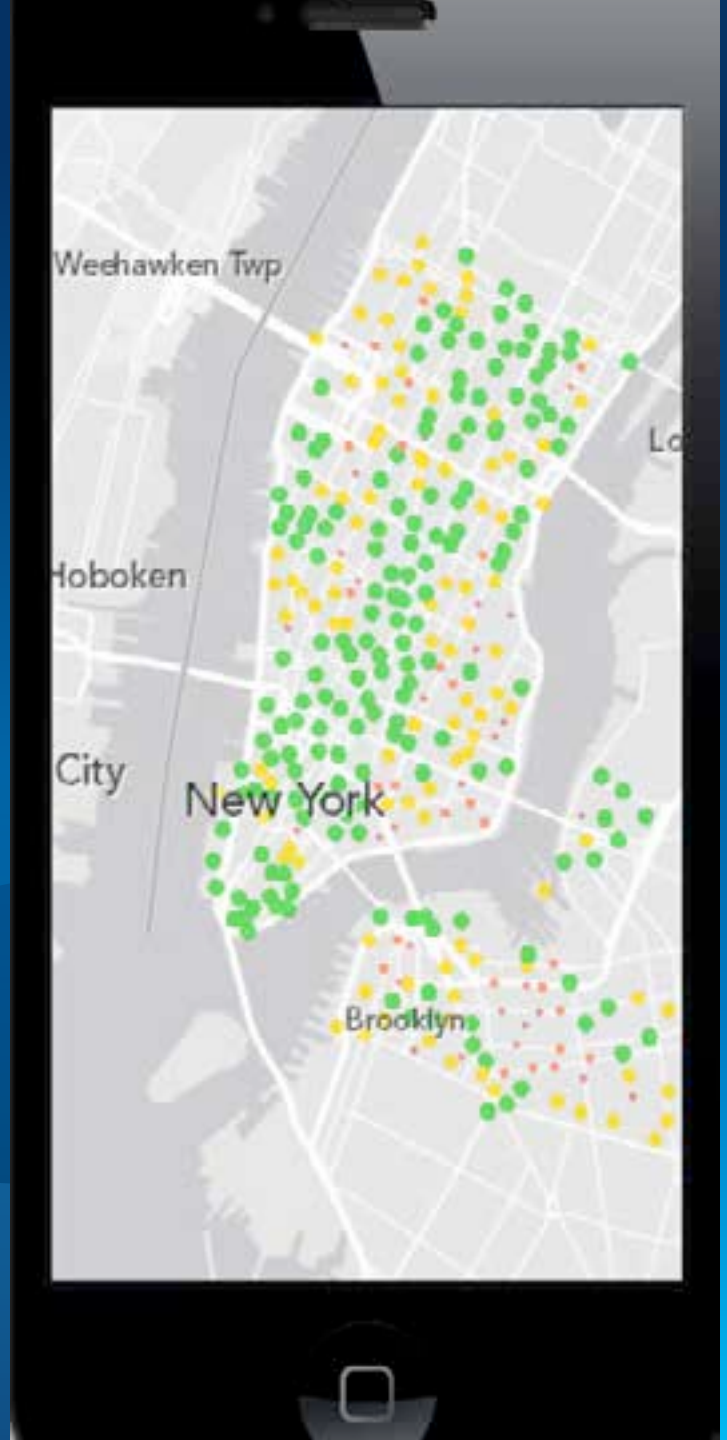
WebMaps

- WebMap
  - Saved Mashup
  - Configured symbols
  - Defined Popups
  - Saved in ArcGIS.com

  - or… saved in your Portal

Demo

Making some maps



Performing Analysis

- Using Tasks
  - Query, Find, Identify Task
    - Search for features In the map

  - Geoprocessing Task
    - Spatial analysis using GP tools and models

  - Locator
    - Geocode and reverse geocode addresses
    - ArcGIS World Geocoder (POI, Global Find, etc.)

Performing Analysis

- Using Tasks
  - Geometry Service
    - Perform geometry operations on the server
  - Routing Task
    - Point-to-point and multipoint driving directions
    - Barriers, Time Windows, Best Sequence
  - Closest Facility Task
    - Find nearest facility
  - Service Area Task
    - Compute drive times and service areas

Performing Analysis

- Native
  - Geometry Engine
    - High-performance engine for performing geometric operations on the device
    - Buffer
    - Union
    - Cut
    - Project
    - Geodesic
    - Spatial relationships
    - etc.

Visualizing Results

- Graphics
  - Geometry
  - Attributes
  - Symbol
- Symbols
  - Picture, Marker, Line, Fill
  - Composite
  - Text

Visualizing Results

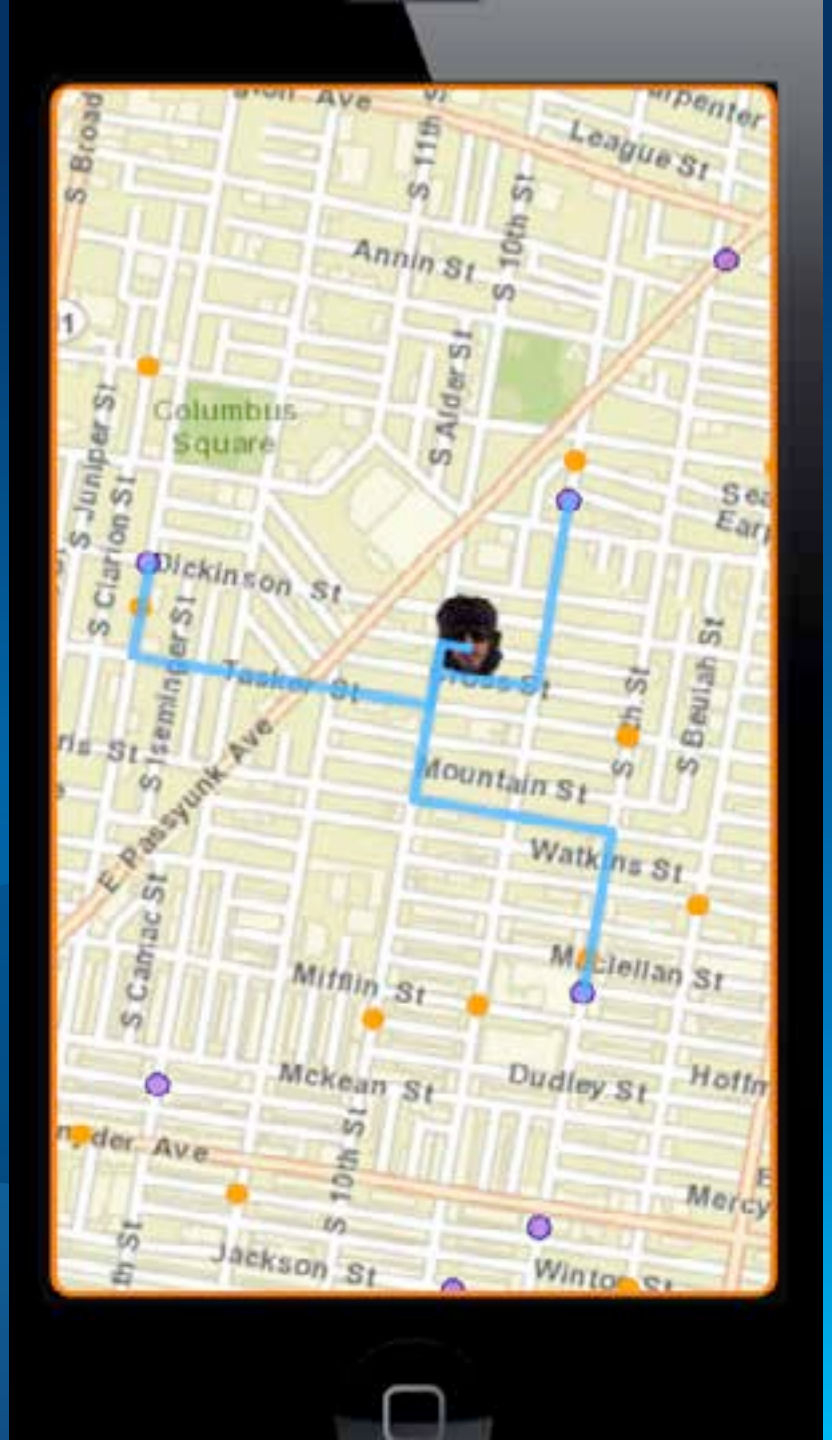
- Contd.
  - Renderers
    - Simple
    - Unique Value
    - Class Breaks
    - Temporal

Task Pattern

1. **Create** & Connect.
2. Set up parameters. **Send**.
3. Get **Results**.

Demo

Graphics and Tasks



Collecting Data

- Using Feature layers & Popups
  - Feature Layers edit data through Feature Services
  - Popups provide UI to
    - Display and edit attributes
    - Manage attachments
    - View charts, media
  - Popups configured through WebMaps
    - Attributes to display & edit
    - User friendly aliases and hints
    - Formatting for numbers, dates

Collecting Data

Using Popups

- **Edit feature**
  - **Attributes**
  - **Geometry**
  - **Attachments**

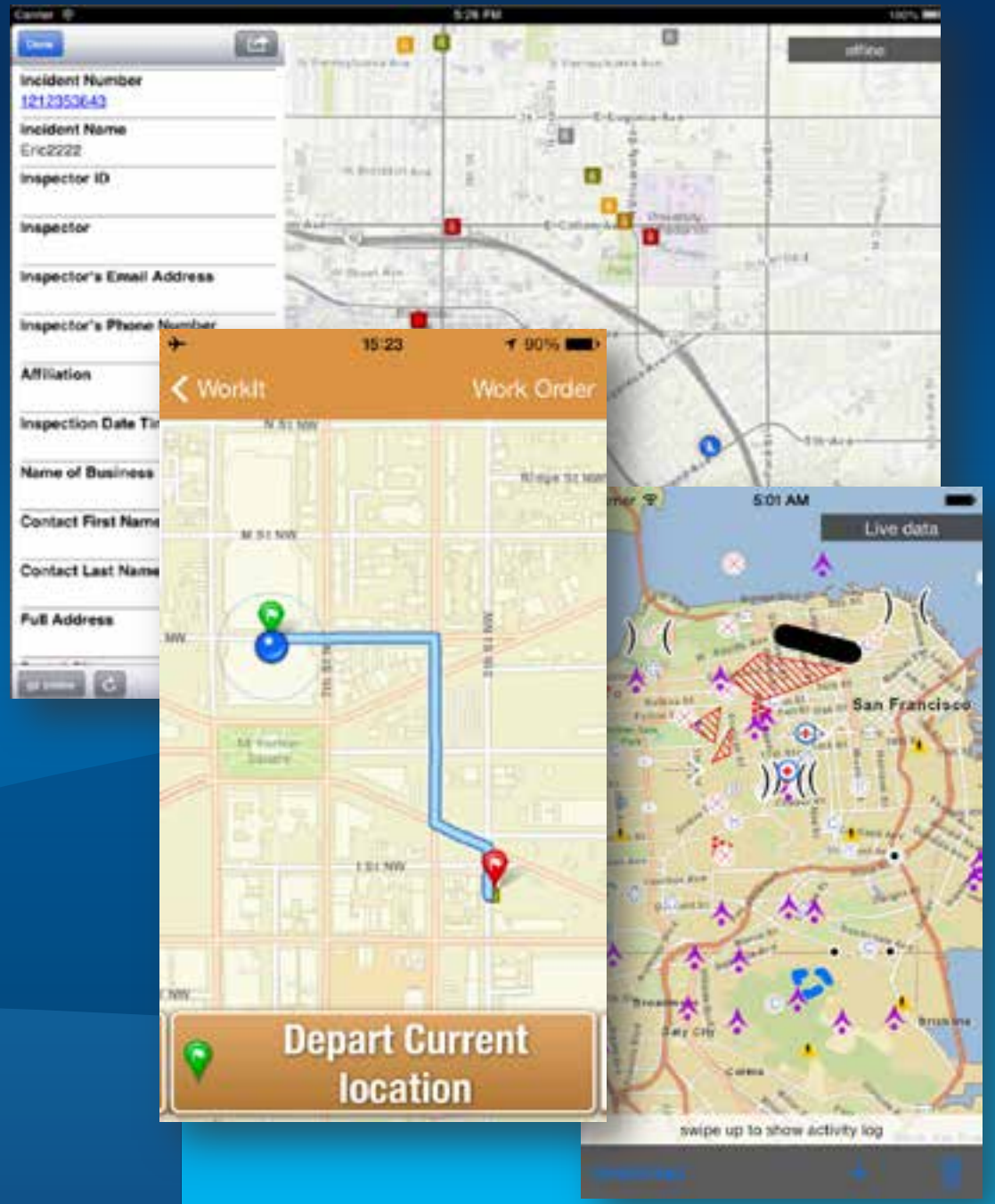
Managing Attachments

Using Popups

- View & Download
- Add
- Delete

Offline maps

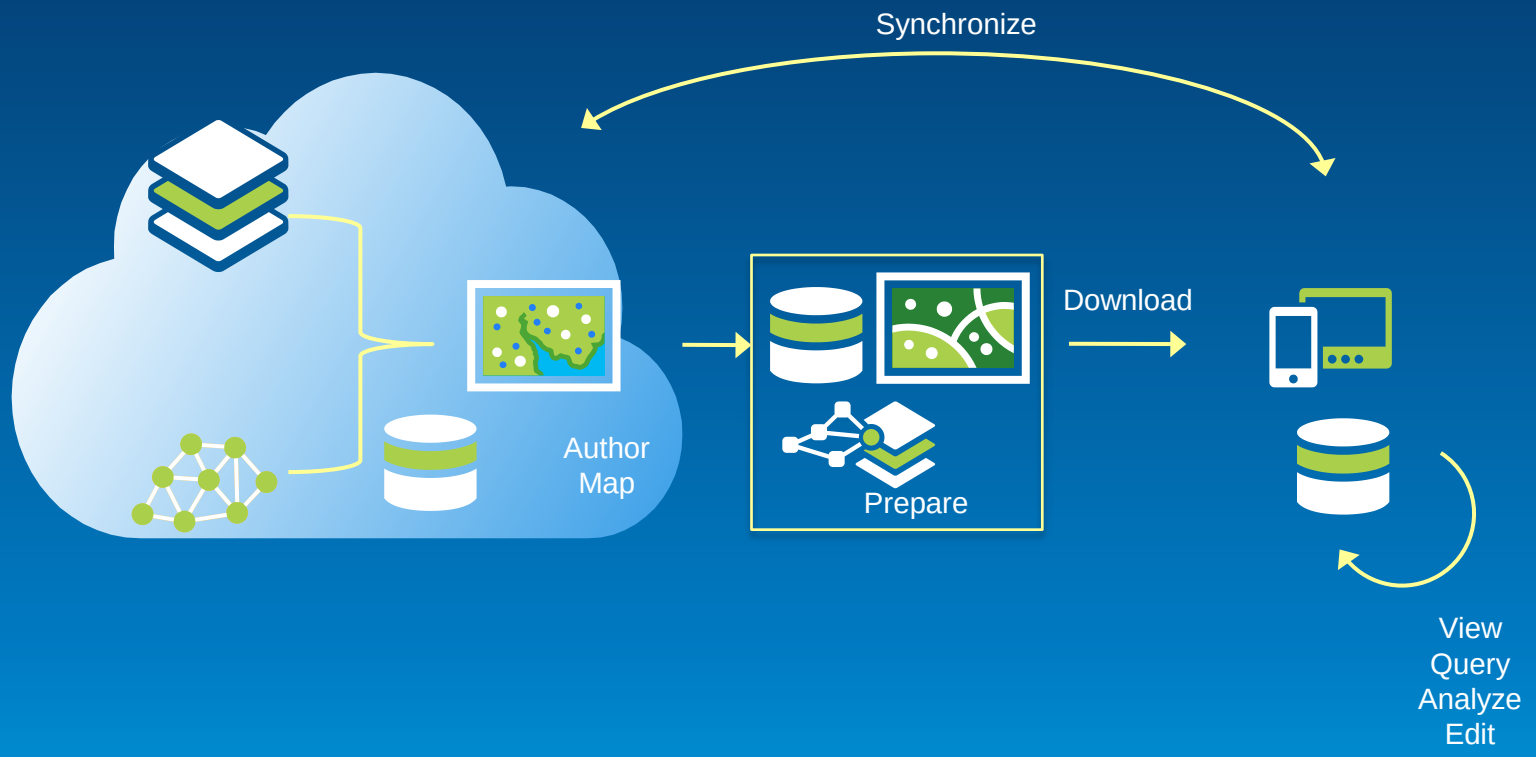
Disconnected Editing and more…



Offline ArcGIS

- Disconnected use of the ArcGIS platform
  - Viewing/interacting with maps
  - Querying data
  - Editing features
    - Synchronization
  - Spatial intelligence
    - Find places and locations
    - Get directions
  - Pre-planned or on demand workflows
  - Occasionally connected scenarios
- All Runtime SDKs

From ArcGIS Online



Workflows

- **Pre-planned**

- **On-demand**

- **Occasionally connected**

Demo

Geodatabase Sync

Demo

Offline routing

4pm, Room 145 AB

Building Offline Apps

What are we working on right now?

- Offline Mapping
- Performance
- Geotriggers
- 3D
- Data Support
  - Kml, shp, raster
- Vector maps

Get more information

developers.arcgis.com

bit.ly/building-ios-apps

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