

March 9th, 2015
Palm Springs, CA

APPSTUDIO FOR ARCGIS WORKSHOP



Ismael
Chivite



Sathya
Prasad



Elvin
Slavik

NEW

Introducing

AppStudio for ArcGIS

Easiest way to create cross-platform native
GIS/Mapping/Location applications

<http://appstudio.arcgis.com>



- A new platform to build focused cross-platform apps for devices and systems
- Targeted for both Developers and Non-Developers alike
- No development skills required to get started
- Choose from a gallery of application templates or build your own
- Configure and add your own assets (Branding)
- Deploy to app stores or in your organization

What is AppStudio for ArcGIS?



AppStudio for ArcGIS

Build one App, deploy across multiple
platforms and form factors



- ArcGIS Runtime API
- Leverages Portal, Server and Online
- Developer Productivity Tools
- Quick start templates
- Player to test and deploy
- Cloud Make
- Common set of UI/Widgets
- Ease of Web and Power of Native Platform

AppStudio for ArcGIS

Value for Developers
Value for Organizations
Value for Partners



App Templates



App Player



App Make



App Upload



App Framework



AppStudio for ArcGIS

Includes Developer Productivity Tools

Deploying Apps

- What are the options?
- Which way do I go?



Run in Player

- Development & Test
- Enterprise



Make Binaries

- Enterprise
- App Stores

What is QML?

A JavaScript-based, declarative language for designing user interface-centric applications.

HTML

CSS

JavaScript

Frameworks & Libraries, ArcGIS
JavaScript API
(Angular, jQuery)

Web Browsers

QML

JavaScript

Quick Framework
AppFramework
ArcGIS Runtime



C++ Compilers

XAML

C#

.NET Framework
ArcGIS .NET
Runtime API

Visual Studio
C# Compiler

Write Apps using

- QML
 - Styles, UI, Controls
 - ...
- Assets
 - Files, Images, Data
 - ...
- JavaScript
 - Business logic
 - Events, I/O ...



AppStudio for ArcGIS

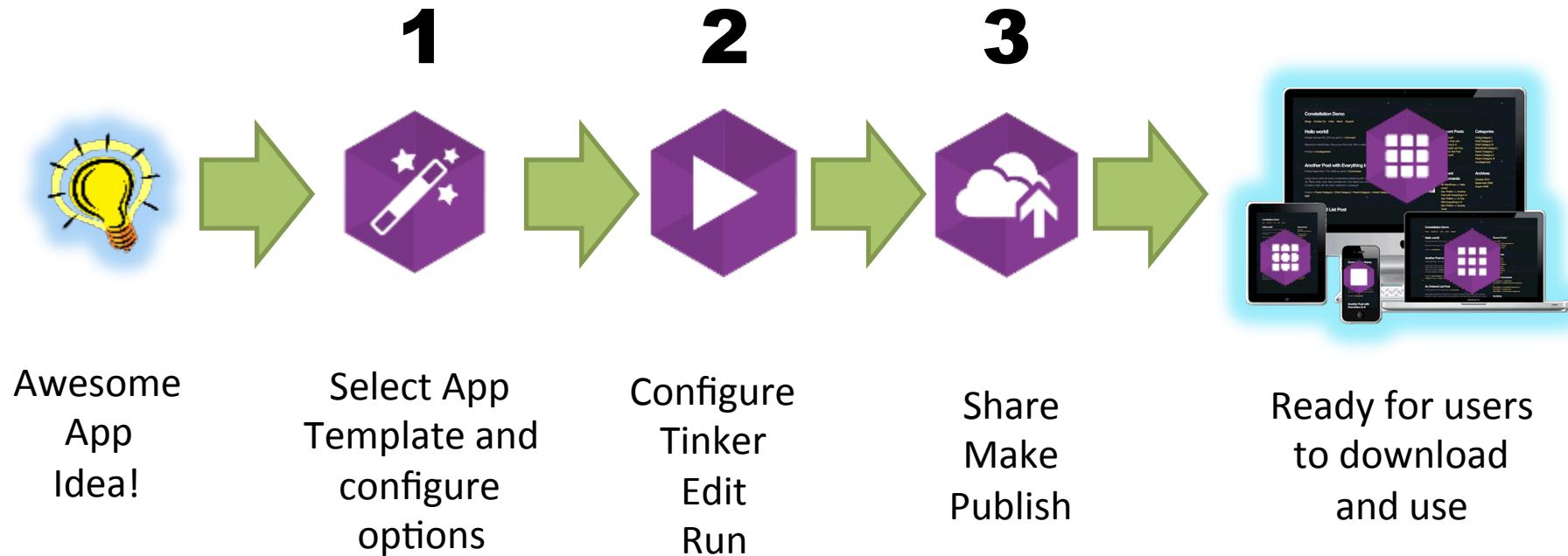
Bundled with Qt Creator

Qt Creator

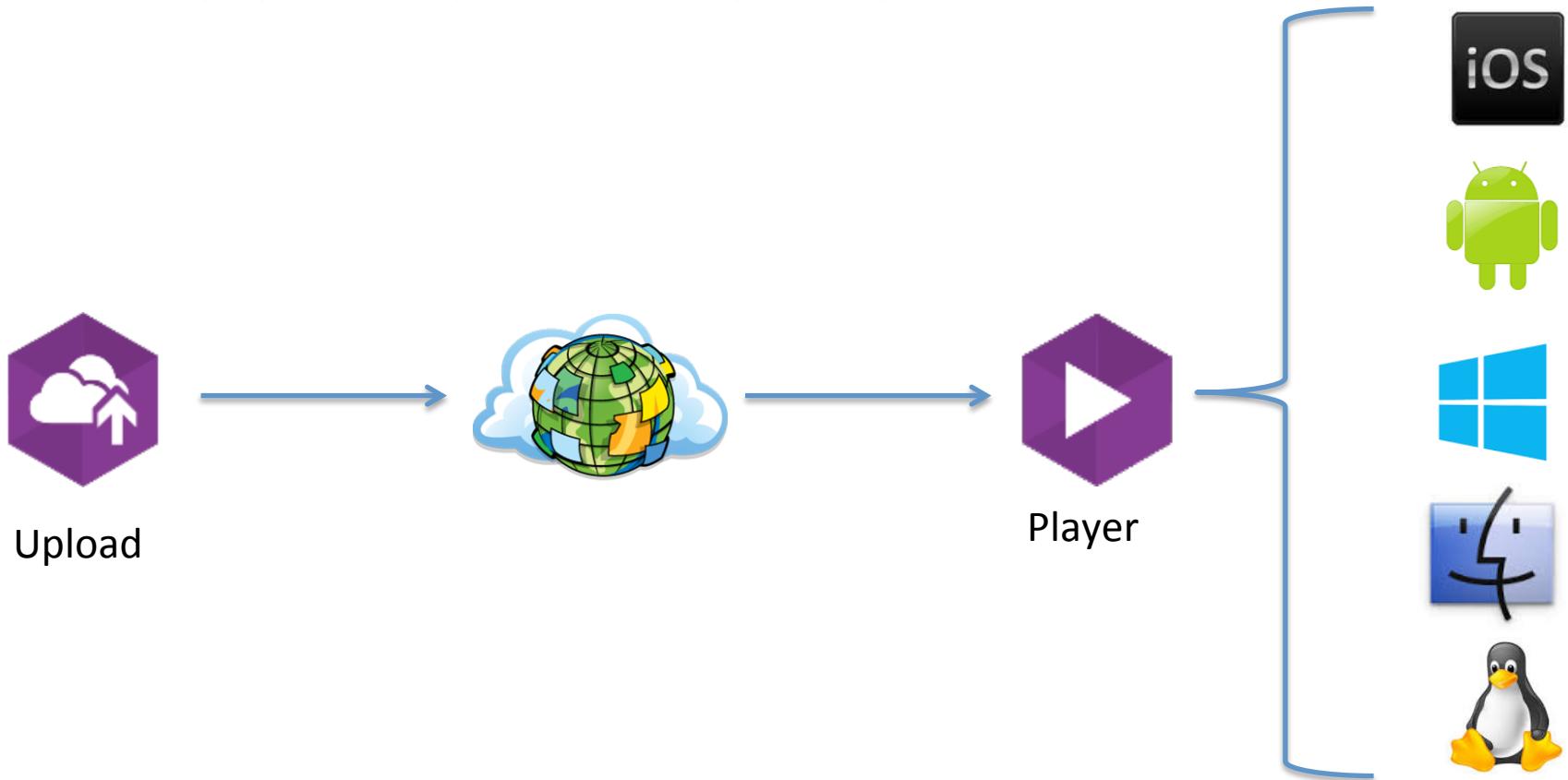


- Launch from AppStudio
- Edit configuration files
- Edit QML and JavaScript code
- Context sensitive help
- Run app and other AppStudio tools

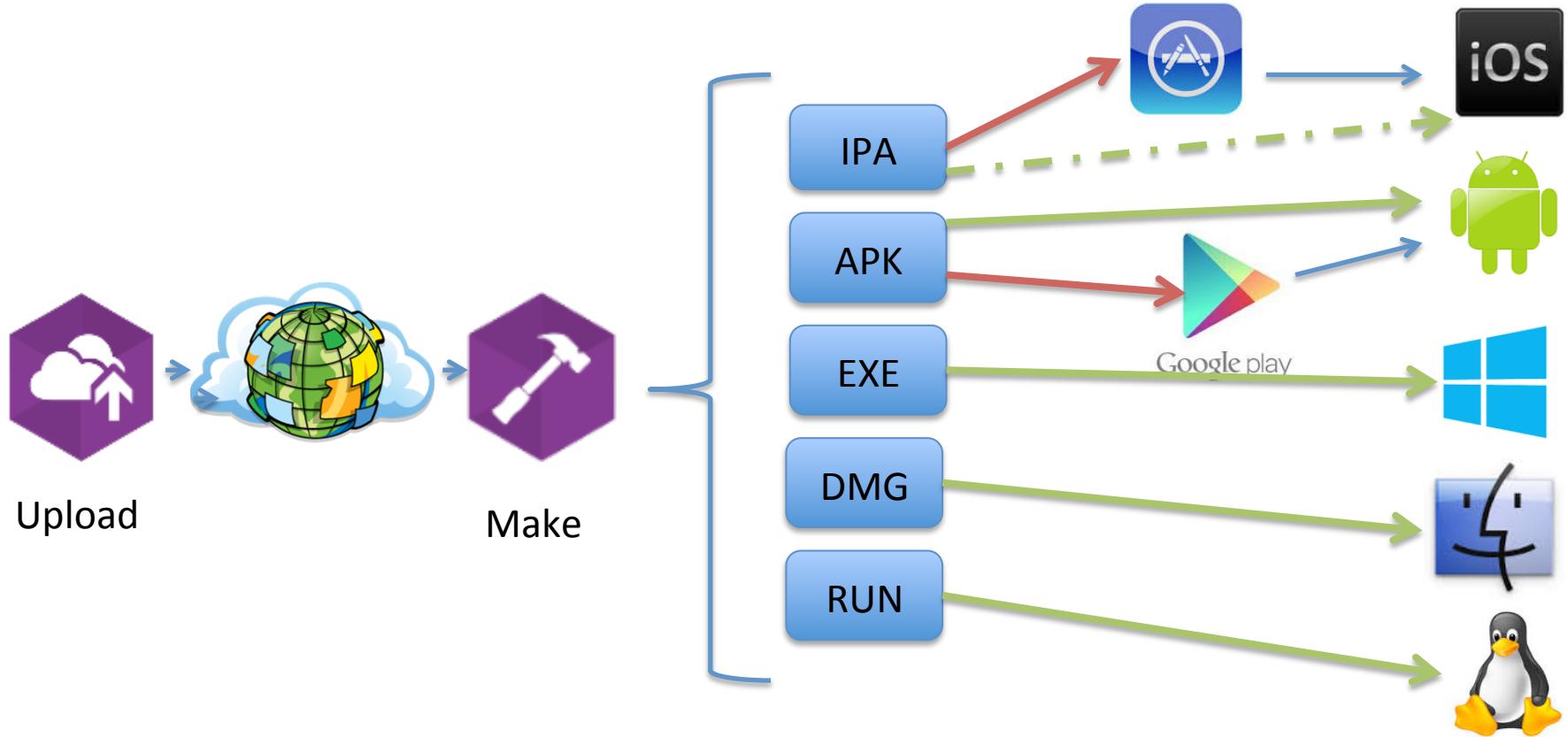
App Development Cycle



AppPlayer Deployment Model



Native Deployment Model



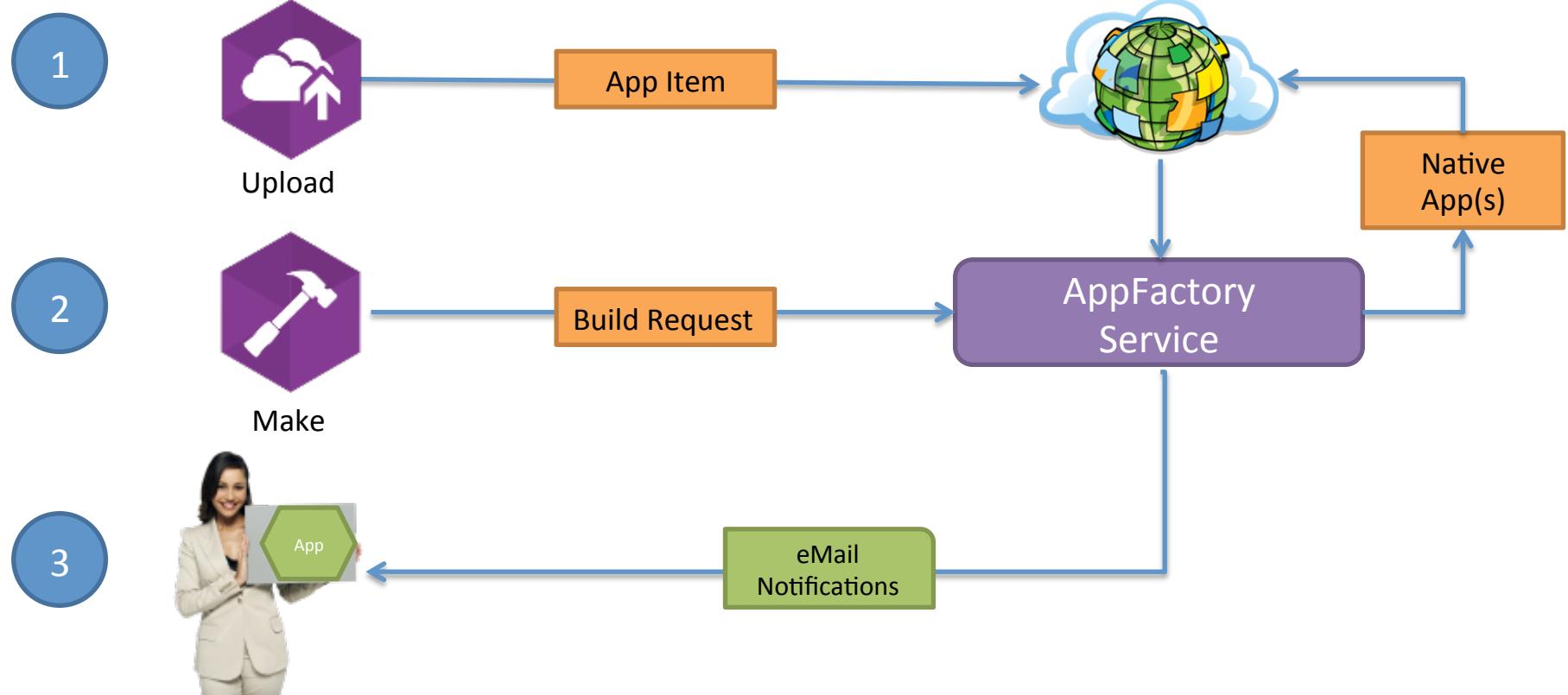
Local Make

Build the native apps on your own development systems

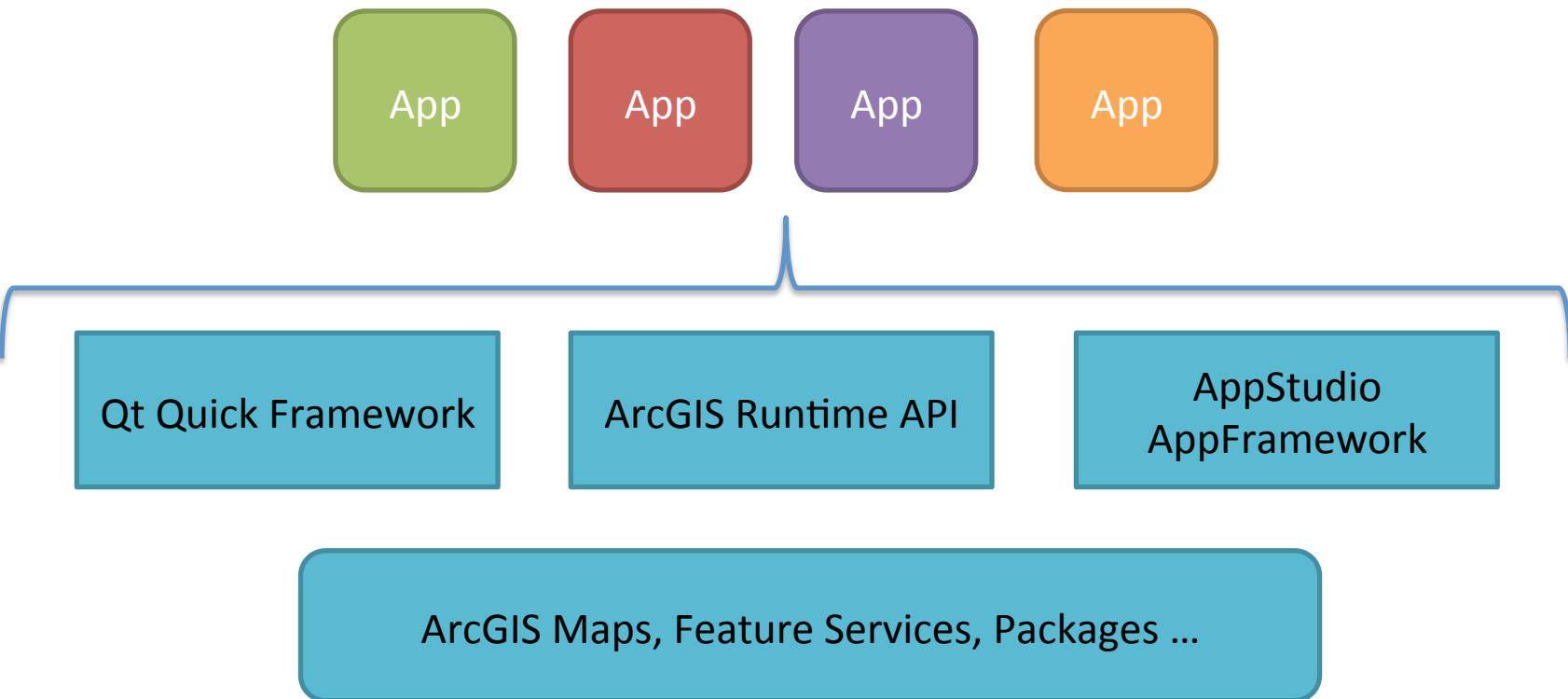
| Target Platform | Windows | MacOS | Linux |
|-----------------|---------|-------|-------|
| Android | Yes | Yes | Yes |
| iOS | No | Yes | No |
| Linux | No | No | Yes |
| MacOS | No | Yes | No |
| Windows | Yes | No | No |
| Windows Phone | Yes | No | No |

- AppStudio
- C++ Tools
- Platform Tools

How Cloud Make Works



The Stack



QML APIs

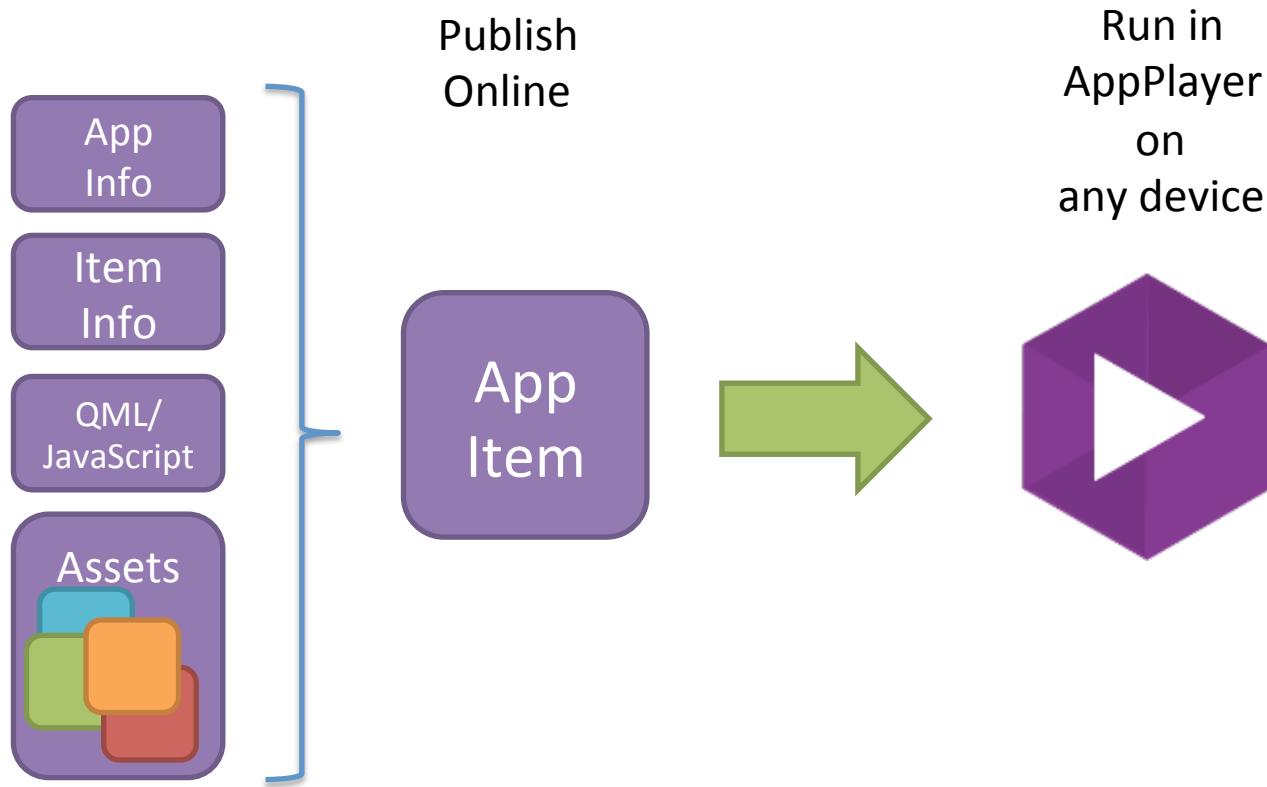
Qt Quick
Framework

ArcGIS
Runtime API

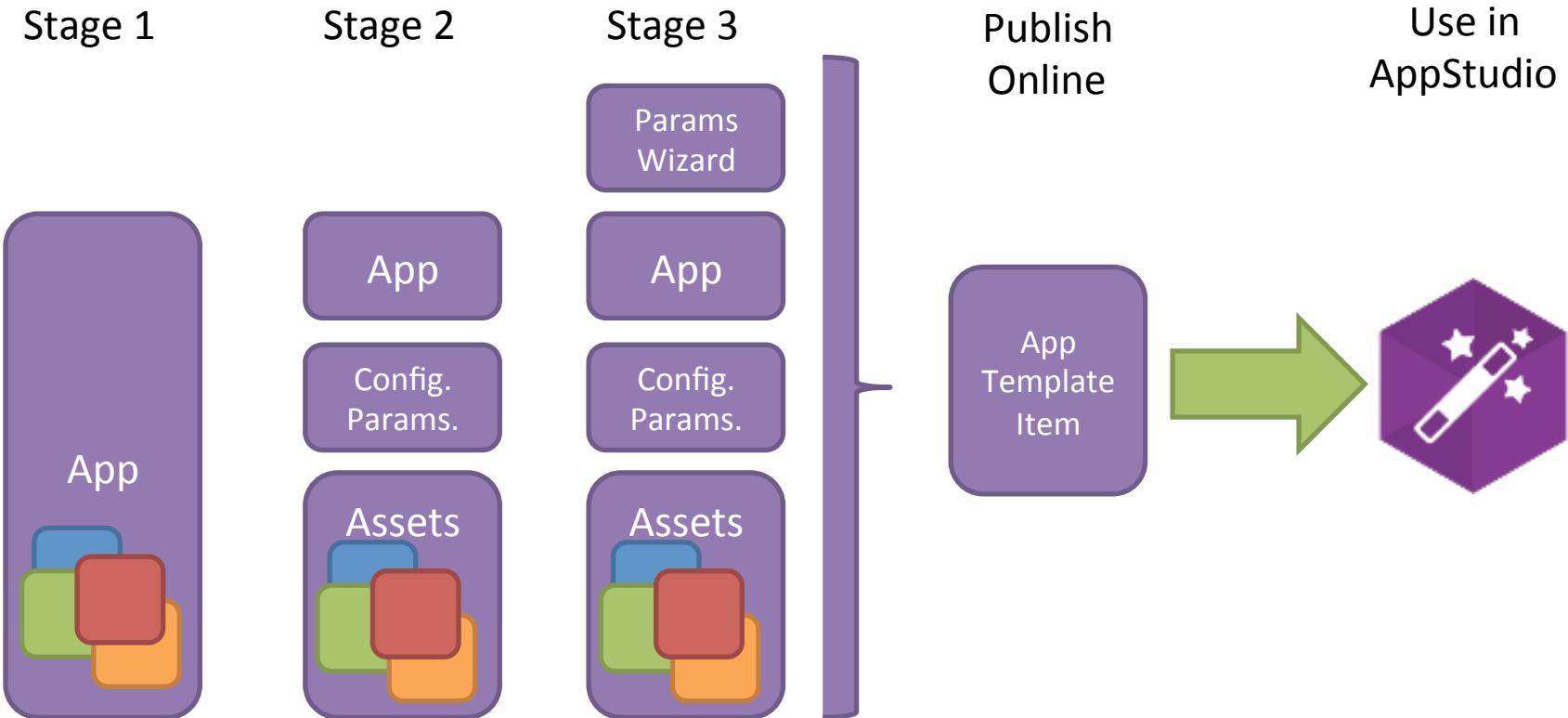
AppStudio
AppFramework

- Core QML Components
- UI Controls
- Positioning
- Sensors
- Map Control
- Layers
- Geometry
- Portal
- Geocoding
- Network Analysis
- Geodatabase
- Symbology
- App Infrastructure
- File System Components
- Network Components
- UI Widgets
- Additional Plugins

What is an App Item?



What is an App Template?



Extensibility

QML

- Reusable QML Components
- Shared QML Modules
- JavaScript Libraries

C++

- Integrated C++ Code
- C++ Based QML Modules
- 3rd Party Libraries
- Qt Core Plugins, including –
 - Positioning
 - Sensors

Property Binding

- Simplifies your code
- Use AppFramework's **PropertyMap** component for dynamic property binding

Network APIs

Traditional JavaScript

- XMLHttpRequest
 - A familiar pattern for web developers

AppFramework

- NetworkRequest
 - Signals
 - Property binding
 - Download to a local file
 - Upload from local files
- Proxy settings for debugging

Plugins

- **Tracking App Usage**
 - Google Analytics Plugin

How do I debug my app?

- **console.log() is your friend**
- **Configure proxy to enable network monitoring**
- **adb logcat for Android devices**
-

Designing for different display sizes and formats

- Dynamic vs absolute position layouts
- Relative views
- Anchoring
- Detecting OS (generally to be avoided)
- Asynchronous Loading (Loader)

Getting more info

- <http://appstudio.arcgis.com>
- <http://doc.arcgis.com/en/appstudio/>
- <https://developers.arcgis.com/qt/qml/api-reference/>
- <http://qmlbook.org>