



Esri International Developer Summit  
Palm Springs, CA

# Getting Started with the ArcGIS Runtime SDKs

Dave, Will, Euan







# Agenda

- **Why native app development?**
- **What can you do with the runtime SDKs**
- **Latest release**
- **Future**

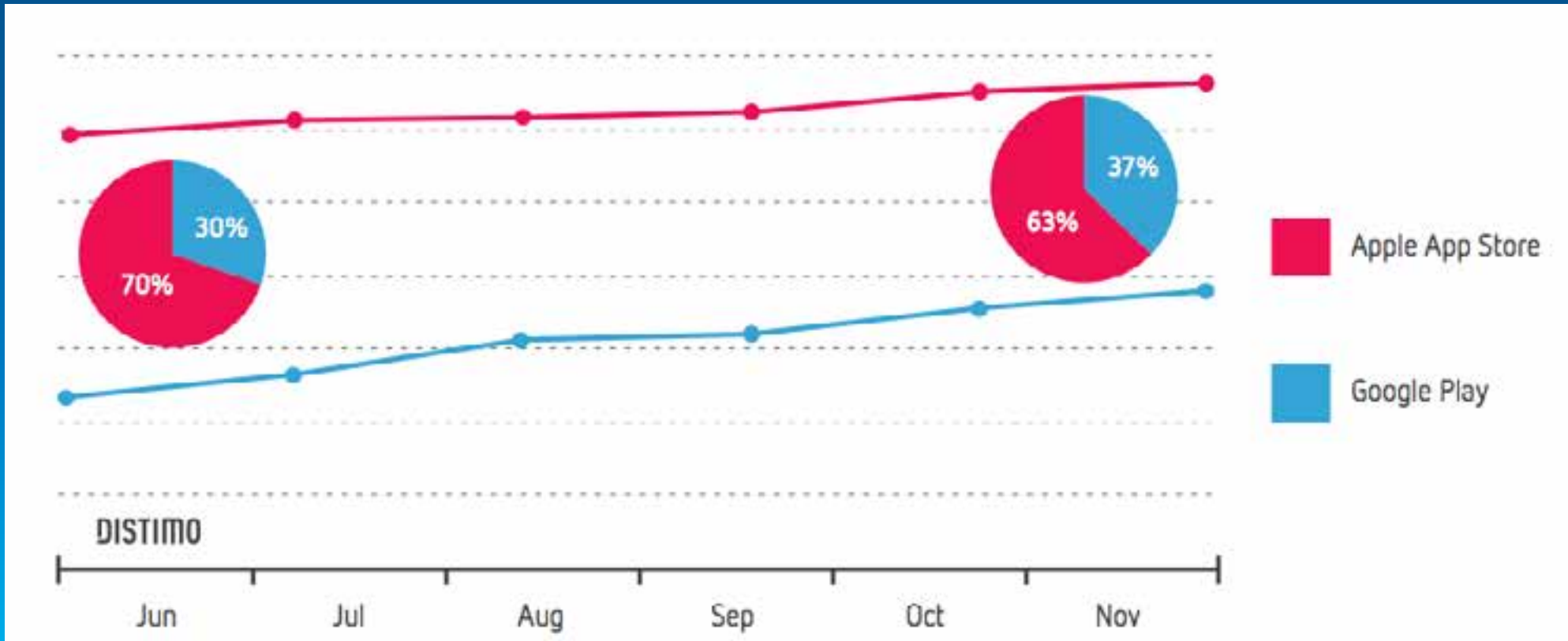
M

ATM

ME

# Native Apps Are Everywhere

- Apple's App Store has over 1 million
  - More than 250,000 Publishers

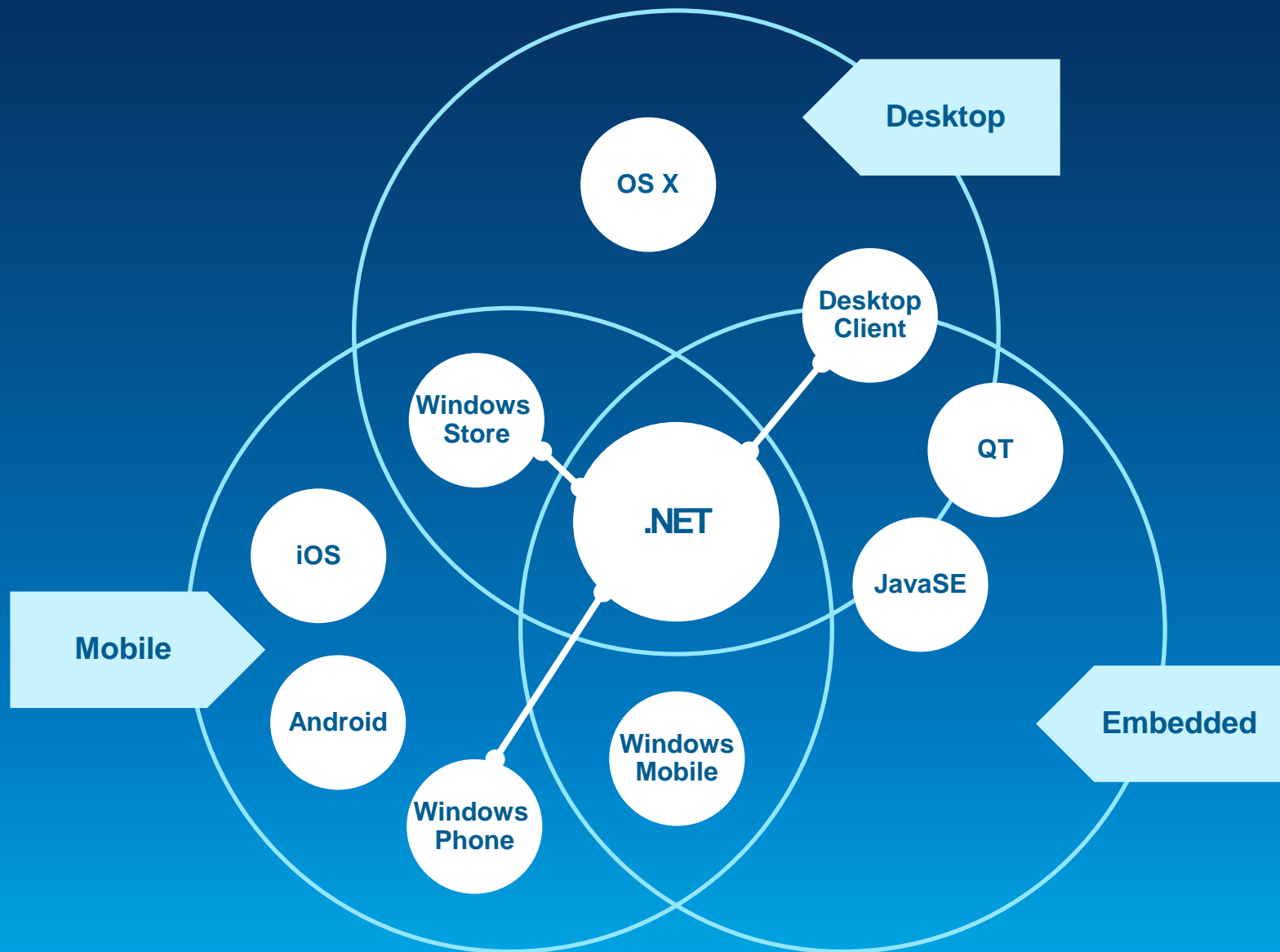


**This year was the year we all went mobile. And we're not just talking smartphones and tablets.**

We're talking mobile workforces ... in and out of the office and using their devices for work and play.

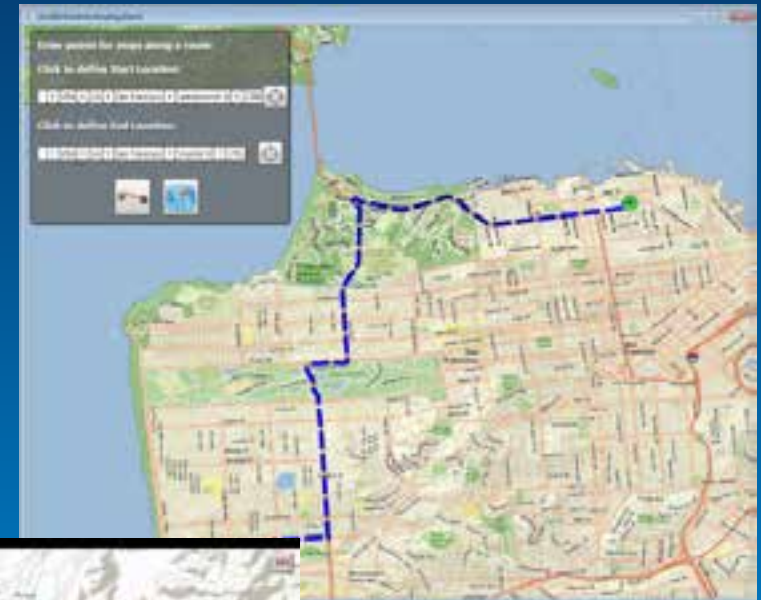
Matthew Wall BBC Business Reporter

# Runtime platforms



# Runtime SDKs

- Native APIs for building focused applications
- Embed ArcGIS into existing applications
- Common conceptual framework across platforms
- **Powered by a Runtime**

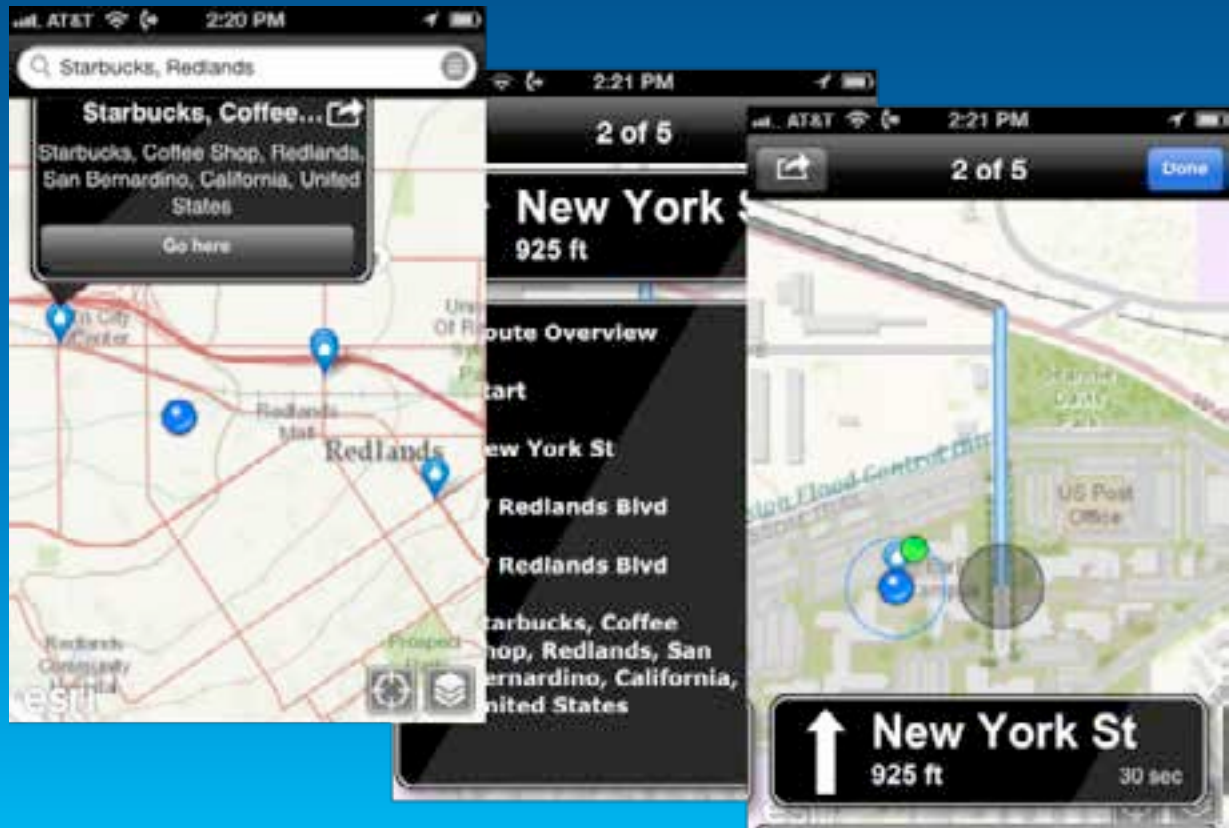




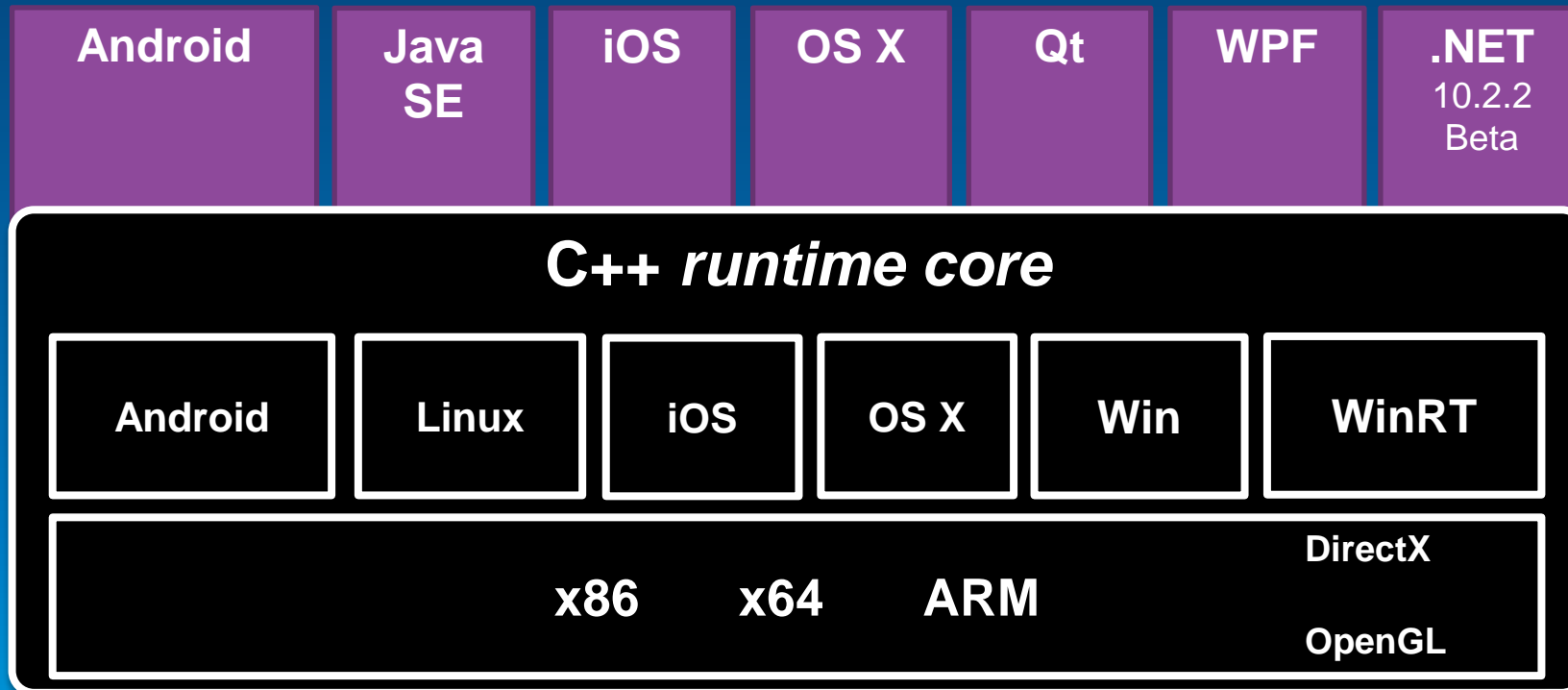
# The ArcGIS Runtime

Supports Native Application Development

- Runtime Core
  - C++
  - Small
  - High performance
  - Exploits the Platform
- Client APIs Expose Functionality to Developers
  - DotNet
  - Java
  - Objective C
- Common Conceptual Model



# Runtime Architecture



SDK

# ArcGIS Runtime SDKs

ArcGIS  
Runtime  
SDKs

Guide

API Ref

Samples

Community

ArcGIS  
Runtime  
APIs

Android

Java  
SE

iOS

OS X

Qt

WPF

.NET  
10.2.1  
Beta

**C++ runtime core**

Android

Linux

iOS

OS X

Win

WinRT

x86

x64

ARM

DirectX

OpenGL



# What can you do with the Runtime SDKs?

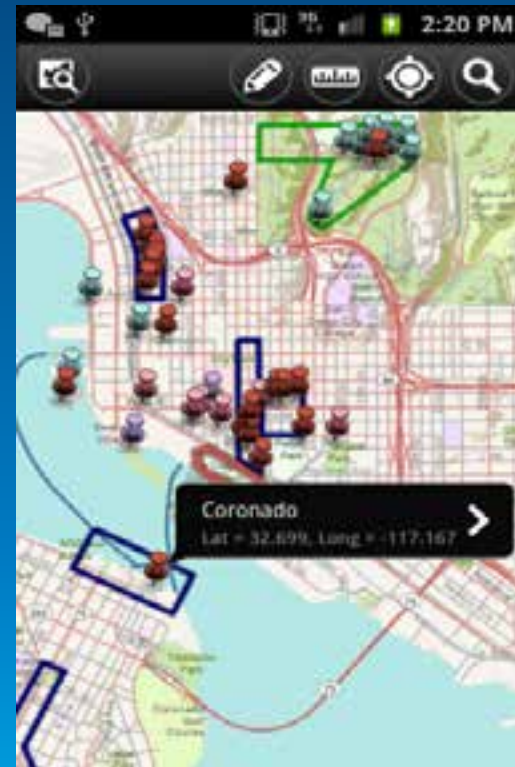
## Maps and layers

### Map Layers

- Tiled
  - ArcGIS Server, Bing, OSM
- Dynamic
  - ArcGIS Server, ArcGIS ImageServer, WMS
- Graphics Layer
- Feature Layer
  - ArcGIS Server

### Web maps

- Featuresets
  - KML, CSV, Shapefile
- Pop-ups



# What can you do with the Runtime SDKs?

## Graphics

### Graphics

- Arbitrary objects added to a Graphics Layer
  - Point, Lines, Polygon, Text
  - Geometry + Symbol + Attributes
- Commonly used
  - Sketching
  - Callouts
  - Attributes
  - Developer defined Popups

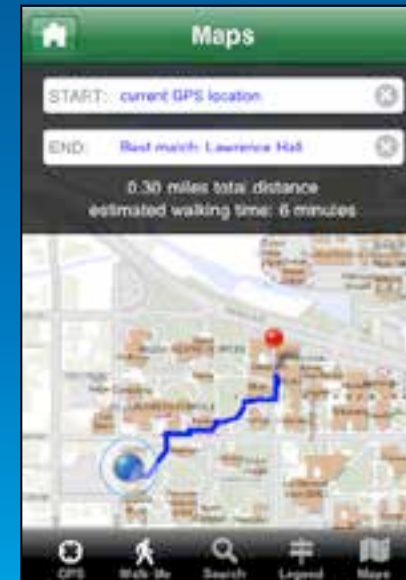


# What can you do with the Runtime SDKs?

## Analysis

### Analysis

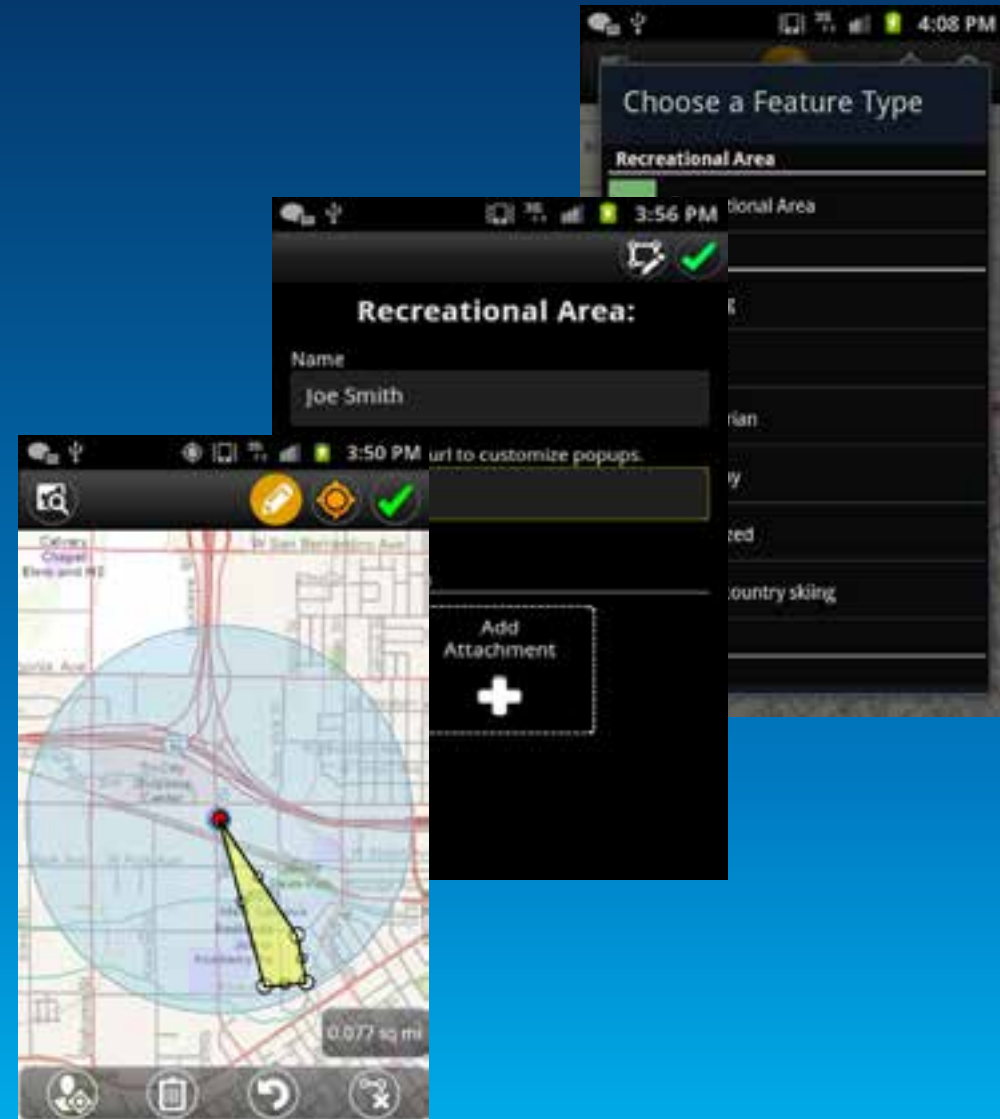
- Query, Identify, Find GIS features
- Locate/Geocode addresses
  - Reverse geocode
- Geometry Engine
  - Native, high-performance engine
  - geometric operations on the device
    - Cut, Union, Buffer, etc.
- Geoprocessing Tasks
- Routing



# What can you do with the Runtime SDKs?

## Data Collection

- Against a Feature Service
- Connected Editing
- Attachments
- Add, delete, modify, cancel





# What can you do with the Runtime SDKs?

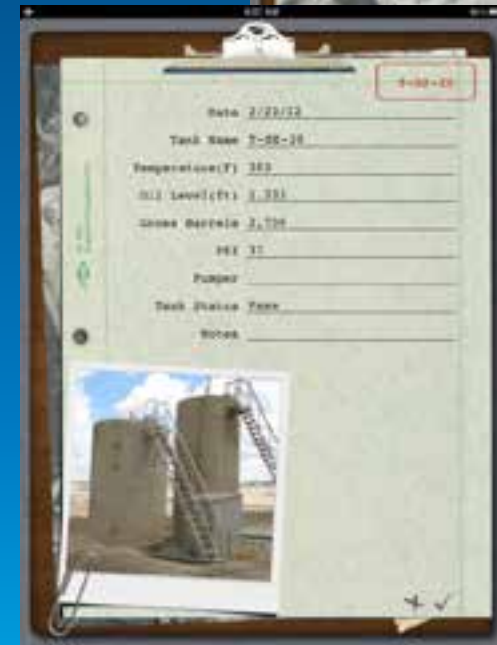
Offline use...

## All SDKs

- Offline basemaps
  - Tile Package (.tpk)
- Offline operational layers
  - Editing and sync
  - Related tables, attachments
- Offline tasks
  - Routing, Geocoding

## WPF, Java, Qt

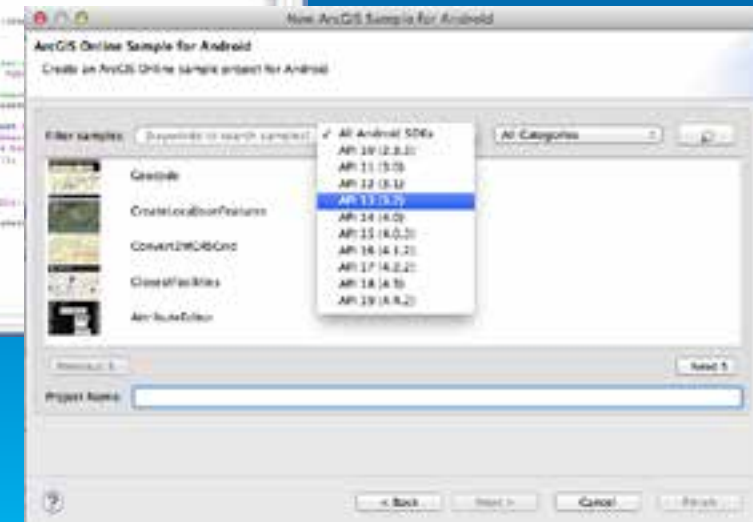
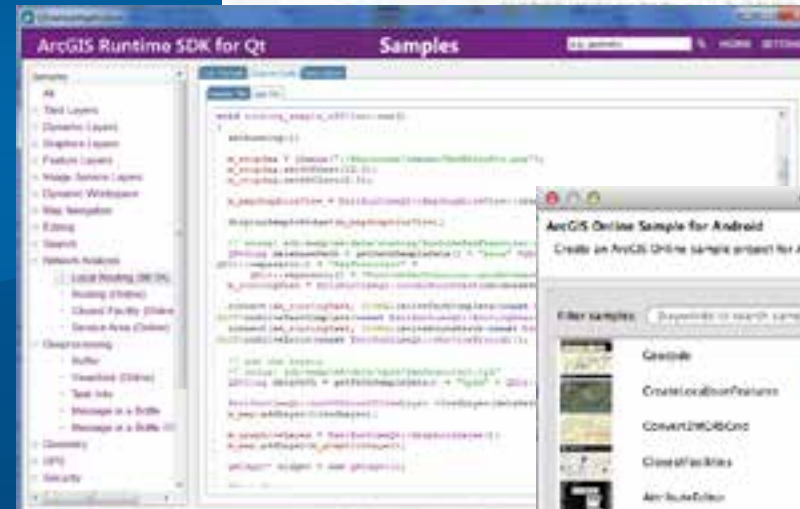
- Map packages – open with local server
- GP packages



Demo

# Developer Resources

Will Crick



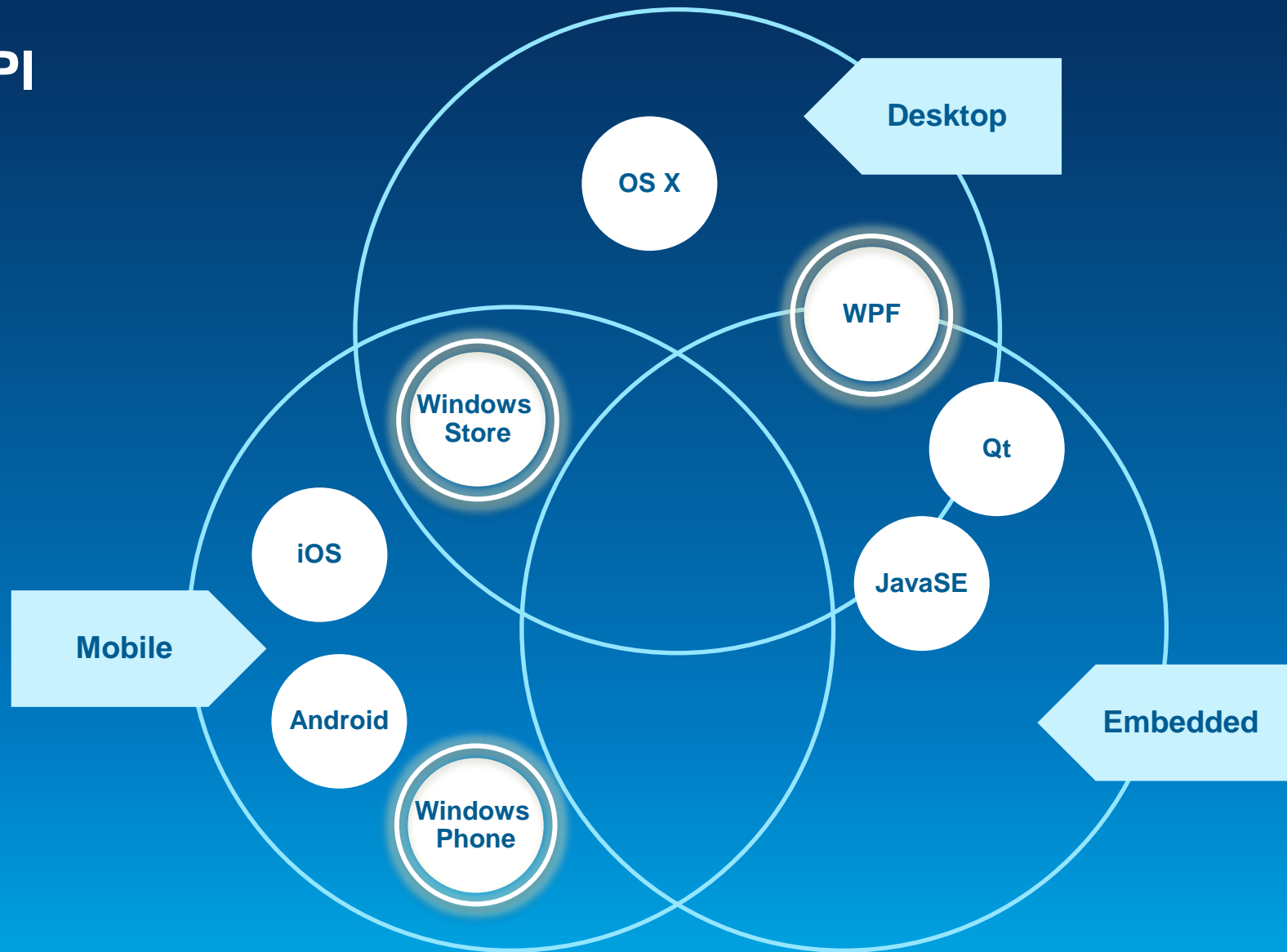
# 10.2.2 Release

# ArcGIS Runtime 10.2.2 Release Themes

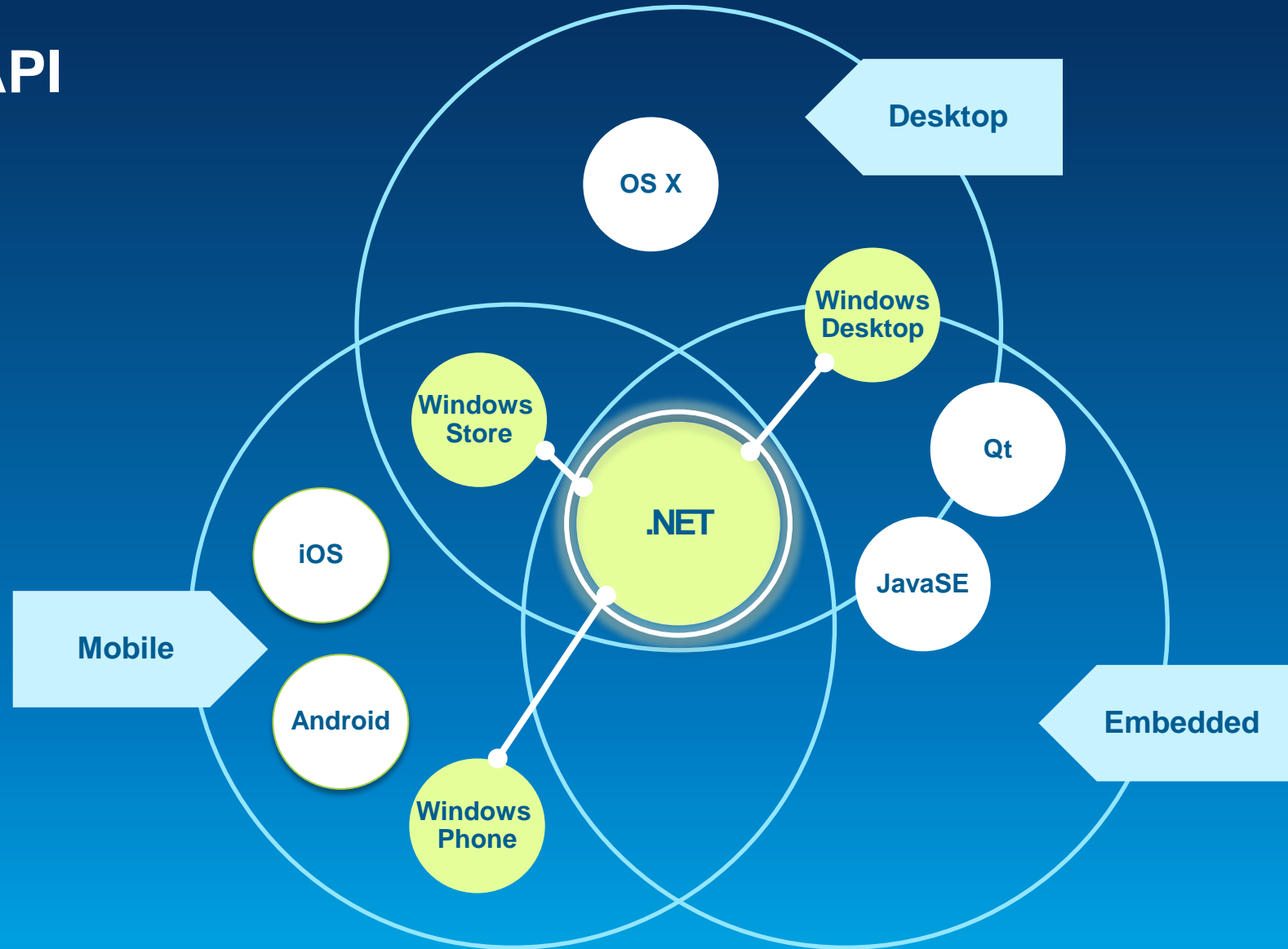
- **Offline map use**
  - Production ready
  - Powerful API
- **Productivity**
  - Easy access to SDKs
  - Quicker to market – same licensing across all SDKs
  - Improved developer doc
- **Quality**
  - Performance, stability,
- **New SDKs**
  - .NET (Beta)



# Runtime API platforms



# Runtime API platforms



# Beyond March

Direct Data Access

Vector Mapping

3D

Offline Analysis

Modular Deployments

## ArcGIS Runtime SDK sessions Monday

Session Name	Time	Location
Getting Started with ArcGIS Runtime SDK for Java SE	11:00am – 12:00pm	Smoketree F
Getting Started with ArcGIS Runtime SDK for iOS and OS X	11:00am – 12:00pm	Smoketree A-E
Getting Started with ArcGIS Runtime SDK for Android	1:00pm – 2:00pm	Mesquite GH
Getting Started with ArcGIS Runtime SDK for the Microsoft .NET Framework	3:30pm – 4:30pm	Pasadena/Ventura/Sierra



## ArcGIS Runtime SDK sessions Tuesday

Session Name	Time	Location
Deploying Android Apps	1:00pm – 1:30pm	Demo Theater 1 – Oasis 1
Deploying iOS Apps	1:30pm – 2:00pm	Demo Theater 1 – Oasis 1
Deploying Windows Store Application	2:30pm – 3:30pm	Demo Theater 1 – Oasis 1

## ArcGIS Runtime SDK sessions Wednesday – Part 1

Session Name	Time	Location
Building WPF Apps with the New .NET ArcGIS Runtime SDK	10:30am – 11:30am	Pasadena/Ventura/Sierra
Building iOS Apps with ArcGIS Runtime SDK	10:30am – 11:30am 1:00pm – 2:00pm	Smoketree A – E Mesquite G-H
Building Mac Apps with ArcGIS Runtime SDK	1:00pm – 2:00pm	Mojave Learning Center
Building Windows Store and Windows Phone Apps with ArcGIS Runtime SDK	1:00pm – 2:00pm	Primrose C/D
Getting Started with ArcGIS Runtime SDK for Qt	1:00pm – 2:00pm	Smoketree F

## ArcGIS Runtime SDK sessions Wednesday – Part 2

Session Name	Time	Location
Building Android Apps with ArcGIS Runtime SDK	2:30pm – 3:30pm	Smoketree A – E
Building Qt Apps with ArcGIS Runtime SDK	2:30pm – 3:30pm	Smoketree F
Building WPF Apps with Runtime SDK	2:30pm – 3:30pm	Demo Theater 2 – Oasis 1
Building Java Apps with ArcGIS Runtime SDK	4:00pm – 5:00pm	Smoketree F

## ArcGIS Runtime SDK sessions Wednesday – Part 3

Session Name	Time	Location
Building Offline Apps with ArcGIS Runtime SDK – Part 1	4:00pm – 5:00pm	Primrose B
Building Offline Apps with ArcGIS Runtime SDK – Part 2	5:30pm – 6:30pm	Primrose B

## ArcGIS Runtime SDK sessions Thursday –

Session Name	Time	Location
The Road Ahead: ArcGIS Runtime SDKs	8:30am – 9:30am	Primrose A
Everything (or Anything) You Wanted to Know about the ArcGIS Runtime SDKs	10:00am – 11:00am	Primrose A

**Questions?**





Understanding our world.