

Bring DevOps to your Apps with VS App Center

Mark Allibone
@mallibone

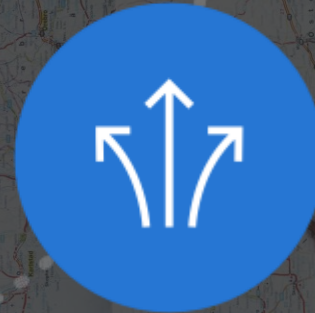




Build



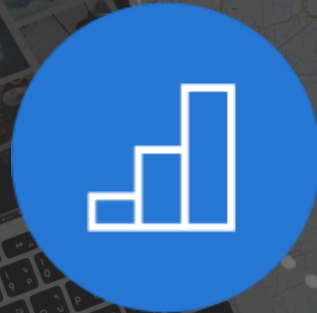
Test



Distribute



Crashes



Analytics



Engagement

A nighttime photograph of a dense urban skyline, likely Shanghai. The image is dominated by several tall skyscrapers. On the left, the Shanghai Tower is illuminated with a bright blue light. Next to it is the Jin Mao Tower, which has a distinctive tiered design and is lit with warm yellow and orange lights. To the right, the Oriental Pearl Tower is visible, also illuminated with warm lights. The sky is dark, and the city lights create a vibrant, glowing effect. The text "Contoso Corp." is overlaid in white on the left side of the image.

Contoso Corp.

Kontösli GmbH





OBJ-C



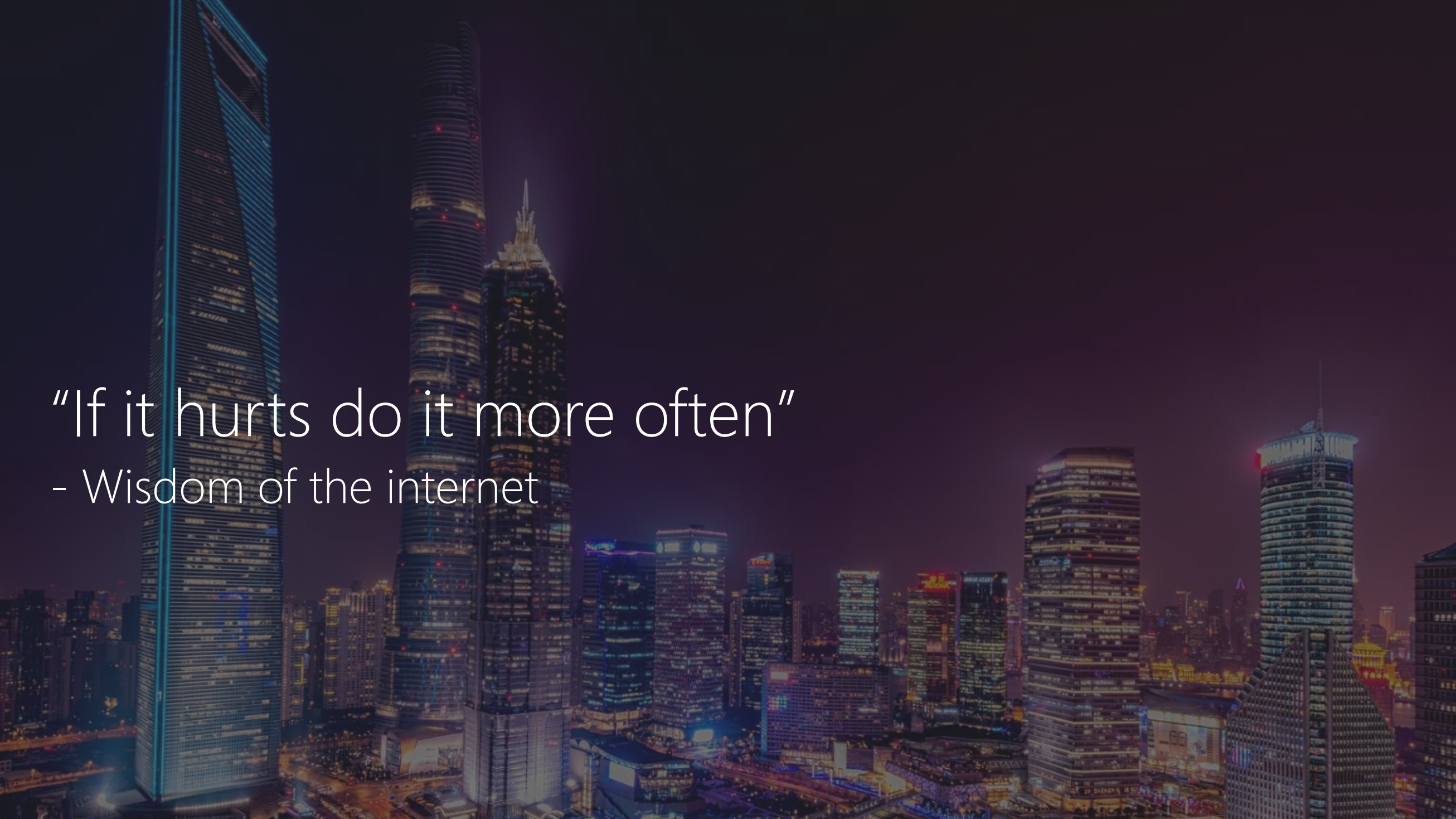










A nighttime photograph of a dense urban skyline, likely Shanghai. The image is dominated by several tall skyscrapers. On the left, the Shanghai Tower is brightly lit with blue and white lights. Next to it is the Jin Mao Tower, which has a distinctive tiered design and is lit with blue and white lights. To the right of the Jin Mao Tower is the Oriental Pearl Tower, which has a distinctive spire and is lit with blue and white lights. The background is filled with other skyscrapers, some of which are lit with yellow and white lights. The sky is dark, and the overall atmosphere is one of a vibrant, modern city at night.

“If it hurts do it more often”
- Wisdom of the internet

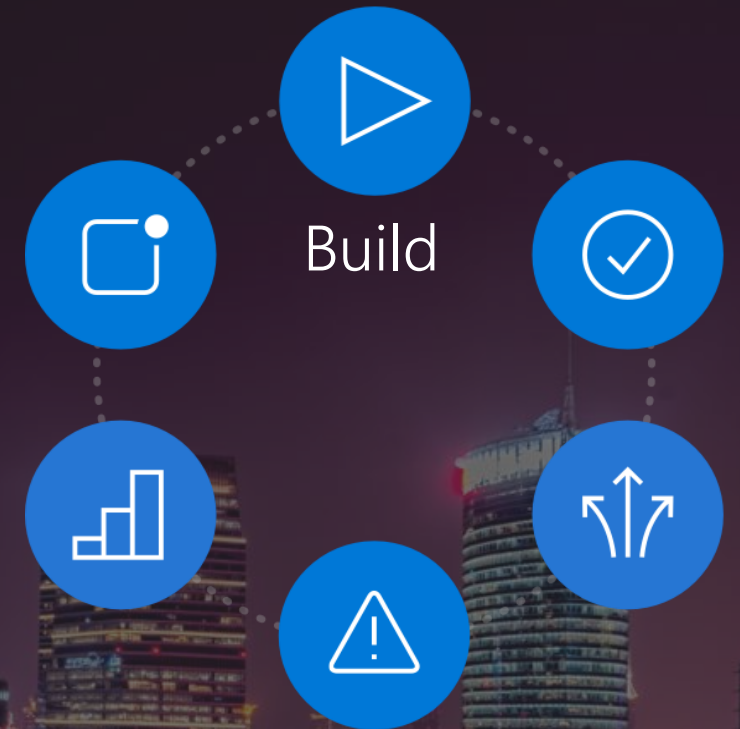
REPEAT OFTEN?



I'M OUT...

imgflip.com

Automate your Release Pipeline



A nighttime photograph of a dense urban skyline, likely Shanghai, featuring several prominent skyscrapers with glowing windows and architectural lighting. The image serves as a background for the text.

Automating your Release Pipeline with Visual Studio App Center

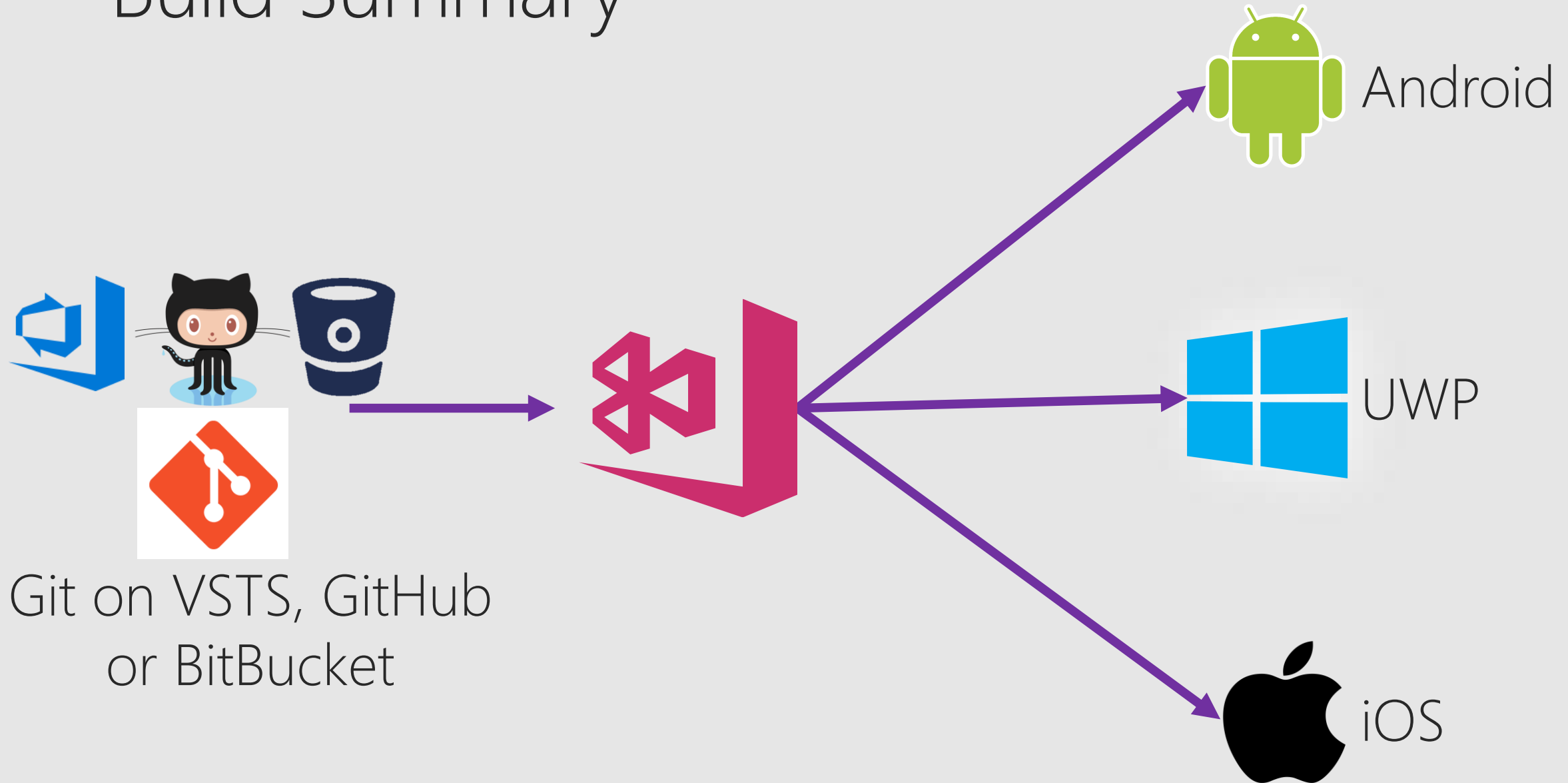
Build



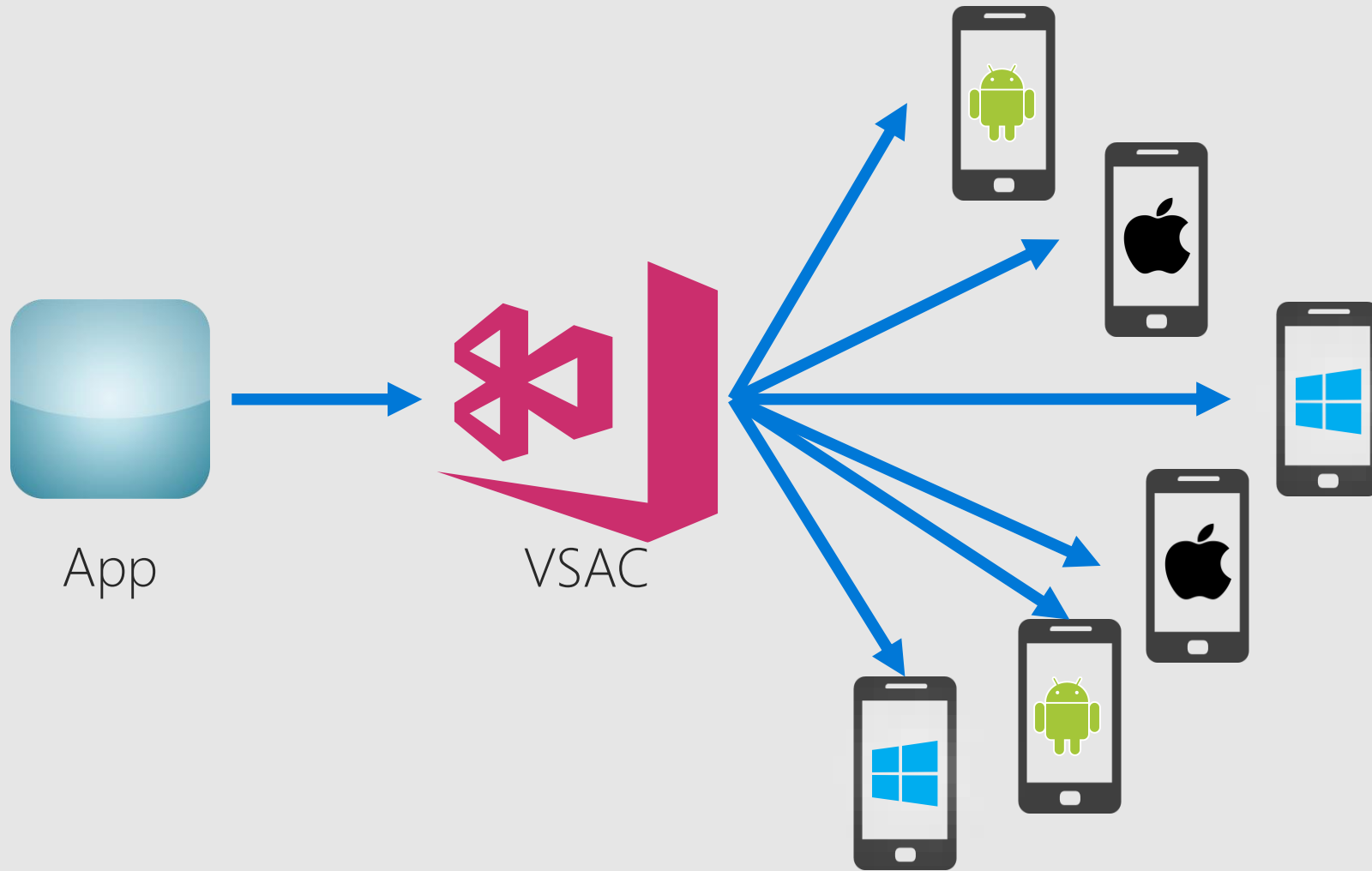
That was easy



Build Summary



App Distribution





"We are already using VSTS as build server"



NoteTaker



Dashboards

Code

Work

Build and Release

Test

Wiki



Builds

Releases

Library

Task Groups

Deployment Groups*

... > NoteTaker-Xamarin.Android-CI

Tasks

Variables

Triggers

Options

Retention

History

Process

Build process



Get sources

NoteTaker

master

Phase 1

Run on agent



Use NuGet 4.3.0

NuGet Tool Installer



NuGet restore

NuGet



Build Xamarin.Android Project **/*Droid*.csproj

Xamarin.Android



Build solution **/*test*.csproj

Add tasks



Refresh



App Center Test

Test app packages with Visual Studio App Center



App Center Distribute

Distribute app builds to testers and users via App Center

Deprecated tasks



Kamarin.Android-CI

Options Retention History



Add tasks | Refresh



App Center Test

Test app packages with Visual Studio App Center.



App Center Distribute

Distribute app builds to testers and users via App Center

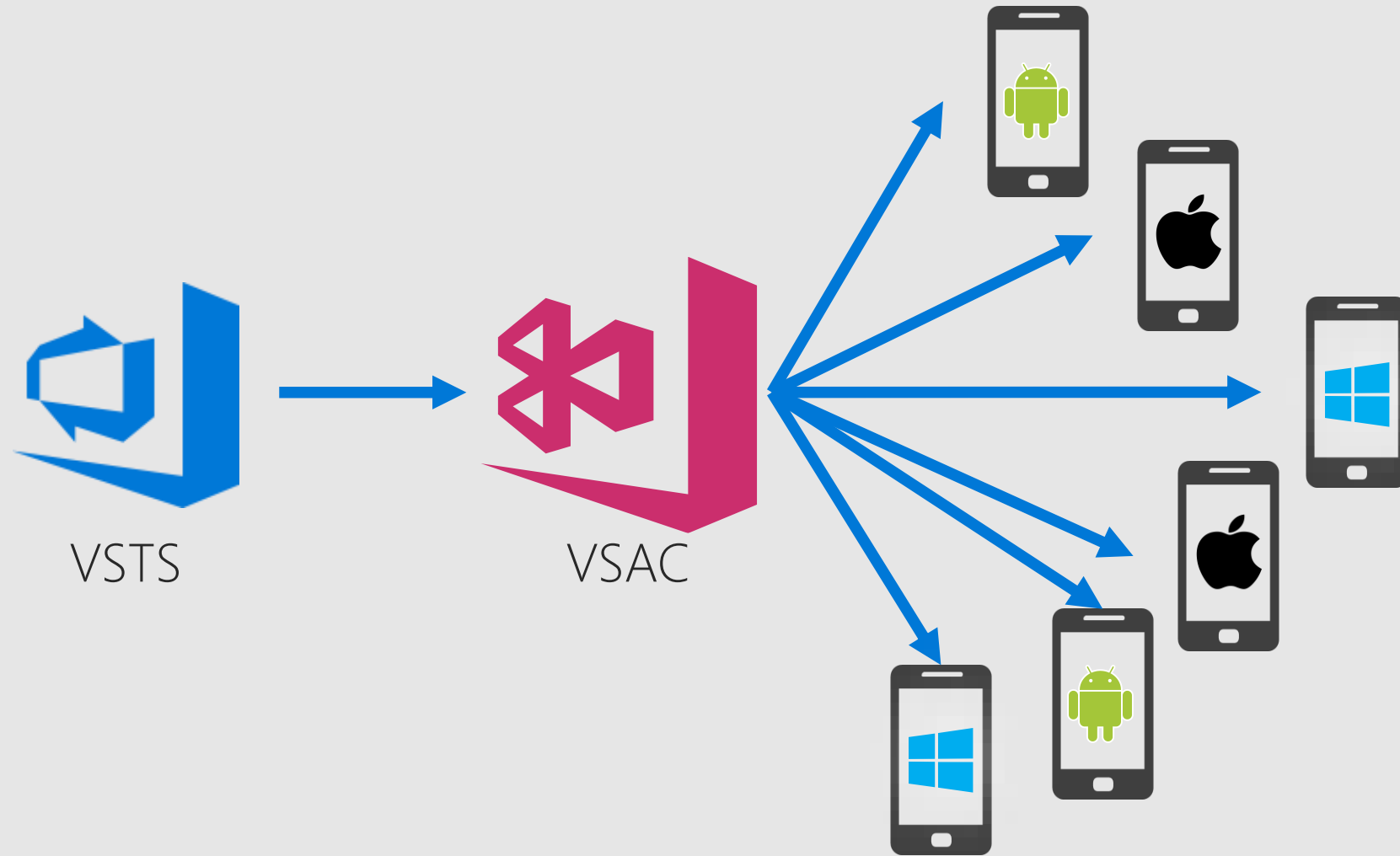
Deprecated tasks ▾

id Project **/*Droid*.csproj

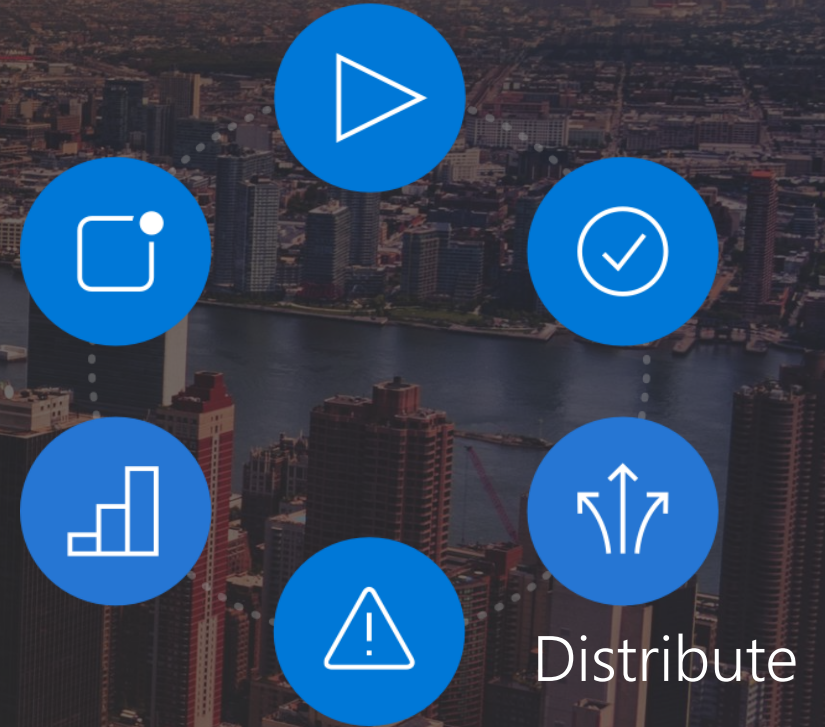
st*.csproj

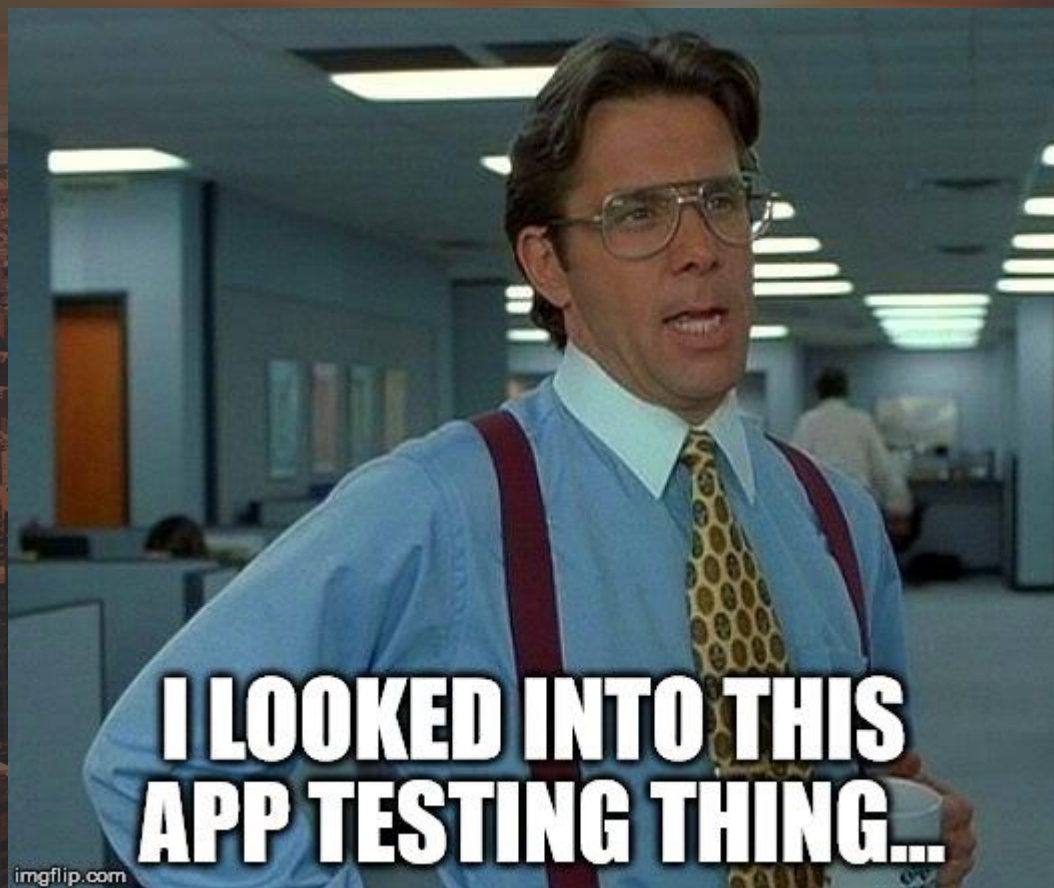
APK file(s) \$(build.binariesdirectory)/...

App Distribution

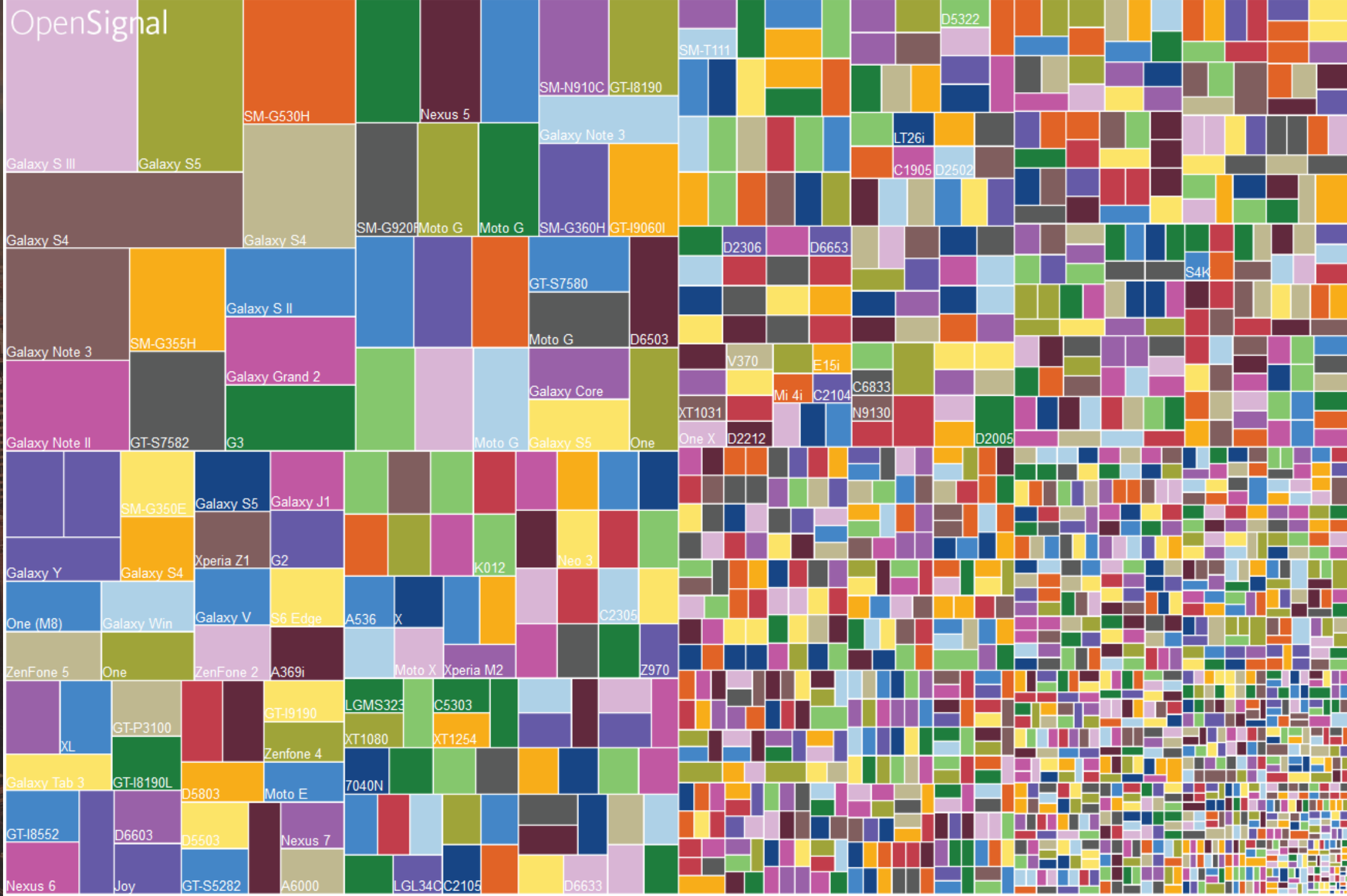


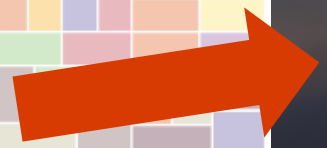
Deploying it to internal users
and testers





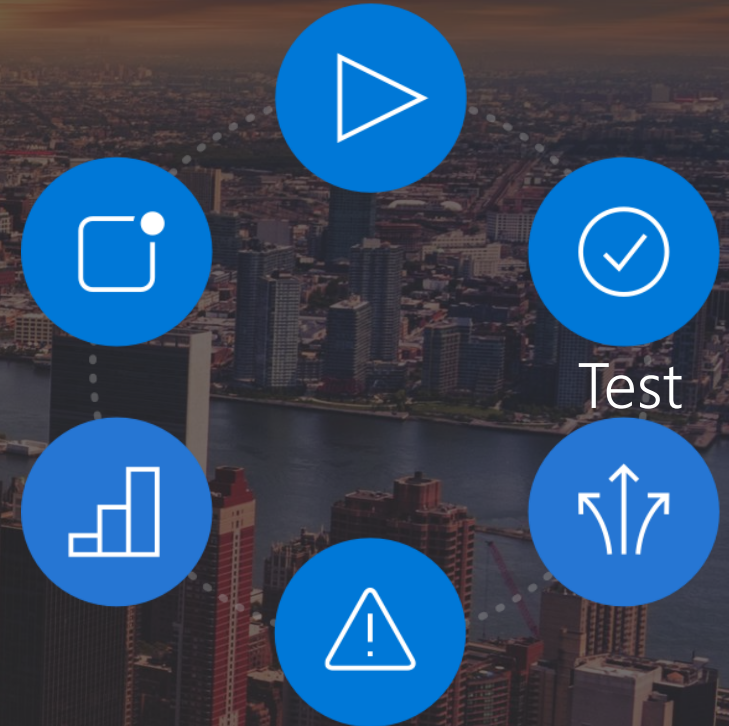
imgflip.com





Source: OpenSignal <http://opensignal.com/reports/2015/08/android-fragmentation/>
2015

Automated Testing







- Appium
- Calabash
- Espresso
- Xamarin.UITest

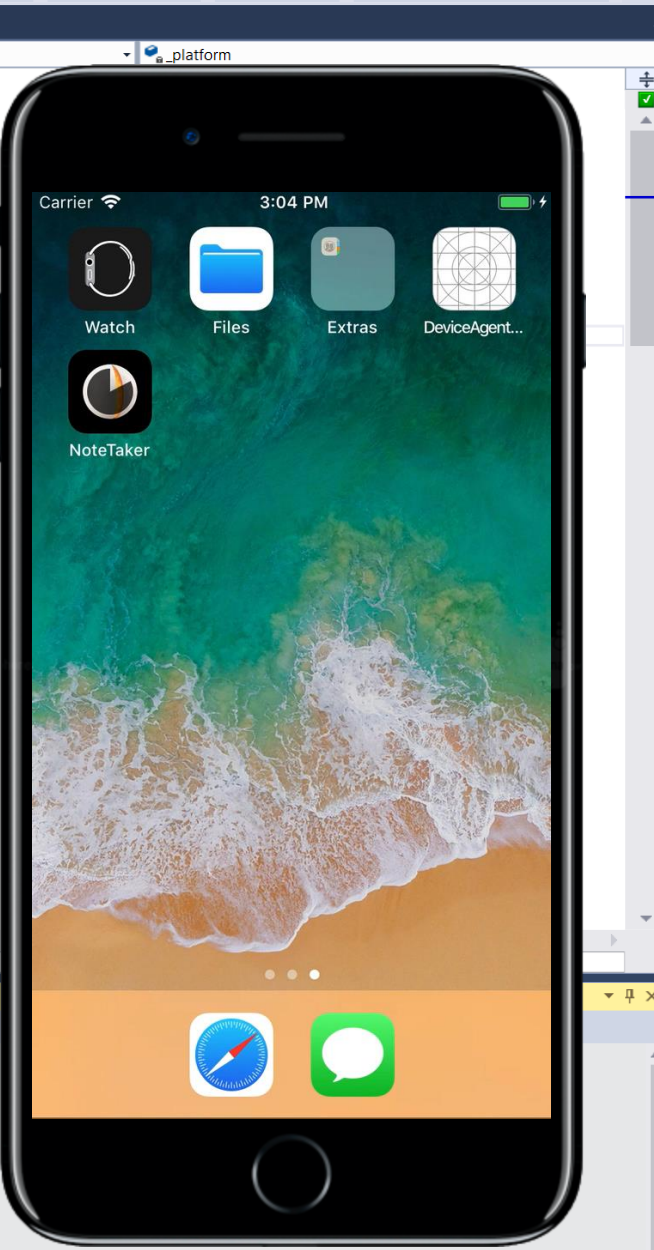


- Appium
- Calabash
- XCUITest
- Xamarin.UITest

Tests.cs

NoteTaker.UITests

```
1 11 using NoteTaker.UITests.Pages;
2 10 using NUnit.Framework;
3 9 using Xamarin.UITest;
4 8
5 7 namespace NoteTaker.UITests
6 6 {
7 5 [TestFixture(Platform.Android)]
8 4 [TestFixture(Platform.iOS)]
9 3 public class Tests
10 2 {
11 1 private IApp _app;
12 0 private readonly Platform _platform;
13 1 private MainPage _mainPage;
14 2 private EditNotePage _editNotePage;
15 3
16 4 0 references | mallibone, 8 days ago | 1 author, 1 change
17 5 public Tests(Platform platform)
18 6 {
19 7     _platform = platform;
20 8 }
21 9
22 10 [SetUp]
23 11 0 references | mallibone, 8 days ago | 1 author, 1 change
24 12 public void BeforeEachTest()
25 13 {
26 14     _app = AppInitializer.StartApp(_platform);
27 15     _mainPage = new MainPage(_app);
28 16     _editNotePage = new EditNotePage(_app);
29 17 }
30 18
31 19 //[[Test]
32 20 //[[Ignore]
33 21 //public void TestCreator()
34 22 //{
35 23     _app.Repl();
36 24 }
37 25 //[[Test]
38 26 //[[Ignore]
```



Solution Explorer

Search Solution Explorer (Ctrl+u)

- Solution 'NoteTaker' (5 projects)
 - Tests
 - NoteTaker.UITests
 - References
 - Pages
 - app.config
 - AppInitializer.cs
 - packages.config
 - Tests.cs
 - NoteTaker
 - NoteTaker.Droid
 - NoteTaker.iOS**
 - NoteTaker.UWP (Universal Windows)

Solution Explorer Team Explorer

Properties

Continuous Testing Session Error List Output Code Coverage Results Package Manager Console

Ready

0 0 NoteTaker develop 4 errors in 3 files

Devices vs Emulators

Search devices



DISPLAYING 241 DEVICES

OS Version



Google
Google Pixel 2 XL

Android 8.1.0



Google
Google Pixel 2

Android 8.1.0



HUAWEI
Huawei Nexus 6P

Android 8.1.0



LGE
LG Nexus 5X

Android 8.1.0



Google
Google Pixel XL

Android 8.0.0



Google
Google Pixel

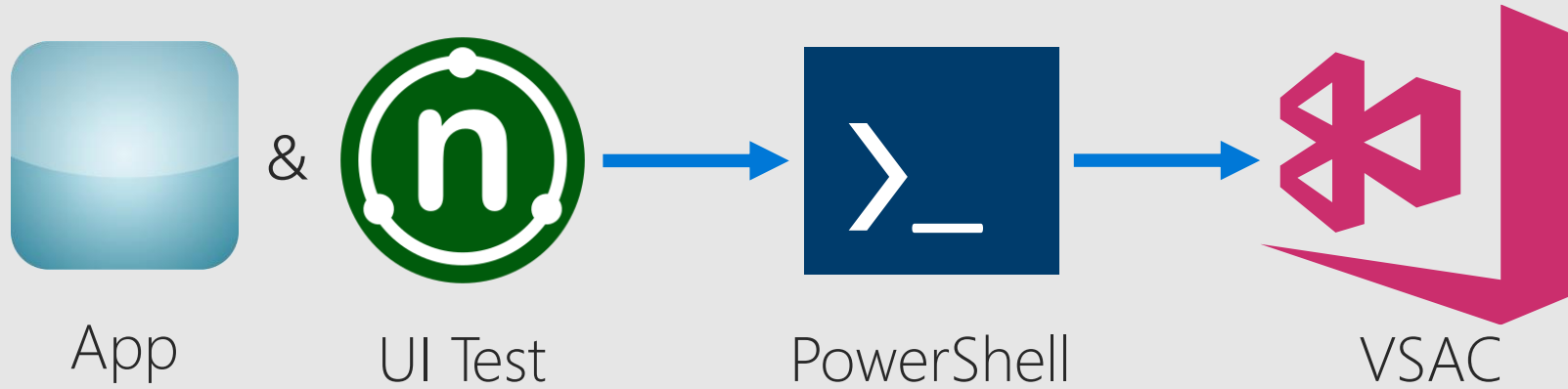
Android 8.0.0



HUAWEI
Huawei Nexus 6P

Android 8.0.0

UI Testing Pipeline





App Center



NoteTaker.iOS
[Gnabber Solutions](#)



Getting Started



Build



Test

Test runs

Device sets



Distribute



Crashes



Analytics



Push



Settings

Feb 25, 2018, 9:23:53 PM

3 tests



Tests(iOS)



Add Note

- Note Overview
- Note Detail
- Note All set
- New Note in List
- ---



Edit Note

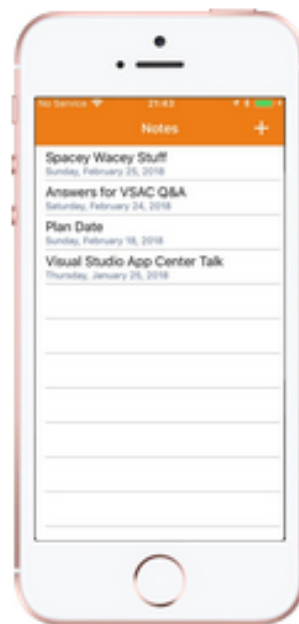


Remove Note

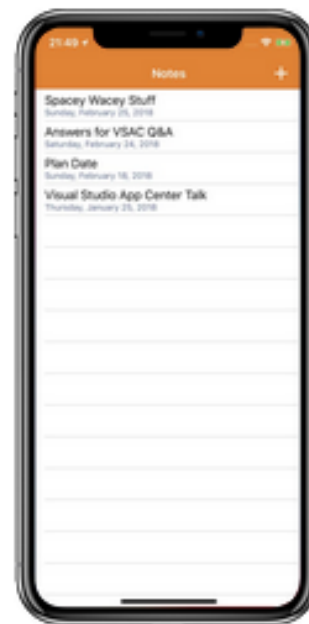


Add Note

Note Overview



Apple iPhone SE
iOS 11.2.6



Apple iPhone X
iOS 11.2.6



NoteTaker.iOS
Gnabber Solutions



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Remove Note

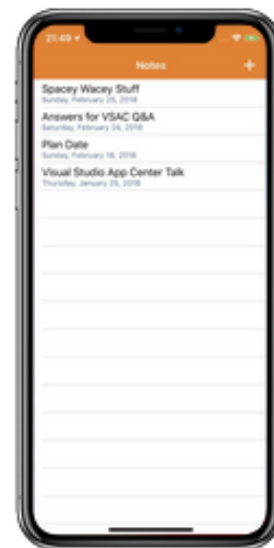


Add Note

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Apple iPhone SE
iOS 11.2.6



Apple iPhone X
iOS 11.2.6



App



NoteTaker.iOS
Gnabber Solutions



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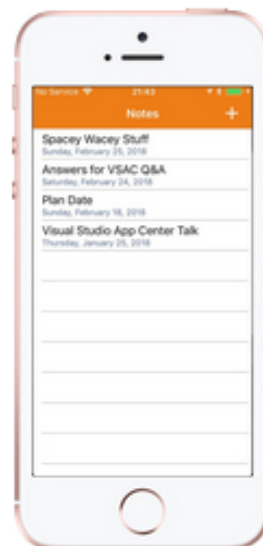


Remove Note



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iOS 11.2.6



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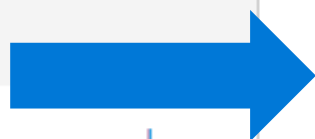
App

Kamarin.Android-CI

Options Retention History



Add tasks | Refresh



App Center Test

Test app packages with Visual Studio App Center.



App Center Distribute

Distribute app builds to testers and users via App Center

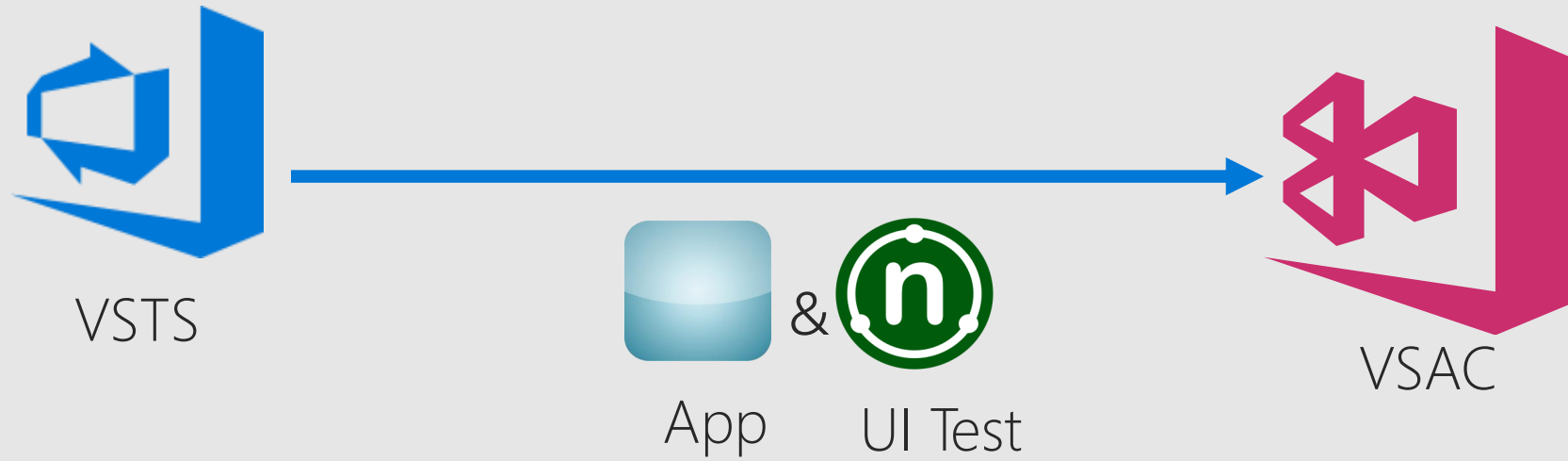
Deprecated tasks ▾

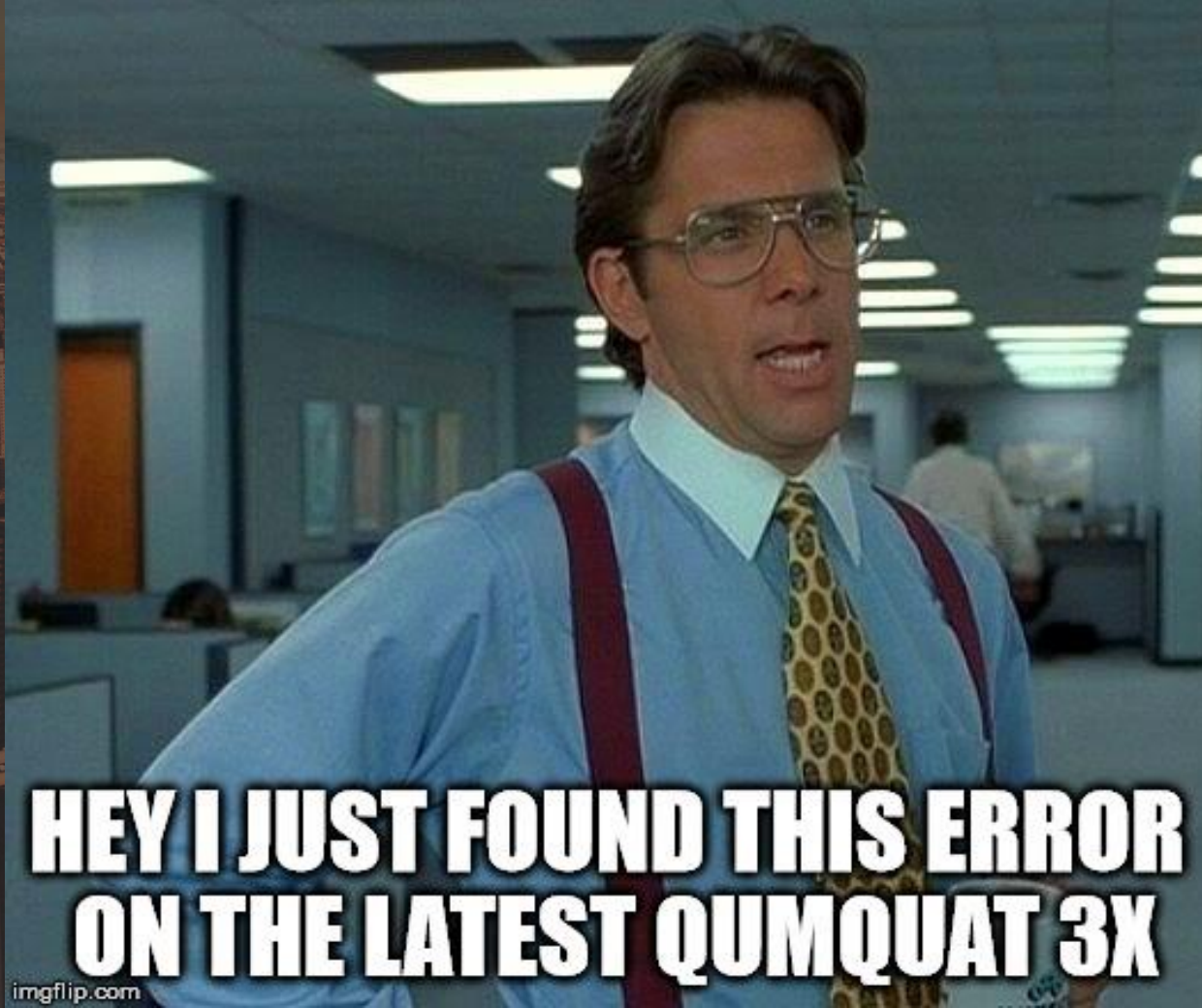
id Project **/*Droid*.csproj

st*.csproj

APK file(s) \$(build.binariesdirectory)/...

UI Testing Pipeline

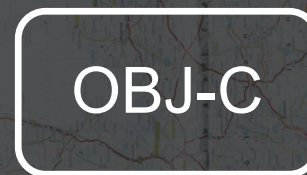
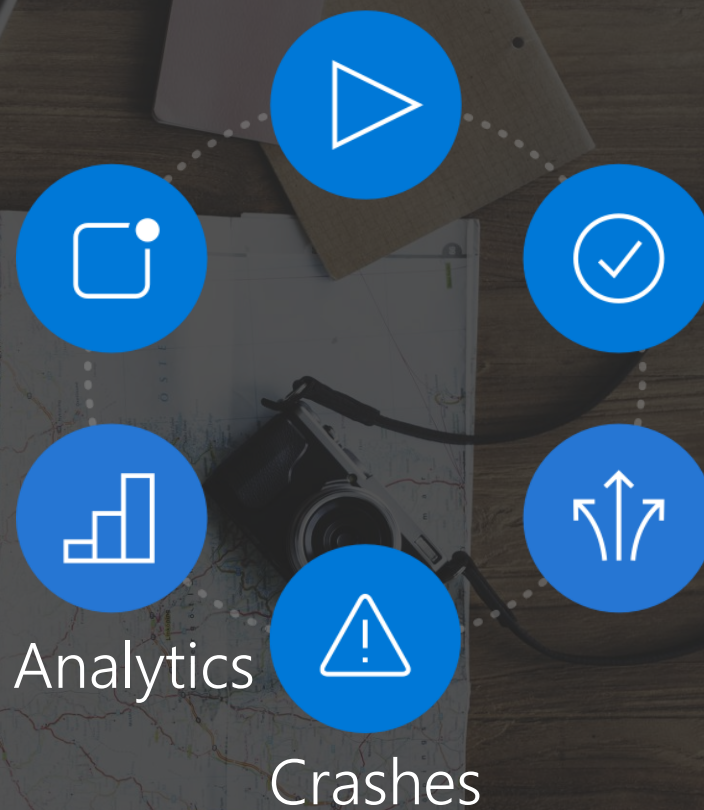




**HEY I JUST FOUND THIS ERROR
ON THE LATEST QUMQUAT 3X**

imgflip.com

Know what is happening





App Center

NoteTaker.UWP
Gnabber Solutions

Getting Started



Build



Distribute



Crashes



Analytics



Push



Settings

Getting Started



Add App Center's SDK to your app.

For detailed instructions on SDK integration go to:
[Getting Started with the UWP SDK](#)

UWP

XAMARIN.FORMS

1 Add NuGet packages to your solution

Search for "App Center", and install the `Microsoft.AppCenter.Analytics` package.

If you use the App Center SDK in a portable project, you need to install the packages in both the portable and the UWP projects.

2 Start the SDK

Open your shared or portable project. Either open `App.xaml.cs` or your class that inherits `Xamarin.Forms.Application` and add the following `using` statements:

```
using Microsoft.AppCenter;  
using Microsoft.AppCenter.Analytics;
```



In the same file, add the following in the `OnStart()` method:

```
AppCenter.Start("uwp=597807bc-ad57-4f2d-b3df-607cdb55be92;" +  
    "android={Your Android App secret here}" +  
    "ios={Your iOS App secret here}",  
    typeof(Analytics));
```



NOTE: You cannot use the same App secret for multiple platforms, right now you will have to create another application in App Center for iOS and Android and copy the other App secrets in the API call above.

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3 Explore data

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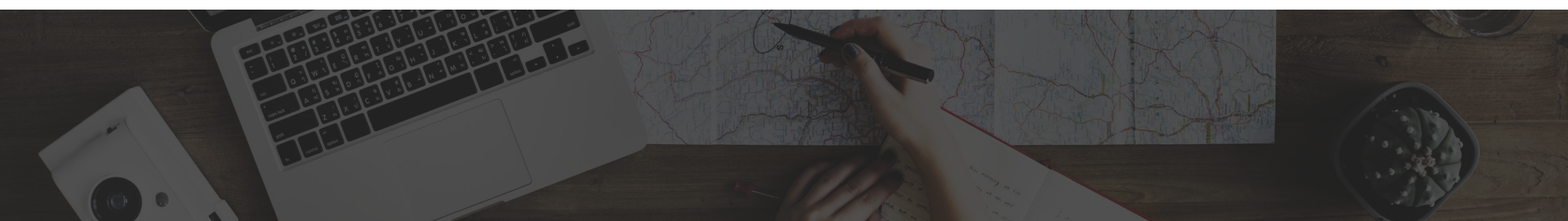


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3 Explore data

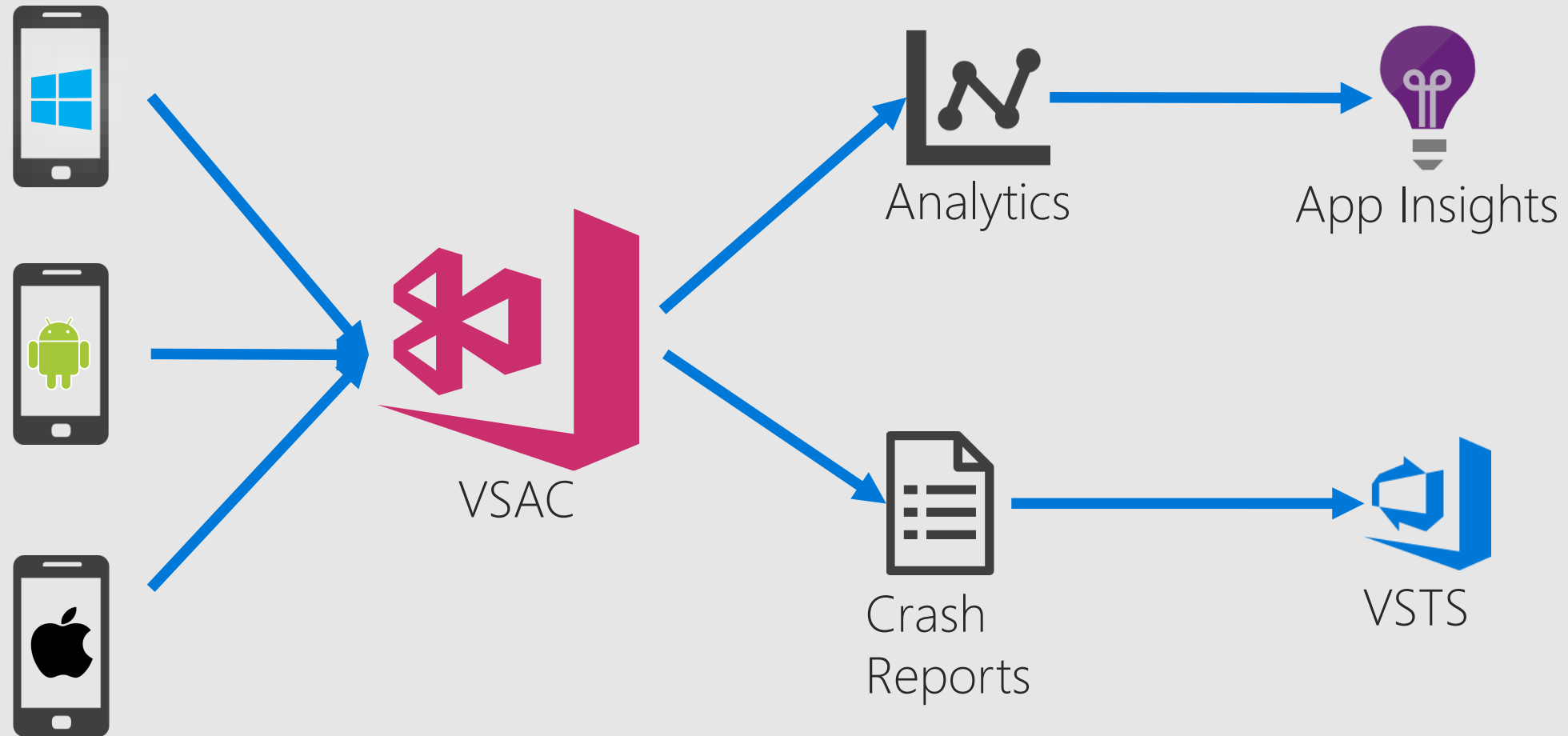


```
internal async Task Init()
{
    if (Notes != null && Notes.Any()) return;
    await LoadNotes();
    Analytics.TrackEvent("Note Overview Loaded");
}
```



Analytics Demo

Analytics



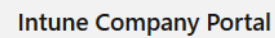


Connect to Store

1 Select store

2 Authenticate

Where would you like to distribute your app?

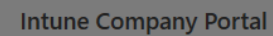


Connect to Store

1 Select store

2 Authenticate

Where would you like to distribute your app?



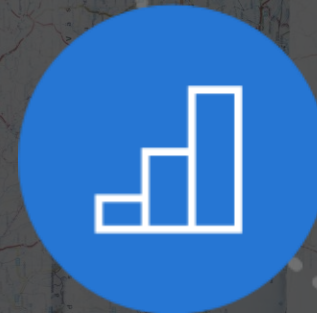
App Center ❤️ Feedback

<https://docs.microsoft.com/en-us/appcenter/general/roadmap>



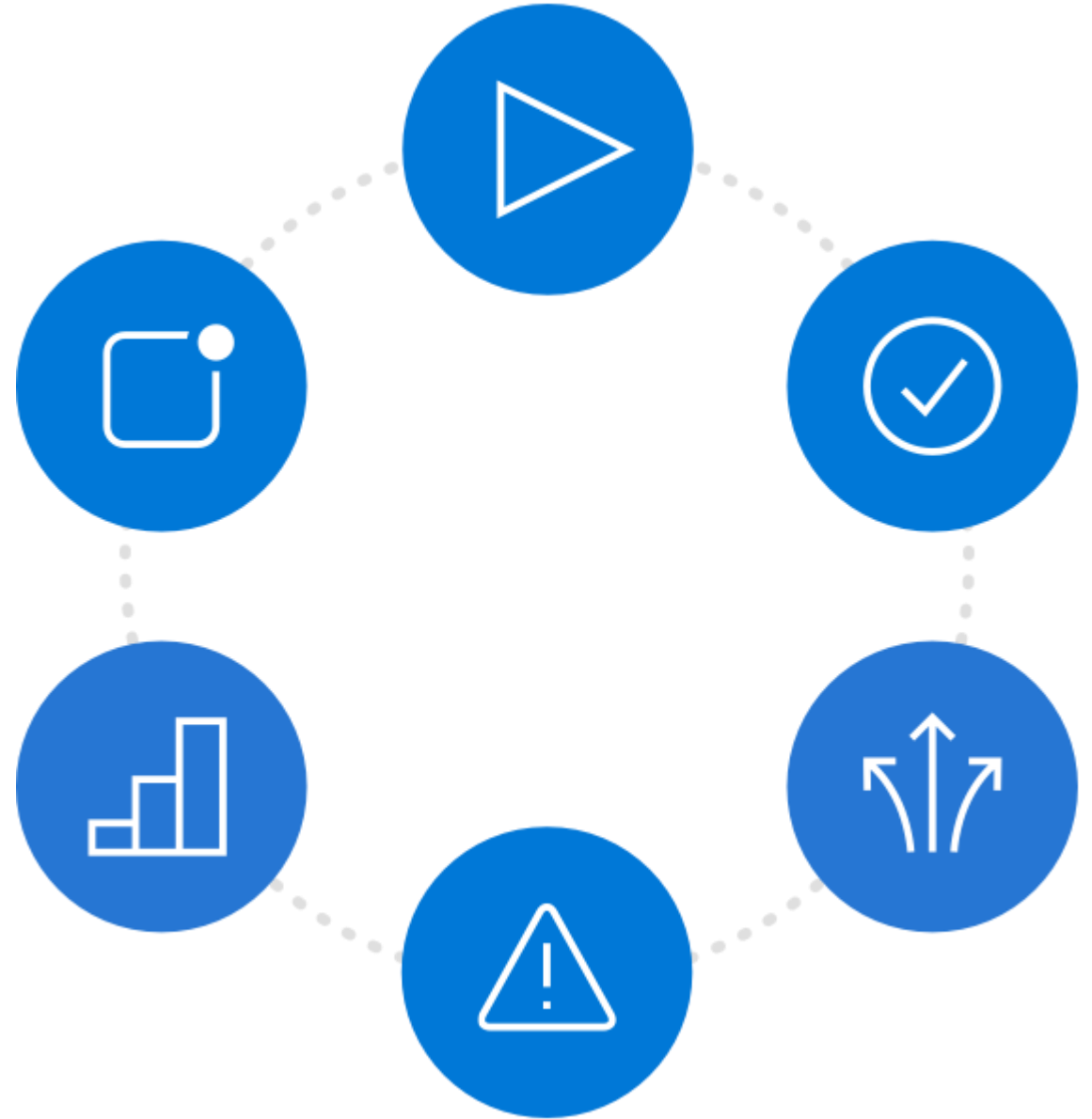
One more thing

Engagement



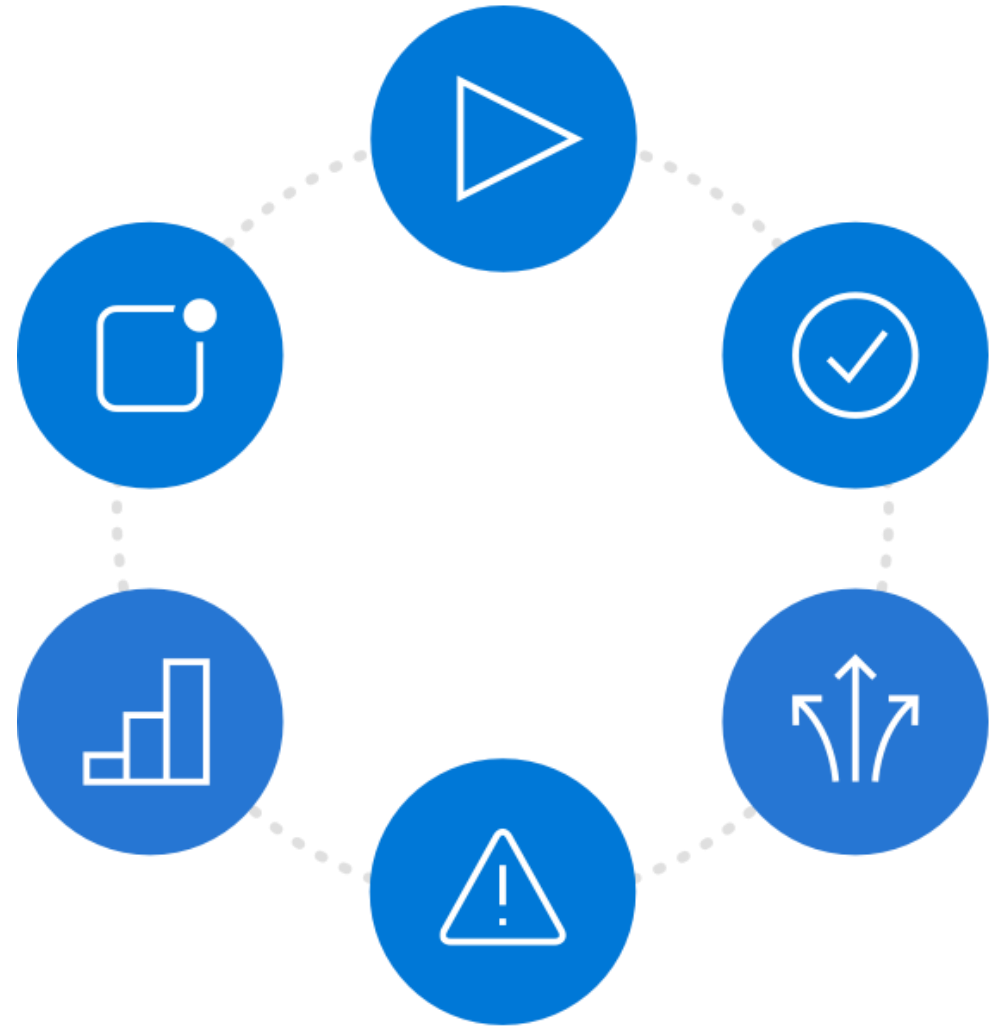
Push Notifications

Takeaways



Takeaways

- Automate your DevOps Pipeline
- Use VS App Center and extend with existing tools
- Make Decision based on Facts



Thank you for being here!

 Mark Allibone

 @mallibone

 Head of Mobile, Noser Engineering AG

 MVP

 <https://mallibone.com>



NOSERENGINEERING
WE KNOW HOW

Microsoft
CERTIFIED
Solution Developer



Please Complete your Session Evaluations

Get your cool IoT Dev Kit!

Fill out your feedback form and turn it in before you leave.



