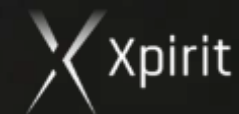


#TECHDAYSNL #XAMARINTC

Xamarin Test Cloud

From zero to hero in automated UI testing

Geert van der Cruijssen
Lead Consultant Xpirit
@geertvdc



Geert van der Cruisen

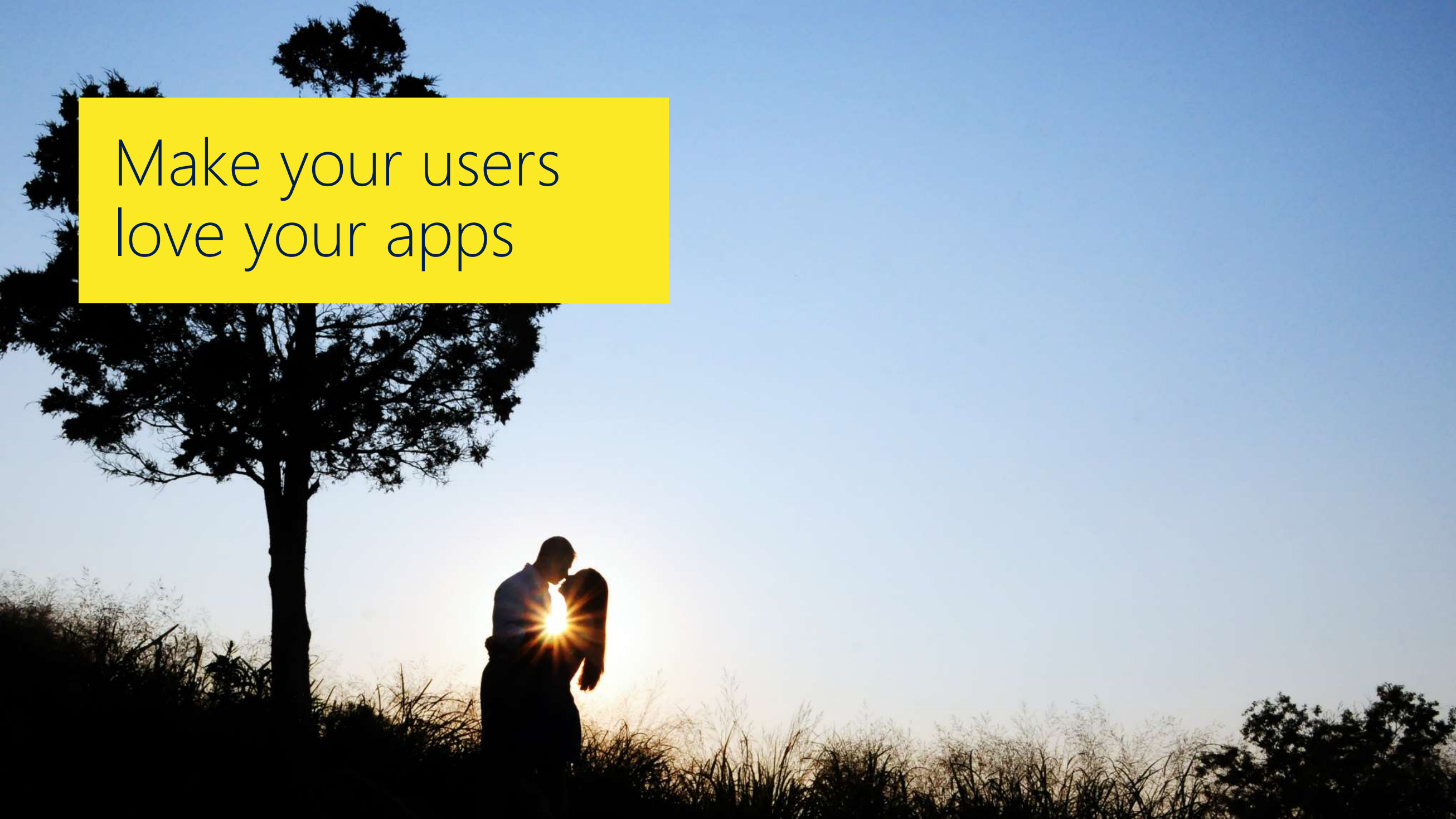
Lead Consultant at Xpirit

@geertvdc

gvandercruisen@xpirit.com



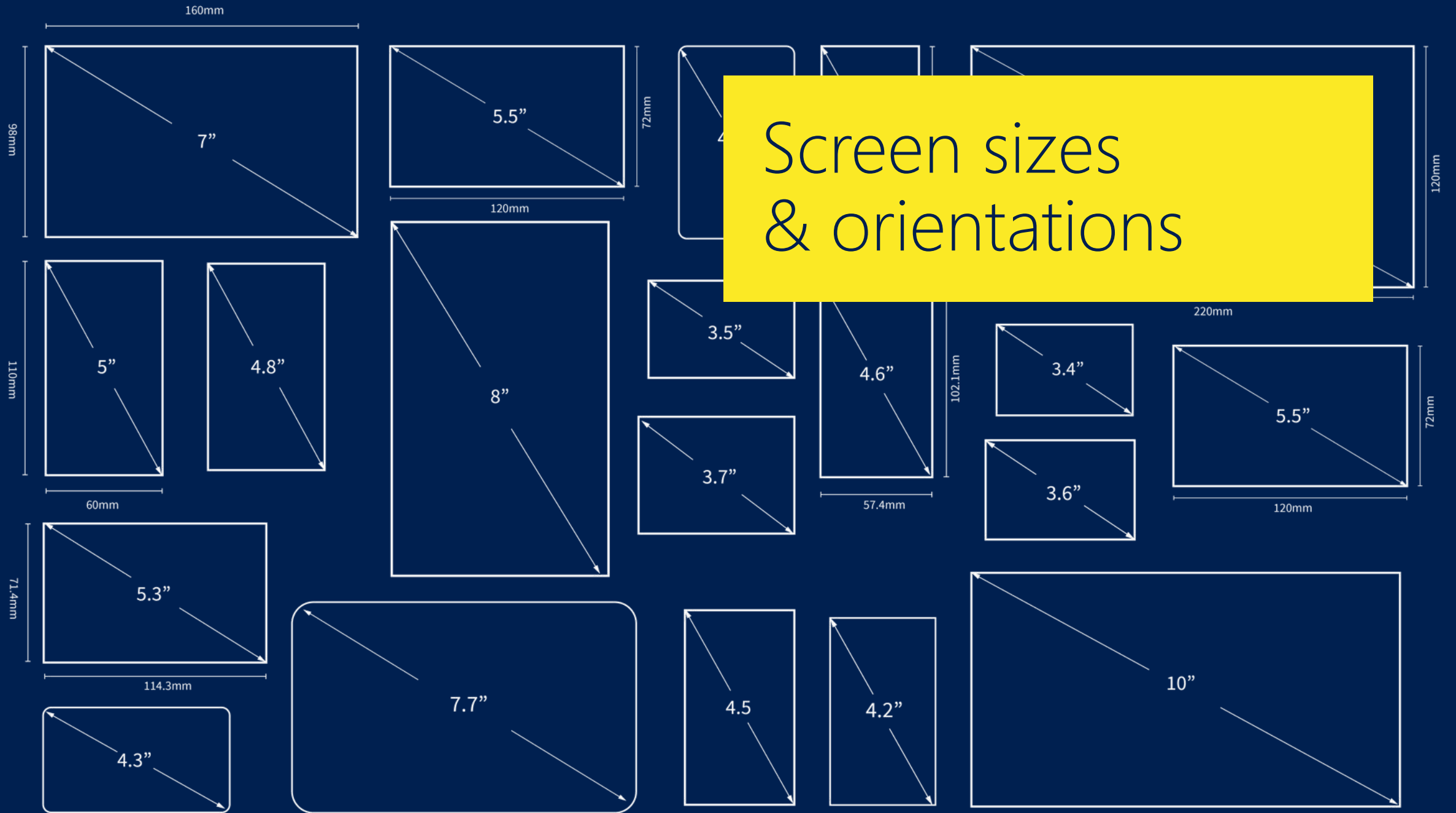
Make your users
love your apps



Mobile app quality challenges



Screen sizes & orientations

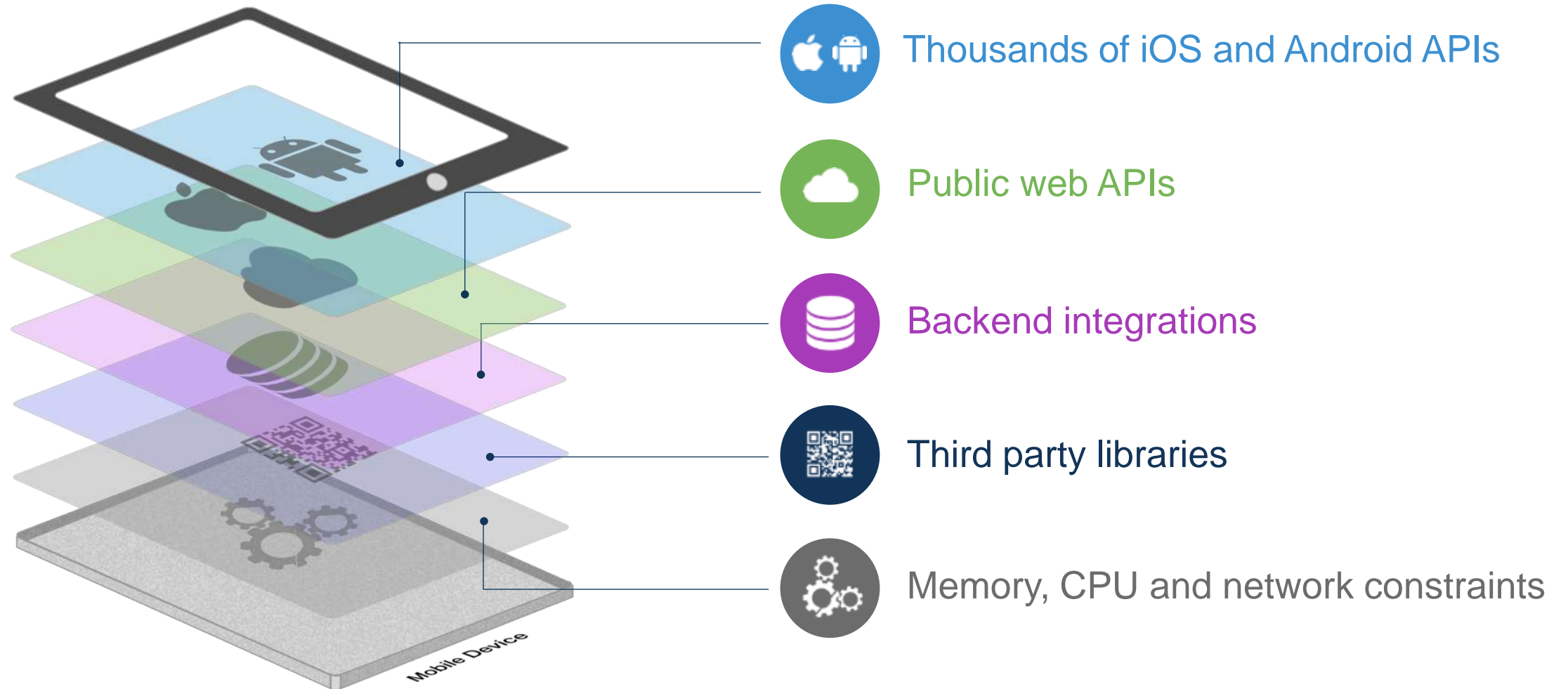


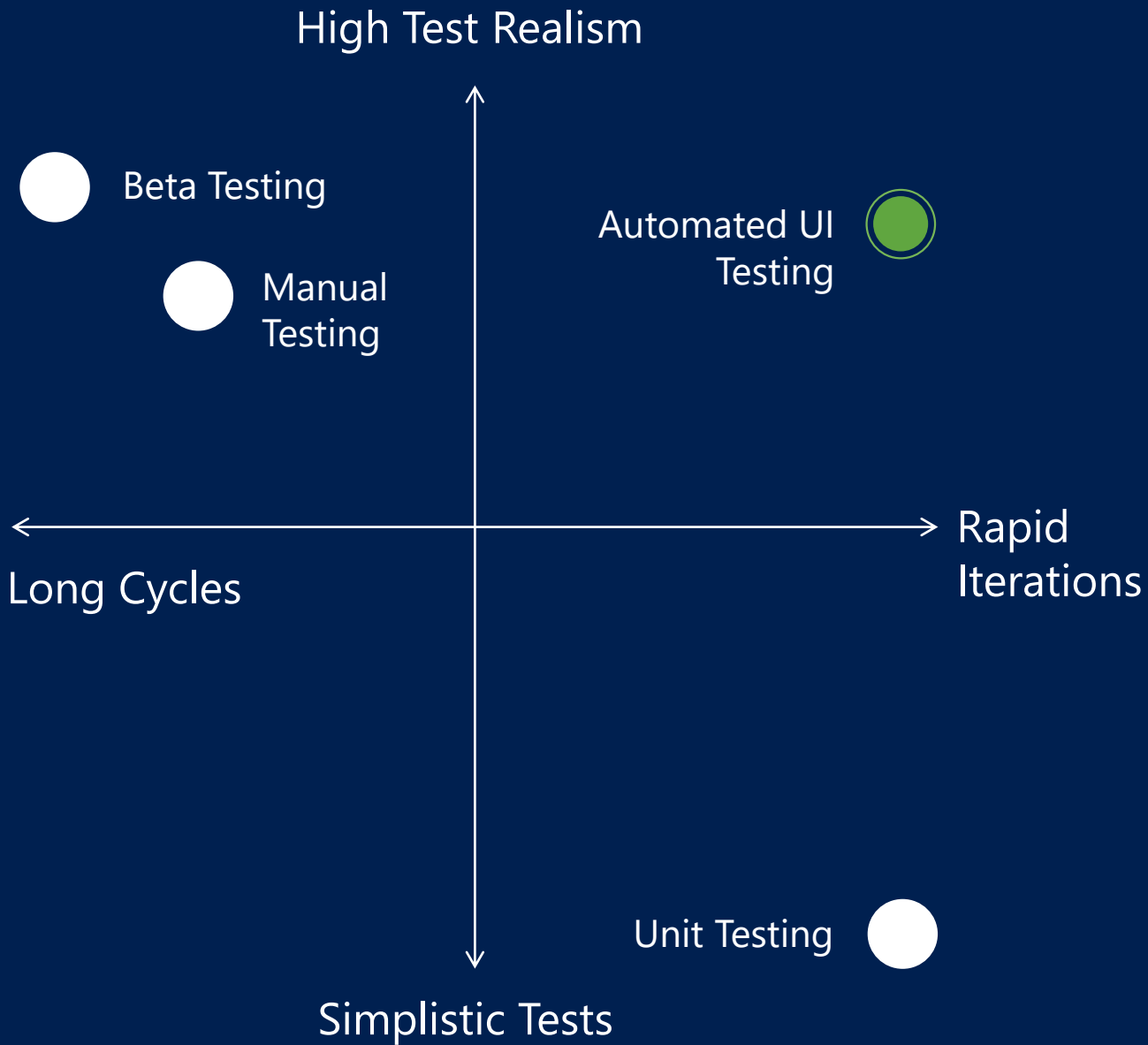
Device Fragmentation

Short & often
user sessions



App Complexity





Automated UI testing is the only way to ensure your app

LOOKS
BEHAVES
PERFORMS

well on a broad set of devices with every release





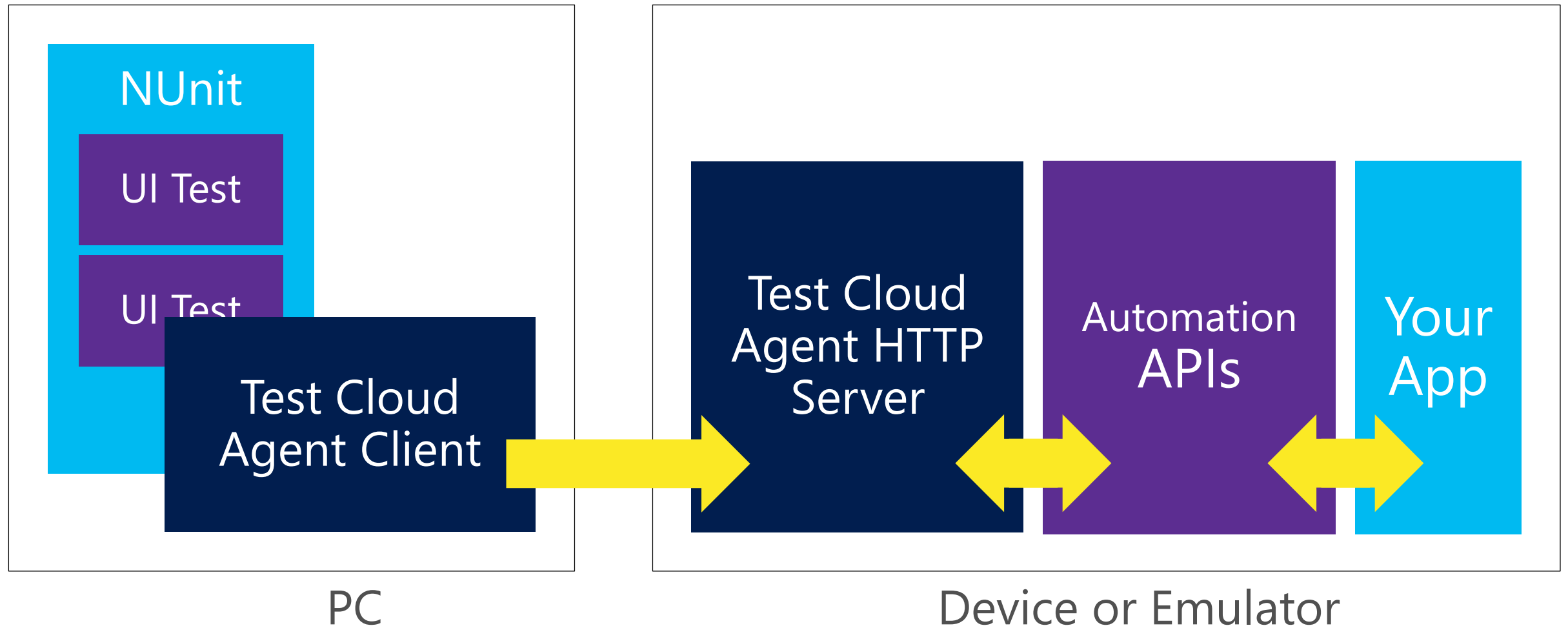
Test ANY native
Android / iOS app

A photograph of three indigenous men in a jungle setting. The man in the center is performing a dance or ritual with his arms outstretched. He has white body paint on his chest and arms. The man on the left is also in traditional attire, looking towards the center. The man on the right is standing with his hands clasped. In the foreground, there is a small fire burning on the ground. The background features large rocks and lush green foliage.

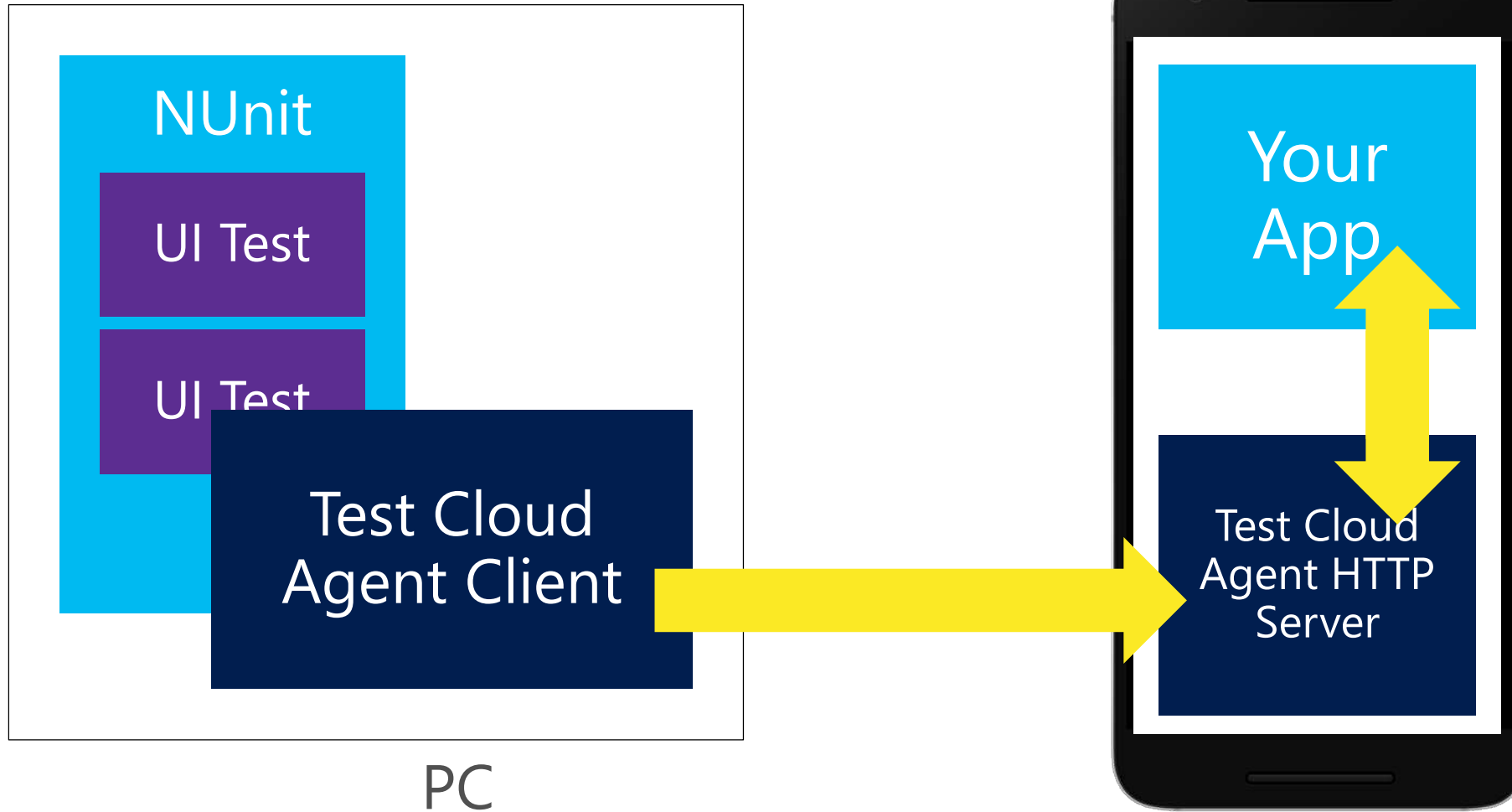
Or hybrid app

Test ANY native
Android / iOS app

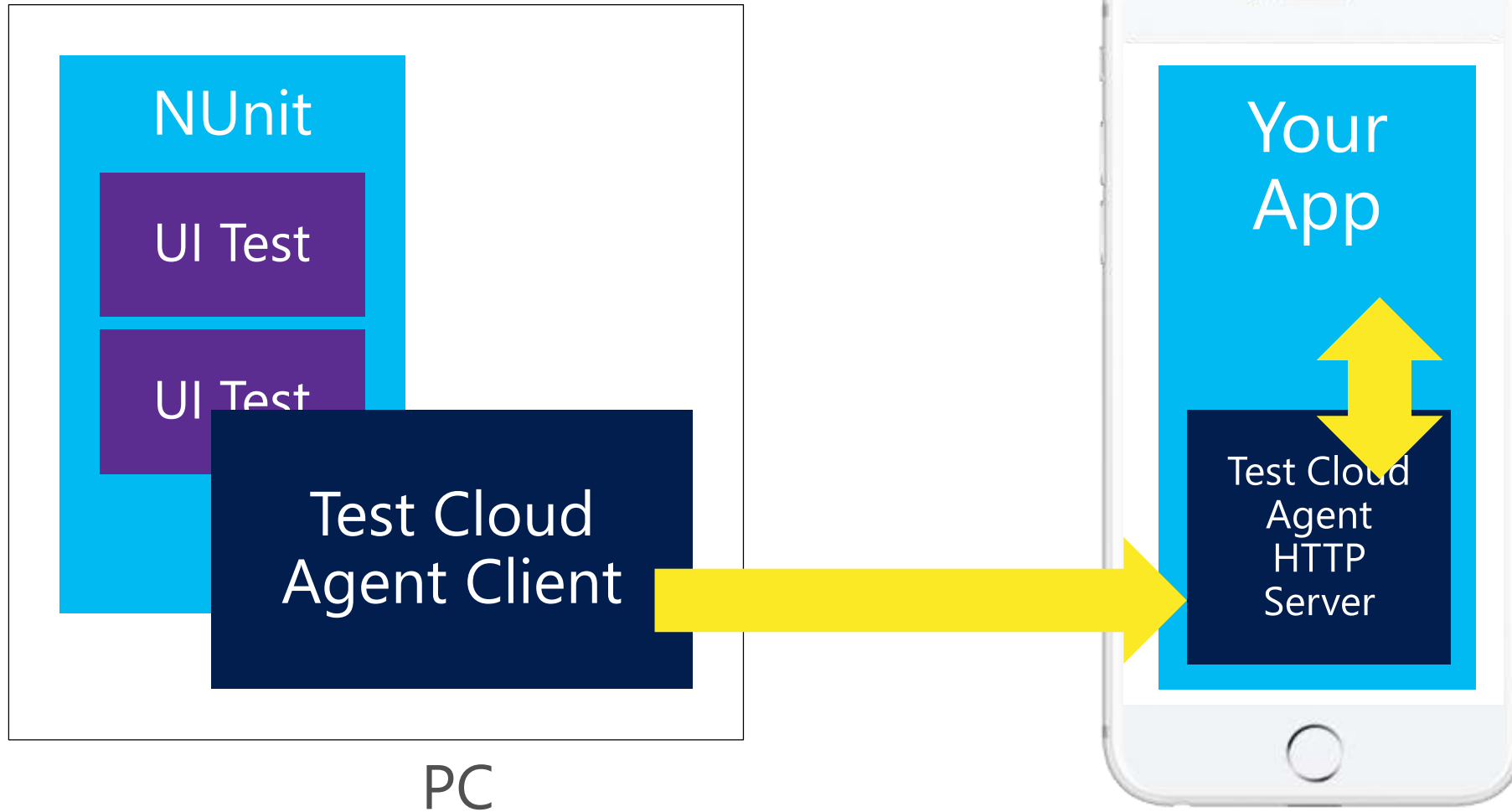
Xamarin.UITest architecture



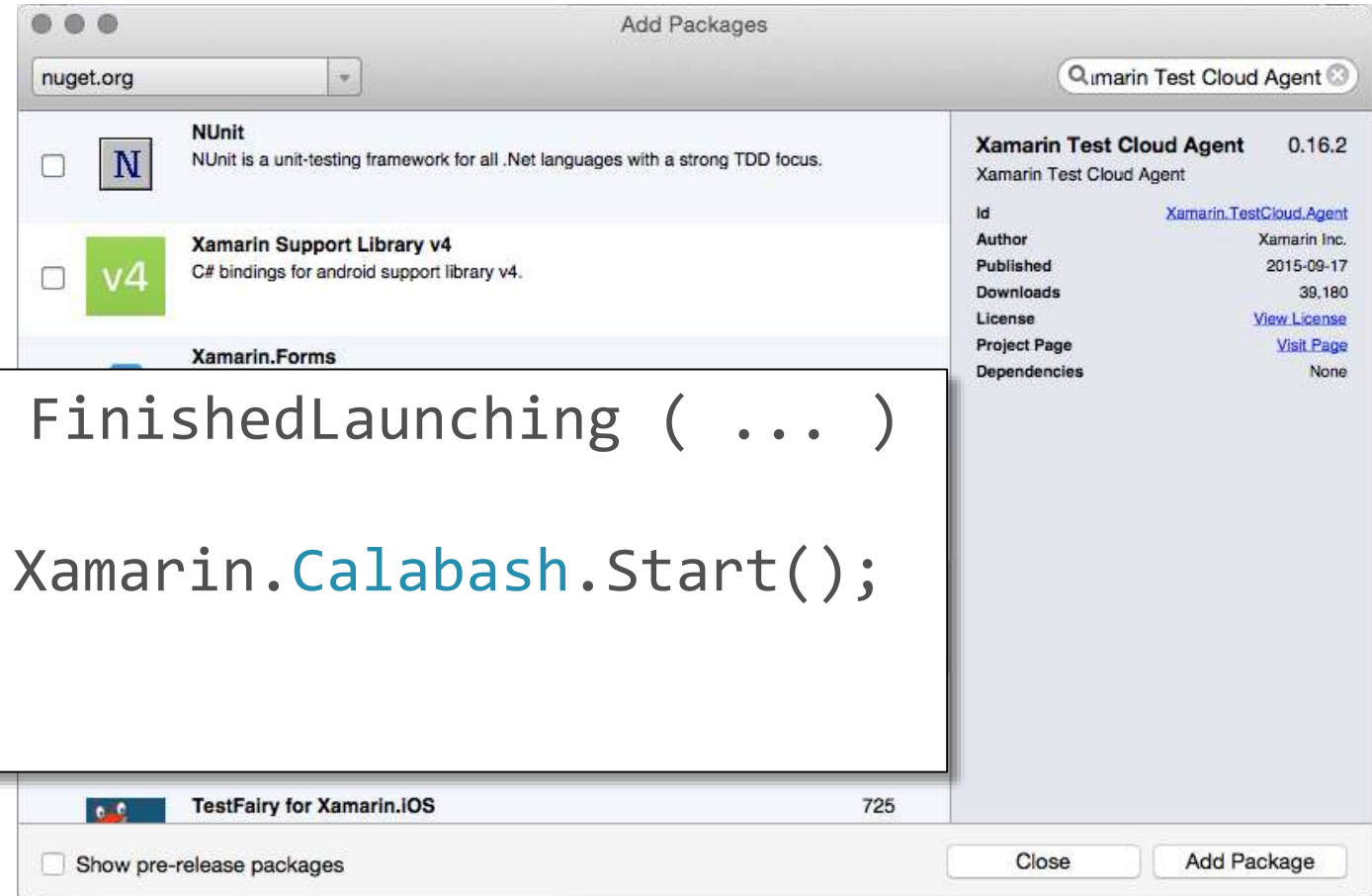
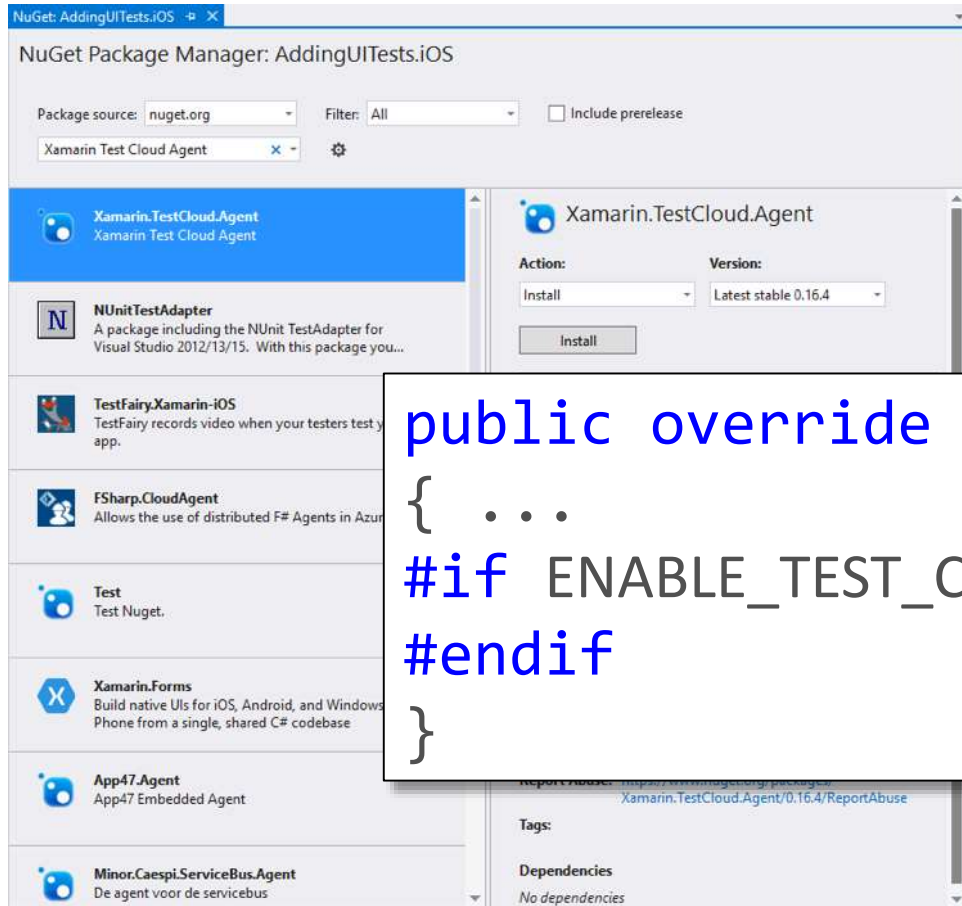
Android architecture



iOS architecture



Xamarin Test Cloud Agent Nuget



```
public override bool FinishedLaunching ( ... )  
{ ...  
#if ENABLE_TEST_CLOUD Xamarin.Calabash.Start();  
#endif  
}
```


Test Setup

```
[SetUp]
public void BeforeEachTest()
{
    app = ConfigureApp.Android
        .ApkFile("../path/myapp.apk")
        .StartApp();
}
```

Interacting with Apps

```
app.Tap ("Click me");
```

```
app.Tap (c => c.Marked ("Add"));  
app.EnterText(c => c.Class("UITextField")  
               .Index(0), "Get Milk");
```

```
app.Tap(x => x.Id("my-webview").Css("#my-button"));
```

Querying the UI

```
var matches = app.Query(c => c.Class("UILabel"));  
var matches = app.Query(c => c.Class("TextView"));
```



Helper methods

```
var matches = app.Query(c => c.Button());  
var matches = app.Query(c => c.TextField());
```

```
var matches = app.Query(c => c.Button()  
                           .Marked("Save"));
```

Waiting for changes

```
var l = app.WaitForElement(x => x.Marketed("Label1"));
```

```
app.WaitForNoElement(x => x.Marketed("Loader"));
```


Commonly used interactions

Query

Tap

WaitFor

WaitForElement

WaitForNoElement

Screenshot

SwipeLeft

SwipeRight

ScrollUp

ScrollDown

Flash

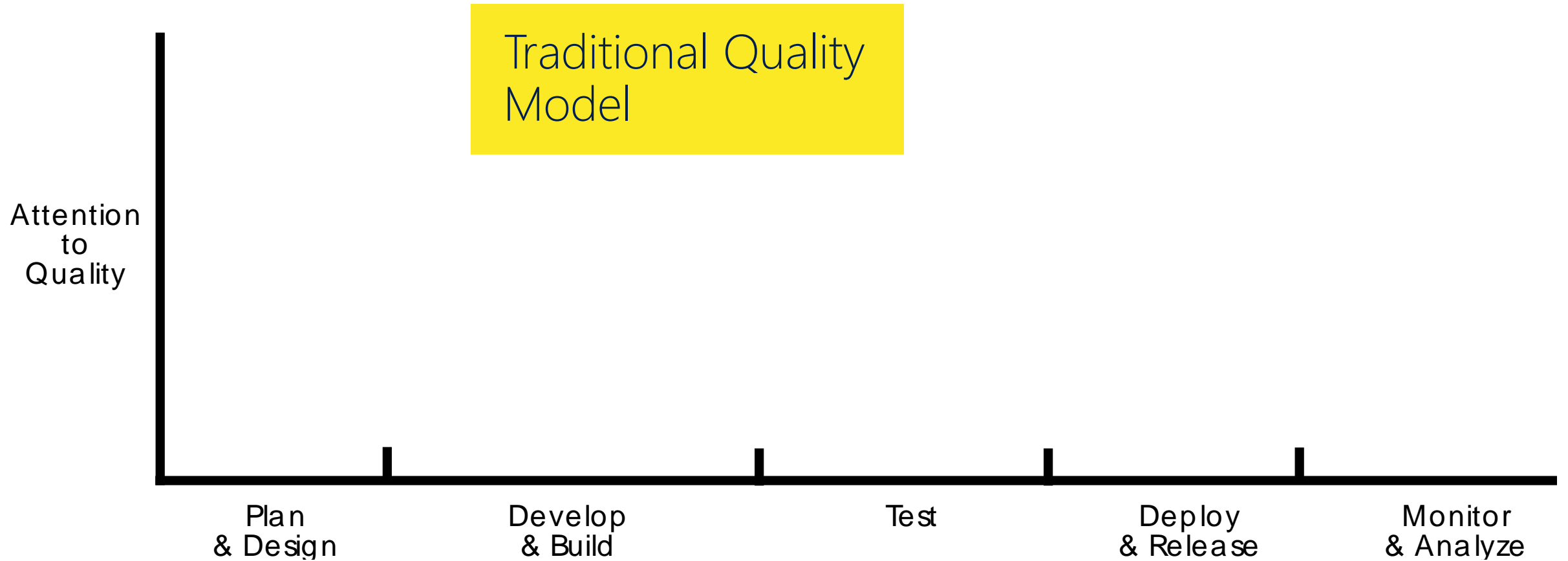


Xamarin Test Cloud Demo

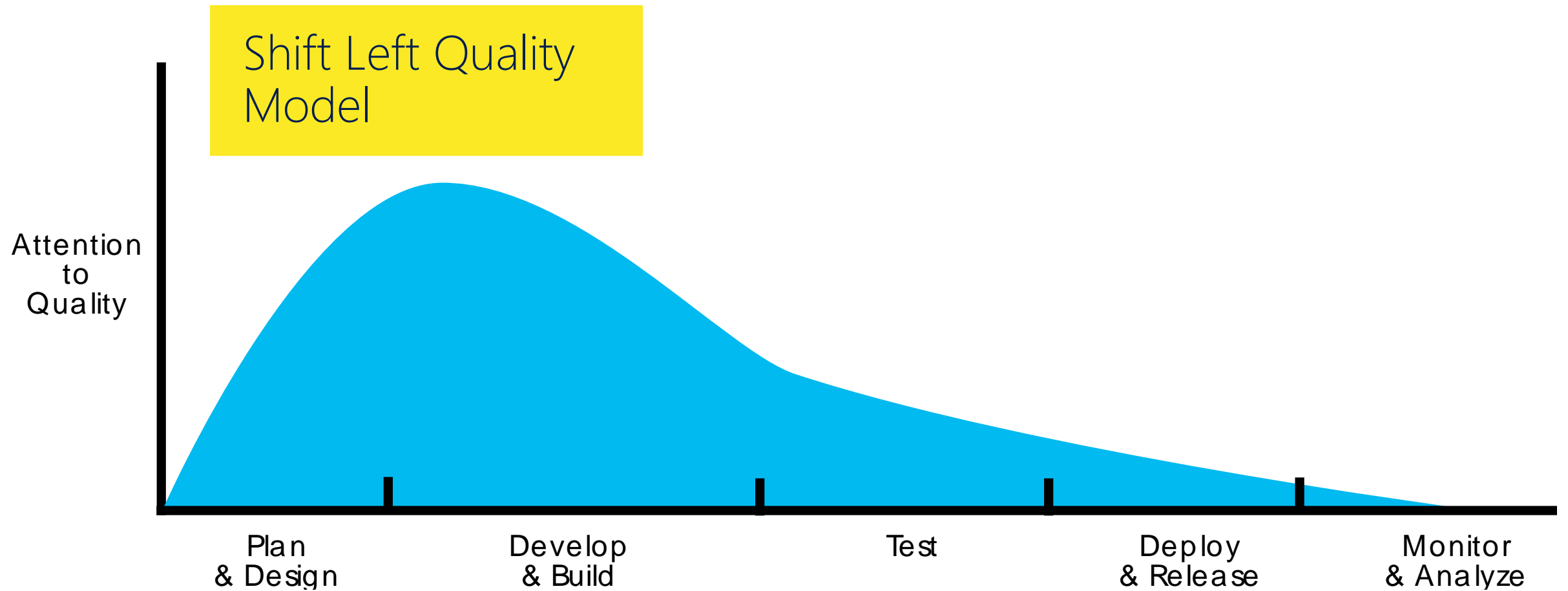
A photograph showing the lower legs and feet of a person standing on a wooden plank surface. The person is wearing green pants and dark sneakers with white soles. The wooden planks are arranged horizontally, and the background is a blurred grey wall. A yellow rectangular box is overlaid on the left side of the image, containing the text "Next steps?".

Next steps?

Shift left testing



Shift left testing



Behavior Driven Development



Feature: Getting the weather forecast

In order to get weather

As a weather enthusiast from Europe

I want to be told the weather of a certain location in Celsius

Scenario: Get forecast for manually added location

Given I opened the app

When I have entered "Amsterdam" as a location

When I set the Imperial switch to "Off"

When I press the Get Weather button

Then the weather for Amsterdam should be shown in Celsius

Behavior Driven Development

MyWeather - Oct 3, 2016 12:59 PM

https://testcloud.xamarin.com/test/myweather_fbc5f55e-c7b5-4438-912b-0666e6316268/?step=0_0_0

Xamarin test cloud > MyWeather > BDD > Oct 3, 2016 12:59 PM

New Test Run Support Docs Geert 28 DAYS LEFT

Overview

ALL RESULTS

Getting The Weather Forecast Feature(Android)

Get Forecast For Manually Added Location

Given I opened the app

- When I have entered Amsterdam as the location
- When I set the Imperial switch to Off
- When I press the Get Weather button
- Then the weather for Amsterdam should be shown in Celsius

GETTING THE WEATHER FORECAST FEATURE(ANDROID)
Given I opened the app

Motorola Nexus 6
Android 6.0.1

Samsung Galaxy S6 Edge
Android 5.0.2

Samsung Galaxy Avant
Android 4.4.2

Behavior Driven Development

The screenshot displays the Xamarin Test Cloud web interface. The browser address bar shows the URL: `https://testcloud.xamarin.com/test/myweather_fbc5f55e-c7b5-4438-912b-0666e6316268/?step=0_0_0`. The page header includes the Xamarin Test Cloud logo, the test name "MyWeather", the BDD framework, and the timestamp "Oct 3, 2016 12:59 PM". On the right, there are links for "New Test Run", "Support", "Docs", and a user profile for "Geert" with a "28 DAYS LEFT" status.

The main content area shows a test run titled "GETTING THE WEATHER FORECAST FEATURE(ANDROID)" with a green checkmark and the step "Given I opened the app". A sidebar on the left lists the test steps:

- Get Forecast For Manually Added Location
- Get Forecast For Manually Added Location
- Get Forecast For Manually Added Location

A detailed view of the first step, "Given I opened the app", is shown in a modal window. It includes a list of conditions and a final assertion:

- Given I opened the app
 - When I have entered Amsterdam as the location
 - When I set the Imperial switch to Off
 - When I press the Get Weather button
 - Then the weather for Amsterdam should be shown in Celsius
 -

Below the test steps, two mobile device emulators are displayed side-by-side. The left emulator is a Samsung Galaxy S6 Edge running Android 5.0.2, showing the "My Weather" app interface with "Seattle, WA" and a "GET WEATHER" button. The right emulator is a Samsung Galaxy Avant running Android 4.4.2, also showing the "My Weather" app interface with "Seattle, WA" and a "GET WEATHER" button.


A close-up, shallow depth-of-field photograph of a bicycle's rear cassette and chain. The cassette, with its multiple sprockets, is the central focus, showing intricate mechanical details. A silver chain is draped over the sprockets. To the right, a portion of the red rear derailleur is visible, featuring a grey cable hanger. The background is blurred, showing the spokes of the rear wheel and other parts of the bike frame.


Test cloud
in your ALM Cycle


Adding Test Cloud to your automated builds

[Build Definitions](#) / New Xamarin.iOS definition 1



Build Options Repository Variables Triggers General Retention History


 Save ▾  Undo

 Add build step...

 Shell Script DeploymentScripts/MacNugetRestore.sh
Shell Script

 Build Xamarin.iOS solution CdSample.iOS/CdSample.iOS.sln
Xamarin.iOS

 Test CdSample.iOS/CdSample.iOS.sln with Xamarin.UITest in Xamarin Test Cloud
Xamarin Test Cloud 

 Copy Publish Artifact: drop
Copy and Publish Build Artifacts



Xamarin Test Cloud Live

Under
development

A person is captured in mid-action, performing a trick on a skateboard at a skate park. They are wearing a dark t-shirt, light-colored pants, and colorful socks. The background shows a clear blue sky, some trees, and a red metal structure.

Call to action

1: ENABLE FREE TRIAL

2: WRITE TESTS

**3: RUN ON 1000+
DEVICES**

4: PROFIT!!



CODE SAMPLES:

<http://xpir.it/td16testcloud>

#TECHDAYSNL #XAMARINTC

THANK YOU!

Geert van der Cruijzen
Lead Consultant Xpirit

gvandercruijzen@xpirit.com
@geertvdc



CODE SAMPLES:

<http://xpir.it/td16testcloud>

