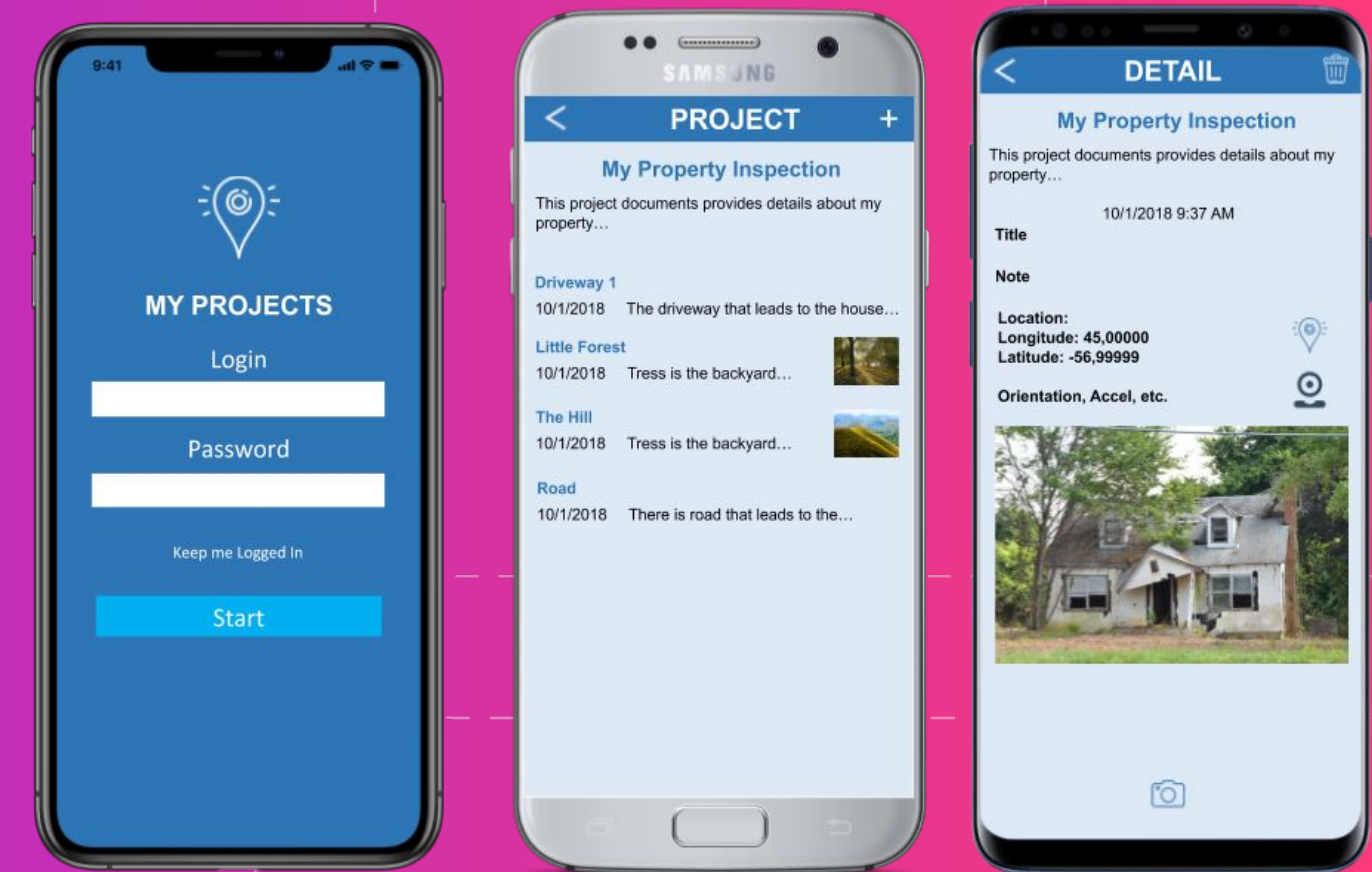


# Adding Mobile Support to existing RAD Studio applications



**Antonio Zapater**

Pre-sales Consultant  
Embarcadero Technologies  
antonio.zapater@embarcadero.com



# In this session

**Why Mobile?**

**Getting ready  
for mobile**

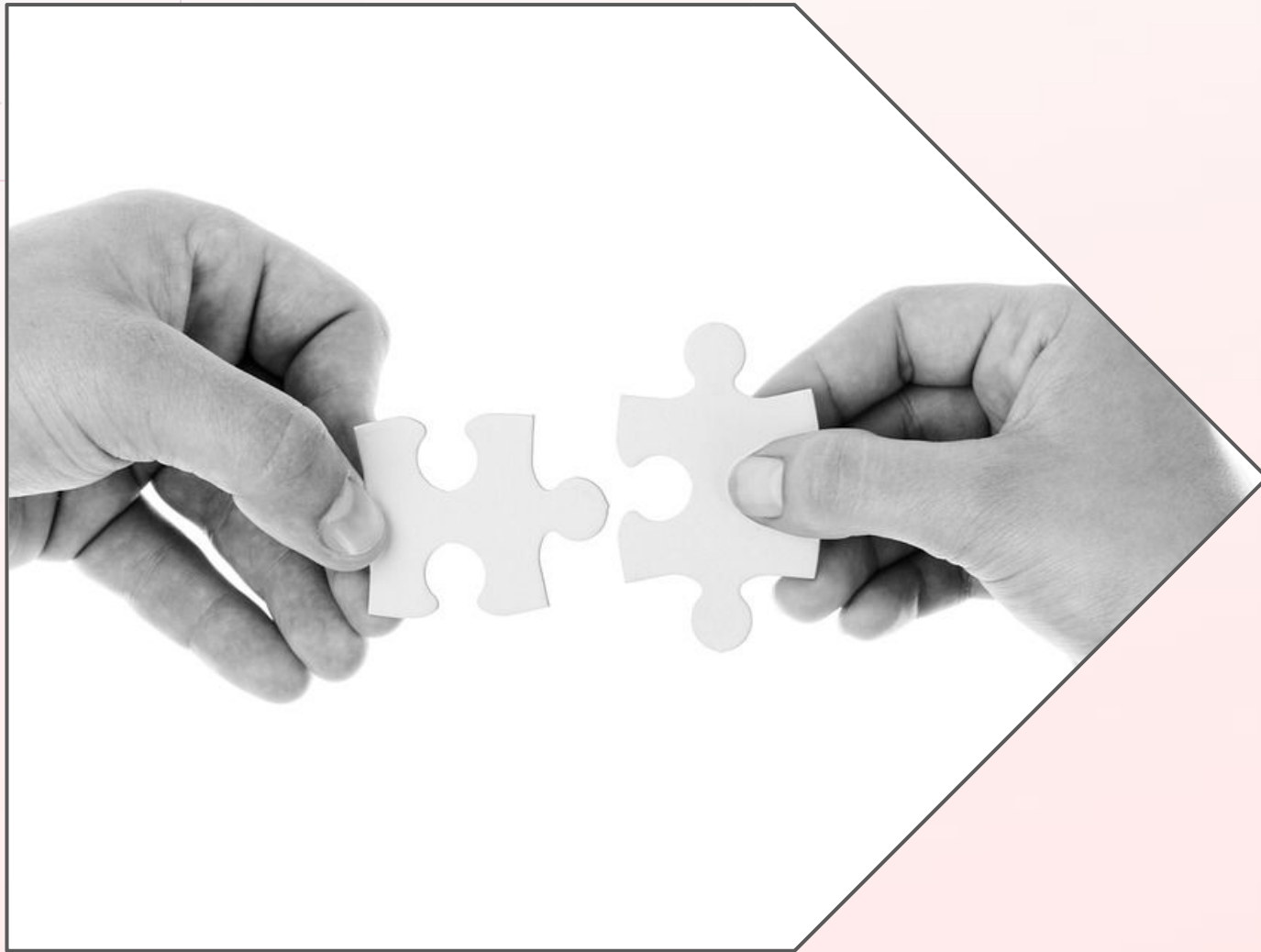
**Mobile & Data  
Storage**

**Functional  
Demo**

**App Testing  
and  
Deployment**

# Why Add Mobile?

- Holistic solution



# Why Add Mobile?



- Holistic solution
- Customer Stickiness

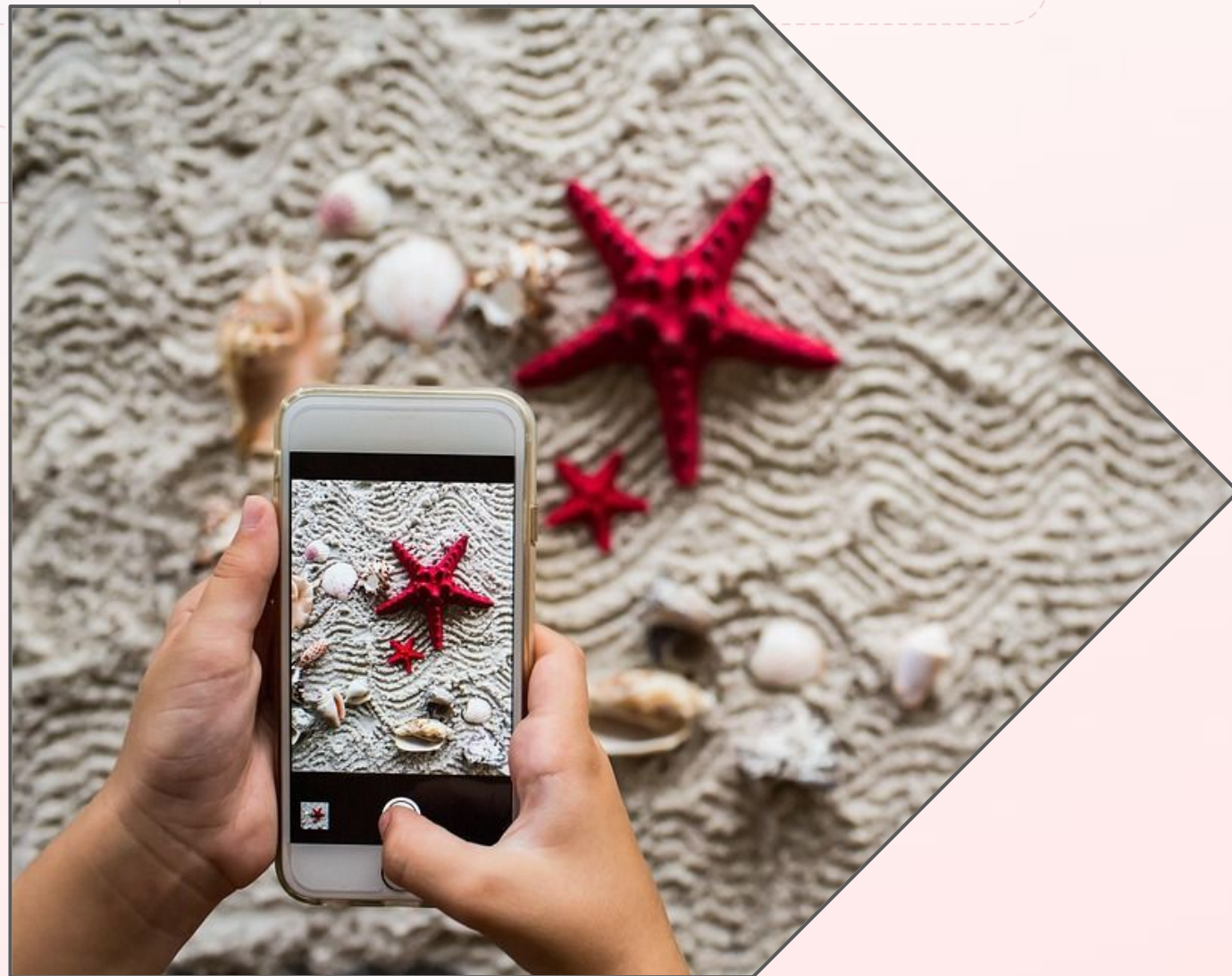


# Why Add Mobile?



- Holistic solution
- Customer Stickiness
- Lower risk & costs

# Why Add Mobile?



- Holistic solution
- Customer Stickiness
- Lower risk & costs
- Usability (Mobile can be better!)



# Why Add Mobile?



- Holistic solution
- Customer Stickiness
- Lower risk & costs
- Usability (Mobile can be better!)
- If you don't, your competitors will!

# Why Add Mobile?

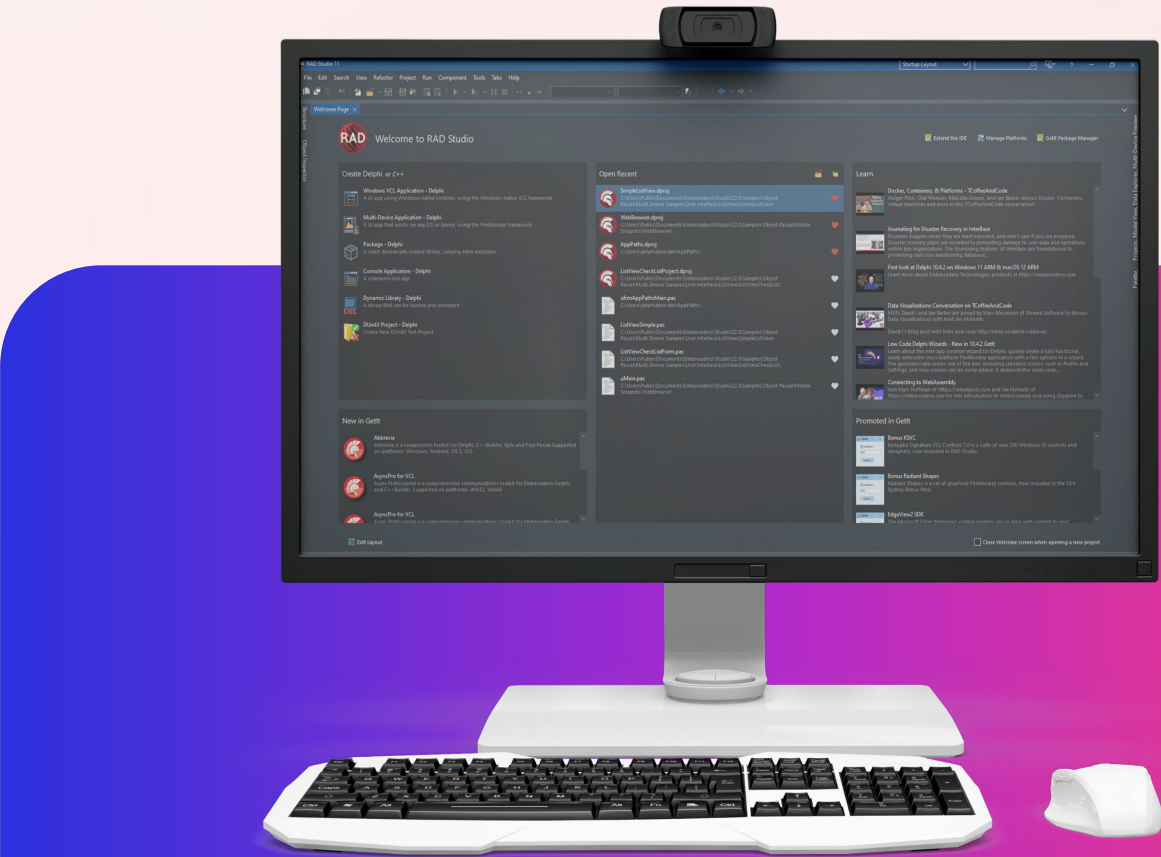


- Holistic solution
- Customer Stickiness
- Lower risk & costs
- Usability (Mobile can be better!)
- If you don't, your competitors will!
- Critical mass of BYOD



# Getting Ready for Mobile

What to think before you start



# Getting Ready for Mobile



- Infrastructure Differences
  - Local vs Remote
  - Server vs App-Teathering
  - Azure and AWS SDK

# Getting Ready for Mobile



- Infrastructure Differences
  - Local vs Remote
- Data security & Risk Mitigation
  - Compiled vs Interpreted



# Getting Ready for Mobile



- Infrastructure Differences
  - Local vs Remote
- Data security & Risk Mitigation
  - Compiled vs Interpreted
- Time to Market

# Getting Ready for Mobile



- Infrastructure Differences
  - Local vs Remote
- Data security & Risk Mitigation
  - Compiled vs Interpreted
- Time to Market
- Total Cost of Ownership / Technical Debt

# Getting Ready for Mobile



- Infrastructure Differences
  - Local vs Remote
- Data security & Risk Mitigation
  - Compiled vs Interpreted
- Time to Market
- Total Cost of Ownership / Technical Debt
- User Experience & Scalability



# Getting Ready for Mobile



## Choosing your Tooling

## Vendor Tools

### Pros

- Native Performance
- Native UX
- Secure

### Cons

- Multiple teams
- Higher dev cost
- Multiple code bases

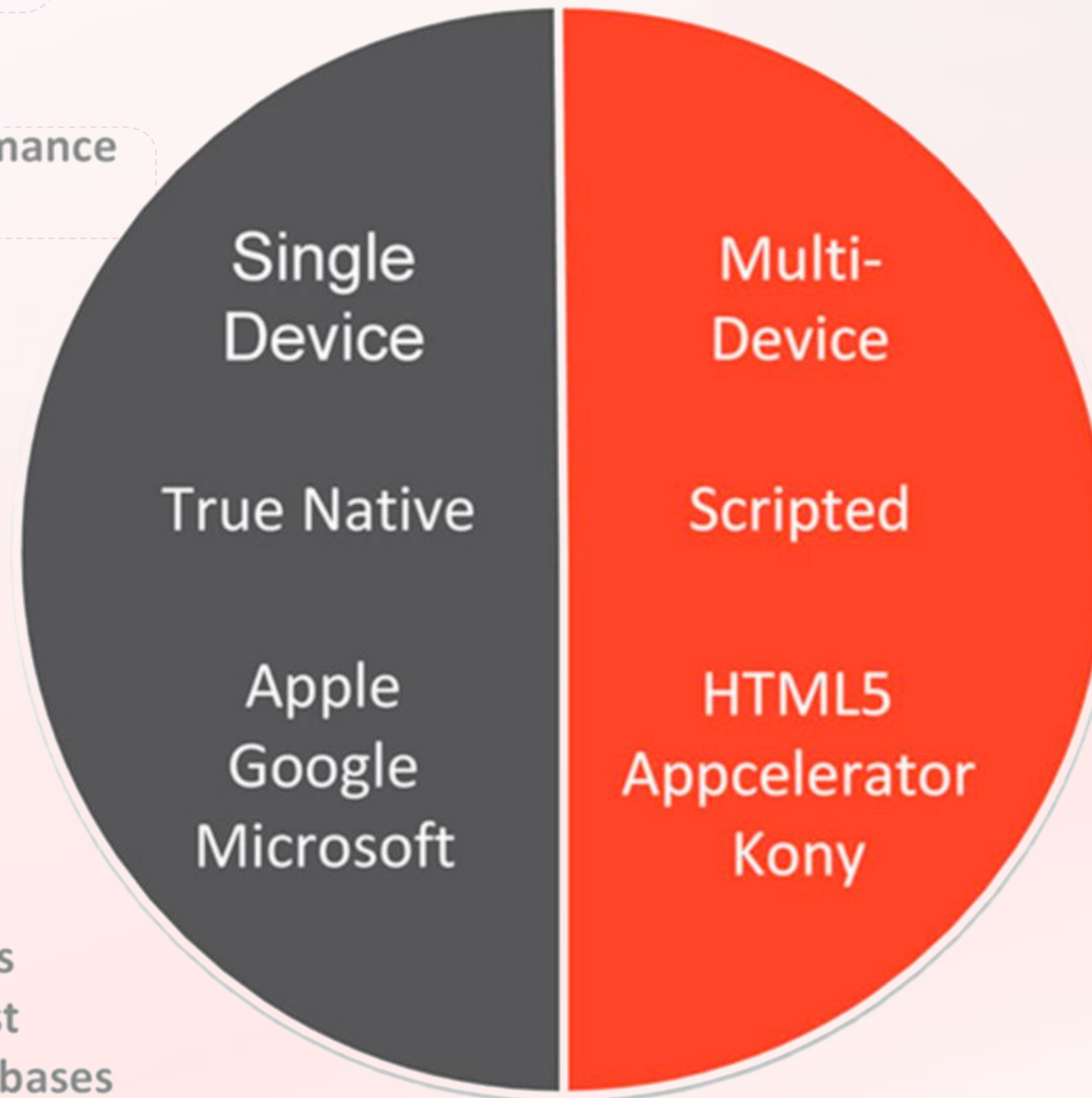
## Web Tech Based Tools

### Pros

- One team
- Lower dev costs
- Fast time to market

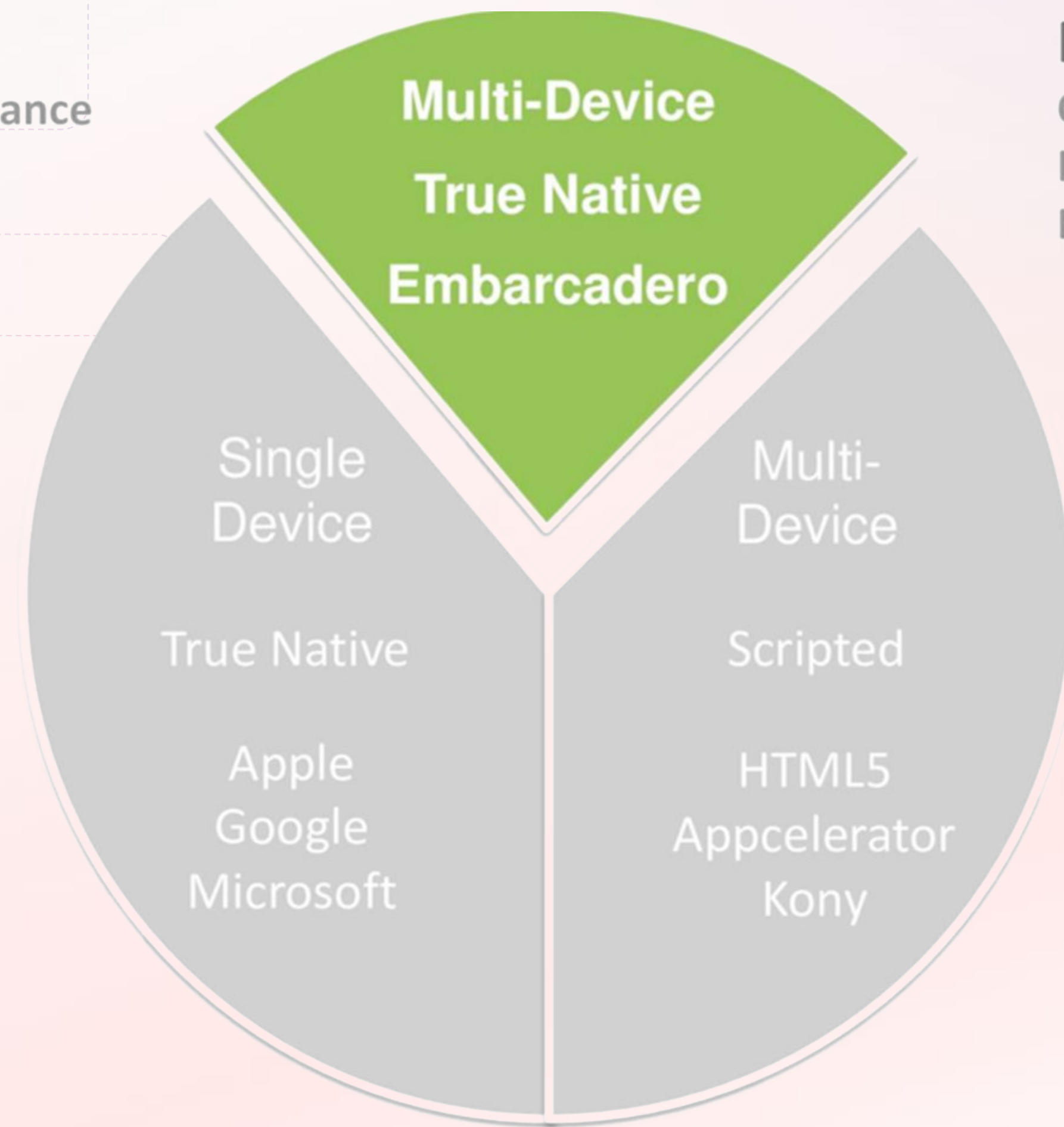
### Cons

- Non-Native UX
- Unsecure
- Script Performance



## Pros

Native Performance  
Native UX  
Secure



## Pros

One team  
Lower dev costs  
Fast time to market



# Platform Vendor Tools

## Apple iOS

Info.plist

Swift or  
Objective-C  
Code

NIB File

Resources

Cocoa APIs

## Android

AndroidManifest.x  
ml

Java or Kotlin  
Code

Layout

Resources

JNI & JDK  
Interface

## Windows

Visual Studio  
Project

C++ or C#  
Code

XAML

Resources

Windows APIs

VS

## RAD Studio

Single Project file

Pascal or C++ code



FMX layout

Android  
Variant

iOS  
Variant

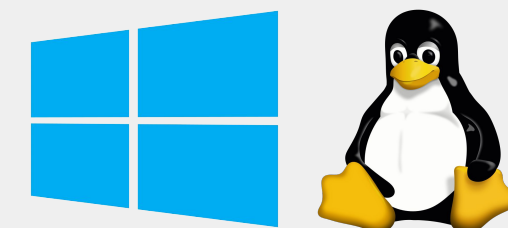
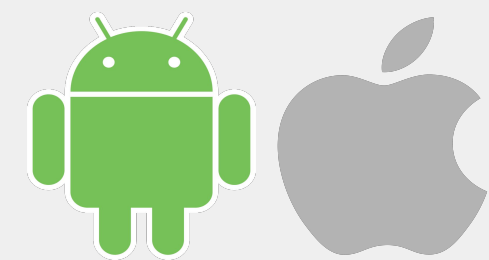
Resources

FMX & RTL  
Libraries

Platform APIs



One Project  
4 Platforms



# Mobile and Data

Choosing the right database



# InterBase ToGo, Included with Enterprise Edition



- Always Available
- Encrypt data
- Multiple encryption keys
- User/role specific decryption rights
- Cross Platform (full life cycle support)
- Change Tracking with ChangeViews™

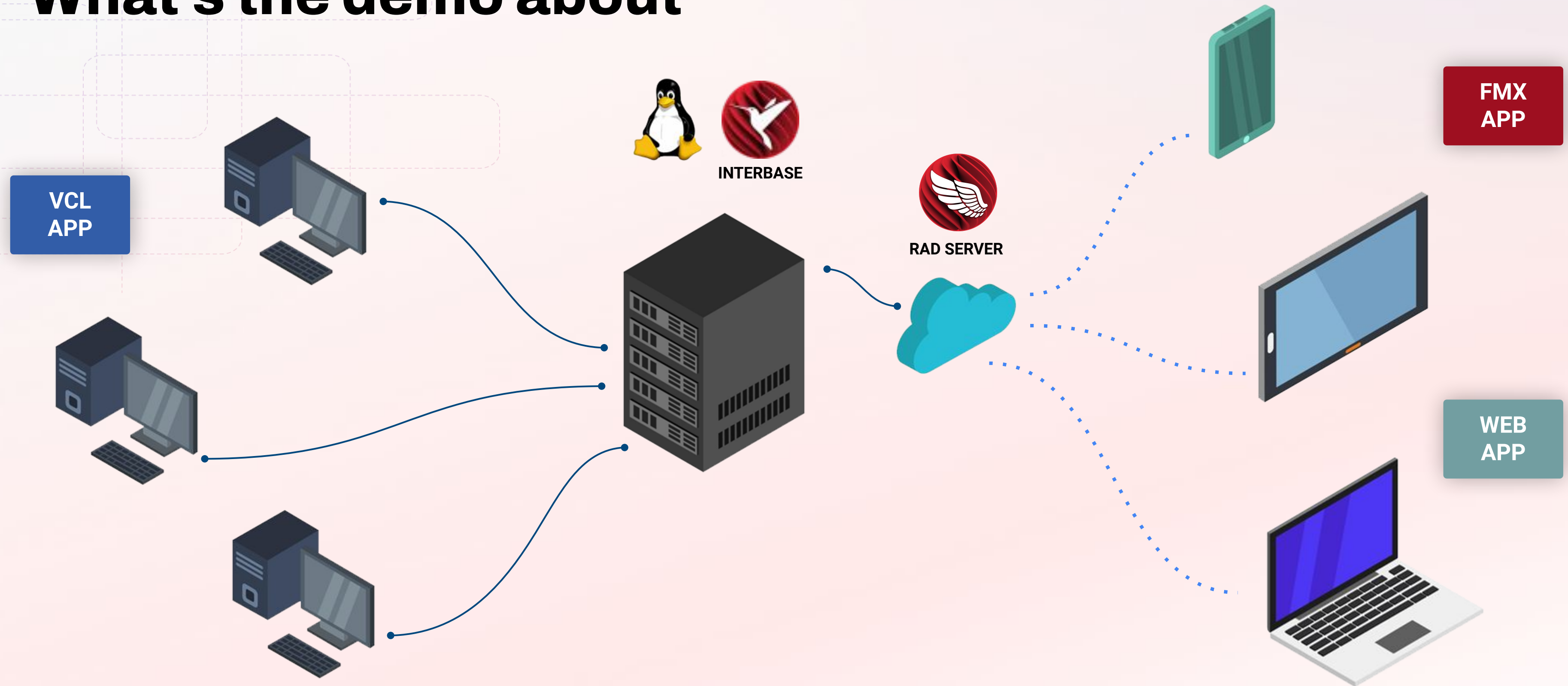


# Let's see a demo

No “hello worlds” or fish



# What's the demo about



Why  
Mobile?

Getting  
Ready

Mobile  
Data

Demo

Test &  
Deploy

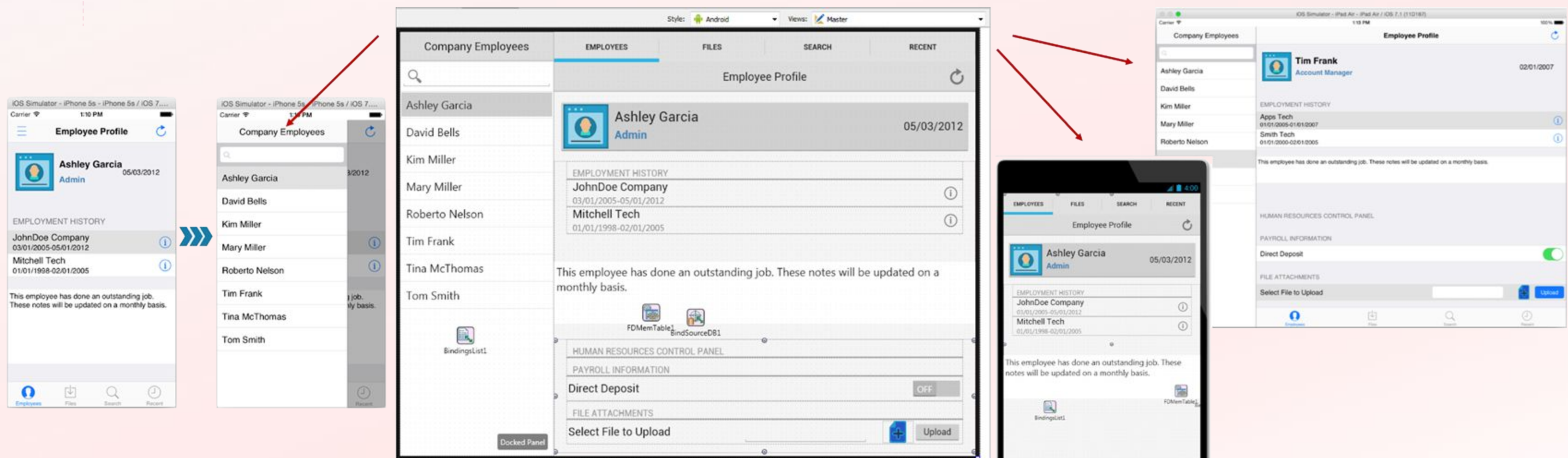
# Demo




# Best in Industry: FireUI Multi-Device Designer

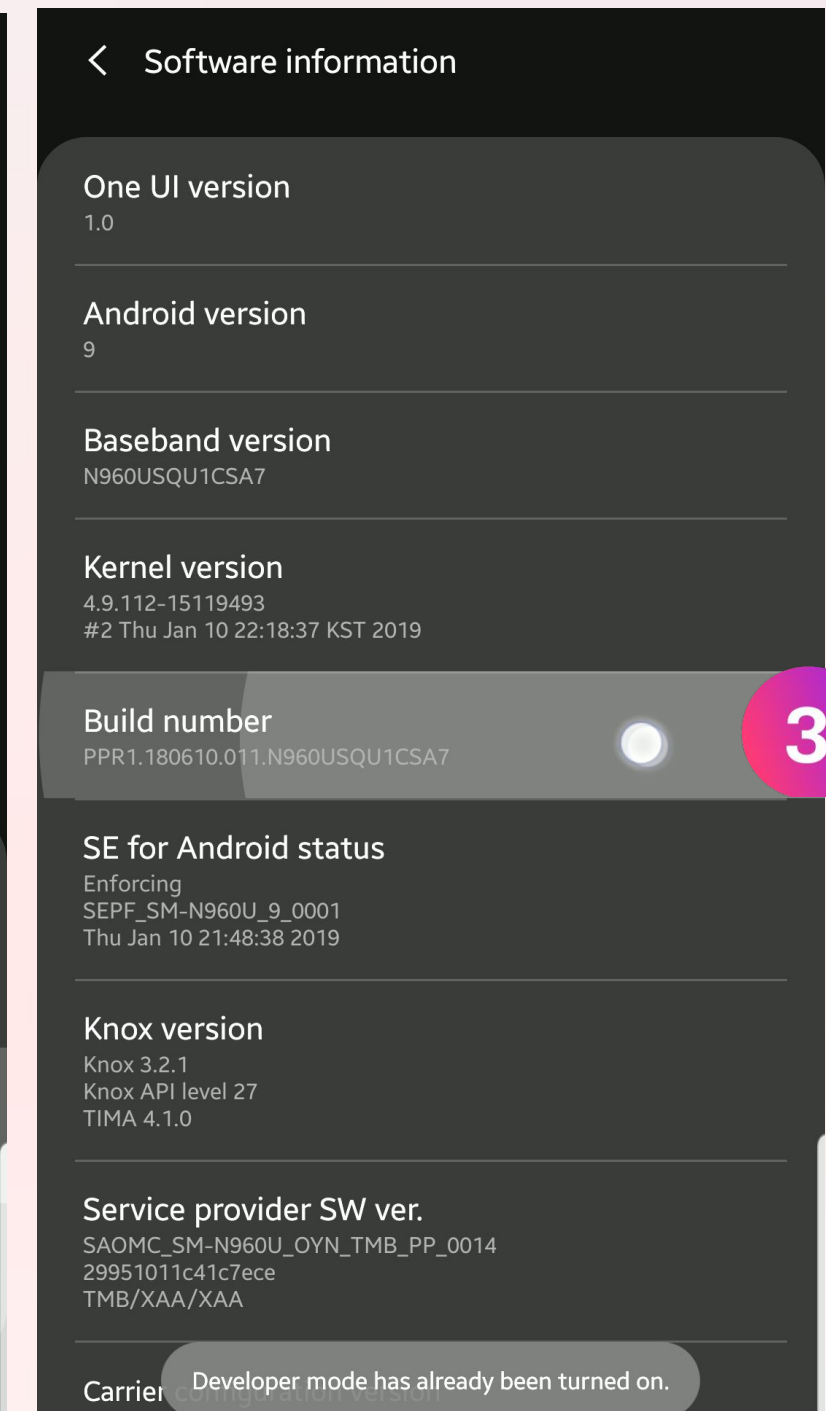
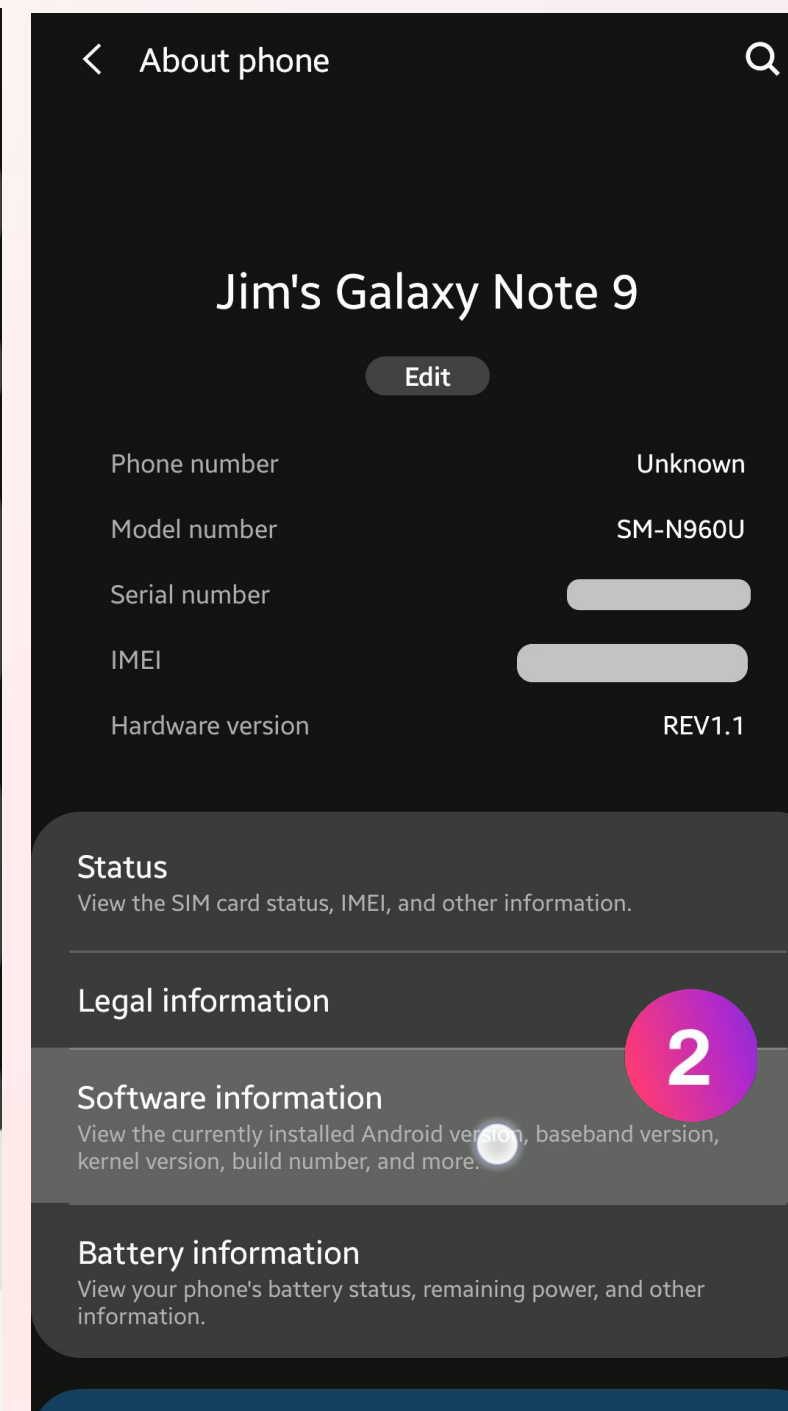
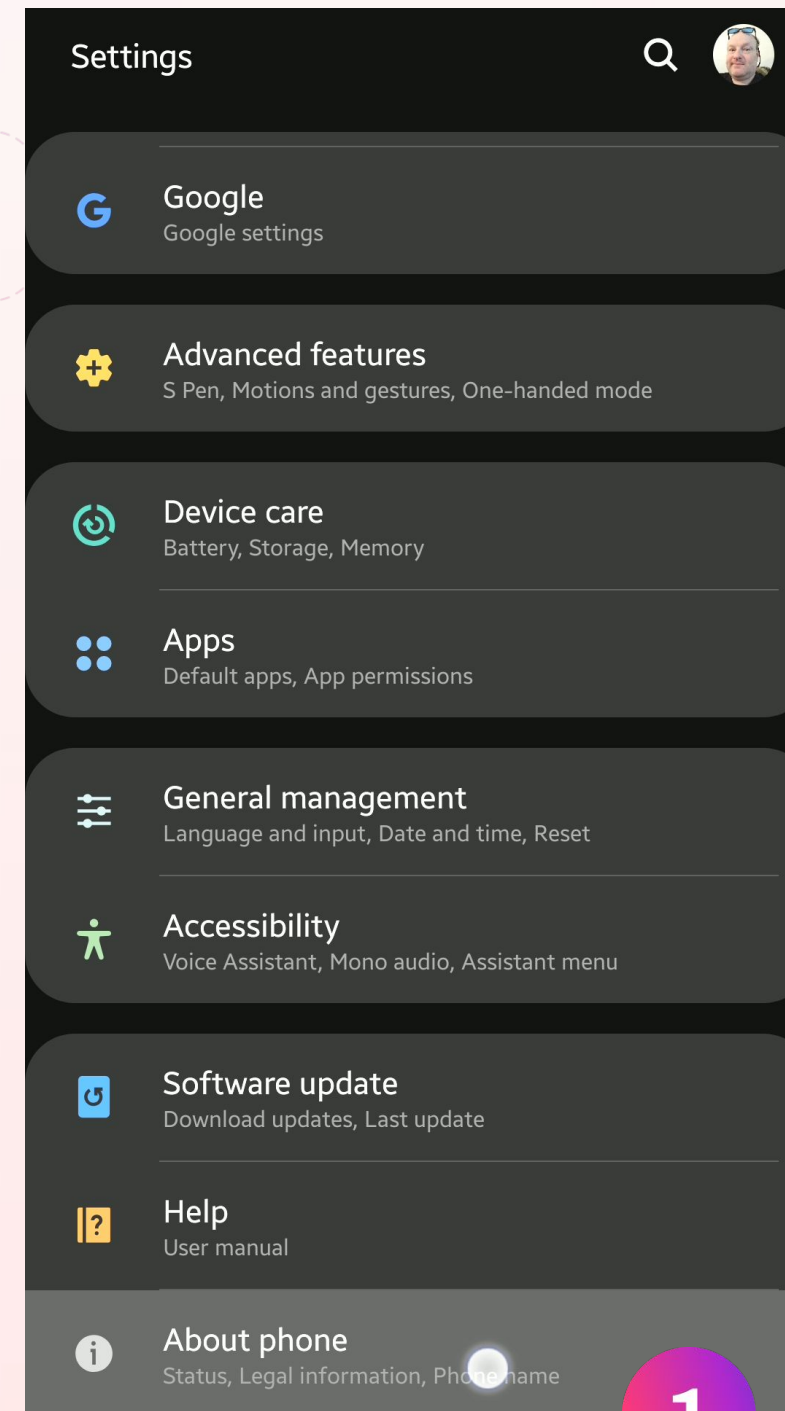
Shared master and specific views

Visually customize forms for different platforms and form factors

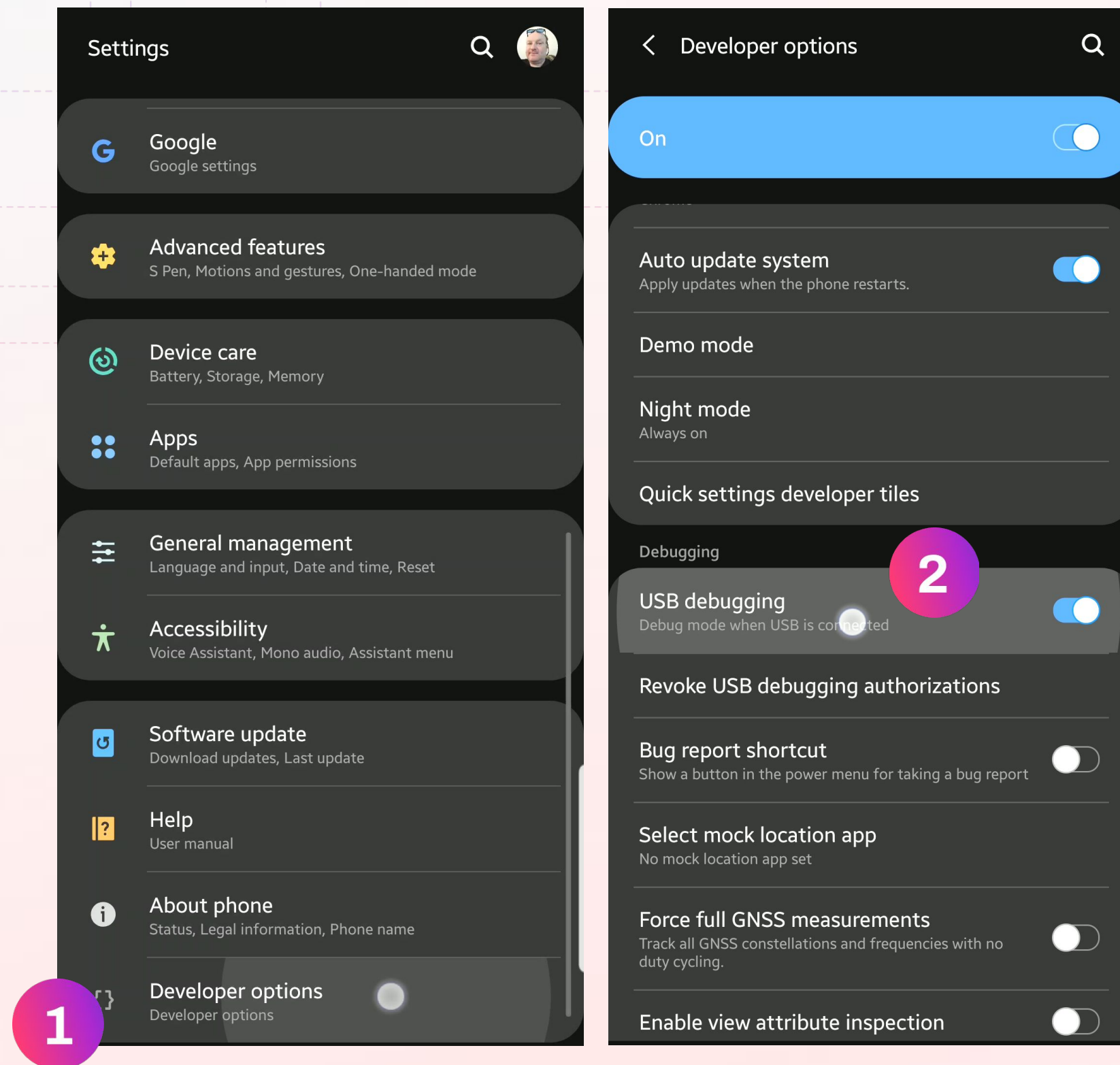


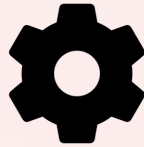
# Entering Developer Mode

- Enter Settings 
- 1 Goto About Phone
- 2 Software Information
- Locate Build Number
- 3 Tap seven times
- Official instructions
- <https://developer.android.com/studio/debug/dev-options>
- Some platforms are slightly different



# Enable USB Debugging

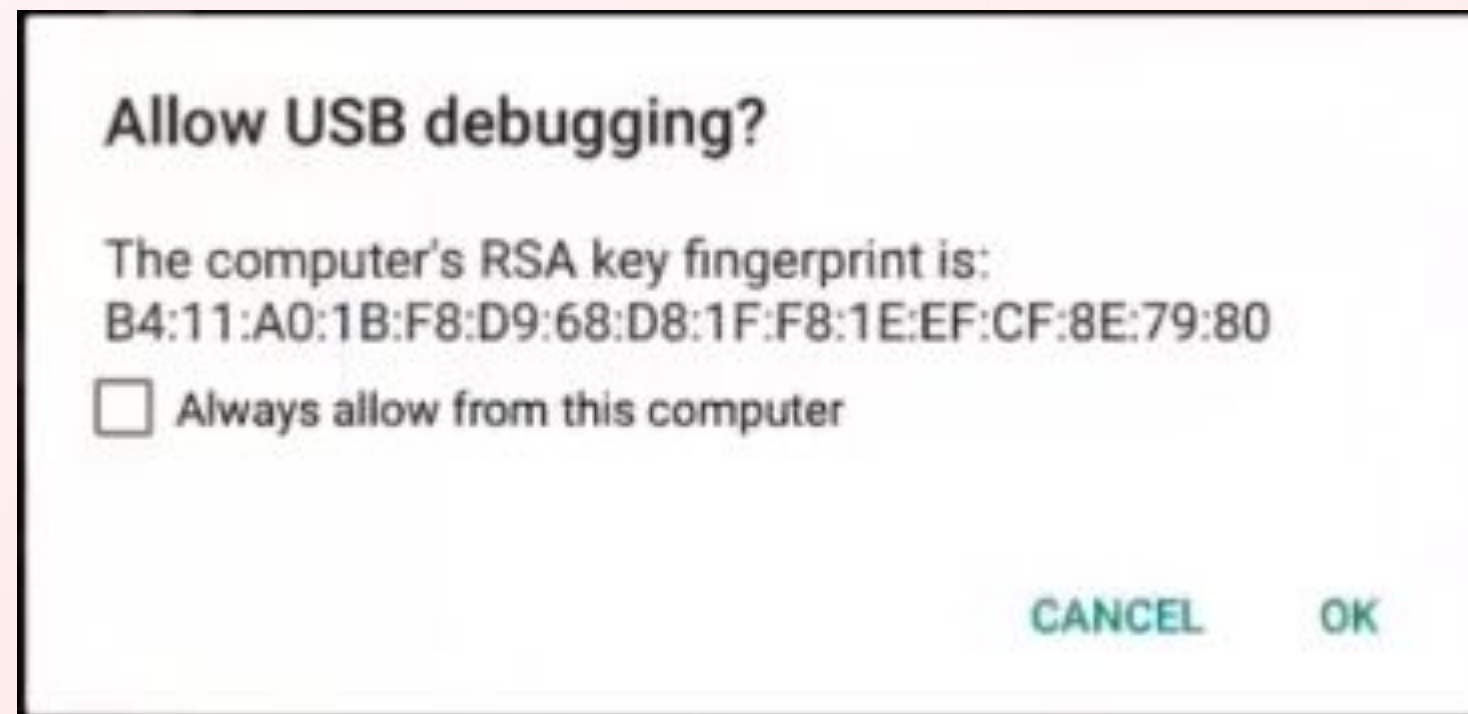


- After entering developer mode
- Go into Settings 
- 1 Enter Developer options
- Scroll down to USB debugging
- 2 Enable USB debugging
- Confirm choice



# Set up the Environment (ADB)

When you connect your device, you'll see a dialog similar to this on the device screen. Check the option to “always allow from this computer” and click “OK”



# Appstores

Key points



# AAB Steps

The image shows the 'Project Options for libRS95485.so (Android64 - All configurations)' dialog in Android Studio. The 'Compiling' tab is active, showing the 'Code generation' section with 'Generate Android App Bundle file (arm + arm64)' checked. The 'Provisioning' tab is also visible, showing the 'KeyStore' section with 'KeyStore File' set to 'C:\Android App Bundle\android\_app\_bundle.keystore' and 'KeyStore Alias' set to 'aab'. An 'Information' dialog box is overlaid on the bottom right, stating: 'RS95485' has been built successfully. You can find the 'RS95485.aab' file in the following location: 'C:\Android App Bundle\Android64\Debug\RS95485\bin'.

**Project Options for libRS95485.so (Android64 - All configurations)**

**Compiling**

Target: All configurations - Android 64-bit platform

**Code generation**

- Code inlining control: On
- Code page: 0
- Emit runtime type information: ☐ false
- Minimum enum size: Byte
- Optimization: ☒ true
- Record field alignment: Quad word

**Debugging**

- Assertions: ☒ true
- Debug information: ☒ true
- Local symbols: ☒ true
- Symbol reference info: Reference
- Use debug .dcus: ☐ false

**Other options**

- Additional options to pass to the compiler: ☐ false
- Generate Android App Bundle file (arm + arm64): ☒ true
- Generate XML documentation: ☐ false

**Provisioning**

Target: All configurations - Android 64-bit platform

Build type: Android 64-bit - Application Store

**KeyStore**

KeyStore File: C:\Android App Bundle\android\_app\_bundle.keystore

KeyStore Password: .....

KeyStore Alias: aab

**Information**

"RS95485" has been built successfully. You can find the "RS95485.aab" file in the following location: "C:\Android App Bundle\Android64\Debug\RS95485\bin"



# Q&A



RAD Studio® 11.3

mbarcadero

Antonio Zapater  
Pre-sales Consultant  
Embarcadero Technologies  
[antonio.zapater@embarcadero.com](mailto:antonio.zapater@embarcadero.com)

