



# Creating Universal App for Microsoft Windows, Windows 10 & Windows Phone



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# Surface Pro 3



## SPECIFICATIONS



**Screen size:**  
12 inches



**Resolution:**  
2160 x 1440



**Dimensions:**  
11.5" x 7.93" x 0.36"



**Battery Life:**  
Up to 9 hours of web  
browsing<sup>4</sup>



**Processor:**  
4<sup>th</sup> generation Intel® Core™  
i3, i5 or i7

# A full Docking Station







Intel i7  
8 GB Ram  
512 GB SSD  
Chf 2989  
Chf 144 (type cover)  
Project wireless (Miracast)  
Run on battery

# The Challenge



# ONE WINDOWS

Phone



Phablet



Small  
Tablet



Large  
Tablet



2-in-1s  
(Tablet or Laptop)



Classic  
Laptop



Desktops  
& All-in-Ones



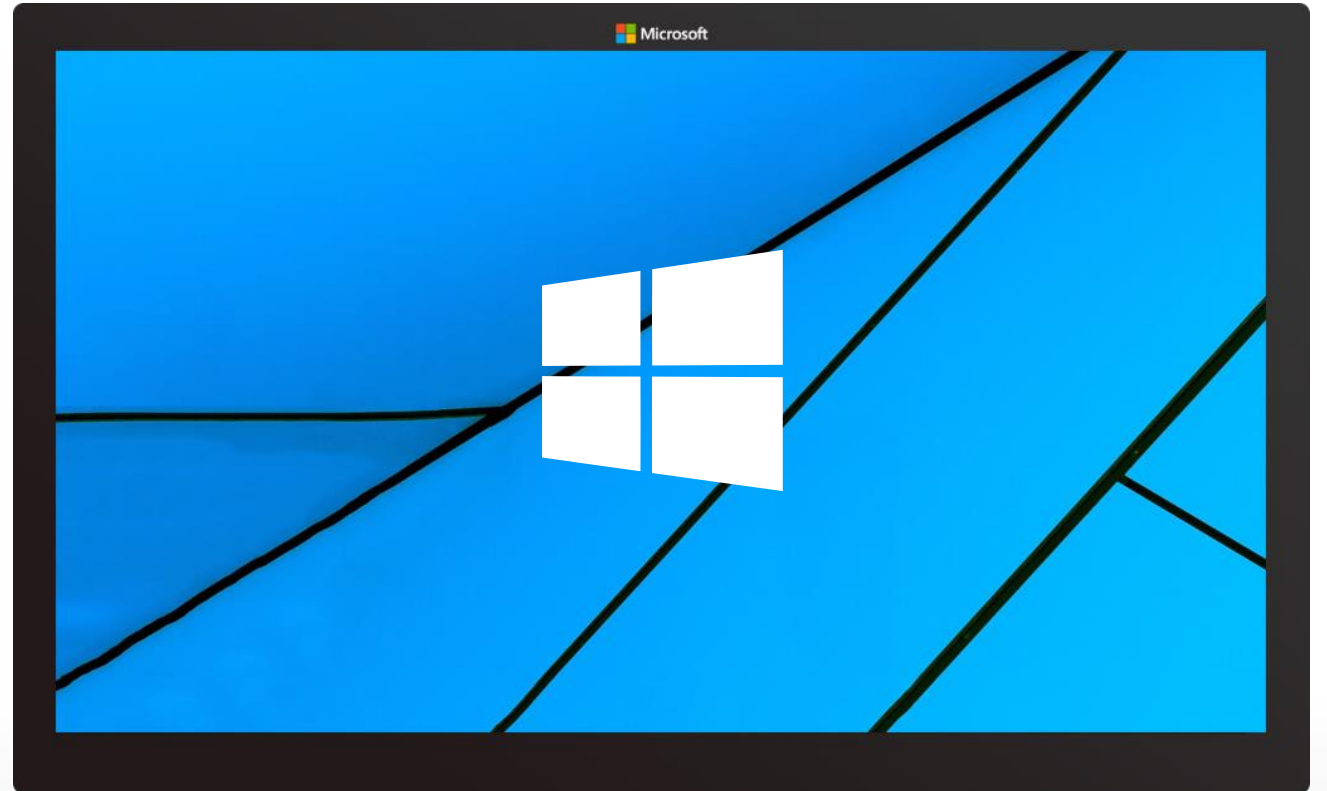
# ONE WINDOWS



Internet  
of Things



Xbox



PPI

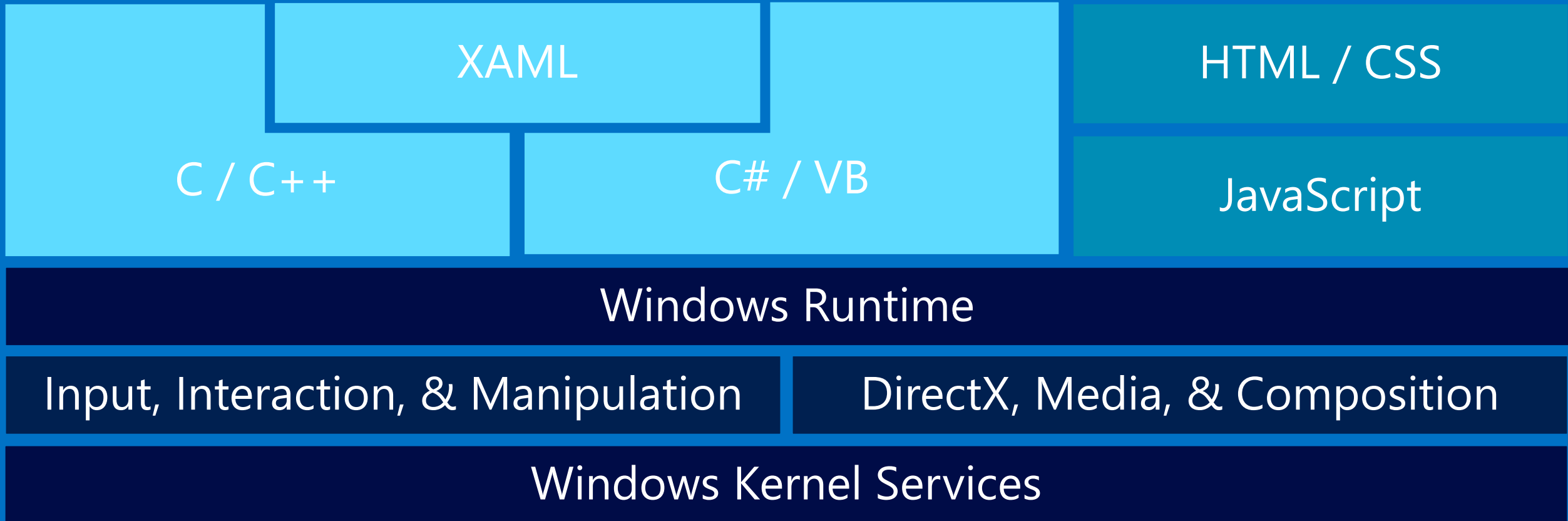




One universal  
app platform



# A common, familiar programming model for universal Windows apps





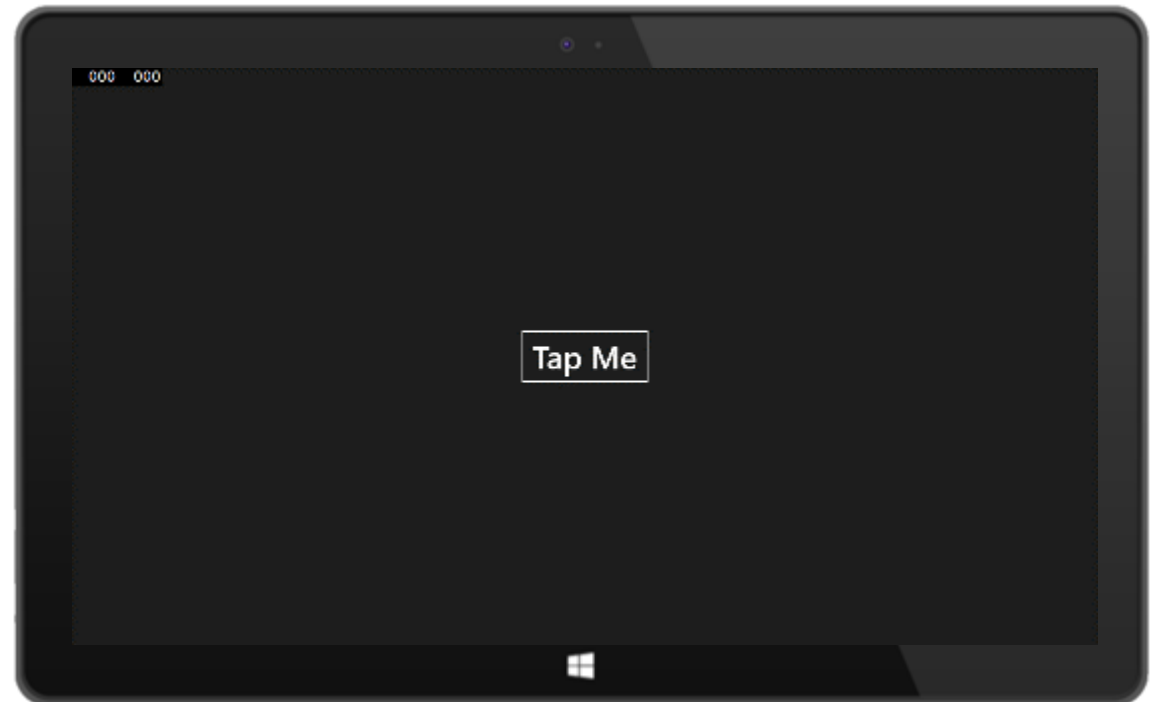


# Demo: Shared Projects



# 'Primitives' - same

- Layout: Panel, StackPanel, Grid, Border
- Buttons, Slider, ToggleSwitch, CheckBox, RadioButton, ProgressBar
- TextBox/TextBlock
- Shapes/Path





# 'Primitives' – same API, tailored behavior



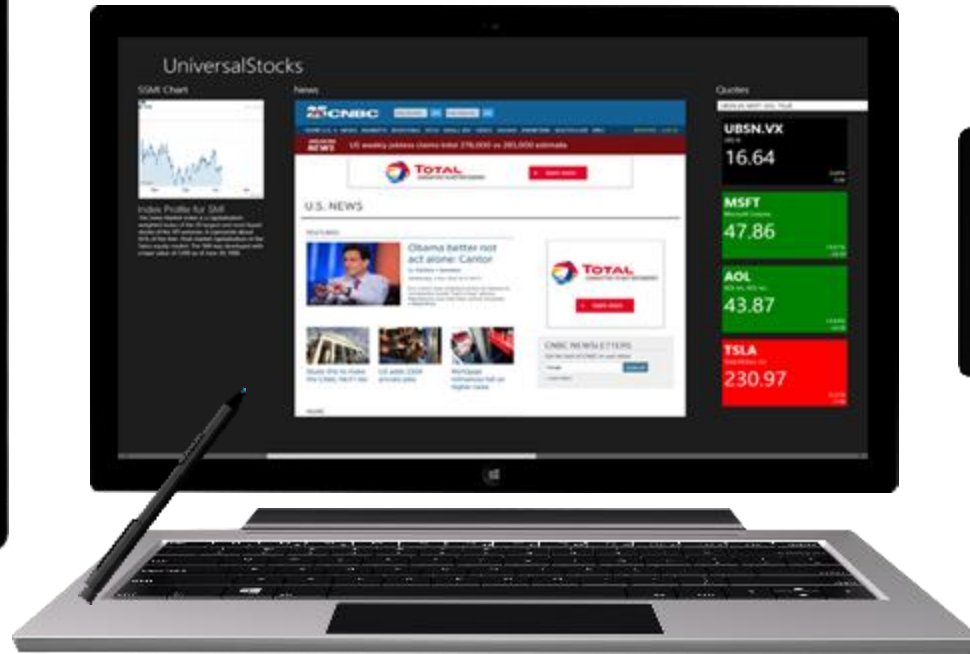
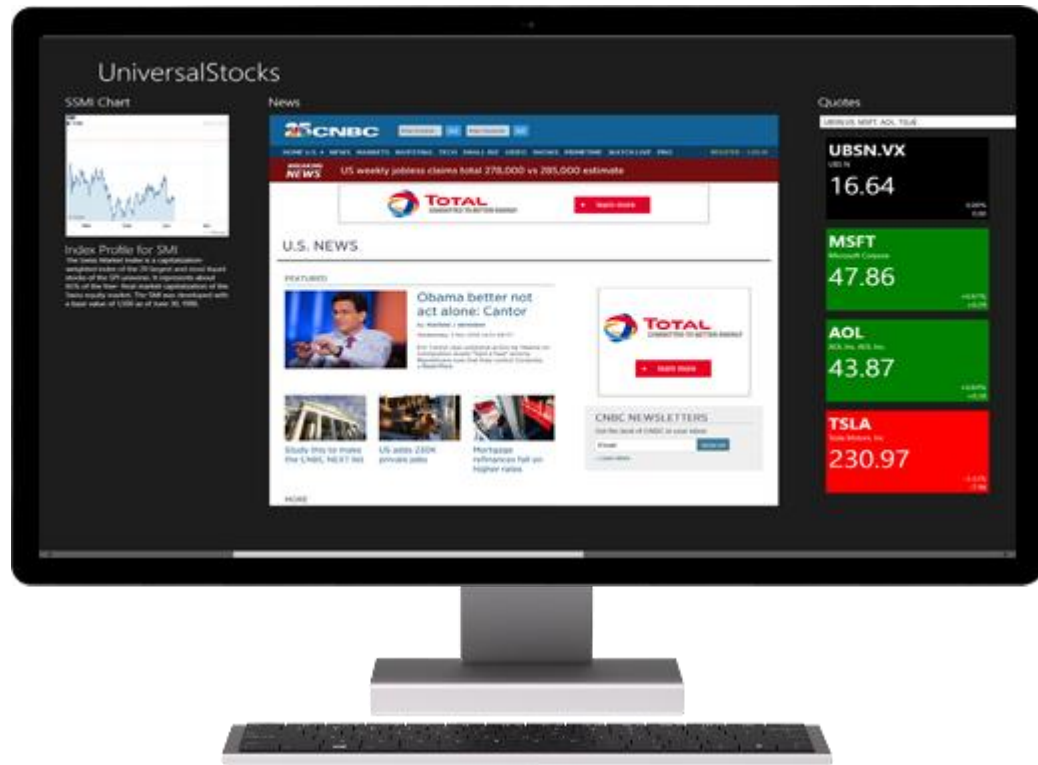
- Hub
- AppBar/CommandBar
- Date/Time Pickers and List Pickers
- ListView
  - Multi-select; containers, swipe selection
- Flyouts
- Media
- Ads SDK\*



Demo: Hub



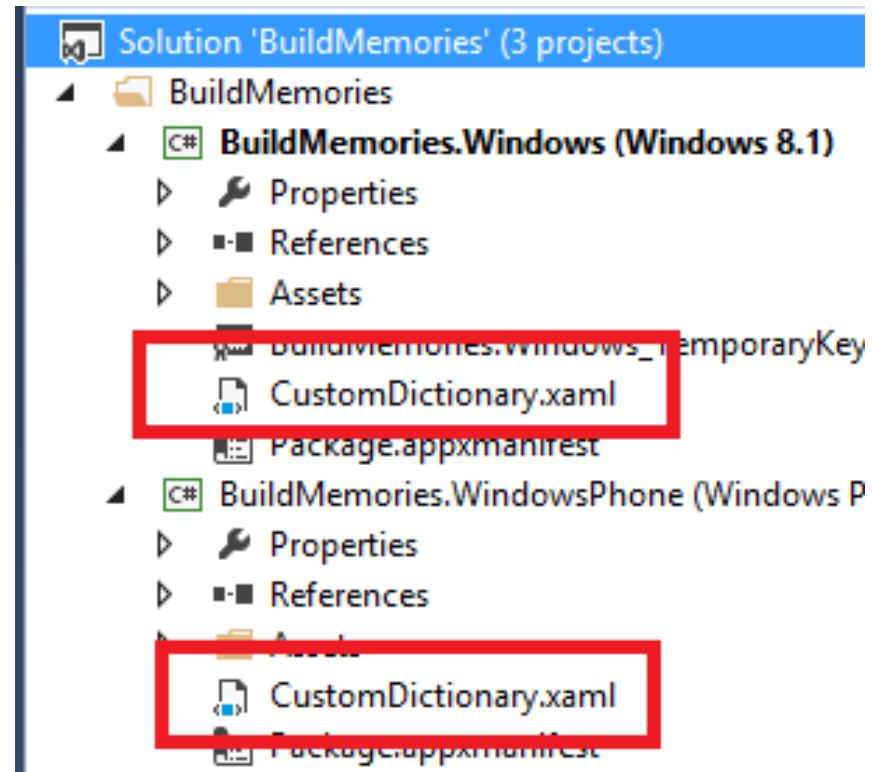
# You can *tailor* the design to each device



# Tailor the design through Styles



- A resource dictionary per project







Demo:  
Tailored resources

# Code reuse options for universal apps

call WinRT APIs  
include code and .xaml files



## Shared Projects

**New!**

Sharing **source code** between projects

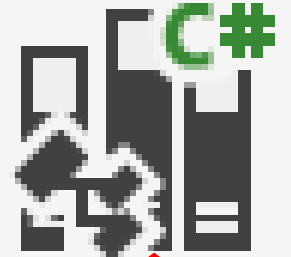


I can easily include platform-specific code under #if or partial classes

## Portable Class Libraries

Sharing one **binary** between projects

I compile just once and know it works on all platforms



**Improved!**



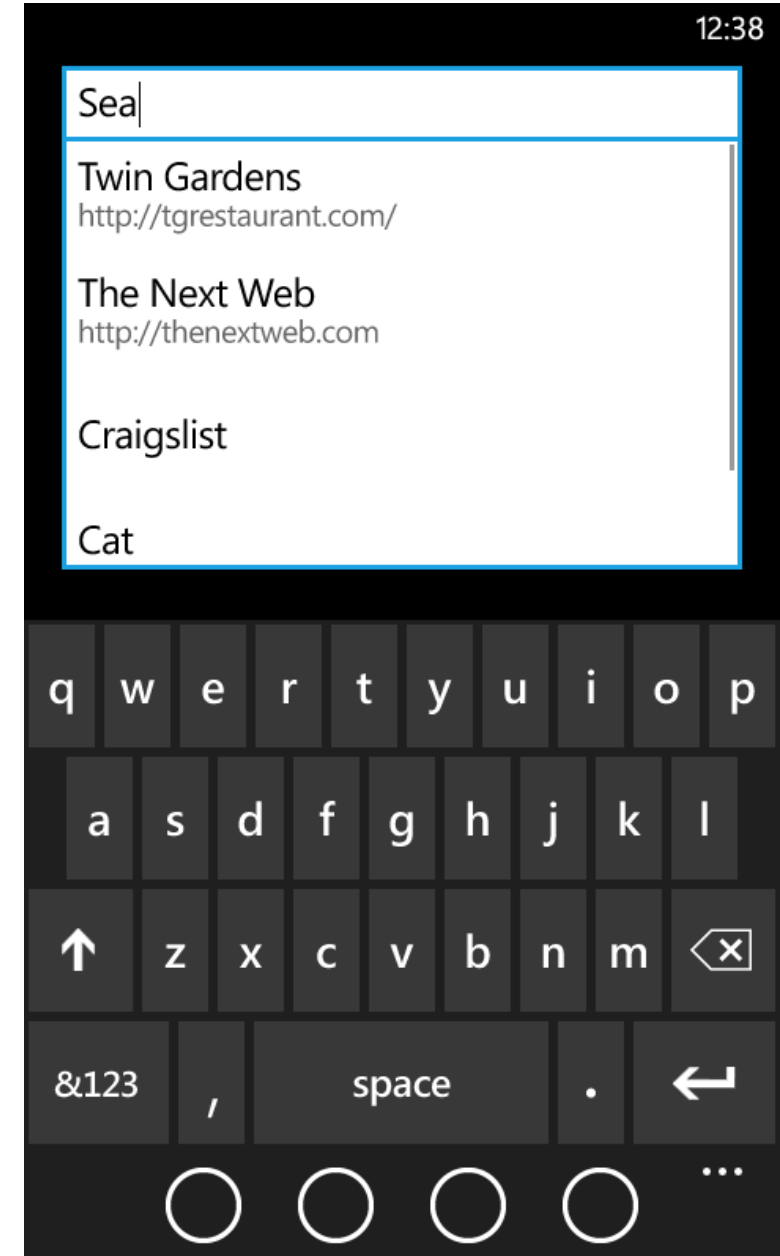




Demo:  
Shared source code

# Device-specific APIs

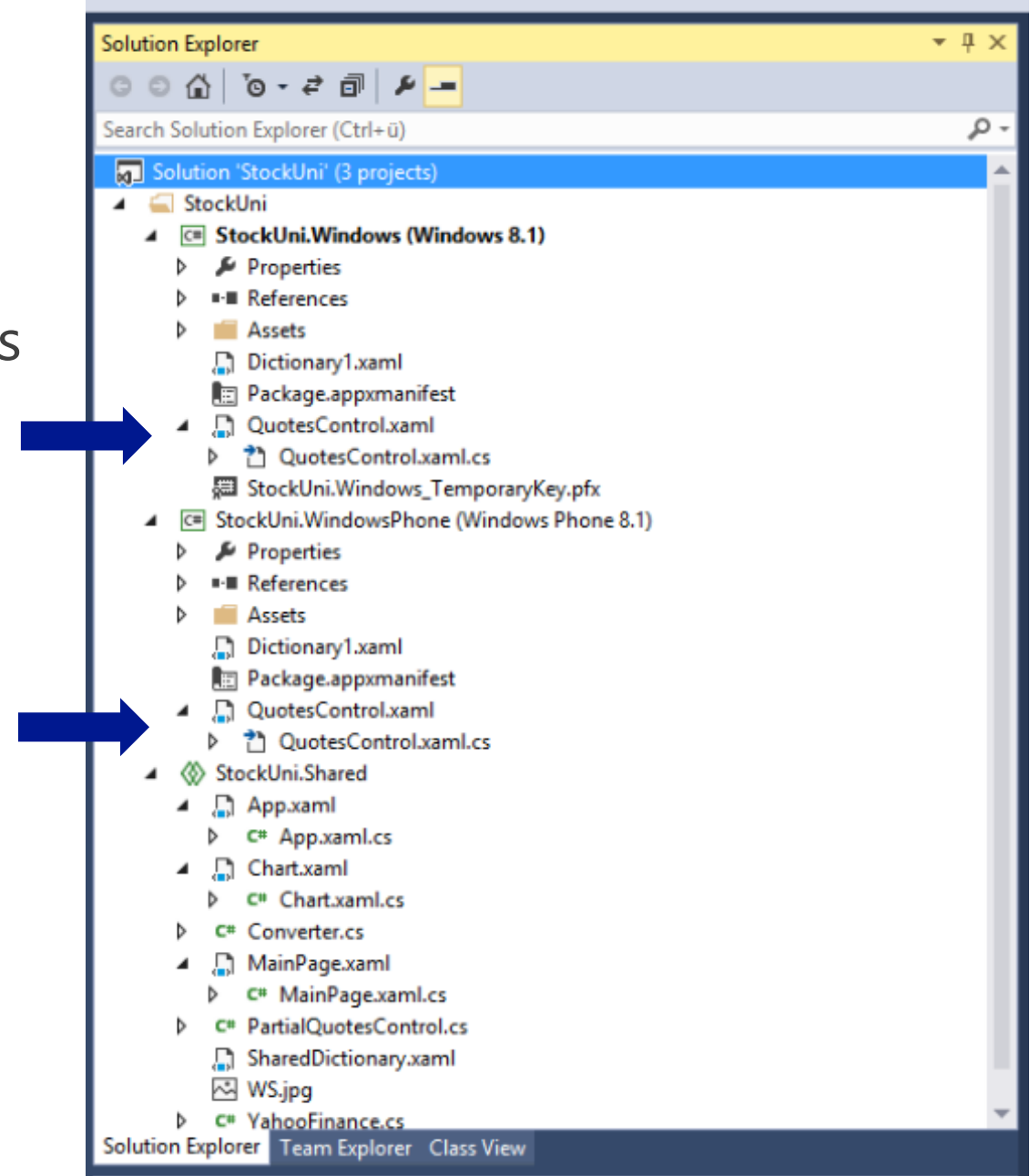
- Windows
  - **SearchBox**
  - SettingsFlyout
- Windows Phone
  - Pivot
  - **AutoSuggestBox**
  - ContentDialog
  - Maps
  - System Chrome
    - Progress area, in-call UI





# Use User Controls

- Can be in the shared project
  - Same code and behavior for both platforms
- One on each project
  - Different code and behavior



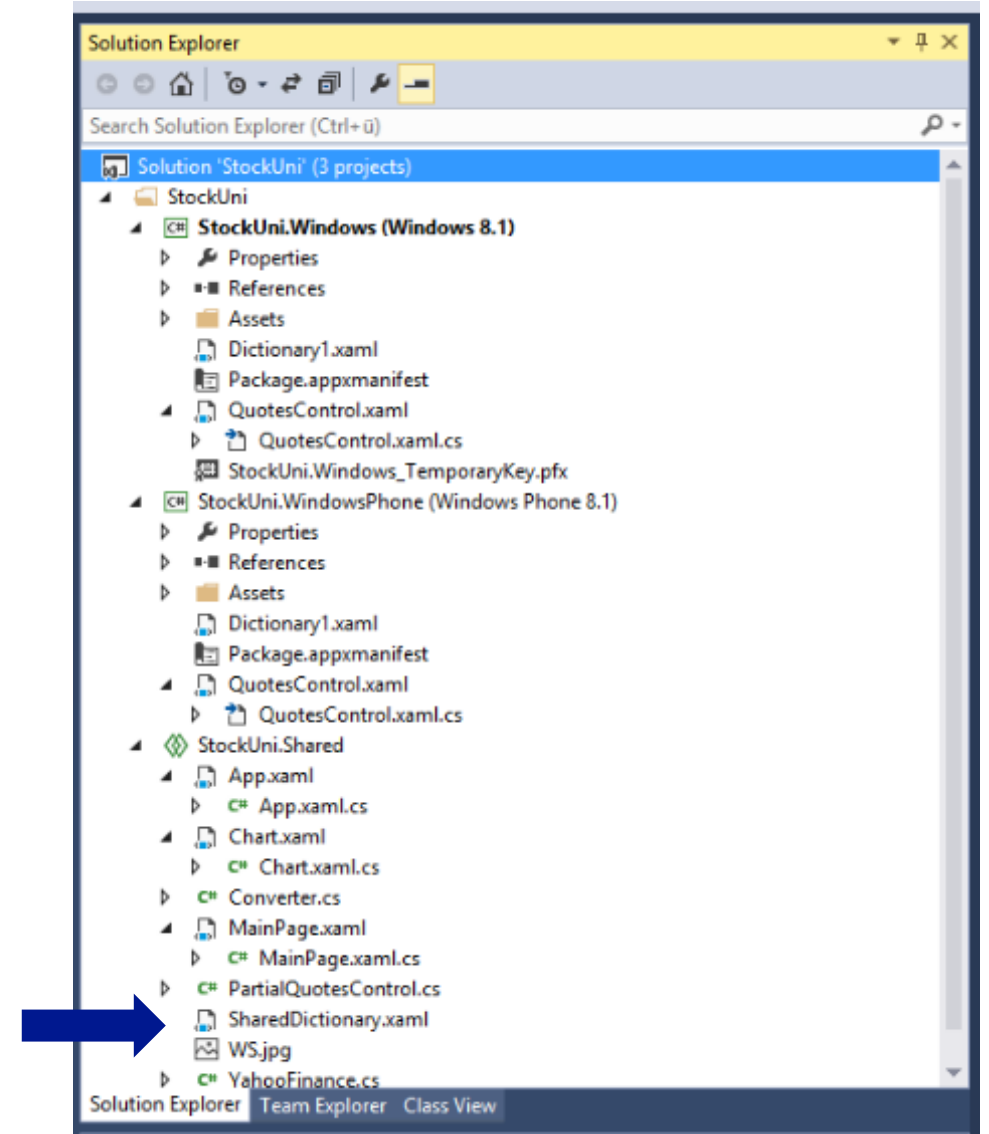


Demo:  
User Control



# Global Resources

- Share DataTemplate
- Share Converters
- Share Style





Demo:  
Share resources



# Use conditional constants



C#: WINDOWS\_APP and WINDOWS\_PHONE\_APP

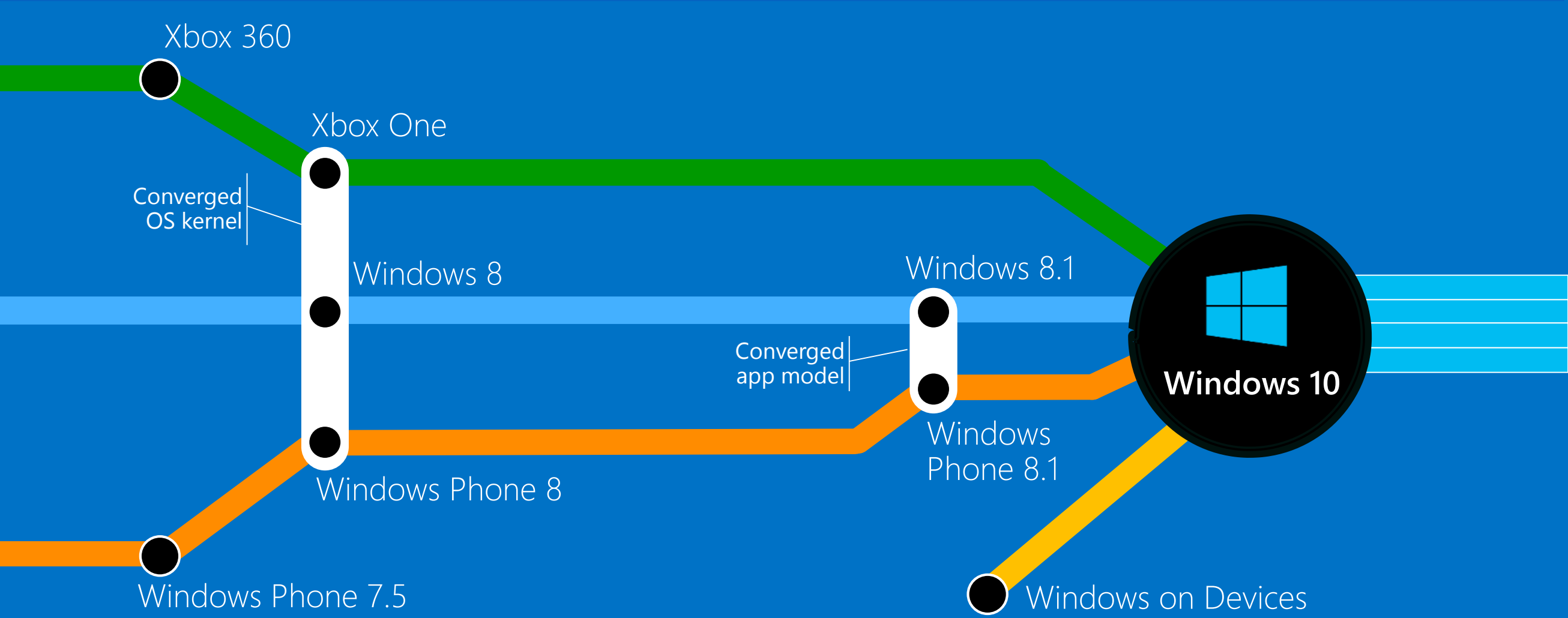
```
#if WINDOWS_PHONE_APP
    Windows.Phone.UI.Input.HardwareButtons.BackPressed +=
    this.HardwareButtons_BackPressed;
#endif
```

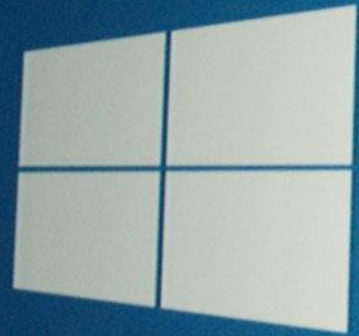


Demo:  
Final solution



# Platform Convergence Journey

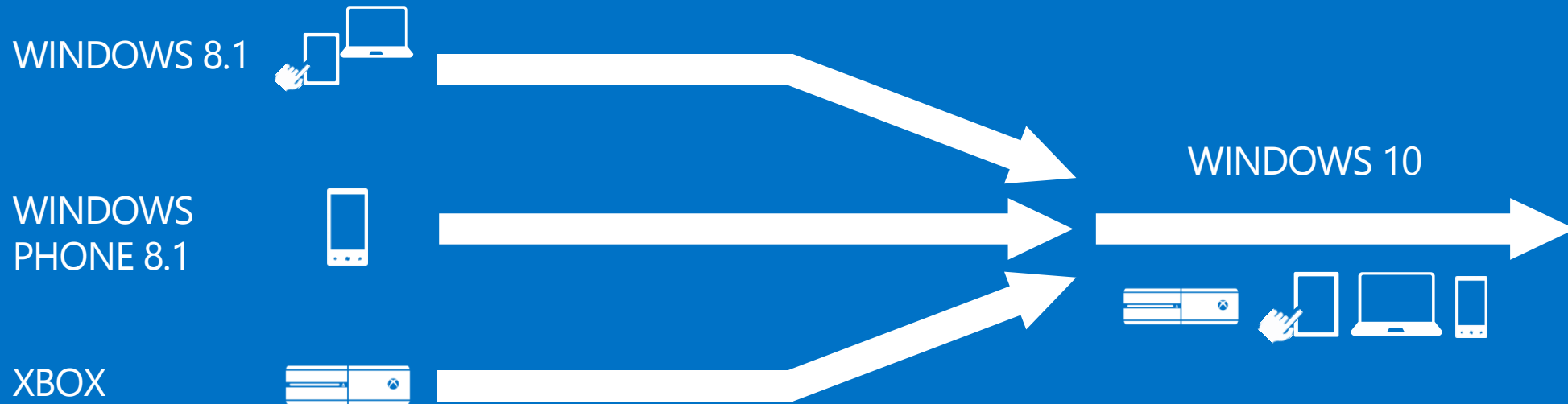




Windows 10



# One Windows Store



- Converged developer portal for Windows and Windows Phone
- Separate user and developer capabilities

- Fully converged experience
- Best features from each
- New capabilities



Your Universal  
App across all  
devices





