



About

- Chief Architect, DevOps & Modern Software at BlueMetal
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Survey says?

- WPF?
- Windows Forms?



Windows desktop market and opportunity

2.4 Million

Developers building
desktop apps in Visual
Studio every month

700 Million

Windows 10 Desktops

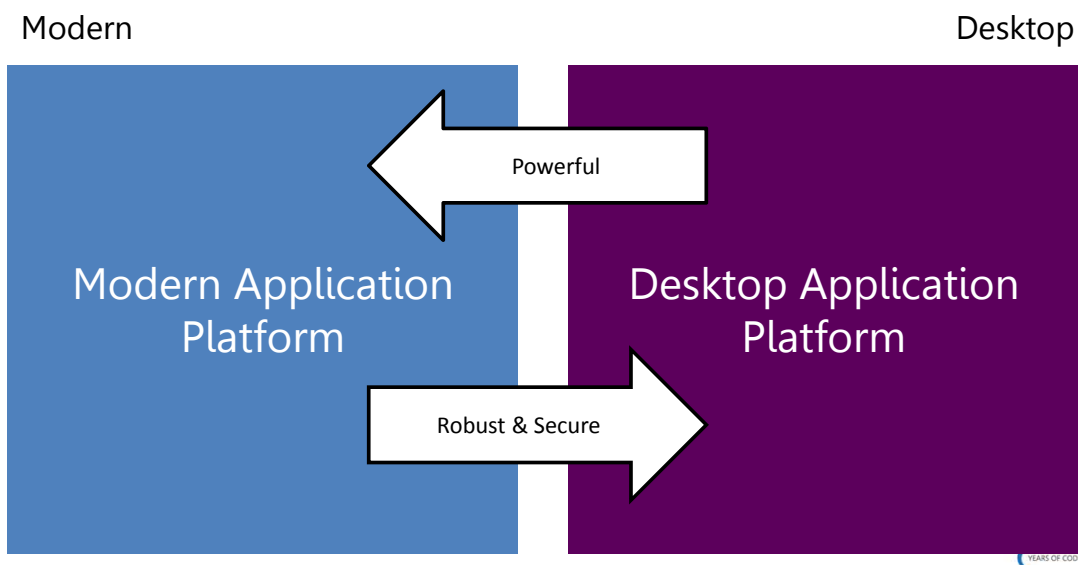


Windows 10

- How many of your companies have moved to Windows 10?
- Remain on Windows 7?
- Plans to move by ...?



One “Windows” Platform



Overview

- Distribution
- Add modern controls
- .NET Core 3: The future of WPF and Windows Forms
- Bringing in cloud data with Graph



DISTRIBUTION

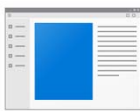


Challenges today

- Installers put things everywhere
- Machine rot
- Clean uninstall virtually impossible
- Auto-updating
- Repackaging apps takes time
- .NET SxS



Evolve to a modern deployment technology



Setup.exe



MSI



MSIX



Microsoft
Application
Virtualization



script.vb
s



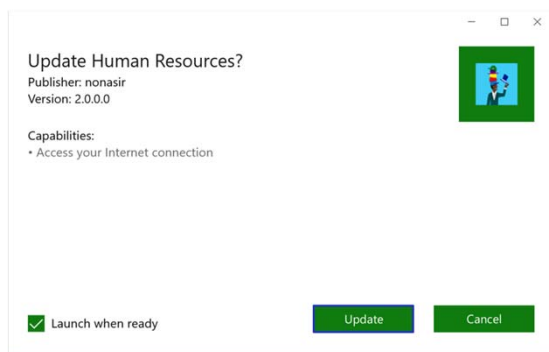
MSIX Benefits

- Never regret installing an app: clean uninstall
- Uses a type of container
- Less disk space
- Faster updates: differential updates at block level
- OS Managed
- Integrity protection



Automatic Updating

User Prompted Updates



Silent updates in background



Updates
independently of
app launch



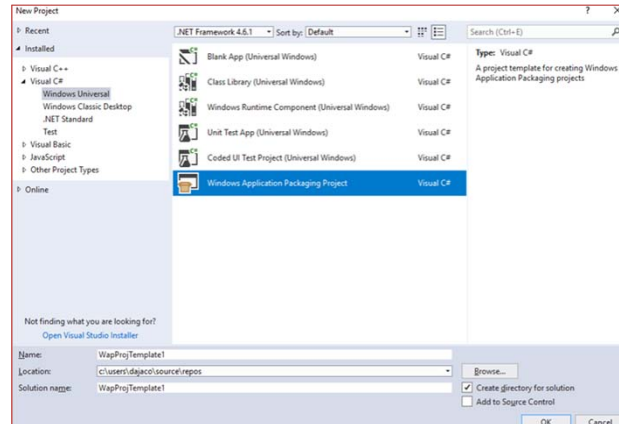
API to check for app
updates while app is
running



Migrate existing projects

New project template in VS 2017

- Package your Windows project directly in VS for streamline deployment
- You can reference your existing projects such as: WPF, Winforms, or MFC
- Leverage the advanced Universal Windows Platform tools such as: Packaging, Manifest editing, and Store association



Packaging project as MSIX

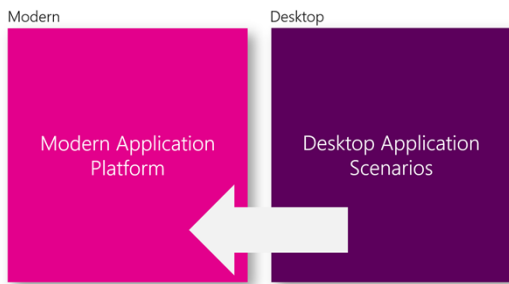
DEMO



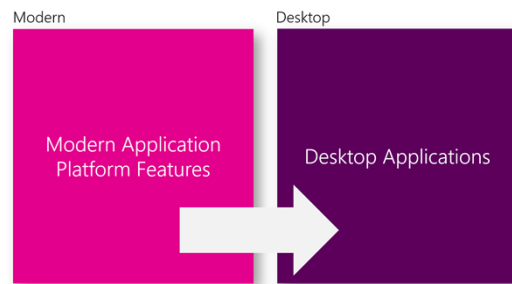
MODERN UX



UWP XAML is LOB ready and hostable in your current apps



Improved Information Density
LOB Controls & Framework
Features
Windowing APIs

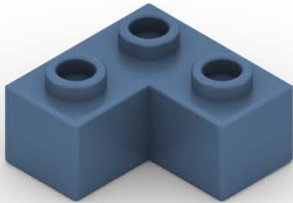


XAML Islands



Density

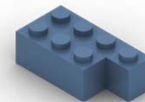
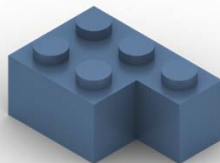
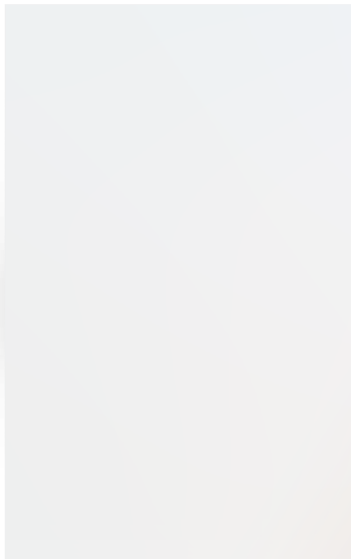
Today



Density

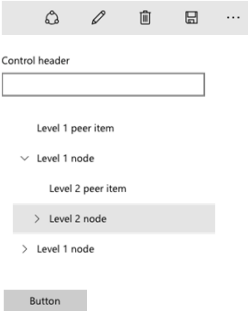
New Microsoft Standard

New Compact Size



Density

Today



Control header

Level 1 peer item

Level 1 node

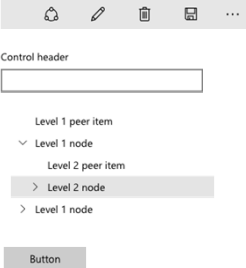
Level 2 peer item

Level 2 node

Level 1 node

Button

New Microsoft Standard



Control header

Level 1 peer item

Level 1 node

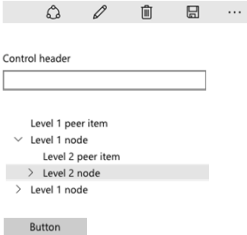
Level 2 peer item

Level 2 node

Level 1 node

Button

New Compact Size



Control header

Level 1 peer item


Level 1 node

Level 2 peer item

Level 2 node

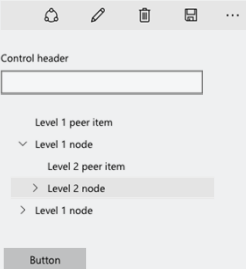
Level 1 node

Button



Density

New Microsoft Standard



Control header

Level 1 peer item

Level 1 node

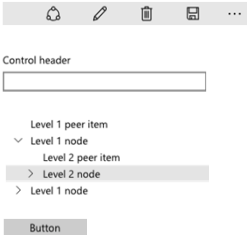
Level 2 peer item

Level 2 node

Level 1 node

Button

New Compact Size



Control header

Level 1 peer item


Level 1 node

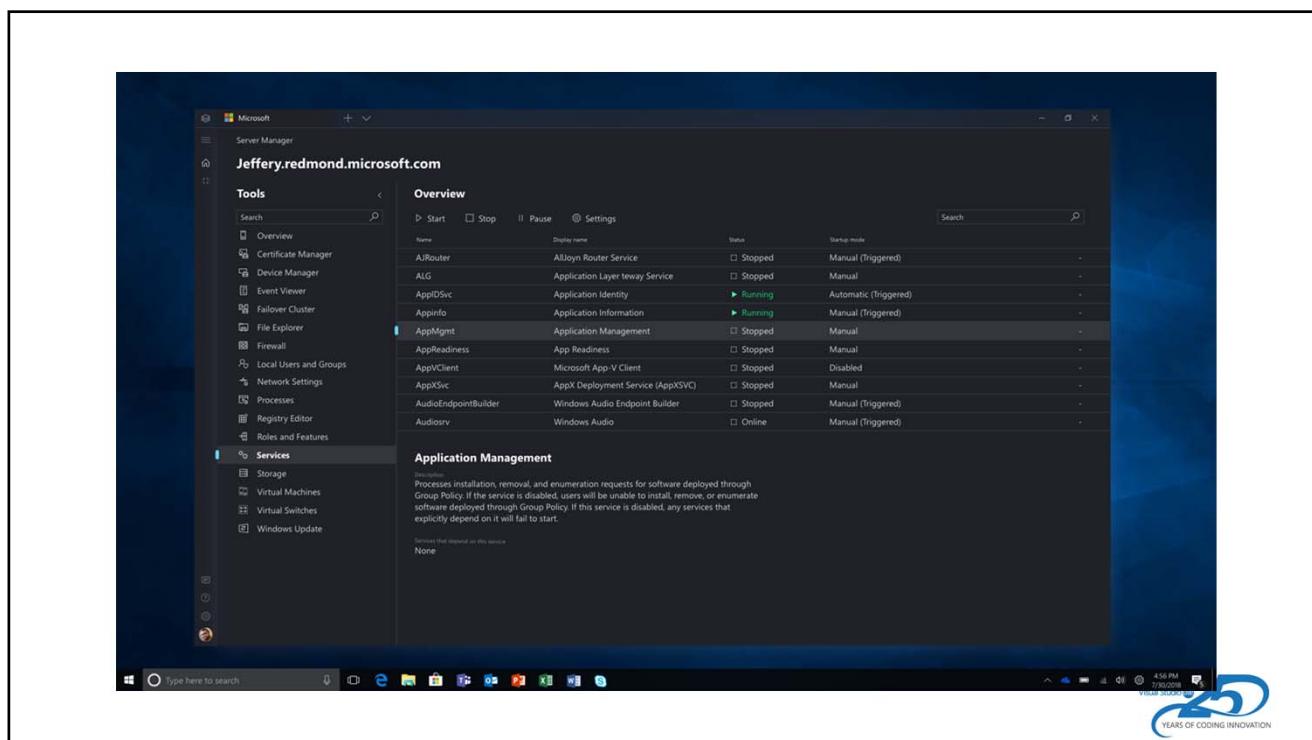
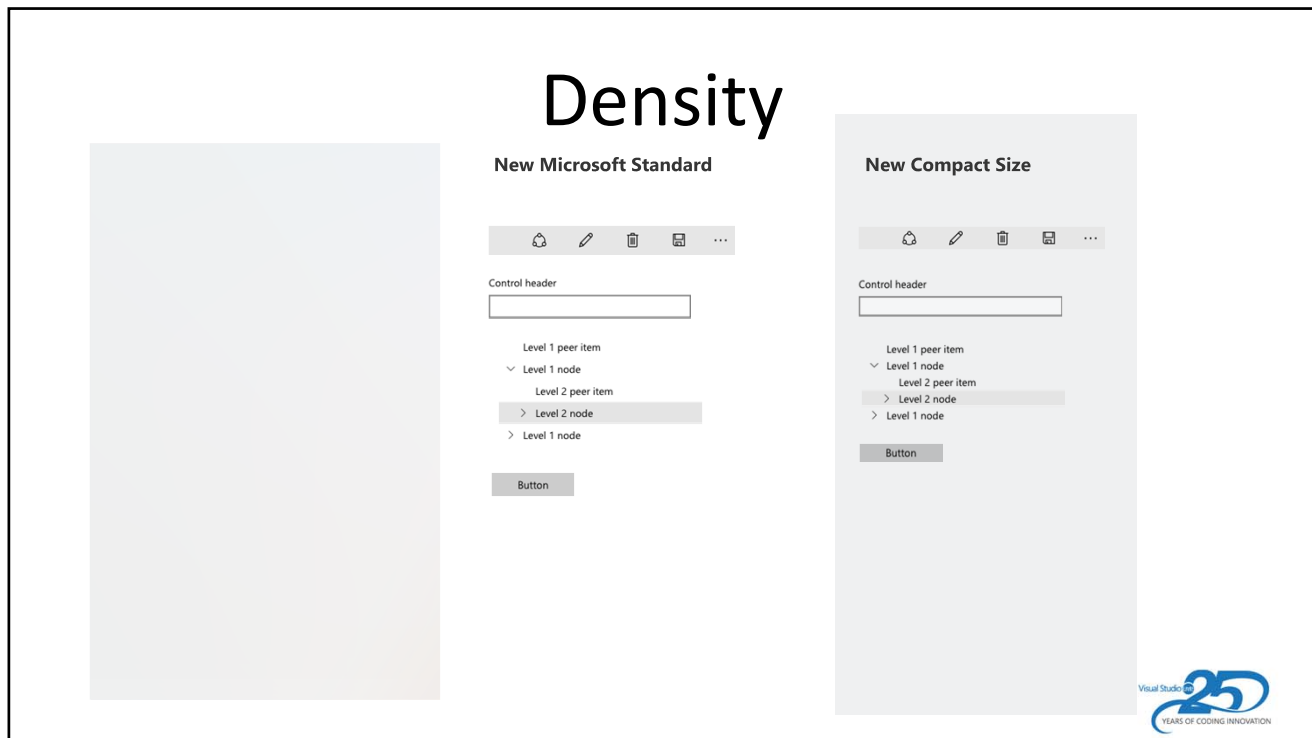
Level 2 peer item

Level 2 node

Level 1 node

Button



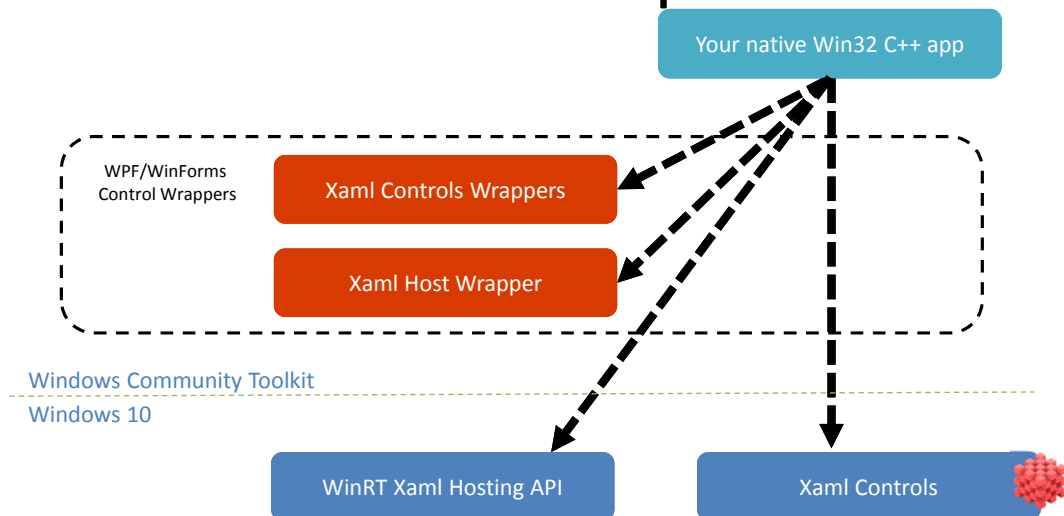


Mix n' match

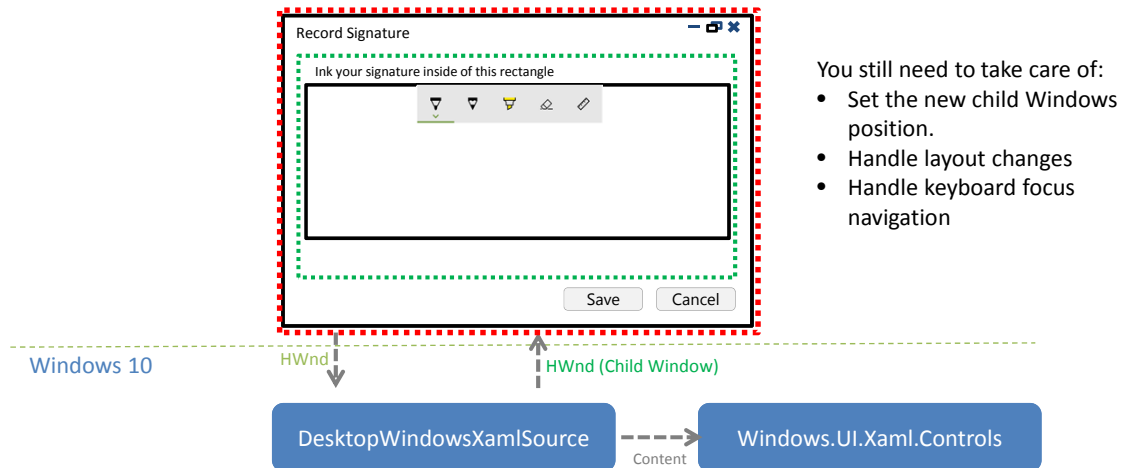
- Lots of existing applications
- Rewriting isn't an option (nor should you)
- Want to use some of the modern controls
 - WebView based on Edge instead of IE
 - Media Element
 - Ink



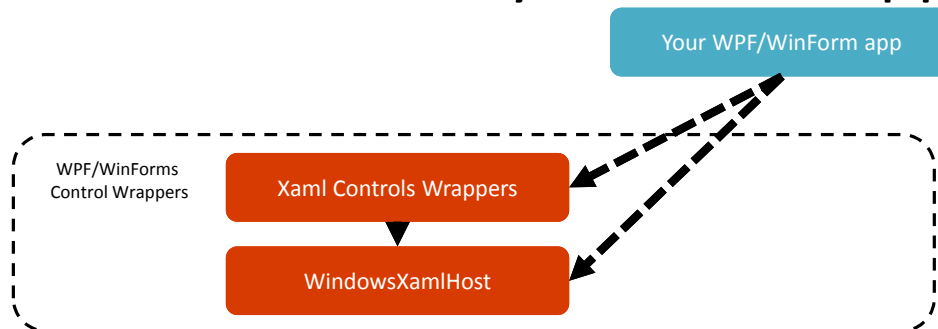
Xaml Island components



Windows 10 APIs



Windows Community Toolkit wrappers



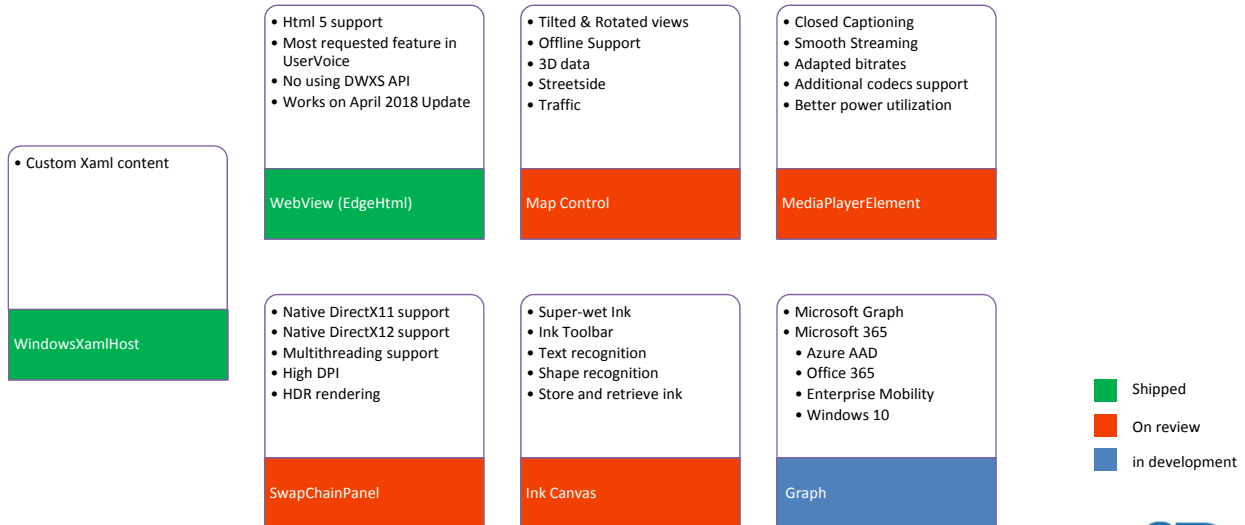
- No WinRT concepts needed for just using the Controls
- Designer Support

Packages:

<https://www.nuget.org/packages/Microsoft.Toolkit.Forms.UI.XamlHost>
<https://www.nuget.org/packages/Microsoft.Toolkit.Forms.UI.Controls.WebView>
<https://www.nuget.org/packages/Microsoft.Toolkit.Wpf.UI.XamlHost>
<https://www.nuget.org/packages/Microsoft.Toolkit.Wpf.UI.Controls.WebView>
<https://www.nuget.org/packages/Microsoft.Toolkit.Wpf.UI.Controls>



Xaml Control Wrappers



Web View

- How many of your apps use an embedded web view?
- WPF/WinForms use Trident (IE's rendering engine)
- Two new controls
 - WebView
 - Works only on Windows 10, exposes more API
 - WebViewCompatible
 - Works on Win 7 & Win 10, exposes API subset
 - Uses Trident on Win 7, Edge on Win 10



WebView & XAML Islands

DEMOS



XAML Island limitations

No Visual Studio support

WebView doesn't work inside of custom content Island (DWXS)

Airspace issues

Only supported 100% DPI rate

Narrator doesn't work with the Xaml content

Reveal brushes are grey

MessageDialogs are not modal,

...



XAML Island Road Map

October 2018 Update
Pre-release

Low level Platform APIs
Wrappers
Acrylic for one island

Etc.

1st Half 2019
V1

Visual Studio Support
Airspace issues in Popups
DPI awareness
Narrator works content
Multiple top level windows on
one thread
Localization & resource loading
@ support in TextBoxes
Inline inking textboxes
Accelerators cross FW

Etc.

2nd Half 2019
V2

Acrylic for more than one
Connected Animations
WebView in an Island
MessageDialogs are modals
AccessKeys cross-FW
Release memory automatically
Reveal works

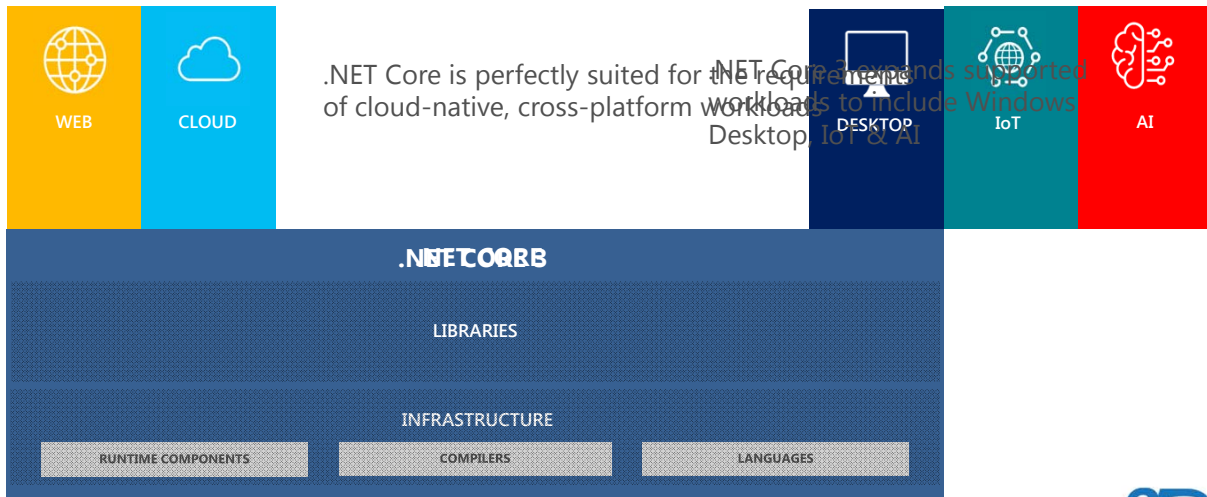
Etc.



WPF & WINFORMS ROADMAP

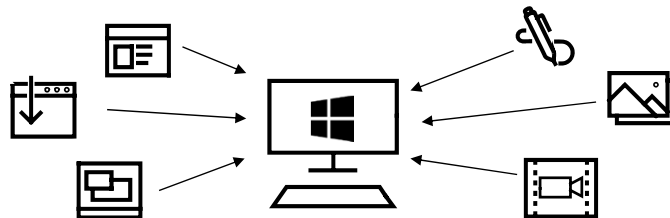


.NET Core 3



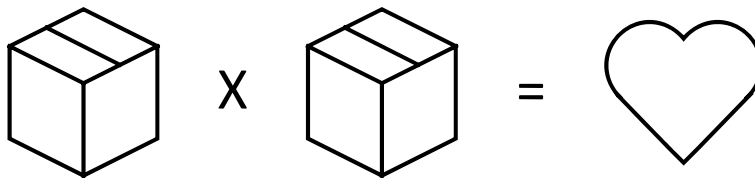
Desktop Improvements

- UI Framework Enhancements
 - XAML Islands - WinForms & WPF can host UWP
 - XAML Controls – WinForms & WPF browser and media UWP controls
 - High DPI fixes for WinForms
- Access to all the Windows 10 APIs
- Also available in next version of .NET Framework (4.8)



Why Windows Desktop on .NET Core?

- Deployment Flexibility
 - Side-by-side support
 - Machine global or app local framework
 - Self-contained EXEs
- Core runtime and API improvements
- Performance



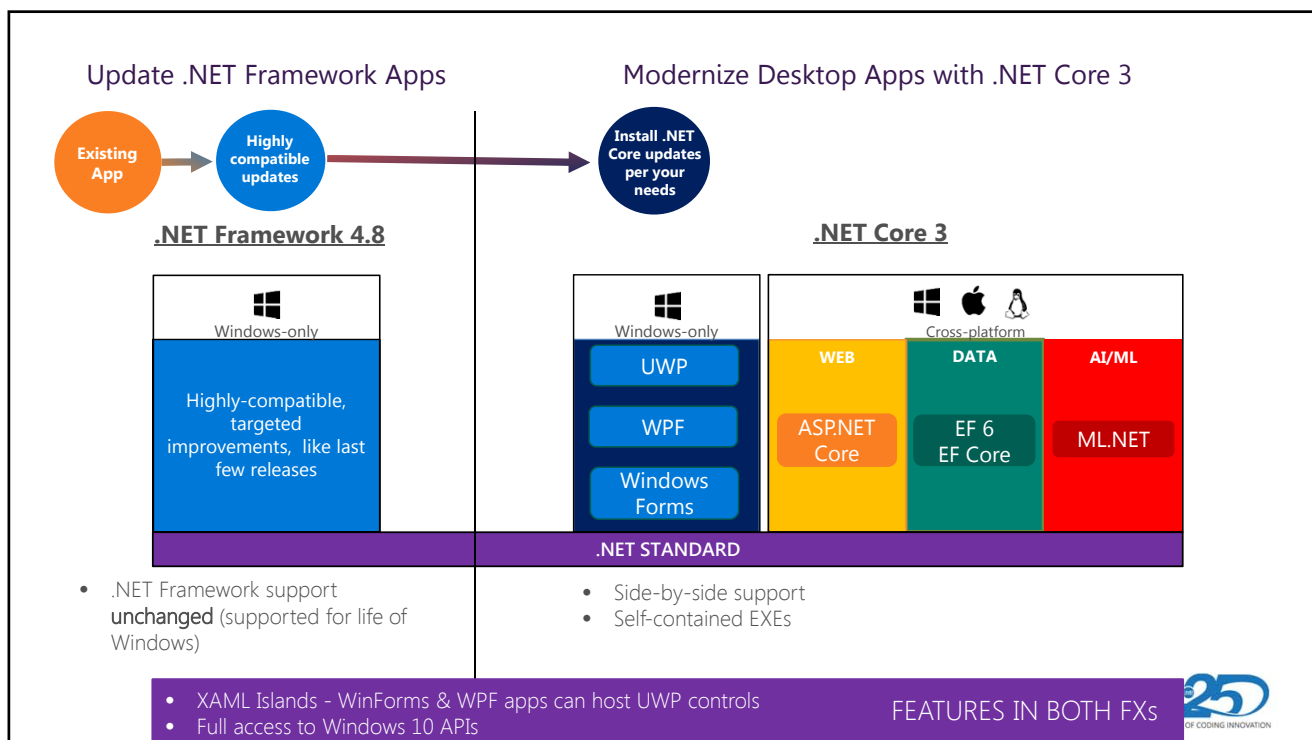
Update on .NET Core 3 since Build 2018

- Internal SDK's now build WinForms & WPF
 - dotnet new wpf
 - dotnet new winforms
- Visual Studio supports building and debugging
 - Designers not available yet
- Public Preview later this year



.NET Core 3 app

DEMO



CONNECTING TO THE CLOUD

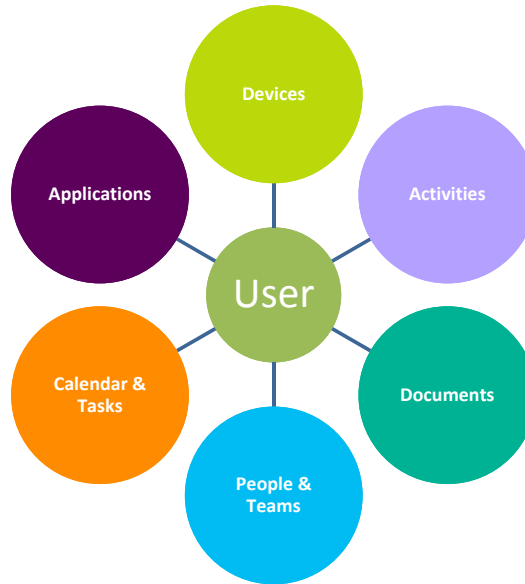


M365 and the Graph

- Hype?
- Connectivity
- Future of office productivity



What is the Microsoft Graph?



Graph

- Microsoft Graph SDK
- Microsoft Graph controls in the Windows Community Toolkit
 - AadLogin, ProfileCard, PeoplePicker, and SharepointFileList
 - PlannerTaskList, PowerBIEmbedded
 - Wrappers for Win32/.NET coming soon via XAML Islands!
- Participate in the Graph via UserActivities (Project Rome)
 - Integrate with Windows Timeline & Continue activities across devices



Graph – Examples

- Adding “smarts” to a pick-list of users
- Accessing files from OneDrive
- Profile information
- Any data from SharePoint, Outlook, Planner, etc
- Sharing activities between devices
- Change notification (via webhooks)



Logging in with AAD

DEMO



TOUCH FRIENDLY APPS



Touch screens increasing

- Many people are using Surface and other tablets
- Some kinds of apps are better with touch
 - Maps
 - Field service
- Embedded screens
 - Factory control systems
 - Medical devices



Creating projects is hard

- Lots of plumbing code
- Learning curve with new concepts



Windows Template Studio

- Accelerates creation of new UWP apps
- Wizard based
- Uses proven patterns and best practices
- Generated code has links to docs, SO and blogs
- Built with the community, for the community
- aka.ms/wts



Example

- Field service app
- Needs to remember settings
- Connects to intranet for certain web content
- Updates data in the background
- Reports telemetry



Windows Template Studio

DEMO



THANK YOU!

