Microsoft tech·days

Kistamässan Stockholm 22-24 oktober 2019



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# State of Windows Client Development



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### Windows desktop market and opportunity

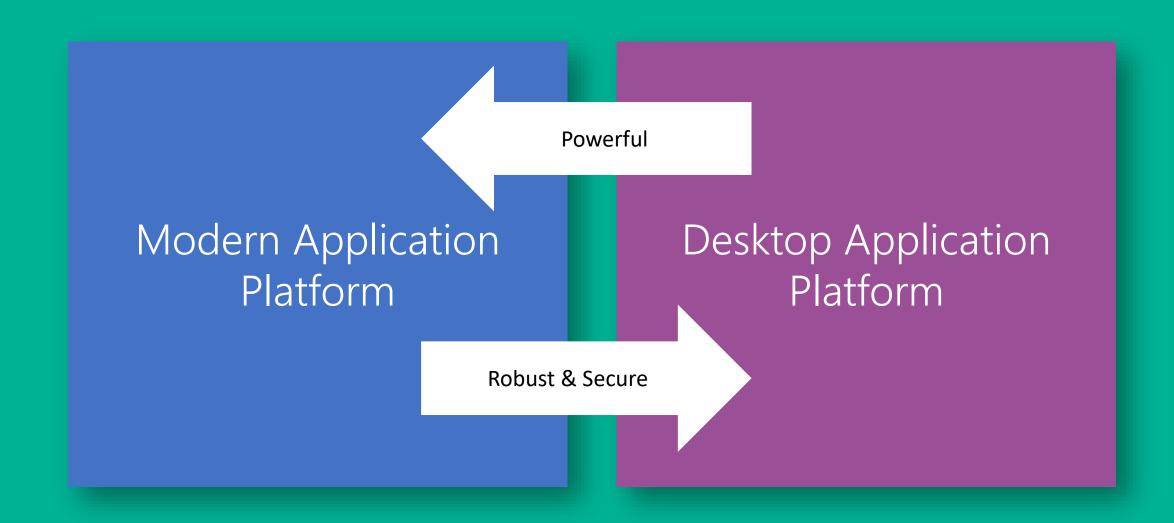
2.4 Million

Developers building desktop apps in Visual Studio every month

900 Million

Windows 10 devices

#### One "Windows" Platform



#### Modern desktop applications

- User experiences that leverages the hardware
- Simplified and efficient distribution
- Latest technologies and innovations
- Connected to the cloud

#### You have several choices!

Universal Windows Platform

• Win32

WPF/WinForms

Progressive Web Apps

#### 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

# Demo Windows Template Studio

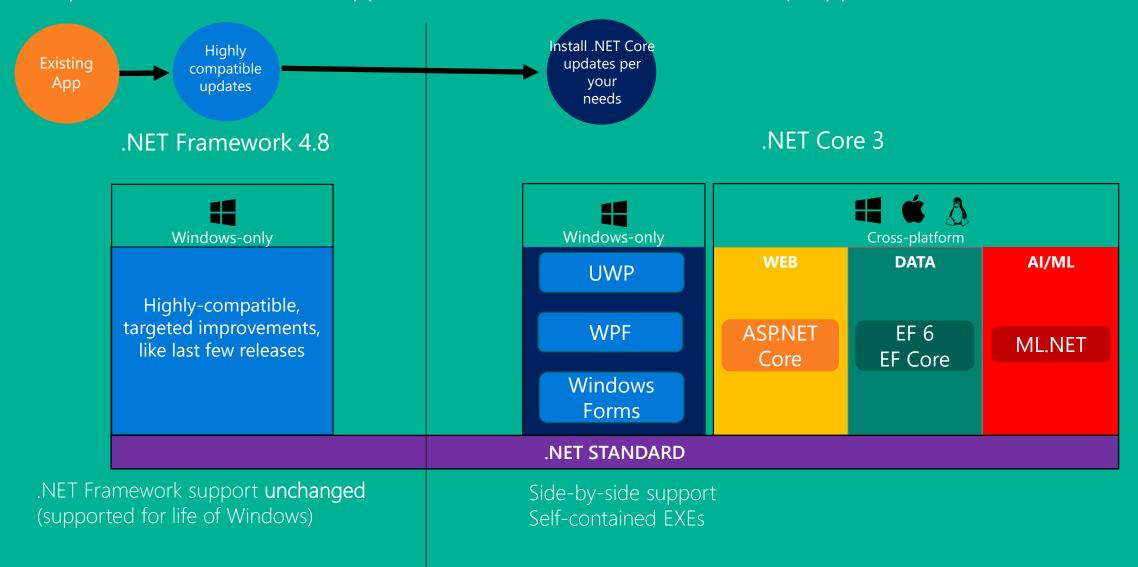
#### .NET Core 3.0

- Launched on September 23
  - WPF and WinForms support on Windows
  - ASP.NET Core 3.0
  - EF Core 3.0
- Visual Studio 2019 16.3 supports building and debugging
  - Designer support for WPF
  - WinForms design support through VSIX

# Demo Desktop applications in .NET Core 3

#### **Update** .NET Framework Apps

#### Modernize Desktop Apps with .NET Core 3



XAML Islands - WinForms & WPF apps can host UWP controls Full access to Windows 10 APIs

FEATURES IN BOTH FXs

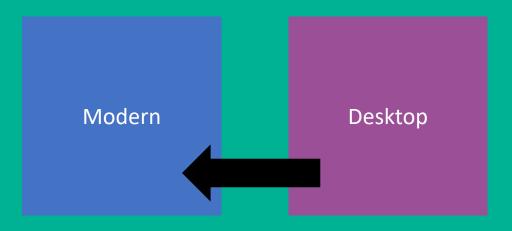
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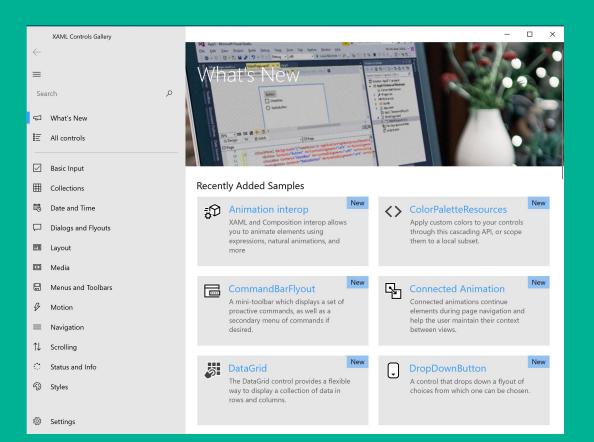
# Experiences

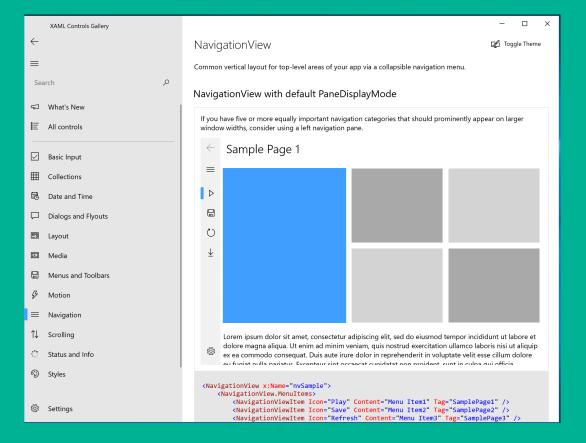
#### UWP XAML is LOB ready

- Improved Information Density
- LOB Controls & Framework Features
- Windowing APIs



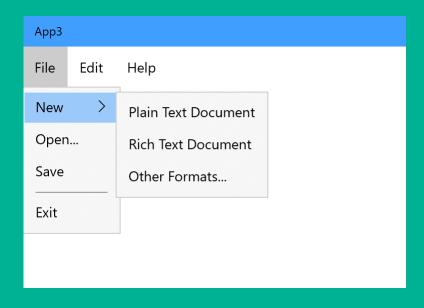
### XAML Controls Gallery

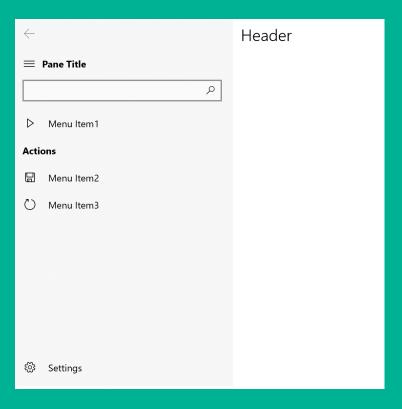




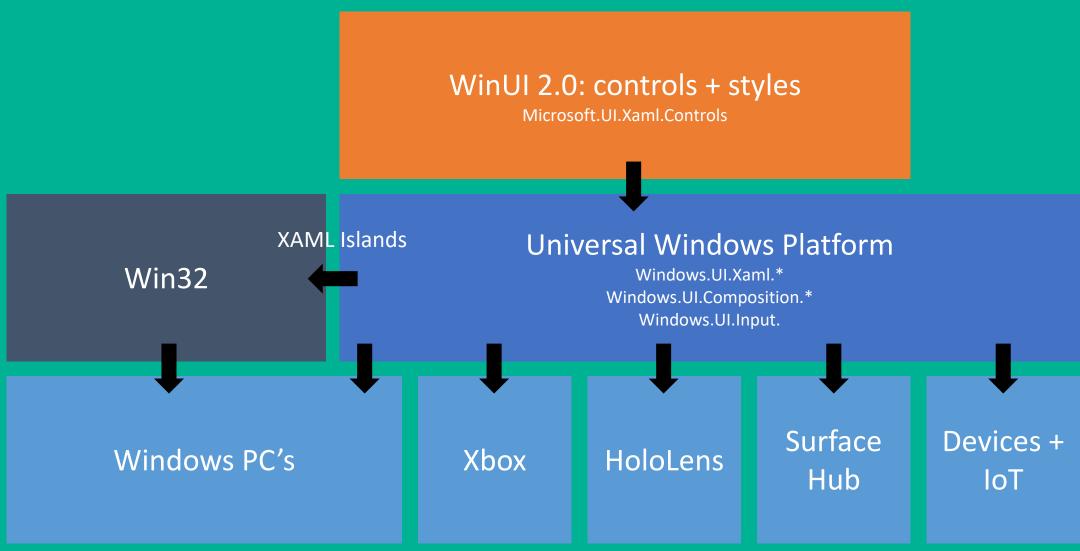
### WinUl Library

Out-of-band updates of controls

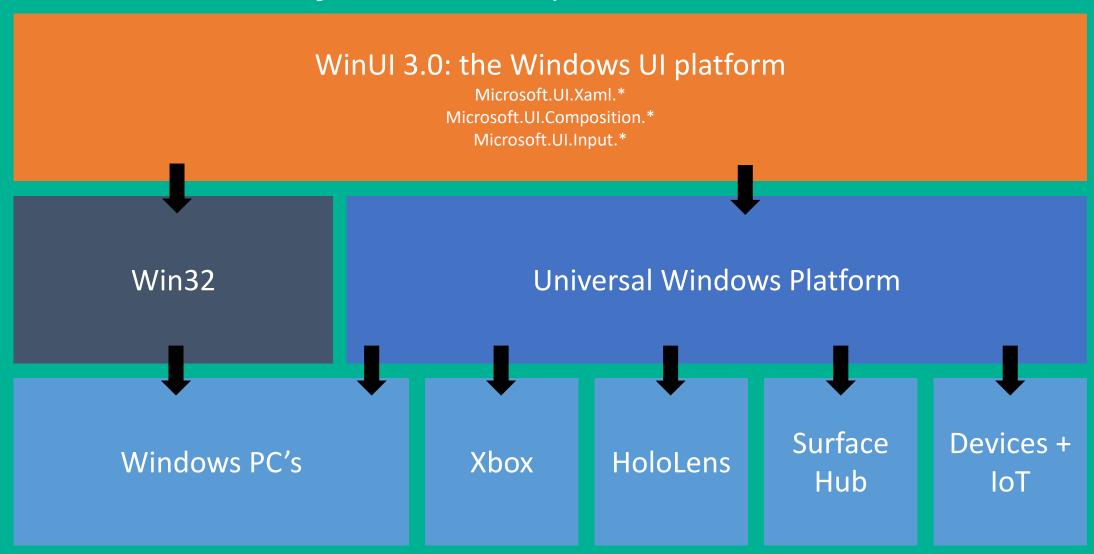




#### WinUl Library roadmap



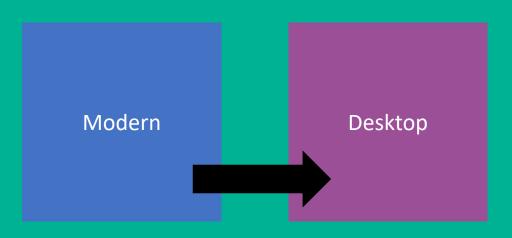
#### WinUI Library roadmap



# Demo WinUI with C++/WinRT

#### XAML Island components

- No need to rewrite your apps as UWP
- Leverage what you need
  - Wrapper Controls
  - Host Controls
  - UWP XAML Hosting API



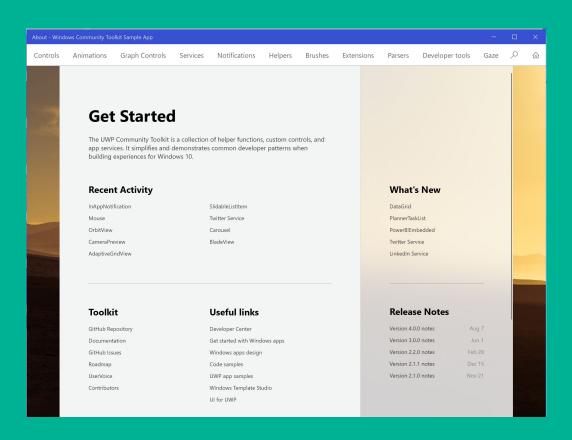
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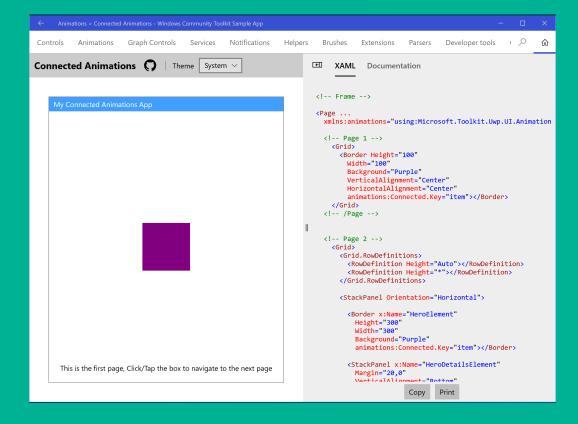
Kistamässan Stockholm Your native Win32 C++ app 22-24 oktober 2019 WPF/WinForms Wrapped Controls **Control Wrappers Host Controls** Windows Community Toolkit Windows 10

**UWP Xaml Hosting API** 

**XAML Controls** 

#### Windows Community Toolkit





# Demo Win32/WPF/WinForms XAML Islands

#### WebView

- Many apps leverages an embedded web view
  - WPF/WinForms uses Trident (Internet Explorer)
- WebView
  - Windows 10 only
- WebViewCompatible
  - API subset
  - Trident on Windows 7, Edge on Windows 10

## Demo WebView

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# Distribution

#### Challenges

- Installation
  - Installers put things everywhere
  - .NET SxS
- Updates
  - Automatic/manual?
- Uninstall

#### Evolution



Setup.exe









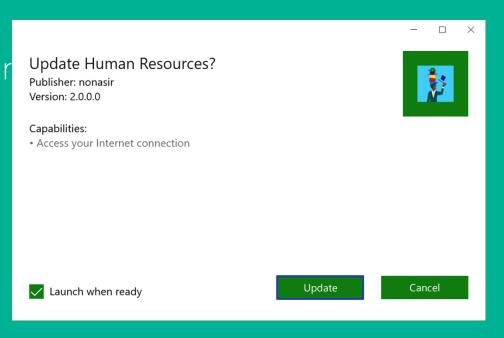
script.vbs

#### MSIX

- Install securely
  - OS Managed installs, updates, removes
  - Tamper protection
- Optimized updates
  - Single instance storage of files
  - Differential updates at the block level
- Never regret installing an app: clean uninstall
  - Uses a type of container

#### Automatic updates

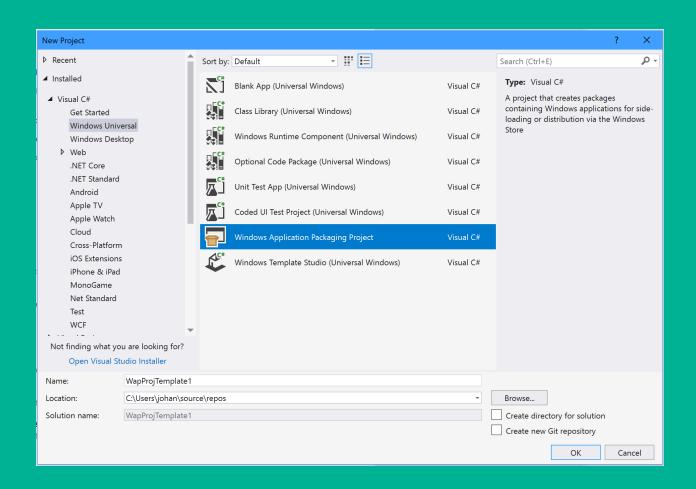
- User prompted updates
- Silent updates in the background
  - Updates independently of app launch
  - API to check for app updates while app is rur



#### Migrate existing projects

Console based commands

 Project templates for Visual Studio



# Demo Packaging project as MSIX

#### More technologies

Microsoft Graph

Uno/Urho/Mono

Mixed Reality

Blazer

Windows Machine Learning

Xamarin

#### React Native Windows

- A framework for building native Windows apps with Reach
  - http://facebook.github.io/react-native
  - Leverage your javascript skills
  - WPF or UWP apps
- Roadmap
  - Current C# version in maintenance mode
  - Future C++ version (vnext)
  - RC in a near future, possibly holidays 2019/2020

## Demo React Native Windows

#### Retrospective

- Huge windows client potential!
  - It's a symbiotic relationship!
- Not necessary to replace!
  - Integrate and innovate!
- You have choices, several!
  - Prepare today for tomorrows technologies!

### Key technologies

• .NET Core

• Windows Runtime API's

WinUl Library

MSIX

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Please take the opportunity to evaluate this session in the app

Thank you!

# Thank you!

//coderox