

Johnny Hooyberghs

**What is new in .NET 6
and the future of .NET**

Here's Johnny!



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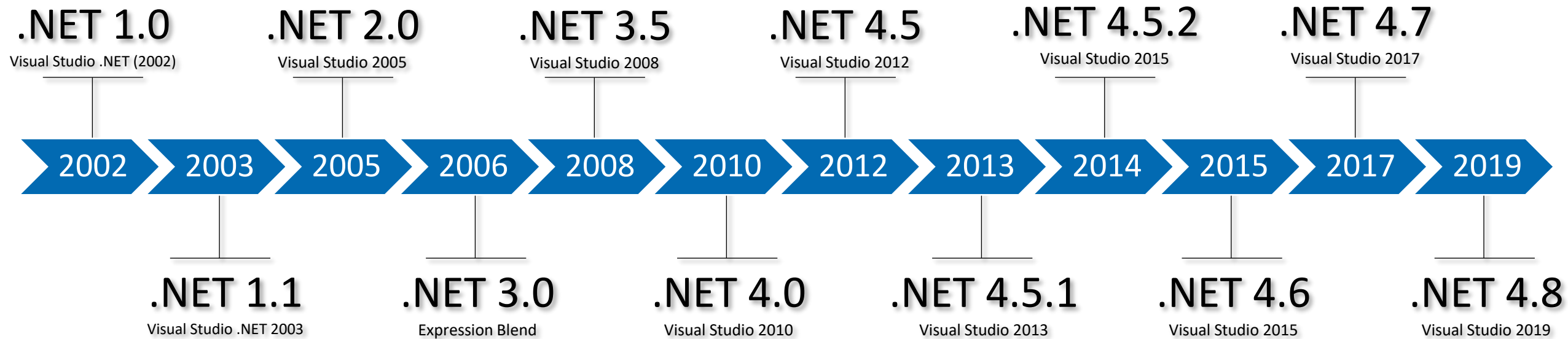
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<https://github.com/Djohnnie/DotNet6-VISUG-2021>

.NET Framework: a quick history

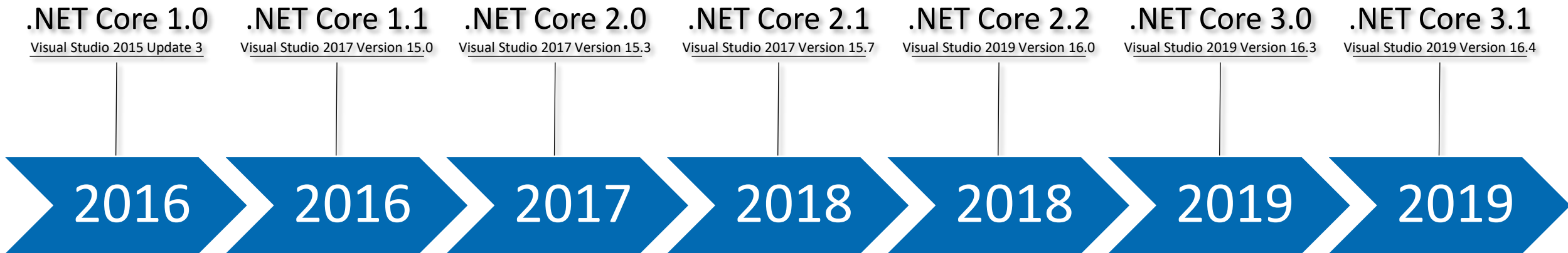


.NET Framework: support



.NET Framework 4.8	...
.NET Framework 4.7/4.7.1/4.7.2	...
.NET Framework 4.6.2	...
.NET Framework 4.5.2/4.6/4.6.1	April 26, 2022
.NET Framework 4.0/4.5/4.5.1	January 12, 2016
.NET Framework 3.5 SP1	January 9, 2029
.NET Framework 2.0/3.0	July 12, 2011

.NET Core: a quick history

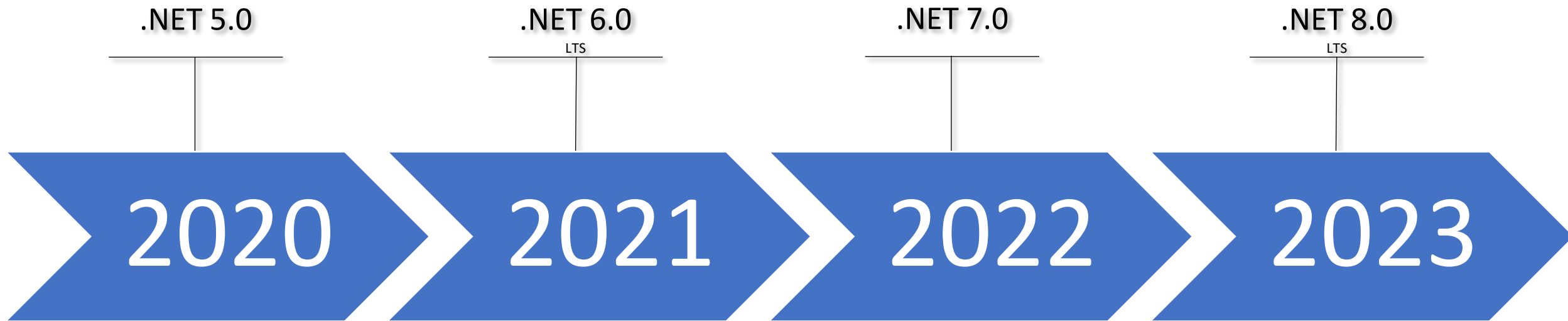


.NET Core: support

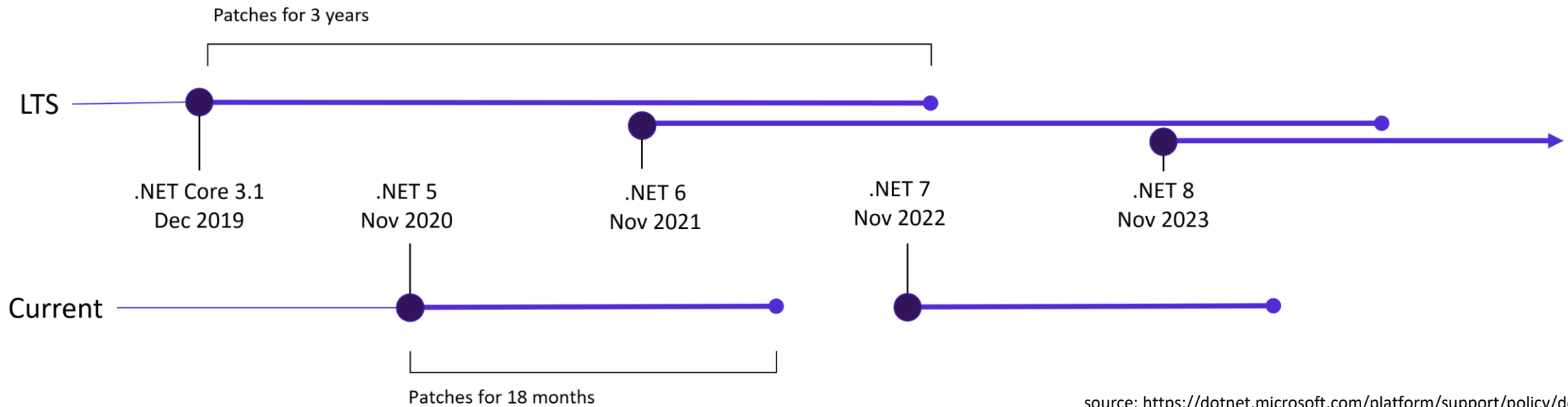


.NET Core 1.0	June 27, 2019
.NET Core 1.1	June 27, 2019
.NET Core 2.0	October 1, 2018
(LTS) .NET Core 2.1	August 21, 2021
.NET Core 2.2	December 23, 2019
.NET Core 3.0	March 3, 2020
(LTS) .NET Core 3.1	December 3, 2022

.NET: what about the future?



.NET: support

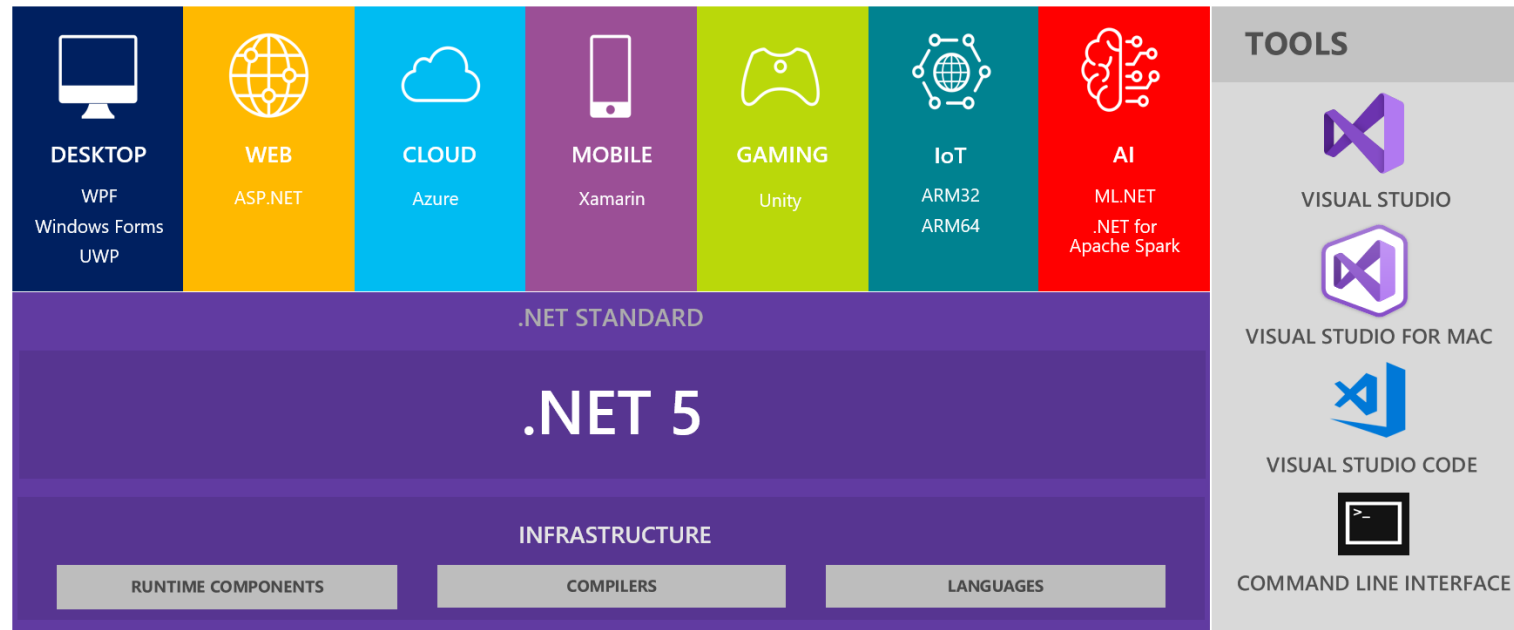


source: <https://dotnet.microsoft.com/platform/support/policy/dotnet-core>

.NET 6/7/8/... = .NET Core vNext



.NET – A unified platform



source: <https://devblogs.microsoft.com/dotnet/introducing-net-5/>

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**What is new in .NET 6
and the future of .NET**

0 – Performance and architecture



- Runtime
- JIT compiler
- AoT compilation
- Tiered compilation
- Profile-guided optimization
- Platform intrinsics
- Source generators

1 – Single SDK Experience



- Single CLI
- `dotnet new` and workloads
- Target framework names (TFM)
- “net5.0” replaces and combines “netcoreapp” and “netstandard”
- “net5.0-windows” is OS-specific and includes OS-specific bindings
- “net6.0-android”, “net6.0-ios”, “net6.0-maccatalyst”
- Hot reload using “dotnet watch”
- Support for Azure Function Apps

2 – Deployment features



- Default Executable
- Runtime Identifiers
- Single File Executable
- Assembly Linking

3 – Modernized Templates



- Console Application
- ASP.NET Empty
- ASP.NET MVC
- Worker Service
- gRPC Service
- WinForms
- WPF

4 – .NET BCL & C# 10 features



- (C# 10) record structs, readonly record structs (and record classes)
- (C# 10) Global usings
- (C# 10) File-scoped namespaces
- (C# 10) const and interpolated strings
- (.NET SDK) Implicit usings
- (.NET SDK) Nullable
- (BCL) DateOnly and TimeOnly

5 – New JSON features



- System.Text.Json
- Performance
- Source Generators
- IEnumerable
- DOM

6 – Linq features



- Support for Indices and Ranges
- OrDefault with customizable defaults
- MaxBy, MinBy
- DistinctBy, UnionBy, IntersectBy, ExceptBy
- Chunk
- TryGetNonEnumeratedCount

7 – Async Dependency Injection



- `IAsyncDisposable` and `DisposeAsync`
- `CreateAsyncScope`

8 – Source Generators



- ASP.NET
- gRPC
- System.Text.Json
- Write your own...

9 – HW Intrinsic and NativeMemory

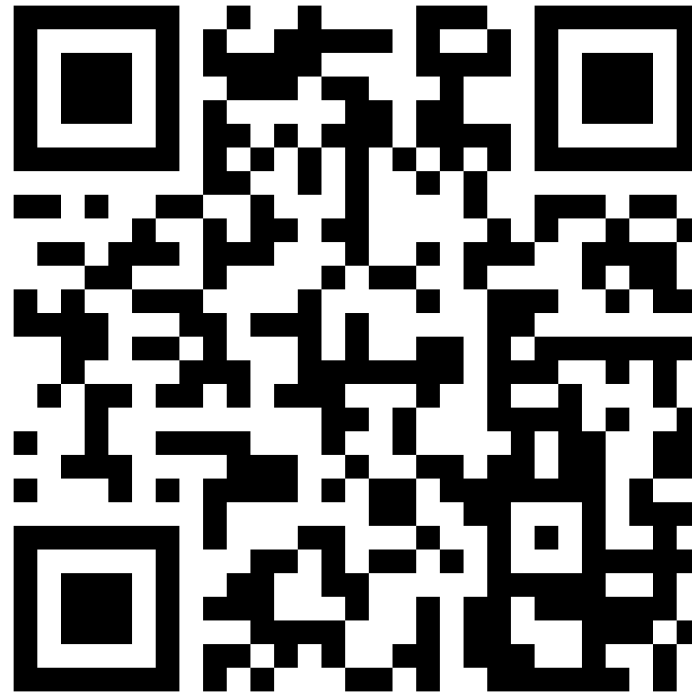


- ASP.NET
- gRPC
- System.Text.Json
- Write your own...

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Thank you!



codit|



team 4 talent

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