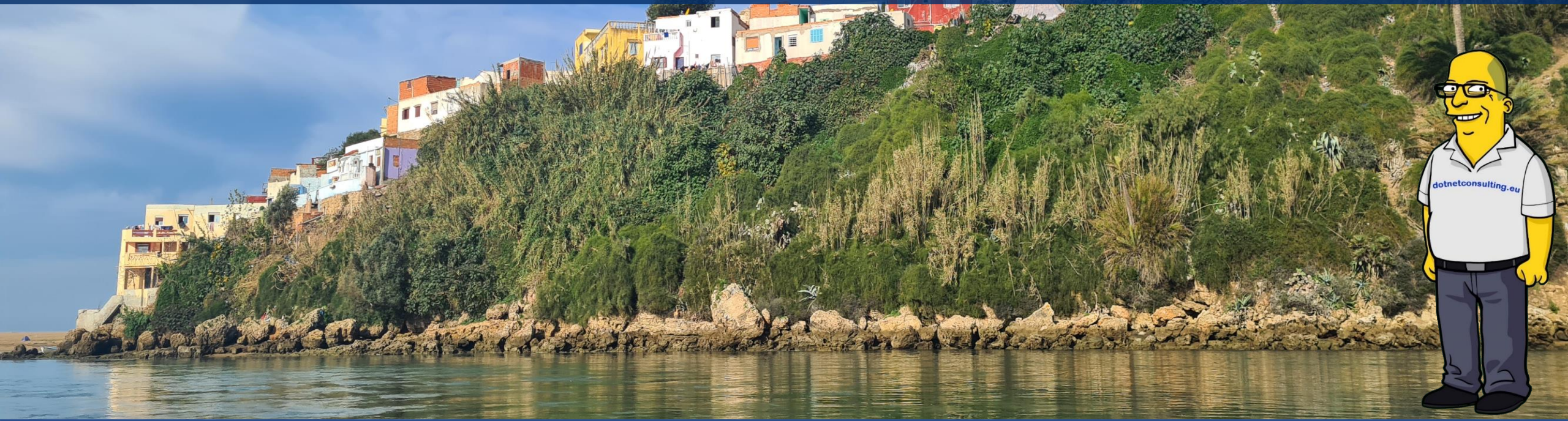


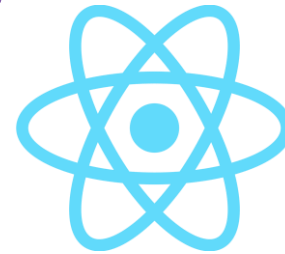
.NET 9 – Stand der Dinge



Thorsten Kansy (tkansy@dotnetconsulting.eu)

Meine Person- Thorsten Kansy

Freier Consultant, Software Architekt,
Entwickler, Trainer & Fachautor



Azure Cosmos DB



Mein Service- Ihr Benefit

- Individuelle Inhouse Trainings
- (Online on-demand) Projektbegleitung
- Beratung
 - Problemanalyse und Lösungen
 - Technologieentscheidungen



Agenda

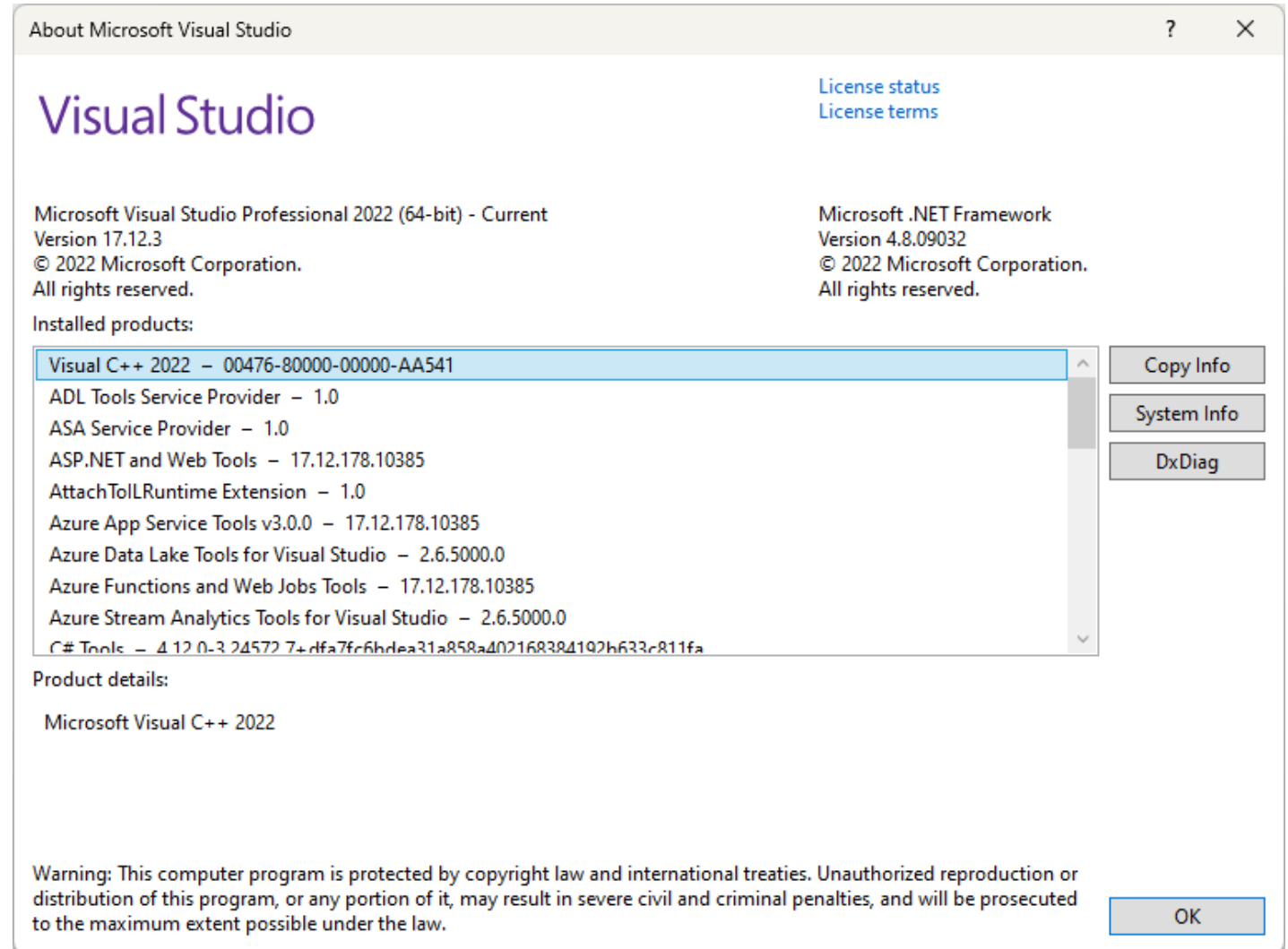
- Verwendete Software
- „One .NET“ Roadmap
- Was kann .NET 9?
- C# 13
- Fazit

A photograph of two farmers working in a rice paddy field. The field is filled with young green rice plants in rows. The water in the field is calm, reflecting the sky and the plants. In the foreground, two farmers are visible from behind, wearing traditional conical hats. The farmer on the left has a hat with a white floral pattern, and the farmer on the right has a hat with a yellow cover. A dark blue horizontal band is overlaid across the middle of the image, containing the text 'Verwendete Software' in white.

Verwendete Software

Verwendete Software

- Visual Studio 2022 17.12+
- .NET 9



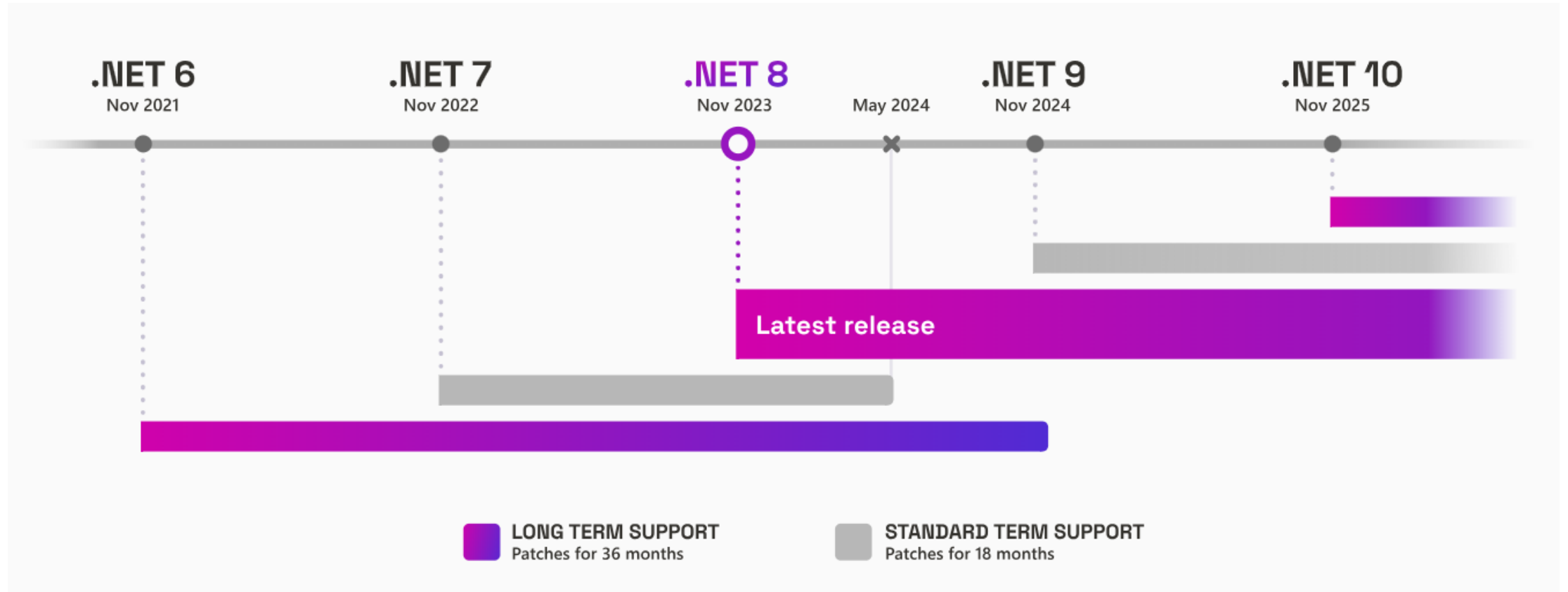


„One .NET“ Roadmap

„One .NET“

- Offizieller Name: .NET 9 (ohne "Core", ohne ".0")
- Aber ASP.NET **Core** 9 und Entity Framework **Core** 9
- Microsoft hält sich aber selbst nicht überall daran

Der .NET (Core) Roadmap



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



<https://github.com/dotnet/core/blob/master/roadmap.md>

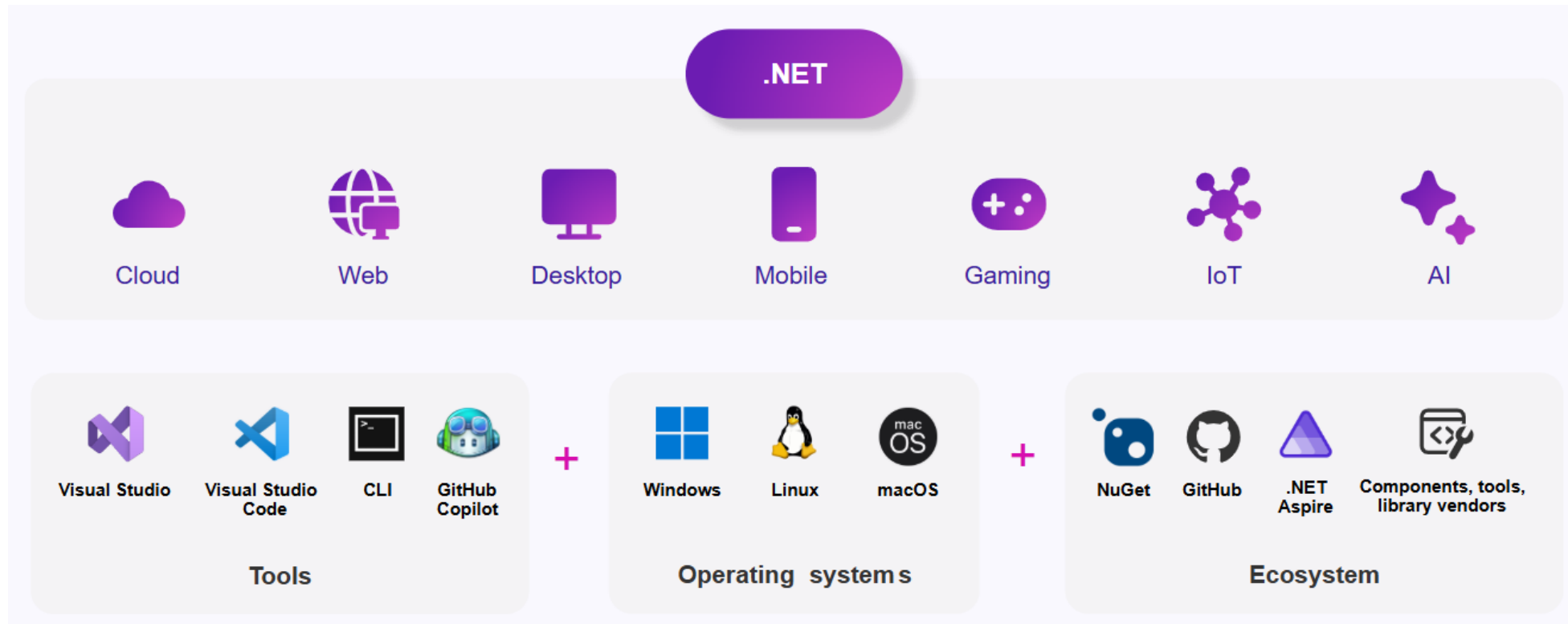
Und .NET Framework?

- .NET Framework 4.8.x ist die letzte .NET Framework Feature-Version
 - Letztes Patch hatte 4.8.1
- Migration auf 4.8.x nur bei neuen Features notwendig



Übersicht

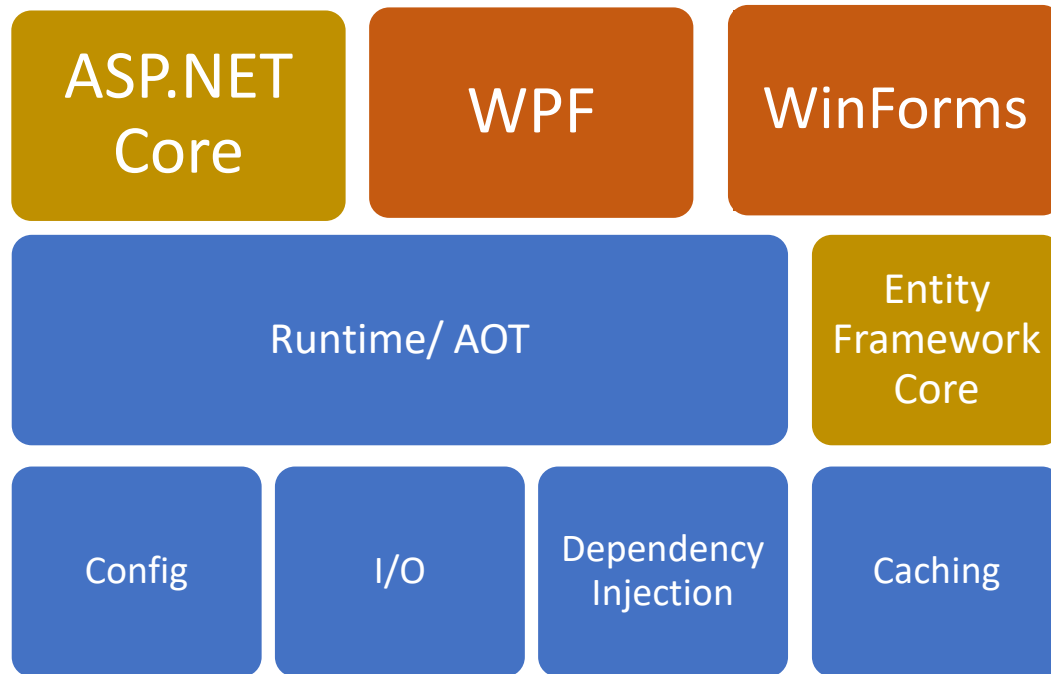
.NET 9



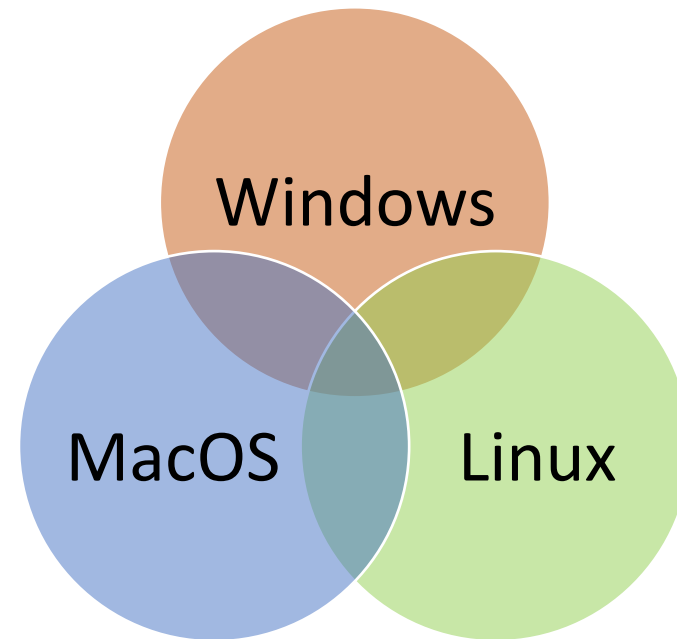
<https://devblogs.microsoft.com/dotnet/announcing-dotnet-9/>

.NET Komponenten

Modular



Multi Plattform

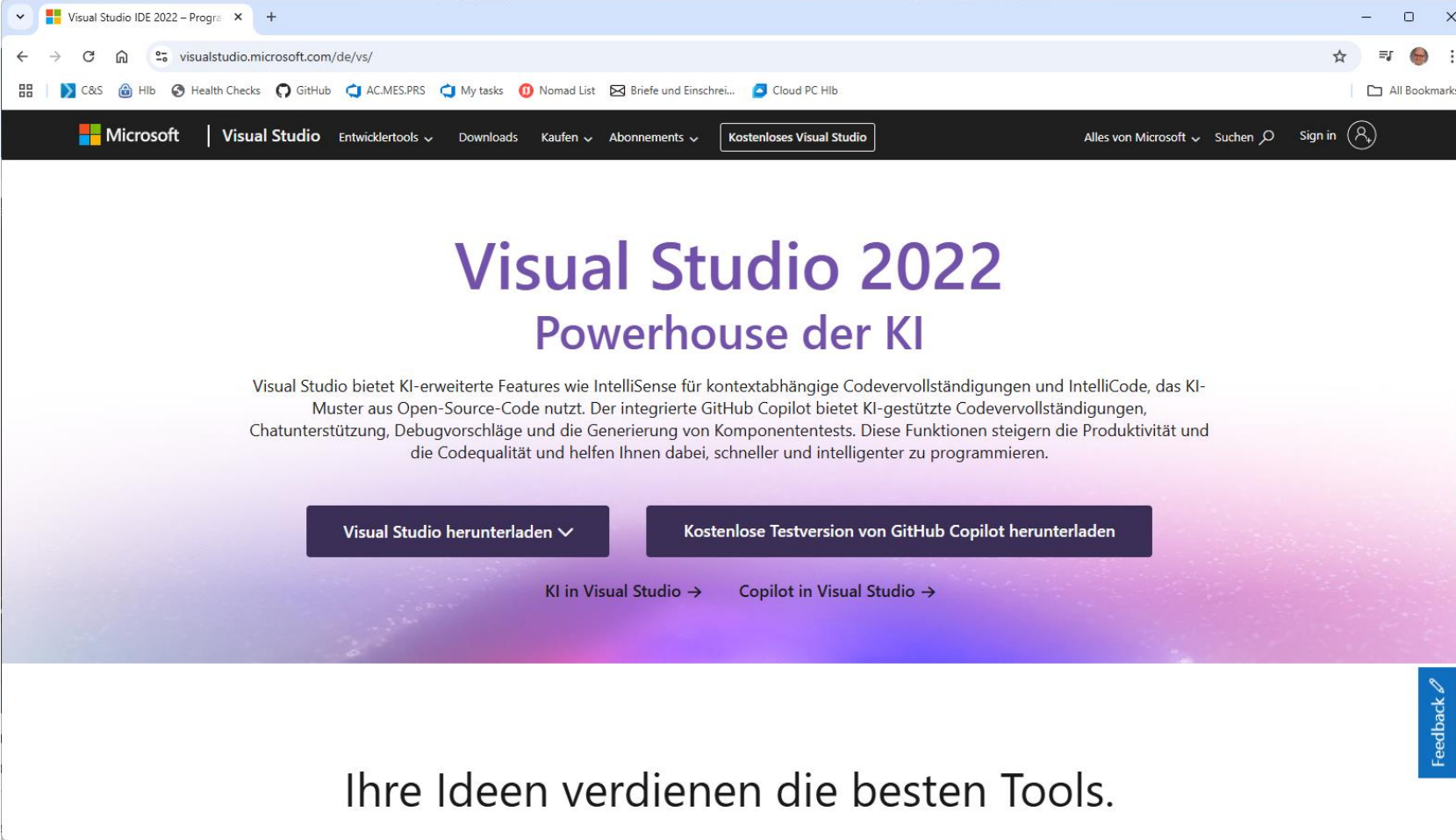


Was spricht für .NET?

- Multiplattform
 - Windows
 - Linux
 - MacOS
- Hohe Performance
 - Modularität
 - ASP.NET, z. B. Entkopplung von `System.Web.dll`
- Geringerer Ressourcenverbrauch
 - Modularität



Visual Studio in Stellung bringen



The screenshot shows the German landing page for Visual Studio 2022. The main heading is "Visual Studio 2022 Powerhouse der KI". Below this, a paragraph describes AI-enhanced features: IntelliSense for context-aware code completion, IntelliCode using Open-Source patterns, GitHub Copilot for AI-assisted completion, chat support, debug suggestions, and component test generation. Two primary call-to-action buttons are present: "Visual Studio herunterladen" and "Kostenlose Testversion von GitHub Copilot herunterladen". Navigation links for "KI in Visual Studio" and "Copilot in Visual Studio" are also visible. The footer of the page features the slogan "Ihre Ideen verdienen die besten Tools." and a "Feedback" link.



<https://visualstudio.microsoft.com/de/vs/>

.NET 9 in Stellung bringen

- Windows
- Linux
- MacOS

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Download .NET 9.0

Not what you're looking for? Visit the [downloads](#) page for more options.

9.0.0 Security patch

[Release notes](#) Latest release date December 3, 2024

Build apps - SDK 9.0.101

| OS | Installers | Binaries |
|---------|---|--|
| Linux | Package manager instructions | Arm32 Arm32 Alpine Arm64 Arm64 Alpine x64 x64 Alpine |
| macOS | Arm64 x64 | Arm64 x64 |
| Windows | x64 x86 Arm64 winget instructions | x64 x86 Arm64 |
| All | dotnet-install scripts | |

Visual Studio support
Visual Studio 2022 (v17.12)

Run apps - Runtime ASP.NET Core Runtime 9.0.0

The ASP.NET Core Runtime enables you to run existing web/server applications. **On Windows, we recommend installing the Hosting Bundle, which includes the .NET Runtime and IIS support.**

IIS runtime support (ASP.NET Core Module v2)
19.0.24303.0

| OS | Installers | Binaries |
|-------|--|--|
| Linux | Package manager instructions | Arm32 Arm32 Alpine Arm64 Arm64 Alpine x64 x64 Alpine |
| macOS | | Arm64 x64 |

Feedback



<https://dotnet.microsoft.com/download/dotnet/9.0>

 Demo 



Was kann .NET 9?

Was wird nicht mehr unterstützt?

- ASP.NET Webforms
- ASP.NET Webservice
- .NET Remoting
- WCF (REST & SOAP) => CoreWCF
- Windows Workflow Foundation (WF)
- Xamarin

Windows Compatibility Pack

- Code Pages
- CodeDom
- Configuration
- Directory Services
- Drawing
- ODBC
- Permissions
- Ports
- Windows Access Control Lists (ACL)
- Windows Communication Foundation (WCF)
- Windows Cryptography
- Windows EventLog
- Windows Management Instrumentation (WMI)
- Windows Performance Counters
- Windows Registry
- Windows Runtime Caching
- Windows Services



<https://docs.microsoft.com/en-us/dotnet/core/porting/windows-compat-pack>

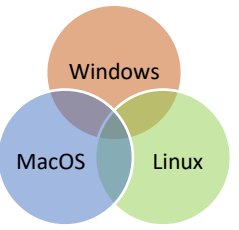
Multi-Plattform-Code

Einsatz mit Guarding

```
if (RuntimeInformation.IsOSPlatform(OSPlatform.Windows))
{
    // Windows Code, Zugriff auf Registry
    using (RegistryKey key = Registry.CurrentUser.OpenSubKey(@"Software\Fabrikam\AssetManagement"))
    {
        if (key?.GetValue("LoggingDirectoryPath") is string configuredPath)
            Console.WriteLine(configuredPath);
    }
}
else if (RuntimeInformation.IsOSPlatform(OSPlatform.Linux))
{
    // Linux Code
    // ...
}
```

```
Install-Package Microsoft.Windows.Compatibility
```

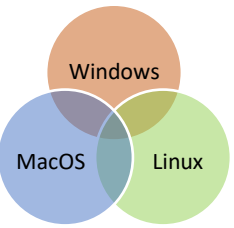
```
Install-Package Microsoft.DotNet.Analyzers.Compatibility
```



Entity Framework Core

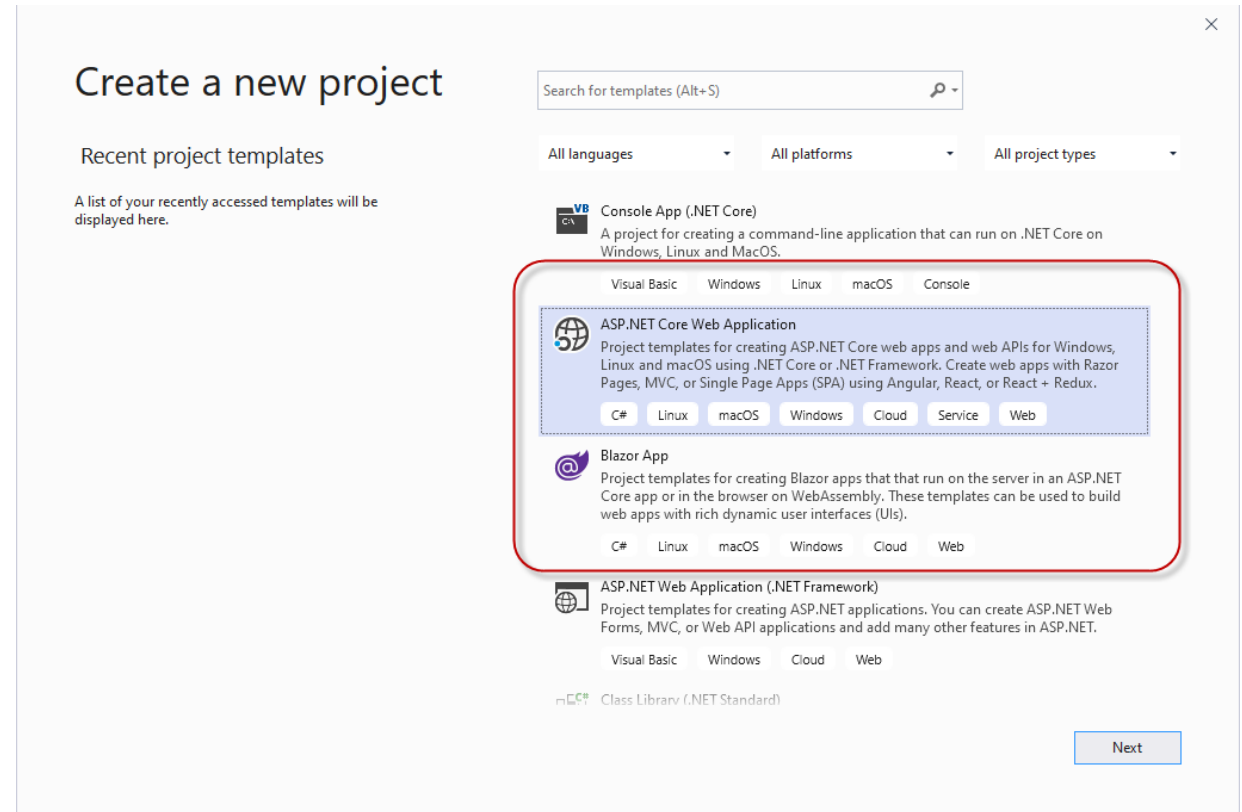
- Relationale Datenbanken
 - SQL Server
 - DB2
 - Oracle
 - MySQL
 - PostgreSQL
 - ...
- NoSQL Datenbanken
 - Azure Cosmos DB

 Demo 



ASP.NET Core (Razor, Blazor, WebAPI)

Vollständig!



 Demo 

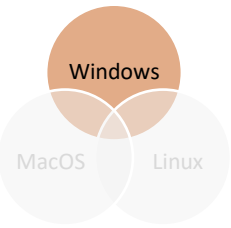
.NET Aspire

- **Orchestration:** .NET Aspire provides features for running and connecting multi-project applications and their dependencies for local development environments
- **Integrations:** .NET Aspire integrations are NuGet packages for commonly used services, such as Redis or Postgres, with standardized interfaces ensuring they connect consistently and seamlessly with your app
- **Tooling:** .NET Aspire integrations are NuGet packages for commonly used services, such as Redis or Postgres, with standardized interfaces ensuring they connect consistently and seamlessly with your app.



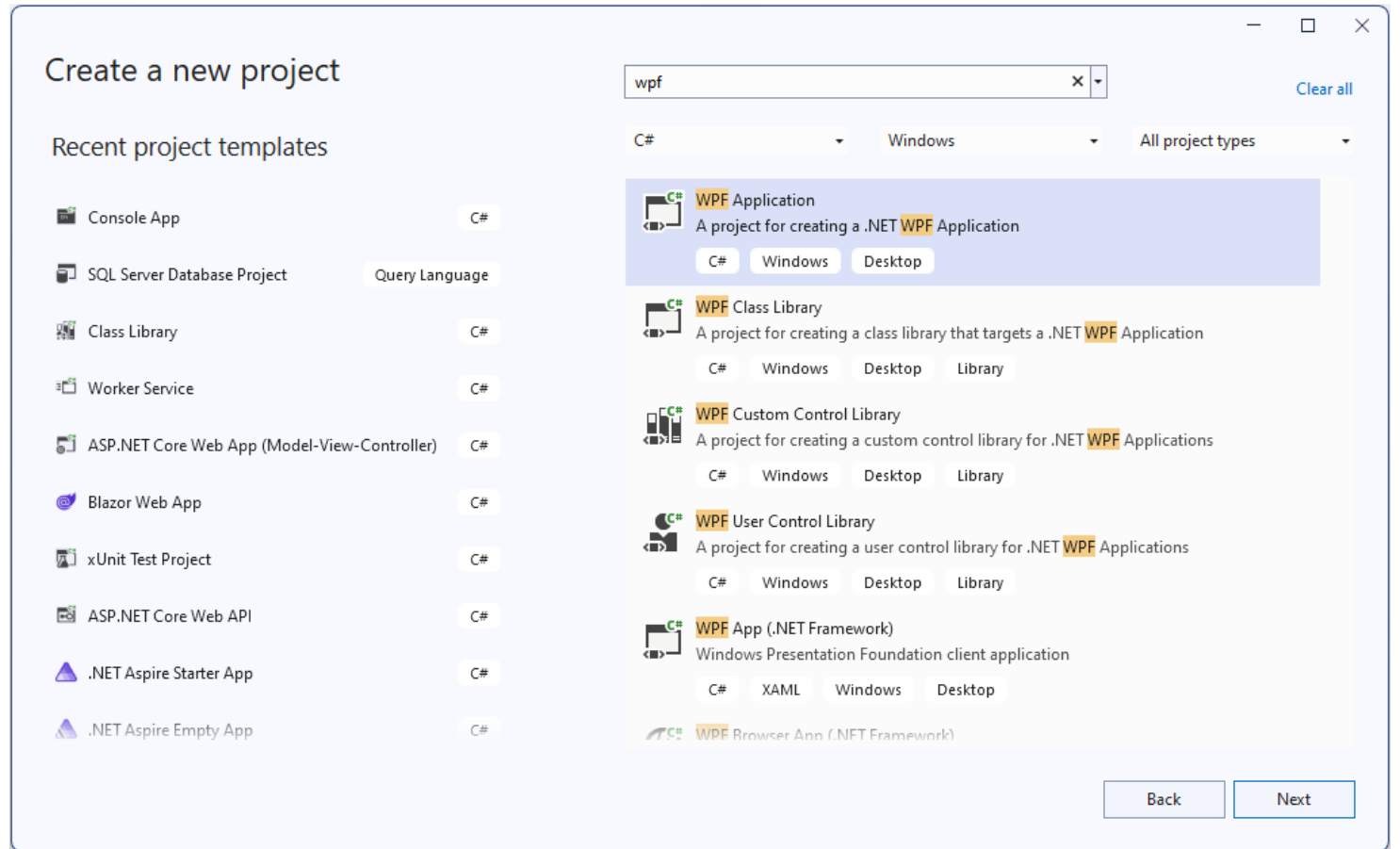
<https://learn.microsoft.com/en-us/dotnet/aspire/get-started/aspire-overview>

 Demo 



Windows Presentation Foundation

Vollständig!

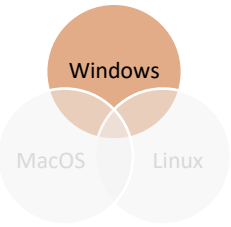


<https://learn.microsoft.com/en-us/dotnet/desktop/wpf/whats-new/net90?view=netdesktop-9.0>



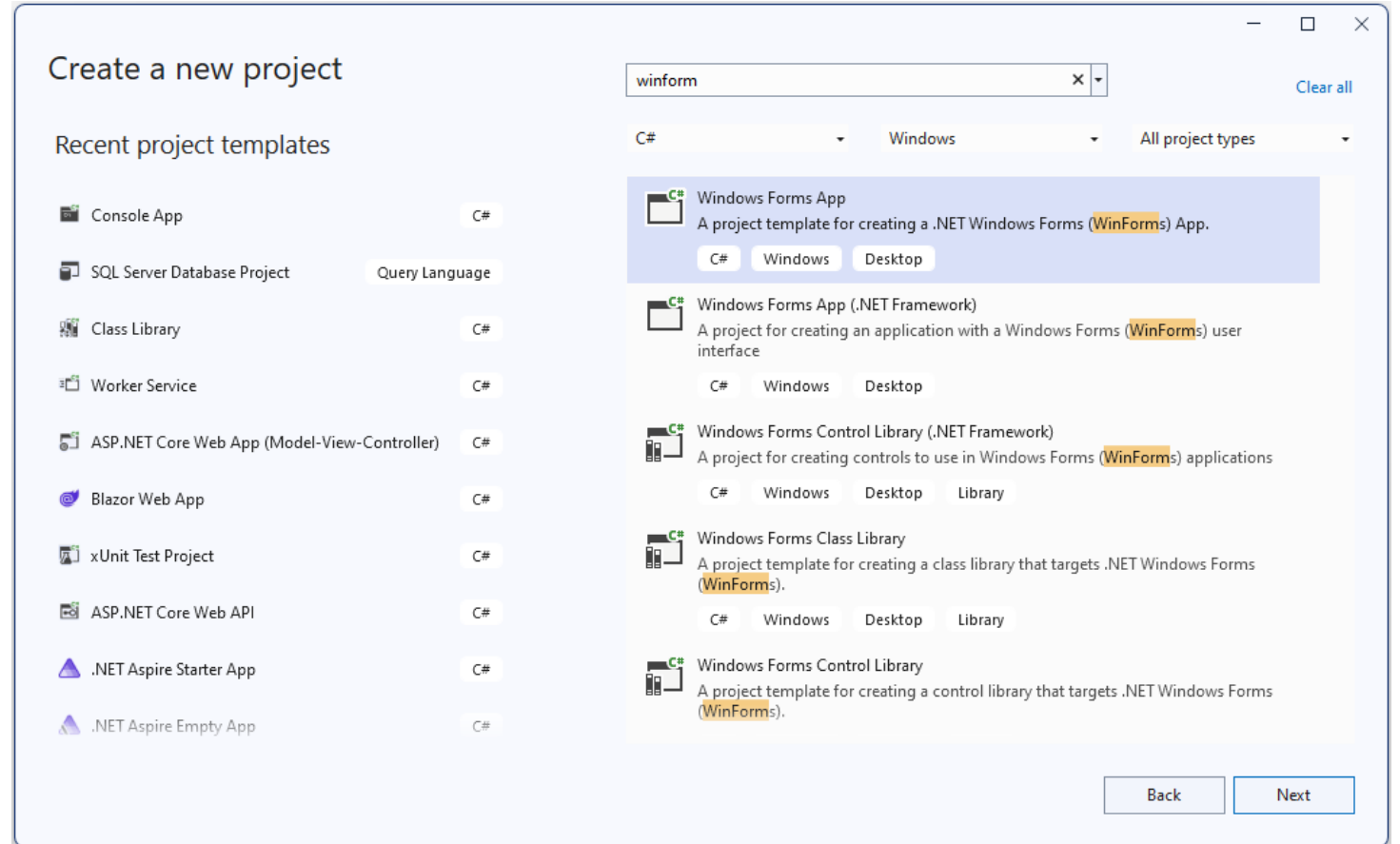
Demo





WinForms

Vollständig!



<https://learn.microsoft.com/en-us/dotnet/desktop/winforms/whats-new/net90?view=netdesktop-9.0>

 Demo 

Native AOT

- Ahead-of-time Compilation
- Schnelle Ausführung, kleiner Memory-Footprint
- Leider aktuell nur Teile des .NET
 - Kein Entity Framework



<https://learn.microsoft.com/en-us/dotnet/core/deploying/native-aot/?tabs=windows%2Cnet8>



Demo



C# 13



C# 13

- Params collections
- New lock object
- New escape sequence
- Implicit index access
- More partial members
- Overload resolution priority
- LINQ

C# 13: Neuerungen Session

IT-Konferenz für Software-Entwicklung,
-Architektur, DevOps, KI, Datenbanken,
IT-Security, Agile und IT-Management

09.–12.12.2024 | Frankfurt am Main

 Jetzt anmelden!

13:00 Uhr





Fazit




Ist .NET bereit für den Einsatz?

- Ja, im Web-Bereich
 - WebAPI & SPA
 - MVC
 - Blazor
- Ja, im Windows-Bereich
 - WPF
 - WinForms
- Ja, mit Entity Framework Core
- Immer weniger API-Breaks von Version zu Version ;-)

Fragen? Jetzt oder später!



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Ich berate, coache und trainiere im Bereich Entwicklung von .NET (Core) Anwendungen mit Microsoft SQL Server- mit Allem, was dazu gehört- und was man vielleicht weglassen sollte.