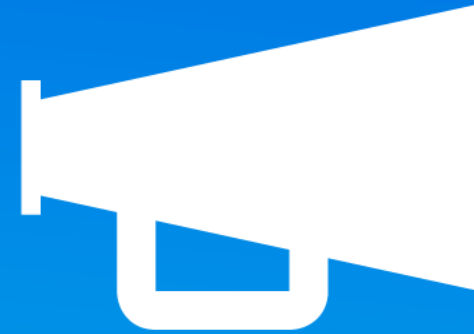
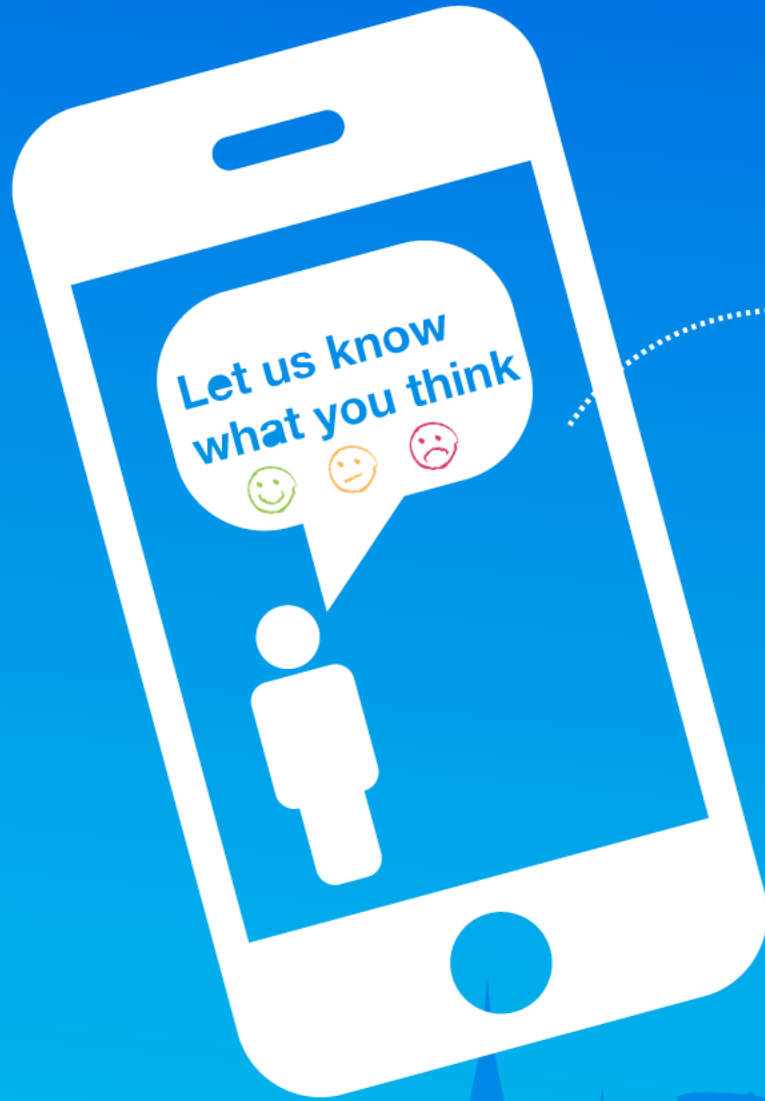


# .NET Core and DNX

Chrisitan Horsdal  
Horsdal Consult  
@chr\_horsdal





**Click 'engage'  
to rate sessions  
and ask questions**



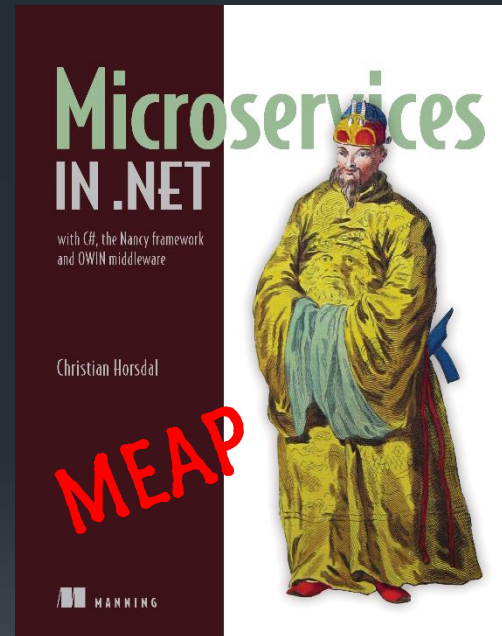


.NET Core  
Middleware  
DNX  
X-Plat

# About me

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Independent Consultant

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[c.horsdal@gmail.com](mailto:c.horsdal@gmail.com)  
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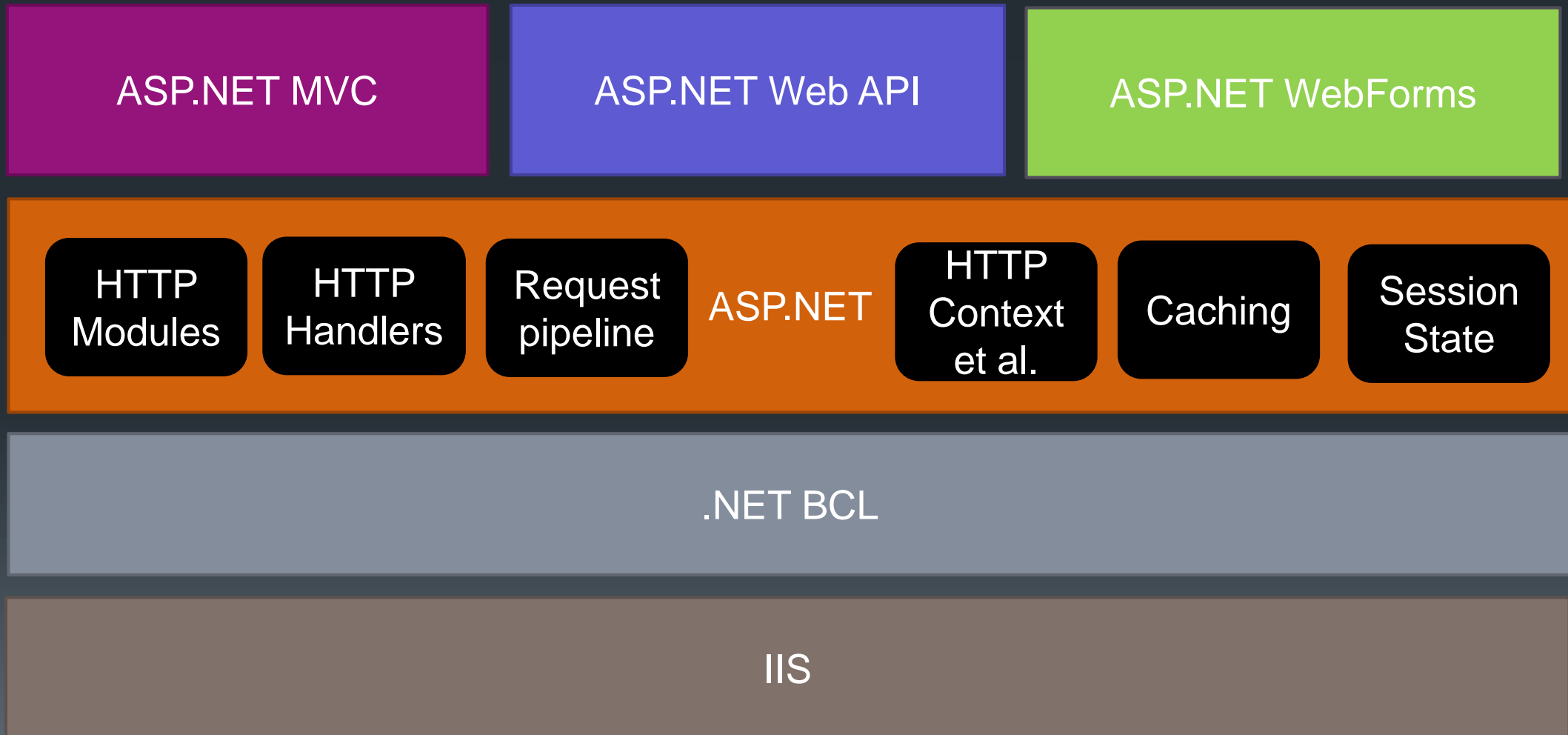


# ASP.NET 5

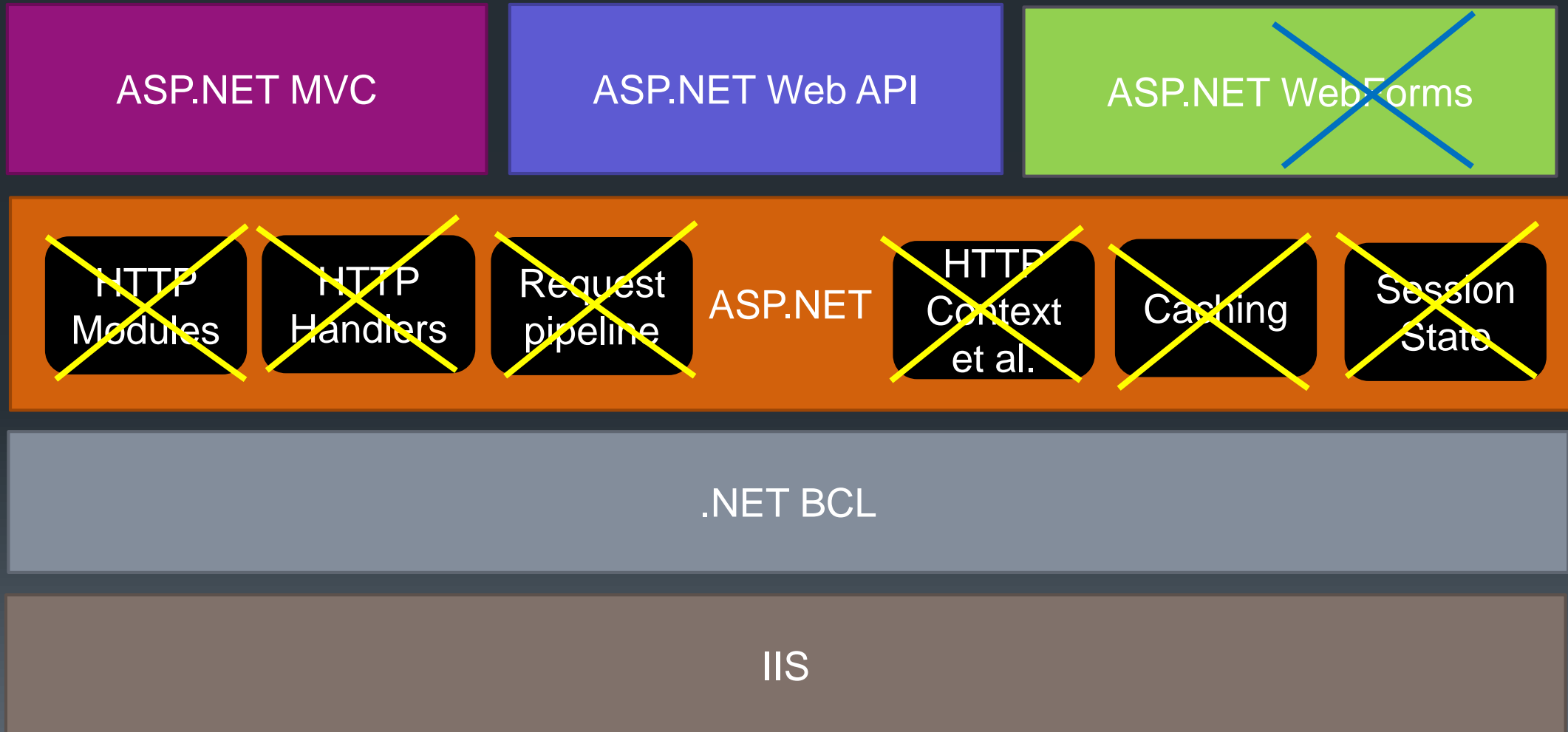
Everything changes

bing

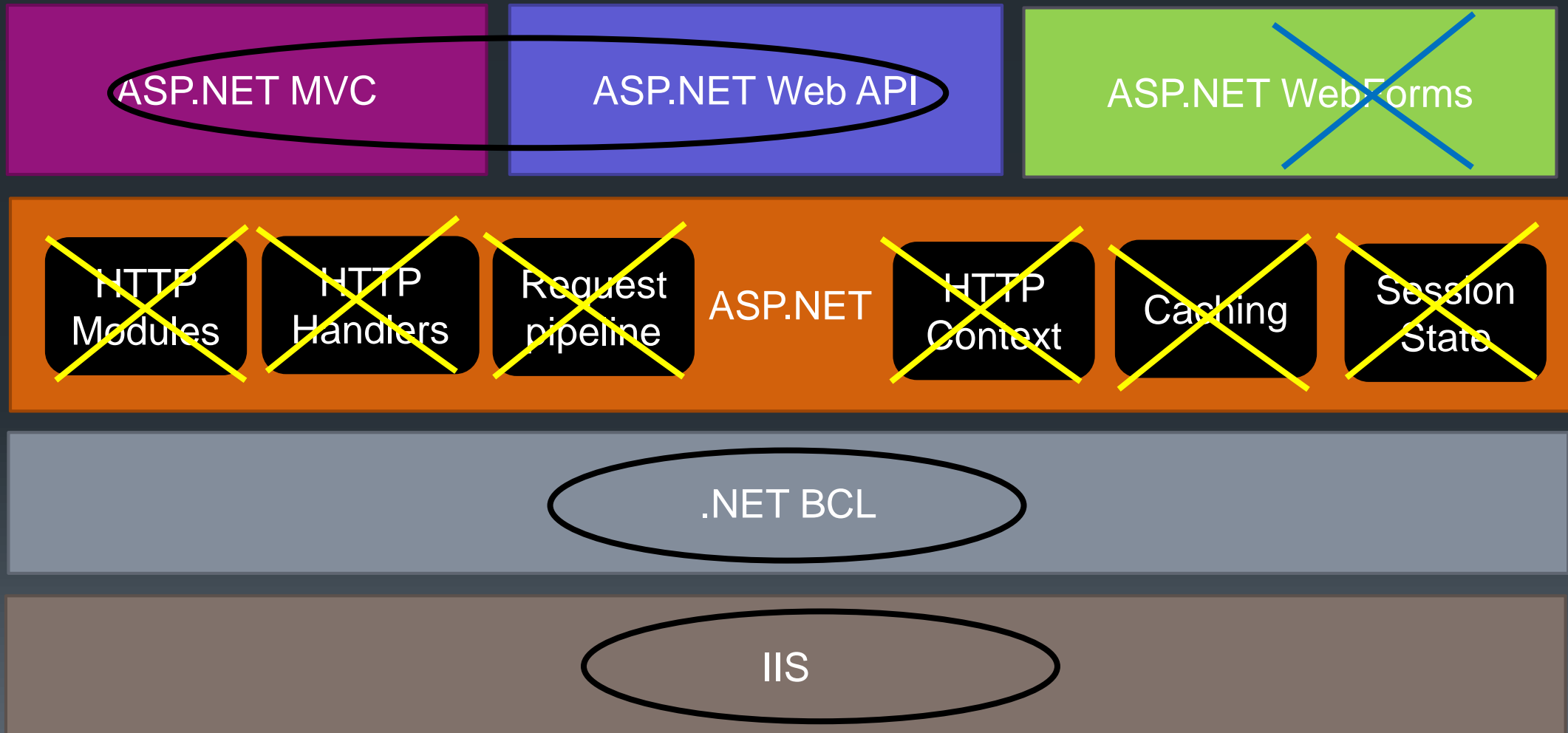
# ASP.NET Today



# ASP.NET – things not in 5



# ASP.NET – and things changed in 5







# Highlights of ASP.NET 5

- DNX runtime
- Modularized .NET
- Cross platform .NET
- Side-by-side deploy
- OWIN / Middleware
- Independent of Visual Studio
- Unified MVC and WebAPI

# Why Do I Care?

- DNX and cross platform:
  - Broader eco system
  - DNX as enabler for your own tooling
  - DNX as enabler for 3<sup>rd</sup> party / OSS tooling
  - Use Linux in production

# Why Do I Care?

- Modularized .NET
  - Smaller footprint on disk and memory
  - Faster development from MS on some parts
  - Side-by-side on different versions

# Why Do I Care?

- Middleware
  - Nice modular way of working
  - Separation of infrastructure and application

# Roadmap

Milestone	Release week
Beta6	27 Jul 2015
Beta7	2 Sep 2015
Beta8	5 Oct 2015: Feature complete
RC1	Nov 2015: Stabilized
1.0.0	Q1 2016
> 1.0.0	Maybe Q3 2016: VB.NET, SignalR, WebPages

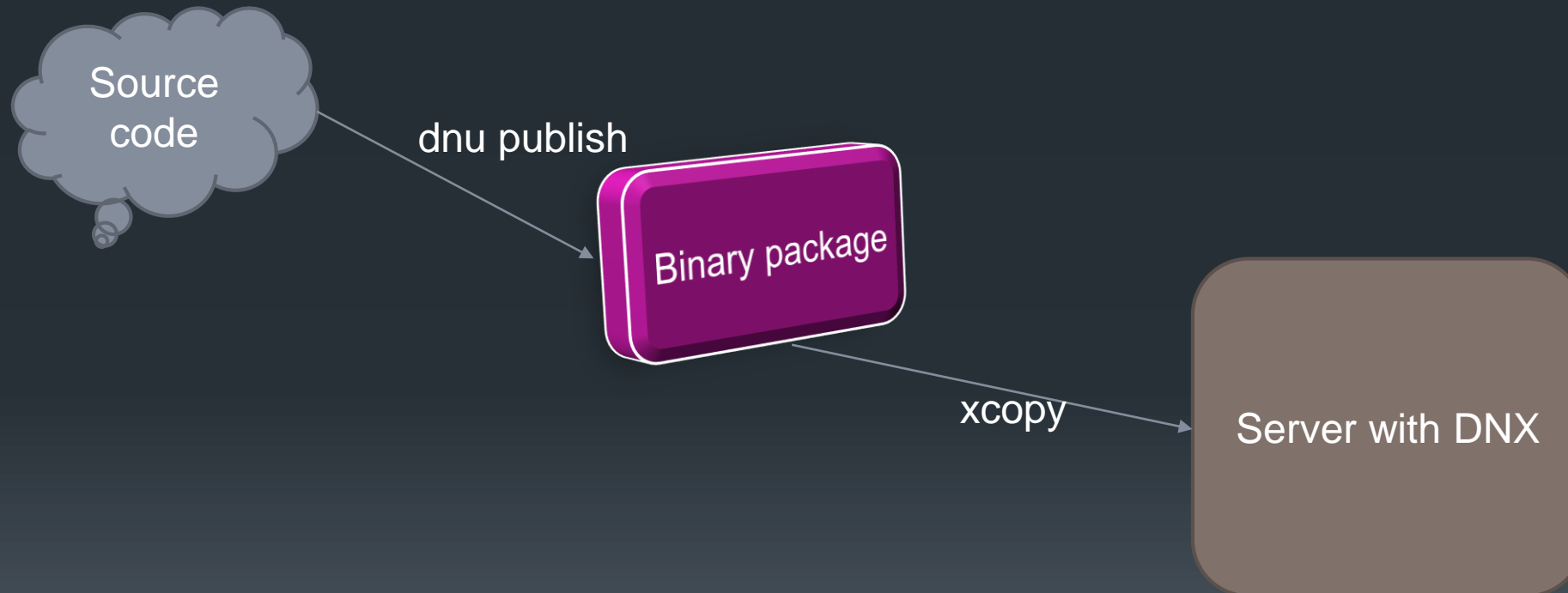


.NET CORE

# AKA: Cloud Optimized Framework

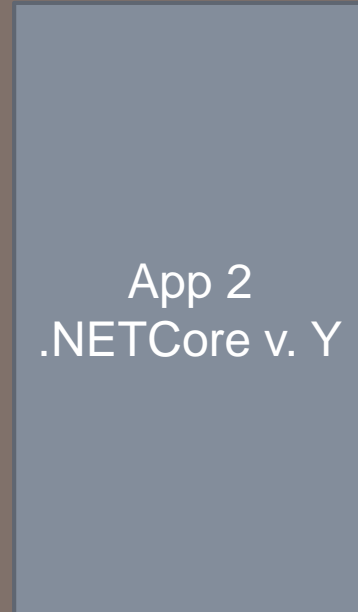
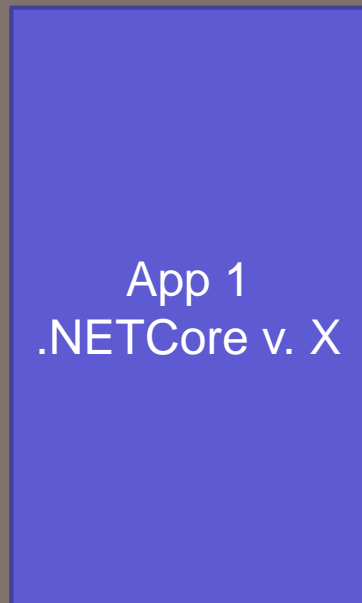
- Because cloud. CLOUD. **CLOUD**
- Trimmed down
  - Opt-in to more through NuGets
- Not in GAC

# BIN Deploy





# Side-by-side deployment



# What In and What's Out?

- No System.Web
- No desktop stuff
  - WPF
  - Winforms
  - GDI
- No Windows APIs – system32

# No System.Web

- System.Web is at the very core of ASP.NET today
  - Context
  - Request
  - Response
  - Session
  - Pipeline (that nasty global.asax stuff)

# What's In and What's Out

- Cleanup
  - E.g. fewer cultures
  - E.g. fewer overloads here and there
- Still being hashed out



Command line fun: DNX, DNU, DNVM

# Why Command Line???

- Automation
  - Cross platform
  - Visual Studio independence
- 
- Well worth learning

# DNX Runtime

Application

Frameworks (MVC, WebAPI, 3<sup>rd</sup> party) & OWIN middleware

DNX

CoreCLR

FullCLR

Mono

# DNX

- Command line for all things ASP.NET 5
- .NET Version Manager (dnvm)
- .NET Development Utility (dnu)
- .NET Execution Environment (dnx)





Demo – YO, DNVM, DNU and DNX

# project.json

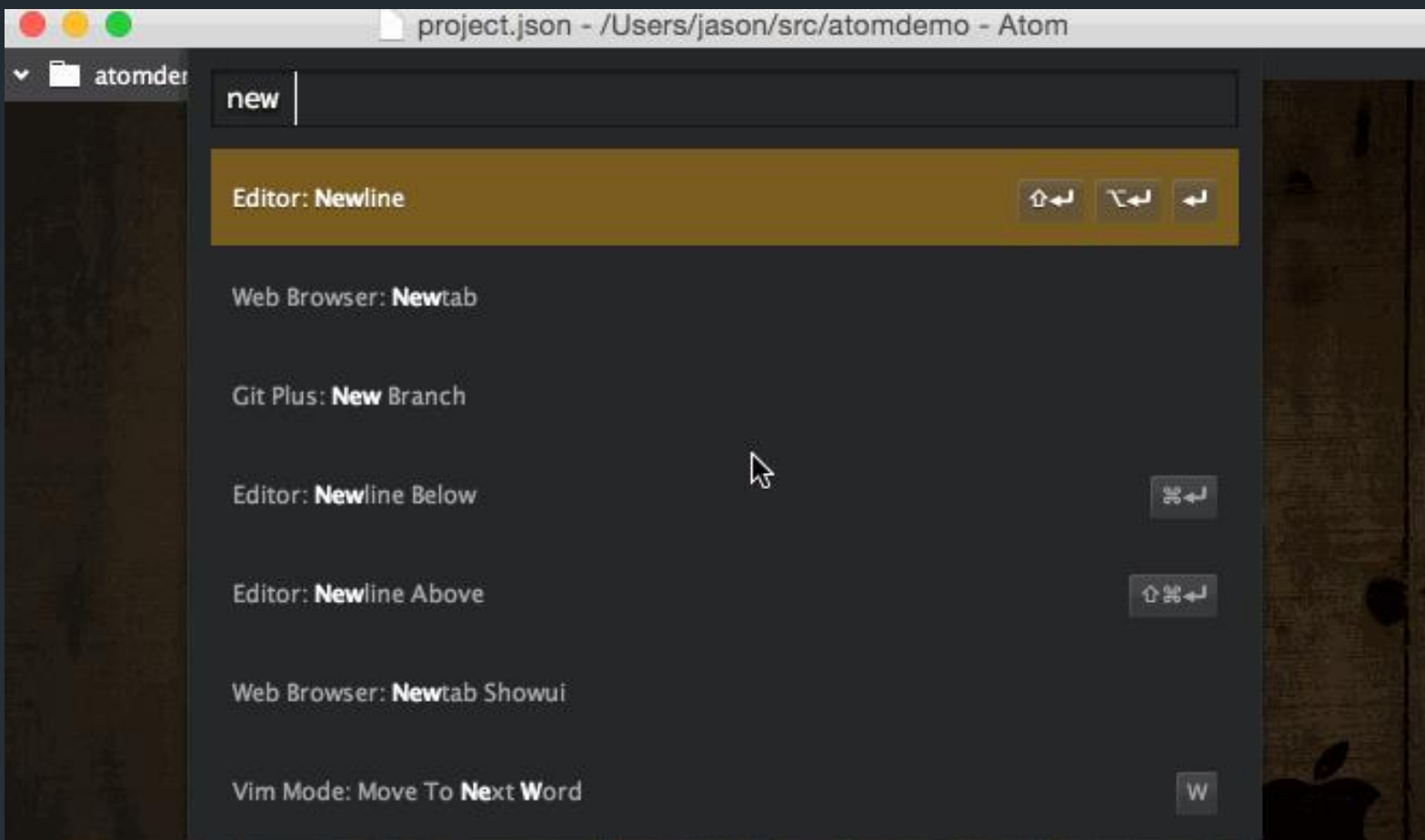
```
{
  "dependencies": {
    "Microsoft.AspNet.Server.IIS" : "1.0.0-alpha2",
    "Microsoft.AspNet.Server.WebListener" : "1.0.0-
alpha2",
    "Microsoft.AspNet.Owin" : "1.0.0-alpha2",
    "Nancy" : "1.2.0"
  },
  "configurations" : {
    "dnx451" : { },
    "dnxcore50" : { }
  }
}
```

project.json

DOES NOT LIST ALL FILES IN PROJECT

# DNX, DNU, DNVM

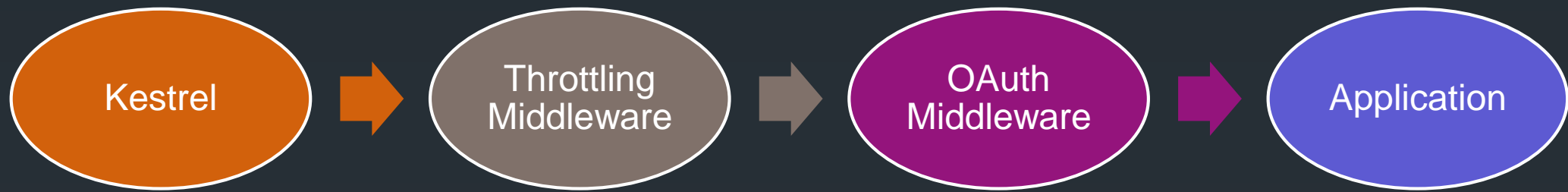
- No ties to Visual Studio
- Point-in-case: atom-omnisharp





# ASP.NET 5 Pipeline

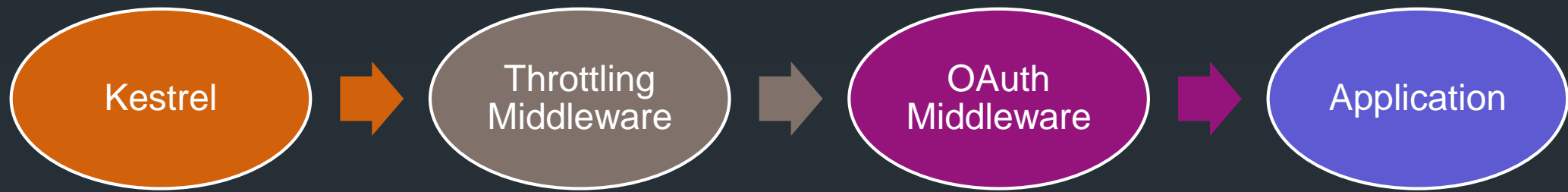
# ASP.NET 5: Pipeline



# Middleware

- Middleware transforms the request and response
  - Takes a context in
  - Can call next step in pipeline
  - Or not
  - Uniform interface

# ASP.NET 5: Pipeline





# OWIN: The Standard

- Several years in prod already
- Used (semi) widely
- Implemented by
  - Katana
  - Nowin
  - ASP.NET 5,...
- Implemented by MVC, Nancy, Suave, ...

# OWIN: Middleware Ecosystem

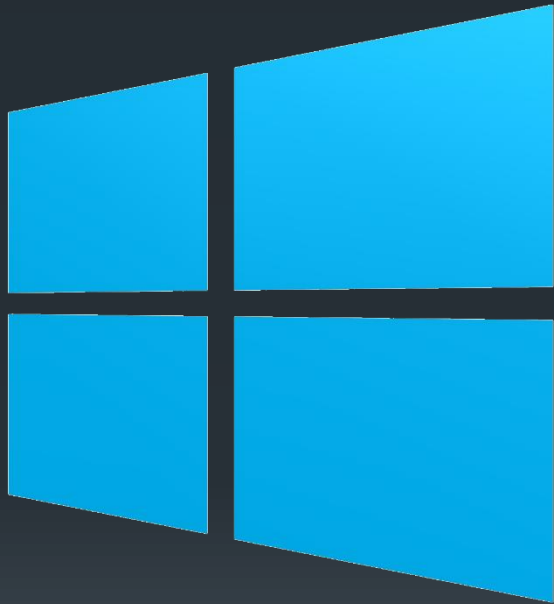
- Security:
  - Oauth, Twitter, Facebook, Google, ...
  - ClaimsTransformations
  - RequireSSL
  - ScopeValidation
  - ...
- Web:
  - Routing
  - Limits
  - Sitemap
  - StaticFiles
- Monitoring
  - Raygun
  - Serilog
- ...

# OWIN Middleware - As lambda

```
app.UseOwin(buildFunc => buildFunc(next => async ctx =>
{
    var stopwatch = new Stopwatch();
    stopwatch.Start();
    await next(ctx);
    WriteLine("Action execution time: " + stopwatch.ElapsedMilliseconds);
}));
```



# Cross Platform





DNX, MVC, WINDOWS, LINUX

DEMO



*Please*

**Remember to  
rate this session**

*Thank you!*

