

ASP.NET Core Razor Deep Dive

PUTTING RAZOR INTO CONTEXT



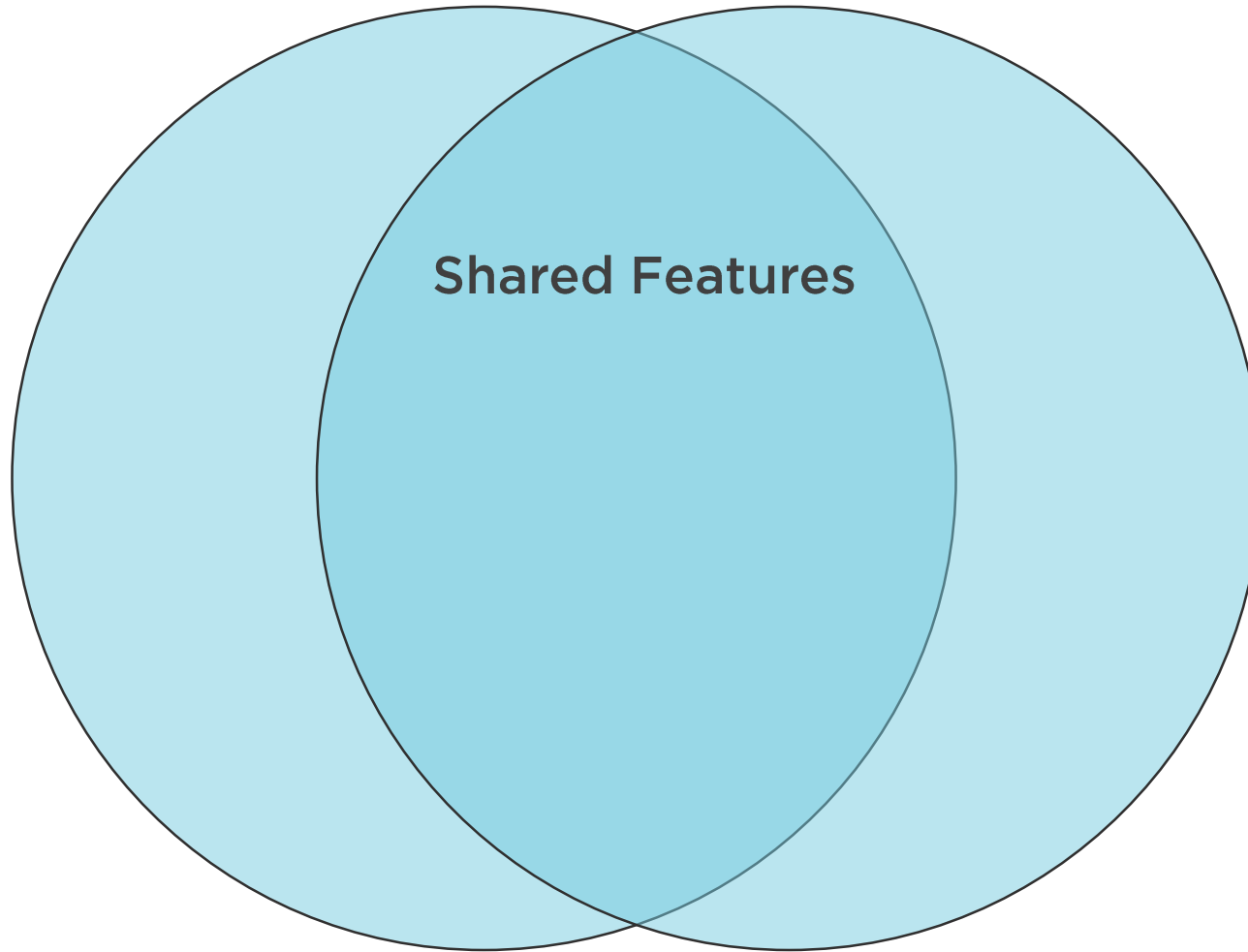
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The Old and the New

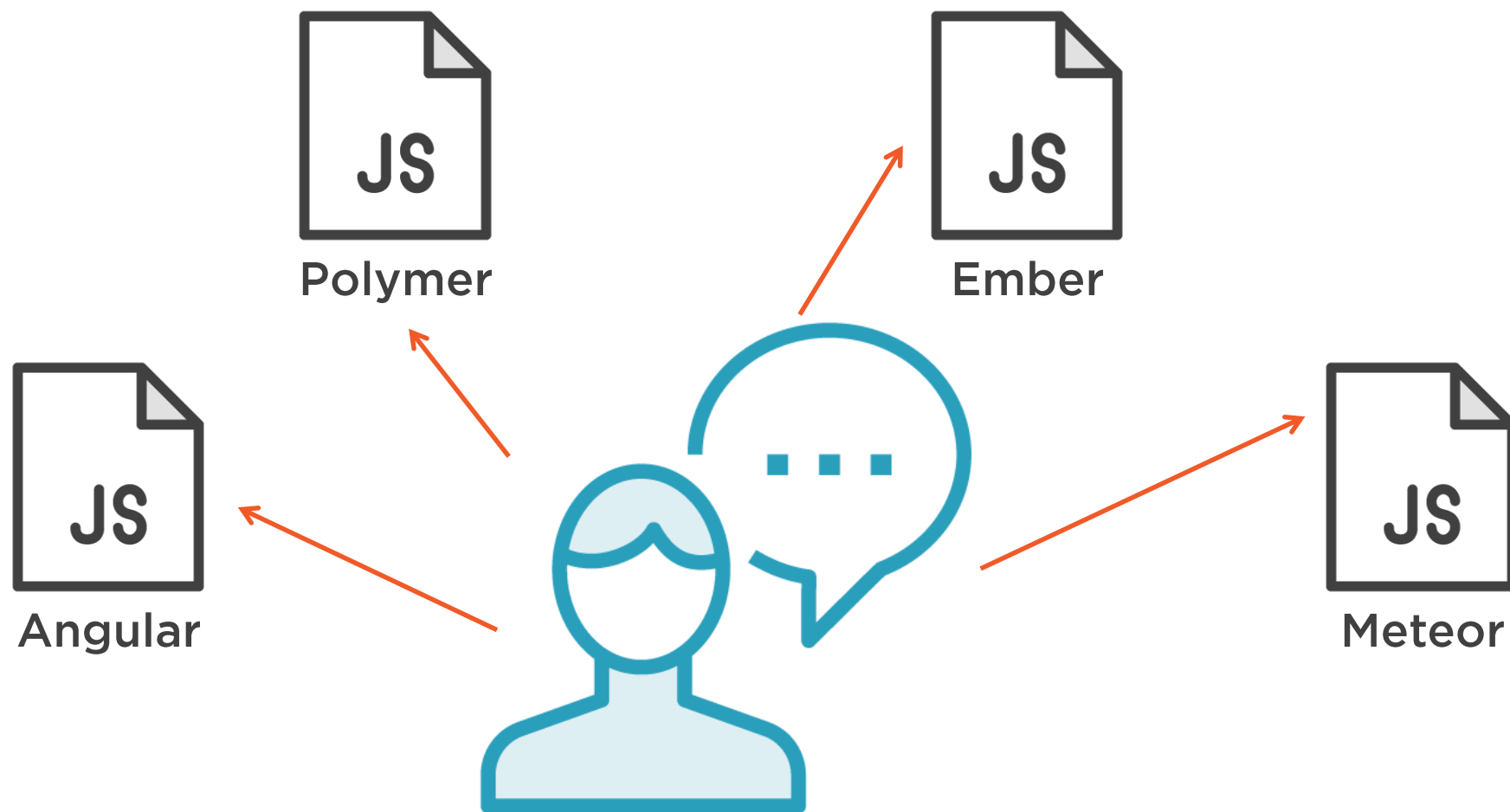
**MVC 5
Razor Features**



**MVC Core
Razor Features**



A Changing Client Side Ecosystem



Do I Still Need Razor?...



Learning by Example

Cypher Marketing

✓ Clients

[New Client](#)

[All Clients](#)

✓ Orders

[New Order](#)

[In Progress Orders](#)

[Order History](#)

✓ Inventory

[New Item](#)

[Current Inventory](#)

Welcome to the Ordering Application!

Here you can manage inventory and orders for our customers.

Pending Orders

List group item heading

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit...

Last Updated: 9/18/2016 8:12:38 PM

List group item heading

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See all

Coollest Product

Product	Add Vote
Life Size Cutouts	Vote Up
Glow in the Dark Pens	Vote Up
Flags	Vote Up
Banners	Vote Up

Idea Center

Have an idea for new marketing materials or methods? Don't keep it to yourself!

Subject

Description

Submit



Are You in the Right Place?



The Curious MVC Developer

What's new in Razor Core?



What other features and configuration options does Razor offer?



The New MVC Developer



I just started working with MVC and Razor...but I'd like to know more!



Required and Recommended Skills

Need to Know

General Web Development

HTML

CSS

ASP.NET

General working knowledge or basic experience

Nice to Know

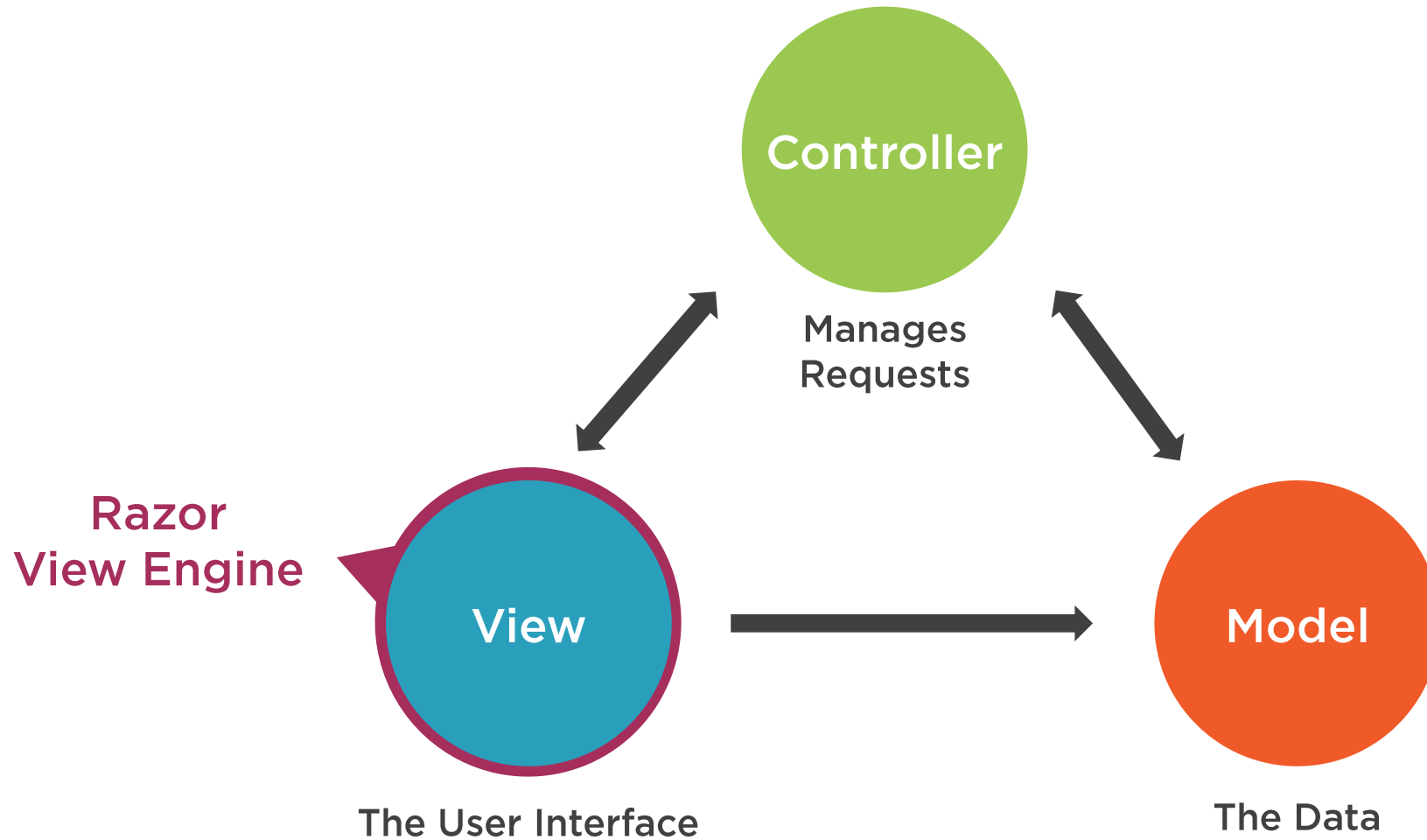
MVC Framework



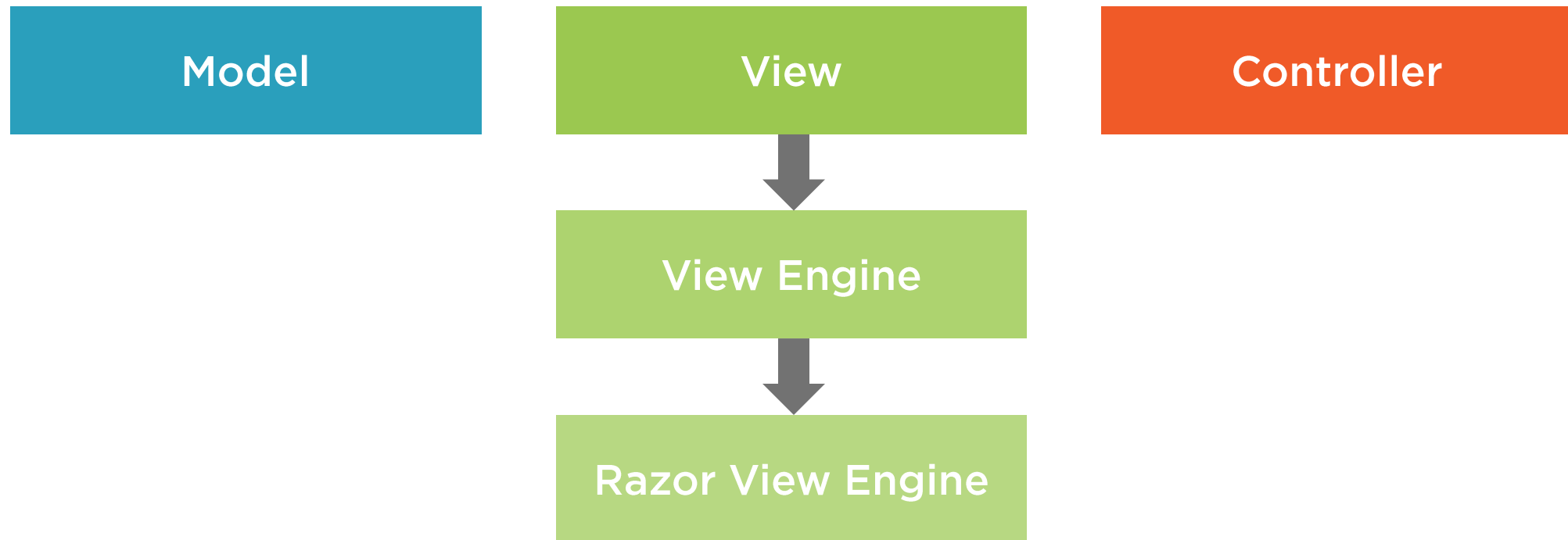
Razor and the MVC Framework



Razor and the MVC Framework



View Engines and the MVC Framework



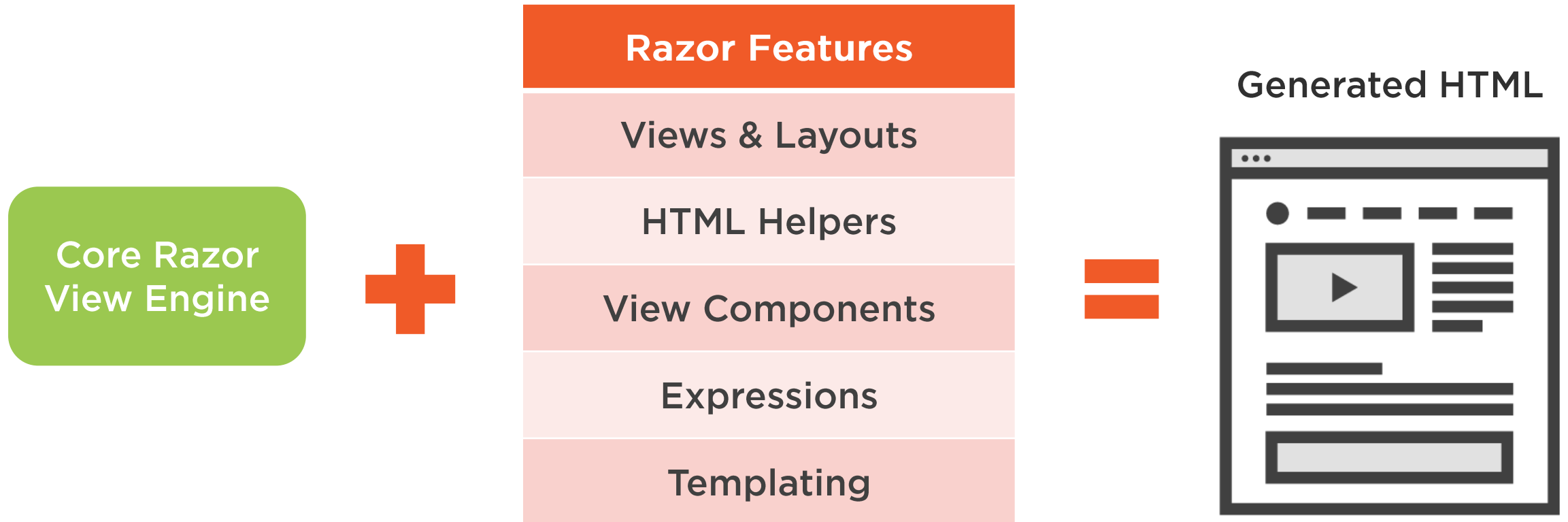
Alternative View Engines

Default View Engine

Razor View Engine



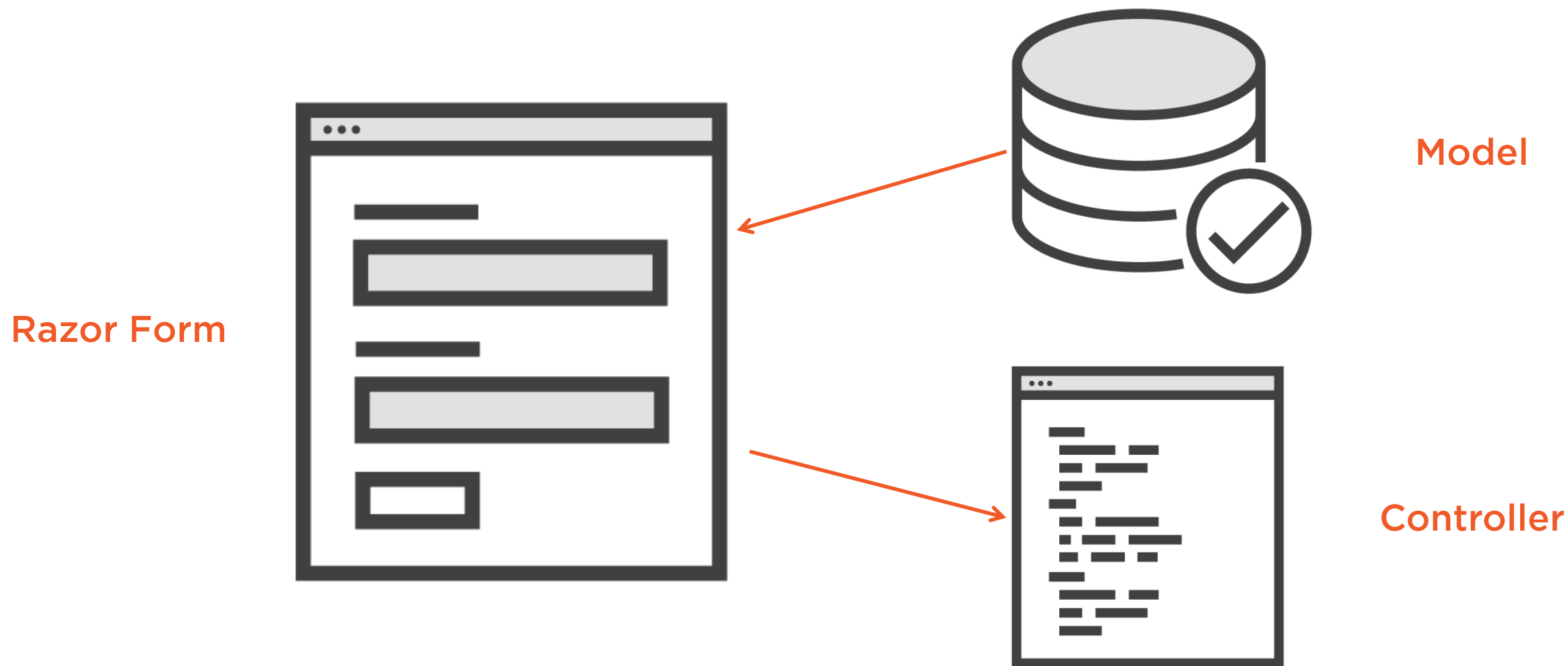
View Engines and the MVC Framework



Razor has powerful
integration with the larger
MVC Framework



Razor Integration with MVC



Razor Utility Helpers

Helper	Output
<code>@Html.ActionLink("Home Page", "Index", "Home")</code>	<code>Home Page</code>
<code>@Html.RouteLink("Contact Us", "ContactRoute")</code>	<code>Contact Us</code>



Razor in ASP.NET Core



The Evolution of Razor

Version	MVC 3	MVC 4	MVC 5	MVC Core
Features	New Razor View Engine introduced	Bundling & Minification, small syntax and mobile enhancements	No significant updates	View Components, Tag Helpers, changes to HTML Helpers, and more



```
<div class="widget">  
    // Invoke the View Component  
    @await Component.InvokeAsync("NewsWidget")  
</div>
```

Introducing View Components

Reusable, self contained pieces of functionality



```
public class NewsViewComponent : ViewComponent
{
    private INewsService _newsService;

    public NewsViewComponent(INewsService
newsService)
    {
        _newsService = newsService;
    }

    public IViewComponentResult Invoke()
    {
        var feed = _newsService.GetFeed();
        return View(headlines);
    }
}
```

◀ Dependency Injection

◀ Execution Method

◀ Associated View



Child Actions No Longer
Exist in Razor Core



Child Action Methods

The screenshot shows a web application interface. On the left is a sidebar with a list of items, each preceded by a timestamp '016 8:12:38 PM' and the text 't metus. Maecenas'. At the bottom of the sidebar is a blue button labeled 'See all'. The main content area features a blue header for a 'Coolest Product' section, which contains a table with two columns: 'Product' and 'Add Vote'. The table lists four items: 'Life Size Cutouts', 'Glow in the Dark Pens', 'Flags', and 'Banners', each with a 'Vote Up' link. Below this table is a green header for an 'Idea Center' section, which includes a text prompt, input fields for 'Subject' and 'Description', and a 'Submit' button. A red rectangular box highlights the 'Coolest Product' table, and an orange arrow points from this box to the '[Child Action]' text in the Controller section on the right.

Product	Add Vote
Life Size Cutouts	Vote Up
Glow in the Dark Pens	Vote Up
Flags	Vote Up
Banners	Vote Up

Controller

// Action Method #1

// Action Method #2

[Child Action]

// Action Method #3



```
<div class="widget">  
    // Can't Do This in Core Razor  
    @Html.Action("Deprecated")  
</div>
```

Child Actions Are No More

Child Actions created awkward controller structures and other issues

View Components are more self contained



```
<div class="form-group">
  <label asp-for="Zipcode" class="col-md-2"></label>
  <div class="col-md-10">
    <input asp-for="Zipcode" class="form-control" />
    <span asp-validation-for="Zipcode" class="text-danger"></span>
  </div>
</div>
```

Introducing Tag Helpers

Much closer to HTML syntax

More friendly for front end developers and designers




```
@model IEnumerable<NewsItem>

@Inject INewsService NewsService

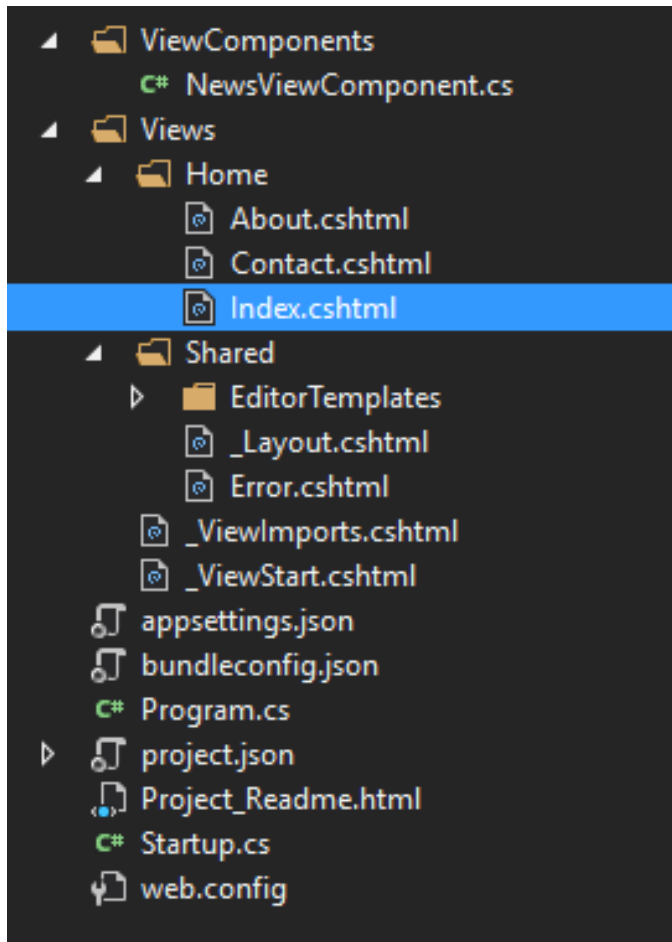
@{
    ViewData["Title"] = "Home Page";
}
```

Dependency Injection in Views

Useful, but requires caution



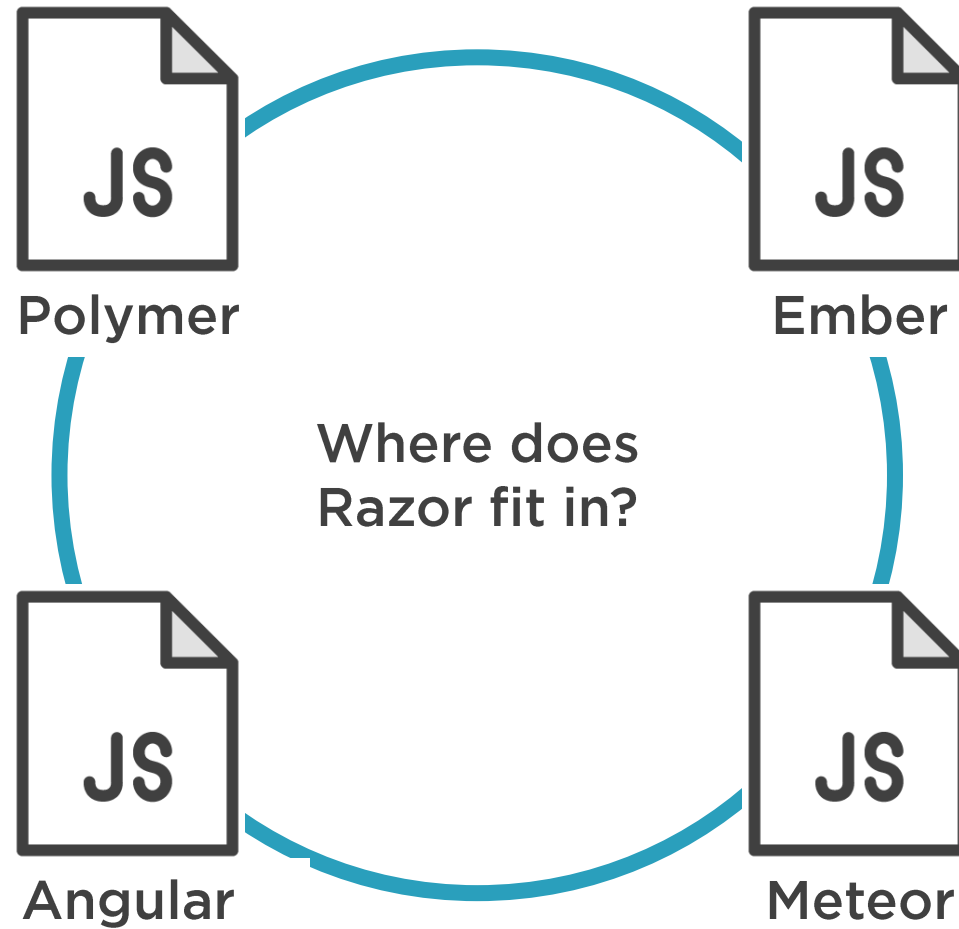
Razor Directory Structure



Now with Fewer
Web.Config Files



A Changing Landscape

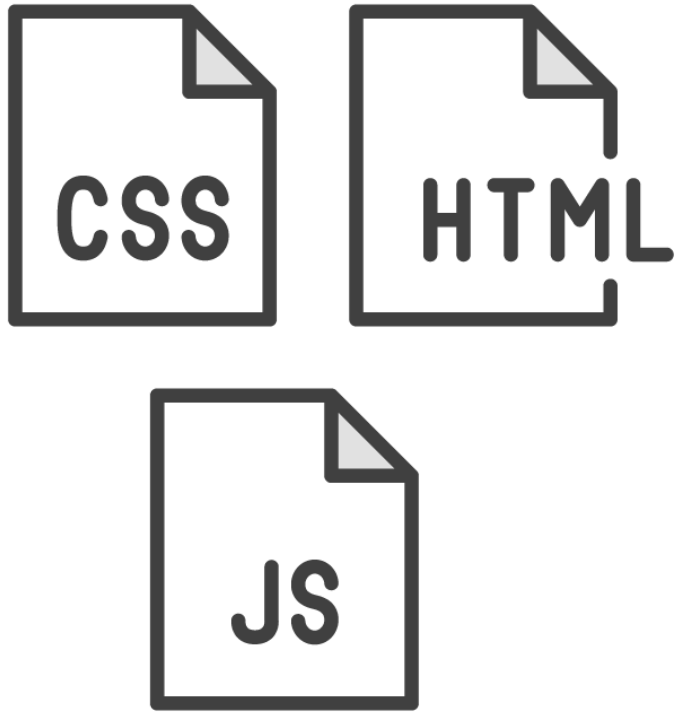


Why Razor?

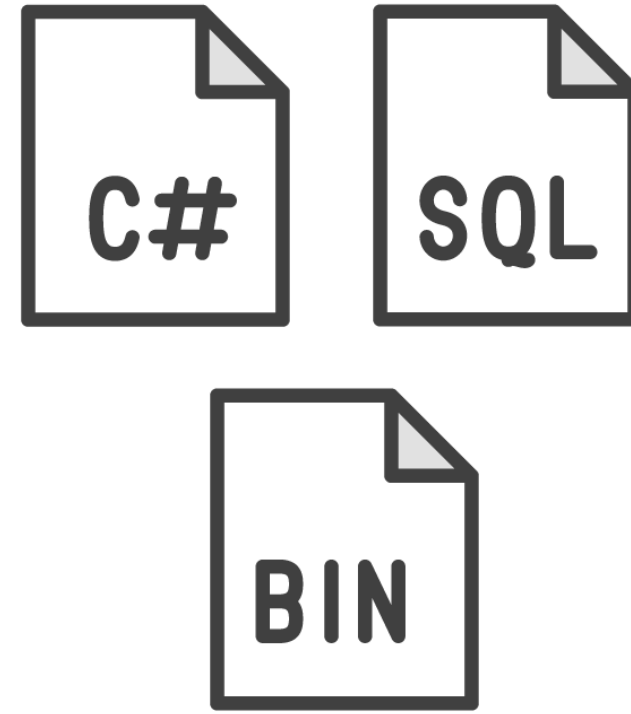


Considering Modern Architectures

Client Side



Server Side

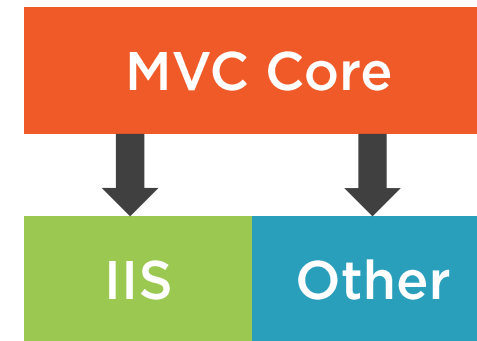


Understanding MVC and Web API

ASP.NET 4.5



ASP.NET Core

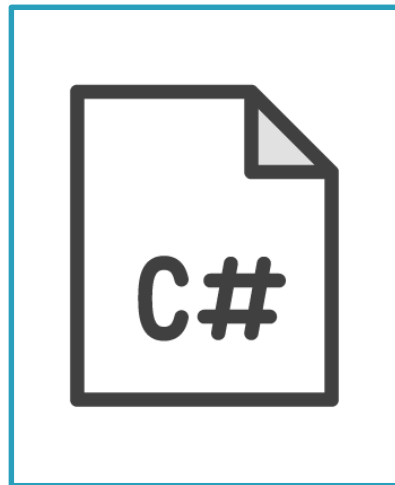


Choosing an Architecture

Separate Projects

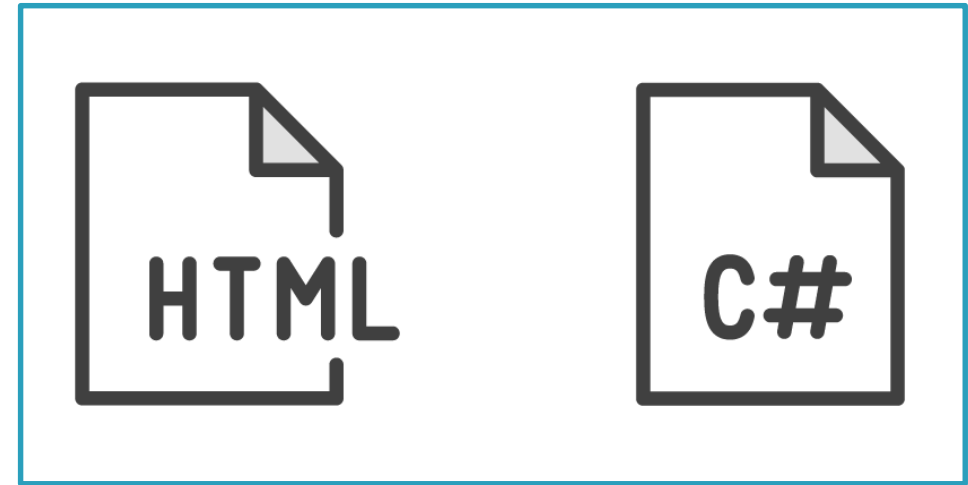


Front End
Code Base



Back End
Code Base

Combined Projects



Combined Code Base

Razor and Client Side Frameworks



Defining Razor

Razor
View Engine

!=



Angular



Polymer



Meteor

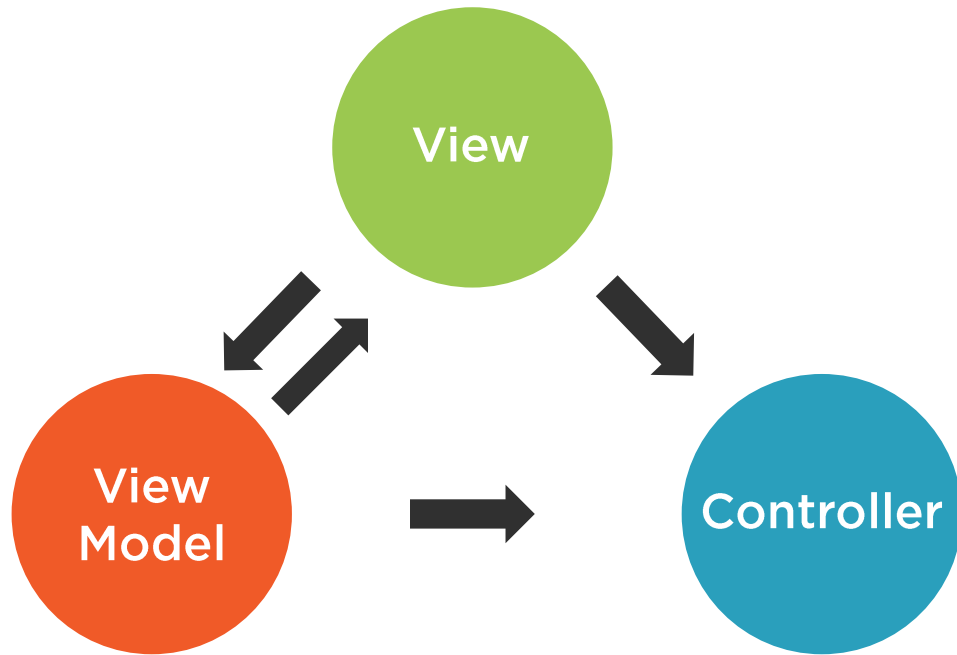


Knockout



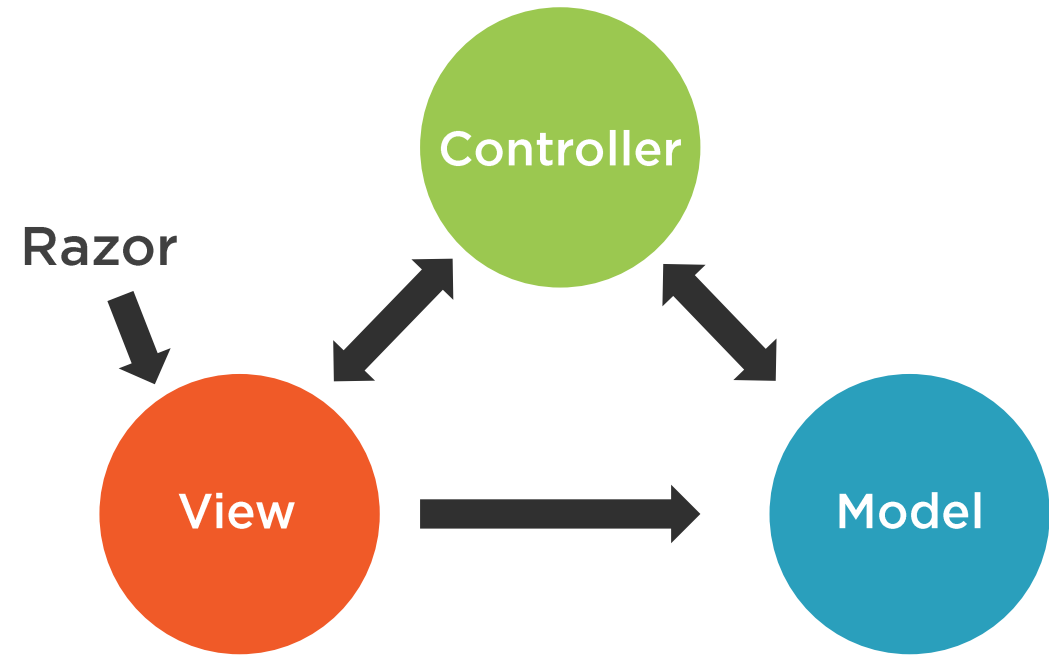
View Engine vs Framework

Front End Framework (MVC, MVVM, MV*)



(MVVM Example)

Razor View Engine



.NET MVC



Tooling Considerations

Front End Framework (MVC, MVVM, MV*)

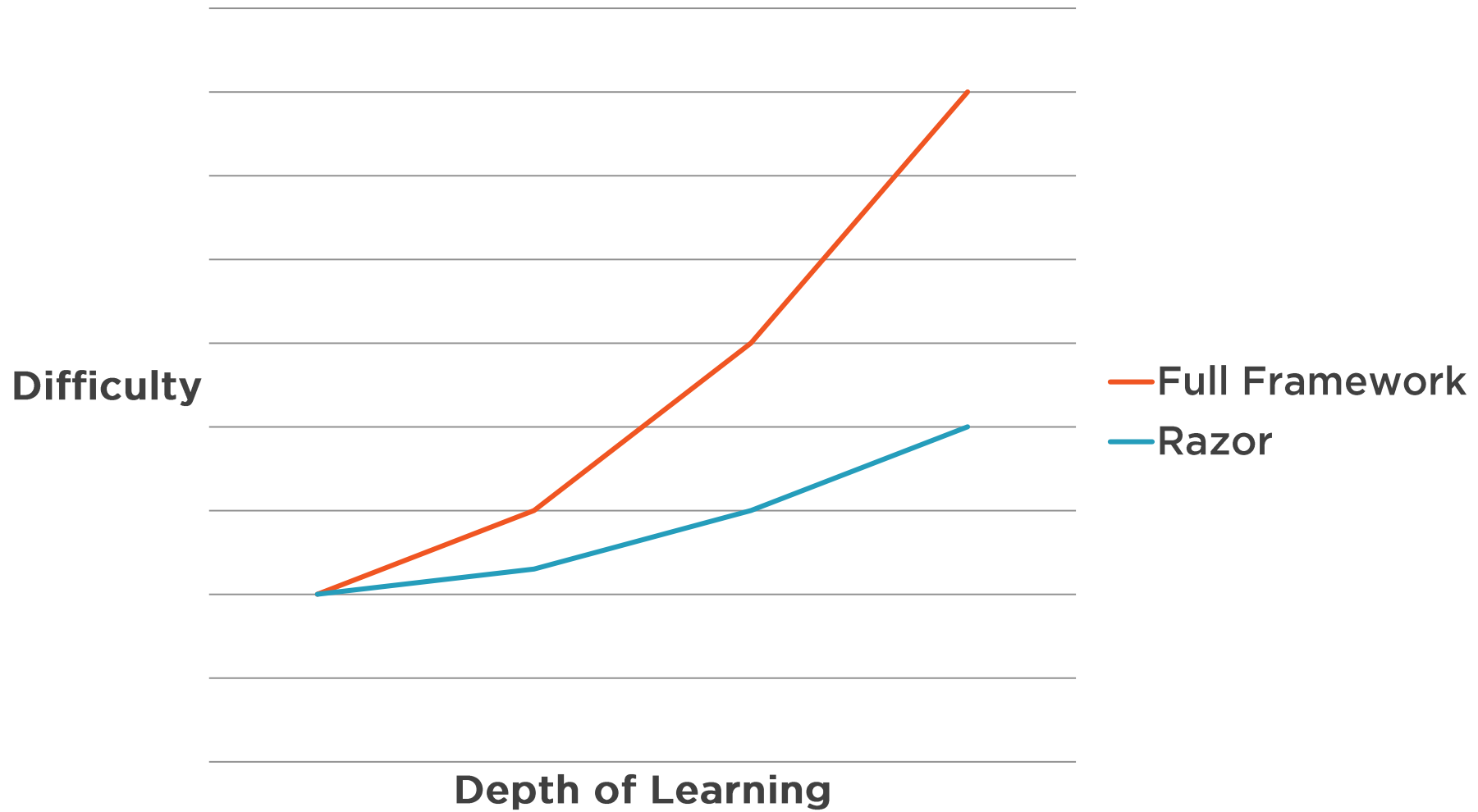
- Node (+ modules)
- Grunt
- Gulp
- Yeoman?

Razor View Engine

- Visual Studio



The Learning Curve



What Does Your
Application Really Need?



What Type of Application Are You Building?

Single Page App



A **Simpler** Approach



Page 1



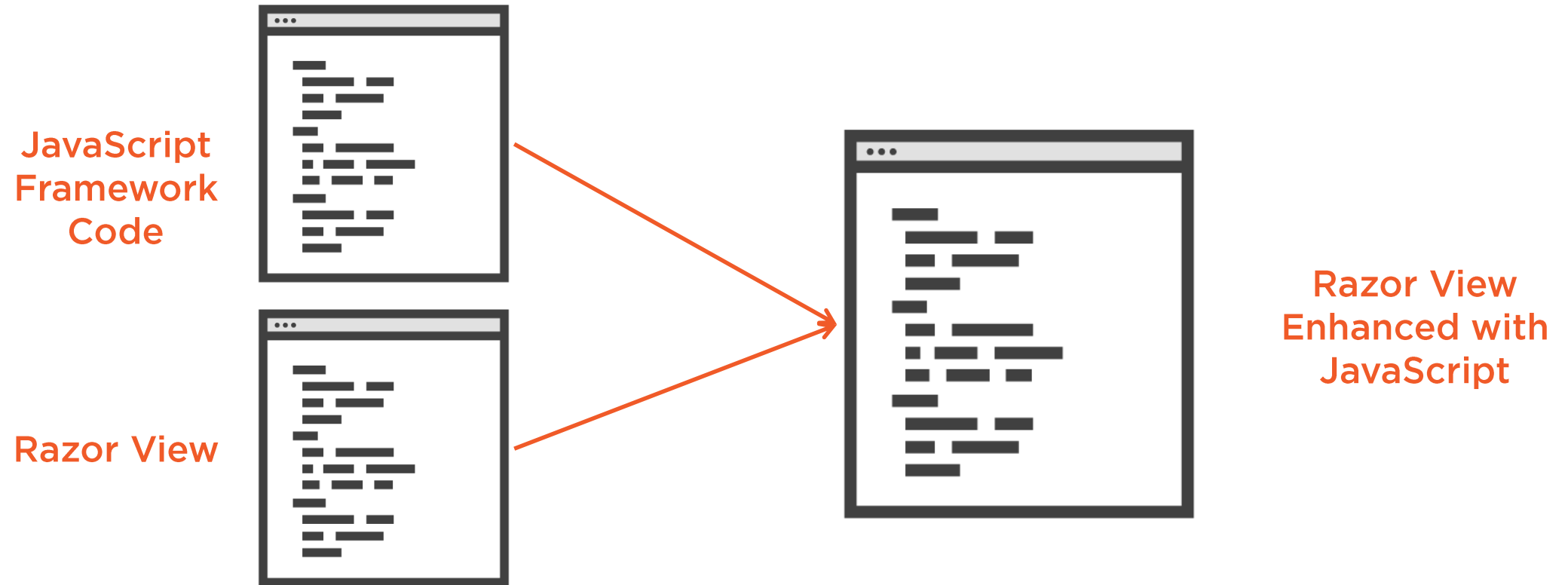
Page 2



Page 3

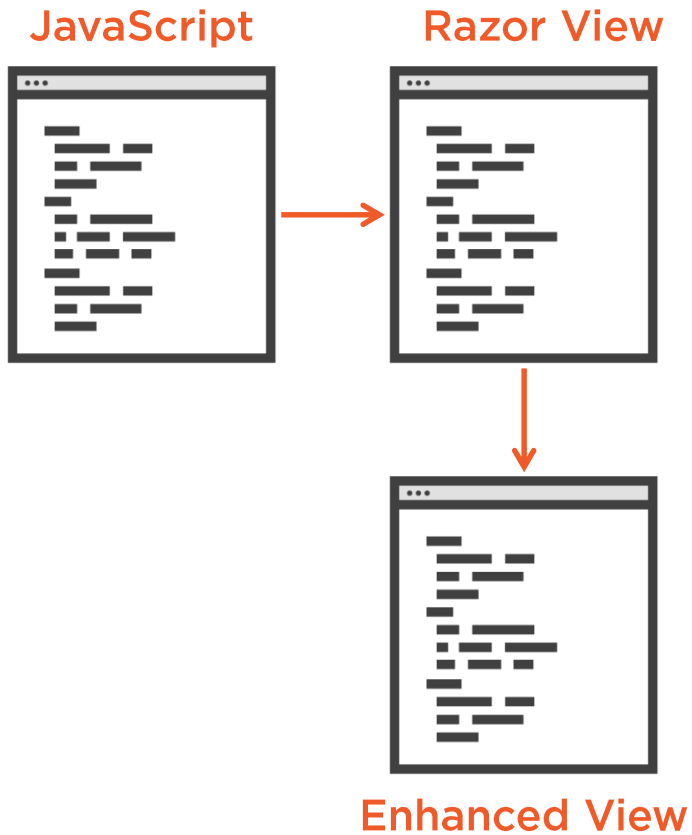


A Hybrid Approach



A Hybrid Approach (cont.)

Admin Area



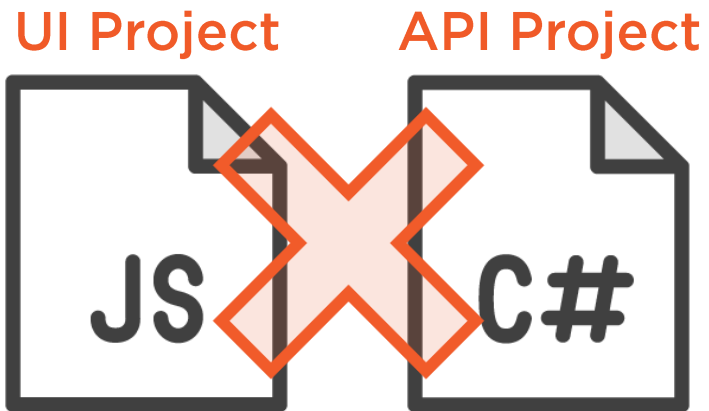
Storefront



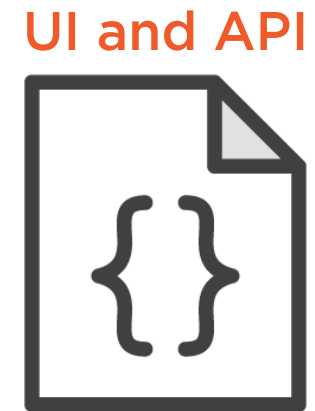
Checkout Area



Code Base Considerations



Separate Code Bases



Single Code Base



The Agenda



To-Do List



Getting Started with Razor Basics

Building Better Forms with Razor

Building for Reusability with View Components

Writing Cleaner Markup with Tag Helpers

Extending and Configuring Razor

Creating Efficient Markup with Razor Templating

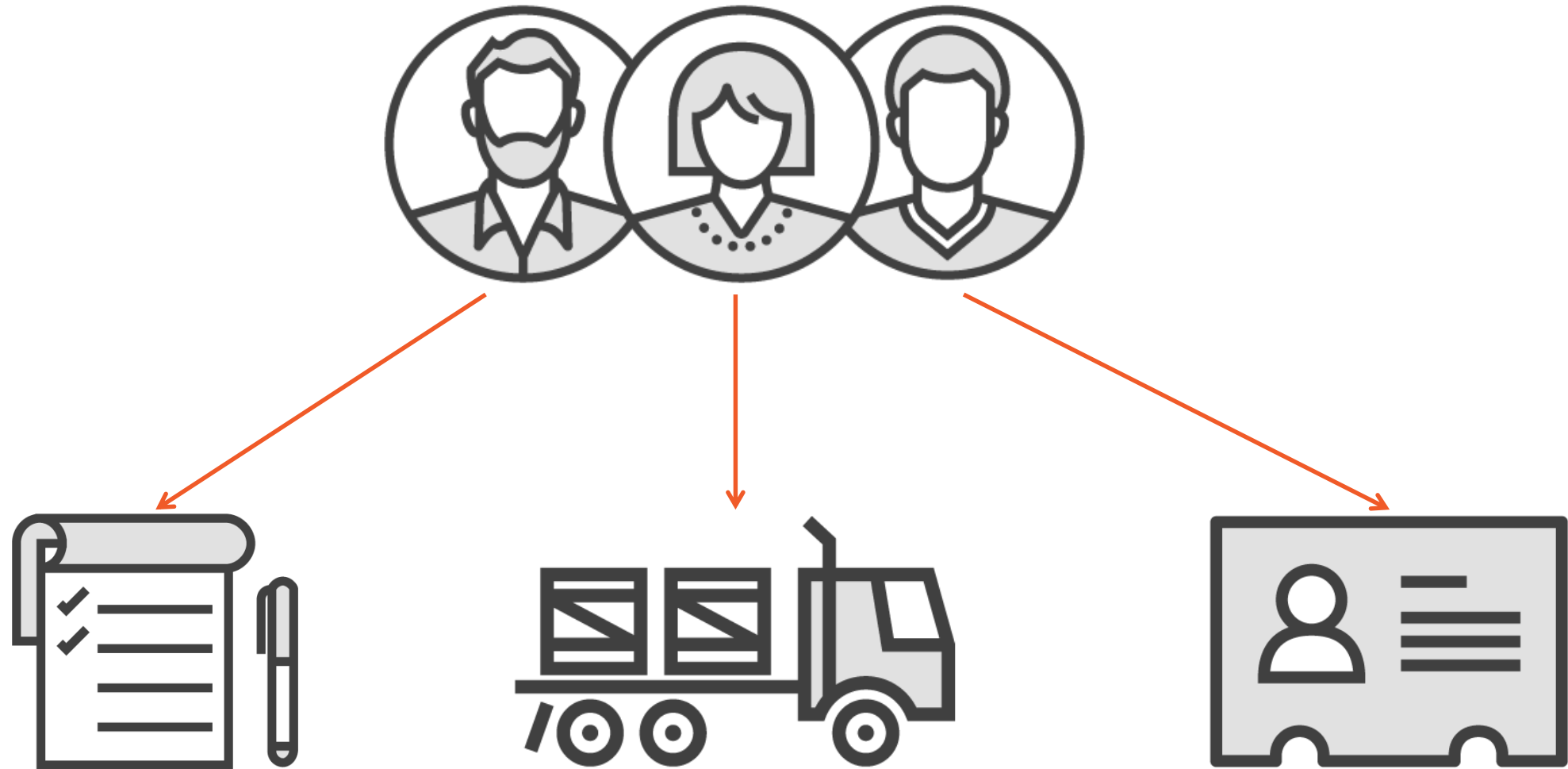
Managing Components with Dependency Injection



Learning by Example



Understanding the Sample Application



Focusing on the Essentials



Summary



Razor is a View Engine responsible for generating views and markup

Razor improves productivity by integrating with the larger MVC Framework

ASP.NET Core introduces new features like View Components and Tag Helpers

The choice between Razor or a front end framework should be driven by application and business needs

