Write Your Own Directives

how I learned to love Angular 1.x

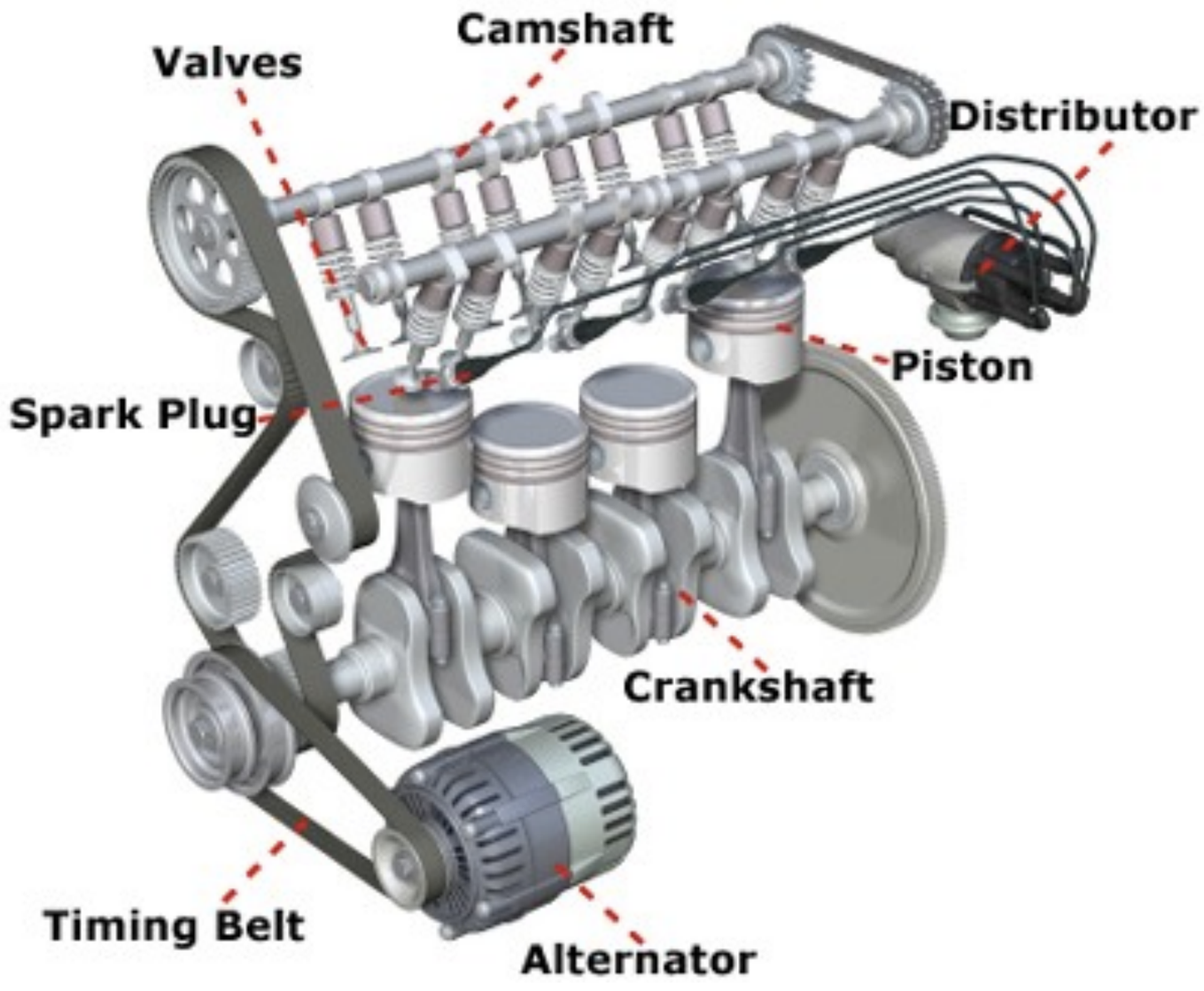
Why Write Your Own Directives

You can make an Angular app without writing your own directives.

Just have one controller per page, use the built in directives.

Component-Based Architecture

Engine-er



Component-Based Architecture

The idea that software should be componentized first became prominent with Douglas McIlroy's address at the NATO conference on software engineering in Garmisch, Germany, **1968**, titled Mass Produced Software Components

It is a reuse-based approach to defining, implementing and **composing** loosely coupled **independent** components into systems that emphasizes the separation of concerns.

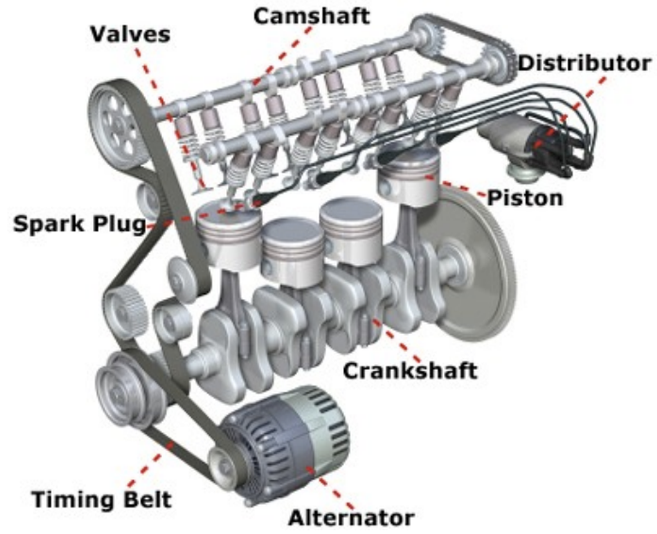
Coupling

https://www.youtube.com/watch?v=Aaxw4zbULMs

Why Write Your Own Directives

Advantages

- ***Composability
- Reusability
- Quicker Debugging
- Test Friendly
- Shorter Files



<u>Biggest advantage to writing your own</u>
Your monster app will be organized into small intuitive ‘components’

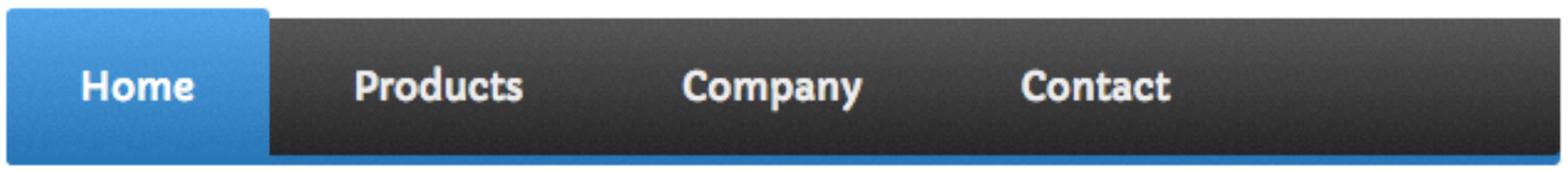
(aka sanity)

Component Thinking

We can think of front-end UI components as generally having 4 aspects

- Configuration Parameters
- Behaviors (respond to events)
- State (stored information)
- A way to talk to others (get/send data)

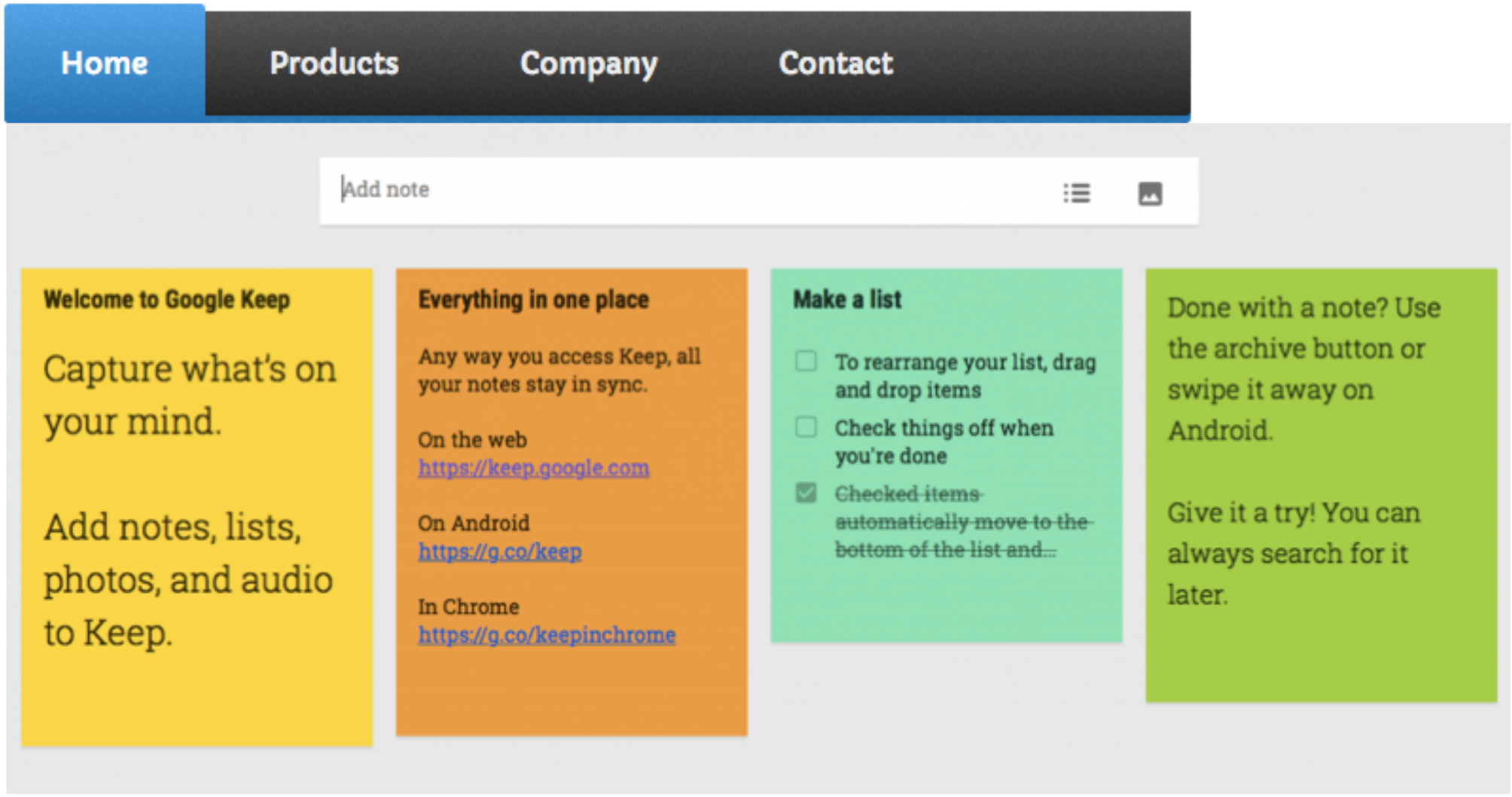
Component Thinking - Example



What are the 4 aspects for a nav bar?

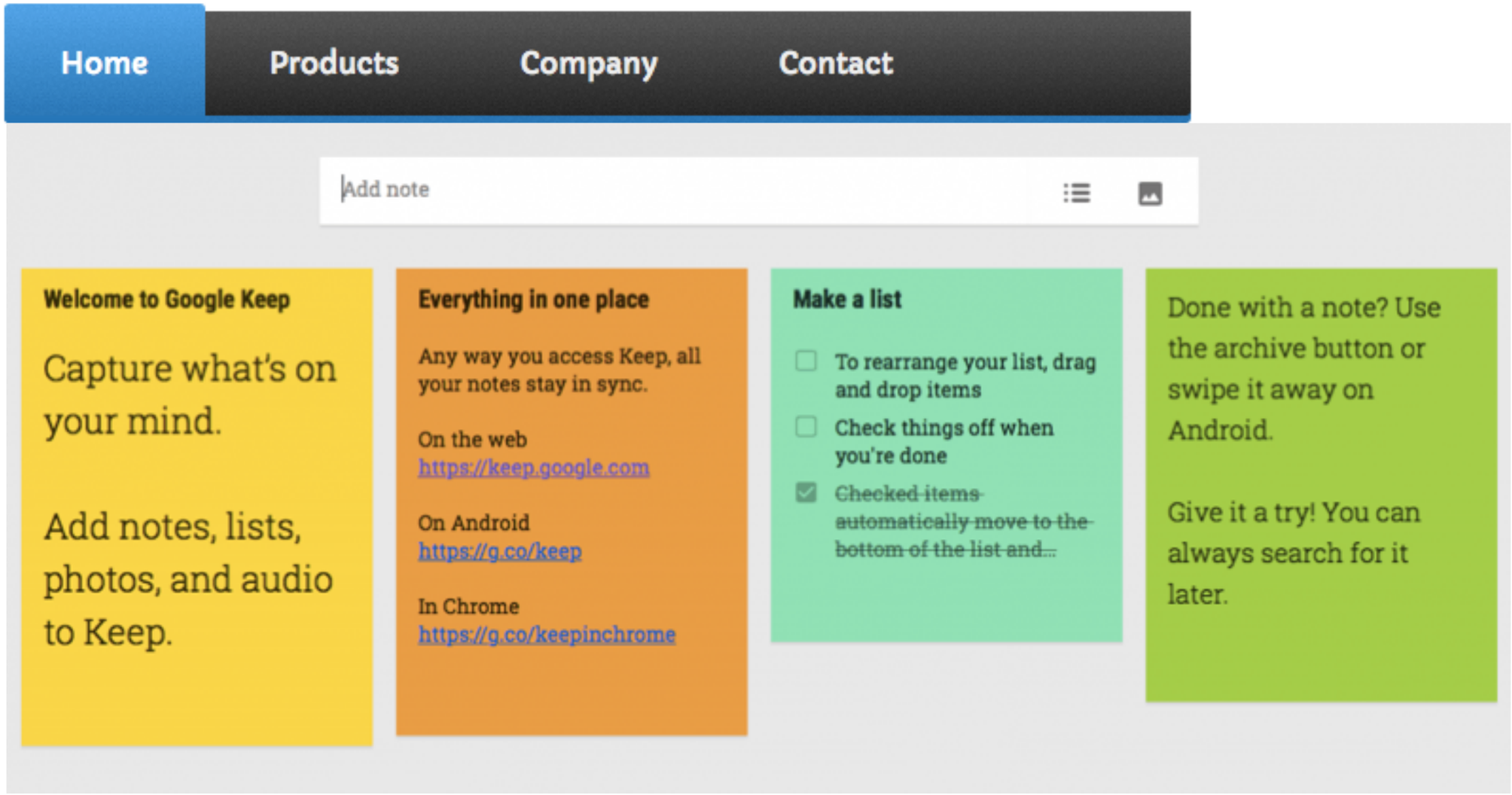
- Configuration Parameters
- Behaviors (respond to events)
- State (stored information)
- A way to talk to others (get/send data)

Component Thinking - Example



What components do you see here?

Component Thinking - Example



What components do you see here?

When we combine directives on a page, we obtain a Separation of Concerns

Using a Directive

coolThing.html

```
<body>
<h1>My Page</h1>
<search-bar config1="a" config2="b"></search-bar>
</body>
```

Tells Angular to

insert my directive searchBar here
with config parameters

and bring it to life

Defining a Directive

For each directive, you should* provide 4 things to the

Directive Definition Object (DDO)

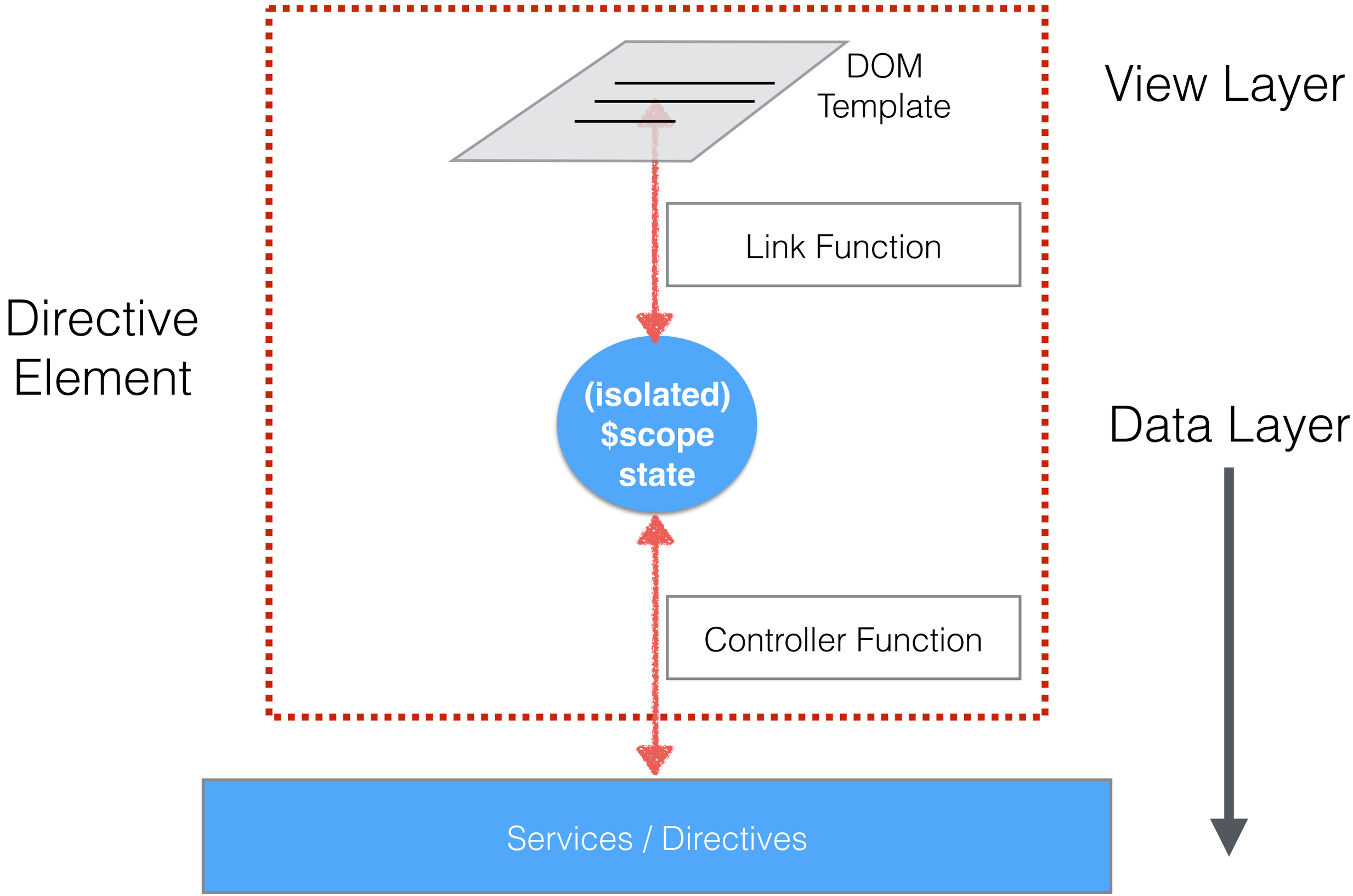
DDO Property	Question Directive Should Answer
scope	what is my initial state? (config)
templateUrl	how should I look? (css, html)
link function	how should I affect the UI? (click events)
controller function	how do I interact with data sources and other directives? (broadcast, http)

Defining a Directive - Example

DDO

```
.directive('yee', function(){
    return {
      scope : initialConfigParams,
      templateUrl: 'yee.html',
      link: function(scope, elem, attrs) { … },
      controller: function($scope, $http, ..) { …. },
    };
});
```

Abstract Idea



Let’s Code

https://github.com/nwbauer/angular-directives-tga

The Life of a Directive

Root Scope

/page1

Scope C

Directiv A

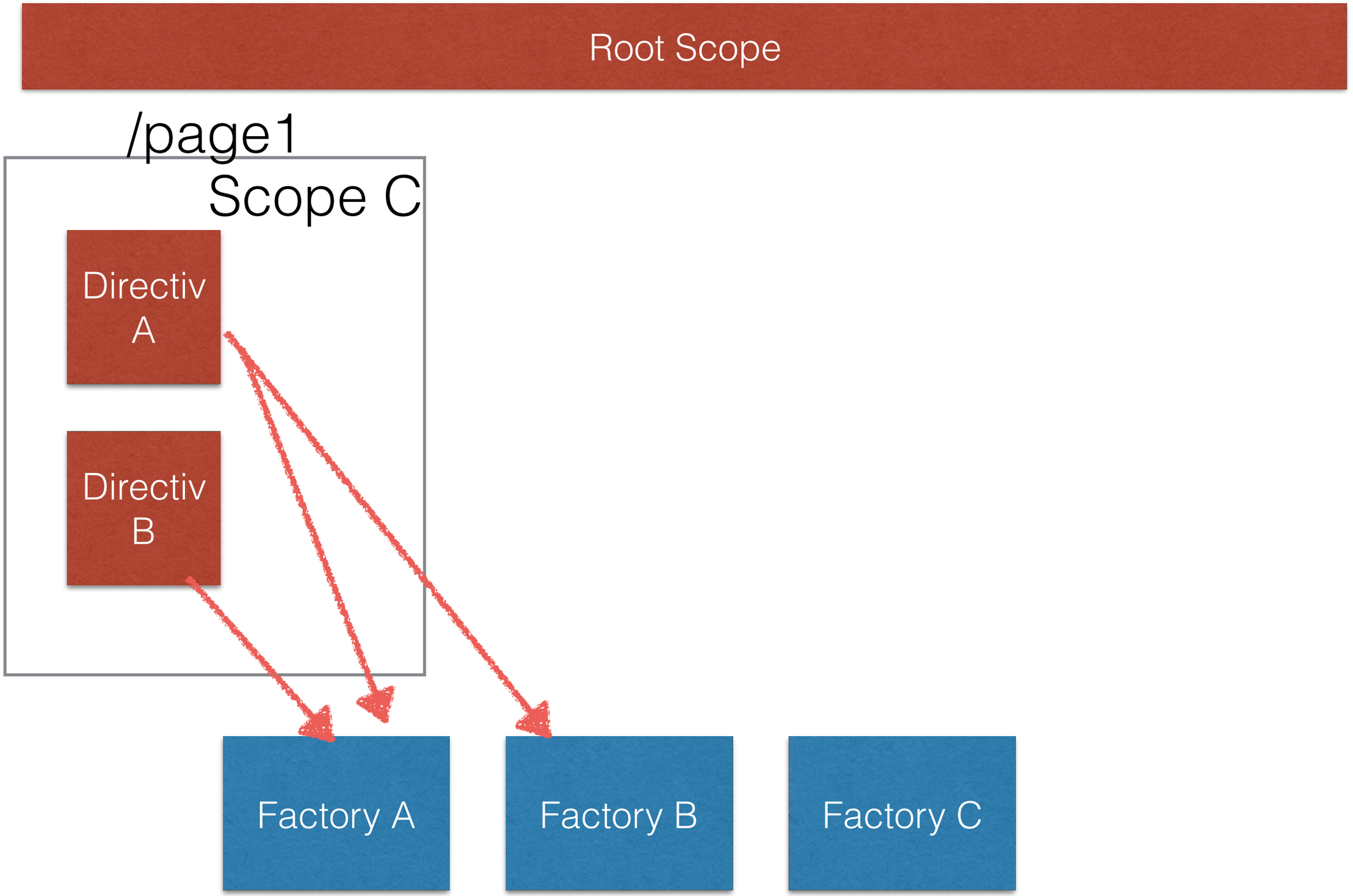
Directiv B

Factory A

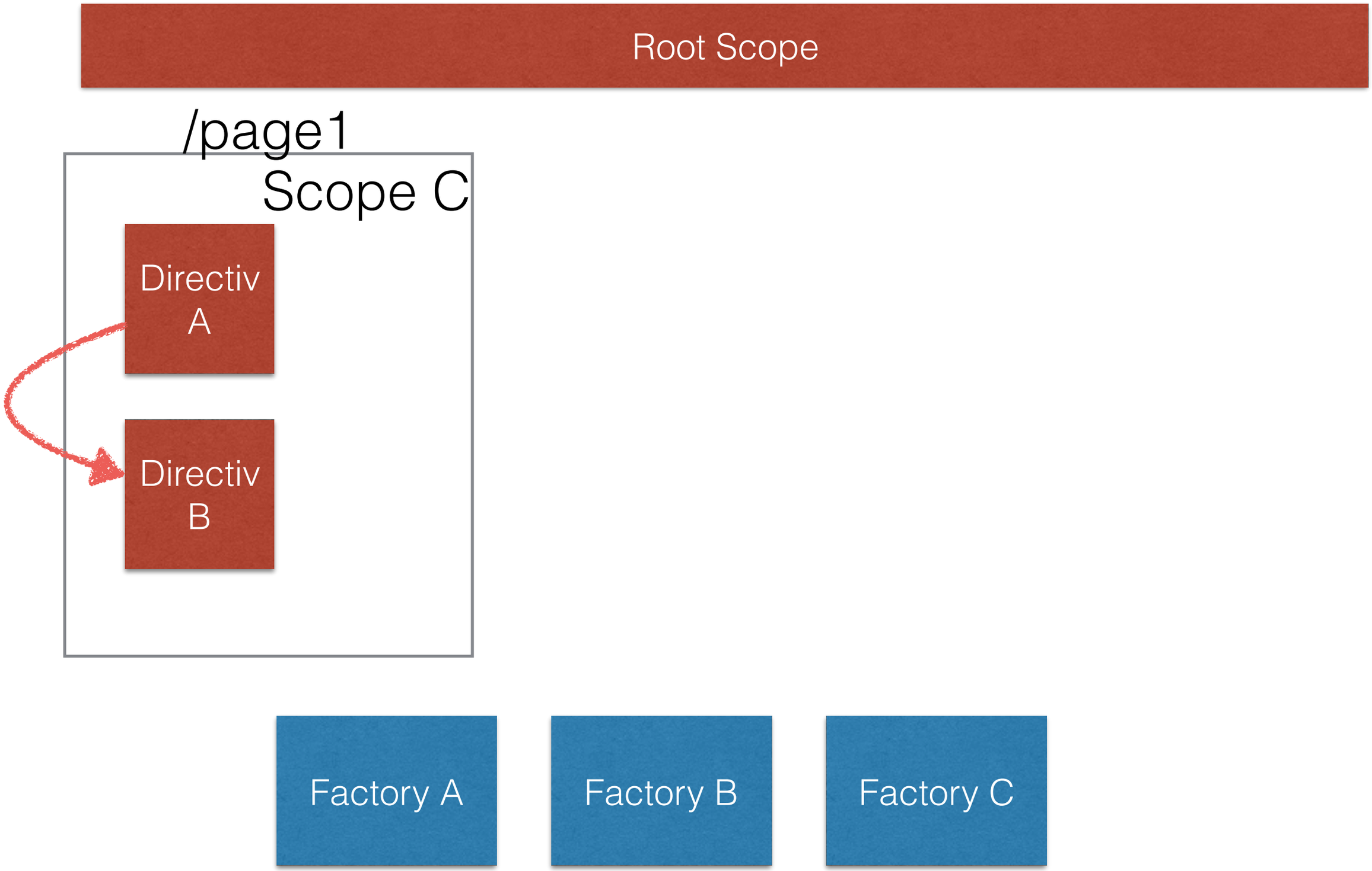
Factory B

Factory C

The Life of a Directive



The Life of a Directive



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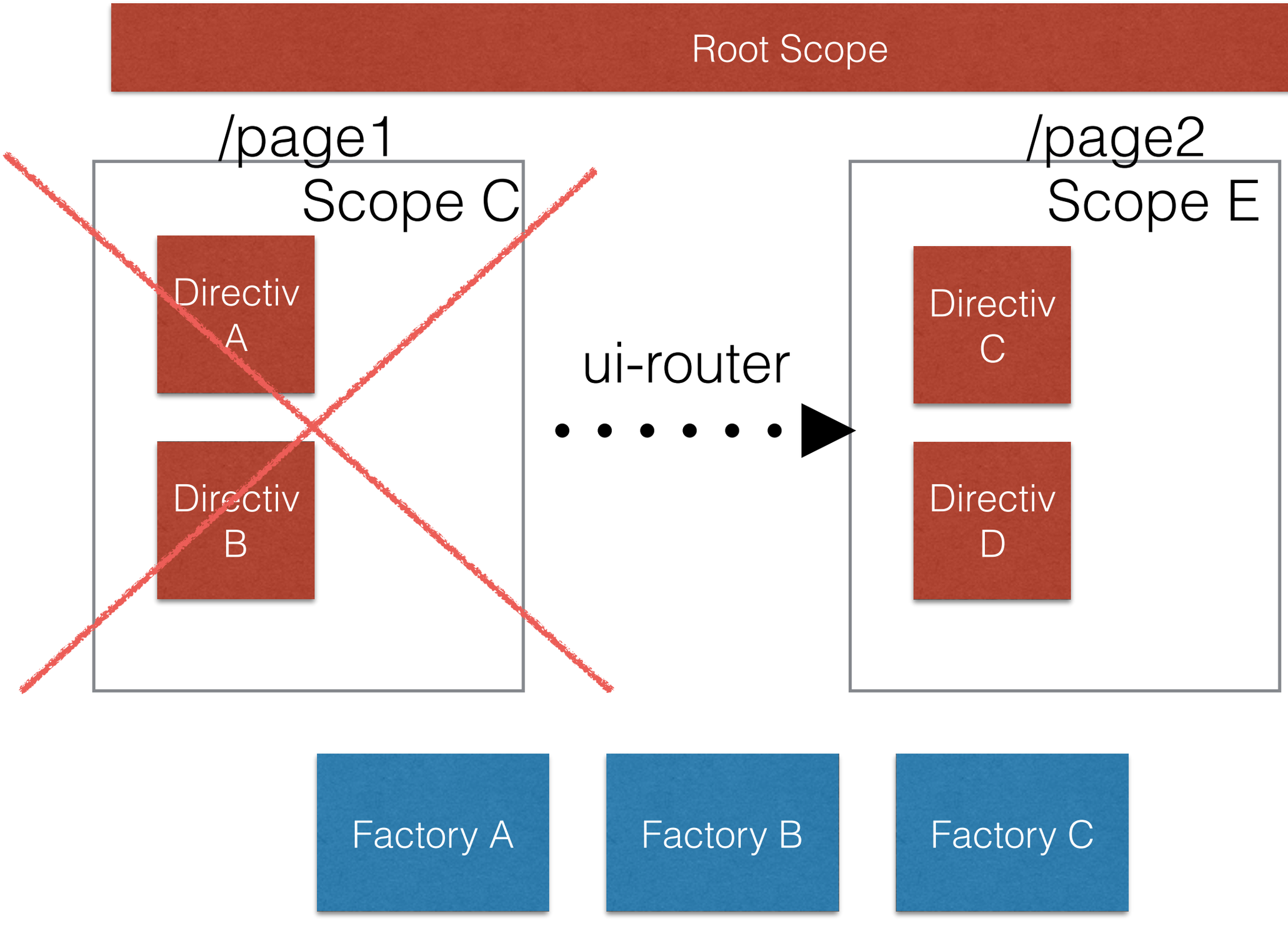
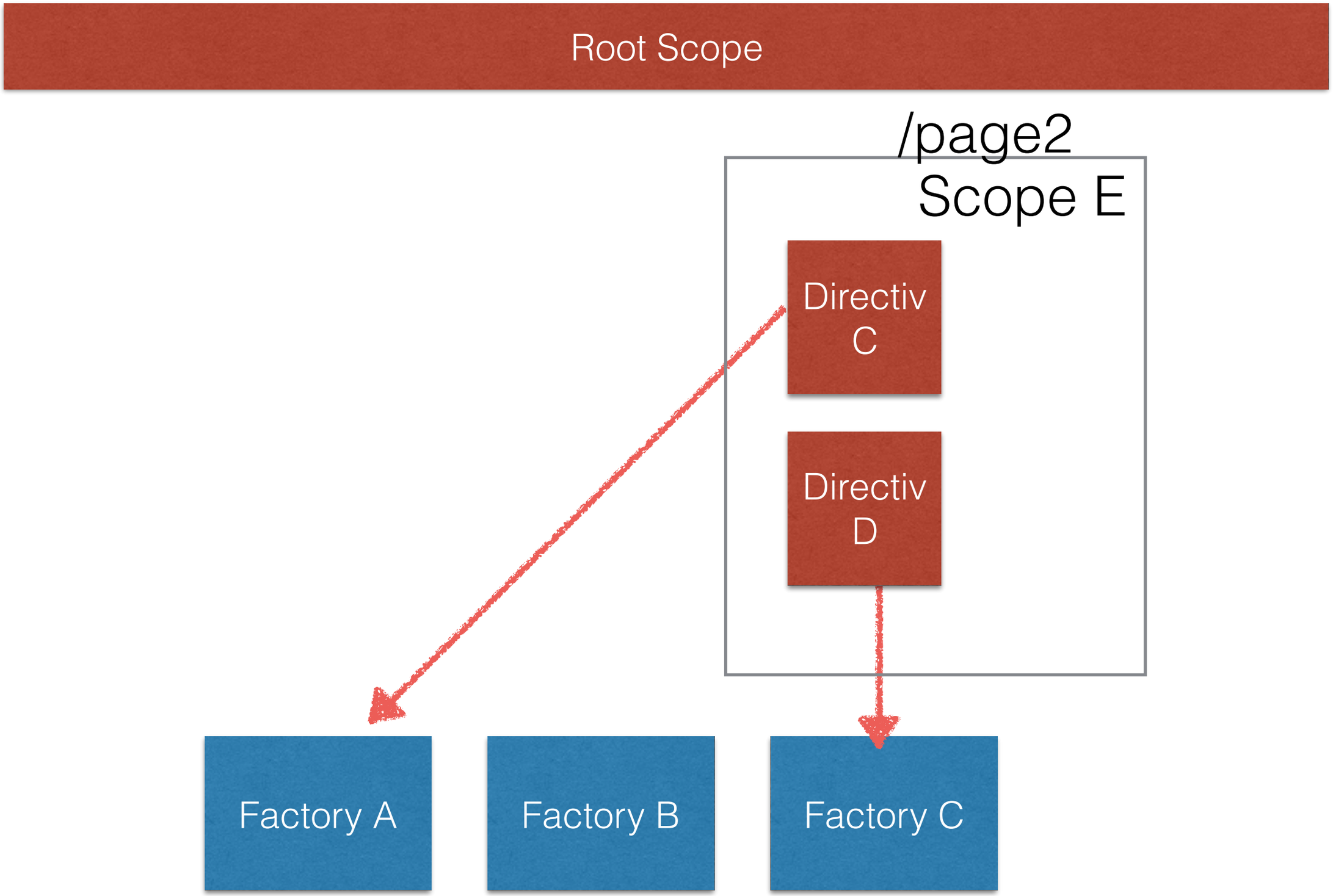


The Life of a Directive



Why Directives

You can make an Angular app without writing your own directives.

Just have one controller per page.

<u>Biggest advantage</u>
Your code will be organized into small intuitive pieces

Nick's Guide to Zen Programming

You can learn anything.

Everything complicated is made up of simple parts.
Break concepts down as far as possible.

Learn to love failure and criticism.

Failure is a part of evolution,
if you are not failing, you are not evolving.

Keep an open mind.

When something challenges your mental model
try to accept it first, rather than fight it.
"usually, I am wrong"