



Web and Mobile Code Sharing with NativeScript and Angular

Sebastian Witalec

Senior Developer Advocate

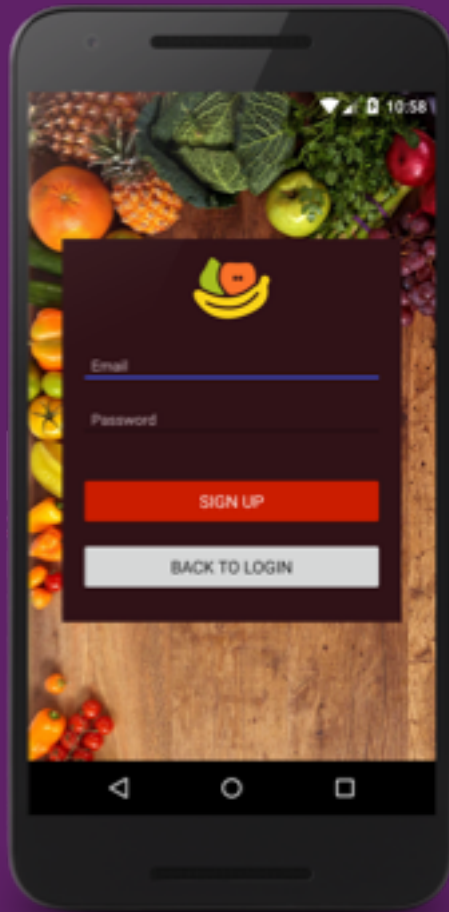
30-May-2018

NativeScript is:

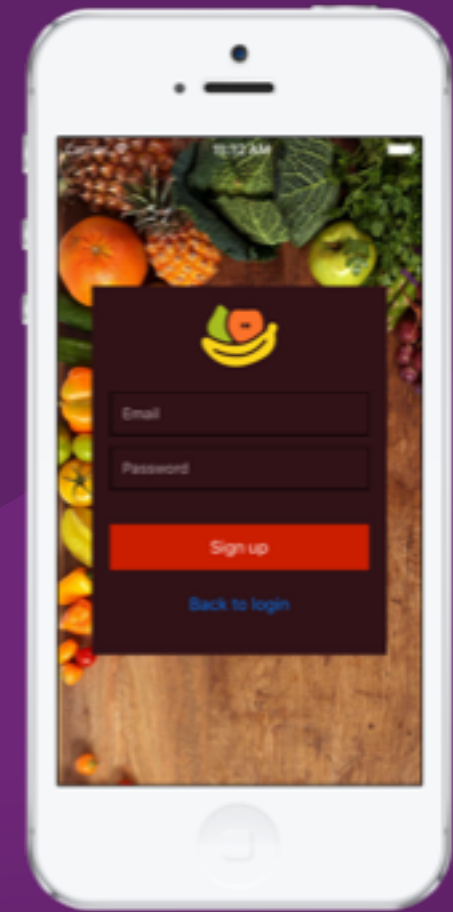
*an **open source** framework for building **truly native** mobile apps with **JavaScript**. Use web skills, like **TypeScript**, **Angular**, **Vue** and **CSS**, and **get native UI and performance** on **iOS** and **Android**.*

The Goal

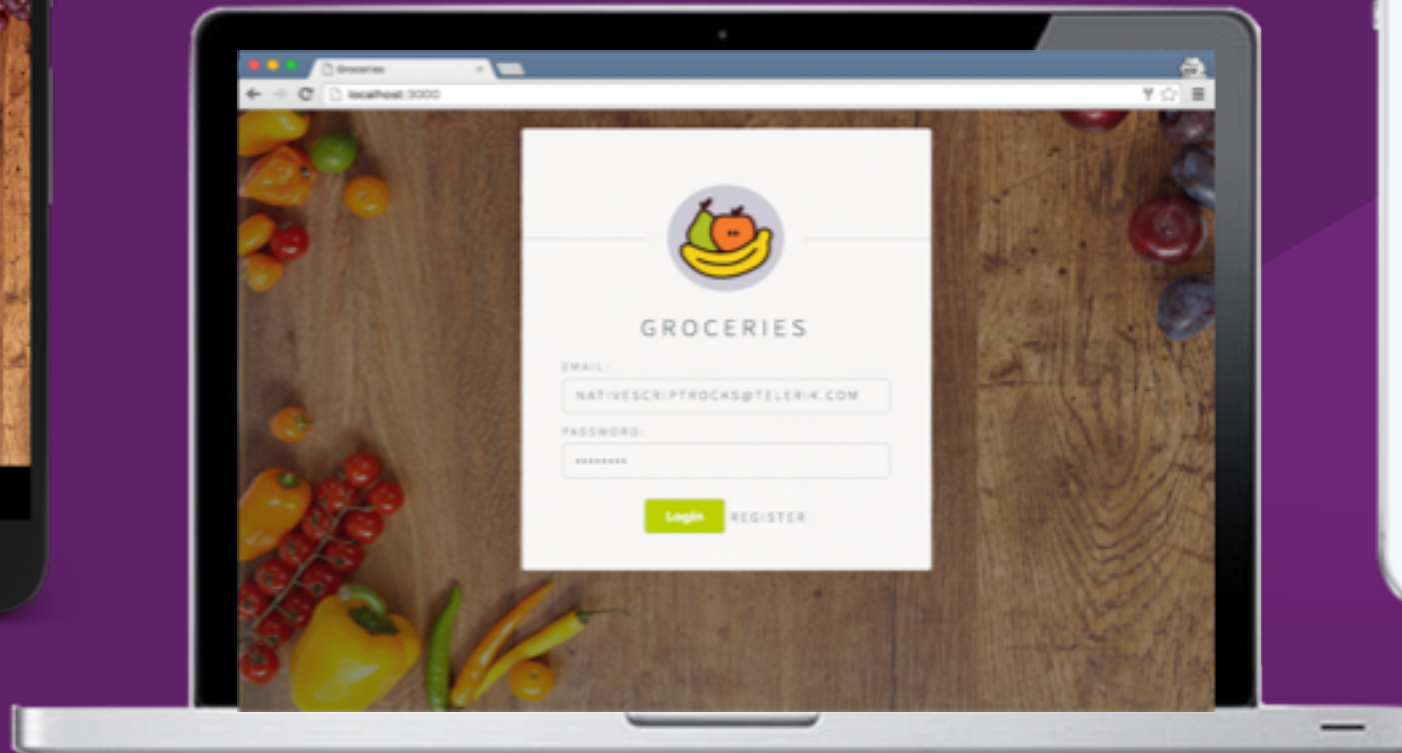
Android



iOS



Web

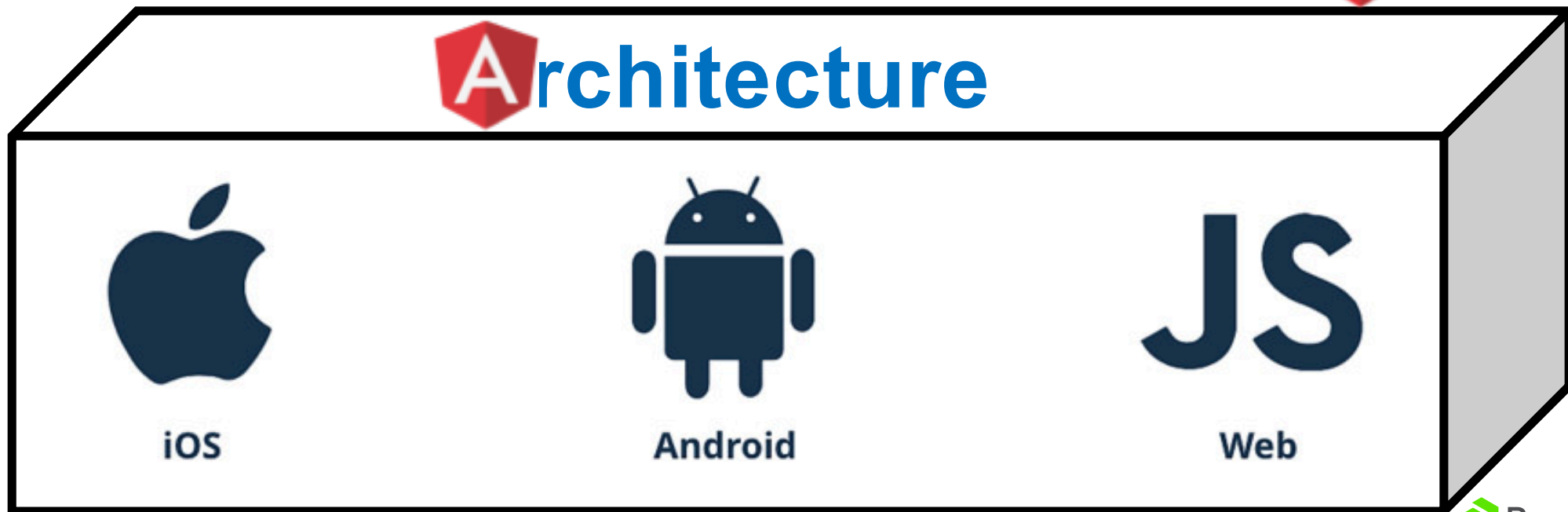




iOS

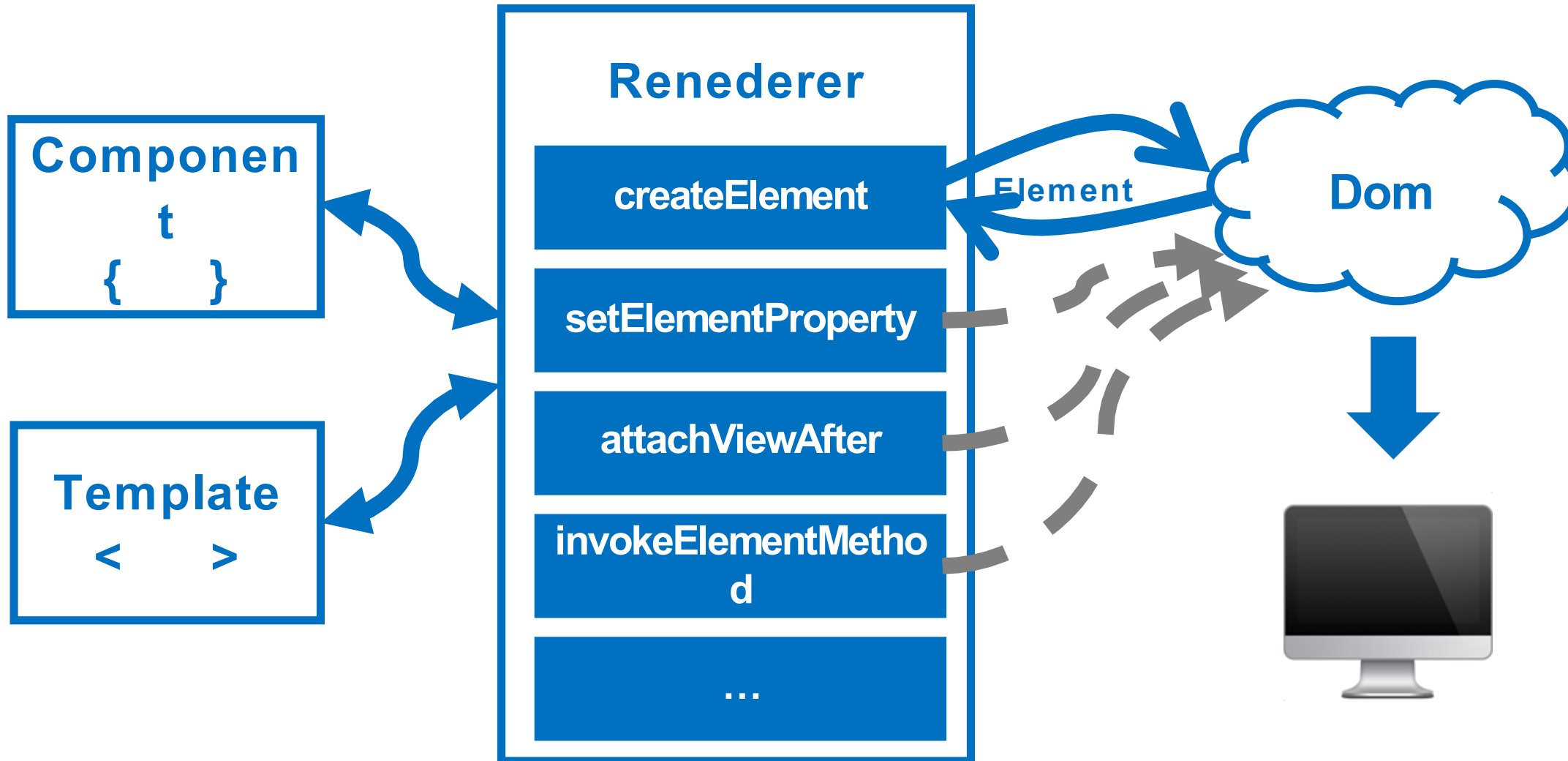


Android

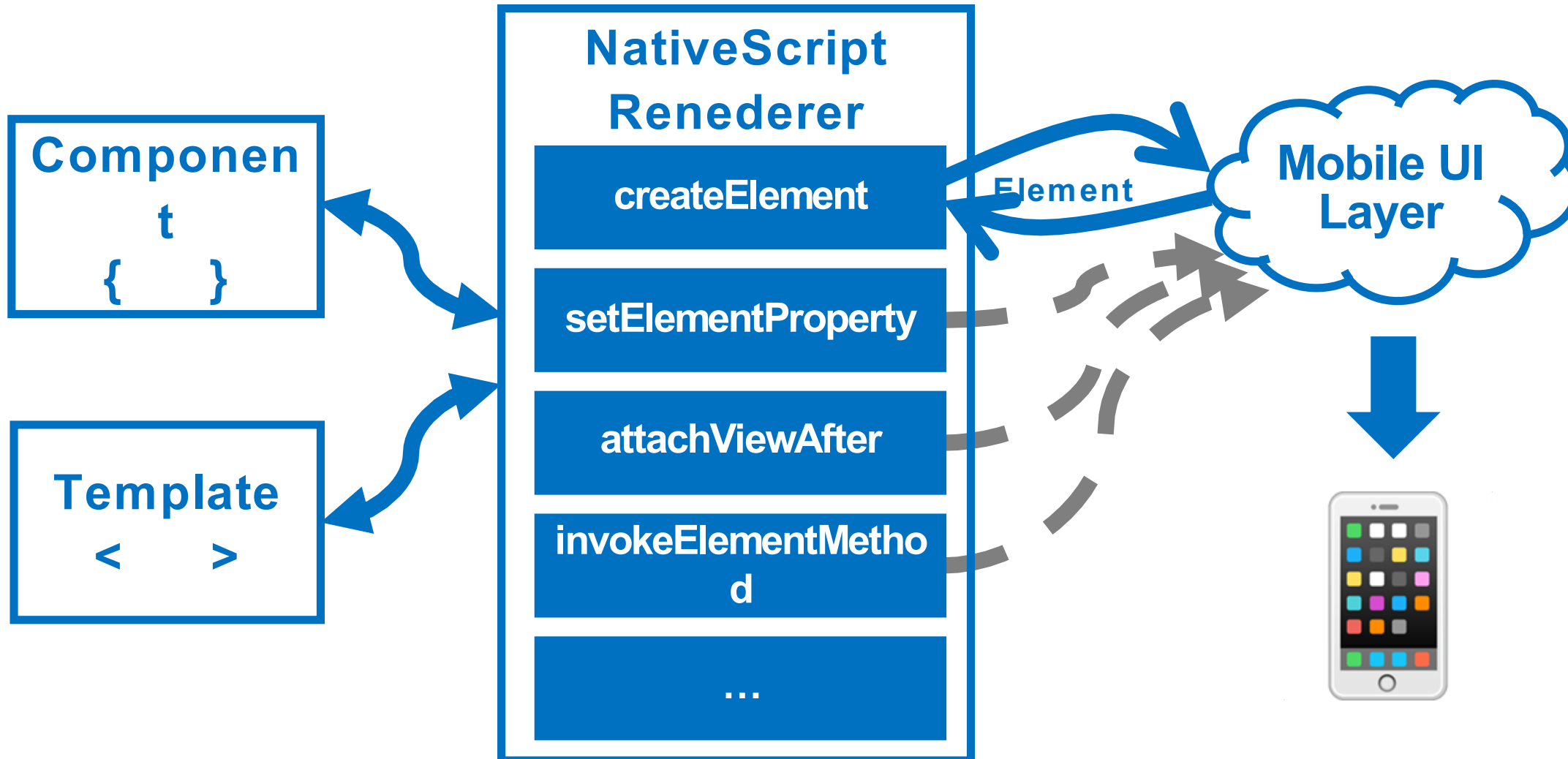


Angular Architecture for Code Sharing

Renderer



Renderer



Component

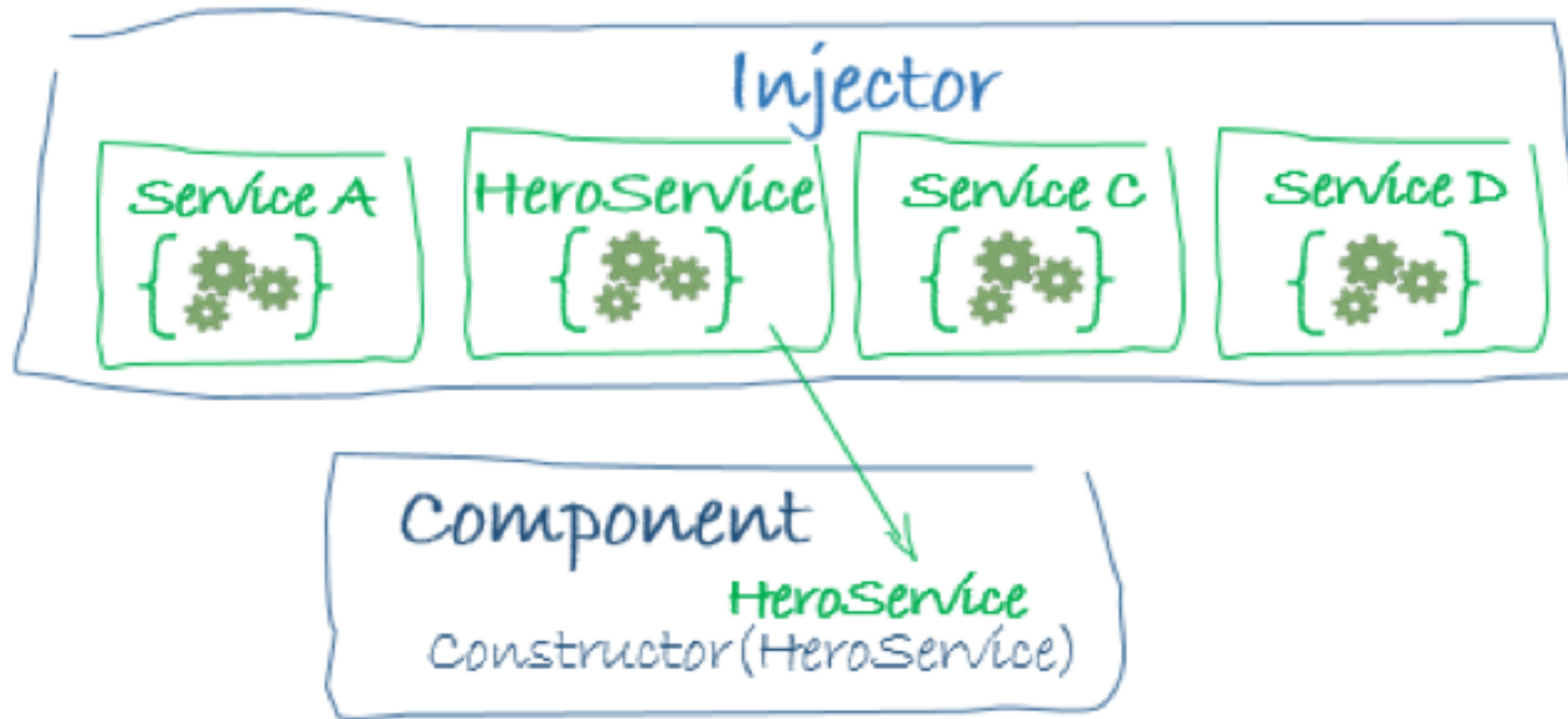
```
export class MyComponent {  
  name = 'Sebastian';  
  twitter = '@sebawita';  
  
  sayHelloTo(name) {  
    alert('Hi ' + name);  
  }  
}
```

Template

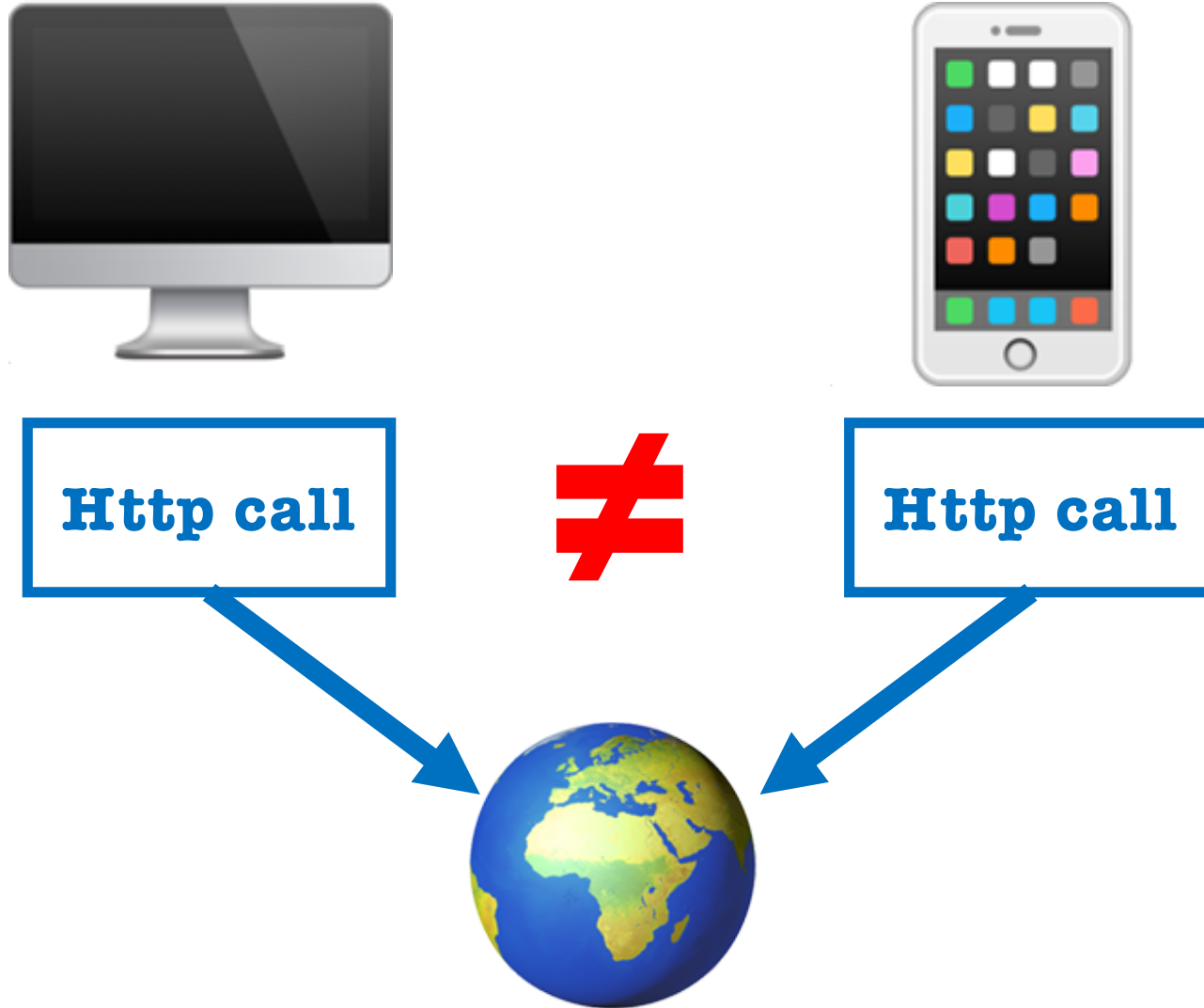
```
<div>  
  name: { { name } }  
  twitter: { { twitter } }  
  <button (click)="sayHelloTo('web')">Hello Web</button>  
</div>
```

```
<StackLayout>  
  <label [text]="name ' + name"></label>  
  <label [text]="twitter ' + twitter"></label>  
  <button (tap)="sayHelloTo('mobile')">Hello Mobile</button>  
</StackLayout >
```

Dependency Injection



Http



HttpClientModule

```
import { HttpClientModule }  
    from '@angular/common/http';
```

```
@NgModule({  
  imports: [  
    HttpClientModule,  
    ...  
  ]
```

NativeScriptHttpClientModule

```
import { NativeScriptHttpClientModule }  
    from 'nativescript-angular/http-client';
```

```
@NgModule({  
  imports: [  
    NativeScriptHttpClientModule,  
    ...  
  ]
```

HttpClient

```
import { HttpClient } from '@angular/common/http';  
  
@Injectable()  
export class MyHttpService {  
  constructor(private http: HttpClient) {}  
  
  getData(url: string) {  
    return this.http.get(url);  
  }  
}
```



Code Sharing

The project structure

Shared Project Structure

Monorepo

Modules

Components

Navigation

Web ngModule

{N} ngModule

Components

TS Class

Web HTML

{N} HTML

Pipes

Services

Directives

Navigation

SASS Variables

Web Style

{N} Style

Build Process

Shared Project Structure

Monorepo

Modules

Components

Navigation

Web NgModule

{N} NgModule

Components

TS Class

Web HTML

{N} HTML

Pipes

Services

Directives

Navigation

SASS Variables

Web Style

{N} Style

Build Process



Shared Project Structure

Monorepo

Modules

Components

Navigation

Web NgModule

{N} NgModule

Components

TS Class

Web HTML

{N} HTML

Pipes

Services

Directives

Navigation

SASS Variables

Web Style

{N} Style

Build Process



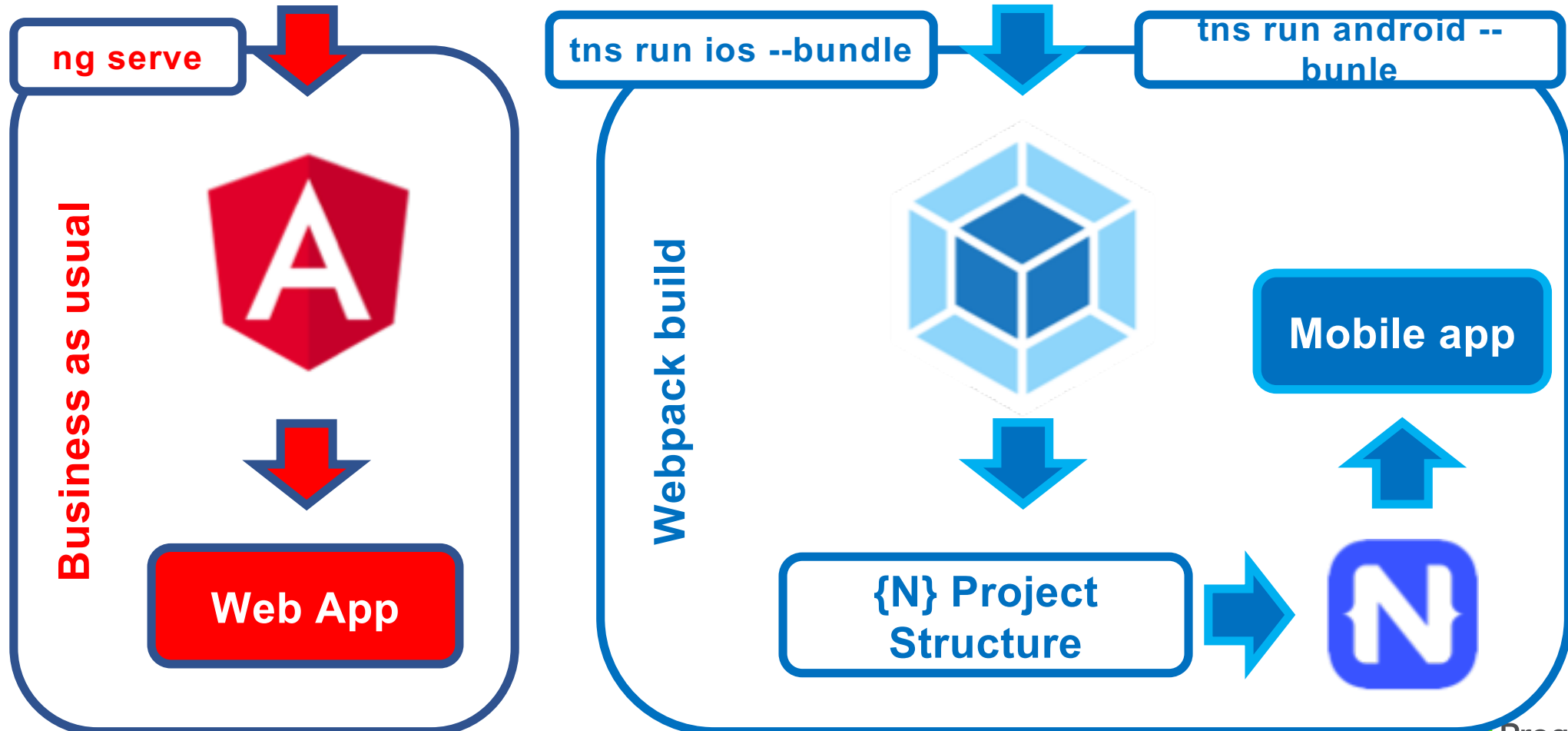
How to get started?

Shared Project Template

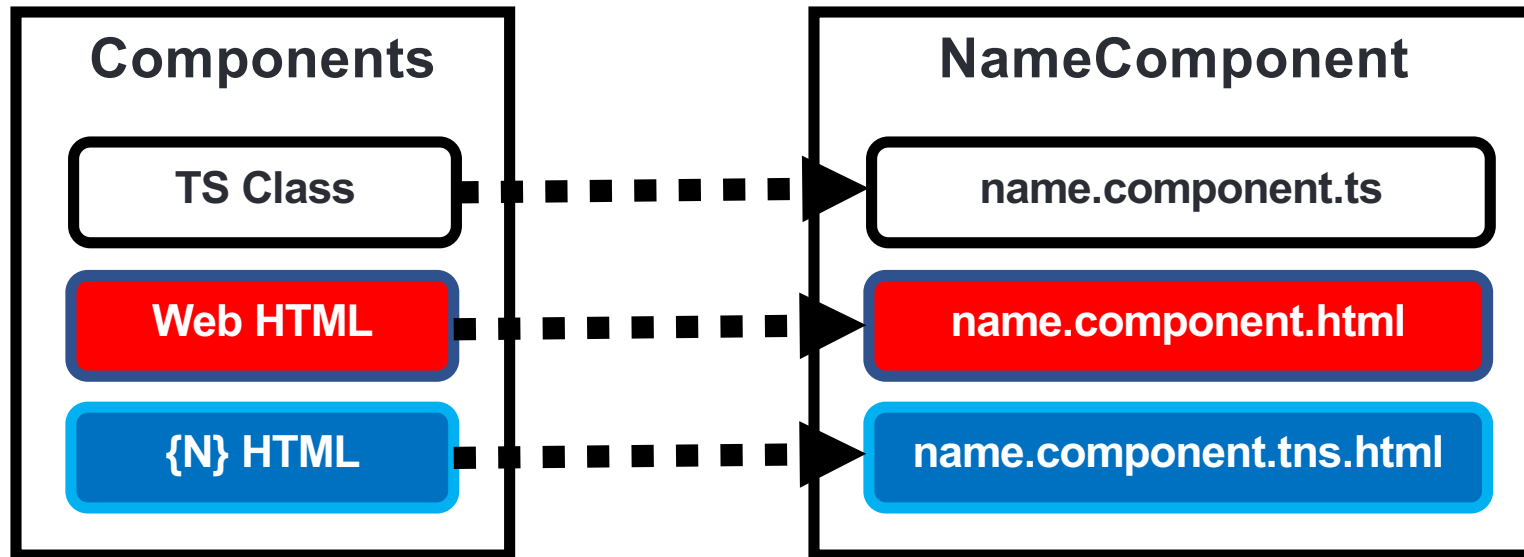
<https://github.com/NativeScript/web-mobile-project>

How does it work?

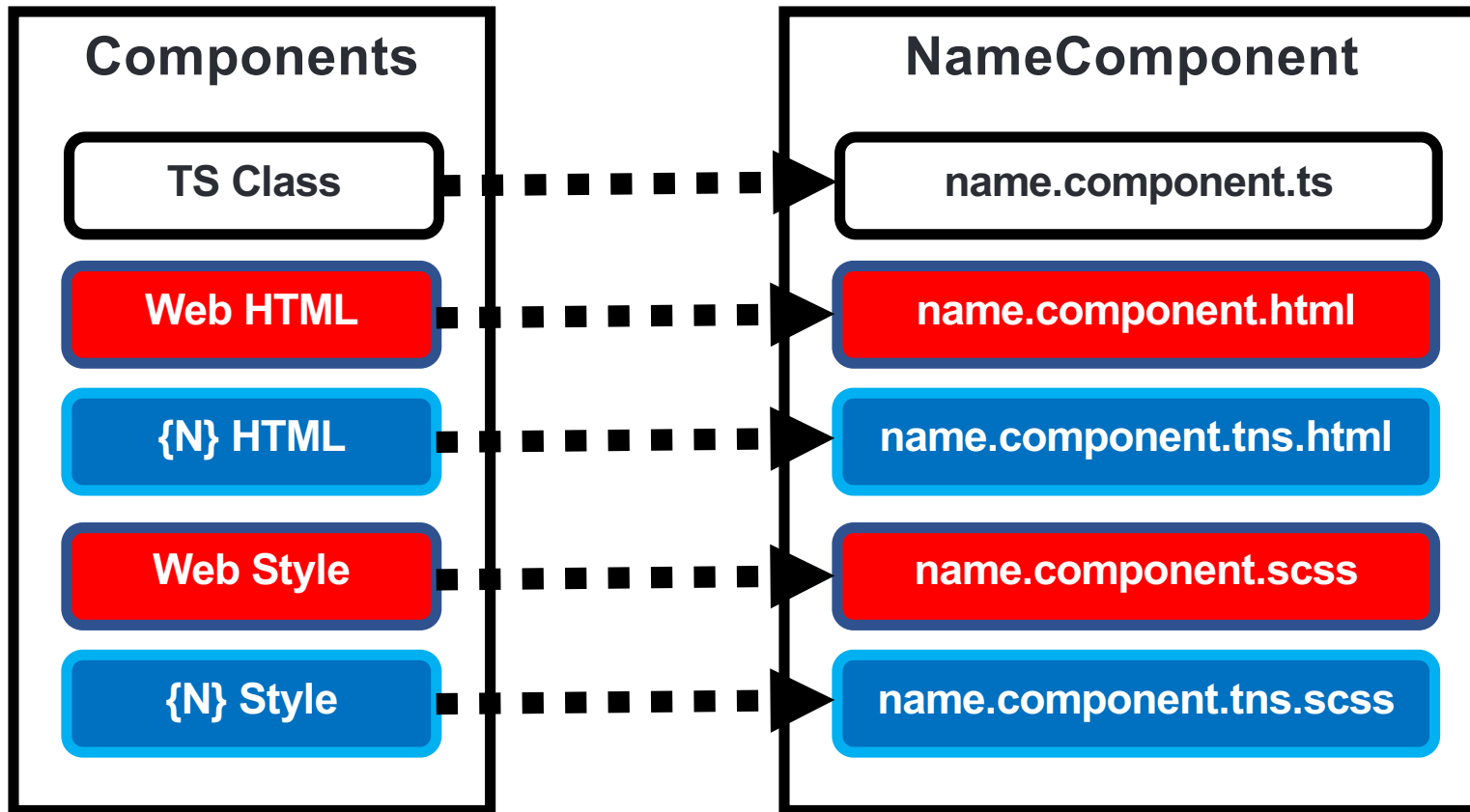
Shared Project



How to do code splitting?



How to do code splitting?





What are the challenges?

**What
are
the challenges?**

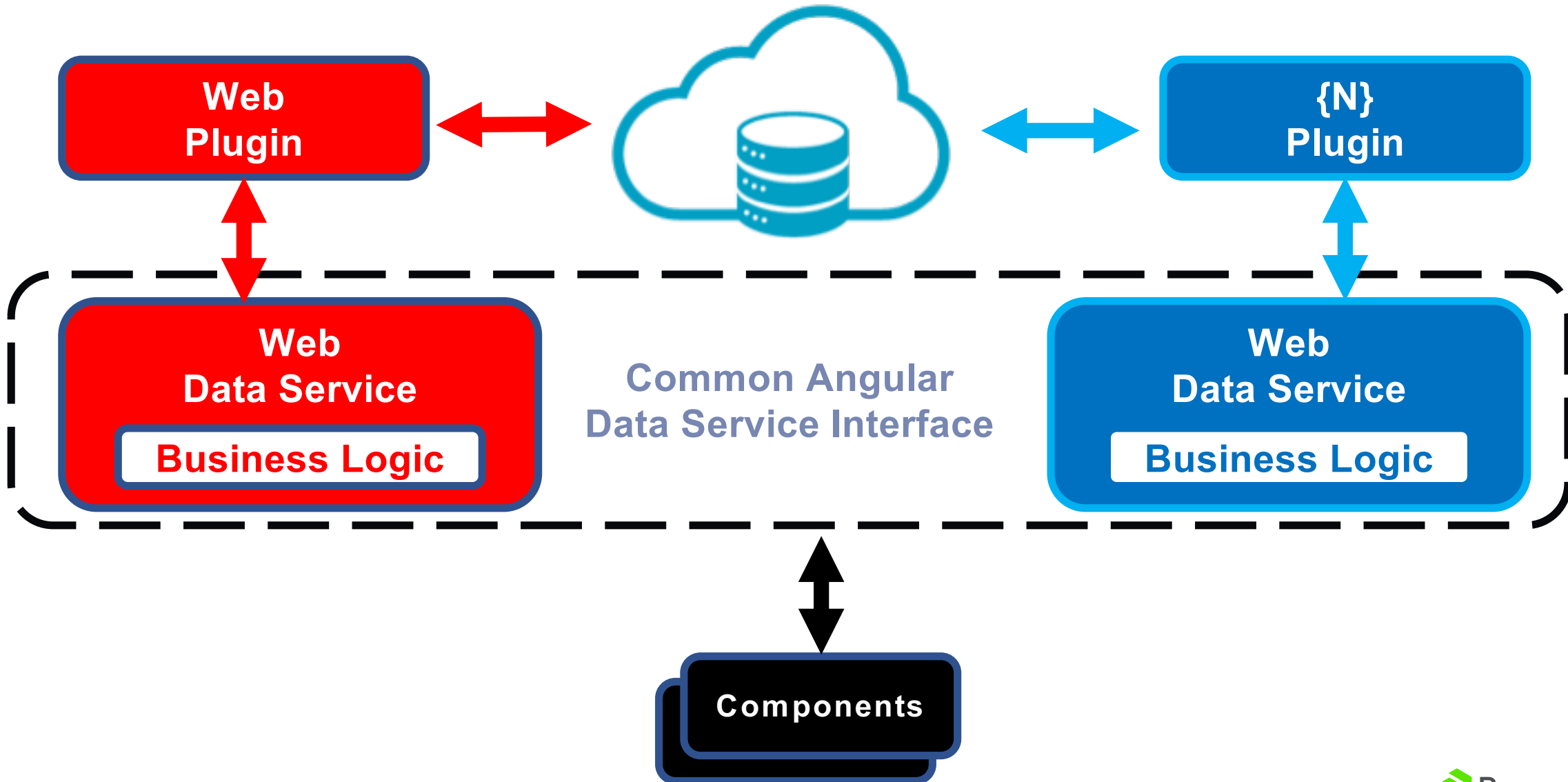
angularfire2 vs **{N} firebase**



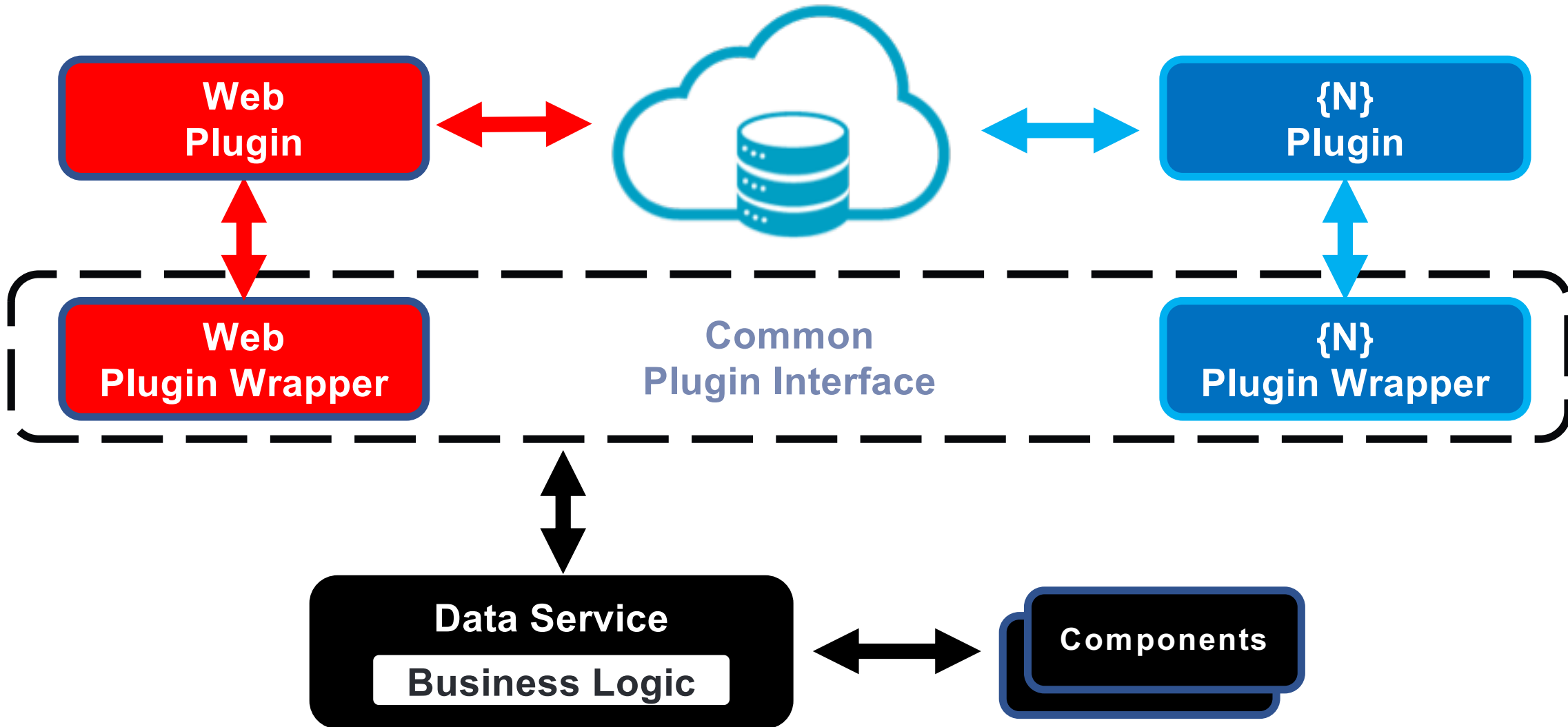
Challenge

Library API Mismatch

Common Service Abstraction

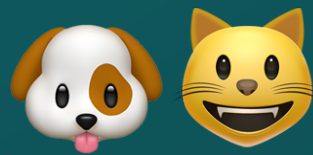


Common Plugin Abstraction



Demo

<https://github.com/sebawita/pet-bros-lite>



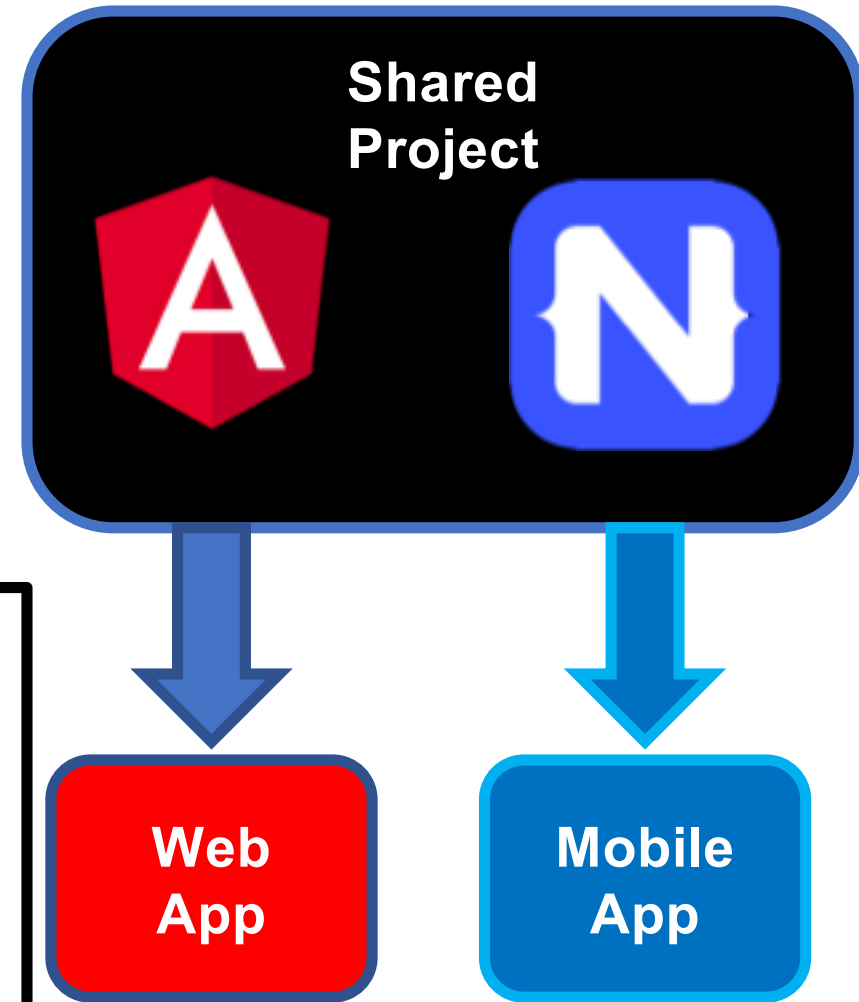
Project Migration with Schematics

Project Migration



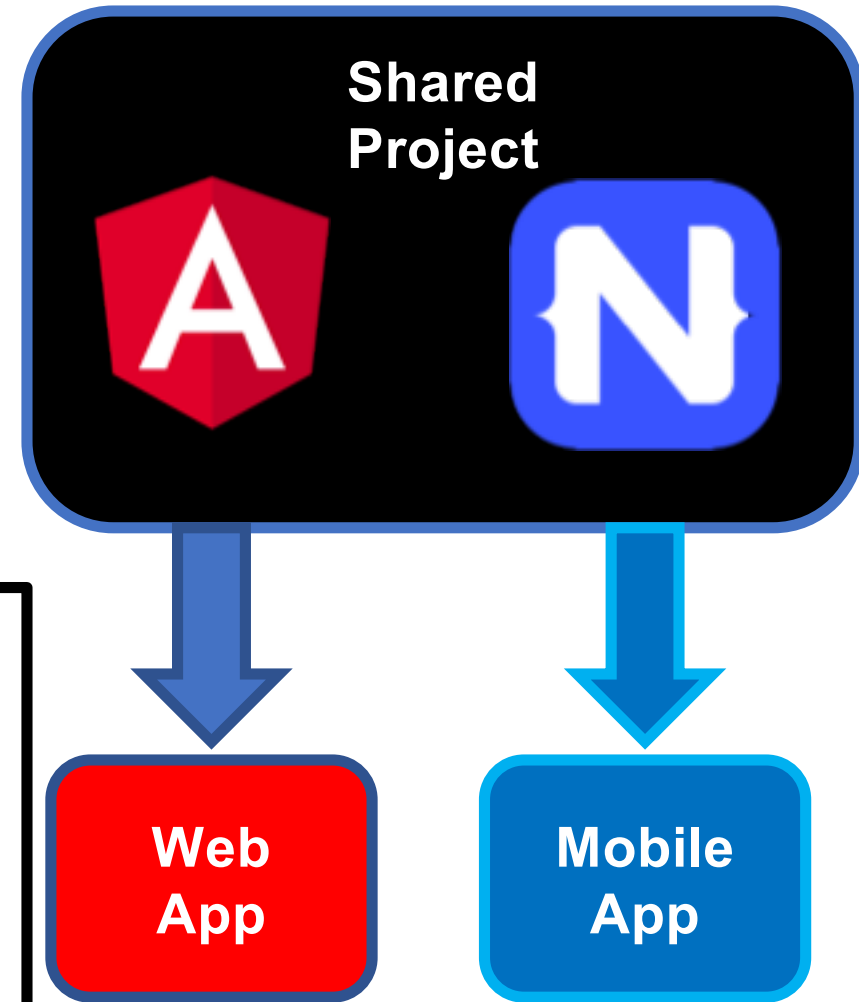
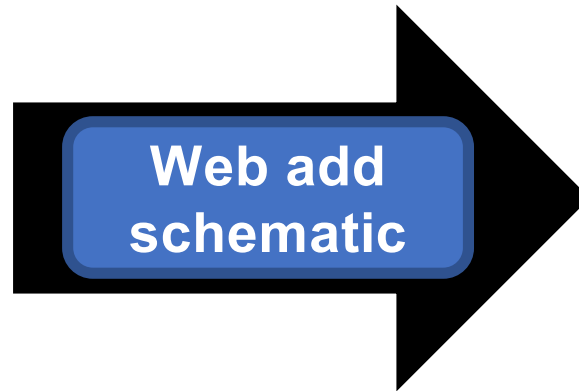
Web
Project

Mobile add
schematic



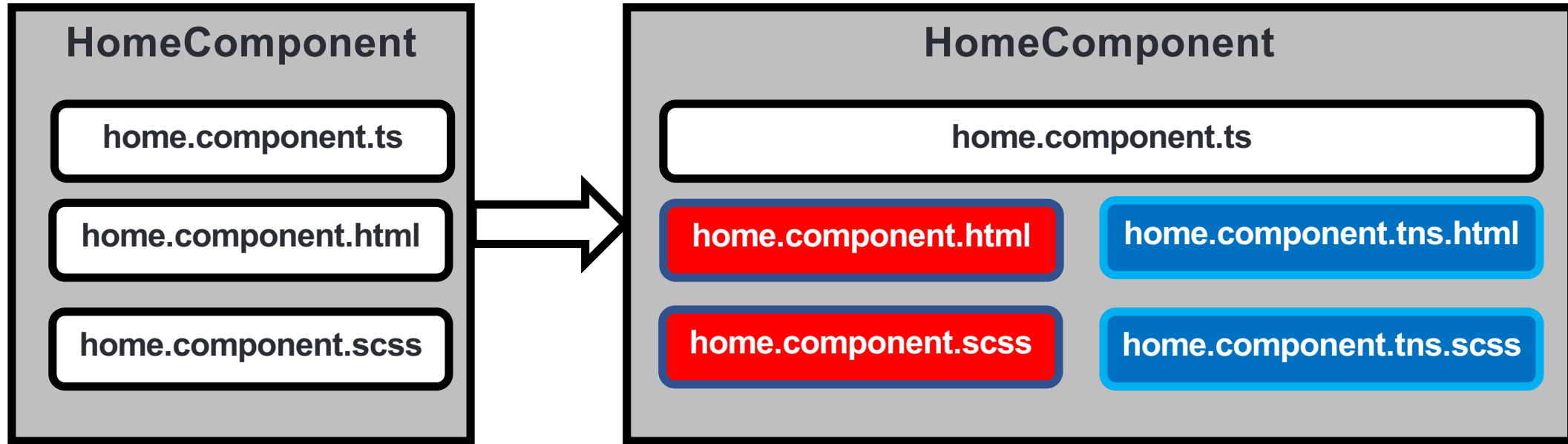
- `ng new myApp`
- `ng add @nativescript/schematics`
- `ng serve`
- `tns run [ios | android] --bundle`

Project Migration



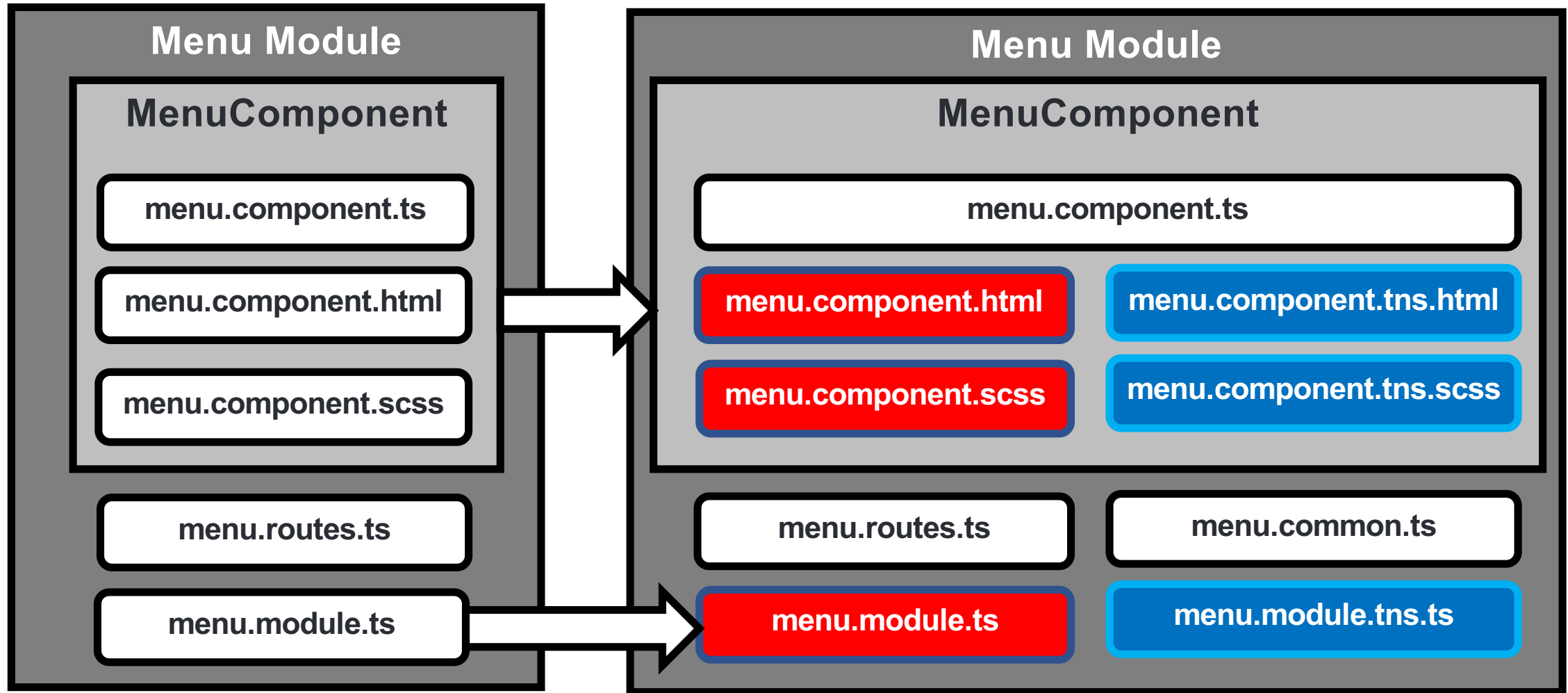
- `tns create myApp`
- `ng g add-web`
- `ng serve`
- `tns run [ios | andoird] --bundle`

Project Migration: Convert Component



ng g migrate-component --name=home

Project Migration: Convert Component



ng g migrate-module --name=menu

© 2018 Progress Software Corporation and/or its subsidiaries or affiliates. All rights reserved.

Demo

<https://github.com/nativescript/nativescript-schematics>



Our Objective for Angular CLI

New Project:

```
ng new --collection=@nativescript/schematics myApp
```

Migrate web to shared

```
ng add @nativescript/schematics
```

Convert module/component

```
ng g migrate-module --name=module-name
```

```
ng g migrate-component --name=component-name
```

Run {N} from Angular CLI

```
ng run nativescript:ios
```

```
ng run nativescript:debug-android
```

Resources

Article:

<https://www.nativescript.org/blog/code-sharing-between-web-and-mobile-with-angular-and-nativescript>

Talk from {N} Dev Day:

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

Github:

<https://github.com/sebawita/pet-bros-lite>

<https://github.com/nativescript/nativescript-schematics>

Thank You!

Sebastian Witalec

 sebastian.witalec@progress.com

 [@sebawita](https://twitter.com/sebawita)

You might also like to attend

[Beautiful Native Mobile Apps with NativeScript and OpenEdge](#)

[Edsel Garcia](#)

