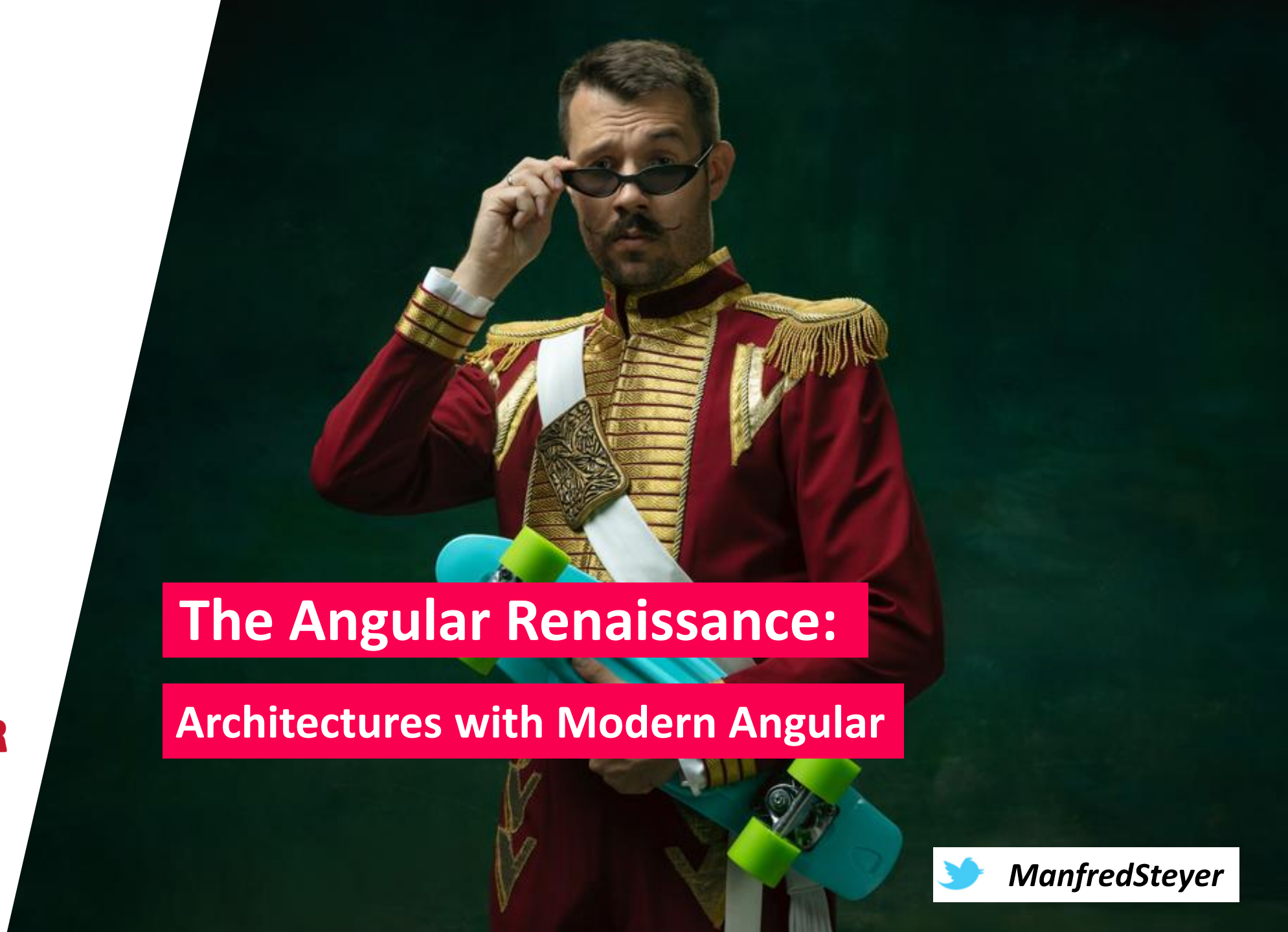
ANGULAR
ARCHITECTS
INSIDE KNOWLEDGE

ANGULAR AIR



The Angular Renaissance:

Architectures with Modern Angular

ManfredSteyer

Wrong Conclusion:

The "more", the "better"

Where is the Sweet Spot?

Under-Engineering **Over-Engineering**

How to Better Meet the Sweet Spot of my Angular Architecture?

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Agenda

#1
Standalone
Components

#2
Custom
Standalone APIs

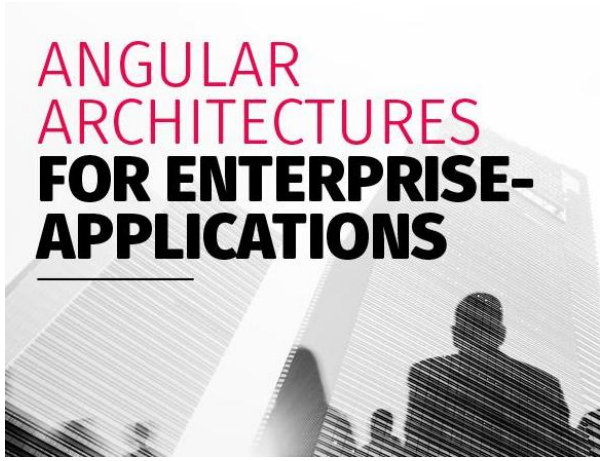
#3
Functional
Services

BONUS:
Signals

About me...

Manfred Steyer

Manfred Steyer, **ANGULAR***architects.io*



(Remote) Angular Workshops and Consulting

Google Developer Expert for Angular

Trusted Collaborator in the Angular Team

http://angulararchitects.io

#1: Standalone Components

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NgModules + EcmaScript Modules

```
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';

import { AppComponent } from './app.component';
[…]

@NgModule({
  imports: [BrowserModule, OtherModule],
  declarations: [AppComponent, OtherComponent, OtherDirective],
  providers: [],
  bootstrap: [AppComponent],
})
export class AppModule {}
```

Angular Modules

TypeScript Modules

Standalone Components

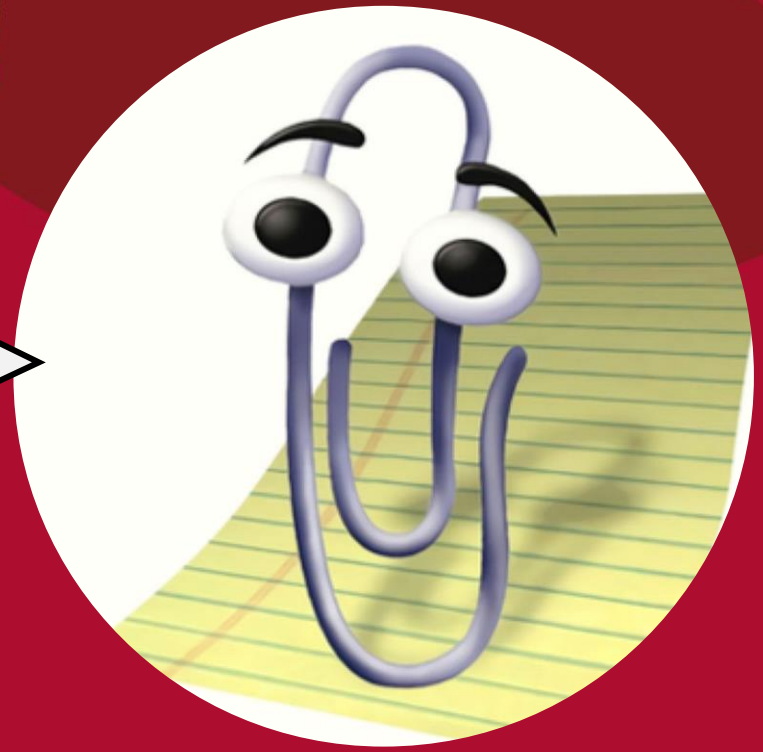
```
@Component({
  standalone: true,
  imports: [
    […],
    FlightCardComponent,
    CityPipe,
    CityValidator,
  ],
  selector: 'flight-search',
  templateUrl: '…'
})
export class FlightSearchComponent {
   […]
}
```

Standalone Components

```
@Component({
  standalone: true,
  imports: [
    […],
    FlightCardComponent,
    CityPipe,
    CityValidator,
  ],
  selector: 'flight-search',
  templateUrl: '…'
})
export class FlightSearchComponent {
   […]
}
```

Click-Dummy

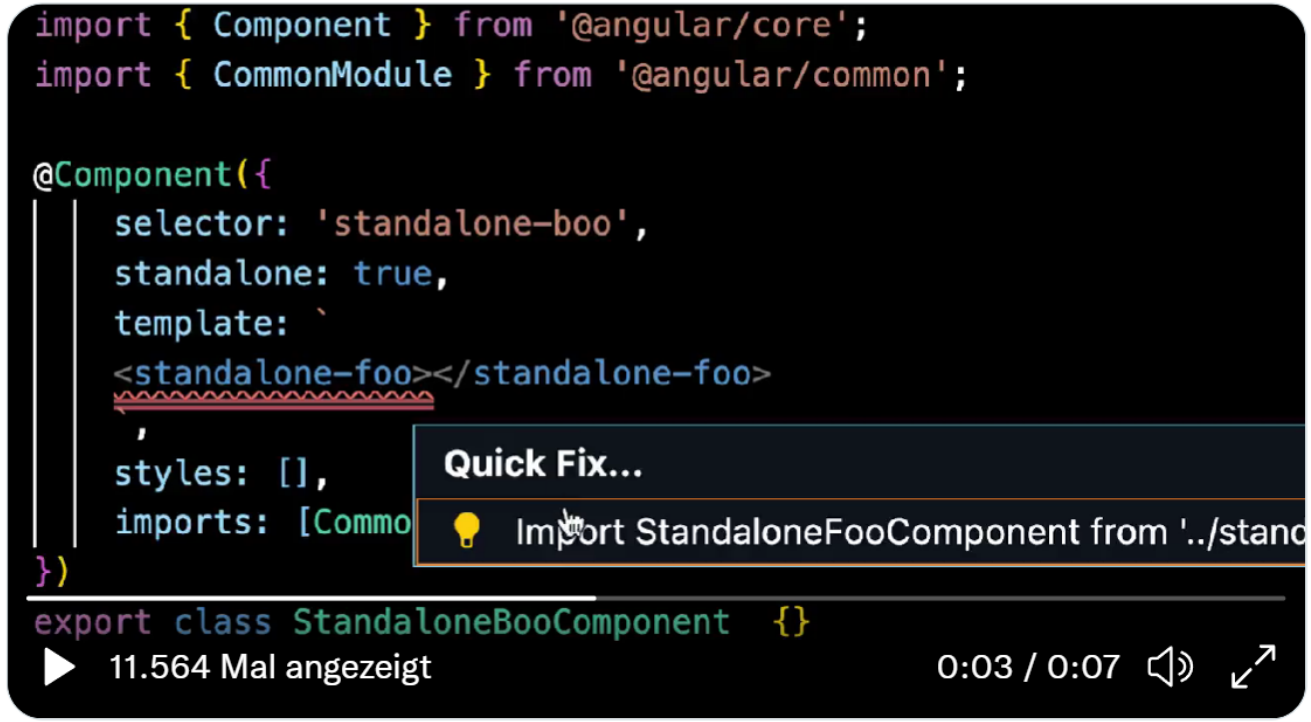
```
<my-comp *ngIf="show">
</my-comp>
```



Dylan Hunn
@dylhunn

As of #Angular v15, the language service will be able to automatically suggest imports for selectors! This is very useful with standalone components, since you don't already have your ngModule imports. (But it works with ngModules also!) @angular

Tweet übersetzen



5:49 nachm. · 11. Okt. 2022 · Twitter Web App

Standalone Components & Architecture?

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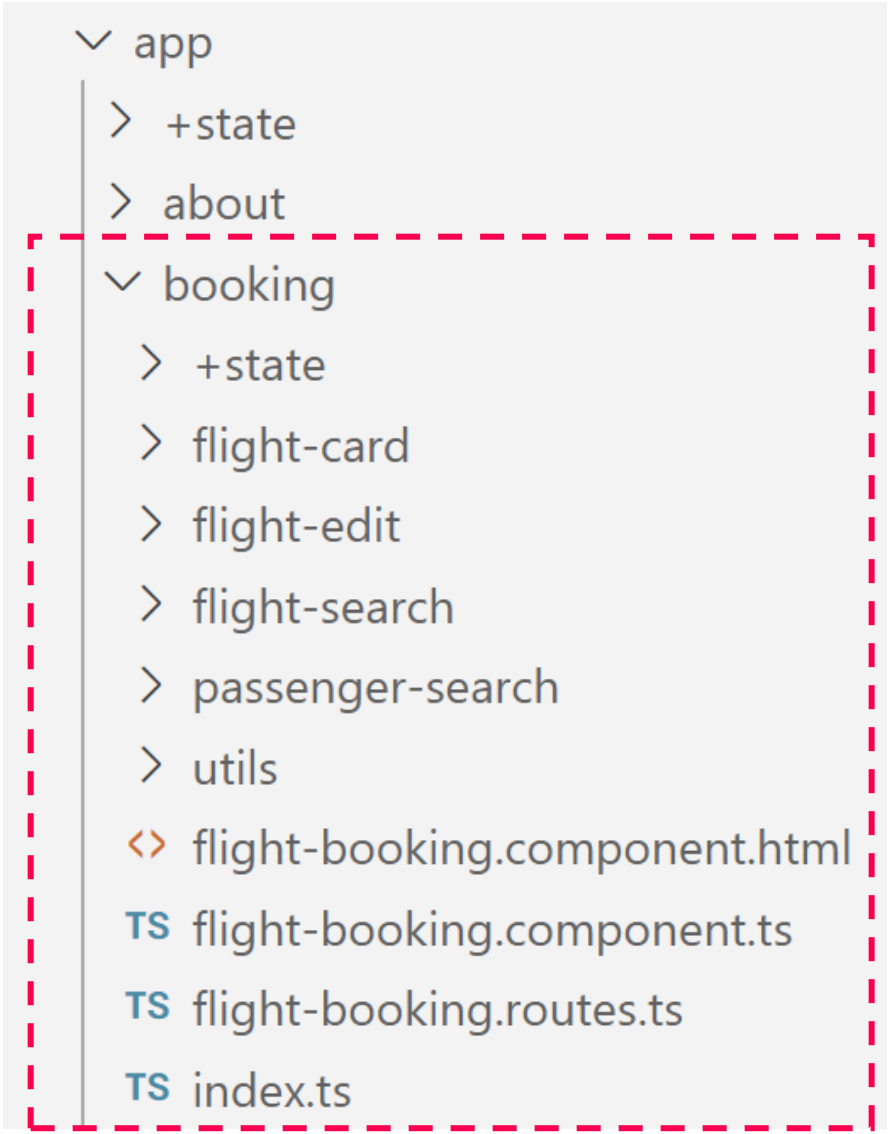
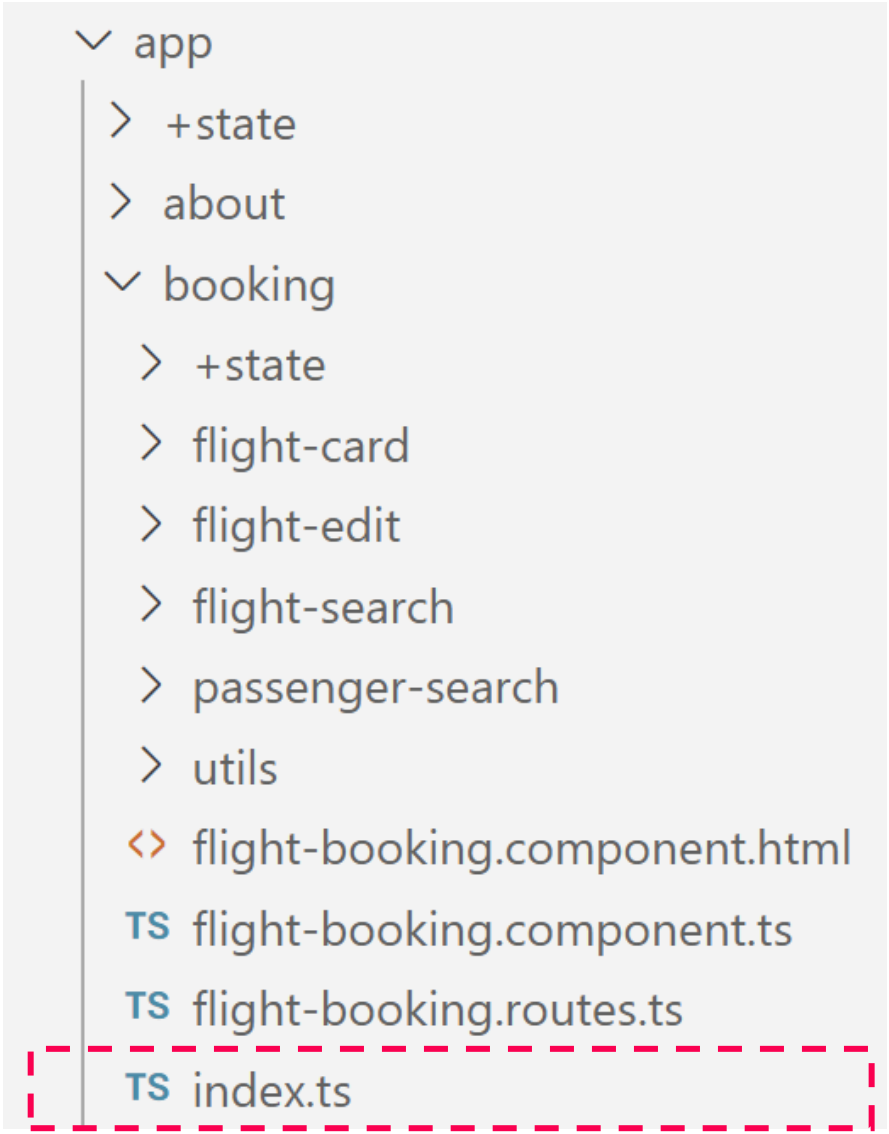


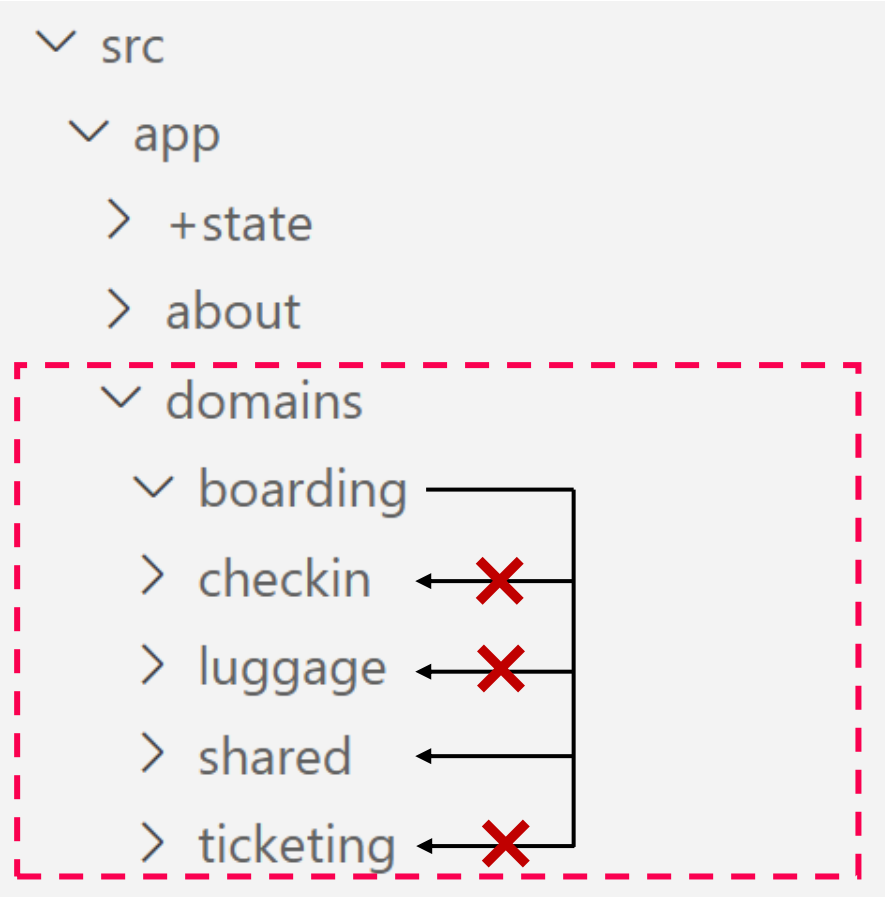
Small and Medium Apps:
Folder per Feature



Your Public APIs:
Barrels

```
// index.ts == Public API

export *
  from './flight-booking.routes';
```

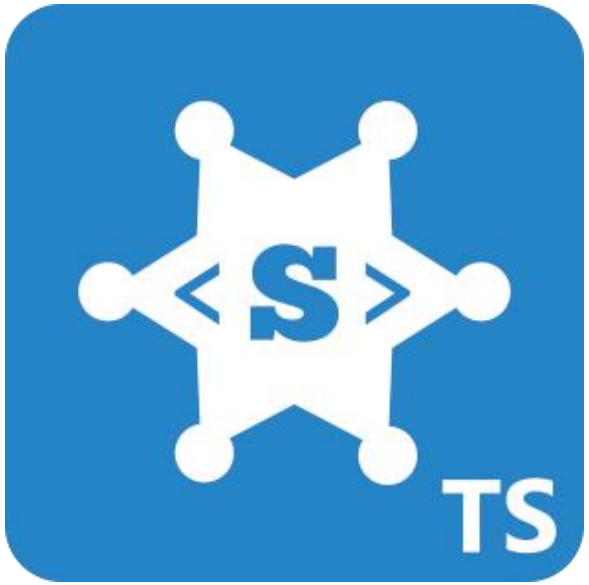


Medium and Large Apps:
Folder per Domain

Restricting Access b/w Domains, etc.
on a library basis

Smart, Fast
Extensible
Build System

Restricting Access b/w Domains, etc.
on a folder basis



@softarc/eslint-plugin-sheriff

Credits to:
Rainer Hahnekamp,
AngularArchitects

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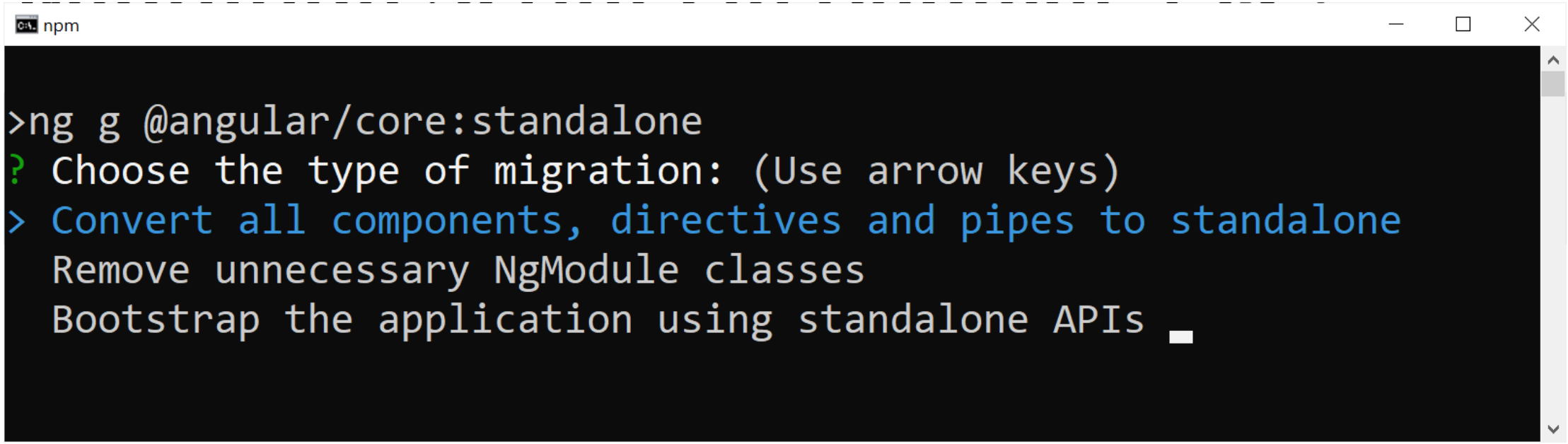
Migration
to Standalone

Migration Scripts in Angular 15.2+

```
ng g @angular/core:standalone
```



#2:
Custom Standalone APIs

Registering Providers

```
bootstrapApplication(AppComponent, {
  providers: [
     […]
  ]
});
```

Registering Providers

```
bootstrapApplication(AppComponent, {
  providers: [
    importProvidersFrom(HttpClientModule),
    importProvidersFrom(RouterModule.forRoot(APP_ROUTES)),
  ]
});
```

Standalone APIs

```
bootstrapApplication(AppComponent, {
  providers: [
    provideHttpClient(),
    provideRouter(APP_ROUTES),
  ]
});
```

Standalone APIs

```
bootstrapApplication(AppComponent, {
  providers: [
    provideHttpClient(
      withInterceptors([authInterceptor]),
    ),
    provideRouter(APP_ROUTES,
      withPreloading(PreloadAllModules),
      withDebugTracing(),
    ),
  ]
});
```

Custom Standalone APIs

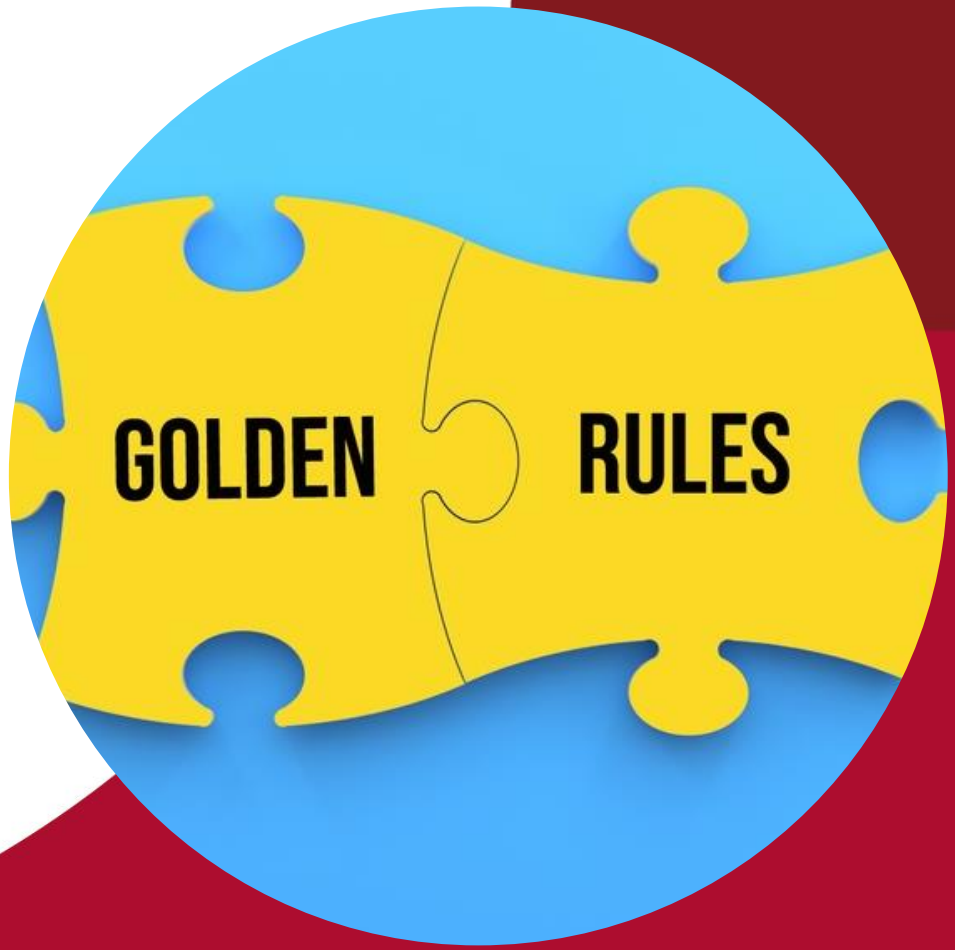
```
bootstrapApplication(AppComponent, {
  providers: [
    provideLogger(loggerConfig),
  ]
});
```

Custom Standalone APIs

```
bootstrapApplication(AppComponent, {
  providers: [
    provideLogger(loggerConfig,
      withColor({ debug: 3 })
    ),
  ]
});
```

Whenever possible, use

```
@Injectable({
  providedIn: 'root'
})
```



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However, if you need to pass a config …

```
bootstrapApplication(AppComponent, {
  providers: [
    provideLogger(loggerConfig,
      withColor({ debug: 3 })
    ),
  ]
});
```

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#3:
Functional Services

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Functional Guards

```
export const APP_ROUTES: Routes = [
    […]
    {
        path: 'flight-booking',
        canActivate: [() => inject(AuthService).isAuthenticated()],
        component: FlightBookingComponent
    },
]
```

Functional Guards

```
export const APP_ROUTES: Routes = [
    […]
    {
        path: 'flight-booking',
        canActivate: [() => inject(AuthService).isAuthenticated()],
        component: FlightBookingComponent
    },
]
```

Functional Resolvers

```
export const APP_ROUTES: Routes = [
    […]
    {
        path: 'flight-booking',
        canActivate: [() => inject(AuthService).isAuthenticated()],
        resolve: {
            flights: () => inject(FlightService).findAll()
        },
        component: FlightBookingComponent
    },
]
```

Functional Interceptors

```
export const authInterceptor: HttpInterceptorFn = (req, next) => {

    […]

}
```

Registering the Interceptor

```
bootstrapApplication(AppComponent, {
  providers: [
    provideHttpClient(
      withInterceptors([authInterceptor]),
    ),
  ]
});
```

Bring Your Own Functional Services

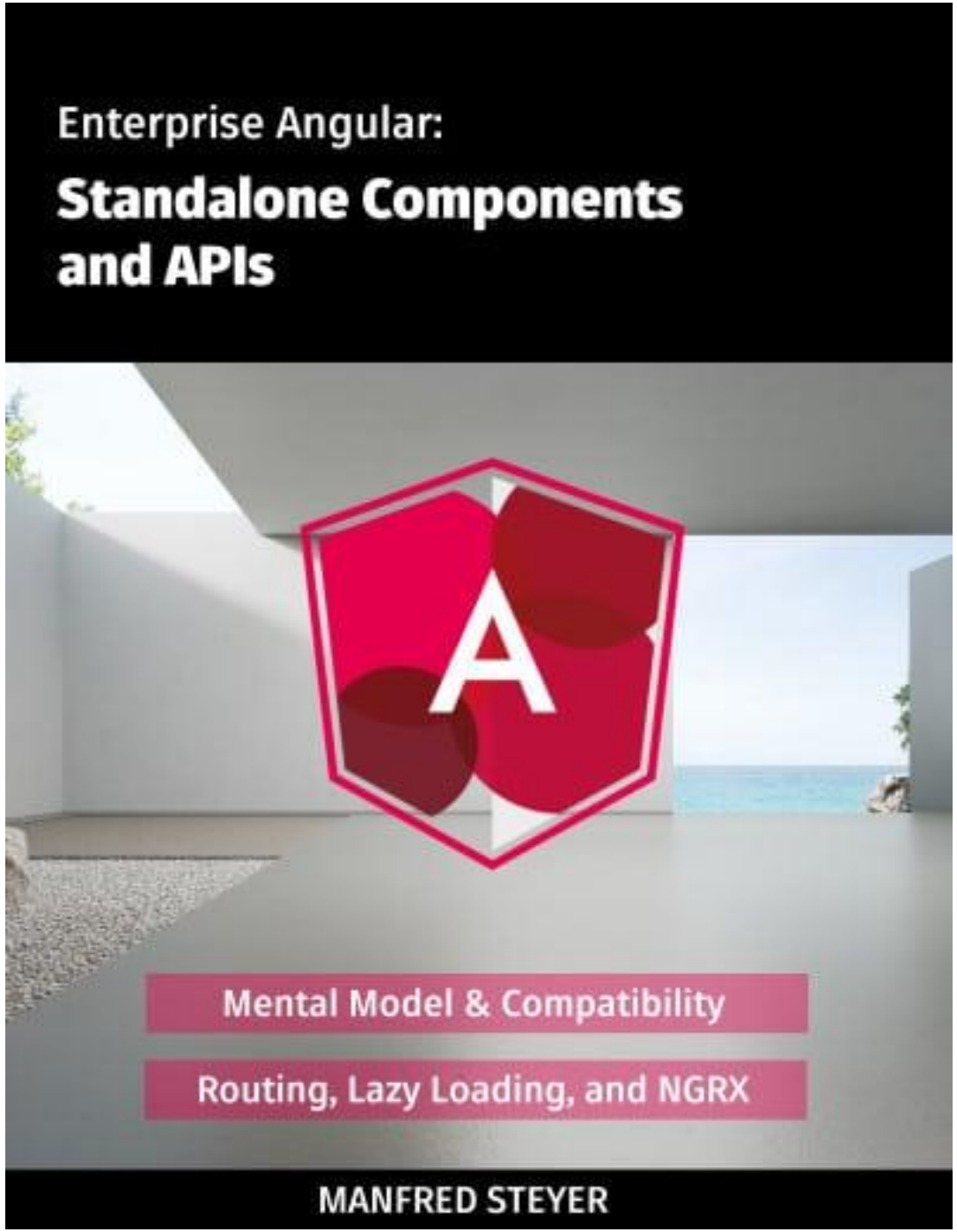
```
bootstrapApplication(AppComponent, {
  providers: [
    provideLogger({
      level: LogLevel.DEBUG,
      appenders: [DefaultLogAppender],
      formatter: (level, cat, msg) => [level, cat, msg].join(';'),
    }),
  ]
});
```

Free eBook (brand new)

Standalone Components

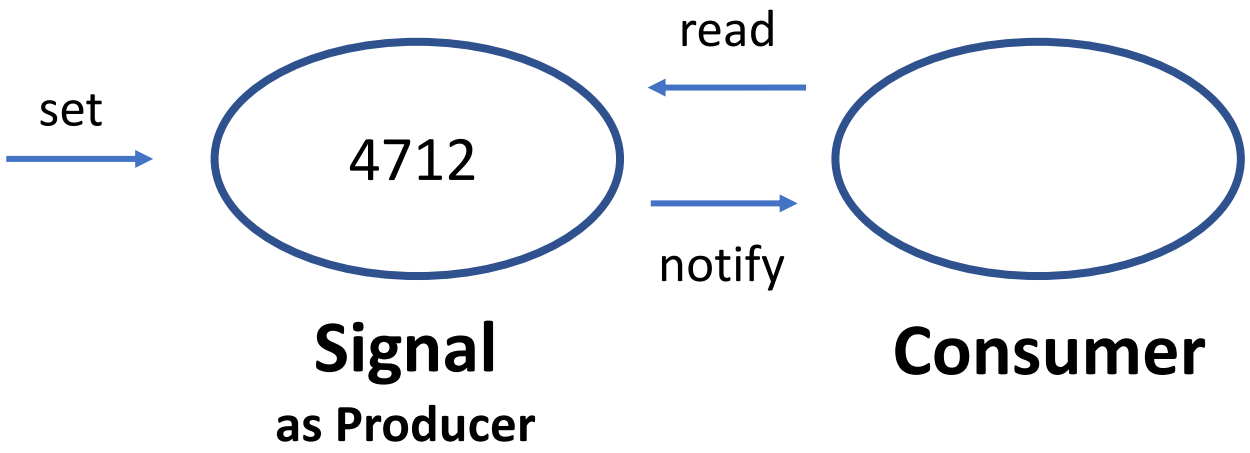
Download here:

ANGULARarchitects.io/standalone



BONUS:
Upcoming - Signals

Signals in a Nutshell



Component Without Signals

```
flights: Flight[] = [];
```

```
const flights = await this.flightService.findAsPromise(from, to);
this.flights = flights;
```

```
<div *ngFor="let f of flights">
    <flight-card [item]="f" />
</div>
```

Component With Signals

```
flights = signal<Flight[]>([]);
```

```
const flights = await this.flightService.findAsPromise(from, to);
this.flights.set(flights);
```

```
<div *ngFor="let f of flights()">
    <flight-card [item]="f" />
</div>
```

Wins

Fine-grained and Zone-less CD

Convertible to Observables and vice versa!

No need to unsubscribe!

No need to update code!

DEMO

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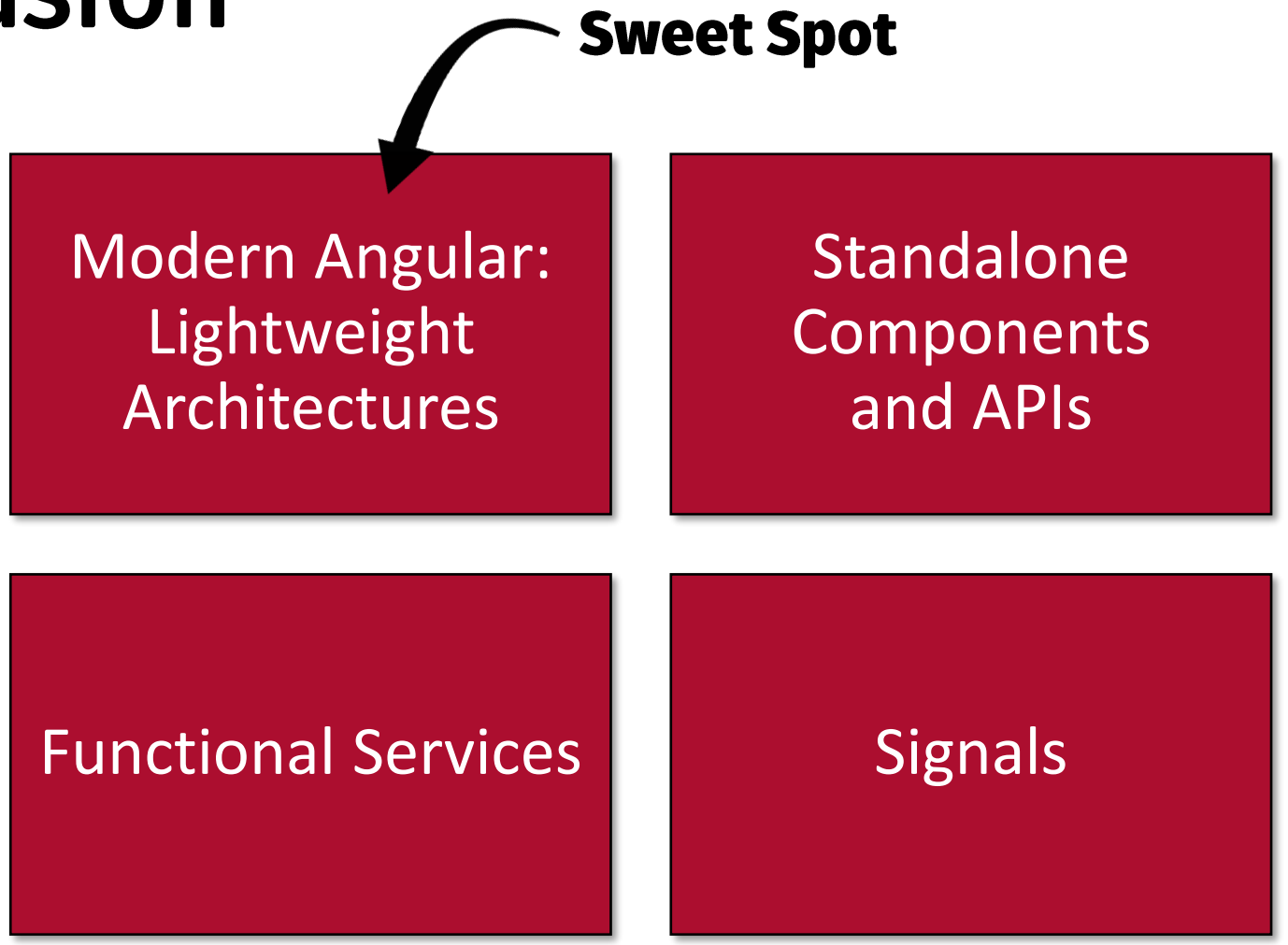
Conclusion


Sweet Spot
Modern Angular: Lightweight Architectures
Standalone Components and APIs
Functional Services
Signals

Contact and Downloads

[web] ANGULAR*architects.io*

[twitter] ManfredSteyer

Slides & Examples

Remote Company Workshops
and Consulting

http://angulararchitects.io