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More Than Micro Frontends:

3 Further Use Cases for Module Federation

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

ManfredSteyer

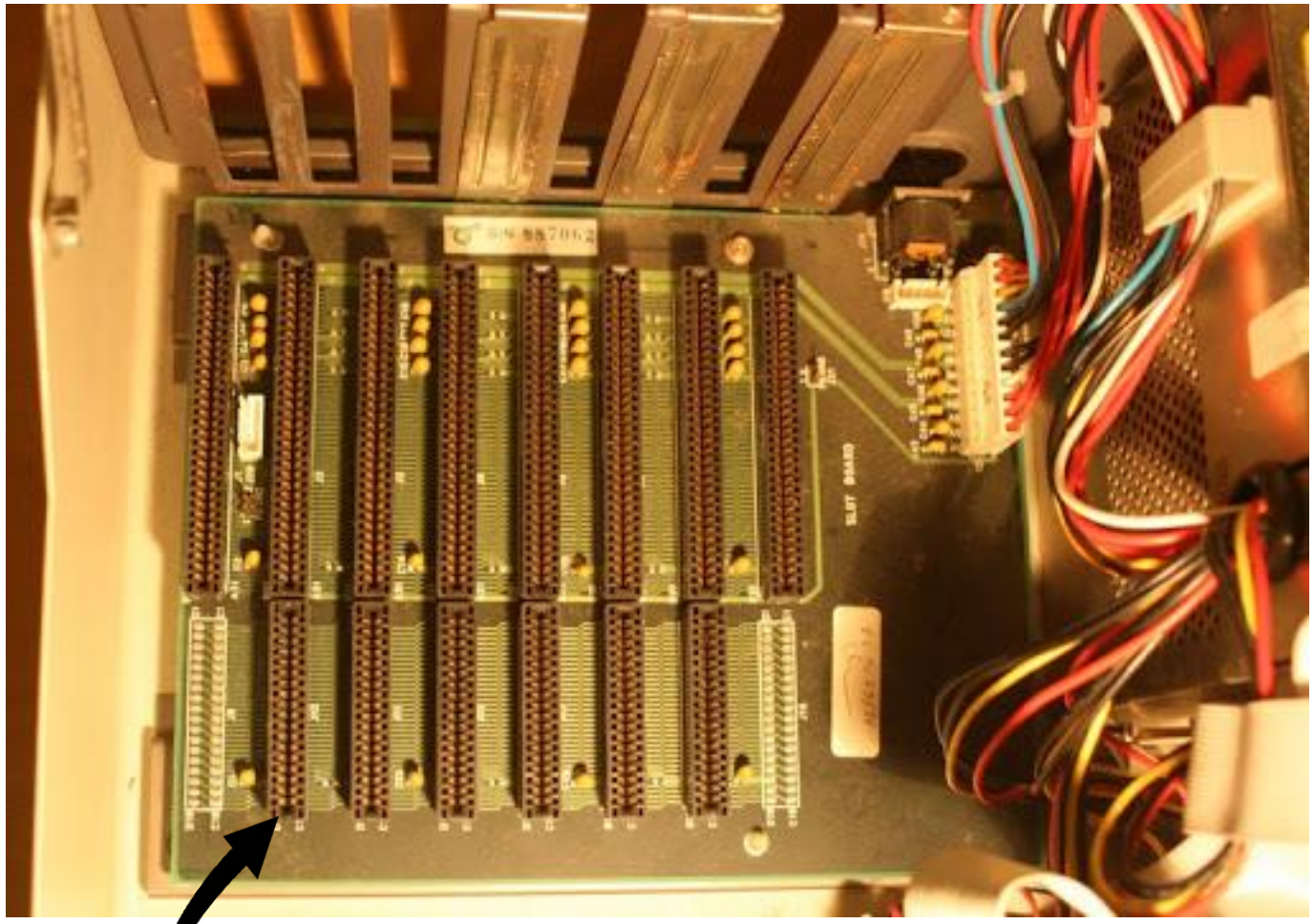
SCUMM BAR
MONKEY ISLAND
Give
Pick up
Use
Open
Look at
Push
Close
Talk to
Pull

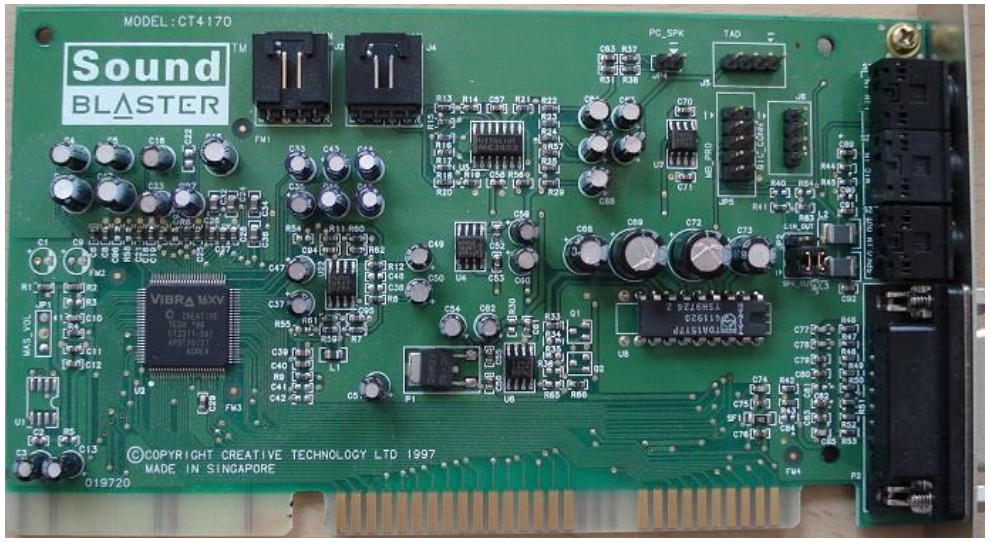
SCUMM BAR
Open door
Open
Close
Push
Pull
Walk to
Pick up
Talk to
Give
Use
Look at
Turn on
Turn off

[On Youtube]

SCUMM BAR
Walk to
Give
Pick up
Use
Open
Look at
Push
Close
Talk to
Pull

On Youtube





Consuming an Interface

Implementing an Interfacae

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How to Implement a Plugin-System with Angular?

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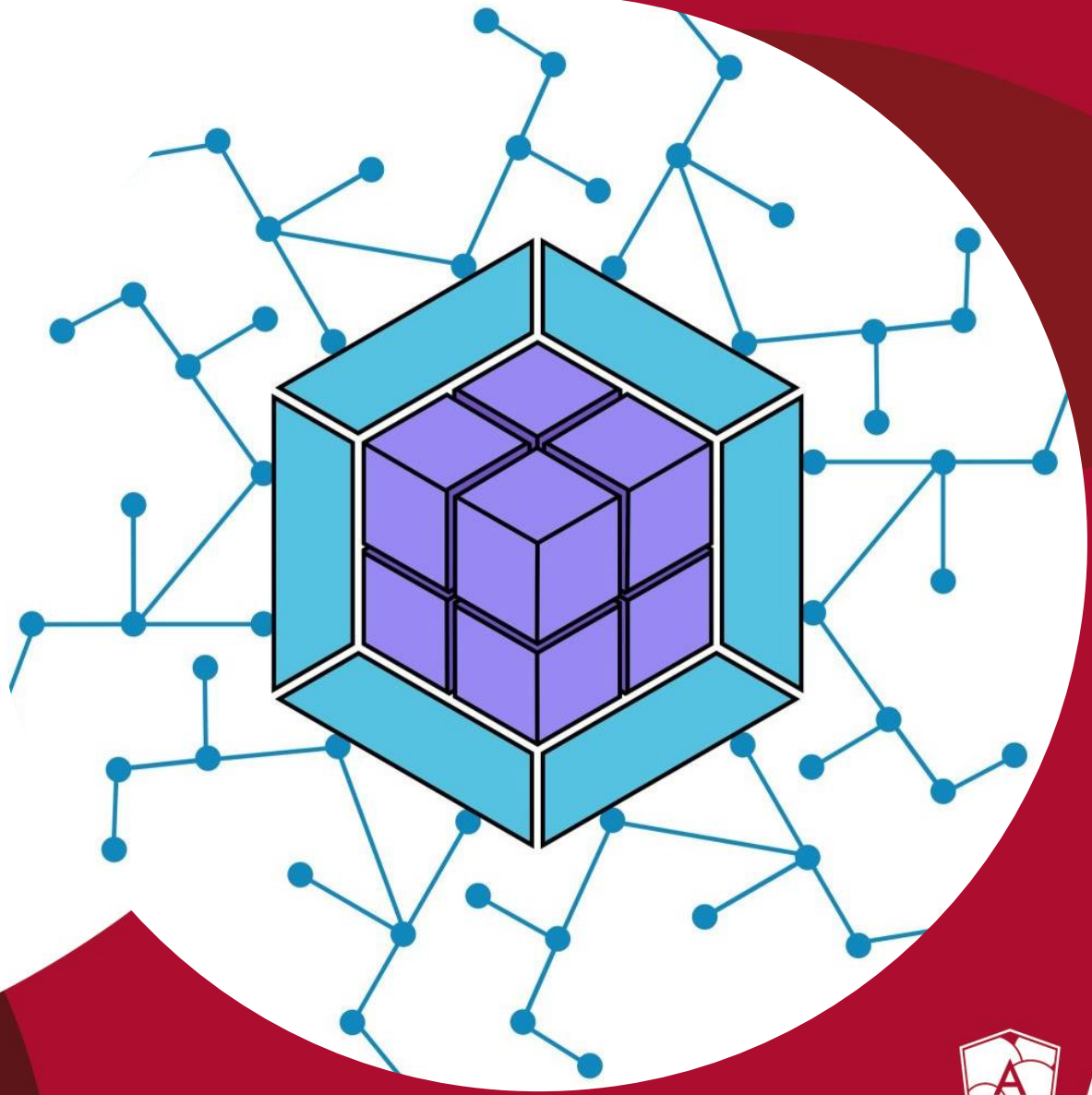
How to Load Separately Compiled and Deployed Code (Plugins)?



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#1:
Module
Federation 101

#2:
Plugin Systems

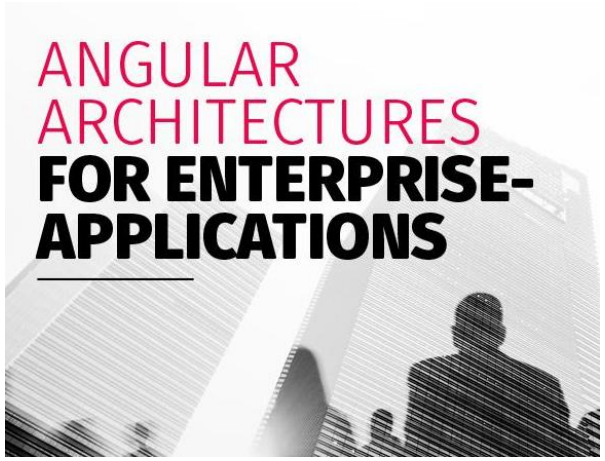
#3:
A/B Testing

#4:
Build
Performance

About me...

Manfred Steyer

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

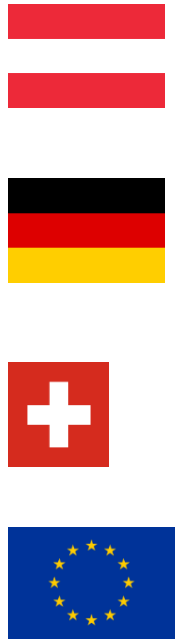


(Remote) Angular Workshops and Consulting

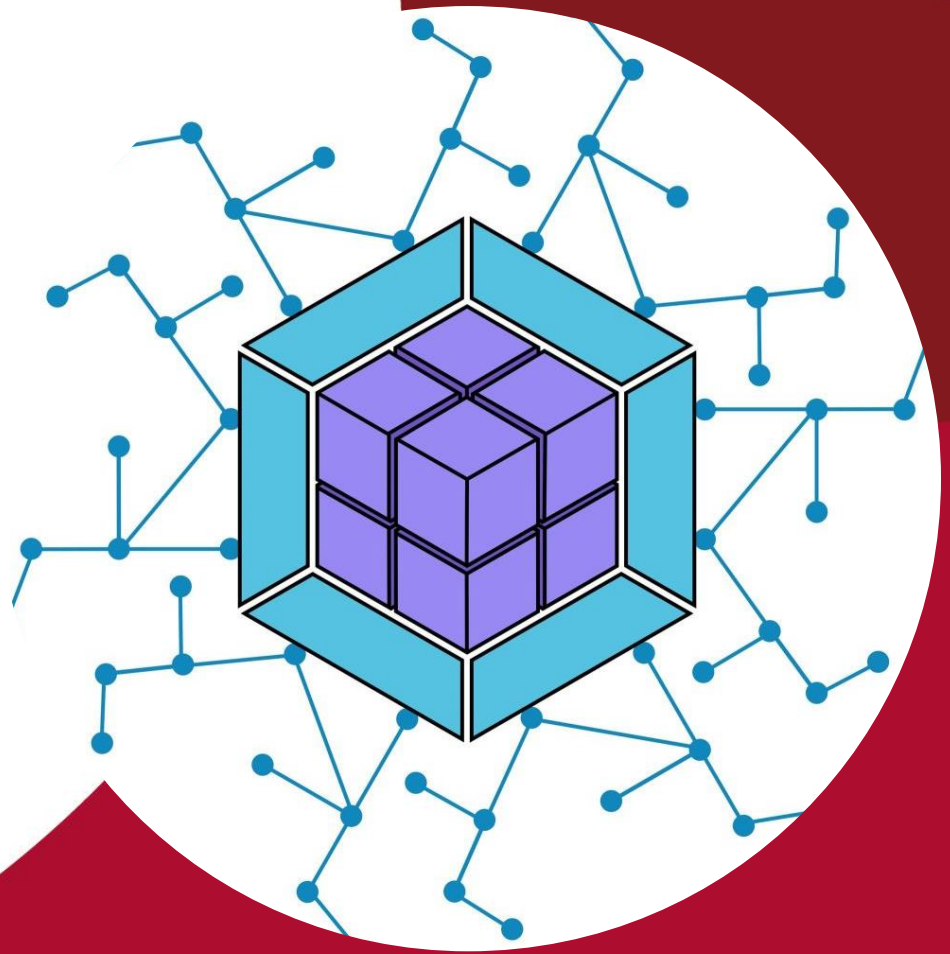
http://angulararchitects.io

Google Developer Expert for Angular

Trusted Collaborator in the Angular Team



#1: Webpack 5
Module Federation 101



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How to load separately compiled code?

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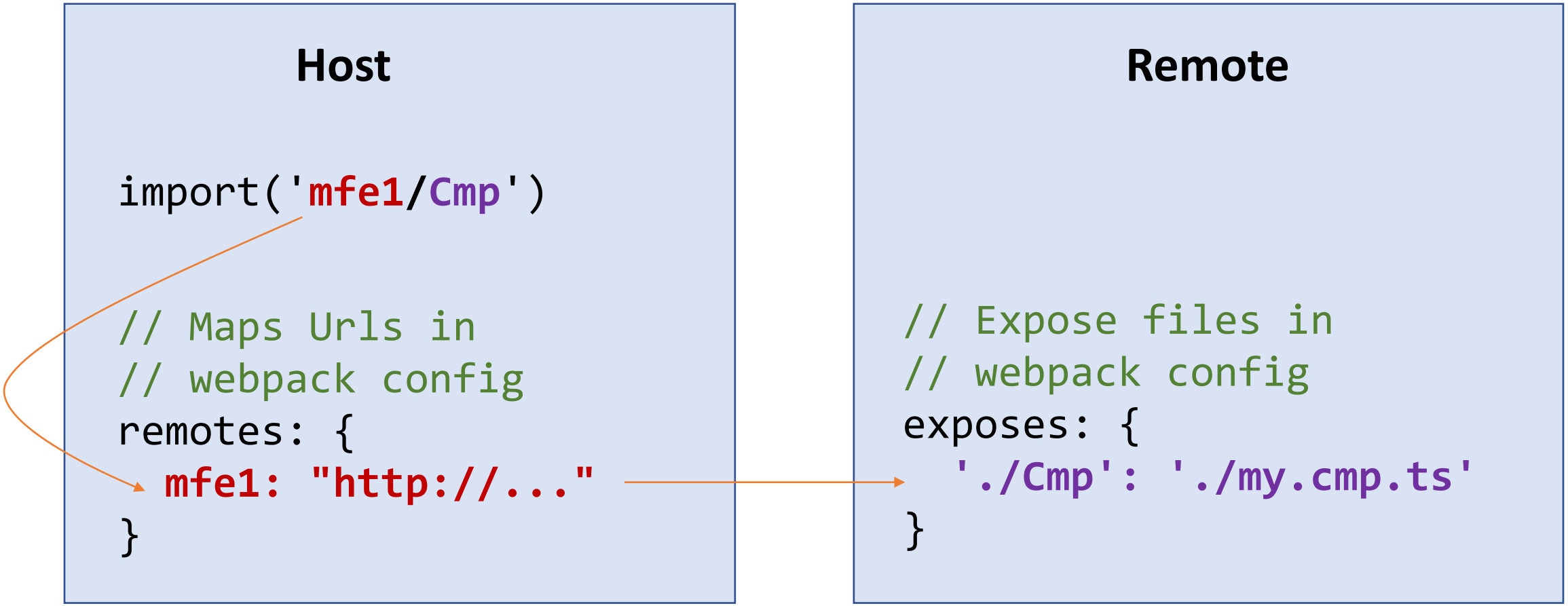
Idea

```
const Component = await import('http://other-app/xyz')
```

Webpack 5 Module Federation



How to Share Libs?

Host

```
shared: [
  "@angular/core", "..."
]
```

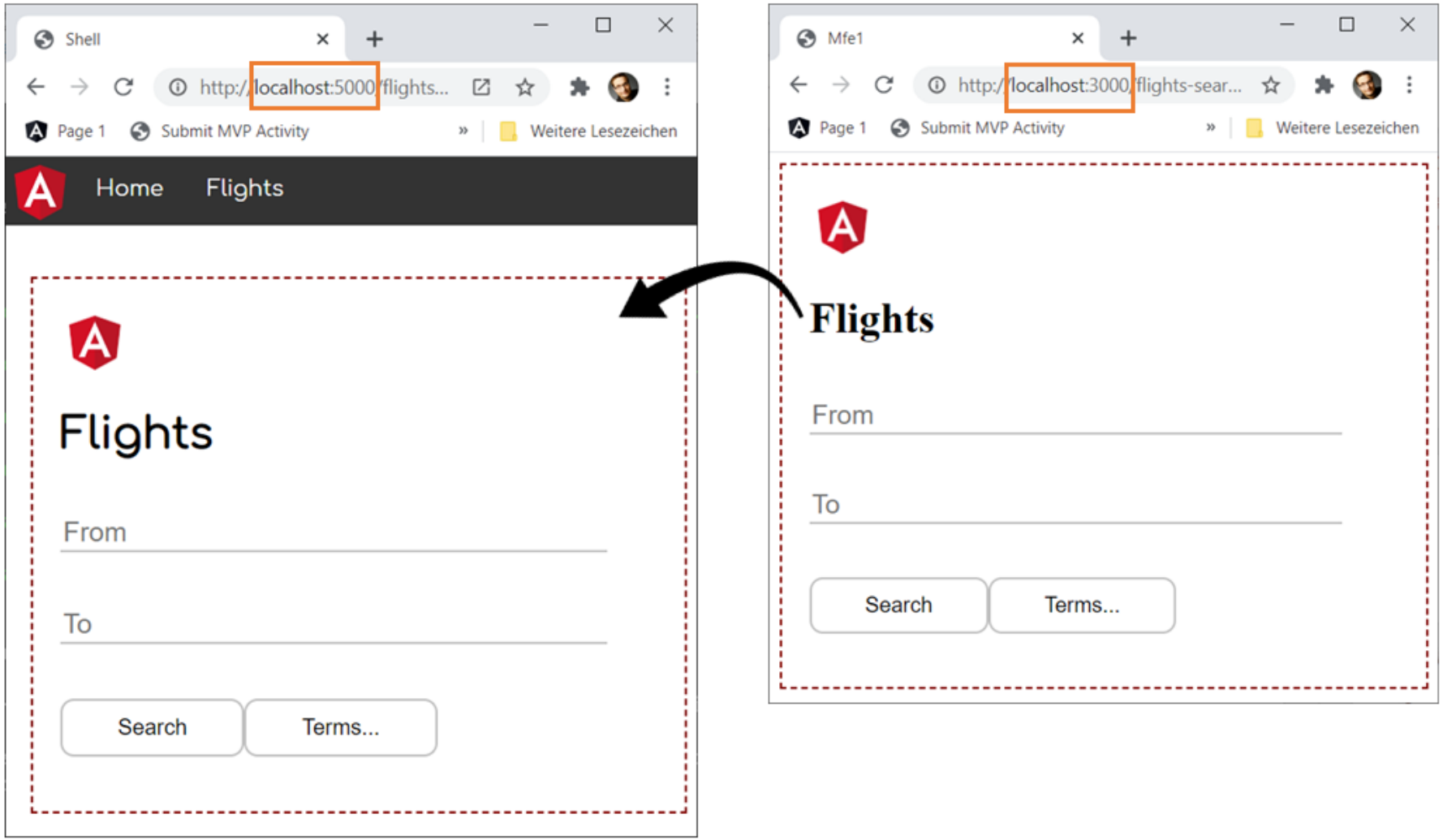
Remote

```
shared: [
  "@angular/core", "..."
]
```

Getting Started

1) npm i @angular-architects/module-federation -D
2) ng g @angular-architects/module-federation:init
3) Adjust generated configuration
4) ng serve

Great Deal for Micro Frontends!



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#2: Plugin Systems with Module Federation

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What if I don’t know my Plugins upfront?

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Dynamic Module Federation

Host

```
import('mfe1/Cmp')



remotes: {
  mfe1: "http://..."
}
```

Remote

```
exposes: {
  Cmp: './my.cmp.ts'
}
```

Dynamic Module Federation

Host

```
import('mfe1/Cmp')



remotes: {
}
```

Remote

```
exposes: {
  Cmp: './my.cmp.ts'
}
```

Dynamic Module Federation

Host

```
loadRemoteModule({
  type: 'module',
  remoteEntry: 'http://…',
  exposedModule: './Cmp'
})

remotes: {
}
```

Remote

```
exposes: {
  Cmp: './my.cmp.ts'
}
```

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#3: A/B Testing

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#4: Build Performance

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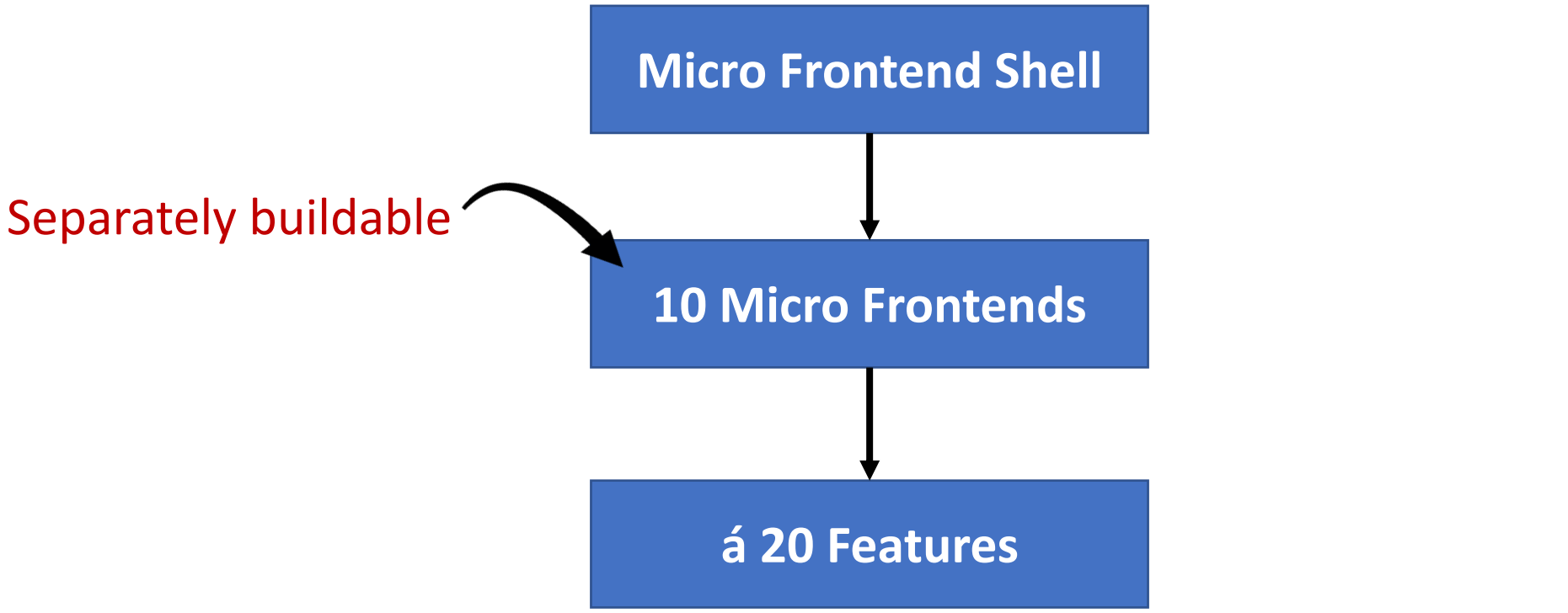
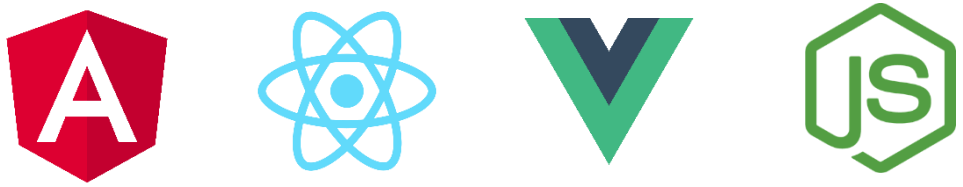
Setting



200 Features in total!

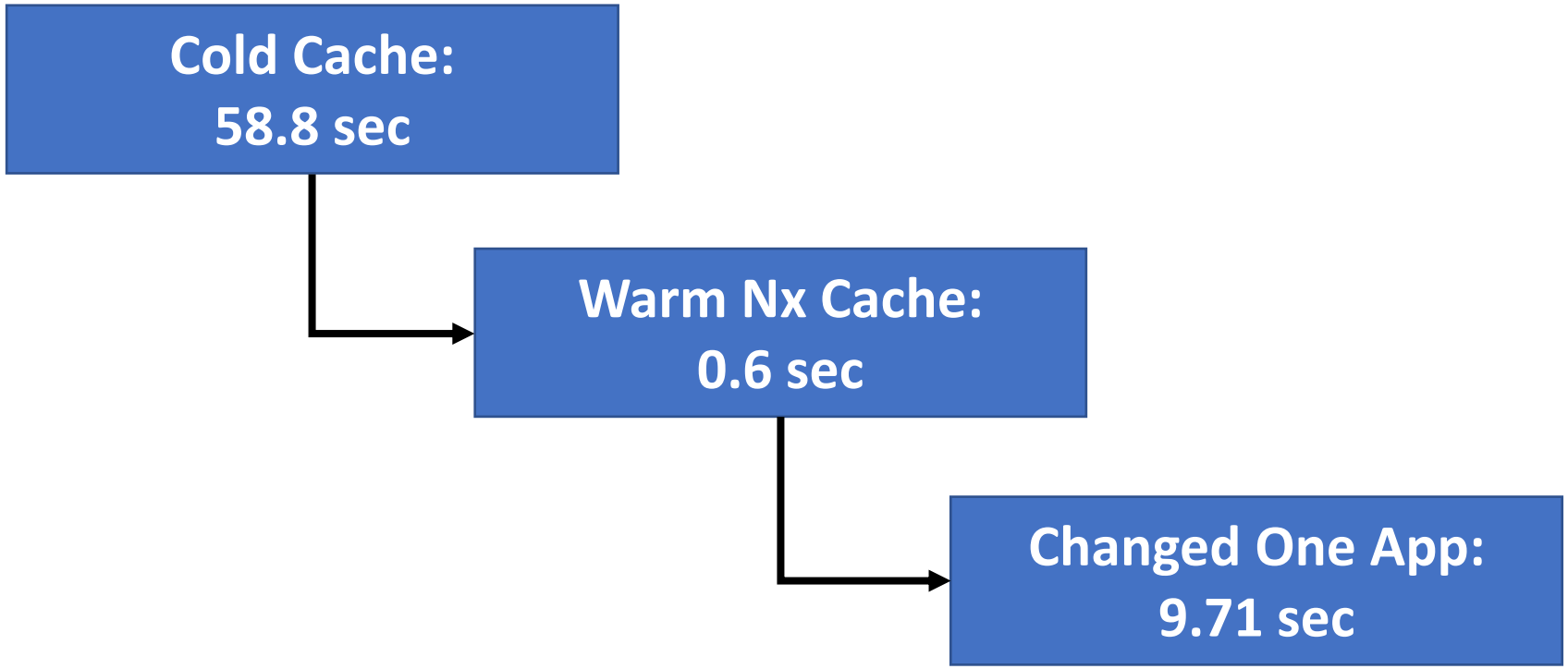
Tooling & Generator

https://nrwl.io/nx



Smart, Fast and Extensible Build System

Results


Cold Cache:
58.8 sec
Warm Nx Cache:
0.6 sec
Changed One App:
9.71 sec

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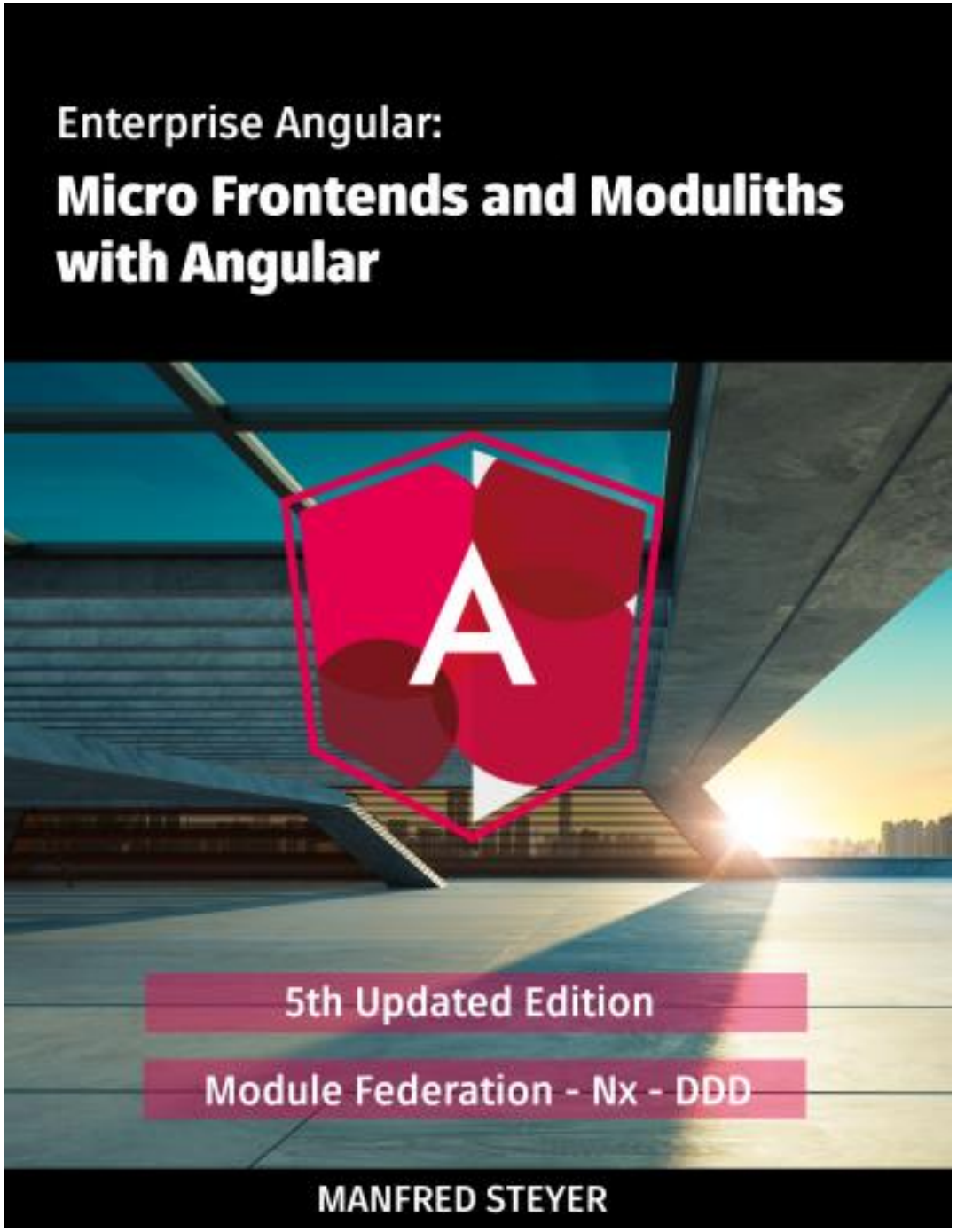
Free eBook (5th Edition)

Module Federation & Nx

ANGULARarchitects.io/book



Conclusion

Loading Separately Deployed Code

Micro Frontends

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Build Performance

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[twitter] ManfredSteyer

Slides & Examples

Remote Company Workshops
and Consulting

http://angulararchitects.io