



STATE OF MICRO FRONTEND

a brief adventure



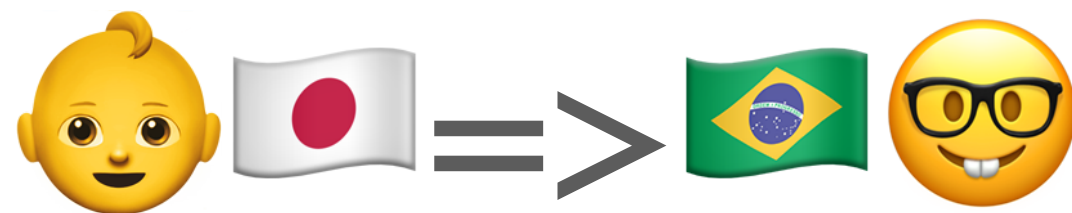
YUGO SAKAMOTO



@ymoto



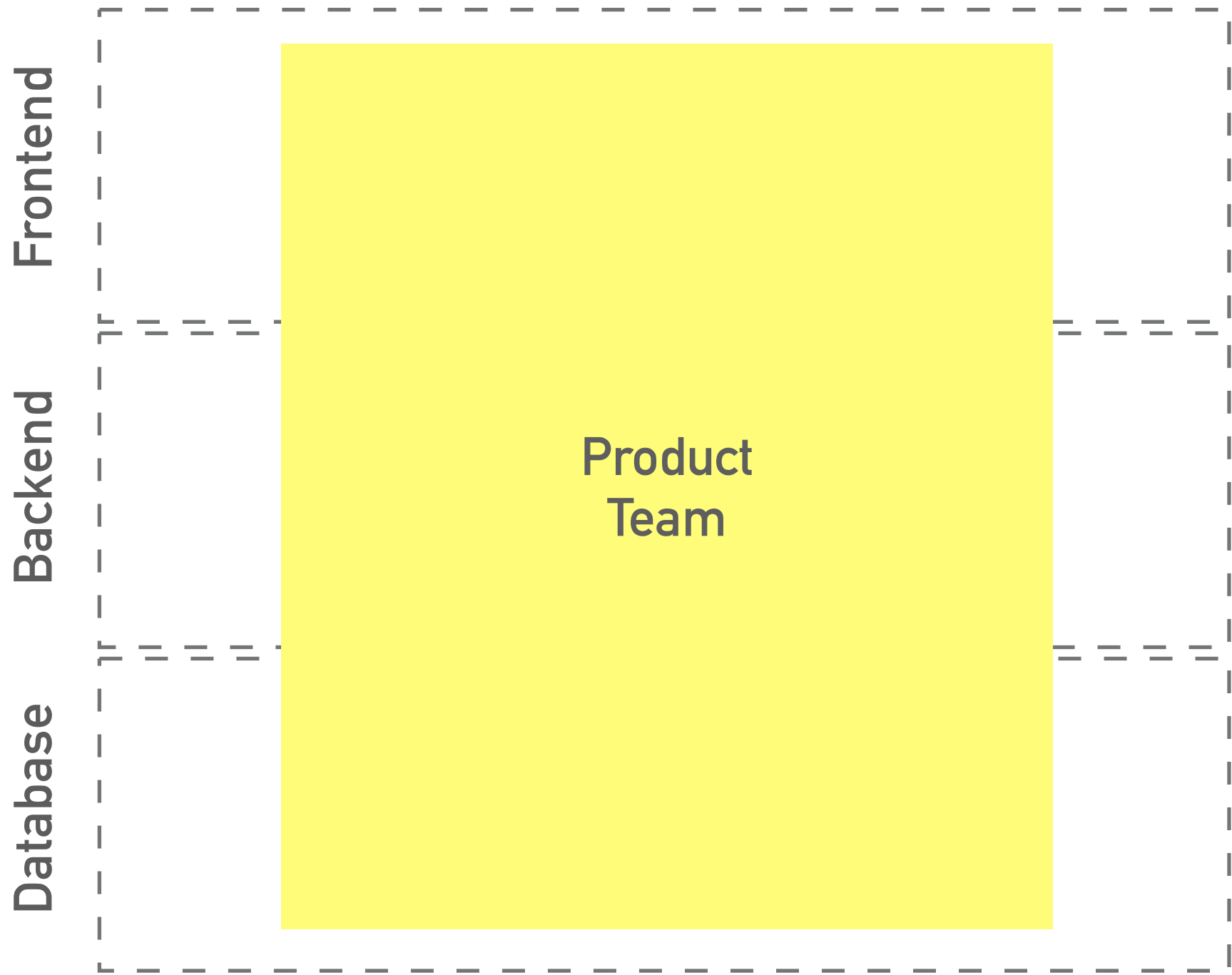
www.linkedin.com/in/yugo-sakamoto



OVERVIEW

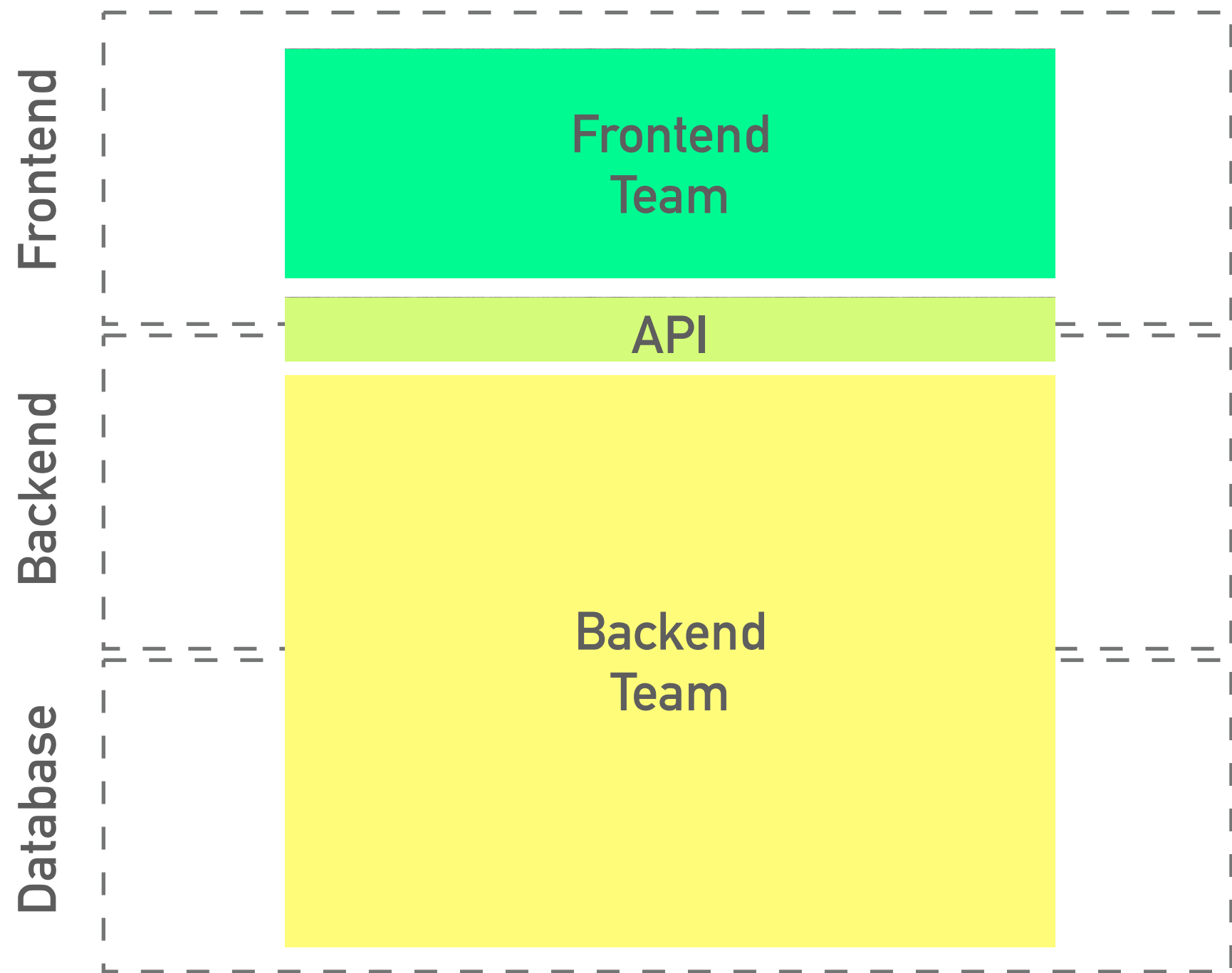
Web Development

MONOLITH



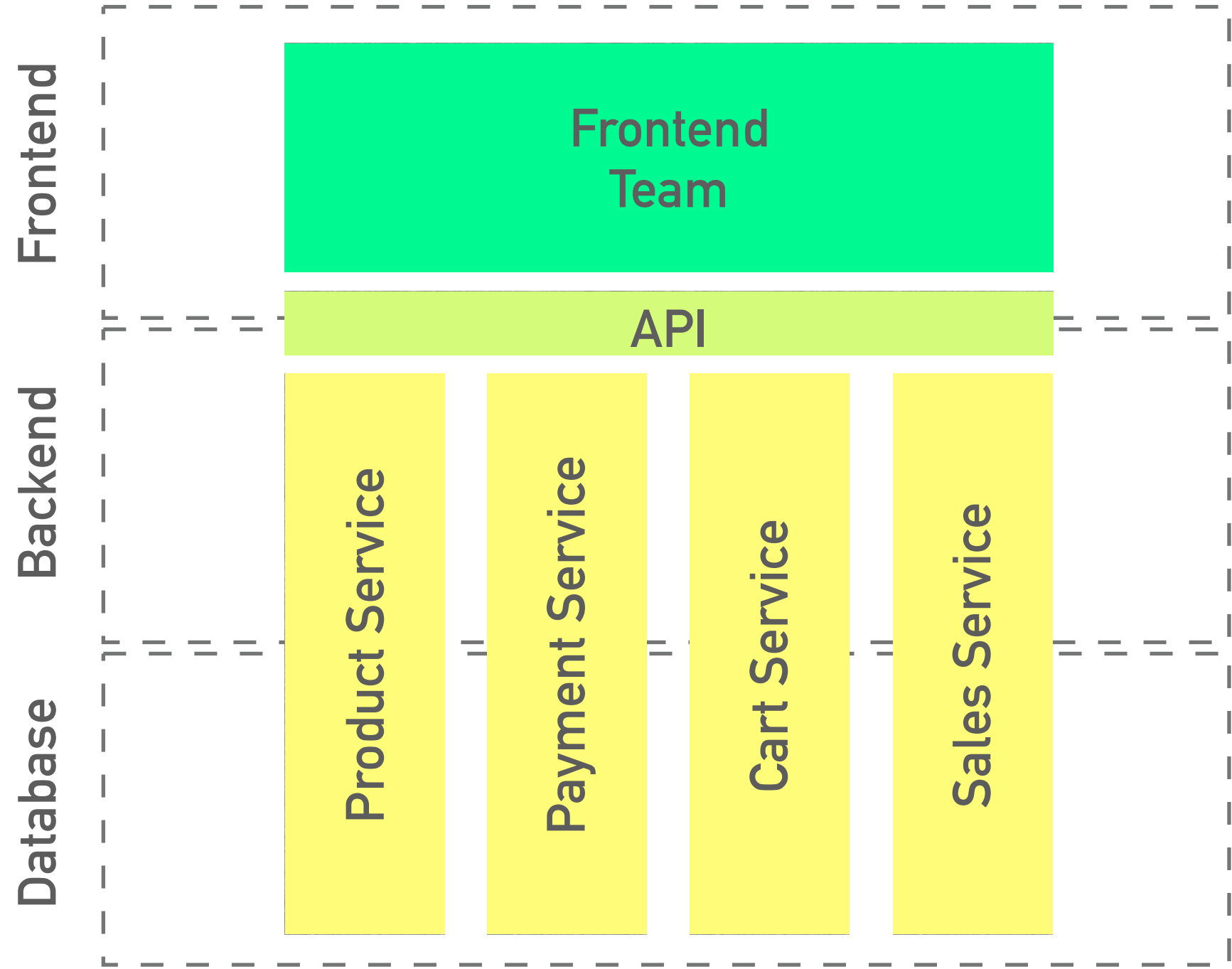
FRONTEND & BACKEND

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MICROSERVICE

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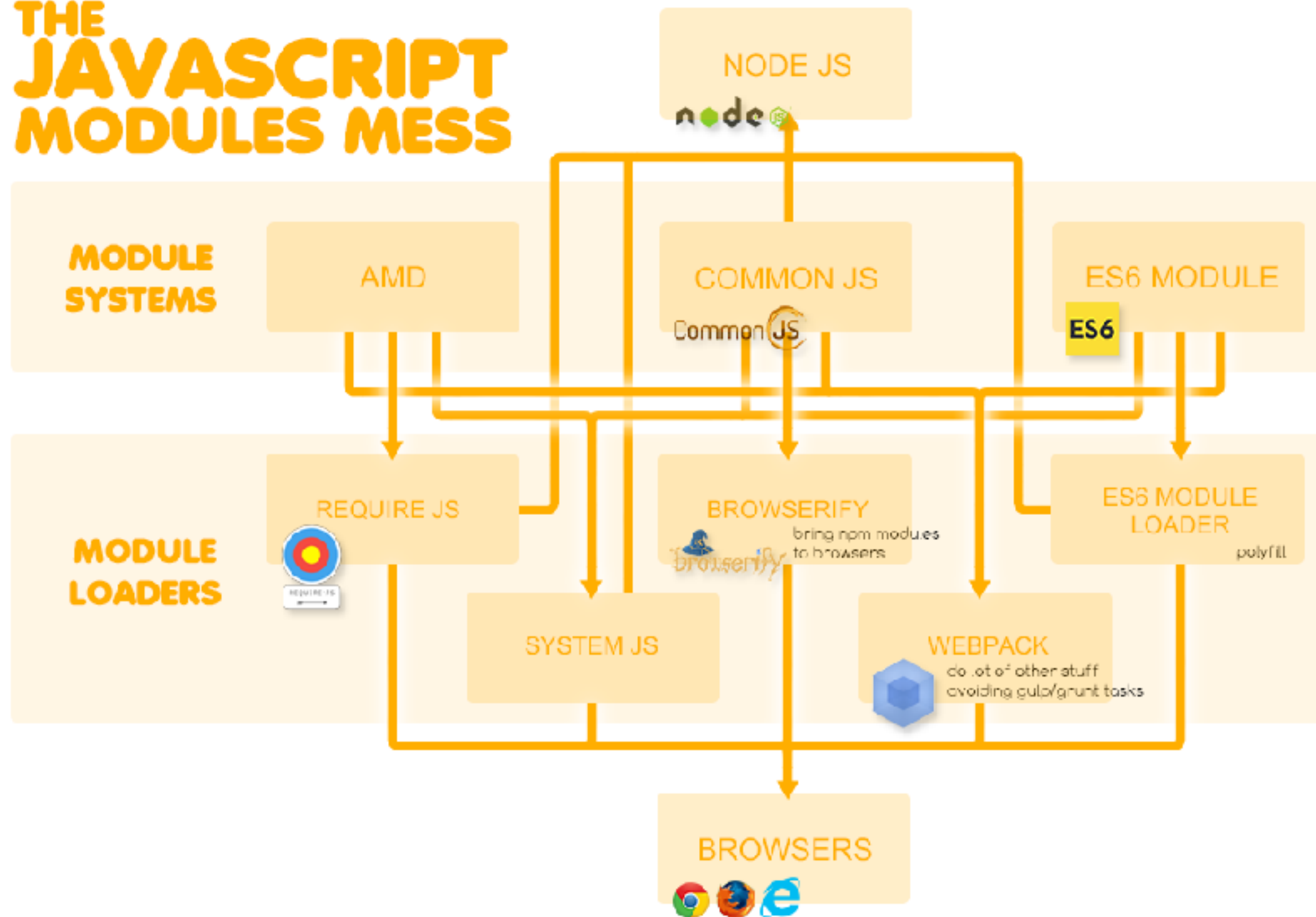


FRONT-END

one more overview...

JS MODULES

THE JAVASCRIPT MODULES MESS



BUNDLERS



webpack

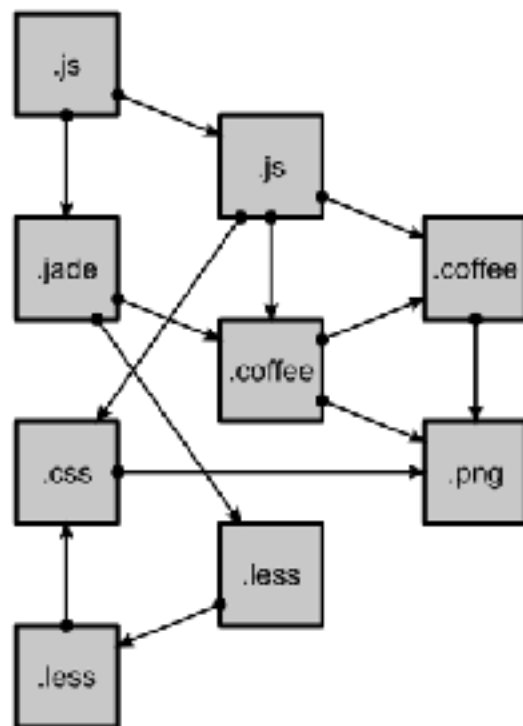


PARCEL

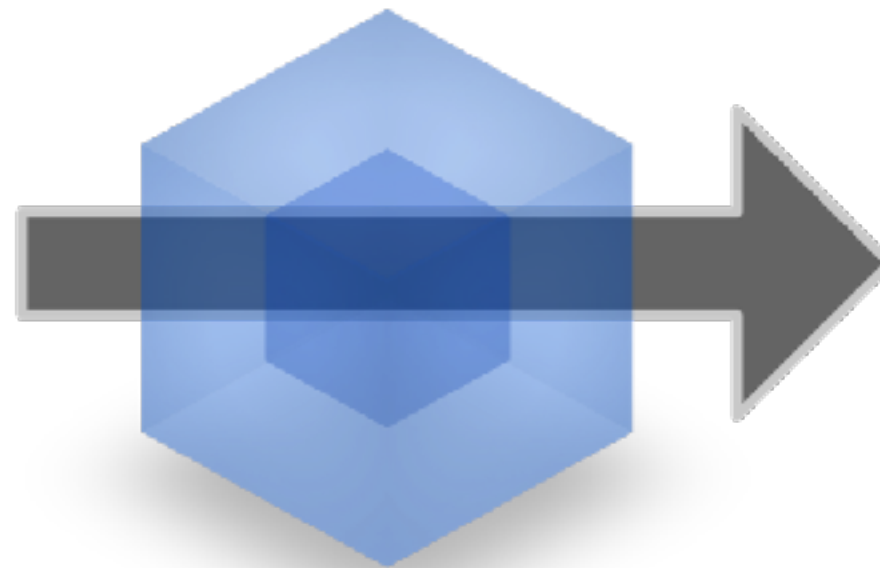
Blazing fast, zero configuration web application bundler



rollup.js

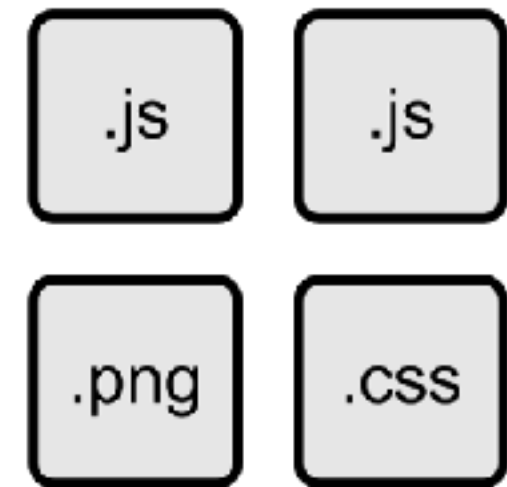


modules
with dependencies



webpack

MODULE BUNDLER



static
assets

COMPONENTS



FRONTEND DEVELOPMENT

Organized
Modules, Components

Optimised
Tree Shaking, Minify,
Code Splitting,
Dynamic Module
Loader

Productive
Bundlers, Vendors
Modules, CLI



BUT IF...



App
grown up



Team
grown up

New
✨shiny✨
lib released



MICRO FRONTEND

the concept

MICRO FRONTEND

TECHNOLOGY RADAR

Search About the Radar Build your Radar Subscribe

Techniques

Tools

Platforms

Languages & Frameworks

The information in our interactive Radar is currently only available in English. To get information in your native language, please download the PDF [here](#).

ADOPT ?

1. Lightweight Architecture Decision Records

TRIAL ?

2. Applying product management to internal platforms

3. Architectural fitness function

4. Autonomous bubble pattern

5. Chaos Engineering

6. Domain-scoped events **New**

7. Hosted identity management as a service **New**

8. Micro frontends

9. Pipelines for infrastructure as code

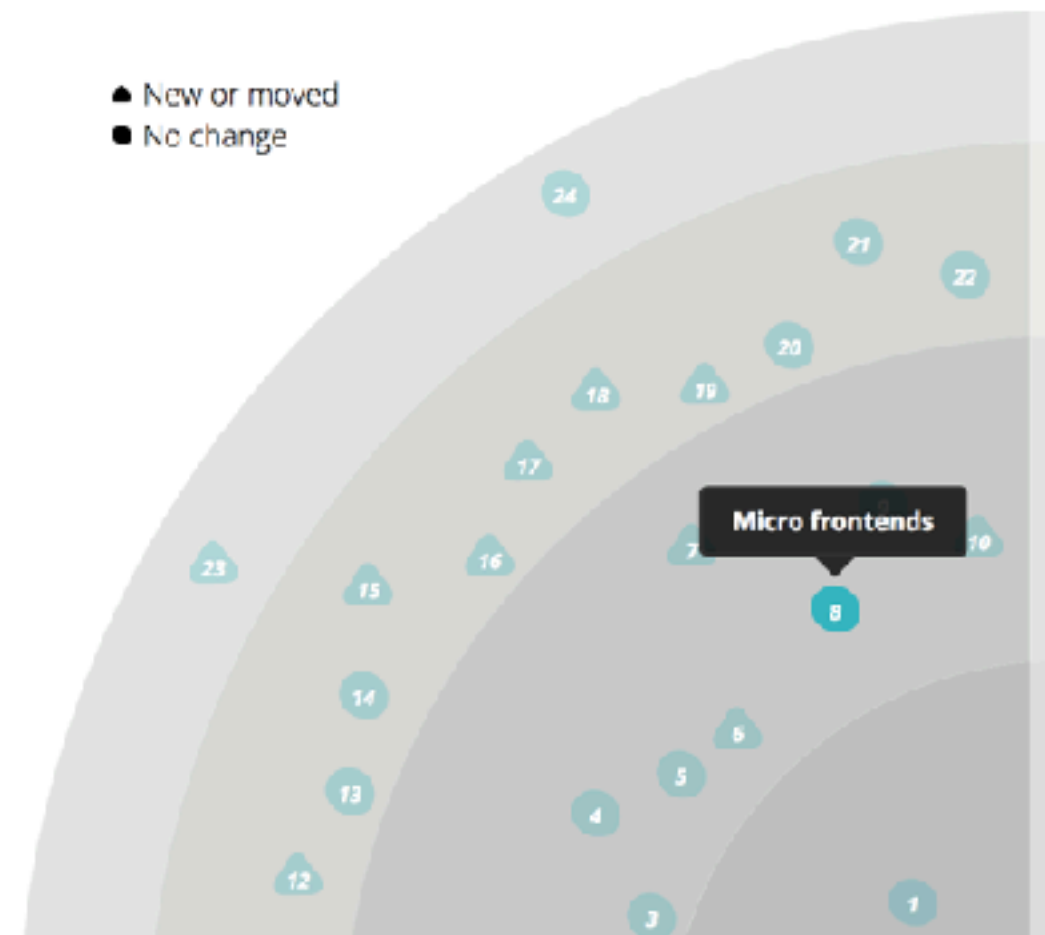
10. Polycloud

ASSESS ?

11. BeyondCorp **New**

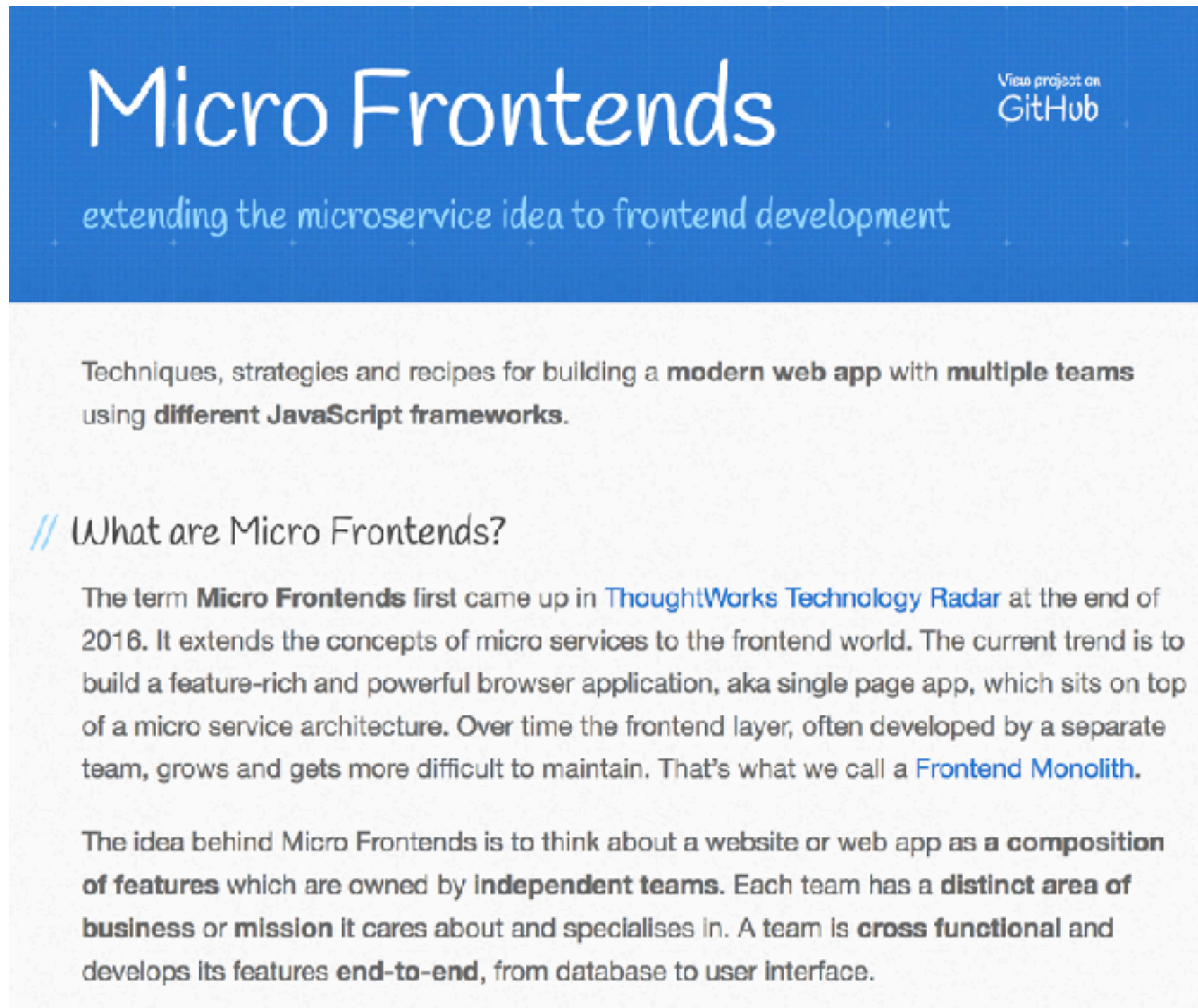
12. Embedded mobile mocks **New**

▲ New or moved
■ No change



Technology Radar (<https://www.thoughtworks.com/radar/techniques>)

MICRO FRONTEND



Michael Geers (<https://micro-frontends.org/>)

“


[...]think about a website or web app
as a **composition of features** which
are owned by **independent teams**.

-Michael Geers


MICRO FRONTEND

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The Model Store





Tractor Porsche-Diesel Master 419



buy for 66,00 €

basket: 0 item(s)

Related Products



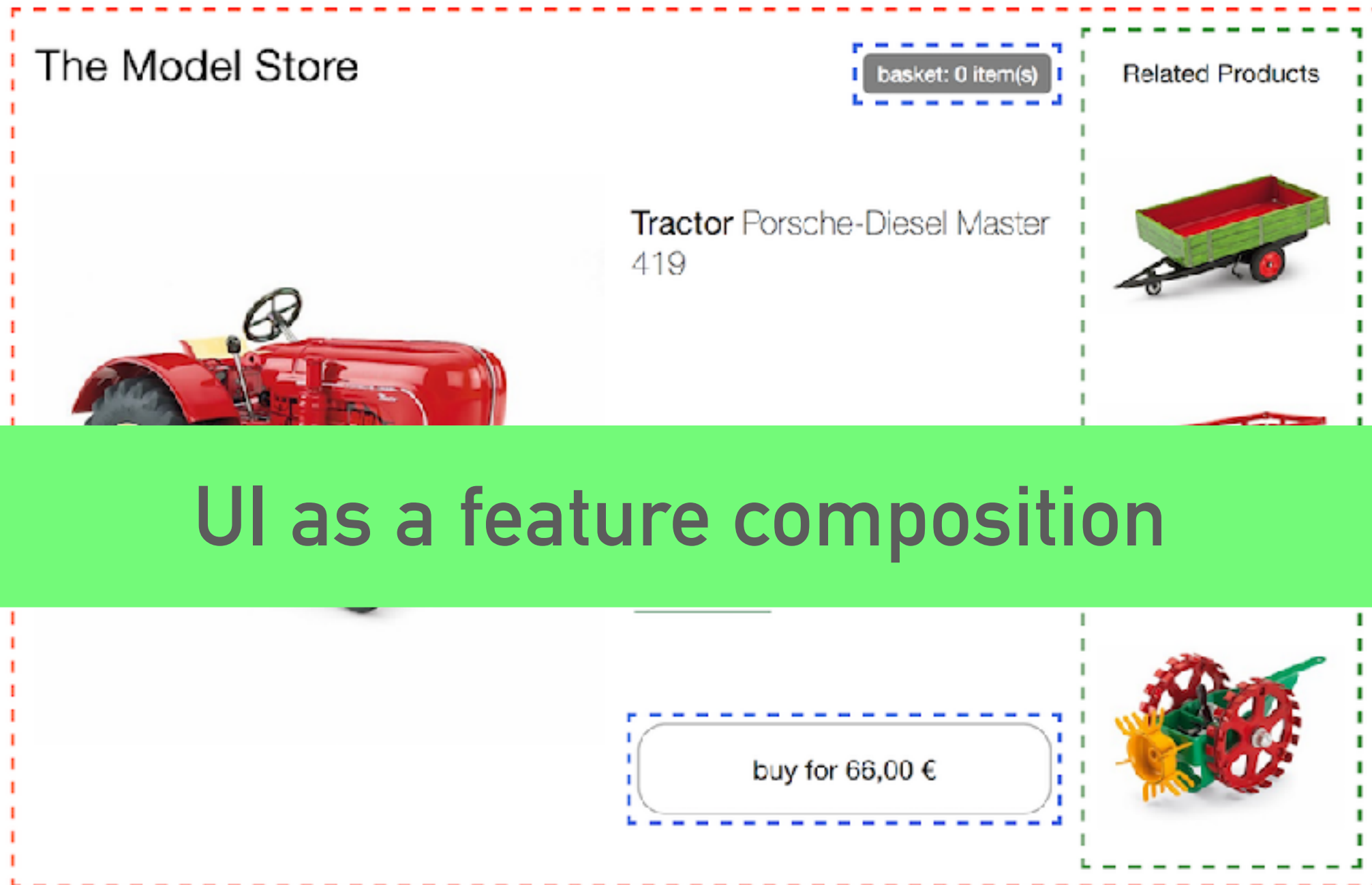
Team Product 

Team Checkout 

Team Inspire 

MICRO FRONTEND

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Team Product

Team Checkout

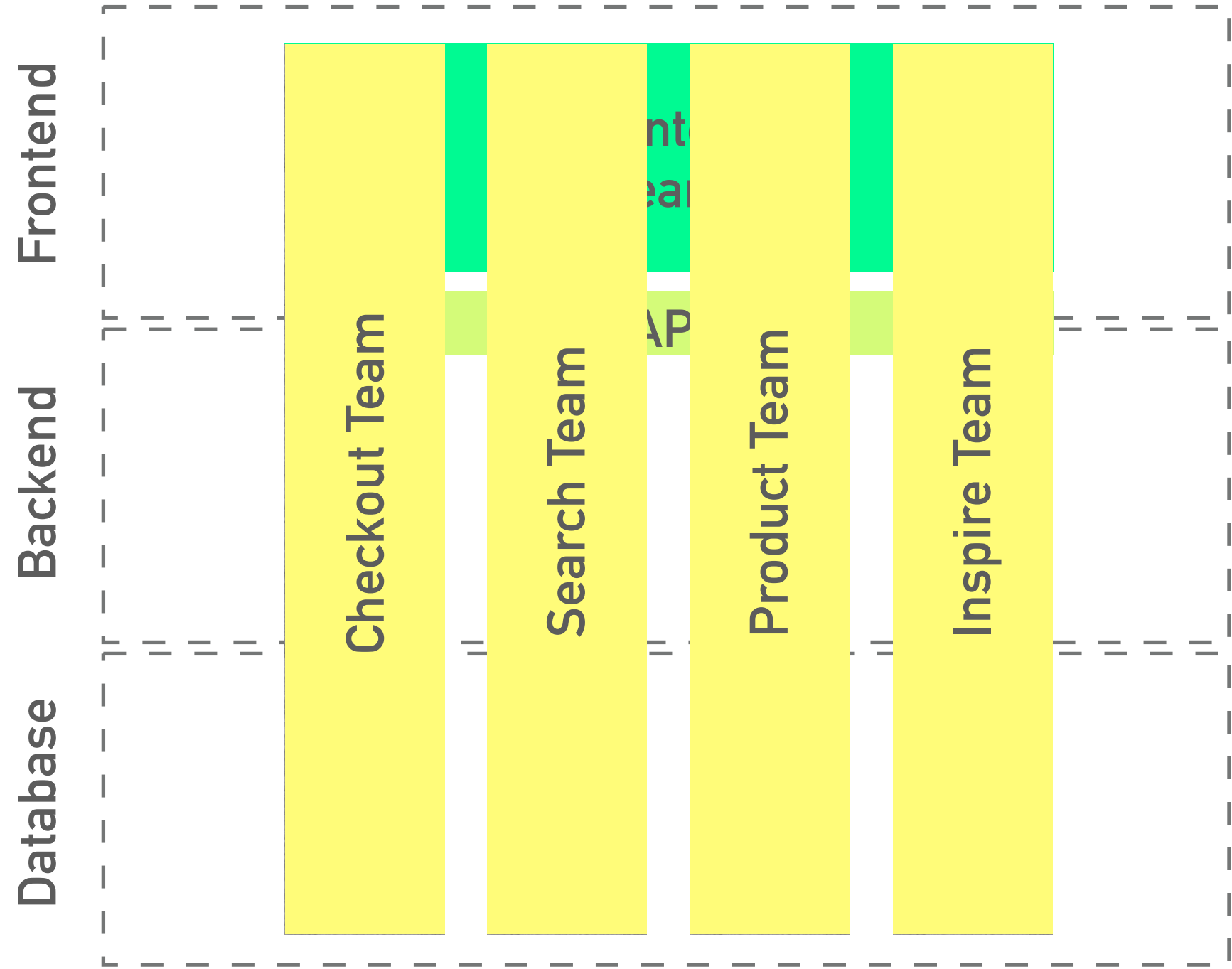
Team Inspire

“

Each team has a **distinct area of business or mission** it cares about and specialises in. A team is **cross functional** and develops its features **end-to-end[...]**.

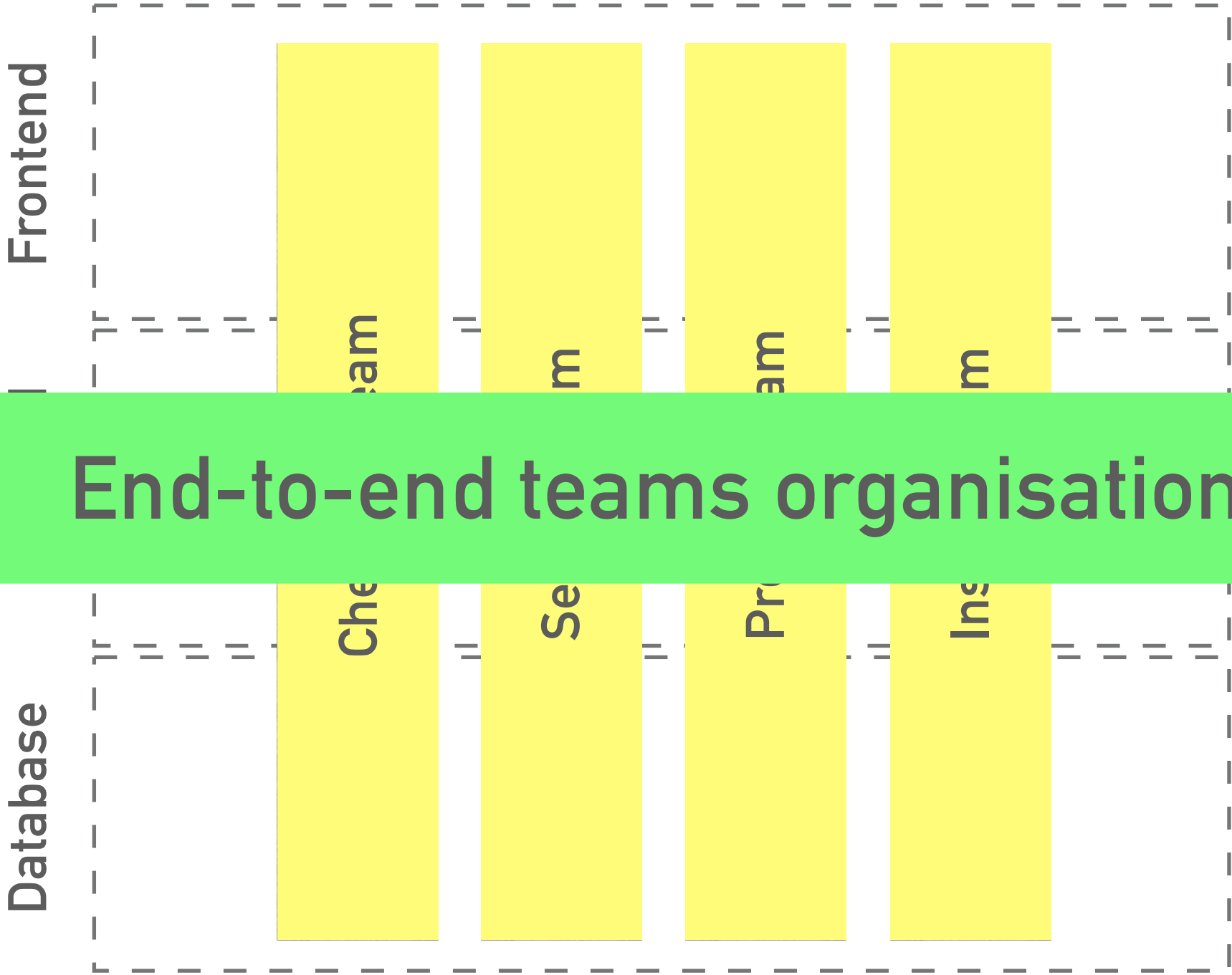
-Michael Geers

MICRO FRONTEND



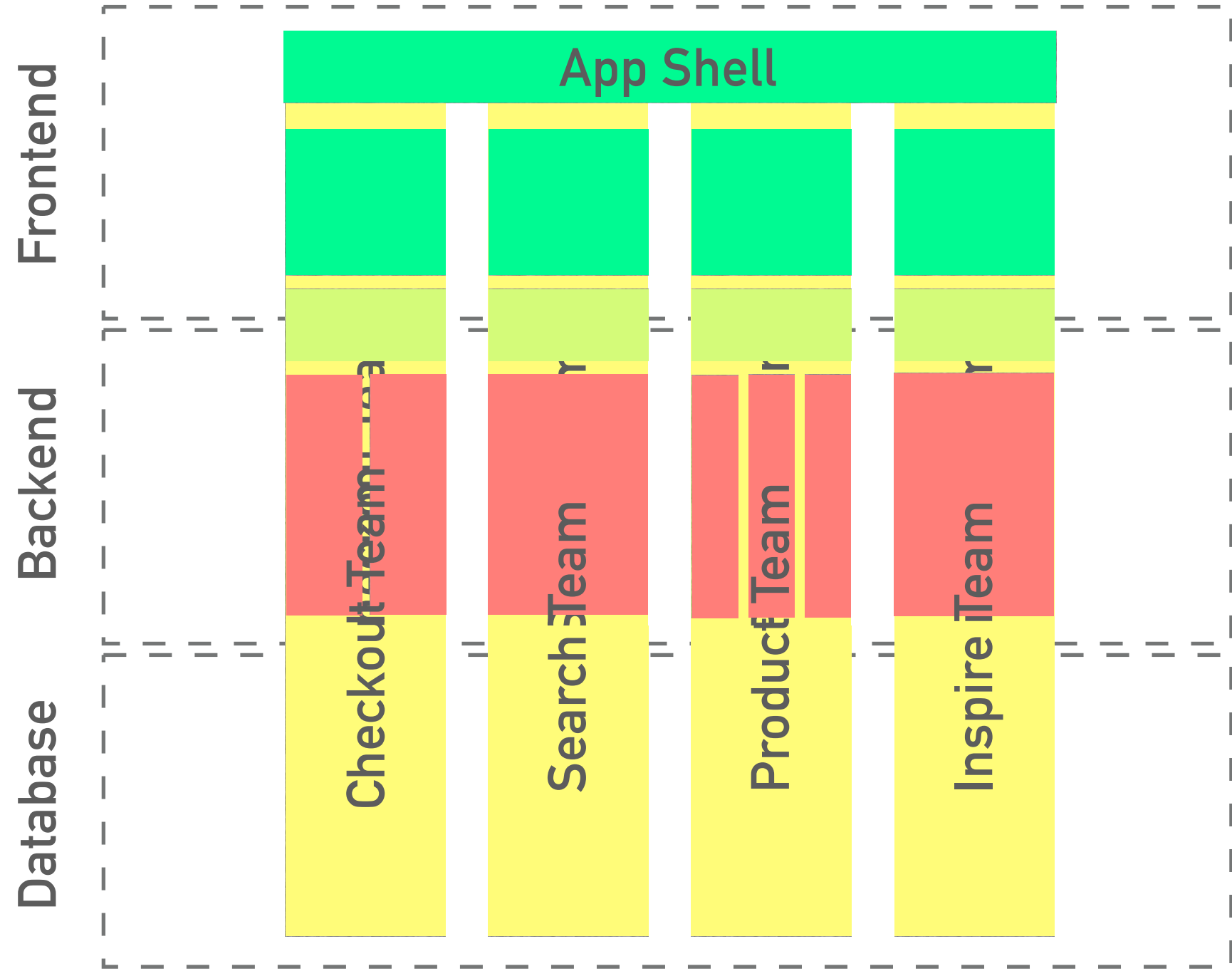
MICRO FRONTEND

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End-to-end teams organisation

MICRO FRONTEND



Independent Deploy

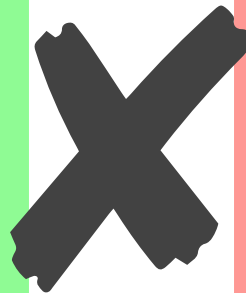
Reduced Scope

Separate Teams

Scalability

Reusability

Code Isolation



Shared libs

Optimised Bundle

Difficult UX

Complex Architecture

APPROACHES

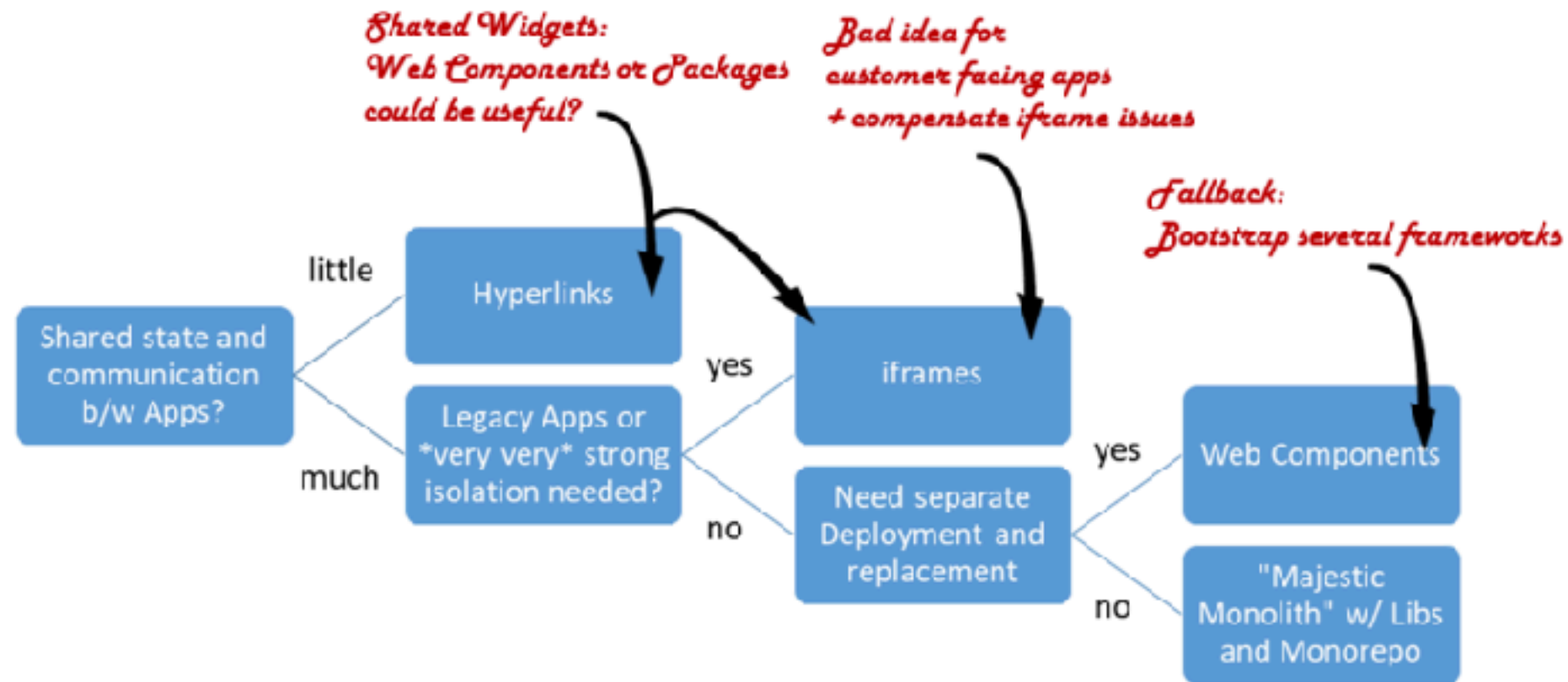
which way?

MICRO FRONTEND

23. Dezember 2017 Angular, Angular And Architecture

A Software Architect's Approach Towards Using Angular (And SPAs In General) For Microservices Aka Microfrontends

TLDR: To choose a strategy for implementing micro frontends with SPA, you need to know your architectural goals, prioritize them and evaluate them against the options available. This article does this for some common goals and presents a matrix which reflects the results of the evaluation. To provide some orientation, you also might find this decision tree useful:



A software architect's approach towards using Angular (and SPAs in general) for microservices aka microfrontends

ARCHITECTURAL CANDIDATES

Dynamic MFE Loading

IFrames

Plugins

Web Components

Multiple SPA

MFE Page

Hyperlink

Code Level Integration

Packages

Monorepo

ARCHITECTURAL GOALS

Optimisation

Optimised bundle

Shared libs

Tree Shaking

Isolation

Runtime Isolation

Separate development

Separate deployment

Flexible

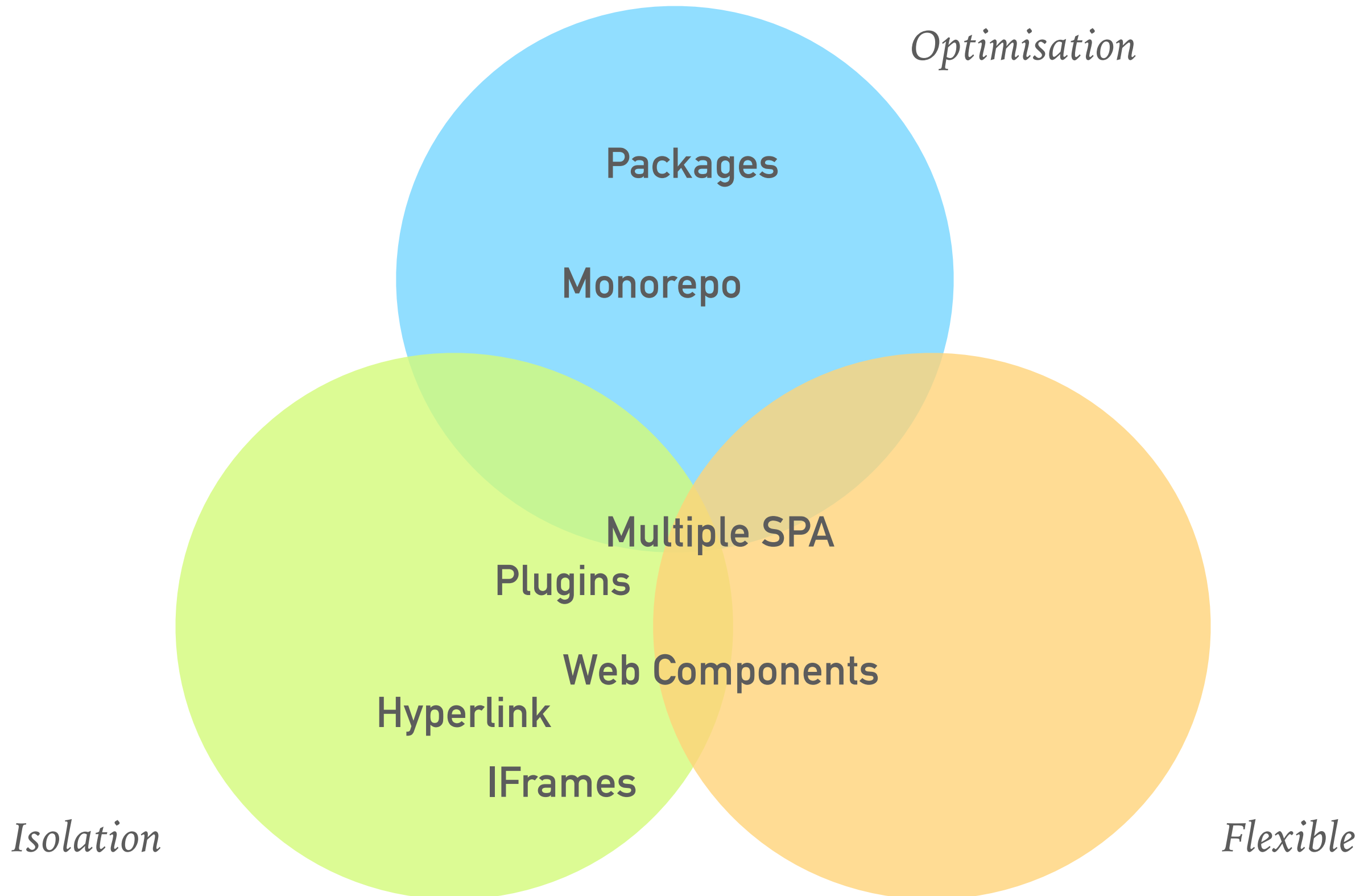
Support Different Frameworks

Multiple MFE on page

Prevent version conflicts

Single Page Shell

EVALUATION

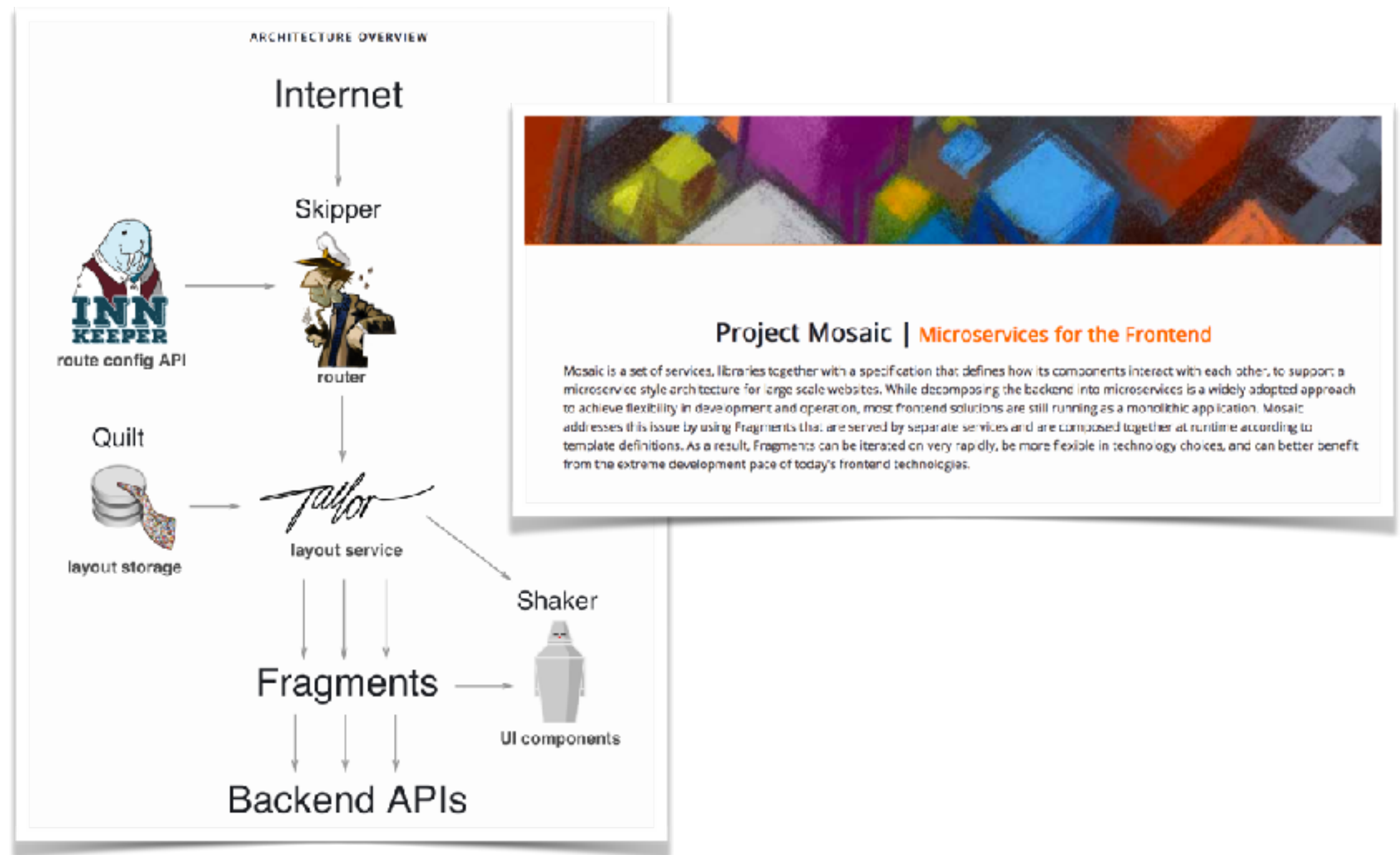


USE CASES

who is using?

ZALANDO PROJECT MOSAIC

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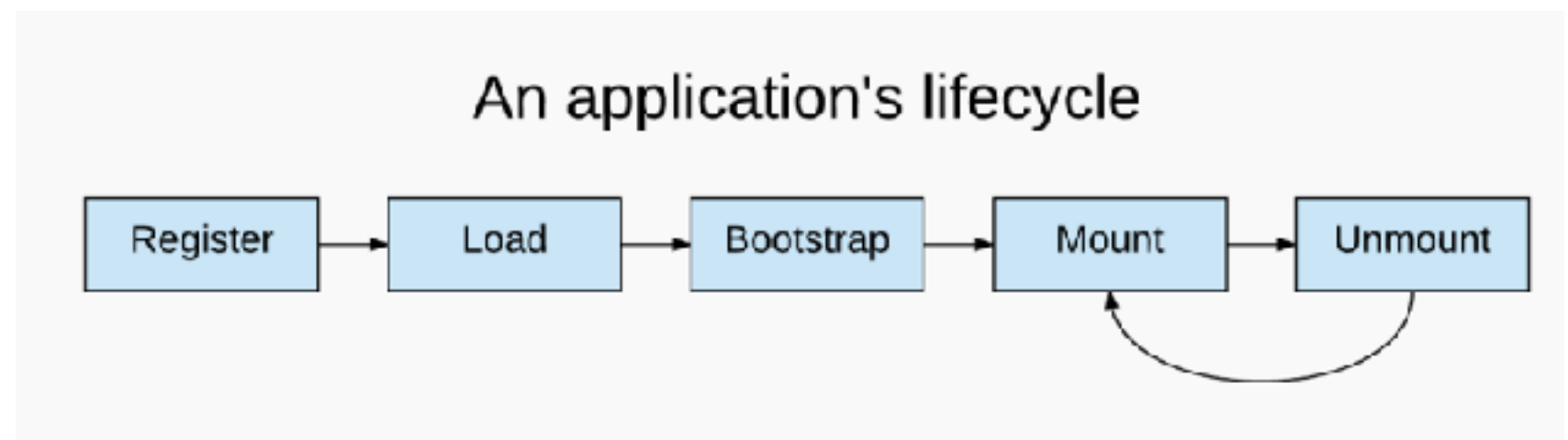
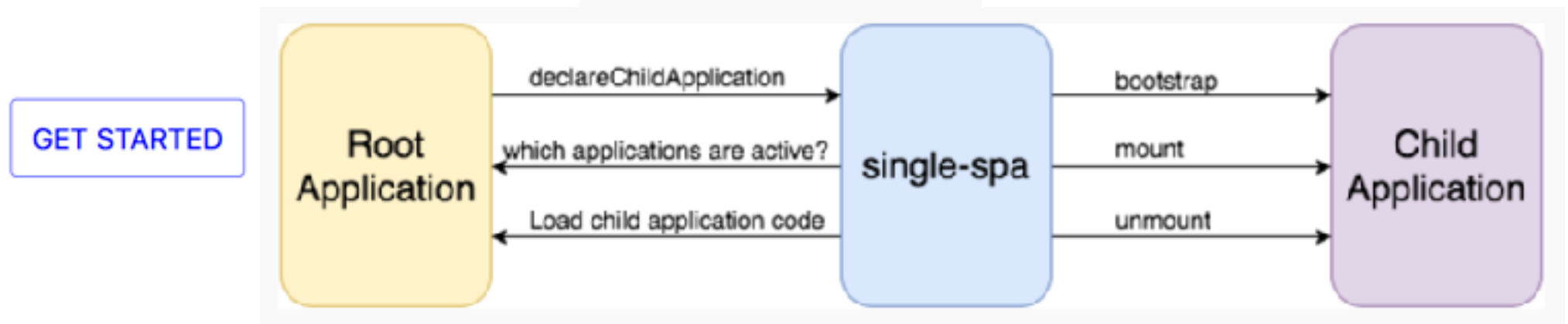


Zalando Project Mosaic (<https://www.mosaic9.org/>)

SINGLE-SPA

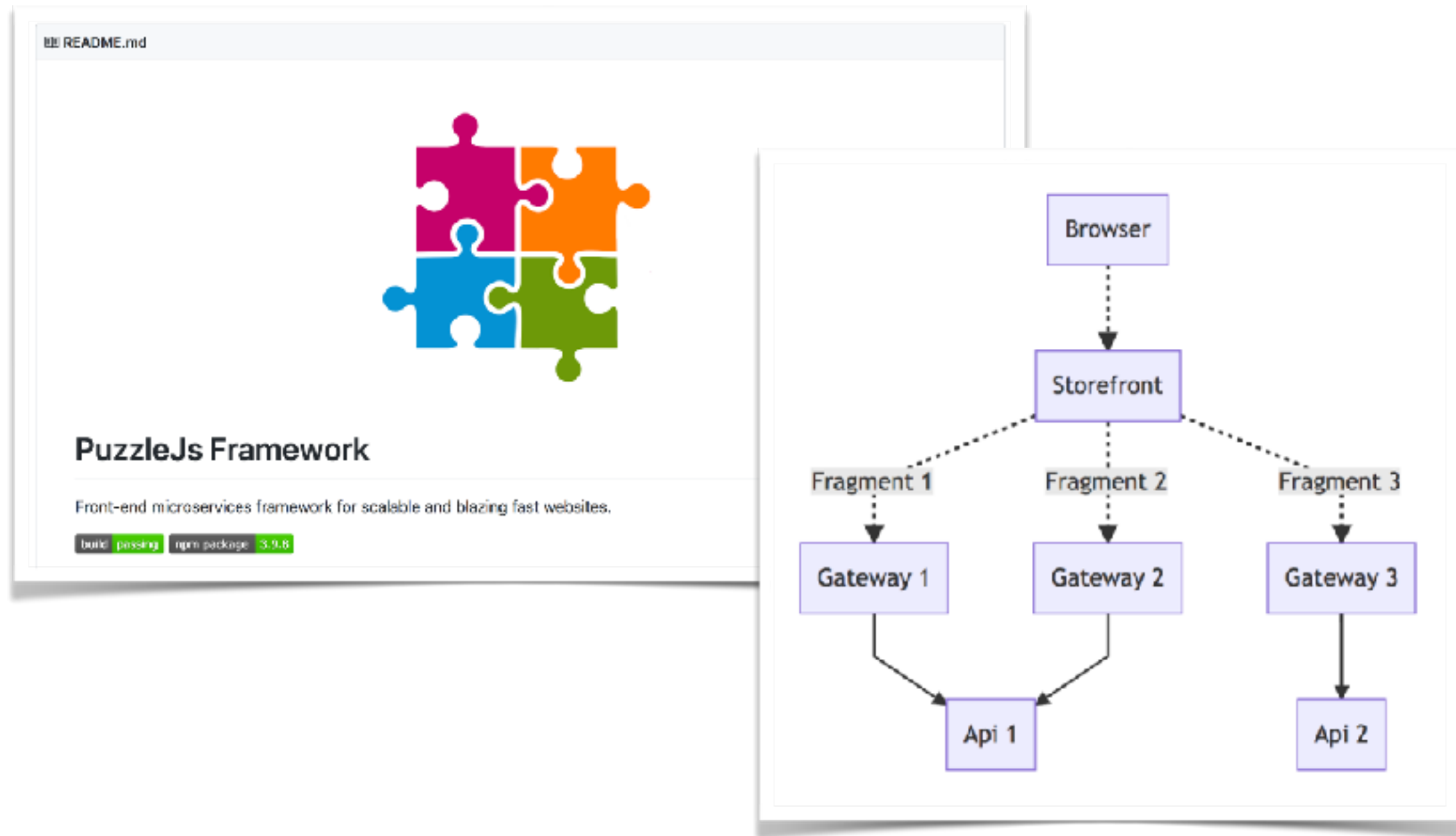
single-spa

a javascript framework for front-end microservices



single-spa (<https://single-spa.js.org/>)

PUZZLEJS



PuzzleJs (<https://github.com/puzzle-js/PuzzleJs>)

MICROSOFT OFFICE ADDINS


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Filter by title

Office Add-ins Documentation

- > Overview
- > Quick Starts
 - > Create Excel add-in
 - Use Angular
 - Use jQuery
 - Use React
 - Use Vue
 - Create Word add-in
 - Create OneNote add-in
 - Create Outlook add-in
 - Create PowerPoint add-in
 - Create Project add-in
- > Tutorials
- > Concepts
- > How-to guides
- > Reference

Build an Excel add-in using React

📅 12/28/2017 • ⌚ 3 minutes to read • Contributors 

In this article, you'll walk through the process of building an Excel add-in using React and the Excel JavaScript API.

Environment

- **Office Desktop:** Ensure that you have the latest version of Office installed. Add-in commands require build 16.0.6769.0000 or higher (16.0.6868.0000 recommended). Learn how to [install the latest version of Office applications](#).
- **Office Online:** There is no additional setup. Please note that support for commands in Office Online for work/school accounts is in preview.

Prerequisites

- Install [Create React App](#) globally.

bash

npm install -g create-react-app

Copy

Microsoft Office Add-ins (<https://docs.microsoft.com/en-us/office/dev/add-ins/>)

“

No silver bullet.

-Fred Brooks, 1986

QUESTIONS?

REFERENCES

About Microfrontend

ThoughtWorks Technology Radar (<https://www.thoughtworks.com/radar/techniques/micro-frontends>)

Michael Geers (<https://micro-frontends.org/>)

Elisabeth Engel slides (<https://slides.com/elisabethengel/micro-frontends/>)

Collection of Microfrontend posts (<https://micro-frontends.zeef.com/elisabeth.engel?ref=elisabeth.engel&share=ee53d51a914b4951ae5c94ece97642fc>)

Software Architects approach for Microfrontend (<http://www.softwarearchitekt.at/post/2017/12/28/a-software-architect-s-approach-towards-using-angular-and-spas-in-general-for-microservices-aka-microfrontends.aspx>)

Microsoft Office Add-ins (<https://docs.microsoft.com/en-us/office/dev/add-ins/>)

Trials

<https://medium.com/@rchaves/building-microfrontends-part-i-creating-small-apps-710d709b48b7>

<https://hackernoon.com/front-end-microservices-with-web-components-597759313393>

<https://medium.com/onfido-tech/micro-frontends-at-onfido-the-component-chimera-32212214408e>

<https://www.softwarearchitekt.at/post/2018/08/19/angular-react-vue-js-and-co-peacefully-united-thanks-to-micro-apps-and-web-components.aspx>

Frameworks

Zalando Project Mosaic (<https://www.mosaic9.org/>)

PuzzleJs (<https://github.com/puzzle-js/PuzzleJs>)

single-spa (<https://single-spa.js.org/>)