

Implementing the *MICRO FRONTENDS* pattern 2 years in 60 minutes

Anatoly Nekhozhin
Group Manager, Netcracker

Implementing the **MICRO FRONTENDS**

2 years in 60 minutes



Problem statement

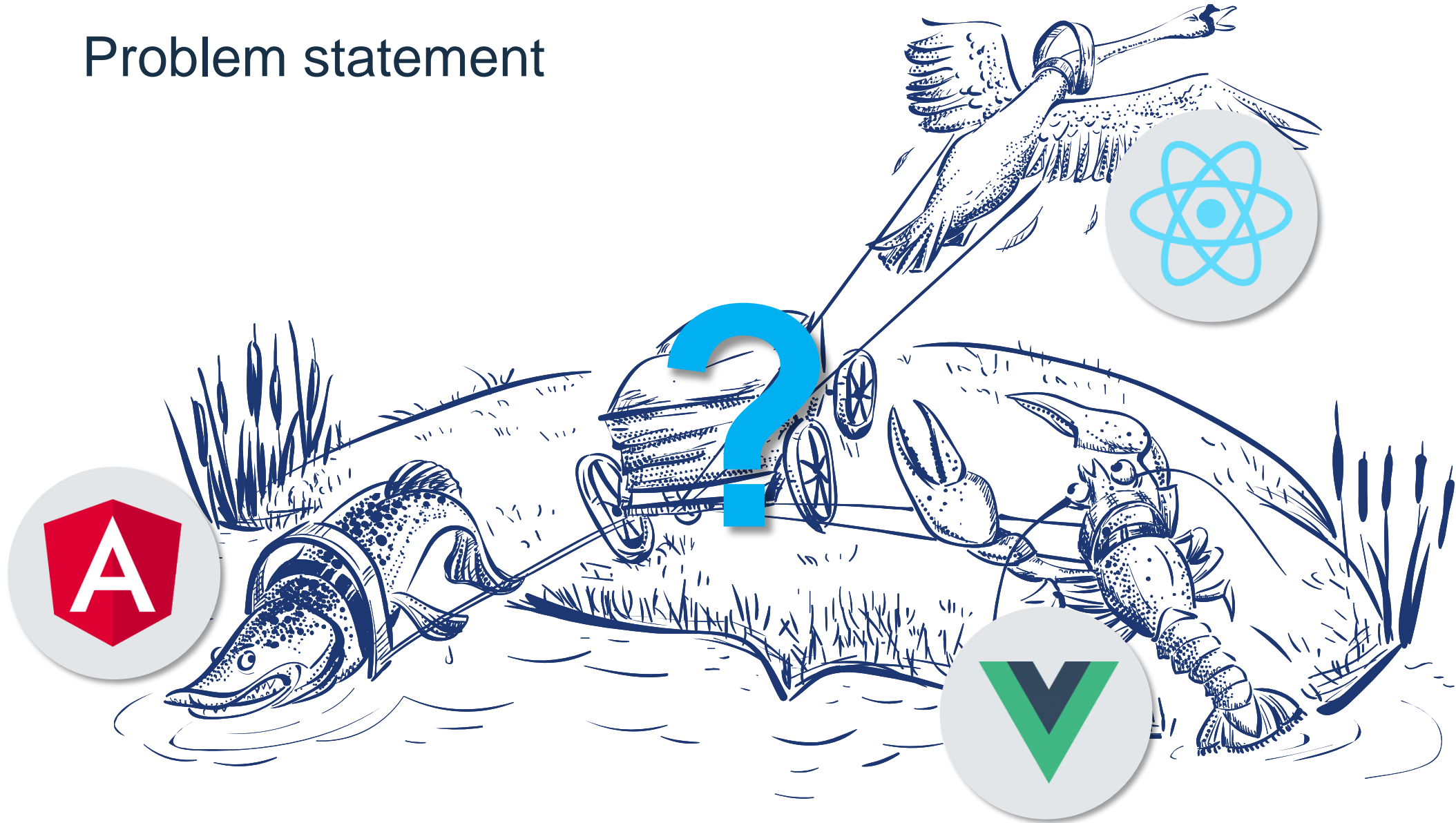
How to include pretty different services with

MICRO FRONTENDS

in one system?



Problem statement



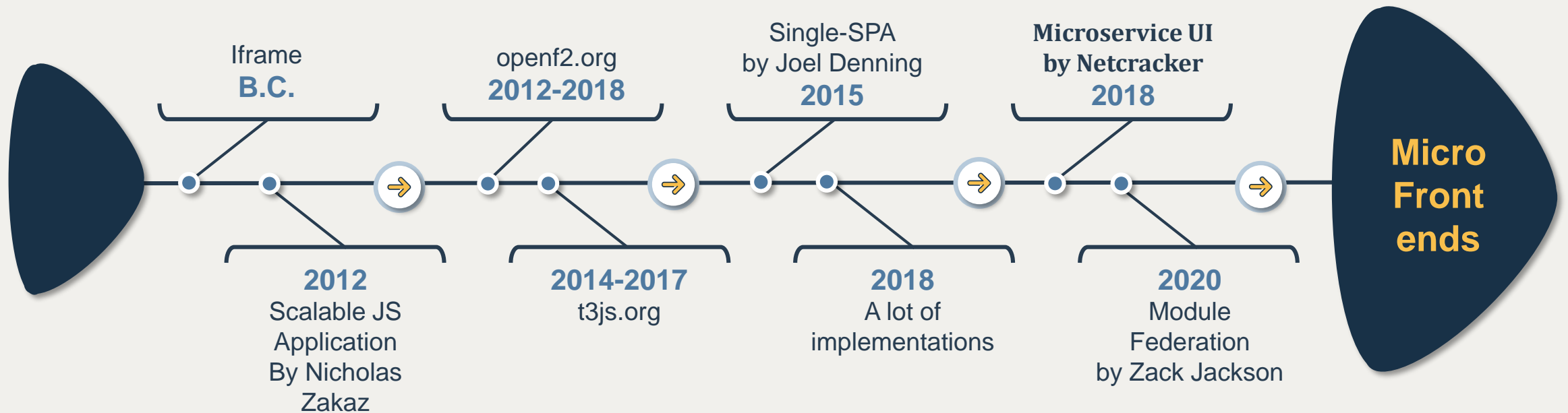
Problem statement

MICRO FRONTENDS

- techniques, strategies and recipes for building a modern web app with multiple teams that can ship features independently.

<https://micro-frontends.org/>

Micro frontends history



Who use micro frontends today



Source: Luca Mezzalira (Solution Architect | Google Developer Expert)
<https://blog.bitsrc.io/state-of-micro-frontends-9c0c604ed13a>

Tasks that can be solved by micro frontends:

1. ?????????????? ????????????? process
2. ????????? ?? ????????? ????? runtime
3. ????????????? agnostic
4. Loose ???????????
5. Reducing ??? ????? ?? ????? ?????????
6. ??????? ?????????????????? enterprise ?? ??? ????????????? ?????????????

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Tasks that can be solved by micro frontends:



Independent developing process



Ability to update code runtime



Framework agnostic



Loose coupling



Reducing the rate of code erosion



Simple customization enterprise UI for different customers

Application example with micro frontends

The screenshot displays a web application interface for a customer profile. The top navigation bar is blue and contains a home icon, a user profile icon labeled 'Admin', and a plus sign. On the right side of the top bar are icons for a search bar, a bell, a refresh icon, and a user profile icon labeled 'AT'.

The left sidebar is light blue and contains the following navigation options: Overview, Billing Accounts, Contracts, Quotes, Products, Tickets, Customer Info (highlighted), Contact Persons, and Interactions.

The main content area is white and contains the following sections:

- General Info**: This section displays the customer's profile information. It includes a profile picture icon, the name 'Admin', and the status 'Prospect'. The customer is identified as a 'Residential Customer #1612547890288366'. The category is 'All'. Below this, there are fields for Gender (Female), Address (with an edit icon), Language (English (US)), and Birthday (with a minus sign). A 'More Info' link is located in the top right corner of this section.
- of Admin as**: This section displays the customer's contact methods. It includes a 'Customer' section with an 'Add Contact Method' button and a 'Bill Receiver' section.
- Documents**: This section displays the customer's documents. It includes a 'Passport' document with a document ID of 23455 and an expiration date of N/A. An 'Add Document' button is located in the top right corner of this section.

Application example with micro frontends

The screenshot shows a web application interface for managing billing accounts. The top header is blue and contains a logo, a home icon, a user profile dropdown for 'Admin', and several utility icons. The left sidebar is light blue and lists navigation options: Overview, Billing Accounts (highlighted), Contracts, Quotes, Products, Tickets, Customer Info, Contact Persons, and Interactions. The main content area is white and titled 'Billing Accounts' with a '+ Add Billing Account' link. It displays a table with one row of data for a 'Postpaid' account.

Billing Accounts				+ Add Billing Account	
Postpaid	CA16125478921391	Billed Debt	N/A	Current Balance	N/A
Active		Unbilled Debt	N/A		

Application example with micro frontends

The screenshot displays a web application interface for managing quotes. The top header is blue and contains a home icon, a user profile labeled 'Admin', and a search bar. The sidebar on the left lists navigation options: Overview, Billing Accounts, Contracts, Quotes (highlighted), Products, Tickets, Customer Info, Contact Persons, and Interactions. The main content area, titled 'Quotes', shows a list of three quotes, each in a white card with a blue border. Each card includes a quote icon, the quote number, status, creation and acceptance dates, total price, and monthly price. Below each quote card are buttons for 'New Products' and 'Show Details'.

Quote #	Status	Created	Accepted	Total Price	Monthly Price
Quote #2283	Submitting For Delivery	2021/02/12 17:10	2021/02/12 17:11	\$1,109.90	\$0.00 / mo.
Quote #2109	Submitting For Delivery	2021/02/10 22:42	2021/02/10 23:09	\$33.00	\$71.50 / mo.
Quote #1691	Delivered	2021/02/05 21:58	2021/02/05 21:59	\$0.00	\$2.20 / mo.

Application example with micro frontends

The screenshot displays the NetCracker Tenant Admin interface. The top navigation bar includes the NetCracker logo, a home icon, a tenant selector set to 'Tenant Admin', and utility icons for search, notifications, and refresh. A user profile dropdown for 'Admin Tenant' (cpq-admin@netcracker.com) with a 'Log Out' button is located in the top right.

The left sidebar contains a menu with the following items: Overview (selected), Billing Accounts, Contracts, Quotes, Products, Tickets, Customer Info, Contact Persons, and Interactions.

The main content area is titled 'Products' and displays a table of product details for the selected tenant. The table includes columns for product status, ID, billed debt, unbilled debt, and balance. Below the table, there are three product entries:

Product	Status	ID	Billed Debt	Unbilled Debt	Balance
TV Satellite TV	Planned	CA16125478921391	\$0.00	—	—
Mobile Plan	Active	Lego-go	2021/02/05	Monthly Charge	\$2.20
Smartphones	Planned	Samsung Galaxy Note 10.1 64Gb Black	2021/02/12	Model	gt-n8013

A 'Show All Products' link is located at the bottom right of the product list.

UI block scheme

Top Navigation Bar:

- NetCracker logo
- Home icon
- Tenant Admin (dropdown)
- Utility icons: A, bell, refresh
- AT (Admin Tenant)

Left Sidebar:

- Overview
- Billing Accounts
- Contracts
- Quotes
- Products
- Tickets
- Customer Info
- Contact Persons
- Interactions

Main Content Area:

Products

Postpaid CA16125478921391 **Active**

	Billed Debt	Unbilled Debt	Balance	
	\$0.00 ⓘ	—	—	

Product Details:

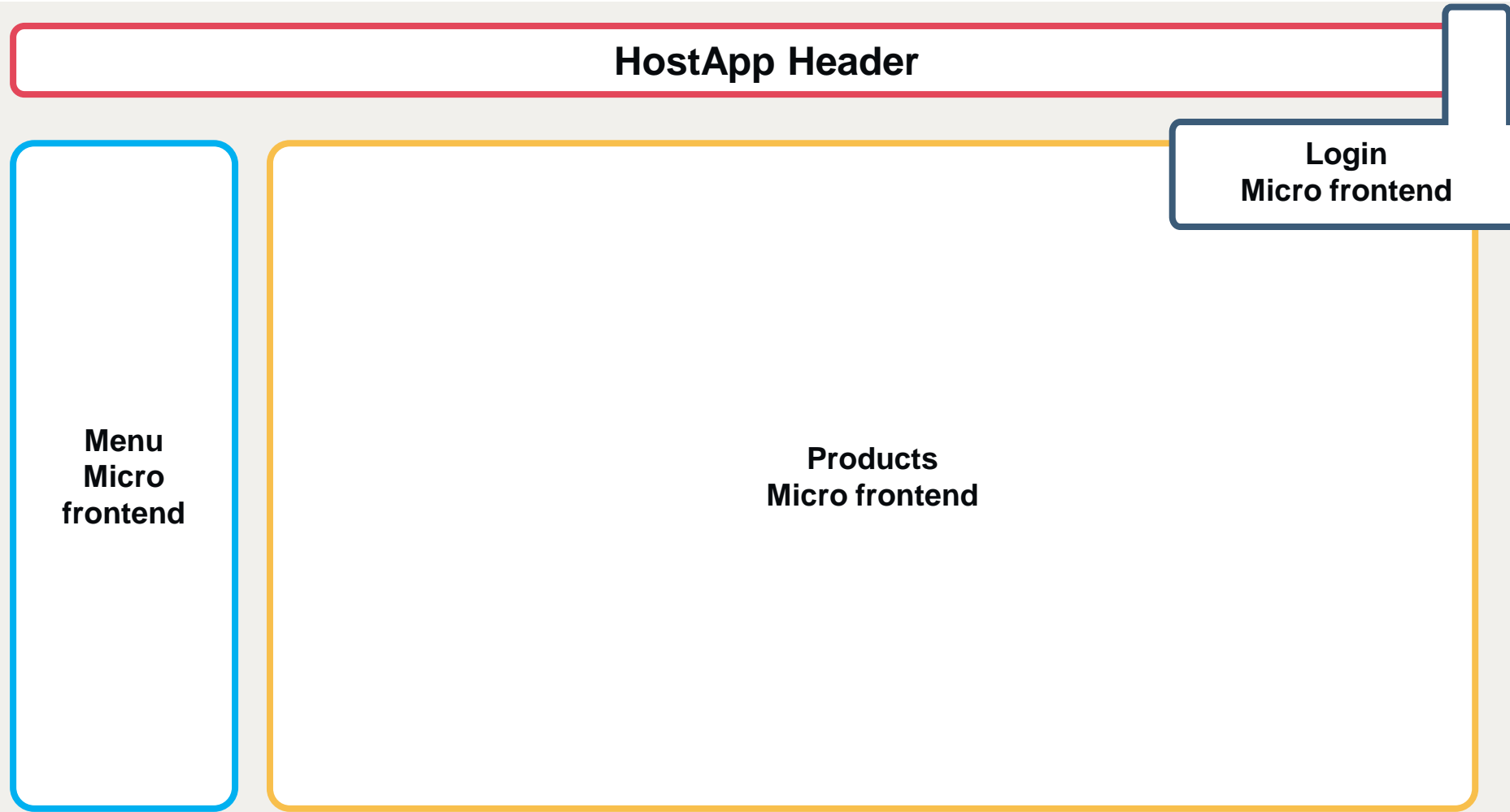
- TV Satellite TV** (Planned)
 - Location: Heroiv Stalinhrada Ave, Kyiv, Ukraine, 02000
 - Activation Date: —
 - Monthly Charge: \$71.50
- Mobile Plan** (Active)
 - Mobile Plan: Lego-go
 - Activation Date: 2021/02/05
 - Monthly Charge: \$2.20
- Smartphones Samsung Galaxy Note 10.1 64Gb Black** (Planned)
 - Sale Type: N/A
 - Date of Purchase: 2021/02/12
 - Model: gt-n8013

[Show All Products](#)

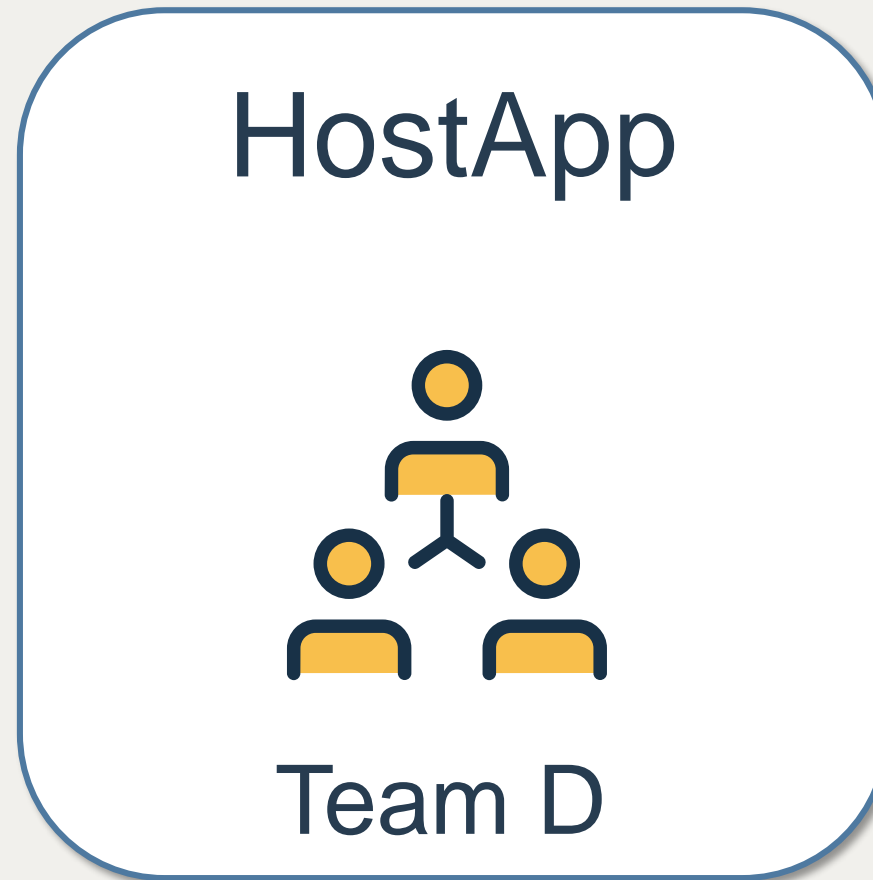
User Profile:

Admin Tenant
cpq-admin@netcracker.com
[Log Out](#)

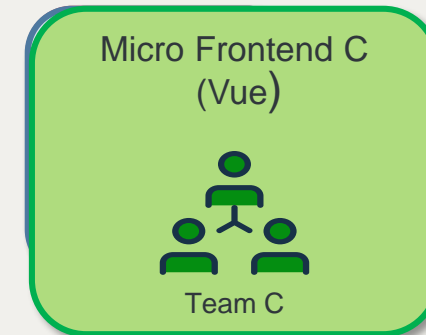
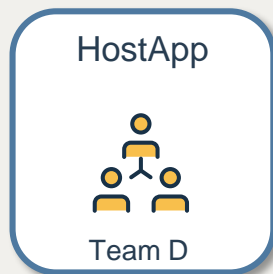
UI block scheme



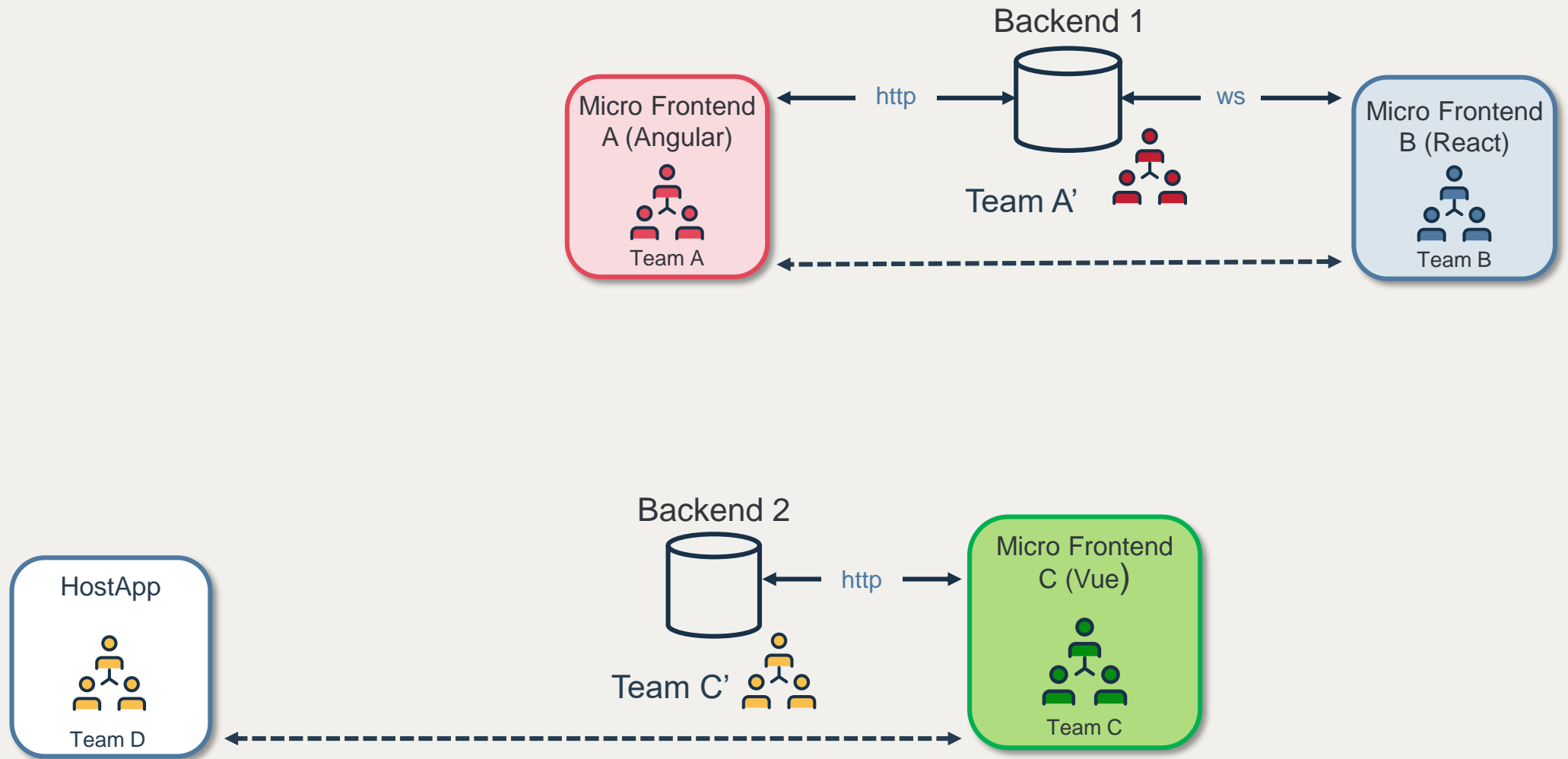
Application architecture with micro frontends



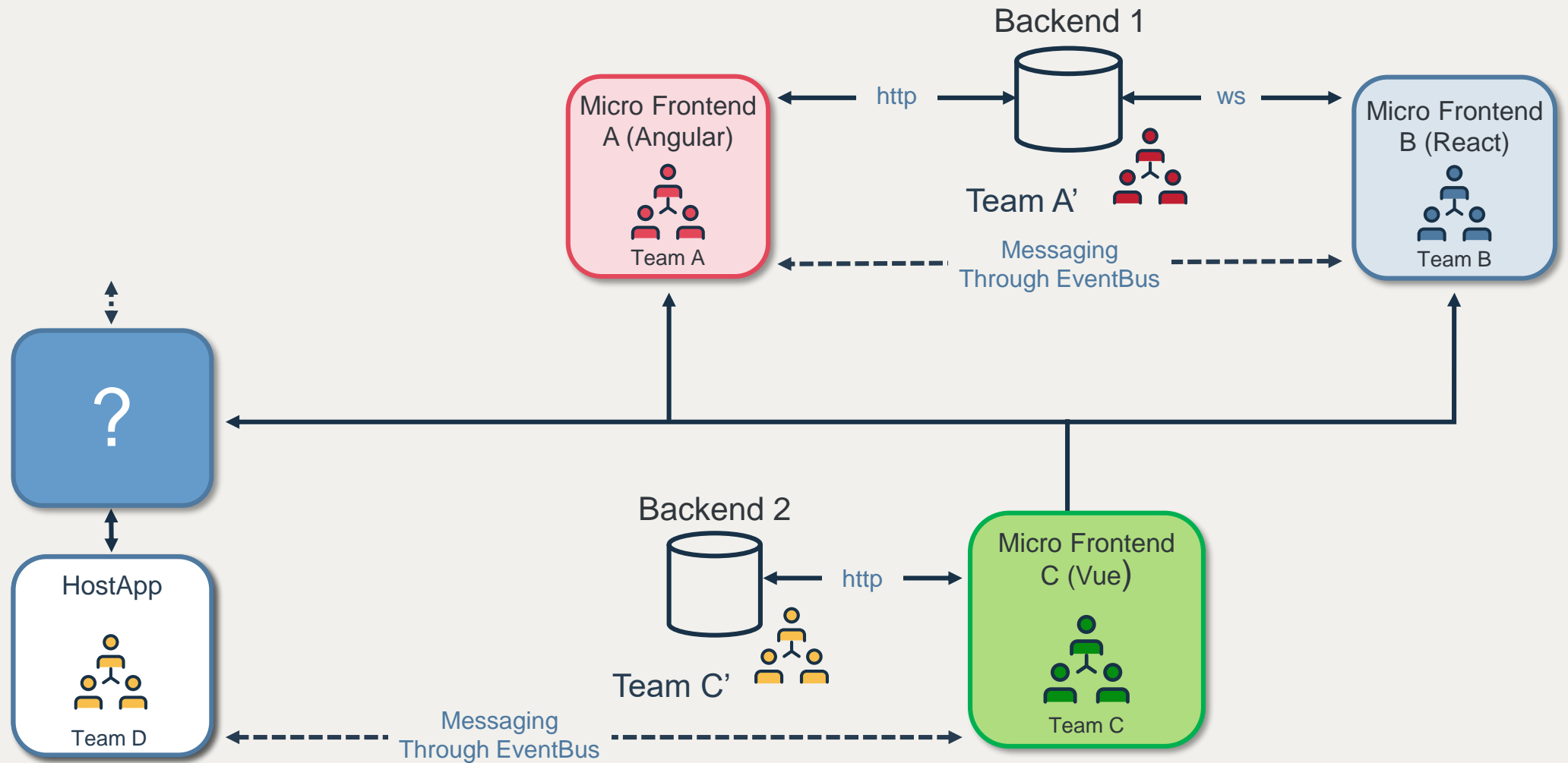
Application architecture with micro frontends



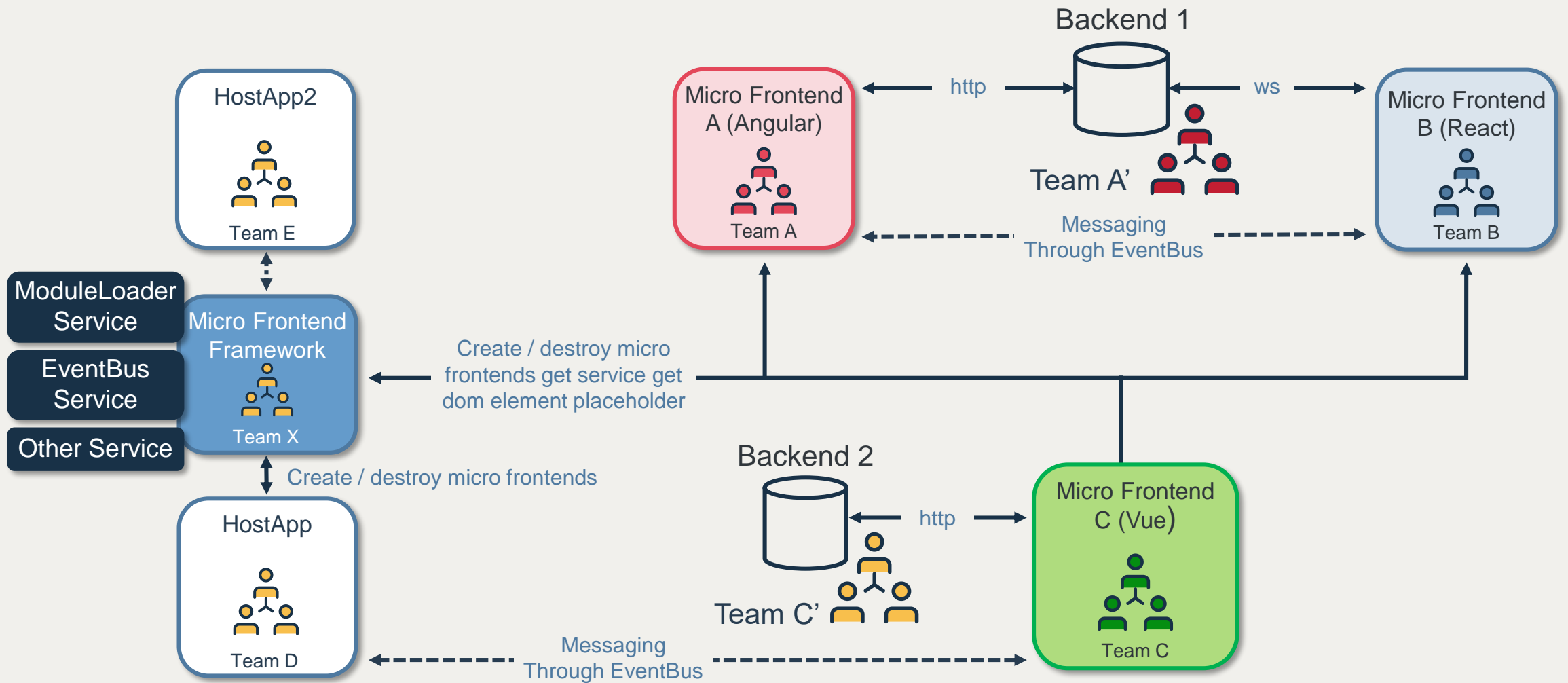
Application architecture with micro frontends



Application architecture with micro frontends



Application architecture with micro frontends

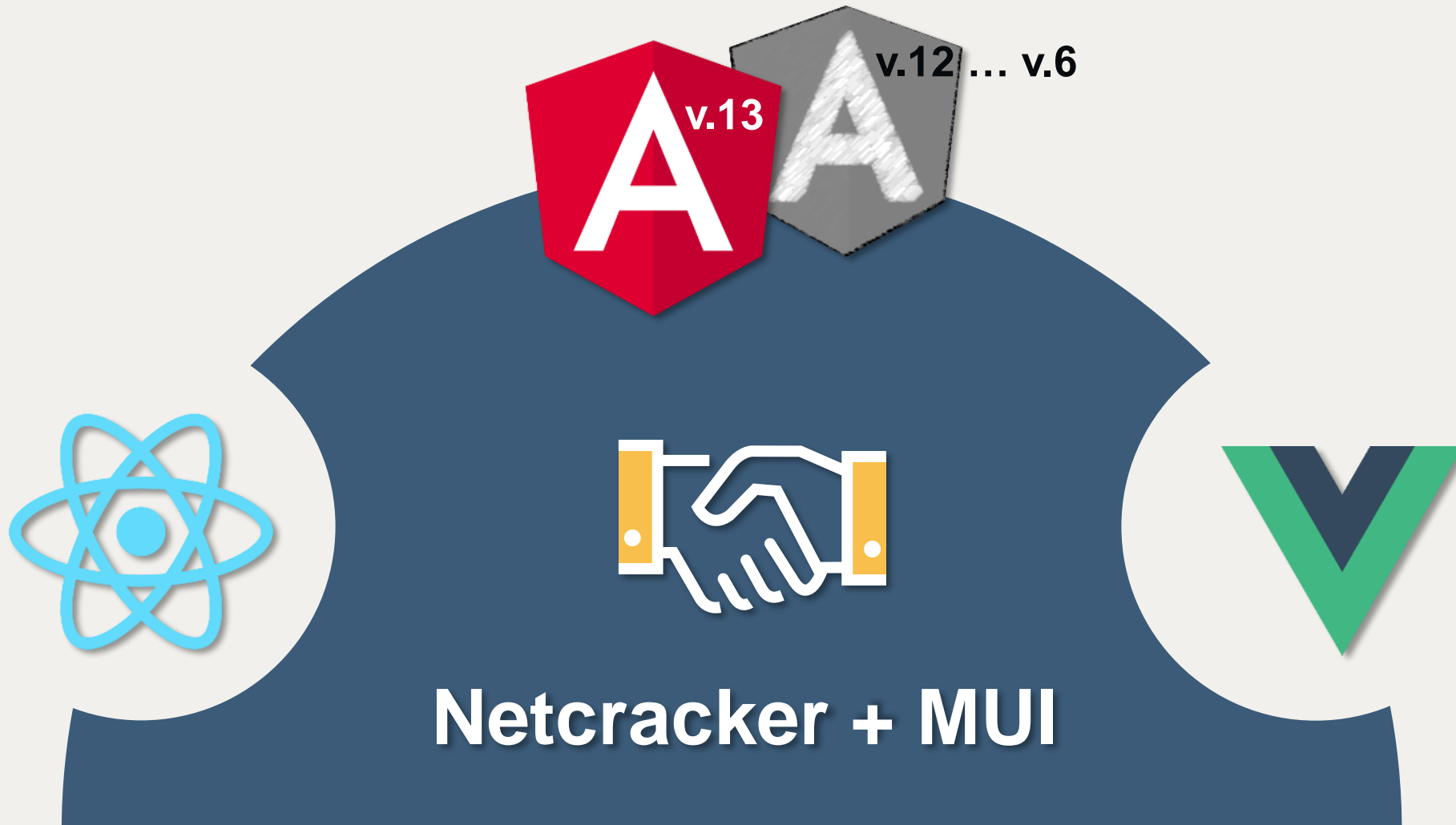




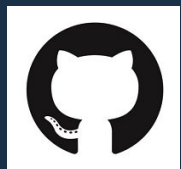
DEMO: Mini-MUI coding



A truce in the Framework battle (and even between versions!)



Q&A



<https://github.com/stswoon/minimui.git>

Anatoly Nekhozhin
Group Manager, Netcracker

Thank You

