



Micro Frontends

How to evolve to an extensible frontend

Benjamín Martínez

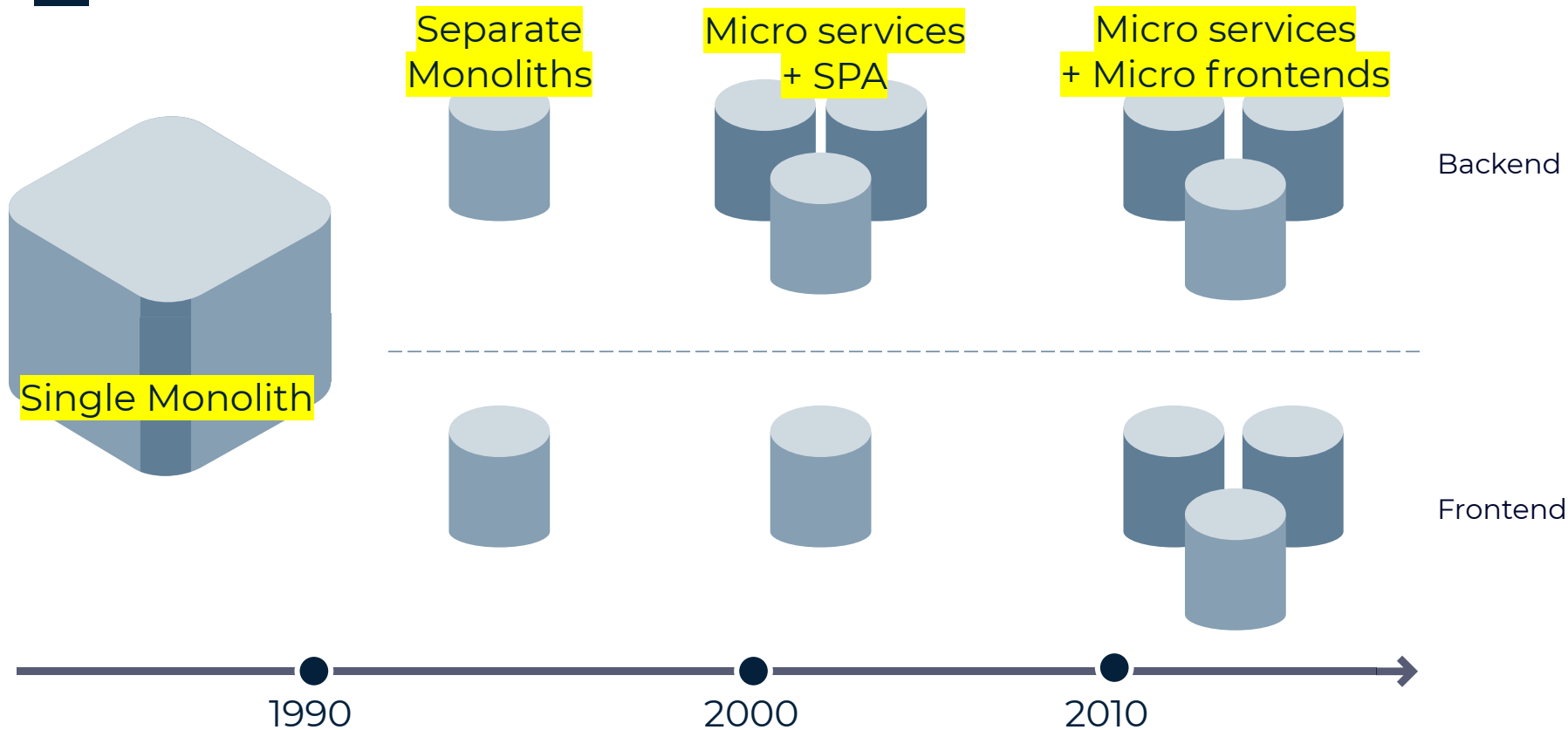


Globant▶

The Problem

You have this **complex software** that is developed by a **huge team** and it's a mess to maintain. To make it even worse, you have additional requirements like **high availability** and **short delivery times**.

A brief history of web apps architecture



— What is micro frontend architecture?

It is an approach to develop web applications as a composition of small frontend apps representing a business subdomain.

How do they look to the user?

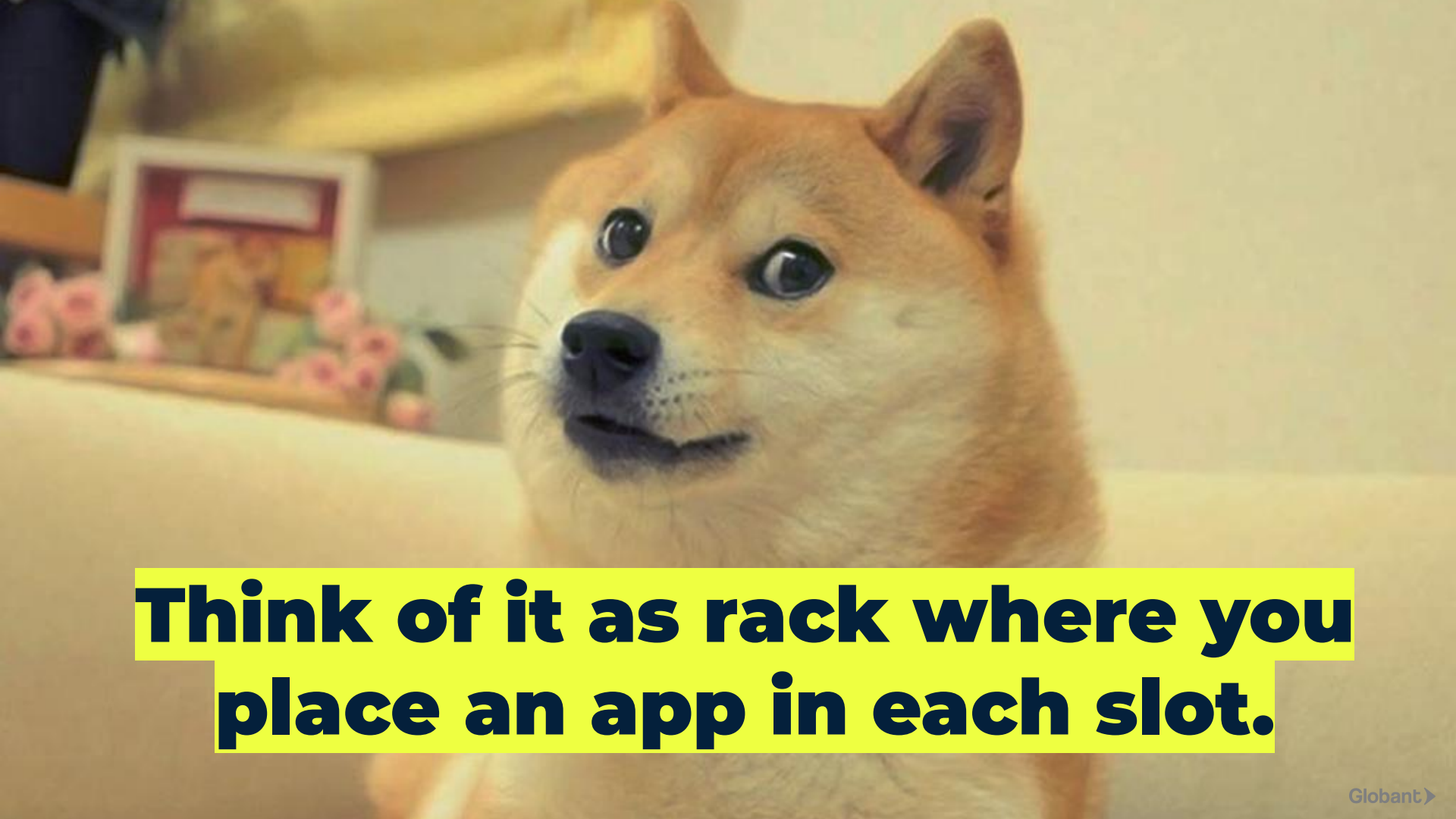
The image shows a screenshot of a Facebook profile page for Benjamin StuMx. The page is viewed from a desktop browser. Red rectangular boxes highlight several key UI components:

- Top Navigation Bar:** Includes the Facebook logo, a search bar, and the user's name "Benjamin StuMx" with navigation links for "Inicio", "Crear", and social features (friends, messages, notifications, help).
- Left Sidebar:**
 - Benjamin StuMx M...:** Profile picture and navigation links for "Últimas noticias", "Messenger", "Watch", and "Marketplace".
 - Accesos directos:** A list of shortcuts to groups and pages, including "Juegos de Mesa...", "Grupo oficial de ...", "Jugadores De M...", "BigMiniMentor", "Magic", "Explorar", "Guardado", "Grupos", "Páginas", "Eventos", and "Recaudaciones de ...".
- Central Content Area:**
 - Crear publicación:** A section for creating a new post, starting with "¿Qué estás pensando, Benjamin StuMx?".
 - Historias:** A carousel of story thumbnails from friends, including "Añadir a historia", "Pauline Ryusei", "Aimesita Sharon Terán", and "Paulina Ruiz".
 - Post by Euni Alvarado Perez:** A text post from 13 minutes ago discussing the passage of time and the feeling of aging.
- Right Sidebar:**
 - Invitación a un evento:** A notification for a birthday event for "Gretel Torrijos".
 - Publicidad:** Amazon advertisements for an Onkyo DAC and NASA t-shirts.
 - Language:** A dropdown menu showing "Español (España)", "Español - English (US)", "Português (Brasil)", and "Français (France)".
 - Friends List:** A vertical list of friends' names and profile pictures, including "Uriel Frias", "Eliás Mochán", "Norman Avila", "Fabs Ansara", "Erasmus Leon", "Sebastian Arellano", "Laus R López", "Edgar Ztrokero", "Sara Pérez", "Ken Luna", "Luis Castrejon", "Jorge Armando Ibarra...", "Violetta Farias", "Emmanuel Maldonado", "Ae Maeth", "CERCA", "Antonio Sánchez Cuevas", and "Christian Aguirre".

How do they look like to the browser?



```
<div id="contentArea" class="_1415 _1qkq _1qkx" role="main">
  <div id="stream_pagelet" data-referrer="stream_pagelet" data-at-shortcutkeys="{\"j\": \"centra la siguiente historia\", \"k\": \"centrarse en _?\": \"mostrar la ayuda de m\u00e9todos abreviados teclado\"}>
    <div class="_2c44"></div>
    <div id="pagelet_megaphone" data-referrer="pagelet_megaphone"></div>
    <div id="pagelet_composer" data-referrer="pagelet_composer">...</div>
    <div id="pagelet_prompts" data-referrer="pagelet_prompts"></div>
    <div id="stories_pagelet_below_composer" class="pagelet" data-referrer="stories_pagelet_below_composer">...</div>
    <div id="topnews_main_stream_408239535924329" data-referrer="topnews_main_stream_408239535924329" data-gt="{\"ref\": \"nf_generic\"}>...</div>
  </div>
  <span>...</span>
</div>
```



**Think of it as rack where you
place an app in each slot.**

```
6 <title></title>
7 <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=0">
8 <link rel="shortcut icon" href="/favicon.ico" type="image/x-icon">
9 <link rel="icon" href="/favicon.ico" type="image/x-icon">
10 <!--CSS-->
11 <link type="text/css" rel="stylesheet" href="css/materialize.min.css" media="screen, projection">
12 <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-awesome/4.6.3/css/font-awesome.min.css">
13 <link rel="stylesheet" href="/css/animate.css">
14 <link rel="stylesheet" href="css/theme.css">
15 </head>
16 <body>
17 <!-- banner -->
18 <div class="banner">
19 <nav class="nav">
20 <div class="nav-wrapper">
21 <div class="container">
22 <a href="#" class="brand-logo hide-on-med-and-up"><span style="font-weight: bold">
23 </div>
24 </div>
25 </div>
26 <div class="container">
27 <div class="row">
28 <div class="col m8 m18 hide-on-small-only">
29 <div class="card">
30 <div class="card-content">
31 <div class="text">
32 <div class="text">
33 <div class="text">
34 <div class="text">
```

DEMO!



Trade offs



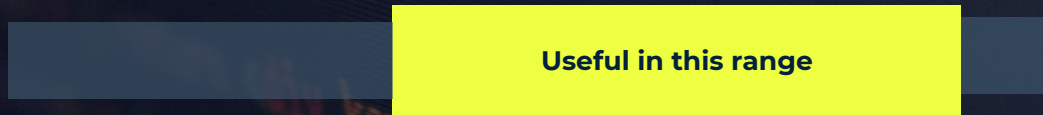
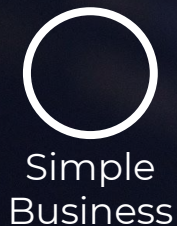
- Organizational Flexibility
- Increased scalability and deployability
- Reduced ramp up for new devs

VS



- Increased complexity
- Increased bundle sizes and data transfer
- Need emphasis on integration tests

When should I use them?



When there's a chance to need a fragmented release.



<https://github.com/StuMx/microfrontends-talk>

Thanks

