

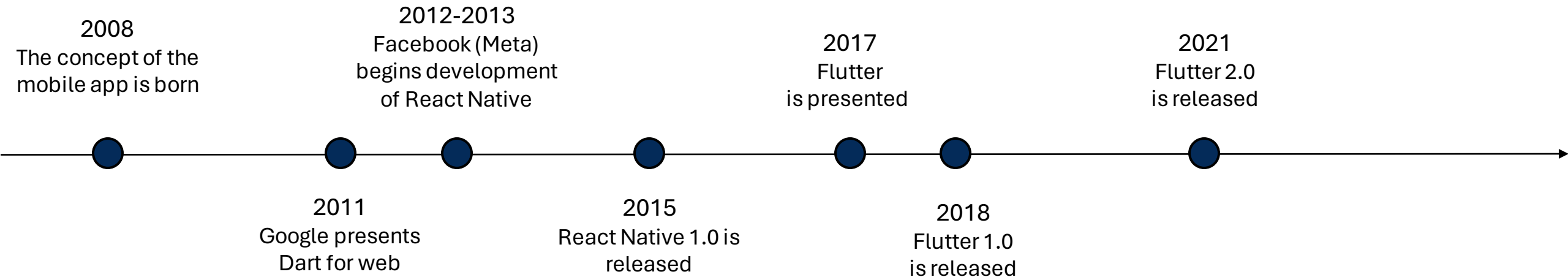




# Mobile Development

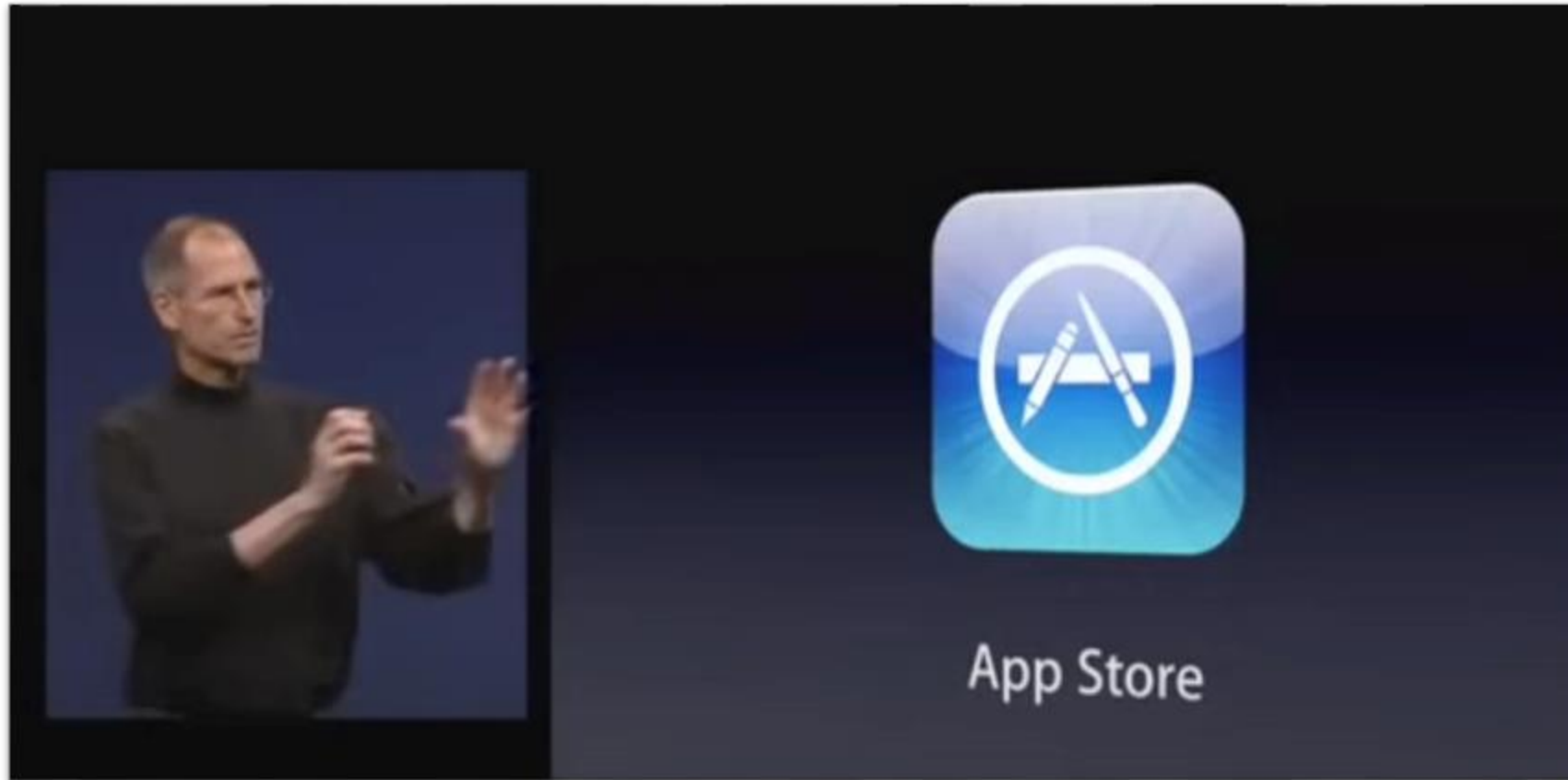
# First a brief recap...

Too many milestones in just a few years



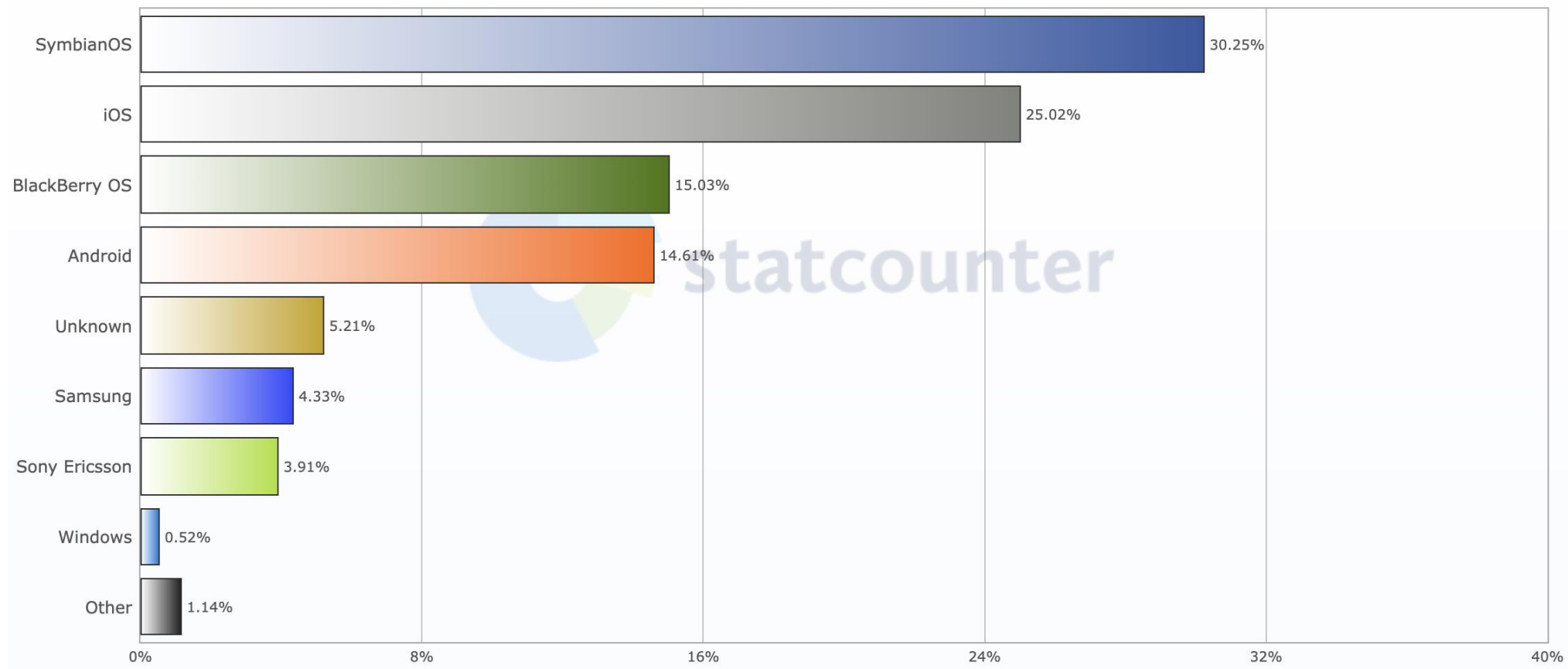
# 2008: App Store is unveiled

The app boom begins



# 2011: A snapshot at the OS offer

Mobile OS market shares worldwide in Jan 2011



# 2011: Dart is born

And it doesn't know what's coming yet!

- Developed by Google: *"It's a client-optimized language for developing fast apps on any platform"*
- Object oriented and with a C-like syntax
- Originally meant for the web
- **The language on top of which Flutter is built**



# 2012: Here comes React Native!

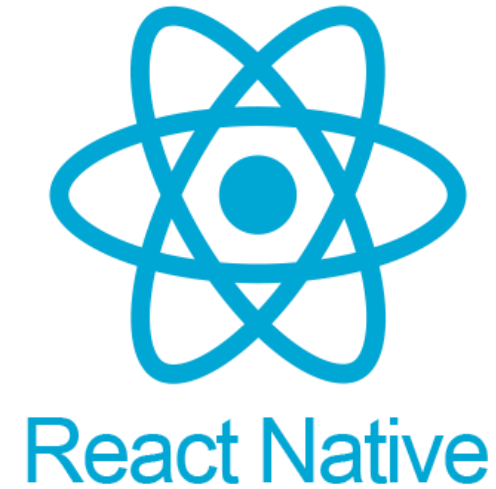
The cross-platform framework that would change the game

*Our Biggest Mistake Was Betting Too Much On  
HTML5 as opposed to native*

Mark Zuckerberg

# 2012: Here comes React Native!

The cross-platform framework that would change the game





# 2017: Welcome Flutter!

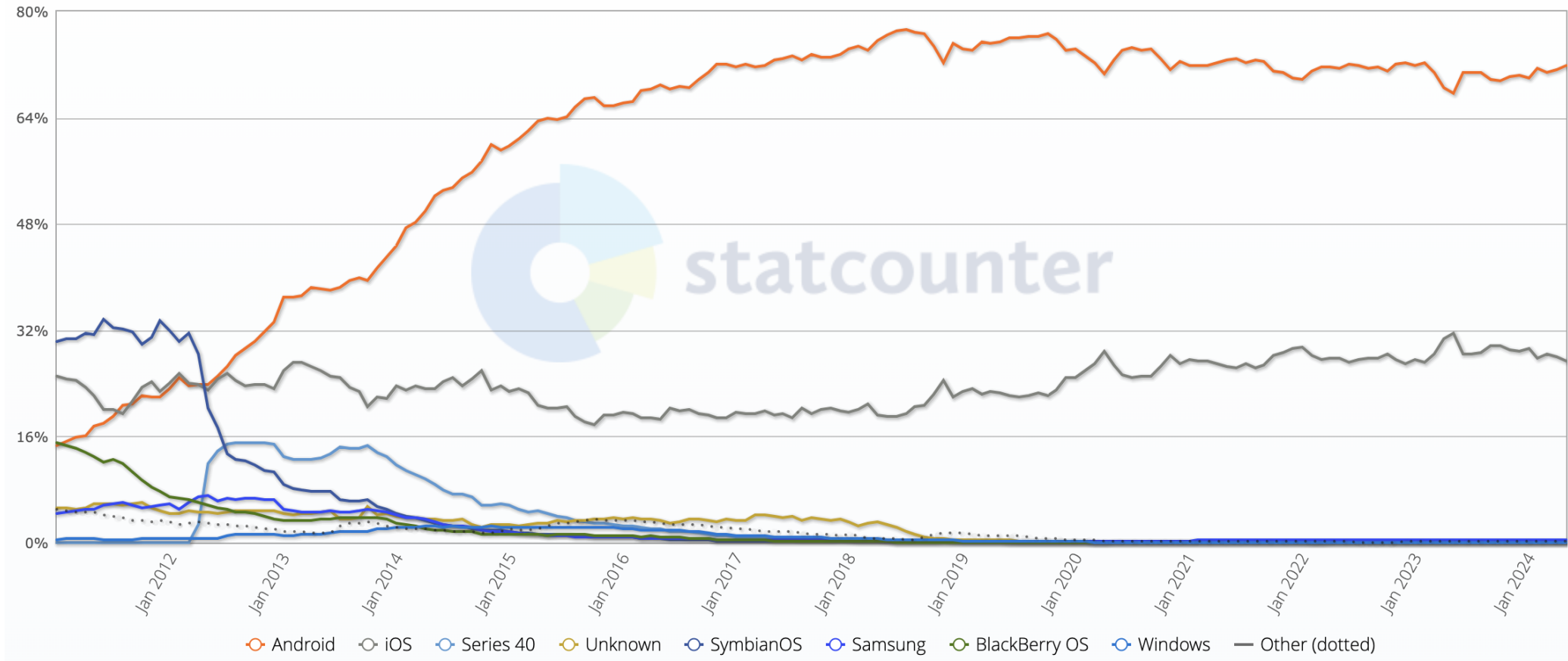
Flutter is presented at the I/O '17



 Flutter 1.0

# 2017- 2024: From chaos to duopoly

## Mobile OS market shares worldwide evolution



# Why did we choose it?

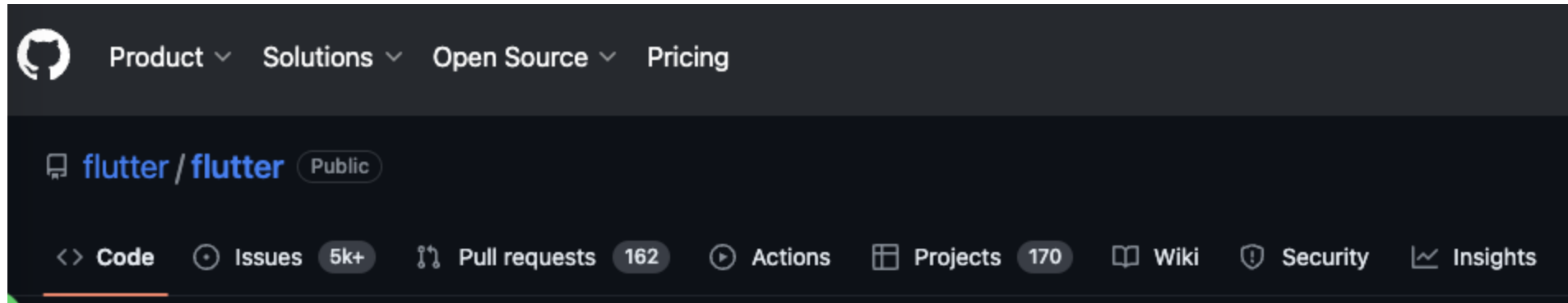
- Cross-platform's use advantages
- Easy to learn
- Hot reload
- Almost no platform-specific code
- Flutter code gets compiled to native code
- Community
- Very flexible framework

# Working with Flutter: Community

Can we (should we) do everything ourselves?

Flutter's code is open source, so you can contribute to it and seek support from a vast community.

<https://github.com/flutter/flutter>



# Working with Flutter: Community

Programmer's best friend



flutter

177335  
questions

52 asked today, 459 this  
week

# Working with Flutter: Community

What about Italy?

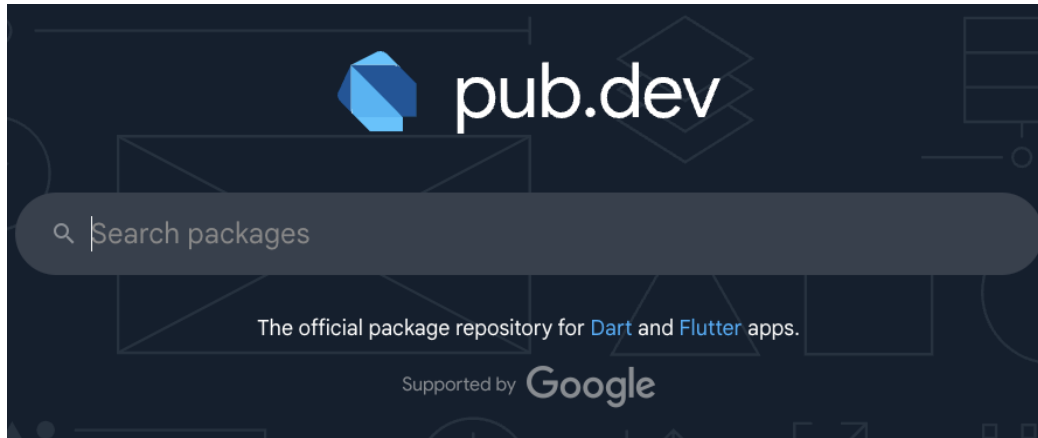
**Flutter**  
**HEROES**



**Flutter**  
Italia developers

# Working with Flutter: Community

## Packages management



Pub.dev is the best package manager that man has ever seen.

r/FlutterDev, 2024

# Working with Flutter: Community

## Packages management

firebase\_core 2.27.2 

Published 26 hours ago •  [firebase.google.com](https://pub.dev/packages/firebase_core) Dart 3 compatible

SDK | FLUTTER | PLATFORM | ANDROID | IOS | MACOS | WEB | WINDOWS

go\_router 13.2.1 

Published 12 days ago •  [flutter.dev](https://pub.dev/packages/go_router) Dart 3 compatible

SDK | FLUTTER | PLATFORM | ANDROID | IOS | LINUX | MACOS

flutter\_inappwebview 6.0.0 

Published 3 months ago •  [inappwebview.dev](https://pub.dev/packages/flutter_inappwebview) Dart 3 compatible

SDK | FLUTTER | PLATFORM | ANDROID | IOS | MACOS | WEB



# Working with Flutter: Versatility

The advantage of setting up your own design system



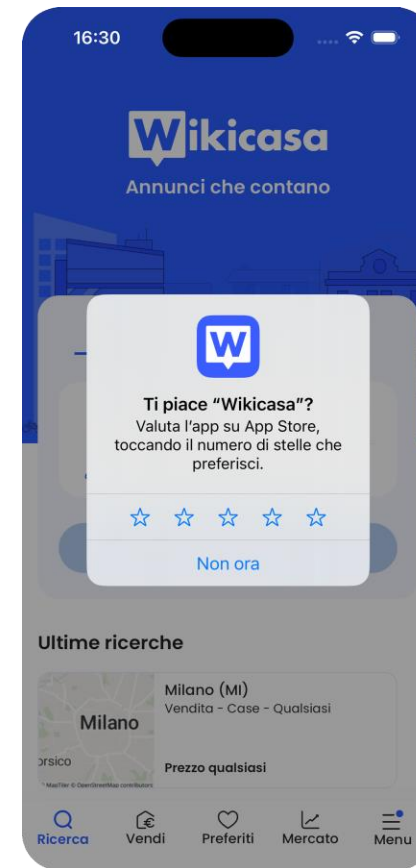
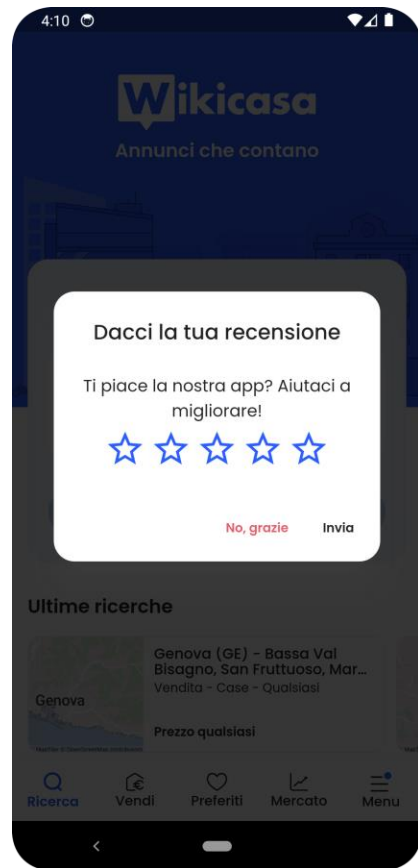
MaterialApp



CupertinoApp

# Working with Flutter: Versatility

The advantage of setting up your own design system

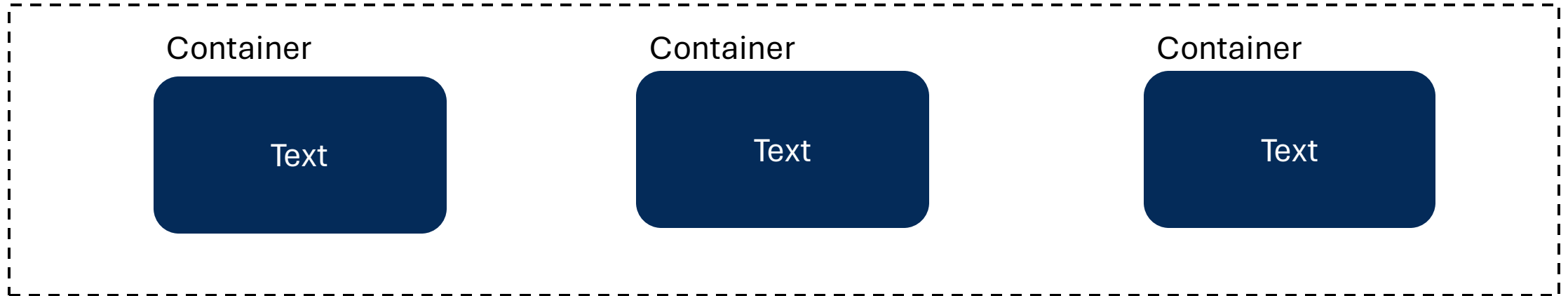


# Working with Flutter: Coding

"Everything's a widget"

Widget: Blueprints for a piece of the app's UI

Row



# Working with Flutter: Coding

"Everything's a widget"

```
Row(  
  // ...  
  children: [  
    Container(  
      decoration: const BoxDecoration(color: Colors.indigo),  
      child: const Text(  
        'lorem ipsum',  
        // ...  
      ), // Text  
    ), // Container  
    // ...  
  ],  
), // Row
```

COMPOSITION

# Working with Flutter: Coding

Building your own widgets



# Working with Flutter: Coding Stateless Widgets

```
class StatelessWidget extends StatelessWidget {  
  
  const StatelessWidget({super.key});  
  
  @override  
  Widget build(BuildContext context) {  
    return const Placeholder();  
  }  
}
```

Immutable

No state

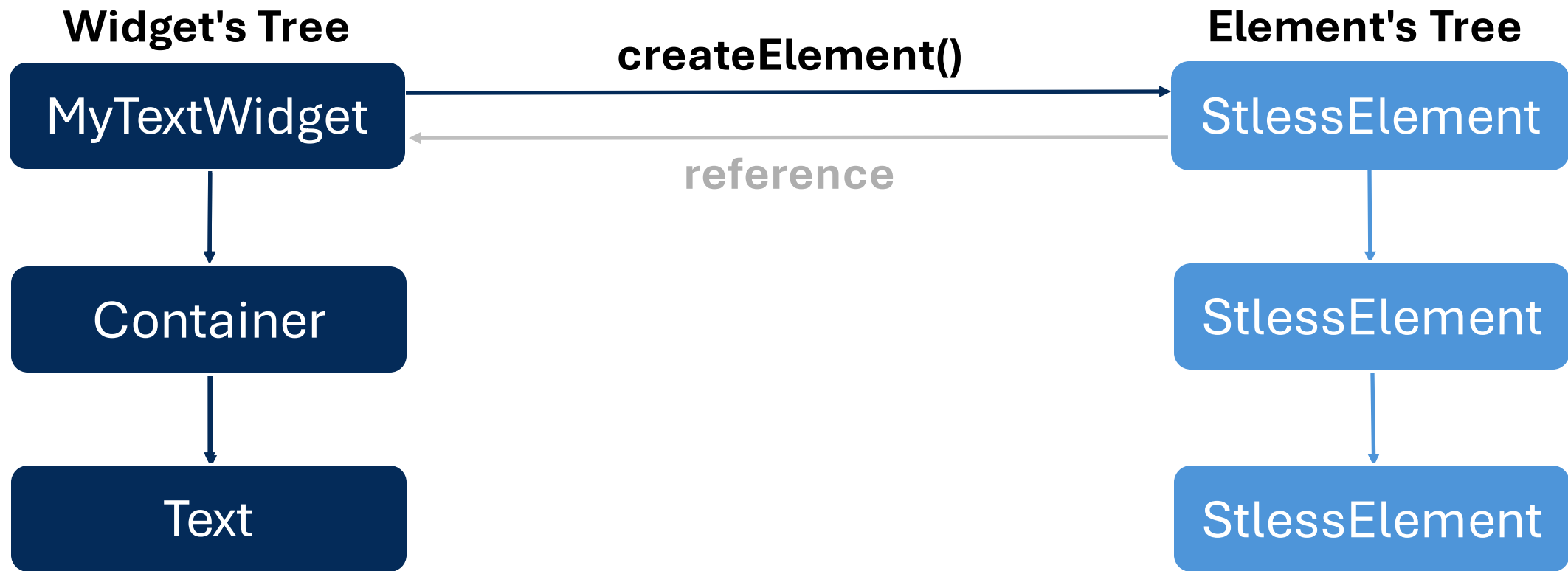
# Working with Flutter: Coding

## Stateless Widgets

DEMO TIME!

# Working with Flutter: Coding

## Stateless Widgets: Widget Tree vs Element Tree





# Working with Flutter: Coding Stateful Widgets

```
class MyStatefulWidget extends StatefulWidget {  
  
  const MyStatefulWidget({super.key});  
  
  @override  
  State<MyStatefulWidget> createState() => _MyStatefulWidgetState();  
}  
  
class _MyStatefulWidgetState extends State<MyStatefulWidget> {  
  
  @override  
  Widget build(BuildContext context) {  
    return const Placeholder();  
  }  
}
```

state != null

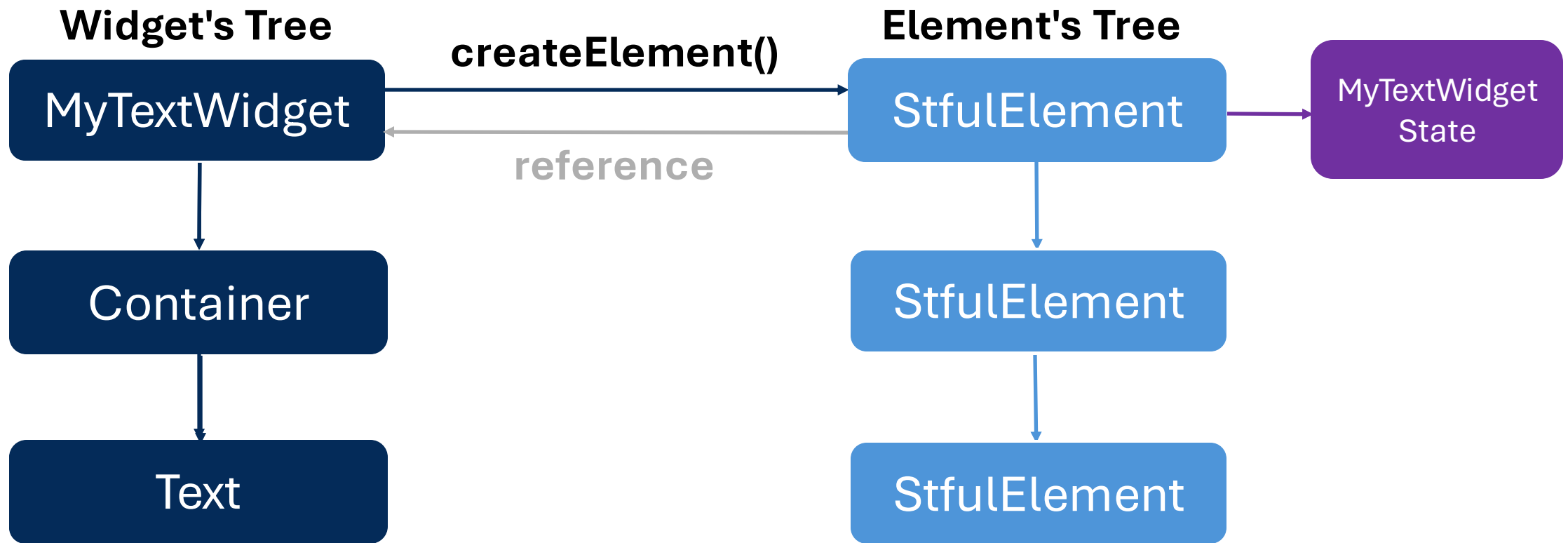
# Working with Flutter: Coding

## Stateful Widgets

DEMO TIME!

# Working with Flutter: Coding

## Stateful Widgets: Widget Tree vs Element Tree



# Summing up...

# Even though we hate Flutter because...

- It's so easy to work with 99% of the time but the remaining 1% may drive you crazy

# We DO love it because...

- Quick and rapid development
- Encouraged and simple modular development
- Only one native code for everything
- Large and collaborative community
- Simple and intuitive UI development
- **Maximum expansion potential**