

Super App - Sendo Case Study

By
Trong Nguyen

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Agenda

01

Introduction

02

Super App

- What is Super App?
- Why a Super App?

03

How to become Sendo Super App

- Problems of development
- Challenges & solution
- Sendo App Architecture

04

Stack of technologies

- Flutter
- Chatbot use AI
- Micro App
- Security

05

Best practices

- Feature teams base on Agile development
- Decouple release
- Training, sharing knowledge, tech

What is Super App ?

“Mobile First”. Features that are mobile specific.

All in one app. Super apps are part of ecosystems.

Multi-functional features: commerce, payments, social, etc.

Case study: WeChat, Grab, Go-Jek.

Why a Super App ?

Mix the digital business model to better fulfill millions of user's needs.

To scale fast once you have a user's buy-in, and add multiple services to gain loyalty.

And the first thing they do to free up space is ... delete apps.

Users check the app at least x times a day on an average, and more than xx% of users purchase products online.

What makes Sendo a Super App ?



Problems of development

Working on a repository with a dependence on another feature that needs to release.

Scaling up is so very hard to do.

Evaluate the effective and responsible for the features so very hard.

Don't take advantage the power of a balanced multi team.

Challenges

Growing DAU: ▲ 3x, MAU: ▲ 3x, GMV: ▲ 3x

The more features provide to customers but need to speed.

Performance & stability.

The smallest app size & security.

Sharing, training developers resources.

How are we doing it

Transition to Feature Teams base on Agile Development.

Micro Apps, modulars become SDK, decouple release features.

Research, apply cross platform & new tech.

Decoupling development and testing environment.

App working closely with back-end and analytic tracking app.

How are we doing it

Training, sharing knowledges/tools/process feature teams.

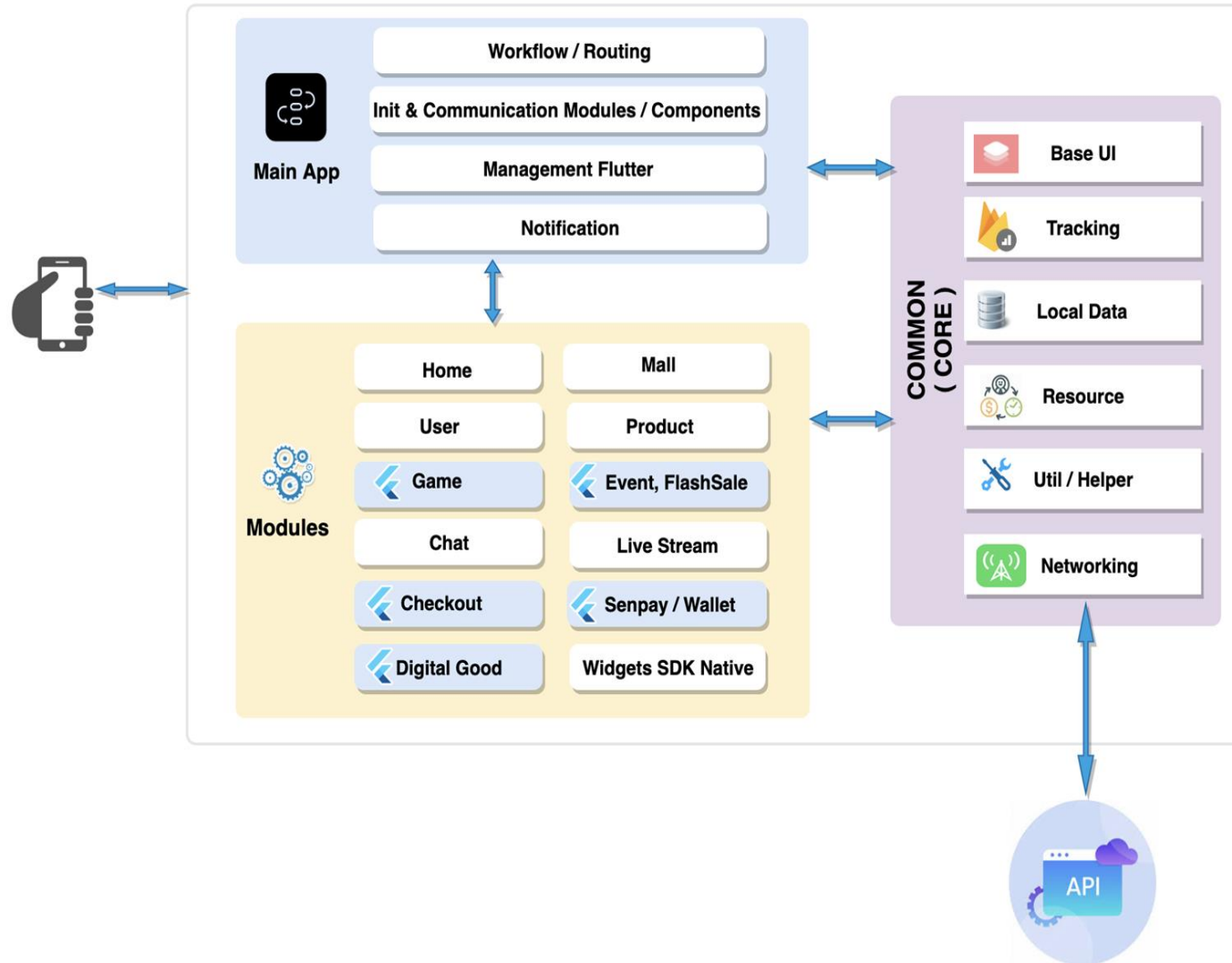
Reuse code base, consistent UX/ UI, apply Design System.

Guideline development process and peer review code.

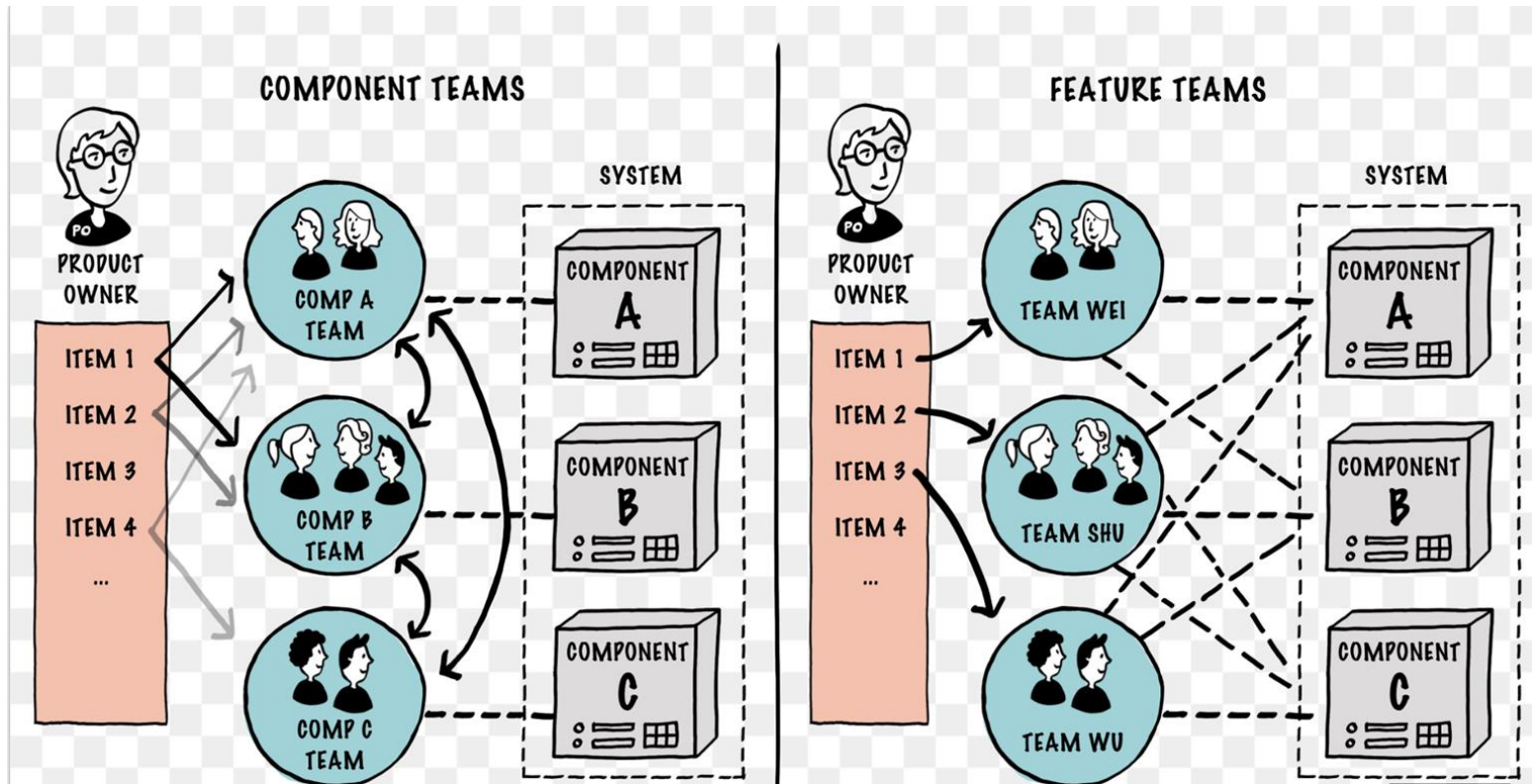
Unit test, Automation test. Apply Continuous integration (CI/CD)

Mobile app security important.

Micro-apps on a single repository



A Feature Teams



Benefit of Feature Teams

Scaling up Agile Development.

End to end delivery of working features & better code quality.

Highly effective communication & accelerating time-to-market.

Autonomy and responsibility drive motivation & innovation culture.

App working closely with back-end

Behind every great mobile app is a great back-end.

Multiple definition of template specialization on app & back-end.

On/off widgets & update & hot-fix from back-end.

Manage the version & features of the app from back-end.

Security

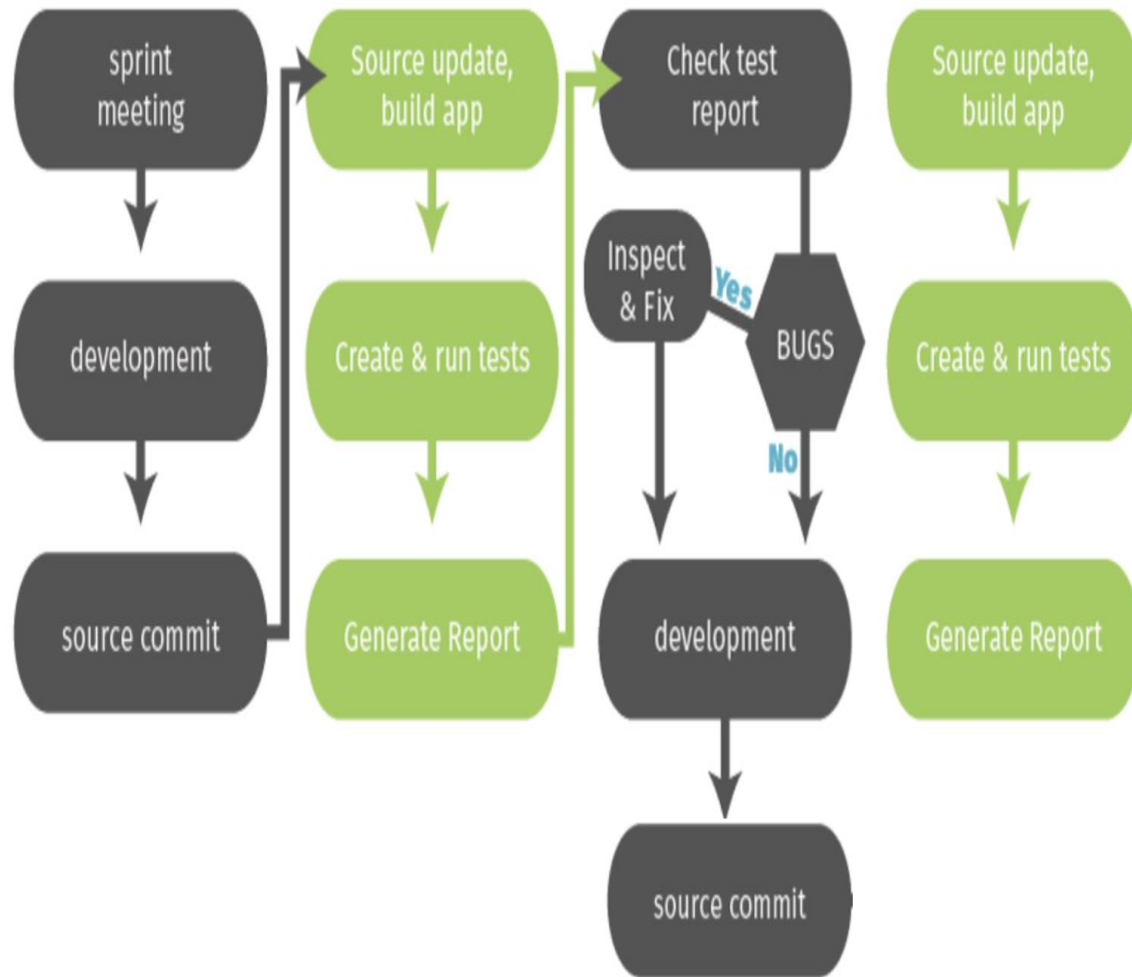
The problem security for mobile apps.

Secure sensitive & decode source.

SSL pinning implementation for mobile apps.

OWASP: checklist for use in security assessments.

Mobile DevOps to build Continuous integration workflow

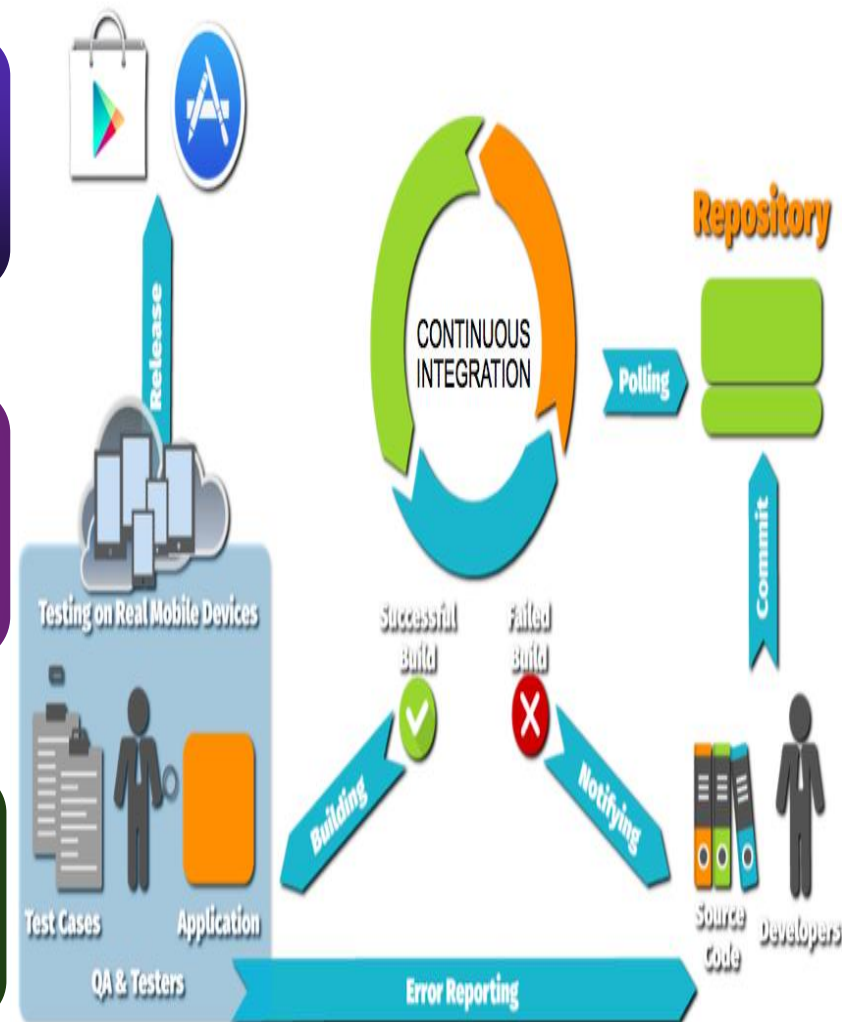


Who will benefit from Mobile Continuous Integration ?

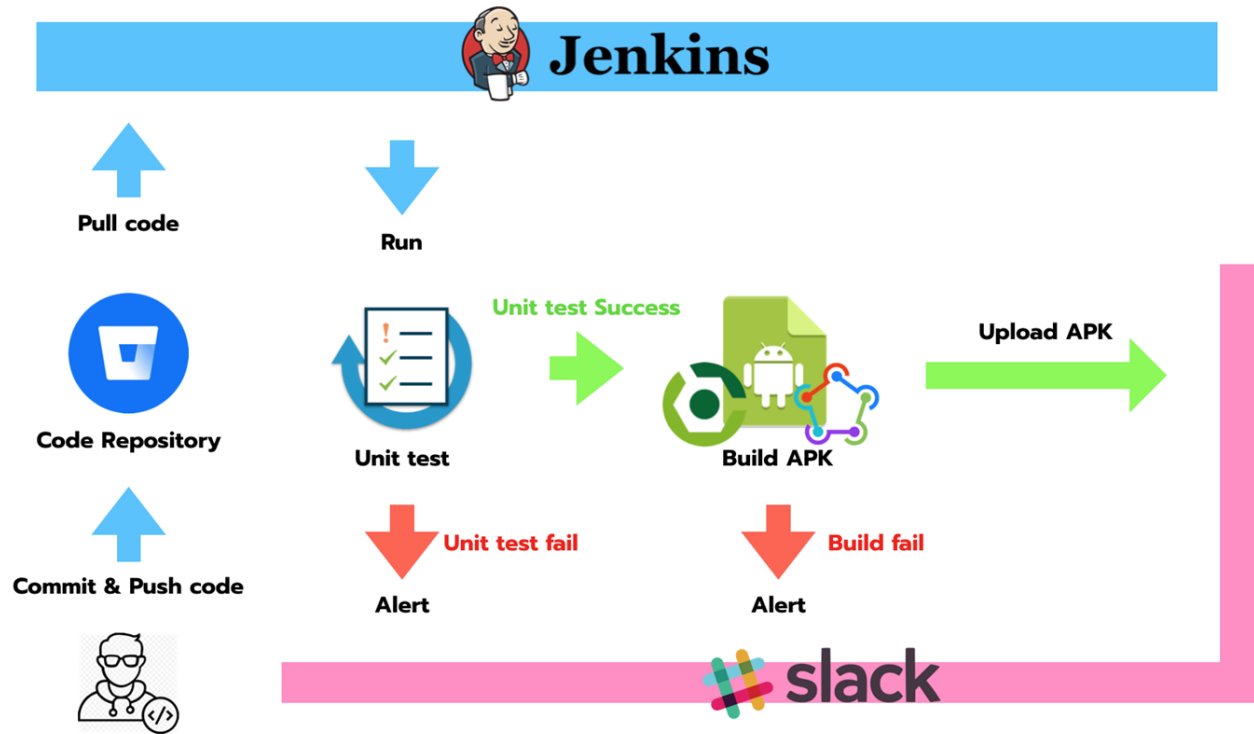
Developers: love CI, get full logs of test runs, screenshots, video records.

The management: increased productivity, effectiveness, cost savings and much better quality.

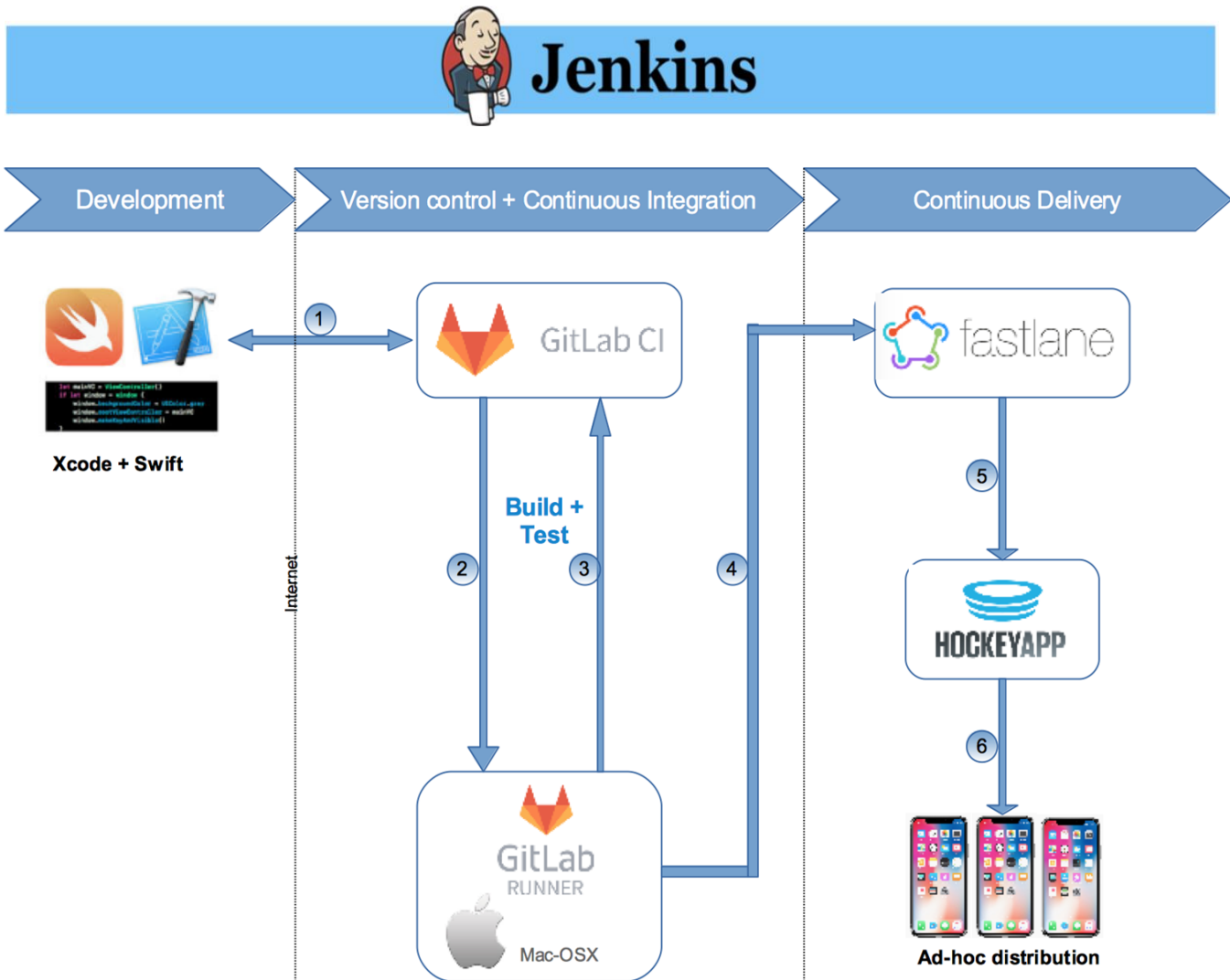
The tester: take care of tests, test scripts, frameworks.



How to automated every thing Android ?



How to automated every thing iOS ?

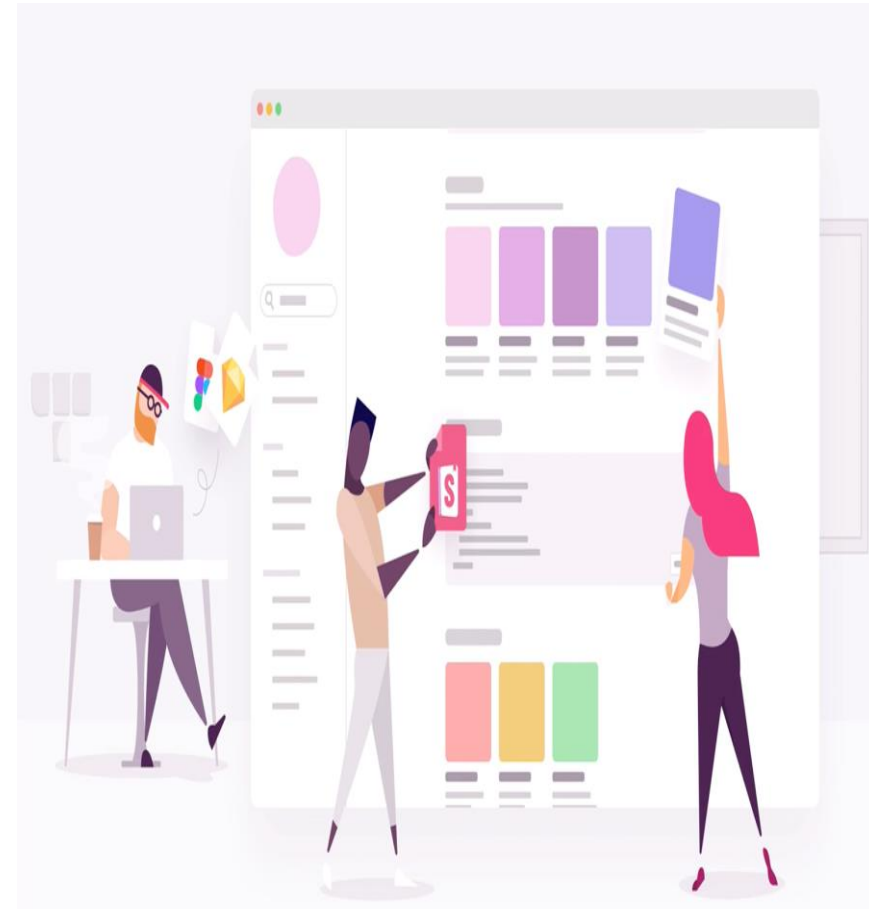


Design system (Base UI components)

Efficiency: designers & developers to reuse components and thereby increase efficiency.

Consistency: becomes much easier to create consistent experiences across different platforms.

Speed: Designs & developers shared library of reusable components and guidelines.



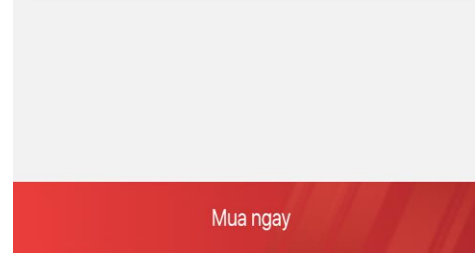
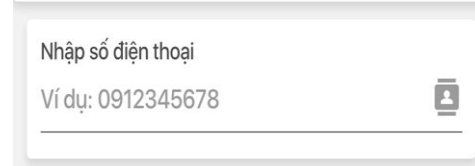
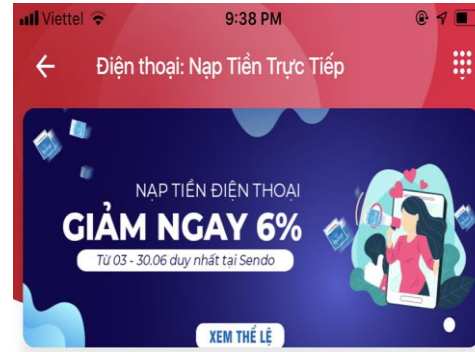
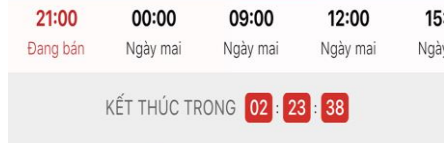
When everyone is speaking the same language, that's when things get done.

What is Flutter ?

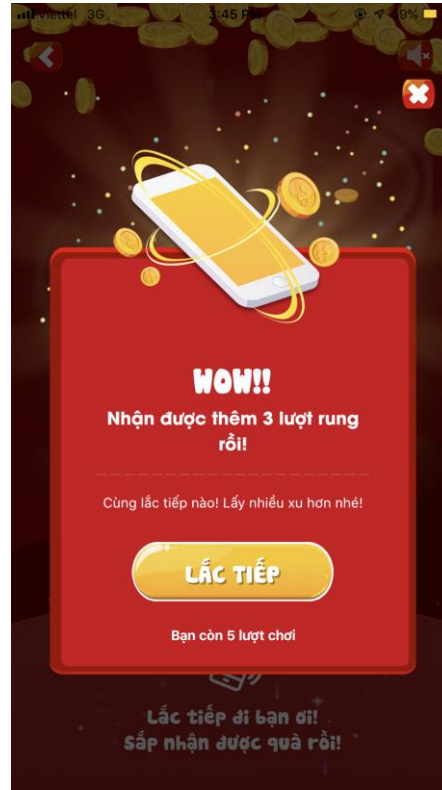
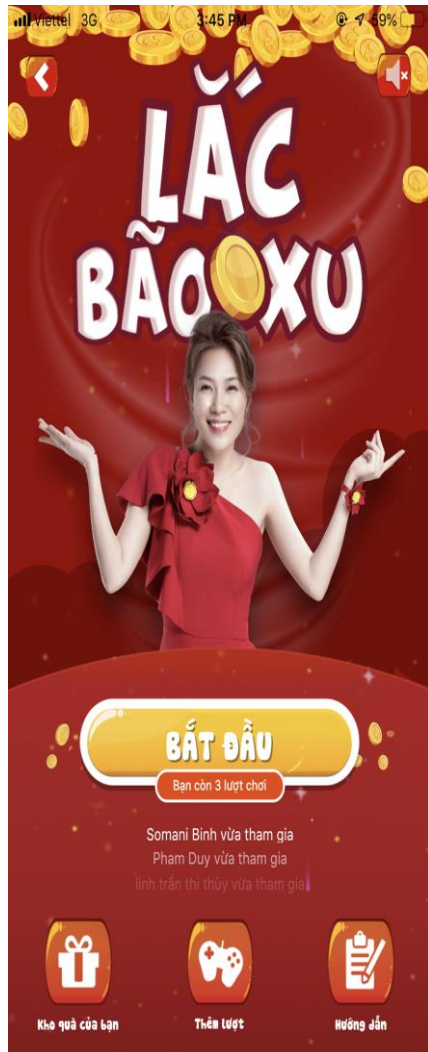


& Why I'm Dropping Everything Else

Flutter Showcase Sendo App



Flutter Showcase Sendo App - Game



What does Flutter do?



For Users, Flutter makes beautiful app UIs come to life.



For Designers, Flutter helps deliver original design vision, without loss of fidelity or compromises. It also acts as a productive prototyping tool.



For Developers, lowers the bar to entry for building mobile apps. It speeds up development and reduces the cost and complexity of app production across iOS and Android.

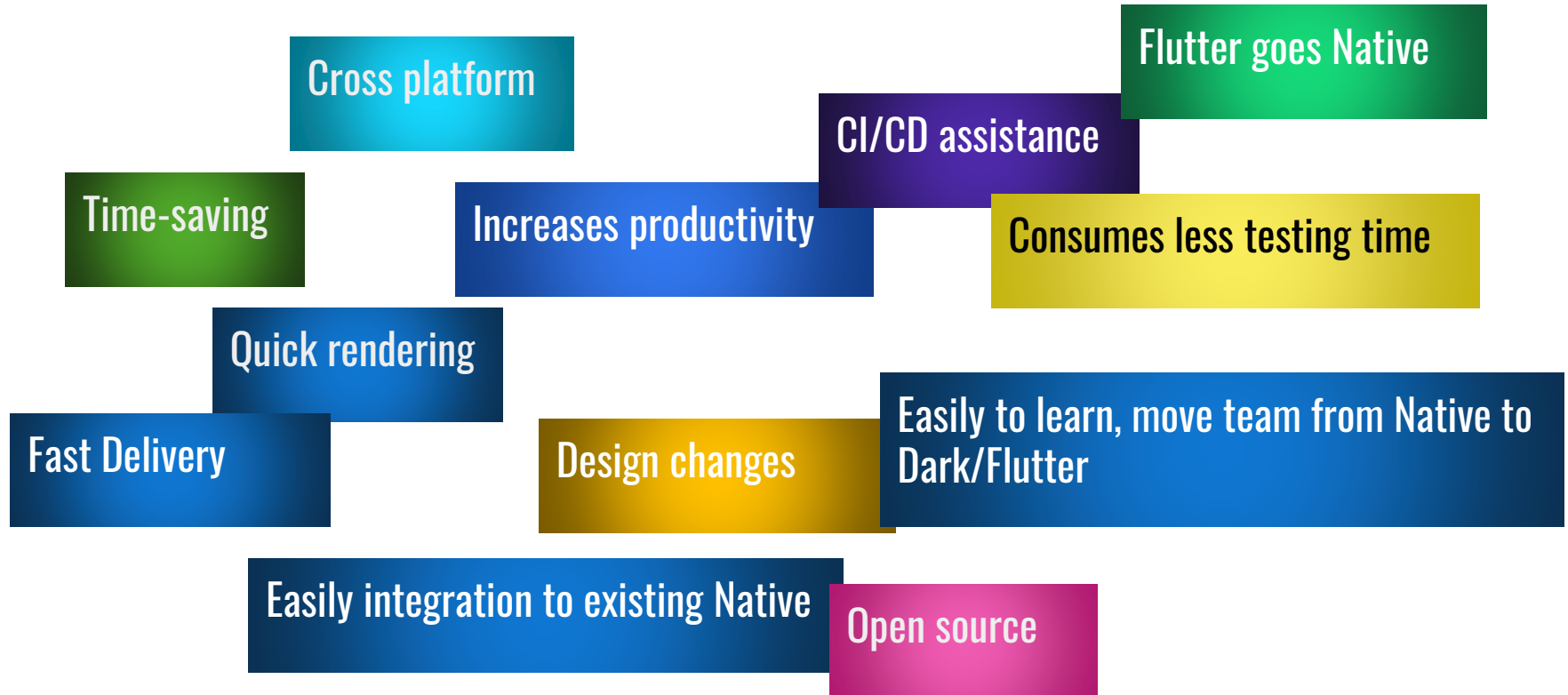
What is Flutter ?

Is a mobile app SDK for building high-performance, high-fidelity apps for ios and android, form a single codebase.

Works with existing code, is used by developers and organizations around the world, and is free and open source.

Will be the main framework for developing applications for Google's upcoming operating system, Fuchsia.

Why choose Flutter platform over others ?



Reduces: ▼ 50% time of testers, estimation of 20% maintenance cost

Chatbot “Trợ lý ảo Sendo”

Use entity to extract keyword in the sentence.

Use NLP technology of FPT. AI



Monitoring / Tracking

Tracking

Google Analytic, Firebase

Appsflyers

Crashlytic (Fabric)

Stack of Technologies

Languages: Kotlin, Swift, Flutter

CI/CD: Jenkins, Fastlane, Slack

Unit test, automation test: all modules

Micro-apps into many different repository

Key results:

- Crash-free sessions: 99.9%
- Release early
- Cross functional team

Best Practices | Frontend Mobile App

Decouple development, testing, production environment

Decouple release features

Making all products under automatic CI/CD, unit test, automation test

Small & fast & safe & scale & independent

Stack of Technologies

Languages: Golang, PHP, JS/Nodejs, Java, C#

Databases: MongoDB, Redis, ElasticSearch, MySQL, MSSQL

Frontend: Reactjs, Kotlin, Swift, Flutter

Sendo Golang SDK, Sendo Web SDK

THANK YOU