How we test

@ Trafi |〉〉
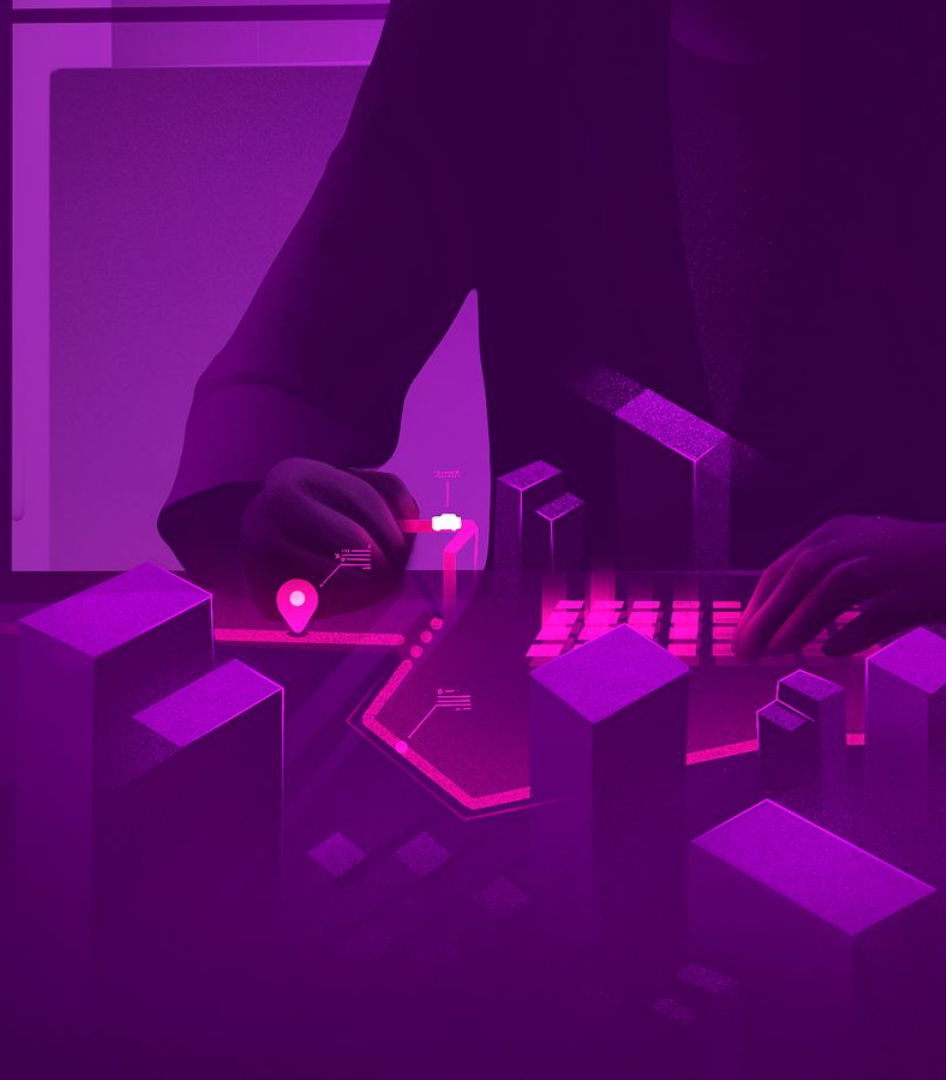
Trafi

What's Trafi?

- *"Legacy" Trafi app*

- Services/
  data/
  software for big players

- **Mobility platform**

TRAFI's mobility platform

Trafi enables cities and enterprises to launch and operate their own MaaS solutions. Our platform provides software that allows our partners to connect, understand and manage their mobility ecosystems.

CONNECT

Mobility as a Service

Connect your city's entire mobility ecosystem into one customer-facing service.

UNDERSTAND
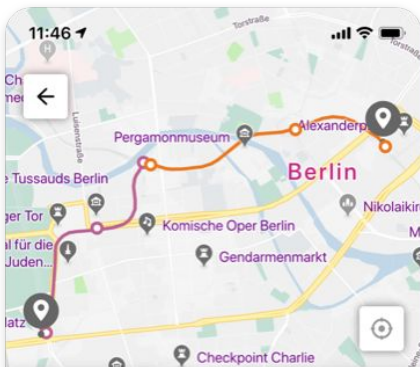
Mobility Insights

Understand critical insights from your city's mobility ecosystem in order to make better, data-driven decisions.

MANAGE

Mobility Policies

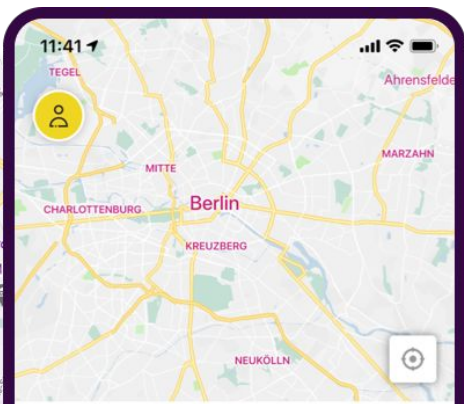Manage and coordinate your city's mobility service providers with real-time regulations and incentives.
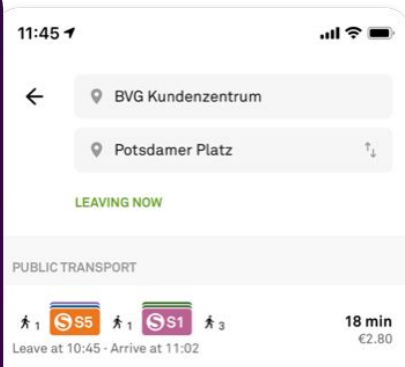
Mobility as a Service

Mobility as a Service is a platform that enables cities to launch their own MaaS. It integrates all relevant public and private mobility service providers. This white label solution comes equipped with a robust multimodal routing solution that supports intermodal trip planning and diverse payment options, including subscriptions and mobility bundles. Trafi offers deep integrations that require users to set-up their profiles one time only, to pick, plan and pay for any services.

In one centralised whitelabel app users can:

- ✓ Look for mobility options around them
- ✓ Plan trips
- ✓ Compare different types of transport
- ✓ Book and buy public transport tickets
- ✓ Book and pay for shared transportation vehicles

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Architecture

WHITE LABEL

App

Wrapper

Platform
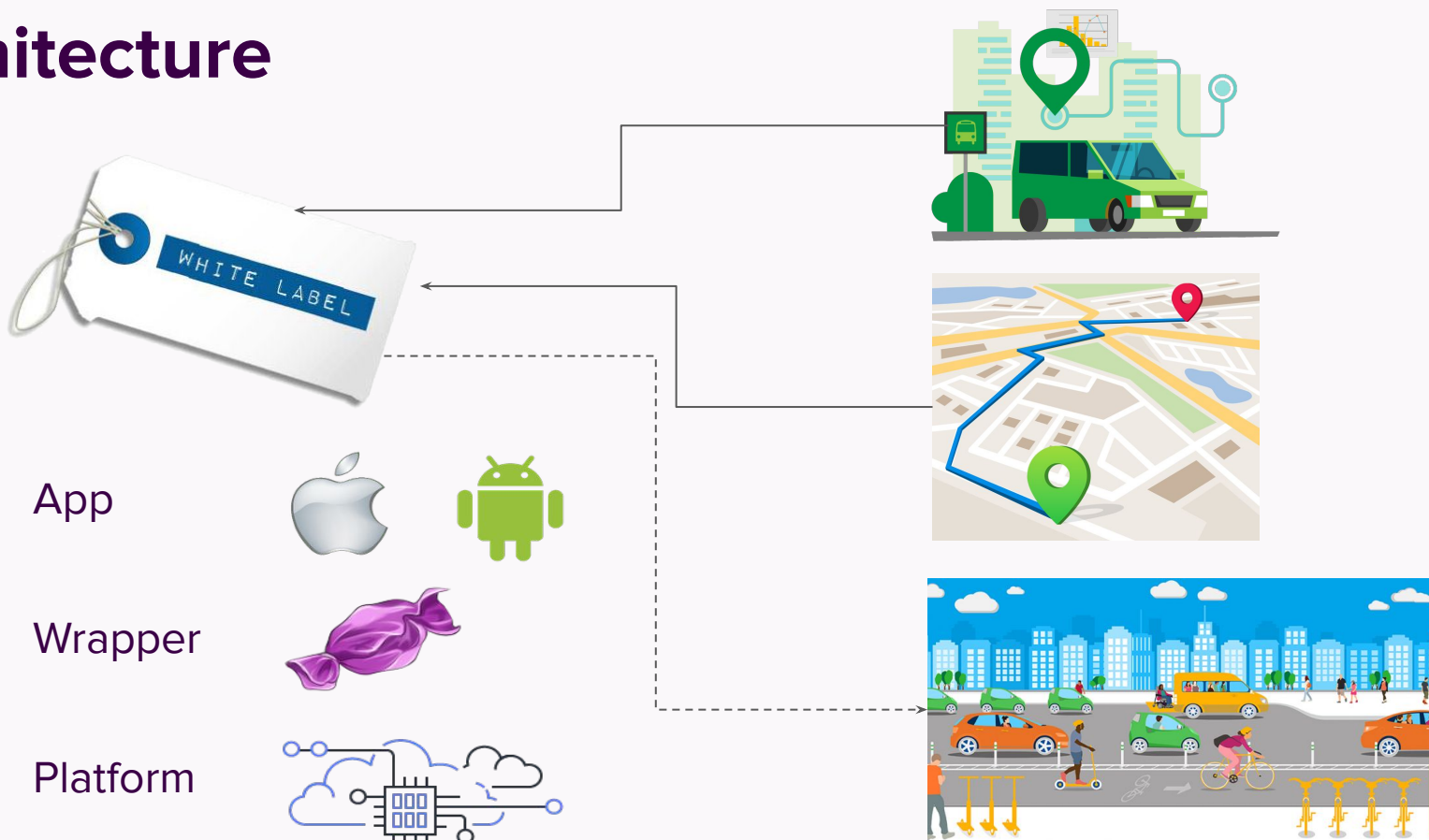
Team structure

- Whitelabel teams: 3
  - Each has PM, designer, a few devs and 1 QA

- Other teams without dedicated QA

So... how do we test?

1. **Manually via app**

With:

    a. Mocked integrations
    b. Test integrations
    c. Prod integrations
        yep, includes travelling! 😍

Who:
- QAs
- Everyone

- Functionality
- UX
- Accessibility
- Analytics

Trafi ▌❭❭

Challenges and tools

- Bug tracking ➜ Slack / Jira
- Release notes ➜ "Gira" (Github+Jira ➜ Slack)

- Location is important ➜ GPS faking
- City differences ➜ Travelling / Open data
- Differences in documents across countries ➜ Alpha / beta testing
- Specific device issues ➜ Own / alpha / beta testing
- 3rd party issues ➜ Slack / Mocks / Direct API calls

2. Automated end-to-end smoke tests

iOS: **XCUITest**
Android: **Espresso**

CI: **TeamCity**
Devices: simulators + phones here + on Firebase

Who:
- QAs*

developers do code reviews and occasional test or test update 👍

3. Resilience testing

With chaos proxy to mock slow / failing integrations
- How does app behave?
- How fast do we recover?

Who:
- QAs + platform team

Tools:
- Proxy servers on AWS (see e.g. https://github.com/clusterfk/chaos-proxy)

4. Performance testing

On *Wrapper* level

Who:
- Platform team ➔ QAs

Tools: **Locust**

5. Other

- Unit tests
- Platform API tests (Postman)
- Custom automated tests
  - for route search
- Great monitoring!

Who:
- Devs

- Security tests

Who:
- *QAs (with OWASP ZAP) ***
- *External*

* Just started

6. Future plans

- "White city"

- More extensive automation on UI and backend

- Hire another QA

- ... ?

Thank You!

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