

CASE STUDY

How SolDevelo created a fully open-source transportation system for Digital Impact Alliance



OBJECTIVES

DIAL requested a system that would be providing data and resources to support management over supply chains as well as have reporting features. It was important for the client to create a system that would be easily accessible and serve as a Global Good.

SOLUTIONS

We built the solution based on an already existing system, but using the newest technology and making sure that it is fully open sourced.

The newly rewritten tool, TransIT, enables managers to better track shipments, make data-driven decisions, optimize distribution resources and assets, and use historical data to show trends over time. We have also worked on redesigning the system so that the user experience is improved.

BENEFITS

Fulfilling Sustainable Development Goals

The entirely open-sourced nature of the application aligns with the SDGs and the client's mission.

Bringing solutions to the underserved

TransIT serves as an affordable alternative to commercial systems, giving the low-resource communities access to a high-quality solution.

Creating a space for further development

Tech debt is reduced from the very beginning, making a great base for further development of the system.

AT A GLANCE

The Challenge

Lack of visibility into the supply chain, particularly in low-resource and challenging last-mile environments.

Requirements

- Building a solution from scratch based on a legacy application used in a production environment.
- Creating entirely open sourced application.

TECH SOLUTION QUALITY



A - RATED

Readability, Maintainability and Security metrics



~ 95%

Code coverage

OUR METHODS

We worked in the spirit of Agile, continuously making changes based on the evolving situation. Everytime changes were made, we monitored, among other things:

- Is the solution building correctly?
- What is the code coverage?
- Do all tests pass?
- Are there any critical bugs that could affect security?
- Does the code adhere to our predefined requirements for static code analysis – Flake8 for the backend, Airbnb's ESLint for the frontend?
- What cyclomatic and cognitive complexity do we have, is the complexity of new classes within a reasonable range?

OUR TECHNOLOGY

When starting a project from scratch, the responsibility lies with us to choose a solution tailored to the specific situation.

Taking the open-source nature of this application into account, we focused on choosing technology that would enable the project to take on a life of its own, attract community interest and have a relatively low entry threshold.

With this mindset in mind, we chose Python and TypeScript. In the same vein, we made the decision to have the front-end part written in ReactJS. We believe that proven efficient solutions with strong community support are the best choice for this type of project.



ABOUT US

SolDevelo is a dynamic software development and information technology outsourcing company focused on delivering high-quality software and innovative solutions.

ISO 9001 confirms our dedication to the highest quality and ISO 27001 shows that we treat security extremely seriously. Over 70% of our team members are certified Scrum Professionals, over 35% are Oracle Certified Professionals and 100% of our quality assurance team has ISTQB certificates.



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