

# Project Proposal - Droppe Supplier Insights Engine

## 1. Introduction

Wouldn't it be cool to develop something that will be used by international companies already from the first version of your software and receive real-time feedback from the actual B2B customers? Wouldn't it be cool to learn and follow how a fast-growing marketplace startup operates and grows in 3 markets? Are you interested to work on **data visualization, data integrations & pipelines** as well as plotting and **predicting trends** based on that data? Then we have the perfect project for you and your team.

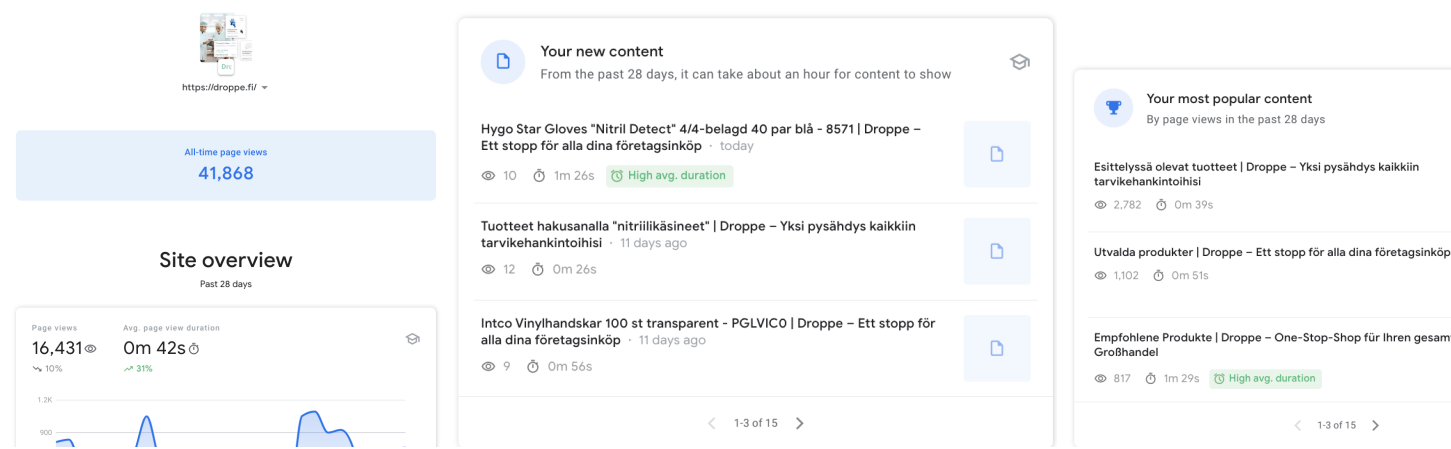
But first, what's [Droppe](#)? We're the one-stop shop for all your industrial wholesale. In other words, a business-to-business marketplace, connecting European businesses to Europe's top equipment manufacturers. This means we tackle all kinds of cool problems with tech, like fintech, logistics, and e-commerce all connected together. Essentially, we save our industrial buyers' time and money via using our wholesale marketplace and help in reducing emissions via more efficient logistics and less packaging waste. Think of it in this way—our industrial buyers can pick products from tens of different suppliers in different countries and checkout with the click of a button and we handle the rest. This means that an industrial buyer from Finland can order work gloves from Germany and overalls from Italy but gets them all into one checkout and on one invoice.

In the last two to three years, we've grown to over 600 B2B customers which include some of the biggest & coolest companies in Finland including—Mylyyn Paras, Oura, Hesburger, Verkkokauppa.com, HKScan, and more. What's even more exciting, during this year we've expanded to Sweden and Germany on our buyer side. We currently have two offices, one in Helsinki and one in Cologne, Germany. Droppe is funded by Finland's #1 venture capital fund, Lifeline Ventures, as well as Miki Kuusi (Wolt) and Ilkka Paananen (Supercell).

The team that chooses Droppe will have the opportunity to learn about cutting-edge B2B marketplace development and building solutions used by some of the biggest companies in Finland, Sweden, and Germany. **Droppe is looking to hire multiple ambitious developers to continue full-time in the Product team after the project.**

## 2. Project goals

On the abstract level, the project is to build a stand-alone platform that will be piloted in real life for generating insight reports for close to [100 suppliers](#) on our marketplace. This means that the software you develop will generate insights and reports to suppliers such as Duni, Sini, Abena, and Berner—suppliers of products that even you use in your day-to-day life. The reports will be generated based on Droppe's private data such as behavioral data from the marketplace via Google Analytics, CRM-based deal data, and our Supply team's operational data like new products added to the marketplace. The reports will add unique transparency to the internal functioning of the marketplace and how thousands of buyers use our marketplace and interact with our suppliers' products each week. Additionally, the generated insights will allow our suppliers to proactively improve their own offering on the marketplace and as a company, understand when adjusting the pricing is necessary as well as new trending product demand or search terms that they should expand to with their product offering. A good benchmark for how these regular (e.g. monthly) insight reports could function is to see how [Google Search Console insights](#) work.



The project has proposed sub-goals as described below as guidance but the team has quite free hands for it's creative direction. Suggested subgoals:

- 1. Monthly insight reports**—Engine that generates & delivers monthly reports to the marketplace's suppliers
  - Architecture to import data from existing databases and integrate private data sources in order to generate monthly reports for individual suppliers. An engine that can generate insights based on data points such as: the most viewed products, total amount people who've been exposed to their brand, how many people visited their supplier shop page, how they rank in terms of price (or other attributes) per category on the marketplace, how many new products were added by Droppe supply team from their offering, what were trending product searches on Droppe marketplace (what are users searching for), lost reason breakdown (what products lost when Droppe sales sent offers to buyers), how many physical product samples were sent out by Droppe sales and to what regions.
  - Awesome way to learn about crawlers & scrapers on the web as well as storing structured data.
- 2. Interact & analyze**—Show and make sense of the collected data
  - Gives the ability to further visualize, filter, segment, and browse the collected data in a user-friendly way. Dashboard for sorting reported insights that is hidden behind supplier login. See performance depending on different time periods. Analyze & visualize the obtained data in a nice UI.
  - Great way to take a deep dive into data visualization and play around with some of the newest libraries & frameworks as well as learn about designing dashboards.
- 3. Trends**—Simple plotting of trends as well as light predictions that use data from previous stages
  - This subgoal gives the team extremely free hands for exploring & implementing existing open source algorithms for historical trends or rudimentary forward-looking predictions. For example, what trends and patterns could be found from the data? Can something be possibly used for future prediction—what happens in a day, a week, or a month? Is there seasonality in the behavior? This is a far-reaching and advanced subgoal for ambitious teams that have nailed the first sub-goals.
  - Awesome way to dip your toes into the field of historical trends, predictive analytics & statistical / machine learning-related topics.

### 3. Technologies

The team can propose the technologies they are most familiar with or which would suit the project goals best. The project is quite full-stack and provides a good opportunity to play with and learn from a variety of domains such as integrations, data pipelines, storage, analytics, frontend implementation, data visualisation, and prediction.

The platform should be a browser-based application (preferably NextJs / React, Node, etc.) that can generate also some more static assets as export options—deliver pdf:s, send beautiful outbound emails. Familiarity with cloud services (AWS, GCP) will be helpful for students. Some data import or integration knowledge is of help to fetch needed data from different data sources. We expect the use of git as version control (GitHub) and proper public CI tools (e.g. CircleCI) for testing and deploying the software. Code reviews in the form of pull requests. Additionally, the code must be well documented, tested, and additional documentation of the system constructed as a part of the project. Some Data Science / Machine Learning experience (or interest to learn PyTorch, Julia, or similar tech) is a strong bonus if the team wants to pursue the trends / prediction subgoal.

### 4. Requirements for the students

1. First and foremost we look for impact-driven, motivated, and ambitious developers who want to learn in a completely new field.
2. Open-minded & flexible, it's very likely in these projects that the scope changes possibly multiple times—a vision that extends over the very next project subgoal, an eye for the bigger picture.

3. Working as a team—this is how all successful software project teams work.
4. Willingness to question things—what to build and why to build it, ways of working, processes, tedious tasks.
5. Being creative & challenging the status quo.

We also appreciate close co-operation with Droppe & stakeholders to lead us all in the correct direction. The project difficulty level is moderate (first stage) / demanding (later escalating to very demanding).

## 5. Legal Issues

Intellectual Property Rights (IPR): 2. The client gets all IPRs to the results.

Confidentiality: 1. Signing the NDA included in the Aalto's contract template is required. The client might share some confidential information with the students in order to enable the student team to work with enough knowledge to guarantee success in the project. No other legal issues.

## 6. Client

The team will be given a cloud server to develop and run the application.

We encourage the team to work physically together for better collaboration, Droppe's offices at Maria01 in Helsinki city center can be used freely if wanted for team collaboration. In addition, the use of hackathon / code sprint / specified office days is greatly encouraged (success-oriented approach in previous SWP projects). Currently, Droppe's team is working in hybrid mode in close to 10 countries and across 2 offices.

### Client representative(s)

Andreas Holmberg will be the non-technical product owner (PO). Henrik Helenius will be the technical product owner in the project and can support in web technologies if needed. Henrik is very familiar with the Aalto SWP as he acted as the Scrum Master (and part-time developer) in Software Project 2018 and was awarded the Accenture Software Quality Award for "Feedbacker Forum". Droppe also took part in the 2021 Software Project course as a client.

Andreas Holmberg, non-technical product owner  
[andreas@droppe.fi](mailto:andreas@droppe.fi)

Henrik Helenius, technical product owner  
[henrik@droppe.fi](mailto:henrik@droppe.fi)

Both Andreas & Henrik are well experienced with the domain of the project. The project's outcome has real business value and we are committed to supporting the project team as required. Droppe can give access to the company's designer for UI/UX support as well as host workshops for topics such as unit testing, cloud hosting, or other technical topics to help the team in quick learning. We believe that communication and staying in sync is key and as such both the student group and we get the most benefit by discussing the project regularly on a biweekly or weekly basis.

### Preselected Student Team Members

Pre-chosen developers for project: Linus Jern, Peik Etzell, Markus Nyman, Johan Nyberg. A scrum master hasn't yet been pre-chosen for the project.

## 7. Additional information

Technical implementation, documentation, and source code must be written in English.

If you have any questions regarding this project, please do not hesitate to contact the client representatives. As mentioned, Henrik has participated in this course before and should be able to answer any related questions you might have. We are happy to discuss the proposal further in a casual setting, for example, [henrik@droppe.fi](mailto:henrik@droppe.fi) or [@henrikhelenius](https://t.me/henrikhelenius) on telegram.

**We're actively hiring ambitious talented developers.** A good skill set, plain enthusiasm & true will to **solve big problems** with tech is what we appreciate the most. This is a great opportunity for us to get to know each other and for you to learn more about Droppe and the mission-driven environment for curious people we aim to create. **We want you to succeed together with us and therefore successful completion of the project will be celebrated.**

Find out more about us and our story online at <https://droppe.fi/>