

# Public Summary

This assignment was carried out for NovelT. NovelT stimulates entrepreneurship and offers students advice if they want to start a company.

NovelT is looking to scale its resources to help entrepreneurs at the university. To achieve this, a guide to help start-ups use more data during their design processes will be created. Two case studies will be done at a start-up to make sure this guide also contains practical tips.

The start-up selected for this case is CodeSandbox. CodeSandbox is a start-up started by two students from the University of Twente who worked together with NovelT before. CodeSandbox was selected because they already had most of their data collection tools set up and were transitioning into a more data-aware design process.

The thesis starts with a theoretical background on what data is and how to work with it. The difference between a data-driven, data-informed, and data-aware approach (Rochelle King, 2017) will be discussed. A framework for experimenting with A/B tests will also be discussed before putting the theory into practice.

The two case studies at CodeSandbox have to do with the new design for their website. The first case uses a data-aware approach, and the second case is an A/B test.

The first case focuses more on the design process and how a designer's intuition can be used in combination with data to create more confidence in the improved performance of the new design. Based on the data collected after releasing the new homepage, a hypothesis was formed that could be tested with an A/B test. This A/B test was then executed as the second case.

The second case was using the A/B test framework described in the theory part of the thesis. The second case focusses on analysing the results of the A/B test.

The biggest flaw during the cases were the many product changes that happened. Combined with the often larger data sets required to show significant improvements, this makes a data-driven approach very difficult. Luckily sufficient value can already be gained from being aware of what data is available and its limitations. In short, the most important findings were:

- Start collecting data as soon as possible.
- When implementing a data collection strategy, be aware of the limitations of different methods of collecting data and different types of data. Also, using complementary types of data will allow the designer to get a better understanding of the product or service and the design process.
- If the designer knows what data he has access to, he can better use it. • Always try to learn more about the available data.

- Always have a goal and hypothesis when making a design. If there is no hypothesis, the design process can be less focussed, and the results and conclusions may suffer from this.

The guide that resulted from this thesis summarises the theory and lessons learned from the cases. This guide will help NovelT with educating the start-ups at the University of Twente. These start-ups can then work more data-aware and, as a result, make better decisions during their product development.

**Sources:**

Rochelle King, E. F. C., Caitlin Tan. (2017). Designing with data (1st edition ed.). O'Reilly Media, Inc. <https://www.oreilly.com/library/view/designing-with-data/9781449334925/>