Field Project (2022-23)

How does technical documentation affect engineers' use of the system?

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Abstract

Anomify, an anomaly detection system, found that most of the users registered but did not start sending metrics. From this, this research explores whether and how the technical documentation affects engineers to use the product. Finding "completeness of content", "consistency between pages" and some readability issues do cause concern for users. Therefore, the research aims to improve consistency and readability of the documentation, making it easier to read and find information.

Introduction & Background

Anomify is a B2B system that uses machine learning for anomaly detection. It can detect outliers in the data and send alerts to the user. The team observed that most of the registered users did not send metrics to start using the system, and they hypothesized that this may be related to the technical documentation and the process of sending metrics: Users aren't sending metrics up because it's not clear how to send their data or we don't support their metric source. This study aims to clarify the factors that technical documentation influences engineers to use the system.

Study Methodology

Literature & State-of-the-Art Review I have extensively collected and read information on technical documentation planning and design, which is not limited to academic sources. This gave me an idea of what a good document should have.

Competitor analysis To better understand the characteristics and forms of technical documents in the industry, I study them of competitors who provide similar services, which are important references during the project.

User interview + Testing site & Mouse tracking tool 5 engineers participated in semi-structured interviews. This allowed me to explore all possible influencing factors and confirm the impact of the document itself. The websites used in the interviews were copies with embedded Microsoft Clarity code to track how users interacted with them.

Tree testing I use Tree testing to test the initial idea of the prototype information architecture. Participants are 8 engineers.

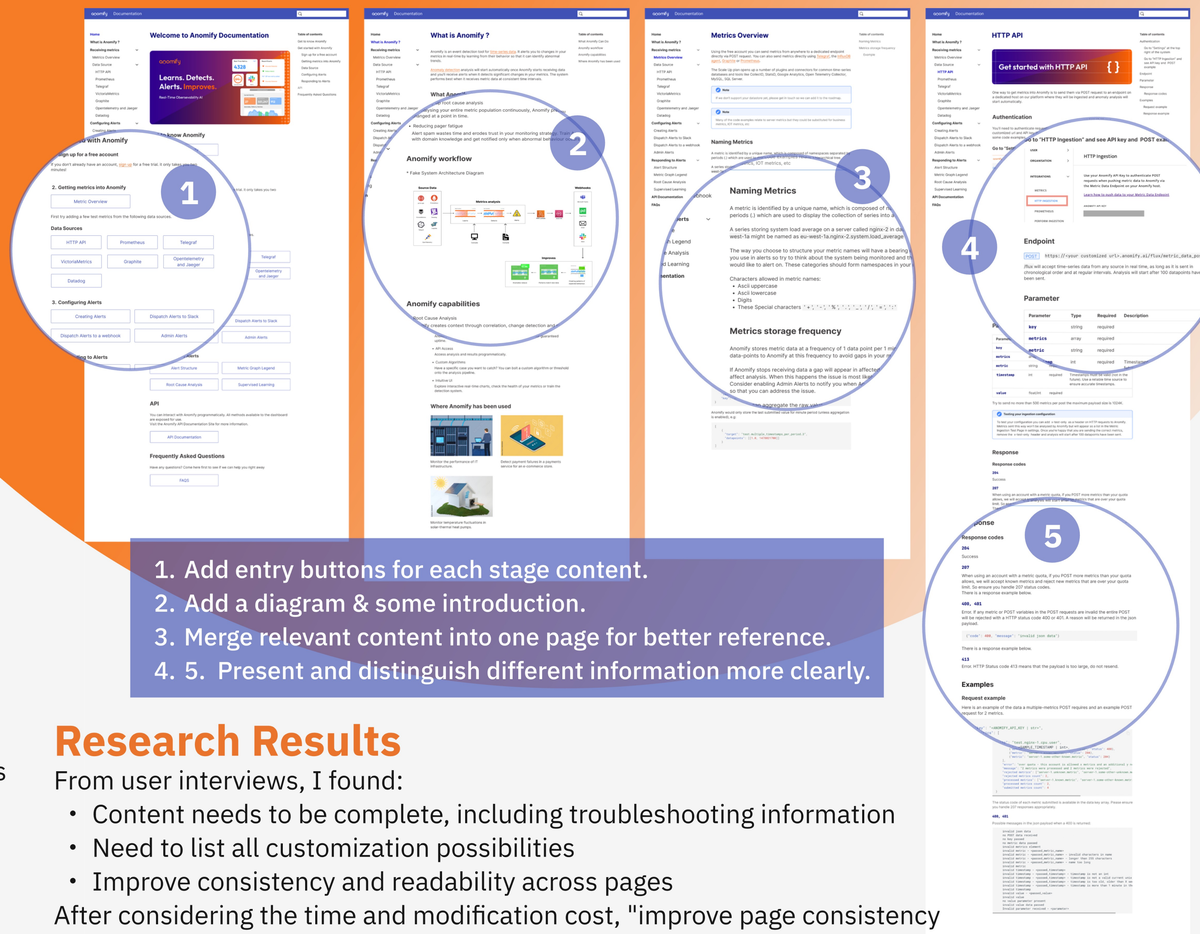
Prototyping Based on optimization goals and strategies, I selected 4 pages that engineers are most likely to use at the beginning to make prototypes. They are: Home, What is Anomify, Metrics Overview and HTTP API.

Testing & Evaluation

To confirm whether the low-fidelity prototype met its goals, 5 engineers were invited to do ***Formative Usability Testing*** to evaluate the prototype and suggest where it needed to be improved. After modifying and completing the high-fidelity prototype, before Summative Usability Testing, I invited 3 engineers to do a ***Pilot Test*** to ensure that there is no problem with the test itself.

Finally, 25 engineers took part in a ***Summative Usability Testing***. I use the Maze for quantitative data collection. Users were asked to do a comparative evaluation between my prototype and Anomify's current technical document to confirm whether the goals were achieved.

Final design



1. Add entry buttons for each stage content.
2. Add a diagram & some introduction.
3. Merge relevant content into one page for better reference.
4. 5. Present and distinguish different information more clearly.

Research Results

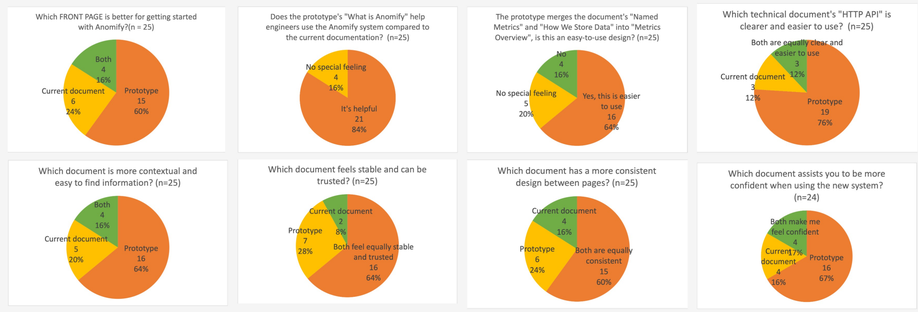
From user interviews, I found:

- Content needs to be complete, including troubleshooting information
- Need to list all customization possibilities
- Improve consistency and readability across pages

After considering the time and modification cost, "improve page consistency and readability" was selected as the optimization direction.

The goal is ***to improve the stability and trustworthiness of the document, and make the document easier to read and find information***.

In the final Summative Testing I got ---------->



Conclusions & Future Work

Technical document is enough to affect users' perception and confidence in the product and team. "Consistency" and "readability" can make documentation easy to find and read, make users feel stable and trustworthy, and make them more confident when using the new system.

During the research, I also found that "participant experience" is important. Make sure users clearly understand the test and reduce irrelevant distracting factors in order to get real feedback.

The results of Summative Testing only obtain quantitative data, It would be even better if I can understand users' thoughts through interviews. The document can allow users to give immediate feedback, such as the question "Is this page helpful to you?", which can quickly find out which pages have problems.