DATA ENCODES STORIES

IxDS P3 Dashboard Design

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UNDERSTANDING THE PROBLEM SPACE

We began by trying to understand the problem space...

Personas:

The most important aspect consisted of understanding our personas — what information do they need? What inspires them? Our analysis led us to the three points:

Sos Bondo

creates bold and story-telling work

Kenny Won

interplay between marketing and fashion

Angela Manful

ability to recognize new opportunities/emerging trends

Current Model:

In combination with customer reviews, we identified a few areas where information for the designers was lacking, hence generating the issues mentioned in the reviews.

Size information not specificly aligned with user needs

Lack of info on the material used to create the shoe, and the result of the fabrics (sturdy, flexible, etc)

Lack of info on customer purchase history.

Lack of info on customer’s backgrounds and motivations.

No way of digging deeper into customer reviews

No data visualization tool that make analyzing customer review more efficent.

Then, we started to brainstorm ideas about the future model.

Problem	Solution	Data
Size information not specificly aligned with user needs	Presenting customer feedback on accurate shoe sizes	Customer reviews and average shoe sizes
Lack of info on the material used to create the shoe, and the result of the fabrics (sturdy, flexible, etc)	Information about how the shoes “age” throughout time	Sustainability information based on environment
Lack of info on customer purchase history.	A tool that depicts recent fashion trends and potential areas of opportunity	Recently popular shoe styles based on sales
Lack of info on customer’s backgrounds and motivations.	Displaying customer demographics for cultural inspiration	Customer demographics
No way of digging deeper into customer reviews	More information on how people use the shoes (with stories, images, etc)	Stories and images of customers wearing the shoes
No data visualization tool that make analyzing customer review more efficent.	Categorize customer reviews based on sizing, comfort, materical, etc	Parsed and group customer reviews

From the feedback session, we learned that we identified great painpoints, but our ideas never formed a model.

The areas we identified that the current model was lacking were specific, actionable, and tangible.

Our potential solutions were linked to the identified problems, quickly deriving the connection from the current model to the future model.

However, neither the problems or the solutions were formed in to models. Our ideas were simply in a list.

The tools we suggested also needed more thought — how did we plan on supporting the tools? How do we present the data?

We understood the painpoints and produced great potential solutions, but ultimately, Ansela cares about how we plan to concretely present our new information in our future model.

2 DRAFTING INITIAL DESIGNS

After delving into the problem space, we transitioned our ideas onto paper.

Looking back on our painpoints, we decided to create a model where we address what designers may want and find useful. We spent time transitioning our “tools” to actual data visualizations that supported the personas.

Individually, we worked on creating several initial sketches of a dashboard. First, we ended up creating elements of our dashboard. This would help us gain more insight on what data could be beneficial for our dashboard without being overwhelmed of how to put a dashboard together. This also gave us inspiration on new ways to represent data that could be understood more clearly. With all these elements, we all ended up creating a unique dashboard with the strongest components from each of our individual sketches.

CHALLENGE

How can we design for [which persona] where elements in our dashboard can inspire them and fulfill their wants?

We narrowed down our elements and created a low-fidelity dashboard.

Area-specific Shoe Comfortability

This feature lets us examine what area of the shoe is causing the most problems in terms of comfort. Since there was a lot of feedback on one shoe not being its ideal size, we created this chart to help spark discussion on different parts of the shoe.

Customer Satisfaction Indicators

This allows us to measure the customer satisfaction with a specific element of the shoe e.g. size, comfort, durability. This would be color coded from red, orange, green to show if the percentage shown was positive or negative.

Sustainability Index

This index is to measure the sustainability of the shoe by seeing how environmentally friendly it is. This specifically addresses Sos' need to understand her own impact on sustainablity.

Shoe Painpoints / Expectations

Painpoints on the shoe allow us directly view what the issue is and understand the problem in a visual way. The expectations are also a different way in indicating customer satisfaction and if it fits the expected outcome.

Fabric Word Cloud

Word clouds are unique in a way that it’s difficult to pull information from them. However, we used filters and specificity to show the general opinion and specific trends designers might want to follow.

Activity-based Shoe Usage

This graph shows where customers take their shoes and what activities they do with them. This can inspire designers and let them understand what their customers are looking for within a shoe.

We brought our dashboard to receive initial feedback...

The data we chose to display was valuable, and our next steps should be considering how each piece of data could potentially fall into a conversation amongst the personas. This technique would help us better understand the data that the personas need.

Our dashboard also **lacked visual hierarchy**, which is especially important when the designers are aiming to quickly gather insights in their busy work schedules.

The most important piece of feedback is that our components should clearly address how the data will help Sos and Kenny make changes. **Instead of just giving them the data, our visualizations should convey "what is wrong".**

3 REGROUPING — DESIGNING FOR THE DESIGNERS

After the previous feedback session, we took a step back.

Instead of brainstoring elements that might be **useful** for the designers, we realized our dashboard design should support the designers' **needs**. Therefore, we took a step back and created a **features summary** before progressing onto our mid-fidelity designs. In our summary, we built a hierarchy of needs, with the goal being:

How does this feature help [which persona] understand what to do/how to fix things?

The resulting hierarchy can be seen on the right, and we used this list to derive each feature on our dashboard.

Does the product satisfy the customer's needs? Satisfies: Sos, Kenny

Subcategories include: fit, comfort, durability, aesthetic/style

Is the product competitive on the market? Satisfies: Kenny, Ansela

Subcategories include: sales performance, competitiveness of customer satisfaction

Are the marketing strategies for this product effective? Satisfies: Kenny

Subcategories include: product engagement on social media, new vs. returning customers

Was this shoe impactful to customers? Satisfies: Sos, Kenny

Subcategories include: keyword association related to designer goals

We followed our hierarchy of needs to create a cohesive dashboard.

The left of our dashboard addressed some subgoal needs, such as: **are the marketing strategies for this product effective? Was this shoe impact to customers?**

The middle of our dashboard addressed the first and most important need: **does the product satisfy the customer's needs?**

Lastly, the right of our dashboard focused on competitor analysis, specifically: **is the product competitive on the market?**

We hoped our changes came across in the next feedback session.

And thankfully, they did! Our visuals showed the designers the information they needed and exactly what changes they needed to make.

As for coming up with ideas about motion, we should make sure to **use motion as a tool to show new information or data changes throughout time**, as opposed to decoration.

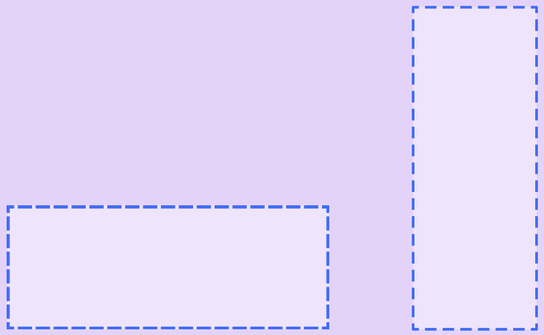
We learned that our hierarchy was still not as apparent, but better than our previous iteration.

Lastly, we should spend time on making our visuals more polished, such as adding the appropriate labels. Although this requires minor changes, it greatly impacts the stakeholders' understanding of our dashboard.

4 INCORPORATING MOTION

We pushed forward with our dashboard, changing from Mid to High Fidelity.

One of the biggest decisions our team had to make was whether to keep our dashboard **landscape** or change it to **profile**. Previously, we pictured that the dashboard would be viewed on a desktop and so we assumed landscape would be better for viewing. However, when we considered the possibility of placing the dashboard on a wall, we realized that portrait orientation would be better suited.



After that, we had to consider placement of the graphs to provide the most sense when reading the dashboard. That is when we decided to separate between **product** and **company** based graphs.

PRODUCT

COMPANY

Our changes...

We continued to develop the Product Painpoints, Customer Satisdaction, Product Sales Over Time, Goals & Customer Perceptions and Competitor Analysis graphs because it provided much more actionable/inspirational information.

After reorganizing our dashboard, we realized that the Company vs. Competitors, Products vs. Competitors, and Adventures Word Cloud either provided repetitive information or did not provide inspiration.

After reviewing our feedback, it was clear that we needed to reformat how we presented our data. We decided to have a top-down hierarchy. Product Painpoints and Customer Satisfaction held the most actionable and inspiration information and thus were placed on top.

Goals & Customer Perceptions and Competitor Sales were the largest changes our team made in terms of dashoard content.

After hearing feedback for Goals & Customer Perceptions, we realized that words can be in different stages as information updates. That is when our team changed our approach and gave each word their color to match their priority to their mention. If it is medium priority and average mention, it is green.

Competitor Sales came from analyzing the graphs that were not actionable. We decided that we wanted to promote design through comparison, and that was when we decided to apply the concept of the Competitor Analysis in their sales as well.

Our first step towards motion. Link Here.

Customer Satisfaction will load up each time a product is switched.

We wanted this diagram to show more information about painpoints while minimizing clutter. Our solution was to use a zooming feature that would zoom in on a painpoint and then back out to the entire shoe.

For Competitor Analysis, our main goal was to have a 1-on-1 comparison for Adidas and Other company. This motion switches between different companies while keeping Adidas' statistics visible the entire time.

The Product Sales Over Time graph shows the important dates of a product (such as the release date) one by one, giving further insight to each milestone date.

We brought our redesigned dashboard and new motions for feedback.

The redesigned dashboard had actionable and data-inspiring graphs whereas our mid-fidelity version had graphs that only showed data.

Although we tried to remind ourselves that **motion should not be decorative**, we failed to implement motion correctly for both the Customer Satisfaction and Product Sales Over Time graphs. Both ended up not providing more information.

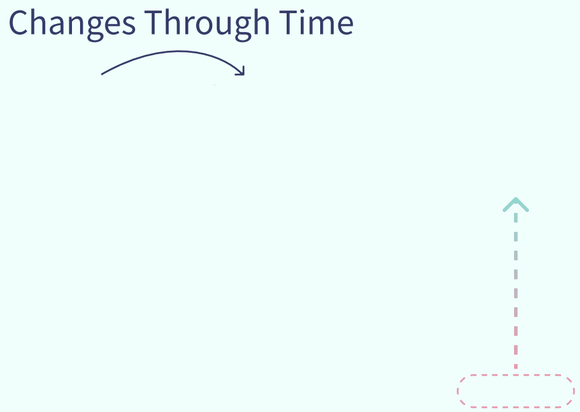
The motion for Product Painpoints could be circumnavigated to reduce the zooming in-and-out of the shoe by just placing the description next to the painpoints.

Although the overall hierarchy of the dashboard made sense, hierarchy was difficult to find in the font sizes. Our team realized it was difficult to find the correct font sizes for the size of the dashboard.

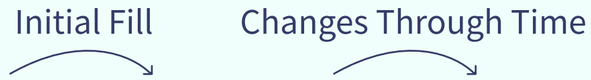
5 AUGMENTING DATA WITH A CONTROL

We began to think about the bigger picture — the context.

Until now, we've mostly focused on the design of the dashboard. But starting here, we began to think about Ansela, Sos, and Kenny's exact experiences when using the dashboard. How would the motion of different components stagger and tell a story? And how can they interact with the dashboard in the real world?



We also showed how customer perceptions changed over time. The graph starts out as the left frame, and becomes the right frame, as the "adventure" moves upwards. This would show Kenny and Sos that people began to frequently mention "adventure" when discussing their shoes.



As before, we started with catching their attention by filling up the circle graphs. However, the percentages would continue to change through time, unlike before.

Continuing to think about context, we started to design our control.

The components in the top two-thirds of our dashboard all detail one single product. Since we imagine that Kenny and Sos will work on multiple Adidas shoes, we would also like them to view information on multiple shoes. This inspired our control — a left/right panel to allow them to switch to dashboard to different products. To broaden our scope, we sketched a few potential controls.

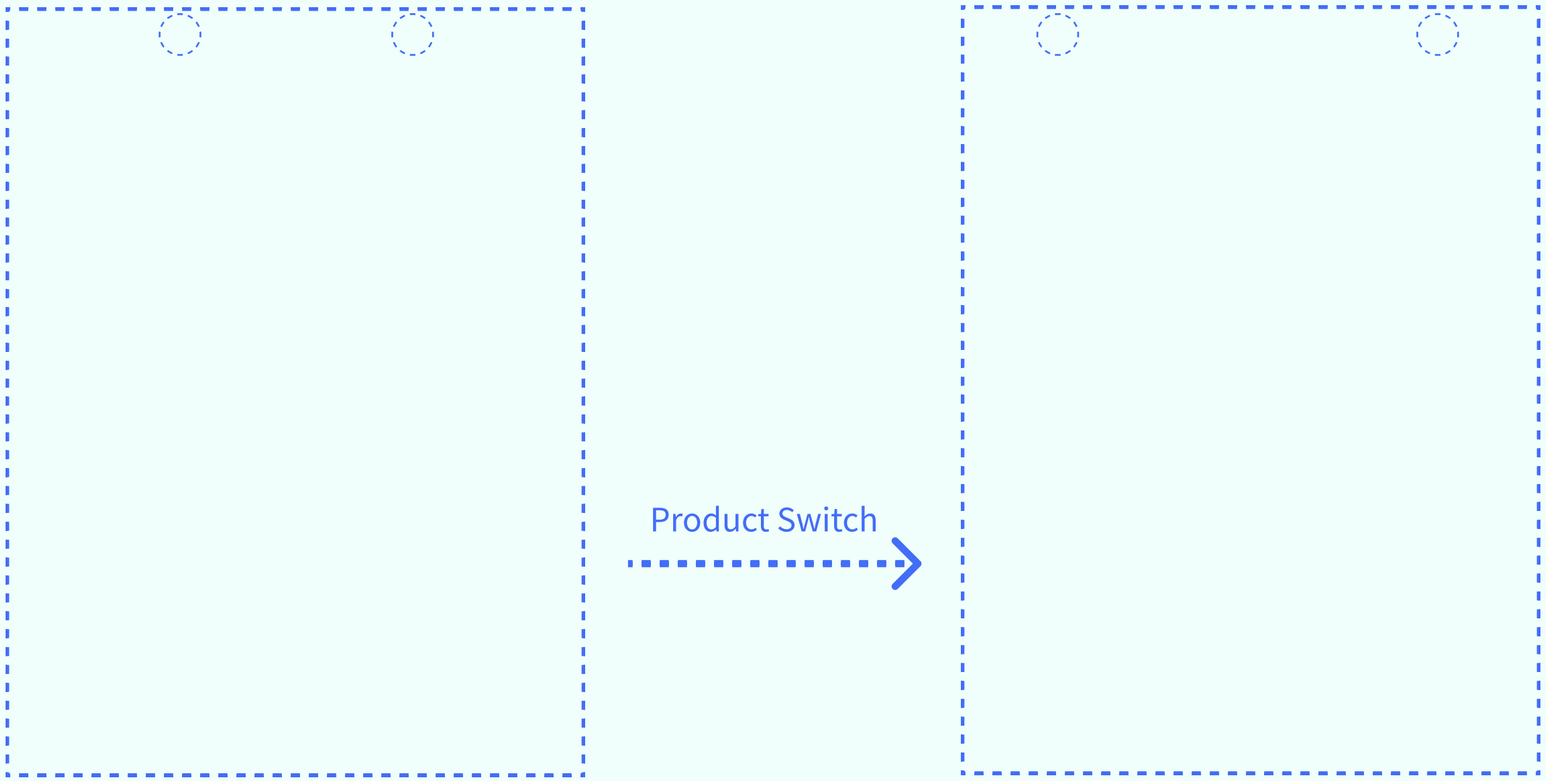
A joystick provided more movement than necessary, but was still a viable option.

A wheel certainly allowed for left/right movement but also had a rotational aspect that our dashboard does not have.

→

The most simple, but intuitive choice would be two buttons large enough to be pushed by the palms of their hands. Because this option was the most likely, we created a quick 3-D model to visualize it.

Everything combined...



We integrated our ideas about the physical control onto the dashboard by starting to design the motion that the control would support. The left and right physical push buttons would visually align with the left and right buttons next to the product names, giving the viewer feedforward. Pressing on the buttons would switching from the starting frame (left) to another product (right). To view the actual motion, follow the link to this video.

We brought our new contextual changes to the feedback session.

The simple control was well-received. Although it might not be inventive, it also allows the stakeholders to effectively receive the information they are likely to be looking for.

The motion being tied across components also made the dashboard more cohesive, and the staggered presentation didn’t overwhelm the viewer.

Since our components were now synced on a time basis, we needed to consider how we could represent time on our dashboard.

6

FINALIZING THE PROJECT

We polished up our final dashboard and control.

We added a line that goes across the product sales over time graph that indicates the time lapse for all product related motions.

We also created a rendered view of the control in relation to the dashboard to show the mapping of physical control to it’s digital counterpart.

To view all iterations of motion including the final version, follow this link to the videos.

7

PITCHING TO A STAKEHOLDER

Show, not tell.

In our initial pitch, we described each section of the dashboard while addressing the specific user of whom the feature would benefit. Although this approach provided a thorough overview of our dashboard. We were telling instead of showing. So in our final pitch. We walked through three key scenarios that lead the users through different features of the dashboard and show how the users might infer deeper insight by connecting information across the dashboard.

During the final pitch we received many positive feedbacks and questions that pointed to areas for further clarification.

In addition, we showed and described our dashboard in context at the beginning of the pitch.

We received feedback on the clean layout and clear hierarchy. The motion animation was also well received with a special shout out to the movement of the word cloud.

Yet it was unclear how “total sales” and “sales growth” in the spider graph was represented by percentages as indicated in the graph.

8 FINAL REFLECTION

CONCLUSION

As common as dashboards are to the world of technology, we've learned that designing one is actually quite difficult. If done well, we think that data can ultimately represent people's stories and experiences, and that's what we aimed to do in our dashboard.

Beyond the initial design of the dashboard, we found the motion, physical control, and pitching aspects to be equally as difficult. We learned that we should use motion to show more information over time, instead of using it as decoration. As for the physical control, we had to carefully consider which information to prioritize — what was the most important information that a physical control could help display?

Lastly, we were pushed to write a pitch specifically for the stakeholders. Framing our pitch in a scenario was not something any of us had done before, but was crucial to help convince the stakeholder that our dashboard was a worthwile investment. All of these components ultimately helped us gain a better understanding of creating a dashboard with purpose, that served the correct context.