

Improved user experience for industrial machines

Imagine you are buying an Apple product. Sure, you might buy it because you like the look of it, or the operator system, but owning an apple product is so much more than just its use – opening the perfectly crafted box, the seamless integration over iCloud, the staff in the Apple stores. All these factors combine for a great User Experience. This thesis has investigated whether it is possible to achieve the same feeling for a machine, placed in a large, dark, industrial environment, where these values traditionally have played a very small role.

What the thesis concludes is that yes, it is possible. The project resulted in a physical-and a virtual prototype using computer aided design software improving these aspects. For the company, the prototypes serve as a great basis for design-decisions to be made going forward during the autumn. Perhaps a more important conclusion was that these subjective values are growing more and more important in these so-called business-to-business industries.

Research from established firms like McKinsey and Bain suggests that subjective values – gut feeling so to speak, are playing a larger role. In the end the purchase decisions are made by humans, not robots or computers, and therefore the same things that matter when you purchase a new phone apply for these companies. Ask yourself why you buy an iPhone over a Samsung or vice versa. Is it because you know the exact specifics of the phone? That the 30-megapixel camera will take a slightly better photo? Probably not.

In an industry where the user experience has played such a small role traditionally and price/performance have played a much larger role, most of the companies have simply made a rip-off on the company's design. The current design was established during the mid 1990s and is still used today, this has led to so many copies that it is difficult to separate the company from the competition. This was the first problem to address - a new design must be more difficult to copy.

Secondly, there are many needs related to the daily interaction with the machine that have been known for many years but have not been addressed. Improving factors such as user friendliness and ergonomics are seen as a game-changer, and not addressing them will likely cause the company to sooner or later fall behind their competitors, if they have not already done so...

The thesis looked at what could be done to improve the brand of the company, and what could be done to improve the daily interaction of the machine for the operators. In a way, there were two different target groups: the company and their end users.

The product development method used for this project was Lean Product Development. I knew little about lean previously, but the findings about the process I hope will serve as inspiration for similar projects to come. It shares many similarities with other design methodologies, like human centered design and by understanding them, you are half-way there in terms of utilizing the full potential of lean product development.

For the physical prototype, a rather substantial budget was allowed to mainly purchase sheet-metal parts. What was a bit surprising however was what the company liked the most: the acrylic plastic sheet that I had purchased at Bygghuset, cut with a Biltema saw, foiled in blue screen intended for cars and then glued on with superglue – showcasing that a little bit of handywork and ingenuity can take you a long way.

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