

Design for Co-creation: Ultra-Personalisation of Philips Electric Breast Pump

Since everyone's body, needs, and goals are unique, frequent and close interactions with unsuitable products can result in negative physical and mental experiences. Yet breast pumps are still mass-produced products, and finding the right product for themselves can be challenging for mothers. As a result, a new design strategy, product personalisation, is offered to address the problem of users' particular demands not being satisfied.

However, along with personalisation comes the involvement of users in the design process, which changes the relationship between the company and consumers. Therefore, there is a need to conduct research on the interaction of the personalization process from the user's perspective regarding the co-creation experience to align with other aspects (e.g., data analysis, manufacturing) of development within the UPPS (Ultra-Personalised Products and Services) system.

This graduation project aims to help mothers better engage in the co-creation process to obtain a more personalised breast pumping product that truly fits their needs. To design a co-creation experience that can motivate participation, research activities were carried out to understand mothers' needs and concerns regarding breast pumping from multiple perspectives and to explore appropriate design opportunities across the whole breast pumping journey.

Challenge for mothers to co-create breast pump

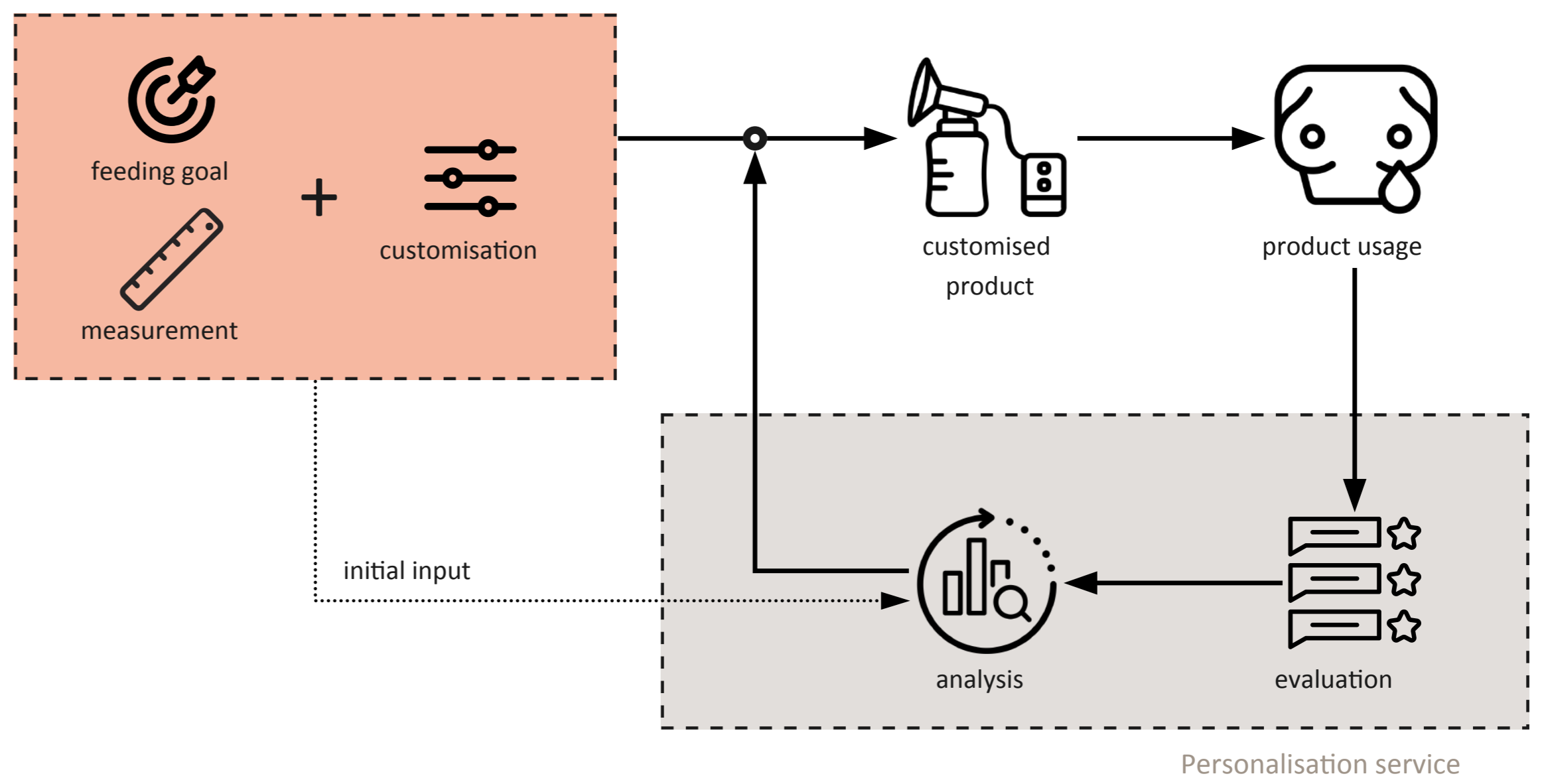


The user research revealed that it could be challenging for inexperienced moms to articulate their needs to get personalised products. In addition, the mother's high reliance on medical professionals in the early stages of childbirth shows that the co-creation of unfamiliar products is even more difficult.

To overcome this problem, the goal of the design phase was to design a supportive and informative process that guides mothers to finish the task easily within co-creation. The design should provide an experience that mothers can feel secure, as easily facing unknown challenges with the support of medical professionals.

The idea ultra-personalisation product service system

Product customisation



Breastfeeding and pumping is a complex behaviour, and there will be corresponding product needs according to each individual's situation. However, changing needs combined with a lack of relevant experience make it difficult to provide a perfectly matched breast pumping product to the user at the outset. Therefore, when applying UPPS to breast pumps, it should not only provide consumers with a perfect fit when they buy the product. Ideally, it should also work closely with customers to adapt to their changing needs and continually offer more personalized products or services to meet their individual needs. The ideal personalised pumping journey should include two parts, the initial product customisation and the subsequent personalisation service. First, the user performs product customization and body measurements to input initial product requirements and user profiles. Second, users will evaluate the customized product after using it to understand whether the initial settings meet their needs. Such a feedback loop allows users to continuously review their breast pumping experience and adjust feeding goals as needs change.

Product customisation

Unlike the traditional form of customization, the question and answer method are used to understand consumers and recommend personalized product configurations, which can reduce the confusion of users when choosing. However, this move may lose the trial and error exploration to understand their own needs. Therefore the association of input and output needs to be informed.

Consumers can avoid confusing product choices by answering questions about their own experiences.



Measuring interaction

User willingness to participate in body measurement is influenced by how it is performed. Measurement activities need to take into account the accessibility of users. If users are required to travel to a specific location or involve more people in the activity, the willingness to participate may be reduced. Simple tasks that individuals can complete independently are more in line with mothers' expectations, especially considering the limitations of mothers who need to take care of children.

However, the challenge for users to complete the measurement alone comes from the fact that the measurement activity may have a certain degree of difficulty, making it difficult for the user to complete the measure independently or having a certain learning cost. Therefore the following design criteria are proposed.

Provides a self-scanning toolkit to improve execution efficiency.

Provide sufficient and clear guidance to support users to complete the measurement process by themselves.

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