

Fibo - The Pregnancy Wearable

An exploration of how to collaborate across disciplines when creating a new hardware device for the sport, lifestyle or wellness domain.



INTRODUKTION

Fibo x IdemoLab

IdemoLab, FORCE Technology collaborated with First Bond Wearables to help explore and develop Fibo - a pregnancy wearable for partners of pregnant women.

The focus of the collaboration, which has been supported by IdemoLab's design thinking based "8-Step" innovation method, has been to help find and engage other partner-companies in this development as well as to utilize the modelling and in-context testing capabilities of IdemoLab.



Concept

First Bond Wearables is a Danish startup which is developing a wearable for expectant parents to use during the last trimester of the pregnancy.

Their solution is a smart bracelet called Fibo, which aims to share the experience of pregnancy by providing partners of pregnant women with the opportunity to know when the baby is moving and kicking inside the belly, through real time, haptic feedback on the wrist.

Although this product is related to a medical area (pregnancy) it is a novelty device, aimed at sharing the experience of pregnancy.

The device relies upon a so-called 'mama-device' made by a 3rd party. This mama-device is a patch for the pregnant woman to wear, and this is a medical product.



Stakeholders

As this product relies on a mama-device one of the most fundamental stakeholders is that of the 3rd party producing the mama-device.

Two have been identified but were busy when partnership was proposed. Therefore, a series of explorations into other possibilities was completed and is described later.

Additional stakeholders include a variety of funding partners, a design house, and a service design studio.

Challenges

One of the main challenges with Fibo was to realize the concept - how it feels to the partner to experience the baby's movements on their wrist. Realizing this with hardware was a challenge.

The initial concept was a set of four pearls which rotated against the wrist, however this posed significant problems in terms of production considerations, motor size, and battery life. Instead we looked to other new technologies including haptics and memory wire to create similar sensations.

Although we could not initially partner with the desired 3rd parties, we did find collaboration opportunities in different domains. This was a key learning from this project.

By seeking technologies in similar but different domains, we could not only learn from them, but also use their technologies to help answer some of the challenges.

Collaboration Opportunities

Instead of using a 3rd party prenatal monitoring patch, we turned to:

Cortrium

cortrium.com

A Danish company which is developing the C3 Holter monitoring patch which records high quality 3 channel ECG, with no external wires, and standard ECG electrodes.

HAPY medical

hapymedical.com

A consultancy offering a CE marked Holter monitor, AMORS/AMS3000, with a 3D accelerometer measuring and recording capability[1] and a user-event button.

zPatch

jarrodknibbe.com/files/zPatch.pdf

Small fabric sensor patch that can be sewn or ironed onto existing clothing, developed by a research team at Copenhagen University.

Collaboration

From a collaboration standpoint, First Bond Wearables engaged with many different partners throughout the process and participated in a series of startup competitions and programs.

When developing a new device, there may be many stakeholders to ensure the right expertise is brought in at the right time. One such collaboration is described here, to demonstrate how an ecosystem of collaborators can lend to the overall expertise of the project.

Collaboration Demonstration

Væksthus Hovedstaden

startvaekst.dk/vhhr.dk/forside/0/2

Has a program, DigitaliseringsBoost to help companies developing new digital solutions. They offer a 33% financing solution wherein companies can apply, with partners to receive 33% of the hours they put into the project to be paid out. In this way, it offers startups who have little in the way of capital, to engage with other companies.

Holscher Design

holscherdesign.com

A Danish design agency which specializes in creating functional, beautiful, and useful objects joined the team to help design the look and feel of Fibo.

Tackle Studio

tacklestudio.com

Specializing in service design, joined the team to investigate the touch points of Fibo, where does one acquire Fibo? How does the rental service work? How do you return it?

Software & Communication

We were also seeking a software and communications specialist once we had established who would provide the device for the mother, so that the data from the patch could be sent to Fibo to initiate movement.

Conclusion

In this short report, we have introduced the project, the partners and the challenges. A longer and more detailed report is available for [download here](#) which covers the pros and cons of various startup support programs and competitions, the technology evaluated and selected and why, the partners and how they contributed, and a description of the customer landscape.

We also present some learnings, which we include here to help other companies who are working across disciplines, with multiple stakeholders in developing a new smart product.



10 Takeaways

This process has been lengthy and involved many stakeholders. As we write this report, we feel that we can present 10 takeaways for other companies embarking on a similar journey.

- 1 There is always a consultant who will help you, ask others who they have asked for help.
- 2 Make a list of questions: What is it you need to know?
- 3 Sometimes your dream partner is unavailable, and so is plan B.
- 4 Save all the applications you do, you can always re-use this material.
- 5 It is extremely useful to be able to both quickly pitch and casually talk about your product.
- 6 Start prototyping early, and often. Fail fast.
- 7 Ask everyone for help but be respectful of their time.
- 8 Seek technologies in similar domains to learn from them.
- 9 Don't overthink applications.
- 10 Say yes to opportunities and see where it will take you.

IDEMOLAB

Who are we?

IdemoLab bridges the gap between technology and design.

We focus on the important early stages of the design process and strive to create meaningful experiences for users and customers.

IdemoLab uses electronics as a design material and explores the properties of electronics, merging them with traditional design materials to explore new possibilities.

Our team specialises in facilitating and creating innovation for technological solutions. We live in a world of early adopters and provide knowledge and access to new and upcoming technologies. We curate and cultivate a culture of learning, exploration and experimentation and will provoke new discoveries through access to new knowledge and inspiration.

We help ideas meet the real world.



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