From KickSmart to BabyLoop: A Design Process

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What is KickSmart?

KickSmart is a **wearable fetal movement monitor** device developed to improve wellness for pregnant mothers and their babies.
The initial proposal was to focus on market research and identify different potential market segments.
“Healthy pregnancy, reduced anxiety, in a clinically-validated, clever way"

-Jen Boland, KickSmart
Initial Concept

- Wearable band
- Kick counting
- Simple application
- **Medical device**

- Product evolution from findings – KickSmart to BabyLoop
Design Timeline

1/20  Project Start
1/29  Meeting with sponsor
2/12  Interviews
2/25  Concept changed
3/19  Final product design

Prototyping
Primary Research

From Clinician Interviews

Do not want the data to be sent to them.

Movement is only one of the measurements.
From Mother Interviews

“Personally, not very interested in the product at all, due to strong fetal movements.”
- Expecting Mother

“I will become too sensitive from the data.”
- Recent Mother
Primary Research

From Mother Interviews

I will be happier, if I can receive messages from my baby.

- Recent Mother
Secondary Research

• Medical validity
• Business case
• Competitive analysis
Market Size

Global Retail Sales of Products Specified for Babies and Children

- Health and Personal Care
- Toys
- Food
- Clothes and Footwear

Note: Estimate/forecast from 2012
Source: Euromonitor International

$30B Market
3% CAGR
Disposable Income

Annual Household Disposable Income and Population under the Age of 5 in 2010

- USA
- Japan
- EU
- Brazil
- Russia
- China
- India

Annual Household Disposable Income (US$)

Population under the Age of 5 (million)
Competition
Competition

Competitor Products

Source: Amazon.com

- BellyBuds
- Sound Beginnings
- Nuvo Ritmo
- Graco Prenatal Listening
- Summer Infant Heart-to-Heart
- MoneyDop

- BabyBelt

Legend:
- ○ Music Player
- ○ Prenatal Listening
- ○ Heartrate Monitor
- ○ Combination

Cost ($)
Competition

Competitor Products

Source: Amazon.com

- BellyBuds
- BabyLoop
- MommyDop
- Sound Beginnings
- Nuvo Ritmo
- Graco Prenatal Listening
- Summer Infant Heart-to-Heart
- BabyBoat

Legend:
- ○ Music Player
- ○ Prenatal Listening
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Design Concept

• Filling market needs created by existing products on market

• Leverage technology, but needs more than just counting kicks

• Enhancing the quality of pregnancy
Design Process

Simple: Only Kicks

Complex: Lots of Data

Incorporation of Music

Feedback Loop

Design Process

Babyloop
Final Design: What is BabyLoop?

- Fetal Kick Monitor
- Heart Rate Monitor
- Fetal Music Player
Final Design: High-Tech Monitor Band
Final Design: Features

Decreases stress & creates an enjoyable experience

Unique Feedback Loop

Multiple Sensors with High Accuracy

Comprehensive App
Feedback Loop

Mother selects music to play

Mother sees activity corresponding to music choices

Speakers transmit music to baby

BabyLoop records response with sensors

Baby responds with movements and heart rate
Application Wireframe

Welcome!
Week 27
- You are now in the 3rd trimester!
- Your baby is around 2 pounds
- Expect to start feeling hiccups!

Movement Tracker
Kicks today: 8
- Kick History
- Live Stream
- Contractions

Music Player
Heart Rate Tracker
- Current rate:
- HR History

Profile
- Name: Jane Doe
  - Age: 28
  - Conception Date: 09/01/13
  - Previous children: 0
Conclusions

- Concept Change
- Rebranding
- Significance
Glimpse of the future...