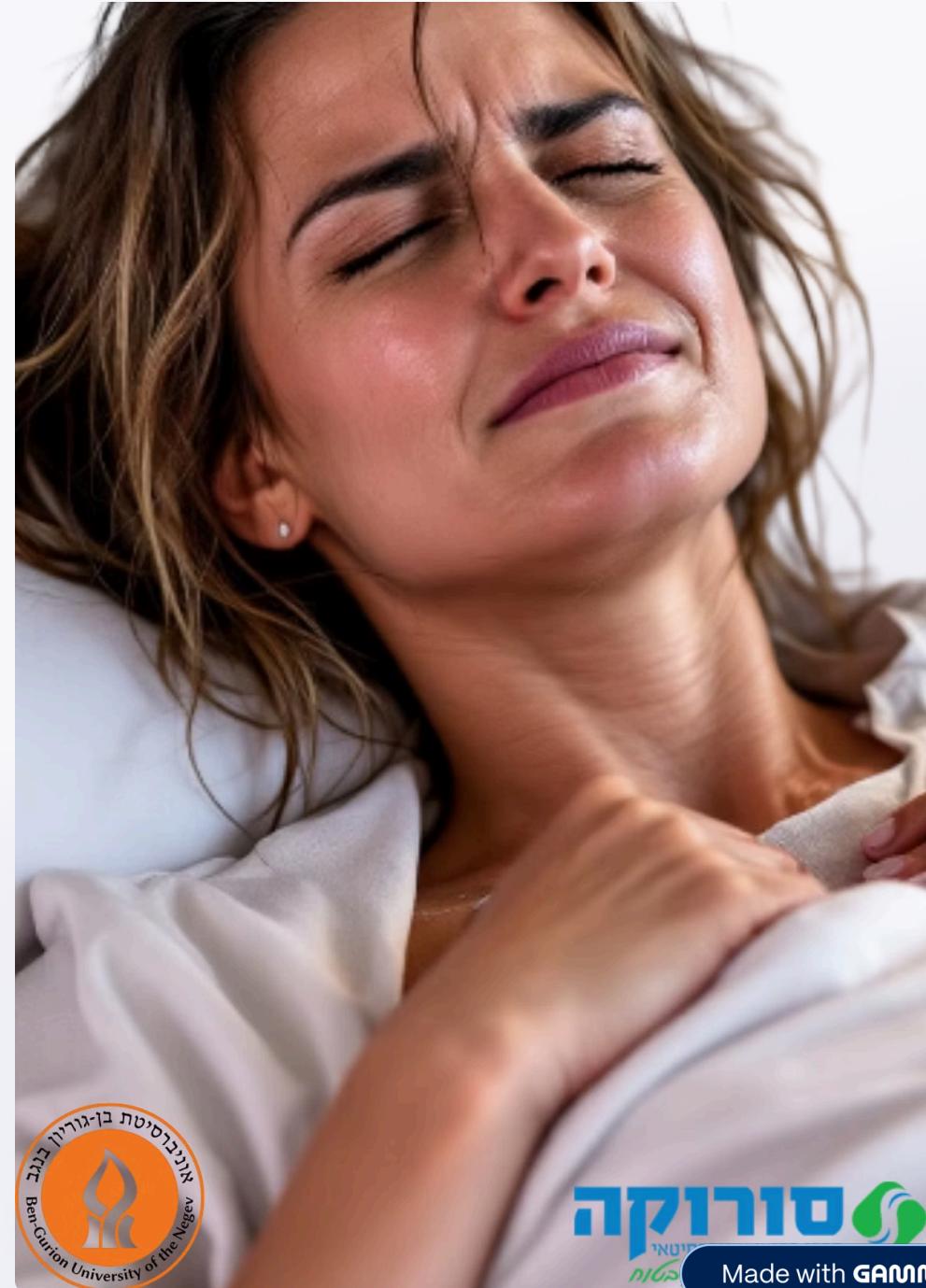


Doula.AI



-1-



Stress Factors



Past Experience



Fear of Pain



Stressful Environment



Unexpected Evolutions

The Problem



Limited Support

3.5/1000

Midwives to Births Ratio



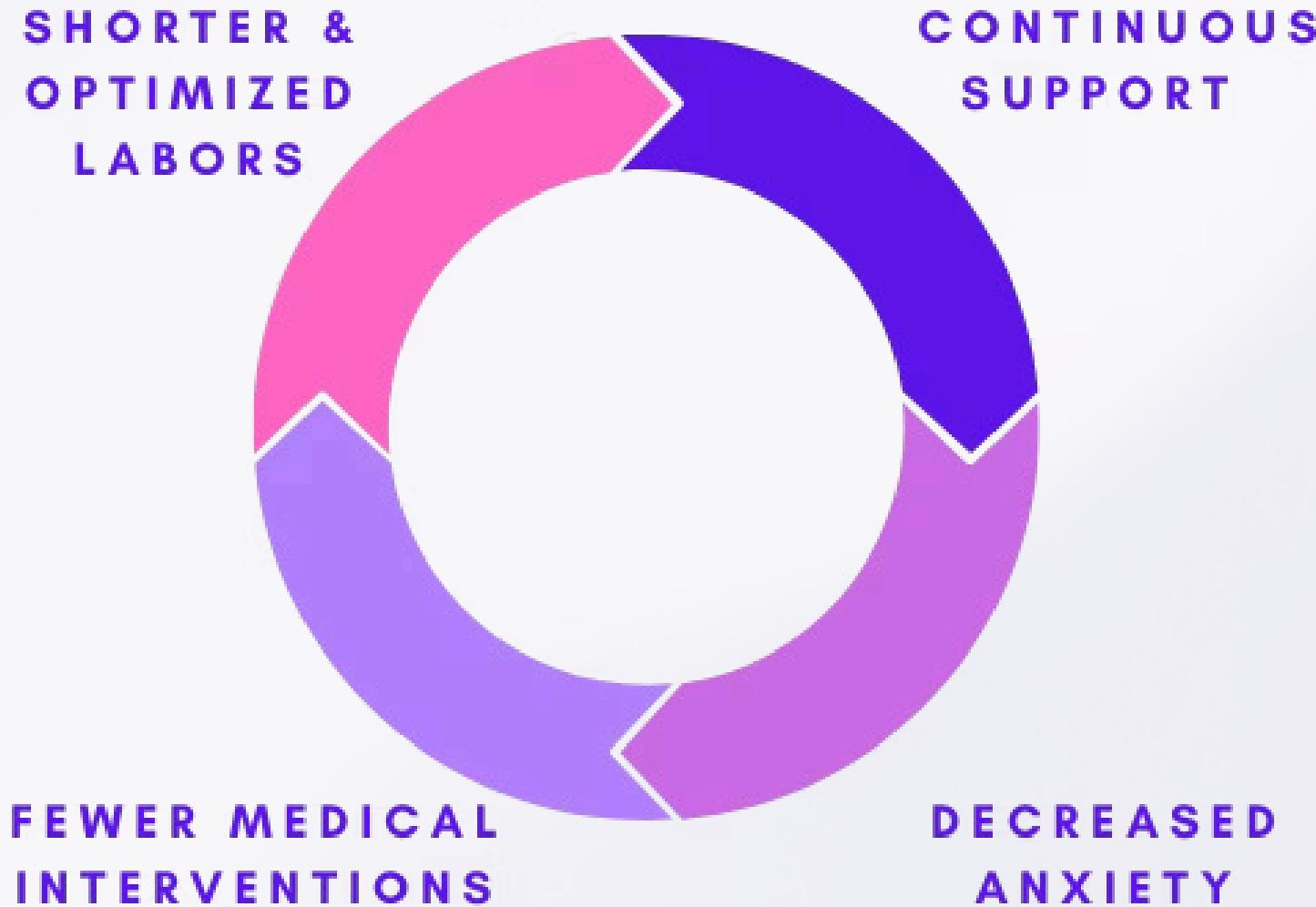
Anxiety

1/10

Experience Fear of Labor



Motivation



Doula's effect on birth outcome

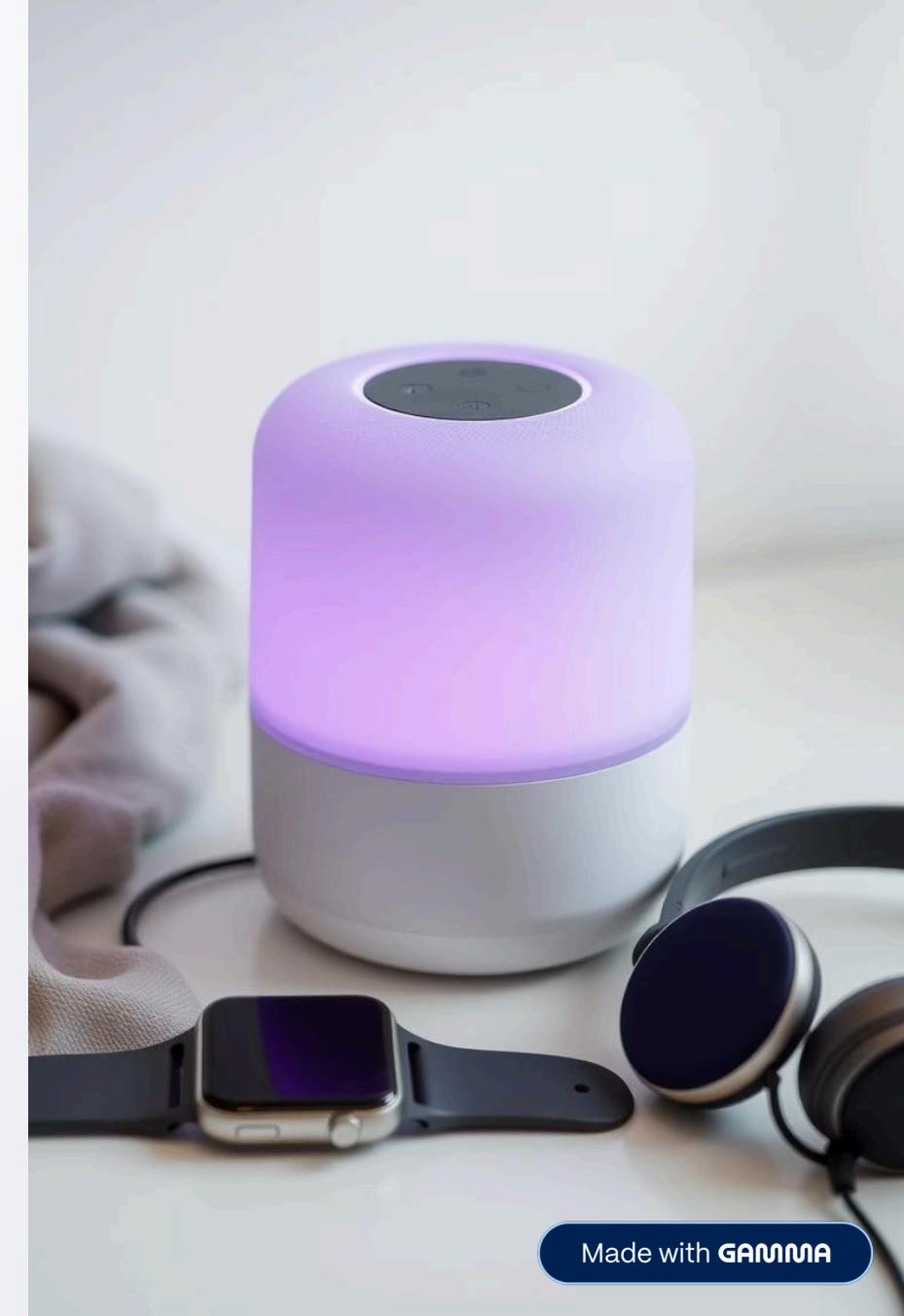
Our Product

AI engine

Smart-Watch

Home-Pod/ Headphones

-5-



Our Solution

Biofeedback



Voice Command



Response



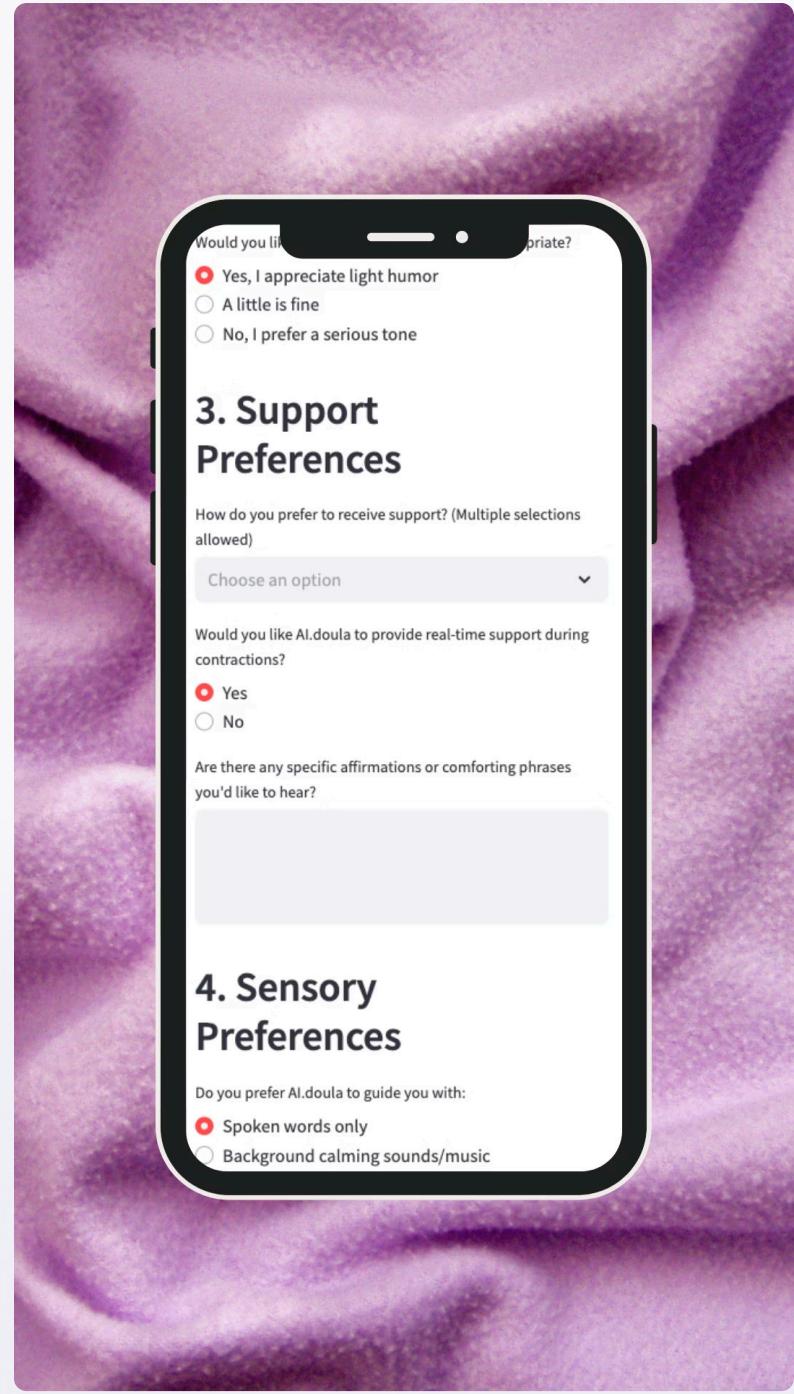


Doula.AI In Action

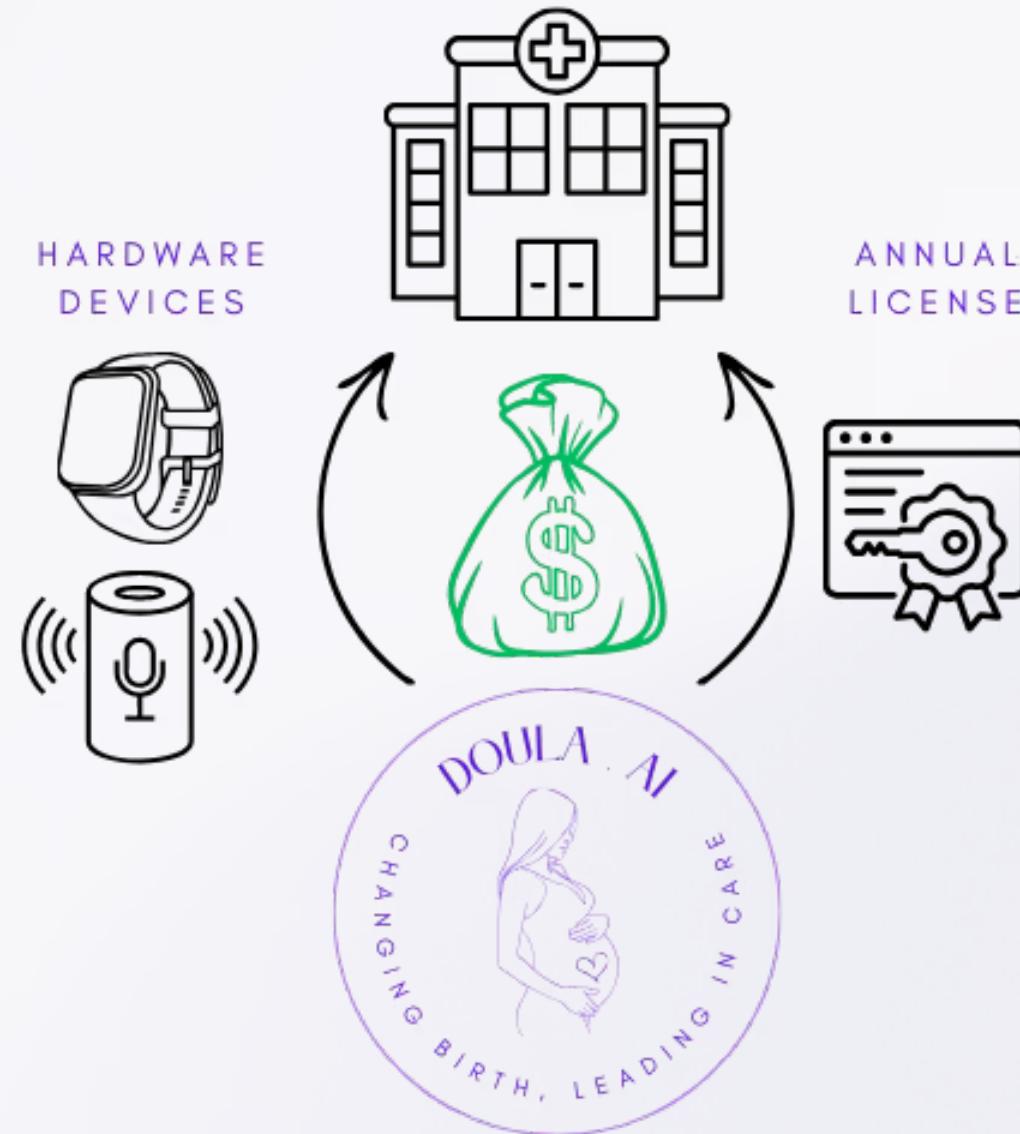
Vimeo
2025-03-09_15-34-15 (1080p)

-7-

Personalized Care



Business Model



Competition Analysis

Fetaures	 VR glasses	 Mental Chatbot	 Smart Rooms	 Doula	 Doula.AI
Personalized	✗	✗	✗	✓	✓
On demand	✓	✓	✗	✓	✓
Comfort	✗	✗	✓	✓	✓
Smart System	✓	✓	✓	✗	✓
Physical Aid	✗	✗	✗	✓	✗
Price	\$\$\$	\$	\$\$\$\$	\$\$\$	\$\$

Competitive Advantages

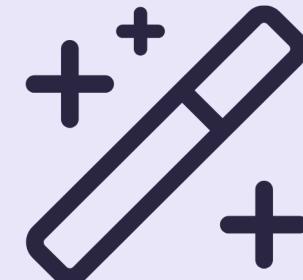
Clinically Supported
Research



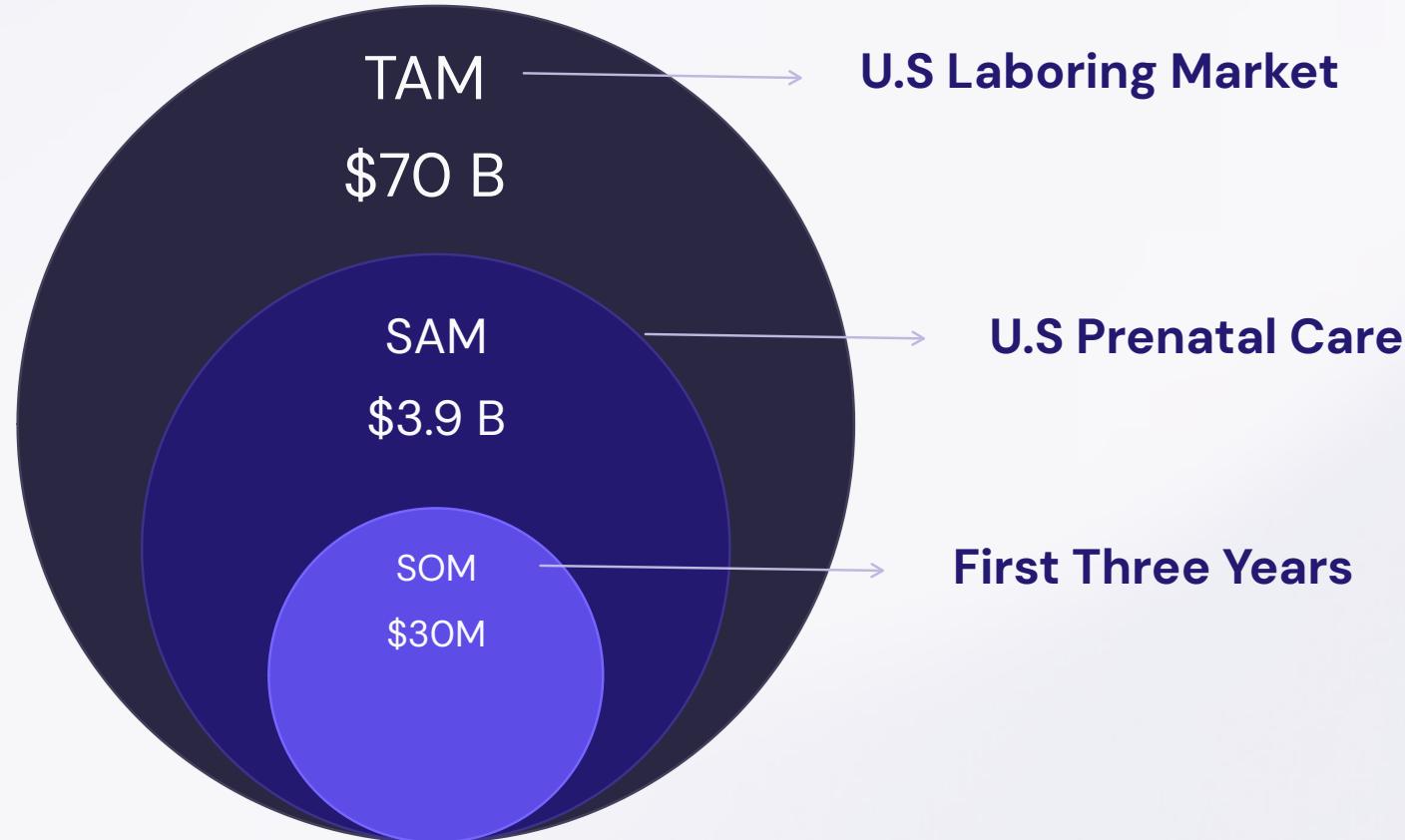
Active Interaction



Seamless Integration



Potential Market Size



[Labor Market](#)

[Prenatal Care](#)

Financial Aspects

\$3.2M

ARR – Third Year

25%

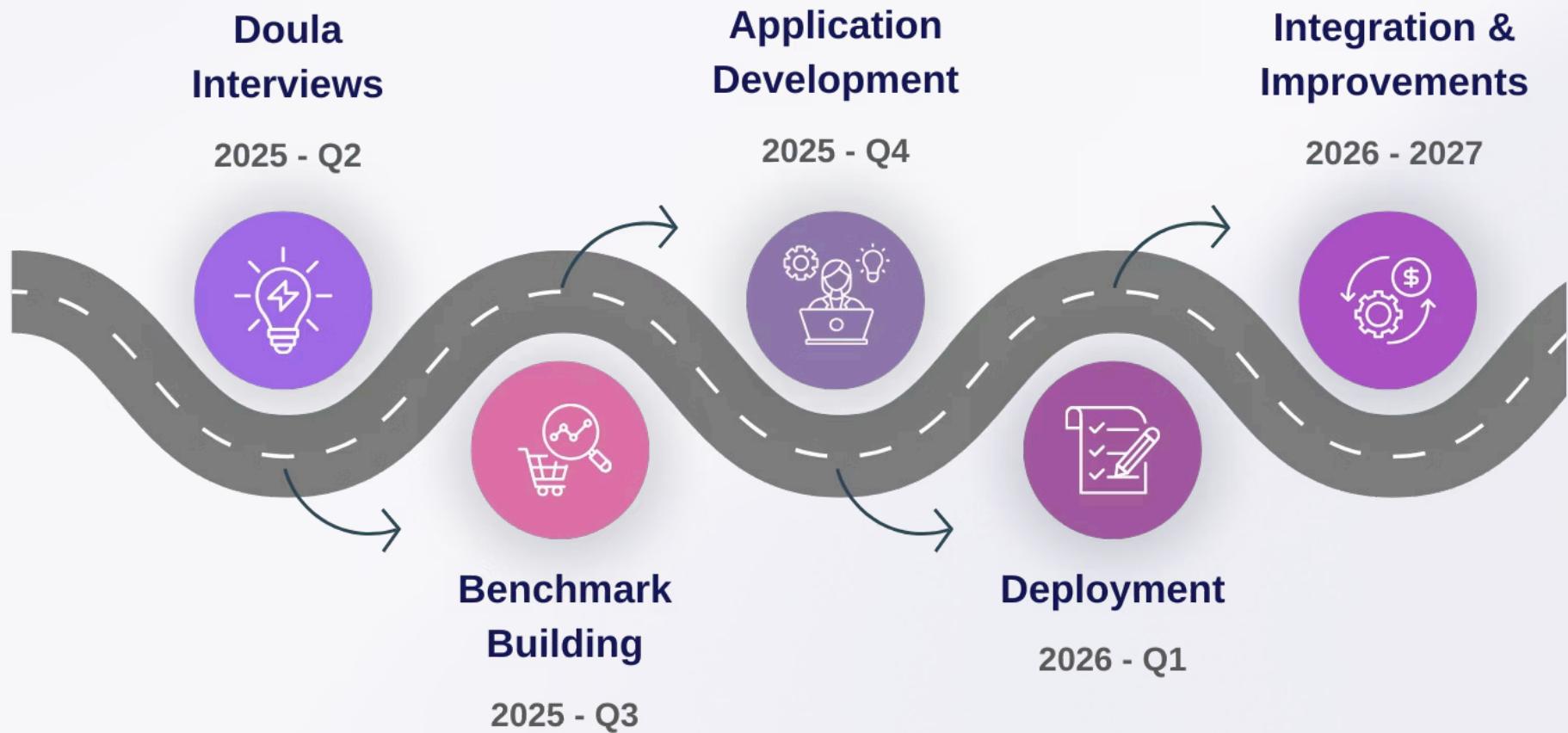
IRR

Regulation

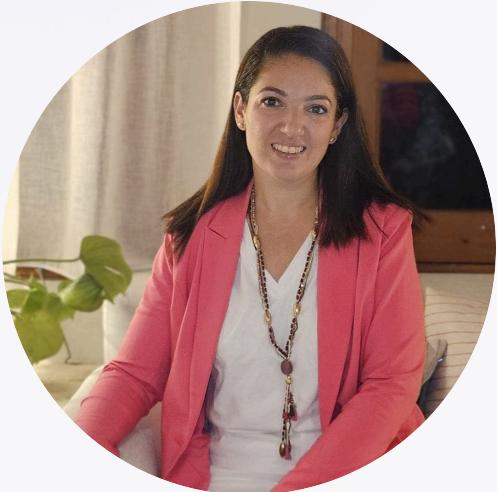


Data Privacy & Security for Sensitive Information

Road Map



Mentors



Dr. Noa Haleluya

Gynecologist - Soroka



Dr. Gil Gutvirtz

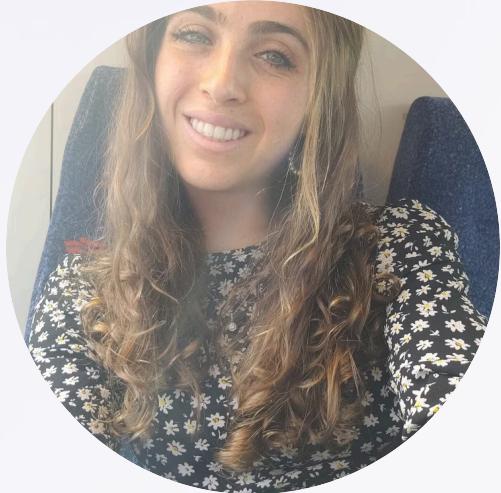
Gynecologist - Soroka



Dr. Anat Shperberg

Head of Bio Innovation Unit - BGN

Our Team



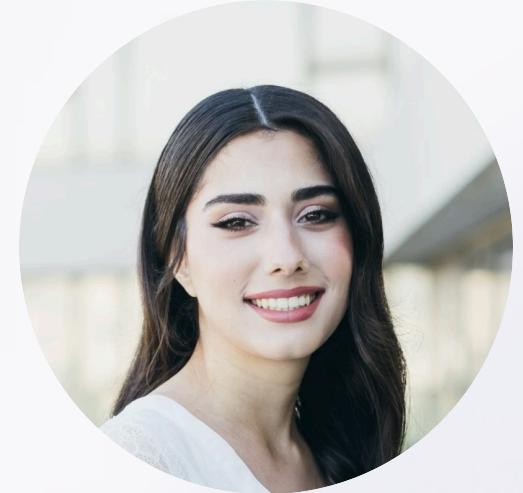
Hadas K.

Healthcare Systems Management & Nursing



Lih S.

**Management & Sociology
Anthropology**



Shir R.

Software Engineering



Tom S.

Software Engineering



Naama M.

Data Engineering



Nelly D.

Biomedical Engineering

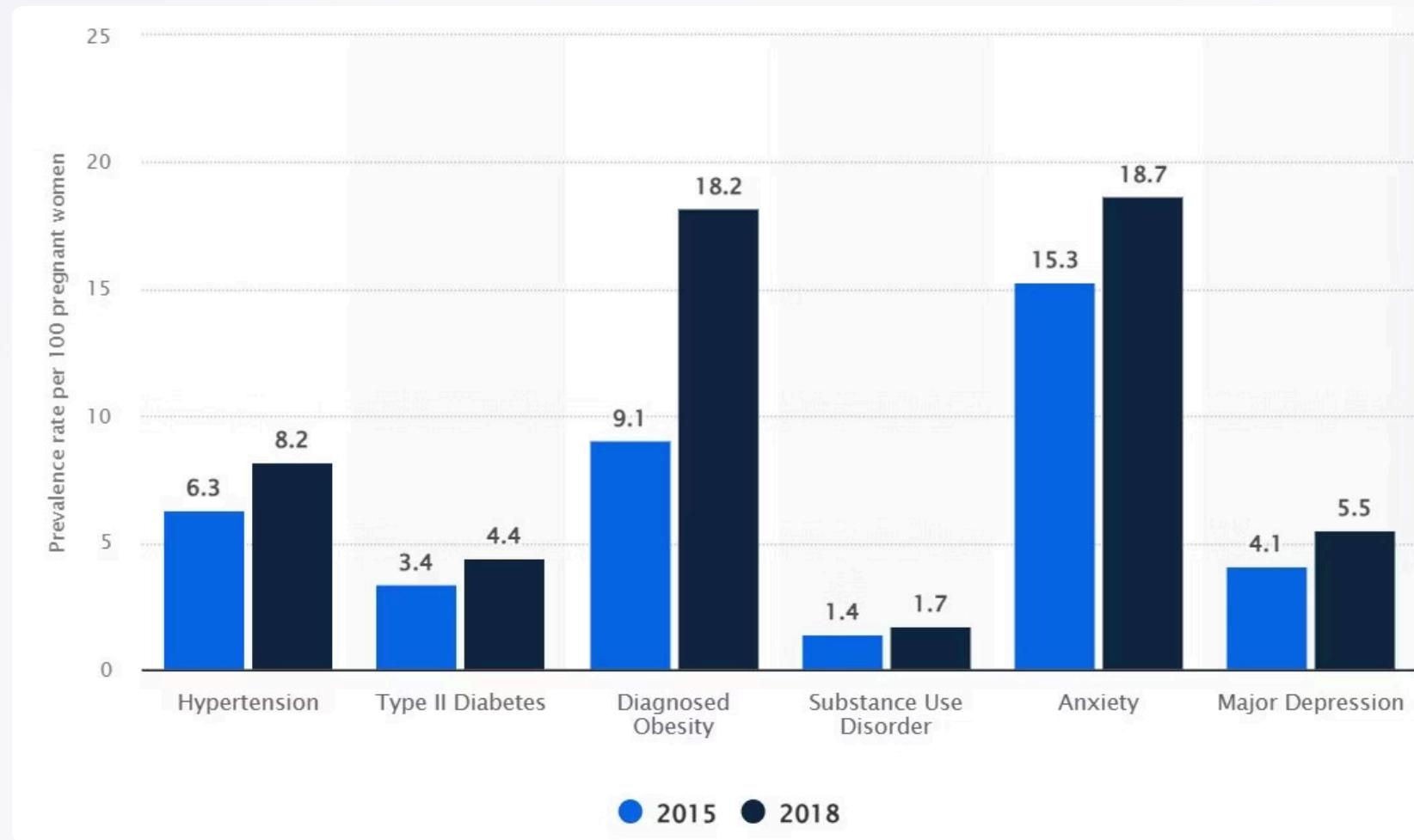
Thank You!



Appendix

- Appendix (1) - Health Trends In Labor
- Appendix (2) - Software Tools
- Appendix (3) - Hardware Tools
- Appendix (4) - Management Tools
- Appendix (5) - Use Case Diagram
- Appendix (6) - Preliminary Requirement Specification
- Appendix (7) - Sequence Diagram
- Appendix (8) - Pre Labor Questionnaire
- Appendix (9) - 4P's
- Appendix (10) - NPV ARR
- Appendix (11) - Som Calculation
- Appendix (12) - Application Demo
- Appendix (13) - Application Demo
- Appendix (14) - Patents
- Appendix (15) - Targeting
- Appendix (16) - TLR

Appendix (1) - Health Trends In Labor



LL

RU

OC

Appendix (2) – Software Tools



Speech Recognition (STT)

Converts speech to text.



Text-to-Speech (TTS)

Provides calming voice responses.



Integration Capabilities

Controls ambient settings.

Large Language Model

Offers personalized support.

Appendix (3) – Hardware Tools



Smart Watch

Heart rate, respiration, blood pressure, and blood oxygen.



Home-Pod/ Headphones



Wi-Fi & Bluetooth Connectivity

Seamless connection with wireless devices. WiFi exclusively for software updates, while relying on Bluetooth for routine tasks

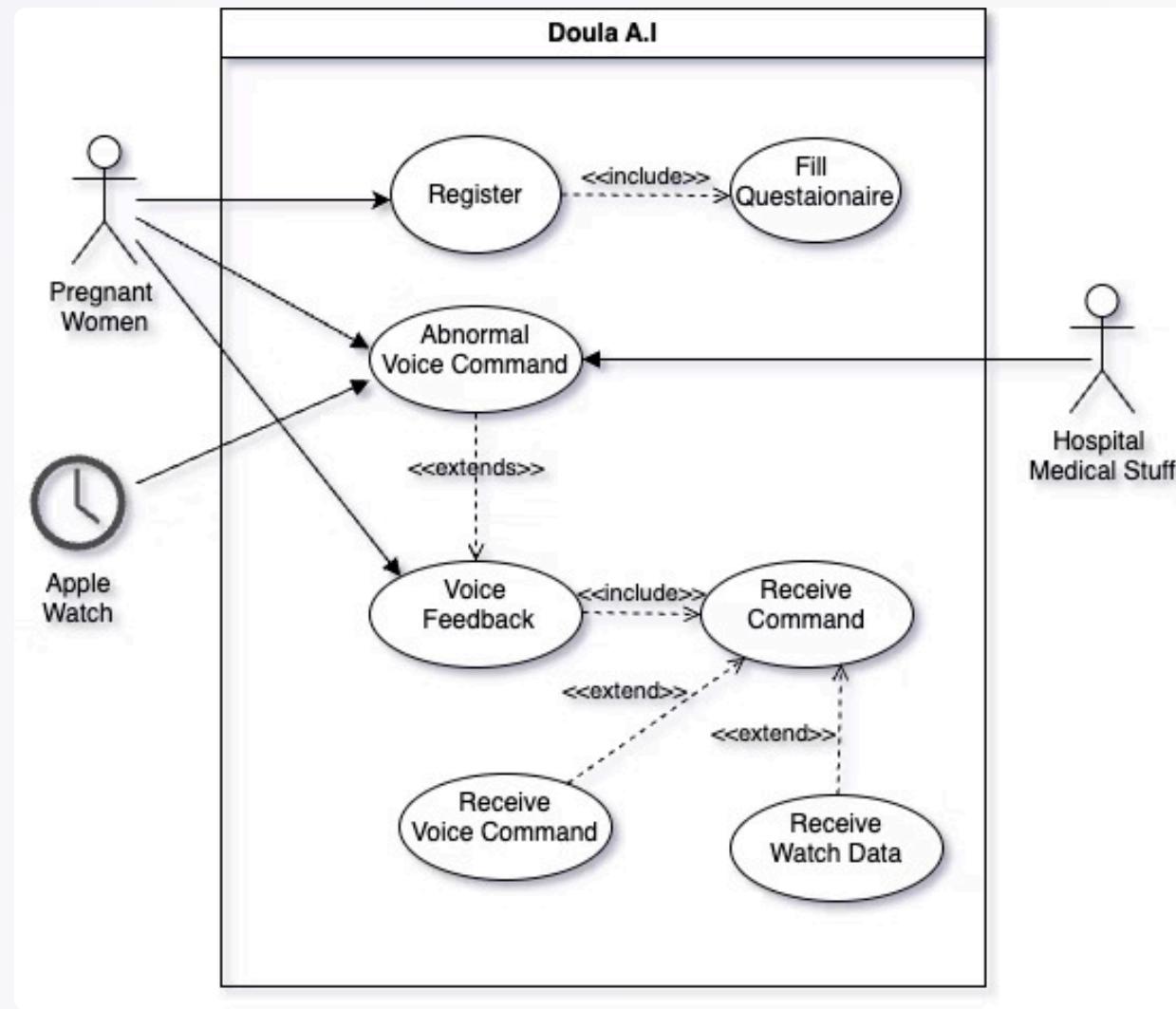
Long Battery Life

Extended power efficiency for prolonged usage

Appendix (4) – Development Process



Appendix (5(1)) – Use Case Diagram



Appendix (5(2)) – Use Case

Use Case #1: Register

- **Goal in Context:** Pregnant woman registers with the Doula AI system.
- **Scope:** Doula AI System
- **Level:** Primary Task
- **Primary Actor:** Pregnant Woman
- **Trigger:** Pregnant woman chooses to register.
- **Success End Condition:** Woman successfully registered.
- **Failed End Condition:** Registration unsuccessful.

Main Scenario:

- Pregnant woman initiates registration.
- Doula AI requests questionnaire completion.
- Pregnant woman completes questionnaire.
- Registration completed successfully.

Appendix (5(3)) - Use Case

Use Case #2: Abnormal Voice Command

- **Goal in Context:** Handle abnormal or concerning data and alert medical staff.
- **Primary Actor:** Pregnant Woman, apple watch
- **Secondary Actor:** Hospital Medical Staff
- **Trigger:** Pregnant woman provides a concerning voice input (or concering data transmits from the watch).
- **Success End Condition:** Medical staff notified about the abnormal condition.
- **Failed End Condition:** AI fails to identify abnormality or notify medical staff.

Main Scenario:

- Pregnant woman speaks an abnormal command.
- Doula AI recognizes the abnormality.
- Doula AI alerts the hospital medical staff.

Appendix (5(4)) - Use Case

Use Case #3: Receive command

- **Goal in Context:** Receive and process normal voice commands, including data from Apple Watch.
- **Primary Actor:** Pregnant Woman, Apple Watch
- **Trigger:** Pregnant woman speaks, optionally accompanied by Apple Watch data.
- **Success End Condition:** Voice command and/or watch data successfully processed.
- **Failed End Condition:** AI fails to process voice or watch data.

Main Scenario:

- Pregnant woman gives a voice command.
- Doula AI receives the voice command .
- Apple Watch sends additional biometric data.
- Doula AI processes both voice command and biometric data.
- Doula AI provides voice feedback to the woman.

Appendix (6(1)) - Preliminary Requirement Specification

System Objective:

To provide support and reassurance to birthing women during contractions through an AI-based voice assistant that responds in real-time to developments during labor.

Target Audience:

Birthing women in hospitals, especially in situations where medical staff are not constantly present in the room.

Key Functions:

- Connection to a monitor that detects contractions in real-time.
- Activation of calming voice responses based on the intensity and frequency of contractions.
- Personalization options for response style and messages.
- Ensuring data privacy and security.

Appendix (6(2)) - Preliminary Requirement Specification

Detailed Requirement Specification

System Components:

- **Monitoring Sensors:** Connection to a medical monitor to receive contraction data.
- **AI Module:** Development of a ChatGPT-4-based model capable of recognizing stress levels and providing appropriate responses.
- **User Interface:** A user-friendly app for installation on a smartphone or tablet in the delivery room.
- **Data Management System:** Secure storage of anonymized data to improve the system.

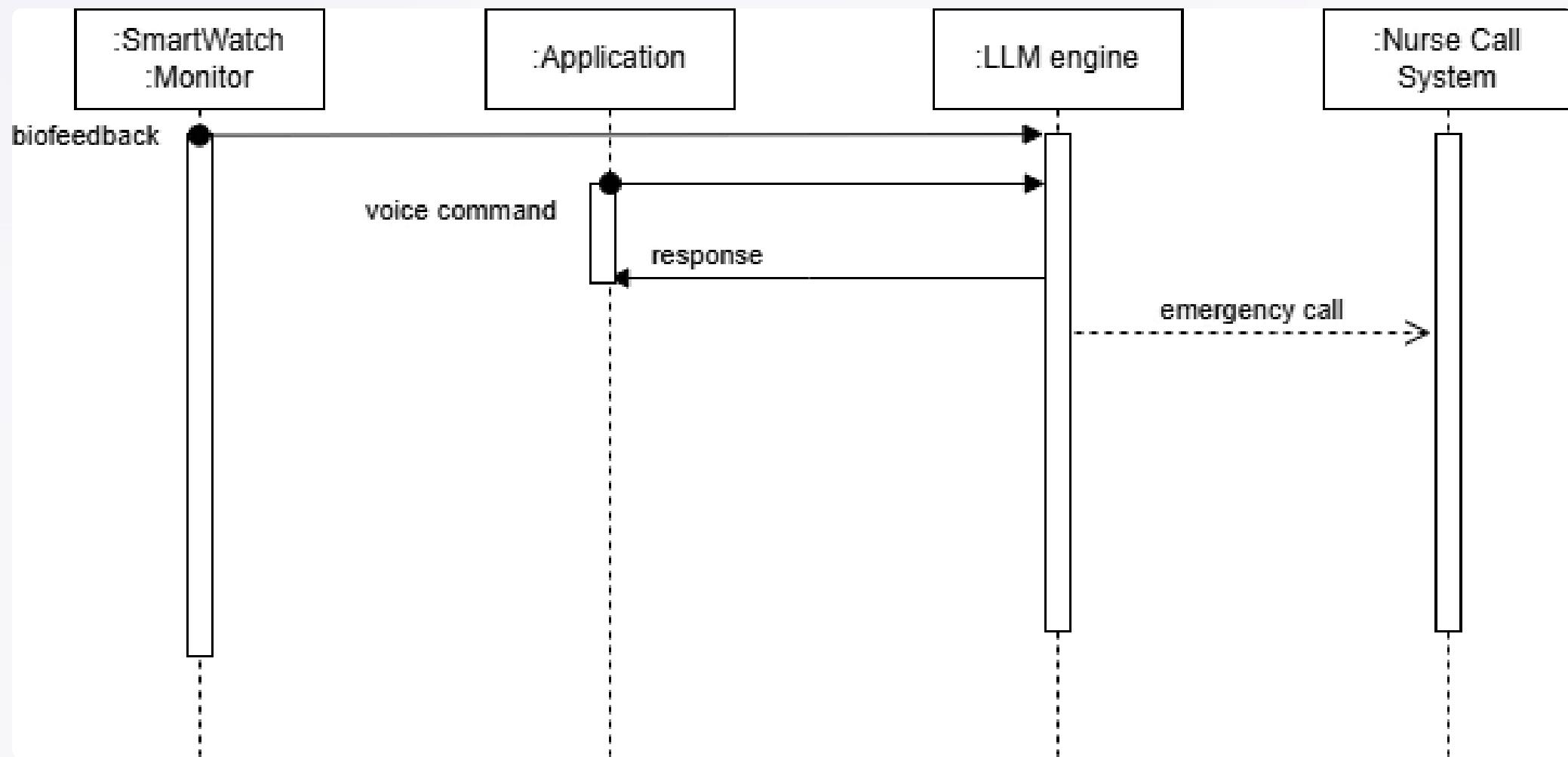
Operational Requirements:

- Voice response within seconds of detecting a contraction.
- Support for multiple languages and the ability to choose the type of calming response (explanations, encouragement, music).
- Automatic operation without the need for constant medical staff intervention.

Security and Privacy Requirements:

- Maintaining data confidentiality in compliance with

Appendix (7) – Sequence Diagram



Appendix (8 (1)) – Pre Labor Questionnaire



AI Doula Personalization Questionnaire

Helping us create a calming and supportive experience for you during labor.

1. General Information

Full name (optional)

Preferred name/nickname

Preferred pronouns

Expected due date
2025/03/10

2. Language & Communication Style

(You can select multiple options where applicable)

What language(s) would you like AI.doula to use? (Multiple selections allowed)

Choose an option ▾

What tone do you find most comforting?

Warm and gentle
 Encouraging and empowering
 Calm and neutral
 Other

Would you like AI.doula to use humor when appropriate?

Yes, I appreciate light humor
 A little is fine
 No, I prefer a serious tone

3. Support Preferences

How do you prefer to receive support? (Multiple selections allowed)

Choose an option ▾

Would you like AI.doula to provide real-time support during contractions?

Yes
 No

Appendix (8 (2)) – Pre Labor Questionnaire

Are there any specific affirmations or comforting phrases you'd like to hear?

4. Sensory Preferences

Do you prefer AI.doula to guide you with:

Spoken words only
 Background calming sounds/music

5. Personalization Based on Past Experiences

Is this your first labor?

Yes
 No, I've given birth before

Is there anything you'd like to avoid based on past experiences?

Do you have any fears or concerns about labor that AI.doula should be aware of?

6. Partner & Support System

Would you like AI.doula to offer words of encouragement for your birth partner/support person as well?

Yes
 No

If yes, how would you like AI.doula to involve them? (Multiple selections allowed)

Choose an option ▾

7. Additional Customization

Do you have any specific cultural or spiritual preferences AI.doula should be aware of?

Any additional preferences or requests?

[Link To The Questionnaire](#)

Appendix (9) - 4P's



Product

AI.Doula software and hardware.



Price

3000\$-3250\$ yearly subscription.



Place

Sold directly to hospitals.



Promotion

Marketing in hospitals and Medical conferences.

Appendix (10) - NPV IRR ARR

Development costs:

- Training with the help of 20 doulas for one month and a doula who accompanies throughout the entire development period.
- Development costs will be paid at the end of the first year.

Marketing costs: Marketing cost are based on the amount of hospitals we want to recruit as customers, as well as hospitals already using our services (due to competition).

Equipment: The hardware device will be replaced every 3 years.

Software Pricing: pilot price for the first year will be 28,000\$ per hospital, and the permanent price will 31,000\$.

Optimistic, pessimistic and regular scenarios were considered.

[Link To Spreadsheet](#)

Appendix (11) – SOM Calculation

25K

Labor Rooms in U.S.

\$250

System Cost per Room

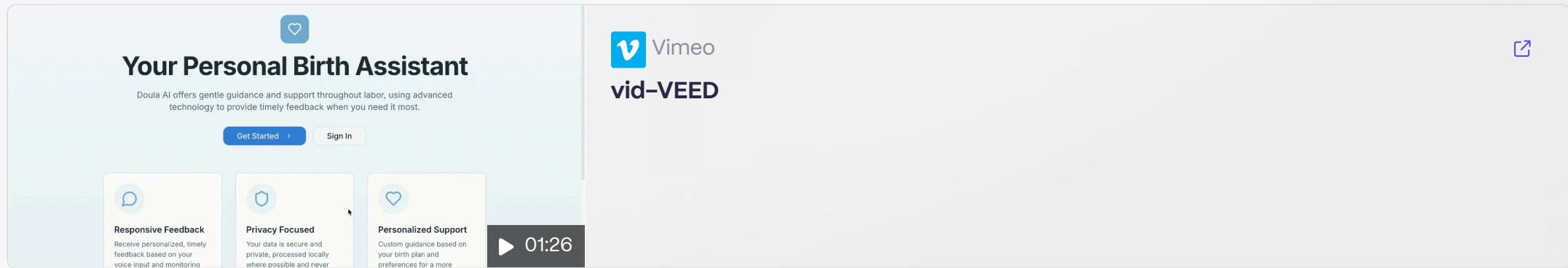
\$2.8K–3.1K\$

Application Cost per Room

\$30M

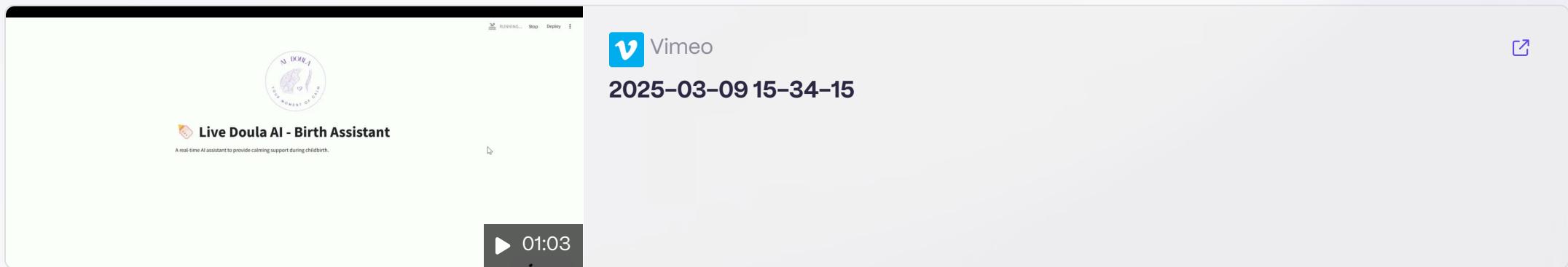
Addressable Market (0.75%)

Appendix (12) – Application Demo (2)



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Appendix (13) – Application Demo (3)



- Another illustration of the AI's response when the metrics were higher

Appendix (14) – Patents

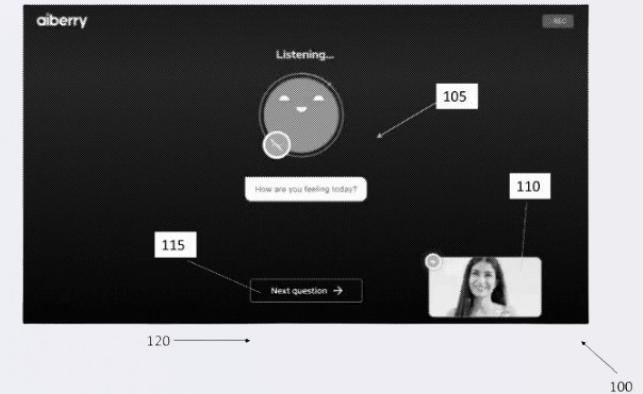
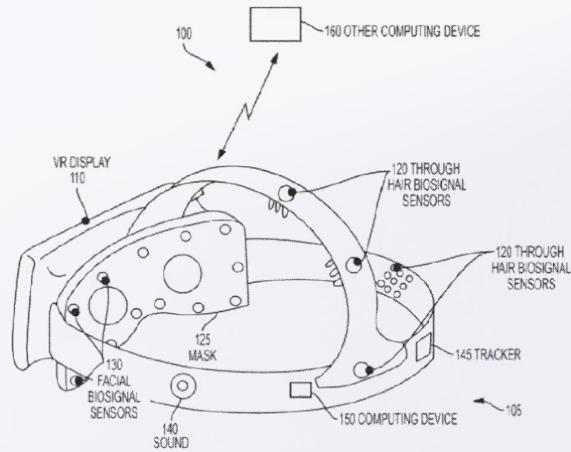
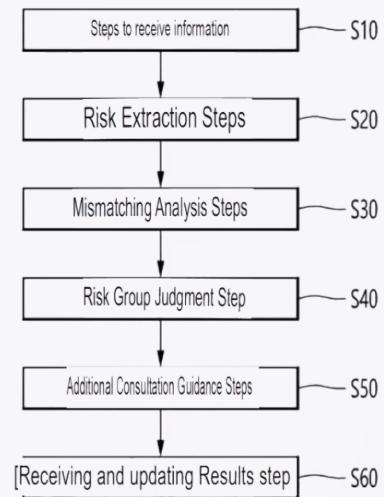
Psychological Assessment



VR Technology



Chat-Bot



Appendix (15) – Targeting

- Mothers
- Hospitals
- Healthcare centers
- Medical crew
- Insurance companies

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Appendix (16) – TLR

No.	Requirement	Rating (1-10)
TLR-01	The system detects physiological changes via the smartwatch	7.5
TLR-02	The system provides AI-driven, personalized voice support	9.0
TLR-03	The system reflects data to medical staff when needed	8.5
TLR-04	The system operates offline when no internet connection is available	7.0
TLR-05	The system supports multiple audio devices (home pod, headphones, etc.)	8.25
TLR-06	The system learns the user's preferences due to questionnaire and over time for better personalization	9.5
TLR-07	The system communicates over Bluetooth 5.0 for real-time interaction	7.75
TLR-08	The system runs on the hospital's local network, isolated from the internet	9.0
TLR-09	The system ensures high data security and user privacy protection	9.0