Mindwell Technologies

Jump to PDF version of report

Jump to $\underline{\text{MP4 presentation of report}}$

Jump to **YouTube Presentation**



Project Report

Jump to any wiki Section, or sub-section below

1 Ethical Business Plan

1.A. Company Name

1.B. Long-Term Vision Statement

1.B.1 Goals:

- 1.B.2 Idea Origination:
- 1.B.3 Purpose/Values/Mission:
- 1.B.4 Key Questions:
- 1.C. Strategy with Ethical Impacts AND Ethical Safeguards
- 1.C.1 Improving Chatbot Screening Accuracy for Mental Health Needs
- 1.C.2 Enhancing Data Privacy & Security in AI Mental Health Support
- **2 Cultural Policy**
- 2.A. Core Values
- 2.B. Motivation
- 2.C. Summary
- **3 Ethics Policy**
- 3.A. Core Items
- 3.B. Board
- 3.B.1 Director Bio A
- 3.B.2 Director Bio B
- 3.B.3 Director Bio C
- **4 YouTube Presentation**
- **5 References**
- **6 Appendix A Meeting Minutes**

1. Ethical Business Plan

1.A. Company Name

Mindwell Technologies

1.B. Long-Term Vision Statement

1.B.1 Goals:

Mindwell Technologies aims to revolutionize workplace mental health support by leveraging AI-driven conversational agents to provide scalable, confidential, and accessible mental health assistance. The goal is to reduce workplace stress, improve employee well-being, and create a supportive corporate culture where mental health is prioritized. Over the next five years, Mindwell seeks to expand its AI capabilities, build a diverse network of licensed mental health professionals, and integrate advanced privacy measures to enhance user trust and compliance with mental health regulations.

1.B.2 Idea Origination:

The concept for Mindwell emerged from a gap identified in corporate mental health support during an AI ethics seminar in a computer science class. The increasing workplace stress and mental health crises highlighted the need for a scalable, AI-driven mental health solution that bridges the gap between self-help tools and traditional therapy. Inspired by both technological advancements and a growing corporate demand for mental health solutions, the founders saw an opportunity to integrate ethical AI practices with mental health support.

1.B.3 Purpose/Values/Mission:

Mindwell Technologies is dedicated to ethical AI implementation in mental health care, ensuring accessibility, privacy, and accuracy. The mission is to provide an AI-powered mental health support system that complements traditional therapy while maintaining the highest standards of data security and ethical AI use. Core values include:

- **Empathy & Inclusivity:** Ensuring AI-driven support is accessible to diverse user groups.
- **Privacy & Security:** Maintaining the highest standard of data protection and ethical AI practices.
- **Collaboration:** Working with licensed professionals to ensure AI interventions align with clinical best practices.
- **Continuous Improvement:** Using feedback loops to refine AI accuracy and user experience.

1.B.4 Key Questions:

1. How can Mindwell ensure that AI-driven mental health support remains ethical and unbiased across diverse populations?

- 2. What strategies will maintain high accuracy in AI-generated mental health recommendations while safeguarding user privacy?
- 3. How can Mindwell create sustainable partnerships with corporate clients while prioritizing user well-being over profit?

1.C. Strategy with Ethical Impacts AND Ethical Safeguards

OKR 1: Improving Chatbot Screening Accuracy for Mental Health Needs

Objective: Develop a clinically sound and structured screening process in collaboration with mental health professionals to enhance the chatbot's ability to accurately assess user mental health concerns and recommend appropriate providers.

Key Result:

- Achieve an **85% provider matching accuracy** within the first six months.
- Maintain at least **90% provider matching accuracy** after one year with continuous feedback integration.

Experiment:

- Conduct controlled **user simulations** with 50-100 participants simulating various mental health concerns.
- Compare chatbot-generated problem summaries with **licensed mental health professional evaluations**.
- Implement a **feedback loop** where providers rate the chatbot's accuracy in summarizing patient concerns.

Ethical Impacts:

- **Risk of misdiagnosis or misinterpretation:** If the chatbot incorrectly assesses a mental health concern, it may delay proper care.
- **Potential AI bias:** Lack of diversity in training data could lead to inequitable provider recommendations.
- **User frustration and trust issues:** Incorrect or unclear recommendations could lead to employee dissatisfaction.

Ethical Safeguards:

- **Diverse training datasets** incorporating multiple demographics and mental health conditions
- Clinical expert review of chatbot outputs before live deployment.
- Regular audits to assess bias in provider recommendations.

OKR 2: Enhancing Data Privacy & Security in AI Mental Health Support

Objective: Ensure user privacy by implementing advanced security measures, including **differential privacy** and **zero-retention data storage policies**.

Key Result:

• Implement **end-to-end encryption** for all chatbot-user interactions.

- Maintain 100% compliance with HIPAA and GDPR regulations.
- Achieve 90%+ user satisfaction in privacy and data security.

Experiment:

- Conduct **bi-annual penetration tests** to assess system vulnerabilities.
- Implement a user opt-in model for data st

OKR 3: Improving Chatbot Screening Accuracy for Mental Health Needs

Objective: Develop a clinically sound and structured screening process in collaboration with licensed mental health professionals to improve Mindwell's AI chatbot's ability to accurately identify user mental health concerns and recommend appropriate, pre-vetted providers. The AI should generate concise and contextually relevant problem summaries that enable licensed providers to quickly understand user needs and determine treatment fit. This objective aims to streamline the matching process, enhance user satisfaction, reduce provider workload, and build trust among users, HR clients, and mental health professionals.

Key Result:

- Achieve 85% provider matching accuracy within the first six months of deployment.
- Maintain at least 90% provider matching accuracy after one year through continuous integration of provider and user feedback.

Experiment:

Controlled User Simulations:

- Recruit 50–100 participants to simulate a variety of real-world mental health concerns including trauma, anxiety, burnout, grief, and workplace conflict.
- Participants describe their issues in their own words during chatbot sessions.
- The chatbot produces two outputs: a concise problem summary and a list of 5–8 provider recommendations.

Expert Review Process:

- Independent licensed mental health professionals evaluate the same chat logs and select the most appropriate provider(s).
- Chatbot recommendations are compared to expert choices. Accuracy is defined as a match between the chatbot's recommendation set and the clinician's selection.

Live Feedback Loop:

- After a real session, the matched provider rates the chatbot's summary on a 1–5 scale for clarity, accuracy, and relevance.
- Providers can offer written feedback if they believe the chatbot misinterpreted or missed a key concern.
- This data is used to refine the LLM model and improve future summaries and matches.

Metric 1: Chatbot-to-Provider Matching Accuracy

Definition:

Measures how well the chatbot's provider recommendations align with expert clinical judgment and provider confirmation.

Target:

- ≥85% match accuracy within six months.
- ≥90% match accuracy within 12 months, measured through expert comparison and live provider acceptance.

Metric 2: Problem Summary Quality (Provider Perspective)

Definition:

Assesses whether chatbot-generated summaries are clear, concise, and clinically useful.

Target:

- 90% of providers rate summaries as clear, relevant, and efficient within six months.
- Maintain ≥4.5/5 average quality score from provider reviews after one year.

Metric 3: User Satisfaction with Provider Match

Definition:

Gathers feedback from users following their first session with a matched provider.

Survey Includes:

- Did the provider feel like a good fit? (Yes/No)
- Did the chatbot understand your concern? (1–5 scale)
- Would you use Mindwell again? (Yes/No)

Target:

- 80%+ of users report the provider was a good match.
- 85%+ feel the chatbot accurately captured their concern.
- 75%+ indicate they would continue using Mindwell.

Ethical Impacts:

Risks Identified:

- **Misdiagnosis or misrepresentation:** Inaccurate summaries may delay access to the right care.
- AI bias: Chatbot may underperform for users from underrepresented or non-Western demographics.
- **Data privacy concerns:** Mishandled sensitive information could lead to legal and reputational harm.

Ethical Safeguards:

- **Bias Mitigation:** Use diverse training datasets representing varied races, genders, languages, and socioeconomic backgrounds. Perform regular bias audits.
- Privacy Controls: Store data on HIPAA-compliant infrastructure with encryption and

zero-retention defaults unless users opt in.

• **Human Oversight:** Implement a provider review and feedback system to ensure summaries remain safe and clinically reliable.

Conclusion:

Mindwell's success depends on its ability to deliver accurate, efficient, and ethical mental health screening through AI. By combining structured clinical collaboration, diverse data curation, real-time feedback from providers, and robust privacy protocols, this OKR ensures Mindwell can scale responsibly while meeting the mental health needs of corporate workforces.

** TO DO STILL **

Meeting goal: iterate group entrepreneur project, firm up OKRs, metrics, experiments Meeting day/time: Tues 3/4 8-915am Who Attended: Marianna Belmares, Jason Russell, Luke Hagan, Benjamin Thompson

Meeting summary: Further work on OKRs, business goals and mission statement

Mission statement: Offer a chatbot as a mobile app as an additional support for common mental health challenges for corporate employees. Focused on helping user ages of 25-49, primary use is case is to find a licensed therapist in a directory. Through the interactive use of a LLM chatbot delivered in the app, company can offer employees immediate help. LLM chatbot can run screening dialogue questions to best place user with a licensed practitioner drawn from directory. Through careful safety studies, a safety approval by a clinical group would be sought to support market messaging for corporate clients. One additional language would be developed early starting with Spanish.

• OKRs: -- Chatbots for mental health:

[NO CHANGE] --- Objective: Through engaging with experts, develop a series of scripted dialogues to serve as ongoing test scenarios to assure chatbot is operating within expected norms. --- Key Result: LLM Chatbot operates within norms in scripted scenarios for common conditions. --- Objective: By engaging test users, confirm through user studies that chatbot continues to perform within safety objectives providing advice to users in studies. --- Key Result: Users report an engaging dialogue with the chatbot, and self report satisfaction with the interactions --- Objective: Through engaging clincians in review, confirm through paid clinician review of user studies that the chatbot is operating within norms in user studies. --- Key Result: Study of clinical review of chatbot performance is within norms and satisfactory

[WILL NOT DO] --- Objective: Engage a regulator with supporting user studies that both the user and clinicians can report positive satisfaction through interactions with the chatbot: --- Key Result: Regulator solicits constrictive feedback, enabling to move forward with testing at the regulator:

[NO CHANGE] --- Objective: Get users into marketing studies to construct positive stories of use for a wider marketing campaign. --- Key Result: Marketing based study is satisfactory, giving confidence in positive testimonials to by used in user marketing --- Objective: Open user testing with a broadly appealing ad campaign with supporting studies --- Key Result: open user testing can confirm results found in smaller user studies

[ADDITION] --- Objective: Develop screening dialog with clinical experts to support placement with licensed therapists familiar with the problem and conditions and interested to help --- Key Result: LLM chatbot can be engaged with a variety of problems. A summary is automatically generated for review by clinicians as part of placement with a provider. Provider can review full text of dialogue and offer feedback to LLM chatbot team.

[ADDITION] --- Objective: App supports a provider directory, or a marketplace of providers available for each corporate client and geography --- Key Result: Starting with two to three enterprises and one geography, get ten to twenty licensed providers signed up with fully created profiles for matchmaking and user booking.

[ADDITION] --- Objective: Sell to corporate enterprises as a subscription benefit for their employees a certain number of hours of licensed provider hours placed through the provider marketplace. --- Key Result: Starting with two to three enterprises, work with one or more HR contacts to make the service available on a trial basis.

Agreed

- Jason is taking the Marketing OKRs
- Luke is taking the Safety OKRs
- Marianna to review the business plan, mission statement for another pass. Will follow up.
- Ben is will take whichever OKRs remain.

Next Steps:

Further develop metrics and experimental designs in one on one follow up meetings.

Revised the mission statement after our meeting. For each OKR, noted whether NOCHANGE, WILL NOT DO or ADDITION.

For each OKR identifying representative metrics, and how we'll measure those and any ethical considerations are the things to think about, and if you can start writing.

If you'd like to revise, simplify or change the mission statement, suggestions welcome!

2. Cultural Policy

2.A. Core Values

At Mindwell Technologies, our core values align at the intersection of empathy, innovation and ethical responsibility. We would like to be seen as a mental health company that leads with heart and builds with intention. One that values trust, transparency and transformative care. Our values articulate our purpose: to radically transform workplace mental health with the ethical use of AI and support real human needs.

We believe in Empathy and Inclusivity. Our AI systems are able to adapt to a wide spectrum of users including diverse languages, cultures, socio-economic backgrounds and emotional experiences. We firmly believe that every user should see and feel their served. Privacy and Security are unquestionably non-negotiable. From day one, we will uphold the highest standards of data protection with a HIPAA-compliant technology infrastructure and a zero-retention policy, unless users consent otherwise. Because Clinical Collaboration is integrated into our systems, our AI technologies will not be siloed and isolated tools but rather be built and validated in unison with licensed professionals and evidence-based practices. Transparency is critical to our culture: We will consistently explain how the models work, how and why we use data and provide recommendations. Finally, we value Continuous Improvement at every level. Our development cycle will utilize exhaustive feedback loops to help align our practices and systems to the needs of users and the ethical expectations of institutional stakeholders.

2.B. Motivation

What drives Mindwell is a passion for solving real problems with ethical, human-centered technology. We love building tools that help people feel heard, cared for, and connected to meaningful resources—especially in high-stress work environments where mental health support is often inaccessible or stigmatized. We are motivated by a future where AI is not a replacement for human connection, but a bridge to it, one that expands access, improves outcomes, and enhances the therapeutic process.

We also fear what happens if we get it wrong. We fear AI systems that misinterpret vulnerable users or reinforce bias. We fear a loss of trust if privacy is compromised or if the technology oversimplifies complex mental health conditions. This fear grounds us in caution and rigor. It fuels our commitment to clinical oversight, to training on diverse datasets, and to always centering users over profit. We fear complacency more than failure, because in mental health, errors don't just mean bugs; they can mean missed chances for healing. That's why our culture values responsible risk-taking, ethical design, and a mindset of continual reflection and improvement.

2.C. Summary

Compassionate AI Built for Human Wellness

3. Ethics Policy

3.A. Core Items

Mindwell Technologies commits to embedding ethical practices across the entire lifecycle of our AI-powered mental health platform. These policies guide how we collect, process, and act on sensitive information while prioritizing user safety and clinical validity.

1. Privacy and Data Ownership

All data shared within Mindwell's platform remains strictly confidential and user-controlled. Personally identifiable information (PII) is not stored without explicit user consent. We implement differential privacy and encrypt all chatbot interactions. Users have full transparency into how their data is used, with options to opt in or out of anonymized data training.

2. Algorithmic Fairness and Bias Mitigation

Mindwell's AI systems undergo rigorous audits to reduce bias and increase equitable outcomes. Training data is sourced to represent a wide range of ethnicities, languages, and socioeconomic groups. We employ adversarial testing and maintain a Bias Mitigation Task Force to oversee fairness in provider recommendations.

3. Transparency and Explainability

Our LLM chatbot is designed to produce summaries that are not only accurate but also explainable to users and clinicians. Providers receive access to both full conversation transcripts and AI-generated summaries to verify alignment with user needs. Users are also informed when AI is being used and how recommendations are generated.

4. Clinical Validation and Human Oversight

Mindwell integrates human-in-the-loop (HITL) systems where all high-risk use cases are escalated to human clinicians. Chatbot screening procedures are developed alongside licensed therapists, and provider feedback is continuously integrated into AI improvements.

5. Corporate Integrity and Responsible Monetization

We maintain a clear separation between user data and corporate profit. Mindwell does not sell user data under any circumstances and is committed to aligning revenue models with ethical service delivery, such as prepaid session access rather than data-driven monetization.

6. Regulatory Compliance and Safety Standards

Mindwell adheres to HIPAA and GDPR regulations and pursues third-party safety validation. Security protocols include biannual penetration testing and zero-retention data storage practices. We also monitor and adjust our platform according to guidance from regulatory bodies like HHS and NIST.

3.B. Ethics Board

1. Dr. Thomas Insel – Former Director of the National Institute of Mental Health (NIMH)

Dr. Thomas Insel is a neuroscientist and psychiatrist who led the National Institute of

Mental Health for over a decade. Following his tenure at NIMH, he co-founded Mindstrong Health, a digital mental health startup that integrates clinical neuroscience with mobile technology. Dr. Insel is a leading voice on the ethical integration of technology in psychiatry, advocating for tools that improve access to mental healthcare without compromising clinical integrity. His deep understanding of both the clinical and technological sides of mental health makes him an ideal ethics board member to guide Mindwell's development of responsible AI-driven care.

2. Dr. Latanya Sweeney – Professor of Government and Technology at Harvard University

Dr. Latanya Sweeney is a renowned computer scientist and pioneer in the field of data privacy and algorithmic accountability. Her research on re-identification risks helped shape modern understandings of how anonymized data can still compromise user privacy. As a former Chief Technology Officer at the Federal Trade Commission and the founder of Harvard's Public Interest Tech Lab, Dr. Sweeney combines academic rigor with public policy experience. Her expertise ensures that Mindwell's use of sensitive mental health data remains transparent, secure, and compliant with evolving privacy standards.

3. Joy Buolamwini - Founder of the Algorithmic Justice League

Joy Buolamwini is a leading advocate for algorithmic fairness and researcher at the MIT Media Lab. Her work has been instrumental in exposing racial and gender bias in facial recognition systems and broader AI applications. Through the Algorithmic Justice League, she champions ethical AI development and corporate accountability. Buolamwini's expertise in AI fairness and equity adds an essential dimension to Mindwell's commitment to justice in digital mental health services.

4. YouTube Presentation



5. References

- 1.
- 2.
- 3.
- 4.
- 5.