Business Case:

Digital Dream Journal with AI Interpretation

Project: LucidVerse

1. Introduction

This business case proposes the development of a "Digital Dream Journal with AI Interpretation" functionality within the LucidVerse application. The functionality aims to provide users with a modern and secure way to record, analyze and interpret dreams using artificial intelligence.

2. Business Need

Users interested in introspection and mental health lack a dedicated digital solution for dream journaling and interpretation. Current methods are fragmented, and existing applications are perceived as impersonal and unclear.

The developed survey highlighted the need for:

- personalized and easy to understand interpretations
- reminder for writing down dreams
- intuitive and visual interface
- privacy guarantees

In this context, an **AI-powered Dream Journal** functionality responds directly to these needs, providing a modern, personalized and secure experience.

3. Problem statement

Dream journaling involves many personal and subtile processes, such as recall, interpretation, symbol recognition and emotion analysis. Most users use disparate methods - notes on their phone, writing apps, voice recordings - leading to loss of information, lack of coherence and difficulty in understanding the patterns in their dreams.

While journaling apps exist, few offer a complete, integrated experience that combines dream capture with automated interpretation, emotional visualization, and protection of personal data.

This gap creates frustration for users looking for an intuitive and secure platform that allows them to deeply reflect on their dreams and gain relevant analysis in a simple, centralized way.

4.a. Situation AS IS

Current processes:

1. **Dream journaling:**
   Most users record their dreams manually in diaries, generic note-taking apps or voice recordings without a standardized structure.
2. **Interpreting dreams:**
   This is often done through internet searches, dream symbol books or forums, resulting in general interpretations that lack personalization and are often contradictory.
3. **Connecting dreams to emotional states:**
   Tools that analyze recurring emotions in dreams and relate them to mental states or real-life experiences are lacking.
4. **History and pattern analysis:**
   There is no platform that centralizes dreams and automatically identifies recurring themes, symbols or patterns over time.

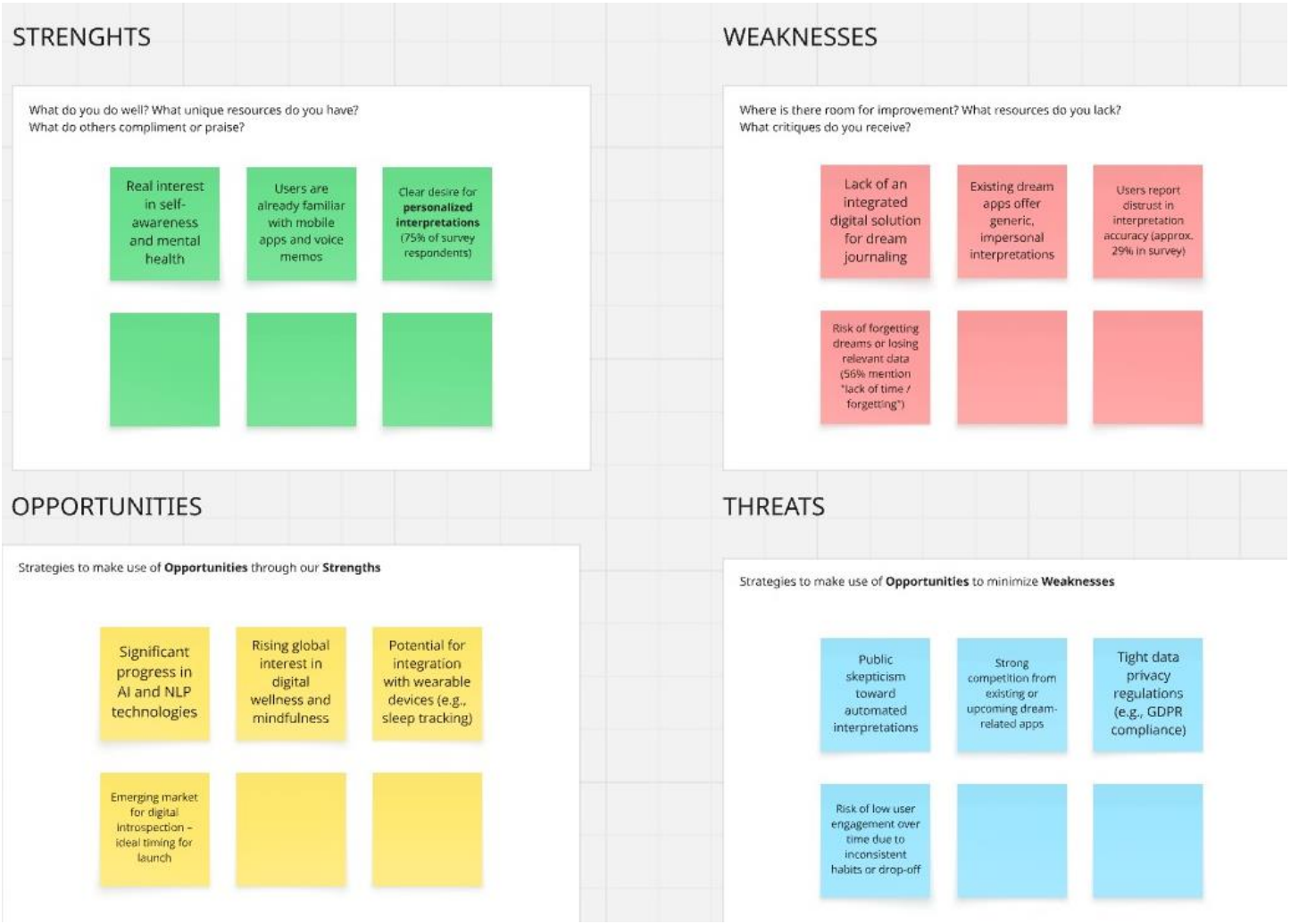
Current technologies and tools used:

1. **Notes apps (ex. Notes, Google Keep):**
   Provides only text-writing functionality, no analytics, organization or artificial intelligence.
2. **Existing dreaming apps:**
   Most offer generic interpretations based on predefined symbolic dictionaries, with no customization or AI/Natural Language Processing (NLP) features.
3. **Online forums or groups:**
   Users turn to communities for interpretation, but responses are subjective and not based on hard data or emotional analysis.

Main limitations:

1. Lack of an integrated digital solution to capture, organize and analyze dreams.
2. Overly general, non-personalized interpretations that do not reflect the user's personal context.
3. No correlation between dreams and the user's long-term emotional state.
4. No way to visualize recurring patterns or developments in dream content.

4.b. Situation AS IS – SWOT Analysis



Link Miro:

https://miro.com/app/live-embed/uXjVJetiIpY=/?embedMode=view_only_without_ui&moveToViewport=-1446%2C-788%2C3717%2C1858&embedId=955610591621

5. Potential solutions including the Cost – Benefits Analysis

Solution 1: Dream Journal with Personalized AI Interpretation

Overview:

This solution integrates into a single functionality: rapid dream capture, automated AI-driven interpretation, intuitive visualization of personal data and smart reminder. Users can record dreams immediately upon waking (text or voice), receive personalized AI-generated interpretations, and access a visual interface to track emotional and symbolic patterns over time.

Key features:

- **Text / audio dream capture**: user can enter dreams by typing or voice recording with automatic transcription.
- **Automatic AI Analysis**: extract themes, symbols and emotions from the dream.
- **Contextualized interpretation**: AI learns from the user's history and provides increasingly personalized interpretations.
- **Interactive visualization:** calendar, timeline, filters by emotions, themes, symbols.
- **Dream tagging:** users can add personal favorites or tags for easy retrieval.
- **Intuitive interface:** design tailored to moments right after sleep for minimal effort.

Costs:

- **Initial Investment:** 180.000 €
- **Annual Operational Costs:** 90.000 €

Benefits:

- **Quick adoption:** Easy capture simplify everyday use.
- **Increased personal value**: AI interpretations give meaning to dreams, increasing emotional engagement.
- **Deep insight:** Visualizing symbols and emotions helps users discover personal patterns.
- **High retention:** Users return constantly to track progress and reflect.
- **Competitive advantage:** Combining the 3 functionalities creates a complete experience that is hard to replicate by other apps on the market.
- **Scalability**: The solution can be further extended with coaching modules, psychological testing, data export, etc.

Solution 2: AI Assistance & User Support

Overview:
Integrated digital assistant that provides contextual support and recommendations.

Key features:

1. AI-generated interpretations based on detected symbols.
2. Personalized recommendations for sleep and mental hygiene.
3. Answers to frequently asked questions about the meaning of dreams.
4. Proactive suggestions for next actions in the app.

Costs:

- **Initial Investment:** 55.000 €
- **Annual Operational Costs:** 20.000 €

Benefits:

- **Proactive support:** AI provides useful suggestions and interpretations without explicit user prompting.
- **Personalizatio**n: Recommendations based on user profile and habits.
- **Differentiation:** Offers a "personal assistant" experience, rare in dream apps.
- **Net benefit:** Premium positioning and attracting a user base interested in personal guidance.

Solution 3: Security and Privacy

Overview:
Implement measures to protect personal data and control access to sensitive information.

Key features:

1. Biometric authentication or password.
2. Encryption of saved dreams.
3. Possibility of private or anonymous public diary.
4. Permanent deletion of dreams on demand.

Costs:

- **Initial Investment:** 30.000 €
- **Annual Operational Costs:** 10.000 €

Benefits:

- **Increased trust:** Users are willing to share sensitive dreams.
- **GDPR compliance:** Meet legal data protection requirements.
- **Personalized control:** Users choose what data they save, share or delete.
- **Net benefit:** Increases loyalty and reduces legal risk.

Solution 4: Dream Export & Share Options

Overview:
Allows users to export, share or save dreams in different formats.

Key features:

1. Export in PDF, TXT, CSV format.
2. Secure sharing (encrypted link or email).
3. Integration with note-taking apps (e.g., Notion, Evernote).
4. Cloud backup with restore option.

Costs:

- **Initial Investment:** 20.000 €
- **Annual Operational Costs**: 7.000 €

Benefits:

- **Flexibility**: Users can save their dreams for personal or professional use.
- **Extensive integration:** Connecting with external applications increases the usefulness of the platform.
- Secure distribution: Facilitates sharing with therapists, friends or communities.
- **Net benefit:** Extends the application's applicability beyond individual use.

Solution 5: AI psychological tests based on dreams

Overview:
Personalized psychological analysis with AI support, based on dream data and user behavior.

Key features:

1. Periodic questionnaires generated by IA.
2. Dream-based assessment of emotional state.
3. Periodic reports with psychological insights.
4. Recommendations to improve sleep hygiene

Costs:

- **Initial Investment:** 52.000 €
- **Annual Operational Costs**: 18.000 €

Benefits:

- **Regular assessments:** AI provides relevant and non-invasive questionnaires.
- **Personalized reporting:** Users receive insights about their emotional state.
- **Self-care tool:** Becomes a digital companion for mental health.
- **Net benefit:** Positioning as a holistic wellbeing app and guided introspection.

Solution 6: Do nothing / Maintain the Status Quo

Overview:
Preserve existing functionality without adding new features. This approach minimizes development costs and avoids complexity but may limit user growth and engagement.

Key features:

1. Enter dreams manually by text or voice.
2. Basic labeling and categorization.
3. Simple statistics (ex. number of records, most used tags).
4. Without AI integration or with advanced functionalities

Costs:

- **Initial Investment:** 0 €
- **Annual Operational Costs**: 5.000 € (basic application maintenance)

Benefits:

- **No immediate spendin**g: Short-term budget savings.
- **Continuity:** It keeps the platform familiar to users.

Disadvantages:

- **Persistent inefficiencies:** Lack of automation, manual input.
- **Missed opportunities:** No innovation = stagnation in attracting users.
- **Competitive disadvantage:** Risk of being overtaken by more advanced apps.
- **Net benefit:** Short-term savings, but long-term losses in use and development.

6. Recommended solution and Reasoning

Dream Journal with Personalized AI Interpretation

LucidVerse is a mobile app in development, dedicated to exploring and understanding dreams. This Business Case focuses on one of its core functionalities - Digital Dream Journal with AI Interpretation.

The proposed solution consists of an artificial intelligence-based functionality that helps users to remember, record and interpret dreams, combining modern technologies with traditional practices of self-reflection and dream symbolism.

Main components:

- Dream recording (text + voice)
- AI detects themes, symbols, emotions and creates personal dream profile (evolution of emotions, most frequent dream types, dominant symbols)-BDD
- Personalized interpretation based on previous dreams
- Smart reminder and fast dream capture (upon waking)
- Offline mode + encryption

The **benefits** of the chosen solution are the following:

1. **Increased user retention:**
   Through smart reminder features, personalized analytics and intuitive visualization, the app creates a daily habit, strengthening user attachment.

2. **Clear differentiation in the dreaming app market:**
   Functionality combines AI, symbolism and self-reflection in an innovative way, positioning Lucidverse as a leader in dream interpretation apps.

3. **Positive impact on mental health:**
   Users are encouraged to reflect on dreams and emotions, fostering mental clarity, self-awareness and reducing anxiety.

4. **Scalability and easy monetization:**
   Functionality allows for the launch of premium subscriptions, advanced interpretations, customized reports or sessions with psychologists - opening up new revenue streams.

5. **Create a valuable database:**
   Anonymized aggregation of data about dreams, themes and emotions can later be used for psychological research, partnerships or development of other AI products.

In conclusion, the "Dream Journal with AI" functionality not only directly addresses the needs identified in the survey, but also brings scalable, sustainable benefits aligned with Lucidverse's vision to transform dreaming into an active tool for personal development.

Recommended solution - Validation by survey

To validate the choice of the core functionality "Dream Journal with AI Interpretation", we applied an online questionnaire addressed to potential users. The aim of the survey was to identify current habits, difficulties related to dream retention and real interest in a complete digital solution.

Main topics of the survey:

- General interest in dreams
- Current habits
- Interest in the proposed functionality
- Valued components of functionality

An online questionnaire revealed the following:

• 17 respondents (12 women, 5 men) aged 30-40

• 75% are interested or very interested in an app that combines dream journaling with AI interpretation.

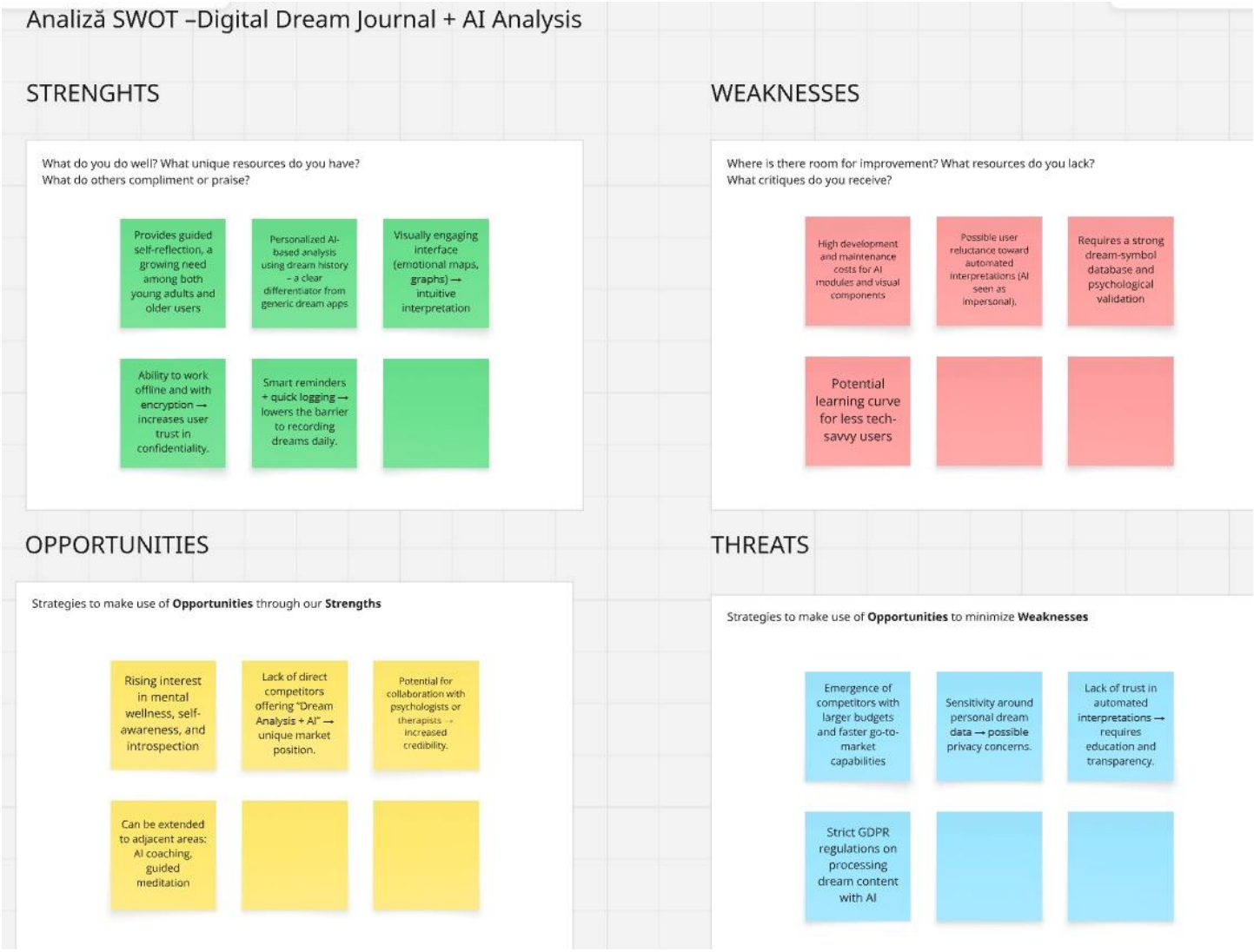
• 62% of respondents are interested in a reminder-type feature for recording dreams immediately after waking up.

• 61% of respondents are interested in a personal dream profile feature, with in-depth analysis of emotions, symbols, and their recurrence.

Link to the survey:

https://docs.google.com/forms/d/e/1FAIpQLSdmJDrESn8OZ055lfEMjLK0PXgWwV9ZSuKPrG9J1pGZEPXmbg/viewform

Recommended solution - SWOT Analysis



Miro:

https://miro.com/app/live-embed/uXjVJetiIpY=/?embedMode=view_only_without_ui&moveToViewport=-1446%2C-788%2C3717%2C1858&embedId=955610591621

7. SCOPE

The Dream Journal with AI functionality in the Lucidverse app aims to provide users with a personal, secure and intelligent space for recording and interpreting dreams. By combining artificial intelligence with emotional introspection, this functionality helps users to identify recurring themes, symbols and emotions, contributing to better self-understanding and inner balance.

In Scope	Out of Scope
Record dreams in text, audio or drawing format	Clinical psychological assessment or professional therapeutic counseling.
Automatic AI analysis of dreams (themes, symbols, emotions)	Multilingual Support Dream analysis will be available in English only for the initial release.
Interactive visualizations: emotional charts and symbolic maps	Detailed spiritual interpretations (numerology, astrology etc.).
Offline mode and encryption for privacy	General conversational chatbot or live AI interactions.
Simplified AI interpretation (3-4 sentences + clear hints)	Social networking or dream forum functionalities.
Export and controlled sharing of dreams	Promotional notifications or generic push messages.
In scope "Smart reminder and fast dream capture (at waking up)	

8. Objectives & Metrics

1. Increasing consistent use of the dream journal

    * We want users to return regularly and record their dreams.

    KPI: % of users who log dreams for at least 3 consecutive days

2. Providing automatic and relevant interpretation for each dream

    KPI: Average AI interpretation generation time: ≤ 5 seconds

    Successful interpretation completion rate (no errors): ≥ 98%

3. Delivering AI interpretations based on the user's dream history

    KPI: At least 85% of users who have saved 3 or more dreams receive personalized AI-generated interpretations based on their individual history.

9. Stakeholder

Internal Stakeholders:

1. **Product Owner**: responsible for strategic direction and prioritization of functionality.
2. **Business Analyst (BA)**: documents requirements, validates solutions, creates BRD/BDD.
3. **UX/UI Designer**: designs the user interface and user experience.
4. **Frontend Developer**: develops application interface (log, visualizations, inputs).
5. **Backend Developer:** implements data interpretation and storage logic.
6. **AI / Machine Learning Specialist:** trains and optimizes the AI model for dream interpretation.
7. **Natural Language Processing Specialist:** adapts the AI engine for dream language understanding.
8. **QA Tester:** tests functionality, security and compatibility.
9. **DevOps Engineer:** manages infrastructure and continuous delivery.
10. **Marketing & Growth Team:** promotes the app and collects market feedback.
11. **Legal & GDPR Compliance**: ensures the app complies with privacy regulations.

External Stakeholders:

1. **End users:** people interested in dream interpretation, mental health, self-awareness:
    - adolescents and young people (curiosity, self-exploration)
    - adults (wellness, personal reflection)
2. **Psychologists/partner therapists:** provide validation and symbolic context to dreams.
3. **Online community / beta testers:** provide feedback for improvements.
4. **Investors / Founders:** support development of functionality and pursue profitability.
5. **Technology providers:** cloud platforms, AI services, NLP licenses (e.g. OpenAI, HuggingFace).
6. **Educational institutions or researchers:** can use (anonymized) data for studies on sleep, dreaming, emotions.

10. Ressources

Technical Resources and Infrastructure:

- Scalable cloud servers (ex. AWS, Azure, Google Cloud)
- Secure database (ex. PostgreSQL, MongoDB)
- Encryption services (for log data)
- AI/NLP tools (ex. spaCy, HuggingFace Transformers, OpenAI)
- Behavioral analytics solutions (ex. Mixpanel, Hotjar)
- Data analytics + dashboard tools (ex. Power BI, Chart.js, D3.js)
- Project management tools (ex. Jira, Confluence, Notion)
- AI /API model licenses

Legal and compliance resources:

- Data Protection Specialist (DPO)
- Legal consultant

11. Risk Assessment

Risk Category	Likelihood	Impact	Mitigation
Acceptability of AI interpretations	Medium	Users may find AI interpretations impersonal or too general	Develop an AI model based on history + transparency in the interpretation mode
High AI development costs	High	Large initial investment with slow or uncertain payback	Phased launch (Minimum Viable Product) / later versions / atractic strategic partnerships
Privacy of personal data	Medium	Dreams may contain sensitive information → risk of reluctance to use	End-to-end encryption, clear privacy policies, transparent communication with users
Poor engagement without gamification/feedback	Medium	Lack of motivation can lead to rapid application abandonment	Deploy notifications, streaks, badges and personalized AI feedback
Complexity in multilingual Natural Language Processing testing	High	Difficulty interpreting correctly in several languages and cultures	Initial launch in 1-2 languages with clear target audience, then gradual expansion with localized testing
User Trust	Low	If the AI misinterprets dreams or gives generic insights, users may feel misunderstood and lose trust. This can lead to lower engagement.	Provide transparency in how interpretations are generated and allow user customization
Technical Reliability	Low	To slow app - users may become frustrated and lose confidence in the app's reliability.	Monitor system performance and implement fallback mechanisms

12. Estimated costs for the recommended solution

Dream Journal with Personalized AI Interpretation

Initial costs (development):

180.000 €, covering:

- AI model development (theme analysis, symbols, emotions)
- AI training on oneiric dataset
- custom UI development (timeline, chronology, emotional visualization)
- dream capture (text + voice) and automatic transcription
- offline mode integration + local encryption

Annual operational costs:

90.000 €, including:

- - AI maintenance and continuous improvements
- - technical support and cloud infrastructure (encrypted storage)
- - behavioral analysis and UX/UI tuning
- - security audit and GDPR compliance

If the initial budget is limited, a phased implementation can be chosen:

- **Phase 1 (MVP - €110,000):** dream capture + simple AI interpretation + chronological visualization
- **Phase 2 (extension - €70,000):** Emotional timeline, personalized dream profile, full encryption and offline mode

13. Technical infrastructure

- **Cloud Services:**
    - iCloud / Google Cloud / Firebase for AI & database
    - Cloud – local synchronization
- **AI Engine**:
    - Natural Language Processing (NLP) customed for dream interpretations
    - Thematic database training (dreams, symbols, emotions)
- **Local storage + encryption**:
    - Encrypted local backup for offline mode
    - Automatic secure synchronization when connected
- **Scalability**:
    - Containerized architecture (ex. Docker) to handle traffic increases (10,000+ active users/month) (backend)
- **Compatibility**:
    - Cross-platform mobile app (React Native or Flutter)
    - Compatible with Android devices (v10+) and iOS devices (v14+).