Hakutaku - TCC

SUMMARY

1. Project Members

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2. Definition of the problem to be solved

2.1 Introduction:

Knowledge management is characterized as the process of capturing, organizing, sharing, and utilizing knowledge within an organization. There are two types of knowledge: tacit and explicit. According to Nonaka et al. (2000), "Explicit knowledge can be expressed in a formal and systematic language; it can be shared in data, scientific formulas, specifications, and manuals; it can be processed, transmitted, and stored easily. Tacit knowledge is highly personal and difficult to formalize."

An effective knowledge management approach encompasses both types, aiming to make them easily accessible within a company and intuitive to be consumed. However, there is often no efficient management in this regard. Frequently, for example, HR departments develop internal management systems or opt to acquire

specialized knowledge management software for their specific needs. However, due to the closed nature and outdated design of most of these software solutions, knowledge is unable to be shared between the different departments of the organization. Artificial intelligence, on the other hand, has the ability to extend across multiple areas, gradually enabling the creation of knowledge management software that meets the needs of various departments within a company. This facilitates the use of knowledge generated not only within a single department but across the entire organization. Despite these advantages, senior leadership still faces challenges in implementing this technology effectively.

2.2 Problem Development:

The problem we are addressing is knowledge management, which is characterized by the strategy and practice of managing all the content and data generated by the company in recent years.

In practice, this issue requires considerable discipline and organization. It involves everything from creating useful information for the company to storing, managing, and controlling access to it. Consequently, most companies face difficulties, especially in:

I. Organizing their documents and knowledge;
II. Creating new documents that effectively record data and knowledge;
III. Sharing information between departments;
IV. Unifying knowledge into a single platform;
V. Establishing a robust document search system.

These challenges lead to problems such as:

I. **Operational inefficiency**, as employees may spend hours searching for the same information;
II. **Succession issues**, where employees who leave take tacit knowledge with them;
III. **Lengthy onboarding processes** that require the time of multiple workers to clarify questions that could be answered with proper documentation and organization;
IV. **Data fragmentation issues**, leading to extensive searches across multiple platforms to find desired information, which is not only inconvenient but also generates additional costs with platform maintenance.

From a financial perspective, these issues create significant problems for companies. Reduced efficiency means more time is needed to complete a task. Succession and onboarding problems ultimately relate to the same efficiency issue, as new employees need to interrupt the experienced team, occupying the time of both parties.

In addition to these financial concerns, effective knowledge management generates less tangible but equally valuable benefits: leveraging the knowledge acquired over the years to enhance daily activities and problem-solving. For example, if a consultancy has already conducted a go-to-market project, the ideal is to review both the macro and micro aspects of the previous project to improve future implementations. This allows the company to continuously learn from the information generated by past experiences.

2.3 Data/Comprovation:

To validate the existence of this issue, market research, field data collection, and participation in competitions were conducted, which provided significant insights and validations regarding the relevance of the problem.

Market Research:

According to a survey conducted by Notion for the 6th episode of their webinar (2024), **97% of leaders recognize the importance of knowledge management, but only 44% believe their organizations execute it effectively**. This data highlights the gap between the perception of the topic's relevance and its practical application within companies.

Competitions and Hackathons:

I. **Stark Bank Hackathon** → We participated in the Stark Bank hackathon, which focused on using AI in the financial market. During the event, the concept of Hakutaku was proposed, receiving praise from the internal team. The main issue identified was "disorganization within the company," which is common in startups experiencing rapid growth. Although it did not win the top prize, the feedback provided clear validation of the relevance of the problem.

II. **Bemobi Hackathon** → In this hackathon, Hakutaku was presented with characteristics and functionalities similar to those it currently has. The project was awarded **first place**, reinforcing the acceptance and consistency of the

proposed solution.

Validation with Companies:

III. **Farmoquímica SA** → In conversations with a trade marketing analyst, it was reported that finding information within the company is challenging. Employees often have to ask on Microsoft Teams to find someone who can help. This situation illustrates how Hakutaku could address knowledge access issues.

IV. **Vault** → In discussions with Vault's CTO, onboarding issues were highlighted, where new employees spend time on unproductive tasks, delaying their activities and those of other team members. This case emphasizes the direct impact of operational inefficiency.

V. **Mavericks** → Mavericks' CFO mentioned succession problems, both in the current company and at Citi (where they previously worked). This underscores the issue of tacit knowledge loss when employees leave the organization.

These practical examples and quantitative data confirm that knowledge management challenges are widely recognized and experienced across different organizational contexts.

2.4 Conclusion:

Knowledge management, despite its recognized importance, remains a significant challenge for various organizations. Issues related to information organization, communication between departments, and retention of tacit knowledge are widely documented, as shown in the market research and validations conducted.

The data presented in section 2.3 corroborates the relevance and urgency of this issue. The gap between leaders' perceptions (97% recognize the importance) and effective execution (only 44% implement it correctly) highlights the existing disparity. Moreover, the validations obtained through hackathons and real-world companies strengthened the understanding that solutions like Hakutaku can address practical problems such as operational inefficiency, onboarding of new employees, and succession.

Therefore, it is evident that knowledge management is not just a theoretical problem but a practical and pressing need in the market. The implementation of technologies using artificial intelligence, combined with intuitive and accessible design, is a promising approach to addressing these challenges in information management, transforming the way organizations capture, store, and share internal knowledge.

Aqui está a tradução para o inglês:

3. Customer Segments

3.1 Introduction:

First and foremost, before discussing how we deliver value, it is essential to understand who Hakutaku is capable of serving—that is, what the prerequisites are for a company to become our client.

Additionally, it is important to highlight the profile and characteristics of the ideal customer, which will be our primary focus after brand consolidation. This group consists of companies that, beyond meeting the minimum requirements, have a structure capable of maximizing the benefits of our solution, making them strategic partners for Hakutaku's growth.

3.2 Market Research (Glean):

To understand the necessary requirements for adopting this type of solution, we gathered information from Glean, a global reference platform in AI for knowledge management. To achieve this, we presented ourselves as potential customers to understand what would be required for a company to become one of their clients.

After multiple email exchanges and a video conference, we obtained the following insights:

- The company must have a well established documentation base before implementing the solution.
- The minimum package offered was for 80 users.
- The annual cost of the basic package was $80,000.

Based on the strategies and requirements of our main global competitor, we identified key metrics and factors that need to be considered when identifying

potential customers, particularly because Glean's solution is the closest to the one we plan to develop.

3.3 Ideal Customer:

From our research, we concluded that in an ideal scenario—especially after brand consolidation—our ideal customer would be large companies with hundreds of employees, a well organized and consolidated knowledge base, and the financial capacity to afford an average monthly ticket price of at least R$400 per employee.

However, since we are offering an entry level solution, we understand that while these are the ideal customers for our base, we must also adapt our product to serve companies that have not yet gained access to such solutions. To achieve this, we analyzed the research metrics to assess their criticality and determine how we can adjust them to make our product more accessible.

3.4 Minimum Requirements:

Based on the insights gathered from Glean's research, although our goal is to create a more accessible solution, we identified some essential requirements for a company to be considered a potential Hakutaku customer. These requirements primarily relate to the volume of stored documents (internal company knowledge) and the number of users.

First, the contracting company must have a structured data and information base before implementing Hakutaku. While our plan is to ensure that the system can handle unstructured data through its search tool, there must be a significant amount

of information available. This is crucial because the data provided needs to be sufficient for our chatbot to answer most employee inquiries accurately.

Additionally, it is important to consider the minimum number of users required to ensure the platform's viability. This requirement is linked to the maintenance and updating of the knowledge base. The higher the number of users, the more quality data will be available, and the more frequently missing or incorrect data will be corrected through the system. While Glean requires a minimum of 80 users, we believe that with an efficient architecture, we can reduce this number, making the solution viable for companies with fewer users.

It is also worth noting that, beyond the dependency on user numbers for data maintenance, there is a financial barrier associated with the technologies we plan to use, such as LLM and RAG. These technologies require not only a significant number of platform users but also a considerable average ticket price to ensure financial feasibility.

While Glean's basic package costs $80,000 per year, our goal is to lower this average ticket price, making the solution accessible to companies with fewer users without compromising quality or scalability.

3.5 How the Solution Generates Value for These Customers:

Even though we understand the need to create a simpler, more accessible, and scalable solution to reach a larger portion of the market that still lacks access to such technologies, all the challenges presented in section 2.2 regarding problem development must be addressed. In other words, while simplifications may be made

to create a more accessible platform, the developed features must ensure that the identified problems are effectively resolved.

Thus, to guarantee that value is delivered to customers, even with a more accessible platform, the solution must offer the following essential functionalities:

- Document and knowledge organization.
- Creation of new documents based on company knowledge.
- Information sharing across departments.
- Unification of company documents.
- Establishment of a robust document search system.

Ensuring that all the challenges outlined in section 2.2 are fully addressed by the solution will enable client companies to achieve greater operational efficiency, reduce succession issues, streamline onboarding processes, and minimize data fragmentation within the organization.

3.6 Competitive Advantage:

Therefore, to ensure the planned value delivery for our knowledge management project while creating a competitive advantage over the competitor analyzed in our research, we decided to focus on making our product more accessible to medium sized companies and more suited to the Brazilian market.

To effectively deliver this competitive advantage, we have set the following goals for product development:

- 75% reduction in the number of required users, decreasing from 80 to 20.

- 75% reduction in the average ticket price per user, designing an architecture that allows for a cost below R$100.00 per user.
- Development of a robust system for knowledge maintenance and creation, enabling work with knowledge bases that are not fully organized.
- Localization of the platform into Portuguese, ensuring greater accessibility for the Brazilian audience.

By designing a more accessible and optimized platform from the outset, we aim to provide a solution that reduces the need for large teams, minimizes the required pre existing documentation, and offers a more competitive cost. This way, we seek to serve medium and small businesses that have not yet had access to such technology, making it more viable, especially for the Brazilian market.

Sources:

- Notions - Episode 6: Supercharging company knowledge with AI. Available at: https://info.notion.so/webinar/webinars-amer/notions--episode-6-the-future-of-organisational-knowledge. Accessed on: March 1, 2025.

- POPADIUK, S.; SANTOS, A. E. M. DOS. Tacit, Explicit, and Cultural Knowledge in Demand Planning. JISTEM Journal of Information Systems and Technology Management, v. 7, n. 1, p. 207–226, Apr. 30, 2010.

- CHATGPT. Writing and Text Revision Assistant. OpenAI, 2025. Tool used for spelling corrections and text cohesion in the development of project documentation. Available at: https://chatgpt.com/.

- Glean | Work assistant & knowledge management platform. Available at: https://www.glean.com/.