



Artificial Intelligence for the SaaS Industry

How LLMs and AI tools can be utilized to assess Key Performance Indicators and Internal Alignment

standards for publicly traded SaaS companies

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Abstract

This artificial intelligence project presents a comprehensive analysis of four distinct Software as a Service (SaaS) companies—Blend Labs, Riskified, VTEX, and CS Disco—evaluating their internal alignment through strategic focus and execution, customer relationship management, operational efficiency, market adaptability, and leadership stability. By examining key performance indicators (KPIs) and strategic initiatives, this project aims to generate new, universal KPIs that serve all of the companies being analyzed. The project also employs a grading rubric designed for assessing the internal alignment of SaaS companies, crucial for their long-term success in the highly competitive and rapidly evolving tech sector. This study is a proof of concept on how artificial intelligence can help equity research in this fast-changing industry.

Introduction

This research project explored two fundamental concepts in the finance industry: Key Performance Indicators (KPIs) and Internal Alignment. These core concepts were further analyzed through the creation of several GPTs on the Open AI Chat GPT Platform. The two primary goals of the project were to 1) Develop a new, universal set of KPIs for four companies in the Software as a Service (SaaS) industry, and 2) Assess the internal alignment of each company, giving each a grade based on a rubric developed by a custom GPT trained on company and industry specific data. The results of this project aim to demystify the concept of *Internal Alignment*, and act as a proof of concept for the development of specific, yet useful KPIs for analyzing this niche subsector of the Technology industry.

KPIs in the SaaS Industry

Key Performance Indicators (KPIs) are quantifiable measures used to evaluate the success of an organization in achieving key business objectives. For SaaS companies, where predictable revenue streams and customer retention are crucial, KPIs provide essential insights into performance and health. Metrics such as Monthly Recurring Revenue (MRR), Customer Acquisition Cost (CAC), Customer Lifetime Value (CLTV), and Churn Rate are widely tracked.

Potential Flaws and Biases in Company-Derived KPIs

Companies may sometimes derive their own KPIs to highlight specific strengths or obscure weaknesses. For instance, a company might emphasize "booked revenue" over "earned revenue" to inflate perceived performance.

Internal Alignment in the SaaS Industry

Internal alignment in SaaS companies refers to the coherence of a company's strategies, goals, operations, and culture to optimize performance and achieve strategic objectives. Internal Alignment is often overlooked due to 1) Too much focus on growth metrics 2) Rapid Scaling Issues 3) Venture Capital-Backed Pressures

Methodology

Internal Alignment Grading Rubric

Strategic Focus and Execution (25%)

- Vital because the correct execution of strategic goals is crucial for long-term success and scaling in SaaS environments.
- How well does each company meet the expectations they lay out on earnings calls?

Customer Relationship and Retention (25%)

- Customer retention is critical for maintaining both consistent revenues and long-term shareholders.
- This metric captures aspects of customer satisfaction through strategic and operational measures, along with non-fundamental business operations such as podcasts and other public relationship activities.

Operational Efficiency/Financial Performance Alignment (20%)

- Efficiency impacts profitability and scalability, fundamental for SaaS companies especially as they scale.
- Given the high growth yet often high burn rates of SaaS companies, closely aligning financial outcomes with strategic plans is essential.

Partnership and Market Adaptability (15%)

- Critical as it reflects the company's ability to leverage external relationships and adapt to rapidly changing markets.
- This metric accounts for M&A (mergers & acquisitions) in a market that is currently under heavy regulatory scrutiny by the FTC.

Leadership and Stakeholder Confidence (15%)

- Important for maintaining investor and internal confidence, crucial for funding and operational stability.
- Factors in C-Suite salaries compared to specific financial metrics such as profitability.

Universal Key Performance Indicators

My GPT analyzed several company specific reports and industry research to develop universal KPIs. Documents included SEC filings, investor relations materials, equity research reports, etc.

Results

Universal KPIs for SaaS Companies

1. Strategic Partnership Impact (SPI):

- **Description:** Measures the impact of strategic partnerships on overall business performance. This KPI assesses the revenue or market share growth attributable to new and existing partnerships.
- **Calculation:** (Revenue from partnerships / Total revenue) * 100
- **Importance:** Given that all these companies engage in significant partnerships as part of their growth strategies, SPI would help quantify the effectiveness of these collaborations in driving business success.

2. Innovation Rate (IR):

- **Description:** Tracks the ratio of revenue coming from products or services launched in the past two years compared to total revenue, reflecting the company's ability to innovate and bring new offerings to market.
- **Calculation:** (Revenue from new products or services / Total revenue) * 100
- **Importance:** This KPI would be particularly useful for tech companies like these, where ongoing innovation is critical for maintaining competitive advantage.

3. Employee Alignment and Engagement Index (EAEI):

- **Description:** Measures the level of employee alignment with company goals and their engagement levels. High scores indicate strong internal consensus and motivation which are often predictive of better performance and lower turnover.
- **Calculation:** Combination of employee survey results, turnover rates, and achievement of internal performance benchmarks.
- **Importance:** Employee alignment and engagement are critical for maintaining productivity and innovation, especially in companies that rely heavily on creative and strategic thinking.

Results (Cont'd)



Headquarters: San Francisco, CA
Industry Sector: Financial Technology and Digital Lending
Internal Alignment Score: 75%



Headquarters: London, UK
Industry Sector: Enterprise eCommerce Solutions
Internal Alignment Score: 76%



Headquarters: Israel
Industry Sector: eCommerce Fraud Protection and Risk Management
Internal Alignment Score: 81%



Headquarters: Austin, TX
Industry Sector: Legal Technology Solutions
Internal Alignment Score: 75%

Conclusion

Many lessons have been learned throughout this project. On the OpenAI side, consistent trial and error taught me that GPTs are sometimes able to learn better from specific files uploaded. If the GPT is unable to infer data from a PDF, uploading a separate excel file with the identical data may help the LLM to infer better. Additionally, the quickly evolving field of Artificial Intelligence is constantly presenting new tools that are extremely helpful with information gathering in an efficient process. Specifically, *Perplexity* provided a great alternative to traditional Google Search by providing concise responses in a chat bot format, while also linking specific citations to search results. There are many podcasts that also discuss the AI landscape that can keep students up to date with new trends in the industry. I would recommend listening to the *All-In Podcast* and *Invest Like the Best*.

This project would not have been possible without Professor Leibowitz. We appreciate all of her guidance throughout this course, particularly in a unique semester for the IPHS Senior Seminar. Also a big thank you to Professor Chun and Professor Elkins for their constant support and mentorship throughout the past three years, you two are the true embodiment of dedicated professors.

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