

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
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**Магістерська робота**

на тему : An AI-powered tool to manage and optimize subscription services,  
business uses to perform operations

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## **PREFACE**

This project is rooted in one long evening, when, while sorting through the mails, another notice from PayPal about the successful payment of Adobe Photoshop was noticed. The main problem was the fact that this software was not used for at least a quarter and the only reason to keep paying was an optimistic belief that in a week, maximum in two weeks the task it was initially installed for will be definitely finished. It has led to additional research on active recurrent subscription and attempts to calculate the cost of ownership for some of them for all time of usage and to compare it with non-SaaS analogs. The result was not really pleasant. Short mental experiment on corporate SaaS usage and discussion with a colleague encouraged an assumption about an unsolved problem and marked the beginning of deeper research.

## PROBLEM STATEMENT 1

### 1.1 Something as a Service market overview.

Nowadays one can certainly state that the subscription business model has won a market with an enormous variety of different SaaS, PaaS, IaaS, and a lot of even more exotic somethings as a service. This trend is actually not only for young web services but also for a lot of strongly established businesses that change the way they sell their desktop products from lifetime deals to monthly or yearly payments. The total market revenue of only SaaS shows near 3-time growth in 2015 -2018 and predicted to show near 5-time growth till 2022 (Figure 1.1).

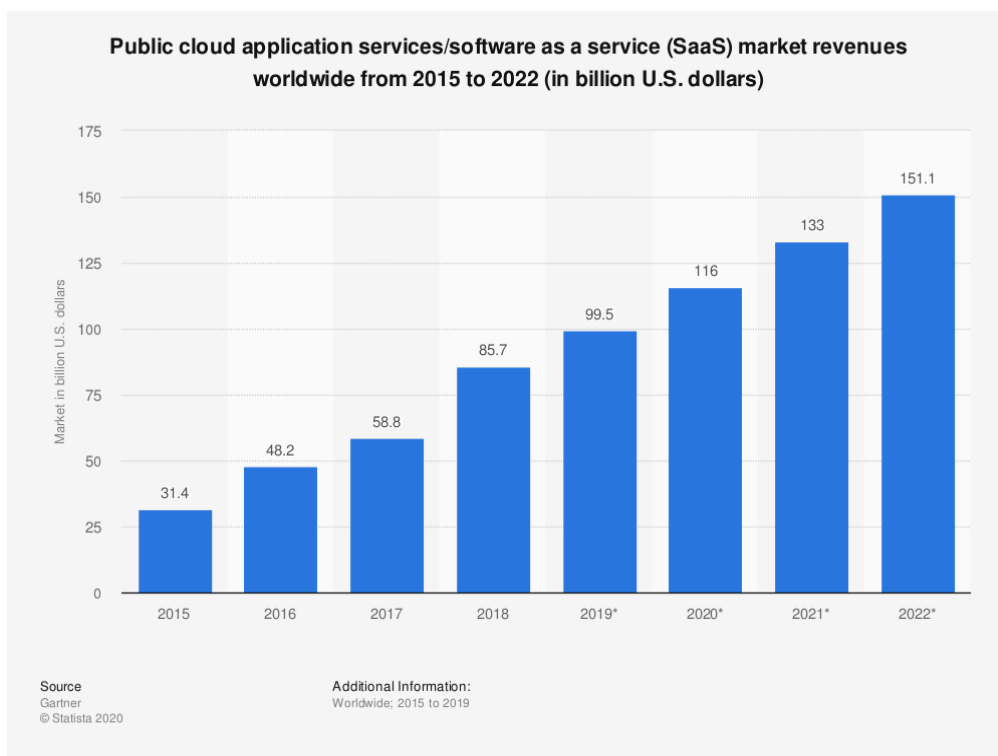


Figure 1.1. Public cloud application services/SaaS market revenues worldwide from 2015 to 2022 [1]

Also, another research shows that more than 60% of respondent companies used at least one SaaS solution in 2015, with a prediction of this metric growing to 80% till 2020 (Figure 1.2).

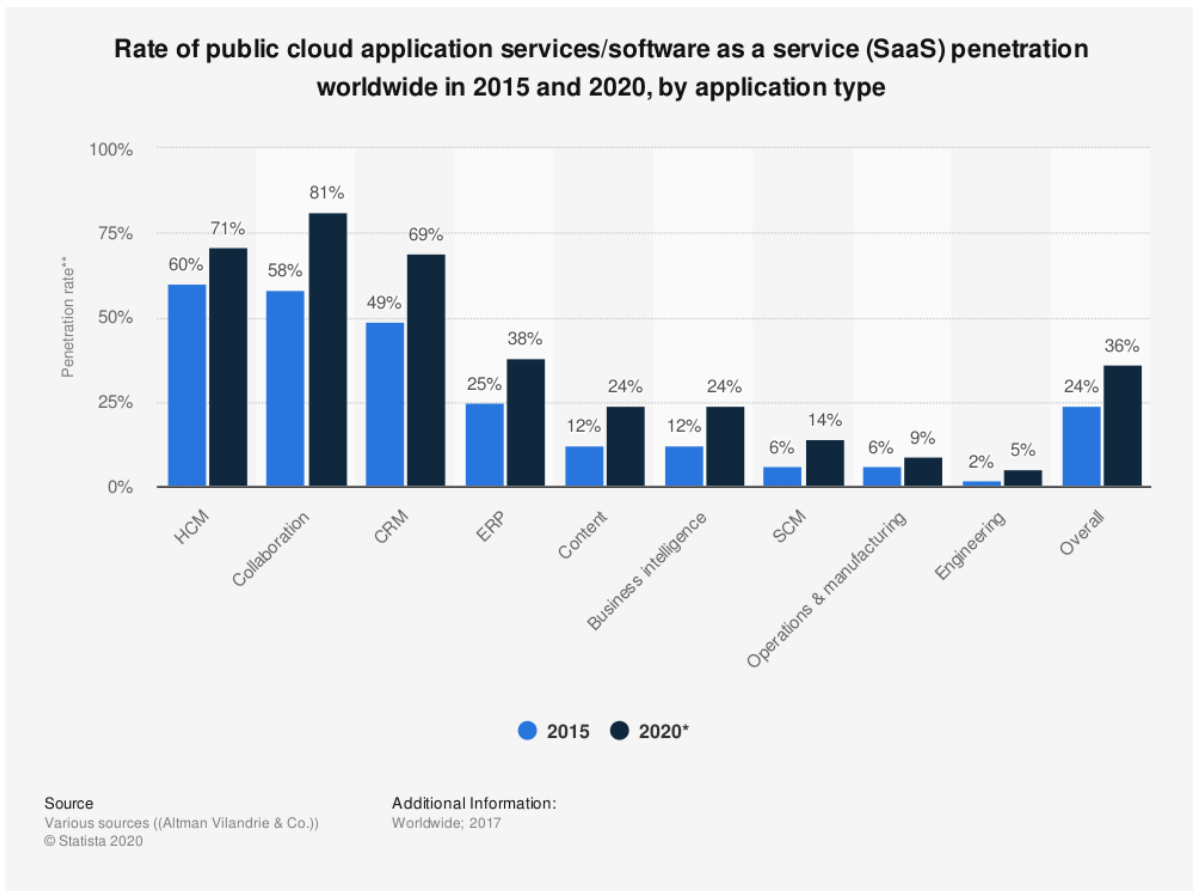


Figure 1.2. Rate of public cloud application services/SaaS penetration worldwide in 2015 and 2020, by application type [2]

This trend has a clear explanation by the potential benefits this model provides for both - vendors and customers. What is more, it provides benefits for different types of consumers - households, SMB, and enterprises.

For vendors it provides the next benefits:

- more predictable revenue streams based on recurring payments;
- potentially higher lifetime value for each client;
- lower entry threshold for customers which makes it easier to acquire them;
- alternate ways to enterprise sales when adoption starts from end-users and then goes to IT departments;

- higher valuations, as investors and stock markets use higher multipliers for SaaS companies.

For customers it also provides a lot of benefits on a first look:

- lower entry threshold, lower initial payment;
- ability to pay only for the time they use an application, hypothetical ability to save on a full application price;
- easiness to migrate to a better solution at any moment;
- no necessity to negotiate IT team to try a new solution;
- easy upgrades without huge one-time additional payments;
- CAPEX to OPEX migration.

## **1.2 User pains and solutions used**

At the same time, further research shows not all things are so great from the customer standpoint.

The research made by Altman Vilandrie & Company shows that for 2-3 year post-deployment companies the price of their SaaS solutions became one of the most disappointing factors (Figure 1.3). And, the smaller a company is, the more disappointed this factor is because of the real cost of a SaaS solution compared to the classic ones.

As a part of further research, it was decided to make some interviews with representatives of different companies of 5 to 1000 employees to learn how they deal with their SaaS solutions, and what inconveniences do they have because of this.

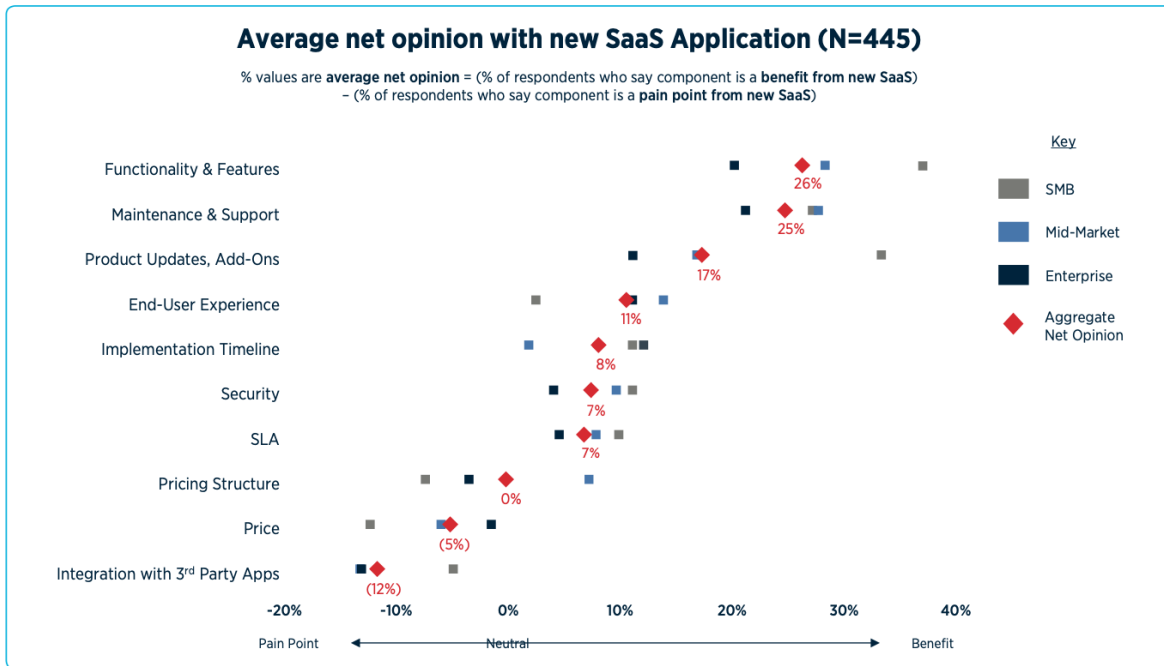


Figure 1.3. Average net opinion with new SaaS Application [3]

The next questionnaire was used to make this research:

- How do you manage your saas services/products?
- Do you know how many you have and what is monthly/annual cost?
- Do you think you have the best deals on all the services?
- Have you had any problems managing these subscriptions?
- Are you managing licenses efficiently/fully utilized?
- How often do you buy new services?
- Have you heard anything about services that help you manage your subscriptions?
- Who is the responsible person in your team for dealing with subscriptions?

After the first interviews, the additional question “How do you solve access management?” was added based on the first insights.

As a result, 10 interviews were successfully held. The detailed findings are represented in Annex A. The main outcomes of this were:

- only one company had a centralized process of subscription management and one was quite close to achieving this build on a compilation of few existed tools;
- the breakthrough in the understanding of the necessity for centralized subscription management came on average with 150th employee (but not always);
- most of the respondents underestimated the number of existed subscriptions;
- most of the respondents from time to time are used to find some unused licenses of services they pay for;
- most of the respondents used Excel or Confluence to manage services.

Most highlighted pains and gains related to subscription management were:

- track existed subscription;
- remind on service prolongation;
- duplicate and unused services to be canceled in time;
- long and taff process of cancel/refund;
- taff process of manual fulfillment;

Also, some additional pains around dealing with web services were identified:

- asses management problem - some respondents had some shared accounts and it was necessary to keep track who has access to this credentials;
- service sponsor to accounting interaction - it is an ordinary situation when the person who is the main user for some external service deals with its administrative stuff, but it was quite inconvenient to provide all the necessary information, including invoices for all the services to accounting.

As the results were quite promising it was decided to move further with existing solutions research. The research covered some existing B2C and B2B



solutions as well as some substitutes. Based on this research additional mostly enterprise pains or jobs to be done were clarified:

- it is quite important to free companies from the necessity to fill all the information manually;
- correct IT budgeting as it is not an easy task to predict how much additional cost would company has with its growth when there is no clarity about which services should each new employee has;
- enterprises also have pain in compliance management (or supply chain and it's compliance management);
- there is a pain of shadow IT - software and services outside of the control of the company IT team, which have been perceived as a big security risk as data-sharing issues, accounts deactivation on employees leave the company, and others.

Two last are among the main results of a tendency to decentralize IT decision making and transfer the decision to the level of departments or team leaders.

Also, some quite interesting data was found in the annual report of one of the most notable players on the SaaS management landscape based on its user base. So, according to its data, the typical mid-sized company saw 39% of its SaaS stack change in 2018. The average number of duplicate apps per company among its clients is 3.6. Enterprise companies have the highest average number of duplicate apps at 7.6, while small businesses show the least redundancy with just 2.3 duplicates on average. For 100-1000 employees companies, the number of billing owners has increased from 12 to 21 per company in the last year [4].

Additional research was made for the B2C market. It showed the next pains:

- reminders which help to cancel a subscription in time;
- no clarity about some recurring payments, what service is it for;

- hard to find how to cancel a subscription as a lot of companies make this process quite hard to go through;

Google Calendar was identified as the most common solution to deal with reminders. Competitor research showed that successful players also

- provide direct bank account integration to import all the data automatically;
- provide a special person to negotiate on behalf of the customer better condition for used services;
- allow to track not only digital subscriptions but also mobile, cable and other recurrent payments;
- an interesting feature was offered by the main German solution- it allows sending paper requests to cancel a subscription based on the internet form.

### 1.3 Generalized problem statement

The next takeaways were made based on the aforementioned research:

- there is a real issue in subscription management related to its observability;
- the problem has 3 aspects: cost efficiency, compliance, and security;
- the bigger company growth the better it realizes this issue and is ready to pay for its solution;
- the market of specialized solutions is still an emerging market, first companies were established in 2016;

Based on this the decision to move forward and create a roughly business model. Also from the organizational perspective, it was decided to look for a third co-founder to cover the marketing side.

## **SOLUTION 2**

### **2.1 High level market segments analysis**

As it is impossible to be one product for everyone it was necessary to make market segmentation and narrow down the number of audiences to find their problems more precisely and provide a specific solution that matches 90% of customer needs instead of the universal one which covers only 30% for each customer. The strategy is not only about what you do, but also what is more important it is about what you would never do if rephrase a statement from Scott Sehlhorst course. The segmentation of the potential target audience was primarily made based on a size basis. These criteria were chosen as the level of internal processes, standardization, and financial discipline usually are linked with some checkpoints related to company size. Also, internal company spending and budgets usually correlate with its headcount. To this moment it was not finally decided what solution B2B or B2C to build so the smallest segment was chosen as an individual person and the bigger one as an enterprise.

An estimation of segment potential was made based on segment size, the degree of concern about this problem (also it covers existing substitutes and readiness to pay), the number of existing direct competitors, marketing model, and rough estimations of investments needed.

#### **2.1.1 Consumers**

A single person or household.

Segment size: Consumer Retail Subscription Services Report prepared by PYMNTS.com estimates the number of US citizens used at least one subscription service in 167.1 million [5]. According to Netflix's last Q1 2020 report, the average number of subscribers is 68.8 million in the US and 167 million worldwide [6]. So we can assume that the potential addressable market is 167 million only in the US.

The degree of concern: Analysis of Quora and other services where consumers can ask questions showed no demand for subscription management services. While there is a demand on step by step instructions on how to cancel different subscriptions. User interviews showed there is awareness of the problem but an absence of readiness to put any additional effort to optimize and track subscriptions. According to the "Deep Dive: The two factors that help drive subscriber satisfaction" report by PYMNTS.com an average spent on all subscription services is from \$433.33 to \$471.13 for US consumers [7]. So it can be summarized as one demand - money-saving and low concern.

The number of existed direct competitors: There are two big players on the US market **Truebill** and **Trim**. Both provide direct connector and import from customers' bank account statements. Most of the smaller applications and services look dead, which leads to the conclusion that integration with bank accounts and AI to recognize subscription payments are must-have for success.

Marketing model: the solution should use a freemium model, as its main value proposition for the B2C segment might only use money-saving promise. The free part should cover base subscription management when premium some extended features like human help with the negotiation process. At the same time as there is no direct explicit demand for such a solution as well as the potential network effect, the marketing cost is expected to be quite high because of necessary educational activities and creating buzz around the subscription service issues and potential savings. Additional elements of Marketplace, Advertising, and additional monetization of customer data might be added.

Investments: It is expected that customer acquisition costs would exceed one-year customer value. Based on this statement and on the necessity to provide indirect marketing activities, a solution for this segment can't be created as self-funding. Truebill experience shows that it requires for near \$2 million to reach half a million users (not customers).

Also both services Truebill and Trim actively move from just a subscription tracking solution to accounting one, probably because it allows to find additional value for customers and increase ARPU.

### **2.1.2 Micro and Small business**

From 0 to 100 employee business.

Segment size: According to the US Bureau of the Census there were 5884403 companies that employed 0 to 100 people in 2017 [8]. Taking into account that 81% of companies are estimated to use at least one SaaS service it leads us to 4766366 companies as a top line of the potential addressable market. Such companies employ 33% of all US employees.

The degree of concern: Based on interview outcomes such companies are not really deeply concerned about a number of subscriptions and the necessity to manage it. Such companies are usually set on Courtship, Infancy or early Go-Go phases of Company Lifecycle by Adizes and some chaos in internal processes and systems are usual for them. Also, they are not much concerned about compliance and security because of the size such companies are not really in the main focus of regulators. Such companies use not so much separate subscriptions and are not really ready to pay for an additional solution. The most usual substitutes are Excel and accounting software like QuickBooks.

The number of existed direct competitors: Probably, the most appropriate services which position itself as specialized subscription tracking systems are **TrackMySubs** and **Binadox**. Both are bootstrapped without external

investments. Both provide only the basic feature set of subscription tracking with a promise to import data automatically from a bank account or statement but such a feature works really unstable. Both have a self-served customer journey funnel.

Marketing model: Freemium when customers might have base subscription tracking, reminders, and education part for free and pay for some extended tier based on the number of subscriptions tracked, compliance, security, or negotiation stuff. Because of the size of the companies, process maturity, and not really huge annual spendings on subscriptions, it is extremely questionable if such companies will use a premium feature set at all. Also, the estimation of annual subscription spendings leads us to quite low ARPU which means a totally self-served solution without an ability to make pre-sale and support the adoption. On the other hand, as there is no explicit demand for such a solution it would require huge marketing spends to educate the audience and create necessary buzz around the subscription efficiency. Additional elements of Marketplace, Advertising, and additional monetization of customer data might be added.

Investments: The necessary investments are expected to be the same as for consumers. But it is definitely a more complicated task to find it as no ventures love small business.

## **Medium business**

From 101 to 1000 employee business. This segment behaves somewhere in the middle between small businesses and enterprises. The transformation from Go-Go to Adolescence usually happens with such a size of the company, so let's assume that this segment characterizes the company in the transformation phase from chaos and manual government to some established and described processes.

Segment size: According to the US Bureau of the Census there were 102440 companies that employed 101 to 1000 people in 2017 [8]. Taking into account that 81% of companies are estimated to use at least one SaaS service it leads us to 82976 companies as a top line of the potential addressable market. Such companies employ 19.5% of all US employees.

The degree of concern: There is at least a group of employees who understand that it is impossible to manage external services without some centralized solution. There are strict concerns not only about cost efficiency but also about compliance and security. At the same time, there is strong opposition to any type of formalization inside, so it might be quite complicated to defend a huge budget for such a solution. Might use a variety of substitutes from Excel to a combination of not specialized solutions like Jira, Zoho, or some self-created solutions.

The number of existed direct competitors: Most of the existing solutions target itself on the enterprise segment with 1000+ employees. The most appropriate direct competitor is **Blissfully**. For companies 500+ employees it is possible to look at enterprise services, but they can face an unreasonably high price.

Marketing model: Freemium with tiers based on numbers of employees with premium support as an additional service. The free tier allows using a self-service funnel with semi-automatic service recognition and a set of reports and reminders. Paid tiers allow using the service for bigger companies plus open compliance, shadow IT, and premium support related features. It is expected that ARPU for this cohort will allow covering the cost of sale which includes some light business development and presale.

Investments: It is expected that it would be possible to work with such a segment even without huge investments and fundraise only to boost the growth.

### 2.1.3 Enterprise

More than 1000 employees. Strongly established companies with a set of formalized processes, politics, and bureaucracy. All transformations usually were successfully finished. Might be on any of Adolescence, Prime, The fall, Aristocracy, Recrimination, or Bureaucracy stage. Usually, requires customization and integration with some already existing corporate systems.

Segment size: According to the US Bureau of the Census there were 10057 companies that employed more than 1000 people in 2017 [8]. Taking into account that 81% of companies are estimated to use at least one SaaS service it leads us to 8146 companies as a top line of the potential addressable market. Such companies employ 47.5% of all US employees.

The degree of concern: Highly concerned about shadow IT, ability to budget spends in the correct way, and utilisations. At the same time require a higher level of trustworthiness behind service providers. Might require specific security certificates, proof of financial sustainability, and some specific customization.

The number of existed direct competitors: There are a lot of solutions targeted on an enterprise market. The most remarkable ones are **Zylo**, **Blissfully**, **Snow**, **Coreview**, etc. Most of them declare the minimal number of employees to start the negotiation at a number of 1000 or at least 500. Most solutions have a lot of possible integrations and automation and a number of features beyond pure SaaS management.

Marketing model: It's a pure Enterprise model with a long sales cycle and individual approach. High ARPU, high cost of sale, a lot of business development, and individual interactions but also the high price of a contract. Marketing should include ongoing activities to support the reputation of expertise in subscription and asset management fields like webinars, research, and interviews.



*Investments:* To gain the enterprise market it is necessary to have two types of investment. The first one is financial investments to build a product that is able to meet corporate requirements and hire salespeople able to build enterprise sales. The second is reputation investments. As a venture fund with an excellent reputation shares part of this reputation with backed companies.

#### **2.1.4 Summary of market segment analysis**

As the initial strategy was to make a product and reach the “Morph” phase of J-curve without external investments, the decision was made to focus on Medium businesses, but the only ones that have reached the transformation stage based on Adizes company life cycle theory. The main hypothesis to support this decision:

- such companies have a natural understanding of the necessity to formalize existed chaos, so they have an explicit wish;
- such companies usually are not biased with existed legacy solutions which are no more actual but it is too expensive to change;
- they usually have no clear understanding of what exactly do they need so it’s a good chance to morph and adopt the product in close partnership;
- such companies are out of scope for most of the existed players so it allows avoiding strong competition but they are quite close to the yummy enterprise what allows to use the strategy of disruption from a lower price segment like it was shown on Joe Pons Strategic Marketing Challenges course;
- there is no necessity to obtain a lot of security certifications;

Further company growth should be focused on moving to the Enterprise segment as the most affordable one.

B2C segment was declined as even with a really huge potential it wasn’t clear enough how to make the product viral. While all the attempts to use paid

traffic required for a huge amount of investments without any guarantees to be marketing ROI positive.

## **2.2 Customer profile**

Based on the above analysis the next customer profile was created (Annex B).

Meet John. John is a CIO of the “SuperFastCompany”. The company was established three years ago and after a really not long period of initial explorations moved to a phase of rapid growth. It has grown from 10 to 105 employees in two years and the first time everything looked amazing. Revenue has increased, new colleagues appeared, and nothing had to change in quite a long future. John joined the company when it had 15 employees to help with some IT stuff and grew together with a company. Initially, he relied on his memory and Excel in IT stuff management, but it became more and more complicated to take everything under control. As the company was quite young it supported each employee in an attempt to find the best tool to improve overall performance. Productivity utilities, project management services, collaboration software, different marketing automation tools appeared, and disappeared. And it didn't look like an issue until the moment when it was necessary to find some details about the project led by John, a guy who left the company about half a year before. And it happens that necessary details were in a third-party system linked to already deactivated corporate mail. It took some time to reactivate it and. But the situation became a very early clue. The next issue appeared when Jim mentioned in passing their CEO some details about the tender no one had to know about. Future investigation showed that the details were available for the whole company because of the comment in the project management system which hasn't allowed to restrict access in their tier. Taking into account recurring problems with CFO who constantly complained about increasing and

uncontrolled IT spends and fails which each new employee setup when it takes a few days to provide the newcomer with all the necessary services John decided to add some formal process and take the situation under control. But very soon he met strong resistance from most of the company as it looked for them as unnecessary bureaucracy and creating barriers to making business. So now he is looking for some lightweight solution that allows him to take all the external infrastructure under control but will create minimal resistance from colleagues.

Two additional roles are taken as a supportive customer and internal agents: CFO and Department budget owner. Persons on these roles will have their own benefits from using the service.

### **2.3 Core stakeholders and user stories**

Based on customer interviews and secret client activities next stakeholders were defined for the system.

1. CIO - main service stakeholder. The person behind this role might have different titles from the more informal Head of IT to IT Director, VP of IT, or CIO. It was described in detail in the previous chapter and in Annex B. The main motivation is to win back control under the whole IT infrastructure and to be able to ensure cost efficiency, compliance, and security. Because even if he was out of the new service usage decision, he would be any way responsible for dealing with force majeure.
2. CFO or any title responsible for financial planning and accounting. The main interest is in ensuring optimal cost spending and avoiding overspends on unused services and licenses. Additional goals - clarity in cost structure, simple cost allocation on business units, clear budgeting process, and simple collection of primary documents. Might act as an internal agent and enabler or gatekeeper to use proposed solutions.

3. Compliance. It might be a separate role like a Head of Compliance or a part of the legal or the financial department. The main interest is to be sure that third-party service usage doesn't create any compliance risks, like PII leaks. Might act as an internal agent and gatekeeper to use proposed solutions.
4. Local budget owner. It can be department lead, team lead, or project lead, any person who has some allocated budget to purchase necessary toolkits to make things done in the most effective way. The main interest is to have a fast and clear mechanism to purchase necessary products. An additional one is to ensure each new employee will have all the necessary products and services active from the first day. Might act as both - gatekeeper, in case the system puts some overhead out of his routine or objector if the solution will add some overhead for him.
5. Employee - any person inside the company. The end-user of third-party tools, services, and products. The main interest is to have a simple, clear, and quick way to get new necessary tools and to be able to have a try for new, potentially more effective ones. Might act as an objector if the solution will add some overhead for him.

To better understand the needs of each stakeholder a set of user stories was created.

*User stories for CIO:*

- As a CIO, I want to control all the purchases of third-party services to ensure it complies with internal policies.
- As a CIO, I want to understand who has a license to third-party services to ensure optimal budget spendings.
- As a CIO, I want to understand real license utilization (both unassigned licenses and a dead or sleeping user with assigned license) to ensure optimal budget spendings.

- As a CIO, I want to be able to predict future spendings to provide accurate budget requests to finance.
- As a CIO, I want to understand who has access to some shared accounts to ensure all the credentials to be changed when the person leaves the company. (yes some services don't allow to link an account to two separate users with separate sets of credentials).
- As a CIO, I want to understand which third-party systems are used without purchasing the license to avoid compliance or security issues.
- As a CIO, I want to be notified if a third-party system used by the company employee gets some compliance or security issues to mitigate its effort on the company.
- As a CIO, I want to be reminded about upcoming service prolongation to either cancel unnecessary services in time or avoid license expiration.
- As a CIO, I want the data to be imported automatically into the system to avoid manual time-consuming operations.
- As a CIO, I want to obtain some benchmarks, analytics, and recommendations to optimize spendings.

*User stories for CFO:*

- As a CFO, I want to have a clear vision of third-party system spending to ensure optimal cost spendings.
- As a CFO, I want to have accurate predictions on third-party systems cost for budgeting to ensure the financial sustainability of a company.
- As a CFO, I want to have primary documents on all third-party systems spendings to be prepared for following audits.

*User stories for Compliance:*

- As a Compliance Manager, I want to be able to evaluate compliance of each third-party system used inside the company where sensitive data might circulate ideally before it was approved to use inside the company.
- As a Compliance Manager, I want to get immediate notification if some issues with the third-party systems used by company employees happened.

*User stories for Budget owner:*

- As a budget owner, I want to have a simple way to purchase new licenses or services for my team to do my job and make my people do the job more effectively.
- As a budget owner, I want to have a simple way to manage my team requests for new services or licenses to make better decisions.
- As a budget owner, I want to have a simple way to understand how my budget has been spent - what licenses and services are linked with my budget, which employees are assigned to optimize spendings.
- As a budget owner, I want to have a simple way to understand how services and licenses linked with my budget are used, to avoid unnecessary spendings.
- As a budget owner, I want to plan the budget for the following period to avoid a headache with unbudgeted purchases.

*User stories for Employee:*

- As an employee, I want to easily make a request for a new service purchase to use it for doing my job more effectively.

## Core assumptions

To make the model works the next assumptions should be correct:

1. Average 100 - 1000 employee company spends 50\$ a month per employee on subscriptions.
2. “CFO” and “CIO” of such companies feel uncomfortable because of Shadow IT infrastructure.
3. Such companies are ready to spend 2% of the annual SaaS budget to manage it effectively.
4. It is possible to build a self-service funnel.

Assuming there are ~80k medium companies in the US gaining 5% of the market would lead us to 4k clients. With an average client company size of 300 employees and \$50 spent per employee a month, we would come to \$3600 ARPU which leads to \$14,5 annual revenue.

Self-service funnel is crucial as reaching such a number of customers with a classic B2B approach would take ages even with a team of BD and sales representatives. At the same time, it is the riskiest hypothesis.

## **2.4 Competitor research**

As our target segment is pretty young medium business companies in the transformation stage it was decided to cover all the landscape of existing direct competitors or substitutes used by smaller companies. The reason for this decision leads to the idea that the company could fall in love with an existing solution and try to avoid any additional spendings without a clear understanding of the current system and benefits of switching to our solution.

The competitor research was based on internet search on “subscription management” keywords from different locations, Crunchbase examination, and results of interviews made on a previous step.

The Gartner quadrant was also used as a source of information, but all the solutions represented by it was purely enterprise-oriented. The representative of

Zylo, a company from Gartner's report declined a call with the reasoning that it would be just a waste of time if you have less than 1k employees.

So, based on the research it was discovered that among the companies who use at list some solution 3 respondents used Excel (and one of these companies has 800+ employees), 1 company uses Confluence, 1 uses a special module of accounting software, and two ones had a solution based on AD + Jira + HRM (one of this companies still had additional Confluence page for local department usage).

The research was based mostly on UA company's experience, but some indirect signs from secret customer competitor research showed that the US landscape doesn't differ a lot.

Internet research showed that in addition to previously mentioned solutions Virtual cards services, Classic asset management services can be used. Also as a specialized solution, TrackMySubs was found.

And everything looked quite good until Blissfully was discovered.

Based on discovery results next solutions were chosen for comparison:

**Excel.** Or some analogs like Spreadsheets, or even Confluence tables. The most popular swiss knife for a lot of different tasks and jobs. It was initially released in 1985 but still is the most handful solution for millions of its clients firstly because of amazing agility. But it's strength at the same moment is its weakness. Being everything for everyone it doesn't provide any specific domain-oriented features.

**QuickBooks.** <https://quickbooks.intuit.com/> Or any similar accounting software. One more dinosaur on our list. Initially launched in 2002 as a spin-off of Quicken by 1984 this solution allows us to categorize spendings and even provide automatic data import from bank accounts. But like Excel, the solution is a swiss knife for accounting so it doesn't allow you to solve some specific cases.



**Soldo.** <https://www.soldo.com/> Or any other expense-tracking solution based on virtual cards. Might be used as a substitute. It has the same limitations as classic accounting software despite the fact it can solve an issue with the budget owner using its private card to pay for some services.

**Snipeitapp.** <https://snipeitapp.com/> Open-source IT asset management software. There are also a lot of similar commercial ones. Like most such solutions, it is more optimized to work with physical assets and lifetime licenses than with recurring subscriptions and shadow IT.

**Trackmysubs.** <https://www.trackmysubs.com/> Specialized subscription management software. It requires a lot of manual activities.

*Established:* 2016

*Core message:* Take control of your subscriptions and be reminded before they hit your credit card.

*Target auditory:* Small business.

*Pricing:* Tier model depending on a number of services tracked. Free for the first 10 services, \$180 annually for unlimited services.

*Alexa rank:* 214733

*Traffic spread:*

- search 16%
- referral 18%
- direct 66%

The company pointed its clients to track about \$105m of payments with the help of the service.

Australia based. No investments. Team size - four people.

**Blissfully.** <https://www.blissfully.com/> Specialized subscription management software.

*Established:* 2016

*Core message:* Blissfully gives you automated visibility into your SaaS apps, usage, and spend, along with powerful workflows to manage change.

*Target auditory:* wide range of companies from 25 to more than 3000 employees. Enterprise funnel with a presale, which leads to an idea that the main audience is enterprise and all the small businesses are used to improve the product.

*Pricing:* Freemium. \$60 annually per employee.

*Alexa rank:* 212452

*Traffic spread:*

- search 47%
- referral 15%
- direct 38%

The company pointed out it has 1000 free clients and 100 paid ones.

NY based. \$5m Seed investments, close to Round A finalization. Team size is about 25 people, mostly engineers.

**Zylo.** <https://zylo.com/> Specialized subscription management software.

*Established:* 2016

*Core message:* Discover every subscription, track every dollar spent, and fully rationalize every application. Integration with 10,000+ applications in its management catalog.

*Target auditory:* Enterprises. Companies with 500+ employees.

*Pricing:* \$24k annually. \$80k with procurement as a service.

*Alexa rank:* 214,733

*Traffic spread:*

- search 23%
- referral 26%
- direct 50%

The company points to more than \$12 billion in SaaS spending under management.

Indianapolis based. \$35,2m of investments raised.

To check if there are still some uncovered areas, a Competitor Comparison Matrix from the Product Management course by Scott Sehlhorst was used. The Zyllo service was excluded from comparison as it is targeted to different customer segments.

Table 2.1

### Competitor Comparison Matrix

Priority	Feature	Excel	Quick Books	Soldo	Snipeitapp	Trackmysubs	Blissfully
High	Keep the list of existed subscription	Green	Yellow	Yellow	Green	Green	Green
High	Integrations to automatically import data and manage services	Red	Yellow	Yellow	Yellow	Yellow	Green
High	License utilisation discovery	Red	Red	Red	Green	Red	Green
High	Hidden IT infrastructure discovery	Red	Red	Red	Red	Red	Yellow
Medium	Credential access tracking	Red	Red	Red	Red	Red	Red
Medium	Future spendings prediction	Yellow	Red	Red	Green	Yellow	Green
High	Deep analytics on existed subscriptions	Yellow	Red	Red	Yellow	Yellow	Green
Medium	Compliance and security notifications	Red	Red	Red	Red	Red	Green
Medium	Reminders about upcoming payments	Red	Red	Red	Yellow	Green	Green
Low	Benchmarking and suggestions	Red	Red	Red	Red	Red	Green
Low	Procurement as a service	Red	Red	Red	Red	Red	Red
Medium	New service/license request management	Red	Red	Red	Green	Red	Green
High	Different roles to work with data	Red	Yellow	Yellow	Green	Red	Green

The analysis of the Competitor Comparison Matrix showed that neither substitutes nor Trackmysub cover most of the Medium business jobs to be done. The only strong competition might be met from specialized enterprise solutions, Blissfully in our case.

Also, this research provided information about the potential value gap for existing solutions. In our case, it is “Shadow IT infrastructure discovery”, “Credential access tracking”, and “Procurement as a Service”.

An additional finding was that despite the initial idea was in a money-saving value proposition it migrates more and more into a solution for some additional issues that appeared because of the SaaS model.

The next step was to create a Competitive Matrix from the Product Management course by Scott Sehlhorst to understand if it is possible to beat competitors with some value prop. The most important features from a previous matrix were used to make this research.

Table 2.2

### Competitive Matrix

Competitive Matrix Template													
How good each competitor is overall, from each customer's point of view	65	86	84							Us (near term)	Us (long term)		
	51	70	70							Blissfully			
	55	80	82										
	44	63	64										
	26	34	33										
Importance of each problem to each customer	Small	Medium	Enterprise	Problems	Us (right now)	Now	Future	Now	Future	Now	Future		
	4	5	5	Keep the list of existed subscription and its usage	0	3	3	4	4	5	5	4	5
	3	4	4	Integrations	0	1	1	2	3	4	4	3	4
	2	4	5	Hidden IT infrastructure	0	1	1	1	3	3	4	4	4
	2	4	4	Deep analytics	0	2	2	3	4	4	5	4	5
	5	3	1	Credential management	0	1	1	1	1	1	1	2	3
Importance of customer to our strategy	1	3	2										
194	26	102	66	Excell	(future)								
361	44	189	128	Snipeitapp	(future)								
459	55	240	164	Blissfully	(future)								
401	51	210	140	Us	(near term)								
491	65	258	168	Us	(long term)								
Overall relative strengths of all competitors, given relative importance of each customer group as a function of our selected strategy													

The research confirmed Medium business as a most appropriate target audience but at the same time highlights the fact that for the first time Blissfully would be a better choice for both Medium and Enterprise.

It creates a point where a decision about future steps had to be made. The one option was just to give up, fix time spent as losses and look for new

opportunities. It was an easy way. Another option was provided by Business Strategy in the Times of Asymmetric Competition course by Adrian Slywotzky and the idea that innovation can be invented on each step of the Value Creation Chain. So it was decided to move forward and to look for differentiators wider.

## 2.5 Value proposition

Competitor research and user interviews provided an understanding of the competitive landscape, but how about understanding what features should be a part of the initial product and what should not. Also, the question was how deep should each feature be developed as it also requires resources which might be used to add something more valuable for customers.

To answer this question the Levitt framework from the Product Management course by Scott Sehlhorst was used. All the features were divided between four areas: Table stakes, Competitive Jockeying, Differentiation, Disruption.

The results of the Levitt framework are represented in table 2.3.

Table 2.3

Competitive Matrix

Priority	Feature	
Low	Procurement as a service	Differentiator
High	Hidden IT infrastructure discovery	
Medium	Credencial access tracking	
High	Integrations to authomatically import data and manage services	Competitive Jockeying
High	License utilisation discovery	
Medium	Future spendings prediction	
Medium	Compliance and security notifications	
Low	Benchmarking and suggestions	
Medium	New service/license request management	Table Stakes
High	Keep the list of existed subscription	
High	Deep analytics on existed subscriptions	
Medium	Reminders about upcoming payments	
High	Different roles to work with data	

The framework tells that Table Stakes are must-have features for products to be purchased. Without these features, it would be totally ignored by customers, so it was decided to add all the Table Stakes to the scope of an initial release. On the other side are Differentiators. Customers usually don't expect to have these functions in the product, so this is a great source of word of mouth and anchors to make customers smile and keep using the product. So it was decided to take

Procurement as a service and look for a potential partner for Credential management.

The motivation behind this decision was the next one.

Procurement as a service requires less to nothing additional coding. It is mostly about adding some new scripts and skillset to the customer service role. So it allows making the test easier and cheaper.

Credential management has a sense in case some big players with a strong brand and the ability to create white labels would be found. Such a partnership would bring at least two huge benefits: reduce the time necessary to create the solution by ourselves and provide some trustworthy and reduce concerns around storing passwords with some new and unknown service.

Talking about Competitive Jockeying, the rule The more the better might be applied to these features. They are not critical, but the better these features are covered the more happy customer is. Based on this statement it was decided even not to try to implement all the features for the first version, but to concentrate on the ones which have high priority.

Based on this thesis the final value proposition for the first launch is:

*Brainsub is a service which allows you to keep track of all the subscription services or applications your employee uses, get notifications about further payments, and optimize your costs by automatic payments and real license usage discovery, providing deep personalized analytic for each role, and*

*backing you with a real procurement person which would help you not only to make the best ever decisions but also to deliver it.*

## **2.6 Marketing strategy**

Marketing is usually the most underestimated part of any business plan created by our local entrepreneurs. The most common misconceptions are “Let’s create the best product ever and clients would find us by themselves” and “Let’s use the factor of low payrolls on a local market and set a price two times lower than competitors and the product will sell itself”. Usually, such companies fail quite soon.

Talking about marketing we can’t forget about sales. And there might be a different combination of this set of activities. For some companies, it is pure marketing, no active sales. This way we are talking about some mass market, usually low average check, self-service funnel, and really easy to use the product. For others, it might be strong marketing at the top of the funnel and then some light sale at the bottom. Such a model works great with quite expensive or complicated products. And the more expensive the product is, the more efforts might be allocated for the sales part. Or it might be business development and sales lead process when marketing is used as a supportive function. This is usual for really expensive enterprise contracts.

Usually, funds prefer to back startups at opposite poles: either the ones with a really low cost of sale, short time to sale, low average check (up to \$1k) and high volume, or the enterprise-oriented ones with a really high cost of sale, time to sale can take a year, high average contract value (more than 100k) and not a huge number of such a sales per year. And try to avoid everything in the middle. The reason is clear - the unit economy for such companies is quite unpredictable which causes issues with scaling. Also, the wrong balance

between the marketing and sales part leads to the situation the company would run out of cash.

Marketing strategy for the project is based on the next previously made decisions:

- ARPU range \$2400 - \$3600;
- emerging market, so clients have no explicit understanding of what solution do they need;
- we create a startup without deep business domain expertise;
- the target audience is middle-size companies in the transformation stage.

Such precondition leads us to the low cost of acquisition and mostly self-service funnel, otherwise, it wouldn't scale. On the other hand, Y-combinator strongly suggests doing the thing which can't be scaled on the first stage to understand the customer and domain better.

So, it was decided to use educational content marketing as the main driver (85% of efforts). PPC on really specific low-frequency keywords (10% of efforts) and marketplaces were chosen as a supportive channel (5% of efforts). And as a thing which doesn't scale light business development was chosen, but it is more a part of the Customer development framework than a marketing strategy.

The idea behind educational content marketing is caused by the fact that there is no established market for such a solution yet. So it is necessary to educate the audience. As there are also a lot of different ways to implement content marketing the next channels were selected:

- Company blog and SEO. This channel allows covering a few goals simultaneously. The first one is to increase trust for the service as a really strong specialist in a domain. The second, to attract super cheap search traffic. The third, to educate the auditory and provide some best practices and success cases of company transformation with really light referring to



the subscription management system in a way it doesn't look like an annoying promotion.

- Some specialized resources like online journals for CIO. It's pure PR and with really interesting and unique material, it would cost nothing to have a publication (except the tangible cost of article production). The reasons to use this channel: it usually has better coverage than SEO, as it also covers the ones who haven't started thinking about the issue yet. It improves the main site of SEO and ranking. It works as a long-term investment, as it wouldn't disappear just in a moment you've stopped to pay for promotion.
- Specialized conferences as a speaker and probably to have some booths. It mostly provides the ability to talk to real customers.

The strategy assumes the creation of two high quality and low-quality articles per month at the first stage. After reaching the Business model stage of the J-curve framework [9] additional content assets should be produced once a quarter. The quality of content assets allows us to use it for PR goals.

The idea behind marketplaces is to use marketplace owner brands as some kind of umbrella that provides part of its authority to specialized plugins which can be found in this marketplace. The most natural is accounting software marketplaces, helpdesk ones, and, maybe, marketplaces of some asset management services, if such exists. It was decided to start from QuickBooks Apps to test the concept.

To support marketing activities landing-style company site with a blog and signup to waiting list was created. To make it quickly and cheap Wordpress and Themeforest plugin were chosen. As a result, it took \$86 (\$50 template and \$36 annual hosting) and one day of work to have a blog ready for adding the first articles.

The core message is “Take your subscription under control”. But really it's worth noting because the messaging should be tested with a split test on real traffic. The site from day one form the promise in three dimensions:

- optimize inefficient budget spendings;
- prevent potential security issues;
- prevent potential compliance issues;

Even taking into account the fact that not all these dimensions would be covered with some features in the MVP version it was decided to avoid this promise on landing-site to keep an ability to check what promise converts better.

To gather this information another trick was used. After signup, a special questionnaire appears and asks the user to answer some questions to have a personalized solution. In fact, it is near to changing nothing for the initial version but allows us to gather feedback about what features are the most important for the ones who successfully sing up the service.

Also, an important part of the messaging on the PPC channel is a freemium model and a promise to bring user value without any risks, as one of the stronger CIO motivators is to avoid risks (Annex C) .

## 2.7 Business model

Now, the main figure of a product appears good enough to move forward and to look at how to transform a product into a sustainable business. To plan it, a Business model canvas was used [10]. This is an amazing tool that allows overviewing the whole strategy on no more than one piece of A4. Also, it provides an understanding of future operations necessary to make the strategy alive. The canvas contains nine areas that should be filled in the next order: **Value Proposition** (which one of the customer’s problems are we helping to solve?), **Customer** (who are our most important customer?), **Key Activities** (What key activities does our value proposition require?), **Revenue Stream** (for

what value are our customers really ready to pay?), **Customer Relationships** (should address three critical steps on a customers relationship: how would we get new customers, how would we keep customers purchasing or using our service, and how would we grow the revenue from our current customers?), **Channels** (through which channels are we going to reach our customers? which ones are the most cost-effective?), **Key Resources** (What key resources does our value proposition require?), **Key Partners** (who are our key partners and key suppliers?), and **Cost Structure** (what are the most important costs inherent in our business model, what are our most expensive resources and key activities?).

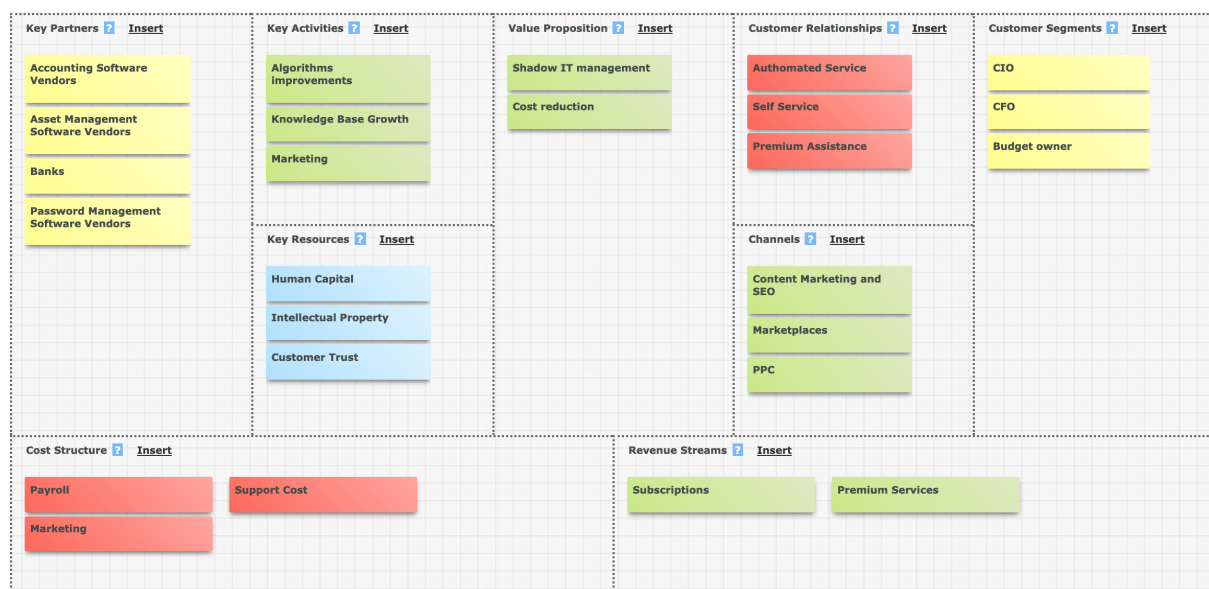


Figure 2.1. Business model canvas

Moving to our Business model canvas, we are going to take care of efficient cost spendings, security, and compliance when using SaaS services and products for CIO, CFO, and Budget owners.

To bring this value we will create the best in class knowledge base of existing SaaS solutions with its peculiar properties, security and compliance levels, information about previous incidents, and algorithms that automatically detect billed and utilized licenses as well as shadow IT infrastructure and

provide suggestions on its optimization. Also, education to be provided to make our target customers better understand existing issues and possible solutions.

Customers will obtain the value within self-service based on automatic algorithms and personal assistance as a premium. Base functionality would be available for free without any assistance and guarantee, with limitations on volumes. Extended features like compliance, procurement process automation, benchmarks, credential access tracking and extended limits would be available with monthly or yearly contracts as well as personal procurement.

Revenue stream - monthly or yearly subscription which allows us to remove volume restrictions and use premium features. Advertisement model for free tier customers with smart advertising.

The customers will be enriched mostly with help of content marketing, but also with PPC and accounting service marketplaces.

Crucial resources for strategy success are Human capital (people who would make algorithms, people who would write articles for content marketing), Intellectual property (algorithms and know-how, knowledge base), and Customer trust (as without trust no one will use the service which pretends to keep sensitive information even for free).

Key partners: accounting software as it might be more comfortable to target customers to export data from special accounting software than directly from a bank but also for such software it might be valuable to have our service represented in its app marketplace, as with additional integrations it allows to increase the value for their customers; media, as we need to educate auditory about an issue and possible solutions. Key suppliers are banks or bank statement providers which help obtain the data to discover subscription payments and credential storages to save us from developing our own password storage.

Main costs are allocated on the payroll as our main resources are algorithms created by people and knowledge base with all the educational

marketing stuff also created by people. Also, it is quite necessary to keep track of customer service costs to make sure support costs exceed 10% of ARPU.

## **2.8 Finance model**

The next natural step after finalizing the business model is to make a finance model for the company. Just to be realistic about if the company might be profitable at lists on the paper, which investments would it require to pass a breakeven, and when does this event could happen.

Two models were created, the first one, based on predicted marketing spent (Annex D). As you can see from table 2.4, the company requires nearly 100k investments in 2 years and passes breakeven on the 17th month (but still has a negative cash flow in a month when some fundamental marketing spend is planned).

Table 2.4

## Financial model I

	<b>2020</b>	<b>2021</b>
<b><u>Total Revenue (\$):</u></b>	55,500.00	412,800.00
<i>New subscribers number</i>	26	184
<i>New subscribers (\$)</i>	45,600.00	273,900.00
<i>Retained subscribers number</i>	12	80
<i>Retained subscribers (\$)</i>	9,900.00	138,900.00
<i>Additional goods (\$)</i>	0	0
<b><u>Cost of Revenue:</u></b>	40,151.36	320,243.64
<b><u>Gross Profit:</u></b>	15,348.64	92,556.36
<b><u>Operational Expences:</u></b>	48,034.00	151,656.60
<i>Administrative</i>	4,000.00	6,000.00
<i>IT</i>	792.00	2,860.00
<i>Payroll</i>	32,742.00	136,296.60
<i>Other</i>	10,500.00	6,500.00
<b><u>Net:</u></b>	(32,685.36)	(59,100.24)

The second model was built based on a self-funding statement. So the amount of investment was limited with \$15k (Annex E). The results are represented in table 2.5. This way breakeven would be passed on the 14th month, but it is also expected to have some negative cash flow in a month when some fundamental marketing spend is planned. The first model allows to grow faster (plus \$100k revenue in a second year and plus 59 customers by the end of 2021), but requires additional marketing investment.

But, taking into account economic predictions and expectations of a new crisis, it was decided to go forward with the second financial plan as a basic one till the moment product-market fit would be found and then recalculate the first

plan based on insides from previous stages, extend it to 5 years and start fundraising.

Table 2.5

Financial model II

	<b>2020</b>	<b>2021</b>
<b><u>Total Revenue (\$):</u></b>	48,600.00	320,700.00
<i>New subscribers number</i>	23	117
<i>New subscribers (\$)</i>	39,300.00	218,700.00
<i>Retained subscribers number</i>	12	45
<i>Retained subscribers (\$)</i>	9,300.00	102,000.00
<i>Additional goods (\$)</i>	0.00	0.00
<b><u>Cost of Revenue:</u></b>	11,570.00	125,420.45
<b><u>Gross Profit:</u></b>	37,030.00	195,279.55
<b><u>Operational Expences:</u></b>	48,034.00	146,507.60
<i>Administrative</i>	4,000.00	6,000.00
<i>IT</i>	792.00	2,711.00
<i>Payroll</i>	32,742.00	136,296.60
<i>Other</i>	10,500.00	1,500.00
<b><u>Net:</u></b>	(11,004.00)	48,771.95

## 2.9 Product architecture

Despite the idea to start some serious investments in product development and promotion it was necessary to have at least something to show potential clients. And ideally this something should look like a finished product for potential customers.

To meet the challenge it was decided to buy one more \$11 template and code some basic UI prototype with help of these predefined blocks from the purchased template and Yii2 PHP framework. The prototype allows users to add information about the services manually, upload bank statements to import

information about active subscriptions from a list of payments, get the list of active accounts from GSuite, get some base reports and schedule notifications. Also a part of menu menu sections were added in a disabled state just to see if it would attract interest. All the complicated background tasks (like bank statement analysis and subscription detection) was decided to perform manually. Such an approach allows to split an effort and use the prototype for customer validation before even the base functionality will be added. Also it allows to look for real early adopters whose main pain is cost efficiency tracking.

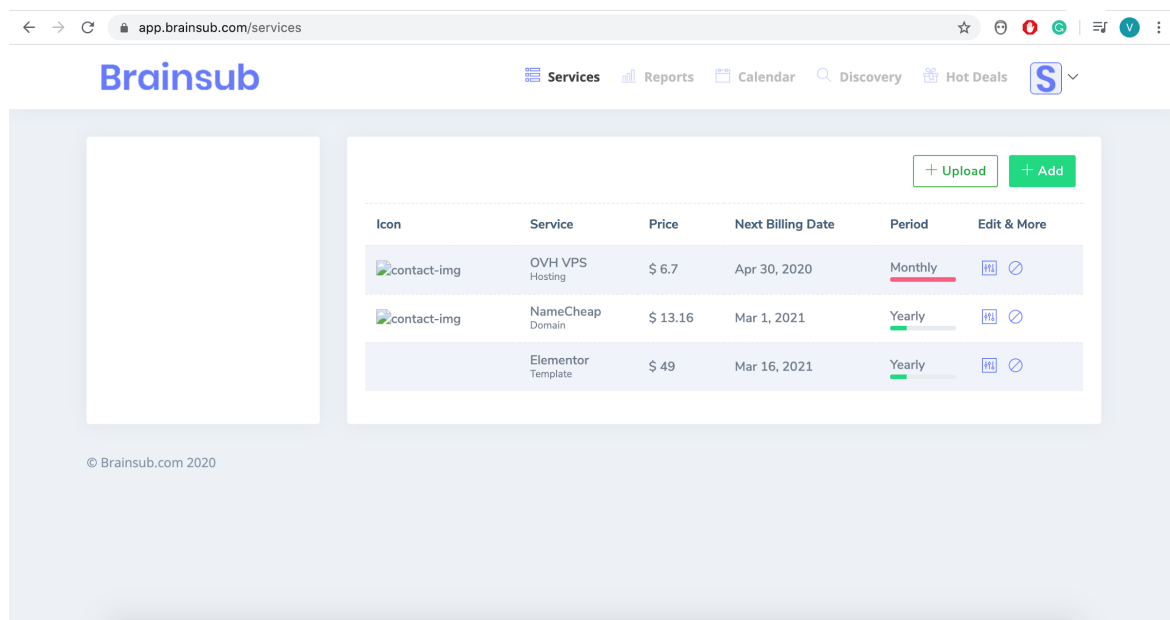
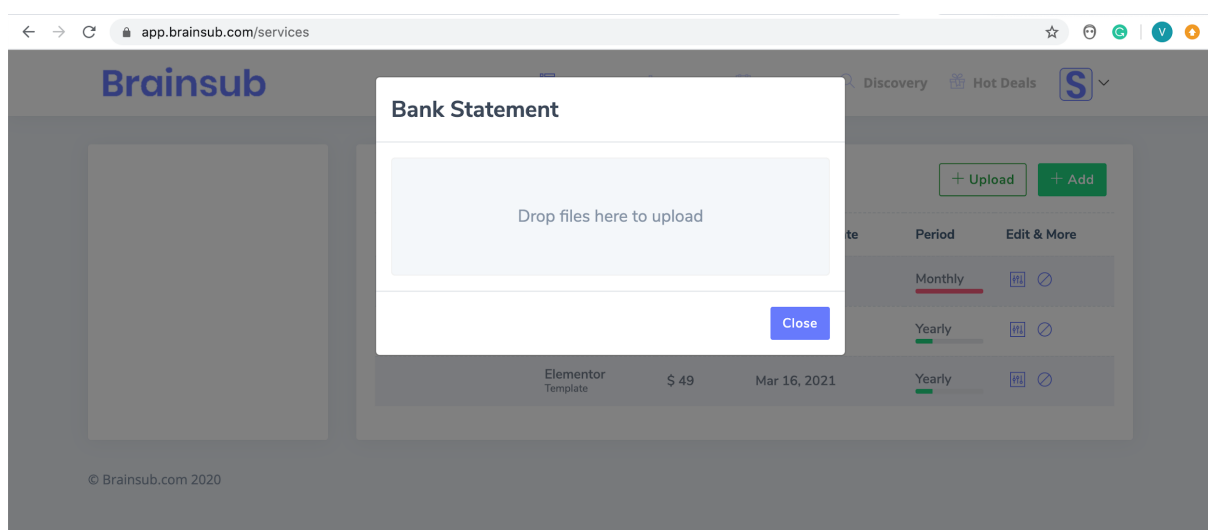


Figure 2.2. List of services





### Figure 2.3. Upload bank statement

On the other hand, core product architecture was defined before even starting to code UI. The main reason to define it so early is in two assumptions. The first one is about the integrations with external services as one of the core values for the service. The second one is about the fact that as the service is in discovery phase it would be necessary to make a lot of changes based on market feedback, so some features would be added, some would be declared as obsolete. And all these changes should be possible to implement really fast. Architecture in turn sets some basic principles and avoids the necessity to make a decision each time new integration or feature appears. Also, it would simplify the communication with subcontractors or employees.

The base architecture is represented on a figure 2.5. There are two applications: main site and blog on Wordpress, and an application to manage subscriptions. This application includes a few modules: the Core one, which is responsible for user management, UI, reports and some other simple functions, and few butches of modules: Import modules, Notification modules, Analytics modules. All these modules have standardized interfaces so it's quite simple to add or remove separate items like boxes in an airplane. Also, Intercom and some solution for credential management are planned as partnership integrations.

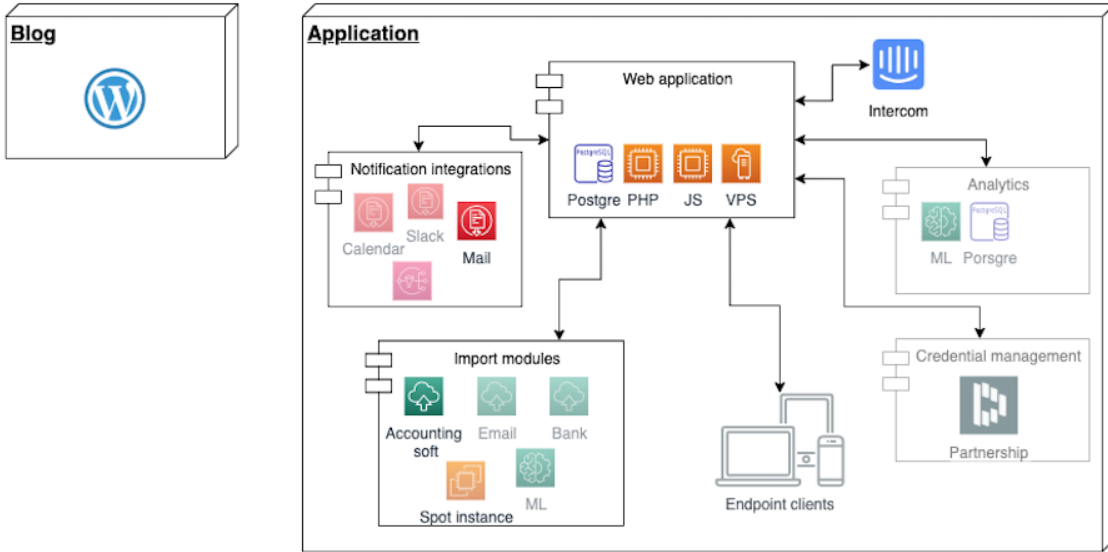


Figure 2.4. Solution architecture

## IMPLEMENTATION STRATEGY AND CONSTRAINTS 3

### 3.1 Implementation roadmap

As it is necessary to have some schedule to deliver results a Project schedule was created. It includes the next milestones:

1. Overview research of SaaS market.

*Due date:* end of February 2020.

*Expected outcome:* A resulting document should contain main trends, players, customer pains, and behaviors.

Create phase.

2. Initial product idea.

*Due date:* April 15, 2020.

*Expected outcome:* The milestone includes at least three potential customer profiles and appropriate value proposition creation and validation through user interviews, deep substitutes and competitor research, business, marketing, and financial model estimation. As a result, one profile and model should be chosen.

Create or Customer Discovery phase.

3. Formalization.

*Due date:* April 20.

*Expected outcome:* Create product requirements, formalize business model, marketing, and finance assumptions.

4. Marketing launch.

*Due date:* May 1, 2020.

*Expected outcome:* Launch a platform for content marketing. This step includes landing-site setup, blog setup, semantic core development, and

preparation of the first 4 articles. These articles to be scheduled for publication within a half a week period.

5. MVP launch.

*Due date:* May 15, 2020.

*Expected outcome:* The MVP version of the product to be ready and accessible all over the world. The version should have base functionality described in the MVP part of the Product architecture chapter.

Release phase.

6. Customer validation phase.

*Due date:* August 2020 (first checkpoint June 31).

*Expected outcome:* At least 4 paid clients. Understand the real need CIO are ready to pay for. Understand the value-delivery chain. Adopt messaging to findings.

Iterations on Morph or Customer Validation phase.

The end of the Customer validation phase is set as a milestone for the Go/No go decision to be made. The first real feedback from the market to be obtained till that moment and product-market fit should be found. The further roadmap to be made on the Morph phase results as it might happen that the most valuable function for real clients would be found among some side features.

### **3.2 Risks**

As a next step, the risk analysis was made. One of the main reasons to make this was an attempt to prevent the confirmation trap when a volume of efforts spent to achieve something makes people invest more even if the project looks to be failed. So it was necessary to specify some conditions when the project should be closed without any additional investments and when a new attempt should be made. So the next risks were specified:

1.

*Risk:* The customer validation phase shows that target persons see no issues in Shadow IT infrastructure.

*Probability:* low.

*Impact:* high.

*Response:* close the project and go to the ideation phase.

2.

*Risk:* The customer validation phase shows that the financial model is not sustainable in the long-term perspective because of wrong assumptions.

*Probability:* medium.

*Impact:* high.

*Response:* change the business model and financial plan. Close project after 3 months of attempts.

3.

*Risk:* The customer validation phase shows that the financial model is not sustainable in the long-term perspective because of the global recession.

*Probability:* medium.

*Impact:* medium.

*Response:* switch to a conservative plan, use our own investments.

4.

*Risk:* The customer validation phase shows that the solution can't bring recurrent value for the customer.

*Probability:* medium.

*Impact:* medium.

*Response:* iterate on a product as a part of the Morph phase to find recurrent value. Close project after 3 months of attempts.

5.

*Risk:* MVP couldn't be finished in time because of hiring issues.

*Probability:* high.

*Impact:* low.

*Response:* shift timelines.

6.

*Risk:* The customer validation phase shows additional compliance requirements for solution technology or the legal side.

*Probability:* medium.

*Impact:* high.

*Response:* focus on smaller companies, look for investments from the reputable fund, reengineer solution, obtain necessary certifications.

7.

*Risk:* Strong players appear and win the EN market.

*Probability:* high.

*Impact:* medium.

*Response:* switch to local markets.

By the middle of May risks numbers 5, 6, and 7 appear. So it was decided to shift timelines and shift the main focus of a value proposition from subscription detection which requires an upload of financial information to the shadow IT management solution without the necessity to link a solution with a bank account and looked safer for both CIO and CFO.

## TEAM, HARD AND SOFT 4

Idea's worth nothing, execution is worth everything. To make our service successful, a strong organization should back its growth. Also, different people might have different visions on how the company should grow, or how the processes and interactions inside should be organized. Unfortunately, different culture, vision, and conflict between founders are among the most often reasons why early companies die. So it was decided to agree on core principles of company operations before starting any serious activities.

### 4.1 Core statements

As for all co-founders it was pretending to be a bootstrap project for at least a half a year, it was decided to build a company on *principles of resiliency*. It looked quite a good decision also as another global crisis was predicted to happen in quite near time, so it was reasonable to design the company in a way to be *able to cut unnecessary costs and quickly become profitable* even in case of raising some investments. Also, a story of Preply showed that it is a really necessary principle even in satisfying times. And of course, such principles are actually in the time of COVID19.

So it was agreed to have a *distributed first company*, which means all the communication should be summarised in a digital form, and active usage of web-based tools for communication, project management, etc...

We agreed to have a *flat structure* as it is the most effective way to organize creative people. While creative people and human capital is the most important company asset. This potentially might cause some internal politics and fractions to appear, as it was mentioned on Alex Shegda's course, but it was decided to handle it with a strong internal culture.

Also, talking about culture, we agreed that an *Orange culture* [11] is the closest for us and worldview so we would look for people with the same culture

for core business functions. These people are usually addicted to take a decision, act, and achieve, which is a crucial characteristic of distributed work.

## 4.2 Team

Talking about the team the next principles were defined:

1. *Values bits Experience*. The main idea behind this statement is to look at a person's values while making a decision about hiring. Even if the experience isn't good enough it's more important to have the right person who is able to learn than to have a jerk employee who will crash a company in a crisis.
2. *Universal employees*, specialists not earlier than in a year. As it is a startup, it is important for every employee to be ready to cover a gap. Deep specialists usually are in love with their core technology so it is hard for them to cover some unusual stuff which is devastatingly for a company looking for product-market fit.
3. *Hire slow, fire fast*. It used to be not an easy task for a lot of companies to get rid of not really effective employees. Especially if it concerns mediocre employees who don't do much harm but, also, don't show significant results. Or the ones who don't match a culture. The issue with such employees is that they take the place of the right person. This, in turn, leads to an organization's degradation and is totally opposite to resilient companies. Needless to say, to make this principle work some performance management systems should be established.
4. *Attention to employee growth*. As we are following *Values bits Experience* principle a lot of not really high skillful people might be hired. To make them deliver really high results it is important to invest in people's growth. To make this happen internal mentorship programs to be established. Also, a separate budget for education should be set.



As an additional filter, it was decided to hire only the people who prefer option programs to a salary under a median range. The conditions are usual for Valley companies - 1 year cliff time and 4-year vesting period. The presentation is based on personal negotiations. The reason is the people who value being a share or potential shareholder of a company feel more ownership and deliver better and more creative results.

The second category of candidates to look in are people who can't work from the office for some reason, like maternity leave. They are usually also more thankful for the opportunity provided and show better results.

Definitely, there should be a need to hire some narrow specialists with company growth. But the main number of people should be motivated with options. This is quite hard to find such people in Ukraine, but as we are talking about a distributed first company it looks achievable.

As an additional decision, it was decided to use contractors as most non-core functions as possible. Just to be able to restructure it easily. It is also represented in the budget.

Moving to a team and roles for the first year the next configuration was planned. Core areas to be split between three founders: bizdev and operations, marketing, product, and engineering.

As a full-time employee one SMM manager / Copy coordinator, one Business development manager, three Software engineers, one QA, and up to three Customer success managers to be hired.

DevOps, UI/UX, SEO, and Content writers to be attracted on a contract basis.

Also, it was planned to use outsource partners to create an initial version of the service.

### **4.3 Processes**

To glue this all together some processes should be established. And to make the company really resilient it should be established from the first days of a company.

Firstly it was decided to use *OKR as a planning system* [12]. This system allows increasing employee commitment by providing bi-directional goal-setting process - Top-Down with defining some strategic company goals, and Bottom-Up with defining specific actions and it's key measurements. Usually, such goals are set annually, but as the company is in a startup phase, not all people understand how to deal with such a system. It was decided to use two sets of OKR, the annual and the quarter ones.

OKR is great for annual and quarterly planning but to stay on top of a company's health on a daily basis some other tool should be used, as OKR has a really huge latency. So the KPI on critical parameters were chosen to observe on a daily basis (Annex G).

As the company should follow the *distributed first* approach communication digitalization is crucial for success. So to support this it was decided to use Slack and Zoom as internal communications. Also, as a rule, all the meetings should have a meeting agenda and summary on Confluence so every person can ensure they understand the decisions and action points from a meeting in the same way. Asana with daily progress updates was chosen as the project management system. Progress updates are a really great feature as it allows us to achieve both - shorten daily check-ins and have a digital history of the day by day progress. GSuite to be used as additional storage for documents and mail provider.

The process ideally should be similar to SCRUM for the whole organization, but for early-stage enterprise, it would definitely be a scrumban, where some predefined milestones are combined with urgent changes based on market feedback. Asana is still to be a tool to deal with it.

To make everyone feel involved, weekly meetings to be established, to share publicly our weekly progress, achievements, other news, or highlight some extra achievement of individuals. This contributes to company culture and helps the collective to feel like one team.

Also, a dashboard with core metrics to be created and set as a homepage for everyone so the team can be able to see the company heartbeat in a realtime. Which also aimed to support the culture of ownership. The homepages is backed by the concept of Information radiator which sets the mention that it is important information to spread like warm air from a radiator despite it being closed and requires an additional effort to get updated like when you try to get something from a fridge.

## **EXIT STRATEGY**

“Begin with the End in Mind”, the great statements from The 7 Habits of Highly Effective People workshop by Anastasiya Markuts. The most desirable outcome would be to sell the company in a 3 to 5 years perspective. In 3 years, the world should recover from COVID19 effects and it is reasonable to expect multipliers to return to the level of 2019, which is around 10x revenue for two-digit growth Europe based companies.

The most natural buyer for such a service is some of an existing big player in an Asset management field. In case we would be able to create a solution, it would take such a player about 2 years of time to copy, and he would be able to offer our solution to the whole existing customer base will be a classical win-win deal. This exit is totally supported by our business strategy where knowledge base and detection algorithms are specified as main assets.

To support the strategy two additional components should be gained. The first one, we need to have a reputable fund on board, which means at least Round A fundraising to be done. But more probable that because the main

operations are located in Ukraine as well as all the founders and there is no successful enterprise experience on behalf of founders it would require to start from Seed round.

The second reason for Seed is a necessity to grow 4 times annually in the first five years to have desirable valuation. This led to covering about 7% of the US market in five years.

As an alternative option, the private equity fund might be considered, but it leads to significantly lower multipliers.

## SUMMARY

“Growing companies by growing people” is the motto of LvBS. It’s a quite deep statement as it requires for some time to understand the simple fact - you can learn an immense number of frameworks, concepts or even best-practices but until you go and try to make something by hand or even better, unless you overcome few crises, all this knowledges are worth nothing.

So here are some takeaways on the part of the journey covered by masters work.

Talk to target customers before build, they will provide unexpected findings and use cases. Quite a popular statement, but it’s still surprising to discover some new problems like necessity to collect digital invoices from each service to provide it back to accounting, or an issue with shared accounts.

Sell before build (and calculate an expected unit economy based on this initial experience). A lot of stuff was written about this concept, but for people with an engineering background it's still unnatural. This concept made us migrate from an initial B2C concept to B2B, And even with B2B it's really interesting to observe how an answer of the same person changes when you change a question from abstract discussion about some problem to an offer. This is a really great way to discover the factors which are really important for potential customers. Also, it allows to make Income part of a financial prediction not so fantastic. In our case we've additionally declined 25 - 150 employee companies, discovered the real level of wariness about uploading the financial data to some newly born service, and got a realistic understanding of readiness to pay for such a solution and cut client growth prediction two times.

There is no better AI solution for a startup than ten students. The same idea is promoted by YC in the form of "Make the things that are not scalable while in a discovery mode". In our case the interviews (and some additional research) showed that to make clients use our solution we should avoid them from the necessity to enter information by hand. To make it happen some really complicated AI based solution should be provided. But it has no sense for a test. So we decided to make it manually for the first time. And this fact allowed us to discover an issue with potencial trust when uploading some financial data into noname service without wasting huge resources.

No huge investments allowed until product-market fit to be found. We've started from B2C, then moved to B2B and now are thinking about moving a main proposition from subscription spend tracking to shadow IT. Why? Based on more details obtained. What does it mean? And, be ready to finish quite far from an initial concept.

You never know when your previous failures will shoot. We've used the findings from one of a previous project when found the need in supplier compliance tracking. It just speed-up the progress.

If you see no competitors who has already made the same solution you just have searched poorly. It was really shocking to find Zylo and Blisfully, after the initial analysis of competitors and substitutes was made and a featureset for Brainsub was specified. Especially Blisfully as it had not only all the features implemented but also actively bet on SEO in marketing activities. It has even rised a question about closing down the project. But then, with additional research it was decided to change the main value proposition for the initial stage.

“Buy” from your competitors, they will provide unexpected findings and use cases. In our case it allowed not only to discover some requests from real customers which competitors had already implemented, but also to find features they say they would never implement.

Arrange the details on the shore. Really amazing suggestion, a lot of founders just ignore. When we started researching we’ve set a point where the details of further partnership to be established as the end of Formalization step. And it was one of the best decisions as allowed to find out divergence in expectation of the amount of time to be spent by each founder on the project. In case any tangible investments to be made till the moment it would create unnecessary conflict.

It is possible to sell Enterprises even if you are a young startup but you have to be locally established, funded by an authoritative fund and have a real local presence. This also explains the reason why VC avoid investments into companies who are going to work on a B2B market without a local presence. This statement was made based on chats with few angel investors and enterprises, and it looks even COVID changes will change not a lot in a nearest perspective.

And one more point which is’t covered yet is a final “Go”/”No-Go” decision. It is very important to define some checkpoints, limits on resources to be spent on each stage and specific indicators of success. The reason is in two

opposite human mental traps. The first one is a justification of the “Go” decision by an amount of investments already made. The second gives up and “No-Go” after the first difficulties. So it is important to have some KPIs prepared with a cold mind. In our case we are already behind the schedule because of the findings on a previous stage, but as most of allocated resources were not spent and feedback obtained before serious development was started the discovery phase continued.

## **LvBS IMPACT**

The LvBS course made a huge impact on this work as it covered some gaps in marketing, sales, and finance areas. Also, additional frameworks and tools in the product management area were learned.

Management Decision-Making Toolbox course by Mykhailo Wynnytskyy raised a great point about the way we as Ukrainians present our thoughts (long entry before the main statement) and difference to the way Anglo-Saxons culture people are used to making the same stuff (main statement and then justification). These takeaways were used while presenting the idea to potential customers. The next great question which appeared during this course was a tendency to calculate the price of some goods based on cost plus fixed margin basis, where the margin is being compared to costs, while the more effective way is to evaluate the benefits and then to set a price compared to client benefits. Ant the fact that using this approach the price might be 2-10 times higher but the customer would still be happy.

The concept was further developed by Joe Pons Strategic Marketing Challenges course. Also, his amazing way to work with cases demonstrates that you should examine each situation from different corners and look for unobvious details and solutions. Also, it raised a question of pricing and

positioning. But the most memorable advice from the course is “Don’t make a discount, find a way to propose an additional value”.

The Product Management course by Scott Sehlhorst Product is a storage of different tools and it is still something to grasp. At least an understanding of how to use the Competitive matrix came only while preparing the one for the masters’ work.

The sales management course by Mykhailo Wynnytskyy brings great concepts of sales. Three profiles of salespersons with different tasks, “infiltration” and diamond techniques form the basis of the marketing part analysis and planning.

Financial Decision Making provided by Yuri Zayarnyy on the practical case showed how the cash gap looks like (and there is one in a business plan). Mark Shuper and Corporate Finance course showed how mysterious is a process of company valuation and how easy it is to get valuations which differs more than two times.

IT Strategy course by Alex Shegda provides a little bit more understanding of how the big enterprises act and how decisions to be made by the CIO, which is crucial for this research.

And also Adrian Slyvotsky. I have been visiting his presentation about the value chain and then LvBS course. Both are quite inspirational and push to action as it explains with quite simple and usual cases how little startups might compete with big rich enterprises and why such companies have much more chances to succeed despite all these resources. So there is no reason to wait. Also, it made me read his books about Strategic business model and Demand creation which provided a lot of insights about components of a successful business mechanism.



## **GLOSSARY**

Here a list of abbreviations and some specific terms been explained.

**SaaS** - software as a service. A method of software delivery and licensing when the software is accessed online on a subscription basis, rather than bought and installed on company internal infrastructure.

**PaaS** - platform as a service. Category of services that provides a platform allowing to develop, run, and manage applications in a rented cloud infrastructure without the complexity of building and maintaining own infrastructure.

**IaaS** - infrastructure as a service. Online services that provide high-level APIs used to dereference various low-level details of underlying network infrastructure like physical computing resources, location, data partitioning, scaling, security, backup, etc.

**SMB** - small and medium businesses. Small businesses are usually defined as organizations with fewer than 100 employees, midsize is the organizations with 100 to 999 employees. Such a business, due to its size, has different IT requirements, and often faces different IT challenges than do large enterprises, and whose IT resources (usually budget and staff) are often highly constrained.

**CAPEX** - capital expenditures. Funds used by a company to acquire, upgrade and maintain physical assets such as property, buildings, an industrial plant, technology, or equipment.

**OPEX** - operating expense. An expense a business incurs through its normal business operations including rent, equipment, inventory costs, marketing, payroll, insurance, and funds allocated for research and development.

**B2C** - business-to-consumer. Business model when a business sells goods or services directly to households.

**B2B** - business-to-business. Business model when a business sells goods or services to other businesses.

**ARPU** - annual revenue per user. Defined as the total revenue divided by the number of subscribers.

**ROI** - return on investments. A performance measure used to evaluate the efficiency of an investment, calculated as the benefit (or return) of an investment divided by the cost of the investment.

**CIO** - chief information officer. A job title commonly given to the most senior executive in a company responsible for information technology and computer systems.

**CFO** - chief financial officer. A job title commonly given to the most senior executive in a company responsible for managing the company's finances, including financial planning, management of financial risks, record-keeping, and financial reporting.

**CEO** - chief executive officer. The most senior executive in a company.

**Compliance** - compliance manager. A role responsible for ensuring a company's policies and procedures comply with regulatory and ethical standards.

**Budget owner** - is someone in the company, who is accountable for spending decisions in the area of their responsibility.

**HRM** - human resource management software.

**Shadow IT** - is hardware or software within an enterprise that is not supported by the organization's central IT department.

**Seed investments** - a series of related investments from \$500,000 to \$3 million. This money is often used to support initial market research and early product development.

**Round A** - an investment round, generally takes place after the founders have used their seed money to provide a "proof of concept" demonstrating that their business concept is viable and will eventually be profitable.

**PPC** - pay-per-click. A model of internet marketing in which advertisers pay a fee each time one of their ads is clicked.

**MVP** - minimum viable product. A version of a product with just enough features to satisfy early customers and provide feedback for future product development.

**SMM manager** - A role in a company responsible for planning, implementing, managing, and monitoring the company's Social Media strategy in order to increase brand awareness, improve marketing efforts, and increase sales.

**QA** - quality assurance. A role in a company responsible for guaranteeing a high level of quality and absence of bugs in software.

**DevOps** - is a role whose main goal is to provide continuous delivery with high software quality by following a set of practices that combines software development and information-technology operations.

**UI/UX** - user interface design and user experience design.

**SEO** - search engine optimization. The process of optimizing a website – as well as all the content on that website – so it will appear in prominent positions in the organic results of search engines. Or a specialist who makes search engine optimization.

**OKR** - objectives and key results. A goal-setting framework that helps organizations define goals (or objectives), and then track the outcome (key results).

**KPI** - key performance indicator. A measurable value that demonstrates how effectively a company is achieving key business objectives.

**SCRUM** - is a framework for project management that emphasizes teamwork, accountability, and iterative progress toward a well-defined goal.

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# ANNEXES

## Annex A. User interviews

	Company 1	Company 2	Company 3	Company 4
Company size	5-10	6	~10	~20
Field	Digital Agency	Call center consulting	Bakery	AdPlatform
How you manage your saas services/products?	Tech lead (dev)	I don't really manage them, they just auto renew and if I don't need them I try to cancel I have a dozen I guess, don't know exact cost	No need. 2 SaaS	In my head
Do you now how many do you have and what is monthly/annual cost?	Aprox 25 but not sure	Most likely not	Yes	Yes
Do you think you have the best deals on all the services?	Yes on tools that I have agency pricing on, but not all	Forgetting to cancel if we don't need the service	Don't think about it	Mostly
Have you had any problems managing these subscriptions ( Specific )?	Yeah, it's a mess! spreadsheet that I keep forgetting to update		No	Hard to account and predict, Hard to gather all the invoices for accounting person
How do you solve access management?	We are a small team so have no issues, only once someone leaves I try to change passwords	I manage all licenses and buy them	No need.	-
Have you heard about services that help you manage your services	No don't want to pay for another thing	no	No need.	No
Are you managing licenses efficiently/fully utilised.	Yeah, kind of	Yes most of the time I would say	Yes	Mostly
How often do you buy new services?	Every now and then	Depends, something every few months	No purchases	-
Who is responsible person in your team.	Anybody can suggest new tools	I manage everythin that has budget	Cofounder	"Department managers"
Comments			Haven't consider domain name, hosting as a service,	Assumed that subscription management software will pass through all the payments and automatically collect invoices;
Company size	Company 5	Company 6	Company 7	Company 8
Field	~25	50	500+	650+
How you manage your saas services/products?	Outsourcing	Technical Support	Outsourcing	Product
Do you now how many do you have and what is monthly/annual cost?	Confluence	On my own with the help of support team and my tech guy	Active Directory + Jira + Zoho People	Jira + Confluence
Do you think you have the best deals on all the services?	Not exact	Yes in PrL	Yes	Yes
Have you had any problems managing these subscriptions ( Specific )?	Don't think about it	Most probably but not 100% sure	Yes	No
How do you solve access management?	Credential management; Service prolongators; Assess management (Who has access);	I did. Hate when it's a long process to cancel the subscription and get a refund.	No	Complexity
Have you heard about services that help you manage your services	No	I have a system administrator who is responsible for this.	Zoho people + Roles + Policy	Jira, but there are gaps
Are you managing licenses efficiently/fully utilised.	~85% of unused services been cancelled in time	No	Implemented with existed ones	Yes
How often do you buy new services?	not often	Depending on the service, but mostly yes.	Yes	No
Who is responsible person in your team.	no specific responsible person. Purchase the ones who need the service	Once a year	1-2month	1th a month
Comments	PMO	Me and SA	Budget owner + CFO	Procurement manager
			The process war established since 250-300 people company size	Department leads
				CTO

## Annex B. Customer profile

**John, CIO**

company size: 100

### **Background**

The technical guy who loves structured approaches. Has joined the company when it has 15 employees and grows with it.

### **Behaviors**

- constantly stressed;
- try to formalize and systemize everything around;
- is wary about new products;

### **Motivators**

- guarantee business sustainability;
- avoid risks;
- increase the efficiency of the IT team with standardization and automation (free up IT team time);

### **Needs**

- take all the external services under control;
- understand who uses what;
- manage risks related to external systems usage;
- activate and deactivate external accounts in time;

### **Challenge**

- resistance to changes from most of his colleagues;
- no budget to use specialized enterprise solutions;
- small and really overloaded IT team;
- no one has an idea of what is really used in everyday work.



# Annex C. Company site

The screenshot shows the Brainsub website interface. At the top, there is a navigation bar with the Brainsub logo on the left, a 'Resources' link in the center, and a 'Get Started' button on the right. Below the navigation bar is a large blue hero section. On the left side of the hero section, the text reads 'Take Subscriptions Under Control' in a large, white font. Below this, a smaller white font text says 'Discover every subscription, track every dollar spent, and fully rationalize every application. Ask for a free SaaS audit today.' At the bottom left of the hero section is a white 'Get Started' button. On the right side of the hero section, there is a laptop displaying a dashboard. The dashboard is titled 'Dashboard' and contains several widgets: a 'Statistics' widget with a line chart, a 'Alerts' widget with a 'Spikes Alert' notification, and a 'Cloud Storage' widget showing a '74.5%' usage percentage. The dashboard also features a sidebar with navigation options like 'Dashboard', 'Projects', 'Messages', 'Usage', 'File Management', and 'Cloud Storage'. A 'Team Member' list is visible on the right side of the dashboard.

# Annex D. Finance model I

	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
<b>Income</b>																				
<b>New subs:</b>																				
Total new subs	1	2	2	3	4	4	4	5	5	3	6	6	6	12	12	12	18	25	27	30
Monthly subs %	0.3	1	1	1	2	2	2	2	2	1	2	2	2	2	2	2	6	11	15	18
Monthly subs \$	300	300	300	300	600	600	600	600	600	300	600	600	600	1800	1800	1800	3300	4500	5100	5400
Yearly subs %	0.7	1	1	2	2	2	2	3	3	2	4	4	4	6	6	6	7	10	10	12
Yearly subs \$	3000	3000	3000	6000	6000	6000	9000	9000	9000	6000	12000	12000	12000	18000	18000	18000	21000	30000	30000	36000
Retained subs	0.9																			
Monthly subs	0	1	2	3	4	4	6	8	9	10	10	11	12	13	16	22	26	34	45	66
Monthly subs \$	300	300	600	900	1200	1800	2400	2700	3000	3000	3300	3600	3600	3800	5400	6600	7800	10200	13500	19800
Yearly subs %	0.7													0	1	1	2	2	2	3
Yearly subs \$	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	3000	3000	6000	6000	6000	9000
Additional revenue (\$/user/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Income:</b>	<b>300</b>	<b>3600</b>	<b>3900</b>	<b>7200</b>	<b>7800</b>	<b>8400</b>	<b>12000</b>	<b>12300</b>	<b>9300</b>	<b>15600</b>	<b>15900</b>	<b>16200</b>	<b>23700</b>	<b>28200</b>	<b>29400</b>	<b>38100</b>	<b>50700</b>	<b>54600</b>	<b>60900</b>	<b>70200</b>
<b>Spent</b>																				
Processing fee	15.00	180.00	195.00	360.00	380.00	420.00	600.00	615.00	465.00	780.00	795.00	810.00	1,185.00	1,410.00	1,470.00	1,905.00	2,535.00	2,730.00	3,045.00	3,510.00
<b>Marketing Spent:</b>																				
Content production		1020	1020	1020	1020	1020	11020	1020	1020	71020	1020	1020	11020	11020	1020	1020	1020	1020	1020	1020
SEO							2000	2000	2000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000
CPC							600.00	1,636.36	2,672.73	3,709.09	4,745.45	5,781.82	6,818.18	7,854.55	8,890.91	9,927.27	10,963.64	12,000.00	14,000.00	16,000.00
<b>Total Marketing</b>	<b>0</b>	<b>1020</b>	<b>1020</b>	<b>1020</b>	<b>3020</b>	<b>3020</b>	<b>18620</b>	<b>9656</b>	<b>10693</b>	<b>81729</b>	<b>12765</b>	<b>13802</b>	<b>24638</b>	<b>15875</b>	<b>16911</b>	<b>27947</b>	<b>18984</b>	<b>20020</b>	<b>32020</b>	<b>24020</b>
<b>Fixed costs:</b>																				
Administrative	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
IT	20	20	20	20	20	100	100	100	100	100	100	100	100	200	200	200	200	200	200	200
Intercom	40	49	49	49	49	49	49	49	49	49	49	49	49	83	83	83	83	83	83	83
<b>Total Fixed</b>	<b>569</b>	<b>569</b>	<b>569</b>	<b>569</b>	<b>569</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>649</b>	<b>783</b>	<b>783</b>	<b>783</b>	<b>783</b>	<b>783</b>	<b>783</b>	<b>783</b>
<b>Payroll:</b>																				
BD						1500	1500	1500	1500	3000	3000	3000	3000	3000	3000	3000	4500	4500	4500	5000
SMM	500	500	500	500	500	500	500	500	500	500	500	500	500	700	700	700	700	700	700	700
Customer Success		300	300	300	300	300	300	300	600	600	600	600	600	1200	1200	1200	1200	1200	1200	1600
Engineer		2300	2300	2300	2300	2300	2300	2300	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900
Engineer		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	2250
Senior Engineer									3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
Engineer in CA									800	800	800	800	800	800	800	800	800	800	800	960
Payroll overhead	35	35	217	217	399	399	420	420	665	665	665	665	665	721	721	768.3	768.3	812	812	812
<b>Total Payroll:</b>	<b>535</b>	<b>535</b>	<b>3317</b>	<b>3317</b>	<b>6039</b>	<b>6039</b>	<b>6420</b>	<b>6420</b>	<b>10165</b>	<b>10165</b>	<b>10165</b>	<b>10165</b>	<b>11021</b>	<b>11021</b>	<b>11759.3</b>	<b>11759.3</b>	<b>12412</b>	<b>12412</b>	<b>12412</b>	<b>12840</b>
<b>Contractors:</b>																				
DevOps										500										
Design																				
Development																				
<b>Total Contractors</b>	<b>0</b>	<b>0</b>	<b>10000</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>0</b>	<b>0</b>	<b>5000</b>	<b>500</b>	<b>500</b>	<b>0</b>	<b>500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Spent:</b>	<b>1,119.00</b>	<b>2,304.00</b>	<b>15,101.00</b>	<b>5,266.00</b>	<b>10,078.00</b>	<b>10,688.00</b>	<b>26,289.00</b>	<b>17,340.36</b>	<b>26,971.73</b>	<b>93,823.09</b>	<b>24,374.45</b>	<b>25,425.82</b>	<b>38,327.18</b>	<b>29,088.55</b>	<b>30,933.21</b>	<b>42,394.57</b>	<b>35,213.64</b>	<b>35,945.00</b>	<b>48,260.00</b>	<b>41,153.00</b>
<b>GSM:</b>	300	2580	2880	6180	4780	5380	-6620	2644	-1393	-66129	3135	2398	-1138	12325	12488	10153	31716	34580	28880	46180
<b>Net:</b>	<b>(819.00)</b>	<b>1,296.00</b>	<b>(11,201.00)</b>	<b>1,934.00</b>	<b>(2,278.00)</b>	<b>(2,288.00)</b>	<b>(14,289.00)</b>	<b>(17,671.73)</b>	<b>(78,223.09)</b>	<b>(6,474.45)</b>	<b>(9,225.82)</b>	<b>(14,627.18)</b>	<b>(14,627.18)</b>	<b>(888.55)</b>	<b>(1,523.21)</b>	<b>(4,294.57)</b>	<b>15,486.36</b>	<b>18,655.00</b>	<b>12,640.00</b>	<b>29,047.00</b>

# Annex E. Finance model 2

	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
<b>Income</b>																					
<b>New subs:</b>																					
Total new subs	1	2	2	3	3	4	4	4	4	3	5	5	5	5	10	10	10	13	14	16	16
Monthly subs %	0.3	1	1	1	1	2	2	2	2	2	2	2	2	0.4	4	4	4	6	6	7	7
Monthly subs \$	300	300	300	300	300	600	600	600	600	300	600	600	600	600	1200	1200	1200	1800	1800	2100	2100
Yearly subs %	0.7	1	1	2	2	2	2	2	2	2	3	3	3	0.6	6	6	6	7	8	9	9
Yearly subs \$	0	3000	3000	6000	6000	6000	6000	6000	6000	6000	9000	9000	9000	9000	18000	18000	18000	21000	24000	27000	27000
Retained subs																					
Monthly subs	0	1	2	3	4	5	7	7	9	10	10	11	12	0.7	13	16	18	20	22	26	29
Monthly subs \$	0	300	600	900	1200	1500	2100	2700	3000	3000	3000	3600	3600	0.7	3900	4800	5400	6000	6600	7800	8700
Yearly subs %	0.7														0	1	1	2	2	2	2
Yearly subs \$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3000	3000	6000	6000	6000	6000	6000
Additional revenue (\$/customer/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Income:</b>	<b>\$300</b>	<b>\$3,600</b>	<b>\$3,900</b>	<b>\$7,200</b>	<b>\$7,500</b>	<b>\$8,100</b>	<b>\$8,700</b>	<b>\$9,300</b>	<b>\$9,300</b>	<b>\$12,600</b>	<b>\$12,900</b>	<b>\$13,200</b>	<b>\$23,100</b>	<b>\$27,000</b>	<b>\$27,600</b>	<b>\$31,200</b>	<b>\$35,400</b>	<b>\$39,600</b>	<b>\$43,800</b>	<b>\$45,000</b>	
<b>Spent</b>																					
Processing fee	15.00	180.00	195.00	360.00	375.00	405.00	435.00	465.00	465.00	630.00	645.00	660.00	660.00	1,350.00	1,380.00	1,560.00	1,770.00	1,980.00	2,190.00	2,250.00	
<b>Marketing Spent:</b>																					
Content production																					
SEO		1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020
CPC																					
<b>Total Marketing:</b>	0	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020
<b>Fixed costs:</b>																					
Administrative	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
IT	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Intercom	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
<b>Total Fixed:</b>	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569	569
<b>Payroll:</b>																					
BD																					
SMM	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
Customer Success																					
Engineer	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Engineer	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
Senior Engineer																					
Engineer in CA																					
Payroll overhead	35	35	217	217	399	399	420	420	665	665	665	665	665	721	721	789.3	789.3	812	812	840	840
<b>Total Payroll:</b>	535	535	3317	3317	6099	6099	6420	6420	10165	10165	10165	10165	10165	11021	11021	11759.3	11759.3	12412	12412	12840	12840
<b>Contractors:</b>																					
Dev Ops																					
Design																					
Development																					
<b>Total Contractors:</b>	0	5000	5000	0	0	500	0	0	0	500	0	0	0	500	0	0	0	500	0	0	0
<b>Total Spent:</b>	<b>\$1,119</b>	<b>\$7,304</b>	<b>\$10,101</b>	<b>\$5,266</b>	<b>\$8,563</b>	<b>\$9,173</b>	<b>\$9,024</b>	<b>\$9,054</b>	<b>\$12,799</b>	<b>\$13,464</b>	<b>\$12,979</b>	<b>\$12,984</b>	<b>\$27,079</b>	<b>\$17,810</b>	<b>\$19,615</b>	<b>\$30,831</b>	<b>\$23,230</b>	<b>\$23,977</b>	<b>\$42,405</b>	<b>\$45,685</b>	
<b>GSM:</b>	\$300	\$2,580	\$2,880	\$6,180	\$5,980	\$6,580	\$7,180	\$7,780	\$7,780	\$11,080	\$11,380	\$11,680	\$9,480	\$22,344	\$21,907	\$14,471	\$27,635	\$30,798	\$16,780	\$25,980	
<b>Net:</b>	<b>\$(819.0)</b>	<b>\$(3,704.0)</b>	<b>\$(6,201.0)</b>	<b>\$1,934.0</b>	<b>\$(1,063.0)</b>	<b>\$(1,073.0)</b>	<b>\$(324.0)</b>	<b>\$246.0</b>	<b>\$(3,499.0)</b>	<b>\$(864.0)</b>	<b>\$(79.0)</b>	<b>\$206.0</b>	<b>\$(3,979.0)</b>	<b>\$9,189.64</b>	<b>\$7,984.97</b>	<b>\$368.61</b>	<b>\$12,169.55</b>	<b>\$15,623.18</b>	<b>\$1,395.00</b>	<b>\$10,107.00</b>	

## Annex G. Daily KPI

- Cumulative Number of Users (for establishing corporate culture only)
- Cumulative Number of Customers (for establishing corporate culture only)
- User Churn Rate
- Customer Churn Rate
- Daily Active Users
- Monthly Active Users
- Number of Subscriptions per User
- Numbers of Leads in Pipeline
- Average Sales Cycle Length
- Conversions from Leads into Customers
- Conversions on Self-Service funnel
- SERP position
- Average Order Value
- Customer Acquisition Cost
- Average Response Time
- Net Promoter Score
- Average Site Response Time
- Number of Errors
- Sales Target (weekly)
- Burn rate (weekly)