МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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на тему :
Company transformation and growth - to build processes and organizational structure for service company to be applicable on a scale of 200 employees

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Abstract

This thesis paper encapsulates new knowledge in areas of Sales management, HR management, Organizational process establishment, Marketing, Finance. The knowledge was gained during study at MSc in Technology program at LvBS.

As the result, new customer focus, organizational structure and processes were developed for Sombra company. The result should market value of the company in the future. Also, current Sombra's customers and future ones will get more structured, bigger and reliable vendor to work with.

Introduction

About Author

I am co-owner and CEO of software development company [Sombra](). I have finished Lviv Polytechnic National University with masters degree in Computer Science. I have started my professional career in 2011 as software developer in large Lviv software development company with more than 3000 employees in Ukraine. In 3 years I have grown professionally from Trainee software developer to Strong Middle level in the company and realized that my passion is Entrepreneurship. I have never worked as manager in the company before, thus I had to gain practical knowledge by making mistakes and conclusions.

About Sombra

I have founded Sombra as a software development company in 2014 with no external financial investments. I realised that I didn't want to take main technical decision in the company so I needed strong CTO and the best way, in my opinion, to engage such person was offering equity. I also wasn't strong in Sales so I decided to share equity with my 3rd business partner. So there are 3 owners of the company now: me(CEO), CTO and Chief Sales Officer. My two other business partner are also studying in MSTM program, group #6. We all have similar vision of the company future.

Company facts as of March 2018 :

- $1.4M in Revenue in 2017;
- 100+ employees;
- 2 office locations: Lviv (headquarters) and Ivano-Frankivsk (development center);
- ≈15 active accounts from North America, Europe and Australia;
- 70% outstaffing, 30% outsourcing
- No own products and no plans to be product company

- Relatively low turnover rate, around 15% in 2017

When I started my studying in MSTM program company had 50 employees and in 1.5 years we doubled that number. Part of this success was possible because of the knowledge, network and vision I got in MSTM program.

The labor market in Ukrainian IT industry is very competitive, and it is hard to recruit people with Intermediate and Senior professional level, especially from bigger companies. That is why our initial strategy was hiring trainee software developers and creating environment for quick and effective professional growth for them. After 4 years doing business we understand that this was the right strategy for us, because we got more loyal to company people and our margin is higher comparing to average industry numbers. We have a plan for this and further years to hire more experienced people than before. Another point to hire employees of Junior level was developing unique corporate culture, it was easier to accomplish when no previous commercial experience present.

Company strategy

As owners of the company we defined strategy for us for the next 2 years, which is :

- Constant growth in terms of revenue - 50% yearly growth in 2018, and number of employees - 30 % growth in 2018.
- Transition to Outsourcing from Outstaffing
- Focusing on one or two business domains (I have to analyze and choose them in this thesis paper)

Current state of the company

The company was able to grow from 0 to 100 people in 4 years. Such quick growth has its pitfalls. One of that pitfalls is the processes, structures and systems are slightly lagging behind of speed of company development and its size.

I consider Adizes Corporate Lifecycle theory as core and fundamental theory in company development. After analysing where we are on the Lifecycle path, and taking online lifecycle test, I realised that our company is in **Go-Go** stage of development, as it shown on the *Figure 1*, because we have appropriate properties for this stage :

- Successful service;
- Rapidly growing sales;
- Strong cash flow;
- No time for long meetings as there's a ton of work to be done;

I realised that mostly all of our current problems are considered as 'normal' according to mentioned theory. I also realised that we must have our internal processes and structures more structured for transitioning to the next level of organizational development and becoming more professional company. Thus, we have to transform from entrepreneurial management to professional management. This should be one of our challenges for coming years.
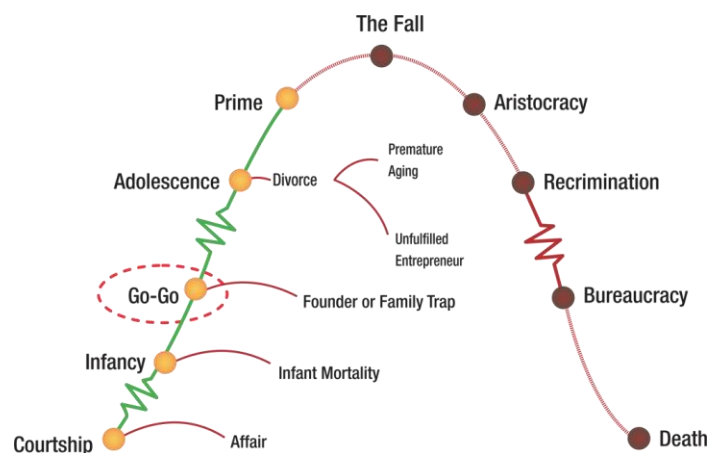
Figure 1. Sombra on Adizes Corporate Lifecycle path

Based on internal research of management styles according to Adizes done in the company in the scope of this project (Table 1) one can conclude that most of the people who lead the organization have strongly developed **P** (Producer) role and **E** (Entrepreneur) role. However they lack in **A** (Administrator) and **I** (Integrator) roles. Such situation could be a reason for hard transition from Go-Go level to the Adolescence level, thus company would need to hire more managers with highly developed **A** skill, what I also will pay some attention to in this final project. Transition to Adolescence level is a natural path of every company, if the goal is organizational growth. Adolescence has its pros and cons but reaching it is inevitable if we want to grow.

Management Level	Title in The Company	Management Style
Top Management	CEO	paEI
	Chief Sales Officer	PAei
	CTO	PaEi
Middle Management	HR Coordinator	PaEi
	Head of Delivery	PaEi
	Head of Finance and Legal	PaEi
	Project manager	PaEi
	Engagement manager	PaEi

Table 1. Current management styles at Sombra

During the lifetime of the company our strategy was hiring people (both technical and non-technical) of Junior level and professionally grow them internally. We were successful in building strong core team of highly motivated professionals of

Strong Middle level at the moment. But now I understand that we need to strengthen our company with more Senior level people from other companies, because we want their experience and professional level to be applied to our company. Also we realized that hiring people of Senior lever from more organizationally mature companies allows us to apply their knowledge for building processes and structures in our company.

Final project topic

So I decided to work on **company transformation** and growth topic and focus on improving of processes part of the project.

The other part I would like to focus in my project is **Sales & Marketing part**. I realised that, as a CEO I allocated not so much time to development of Sales & Marketing department in our company and I would like to work more on our future customer and market focus. Also I understand that as a CEO I should be strong as a Sales person, so I hope understanding future customers and their markets help me with that.

Value and impact of the final project

As I realised our company now is in stage of transformation to the next level of organizational development so I decided to do this final project to help my company to undergo this transition. I believe that knowledge that I got in MSTM program and while working on my final project will help my company to make this transition more smooth and predictable.

Talking about our external customers - after completion of the project and implementing the strategy, they will get more structured, bigger and reliable vendor to work with. One of strategic point of this work will to defining customer focus, and in that case company will have deeper industry knowledge and therefore will be serve its customers better.

Our internal clients (employees) after completion of the project will get more structured and organized place of work and more opportunities for professional growth and development of hard and soft skills in the company.

During my studying on MSTM program I have got valuable knowledge and I am going to use that knowledge in my diploma project. Three modules, that were really helpful for my project are : "Transformation and Change Management", "Leadership and Management" and "Methods and Management Decision Making Toolbox".

I expect this project to have a huge impact on my company in the future, because it reflects and should satisfy current needs of the organization.

Problem statement

1. **Unclear customer focus.**

   Before we have been working with everyone who would be interested in our services. We would like to change that and choose one or two business verticals and customer profiles that we are aimed to work with in the future

2. **Raw undeveloped processes**

   We didn't pay much attention for development of internal processes, our two main goals were quick growth of number of employees and revenue

Goal

In 2 years time to be **outsourcing** company (more responsibilities, not outstaffing) software development company with :

- 200 employees (approximately 40% annual growth). We need that size to be able to work with bigger customers. This is one step for Enterprise clients in the future.
- Well-defined internal processes and systems
- Clear customer focus

As I stated in the Introduction part, 70% of our business at the moment is outstaffing and rest 30% is outsourcing. We have done comparison between two models for better understanding of our future strategy and course of action (Table 2).

Outstaffing	Outsourcing
Low margin	High margin
Management is on a client side	Management is on our side
People consider customer as their employer	People consider company as their employer
We don't choose technology stack and architecture	We do choose technology stack and architecture
Low engagement of employees to process forming activities	High engagement of employees to process forming activities
Lower risks, predictable payments	Higher risks, delayed payments
Relatively easy for customer to change vendor	Hard to change vendor
Have lower impact on a final product and success of the customer	Have huge impact on customer success and final product

Table 2. Comparison between outstaffing and outsourcing

Based on the above data, we, as an owners of the company, decided to focus on outsourcing projects in the future. We took that decision based on our values and vision of the company future. We would like to make this transition smoothly and therefore we are fine working with outstaffing clients in the nearest future if there is need in our services. What it really means is that we are going to target our Sales & Marketing strategy for getting customers with outsourcing projects, so we will have more responsibility and influence on final product and success of the customer.

I have decided to pick number of 200 employees as one of the goals, because this is part of company strategy and I consider this size of business as a new level of

organizational maturity for software development company. I also think that this is essential to have all internal processes and systems well established and structured on a level of 200 employees to continue growing and to becoming company of Adolescence by Adizes (see *Figure 1*).

Solution will include several strategic initiatives :

- Sales & Marketing Plan
- Processes and structure
- Finances, needed to implement the project

Sales & Marketing Plan

In this part I want to share information about our current clients (analyse who they are and why they chose us as a vendor) and our desirable clients in a scale of 200 employees. The outcome will be:

- **Customer survey information analysis.** The goal is to know our strengths and weaknesses so to know where should we invest our resources.
- **Choosing one Business vertical for outsourcing projects.** For this I am going to analyse our potential clients portfolio, clients map, portfolio of the projects, choose one or two business domains and then do marketing research on potential customers market.

McKinsey 7-S

I decided to apply The McKinsey 7-S Framework to ensure that all parts of our company work in harmony. The goal of the model is that there are seven internal aspects of the company that need to be aligned if it strives to be successful. The model consist of "hard" and "soft" elements. At the Figure 2 described internal analysis according to 7S framework.
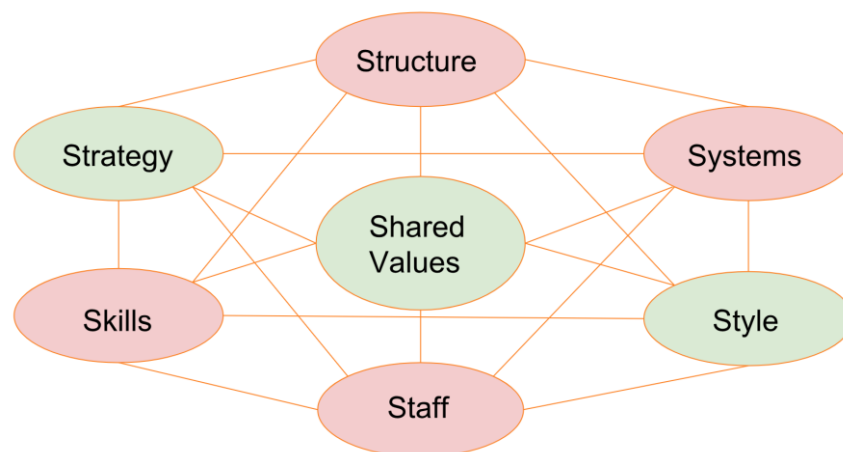
Figure 2. McKinsey 7-S application to Sombra

From the analysis I can say that Strategy, Shared Values and Style are aligned and works well in the company. Figur 2 also helps us identify what needs to be

realigned (Structure, Systems, Skills, Staff) to improve performance and to maintain alignment. This information also helps the company to analyze the current situation (Point A) and to identify gaps and inconsistencies between it and proposed future situation (Point B).

Customer survey information

In our company strategy for 2018 year we decided to do 2 customer surveys during the year. As the time for the first survey coincided with my diploma paper writing, I decided to do the survey in scope of it.

We don't want our customers to spend more than 3 minutes on this survey, so the questions should be short and accurate. On the other side, the answers should give us full picture of the cooperation : satisfaction level and ability to refer Sombra to potential leads (NPS score). I also wanted to include questions regarding company's strengths and weaknesses into survey to better understand where should we invest into. We also decided to offer free 2 free hours of software development to our customers for filling the survey. Three questions were included in the survey :

1. How likely is it that you would recommend Sombra to a friend or colleague?
2. What are 3-5 our strengths? (What did we do really well?)
3. What are 3-5 our weaknesses? (What can we do to be even better?)

Questions #2 and #3 were designed with common industry bullet points. It was made with the purpose of spending less time filling the survey. The survey was sent to 22 active customers of Sombra and during 3 days 10 responses were received. The result chart is shown on the Figure 2.

How likely is it that you would recommend Sombra to a friend or colleague?

Answered: 10   Skipped: 0

DETRACTORS (0-6)	PASSIVES (7-8)	PROMOTERS (9-10)	NET PROMOTER® SCORE
0 0	20% 2	80% 8	80
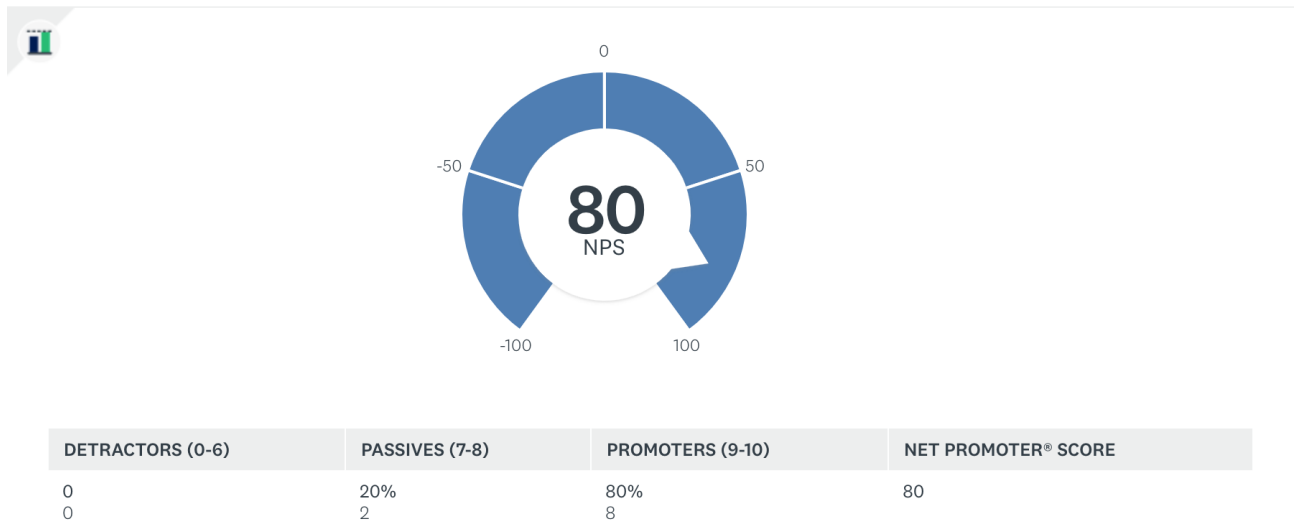
Figure 2. Customer survey results

I consider the NPS index of 80 is successful result. SurveyMonkey shows benchmark of average 13 for companies of our industry and size. The data was collected from 216,012 organizations during the period of 01.04.2017 - 31.03.2018.

The detailed answers to Question #2 and #3 are shown on the Appendix 3 and 4 respectively. From these answers I can see that Sombra's top **strengths** are:

- Communication (8 responses);
- Quality of work (7 responses);
- Technical Expertise (6 responses);
- Friendly employees (6 responses);
- Proactivity (4 responses);
- Management (3 responses);
- Customer service (3 responses);

Sombra's **weaknesses** are:

- Development time (3 responses);
- Proactivity (2 responses);
- Management (2 responses);
- Geographical location (2 responses);

- Efficiency (2 responses);
- Communication (2 responses);

From the above information I can see that Communication, Proactivity and Management were mentioned in Strengths and Weaknesses at the same time. That means company has to invest in transforming its weaknesses into strengths. It's good to see Communication as our main strength, it the point where we invest a lot at the moment. Also points Friendly employees and Proactivity are our core values and survey results prove their importance and business values.

Choosing one Business vertical for outsourcing projects

I would like to start this section with analysis of our current and past customers and their business domains. I have chosen the biggest 35 projects that we have been working on during last 4 years and got following analytics (Table 3).

Business domain	Number of projects completed by Sombra
Retail	5
Financial services	7
Fintech	7
Investments	2
Lending	1
Business Services	10+
Social	2
Analytics	7
Customer experience	2
Videostreaming	2
Accounting	2
Mobile projects	3
Tender	2
Healthcare	3

*Table 3. Analysis of business domains of current and past clients*

Taking into consideration the above data I can see that we have most of our experience in Fintech, Financial services and Business services. Business services is not a narrow domain so I won't consider it as a focus. Fintech looks better.

When we are talking about selecting a business domain, the important part is choosing the right technological stack. As I have started the company as Java software developer, our main technological stack on the back-end always was Java related technological stack. Also there is a fact that most of financial software application is written on Java platform because of its reliability and scalability. But I

also need to do market analysis for confirmation or refutation choosing fintech as our main business domain.

Fintech market research

Size of global Fintech market is growing every year. On a Figure 3 there is data showing amount of transactions per year and projections till 2022 year. The data provided by Statista.com.
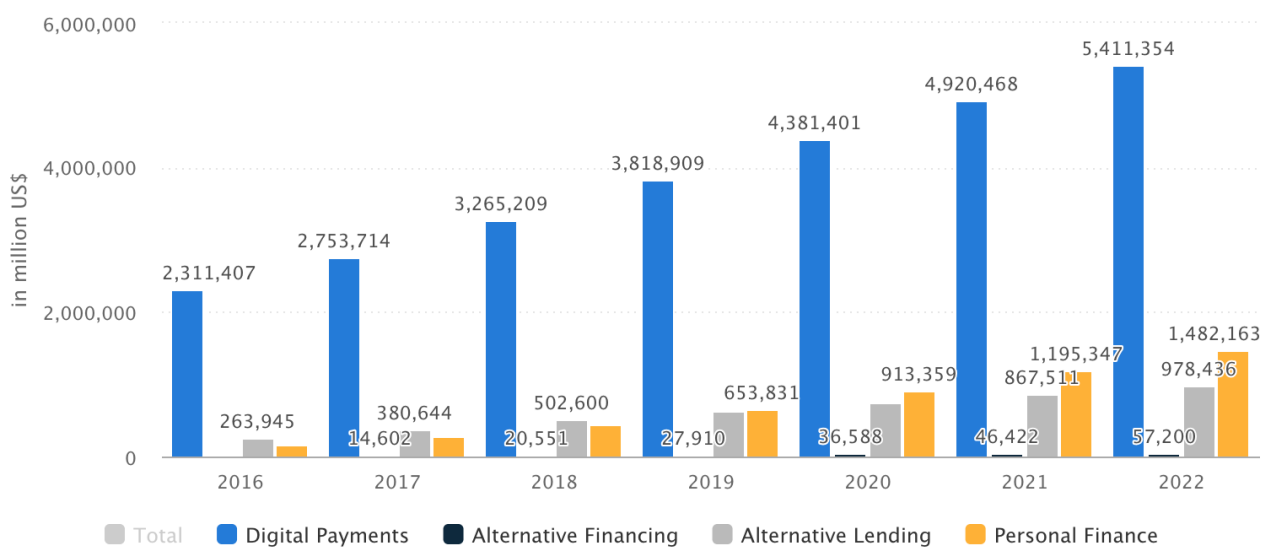
Figure 3. Global Fintech transactions value

The above data means the market has big potential and is is right time to be focused on this business domain. Fintech companies are working in a dynamic market, technologies are being changed, new players are entering the market. As the industry is young, I consider startups as a typical client type from Fintech. The speed of growing of typical fintech startup is high, thus often there is no time to handle technical issues. In that case the startup has to hire technical consultants and engineers on-site, which could be very expensive, especially in the US or Europe. And that is where outsourcing providers like Sombra enters the market. For us it is great opportunity, because we already have couple of existing Fintech projects.

During analysis I considered four types of potential clients : Startups, Small and Medium Businesses (SMB), Independent Software Vendors (ISV) and Enterprise. Each or the types has its strengths and weaknesses. At that moment the company is ready to work with any type of clients, provided that is Fintech company and outsourcing project. The personality of our ideal customer is going to be discussed and chosen later this year.

Processes and structure

Organizational structure

Current company structure

During company's first two years there was no organizational structure defined. After that I realized that having scalable structure is vital for our business health so the first iteration was developed. You can see it at Figure 4.
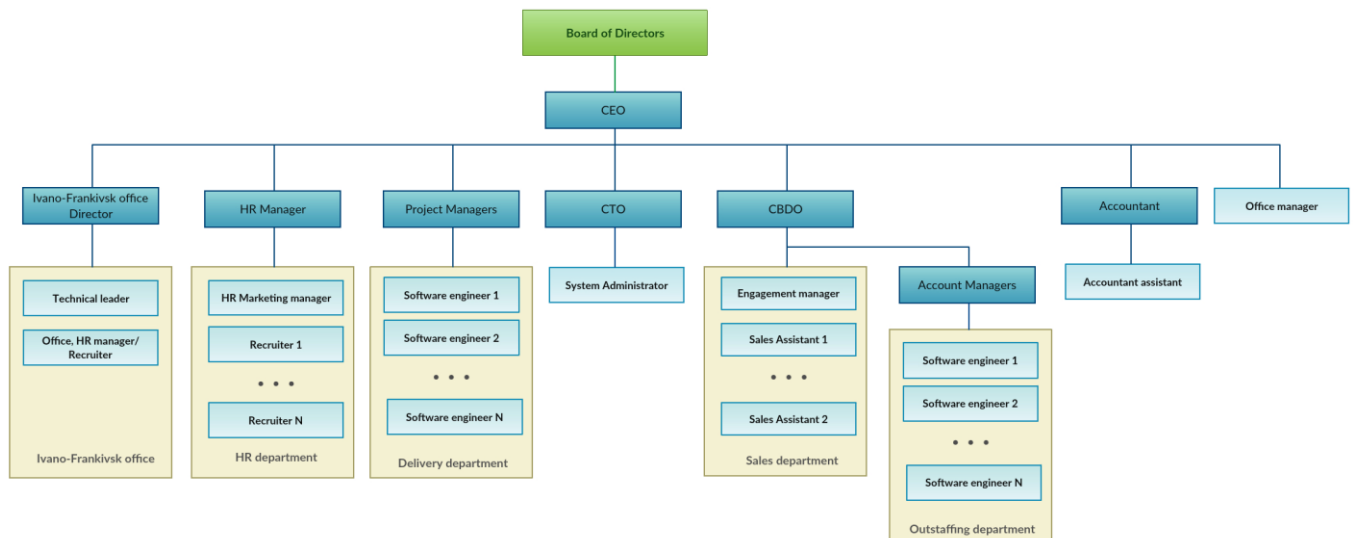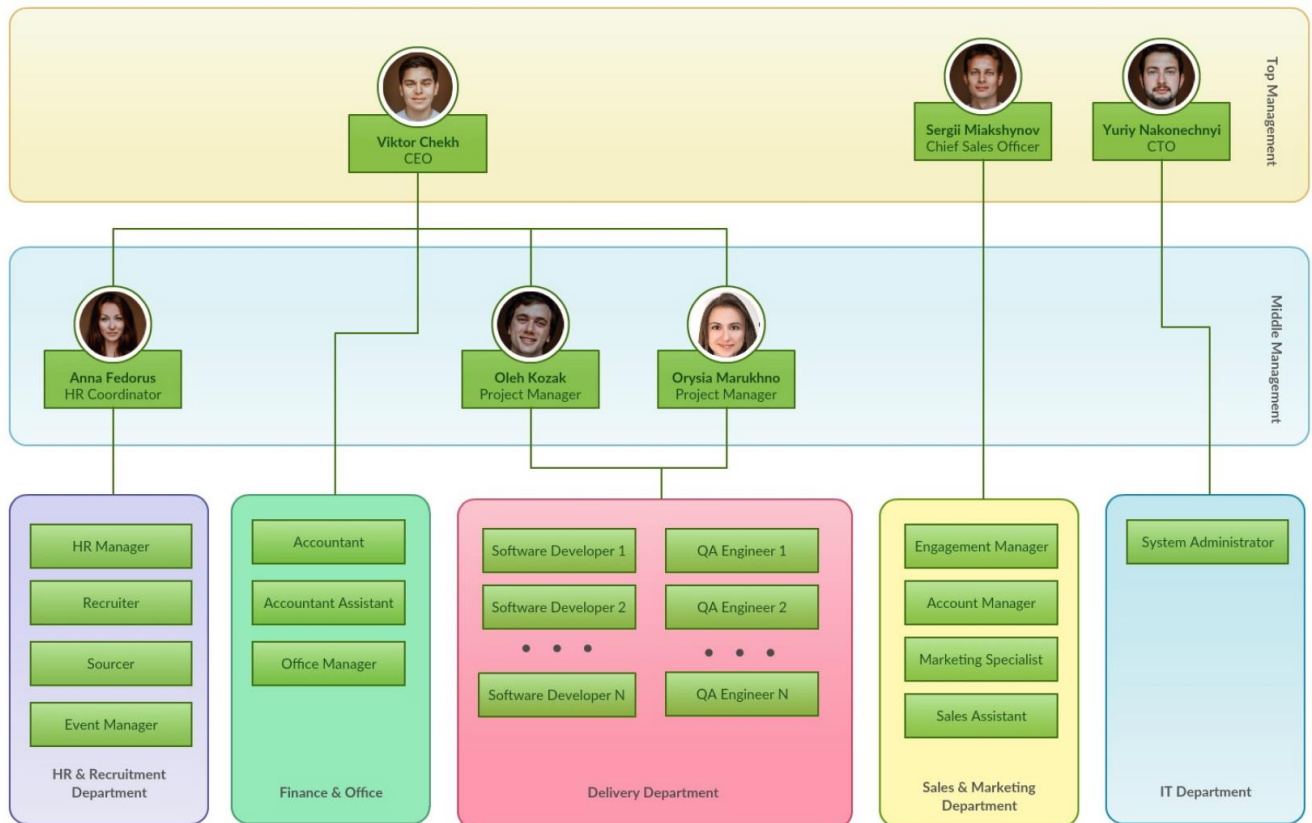

Figure 4. First iteration of organizational structure in Sombra

Provided at Figure 4 structure is relatively simple and was well applicable for our small organization. At the time we developed that structure there were around 50 employees. I haven't analyzed other organizational structures and best practices before creating that one. It was just representation of as-is state of the organization. We haven't thought about scalability as well.

In the head of the structure there is Board of Directors, but in fact there were just three owners. Although in the diagram CBDO (Chief Business Development Officer) and CTO are direct reports of the CEO, in fact all major decisions in organization were discussed by three of us and taken jointly. As a CEO and holder of the biggest part of the shareholder's equity (however my share is not bigger than total

of other co-owners share), I always had a right of "final word" but I have never used this option.

So around half a year ago, when there were 80 employees in the company I decided to update the organizational structure. It is shown in the *Figure 5*. This is the **current structure** that is used in our company at the moment of writing this thesis.

Figure 5. Current organizational structure in Sombra

Difference between two iterations :
1. Board of the Directors level was eliminated and in the new version CBDO and CTO are not direct reports of CEO anymore. I have made this decision because there were same people in Top Management and Board of Directors and there was no sense for me to have both organizational levels with the same people involved. However I have to analyze expedience of that change in the final version of the structure.

2. Delivery department was formed. In the previous version there was separation on Outsourcing and Outstaffing departments. Although the goal of the company is focusing on Outsourcing, I considered having one Delivery department would be acceptable for Sombra. In the analysis part I have to prove or to object that.

The goal of this section will be making sure that new organizational structure will be scalable and will represent company strategy.

Properties of organizational structures

After making online research and analysis about existing corporate structures I can make following conclusions. I have to take into account several properties and analyze whether or not each property is applicable for our goals and to what extent. These properties are : Chain of command, Span of control, Centralization, Specialization, Formalization, Departmentalization. The analysis is below :

Chain of command

For me Chain of command means number of levels of management in the organization. In our current version of organizational structure there are 2 levels of management and therefore Chain of command is short. For our future goal to move in Outsourcing direction the company needs to have Head of Delivery, who will be reporting to CEO and therefore one more level of management could be needed. Also, as the company grows, we want to save Chain of command as short as possible to simplify the internal communication and avoid bureaucracy.

Span of control

Here Span of control refers to the the number of subordinates directly reporting to a leader/manager. In the hierarchical business organization of some time

in the past it was common to have average spans of 1-to-4 or even less. That is, one manager supervised four employees on average. In the 1980s the size of average span move closer to 1-to-10. That was made possible primarily by the development of inexpensive information technology. The current shift to self-directed cross-functional teams and other forms of non-hierarchical structures, have made the concept of span of control less important. There are numerous theories about the optimal span of control in the organization. Some factors affecting span of control are:

- Geographical dispersion;
- Capability of workers (in IT industry most of the workers as highly skilled and need little supervision);
- Capability of manager;
- Value-add of the manager;
- Similarity of task (I consider tasks in IT companies as different, however technical people enjoy challenging tasks and projects);
- Volume of other tasks (of manager);
- Required administrative tasks (If the manager has other time consuming administrative activities, Span of control should be reduced);

After analyzing all the above information I don't see a problem to have organizational structure with wide Span of control, because peculiarity of IT industry and its workers allow managers to have more subordinates than in non-IT organizations.

Centralization

Centralization for me is about making decisions in the company. If the power of decision making is concentrated at a single person, the organizational structure is centralized. If the power is spread out, the structure is decentralized.

At the moment we have centralized structure but the goal is to spread out the power among departments and not to take all strategic decisions in top-management level. And one of the option for us here will be to have Head of Delivery role, who will be responsible for all production. At the moment, me, as a CEO have this responsibility and the idea is to transfer it to one level down. So, our goal is to have decentralized structure, but I understand that such change couldn't be done in a month and will take more time, so the company will be moving into the direction of decentralization.

Specialization

Could also be division of labor. Specialization is the degree to which tasks or activities in the company are broken down and divided into individual jobs. High specialization can be beneficial for an organization, as it allows employees to become "masters" in specific areas, increasing their productivity as a result. However, low specialization allows for more flexibility, as employees can more easily tackle a broader array of tasks (as opposed to being specialized for a single task).

Taking into account peculiarity of IT outsourcing industry and the way we had chosen for our company I can say that our goal is to have high specialization in the future, but it is long way for achieving that. I have analyzed in the [Sales & Marketing](#) part choosing one or two business domains for Sombra and this will be one step to become more specialized, however to educate Sales and Delivery people it is still huge piece of work to be done, which is not part of this thesis.

When I am talking about Specialization in Sombra, I mostly mean Sales and Delivery departments, because they are core departments in our business model. Of course this transformation will start from Sales and then slowly move to Delivery and will slightly touch other departments such as HR, Recruiting, IT and Finance.

Formalization

Similar to specialization, formalization deals with how jobs are structured within an organization. The key differentiator here is that formalization also takes

into account the degree to which an employee's tasks and activities are governed by rules, procedures, and other mechanisms. A formal organizational structure seeks to separate the individual from the role or position, as the role or position stays the same regardless of who's holding it. An informal organization, on the other hand, places more value on the individual. It allows for the evolution of a role or position based on an individual's preferences, skill set, etc., and places less importance on what team or department that individual is part of.

The main asset of IT outsourcing company is its employees and formalization is the tool for separating the role or position from the individual which does not make any sense for me in this case. Formalization also requires strict job description and it is hard to write such descriptions for software developers for instance. I consider the job of Software engineer ок Quality assurance engineer as a creative profession and for me creativeness doesn't align with formalization. That is why in Sombra we will not strive to have formalized organizational structure in the future, because it will not support our goals. I do also understand there could be some deviations between our future structure and real state of things in the company, and this is fine for me, as long as it doesn't affect our customers.
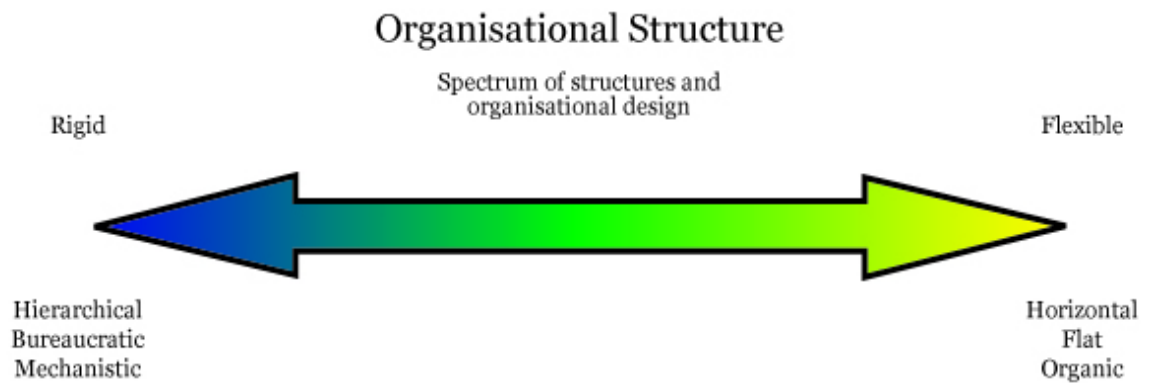
Departmentalization

Departmentalization refers to the process of grouping jobs together in order to coordinate common activities and tasks. If an organization has rigid departmentalization, each department or team is highly autonomous, and there is little (or no) interaction between different teams.

Thinking about the company we want to be in the future, I could say that having rigid departmentalization will be beneficial for our business. The core department or our company is Delivery, because it directly impacts customer experience and satisfaction. Other departments like Sales & Marketing, HR & Recruiting, Finance & Office, Administrative in my opinion help Delivery to serve our customers. Most of our departments don't have common tasks or activities, because of the specialization and we would like to save that in the future.

Types of organizational structures

Taking into account described above properties, I would like to pay attention to types of organizational structures.

Basically organizational structures fall on a spectrum (Figure 6) with "mechanistic" at one end and "organic" at the other end. Mechanistic structures can be described with narrow spans of control; high centralization, specialization, and formalization; as well as by rigid departmentalization. And the chain of command, whether long or short, is always clear. Oppositely, organic structures (also known as "flat" structures) are typified by wide spans of control; decentralization; low specialization and formalization; and loose departmentalization. And the chain of command, whether long or short, can sometimes be difficult to decipher. In today's world mechanistic structure represents the traditional, top-down approach to organizational structure, whereas the organic structure represents a more collaborative, flexible approach. Next I would like to talk about pros and cons of different types of structure from the Spectrum to understand better which one could be applied to our organization to serve its future goals and needs (Figure 6).

Organisational Structure

Spectrum of structures and
organisational design

Rigid

Flexible

Hierarchical
Bureaucratic
Mechanistic

Horizontal
Flat
Organic

Figure 6. Spectrum of organizational structures types

The Spectrum starts from **traditional hierarchy.** This type of structure is effective and makes sense where no brain power is required and every position in the organization has detailed written job instructions. However, in today's reality of war for talent, most of companies around the world are trying to figure out the alternatives to the hierarchy. And also, most of organization try to make their structure more flat rather bureaucratic.

Advantages of hierarchical structures :

- Authority and responsibility are clearly defined
- Employees are loyal to their departments in the organization

Disadvantages :

- Slow respond to changing customer and market needs;
- Communication is slow;
- Long chain of command;
- Departments can make decisions which benefit them rather than the business as a whole

Between **traditional hierarchy** and **flat organizations** there are intermediate stages:

- Flatter organizations
- Flat organizations
- Flatarchies

I would like to analyze some of them. Unlike the traditional hierarchy which typically sees one way communication and everyone at the top with all the information and power; a "flatter" structure seeks to open up the lines of communication and collaboration while removing layers within the organization. A company with a flatter organizational structure also has less bureaucracy because of fewer echelons or tiers. Therefore, a company can make quicker decisions in with a flatter organizational structure.

There are of course disadvantages of such structure. For example - some employees may report to more than one boss in a company with a flatter organizational structure. In addition, a company's emphasis on a flat organizational structure can hinder growth. However, with the right approach, I consider this structure as an optimal for the business of our size and specialization. On the Figure 7 there is visually shown how flatter structure looks schematically. For me flatter structure looks like advanced and modern version of hierarchical structure with benefits of open communication lines.
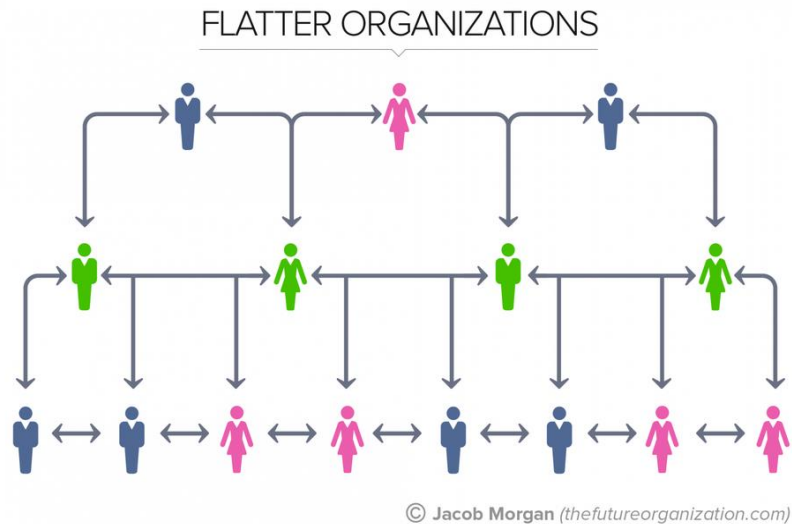
Figure 7. Flatter organizational structure

I don't see our company being completely Flat on the organizational level, having analyzed the above information I still consider that it is beneficial for our business to have some organizational levels. I am not going to analyze flat structure in this thesis paper. Also, I don't see us having traditional hierarchical structure. Moreover, based on above analysis I think that traditional hierarchy can't be applicable anymore to business that requires innovation as a core driver of success. Talking about completely flat structures, I doubt that company, that applied such structure will be scalable enough to sustain market growth. Therefore, taking into account our future goal of being software development outsourcing company, I consider flatter structure as the most beneficial and applicable for our company in the nearest future.

One of the compromises in choosing flat or hierarchical organizational structure can be Matrix structure. In this type of structure each employee will have 2 managers : Project manager and functional manager. In reality, our CTO now has responsibilities of functional technical manager. I consider this two-boss problem as the main disadvantage of Matrix structure. However I like the communication flow and other advantages in this approach and I consider opportunity to implement Matrix structure one day in the future, but not in scope of this thesis paper.

Choosing company structure for Sombra

I would like to start this part from analysis organizational levels that we need to achieve our goals. After analyzing type of structures I see following levels in our future company :

1. Board of Directors
2. Top management
3. Middle management
4. Software developers and staff members from other departments

First of all, I think it's time to have **Board of Directors** to be back into our company's structure, but in different way. In our corporate structure v. 1.0 we had management level, that we called Board of Directors, but in reality there were just 3 shareholders of the company with no invited Board member from the side. After reading materials about business needs of Board of Directors, I see some advantages of implementing this idea to our company in nearest future. Some of them are :

- Having in our board at least two people from the side with bigger professional experience allow us to avoid the risks that we don't really want to take.
- Boards will extend networks and connections and give the company access to people that we can't reach now
- Board can help us to prevent and solve future conflicts and disputes between shareholders

Also, according to Lodestone Global survey (Figure 8), 87% of participants responded their companies saw increased revenues and 81% reported increased EBITDA after implementing a Board of Directors.
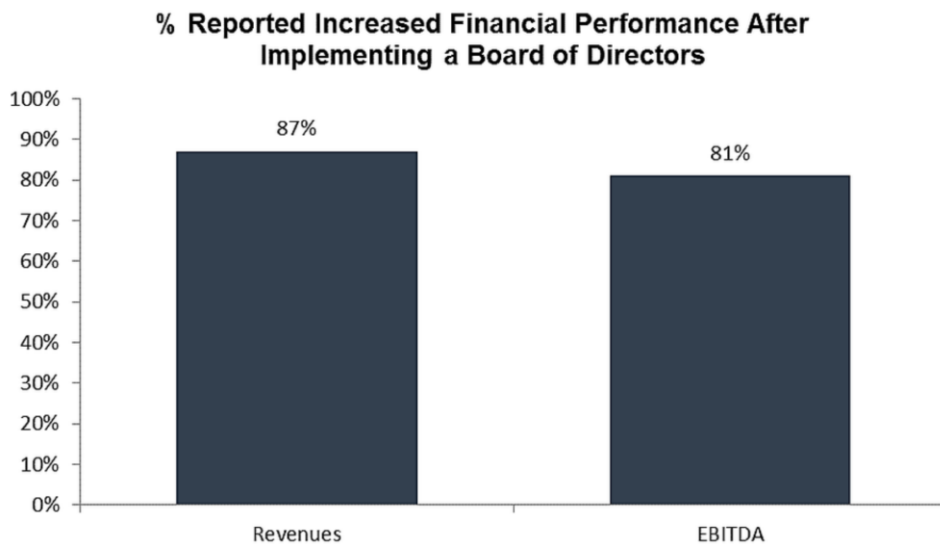
Figure 8. Lodestone Global survey

After analyzing above data I think it will be beneficial for our company to implement Board of Directors in the nearest future, possibly this year. I am going to start with analysis of my connections, shortlisting them, interviewing and offering place in our Board.

The next level, I would like to talk about is **Top Management** level. In our current version of <u>organizational structure</u> (Figure 3) we decided to combine roles of shareholders and top managers, therefore Top Management level was flat so CTO and CBDO were not direct reports of CEO. After analyzing information about such distribution of roles and taking into account feedbacks regarding my preliminary defence, I took decision to put CEO role back to head of Top Management level and all company.

Next, I would like to describe division on departments in our company according to new knowledge that I got during working on this thesis paper and during my studying in Ms in TM program. I see the following division :

1. **Delivery**. The core department of our business. Currently takes 72% of all company, I predict this number to grow to at least 75% when the company gets bigger in size.

2. **Sales & Marketing;**

3. **Finance and Legal**. In our current organizational structure this department is combined with Office and Accounting. I decided to separate them and to name it Finance and Legal, because our Chief Accountant is responsible for Legal questions as well. I think it is important to have this department as a separate one, because of its importance and influence for business.

4. **HR.**

5. **Recruiting.** Last year company had troubles hiring software developers and QA engineers of Senior level. Thus we decided to hire Senior recruiter and give her permission and freedom to completely rebuild Recruiting department according to vision and goals of the company.

6. **IT;**

7. **Ivano-Frankivsk.** As we have branch office in city of Ivano-Frankivsk, I decided to separate it as another department with Office director (who will be handling HR and Recruiting role as well) and office manager. The rest of the employees of Ivano-Frankivsk office will belong to Delivery department.

8. **Office.** I took decision to separate this division as well. However I am not going to create separate Office department, as the responsibilities are short.

Thus 7 departments was formed, instead of 5, that there are in our current version of organizational structure. I consider new division on departments more scalable and beneficial for our goal to be outsourcing company.

Also, as I considered to move into Flatter structure direction, I am going to add communication connections between departments. What these connections should really mean is that I don't want the communication to be limited by boundaries of the each department. Therefore these schematic connections should show our desire to make communication inside open and wide.

On the Appendix 1 you can see next iteration of our organizational structure, that was done based on the above thoughts and analysis. You can also see Ivano-Frankivsk branch manager, who reports to CEO.

Processes optimization

As a part of our organizational growth I decided to work on processes establishment and optimization. This topic is important for my company at the moment as we are growing fast and sometimes processes lag behind. We already have some misunderstanding issues and also conflict of interests issues, mostly all of that happens because rules of interactions are not set and sometimes may be unclear. I am going to analyze current interactions between internal departments (Sales & Marketing, Delivery, HR & Recruiting, Finance & Legal), how it works now and what could be done to make my company successful in the future.

Processes optimization is a very complex and extensive topic. In this thesis paper I decided to focus on three main blocks of processes and their optimization. They are **Quote-to-Cash, Procure-to-Pay**, **Hire-to-Retire**. I am going to analyze each of processes blocks and try to streamline them.
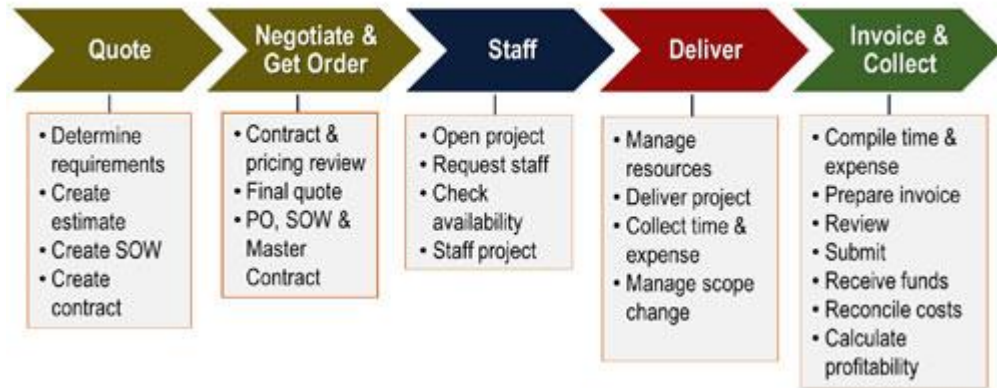
Quote-to-Cash

The quote-to-cash (Q2C) process is an important part of a company's success, and also it plays a huge role in driving an organization's relationships with the customers. I decided to start with this process block, because constant cash flow is important and vital for the health of the business and its proper function. In our business quote-to-cash process starts with a quote to client and finishes when the money is received. In our company quote-to-cash process is a series of interrelated processes and will include :

-    Sales forecasting and pipeline;

-    Project estimations;

-    Proposal writing;

-    Contract negotiation and signing;

-    Staffing for project;

-    Execution of project;

-    Completion of project;

- Invoicing;

- Collection of money;

For most of service organizations Quote-to-cash process can be visualized as it shown on Figure 9.

Figure 9. Service Quote-to-Cash Process

Here each stage of process belongs to responsibility of different department. Table 4 shows the division of responsibility among our departments. This division gives me understanding regarding process flow and responsible people on each stage.

Stage of Quote-to-Cash process	Responsible Department	Responsible Person
Quote	Sales & Marketing	Engagement manager
Negotiate & Get Order	Sales & Marketing	Engagement manager
Staff	Delivery, Recruiting	People Manager
Deliver	Delivery	Head of Delivery
Invoice & Collect	Delivery, Finance & Legal	Project manager, Head of Finance

Table 4. Quote-to-Cash division of responsibility in Sombra

Based on the the Table 4 data, Quote-to-Cash is the widest process in our company, because it affects 4 departments and therefore should be well documented and automated to avoid misunderstanding and conflict of interests issues.

Engagement management role responsibilities and boundaries are well defined in our company, because this role is "old" in relation to company age, therefore no issues should be here. The only parts should be improved is Proposal preparation and Discovery phase development, these are new parts and were added couple months ago therefore should be treated with special attention. Also, Engagement manager should agree the contract terms and conditions with Head of finance, as latter position is responsible for Legal part in our company.

Approximately half a year ago we have added **People manager** position. The main responsibility of People Manager in our company is to provide an effective division of people into projects, discussing each case individually with anyone who can help in this and offering compromises in order to achieve a more effective distribution of people in the projects. We didn't want to call it Resource manager as the role called with similar job description, the alternative name was "People

manager". Although the role was added, clear boundaries of responsibility were not described. One of our HR managers started to do the job and to document responsibilities 6 months ago. Now this activity takes approximately 25% of HR manager's time. So the goal for the next 6 months will be to empower this role with the responsibility of Staffing new projects and creating full-time position of People Manager. This will be be beneficial for the business in general, because the balance between staffing projects from the Bench or taking people outside the company is very important for effectiveness and profitability of the company as well.

In scope of this thesis paper I have added **Head of Delivery** position to the company structure. Before our most experienced Project manager held this responsibility, but we have never called it that way. As this position will have very important responsibilities that directly impact customer experience and satisfaction, in the next months our task will be to empower the position with proper authority and responsibility. Also with implementing this position, another level of management arises and it worries me as the CEO, because communication chain with software developers and QA engineers became one step longer. So I have to make sure, that quality of internal communication remains the same with adding Head of Delivery position.

In the **Invoice & Collect** stage of the process, the goal of the company is to raise the invoice and to get it paid as soon as possible. Currently this responsibility is divided between Project manager and Head of finance. But I think there is need to empower Head of finance with more authority to be completely responsible for collecting overdue invoices from customers. Also I want Head of finance to have the right to escalate the case to Head of delivery or Senior management (depends on the size of contract) for terminating service if the money are not received on time.

Quote-to-Cash automation

To successfully manage such process we need proper technological solutions for automation. These software products should provide visibility, transparency and control. Such solutions include client relationship management system (CRM),

professional services automation system (PSA) and the core financial management application, enterprise resource planning system (ERP). Below, on the Figure 10 you can see quote-to-cash process division by technological solutions and responsibilities that each of software products should cover.

Figure 10. Quote-to-Cash process automation

We have started using CRM in our company around 2 years ago. We decided to pick european product called Pipedrive. It is well suited for small to medium businesses like ours. Pipedrive so far covers for us Sales pipeline & forecast, Proposals & approvals. Contract negotiations & acceptance. We have also recently move the dashboard information of our current accounts into Pipedrive from Google documents. So all information regarding our potential leads, customers and communication with them will be stored in one single application.

Lead generation is still weak point of our Sales process. The main source of most of our incoming leads is freelance platform Upwork. My business partner Sergii Miakshynov, who is head of Sales & Marketing department, has been trying to establish new Lead generation channel of Fintech software development projects since New year, with no major result so far. Although our current lead generation channel provide enough leads for 40% annual growth (which is good number comparing to average industry benchmark), we still need another channel for risk mitigation.

Proposal writing is an important process that requires special attention in my thesis paper. As we decided to do software development outsourcing, writing efficient proposals is very beneficial for the business, because by analyzing our proposal Customer decides whether or not to work with us. In outstaffing proposal

writing is not that important. Our company didn't have much expertise in proposal preparation, this is still area of development for us. We have set goals for 2018 year to write and present certain numbers of proposals to get experience in that field. For outsourcing projects we prepare for potential customers Statement of Work (SOW) document along with proposal. The responsible for writing these document from our side is Engagement manager. He is also responsible to involve other roles if needed : Business analyst, UI/UX designer, Project manager, Technical Architect. The process of proposal writing is well enough described in Knowledge base system - Confluence, thus I am not going to do deep analysis of this process here.

As you can see on the Figure 7 there should be PSA and ERP software arter CRM. In our company we have started to write our internal processes automation software product that combines some of PSA and ERP functions. I am going to make analysis of our technological solution and comparison with existing competitors to understand if we made proper decision to create our own internal product from scratch.

Procure-to-Pay

As our company is still considered as small organization, there was no need for us to determine procurement process. What is done at the moment is division on departments and cost centers initiation. I think in our current business model professional procurement processes should be applied to departments that involved in choosing service vendors. From this point of view, departments with most expenses are Office, HR and Recruiting. Before we didn't document selection of vendors, usually Head of department took the decision. I think in the coming months we need to establish process of choosing service vendors (at least for 3 mentioned above departments) to eliminate future possible cases of corporate abuse. Now every department of Sombra has its monthly budget and Head of department is responsible for expenses in the budget range. I am going to analyse classical procurement steps

and how they can be implemented to our company. So, usual procurement Procure-to-Pay cycle consist of following steps :

- Requirements identification;
- Purchase Request authorization;
- Purchase Request final approval;
- Procurement;
- Suppliers identification;
- Inquiries;
- Receipt of the quotation;
- Negotiation;
- Vendor selection;
- Purchase order acknowledgement;
- Advance shipment notice;
- Receipt of goods;
- Recording of invoice;
- 3 Way Match;
- Payment to Supplier;

If following best practices and the steps mentioned above, when employee who works in specific department wants to purchase something, purchase request should be submitted to Head of department in our case (considered as an approver).

The initial purchase request can be either approved or decline depends on its type, the cost, the service, and allowable budget. The final approver for bigger purchases in our company is Head of Finance and I don't think it should be changed in our next level of organizational development, because of the low number of transactions per month.

I consider Procurement as the most important step of Procure-to-Pay process. In our case of choosing suppliers, the decision making person (Head of Department) has to analyze existing contracts with suppliers. If it is new supplier, then additional research should be done, which should include : Internet search and use of referrals.

Once the supplier is identified, the company should send the request for proposal (RFP). Of course there is only sense to follow such process of research and RFP when total sum of contract is bigger than agreed amount (can be discussed and approved later, let's call it Amount X for now). The responsible person for final supplier approval should be Head of Finance in our case. When the initial quote received, suggested changes from our side should be approved and we should get the final quote.

If the contract amount is bigger than Amount X, suppliers who were shortlisted should be invited for negotiations. The goal of negotiations is to maximize our business value and profit from coming contract. Some of the topics for negotiations can be :

- Reduction in the initial price;
- Year-over-year reduction in price;
- Discounts because of quantity;
- Payment terms and conditions;

According to the selection criteria, after negotiations with all vendors, who were initially selected, one will get the contract. When the goods are received the responsible person (System administrator of Office manager) checks the quality and quantity, so any unfit items can be sent back to the supplier. In case of service the same order of procedures should be followed.

When invoice is received, it should be entered into procurement system and be processed by accounts payable. At the at Sombra we don't use any procurement software, everything is stored in Google Spreadsheets. There are popular Out-of-box solutions for this purpose, some of them are : Procurify, Gatekeeper, Promena e-Sourcing, Precoro etc. I am not going to analyze such software in scope of this thesis paper. Also Procurement module can be and in most cases is part of ERP system, detailed analysis will be provided in next chapter.

Because of our size, we are going to skip 3 way match step. So when product or services are received and the responsible person is satisfied with quality, the payment will be released to supplier.

Procure-to-Pay process is important for the company, because it directly impacts the profitability and therefore ability to scale, because growth (especially quick) requires cash. In coming months we are going to make necessary changes in our process documentation and analysis of procurement software and expediency of its implementing in current phase of organizational development.

Hire-to-Retire

Hire-to-Retire process is one of the most important processes in IT outsourcing company, because human capital is the main asset in this business. The process includes everything that needs to be done during the period of an employee's career in the company. Detailed classical process steps are shown at Figure 11.
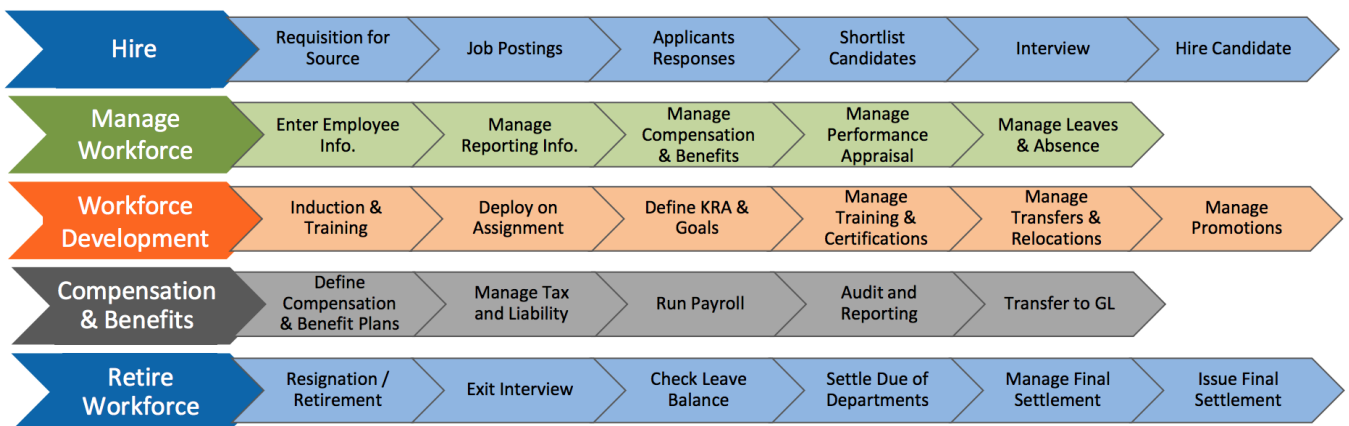
Figure 11. Hire-to-Retire process steps

I am going to analyze each step of the process and propose necessary changes to Sombra's process base.

Hire

The responsibility for this first step of the process is on Recruiting department. As we have just separated Recruiting department from HR and hired Recruitment coordinator of Senior level the new process base should be established. For the last 4 years our main target audience were fresh graduates from local

technical universities. Now the company has strategic goal to hire employees of Middle and Senior level and integrate them into company's corporate culture. Thus new approaches for talent sourcing should be applied. Interviewing of candidates should be changed as well. We always thought that to check "cultural fit" of the candidate, the maximum number of people should be present during cultural part of the interview. It worked well with Trainee and Juniors, but I realized it is not common to have more than 1 or maximum 2 people from the company on the interview with potential Middle or Senior candidate. Also there is different approach of introducing our corporate culture and core values to Senior candidates, as their motives of changing place of work is different. So newly created department should establish its process base to be able to achieve company goals.

Manage workforce

This step is under responsibility of HR department. In the first working day, to newly hired employee HR manager is assigned and is responsible for entering initial information into our ERP system. Newcomer is also assigned to department and one or multiple projects and required to manually enter time logs in the end of each working day. HR manager is also responsible for scheduling and conducting Performance review, setting professional goals and checking goals achievements before next scheduled performance review. Our ERP Sombra Space covers managing Leaves & Absence, if an employee needs day off or vacation the request should be sent to manager for approval. For me it looks like this step of process is well covered in Sombra, scalable and doesn't require major changes.

Workforce development

The responsible department for corporate education is HR. As we were focused on hiring employees of Junior level, introduction part and initial training have been well established in Sombra. The internal training center was created with name of Sombra University. Its goal is to provide newcomers with necessary and desired in the company hard and soft skills. There is trial period of 3 months for

every employee. After that period professional hard and soft skills KPI and goals are set. Talking about professional education and certification during employee's lifetime in the company, the responsible person is Head of department. I am thinking about implementing Matrix organizational structure in the future with functional managers. Because, for instance, in case of Delivery department the responsible for education person is and should be CTO and not Head of Delivery.

Managing transfers and relocations is an area of development for us. Although company has offices in two cities, these rules are not well defined yet. There were no cases of relocating someone abroad or onsite, so these processes can be developed later, when it becomes necessary.

Managing promotions has been well established only in Delivery department so far. For other departments more detailed position description and grades, as well as promotion rules should be developed.

Compensation & benefits

There are two departments responsible for this part - HR and Finance & Legal. The goal for this year is constant analyzing and collection of benchmarking information about local IT industry compensations and making process of salary change more clear - transparent performance KPI should be written and implemented. As with promotions, changing compensations for Delivery department is more defined and established than in other departments.

Running Payroll is in responsibility of Finance & Legal department. So far process is well established and doesn't require major changes. The company has switched to paying Gross salary (instead of Net) two months ago, so we are still managing this change. Switching to Gross

Retire workforce

Responsible department : HR, Finance & Legal. As the average age in the company is under 27, we don't have formal processes for retirement, only for resignation. Retirement process will be established, when the need arises.

Exit interviews are important for the company, because it is great chance to ask about company's strengths and weaknesses. The technical part of responsibility, relating to this process step is divided between System administration and Office management.

Technological solution for processes automation

Sombra Space ERP analysis

The software development of the product was started 1,5 years ago. We decided to assign software developers, that were on the bench for better resource utilization. The decision of developing custom ERP solution has its pros and cons, as described in Table 5. At the moment team of 4 software developers and 1 Project Manager part-time is working on the project.

Advantages	Disadvantages
Low cost (assumption)	Development team is always been changing
Internal training project for people on the bench	Scalability is under the question
Highly adaptive to to company needs	Lack of knowledge of future business needs
Knowledgeable support	Lower quality, because of junior staff
Minimized downtime from technical errors	

Table 5. Advantages and Disadvantages of developing custom ERP solution

As there is mentioned in the Table 5, we have never calculated cost of software development, partly because most of the team were juniors so their salaries were low, comparing to others in the company. But I decided to calculate how much we have already spent for the last 1,5 years for the development and how much we

spend for support and new features development in scope of my thesis paper. So rough calculation is described in Table 6.

Cost for 1,5 years	Amount, USD
Team of 3 junior software engineers, full-time	$27,000
Junior QA engineer, full-time	$4,000
Project manager, part-time	$4,000
Involvement of mentors, 15 hours a month	$2,500
Cost, total :	≈ $37,500

Table 6. Rough cost calculation of Sombra Space development

Based on the provided information in the Table 6, we can see that roughly Sombra has already spent **$37,500 on the development of internal ERP system. From that amount I also understand that currently we spend ≈ $2,000 a month or ≈ $25,000 a year for support and development of new modules. The number itself gives me nothing without comparison to existing competitors. Therefore, the next step will be analysis of competitors, features and pricing.**

For comparison with competitors we also have to understand scope of functionality that Sombra Space covers at the moment. It includes following modules :

- Employees time reporting;
- Managing day offs, vacations
- Resources planning;
- Employees contact book;

- Office and Technical issues management;
- Sales module;

There are also modules in progress of development, they should be ready later this year : Dashboard page (Home page), HR module, UX design change (making it more professional). So I am going find similar out-of-box corporate solutions.

When I had conversations with CEOs of around 5 local software development companies of bigger size (200-500 people), all of them mentioned using internal ERP system like Sombra Space in their companies. They also mentioned that having development of internal software is more costly that buying one from the market, the only problem is customization. I also know that some of big local software development companies (more than 1000 employees) are switching to large and costly Enterprise solutions like SAP or Oracle.

Competitors analysis

There are big number of ERP solutions on the market today so my goal was to choose 4-5 among them to make comparison. I used web resource [top10erp.org](top10erp.org) for narrowing down list of existing products according to our industry and services. I chose to show ERP systems for Professional Services (Non-MFG) organizations and Cloud-Based (Saas). As a result I have got list of 4 products : Epicor, Netsuite, Oracle and Microsoft Dynamics. About 3 of them I have heard about before and considered them large products for Enterprise, hardly applicable for small and medium businesses. Below is the comparison and analysis of each one of the products.

Epicor

First of all, it was hard to find information about pricing without contacting sales people from Epicor. After some investigation I realised the Epicor product suits more for manufacturing companies than software development companies and designed mostly to SME market.

Regarding Epicor pricing, it starts from $10,000 for cloud based subscriptions. On-premise license starts from $30,000 for a basic configuration (for manufacturing). Consulting and implementation services is about 1:1 ratio in respect to the license of software costs. Average subscriptions are in range from $10,000 to $30,000 for annual usage. Perpetual on-premise licenses would cost about $4,000 to $6,000 per user for an average configuration.

In base configuration Epicor has following modules available: Financial management, Supply chain management, Production management, Planning and Scheduling, Product data management, Service management, Human capital management, Sales management, Customer relationship management. There is an option to purchase the modules you need, which should keep costs down, but the modules that you do need are very costly.

Looks like Epicor covers a lot of functionality and suits better for much bigger companies that we are at the moment. Also, as I mentioned before, this software is designed for manufacturers, reviews from customers confirm that. Thus it would be quite hard to implement and customize for our needs.

NetSuite

According to its official website, NetSuite ERP is a cloud-based ERP software, with ability to scale, targeted mid-sized businesses, who grow fast and large enterprises. It automates front-office and back-office processes and include following modules: Inventory management, Revenue management, Financial management, Order management, Manufacturing, Fixed assets and Billing.

NetSuite offers 4 software products, that potentially could be applicable to our company. First one is NetSuite Small Business. Pricing for this product starts at $99 per month and include 1 full access user and 10 limited access users, also additional users will cost $49 per month. The second product is NetCRM. The price starts from $79 per month and include only 1 full user, additional users will cost $79 per user per month. And the third product is NetCRM+ (advanced version of NetCRM). Pricing for this product starts at $129 per month, includes 1 full user. Additional users will

cost $129 per user per month. NetCRM+ edition includes upsell and cross-sell, sales order management, partner relationship management (PRM), project tracking and limited Web site hosting capabilities. The forth product is NetERP, pricing starts at $399 per month and include 1 full user and 10 limited access users. Price for additional users will be $99 per user per month.

The most suitable product for Sombra from listed above, I consider NetERP product. The open question is price. Even if we wouldn't buy software for all 100 employees and just for managers, we would need around 15-20 users at the moment. According to the above pricing information, I can calculate that using NetCRM software in Sombra will cost us around $1 500 per month. But in this case Time tracking and HR functionality (days off, vacations and sick leaves) for employees are not covered and additional software product will be needed. Also there is no option to purchase individual modules.

So in any case, using of NetSuite ERP software will be costing for our company more than we spend for internal ERP development.

Oracle

According to official Oracle website, Oracle ERP Cloud is a cloud-based software for financial services, that offers a fully integrated platform for businesses, who are growing. There is also option to buy on-premise license for Oracle ERP. The software includes following modules : Financials, Manufacturing, CRM, Payroll, Human Resources, E-commerce, Distribution. List of modules are similar to other software products, analyzed above.

Official Oracle website says that ERP Cloud for 1 user of will cost from $500 a month. This solution is for Midsize company and minimum of 10 users required. I have also found prices for on-premise version of the software. Oracle requires to buy its license first in order to use its products. The license price is at least $4,600 per user per module (average list prices). Also if the ERP needs to be integrated with other systems in the company (which is essential for systems of such level), Oracle middleware licenses (Oracle Weblogic Server and Oracle SOA) need to be bought

separately as this. Oracle Weblogic server would cost around $47,500 per processor (list price) Oracle SOA would cost around $57,000 per processor (list price). I have found a recommendation to budget at least $500,000 with additional $500,000 as a backup fund.

There is no reason to search for more information regarding Oracle ERP software, because the price is way too high for us at the moment in comparison with our current expenses and I doubt Sombra can afford this solution in the future as well. It looks like the product more suitable for large enterprises, rather than small and medium business, like we are at the moment.

Microsoft Dynamics

Microsoft Dynamics family consist of six separate products: GP, GP, NAV, AX and SL are ERP solutions. There is also Microsoft Dynamics CRM solution. In general, Microsoft Dynamics GP, NAV and SL are intended for small and medium enterprises, and Microsoft Dynamics AX is best suited for larger enterprises. I am going to evaluate GP product as it suits well for our size and type of business.

The latest available release of Microsoft Dynamics GP was in 2015. Cost for on-premise perpetual license (Starter Pack) is $5,000 for 3 users and each additional full user is $3,000. On-premise license requires having Microsoft middleware software installed and configured so it has additional expenses. Dynamics GP for Cloud costs $134 per user per month ($159 if it is Extended Pack for Dynamics GP). Also there is additional expense of $2,495 one time data center set up fee.

Based on above information about Microsoft Dynamics GP I can make conclusion that this product is too "heavy" and too expensive for us at the moment. Similar solution could be SAP ERP. I think we can get back to reviewing opportunity of implementing such systems later in the future.

Resume

After analysing 4 proposed ERP products I can say that all of them are large complicated solutions and it will be hard and costly for us to implement one of the

products in Sombra. When I calculated cost I also did not take into account costs of initial implementation and support needed. For instance such cost for Oracle or Microsoft Dynamics could be almost one third of license price.

All of the reviewed products have broader functionality, than Sombra Space, however I assume integration and customization will be costing us more time and money than we spend on Sombra Space.

The other point is we are software development company so from business perspective it could be more smart and cheap to utilize our resources than to pay margin to other businesses, but this is just assumption and sometimes it is more smart to outsource part of the processes that we are not experts in. Also, one of our selling points is competitive price, it would be really hard to sell our services to western businesses if the prices were same as in western countries. So for us development of software for internal use will be the cheapest possible option of ERP implementation.

Software development outsourcing business, that we are in, requires having bench or people to start new project, when opportunity arises. There are many solutions, that could be applicable to bench utilization issue, internal education for example. But to keep talented people motivated, company should provide them with challenging and interesting tasks all the time. The talent market in Ukraine is very competitive at the moment, so we can't afford keeping software developers on the bench for more than couple weeks, because there is higher chance they will receive and accept job offer from other local or foreign companies. In our case most or software developers on the bench are junior and intermediate level, so development and support of internal ERP system is great training project for them with reasonable costs for the company.

Sombra Space also combines ERP solutions with time tracking and project teams allocating. The goal is to keep most of the internal IT systems in one place. However not all of the reviewed above systems have time tracking module and additional integration can be needed. I assume we can get back to analyze and review different solutions in the future, but till then developing and improving Sombra Space will be the best possible option for the company.

Huge benefit of out-of-box solutions is they can show processes of the next level of organizational development so with Sombra Space we have to make sure that we are automating future processes, and the current. For this we will need to involve external consultant and the best option will be hiring my diploma thesis mentor Natalia Cheliada as part-time consultant, as she is already familiar with part of our internal processes. Her knowledge and experience help us to customize our ERP system to the future processes and stages of organizational development.

Therefore for us the best decision now will be to continue development of our internal ERP application.

Knowledge management system Confluence:

We started using Confluence as our main Knowledge management system one year ago and decided to buy on-premise license. The investment was relatively big for our company size so expectations were high. As of now most of Sombra's processes and procedures are moved from Google Documents to Confluence. The process of documenting processes works next way : Head of Department make necessary changes directly in the Confluence. This sometimes causes issues of misunderstanding and conflict of interest. Another point is most of processes are written in different style and grammar.

After discussion with management and with external consultant and because the company is constantly growing, the decision was made to create new role inside the company - Process manager with the following responsibilities :

- Process documentation in unified way;
- In case of process change, necessary changes should be made in Confluence and notifying all related stakeholders;
- Making sure the information in Confluence is up to date;
- Suggesting process improvements;
- Working with external process consultant

At the moment there is no need of full-time involvement of such role. Thus the decision was made to combine the position of HR manager and Process manager. 80 hours a months should be enough for the next year, after that the Process manager role should become full-time position.

Managerial Conclusions

After completion of the final project, I have made several managerial conclusions. They are listed below :

1. From the Introduction part and Adizes analysis I was able to understand that company needs hiring more managers with **Administrator skill set**.

2. Sales & Marketing part gives me vision about focusing on one business vertical. Was decided to **choose Fintech** as a primary business domain for Sombra.

3. While working on Sombra's organizational structure, the decision was made to apply **flatter structure**. Also, after analysis of pros and cons, I decided **to implement Board of Directors** in nearest future.

4. Working on process automation gives me understanding how much resources we spend on internal ERP development and what the price of implementing out-of-box solutions. The decision was made to c**ontinue development of internal ERP**.

5. During working with processes documentation external consultant Natalia Cheliada was involved, who also helped me with diploma project mentoring. She helped me understand that there is partly chaos in documenting and communication of process changes, thus the decision was made to hire Natalia as **part-time external consultant** to help us with processes development. Also we are going to create n**ew internal role - process manager**.

The knowledge, gained during study at MSc in Technology program at LvBS helped me better understand current state of the organisation and to create path for reaching company strategy and goals. Below there is short analysis of most valuable MSTM courses for me with their benefits for my business.

The first module "Technological Entrepreneurship" gave me knowledge about startups - how they are launched and funded. This information helped me and company understand what the motivation of people from startup and how to work

with them. After the module I realised that want Sombra to be service company and not the product one.

During the second module "New Business Models for Business Creation" I learnt the importance of verifying of new business ideas. It also gave me understanding that new business should start from needs of future customers.

The "Management Decision Making Toolbox" module gave me necessary practical knowledge and set of tools and framework for everyday decision making. The information and cases provided during studying was helpful and useful, so I decided to ask Mychailo Wynnyckyj to become my diploma project mentor. I used Mckinsey 7s model in this diploma project.

The "The 7 Habits of Highly Effective People" workshop taught me how to prioritize tasks, I started to use Stephen Covey's 4 Quadrants framework in my everyday life. I also learnt more about proactivity and emotional intelligence, it helps me to interact more productive with my co-workers.

Two financial modules - "Introduction to Finance" and "Corporate Finance" gave me deeper understanding of working with finances and budgeting These modules also helped me to understand how to calculate valuation of the company.

The module "Innovation Management and its Business Development" gave me understanding about innovation corporate cultures and toolset to encourage innovations within the company.

Two leadership modules - "Leadership and Management Methods" and "Management 3.0" helped me to better understand concept of managing people and effective collaboration with them. Modules also provided practical toolset of giving feedback, which very valuable practice, especially in IT industry.

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10. [Blog.procurify.com - The Complete Procure to Pay Cycle](#)
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Appendices

Appendix 1. Next iteration of organizational structure of Sombra
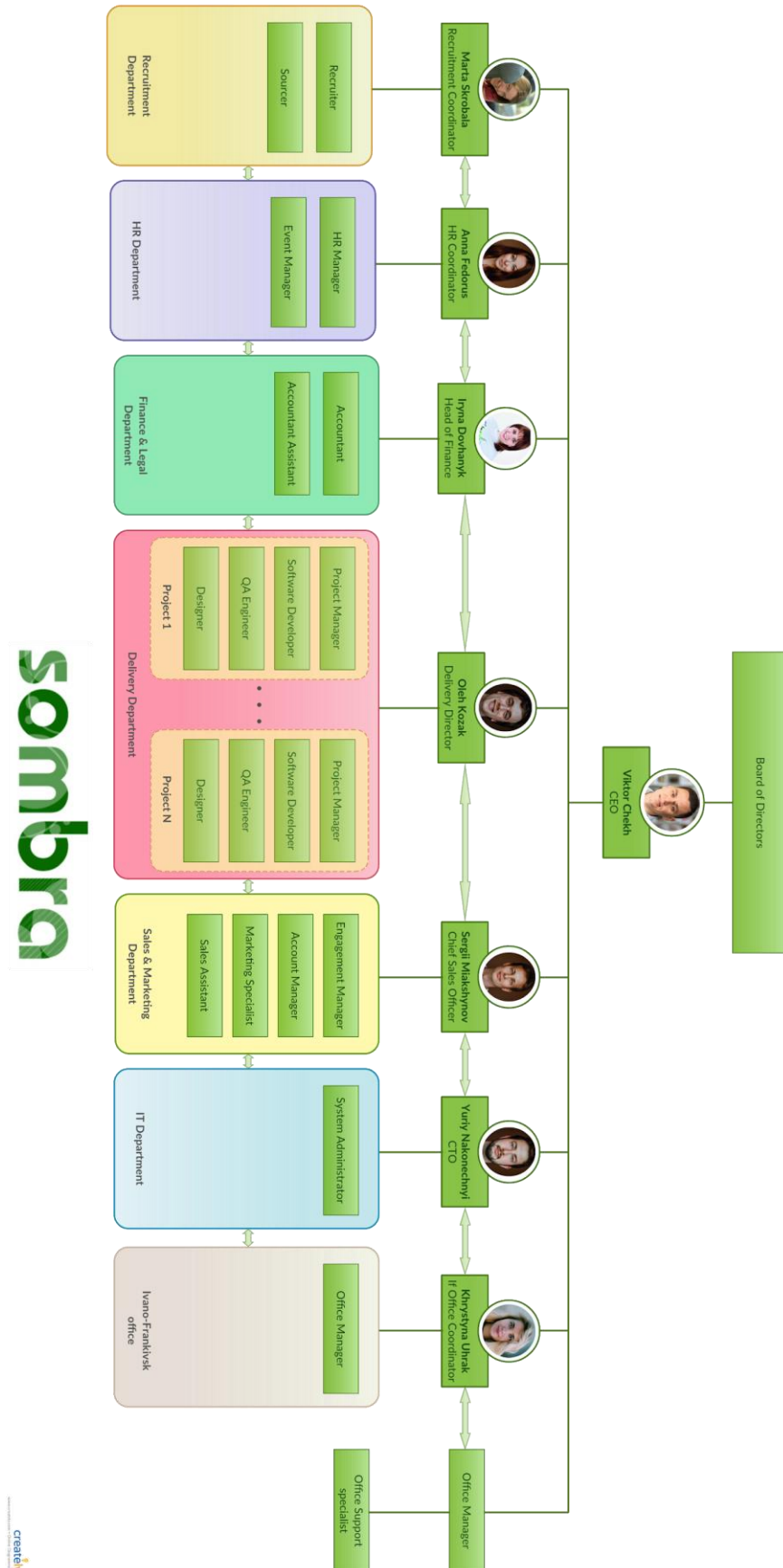
Appendix 2. Comparison table of existing ERP systems

Criterias for ERP comparison : Professional Services (Non-MFG), Cloud-Based
(Saas)

	Best Pricing › / Free Demos ›	EPICOR free demo ›	ORACLE + NETSUITE free demo ›	ORACLE free demo ›	Microsoft Dynamics free demo ›
General Data					
Product Name		Epicor ERP	NetSuite ERP	Oracle E-Business Suite	Microsoft Dynamics GP
Version		10.00	Always Current	Release 12	2016
Price Range		$4K -500K	$10K-100K	$12K-$350K	$10K-100K
Financing Options		Lease, Owner Financing, Lease to own	Subscription	Lease, Financing	Lease, Owner Financing, Financing
User Range		10-2000+	10+unlimited	25-1000+	25-500
Multi Site		Yes	Yes	Yes	Yes
Multi National		Yes	Yes	yes	yes
Architecture		SOA	SAAS, Multitenant	SOA	SOA, .NET
Database Platform		MS SQL Server, Cloud-Based (Saas), MAC OS	MS SQL Server, Progress, IBM DB2, Other, Oracle, ODBC Compliant, Proprietary`, Customized per Client, Pervasive, Power, Sage ProvideX, Sybase, Cloud-Based (Saas), PostgreSQL, MS SQL Express, abas Open Object Oriented Database, MS Access, IBM UniData/UniVerse, Universally Compatible w/all Data Base Platforms, Quickbooks, Salesforce, Multi-Tenant SAAS on the SalesForce Cloud	MS SQL Server, Progress, IBM DB2, Other, Oracle, Proprietary`, Cloud-Based (Saas)	MS SQL Server, IBM DB2, Other, Oracle, Proprietary`, Cloud-Based (Saas)
Server OS		Linux, Windows, Unix	Mac OS, Windows, Unix, Novell Netware	Mac OS, Linux, Windows, Unix, Novell Netware, Solaris, AIX, HP-UX, i Operating System	Mac OS, Linux, Windows, Unix, Novell Netware
SAAS		Yes	Yes	Yes	Yes

Appendix 3. Customer survey. Question #2 answers

What are 3-5 our strengths? (What did we do really well?)

Answered: 10   Skipped: 0
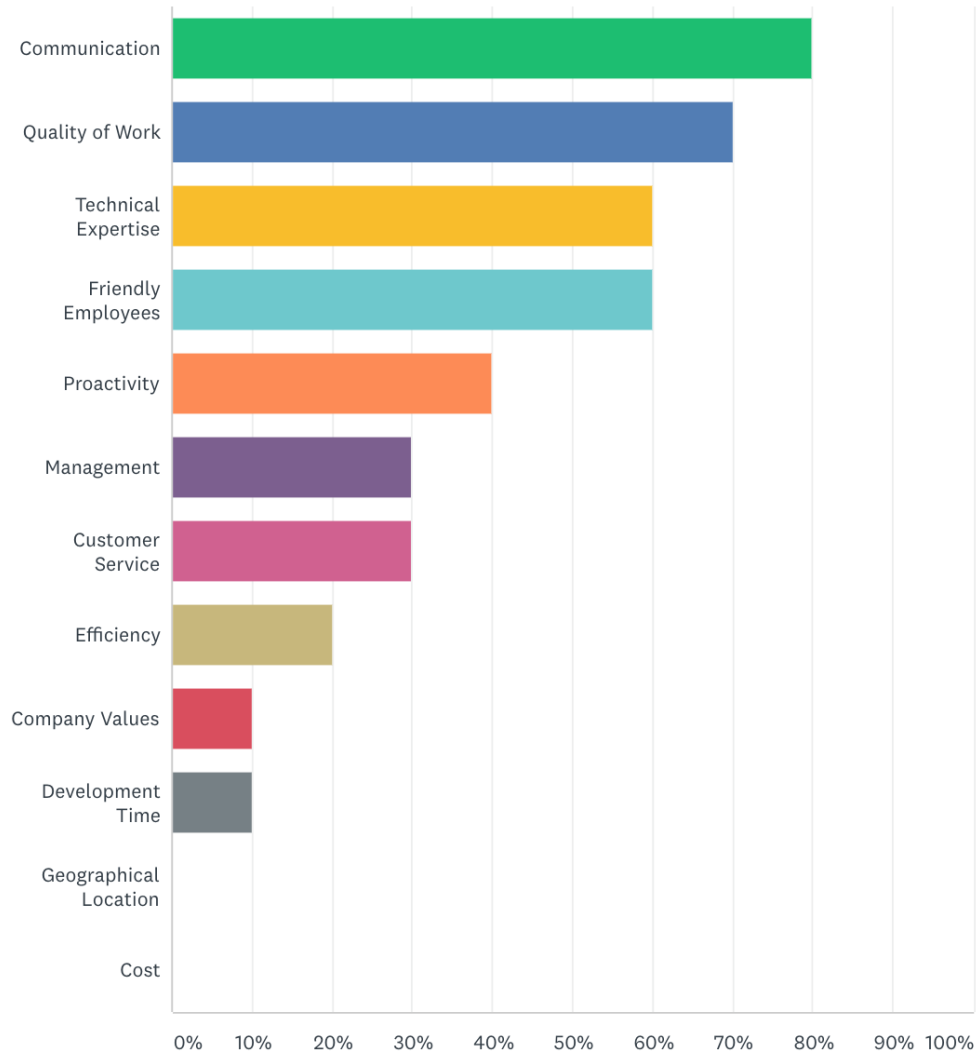
ANSWER CHOICES	RESPONSES	
Communication	80.00%	8
Quality of Work	70.00%	7
Technical Expertise	60.00%	6
Friendly Employees	60.00%	6
Proactivity	40.00%	4
Management	30.00%	3
Customer Service	30.00%	3
Efficiency	20.00%	2
Company Values	10.00%	1
Development Time	10.00%	1
Geographical Location	0.00%	0
Cost	0.00%	0
Total Respondents: 10		

Appendix 4. Customer survey. Question #3 answers

What are 3-5 our weaknesses? (What can we do to be even better?)

Answered: 6   Skipped: 4
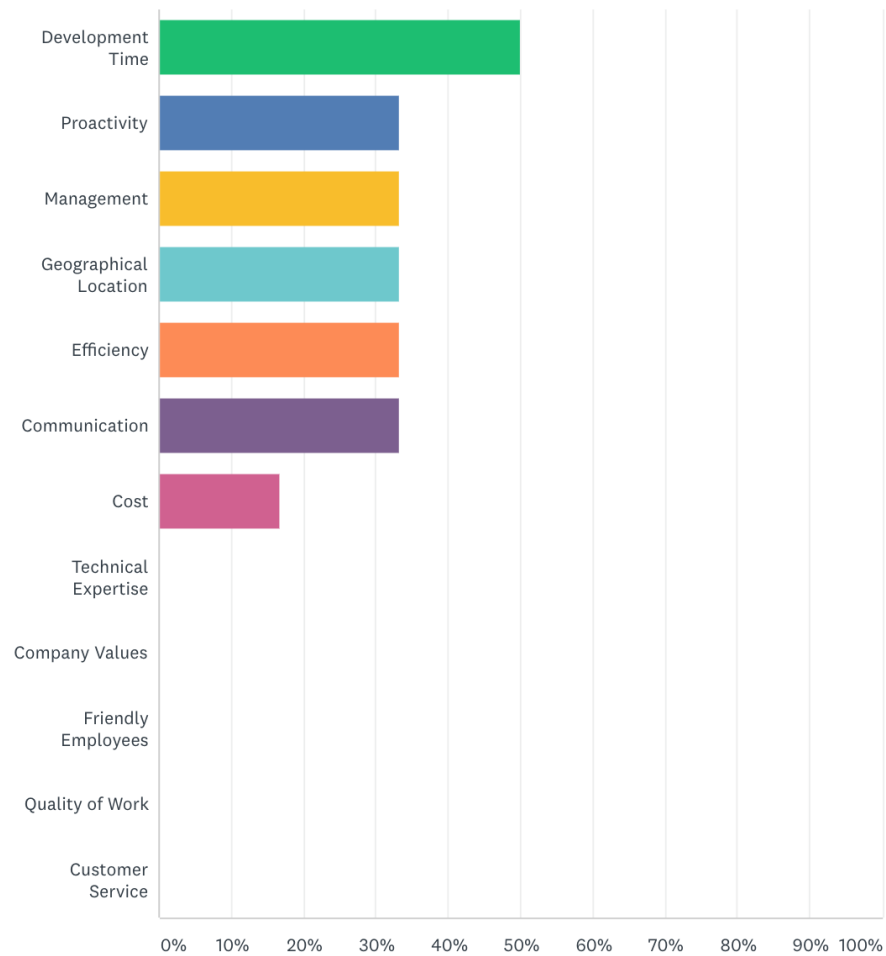
ANSWER CHOICES	RESPONSES	
▼ Development Time	50.00%	3
▼ Proactivity	33.33%	2
▼ Management	33.33%	2
▼ Geographical Location	33.33%	2
▼ Efficiency	33.33%	2
▼ Communication	33.33%	2
▼ Cost	16.67%	1
▼ Technical Expertise	0.00%	0
▼ Company Values	0.00%	0
▼ Friendly Employees	0.00%	0
▼ Quality of Work	0.00%	0
▼ Customer Service	0.00%	0
Total Respondents: 6		