

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
HIGHER EDUCATION ESTABLISHMENT
“UKRAINIAN CATHOLIC UNIVERSITY”

Department of Social Sciences

Chair of Management and Organizational Development

Master’s thesis

Entitled: A Framework for Monitoring and Measuring Strategy Execution in the
Small-Size Consulting and Software Development Company

Performed by: 6th year student, group STM17/M
speciality 073 “Management”
Olga Shcherba

Supervisor: Kleban Yuliia

Reviewer: Anton Skrypnyk

Lviv 2019

TABLE OF CONTENTS

INTRODUCTION	5
SECTION 1 - PROJECT ESSENCE	6
1.1 Problem Statement	6
1.2 Problem Solution	6
1.3 The goal of the project	8
SECTION II - PROJECT BUSINESS MODEL	10
2.1 Key Partners	10
2.2 Key Activities	10
2.3 Key Resources	13
2.4 Value Proposition	11
2.5 Customer Relationships	12
2.6 Channels	13
2.7 Cost Structure	13
2.8 Revenue Streams	13
SECTION III - PROJECT BUSINESS ANALYSIS	15
3.1 Research on approach to strategy in SSSDCC	15
3.2 Target Audience Analysis	18
3.3 Company structure and functional departments	19
3.4 Structures of the Delivery	21
3.5 Principles of Balanced Company Structure	24
3.5.1 Project Efforts Structure	25
3.5.2 Team structure by skills maturity	26
3.5.3 Structuring departments according to expected earnings	28
3.6 Common metrics by departments	29
3.6.1 Marketing and Sales	29
3.6.2 HR and Recruiting	31
3.6.3 Research and Development (R&D)	34
3.6.4 Delivery	36
SECTION IV - SOLUTION ARCHITECTURE	39

4.1 The structure of the consulting solution	39
4.1.1 Expectation	40
4.1.2 Fundamentals	40
4.1.3 Strategy	41
4.1.4 Structure	42
4.1.5 Tools	43
4.2 The strategy definition and tracking framework	44
4.2.1 Expectation from the framework	44
4.2.2 Overview of existing frameworks	45
4.2.3 Compare Strategy Management Framework	47
4.2.4 Conclusion	48
4.3 Extend OKR framework	48
4.4 Automated strategy execution tracking approach	49
4.5 Tools	53
4.5.1 OKR and Strategy Management tool	53
4.5.2 Delivery Department Tools	54
4.5.3 Sales Department Tools	56
4.5.4 HR tools	57
SECTION V - IMPLEMENTATION STRATEGY	60
5.1 Marketing and promotion	60
5.2 Finance	62
CONCLUSIONS	65
LIST OF SOURCES AND LITERATURE	66
ANNEX 1 - The Questionnaire for research on Strategy Approach	67
ANNEX 2 - Team health survey	69
ANNEX 3 - Tools budget calculations	69
ANNEX 4 - Draft of the consulting budget	71
ANNEX 5 - The example	72
Company background	72
Process	73

Solution Architecture	74
AgileVision Target company Structure	75
What was done	75

INTRODUCTION

Small-size software development and consulting companies (**SSSDCC**) need to have a strategy to survive and grow in today's highly competitive and fast-changing environment. But the benefits of having strategy are not only the fact that company has it, but mostly in having tools and understanding how to evaluate its execution. On the other side the most part of approaches and frameworks for strategy management are designed for large enterprises and are too resource-consuming and "heavy" for small companies.

The idea of the project is to study the existing approaches and to find or to elaborate the best-fit framework for measuring strategy execution for the small business in software development and consulting services. Having such tool, the company could be more specific and aligned to the defined goals and at the same time could increase the speed of reaction to deviations.

As a result of the project the consultancy service for the establishment of processes and tools supporting strategy implementation and progress tracking will be evaluated in order to offer it as external knowledge sharing and expertise. The service designed based on knowledge obtained during studying at the program and experience gained during the work in the targeted companies.

SECTION 1 - PROJECT ESSENCE

1.1 Problem Statement

The Ukrainian outsourcing business becomes more and more competitive each day because the lack of qualified engineers and growth of similar software development service providers in other countries offering lower prices with the same quality. In such an environment it becomes a problem to grow for a small company without a clear vision of goals and understanding of benefits.

The reason why small companies lacking mentioned staff is that in most cases they are leading by software engineering persons which build company based on own technical expertise and grouping people around their skills and professional knowledge. Technical expertise is crucial for engaging first clients and run first projects and start a business in outsourcing of the software development since in most cases the reason for being a client is to get ready technical expertise by affordable price.

But at some point of the company growth, the approach to the management of the company should be changed significantly and quickly in order to support growth and transform “team-style” company into the well-established company with the defined processes, and clear vision of goals and tactics, and measurable indicators of how things are going. The main challenge in this transformation is that the leader with the technical background doesn’t have enough knowledge, experience and skills to go through these changes along. It will take time to learn all by own tries and fails.

So, that the problem is the lack of business skills and strategic approach to enable growth of the company from the team to some hundreds.

1.2 Problem Solution

There are some common ways to support technical owners with the business expertise:

1. Educate the Owner and give him all necessary tools and knowledge to build the company on their own.

Procs:

- owner doesn't need to delegate decisions to anyone and has a feeling of being the one who build the company;
- owner better understands the further challenges and could be prepared;
- owner could build a company according to his vision and in a way how it feels it is the best company;

Cons:

- it will take time to pass through education and the impact to the operation of the non-established company could be very negative;
- Owner might be not interested in moving to the business knowledge instead of doing technical management;
- Owner will not learn how to delegate decision-making;

2. Hire full-time skilled manage to carry out structuring and processing the company.

Procs:

- There will be a dedicated, responsible person who will care about all things and contribute personal experience into the practice;
- The process of transformation will be quick and more specific;

Cons:

- It will be a challenge to identify the proper skills of the candidates since the owner doesn't fully in scope;
- It could be not attractive to real professional managers to join a small company because of low challenge level and opportunities;
- Lack of trust between owner and manager;
- Low understanding of real drives and goals of the owner by manager;

- At some point manager will leave the company because everything was established but the owner will not have enough skills and desire to maintain these processes and develop them;
3. Getting served by the Consultancy Service to be mentored and work hand-in-hand to establish everything according to the vision of owner but by the hands of consultancy;

Procs:

- The owner will get knowledge sharing and will be mentored at the same time;
- The level of trust will be higher because the owner will know that consultancy is a temporary and in the end, he will still be the key decision-maker;
- Consultancy will have more relevant experience and is targeted to solving of problems related to the establishment of the small companies;

Cons:

- It could seem to owner as too expensive price for abstract things;
- The issue to find the proper service and to trust that they could help;
- The ability of the owner to carry out the results after the completion of consultant's work;
- The vision of consultants and vision of owner will not match;

1.3 The goal of the project

According to the given options the goal of the project is to evaluate and define the consultancy service for the strategy definition, building processes according to the strategy and integrate tools for measuring execution of the strategy in a SSSDCC in order to support technical owner in growth and transformation of the company according to their vision and motivation. The goal of the service is not just an establishment of the

processes and tools, but the mentoring of the owner to empower them carry out the newly restructured company and have enough knowledge on how and why things organized.

SECTION II - PROJECT BUSINESS MODEL

/ The ideas described in this chapter are carried out from studying at the LvBS mostly

The Business Model Canvas reflects the business structure taking into account all components which should be included into the model in order to describe it in a comprehensive way. This approach to thinking out the business model helps to concentrate attention at each of the important business aspects.

2.1 Key Partners

- Coaches, Mentors & Trainers from the related fields - this is most important partners because they have mutual interest to recommend and to be recommended, there are some common way for motivation: pay per lead, % of revenue, or recommend back agreement. In case of this partnership the recommendation back agreement will be the best option because it will exclude promotion for money what is really could have a negative impact to the reputation if it will be discovered.
- Courses and business schools for juniors - lecturing could be of mutual benefit for the courses as a quality content as a promotion tool for the consultancy;

2.2 Key Activities

- Continuous learning and improvement of knowledge - the value of consultancy is the expertise given to companies, so a lot of reading books, talking to experts and analysis is required, so studying should be an important part of the process. As a result, proposed solutions should be improved and enhance each continuously;
- Public speaking - it required to visit at least 5-7 events per year in order to improve brand visibility and exchange knowledge;
- Consultancy - the key process of helping companies;

- Legal and accounting - any business requires financial reporting and legal agreements with clients, so it is the mandatory activity to keep finance and legal in order;
- Preparing materials for blog - at least 2-3 articles per month should be prepared in order to keep alive;
- Review and analyze materials - make analysis of tools which could be used as a part of strategy tracking, review approaches to measuring of performance;

2.3 Key Resources

- Knowledge and expertise - the idea of consultancy is based on willing to grow and share experience in building structures of small companies, so this is the main resources;
- Questionnaires and structures forms - a prepared and continuously improved forms of structuring information and extracting of key points from the discussions are of great help and time-saving in building consultancy;
- Lectures and presentations - prepared and continuously improved materials for coaching owners and company's employees for strategic things and importance of having the right processes aligned with values and structure;
- Promotion materials - articles, blog posts which demonstrates expertise;
- Time - to go into consultancy requires a lot of personal efforts, time and energy for finding first clients, prepare materials, study new information, research tools;

2.4 Value Proposition

- Experience - the main value which could receive the client from the consultancy is the experience is strategy definition and tracking, the consultancy approach will allow to receive wider experience because of often changes of companies and taking to the huge number of relevant persons, consultants and experts;

- Time - involvement of consultancy could cost more but it will be focused and quick implementation of strategy integration into the company operations, such an approach helps to save time and scale faster what is critical in today's world;
- Avoid common mistakes - the service brings knowledge to the company which is based on analysis of previous cases and as a result leads to more weighted decisions and approaches;

2.5 Customer Relationships

- Independent reviewer - the consultant is joining the company as an independent point of expertise with personal view to the company processes and structure, so they are free to share feedback and don't have any pressure to the opinion;
- Facilitator - the main aim of consultancy is not to bring ideas for strategy but to organize and structure everything in order to implement ideas of owners and manage them to structure their goals and define strategy; so it is important to have such kind of relation, not the one where consultant says what to do and thinks instead of owners;
- Coach - the idea of the consultancy is not only to configure and integrate everything according to the needs and goals of owners but also to teach them for further maintenance and development of strategy tracking framework and defined fundamentals;
- Temporary Employee - in order to analyze company deeply internally so the consultant should be treated as a part of the company for easier access to the other employees and oversee processes in action;

2.6 Channels

- Personal branding - build reputation among the target audience to raise trust and increase recommendations;

- Conferences, meetups, and other IT events - demonstrate expertise, get new acquaintances, discuss problems and study target audience pains and fails;
- Facebook - the source of opinion leadership, way to communicate with anyone, promote posts, events and build brand awareness;
- Personal blog - the collection of structured information and confirmation of expertise. Each post should be shared to Facebook and LinkedIn. The newsletter subscription should be implemented in order to collect leads and grow them with emails notification for the newly published posts. The blog should perform lead generation function with the help of SEO, and Social media;
- Guest articles - great option to increase brand awareness and prove expertise among the new audience is to publish articles in different popular resources;

2.7 Cost Structure

- Fee for conferences and events;
- Blog hosting;
- Advertising budget;
- Taxes;
- Software licenses;
- Partnership fee at events;
- Office renting;
- Legal and accounting;
- Promo materials;

2.8 Revenue Streams

- Payment for consulting;
- Bonuses for the software recommendations;
- Bonuses for recommendation of other consultants;

- Bonuses for the recommendation of third-party developers to integrate tools

SECTION III - PROJECT BUSINESS ANALYSIS

3.1 Research on approach to strategy in SSSDCC

The starting point for considering consultancy could be the research on the general situation with the strategy and related things within the targeted companies in order to have a better understanding of problems, challenges, and approaches.

The answers from the representatives of targeted companies could be as a great insight to start thinking about the development of consultancy and aspects that should be defined in the services and could help to structure the ToDo items for the SSD and at the same time be as an early validation of hypothesis that SSSDCC might really need such help and the project has potential to be successful.

The key points of the research are listed in the form of questions that should be answered during the research:

- How much companies have strategy and how it is defined?
- What is the goal of their company?
- Do they track the execution of strategy and how?
- Which tools and metrics do they use for tracking processes inside the company?
- What challenges have companies with strategies?

Note: Please, refer to **Annex 1** to overview the full list of questions.

The research was done in some ways:

1. Online anonymous survey published in Facebook relevant groups and emailed to relevant people in personal messages;

Procs:

- covered more respondents in order to get more objective conclusions;
- responses done by people who are willing to share the feedback;
- answers are structured and could be processed;

Cons:

- Respondents could be representative of non-relevant SSSDCC
- No way to ask additional or clarifying questions

2. Personal face-to-face interview with representatives

Procs:

- Opportunity to go into details and clarify more deeply situation within the company;
- Unexpected insights;

Cons:

- More complex to structure answers and build measurable results;

3. Notes about companies from previous experience and non-formal discussions

Procs:

- Cover more respondents;

Cons:

- Information could be subjective based on personal impression;
- Information could not reflect the real situation inside the company;

In general, the research covers about 40 companies from Ukraine. Most of the companies were small size, but there was also information about approaches in more mature and big companies of the same field which could be as a great example of target point where make sense to aim.

Another side effect that was identified is that the understanding of strategic planning by middle-managers who filled the survey could be incorrect or lacked. This demonstrates that there is a problem of communication of strategic questions to all levels in the company. So such answers reflect the problem of communication but not the problem with the strategy itself.

The analysis of received information provides with such conclusions:

- 32% have the defined and measurable strategy;
- 15% have semi-automated tracking of strategy execution;
- The most common period for strategy definition is 1 year;
- Some of company goals looks like goals of units not of the whole company (Self-identification, Customer Success, Care about people, Stability)
- In most cases the strategy is defined by top-level and communicated to all the company levels;
- The most highlighted challenges of strategic management:
 - Strategy is not clear and acceptable for people inside the company;
 - Not enough time to work on execution;
 - No clear measurables and KPIs;
 - No clear plan for the implementation

In general, the results of the research confirms the hypothesis that the approach to strategic management is lacking of experience knowledge and companies face with the long list of challenges. So, the idea of the project has potential to be considered and evaluated in detail.

3.2 Target Audience Analysis

Before one starts to develop specific approach to establishment of company's processes and structure aimed to grow and mature the SSSDCC it will be helpful to pass the target companies through the SWOT analysis in order to focus on strength and highlight them in structure and process, and at the same time it helps to identify weaknesses and elaborate approach for mitigation.

The idea is not just run the SWOT analysis of the given company but to build the generalized SWOT in order to define all elements according to general situation within the companies, because the most part of small companies are very similar and really have the common problems and wins.

Strength

- Tight communication between all employee and management;
- Knowledge-sharing;
- Seniority or specialization of engineering staff;
- Non-formal environment;
- Owner is highly motivated to success;
- Hire by reference;

Weakness

- Hard to engage big clients;
- Low employee brand awareness;
- Lack of business thinking;
- Poor risk management experience;

Opportunities

- Rich experience in narrow domain raises trust;
- Choose any industry focus and technology stack to get deep expertise;

- Be flexible in terms of clients and in terms of internal processes;
- Start work with small clients which will grow fast;

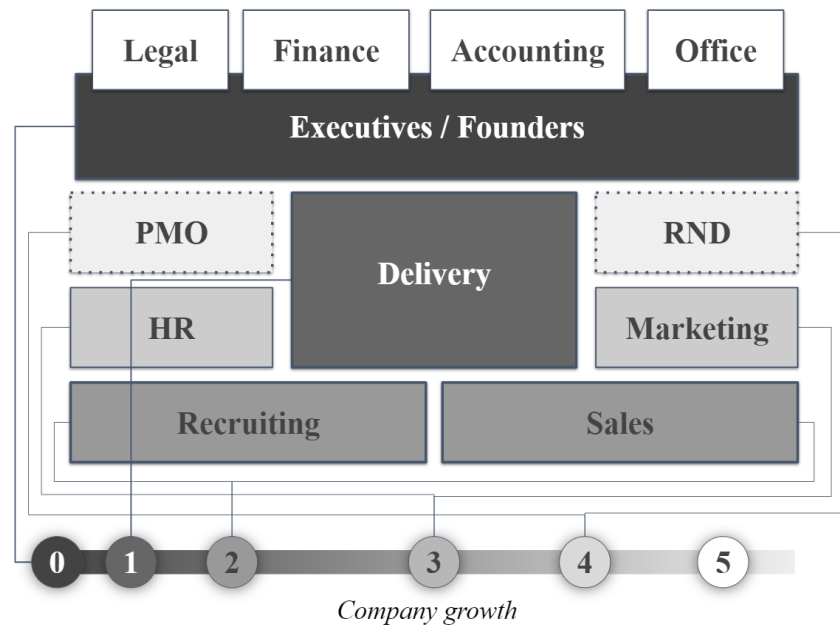
Threats

- Low budget savings to grow fast;
- Highly competitive labor and client's market;
- Poor experience in building internal structure and process;
- Company doesn't organize to apply efforts to right things;
- Account team could separate into the independent company;

3.3 Company structure and functional departments

Almost any company starts with the founders and they are the first employees who perform all functions. The first step they do is the building of the delivery department as a source of income and the most important function which is required for making money and growing the company. All other functions are fulfilled by the founders and the lack of understanding how and in which order to delegate them leads to the situation that company stops growing.

So, one of the important things which are required external experience is to define the structure of the company and order for delegating functions to the newly created departments.



Img. 3.1 - The general structure of the SSSDCC

The common approach is to establish delivery processes and then continue growth by establishing recruiting and sales because they will become a bottleneck for growth. And it is important to develop both functions at the same time in order to balance the incoming projects and engineering resources.

As soon as the Sales and Recruiting will operate more or less independently it is a time to empower company with the HR and Marketing functions as a way to build long term perspective to client’s attraction and controlling attrition as a way to have strong team and reduce hiring costs.

Having Delivery supported by HR, Recruiting, Sales and Marketing it is a time to establish PMO and R&D as a source of knowledge, standards and innovations. Having these independent functions company will be able to go through changes in technical environment and staying competitive and being able to scale fast having processes defined and measured by PMO.

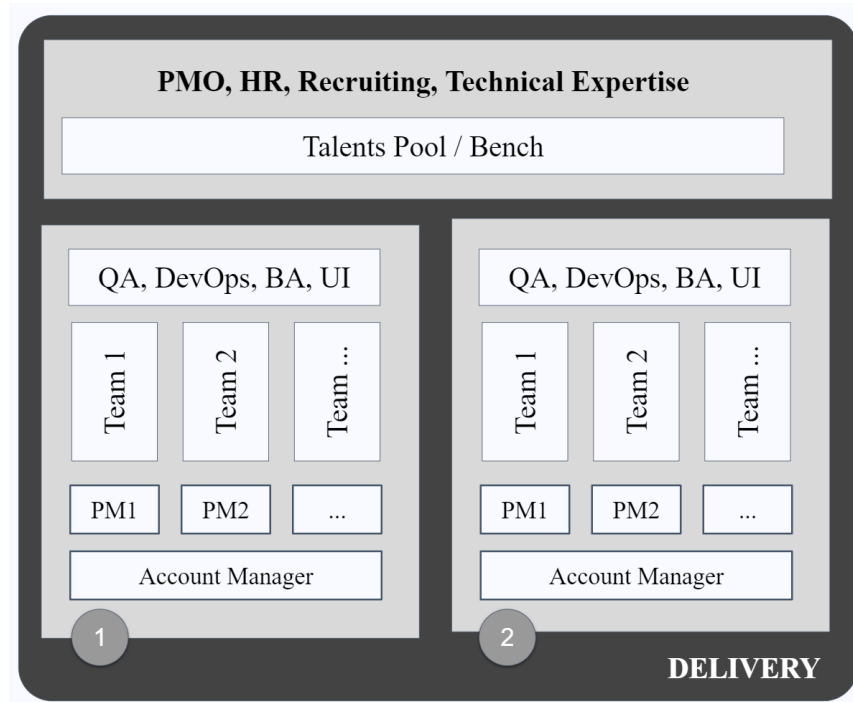
In some company’s cutting-edge technical expertise could be a strategic benefit and in this case R&D establishment should go together with the delivery as an integrated unit.

It doesn't mean that any department should not evolve after the establishment. The evolution should be continuous and self-driving since it is the responsibility of the department to improve performance, approaches and results as an independent unit.

3.4 Structures of the Delivery

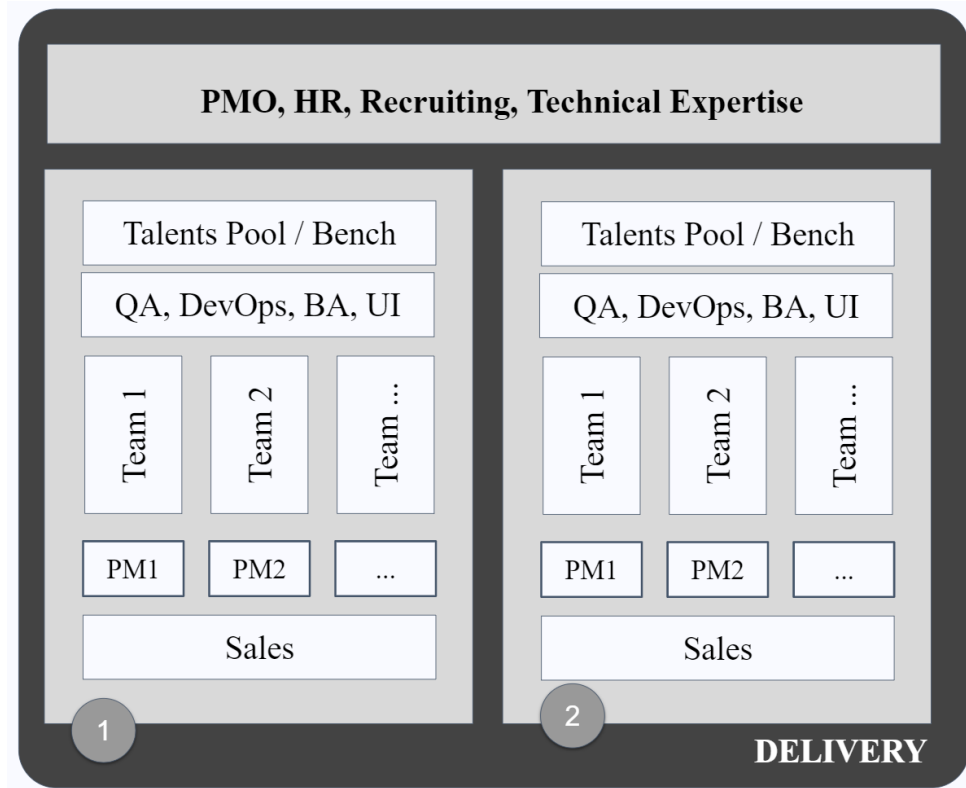
There are two internal structures inside the company that should be elaborated according to the company's strategy and goals. The first one is the general company structure which is aimed to organize secondary functions of the company which will serve the production department: HR, Recruiting, Business Development, Sales, PMO, Finance, Legal, Office. In small companies these functions are done by the owner and there is a problem when the company turns from 10-20 people to 50+ because things should be done in other way and should be distributed among the team to be able to scale.

The other structure that should be passed through the transformation is a delivery department which is the largest and the most important since it is the profit center of the company and its structure should reflect the approach to work with the client and strategy. There are some common patterns of how to build delivery department which succeed in mature companies of 500+ people:



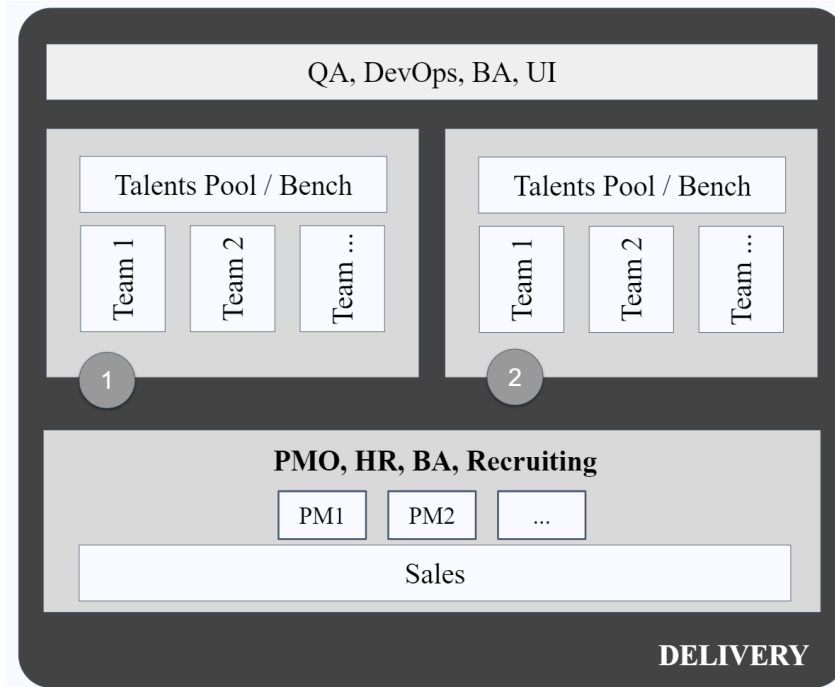
Img 3.2 - The structure of the delivery department organized by clients

By the account - it works great when company aimed to provide full-cycle services to their enterprise clients and needs of clients may vary a lot. In this case each account becomes highly isolated and leads to internal competition between the accounts and higher risks to be separated to a single independent entity because the company doesn't give a lot of value to the client and team, and on the other side the loose of such account could injure the company finance a lot;



Img 3.2 - The structure of the delivery department organized by business domain

By expertise/industry - if the company is planning to provide solution-based service for the given niche or industry it aims to diversification of risks and choose not the one by some industries. In this case each industry requires specific domain knowledge which is more important than even the technical skills because the idea of the team is to bring value by knowing how to apply technologies in their business and what problems it could be faced with.



Img 3.4 - The structure of the delivery for the technology-oriented company

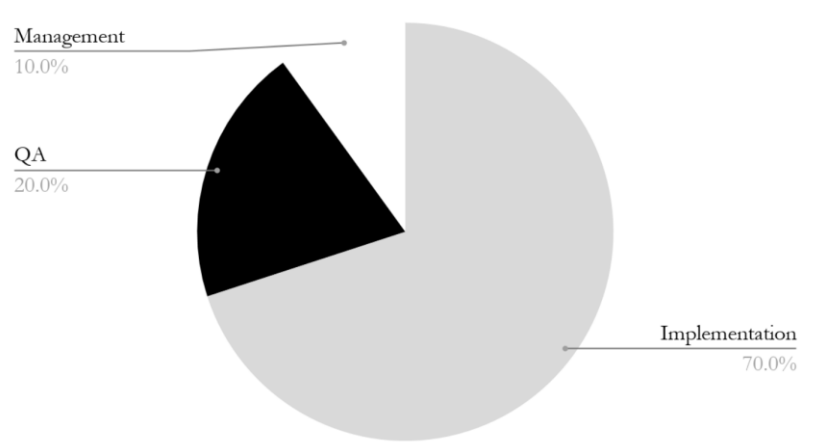
By technology/skills - there is a set of companies which are successful in bringing specific technical expertise to any kind of clients. In this case the strategy is built around growing of specific technical expertise and the key is the united team of professionals in the defined set of technologies which are following all updates and sharing knowledge to demonstrate technical excellence in their solutions.

3.5 Principles of Balanced Company Structure

Since, the aim of the project is to consult small companies how build the measurement system for strategy execution it is highly important to know what are the key metrics and standard values that indicates the health of the company model, strategy and structure. These indicators could be as a direction and principles to follow in order to validate how well company structure and processes are aligned with the strategy.

3.5.1 Project Efforts Structure

The major source of income for the outsourcing is the payment for the delivered services. The services are provided on a project base by the team and the structure of the team could vary, but in any project, there are some common elements that are required for almost any project and the distribution among them is highly important for analyzing how much budget and efforts are spent incorrectly.



Img 3.5 - The Balance for project budget and efforts

The major project participants should be classified and distributed as following:

- Management - 10%-15%;
- Implementation - 60-70%;
- Quality Control - 20-25%;

This indicator could help to evaluate the structure of the teams and define point with the lack of any component. These values should be the starting point but each company should elaborate own values based on statistics and analysis.

Depends on the strategy approach these values could vary: more management is required for industry-oriented companies because of product and consulting approach. In case of

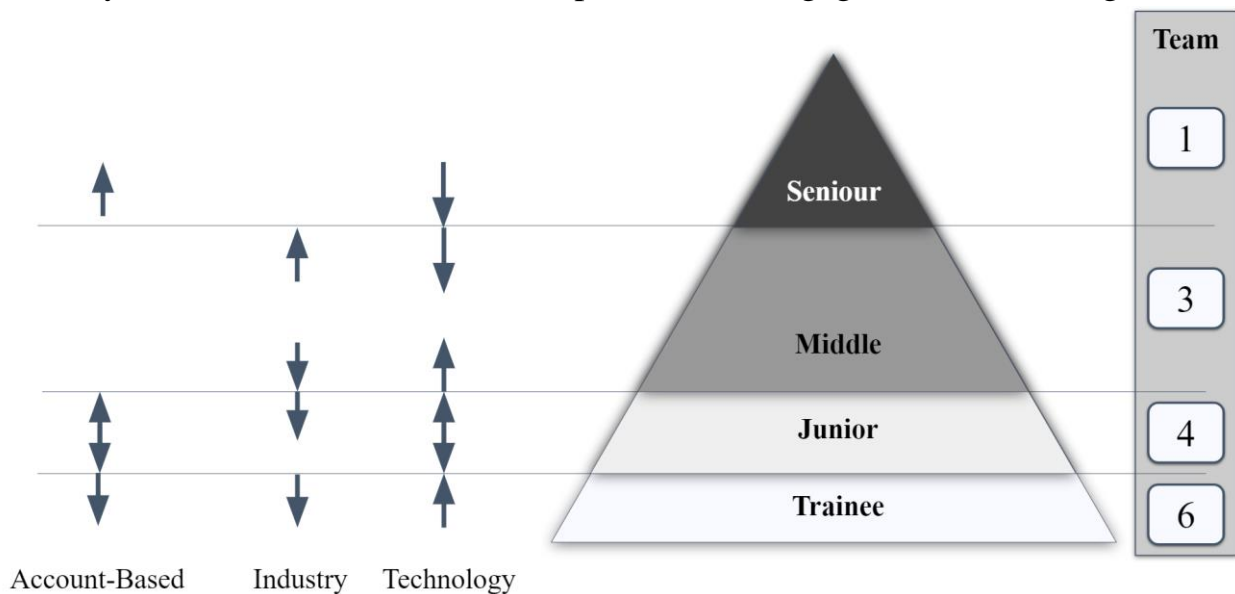
technology approach the management and QA requires less effort because this approach is about mature engineers and clear task settings by the client.

	By Account	By Industry	By Technology
Management	10%	↑	—
Implementation	70%	↓	↑
Quality Control	20%	↑	↓

Img 3.6 - The Balance for project budget and efforts depends on selected strategy

3.5.2 Team structure by skills maturity

The other important aspect is the maturity balance for the software development team. Sustainable growth should be supported with the team structure in order to organize maturity of team members and build a platform for engagement of new engineers.



Img 3.7 - The Skills Balance in an average team

Tracking the structure of the engineering staff could help to understand how well it is balanced and what kind of skill level is missing or lacking. The structure of the team vary depends on the selected strategy approach.

Account-Based approach:

- could be based mostly on middle engineers because the number of challenging tasks is not high, and in most cases it is a long-term b2b development which could be fully carry-out by middle level skills;
- There are some reasons behind having the comparably large amount of junior developers: reduce costs, extend team fast, prepare replacement for tired middle developer and enable their professional growth in other projects;
- For this approach trainee are not the best solution because it takes time to grow them, but there is not time for this when account should be extended;
- In the long-term accounts in most cases there is not so much technical tasks for the senior engineers and the costs of having them onboard are too high, so the number of seniors should be minimized;

Industry-oriented development:

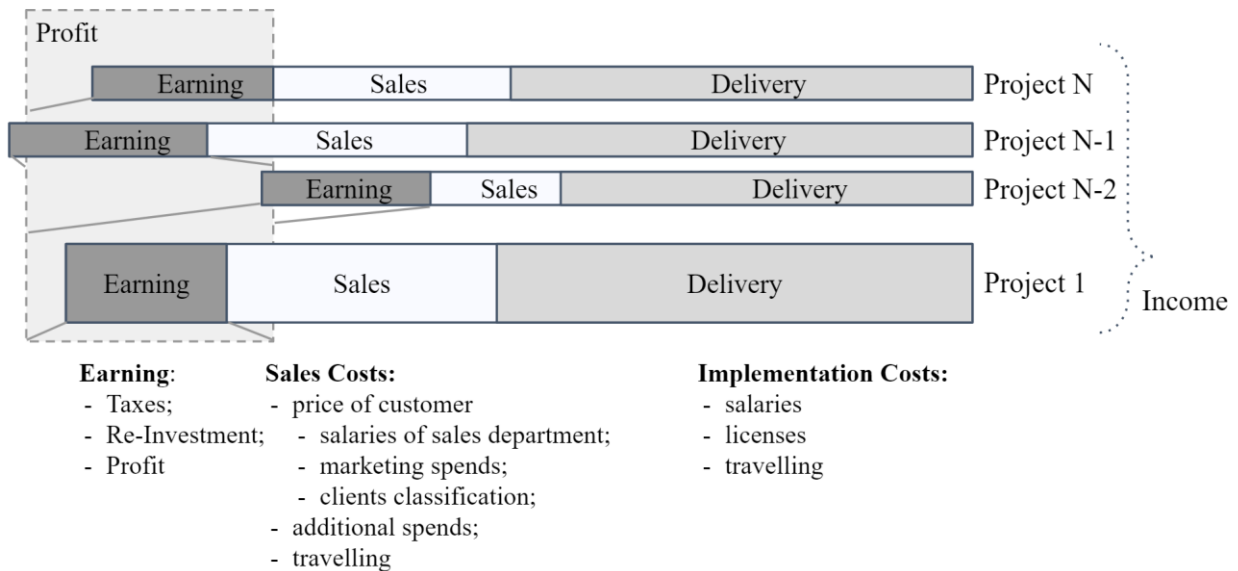
- The major part of work here should be carried out by middle and senior staff because this kind of delivery requires deep understanding of business needs and wide knowledge of the technologies in order to be able to match technologies and products to the business expectations. The described approach could be provided by middle+ staff but not by juniors and trainees which are lacking experience;
- The junior and trainee should be present in this model too but with the limited amount for replacing more senior staff and risks mitigation.

Technology approach:

- For this kind of strategy, it is highly important to have senior staff in order to assign them to challenging complex problems and be able to provide technical solution very fast;
- The other important pool here is juniors because there will always be a lot of simple work around complex technical problem which should be done by someone not so mature. The other vote for juniors is that the technology stack is narrow and easier to adopt, so it will require less time for juniors to adopt required skills, at the moment when middle staff could be overskilled for this;
- Junior flow should be supported by pool of trainee;

3.5.3 Structuring departments according to expected earnings

The goal of any business in a general is to earn money. So, strategy can't be defined without setting goals of revenue and budget expectations.



Img 3.7 - Budget structure

There are some common metrics that could help to define the structure for departments:

- Profit margin and profit - can provide the information how much income should be generated to achieve financial goals

- Price per client engagement, CTR lead to client, average project size, leads per month - can be used to define the structure of the sales department and measure sales;
- Project delivery cost sold vs paid - can be a definition of % that was spent on delivery of the project and should be tracked to measure success of the delivery;

3.6 Common metrics by departments

3.6.1 Marketing and Sales

The metrics for this department should be oriented to measuring engagement of the new projects according to the defined company interests (types of clients, industries, technologies) and building brand awareness moving focus to the outbound sales.

Key metrics which could provide required information:

- qualified leads;
- new clients;
- contract budget;
- outbound vs Inbound;

Qualified Leads - the metric which shows how much potential sales company could have in the defined time frame, it is important to qualify leads against the defined requirements such as client type, contract budget, industry and type of service. The qualified leads metric could be a way to compare sales channels, or potential by the client type, or compare one lead generation team member to another.

- the number of qualified leads by client type;
- the number of qualified leads by channel;

New Clients. This is a key metric for the Marketing and Sales department because it

shows real results for the company growth and success. Department could generate a lot of leads but the conversion rate at the same time could be very low and this means that the quality of leads doesn't match the skills, prices or experience. So, it is highly important to measure not only the number of new clients but the conversion rate and spends required to acquire new clients. These criteria are minimum which should be tracked at the first stage of company growth.

- conversion rate (lead->client);
- clients by type;
- clients by channel;
- price of acquisition per client;

Project Budgets. To get new clients is not the only important measure of success for the department of Marketing and Sales, because it requires to measure if the new clients cover the existing team or requires additional team members to hire what is good from the perspective of company growth. The other thing which indicates the impact of the project to the company is its total budget and monthly budget which means how intensive this project expected to be and how much it will contribute to the company budget.

- the budget of contract vs sales and marketing spends;
- monthly budget;
- number of new employees required to hire for the project;

Inbound vs Outbound Sales. For the growth of the company and scale of the sales, it is important to start with the outbound sales as the initial source of leads and step by step increase inbound sales as a long-term perspective. Having not so high conversion inbound sales are required and most effective in the long-term in order to build scalable sales. The outbound channels are the great start because it requires less time and effort to start but it

is not so good for the fast scale. So, tracking of distribution of sales results between these two approaches should indicate the maturity of the outbound channel. The key measures should be the number of leads and clients obtained by each of the approaches.

- qualified lead inbound vs outbound;
- contracts inbound vs outbound;

3.6.2 HR and Recruiting

All the metrics related to personal and team growth, soft-skills and communication were defined for HR & Recruiting department as the responsible entity for healthy working environment and conditions for personal growth of each team member within the company.

Key Metrics:

- recruiting excellence;
- attrition;
- company health;
- team health;
- personal growth;

Recruiting excellence. Recruiting is the key element to growth because of the responsibility to find and select the right people to the team. It is highly important to know how much time it takes to find the team member in order to predict the company growth and understand how much effort it required to staff the new project. Analyzing this one should take into account that the measure could vary depends on seniority and technology stack of the required candidate. It is clear that in most cases the size of the compensation scientifically impacts the time-to-hire metric, so it is important to track both.

- time-to-hire;
- compensation vs average on the market;

Attrition. Recruiting metrics helps a lot to predict the ability to company growth but it is not the only metric which has a direct impact to the company scale. So, the other metric is the attrition rate which shows how much people leave the company in comparison to the company size. The other metric which indicates the company health is how much time people work in the company.

- employee leave vs total employee;
- the average working time in the company;

Company health. One of the HR responsibilities which is identified as the general “climate” in the working environment and could produce huge positive or negative impact to the attrition and productivity of team members. This metric is one of the most important things to be tracked in order to understand how things are going and what actions needed to be done to improve the situation and make team members happier. 10 indicators should consolidate full picture about level of satisfaction and engagement at the company level. This data could be measured in form of regular questionnaire for all company employees in anonymous form to make it transparent and maximize trust and reliability of answers.

- Engagement
- eNPS
- Personal Growth
- Ambassadorship
- Relation with Peers
- Relation with Managers
- Recognition

- Wellness
- Feedback
- Satisfaction
- Happiness
- Alignment

Team/project health. Even with the high level of company health people still could suffer because of problems inside the project team within which they spend the most part of working time. So, only both company and team level tracking could give the full picture about the emotions and feelings which people experience in day-to-day work. The most important indicators of team health are the work overload, getting help inside the team, clarity of tasks that should be done, possibility to grow professionally, and satisfaction with the results. These five things measured on sprint basis in form of questionnaire could form the vision with the team health and will allow to compare team and identify the root cause of the problem.

- Work overload
- Mutual help and support
- Satisfaction with the results
- Clarity of tasks
- Ability to grow professionally

Personal Growth. Creating the comfort working environment is not enough to make people happy at work. Company should provide the personal approach to career path, and at the same time it requires to include metrics for tracking each employee status to give them the proper support, development opportunities and avoid conflicts. Technical skills and professional growth be measured with the performance review which filled by the

direct manager with the help of other relevant leads to give assessment of knowledge and practical appliance according to the defined skillset. The 360 feedback could provide indicator for satisfaction of behavior to company core values, communication skills and professionalism in the eyes of colleges. Also, it is important to know how engineer is doing his daily job which is software development, so it could be measured by how they fit into the estimation, how many bugs the produce while implementing the tasks and whether the results are delivered in time, knowing this indicators it will be easier to predict delivery of the team and improve the skills of the person.

- 360 feedback by core values;
- technical performance review;
- estimated vs done;
- tasks reopen;
- on-time delivery;

3.6.3 Research and Development (R&D)

The research and development department is the contribution of the company into the future delivery, sales and growth. Only continuous learning could support company next days. The metrics of this department should be oriented to measure the volume of the learning and the efforts contributed to share the obtained knowledge inside and outside the company. Also, to avoid R&D becoming fully internal department it would be great to measure the rate of internal vs external projects and volume of services sold to the clients like research and proof-of-concept. Since, the R&D department is treated as a center of technical expertise certification should be tracked as part of its metrics.

Key metrics

- new technology researches;
- knowledge sharing;
- Research as a service;
- Certification;

New Technology Research. The evolution of the company requires continuous learning and improving the processes and technologies used in projects. The number of researches and technologies learned should be counted and tracked over time on a monthly basis. But, the number of researches is not enough to understand the intensively of the learning, so the knowledge sharing inside the company should be also measures to complete visibility of learning process.

- number of researches done per month;
- knowledge shared inside the company;

Knowledge Sharing. The internal knowledge sharing impacts the level of all engineers and distribution of cutting-edge technologies among all projects, the external knowledge sharing rises trust to the company and increase expert position of the company which could help to sell services. For each approach to knowledge sharing measuring should be performed.

- amount of blog posts about research results;
- webinar hosted;
- third-party hosted articles;

Research-as-a-service. In case when the key focus of business is to build a technology, company focused on the innovative solutions and technology consulting partner for non-technical clients. The successful implementation of this strategy could be measured by

engagement of the R&D department in the client's projects

- research hours vs paid research hours;
- amount of research projects vs total company projects;
- clients engaged by technological experience;

Certification. If on a strategic level the list of certifications is defined as a tool to ensure the level of knowledge inside the company. Each software engineer should pass the list of certifications as a condition to work in a company, the certification preparation is a part of the R&D research work, so it planned to measure it as metric of this department.

- certification passed according to goals;

3.6.4 Delivery

Delivery department is the key engine of the company because it is the unit which brings actual value to clients and it is most important to have it working very stable and in the expected level of quality making clients satisfied and willing to work further. Doing job great delivery becomes point of sale for current clients, so upsale was defined as one of metrics too.

Key metrics

- on-time delivery
- in budget
- quality
- customer satisfaction
- Upsale

On-Time Delivery. This metric should show how good team keeps deadlines at the project level and also the aggregation of this metric to the level of the department should be done. The aggregation must take into account the team size as weight of the team indicator in order to get the correct impact at the department level. Small team missing deadline is not the same problem as the big team or the whole account due dates gap, so it should be calculated properly.

- % of work which was not delivered in the expected time;
- aggregation as average weighted by team size;

In Budget. The problem with meeting deadlines is not the only one that should be tracked, the other one is doing tasks, features, project according to the estimations done before the start. When it comes to money it should be clear where is the root cause of redundant budget spends. Since, estimations are done according to some average skill level of engineers and it is clear that engineer who is implementing this task could be of other level, the weight for aligning levels should be applied as a part of calculation for this indicator. These indicators should be aggregated to the account and department level using weighting by team size too, because the size of the team impact the size of budget losses.

- billed hours vs logged hours taken into account efficiency index; (excel vs jira);
- for aggregation we use weighted by team size sum;

Quality. Quality of the delivery impacts the on-time and in-budget metrics indirectly thing it required additional effort for quality control and problem-solving, so aiming the high-quality means doing things right from the first attempt. The low quality also produces technical debt which leads to additional spends and increasing level of problems

- bugs opened after sprint;
- Technical debt - bugfixing + techtasks time vs new features development time;

- task reopen index;

Customer satisfaction index. The measured delivery doesn't take into account the satisfaction of the client and feedback about cooperation, so it is required to have a measure of satisfaction consolidating some important indicators. Quality from the client perspective could be measured as a number of bugs and problems at production reported by the client. The most "killing" argument of clients' satisfaction is willing to recommend as an indicator of the level of trust. Client also could give feedback on satisfaction of the project team and core values which company declared. Maybe this is not so important to client, but it is crucial to know whether company demonstrates behavior matched to core values or not.

- bugs reported by client;
- survey results:
 - transparency - how responsive and clear we work;
 - teamwork - willing to help, contribute to ideas;
 - evolution - ability to find the solution, product improvement;
 - ownership - on-time, in-budget, in-scope;
- willing to recommend

Upsale. Growth of the company means not only engagement of the new clients but growing existing clients and starting new projects for them. The upsale should be measured as a part of the delivery because it shows indirectly how good project team doing their job and whether client trust them new ideas and challenges. The upsale indicator should be weighted by the current size of the budget project in order to provide the real measure.

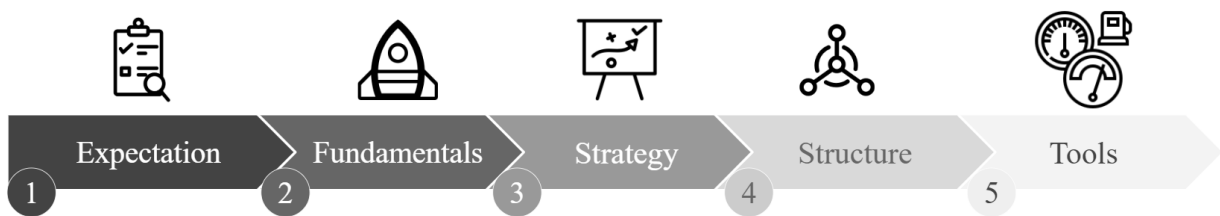
- % growth of monthly budget compared to the previous year;

SECTION IV - SOLUTION ARCHITECTURE

4.1 The structure of the consulting solution

The consulting should be aimed to define measures and establish tools for the tracking of strategy execution. It is clear that some processes could already exist in the company and it requires to evaluate them and align with newly one. The same situation could be faced with management tools used in the company. So, the goal of the consulting service is not creating everything from scratch but to find the smooth way to integrate changes and introduce new elements into the company structure to enable strategy execution and make it measurable and trackable.

It is clear that strategy and goals could vary from company to company and the set of tools and processes could be different, but the core always will be similar since outsourcing business is quite standardized.



Consulting steps

Img 4.1 - Consulting steps

Five steps of the consulting process were identified and structured in order to make company evolution and knowledge sharing in the most efficient way.

4.1.1 Expectation

The basis for this step is described in the book “Five Dysfunction of the Team” and it prescribes just to observe the company inside in order to identify dysfunctions. The idea of the step is not to find any solution, but it is about finding problems and discover needs, expectations and identify how it works now.

Goal:

- Analyze current state of processes, tools, culture inside the company;
- Facilitate owners to define what do they expect from company and whether they are ready to work hard and spend money and efforts for growth;
- Define pain-points of the internal operations;
- Find out how company positioned abroad among potential clients;

Tool:

- Observe internal operations;
- Questionnaire and 1-to-1 meetings with key employees and some random employees;
- Overview the internal documentation regarding processes;
- Questionnaire and meeting with the owners;

Outcome:

- The understanding of ambitions of owners/founders;
- The understanding of current state in the company (SWOT analysis);
- The people in the team who could help with strategy implementation;

4.1.2 Fundamentals

In order to build a basis for the long-term strategy implementation process and align the team by setting the right terms and shared vision of principles it is important to define the

mission, vision, values before going to strategy and execution. The company will scale and the level of the relation between each new employee and founder will be more distant and it will be not enough to inspire the team by energy of the owner. Some general simple ideas should be defined and communicated to the team in order to save the spirit of all employees and make them more confident about understanding where company goes.

Goal:

- Identify and agree common principle which could be the basis;
- Engage everyone in the company to contribute to the definition;
- Formulate mission, vision, values;
- Communicate defined terms to everyone and get agreed on using them in everyday decision-making process;

Tool:

- Brainstorm session to generate basis for extracting terms;
- Analysis and structuring the information;
- Anonymous voting;

Outcome:

- Defined, agreed and communicated mission, vision, values;

Knowing why you're doing what you're doing (your mission), where you're trying to go (your vision), and how you're going to go about it (your values) are the glue that holds an organization together.

4.1.3 Strategy

Once the company knows fundamental principles how it operates then the goals should be defined and the strategy of achieving them. Since the final point is to make strategy execution measurable and trackable it highly important to structure it according to strategy

management framework or order to measure it easily, the other vote for the usage of framework is because of knowledge sharing, and best-practice application.

Goal:

- Define measurable goals;
- Understand the strategy management framework to use it effectively;
- Elaborate high-level planning for reaching goals;
- Adjust strategy definition with strategy management framework;
- Communicate clear vision for the upcoming plans and actions;

Tool:

- Strategic session;
- Brainstorming;
- Strategy management framework;
- General meeting to communicate strategy;

Outcome:

- Defined goals;
- Defined strategy in terms of framework;
-

4.1.4 Structure

It is not enough to have the defined strategy and values, this will not bring any result without actions and steps forwards the set goals. So, the next step is to elaborate structure of the company which is aligned with the strategy and roles are set with the defined list of responsibilities which reflects the strategy.

Goal:

- To ensure that the structure of the company could support the strategy execution;
- Align roles and responsibilities with the strategy;

- Identify the bottle-necks and lack of expertise among current employees;
- Discover people with what skills should be hired to implement strategy;
- Map current employee to structure and roles;

Tool:

- Mind map;
- Brainstorming;
- Company orgchart;

Outcome:

- Targeted structure of the company;
- Defined and assigned Role and Responsibilities;

4.1.5 Tools

The last but not the least step for establishment of strategy-driven company is to define metrics to be tracked and tools to be used for enabling of strategy execution. Another benefits of having automated data gathering and metrics analysis is to use data-driven decision aligned with values and strategy. At this point it is important to combine the tools that already exists and to define which should be replaced, which should be extended and which should be added.

Goal:

- Identify list of tools to use and how to use them;
- Map strategy execution metrics to data from tools;
- Enable data-driven decision-making;
- Establish metrics for strategy execution;

Tool:

- Comparable analysis of tools against the requirements;
- Consulting on metrics and how to understand them;

Outcome:

- Integrate tools;
- Implemented execution tracking system;
- Defined and measurable metrics;

4.2 The strategy definition and tracking framework

In order to have strategy structured and organized for easier perception, sharing, tracking and improving the company requires a framework, at least at first stages to ensure that efforts for strategy definition will go in the right direction. There are many Goals Management frameworks and techniques at the market. Most of them have decades of history, others are modern and flexible. It is important to find the strategy management framework which is the best fits small companies and flexible enough to be adjusted several times per year.

4.2.1 Expectation from the framework

Considering the situation and company state there are several expectations of the framework which should be considered when selecting framework:

- The company size - it is about 20-50 employees so there is a limited resource for strategy management, and at the same time it shouldn't be too complex to communicate it to all members;
- The pace of company growth - the approach to the strategy definition depends on company size and growth. In the very beginning the company expects rapid growth, so the strategy could be revised often, and the framework should be flexible to adopt these changes;
- The ability to measure final and medium results - the value of having a strategy is to be able to understand how good it is executed in order to make sure that time is not wasted;

- The ability to have strategy breakdown - since the company is small it is expected that each employee will contribute significantly into the strategy execution;
- Easy to present and explain it to everyone;
- Assign responsibility to everyone - encourage ownership of every team member by enabling him to produce impact to the general results

4.2.2 Overview of existing frameworks

- **S.M.A.R.T criteria.** The first mention was dated by 1981 in Management Review by George T. Doran. Commonly based on **MBO**.
 - Management by Objectives/Results (**MBO/MBR**). First Mention in Peter Drucker's book *The Practice of Management*, 1954. *Hewlett-Packard, Intel, Xerox.*
- The European Foundation for Quality Management (**EFQM**). The first version was released in 1992. The model has been used across Europe, but also expanded to Middle East.
- The 4 Disciplines of Execution (**4DX**). Was published by Covey, Sean in Free Press, 2012
- Balanced scorecard (**BSC**). The first generation of the approach is dated at 1987 by Art Schneiderman, Analog Devices. There are three generations of Balanced scorecard approach.
- Key Performance Indicators (**KPI**). A very common approach started its history in the 19th century and very popular nowadays.
- Objectives and key results (**OKR**). Released by Intel's salesperson John Doerr in 1975. *Google, LinkedIn, Twitter, Uber.*

S.M.A.R.T criteria. SMART criteria is very popular in many companies. The main idea is that all goals should follow the SMART criteria list: *Specific, Measurable, Achievable,*

Relevant, Time-bound. The framework is easy to use but requires clear and full description for each goal. The main issue is that goals are isolated from each other and for goals combination another approach should be used. It doesn't give an input on how goals should be structured and distributed among the team members. It is considered that SMART is more comfortable for personal usage and small strives rather than for systematic usage.

The European Foundation for Quality Management (EFQM). The popular framework around Europe companies. The main idea is to find “path to excellence”. A Company should implement next three components:

- Define core values or key management principles that drive a success.
- Define Enablers and results.
- Continuously use RADAR logic
 - Determinate Result
 - Plan and Develop Approaches
 - Deploy Approaches
 - Asses and Revine

The Framework uses a difficult artifact, iterative approach (big goals will be achieved in some steps). As a result, the goals are not transparent for all, only a small group knows the real status.

The 4 Disciplines of Execution. The main concept is to cover 4 disciplines: Focus, Leverage, Engagement, Accountability. The idea is to prioritize different daily routine tasks and as result to concentrate on main objectives. There are two important limitations: only one or two Wildly Important Goals (WIGs) can be in progress and regular frequent meetings for review and prioritize are required.

Balanced scorecard. The framework is popular around the world. The main idea is to create goals based on four areas such as Financial, Customer, Internal Processes, and

Learning & Growth. In this case Objectives are complex and execution time usually more than 1 year.

Key Performance Indicators. KPI is a very popular approach over the world. It helps measure a performance or success by many different criteria. However, KPI measures already present things and is not closely aligned with strategic planning.

Objectives and key results. OKR is a framework with two elements: Objective + one or more Key Results. Objectives represent a destination from one state to another, set clear descriptions of what is expected. Key Results just are metrics that measure success of an objective. The does not describe goals in isolation, instead provide a solution for combine goals in the hierarchy. OKR does not limit Goals with formal description, instead provides a flexibility of definition.

4.2.3 Compare Strategy Management Framework

Table 4.1 - Comparison of strategy management frameworks by criteria

	S.M.A.R.T	EFQM	4DX	BSC	KPI	OKR
Define goals and values	+	+	+	+	-	+
Align teams and individuals around goals and values	-	-	-	-	-	+
Data driven decision making	+	-	+	-	-	+
Apply efforts to the right things	+	+	+	+	+	+
Estimate resources vs goals	-	-	+	-	-	+
Transparency	-	-	-	-	+	+

4.2.4 Conclusion

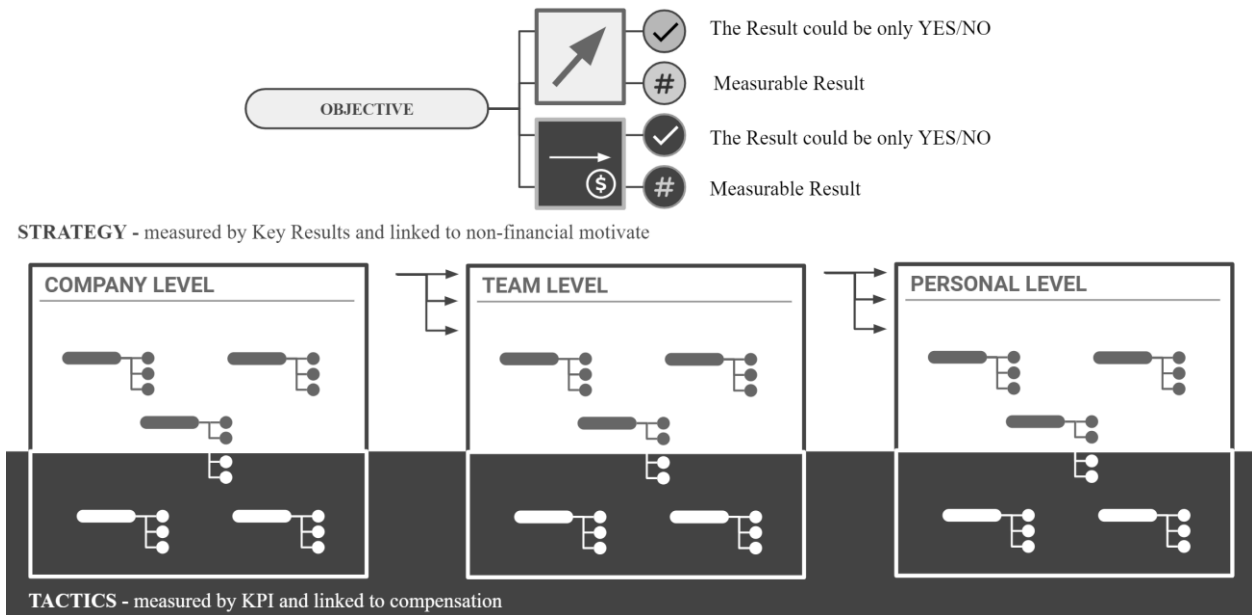
According to studied information the basic framework the most appropriate is the OKR since at the current stage of the company because it is about going beyond the comfort zone and engage each team member to contribute to goals achievement and at the same time it gives full transparency and it is rather simple way to communicate strategy and key effort focuses to each employee.

4.3 Extend OKR framework

There is a problem that should be addressed while using OKR framework for small size companies. This is not the problem of OKR itself it is more about the environment of the company where you plan to apply it. The problem is related to the absence of any objective measures and tools to estimate how day-to-day routines are running in company. The excellence in doing ongoing operations should be the source for definition of bonuses as a financial motivation. The nature of OKR prescribes that it should practice without relation to compensation and be applied to an ambitious strategic goal rather than to routine work. As a result, we need to make sure that achieving new horizons the overall quality of operations remain at least at the same level and employees get compensation for managing to have the same result while working with OKR.

So, for SSSDCC it is important to elaborate a way how to track health of company operations and define dependence between these metrics and compensation. And ideally it should be managed within the same tool in order to have it aligned and consistent. It means each OKR assigned should be supplied with metrics which are not related to OKR itself but informs what should be still cared about.

Actually, it could be still the OKR based approach for setting this metrics but it should be clear to everyone that not all OKR are actually OKR and the Key Results of them will impact the compensation while the classic OKR not.



Img 4.2 - The extended OKR framework

4.4 Automated strategy execution tracking approach

The idea of this project is not just help companies to establish strategy-driven operations with trackable strategy execution but also to integrate tools in order to automate metrics gathering and analyzing.

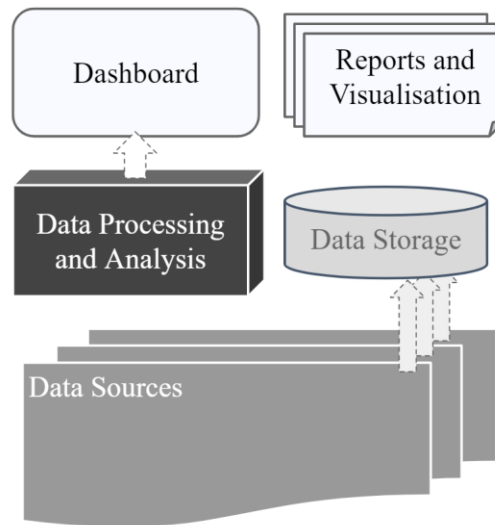
Such approach to measuring could bring a lot of positive impacts to the company:

- save people resources needed for manual tracking;
- discipline the staff around performance and focus;
- make tracking visual and transparent so everyone know things are going;
- Add motivation and competitive spirit to the company;
- Quick reaction to deviant results;
- Clear and fair compensensation policy;

In order to implement automation it needed to integrate management tools for each functional department such as delivery, HR, recruiting, sales, finance and analyze how useful could the tools which already used by the company. At the moment of the goals

definition it is necessary to find the source of data which could be retrieved automatically and could be used for update of Key Results.

So, the last step of the consulting is the integration the system which has structure as described at img 4.3



Img 4.3 - Management Data System for automated tracking of strategy execution

Data sources - the internal management tools which contains relevant management data specifically to its field: HR, Delivery, Finance, Sales, Marketing.

For each data source the steps should be done:

- Choose the tool considering the possibility of automated data extraction;
- Define the process and structure of its integration into the given company;
- List out data that should be extracted from the tool;
- Build formulas to process this data and calculate metrics;
- Decide whether it possible to extract required data out-of-box or custom script development is required;
- Estimate efforts of integration.

Not all data could be retrieved from the data sources, so the additional data-source such as manual data input should be considered in order to support automatic calculations.

Also, important to mention that when choosing the tools to cover the needs of each functional department important to look at the complexity of automated data retrieving by third-party tools.

Data Storage - all the data from the management systems/tools should be stored separately with the historical tracking of changes and available to usage even after any tool will be removed or replaced by other one at any stage of company growth. The only requirement should be taken into account when replacing one tool to another is the backward compatibility of retrieved data. The data storage should be protected to be stolen or accessed by any unauthorized person, because the data could be a volatility for the company. For some companies it is important to leave all financial information non-transparent due to many reasons, so the data storage should be developed and maintained by third-party or owners in order to avoid access of employees to this information. The Data Storage should be also

Data Processing and Analytics - the part of the system targeted to convert data gathered from all the systems into the metrics values reflecting the current position of the company according to strategic expectations. This part of the system is totally depending on the company strategy and defined goals and expected results measures. So, each time when providing consulting to the new company this part should be reviewed and adjusted after the strategy will be defined. As further development of the consulting services it could be a completed software solution which could be reconfigured by owners automatically, and the main challenge to make it available is to implement the tool to configure Data Processing and Analytics, so for now it is partly manual and mental work to think out algorithm of data processing for each new company. The one more feature that could be used by owners since they already are gathering the data is to look for unexpected patterns

of behavior as an early risk identification tool. Also, this part of the system could provide not only the data for metrics indication but also general data about the company which could be needed to owners or other employees to make a decision based on data not only on emotions and intuition quickly without the need to collect and analyze data at the decision moment.

Dashboard - it is a way to show the relevant data metrics status to any employee. There should be a list of dashboards inside the company targeted to different teams, departments and persons. Each Dashboard should be aligned with the assigned goals and key indicators both strategic and tactics. It is important to extract only relevant data and show it in simple and visually easy way in order to have an understanding of status at first glance. Access to the dashboard should be only for the authorized users using their company's account or any other third-party identity provider. The Dashboards could be configurable in order to allow users to manage the view they see. The settings should depend on logged user account, and the data access should be also restricted by user's account which identifies them as a part of the company org chart. Dashboards should be the source of the information to each employee about his personal and team contribution to goals and the performance evaluated by the system according to the defined criteria. Access to the information is the key to the transparency and inspiration for everyone. In comparison to Balanced Score Cards where the Dashboard is intended to show the general company status on track the dashboard in the proposed approach serves as a "window" to the same information understandable from the point of view of the given user.

Reports and Visualization the other important form of engagement and transparency is the reporting and visualization part of the system. The idea of this element is to build reports for printing and presentation in order to use them as a part of documentation. The

other more important feature is to make the ability to visualize and show some important data at internally public places with the help of TVs or Monitors. Such approach to information will help to make everybody turned on the whole day and learn about the success and fail of other departments and persons be aware of general situation inside the company and feel more relevant to the company success having understand that your own contribution is so important not only for your personal success and compensation but also for the company. The other effect of having this onboard is to save the level of relation and communication of information between owners and growing company staff. To implement this it is required to analyze available places and devices in the given company in order to find the best places for Data Visualization points and to find the proper tool to connect dashboard and devices be able to refresh and switch information.

4.5 Tools

4.5.1 OKR and Strategy Management tool

There are a lot of tools for OKR framework at the market, and due to preliminary analysis, the sort list for comparing:

- BetterWork
- Uppraise
- GTMHub
- 7Geese
- Wrike
- Perdo

The key requirements for comparing:

- OKR compatible
- Company, team, personal OKRs
- Integration for updating results values

- Affordable Price
- Login with Google Account
- Link OKRs with Jira Tasks
- Ability to plan by cadences

Nice to have:

- Company ORG chart;
- Performance Review;
- One-to-One meetings tracking;
- 360 feedback;
- any other HR-related tools

Also, for each tool we reach out the support and request a demo and discuss all the details which we were interested in and as a result the 7Geese was selected as the most reasonable tool considering requirements. The only problem with the 7Geese that there is very limited list of integrations in compare to GMTHub, but it could be solved easily since the external Data Storage is planned.

4.5.2 Delivery Department Tools

Since, the core business of the targeted companies is software development then the one of the most important and broadly used tools is a Software Project Management tool. And there are 2-3 tools widely spread among the IT industry:

- Atlassian Jira
- Redmine

Both tools are very similar from the functional point of view and are able to cover the general requirements:

- Tracking deadlines;
- Tracking scope;

- Tracking time spent vs estimated;
- Bugs tracking;
- Identification of assignee;
- Division of all tracking by project;

Atlassian Jira. The standardly used tool all over the world because of available functionality and flexibility; The other vote for this tool is because of the wide set of other related tools and plugins make usage of Jira comfortable and almost irreplaceable. The only problem with the Jira is that it is paid, but the price looks reasonable for the abilities it gives to the manager. Jira has a lot of already implemented integrations with other tools but not all of them works pretty well and could cost additional money. Jira did a great support of different project management frameworks such as SCRUM, Kanban which enable to track additional data for analysis and build more precise metrics. Not looking to the huge amount of already implemented integrations the best way to extract required data is to parse it via the Jira API. So, the default option for the consulting will be the Jira tool. And as an alternative for saving costs on its usage could be Redmine, but it will not be so user friendly as Jira.

The other tool that should be analyzed from the tracking point of view is the source code repository. Each software engineer put the result of their work into the repository and it should be available to track how much they commit, how often and to which component, so the data which could be extracted from this tool could be of great help for tracking and evaluating personal metrics. The most popular tools today are:

- Github
- Atlassian Bitbucket

Both of them are pretty popular and fully functional. There is almost 100 probability that at the moment when consulting will be required this tool will be used, so there is no real opportunity to advice on it, just to be able to extract data from both.

4.5.3 Sales Department Tools

The main tool used by the Sales and Marketing Department is the CRM system as a place of storing all the relevant information about deals, leads, channels. In most cases the CRM is integrated with all the data source which are required for effective operation of the sales staff, so the main challenge while integration this tool as data source is to identify data to extract and how to process data to get metrics, because the CRM tool contain a huge amount of data which could be used.

There is no data standard for the CRM, the most popular are:

- Pipedrive
- Suite CRM / SugarCRM
- HubSpot CRM
- Zoho

Almost all of them are comprises the same functionality and cost are the same. The one among them is the open source tool is the Suite CRM. It costs nothing but it has poor functionality and comparably not easy to user interface. A lot of companies choose it because they plan to adjust it to the personal needs once and then save money for years of usage, but the problem here is that there is always changes to be adjusted and in case with SuiteCRM it will require additional development because of poor configurability, so Suite CRM is not the choice for rapidly scale and agile company, which is the target audience of the consultancy. According to personal experience with the Sales it will be better to stay on Pipedrive. It provides an API for retrieving data and a lot of plugins are available.

For tracking Marketing, it will be enough to integrate Google Analytics as a source of Marketing results

4.5.4 HR tools

There are a lot of functions which should be addressed to the HR department and should be measured to evaluate the health of company and teams. But there is a problem to hire skilled HR by the number of reasons:

- There is not enough expertise to identify required HR skills;
- Skilled HRs aimed to work in big companies where they have more freedom;
- It is a risk to owner to lose control over the team while hiring HR with ambitions;
- When HR first comes to the company it makes employees worry about it and decrease trust to head of company;

There are a number of tools which could significantly automate work of HR and replace human with more objective software tool Taking into account these problems and the list of expectations from the HR:

- Continuous tracking and evaluation of changes in feedback;
- Engagement of employees to interact and encourage each other;
- Identify root causes and risks in relation or working environment;
- Teambuilding;
- Improve relations and make workplace comfort;

Two tools were selected as a basis for HR function automation:

- Officevibe
- Bonus.ly

Officevibe - is the fully anonymous weekly surveys with the predefined set of questions which could be integrated with the messaging system and ping once a week each of employee to answer 3-5 random questions. It collects all answers and build dynamic reports by 10 metrics:

- Engagement
- eNPS
- Personal Growth
- Ambassadorship
- Relation with Peers
- Relation with Managers
- Recognition
- Wellness
- Feedback
- Satisfaction
- Happiness
- Alignment

So, as a result the process of the feedback about company health fully automated and the owners have easy to use dashboard to overview the company health and dynamics in any area mentioned above.

Bonus.ly is a tool of giving bonuses each other in a team for different actions like saying thanks. The general number of bonuses per month is defined and spread in equal parts between all employees. Each employee could take out received bonuses as gifts or money any time. It could as a complementary tool which gives some very useful options to the company:

- gamification
- Team defines who receives how many bonuses;

- Hidden 360 feedback based on given bonuses;
- Continuous involvement of team in doing right things;

SECTION V - IMPLEMENTATION STRATEGY

This section describes how to implement consulting service and make it real. As any startup business it will requires all components to think about: marketing, finance and staff.

5.1 Marketing and promotion

/ The ideas described in this chapter are carried out from studying at the LvBS mostly

The marketing of the consulting service should be implemented as a way to build trust between consulting service and owners. The main tools for building trust which should be used:

- Personal brand
- Expertise demonstration
- Recommendations

Personal brand. The main reason of building personal brand is that people easier trust to concrete persons they know and the experience which stands for the given person. Owners should be looking for advice and guidance from the person they trust rather than from company, because when it comes to company you will never know in advance who will be your consultant, so it is easier to start this business by building personal brand.

The main techniques to improve personal brand:

- Articles in scope of consulting - writing interesting and useful articles about challenges for SSSDCC related to tools and strategic approach;
- Opinion leadership in social networks - the most used social network for these purposes is the Facebook, so it is important to develop profile and take part in the relevant discussions;

- Become a speaker in relevant conferences, events, meetups - this is an effective way to reach out to new people who are not known with the brand and demonstrate knowledge and skills;
- Help friendly companies on a volunteer base - there is always a small thing that you could improve in any company for free of charge. It gives you experience first of all and if your advice really helpful it will be a step to trust and the probability that this company will ask you for the help increase a lot;
- Launch training for the managers regarding metrics and performance - it helps to get the audience which is interested in this topic and willing to improve this;
- Success story - the most important for the brand trust is to have the example of successful implementation of ideas, approaches into the operation of the company; it is something that will go by the word of mouth and increase brand awareness;

Expertise demonstrated. To avoid negative reputation the personal brand should be supported with the expertise. There is very tight dependency between brand and expertise. But there are some common approaches to prove expertise:

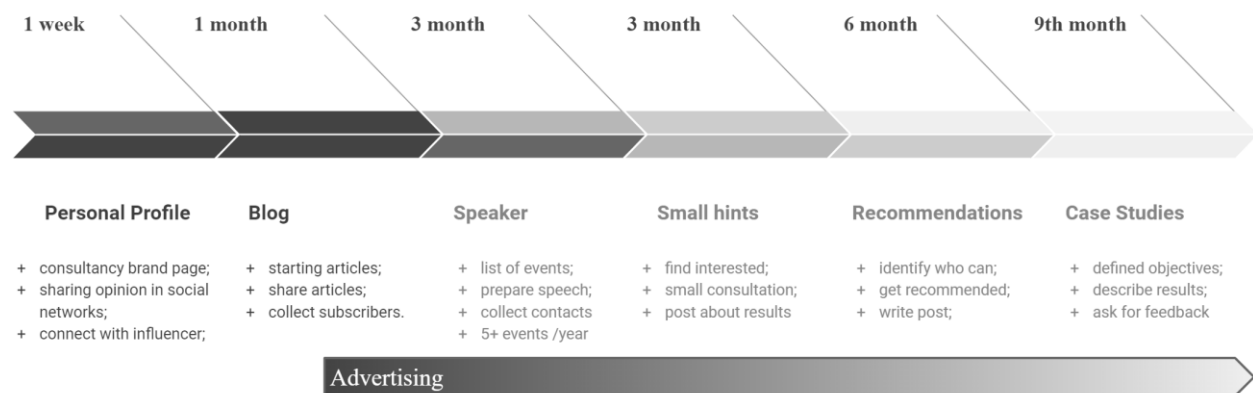
- Certification and authorized studying - the consultant should have all related and existing certificates which authorize consultant and confirm skills for tools, frameworks and other techniques;
- Case studies - when it comes to expertise the case studies are very important to describe previous related experience and outcomes which got each client from the consultancy;
- Feedback on service provided - ideally each case study should be confirmed by the client in form of official feedback, letter of recommendation or so;

Recommendations. If the client comes to the service provider by recommendation or reference, then they have more trust credit than if they find service from advertising. Inspired by the results of other companies they will trust more and easier start to work, so it is important to encourage clients to share feedback and engage them as participants in the meetups or training in order to allow them to share results, impression and received knowledge. The other kind of recommendation could be the advice of other consultants and experts in similar field of knowledge.

All described above is about building of reputation, awareness and expertise. It could help not only to attract clients but to ensure the ability to provide skilled consulting. The clients received by this channel will be the loyal and “hot”, but the advertising and promotion could bring more clients which were not aware of the brand.

So, after the initial establishment of personal brand the advertising, especially in social networks could be of great help to cover more audience with the announcements.

The general planning for the first year described at the picture.



Img 5.1 - Marketing and promotion strategy for the first year.

5.2 Finance

The consultancy will be non-profit for the first year, and it is expected that the money should be reinvested from the personal income. But in future the profit should be gained.

The business model of the consulting could base on two payment models:

- Option 1 - Hourly rate + bonus after successful implementation;
- Option 2 - Fixed price for the defined scope of service;

Option 1 is fairer in terms of payment for the spent time, but it leads to lack of trust and clarity how to track mental and analytics work which takes the most part of time. Option 2 is about agreement on the beginning of work and full transparency and it is preferred in first deals because it is easier to gain trust and got deal. The main risk with option 2 is to estimate effort in advance correctly.

For the first time it is reasonable to have one client at a time, and the consultancy should not less than 3 months. During this time, it is still require some time for marketing and promotion activities, as well as for other operations, so the received income should cover this, The success of consulting will be in case if consultant earns at least 50\$/hour. The draft budget for these cases could be found in Annex 3. So, according to the draft consulting could cost ~ 10000 \$ for company + spends to the integration implementation and cost for tools which are present in Annex 4.

It is important to say, that if someone tells the owner that tools will cost them hundreds of dollars per year it will look like a high price, but if to calculate how much extra cost it will be added to each employee it will sound more reasonable, because 30-50\$ in addition to 1000-5000\$ of the monthly compensation to employee sounds not so fraud.

The financial part of the consultancy should be carefully revised and studied deeper before starting this business, but here are some key points that will be analyzed:

- The total costs of consultancy in compare of hiring the same specialist on-site for a year;
- Expected positive financial impact of changes after the introduction of the strategy tracking;
- General cost of having such business including marketing, preparing materials, certifications, trainings, tools and time to learn;

- Cost of building the general software solution for tracking and how much it costs for companies on SaaS bases instead of doing the same but unique;
- Costs of implementation for the given company

CONCLUSIONS

During the study for this project the idea of consultancy was analyzed and described as a way to help SSSDCC grow and scale by sharing strategic thinking and integration of automated strategy execution framework. As a result of project, the framework consisted of management tools, defined metrics and methods of communication drafted in order to have a roadmap for the consulting process. The project idea was not evaluated fully and there are some fields which are planned to research further before the implementation but nevertheless the idea of going live is inspiring and should be proceeded. This work is not the completed project it is a research and structuring of the initial phase, since the implementation will take time and will be done in several iterations and will be rethought each iteration but thanks to the studying I started this path.

The further steps are:

- Make more detailed financial analysis;
- Prepare promotion materials;
- Research needs and problems of target audience deeply;
- Improve and extend framework to make it more detailed;
- Complete the consultancy of the first company and make retrospective

The general project contribution to the Ukrainian software development outsourcing business is to help companies be focused and build perceived and competitive structure to prosper and reach attitude. The more mature service companies will provide the better reputation they will gain for Ukrainian companies and raise trust of clients all over the world.

LIST OF SOURCES AND LITERATURE

1. “The Goal: A Process of Ongoing Improvement” by Eliyahu M. Goldratt, Jeff Cox
2. “It's Not Luck” by Eliyahu M. Goldratt
3. “Corporate Lifecycles: How and Why Corporations Grow and Die and What to Do About” by Ichak Adizes
4. “The Five Dysfunctions of a Team: A Leadership Fable” by Patrick Lencioni
5. “Key Management Models (Financial Times Series)” by Steven ten Have (Author), Wouter ten Have , Frans Stevens , Marcel van der Elst , Fiona Pol-Coyne
6. “Selling the Invisible: A Field Guide to Modern Marketing” by Harry Beckwith
7. “Objectives and Key Results: Driving Focus, Alignment, and Engagement with OKRs” by Paul R. Niven, Ben Lamorte
8. “The 4 Disciplines of Execution: Achieving Your Wildly Important Goals” by Chris McChesney, Sean Covey, Jim Huling
9. “Management” by Peter Drucker
10. “Our Iceberg Is Melting: Changing and Succeeding Under Any Conditions“by John Kotter and Holger Rathgeber
11. “Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers” by Alexander Osterwalder

ANNEX 1 - The Questionnaire for research on Strategy Approach

General information:

1. Company Name

2. Your Role

Founder/CEO/Decision-makers / Top Management / Other

3. Company Type

*Product / Outsourcing (multiple clients) /
Outsourcing (single major client) / Consulting*

4. Company Age (1...10)

5. How many Founders/Managing Partners (active decision makers)?

6. Company Size

< 20 / 0 - 50 / 50 - 200 / 200 - 1000 / 1000+

Strategy Approach:

7. Do you have a strategy for the company?

Yes, we have general vision

Yes, we have it described and agreed

Yes, we have it with the defined numbers as a measure of success

No, but we plan to define it soon

No, we don't need it now

8. What is the goal of the company?

Profit / Scale / Acknowledgment/ Other

9. What period of strategic planning? *1-5 years*

Strategy Execution:

10. Do you track strategy execution?

Yes, we have automated tracking / Yes, we do it from time to time / No

11. What are the main problems of having/not having strategy in your company?

Processes Tracking and Metrics:

12. What tools do you use for tracking sales? (CRM, etc)

13. How do you measure the success of Business Development & Sales?

14. What tools do you use for tracking delivery/development department? (Jira etc)

15. How do you measure the success of the delivery/development department?

16. What tools do you use for tracking HR related issues?

17. How do you measure personal success and growth of employees?

18. What tools do you use for tracking financial flows?

19. What financial indicators do you use for measuring success?

ANNEX 2 - Team health survey

Did you feel pressure with the amount of upcoming work? *

	1	2	3	4	5	
No, I felt relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, I was totally overheaded

Did you get support and knowledge-sharing from your team? *

	1	2	3	4	5	
No, I did all on my own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, I got a lot of help

Were all tasks clearly described? *

	1	2	3	4	5	
No, extra explanations were required	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, everything was clear

Did you feel that tasks were challenging from the technical point of view? *

	1	2	3	4	5	
No, tasks were simple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, I got new expertise

Are you satisfied with the sprint results? *

	1	2	3	4	5	
No, it was not the best sprint	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, we did a great job

ANNEX 3 - Tools budget calculations

*Sales ratio	0.1	0.05	0.05
Company size	50	200	500
Jira Atlassian	\$7	\$5	\$1.10
Slack	\$6.67	\$6.67	\$6.67
G Suite	\$6	\$6	\$6
Pipedrive	\$24.20	\$24.20	\$24.20
Officevibe	\$4	\$4	\$4
Bonusly	\$2.70	\$2.70	\$2.70
7 Geese	\$14	\$14	\$14
Klipfolio	\$99	\$99	\$99
Yearly total:	\$26,862	\$96,180	\$215,268
Monthly per employee	\$45	\$40	\$36

** Sales ratio - amount of sales divided to company size, required to calculate the number of licenses for Marketing tools*

ANNEX 4 - Draft of the consulting budget

	Action Item	Hours	Total, \$
Expectations	Introduce into company specific	8	400
	1-to-1 with key employees	12	600
	Discussion with owners	6	300
	Questionnaire	2	100
	Study information and processes	24	1200
	Total:		
Fundamentals	Brainstorms on mission, vision, values	6	300
	Engage employees	6	300
	Analysis and final formulation	12	600
	Lecture and knowledge sharing	2	100
	Total:		
Strategy	Initial goals definition	4	200
	Facilitation of strategic sessions	8	400
	Strategy and market definition	6	300
	Strategy breakdown according to OKR	16	800
	Tactics metrics definition	12	600
	Verification and alignment	8	400
	Total:		
Structure	Company structure	4	200
	Roles and Responsibilities	24	1200
	Processes overview	16	800
	Adjust strategy and structure	8	400
	Lecture and knowledge sharing	2	100
	Total:		

Tools	Define tools configuration	8	400
	Define data source for metrics	8	400
	Requirements for integration	8	400
	Configure dashboards	16	800
	Total:		2000
	* Hourly rate - 50\$/h	Total:	10400

ANNEX 5 - The example

Company background

The AgileVision.io is the 3 years old company focused on solutions development and technical consulting services. The company builds expertise in IoT integration and Data Analytics for Inventory Management, and automation of the Supply Chain and Logistics processes.

Currently, the company consists of 20 software engineers 35% of which are AWS certified architects, Managing Director, Delivery Manager, and Project Manager. The Management team overtakes the roles of other missing units such as HR, Business Development and etc.

The main challenge of the company, for now, is to build processes, define strategy, identify problems and blockers in order to be ready to scale. Company leader believes that preparing and structuring company before the scale will be a good point to start and it could bring additional benefits for faster scale.

When this project was started the company doesn't have formalized strategy, values and processes, so the goal of this work is to facilitate these activities and build structure together with the management team.

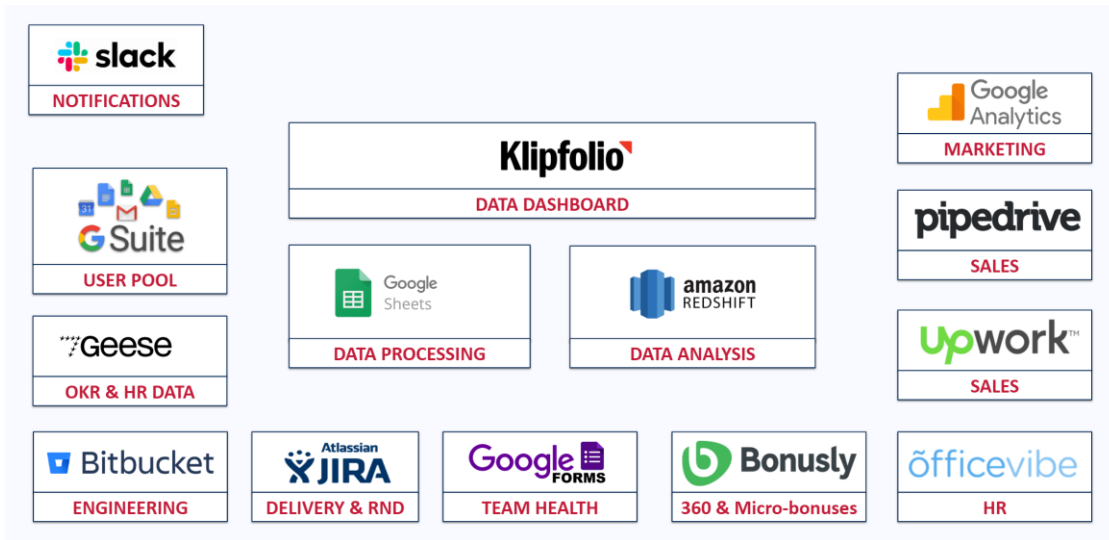
The company aiming to be a consulting partner for customers and help them to innovate their processes with automation and usage of the latest technology approaches, so the company must be an example of automated processes and innovative approach to do things. To make this happen it was decided to think about automation of the internal processes from the very beginning and apply the lean approach to company structure replacing some functions by automated systems.

This project will contribute to the company structure and processes by bringing clarity and definition of strategic vision, measures of success, and incorporating values into the processes and measures.

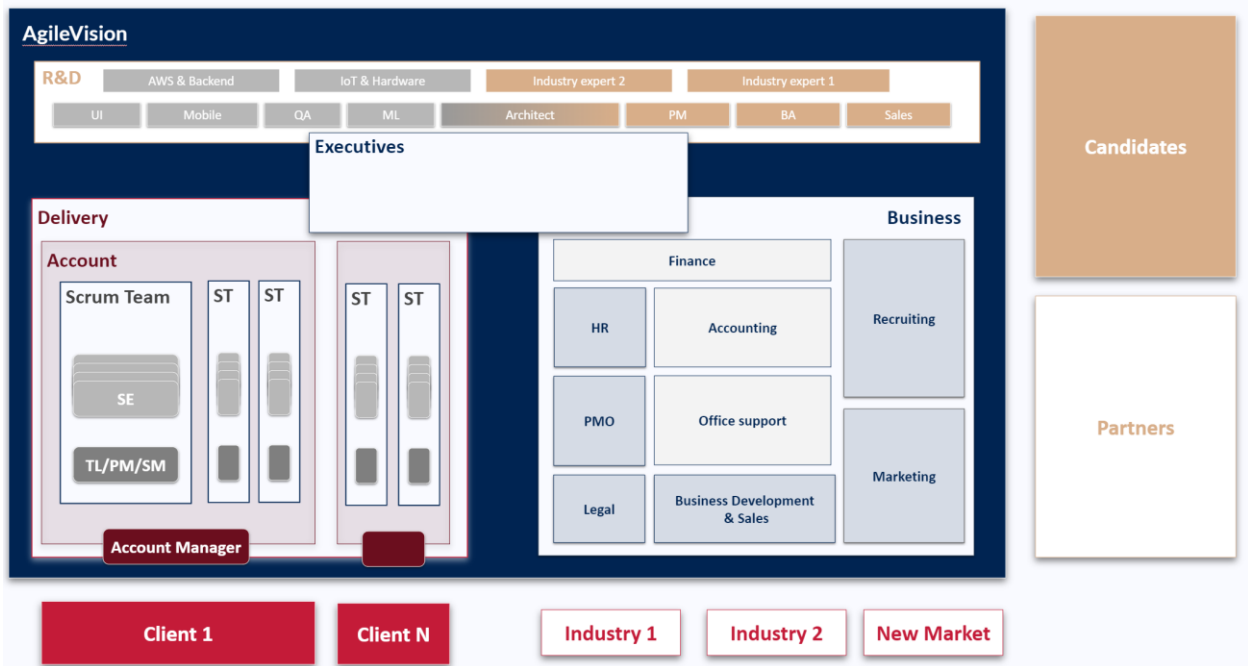
Process



Solution Architecture



Agile Vision Target company Structure



What was done

- Goals and intentions of owners - defined;
- Values - formed and communicated;
- Strategy - defined for 5, 3, 1 years;
- Tools - introduced into usage;
- Metrics - 50% defined and agreed;
- Automation architecture - defined;
- Automation implementation - in progress;
- Company structure and roles - defined;
- Company processes - in progress;
- Due date - December 2019;