INCREASING PROJECT FLOW CAPACITY BY IMPROVING PROJECT MANAGEMENT PROCESS AT UAB "GLUK MEDIA"

A Thesis

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by

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Abstract

Matusevičius, Mangirdas, Increasing Project Flow Capacity by Improving Project Management Process at UAB "Gluk Media" [Manuscript]: Final Bachelor Thesis. Industrial Technology Management. Vilnius, ISM University of Management and Economics, 2018.

UAB "Gluk Media" is an interactive solution creation agency in Lithuania. Company's core business area is the execution of projects, however, investing in project management improvements can lead the company to the improvement of financial results, ability to manage bigger scope projects and increase the satisfaction of customers. Company's goal is to achieve higher projects flow capacity by not involving more human recourses in the process. The aim of the paper is to increase project flow capacity by improving project management process. Situation analysis was performed to appraise company`s current state and indicate possible strategic initiatives. The Project management process maturity was analyzed during the empirical study, the lowest maturity areas were identified, company`s project management process was drawn, and main process issues were indicated. Process issues were combined with the lowest maturity areas, and managerial solutions were provided. The outcome predicted is higher project management process maturity reached and process improvements which would lead to higher project flow capacity.

Keywords: project management, project management maturity, project management process, project flow capacity

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Introduction

The relevance of the Topic. Project management is a critical success factor for most of the organizations (Kerzner, 2005). The optimization and improvements in project management are clearly seen by its payoff: lower costs, greater efficiencies, higher customer and stakeholder satisfaction and greater business results (PMI, 2010).

UAB "Gluk Media" is an interactive solution creation agency in Lithuania. Company's core business area is the execution of projects, however, investing in project management improvements can lead the company to the improvement of financial results, ability to manage bigger scope projects and increase the satisfaction of customers. Company's goal is to achieve higher projects flow capacity by not involving more human recourses in the process. The aim of the paper is to increase project flow capacity by improving project management process.

The problem. Consequently, the research problem is: how to increase project flow capacity by improving project management process. Therefore, **the aim** of the thesis is to evaluate Gluk Media project management system maturity and provide managerial solutions for process improvements.

Objectives of the Thesis. This thesis has the following objectives to achieve the defined aim:

1. To conduct a situation analysis of internal and external business environment as well as SWOT analysis and create TOWS matrix to find possible strategic initiatives;

2. To evaluate Gluk Media project management maturity and conduct an interview to draw the project management process map;

3. To provide managerial solutions for project management process improvements.

Research method. The research methods that have been chosen for the thesis are based on a project management maturity model to evaluate the level of the maturity and semi-structured interviews with company's representatives to draw the project management process map and identify key process problems. The information provided in the thesis consists of internal Gluk Media database information, evaluation of maturity, interview, as well as verbal information from company's representatives, and author's experience in the company.

The practical value of the Thesis. As company's one of the goals is to boost processes efficiency by not allocating additional human resources. The managerial solutions for project management process improvement could be beneficial for the company's processes optimization which would enhance efficiency, financial results and stakeholder's satisfaction.

Logical sequence of the thesis. There are three main parts of the thesis which are relevant to the thesis problem-solving. The logic is as follows:

1. Situation analysis. It includes information about the company, internal and external analysis of the company, and identification of the problem.

2. The empirical study includes project management maturity model; project management maturity level evaluation questionnaire and analysis; semi-structured interview on process map and key problem identification in the process findings.

3. Managerial solutions. It includes recommendations for the company how to solve the existing problem and prepare the process for new initiatives.

Most of the data used in thesis consist of company's internal sources, therefore any disclosure of this information to third parties is not allowed.

1. Situation analysis

1.1. General information about UAB "Gluk Media"

About the company. Gluk Media was founded at the beginning of 2010 in Vilnius, Lithuania by four co-founders with a legal status as Limited Liability Company. The company started its business as interactive marketing and media solutions agency which offered full-stack solutions from idea to application for client's brand message communication. The company uses newest IT technologies: projection mapping, human body tracking for gaming (using mostly Kinect technology) and other ways of adapting current technological solutions for marketing.

The company is trend follower and adopter for marketing. Since 2016 company started working with VR (Virtual Reality) solutions for promotions and brand representation: 360-degree filming and photo shooting, 360-degree CG (Computer Graphics) video, 360-degree interactive video, and VR games. At the moment, most of the company's product portfolio is formed of VR, 360-degree video, and pre-made human body tracking interactive game solutions for exhibitions and brand representation. Nevertheless, Gluk Media still has in their portfolio projects related to tourism applications, information technology systems, web pages, touch-screen games, information terminals and various other solutions for their clients.

1.2. Business Model

70% of the time Gluk Media works on unique projects which are ordered by clients and 30% on its products, later in the paper product portfolio will be presented in section 1.3 covering product portfolio. Company's internal resources are focused on sales, project management, video post-production, graphical and user experience design. Currently, Gluk Media has 13 employees (Rekvizitai.lt, 2018), while most of the projects' implementation recourses are sub-contractors or freelancers (V. Skinderis, personal communication on February 5, 2018). This business model allows the company to allocate recourses effectively,

take and manage different scale projects and minimize fixed costs of high-paid specialist as 3D animators and software engineers.

To use this business model effectively, the company has very flexible processes which can be adopted to project and client needs, but project management process is not clear and not effective at a time, build upon different project managers' competences, and their experience how to cope with projects is not a described process in the company.

Company's business model also has its cons. One of them is instable project revenues throughout the years. This instability is hardly controllable by the company caused by lacking strategic planning and leadership competence (V. Skinderis, personal communication on February 5, 2018).

1.3. Product portfolio

Wide product portfolio was created over more than eight years. Width of the portfolio was mostly formed using blue ocean strategy – previously unknown market space in which demand is formed rather than fought over (Chan & Mauborgne, 2004). Successful adoption of new technologies and innovations from blue oceans formed company's competence to be a technology adopter and use knowledge to create interactive and tailored solutions for clients.

Gluk Media product portfolio is split into two segments: pre-made applications and unique projects. Pre-made applications are already made installations for which technology is already chosen and mostly it is just design part be adapted for the specific client. These installations are: "Smart Choice", "Arkanoid", "Cover star", "Biometric" (Gluk Media, 2018).

Unique projects are fully tailored solutions based on client needs starting from touch-screen based applications to VR, AR (Augmented Reality) experience, and all other IT systems and technology-based solutions. These solutions are impacted by technological innovations in the market the most, which creates new opportunities for the company.

Since 2016, Gluk Media shareholders have decided to pay more attention VR, AR, 360 filming, and 360 photo shooting technologies. These solutions are sold as unique, tailored solutions for the clients. Demand for VR, AR, and 360 solutions increase is seen in the market and from company revenues. Nevertheless, the company still provides other interactive solutions and pre-made apps for clients. (S. Chomentauskas personal communication, February 20, 2018).

1.4. Clients

Gluk Media is using B2B (business to business) and B2G (business to government) sales models. In B2B model, the company is not using active sales technique at a time. Most of the client base is repetitive and comes based on the need for a new approach to marketing or advertising. In B2B sector, most of the orders come from marketing and advertising agencies or sales and marketing departments of medium-large enterprises.

In the B2G sector, which Gluk Media started exploring just three years ago, governmental organizations need a new marketing and advertising tools to attract new students, tourists, and businesses to come or invest in Lithuania. Other possible case is to improve user and client experience in museums using IT infrastructure: for traveling, gaming or education (S. Chomentauskas, personal communication, February 20, 2018). In the year of 2016 and 2017 B2B sector has provided 80% and 40% of company's total revenues and B2G sector provided 20% and 60% of the total revenues, accordingly (S. Chomentauskas, personal communication, February 20, 2018).

Even though company's geographical presence is in Lithuania, Gluk Media had projects both in European countries and other continents, such as North America, Middle East, and Asia. As Gluk Media's products are easily deliverable throughout the internet, clients from all over the world are seen as a potential client base, but at the moment there is a lack of sales initiatives to reach them (S. Chomentauskas personal talk, February 20, 2018).

1.5. Product attributes

Clients choose Gluk Media because of three main product attributes: new technological innovations, a wide range of solutions, and expertise in its implementation. Following of new technological innovations and its adaptation to client's usage is a key projects' success factor. Over seven years of experience in the market through very different projects gave company expertise, and quality understanding in implementation, as well as a wide range of possible solutions, was collected. These two attributes allow the company to provide best-tailored solutions to satisfy client needs. As hygiene factors, company to product attributes adds a high speed of implementation and employees' expertise in marketing, advertising and IT (three out of four co-founders had from five to seven years working experience). Most of the employees also have experience in those fields.

To conclude, Gluk Media general information, business model, products, product attributes, and clients were presented. For deeper situation understanding market analysis is presented below.

1.6. Market analysis

Gluk Media operates in IT solutions, and media markets. Main segments in which company operates are games and IT systems, marketing and advertising solutions for companies or media, education and personnel training interactive solutions. The company is paying more focus to IT and interactives solutions market. The Global tech market is expected to grow 5% during the upcoming year (Comptia, 2018), while Global media market is expected to grow 11,4% till 2021 (Marketline, 2017). Market demand growth is also felt by the company, from personal communication with company's representative it was stated that market is growing, although, the market also seems attractive for new players and they are entering these market segments (V. Skinderis, personal communication, February 20, 2018).

New market players are not just newly established companies, but also bigger IT developers who are entering these segments, as well as freelancers (code developers and design specialists) who are offering their solutions and services. Henceforth, freelancing for design and code development not only generated a good business model for Gluk Media but also created more intense competition, because these people can offer smaller price for clients or can easily be employed by the competitors.

For better understating of the market, Porter's Five forces model is used. *Table 1* below illustrates summarized view of the Level of Threat.

Table 1

Porter's Five Forces analysis of Gluk Media

Force	Level of threat
The threat of new entrants	High
Bargaining power of buyers	High
Threat of substitutes	Medium-High
Bargaining power of suppliers	Low
Industry rivalry	Low - Medium

Note: composed by the author.

1.7. Porter's Five Forces model

The threat of new entrants. Gluk Media operation market is attractive for new entrants, and it is clearly seen that new competitors are coming to it. There is low or even no barrier for newcomers to enter. Each entrepreneur can start a business in this area and find a good team, or freelancers can collaborate and establish legal units to get bigger projects together. From Gluk Media's perspective, it is impossible to create any barriers to entry for new players in the market.

Bargaining power of buyers. As it is service and project-based business, the buyer has full power in decision making. Right now, the company is in a quite good position, mainly because of the lack of direct competitors who can offer same full-stack solutions for

clients. So the bargaining power is limited if the buyer needs a fast solution without paying too much time for gathering information and managing project by itself from various service providers.

The threat of substitutes. As most of the projects are marketing and advertising related threat of substitution is from medium to high. Most of the companies in a period of economic recession are decreasing marketing and advertising budgets. Although if budgets are not big enough marketing and advertising agencies are substituting interactive solutions by promo campaigns for brands representation, simple screen videos or products brochures in events. Clients with the need for interactive solutions do not have a lot of choice in the market at the time, and Gluk Media has the medium threat of substitution, but it is seen that technological innovations are becoming more user-friendly and rivalry so do threat of substitution will increase in the near future.

Bargaining power of suppliers. Gluk Media suppliers are sub-contractors and freelancers for project implementation. As freelancing and co-working trend grows, the company uses this growth to attract suppliers. Freelancers and sub-contractors do have medium bargaining power because of their proven abilities to work on certain projects. Although, most of the suppliers are quite easily substituted and they are competing not only in Lithuanian market since Gluk Media can cooperate with freelancers and sub-contractors from whole over the world. At a time, the company has projects with cooperation with code developer in Moscow, Russia, 3D animation team from U.S. (S. Chomentauskas, personal communication, February 20, 2018). Suppliers' power increases by the increase of demand for code developers in the market and rivalry for better specialists impacts Gluk Media influence on suppliers.

Industry rivalry is from low to medium caused by high differentiation of products and solutions, which other competitors do not have. As the main competitors of Gluk Media

do not have same abilities on projects, the rivalry is not very intense, and sales are not lost because of rivalry rather than substituting by other possible solutions which are offered for clients instead of interactive projects implementation.

1.8. Competitors

Gluk Media is not in intense rivalry with a number of competitors as it is seen from Porter's Five Forces model, but there are few main players who operate in the same market or company considers them a threat which can decrease its number of projects and sales growth.

Operates in a similar segment. These players are just entering the same market, and Gluk Media had not yet felt their impact on competition. UAB "SneakyBox", the company provides interactive marketing solutions and just started working with VR, AR and 360 filming and photo shooting. UAB "SneakyBox" approach is slightly different, they are more into gamification field and is more focused on hard skills side of the solutions: code development, technology usage, and others, while Gluk Media focuses more on user experience design and tailored solutions based on client needs. Another player UAB "Bluebox IT" is not entering VR, AR and 360 filming and photo shooting industry, but they are considered as competitors in interactive web solutions creation and applications, but same as UAB "Sneaky Box", they are more focused on hard skills.

In this field, freelancers also take part. Freelancers cooperate with each other in teams and provide solutions for clients, they mostly offer a better price to overcome quality and expertise aspects. They also are easily employed or contracted for projects by other firms which provide interactive solutions, therefore, for freelancers, it is harder to find clients.

Is in the same market segment, but provides different solutions. These players are looked after because of their size and ability to follow and penetrate same market segment as Gluk Media is targeting. These players are operating in various fields. UAB "Telesoftas" provides code development, design for apps and using VR solutions for business operations,

they can easily adapt and allocate recourses to interactive marketing solutions. UAB "PM Screen Group" works with projection mapping, touch screen solutions and their use cases in interactive marketing. UAB "Wide Wings" company operates in video shooting industry, but have already started working with 360 filming projects and are able to allocate bigger recourses needed for 360 shooting as director, copywriters, lighters, video montage operators.

All in all, Gluk Media has competition and deals with substitution problem, but at the moment company does not struggle to find new projects and provides appropriate profits for the shareholders. (S. Chomentauskas, personal communication, February 20, 2018).

To better understating of company's competition *Table 2* illustrates summarized view of competitors' product attributes and solutions focus related to Gluk Media market segments.

Table 2

Gluk Media's competitors summarized attributes

Company name	Product attributes			Solutions focus
	New technology innovations	**Solutions range**	**Expertise/ quality**	
Gluk Media	High	Wide	High	Interactive marketing; VR; 360 videos and photos; apps
Sneaky Box	High	Narrow	Medium	VR; AR apps
Bluebox IT	Low-Medium	Narrow	Low-Medium	Interactive marketing, apps, 360 videos and photos
Telesoftas	High	Narrow	High	Apps, IT systems, VR
PM Screen Group	Medium	Narrow	High	Interactive marketing
Wide Wings	Low-Medium	Narrow	High	360 videos and photos
Freelancers	High	High	Low*	-

Note: composed by the author.

All in all, the market situation is good for a company to operate. At the time market is growing and is expected to grow, new technological innovations are created, and demand for the Gluk Media solutions is growing. Nevertheless, new different power players are entering the market, the situation is unpredictable and has a high risk. To deeper analyze company's situation, SWOT analysis and TOWS Matrix was conducted.

1.9. SWOT analysis of Gluk Media

In order to highlight the internal strengths and weaknesses as well as identify external market opportunities and threats, the SWOT analysis of Gluk Media is provided in the *Table 3* below. All gathered information was summarized by the author after discussion with Business Development Manager V. Skinderis and Managing Director A. Juvko in internal company's meeting which was held on February 6, 2018.

Table 3

SWOT analysis of Gluk Media

Strengths	Weaknesses	Opportunities	Threats
S1: ability to manage different scale projects (para. 1.2) **S2:** wide and deep knowledge area of interactive solutions creation and usage (para.1.3) **S3:** ability to adapt newest technology innovations and trends (para. 1.3) **S4:** flexible processes (para. 1.2) **S5:** easily adaptable and flexible business model (para. 1.2) **S6:** blue ocean strategy implementation (para. 1.2)	**W1:** company's revenues instability (para. 1.2) **W2:** unknown brand name and poor marketing activity (para. 2.2) **W3**: low strategic planning and strategy implementation competence (para. 1.2) **W4:** project management process is not effective (para. 1.2) **W5:** low sales initiatives initiated by company's sales representatives(para. 1.4) **W6:** lack of leadership (para. 1.2)	**O1:** increasing number of technological innovations which can be used for company's projects (para. 1.3) **O2:** growing trend of freelancing and co-working (para. 2.1) **O3:** growing demand for interactive solutions (para. 1.3) **O4:** at the time low competition in global interactive solutions creation market (para. 1.4)	**T1:** increasing rivalry in the market (para. 2.0) **T2:** IT specialist recourse demand and price increase (para. 2.1) **T3:** increasing number of substitutes to interactive solutions (para. 2.1) **T4:** technology becomes more user-friendly and more companies can adapt it to use cases (para. 2.1)

Note: composed by the author.

SWOT analysis indicates that Gluk Media has strengths which can help to minimize weaknesses, in addition to pay attention in certain fields such as strategic planning, sales

focus, and project management process improvements as well as opportunities existing in the

external environment can be strategically empowered to minimize threats. Therefore, TOWS

Matrix is made below to identify strategic initiatives which company should estimate.

1.10.   TOWS Matrix of Gluk Media

To find possible strategic initiatives from the SWOT analysis, which company can

empower, TOWS matrix is composed in the *Table 4* TOWS Matrix of Gluk Media below.

Table 4

TOWS Matrix of Gluk Media

Strengths to Opportunities	Weaknesses to Opportunities
S3/S6-O1: follow and adapt new technological innovations and serve them for clients using blue ocean strategy **S1-O3/O4:** increase the throughput of projects in Lithuanian or another market to increase company's financial performance **S5-O2:** use freelancers and co-working places in project implementation. Establish better knowledge and closer relationship with them	**W2-O2:** establish a closer relationship with freelancers and create better working conditions for them. Employ some tested and trustful freelancers to work in-house **W4/W5/W6-O3/O4:** pay attention to strategic and long-term planning and use market demand to increase company's revenues **W4-O3:** improve project management process to be able to satisfy the demand growth
Strengths to Threats	**Weaknesses to Threats**
S2-T1: create and save know-how of technology adoption and move more to solution sales rather than products **S4-T2:** create possibilities for full time working specialist to have additional income and motivate them **S3-T4:** focus on harder adaptable technologies and sell solutions not technologies **S6-T3/T5:** leave projects and solutions which are substituted easily and find new sales objects	**W1-T1:** partnership on projects or sales with competitors **W1-T2:** a partnership with big IT sector players for projects implementation part **W4-T1:** outsource project management

Note: composed by the author.

After SWOT analysis and TOWS Matrix strategic initiatives which company can take are seen. At the moment, Gluk Media does not fear of intense rivalry and market is not penetrated, so the growth of the company could be achievable by using attacking strategy – merging Strengths to Opportunities can make the highest and the fastest impact on company's performance.

The company is suggested to follow Strengths to Opportunities initiatives by the author. The suggestion is based on company's strategy (V. Skinderis and A. Juvko, personal communication, March 15, 2018). One of the most important initiative is seen ***S1-O3/O4: increase the throughput of projects in Lithuanian or another market to increase company's financial performance***. Execution of this initiatives could lead the company to more effective resource utilization, an increase of market share, financial performance and to exploit market opportunities as demand growth for interactive solutions and possibility to enter new foreign markets.

As Gluk Media is project-based company and these initiatives implementation would attract more projects, investing and improving project management process is highly recommended. Currently, the company is not ready and sees a risk to invest more in additional project management recourses. Henceforth, a possible solution with minimal investment and avoiding the risk is the improvement of project flow capacity by improving project management process. It could create a window for new projects' execution while possibly reducing the costs of the project management (V. Skinderis, personal communication, March 15, 2018). To increase project flow capacity, project management process should be improved, and the aim of the thesis is to provide managerial solutions how to do it.

The problem. Consequently, the research problem is: how to increase project flow capacity by improving project management process. Therefore, **the aim** of the thesis is to

evaluate Gluk Media project management system maturity and provide managerial solutions for process improvements.

Objectives of the Thesis. This thesis has the following objectives to achieve the defined aim:

1. To conduct a situation analysis of internal and external business environment as well as SWOT analysis and create TOWS matrix to find possible strategic initiatives. Provided in the first part of the paper;

2. To evaluate Gluk Media project management maturity and conduct an interview to draw the project management process map. Provided in the second part of the paper;

3. To provide managerial solutions for project management process improvements. Provided in the third part of the paper.

The second part of the thesis is made to evaluate Gluk Media's project management maturity, draw the process map and identify key problems of the process which will allow to create the recommendations for process improvements.

2. Empirical study

In order to increase project flow capacity, project management process should be improved. To do so, further steps are made in second part of the thesis:

- Project management maturity level evaluation of Gluk Media;

- Project management maturity analysis made by the author;

- Interview with project managers of the company. The main purpose is to draw the project management process map and identify main process problems;

- Main problems of the process are combined with the lowest maturity levels of the project management steps to identify areas for improvement;

- In the third part of the thesis, managerial solutions will be based on the findings.

2.1. Project management maturity level evaluation

To improve project management process, the maturity of the process should be evaluated to understand the weakest and the strongest process parts. There are several maturity evaluation methodologies existing, one of the core is Software Engineering Institute (SEI) Capability Maturity Model Integration (CMMI) (SEI, 2006). Based on this model R. Gareis created Project Maturity evaluation methodology. The methodology follows five main maturity levels which can be seen in the *Table 5* below (Gareis & Huemann, 2007).

Table 5

Maturity levels description

Maturity Level	Description of the Level
5 = optimized	Continuous improvement of the process
	Continuous collection of data to identify

Maturity Level	Description of the Level
	Analysis of defects for prevention
4 = managed	The process is quantitatively measured
	Minimum of metrics for quality and productivity exist
	Collection of process experiences
3 = defined	Process defined and institutionalized
	Process groups defined
2 = repeatable	The process depends on individuals
	Minimum of process controlling/guidance exists Highly risky in case of new challenges
1 = initial	Ad-hoc process, not formalized
	No adequate guidance
	No consistency in product delivery

Note: composed by the author using the Gareis, R., & Huemann, M. (2007). Maturity models for the project-oriented company. The Gower Handbook of Project Management (Gareis & Huemann, 2007).

Each level represents the degree of maturity, to enter higher maturity of the process all process parts should reach the same maturity level.

To evaluate Gluk Media project management maturity degree, questionnaire template "Mažasis brandos klausimynas" (EN: "Brief maturity questionnaire") was used. The questionnaire was adopted to Lithuanian market by Chiemliauskas, A.; Būda, V.; Stasiukynaitė, R.; Viliūnas, V (Chmieliauskas, Būda, Stasiukynaitė, & Viliūnas, 2007). The questionnaire consists of 101 questions separated into 20 question blocks. Respondents were asked to evaluate each question from 1 to 5, where 1 means "never or very bad", 2 means "rarely or bad", 3 – "sometimes or average", 4 – "often or good", 5 - "always or very good".

The questionnaire was answered by three respondents who deal with project management at the company. The questionnaire can be seen in the *Appendix A*. All the answers were converted to the surface chart to see Gluk Media project management process group's maturity and identify the highest and the lowest maturity parts. The *Figure 1* with project management process group's maturity levels is provided below. The *Figure 1* data is taken from summarized process groups' maturity which can be seen in the *Appendix D.*

Gluk Media Project Management Process Groups Maturity Level
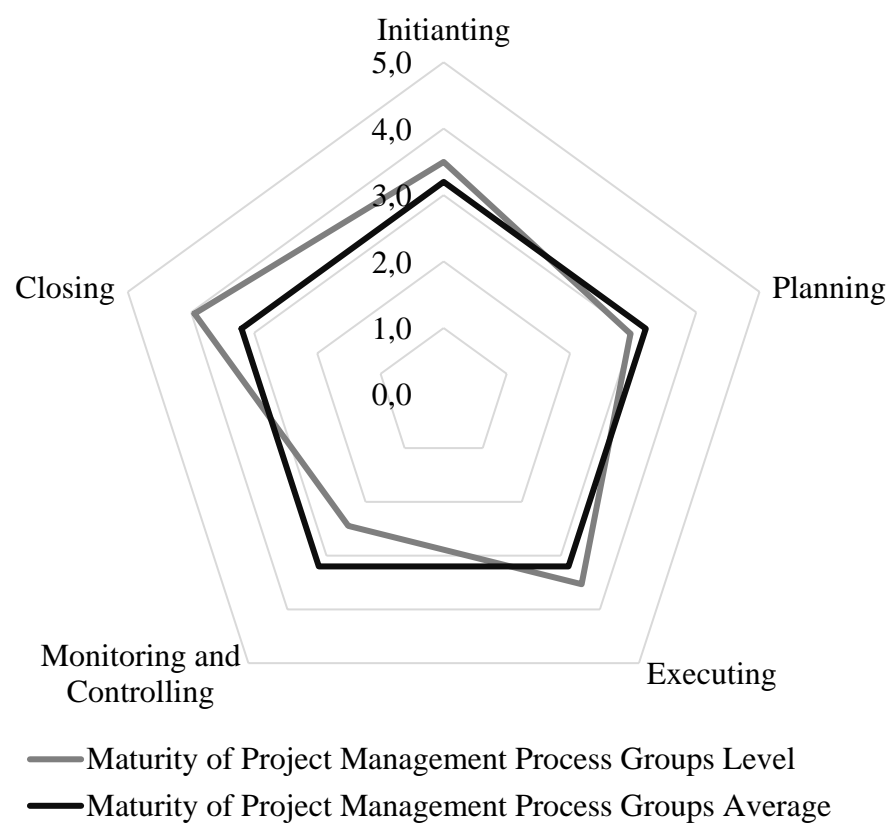
Figure 1. Gluk Media Project Management Process Groups Maturity Level. Composed by the author.

As seen from the *Figure 1* total average process group level is 3,2. The lowest process groups are Planning (3,0) and Monitoring and Controlling (2,4). Which means

Gluk Media project management process maturity is between second and third levels. The second level of maturity is described as organization holds the project management process, but it is not considered as organizational standard and mostly is poorly described; management supports project management, but there is none of the consistent understanding, involvement and empowering to cover all projects; there are basic metrics used to track project time, budget and scope. The third level maturity is described as organization holds all project management process which is in place and established as organizational standard; the process involves all stakeholders of the project; management is regularly involved in key decisions making; each project is tracked with more complex metrics and are evaluated; there is a flexibility and project process is tailorable for each project (Kent Crawford, 2002).

To more precisely identify which process parts should be improved, each question block score is represented in the *Figure 2* below. The summarized data of the project activities maturity can be seen in the *Appendix B*.

Gluk Media Project Management Maturity Level
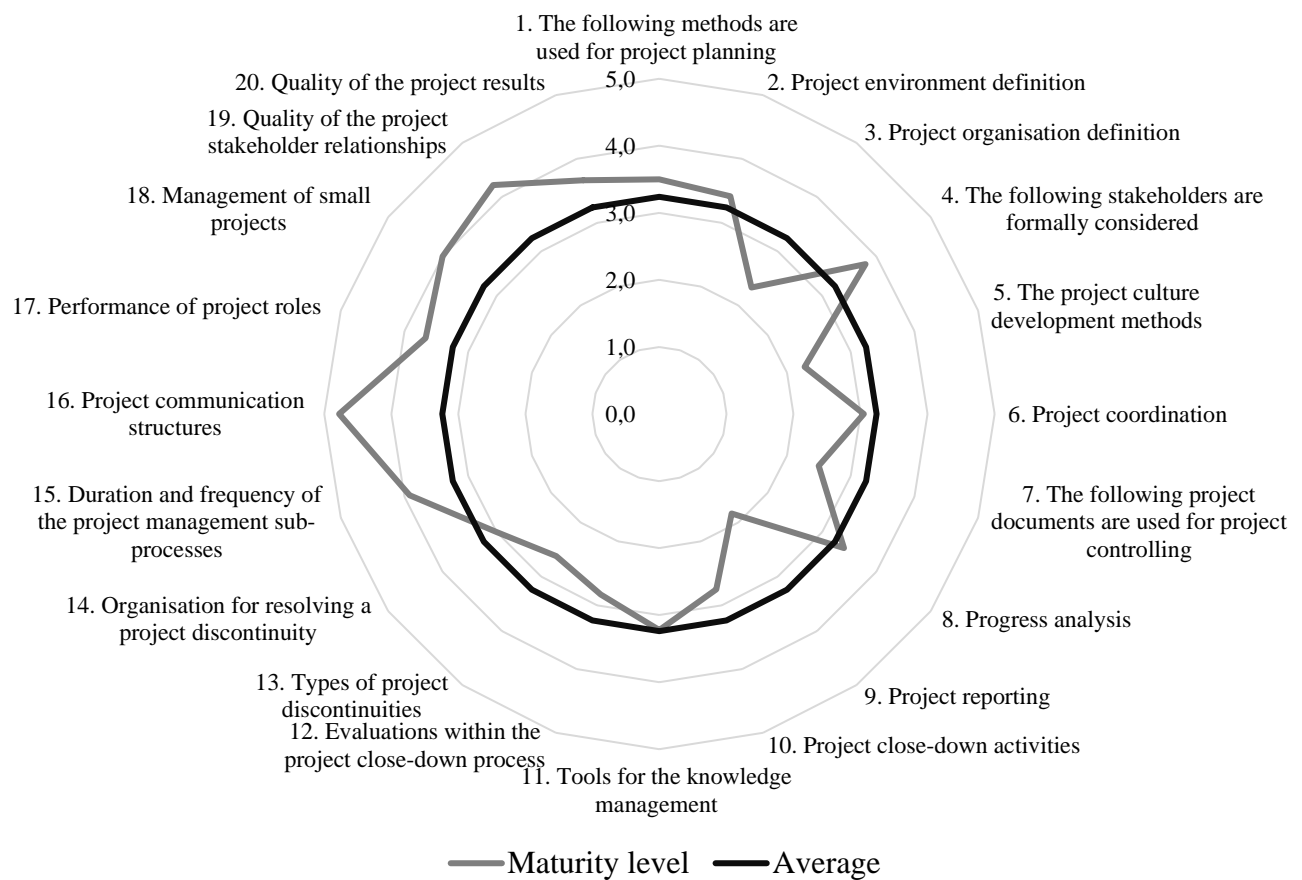
Figure 2. Gluk Media Project Management Maturity level. Composed by the author.

From the *Figure 2,* it is seen that main problematic areas which do not allow the company to fully enter level three maturity are: 3. Project organization definition (Planning process group) – 2.3 maturity score; 5. The project culture development methods (Planning process group) – 2.3; 7. The following project documents are used for project controlling (Monitoring and Controlling process group) – 2.5; 9. Project reporting (Monitoring and Controlling process group) – 1.8; 10. Project close-down activities (Execution process group) – 2.8; 12. Evaluations within the project close-down process (Monitoring and Controlling) – 2.8; 13. Types of project discontinuities (Monitoring and Controlling) – 2.6.

To increase maturity level company should focus on fixing all problematic process areas which have the lowest score. The higher level cannot be reached by the organization if any project management process part is not at the same level (Kerzner, 2005). Gluk Media

project management process the lowest maturity parts mostly meet attributes of Level 2 and

Level 3 descriptions. The company have common methodologies and develop processes,

which are not documented but help to more effectively achieve project management goals.

The Kerzner, H., also draws the line, that Level 3 organizations mostly use singular

methodology rather than multiple (Kerzner, 2005). Gluk Media, have a singular methodology

for most of the projects, which is flexible and is tailored for all project portfolio – from

interactive IT installations to VR and 360-degree production.

2.2. Project management process

To understand the project management process and main process problems, interview

with Gluk Media project managers was made. The interview was semi-structured with the

prepared structure of four main questions:

1. What is most commonly used project management process?

2. What are the problems in the process?

3. What are the key priority problems?

4. What is the root cause of the key priority problems?

These questions were asked in a group interview with two respondents from the Gluk Media.

Respondents were chosen from the whole population of 13 people – who work at Gluk Media

by the judgmental sampling technique – two respondents who work as project managers at

the company were chosen as a sample. Question – answer matrix is added in the *Appendix E*.

During the interview respondents draw by hand the process map in order to be able more

easily explain how the process of project management is constructed.

Gluk Media project management process is flexible and tailored depending on the

project. To fully describe the process as an example was taken interactive solution

programing project, but the process structure is applicable to most of the other projects. The

process at the company is divided into four main stages: initiation, planning, execution, and

closing. All process is shown in the *Appendix C*.

The first part of the process - Initiation is presented in the *Figure 3* below.

Figure 3. Initiation Process Map. Composed by the author.

Initiation process is mostly made by sales representatives from the company. While

price estimations mostly are constructed with the help of the project managers. After

providing the final price, offer client chooses to start the project or reject it. After approval,

the process proceeds to the planning stage. Interviewed respondents stated that during

initiation process one main problem occurs. Price offered to the client is not constructed on

the costs plus margin basis (project managers in Gluk Media approach) rather by sales

representative`s gut feeling or client's budget. This problem creates harder execution process

and mostly affects the quality of the project.

Project planning process map is represented in the *Figure 4* below.
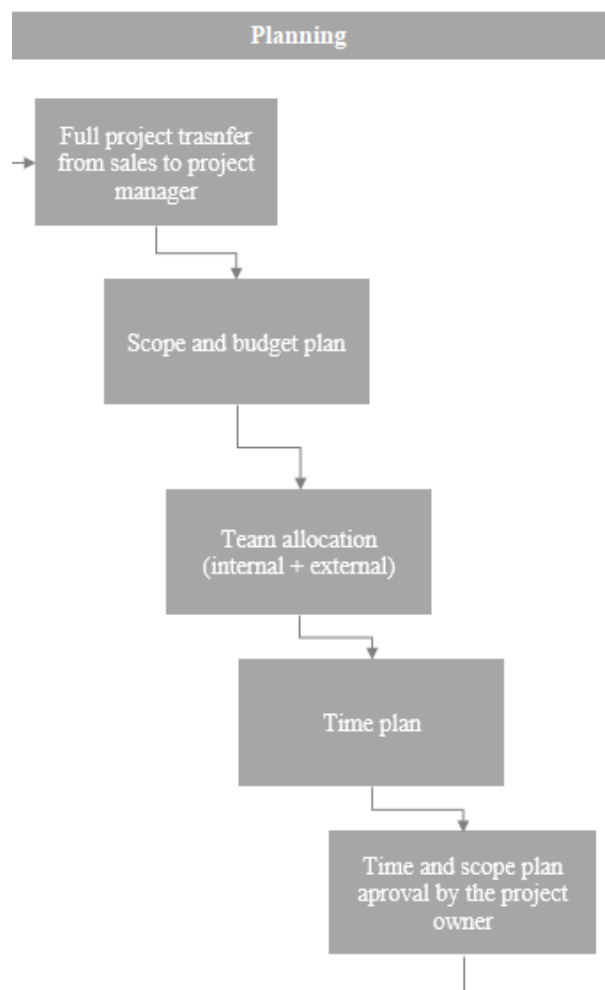
Figure 4. Planning Process Map. Composed by the author.

The planning process starts from the transfer of project information and client expectation from sales representative to project manager. After the first step, further planning and communication with the client are done by the project manager. Team allocation is internal – where in-house specialist is allocated and external – sub-contractors or freelancers, with proper skills are found and allocated to the project team. Afterward final planning and plan approval is made. Interviewed representatives stated that in planning process three main problems occur. First, when the information transfer is made – caused by no described procedure, what information should be collected by the sales representative and transferred for a project manager. The second problem is external team allocation, mostly this problem

occurs when the project is tightly timed or when the budget does not include appropriate sum

which is asked to pay for sub-contractors or freelancers. Third, risk analysis is poorly made

and mostly not incorporated into the time planning, and project discontinuities affect the

project delivery timing or poorer quality. After the final plan approval by the client, process is

staged to the execution process.

Project execution process map is presented in the *Figure 5* below.
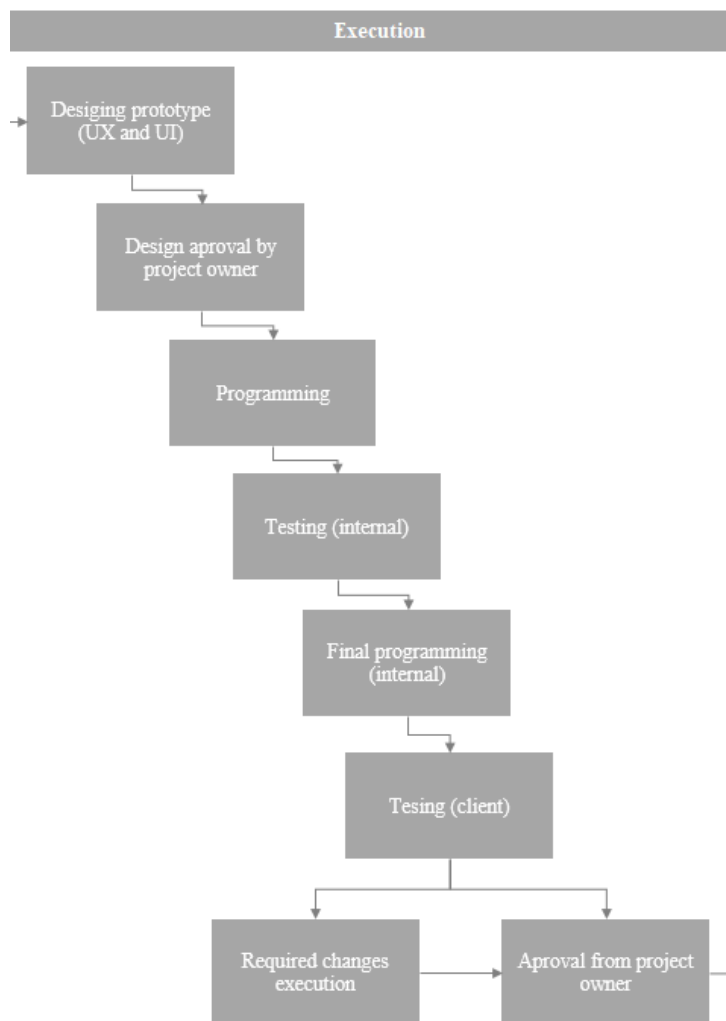
Figure 5. Execution Process Map. Composed by the author.

Execution process starts with designing the prototype (UX and UI) – UX stands for

user experience and UI for the user interface. After prototype approval programing step starts.

The company does not exclude monitoring and controlling process as separate it goes with a

flow of execution process. After the programming testing and changes execution are made. In

execution process, respondents stated that two main problems exist. First, the timing of the

project final derivable is mostly not affected, but days or weeks before closing becomes very

tight caused by lack monitoring and controlling during the process or poor risk management

planning. Second, discontinuities arise, caused by project owner need shift or not met

expectations. The timing issue is mostly affected by poor timing plan, not an appropriate

budget which affects the team competence, not fully executed duties by each team member or

discontinuities from project owner side. After the final execution and project owner approval

process goes to the last stage – closing.

Project closing process map is presented below in *Figure 6.*
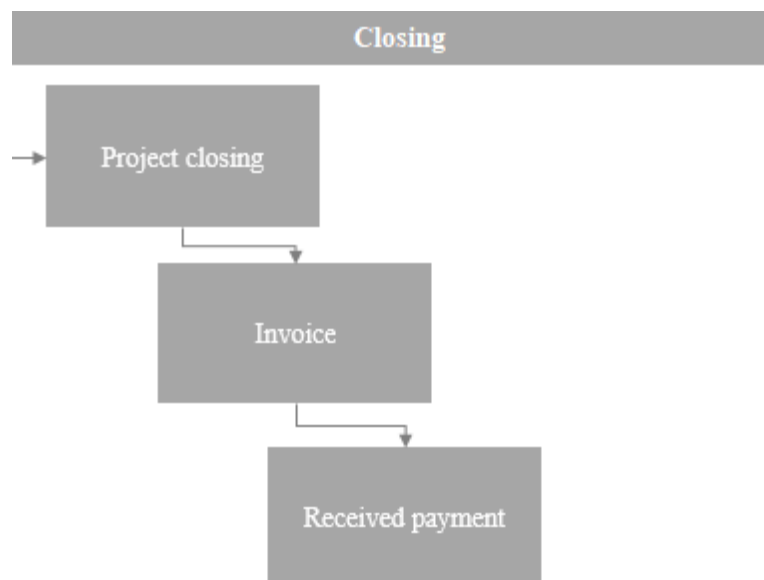
Figure 6. Closing Process Map. Composed by the author.

Project closing process starts when the project owner accepts the project deliverables

and mostly it is after the project is implemented as a solution to the event, works as a system

or is used in another wanted environment. The project is closed in the company after the

payment is received. Respondents stated that one key issue in the process occurs when

projects are not closed until planned deadline. There are two main problem influences – first

is that mostly invoice is sent by a sales representative, not the project manager and there are

delays in the procedure or the project owner is not following the deadline of payment.

All the main process issues are concluded in the *Table 6* below and listed by the

priorities which were done by the respondents during the interview. The interview answers

summary can be seen in the *Appendix E.*

Table 6

Summarized Project Management Process Issues

Priority	Issue	Process part
1.0	Not appropriate budget	Initiation
2.0	Poor risk analysis	Planning
3.0	Team allocation	Planning
4.0	Information miscommunication	Planning
5.0	Timing delays	Execution
5.1	Discontinuities	Execution
6.0	Not fulfilled responsibilities	Execution
7.0	Closing delays	Closing

Note: composed by the author.

2.3. Project management maturity the lowest parts and process issues combination

After project management maturity level is evaluated, the lowest maturity areas are

found, project management process is described, and process issues are defined. Process

issues and the lowest maturity areas are combined in the matrix to understand the relationship

between them and to provide the best managerial solutions which would allow the company

to enter higher level of maturity while solving the issues of the process. Maturity the lowest

areas and process issues matrix is presented in the Table *7* below.

Table 7

Higher Maturity Level Influence on Process Issues

	Issue	Not appropriate budget	Poor risk analysis	Team allocation	Information miscommunication	Timing delays	Discontinuities	Not fulfilled responsibilities	Closing delays
Process group	Process part	Initiation	Planning	Planning	Planning	Execution	Execution	Execution	Closing
3. Project organization definition	Planning		Medium	Medium	High			High	Medium
5. The project culture development methods	Planning			Medium					
7. The following project documents are used for project controlling	Monitoring and Controlling		High			High	High		
9. Project reporting	Monitoring and Controlling					Medium	High	Medium	
10. Project close-down activities	Executing						Medium		Medium
12. Evaluations within the project close-down process	Monitoring and Controlling	High		Medium				Low	Low
13. Types of project discontinuities	Monitoring and Controlling					High	High		

Note: composed by the author.

From the Table *7,* it is clear that if the company would increase maturity level in each the lowest maturity areas and fully enter level 3 maturity all project management process issues will be solved. Most of the issues will be solved caused by proper project management process establishment as an organizational standard, tools and documentation usage.

In the third part of the paper managerial solutions how to improve project management process to increase project flow capacity will be provided by analyzing each the lowest maturity areas and providing tools and processes which would aid the project management process.

3. Managerial Solutions

Managerial solutions are the third part of the paper in which process improvement steps will be provided. Those solutions will be made by analyzing project management maturity analysis, process map and key process issues and providing theoretical frameworks which are created for successful project management process.

3.1. The lowest maturity areas improvement

As seen from the Table *7* process issues will be solved by increasing the lowest maturity areas. Each the lowest maturity area is presented below, and improvement steps are provided for it.

Project organization definition. This is one of the activities of the project planning process group. At a time activity average is 2,3. Tools usage scores indicate that each of the tools are rarely used. The five tools of this activity listed as follows:

- Project charter;

- Project organization chart;

- Project roles/responsibilities description;

- Project communication plan;

- Project process description.

To reach the higher maturity of this activity, all tools should be used at least sometimes (3) or main tools mostly (4) or always (5). Recommendation for the main tools to be always used (5) are listed below.

Project charter. Developing formal document of project existence, authorization of project manager, allocation of recourses, describing project roles and summarizing milestones. (Project Management Institute, 2017). This document will help to fix project transfer and miscommunication issue from initiators to project manager and for project manager quicker initiate the planning procedure. The form of the document is recommended

to be created on behalf of Gluk Media project process and main need for project manager. The form should be easily accessible for all project managers and initiators, they should be familiar with the form filling process and create it for all of the projects. The form also can be used as formal agreement with the project owner to start the project.

Project roles and responsibilities description. The document which indicates all the team is working on the project and describes their part and duties on the project (Project Management Institute, 2017). This document should be done by the project manager and should be located at an accessible place for all team members. The form of the document should be created and used for all projects. It will help team members to find contact information of others for faster communication and a better understanding of their role and responsibility at a project.

Using these two main tools always (5) will help for project organization and increase the maturity of the process to level 3. Not only will increase the maturity but will affect the quicker planning process and will help later for communication and duties fulfillment by all team members.

The project culture development methods. This is one of activities of planning process group. Its maturity level is 2,3. The six elements which belong to this activity are listed as follows:

- Project name;

- Project logo and/or slogan;

- Social start event;

- Internal project marketing;

- External project marketing;

- Project newsletter and/or project homepage.

Gluk Media projects mostly are done without developing projects culture. The culture of the project is affected by the company`s culture, which is open and friendly rather than strict and formal. To increase this activity maturity is recommended to develop stronger Gluk Media internal culture and communicate it to external shareholders – subcontractors or project owners. This would lead to stronger projects culture. Few tools below are recommended to be developed for the company to gain higher project-oriented culture and develop the higher maturity of project culture.

Internal projects meetings. Develop a weekly meeting for all project managers to discuss all the projects under execution at a time and projects related issues. This will create a project management knowledge sharing and faster issues escalation regarding resources or processes.

Project reports. Develop a form of project reports, which would be informal updates regarding tasks done and plans for the upcoming period.

Those tools using and higher internal culture should increase the maturity of the activity and help to make the project management process more stable and clear in the company and for the project teams.

The following project documents are used for project controlling. This is one of activities of monitoring and controlling process group, at Gluk Media monitoring, and controlling process group is combined with execution process group. Its maturity level is 2,5. The four elements which belong to this activity are:

- Documents describing project scope, project schedule and project budget;

- Documents for the risk management;

- Documents to manage the project stakeholder relationships;

- Documents describing the project organization.

The company is recommended to always use (5) or mostly (4), those main project documents for project controlling are listed below.

Documents describing project scope, project schedule and project budget. This document formation helps to understand the triple constraint of the project and manage all the main areas of the project correctly (Project Management Institute, 2017). This is one of the main documents which form and development of it should be done in the company. Describing triple constraint will help for a project manager to control the process more effectively and identify the discontinuities in the project and prepare a plan for managing it.

Documents for the risk management. Initiation of these documents obliges project manager to develop a risk identification list, identify risk owners and prepare risk response plan (Project Management Institute, 2017). Gluk Media is recommended to prepare a list of frequently arising risks and response plan for it. Project managers should develop these documents for each project, the form could be established and standardized.

Documents to manage the project stakeholder relationships. These documents help to identify project stakeholders, their links and stakeholder's management plan (Project Management Institute, 2017). These documents will allow the project manager to better develop communication with a shareholder`s and manage their expectations and impact on the project.

Those tools should be used mostly (4) or always (5), and it will help to increase the activities maturity level while project managers will cope with the triple constraint, risk, and shareholders more effectively. Usage of these tools would help to solve the present process issues of poor risk analysis and management, timing delays and better plan and manage project discontinuities.

Project reporting. This is one of activities of monitoring and controlling process group. At Gluk Media monitoring and controlling process group is combined with execution

process group. Its maturity level is 1,8. The six elements which belong to this activity are as follows:

- Project scorecard;

- Project progress report;

- Project progress report for external stakeholders;

- Minutes of the project team meetings;

- Minutes of the project owner meetings;

- To - do list.

Project reporting tools would increase the efficiency of fast check on the project and prepare the changes plan if needed. The main recommended tools for this process part are described below.

Project process check and reporting. For Gluk Media it is recommended to combine project scorecard and process reporting tools because most of the projects are implemented in the quite small time period, it will save time and help to measure the progress faster. To do so, the company should follow the instruments working architecture and combine it in one matrix which later on would be presented to external stakeholders as well.

To - do list. This tool is recommended to be done on project management software, which where tasks can be followed by all team members and be assigned by the project manager.

Reporting is at a time bellow the second level maturity, tools should be implemented for usage and be mostly or always used to increase the efficiency of tracking the progress and reporting. It will help to identify schedule changes, project discontinuities and check on each team member responsibilities fulfillment.

Project close-down activities. This is one of activities of execution process group. Its maturity level is 2,8. The four elements which belong to this activity are as follows:

- Planning and controlling of remaining tasks;

- Agreements for the post-project phase;

- Dissolving the project stakeholder relationships by thank-you letters, presents, etc.;

- Final project marketing.

As projects mostly become tight scheduled in the last days or weeks, this activity should be managed more carefully. Main tools are recommended below.

Planning and controlling of remaining tasks. This is more a process than a tool. Project managers should pay more time for developing more precise tasks schedule and manage its changes correctly. For scheduling is recommended to use software that all team could see the planed time and delivery packages.

Agreements for the post-project phase. Gluk Media should develop a form of project transfer from project manager to the owner. It could be informal way, of email or meeting the owner rather than official documents. It will help to close the projects on time.

The company should use those tools always (5) to increase the maturity of activity. Those tools will help to schedule work load better and prepare for project closing not that intense.

Evaluations within the project close-down process. This is one of activities of the closing process group. Its maturity level is 2,8. The four elements which belong to this activity are as follows:

- Evaluation of the project;

- Evaluation of the project team members' performance;

- Evaluation of the project manager's performance;

- Evaluation of the project owner's performance.

The evaluation of the project mostly affects not the project which is evaluated but collecting and analyzing the data for project management process improvements or knowledge sharing for other projects implementation. As Gluk Media has a process issue of not right project budget estimation, it is one of the best ways to collect historical data and make more precise budget estimations for future projects. Main tools to use are listed below.

Evaluation of the project. Develop a standardized form which needs to be filled after each project, the formal form is recommended that later on data could be summarized and pricing or process related issues could be model according to the data. The form should evaluate the project from project manager's point of view while adding project owner evaluation and if needed team view in the process.

Evaluation of the project team members' performance. The formal evaluation form should be established and should be systematically updated, mostly not for internal recourse evaluation but for sub-contractors and freelancers evaluation to be able for future projects to form the best teams and find the best competences.

These tools usage always (5) will increase the maturity of the process activity and help to solve present process issue of inappropriate price estimations, team allocation and responsibilities fulfillment.

Types of project discontinuities. This is one of activities of monitoring and controlling process group, at Gluk Media monitoring, and controlling process group is combined with execution process group. Its maturity level is 2,6. The seven elements which belong to this activity are listed below:

- Definition of project crisis;

- List with ad hoc measures;

- Formal project discontinuities management plan;

- Situational discontinuities management tools;

- Cause analysis;

- Planning of coping strategies;

- Description of new communication to cope with the discontinuity.

Gluk Media projects do not meet with highly impacting discontinuities, mostly it is schedule changes due to communication issues or not fulfilling duties by each team member. Those type of discontinuities is recommended to be managed by using tools listed below.

Discontinuities management plan. Project managers should prepare for each project discontinuities management plan, which will identify possible discontinuities from previous experience on the projects (better if knowledge is shared between project managers) and the plan how they are going to cope and communicate with those issues with the project team and the owner.

As most of the discontinuities are time and schedule related company should prepare a standardized form with mainly occurring discontinuities to save project managers time while project manager can flexibly update the document regarding to project.

This tool should always be used (5) to increase the activity maturity and help the project manager to cope with issues faster.

Each activity maturity increase to the third level will increase overall Gluk Media project management process maturity to the level 3. By using all the recommended tools company is predicted to solve the primary process related issues, project managers would be able to cope with the projects faster and would increase project flow capacity. By applying recommended approach Gluk Media has a potential to improve the project management process, would be able to use the resource more effectively and would improve its financial performance.

Conclusions

The thesis followed through the aim to evaluate Gluk Media project management system maturity and provide managerial solutions for process improvements. Corresponding to its objectives, the paper was divided into main three parts: situation analysis, empirical study, and managerial solutions.

Situational analysis part of the thesis summarized and provided information about current Gluk Media situation, its structure, business model, product and service offerings as well as a look at the market situation and competitors' overview. Analysis indicated, that company is in a good market position and has growth potential. TOWS matrix indicated a few possible strategic initiatives which company could utilize for growth. One initiative was chosen as the most compatible with company's strategic goal to improve and create more effective project management process.

Empirical study part of the thesis was made to evaluate Gluk Media project management system maturity, indicate company`s current maturity level, identify the lowest maturity areas. The project management process map was drawn by conducting the interview, and key priority process issues were identified. Combination of the lowest maturity parts and process issues was used to create a matrix of process groups' maturity influence to process issues.

Managerial solutions part of the thesis was made by concluding and interpreting the research findings to provide project management process improvement tools, which would lead to increase project management maturity level, solve the primary process issues and increase project flow capacity at Gluk Media company.

The aim of the thesis was achieved, and the problem how to increase project flow capacity by improving project management process was worked out. Gluk Media company has a potential to utilize its resources more effectively and to improve the financial

performance by implementing recommended project management tools to reach higher

system maturity and increase the project flow capacity.

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Appendices

Appendix A. Gluk Media Project Management Maturity questionnaire.

Project management maturity questionnaire for Gluk Media, UAB					
English version	**Lithuanian version**	**Respondents**			**Average**
		I	**II**	**III**	
1. The following methods are used for project planning	**1. Projekto planavimo priemonės**	**Maturity:**			**3,5**
Definition of project goals	Projekto tikslo formalus apibrėžimas	4	4	5	4,3
Project goal hierarchy	Projekto tikslų hierarchija	2	3	3	2,7
Work break-down structure (WBS)	Darbų išskaidymo struktūra (*WBS*)	1	3	4	2,7
Work package specifications	Darbo paketų aprašai	1	3	3	2,3
Project milestone plan	Projekto gairių planas	1	4	3	2,7
Project Gantt chart	Projekto stulpelinė (Gantto) diagrama	3	2	2	2,3
CPM schedule	Kritinio kelio (*critical path method*) analizė	2	4	3	3,0
Project resource plan	Projekto išteklių planas	5	5	5	5,0
Project cash flow plan	Projekto piniginių srautų planas (*cash flow*)	5	5	4	4,7
Project costs plan	Projekto kaštų planas	5	5	3	4,3
Project risk analysis	Projekto rizikos analizė	3	5	4	4,0
Project scenarios	Projekto scenarijų variantai	2	5	5	4,0
Legend: 1=never, 2=rarely, 3=sometimes, 4=mostly, 5=always	*Čia ir toliau pildymo raktas: 1=niekada, 2=retai, 3=kartais, 4=dažnai, 5=visuomet*				
2. Project environment definition	**2. Projekto aplinkos apibrėžimo priemonės**	**Maturity:**			**3,4**
Stakeholder analysis	Projekto suinteresuotų šalių analizė	3	5	3	3,7
Project relationship to company strategy	Projekto ryšys su įmonės strategija	3	4	3	3,3
Project relationship to other projects	Projekto ryšys su kitais projektais	3	4	4	3,7
Business case analysis or cost-benefit-analysis	Verslo atvejo analizė / pelno-nuostolio analizė	1	5	3	3,0

3. Project organisation definition	**3. Projekto organizacijos apibrėžimo priemonės**	**Maturity:**			**2,3**
Project charter	Projekto įteisinimo dokumentas (*charter*)	1	4	2	2,3

Project organization chart	Projekto organizacijos struktūra	1	3	3	2,3
Project roles/responsibilities description	Projekto rolių aprašymas	1	3	1	1,7
Project communication plan	Projekto komunikacijos planas	1	3	4	2,7
Project process description	Projekto įgyvendinimo tvarkos taisyklės	1	4	3	2,7
4. The following stakeholders are formally considered	**4. Išorinės suinteresuotos šalys, laikomos galimais projekto komandos nariais**		**Maturity:**		**3,8**
Representatives of different profit-centres of the company	Įmonės pelno centrų atstovai (pvz., pardavimų)	3	5	4	4,0
Representatives of customers	Klientų atstovai	5	5	4	4,7
Representatives of suppliers	Tiekėjų atstovai (jei dalyvauja projekte)	5	3	4	4,0
Representatives of consortium partners (if participating in the project)	Konsorciumo atstovai (jei dalyvauja projekte)	5	1	4	3,3
Representatives of consultants (if participating in the project)	Konsultantų atstovai (jei dalyvauja projekte)	3	3	3	3,0
5. The project culture development methods	**5. Projekto kultūros kūrimo ir rinkodaros metodai**		**Maturity:**		**2,3**
Project name	Projekto pavadinimas	5	5	5	5,0
Project logo and/or slogan	Projekto logo ir devizas	1	2	3	2,0
Social start event	Projekto pradžios renginys	1	3	2	2,0
Internal project marketing	Projekto rinkodara vidinėje organizacijos aplinkoje	1	3	2	2,0
External project marketing	Projekto rinkodara išorinėje organizacijos aplinkoje	1	1	2	1,3
Project newsletter and/or project homepage	Projekto informaciniai lankstinukai ar bukletai, interneto tinklalapis	1	2	1	1,3

6. Project coordination	**6. Projekto koordinavimo metodai**		**Maturity:**		**3,0**
Meetings between project manager and project owner	Projekto vadovo ir projekto savininko susirinkimai	3	5	5	4,3
Meetings between project manager and project team members	Projekto vadovo ir projekto komandos narių susirinkimai	4	5	4	4,3
Meetings between project manager and representatives of stakeholders	Projekto vadovo ir projekto suinteresuotųjų šalių atstovų susirinkimai	3	5	3	3,7
Use of project plans as communication instrument	Projekto planai naudojami kaip komunikacijos priemonė	2	4	2	2,7
Minutes of team meetings	Projekto komandos susirinkimų protokolai	1	1	1	1,0
To Do-Lists	Projekto užduočių sąrašai	5	4	3	4,0
Project deliverables documentation	Projekto darbo paketų priėmimo aktai	1	1	2	1,3
7. The following project documents are used for project controlling	**7. Projekto dokumentai, kurie keičiami, atsižvelgiant į eigos rezultatus**		**Maturity:**		**2,5**
Documents describing project scope, project schedule and project budget	Projekto užduočių, projekto tvarkaraščio ir biudžeto valdymo dokumentai	1	4	4	3,0
Documents for the risk management	Projekto rizikos ir pokyčių valdymo dokumentai	1	2	3	2,0
Documents to manage the project stakeholder relationships	Projekto suinteresuotų šalių valdymo dokumentai	1	4	3	2,7
Documents describing the project organization	Projekto valdymo struktūrai sukurti skirti dokumentai	1	3	3	2,3
8. Progress analysis	**8. Projekto eigos analizė**		**Maturity:**		**3,4**
Analysis of the progress of work packages	Darbo paketų eigos analizė	3	4	4	3,7
Analysis of the progress of the project phases	Projekto apimties nuokrypų analizė	3	4	3	3,3
Costs deviation analysis	Projekto kaštų nuokrypų analizė	4	5	4	4,3
Schedule deviation analysis	Projekto tvarkaraščio nuokrypų analizė	3	4	3	3,3
Earned value analysis	Projekto sukurtosios vertės analizė (*EVA*)	3	1	3	2,3
9. Project reporting	**9. Projekto ataskaitos**		**Maturity:**		**1,8**
Project scorecard	Projekto rodiklių kortelės (*scorecard*)	1	1	2	1,3
Project progress report	Projekto eigos ataskaitos (vidinės)	1	4	2	2,3

Project progress report for external stakeholders	Projekto eigos ataskaitos klientams ir užsakovams	2	4	2	2,7
Minutes of the project team meetings	Projekto komandos susirinkimų protokolai	1	1	2	1,3
Minutes of the project owner meetings	Projekto savininko susirinkimų protokolai	1	1	2	1,3
To Do-list	Projekto užduočių sąrašų keitimas	1	3	2	2,0
10. Project close-down activities	**10. Projekto užbaigimo darbai**	**Maturity:**			**2,8**
Planning and controlling of remaining tasks	Likusių užduočių planavimas ir kontrolė	4	5	2	3,7
Agreements for the post-project phase	Sutartys poprojektiniam etapui	1	2	4	2,3
Dissolving the project stakeholder relationships by thank-you letters, presents, etc.	Padėkos laiškai/dovanos projekto suinteresuotoms šalims	2	4	2	2,7
Final project marketing	Baigiamosios projekto rinkodaros priemonės	1	4	2	2,3
11. Tools for the knowledge management	**11. Projekto patirties kaupimo priemonės**	**Maturity:**			**3,2**
Analysis of business case after completion	Projekto pelno/nuostolio analizės pritaikymas kitiems projektams	4	5	2	3,7
Project close-down report	Baigiamoji projekto ataskaita, specialios projekto ataskaitos	2	4	2	2,7
Meetings for exchanging experience	Patirties perdavimo ir sklaidos susirinkimai	3	5	2	3,3

12. Evaluations within the project close-down process	12. Projekto įvertinimas jo užbaigimo procese	Maturity:			2,8
Evaluation of the project	Organizacijos požiūriu	1	5	2	2,7
Evaluation of the project team members' performance	Komandos narių požiūriu	1	5	2	2,7
Evaluation of the project manager's performance	Projekto vadovo požiūriu	1	5	3	3,0
Evaluation of the project owner's performance	Projekto savininko požiūriu	1	5	3	3,0
13. Types of project discontinuities	13. Projekto pokyčių valdymas	Maturity:			2,6
Definition of project crisis	Projekto nuokrypių nuo plano suvokimas ir apibrėžimas	2	5	4	3,7
List with ad hoc measures	Projekto galimybių įžvelgimas ir apibrėžimas	3	5	3	3,7
Formal project discontinuities management plan	Formali projekto pokyčių valdymo tvarka	1	1	2	1,3
Situational discontinuities management tools	Konkrečiai situacijai pritaikytas pokyčių valdymo priemonių sąrašas	1	1	3	1,7
Cause analysis	Atliekama projekto pokyčių priežasčių analizė	1	5	2	2,7
Planning of coping strategies	Planuojamos alternatyvos ir priemonės joms įgyvendinti	1	5	2	2,7
Description of new communication to cope with the discontinuity	Komunikacija apie sprendimą dėl projekto pokyčių ir jų įgyvendinimo priemonių	1	4	3	2,7

14. Organisation for resolving a project discontinuity	14. Projekto pokyčių proceso atsakomybės	Maturity:			3,0
Analysis of measures by project owner, project manager and project team	Sprendimą dėl projekto pokyčių priima projekto savininkas	4	4	4	4,0
Conclusion by the project owner	Pokyčių analizę atlieka ir priemones valdymui nustato projekto savininkas, projekto vadovas ir komandos nariai	1	5	4	3,3
Involvement of additional experts to cope with the discontinuity	Pokyčių valdymui pasitelkiami ekspertai	1	1	5	2,3
Communiacation plan for project discontinuity	Pokyčių valdymui sudaromas naujas komunikacijos planas	1	4	2	2,3
15. Duration and frequency of the project management sub-processes	15. Projekto valdymo sub-procesų trukmė ir dažnumas	Maturity:			3,9
Duration of the project start process: maximum 2 weeks	Projekto pradžios proceso trukmė: iki 2 savaičių	4	4	3	3,7
Duration of the project controlling process: maximum 1 week	Projekto kontrolės proceso trukmė: iki 1 savaitės	5	4	3	4,0
Duration of the project close-down process: maximum 2 weeks	Projekto užbaigimo proceso trukmė: iki 2 savaičių	4	4	2	3,3
Frequency of project controlling: at least every 4 weeks	Projekto kontrolės dažnumas: bent kartą per 4 savaites	5	5	4	4,7
16. Project communication structures	16. Projekto komunikacija	Maturity:			4,8
Individual meetings	Individualūs susitikimai	4	5	6	5,0
Project owner meetings	Projekto savininko organizuojami susirinkimai	5	4	5	4,7
Project team meetings	Projekto komandos susirinkimai	5	4	5	4,7

17. Performance of project roles	17. Projektinių pareigų atlikimas		Maturity:		3,7
Appropriate performances of the project manager	Projektų vadovai tinkamai atlieka savo pareigas projekte	4	4	4	4,0
Appropriate performance of the project owner	Projektų savininkai tinkamai atlieka savo pareigas projekte	1	4	3	2,7
Appropriate performance of the project team members	Projektų komandų nariai tinkamai atlieka savo pareigas projekte	4	4	4	4,0
Appropriate decisions and agreements within the project team	Projekto komanda priima tinkamus vidinius sprendimus ir susitarimus	4	4	4	4,0
18. Management of small projects	18. Mažų projektų valdymas		Maturity:		4,0
Less comprehensive application of project management methods than in large projects	Supaprastintas projektų valdymo metodų taikymas	4	4	5	4,3
Lower level of detail in the project plans	Žemesnis plano detalizavimo lygis, nei įprastos apimties projektuose	5	3	5	4,3
Project owner role performed by persons of lower hierarchical levels	Savininkais skiriami žemesnių pareigų darbuotojai	4	3	3	3,3
Less project marketing than in projects	Mažiau rinkodaros priemonių, nei įprastos apimties projektuose	5	3	3	3,7
Duration of the project start process: maximum 1 week	Mažų projektų pradžios proceso trukmė: daugiausia 1 savaitė	5	5	3	4,3

19. Quality of the project stakeholder relationships	19. Santykių su suinteresuotomis šalimis kokybė				Maturity:	4,2
Quality of the relationships with customers/user of the project results	Santykių su klientais ir projektų rezultatų vartotojais kokybė	3	5	5		4,3
Quality of relationships with partners and suppliers, who contribute to the project	Santykių su projektų partneriais ir tiekėjais kokybė	3	5	4		4,0
Quality of relationships with other relevant stakeholders	Santykių su kitomis projekto suinteresuotomis šalimis kokybė	3	5	5		4,3
Legend: 1=very bad, 2=bad, 3=medium, 4=good, 5=very good	*Čia pildymo raktas: 1=labai bloga, 2=bloga, 3=vidutinė, 4=gera, 5=labai gera*					

20. Quality of the project results	20. Projekto rezultatų kokybė				Maturity:	3,7
Quality of meeting project objectives	Projekto tarpinių ir galutinio rezultatų įgyvendinimo kokybė	3	4	4		3,7
Quality of meeting project schedules	Projekto tvarkaraščio įgyvendinimo kokybė	3	3	3		3,0
Quality of meeting project costs	Projekto kaštų plano įgyvendinimo kokybė	4	4	3		3,7
Quality of project revenues stream	Projekto pajamų plano įgyvendinimo kokybė	5	4	4		4,3
Quality of the business case	Pelno-nuostolio analizės kokybė	4	3	3		3,3
Quality of the project team work	Projekto komandos darbo kokybė	3	4	5		4,0
Legend: 1=very bad, 2=bad, 3=medium, 4=good, 5=very good	*Čia pildymo raktas: 1=labai bloga, 2=bloga, 3=vidutinė, 4=gera, 5=labai gera*					

*Note: composed by the author. For English translation Valaityte. M.*

"Recommendations For UAB "Lauksva" Organizational Changes for Entering Higher

Project Management Maturity Level" was used (Valaitytė, 2017).

Appendix B. Process activities maturity.

Project management maturity of Gluk Media, UAB				
English version	**Lithuanian version**	**Maturity level**	**Average**	**Project management procees group type**
1. The following methods are used for project planning	1. Projekto planavimo priemonės	3,5	3,2	Initiating
2. Project environment definition	2. Projekto aplinkos apibrėžimo priemonės	3,4	3,2	Planning
3. Project organisation definition	3. Projekto organizacijos apibrėžimo priemonės	2,3	3,2	Planning
4. The following stakeholders are formally considered	4. Išorinės suinteresuotos šalys, laikomos galimais projekto komandos nariais	3,8	3,2	Planning
5. The project culture development methods	5. Projekto kultūros kūrimo ir rinkodaros metodai	2,3	3,2	Planning
6. Project coordination	6. Projekto koordinavimo metodai	3,0	3,2	Executing
7. The following project documents are used for project controlling	7. Projekto dokumentai, kurie keičiami, atsižvelgiant į eigos rezultatus	2,5	3,2	Monitoring and Controling
8. Progress analysis	8. Projekto eigos analizė	3,4	3,2	Executing
9. Project reporting	9. Projekto ataskaitos	1,8	3,2	Monitoring and Controling
10. Project close-down activities	10. Projekto užbaigimo darbai	2,8	3,2	Executing
11. Tools for the knowledge management	11. Projekto patirties kaupimo priemonės	3,2	3,2	Executing
12. Evaluations within the project close-down process	12. Projekto įvertinimas jo užbaigimo procese	2,8	3,2	Monitoring and Controling
13. Types of project discontinuities	13. Projekto pokyčių valdymas	2,6	3,2	Monitoring and Controling
14. Organisation for resolving a project discontinuity	14. Projekto pokyčių proceso atsakomybės	3,0	3,2	Executing
15. Duration and frequency of the project management sub-processes	15. Projekto valdymo sub-procesų trukmė ir dažnumas	3,9	3,2	Executing
16. Project communication structures	16. Projekto komunikacija	4,8	3,2	Executing
17. Performance of project roles	17. Projektinių pareigų atlikimas	3,7	3,2	Executing

18. Management of small projects	18. Mažų projektų valdymas	4,0	3,2	Executing
19. Quality of the project stakeholder relationships	19. Santykių su suinteresuotomis šalimis kokybė	4,2	3,2	Closing
20. Quality of the project results	20. Projekto rezultatų kokybė	3,7	3,2	Closing

Note: composed by the author.

Appendix C. Gluk Media Project Management Process Map.

Gluk Media Project Management Process map

| Initiation | Planning | Execution | Closing |
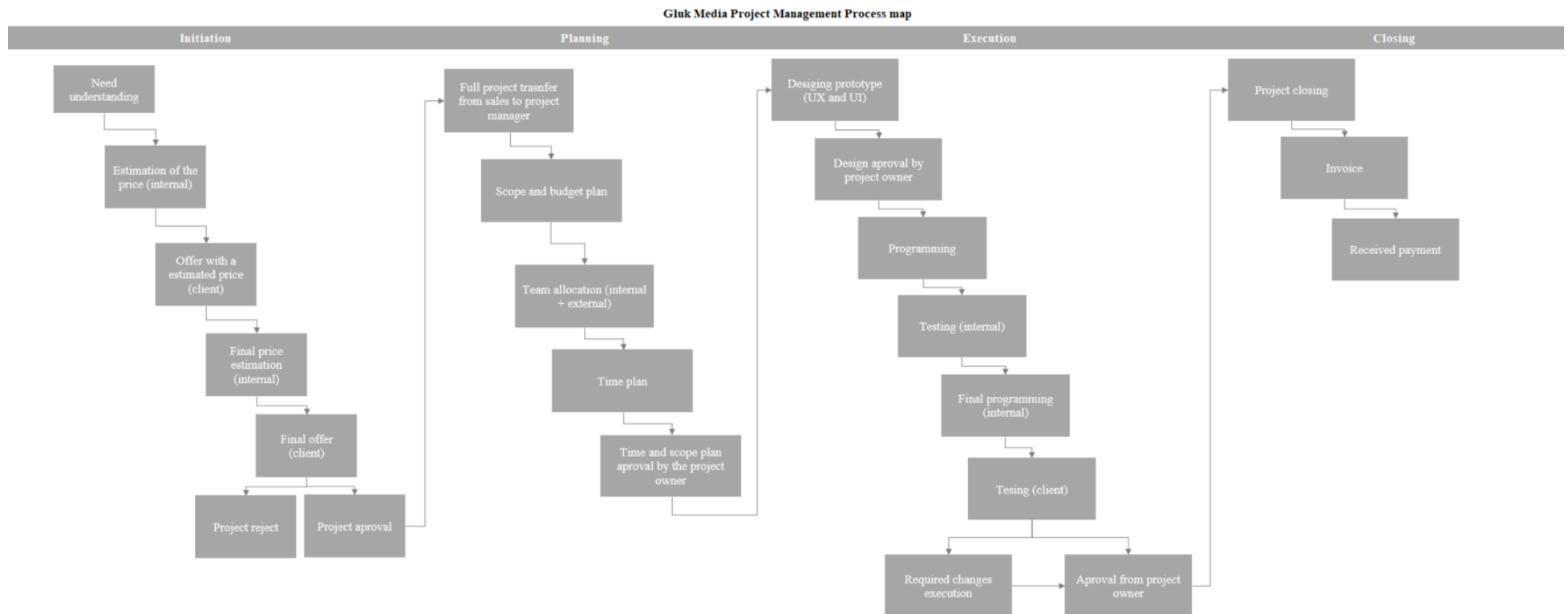
Note: composed by the author.

Appendix D. Process Groups Maturity.

Maturity of Project Management Process Groups		
Process group type	**Level**	**Average**
Initianting	**3,5**	**3,2**
Planning	**3,0**	**3,2**
Executing	**3,5**	**3,2**
Monitoring and Controlling	**2,4**	**3,2**
Closing	**3,9**	**3,2**

Note: composed by the author.

Appendix E. Questionnaire answer summary.

Question	Answer summary
1. What is most commonly used project management process?	Gluk Media project management process structure is the same for all the projects, just task names changes and execution procedures changes depending on the project. All the process is grouped in 4 main process groups: Initiation; Planning, Execution (includes monitoring and controlling); Closing. In each stage the tasks which are done was described and drawn by the respondents on a paper and is presented in the *Appendix C*.
2. What are the problems in the process?	The main process issues was described in each process group. The problems are: 1. Initiation group - not appropriate budget is estimated and offered for the client; 2. Planning group - information and need transfer from project initiator to project manager; 3. Planning - external team allocation is difficult and to long taking process; 4.Execution - schedule changes due to lack of budget or not fulfilled team member duties; 5. Execution - hardly controllable and poorly managed risks; 6. Execution - poor responsibilities implementation; 7. Closing - not closing the projects on time due to not having a payment till the deadline.
3. What are the key priority problems?	Prioritization was made after writing down all the process issues with the respondents and they have prioritized them according to the listed issues above: 1; 5; 3; 2; 4; 6; 7.

Note: composed by the author.