

**“The influence of organizational environment on mobile
game development team effectiveness”**

- A Single Case Study .

Master's Thesis

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Abstract

The mobile gaming industry is a fast-growing and lucrative market, which has surpassed the money generated by consoles and PC games, and the market is going to grow continuously. Games are produced by teams that need to have diverse technical and creative skills and competences as well as good understanding of customer expectations. Nonetheless, there is limited literature on mobile game development teams, and particularly on the management practices and organizational structures that support their functioning. Therefore, this research sets out to discover how organizational environment affects the effectiveness of game development teams.

Since this study only focuses on the influence of organizational environment, the team effectiveness model introduced by McShane and Von Glinow was adopted. The thesis divides organizational environment into organizational structure and leadership styles for further study. Literature about team design and team processes is also discussed in this study from in the context of mobile game development. Finally, a theoretical framework was drawn based on the reviewed literature.

The empirical part of this research was conducted as a single case study. Empirical data was collected through interviews in the case company with top management and team leaders, who are involved in game development and decision-making process. The case company's games have occupied the top positions in top grossing list in AppStore, which makes it interesting for the empirical investigation.

The findings of this thesis explain that organizational environment affects team design gradually. It is like a pyramid where the foundation is a flat organization which helps the company with team composition. In the middle of the pyramid is the stable organizational environment which helps with team stability. On top of the pyramid, the organic organizational structure and servant leadership, which is built upon flat and stable organizational environment, helps development teams to be autonomous. Right members in teams, high extent of team stability and team autonomy altogether have positive effects on team processes and in turn increase team effectiveness. In addition, a balance between autonomy and control is a critical issue for managers to consider. In this study, some practicalities learned from the case study were provided. Thus, this study provides implications for mobile gaming companies by investigating teams' functioning responsive for development of successfully games.

Keywords mobile games, mobile game development, team effectiveness, organizational environment, organizational structure, leadership

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	MOTIVATION FOR THE THESIS AND RESEARCH GAP	2
1.3	RESEARCH OBJECTIVE AND QUESTIONS	5
2	LITERATURE REVIEWS	6
2.1	TEAM EFFECTIVENESS	6
2.2	ORGANIZATIONAL CONTEXT	8
2.3	TEAM DESIGN	16
2.4	TEAM PROCESSES	24
2.5	TOWARD THEORETICAL FRAMEWORK	30
3	METHODOLOGY	33
3.1	RESEARCH DESIGN	33
3.2	DATA COLLECTION	34
3.3	DATA ANALYSIS	36
4	EMPIRICAL FINDINGS	38
4.1	ORGANIZATIONAL CONTEXT	38
4.2	GAME DEVELOPMENT TEAM	59
5	DISCUSSION	70
5.1	ORGANIZATIONAL CONTEXT OF COMPANY X	70
5.2	A FLAT STRUCTURED ENVIRONMENT	71
5.3	A STABLE ENVIRONMENT	73
5.4	AN AUTONOMOUS ENVIRONMENT	75
5.5	EMPIRICALLY-BASED FRAMEWORK	77
6	CONCLUSIONS	80
6.1	SUMMARY	80
6.2	PRACTICAL IMPLICATIONS	82
6.3	LIMITATIONS	82
6.4	SUGGESTIONS FOR FUTURE RESEARCH	83
	REFERENCES	85
	APPENDICES	92

LIST OF FIGURES

Figure 1: A Heuristic Model of Group Effectiveness	6
Figure 2: Team Effectiveness Model	7
Figure 3: A dimensional scaling framework for describing teams	17
Figure 4: Team Development Phases	23
Figure 5: Manifestation of Processes in Transition and Action Phases	26
Figure 6: Game Development Life Cycle with team process	27
Figure 7: Theoretical Framework	32
Figure 8: Case Study Method	37
Figure 9: Gate Review Process of Company X	42
Figure 10: Structure for reporting of Company X	44
Figure 11: Support Flow of Company X	53
Figure 12: Roles of Leadership of Company X	58
Figure 13: The effect organizational context on team composition	73
Figure 14: The effect organizational context on team stability	75
Figure 15: The effect organizational context on team autonomy	77
Figure 16: The effect organizational context on team effectiveness	79

LIST OF TABLES

Table 1: Comparison of mechanistic and organic organizational structure	11
Table 2: Comparison of transformational and servant leadership	15
Table 3: Company X interviews	35

1 INTRODUCTION

1.1 Background

The mobile gaming industry is a fast-growing and lucrative market that is projected to generate \$46.1 billion in worldwide revenue in 2017, which surpassed the money generated by consoles and PC games, and the market is going to grow continuously. In 2020, half of the total game market will be dominated by mobile gaming (McDonald, 2017). Speaking of the mobile gaming industry, there is no doubt that Finland plays a substantial role in the field. The remarkable successes of Rovio and Supercell have helped the mobile gaming industry to grow from a 100 million-euro industry to two billion in the past five years (Tekes, 2016). On the other hand, gaming companies are essential and important contributors to the Finnish economy. Due to the small domestic market, Finnish companies always seek opportunities globally. In 2015, there were 290 active game development companies in Finland (Neogames, 2016), and the majority of them are less than five years old.

Through application stores, such as iOS and Google Play, mobile gaming companies can deliver their products to global users immediately without any cost. Thus, mobile gaming companies can be classified to born globals due to their ambition to generate the sales of outputs across multiple countries from or near their inception. Soon after the launch, billions of people around the world can enjoy these games. Nevertheless, the mobile gaming industry is extremely competitive due to its low barrier to entry, and the fast-changing customer preferences make the situation even more challenging for the game developers and companies. Despite these difficulties, there are still plenty of companies that perform well in this competitive market and generate substantial revenue sustainably with their new launching games.

Based on the viewpoint of born global research, unique and highly differentiated products that capture worldwide attention are the main sources of value creation for these companies (Knight & Cavusgil, 2004). That is, under this competitive environment, the capability to develop the next trendy and player addicting games is the lifeblood of mobile gaming companies. Hence, it raises my question whether these outperforming mobile game companies have some secret sauce to develop successful games. Game development teams

are the creators behind these remarkable games, in consequence, they become my target to investigate. Surprisingly, in spite of its current and projected influence, there has been limited research on the mobile gaming industry or game development.

Recent research on mobile games has significantly focused on player-centered game design, gameplay experience (e.g. Ermi & Mäyrä, 2005; Merikivi, Tuuainen & Nguyen, 2017), or the educational functions of mobile games (e.g. Schmitz, Klemke, Walhout & Specht, 2015; Wu & Huang, 2017). None of the literature pays attention to management practices and organizational aspects. However, game development teams are normally built up with a number of talented developers from various disciplines and are highly passionate about their work, which gives game development teams a very distinct nature from product development teams in other industries; thus, game development teams require a different type of managing style and organizational support.

Moreover, in general, game development teams are compact, meaning each team only consist of five to six people; thus, high interdependence and cohesive teamwork determine the effectiveness of teams and ultimately influence their success. Hence, this study aims to understand what types of leadership style facilitate the effectiveness of game development teams as well as what kinds of organizational environment help teams to thrive. By this study, I wish to discover the factors that facilitate successful game development and bring new insights to the fields of mobile gaming research.

1.2 Motivation for the thesis and Research Gap

Seeing the successful mobile gaming examples in Finland, it raised my interest in finding out why some gaming companies succeed, while some fail. It is known that Supercell, one of the leading and recognizable mobile gaming companies, only hires the best people. The company believes that the best people make the best games (Handrahan, 2018). Nevertheless, it is not enough to create the miracle by just gathering a bunch of talented individuals. Without seamless teamwork, the game development is hard to be completed, not to mention the success. The intriguing question that remains undiscovered is how these individuals with different expertise work together as a team, and further develop the capabilities to coordinate and innovate collaboratively to create successful games. Moreover, whether the leadership

styles and surroundings influence team effectiveness to develop successful games is another mystery that I wish to find out in this study. As far as we know, mobile gaming is a highly customer driven industry, where the most successful and long-lasting games are always the ones that listen to and care for their players. Hence, to survive and be sustainable in this competitive and rapidly shifting marketplace, organizations need to be agile. High degree of flexibility, quick adaptation, and fast responsiveness are keys to success. For the sake of staying agile, some companies insist on the ideology of keeping small, both for the size of company and game development teams. However, what is the other success factors than keeping small?

"Leadership is a group or team function. The leader's job is to create the conditions for the team to be effective." Robert Ginnett (2005)

We all agree that leadership is undoubtedly important to the emergence of successful teams. However, along with the sentence, there are some questions come up. To be more specific, what kinds of conditions, in particular, facilitates teams to be effective. In addition, how and what leaders could do to create this favorable environment for development teams within the organization? Most of the theories that discuss team performance are enlightened by the input-process-output model of McGrath (1984). The inputs shape the team process which in turn influence the project outcome. Input variables include individual-level factors (e.g. the personality and skills of group members), group-level factors (e.g. group structure and size), and environmental factors (e.g. the work context and group atmosphere). The team will convert these inputs into outcomes through a series of processes which means the courses of action and interaction among team members for achieving goals.

Soon after, due to the lack of managerial practice of IPO model, Hackman (1987) advances the framework by elaborating how can organizations utilize these factors to facilitate team effectiveness. The author states that, for the organizational context (inputs), a supportive reward system could motivate members to work harder, while an educational system that reinforces members' skills and knowledge required for the project can lead to greater team performance. Moreover, an accessible and reliable information system can provide valuable data to teams and help them with planning and decision-making. Later, Cohen and Bailey

(1997) provide a heuristic team effectiveness model in which the external environment (e.g. the characteristic of the industry and the turbulence of market) are taken into account. As for the organizational context, it comprises rewards, supervision, training, and resources variables, which is similar to the Hackman's (1987) model.

Notwithstanding these authors all refer to the effect of organizational context, the concepts they discuss are more with regard to mechanical aspects, focusing on what kinds of methods and systems that organizations could use for moving teams forward and enhancing effectiveness. The puzzles regarding what kinds of organizational conditions are most favorable for teams and facilitate their effectiveness are not solved yet. Oftentimes, while teams suffer from poor performance, the organization will instantly link the problem to team processes and strive to fix them since adjusting processes can reflect immediate effect, yet only for the short term. The actual root cause of the problem is the inputs, which are normally omitted by organizations. Ginnett (2005) suggests that team leaders should trace back to input variables while identifying problems in processes. The team effectiveness model emphasizes the role of team leaders and provides a constructive approach for helping them create a suitable environment for teams to succeed.

To conclude, I believe that in order to provide a comprehensive understanding of the forces that create and manage successful teams, I need to look into the organizational environment, which is contingent upon the organizational structure and leadership the style, and how the environment of the organization relates to the team effectiveness. Furthermore, I will examine two main factors that have direct and indirect impacts on team effectiveness, namely team design and team processes. In the chapter of literature review, I will develop a preliminary framework to help us focus on the scope of the study and as a guidance to proceed with the empirical research.

1.3 Research Objective and Questions

In the book of Hughes, Ginnett and Curphy (2012), the authors compared team effectiveness model to an iceberg that the output of the team (i.e. the outstanding performance or the successful product development) is the part of the iceberg above the waterline, which are easily identifiable and where people pay most attention to. Some can see the processes, which are a little below the surface, and attempt to understand them. However, we often overlook the imperceptible part that is deeply underwater, that is, the organizational inputs, which accounts for the biggest and indeed the most fundamental portion supporting the top of the iceberg, namely the teams. Therefore, the purpose of this study is to discover and reveal the hidden portion underlying the water.

The main research question of the study is:

Q: How does organizational contexts influence effectiveness of game development teams?

The sub-questions for providing a more specific research direction are:

Q: How does the organizational context influence team design, and in turn team effectiveness?

Q: How does the organizational context influence the process of game development, and in turn team effectiveness?

I aim to fulfill the research objectives with three phases. First, I will review the literature regarding organizational structure and leadership, and subsequently, I will research on their relations to team design, team process, as well as the team effectiveness. Later, I will conduct a single case empirical study. Through the in-depth review, I aim to gain deeper insights on how organizational context affect game development. This thesis aims to provide implication for gaming companies to design or redesign their input-stage variables, that is, the organizational structure, leadership style as well as the team design.

2 LITERATURE REVIEWS

2.1 Team Effectiveness

In response to the competitive environment, the use of teams in organizations has increased dramatically and has attracted a large amount of research investigating teams and team effectiveness (Cohen & Bailey, 1997). Devine et al. (1999) call for a greater attention to study on specific features of teams, such as team structure, composition, functions, and characteristics. In the light of the *Input-Process-Output* model from McGrath (1984), Cohen and Bailey (1997) introduce a heuristic framework of team effectiveness (Figure 1), in which the team effectiveness relies upon external environment, team design, team processes, and collective psychosocial traits of team members. Environmental and design factors are regarded as inputs of the team outcomes, while the team processes are the factors that directly linked to the outputs, team effectiveness. It is important to note from the framework that design factors have both indirect and direct impact on team outcomes (Cohen and Bailey, 1997).

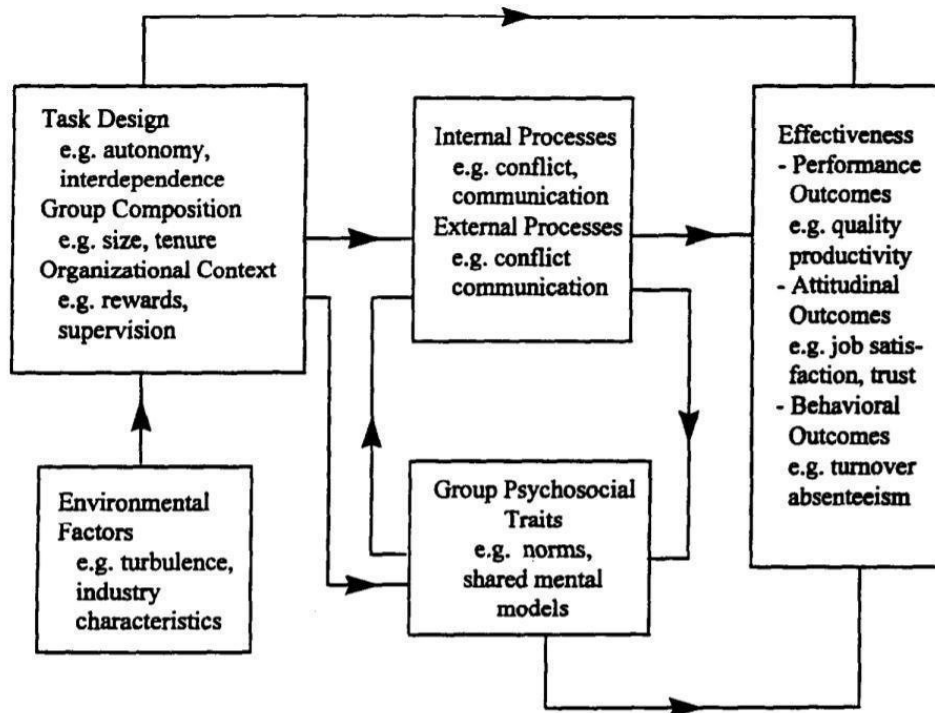


Figure 1: A Heuristic Model of Group Effectiveness
Source: Cohen & Bailey (1997)

In the most recent literature, McShane and Von Glinow (2010) present a new type of team effectiveness model in which the authors integrate all the main components of team effectiveness. Unlike the model presented by Cohen and Bailey (1997), the new model neither includes the environmental factors (i.e. the industrial characteristics and turbulence of market), nor the psychosocial traits (i.e. shared value and belief of the group). Instead, the new model emphasizes more on the intra-organizational environment, which can be controlled and modified by leaders and top management. Due to the aim of this thesis is to examine how different organizational structures and leadership styles affect the effectiveness of game development teams, the model introduced by McShane and Von Glinow (2010) is adopted (Figure 2). Based on the model, in the following section, I will start with reviewing organizational and team environment, that is, organizational context.

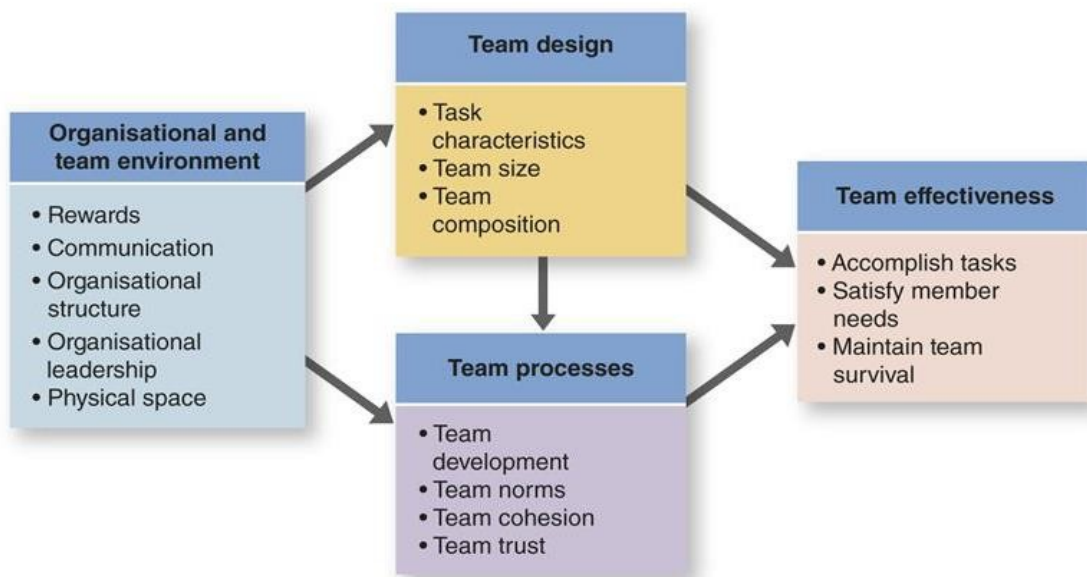


Figure 2: Team Effectiveness Model
Source: McShane and Von Glinow (2010)

2.2 Organizational Context

Due to the increasing global competition, teams have been utilized increasingly as a mechanism to help organizations achieve competitive advantages. For instance, companies build cross-functional teams to increase their innovativeness and speed of product development for gaining new product advantages (Slotegraaf & Athuahene-Gima, 2011; Chen, Damanpour, Reilly, 2010). The success of these organizations is mainly contingent upon the effectiveness of teams (Delarue, Van Hootegeem, Procter & Burrige, 2008). This new type of organization that uses teams to perform the core task has been described as “team-based organization” (TBO), and the term has shifted scholarly attention from individual team to the organization.

Team-based organization decreases the hierarchical discrepancy within the company, which enables a more effective interaction between workers and managers, and results in higher performance (Harris & Beyerlein, 2003). In order to examine the benefits of team-based organization, Jouini, Dallery, Nait-Abdallah (2008) investigate the change of a call center after the company reformed their organization into team-based. The study demonstrates the distinct improvement in the quality of answers by grouping agents into small size teams with a certain cluster of customers. The feeling of autonomy, team-based reward incentive, and the competition with other teams give agents a sense of accountability and motivation to contribute to their teams. As a result, the transformation into a team-based organization increases the overall performance of the call center.

However, utilizing teams to perform core tasks is not a panacea for organizations since the environment surrounding those teams can limit or facilitate their effectiveness. Harris & Beyerlein state that, “team-based organizing is not about teams, but the organization.” (2003, p. 192). It is crucial that teams are integrated within the organization, instead of operating in isolation. For teams to succeed, organizations must provide a supportive environment and structured in the way to align with team needs (Harris & Beyerlein, 2003). The organizational structure represents how the work is coordinated within an organization and determines the internal relation, reporting, the extent of control of managers (Ahmady, Mehrpour & Nikooravesh., 2016). That is, organizational structure is an element of organizational context.

Besides organizational structure, leadership is another element for an organizational context. Leadership is the key to stabilize the organizational structure. The role of a leader is to create an environment in which trust and safety flourish so that the innovativeness and effectiveness of teams can thrive. For instance, within an organic organizational structure, transformational leadership is more likely to occur for creating an inspiring and encouraging environment. On the other hand, within a mechanistic organizational structure where the market is stable, transactional leadership is regarded as a more appropriate style (Shivers-Blackwell, 2006). Consequently, leadership styles and organizational structures are interdependent.

The study of Hempel et al. (2012) indicates that the organizational structure has a direct impact on the psychological empowerment, and in turn affects team performance. The study shows that the formalization of an organizational process has a positive effect on psychological empowerment of teams, whereas the formalization of jobs roles decreases the perception of empowerment. Thus, based on this notion, organizational structures have an influence on the effectiveness of empowerment. Erkutlu (2012) also shows that the organizational culture could moderate the positive relationship between shared leadership and team proactivity. The study presents three different types of organizational culture. Bureaucratic and innovative culture are both unfavorable for the effect of shared leadership on team proactivity. Only the supportive organizational culture benefits the relationship. Furthermore, at the end of the study, the author brings up the idea that organizational culture may be modified by the organizational structure. This notion leads us to the conclusion regarding the relationship between organizational structure and leadership and their interactive impact on team effectiveness.

To conclude, in light of the reviewed literature, I argue that the relationship between organizational structure and leadership is interactive and therefore why it is important for us to discuss both of them in this study. In the next paragraph, I will start looking into different organizational structure and leadership styles and examine how they affect team effectiveness.

2.2.1 Organizational Structure

A typical hierarchical organizational structure consists of many layers of managers may hinder the information flow and result in slow decision-making. Tata and Prasad (2004) investigate how the organizational structure influences team effectiveness. The study indicates that self-management teams perform more effectively under a decentralized structure where employees have the authority to make decisions for their day-to-day tasks than teams within a centralized structure. Later on, the study of Hempel, Zhang & Han (2012) demonstrates that the organizational structure has an impact on team performance, yet indirectly through its influence on team empowerment. To further elaborate, the management in decentralized organizations are more likely to empower decision-making authority to teams, which eventually increases team perception of meaningfulness and enhances the overall team performance. To conclude, organizational structures vary between industries as well as organizations depending on the strategy of the organization and the business environment. For the success of teams, one should look into the organizational structure and ensure its alignment with teams.

Centralization and formalization are the two dimensions that have been widely used among scholars to study organizational structure (Jansen, Van Den Bosch & Volberda, 2006; Strese Meuer, Flatten & Brettel, 2016). The degree of organizational decentralization was assessed by how much decision-making activities has been delegated downward to the team level. The organizational formalization was measured by the extent to which process and rules have been formalized in the organization (Hempel et al., 2012). In general, organizational structure can be labeled as mechanistic (high degree of centralization and formalization) structure which normally used for operating under stable environment and organic (low degree) structure where the market is dynamic (Table 1).

Attributes	Mechanistic	Organic
Appropriate Conditions	Stable	Changing
Chain of Command	Decisions flow top down; accountability is in leader	Decisions spread through all levels; mutual accountability
Labor Division	Specialized; based on function	Cross-functional; diverse knowledge, and skill-based
Centralization	High	Low
Formalization	High	Low
Communication	Vertical; i.e. between superior and subordinate	Lateral; i.e. between people of different rank, resembling consultation rather than command

Table 1: Comparison of mechanistic and organic organizational structure
Source: Synthesis of the work of Ramezan (2011) and Simi, Harms & Harris (2013)

In a highly centralized firm, all kinds of decisions require the approval from the top management, which causes the inefficient information transfer and a low degree of knowledge sharing (Aiken & Hage, 1968). The concentrated authority of decision-making narrows the communication channels and information exchange within an organization, which results in the impediment to idea creation (Jansen et al., 2006). Within the centralized organizational structure, teams have low participation in decision-making. The lack of involvement in the overall process limits teams' problem detecting and solving abilities. Besides, even if teams recognize the problems or come up with some new ideas, they cannot have any action until the approval from management, which as a result, decreases the efficiency of teams. Centralization, therefore, may adversely affect the team effectiveness (Tata and Prasad, 2004).

Formalization is another dimension to describe the organizational structure. It refers to the degree of procedures, rules, and roles are recorded and written down. It is more efficient to exploit and easier to apply those best practices while they are codified, and in turn, facilitates the improvement of current routines. The documented process can be used as a shared language to enhance the effectiveness of communication and interaction across different functional departments and ensure team objectives are aligned with organizational goals (Jansen et al., 2006; Strese et al., 2016). Nevertheless, the existence of the codified rules and procedures increases the employees' reliance on these explicit instructions, which in

consequence, hampers the experimentation, idea generation and freedom of internal innovation within the organization (Chen, Huang & Hsiao, 2010). The specifying rules, procedures, and instructions could restrict team members' flexibility and speed to respond to problems, which leads to members' discouragement and demotivation toward their work, and in turn, decreases the team effectiveness. Thus, self-management team works more effectively under the lower level of formalization (Tata and Prasad, 2004).

In terms of mobile gaming companies, the market is dynamic. They require flexible and adaptive organizational structures to achieve superior organizational performance (Alhadid & Abu-Rumman, 2015). With flat structures, organizations are able to respond quickly in the fast-changing environment and be coordinated in a more effective way (West, 2012, p.18-19). In addition, developers are experts in their field. They understand the most about their work. Thus, it makes sense to delegate the decision-making power downwards to game development teams. However, an excess of decisions may cause the dysfunction of teams (Anderson & Brown, 2010). Therefore, it is essential for mobile gaming companies to find out the balance that what kinds of decisions would be better to keep within the management for maximizing team effectiveness. Additionally, being creative is essential for gaming development. The organizational structure with least rules and procedures would benefit the team innovativeness, giving development teams the flexibility to be experimental. Nevertheless, comprehensive and clear design documents to record the concept of game and development processes are needed for effective communication and information sharing with team members and across departments (Fullerton, 2014, p. 394).

2.2.2 Leadership

Leadership is complex and hard to define; thus, there is no single, consistent, and clear definition for the term (Avery, 2004; Northouse, 2015). Through a broader perspective, we can view leadership as a social influence process practiced for achieving a common goal (Paglis, 2010). Carrying out proper leadership could foster employee commitment, and eventually contribute to the organizational performance and its growth (Howell and Frost 1989; Wang, Shieh & Tang, 2010). Moreover, employees' task proficiency and proactive behaviors could stifle or uplift depending on different types of leadership and follower's perception towards the leader (Martin, Liao & Campbell 2013). Effective leadership is situational dependent. That is, the right leadership style will be contingent upon the competence, level of maturity, or readiness of followers (Hersey & Blanchard, 1993). Within the working environment where employees lack the specific knowledge required for the job and are unwilling to be responsible for their work, a leader should adopt a directive leadership style to maintain the order among the organization. On contrary, if employees are a set of talented and motivated individuals, where the instructions and command are not needed, participatory leadership style would be a suitable way to lead.

Although the prevalent literature recognizes team leadership as one of the most critical factors for the success of organizational teams, we still know little about how leaders form and organize effective teams. Among the extant literature, there are two distinct viewpoints on leadership research. One stream is to put the focus on the team leader and attribute the team effectiveness and success to his or her extraordinary leadership skills. This type of leadership is characterized as "traditional, vertical, top-down and hierarchical". Contrary to leader-centered approaches emphasizing on a single individual, scholars nowadays shift focus towards collective leadership, where the responsibilities and task management are shared among team members (Salas, Goodwin & Burke, 2008, p. 85). Shared leadership is normally adopted for team-based knowledge work or within the condition where the work is complex and interdependent (Pearce, 2004). However, it is noteworthy that shared leadership does not eliminate the necessity or importance of a formally designated team leader. A new product development team still requires a team leader to form and design the team, manage boundaries, and offer support whenever the team needs (Salas et al., 2008, p. 86).

A more recent literature advocates raising awareness on the leader-follower relationship, putting emphasis on followers' perspectives. That is, the role of a leader is to provide orientation, align people, and inspire followers (Northouse, 2015). Examples of this type of people-centered leadership are transformational leadership and servant leadership. Transformational leadership is defined as "the adaptive leadership aims to achieve desired performance by intellectually stimulating, inspiring, and motivating followers to go beyond their self-interest and to value collective goals." (Hirunyawipada, Beyerlein & Blankson, 2010, p.657). In comparison with transactional leadership, transformational leadership motivates followers with different incentives (Bass, 1985). Transactional leaders motivate followers with contingent rewards, while transformational leaders provide support and assistance for encouraging followers to accomplish their jobs (Wang, Oh, Courtright & Colbert, 2011). One of the key notions of transformational leadership is the idealistic influence, meaning the transformational leaders influence and mobilize followers towards shared goals through encouraging their heart via individualized consideration, intellectual stimulation, and supportive behavior (Winston and Patterson, 2006).

Transformational leadership style has been agreed as an efficacious approach to enhance team effectiveness. A transformational leader directs and energizes team members by providing them with an exciting vision for the future instead of giving rewards while a goal is accomplished. Along with the feeling of empowerment, team members start considering their tasks important and valuable and developing the sense of the meaningfulness of their work collectively. Ultimately, these cognitions spark team members to reach their highest performance level (Özaralli, 2003). Bass (2000) implied that transformational leaders "move followers to go beyond their own self-interest for good of their group, organization or community, country or society as a whole" (p.21). On the other hand, servant leaders "select the needs of others as leaders' highest priority" (p.33). Thus, according to Bass's illustration, servant leadership is different from transformational leadership that servant leaders put emphasis on the interest of followers and set the organizational strategy to align with the needs of followers. In contrast, the transformational leaders focus on the organizational goals and attempt to influence followers' value to be aligned with the objectives of the organization (Winston and Patterson, 2006). That is, the primary focus for transformational

leaders is the organizational growth and goals, whereas servant leaders aim to serve the followers' needs and help them grow (Dierendonck, 2011). In spite of the differences (Table 2), both leadership styles have been proved to have a positive impact on team effectiveness (Özaralli, 2003; Irving & Longbotham, 2007).

	Transformational Leadership	Servant Leadership
Author (year introduced)	Burns (1978)	Greenleaf (1970)
Influence	Influence followers with charisma	Influence followers by providing assistance and resources
Focus	Focus on organizational vision and goals	Focus on followers' needs
Attributes	Idealized (charismatic) influence; Inspirational motivation; Intellectual stimulation; Individualized consideration	Empowerment; Humility Authenticity; Stewardship Interpersonal acceptance; Providing direction

Table 2: Comparison of transformational and servant leadership
Source: Built upon the work of Stone, Russell, Patterson (2003)

For mobile gaming companies, especially for leading gaming development teams, a typical autocratic and hierarchical leader is clearly unsuitable based on this situational leadership notion. Game development teams are usually small and consist of highly motivated and savvy developers; therefore, an ethical, caring, and empowered leader would be the most appropriate style to manage teams effectively. Similar to the participatory leadership that leaders intend to inquire advice from followers and increase follower's involvement in decision-making procedures (Marx, 2015), empowering leadership delegates decision-making authority and makes members feel they share responsibilities as well. Even though teams led by directive leaders who provide followers with specific guidance and role clarification reflect better performance than teams led by empowering leaders in the initial stages, teams with empowering leadership exhibit higher performance in the long run. With empowering leader support, teams continuously improve coordination and development through team learning over time and eventually become self-efficacy and capable of autonomous managing (Lorinkova, Pearsall, Sims, 2013).

2.3 Team Design

After understanding what the organizational context is and how does different organizational structures and leadership styles affect team effectiveness, I will proceed to look into the next factor, team design. Designing an effective team implies to make decisions about team composition (who are the best individuals for the team), team size (how large the team should be), and team diversity (should the team be composed of homogeneous or heterogeneous members). Additionally, the level of team autonomy and team stability (Hackman, 2002, p.55) are all crucial factors influencing the interaction among team members and team effectiveness. Plenty of research has acknowledged the importance of team types to team effectiveness (e.g. Stewart, 2006). Through a systematic research, Hollenbeck, Beersma & Schouten (2012) develop an integrated classification system to help researchers describe and distinguish different types of teams. Three dimensions are presented in the framework, namely skill differentiation, authority differentiation, and temporal stability. In the following paragraphs, I will discuss each of them and their relationships with team effectiveness (Figure 2).

A Dimensional Scaling Framework for Describing Teams

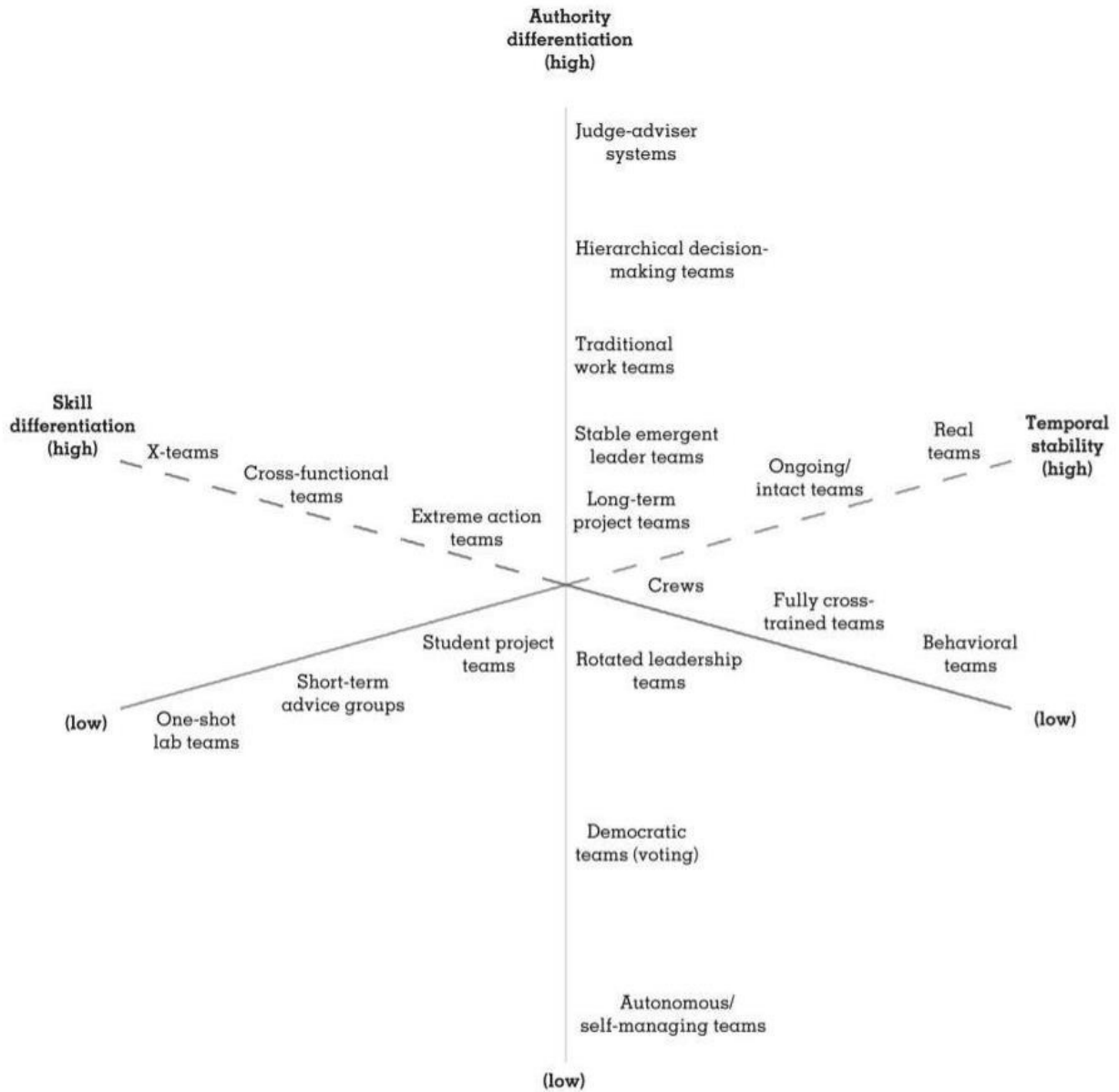


Figure 3: A dimensional scaling framework for describing teams
 Source: Hollenbeck, Beersma & Schouten (2012)

Team Composition

Skill differentiation is the first dimension to draw the distinction between different team types. It represents the extent of functional disparity across team members. In a highly functional diverse team, members possess unique and own specialized knowledge; hence, each member's role is hardly substitutable (Hollenbeck et al., 2012). However, the disparity between members is not restricted to their functional background. The differences in experience, age, gender, and education among team members also have an impact on the capability and effectiveness of a team to perform tasks. Thus, to take all these factors into consideration, this study will use the term *Team Composition* to represent the concept of skill differentiation with more extensive facets included. Broadly speaking, team composition refers to the configuration of a team. The included elements are team members' skills and abilities, personality traits, demographics, background, and experience, as well as the size of a team (Stewart, 2006). The underlying concept of team composition is about how teams should be formed or how teams should be staffed.

Team processes and outcomes are highly dependent on team composition since it represents the quantity and quality of members' knowledge, abilities, and skills to handle and perform tasks. Therefore, team composition plays an important role for the effectiveness of a team (Kozlowski and Bell, 2003). Noteworthy here is that the composition I discuss in this thesis will only focus on surface-level composition variables (Somech & Zahavy, 2013), meaning easily identifiable attributes, such as demographic characteristics and functional diversity. Studies have suggested that differences on these surface-level composition variables can have both positive and negative effect on team performance. Many of which support that functional heterogeneous teams are more likely to outperform homogeneous teams with their superior team creativity and innovativeness (Milliken, Bartel, & Kurtzberg, 2003, p.327; Bell et al., 2011). First, functional heterogeneity can draw a greater pool of skills and knowledge from various functional specialists, which gives the team the capability to solve complex problems and generate unusual ideas. Second, the diverse external network of cross-functional teams enables them to acquire extensive information externally, which in turn helps the team to have better performance in product development (Keller, 2001). Hence, in terms of skills and functionality, the degree of diversity is positively related to team performance.

On the other hand, several studies argue that teams with higher diversity are more likely to fail in coordination, cooperation, and cohesion among team members. One reason is that conflicts are more likely to occur in heterogeneous teams due to the diverse perspectives and values among team members. Additionally, the social categorization that members normally categorize themselves into subgroups with other members who have similar attributes supports the concept that homogenous teams coordinate better than heterogeneous teams. Because of the social similarity among team members, the communication within demographic homogenous teams is more effective than diverse teams, which in turn results in more efficient team processes (Wiersema & Bantel, 1992; Earley & Mosakowski, 2000). The heterogeneity can lead to coordination failure, meaning the incapability of the team to integrate information, and eventually result in inefficient team processes and performance losses (Srikanth, Harvey & Peterson, 2016). It is important to note that age and gender, variables that are easily observable, are more likely to cause social categorization (Bell et al., 2011). Overall, based on the aforementioned literature, diversity is like a “double-edged sword”. It can foster the creativity of a team, but also decrease the team’s operational efficiency (Milliken & Martins, 1996).

Team size was controlled in many studies, since researchers have found that the size of the team influences team outcomes (e.g. Slotegraaf and Atuahene-Gima, 2011; Daspit, et al., 2013). Some scholars support that bigger teams are better than small ones because they have more resources to utilize, which strengthens their knowledge, creativity, and performance. However, it is a common fallacy to think that the bigger team is better. In fact, the relationship between members becomes more complex, requiring more management, as teams get bigger (Coutu, 2009). Large teams often experience difficulties in reaching agreements due to the knowledge and value differences among members. Sometimes, in order to avoid the need for a shared consensus among team members, teams will rely on team leaders to make decisions. Eventually, the decision-making becomes centralized, where only one person makes the decision for the whole team (Hollenbeck et al., 2012). On the contrary, in a small team, every member’s opinion is influential so that members feel the sense of responsibility and their significance to achieve the team’s goals and, accordingly, increases their willingness to contribute to the team (Alnuaimi, Robert & Maruping, 2010).

Team Autonomy

Plenty of decisions have to be made every day within a team, and how team decisions are made will influence the team effectiveness. Some teams will have a formal leader to determine all the decisions or an informal emergent leader to represent members' opinions, and some teams will agree on the decisions collectively with all members. Authority differentiation distinguishes team types through identifying how decisions are made in different teams (Hollenbeck et al., 2012). In this study, I will refer to authority differentiation as the term *Team Autonomy*, which represents the degree to which power is possessed by team members in decision-making. Two extreme team types are the hierarchical decision-making teams, where the authority of decision-making is highly concentrated; and, the self-managing teams, where the decision-making responsibilities are shared and shouldered by every team member.

Self-managing teams are normally built in organic organizations, where the decision-making is decentralized, communication is frequent, and the process is flexible. On the contrary, mechanistic organizations are more likely to use functional teams, where teams are divided according to discipline and decisions flow from top down (Patanakul, Chen & Lynn, 2012). In response to the turbulent and unpredictable environment nowadays, autonomous teams are more applicable for companies to act and adapt accordingly to cope with the fast-changing market. Building autonomous teams becomes an emerging tool for organizations to gain competitive advantages, especially in new product development. Giving autonomy means empowering the decision-making authority to the hands of members. Within an autonomous team, members have the freedom to make decisions, express opinions, and experiment with new ideas. Under this autonomous atmosphere, the innovation and creative problem solving are more likely to happen.

Notwithstanding the fact that autonomous structure can bring positive effect for teams and organizations, some researchers contradict the concept and point out that giving too much autonomy may result in the loss of managerial control and risk isolation (Haas, 2010). To explain, autonomous teams are independent units with their own decision-making rights to decide what serves the best interest for the team; however, the high independence may cause their isolation from the whole organization. Rather than put the organization's interest as the

priority, autonomous teams may overlook the organizational goal and work for their self-interest. Besides, the endorsement of autonomy may cause the team's unwillingness to adopt idea externally, resulting in their slow response to the market. Therefore, due to these potential risks, a higher degree of autonomy does not necessarily ensure better team performance (Haas, 2010). The work of Chen et al., (2015) shows that under the highly uncertain environment, the relationship between team autonomy and operational outcomes is an inverted U-shape, meaning the autonomy will start to have a negative impact on team outcomes while reaching the certain degree. Based on the literature, we realize that an excess of team autonomy can give rise to the adverse effect on team performance. Hence, a balance between autonomy and control is a fundamental issue for managers to consider.

Team Stability

Temporal stability, or so-called *Team Stability*, is the third and last dimension presented in Hollenbeck et al., (2012)'s framework for distinguishing team types. Team stability refers to the extent to which the membership of a team remains the same and is a crucial factor to team effectiveness. For new product development teams, the longer time team members have worked together, the more effective the team is (Sivasubramaniam, Liebowitz & Lackman, 2012). One explanation for why teams with stable members better performance have is that they can focus on performing and achieving the goal, instead of taking time to be acquainted with new arrivals and figuring out how he or she fits the team (Hackman, 2002). Thus, it is essential to have stable members over time if a company wants to build a real team where members collaborate effectively. Small teams have to go through four developmental stages, including forming, storming, norming, and performing, before becoming real teams (Tuckman, 1965). In the beginning of team formation, members attempt to discover interpersonal behavior, group boundaries and understand their tasks. Later, intragroup conflict starts to occur out of the self-defensiveness, competition, and members' resistant to the task. During the third phase, members begin to realize and accept the idiosyncrasies between each other and see themselves as a unit and are willing to discuss openly with other members. In the final developmental phase, members equip the full knowledge of how to collaborate to achieve the goals. The same concept regarding team development was presented by Lorinkova et al. (2013), which the idea was adopted from the work of Kozlowski et al., (1999). Team development consists of four transitional phases, establishing

from a set of individuals and gradually growing into an adaptive team. At the outset, members focus on their individual tasks and strive to understand team orientation. Along with the accumulated interpersonal knowledge, team transition to the next phase where members begin to exchange information with other members and seek to clarify their roles within the team. In the last phase, team compilation, the role linkage within the team becomes clear that the team is able to collaborate and reconfigure while facing unexpected change. At this point, the team has eventually become an adaptive and self-regulating team. The illustration below helps to summarize the context (Figure 3).

Team decision-making can be divided into two processes: team-level debate and decision comprehensiveness. The former refers to the extent of members express their opinions and challenge others' ideas. The latter means the degree of exhaustive deliberation with various approaches and options before making decisions. Slotegraaf & Athuahene-Gima (2011) show that team stability enhances the team decision-making process, and in turn, the ultimate project outcomes of NPD teams. Important to note that team-level debate does not increase new product advantages directly, instead, it facilitates the team decision comprehensiveness, and eventually benefits the product development.

Nevertheless, the decision-making effectiveness will start to attenuate while teams reach a high level of stability. While members become close to each other, they will prioritize harmony and avoid team debate. Additionally, members' thoughts become cohesive and similar while they have worked together for a long time. This could be a disadvantage for technologically complex projects where the innovativeness is essential (Carbonell & Rodriguez, 2006). Bringing new members can be a solution to help the team see things from different perspectives and spark new ideas.

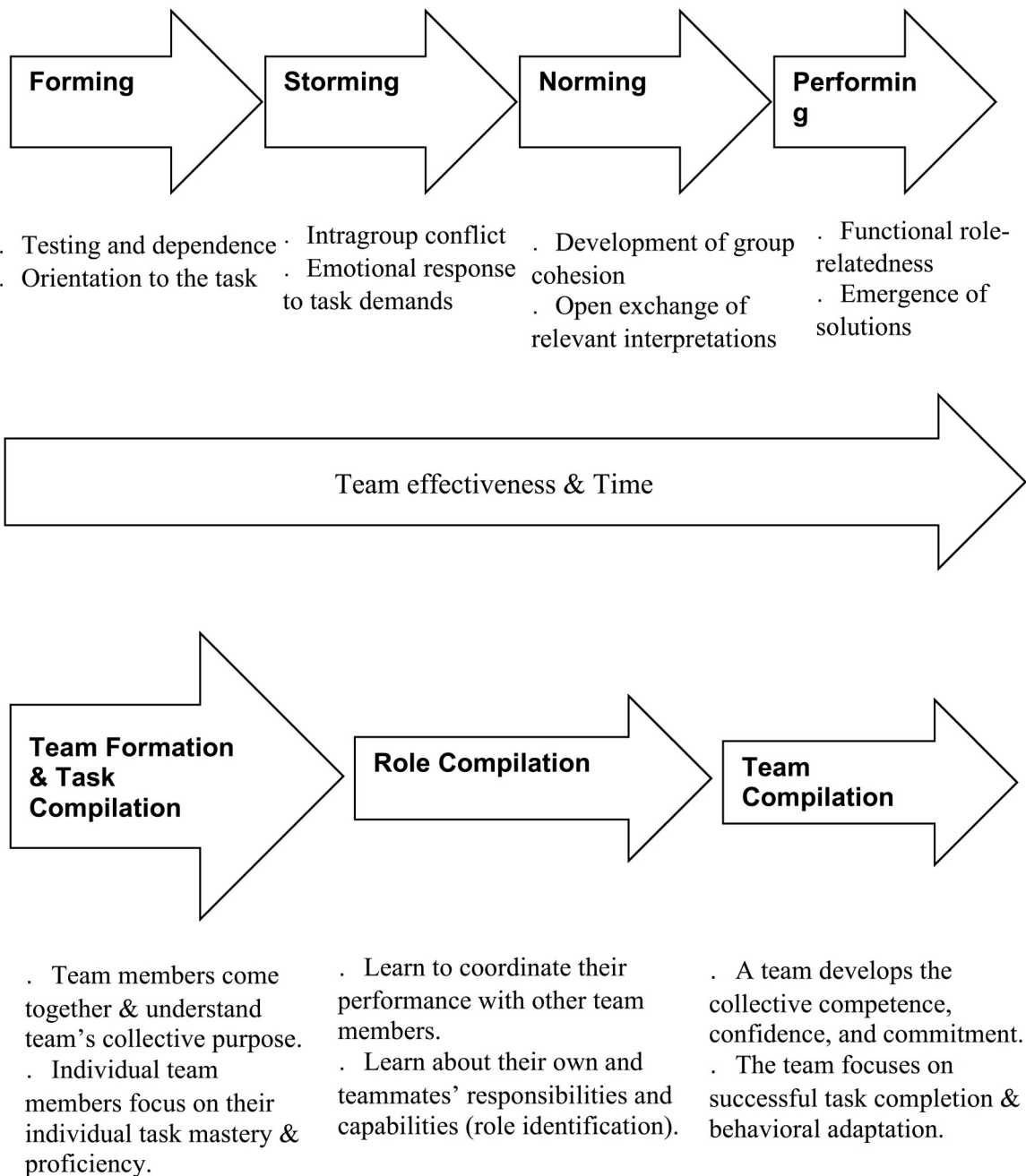


Figure 4: Team Development Phases
 Source: Synthesis of the work of Tuckman (1965) and Lorinkova, Pearsall & Sims (2013)

2.4 Team Processes

Based on the abovementioned literature, supportive organizational environment and empowering leaders do have a positive impact on team performance, yet indirectly. That is, supportive organizational context creates a favorable condition for teams, which increases their opportunities to perform better; however, it does not necessarily guarantee team outcomes. To be more specific, decentralized organizational structure delegating authority and supportive leadership assisting teams with their needs directly enhance the effectiveness of team process, and, in turn, indirectly have an impact on team performance. Hence, team process plays a mediating role between the relationship of organizational support and team performance (Kennedy, Loughry, Klammer & Beyerlein, 2009).

Notwithstanding most of the literature are in line with the McGrath's (1984) concept that team process is the mediator between team inputs (organizational context and team structure) and outcomes (team effectiveness), the results in Stewart and Barrick's (2000) research does not find the support for its mediator role in the relationship between team self-leadership and performance. One explanation for the finding is because the data collection is not longitudinal. As I mentioned in previous chapters, it requires a substantial time for a team to become a real and self-managing team (Tuckman, 1965; Lorinkova, 2013). Thus, a lack of longitudinal examination could be the reason for the unanticipated result. Nevertheless, a revision and further examination on the IPO model are needed (Stewart and Barrick, 2000).

Researchers working on team effectiveness often blend emergent states with interaction process since there is no agreed definition on team process (Ilgen, Hollenbeck, Johnson & Jundt, 2005). Cohen and Bailey (1997) define team process as "interactions such as communication and conflict that occur among group members and external others" and separate process from psychological traits, which the term was redefined by Marks, Mathieu, Zaccaro (2001) as emergent states. Emergent states represent the psychological thoughts of team members, such as their attitude, motivations, and values. They occur and vary during the team interaction and become new inputs that influence the subsequent process. On the other hand, the process is more about members' interdependent acts. It focuses on team actions regarding how teams do to convert inputs to outcomes (Marks et al., 2001).

Marks et al. (2001) synthesize extant process literature and categorize these unsystematic processes into three superordinate categories, namely transition, action, and interpersonal phases (Figure 4). Transition phase processes take place at the beginning of the project cycle, where teams focus on planning and evaluation activities. The processes are mission analysis, goal specification, and strategy formulation and planning. While the team enters the implementation and development stages, the action phase processes start to occur. Action phase processes include monitoring progress towards goals, system monitoring, team monitoring and backup responses, and coordination activities. The last dimension is interpersonal phase processes, representing the processes that teams use to manage interpersonal relationships. These processes take place throughout transition and action phases, consisting of conflict management, motivating and confidence building, affect management (Marks et al., 2001).

Manifestation of Processes in Transition and Action Phases

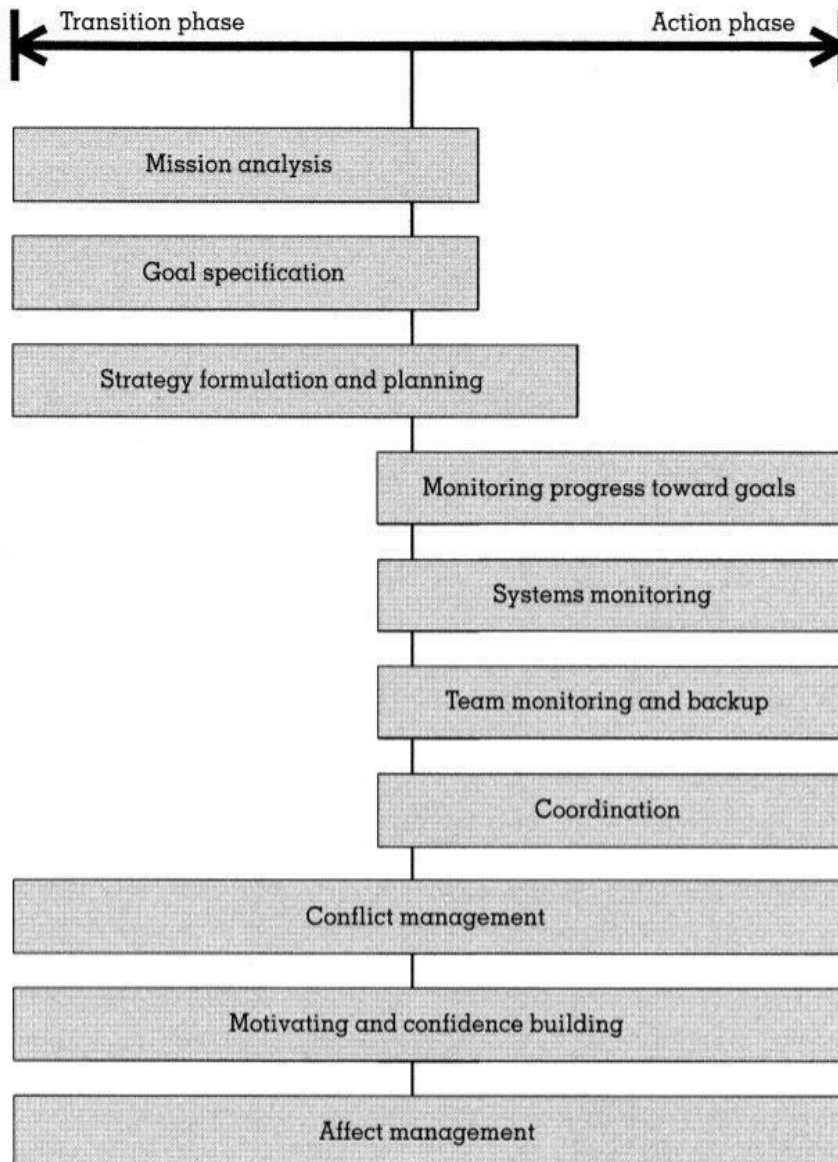


Figure 5: Manifestation of Processes in Transition and Action Phases
Source: Marks, Mathieu & Zaccaro, 2001

Although the framework present ten-dimensional processes, in each superordinate category, selecting one dimension that is most relevant to the research context to discuss would be sufficient for us to gain a breath of understanding of team interaction (Marks et al., 2001). Thus, in the following paragraphs, I will only discuss a few processes that I consider most relevant and conducive to this study. In addition, I integrate the three superordinate phases

with game development life cycle (Ramadan & Widyani, 2013) to visualize how these interaction phases correspond with different stages of game development. Figure 5 helps us to have a more vivid picture about how to utilize the framework in gaming development context.

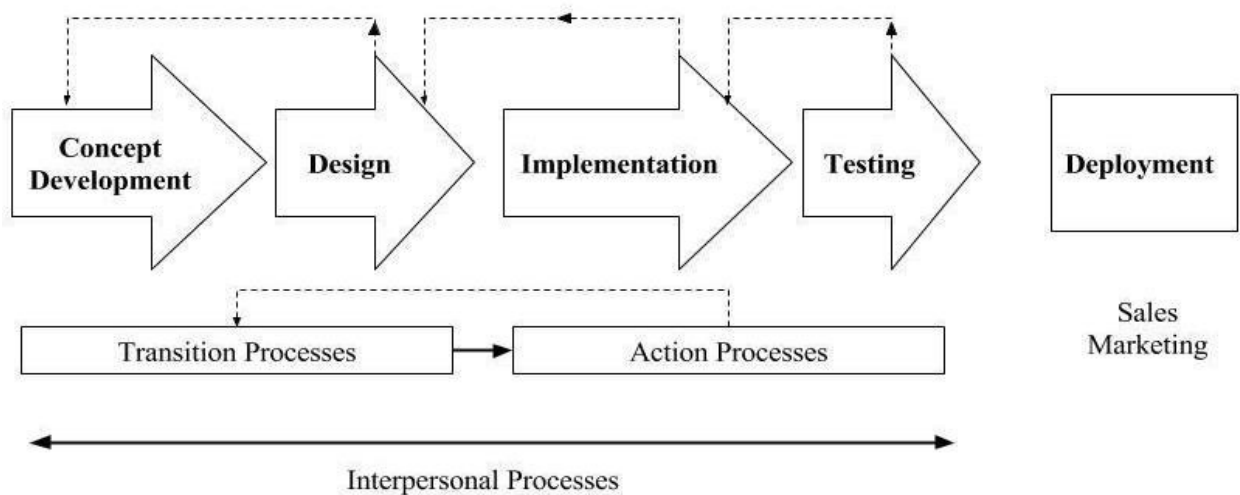


Figure 6: Game Development Life Cycle with team process
Source: Own Illustration

Transition Phase Processes

Team members come up with various ideas and hold different opinions during the planning phase. At this point, team mission and individual task are still obscure. Once the team objective is agreed collectively, members will feel a sense of shared purpose and work jointly with high commitments towards team goals (Carson, Tesluk & Marrone, 2007). Specific goals give members greater motivation to work since members know exactly what they should do to meet the demand. Meanwhile, members' consent to the goals will increase their tendency to stay in the team, which confirms the team stability (Akgün & Lynn, 2002). In comparison with internal communication, group cohesiveness, and external communication, goal clarity is the most significant factor for new product development outcomes and speed to the market.

Team leaders can help teams with goal clarification by using their communicative skills and empowerment to encourage members to discuss their thoughts freely and perhaps set up regular meetings to facilitate communication (Sivasubramaniam et al., 2012). Teams with clear goals are more likely to be supported since the organization or top management have sufficient knowledge of what are they supporting (Akgün & Lynn, 2002). Reciprocally, satisfactory organizational support, such as providing teams with necessary resources and rewards, will enhance team beliefs in achieving goals (Tata and Prasad, 2004).

Action Phase Processes

After planning and evaluation, teams start to develop and realize their concept. In terms of game development cycle, this phase is so-called production, where details, programming, and asset creation take place. Action phase is the core stage of development and requires members' high interdependence to integrate all the elements into one product (Ramadan & Widyani, 2013). Therefore, team coordination plays a relatively important role in this phase. Coordination refers to members' capabilities to integrate and synchronize their actions with other teammates. High extent of familiarity with other member's skills and abilities is the key for members to coordinate successfully with each other. Having a good understanding of "who knows what" enables an efficacious information exchange within the team. That is, the questions will be sent to the right person who equips the equivalent skills and capabilities to solve the problems. Similarly, members will receive the answers and responses they need from other teammates in a timely manner (Maynard, Mathieu, Rapp & Gilson, 2012). Thus, a high degree of coordination can decrease the process loss; in other words, team effectiveness is highly dependent on team coordination.

Through continuous interaction among team members, the team will develop a shared mental model that members can predict each other's actions based on the pattern of team interaction (Zaccaro, Rittman & Marks, 2001). Any changes in a team, for instance, changes of members can give rise to the coordination flux. The flux will be aggravated if the changed member is in a strategical core role. Most importantly, the coordination flux has a negative impact on team performance (Summers, Humphrey, Ferris, 2012). Thus, it is essential to remain same members within a team for assuring the coordination and team performance.

Interpersonal Phase Processes

Conflict is one of the most common but relevant issues occurred during team interaction (Zhang, Cao & Tjosvold, 2011). Three different types of conflict are identified: task conflict, relationship conflict, and process conflict (Daniel, 2010). Task conflict refers to arguments raised out of differences in opinions over the project between members. Team leader's supports of conflict would encourage members to express their ideas and opinions, which in turn sparks members' creativity (Daniel, 2010) and helps the team to reach consensus more easily since they have a shared understanding of each other's thoughts (Peterson & Behfar, 2003). Slotegraaf & Athuahene-Gima (2011) also support the idea that conflict over project's strategies or task priorities is positive to new product advantages; yet, only if the team takes these different opinions during the dispute into serious consideration and utilizes them in decision making.

Nevertheless, team conflict can be negative to performance and inhibits the creativity if the controversy results from interpersonal incompatibility and hostility (Daniel, 2010). This type of relationship conflict is the most disruptive type of conflict since it will cause serious process dysfunction and damage team effectiveness. Therefore, forming a team with members who have similar thoughts and behavior can reduce the level of conflict and improve effectiveness (Sanots and Passos, 2013). In addition, team leaders can promote team coordination by encouraging members to manage conflict collaboratively, which in turn can not only alleviate the conflict damage but also increase team effectiveness. Leaders can show members the benefits of coming up integrative solutions and establish the atmosphere that conflict does not necessarily to be competitive or to have a win-lose answer (Zhang et al., 2011).

2.5 Toward Theoretical Framework

Teams have become a strategically important tool for organizations to gain competitive advantages. This type of organizations that using teams to perform their central tasks is so-called team-based organization (Beyerlein and Harris, 2003). Mobile gaming companies are classic examples of team-based organizations that the success of companies is highly contingent upon the effectiveness of game development teams. The objective of this study is to find out how organizational contexts influence effectiveness of game development teams. Enlightened by the input-process-output model of McGrath (1984), the literature starts by stressing the importance of the work environment; that is, the organizational context where the teams are embedded in.

To cope with the dynamic market, an organic organizational structure, which refers to a low degree of centralization and formalization, would be a favorable environment for teams to develop new products (Alhadid & Abu-Rumman, 2015). Decentralization gives teams authority to make decisions so that members can respond and solve the problems immediately. On the other hand, the low degree of formalization provides teams flexibility to be creative and enhances their innovativeness of new product development. Nevertheless, it is essential for organizations to find out the optimal degree of decentralization and formalization, since the excess of decisions can cause the dysfunction of teams (Anderson & Brown, 2010), and a deficiency of codified rules would decrease the team operational efficiency (Strese et al., 2016).

According to the situational leadership notion, leaders should adopt different leadership styles based on the abilities, the level of experience, and readiness of members (Hersey & Blanchard, 1993). Hence, to lead game development teams that are normally consisted of talented developers, empowering leadership would be the most appropriate style. Teams led by empowering leaders may have poor performance at the beginning of the project. However, with continuous learning and improvement, teams with empowering leadership would outperform teams with directive leadership eventually (Lorinkova et al., 2013). Moreover, transformational leadership and servant leadership are discussed in this study for understanding different types of leader-follower relationship. Despite their different ways to

influence followers, both of them have a positive impact on team effectiveness through their empowerment (Özaralli, 2003; Irving & Longbotham, 2007).

Team design and team processes are the two main factors that directly relate to team effectiveness (Cohen & Bailey, 1997). Based on Hollenbeck (2010), team design is constructed by three dimensions: team composition, team autonomy, and team stability. Heterogeneity within the team is like a “double-edged sword” (Milliken & Martins, 1996) that it can give teams the capacity to solve complex problems and generate innovative ideas; however, it can also cause the coordination failure among members. Based on the literature, we realize that team creativity is more likely to happen under the autonomous environment, yet an excess of team autonomy can give rise to team isolation from the rest of the organization (Haas, 2010). Moreover, a team needs to go through many phases before becoming a real and self-managing team (Tuckman, 1965; Lorinkova et al., 2013); thus, stable team plays an important role to team effectiveness. As for team processes, leaders should assist teams with goal clarification and provide teams with enough organizational support. Moreover, it is essential for leaders to manage team conflict appropriately by encouraging them to solve problems collectively, instead of seeing conflict as competition (Zhang et al., 2010).

Based on the literature, I argue that organizational context and team design and team processes are the main factors that have a direct impact on team effectiveness. By linking these perspectives, I develop a framework (Figure 6) to help us examine how the organizational environment affect the team effectiveness through its influence on the formation of the team and the interaction of team members. Using this framework as an analytical tool, I aim to examine how teams are constructed within different organizations. Moreover, I expect to find out how different organizational environment and the distinct natures of teams affect their ways to achieve the goal during planning, designing, developing and gaming launching stages. Finally, we want to understand how the different team design and processes make a difference in developing a successful game.

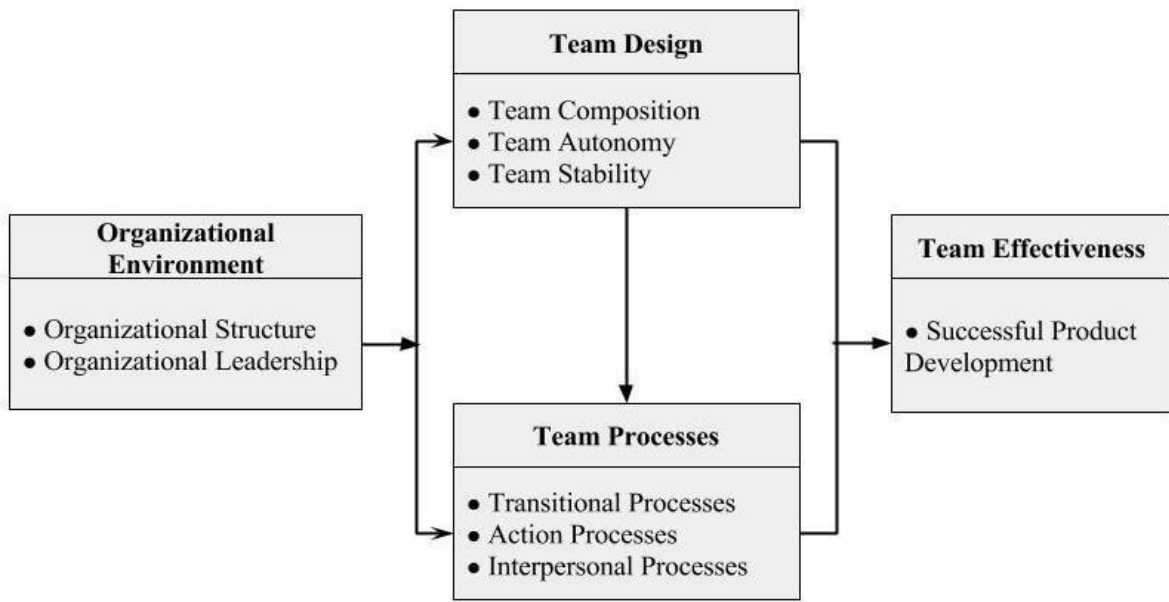


Figure 7: Theoretical Framework
Source: Own Illustration

3 METHODOLOGY

3.1 Research Design

The research design is a plan that enables researchers to collect and analyze data which are applicable and conducive to answer the questions studied (Ragin & Amoroso, 2010, p.28). The nature of this study is exploratory by asking *how* in the research question (Yin, 2003, p.6). The study aims to discover and find out the influence of organizational conditions on game development teams and their effectiveness. As I mentioned earlier, due to the lack of academic research, especially on the business side, of the mobile gaming industry, there is a need for more in-depth analysis to expand our understanding of this field. Thus, through this study, I intend to generate new knowledge and implications for mobile gaming companies.

Qualitative inquiry provides the detail and rich data, and the purpose of the researcher is to transform these data, through analysis and interpretation, into useful information. According to Eriksson & Kovalainen (2008), qualitative research is an adequate way to produce knowledge (p.5). Based on the above-mentioned reasons, a qualitative research is adopted for conducting this study. Within qualitative research, there are various genres to choose for empirical research. Yin (2003) states that case study is likely to be used while the questions are about “why” and “how”.

Both of the sub-questions of this research attempt to address “how” questions and are highly pertinent to real-life conditions (Yin, 2003, p.13). In addition, the case study is widely used by researchers as a tool to study complex business issues (Baxter & Jack, 2008). The research questions of this study are rather complex that the study attempts to explore the interaction between organizations and their game development teams as well as how these different types of relationship influence the game development. Therefore, the choice of case studies as the research strategy is justified. In contrast to an extensive case study that investigates on multiple companies, this research tends to be an intensive case study that focuses on one unique case.

Case studies can involve either single or multiple cases and there is no answer about which one is a better strategy for research usage. Dyer and Wilkins (1991) mention that it is not

promised that a richer theoretical insight will be generated while using a single case study approach, and it is neither guaranteed that the same kind of insights will be developed from using a multiple case study strategy. According to Yin (2003), a single-case study provides a more in-depth information on a specific issue, while the results created from multiple-case studies are regarded as more reliable and robust (p.46). Besides, multiple case studies are usually more expensive and time-consuming. If taking a fixed time period into consideration, single case studies would be a better choice for creating a high-quality study through careful and thorough data observation and theoretical analysis. Due to the fact that it provides me with the possibility to gain a deeper understanding of the subject, the single-case study is chosen as my empirical research approach.

3.2 Data Collection

This qualitative research will conduct in the form of single case study, which the goal is to investigate and gain an in-depth understanding of a company that has developed successful games. That is, the case company will be chosen upon the commercial performance of their games. According to Yin (2003), the selection of cases is relatively imperative for case studies. Hence, in order to yield meaningful and convincing findings, I first set the standard of sample selection rather high. The selection criteria for case companies is based on if they have developed games are currently in the top 50 grossing in both iOS and Android, which satisfies the rationale of “successful games”.

Selecting companies with this approach, the ultimate selected companies are the exemplars of the mobile gaming industry, which makes the generated results more reliable and convincing as well as provides valuable implications for future application and research. Retrieved the data from App Annie on June 18, 2017, I created a list which includes the top 50 grossing games in both iOS and Google Play app stores in the United States (Appendix 1). Furthermore, the list encompasses the background information of mobile gaming companies behind these top grossing games, such as the countries of these companies, the number of employees, the founding year, game genres, and game release dates. After fulfilling the list, my supervisor reviewed and examined if she has possible connections to contact the listed companies. Later, the final case company was chosen based on the

accessibility. The participating company wish to remain anonymous, therefore, the company will be referred as Company X in this thesis.

Since the nature of this study is to explore and discover a little-known phenomenon, semi-structured interviews would be the most effective means of data collection (Rowley, 2012). The flexibility of semi-structured interviews enables interviewees to respond freely and with their own opinions, which benefits researchers to understand respondents’ views and attitudes toward certain issues. With semi-structured interviews, I am able to acquire more information, and sometimes, unexpected answers from the interviewees. Besides, for semi-structured interviews, an interview guide that helps researchers to ask questions in a systematic manner and keep the conversation surrounding with research topic is needed. (Qu & Dumay, 2011). Hence, the project team and I created an interview guide and constructed the interview questions collaboratively (Appendix 2).

Three interviewees were chosen from the case company, and each of whom was in different roles and positions to allow for various disciplines and organizational units or levels of hierarchy to be represented for a more versatile sample. The chosen interviewees (Table 3) were all highly related and involved in game development and decision-making process.

Abbreviation	EVP	SVP	HOS
Title	Executive VP of Games	Senior VP Global Studio	Head of Studios

Table 3: Company X interviews

Each interview took around an hour and all of them were recorded to ensure the validity and reliability of the research. In addition to interviews, documentation, which was mainly online resources, was used as another data collection method. The external documentation, such as articles, speeches, online conferences, were used before interviews to gather information regarding the organizational background, their philosophy toward game development as well as their management styles. It helped me to be familiar with the organizations and facilitated the data collection process during interviews. Later, after interviews, the external documentation enabled me to verify the data collected from interviewees and to gain a deeper understanding of their words and thoughts.

3.3 Data Analysis

The unit of analysis defines what a “case” is in a case study (Yin, 2003, p.22). In this study, the case, namely the unit of analysis, is the mobile gaming company. The definition of the unit of analysis will be clear while the research questions are well-specified (p.24). Hence, to trace back to my research questions. The research questions aim to understand the influence of organizational context on the effectiveness of game development teams. The organizational context, in this research, refers to the organizational structure and leadership styles. The objective of this study is to discover the most favorable organizational context that facilitates the effectiveness of game development teams. Overall, it is clear that the focus of this research, as well as the unit of analysis, is the organization.

For the data analysis, I followed the *relying on theoretical propositions* strategy, which is the most preferred one in the case study and especially useful while the research problems regard “why” and “how” (Yin, 2003, p.111-112). That is, I utilized the preliminary theoretical framework to guide my data analysis, which enabled me to concentrate on the specific data that is most relevant to my research questions. In other words, I already had some prior codes in my mind, which were raised from literature review before I started the data analysis. Nevertheless, I still kept an open mind in case any unexpected insight or concept emerged during the phase of data analysis.

The transcribing work was done by an intern in the business department of Aalto University. However, in order to keep myself familiar with the interview contexts, I reviewed the recording files, and most importantly, made short notes right after the interviews to reflect the key issues I considered useful and crucial for the following data analysis. Before presenting my empirical findings, I illustrated and summarized the overall empirical research processes below (Figure 7):

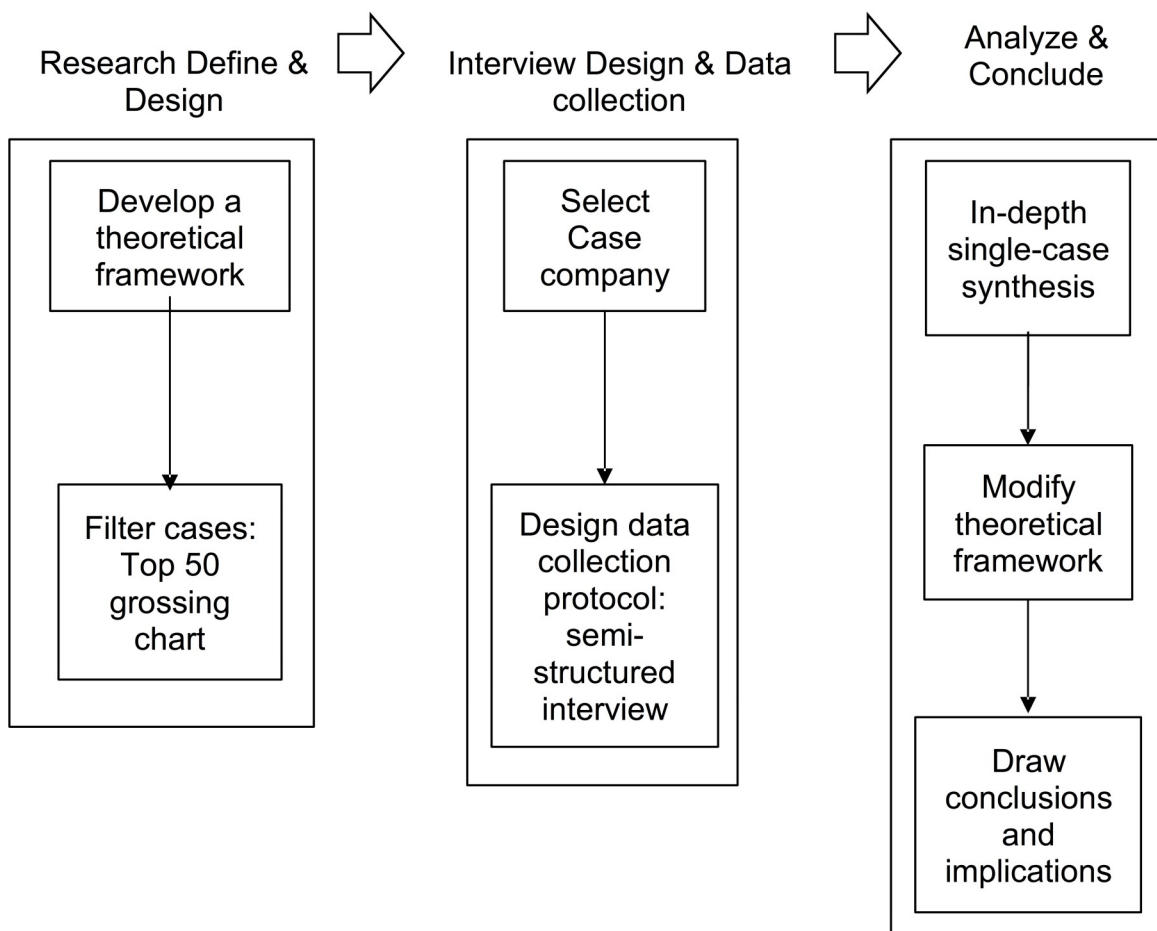


Figure 8: Case Study Method
Source: Own Illustration

4 EMPIRICAL FINDINGS

After having learned about the team effectiveness theoretical framing and getting to know the choices of the methodological approach of this study, this part of the thesis will present the empirical findings from the semi-structured interviews. The findings will be categorized and discussed as follows: First, I will discuss the organizational structure of Company X regarding how the decision makings have been made in the company and its information flow. After that, I will move on to the leadership style of the company about the extent of power delegation from the management to development teams and the supportive role of managers. Finally, I will focus on the development teams, analyzing how they are usually formed, and how they work together.

4.1 Organizational Context

To re-emphasize the words stated by Harris & Beyerlein, which was mentioned in the literature reviews that “team-based organizing is not about teams, but the organization.” (2003, p. 192). The environment of the organization influences how the development teams integrate within the company, which is a crucial factor that affects the effectiveness of teams. According to the developed theoretical framework, organizational context consists of organizational structure and leadership style. In the following paragraphs, I will go through and analyze the interviews based on the themes that were discussed in the theoretical framework.

4.1.1 Organizational Structure

It was mentioned in the literature review that organizational structures vary depending on the industries and the strategy of the organizations. An organic flexible structure would be a more suitable structure for gaming companies, where the market is dynamic and changing rapidly. While talking of the organizational structure, all the interviewees agreed that the organizational structure of Company X is flat and developers should always feel free to reach out and share their thoughts with the management.

Low Degree of Centralization

Most of the decision-making activities in Company X have been delegated downward to the team level. For example, one of the most important decisions in gaming companies is the so-called “Game kill decisions”. Game kill decisions are part of the game development processes. They are very important and hard to make, especially when the games are still in the initial phase, e.g. concept development and design phase.

“Sure, that [making game kill decision in the initial phase of game development] is the more difficult part, because once you are out, you have data and you know immediately if you are a failure or not.” (SVP)

Once the game is released, you can have data to determine if the game is a success or not. However, it is hard for anyone to tell if a game will be a success or not when it is still in the initial developmental stage, such as idea creation phase. For Company X, the game development team is the one to decide if the game should be continued or not. Moreover, game development teams can make the game kill decision whenever they feel it’s needed. There is no certain time, standard, or rule to kill a game. When the team sees the game does not do well, then the kill decision has to be made.

“Whenever it happens to be. It could be there, or it could be... If we go all the way to soft launch and we see that hey, this is not working out at soft launch, why take the game to global launch green light? If you see that you're not hitting your own targets and there is no chance of meeting them. So...” (EVP)

Teams are responsible for deciding to continue or kill their games. Game kill decision is the most important decision within game development, and Company X fully delegates this decision-making authority to the team. The management trust that game development teams know what are the best decision for their games.

“ It's [killing a game] a sink. And we'd like for teams to discontinue their games outside of that formalized process.” (EVP)

“And at that point, you can decide that although our numbers don’t look so good, we think that the idea is still very good, we will just continue pushing forward. That’s one of the most difficult decisions in game business because sometimes you have a hit in your hand and you didn’t quite know it. And, vice versa, you think that you have a fantastic game at your hands but it just doesn’t perform. It performs like shit, nobody likes it. What are you going to do?” (SVP)

The success of a game is hardly predictable, which makes the game kill decisions hard. When a game development team feels a game is not right, it’s not a must to kill the game. There are many other choices for the game development team. They can decide to continue with the same game, or pivot and make some changes to the game, or they can kill and end the game. But most importantly, no matter what the decision is, it is always determined by the development team.

“ If you don’t immediately have something that you think it's gonna make it. And when you start to make those decisions that probably it isn't working, there's always the kill decision. If you kill it, it's killed and it's gone. And there is pivot decision, let's change some parts of the product or let's take a new marketing position. It used to be about dogs, let’s try cats or space aliens or something, you pivot. Or, you just continue with the current part. You add little things and add new little twists to it then.” (SVP)

Like the words from the head of studio, the decisions regarding game development are all decided by teams themselves. The head of studio does not directly influence the game development. She can give feedback and her thoughts to the team, but it is the team itself to decide what to do and make the final call.

“So, not necessarily kinda like directly affecting the game at all. Of course, I love playing games, and I love playing our games as well, and I can give feedback, but it's more gonna like as, you know, this is my inputs as a player, and you know, do

whatever you want with that feedback. So, it's actually the team, they kinda like decide what to do.” (HOS)

Low Degree of Formalization

Company X aims to have little bureaucracy and official rules and formalities. Employees should always feel free to be around with the management.

“I think that's the reflection of whom we want to be and also I think a reflection of Finnish culture, there should be very little red tape, there should be very little aura around the executives.” (EVP)

Although with the low degree of formalization, Company X still has certain routines and official formalities to increase and make sure the information flow between the studios and the management. For instance, there is monthly operation reviews where the management team will meet with the studio leads and product leads.

“Each studio has a monthly operational review for the central management team, EVP’s management team. And, that’s the position we met all the product leads. There is Head of studios, and all the product leads and then the central management. It was 12 people or so have met them.” (SVP)

However, the main purpose of these meetings is to enable the management to get to know the progress and situation of each studio, knowing what they are working on, what are their products currently.

“We have monthly sit-downs with these studios, in which just normal "Hey, how are you doing? What's going? Is there anything we can help with? What should everyone knows about at the roundtable? " It's more like..., I guess, summarise what those are, it's more like a strategy thing, operational thing... ongoing recruitments etc.” (EVP)

No matter it is in meetings or daily operation, the management team would not intervene in the game development. For Company X, the job of the management team is to know the game development progress, situation and to help when the resources are needed.

“I interact directly with the product lead on the level of how’s your resourcing going? How’s your team? Or, what direction are you going? What board game mechanic are you thinking for the next one? There I can be the bouncing wall.” (SVP)

Another example of the formalization is the gate review process (Figure 8) where the games will be evaluated by the management team and stakeholders. In terms of the game kill decision, even though all the decisions are all made by the teams themselves, there is still the three-gate review process, which is a formalized meeting to decide whether the game development is ready to go into the next stage.

“In our case, our production methodology or gate review process that goes through all of these called "fly pass", and it goes through a set number of decision points, in which I am involved in those decision points.” (EVP)

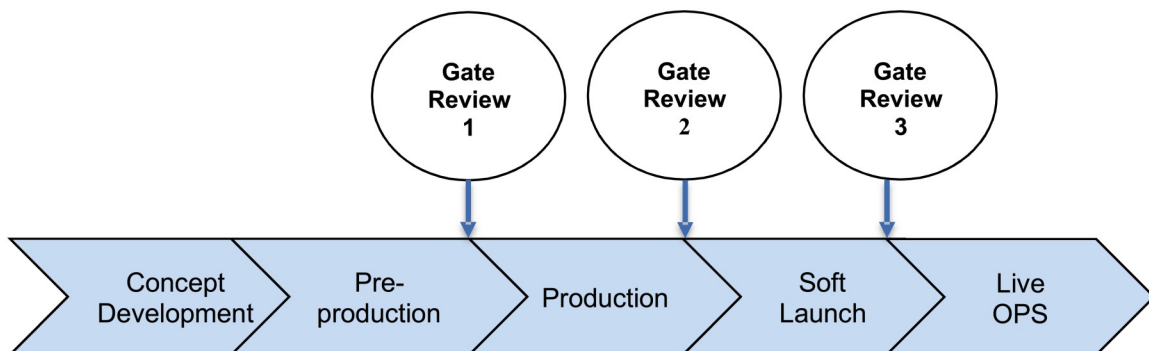


Figure 9: Gate Review Process of Company X
Source: Own Illustration

Overall, even though Company X has these formalized meetings, the main purpose is not about decision making but to have a formal way to get to know the teams’ progress, and to make sure that they are aligned with the company. The management control within these meetings or the organization is relatively low. The management team will not intervene with the game development decisions even in those formalized meetings.

“The point is not that the team is doing something over there. Then they enter the room, we don’t know them they don’t know us. They enter the room, we do a quick open the cadaver. We look in there and I just say yes or no, that’s a failure. The process has to be substance, there’s a constant talk and they ask us outside those checkpoints what do you think about this? Should we warm up the next stage? These are the questions we are facing, and those should be only kind of final confirmation. Are we doing something stupid? Does somebody here notice something odd here? In the old time, it used to be like that. But that would be very old-fashioned way that even in this company, it used to be like that the game teams enter a room where there were decision makers who would shout at them, and that’s obvious what that leads to... it doesn’t work ... not on any level.” (SVP)

Besides these formalized meetings, the management also gets to know the progress of each development team through constant talk with developers. It’s not like the game development team only has the chance to talk to the management regarding the game kill decision in those formalized meetings. The talk happens every day. Game kill decision is not a one-time decision making. It is a decision that made through constant interaction and discussion between the management and development teams. Nevertheless, the final decision is still determined by the development team, the gate review process is just for having an official final confirmation.

Communication

With the low centralized and low formalized organizational structure, the effectiveness of communication and high extent of interactions across different functional teams become even more important to ensure team goals are aligned with organizational goal. Company X has a well-structured reporting system; however, that is not the only way for the development team to approach the management. the development teams are still felt welcoming while they approach the management directly. People within the company are close to each other and should always feel free to share their thoughts without any reservation.

Well-structured reporting system: The number of employees of Company X is over 300; thus, the size of the company is big in comparison with Supercell (around 190). Therefore,

in order to have efficient information flow within the whole organization, case company has a clear and well-structured reporting system (Figure 9).



Figure 10: Structure for reporting of Company X
Source: Own Illustration

"He [the head of games] had just too many things to do. Too many people, too many people, basically. Because my direct reports are five, or could be six. I am running one of the studios myself at the moment. The previous studio head left. So, we are one point six, but at the moment, one point five. One month was five. If EVP had all these people report to him, he would die. So, you can't have that much, you are not supposed to have that many direct reports." (SVP)

As we can see from the words of SVP, there are too many people within the organization, so it requires a well-organized management structure and layers of reporting system to help the company to operate.

"From games structure or reporting structure point of view, studio leads are a layer that reports into a global head of studios, that reports to me. So, and they have, naturally, weekly things and one-on-ones etc. in their own process." (EVP)

"Product lead has one. Product lead leads a game. And then, product lead reports to studio head, and studio head could have... our smallest studio has one game, the biggest studio has 8 teams." (SVP)

"We have a guy who sits on top of the marketing. He owns the marketing budget. And he is my peer, so we both report to EVP" (SVP)

Through the words of our interviewees, I was able to illustrate the reporting system of Company X. The reporting system of Company X is really straightforward and clear that everyone knows whom he or she should approach and report to. Nevertheless, the well-structured reporting system is just a formal method to ensure the effective information flow within the organization, and within the game development teams as well as the management. From the interviewees' point of views, the informal communications and constant interactions with developers are way more important than the talks in formal meetings.

Lateral communication: Even though there is a well-established reporting structure, it is not restricted. There is very low hierarchical discrepancy within the Company X. Everyone should feel free to talk to anybody in the organization. If anyone has a good idea or any problem, he or she can always directly approach the head of studio, the global head of studio, or even the head of games.

“You should feel very empowered and very open and free to go and say anything to anybody that needs to be stated.” (EVP)

“ I get signals from my game teams, they say that this is now a really good opportunity, we should invest a lot into it. And then I try to influence EVP, let’s invest into that direction. And, they, of course, go directly to EVP also talk about the efficiency and the opportunities.” (SVP)

“I think that we have kinda like.. because we have low hierarchy. And, the EVP and myself, I think that we... I would say that we are all very approachable people so I don't think that there isn't any big hurdle to actually come in, and say that this is something that I heard or I see this or did you know that they are doing this maybe we should also consider. So, I think that the people actually feel fairly they don't have kinda like any problems bringing up the new ideas.” (HOS)

Close internal relation: From the SVP’s description, the management team has very close internal relations with their employees and teams.

“And that I think is the case for Company X, we both CEO and I, and rest of executive team have very close relationships with most of the organization, very open dialog with most organization.” (EVP)

Nevertheless, as the abovementioned, the size of Company X is not small. It is hard for the management to keep a close relationship with everyone within the organization or to know everything that is going on within the company, for example, how developers and teams are doing with their games all the time.

“ I know most..., I mean, let's also face it that my perception of knowing most of the people is probably wrong, there are over 300 people in our organization. I simply cannot know each and every one of those persons well. What I haven't noticed, which is kind of a signal, is when you walk downtown and you see more and more people saying hi to you, but you don't know who they are that would be a clear signal of something... I'm not even recognizing them. So, I do recognize, I think, most of the individuals.” (EVP)

“But the further down we go, of course, the more dialectic it becomes. Up until is the point that I don't quite know what those guys do there. Not everybody knows what EVP does every day. Not everybody knows what I do every day. Of course, you know, in a ten-person company, everybody knows everything, very intimately, because there is one room. But it's a three hundred person operation. Not everybody knows everything.” (SVP)

After the talk about formalized structures, and meetings, EVP quickly brought up the importance of the informal interaction with employees.

“But I do want to underline that more informal sporadic encounters are very important to keep a feel of what is going on in the organization.” (EVP)

While discussing the greatest challenge to work with the game development teams, the head of studio emphasized the significance of informal communication.

“I think the challenge is probably... it's having enough time to actually talk with people and to understand how they are feeling and what they are doing and you know, being present.” (HOS)

From both of their words, we can see the importance of communication within a mobile gaming company. The informal communication can help the management to enhance their relations with the game developers and to have a deeper understanding of what is truly going on within the teams or even the whole organization.

“I tend to speak with everyone. I meet them, and then you have a bit of a deeper relationship with a lot of them. You actually know what they're doing, and you know the projects they are working on, you know the importance of everything going on.” (EVP)

4.1.2 Leadership Style

In the last section, I reviewed the organizational structure of Company X. However, the leadership styles and organizational structures are interdependent. Leadership is the key to stabilize the organizational structure. The leadership style of Company X is more toward servant leadership. The management team of Company X emphasized on empowerment, communication, understanding people, assistance and support. The management team influences the game development by providing assistance and resources they need. The management team focuses on helping teams and give them support. Meanwhile, to provide development teams directions without intervening within the actual development processes.

Empowerment

Game developers are the expertise with their games. The management couldn't have as much knowledge with the game as game development teams do. Therefore, it makes senses to empower and delegate the power down to developers who know the best about their games.

“It's really really difficult to steer top down, and if I decide that there are 19 teams, I know something about it, I know details of some of those games. I could decide.....Or they are in their early stage, they are still at the point where it's in prototyping, pre-production, it's a good moment to align yourself with the team and give them feedback. But if it's a game close to launch, and it's a game I don't play, I am not gonna say anything, pretty much anything. I will just be hands-off and say what do you need from me, what sort of help do you need from me, and of course, they need very different help.” (SVP)

During interviews, we asked the interviewees about what management team would do if there are many great game ideas for the company to choose. The response from EVP gave us the impression and the feeling of the empowerment that he completely delegates the decision-making rights to the head of studio and teams. As he said, “they are the business owner of the portfolio of the games”, “we are not product owners, we are stakeholders”.

“You could think of the studio leader or head of studio, whatever you want to call it, as the business owner of the portfolio of the games within that studio. They are general managers in terms of their own business.” (EVP)

“Well, let's go back scrum terminology, and ... from purely that point of view, I and my executive team as well as studio leadership, we are not product owners, we are stakeholders, and that ... when you really understand what that means, then you have environment within the product teams, where it belongs.” (EVP)

“We called finger pointing, how much finger pointing do you do? And that's the difficulty to say, cause I am supposed to say that the next studio could be about X, and Umm... I could stop there. Or, I could say it's about X, we gonna do it this way, we gonna do it in Prague and we are gonna use blah blah blah blah blah..., go and do it. That's an example. And if I choose the way that I say, this is your opportunity, we should go to this direction, this is a new gaming type, which we should do. Figure out the plan and come to make sense. That's.. then somebody is empowered, trusted, that's work on it. I was just given the bandage to make it happen.” (SVP)

Through the words of interviewees, I can feel the managers' full trust in the development teams and the implementation of empowerment. But then it raised the question that if most of the decision makings are delegated downwards to the development teams themselves, then what is the duty and role of the management team of the Company X?

The Role of Management

It is true that giving the power to development teams is important for the team effectiveness. However, empowerment is not simply just delegating all the work and decision-making rights to game development teams. The management needs to find a balance point that they provide a clear direction and instruction to the teams that what they should do, but not too restricted. This following part will discuss some roles of the management team that were raised while reviewing the interviews.

Providing direction: While development teams are working on a game, the management team's job should be focusing on the organizational level, such as planning long-term strategies and recruiting talents to join the company, so that developers can stay focused on developing games.

“The most important responsibilities I think in terms of general manager like this, is mission-vision-strategy, hiring of the executive team within games and on top of that communication in both internal as well as external. Those are, kind of, the top most important. Then I think the bulk load of the time GM spends and should be spending is on communications as long as those other aspects are somewhat in order.” (EVP)

“It's very easy to stay focused, it's good you [developers] stay very focused, it's great. But it's bad because you don't have any time to look outside. You know, you are not because you are not supposed to. You are supposed to launch in three months' time, you are supposed to stay on that track, and that's great.... but then somebody has to look outside, and that's why you have the strategy process.” (SVP)

Developers are task-oriented and highly focused on their game development. All they think about is to develop the best games and the deadlines. Therefore, the management job is to discover the market, know what's going on within the industry and what are the trends and changes etc. and to set up the strategy so that the game development teams can have a clear direction about what they should do to keep up with the market without spending time on researching, discovering or even guessing themselves. Overall, the role of the management

is to help the game development team to have less distraction, so that they can be more focused.

Company X at the moment have five studios focusing on different genres of games. By having different genres, the company is able to secure a healthy position in mobile games and also to make sure that they will not miss the next big trends. The five studios are Match, Slingshot, Battle, RPG, MMO studios.

“[Securing healthy position in mobile games by] those 5 genres, making the best possible games for those 5 genres, and making sure that everything we launch is scalable and strategic in nature.”

Setting up the framework, giving each studio a clear genre to work on, is the role of the management. With a clear strategy from the management, the game development teams can purely focus on their games. Nevertheless, the ultimate decision-making right is still on the developers' hands. The management provides broad directions, but ultimately it is game development teams' decisions to decide how they want to operate within that direction.

“I have to have a certain type of belief that occasionally what we set as the frameworks are useful. But it's the game team who can ultimately... It's like a tube, and inside the tube, we have to operate. And, it's my role to define the tube what, ... how big is it for example at the moment?” (SVP)

“I am one of those people who set up those parameters and framework. But it's the people in the game team who actually evaluate their usefulness, they are the ones who say that again, what they gave us wasn't that useful or maybe was useful this time.” (SVP)

Again, the role of the management is to give teams a direction for them to move forward. But within that direction, there are still lots of space and flexibility for teams to develop.

“Let's give it a little goal and push and see where it goes. Because keeping the pipe in the right...., pointing in the right direction and the right shape that's the constant thing that I try to do with the studio leads and that's a very known activity. What happens in the pipe should the reason why I am using the pipe metaphor is that you can move in the pipe, but you are restricted by the pipe.” (SVP)

As I mentioned above that the role of the management is to provide directions to teams, but also give them autonomy and space to develop their ideas. Nevertheless, autonomous does not mean isolated. Game development teams develop games which are the core business of the whole company. Thus, the task of the whole company and the management team is to support the game development teams.

Providing support: Besides providing directions, the other important role of the management is to provide all the support they can. The ultimate goal of every part of the company is to support the game development teams. For instance, helping teams to find the right competence they need.

“And then I help in my team leads the competence, craft leaders, talk to their people, and understand if there are some people who want to, who are maybe looking for new opportunities and would be interested in joining that team, and then it's quite organic way. And sometimes we of course recruit. I think that's definitely one of our key areas as well. I am there, I am of course very involved.” (HOS)

It's the management team's job to help development teams by providing them with an environment where they can completely focus on developing games. It was discussed in the interview that the head of studio usually attends most of the meetings as a representative if the meeting is not mandatory for development teams to participate. In this way, the teams do not have to spend time on that and will be able to keep their minds on the games. In other words, providing support to the development teams means helping them to remove all the obstacles they encounter so that they can have an environment where they can completely concentrate on developing games. I made a figure below (Figure 10) to summarize the support flow of Company X.

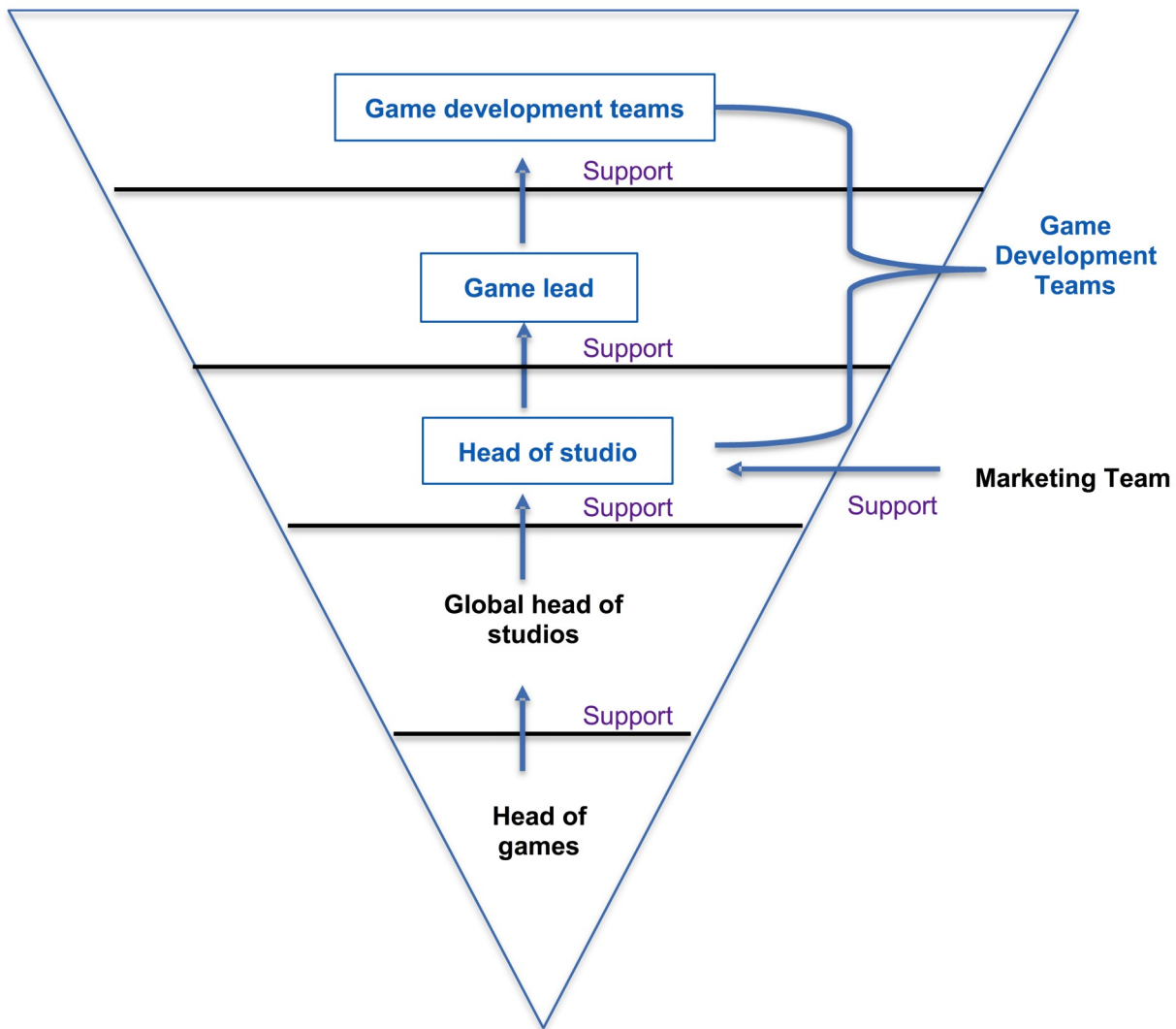


Figure 11: Support Flow of Company X
Source: Own Illustration

“I think that probably the biggest challenge is kinda like not being in the meetings all the time. But it's also kinda like that I kinda like thinking that if I am in the meetings, then it means they don't have to be. I kinda like I try to make sure that they're kinda like, as I said in the beginning that they can really concentrate on working with their games.” (HOS)

“I tried to kinda like move all the obstacles, I tried to kinda like make, I make sure that they can actually concentrate on making the best game ever.” (HOS)

Being supportive does not mean that the management team has to monitor and be with the development teams all the time. This brings us back to the concept that autonomous does not mean isolated. The management team has to find a balance point where they won't intervene in the game development processes but at the same time, they will provide development teams with support when the teams need. The management team should be detached, but meanwhile to be able to "serve and help" when needed.

"And, if you ask me, you definitely have to be on the detached side of things, you have to give a lot of room. But be available, this is a service function. I am supposed to help people when the problems come, rather than pushing the front line." (SVP)

The help that each game development team needs varies. The management provides different kinds of help, situational dependent, based on what each team needs.

"Well... I am kind of deciding already that these are the games where I will be working more closely, because they are the games that I play a lot, and my background, my background is such that I actually can help you. Or they are in their early stage, they are still at the point where it's in prototyping, pre-production, it's a good moment to align yourself with the team and give them feedback. But if it's a game close to launch, and it's a game I don't play, I am not gonna say anything, pretty much anything. I will just be hands-off and say what do you need from me, what sort of help do you need from me, and of course, they need very different help. Whereas the team that who wants opinions on how to do cooperative match games, then I ...then I could actually be a substance, substance person." (SVP)

Empowering, that is, giving the room and autonomy to game development teams, is essential to the effectiveness of game development team. However, it is important that the management plays the support function, giving developers all kinds of help and being available when the help is needed.

Trust your people: The fundamental element of empowerment is trust. Through the interview with the management team, you can feel that it is their trust in the teams enables them to empower and delegate authorities to the teams.

“I think that they are quite successful in it [making own decision while there are lots of ideas to choose], and this is really where the studio leadership should be capable in taking this forward, right.” (EVP)

“And that's [scheduling their game delivery time and their progress] where the great studio management and great product leadership within the studio really come shining through, and I don't think that our current culture wouldn't allow for that to happen, it solves itself, basically.” (EVP)

When we asked the head of games about the decision making, for instance, making decisions among lots of good ideas, and the schedule of the game development, we can feel his confidence in teams to make their own decisions through his words.

“It's the strong game team [to make decisions]. I have to trust the strong game team. That's why my work is like herding cats, or pushing with the rope. Cause if I don't trust the strong game team, I might well... just fire them all, right?” (SVP)

You need to trust them to empower them. Moreover, trust is reciprocal. You trust your team, the team will trust in you as well. In this way, the communication will be more open. And, communication is one of the most crucial parts of a mobile gaming company. As I mentioned, besides formal meetings, lateral communication is the way that enables the management team to know about what is going on within the whole organization. Therefore, it is important for the mobile gaming company to have an environment where game development teams and developers can feel free to express their thoughts, opinions and problems.

“I tried to kinda like have people in the product lead position that I trust and that I feel that they trust me, so that if they have kinda like some questions or doubts about the project, so they... they don't need to feel that they need to kinda like sell the

project to me, but they can also come and ask if they feel kinda like insecure about something on, or unsure about something, but ultimately it is their, kinda like call.” (HOS)

Establishing a supportive environment: Supportive organizational context creates a favorable condition for teams, which increases their opportunities to perform better. Being encouraging and positive in formalised meetings, so that the game development teams feels that the management is supportive in nature. As we mentioned, the purpose of these formalised meetings are not to kill a game or make decisions, but the main goal is to enable the management team to keep up with the progress of each studio and to know what kinds of help they need.

“Now, we try to keep this [Gate reviews] as a lightweight as possible, and ... we, in none of those meetings so far have we discontinued the game. We've discontinued a lot of games, but that has happened outside of that process. So, part is also that those meetings should be quite positive in nature. It's a sink. And we'd like for teams to discontinue their games outside of that formalised process.” (EVP)

The notion to embrace failure is important in mobile gaming companies. For the management team of Company X, failure is a part of the learning. You need to give the team the time and chance to try and learn. In addition, the supportive organizational culture where embracing failure would increase the creativeness and innovativeness of developers.

“There are some companies out there who at least used to few years back still say that if your game fails, we will break your team up and we will put, split you into other teams. But that's definitely wrong, because you have to be given another chance so that you learn. Learning is the heart of making a good game. And, sometimes, the learning, unfortunately, is a failure and if you fail on your first game, what do you need to do? You need to do another game.” (SVP)

“If there is a team and product lead who I then feel that okay... they are going into so wrong direction and we have the discussion and they are still kinda like determine

that they can make this work. I guess then we would, what I probably would do is, you know set some sort of kinda like the deadline for them to actually prove it. And if they are not there then, it's like then they probably would kinda like then understand that okay...it's not going forward. But, I haven't had to do that.” (HOS)

The game does not look good, but the product lead believes in it. The HOS will try to find a way to help the team find the resources they need. But if what the team requires is a big resource, then they have to justify their needs. But if it's small resources or the thing that HOS can do easily, then she will try to support the team and help them to acquire the resource the team needs.

“I think that... they like... I need to feel that the product lead him or himself really kinda like believes in the product or the business case. And if it's.. if the situation is such that hmm... we are not able to do the prioritization and the kinda like resource shuffling within our studio which is of course always easier. Cause it's basically our teams and we decide okay..you know, they need help, so you know, you are not in that critical phase at the moment, so could you maybe help with this, with this or.... your team animator would be needed here. If the case is that we actually don't have the needed competence or talent in our studio, but we would need and actually go and ask from somebody else's' studios. If it is more than just a week over or something... it's, for example, a permanent role, then i would of course kinda like with the product lead try to make the case that why we would need it , and why this is important., and also kinda like help to justify the need.” (HOS)

The words from the head of studio perfectly summarized the leadership style of Company X. The management team empowers the development teams to work on their games with full trust. If the product lead has faith in the project, then the management will try their best to remove all the obstacles that the team face and be supportive by providing the team with the resources they need. The following figure (Figure 11) helped to conclude the analysis of the organizational environment of Company X:

Roles & Responsibilities

For management team in general (EVP, SVP & HOS), the roles and responsibilities are to:
Set mission, vision, strategy

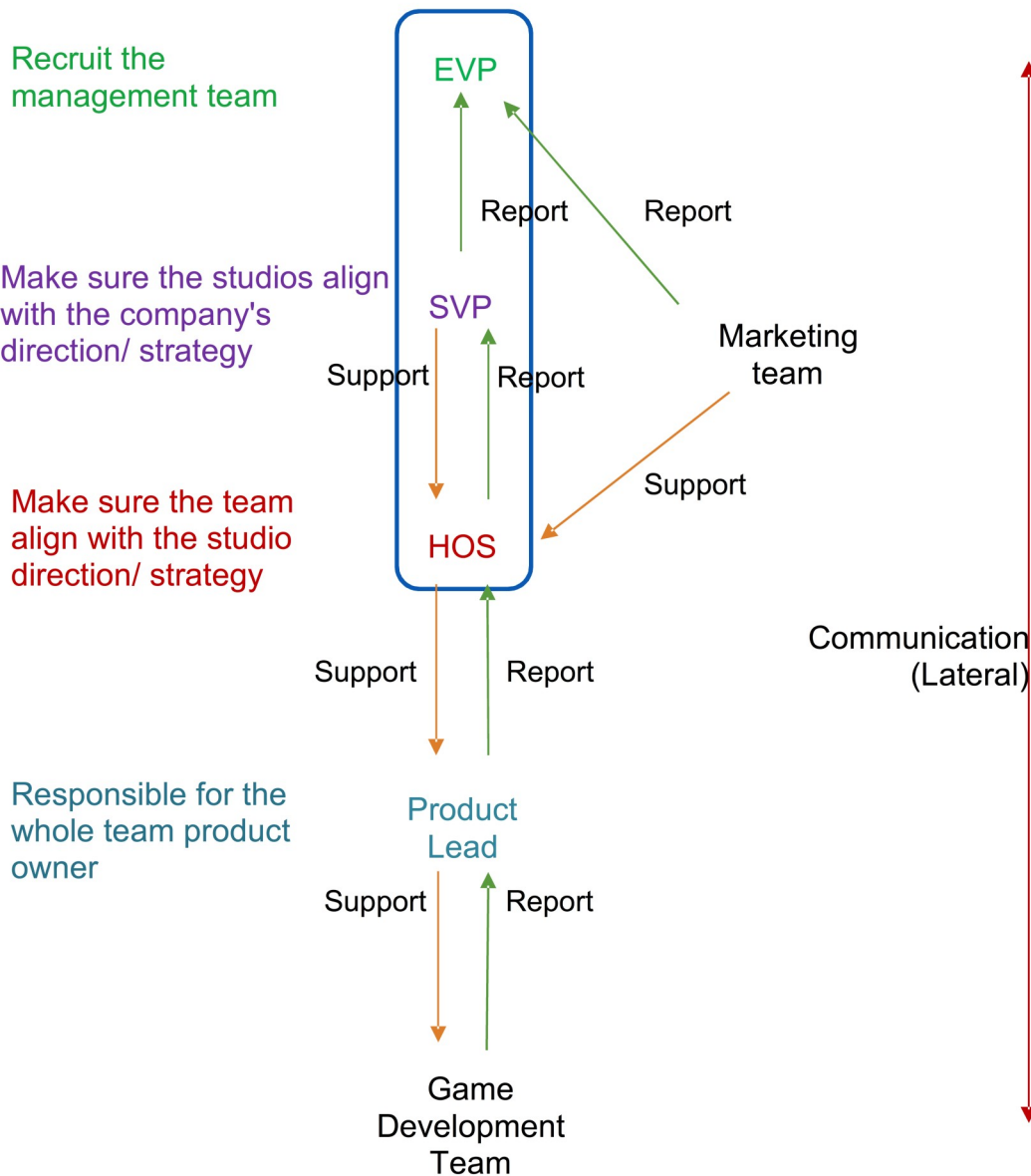


Figure 12: Roles of Leadership of Company X
 Source: Own Illustration

4.2 Game Development team

4.2.1 Team Design

Team Composition

It is no doubt that having a great team is the fundamental to make a great game. Team composition refers to the configuration of the team, representing the quantity and quality of members' knowledge, abilities, and skills to handle and perform tasks. Therefore, team composition plays an important role for the effectiveness of a team (Kozlowski and Bell, 2003).

“The way to make a great game is to have a great team. There's unfortunately, there's no shortcut to it. That is the only way.” (SVP)

To compose a great team, having the right people with the right mentality is important. Their mentality has to be aligned with the company. For instance, one of the biggest changes in the mobile gaming industry is the free-to-play model. If a developer cannot adopt this mentality, he or she might not be able to succeed within the company.

“But it's [challenge that shifts to free-to-play] exactly what I was talking about. So, there is this tube where they want all the games to go, and suddenly they said the tube used to be pointing there, it was called premium. Now it has to point there, we will change the shape of it, it's free-to-play. And, those people whose DNA was premium, they left the company. They either left the company because they wanted to leave the company and they went to work for PC premium games as an example, or they were made to leave, because they couldn't make the transition into free-to-play, because it's different mentalities, it's actually very different mentality to do free-to-play games.” (SVP)

“I am a big believer that this journey ain't gonna work if we got the wrong people in the bus. So, you have to hire and fire accordingly, there is no other way, you have to

make sure all the people who are in here are interested in making free-to-play games. If you are not interested in making free-to-play games, you are in the wrong company. You have to love, to play them occasionally, and to be passionate about doing them. It's gonna be harmful to the person in the long run, if they are in Company X trying to do it, if they don't like it. So, you have to identify and then make, you have to shape the organization to fit it. "(SVP)

In addition to possessing the right mentality that is aligned with the company, a development team that has worked together usually continues to work together still for the next game.

"I am in a way that we also, we tried to also think okay...who would be that if it's not the same team that is like naturally formed; for example, basis on that they were working on this project before and we didn't for example, that project ended, and now we have a team and you know, they have this great idea, and they start working on that." (HOS)

In this way, the team is very stable that all developers know each other well. They do not have to spend time getting to know each other. Team stability is the concept that the management emphasized a lot during the interviews. A team has to make at least one game together to become a cohesive team. However, if it's a new team formed from the scratch, then the formation will start with the core members. The core members need to have a good collaborative experience in the past. Later on, after the core members are formed, the team will be expanded based on what kind of competence the team still needs.

"If it's not like that, but we actually like form a team from a scratch. We need to make sure that the very core of the team: the product lead, and the designers and then probably actually the lead programmers and artists they were well together. And, usually it starts from the prototyping. And, doing that process they also like realize and like form that common understanding that how they work and what is the game vision and all that. And then we like understand that what kind of competencies are needed, then like expand on that team." (HOS)

From the words of the head of studio, we can understand the importance of developers to have previous working together experience. It benefits the team to work more effectively. Another noteworthy point here is the role of the management. The management has to have a deep understanding of the team and developers, knowing what they need and to expand the team based on that knowledge. In addition, in terms of the size of the team, it is normally small. Fewer people in a team increases the communication and facilitates the understanding of each other, which in turn will strengthen the trust among developers.

“But it's more like if we keep the team size like very small, then the communication is quite automatic, and everybody knows what the others are doing. It's like they can trust that... okay. You know... we are like working now together.” (HOS)

Nevertheless, there is no standardized size regarding how big or small a game development team should be. Rather, the most essential factor to compose a great team is to have the right people. And, the management role is certainly important to team composition. The management has to know well about each team and developers in order to recruit or add new people into each team appropriately.

“I would say that each team has a bit like different team spirits and in a bit different way of working. And I think that is exactly why it's like you cannot say that one size fits all. But it's more kinda like you need to know your people, and you need to know not only from like competence point of the view, but also from the...like you know, this team works in this way. And, if I bring a new people in, then they need to be able to adapt to how the team is working. I can also decide that okay I bring somebody there who is able to change a bit how they work, so it's... you need to know your people.” (HOS)

Therefore, to know your people is the fundamental factor to form a game development team. It enables the management to find the exact people that fit into the team. In terms of team formation, knowing your people and how they work together is rather important than the team size.

Team Autonomy

As we mentioned, the decision making during the initial developmental stage are the most difficult ones, since there is no existing data to support the decisions. Nevertheless, the management still empowers the decision-making rights and have trust in the development teams. Game development teams of Company X are highly autonomous. They made their own game development decisions from initial developmental stage to launching stage.

“[The decision making during developmental phase] is within the team, which sits within the studio.” (EVP)

Even though all the decisions are decided within the teams and studios, there is a well-structured framework that defines what types of games and direction each studio should focus on. As above mentioned, Company X has five studios currently, which are Match, Slingshot, Battle, RPG, MMO studios.

“Creative decision happens within those sandboxes along with the audience profile that those studios are targeting.” (EVP)

Game development teams develop games based on these sandboxes. With these sandboxes, developers have a big and clear initial direction for their game development. Game development teams are fully autonomous within these sandboxes. Company X has the strategy meetings four times a year. The strategy meetings are formalized and centralized in a sense that they tell the game development teams what types of games they should focus on and develop games based on and within those boxes. Nevertheless, according to the words from the head of studio, these strategy meetings indeed benefit the game development teams to be truly autonomous. The strategy meetings help both the management team and the game development teams to make sure that their direction and goals are aligned with each other. It saves the time and effort for the game development teams to continuously inquiry about the idea and wait for approval of the game development from the management team. With the certain extent of formalization and centralization, it actually increases the overall team effectiveness.

“Yeah, I’ve been [in strategy meetings]. Well, I think that it’s also ... there is the Company X strategy that is at the moment it seems it’s very much actually driven by the game strategy, and the game strategy has been very stable for one and a half years now, and we then based on that one we created these studios eventually. And then you know, just presented that to the central management and now are working on you know, on the grounds of that. And four times a year, we think with the central management that our strategy and game strategy aligned and we can then... so that we don’t need to ask for, you know... They know that we are working based on these assumptions and these strategies, and we don’t need to kinda like.. We can then work very independently.”

It is important for the management to find the balance point between giving the authorities and the extent of control. Among the literature review, high independence may cause a team’s isolation from the whole organization. Rather than put the organization’s interest as the priority, an autonomous team may overlook the organizational goal and work for their self-interest.

“On one hand, you can do micromanagement, it's not gonna work. I couldn't do it anyway, because it's so big organization and it would be totally crazy for me to do micromanagement, but that's the one you could try micromanaging. Or, on the other hand, you can be too detached. You can just be designing some things that don't have any relevance to the team on the ground, and you have to find the middle ground somewhere between these two.” (SVP)

Nevertheless, the head of global studio pointed out a different aspect. Instead of thinking the development teams are not aligned with the company’s goal, the head of global studio is afraid of not having sufficient knowledge of the teams to know what they need and to support them in a right manner if the management is too detached from the teams. Therefore, the control from management does not necessarily mean centralization of the decision making, but to help the management to be involved and to have a better understanding of what’s going on with the teams. It’s not only that the teams have to be aligned with the company’s goal, but on the hand, the management team has to understand the team and try to set the strategy and direction that is aligned with the team’s interest and competence as well. A

certain degree of control can help the management to know the situation and problems of the teams so that the management is able to support them accordingly.

Team Stability

Team stability refers to the extent to which the membership for a team remains the same and is a crucial factor to team effectiveness. For new product development teams, the longer time team members have worked together, the more effective the team is.

“The team has to be relatively experienced, fully gelled, the team must have gone through a period of tough times. And, I'm not talking about a few months, I'm talking about 2 years plus. That team must have worked for a long time together so that they know each other, there is the basic trust there and so that they become effective.”

(SVP)

From the words of the head of global studios, we can see the importance of team stability. Team stability can establish the trust among team members. Game development is a lengthy process, it includes many stages, from concept development, design, production, launch and live. Every part of the game development process is different, it requires game developers to have different knowledge and mentality, that's why the head of global studios call it a cycle. The game development teams have to go through a cycle together, experiencing different stages so that they can know what will happen when a game goes live. In this way, the team can make better decisions in each stage.

“How many games has the team made together? Because in game business you have to see the game cycle from the beginning to the end. Every part of the cycle is very different, in beginning to the concept and you go to pre-production and then you're in production and you go to launch and then you go to live. All of those are very different. And, if you don't know the full picture, if you never produced a game that has gone live. If you don't know the live challenges, you make wrong decisions up straight because here you make the decisions that will have impact still three years later, and you have to understand what are we deciding now here, will come and meet us here in three years' time. And, that's why I'm now I'm saying the best team they

have done at least one game together, maybe two, then gone through cycles and one cycle is about 3 years roughly.” (SVP)

It is the management’s role to provide the team with team stability, to make sure that everyone is truly passionate about developing the game. However, as I mentioned, game development is a lengthy process and it takes around 3 years to finish a cycle and build a cohesive team. In reality, it seems very difficult to implement since people come and go, and sometimes, people just lose interest and leave. Therefore, team stability does not necessarily mean the whole team has to be intact during the game development process. The stability of the core members is the key. If the core members have previous working together experience which they know each other very well, it will already help the team to work more effectively.

“I would say that as long as the core team is, they kinda like the key members of the team, if they've been working together, it makes everything a lot easier. It's like that they know...like everybody knows how others are working. It removes a lot of ... it removes a lot kinda like the need for the actually managing the team.” (HOS)

“I don’t believe in this rotation, where you just visit other teams and go back to own team. I don’t think that... or let’s just put it that way that it would need you to be kinda like...it’s harder to build the commitment and investment into the “Yes, we are working in this project together for a long time.” If you know already that I will be here only for six months and then I go away. I think that kinda work if you are there to gather a new skill or insight so that you know then how that is done and you can actually start working the same way in your own project. But it’s... it needs to have a specific purpose why you are in that team.” (HOS)

From the individual perspective, once you realize you are going to work within a team for a long-term, you will build up the sense of commitment for the team and the project. And while every member has the strong sense of commitment, it increases the individual work efficiency. From the team perspective, team stability does not only build up the familiarity and understanding among team members but also gives the team members a sense that they

are a team and all of them are thinking and working for the same goal, which increases the team collaboration and effectiveness.

4.2.2 Team Process and the role of the product lead

Transitional Phase Process

During the planning phase, developers come up with different ideas and thoughts. The concept and design of the games are still blurred. After reaching consensus regarding the idea of the game during the pre-production phase, team members will have a crystal idea about what they should do or what they can do to help the team to reach the shared goal. The feeling that everyone is working for the shared purpose and highly committed will help the team become more cohesive.

“A lot of energy is lost in just getting people. The biggest thing inside a product is to get the vision right. That’s why the project fails, they fail because there was no vision, or it wasn’t communicated. Only when everybody believes that that is a good idea and I know what I am supposed to do to make it work. Then... if there is a vision which everybody shares, then there is a chance to succeed. But if there is no vision, then you will never ever succeed, because there is no vision, it means there is constant change, uncertainty, and the thing starts to take long and suddenly is inefficient and you just start to recognize those projects.” (SVP)

To have a shared and clear vision is a necessity for teams to work effectively. Before the game goes into the production stage, the head of studio will make sure the team has a clear vision with their game. By asking tough questions, the head of studio can find out if the team has the big picture regarding the competitiveness and future of their game. After ensuring the team has a clear vision and is ready to enter the production stage, the head of studio will not get in the way with game development.

“Well, first of all, I think that before even the game going into wrong direction, I... we try to spend quite a lot of time in beginning to actually talk about the vision for the game and, you know, what are the.. what is the setting and overall promises? You

know, what are the... how do you plan to run this game after it's launched? What is the, you know, the competitor landscape at the moment?" (HOS)

"I would say that asking tough questions before they are in that heavy production phase, is in my opinion, more important so that their vision is crystallized for the project. And, of course, there are surprises. There is probably some sort of pivots all the way throughout the game project. But as long as it's gonna like the vision stays roughly the same and it's clear, then it's... there doesn't need to be that... I wouldn't say that it's kinda like I need to interfere." (HOS)

In addition to commitment enhancement, a team with clear goals is more likely to be supported by the organization and top management (Akgün & Lynn, 2002).

"And, do we support the ... as a company, do we support especially the things that we know are gonna work out very well? Of course, we do. And those teams and those products will receive all things at game's disposal in order to maximize those opportunities, they will." (EVP)

The top management will most likely to support the development team that they have sufficient knowledge about what the team is working on and they know the project is going to perform well. Those teams with clear goals will receive the most resource from the management to help the teams achieve their goals. Correspondingly, teams with sufficient organizational support will have stronger belief in themselves to achieve the goals (Tata and Prasad, 2004).

And the role of the product lead is extremely important that he or she is the one to help the team to set a clear vision. In a mobile gaming company like the Company X which has many game development teams, the internal fighting for resources is competitive. As we mentioned above that a team with clear vision is more likely to receive support from the organization; therefore, one of the most important tasks of the product lead is to build, set and persist a clear vision for the team.

“So, there is always the product lead... is the one who has the vision of the product and they are the one to push. It’s their role to push all the time and to protect. Because in a company like ours, if you have... in the same studio, a game that makes hundred million, and in the next room there's a bunch of guys who are making nothing, they only make losses, of course, because the product isn't out yet, we don't yet know. They are making losses and these guys are making profits. What do the...? You know it's really difficult to protect the new babies. It’s the product lead has to protect the babies. That's their role in the company, because everybody else in the company would like to just eat those babies like a pack of wolves, cause that’s a distraction. If I am running my hundred million business, I would like to get all the resources and make it into hundreds and ten million. And, anybody is not supporting me is kind of against me, and that's why the product lead has to be the one who protects the project and then sets the vision and make those decisions about when to continue or when to cut it.” (SVP)

“We don’t have that ten billion, so it’s a limited resource. And everybody is fighting for the same marketing budget, they are fighting for management attention, they are fighting for the best resources. Sometimes you need to get a new server, senior server guy from inside the company. So, then the product leads, they are fighting, they are positioning, shuffling, fighting all the time.” (SVP)

Action Phase Process

Action phase is the production phase of the game development. It is the stage that requires member’s high interdependence to integrate all their skills to realize their ideas and concepts from the planning stage. The team stability directly influences the extent of team coordination in the production phase. Members in a stable team are familiar with each other’s skills and abilities. They know exactly “who knows what” so that they can coordinate and exchange the information more efficaciously within the team.

“That’s what I meant when I said the strength is the cohesive team, because they know what they are doing. We recently launched a game called Battle Bay a month ago. And that team, they are very well positioned to do a follow-up in the same genre.

They now work for few years working on that type of concept, now we just tell them redo it and maybe consider this type of changes, they will execute it extremely well, because they are aligned, and they know what to do.” (SVP)

Interpersonal Phase Process

Team conflicts could be both negative and positive depending on what types of conflicts they are. Team conflict can increase the creativity of the team if members feel the encouragement from the team leader. However, it could inhibit the overall creativity of the team if they result from interpersonal incompatibility which would worsen the willingness of members to share their thoughts in preventing possible hostility. Therefore, forming a team with right members who have similar thoughts and behavior is so important that it will, later on, affect the interpersonal phase process.

“We need to make sure that the very core of the team, the product lead, and the designers and then probably actually the lead programmers and artists they were well together and usually it starts from the prototyping and doing that process they also realize and kinda like form that common understanding that how they work and what is the game vision and all that.” (HOS)

The role of the management team was discussed in the 4.1 section. In this section, a deeper look on the development team itself was taken. While talking about development teams, the role of a product lead was mentioned continuously during the interviews. Product lead is like a connector between the management and development teams. Based on this, we can know that product lead is the key to an effectiveness team.

5 DISCUSSION

In this chapter, I will discuss the main findings and compare them to the theories presented in literature review. The purpose of this chapter is to explain the meaning of the results and answer the research questions of the study. As I mentioned earlier, limited academic research exists on the mobile gaming industry. Recent research on mobile games mainly focus on player-centered game design, gameplay experience etc., and I found none of the literature studying the management practices and organizational aspects of mobile gaming companies. Therefore, I believe the findings from the case company can provide new insights to the literatures and the managerial practices for mobile gaming companies.

5.1 Organizational Context of Company X

After introducing the Team Effectiveness Model in the literature review, I started the chapter by studying on organizational context. Organizational context is consisted of organizational structure and leadership styles. These two elements are interdependent. Leadership is the key to stabilize the organizational structure. Once the organizational structure is set, leaders should act accordingly and consistently. In literature reviews, I discussed two types of organizational structures, that are mechanistic and organic organizational structures. I also noted that for mobile gaming companies, organic organizational structure is more likely to be adopted. Firstly, mobile gaming industry is a dynamic market which requires agility and fast decision makings. Secondly, developers are experts in their fields. It makes sense to delegate the decision-making power downwards to game development teams. Thirdly, the organizational structure with least rules and procedures would benefit the team innovativeness.

The organizational structure of Company X fits the description of organic organizational structure. The case study showed that the degree of centralization and formalization of Company X are both low. Most of the decision-making activities of Company X, from the developmental stage to launching a game, have been delegated to the team level. Decisions regarding game development are all decided by development teams themselves. Meanwhile, even though there are still meetings like gate review process, Company X aims to have as

few rules and formalities as possible. Besides, since there are not so many meetings, lateral communication becomes very important channel for managers to understand what is going on in each team. However, organizational structure is only part of the organizational context. As I mentioned earlier, organizational structure and leadership are interdependent. For instance, within an organic organizational structure, transformational leadership is more likely to occur for creating an inspiring and encouraging environment. On the other hand, within a mechanistic organizational structure where the market is stable, transactional leadership is regarded as a more appropriate style (Shivers-Blackwell, 2006).

In literature review, I specifically made a comparison between transformation leadership and servant leadership since both of them advocate providing support and assistance to teams. However, the main difference is that servant leaders “select the needs of others as leaders’ highest priority”, while transformational leaders “focus on the organizational vision and goals”. Based on this distinction, I conclude that the leadership style of Company X is servant leadership. The management team of Company X emphasized on empowerment, communication, understanding teams’ needs and giving support. The management team influences the game development by providing assistance and resources they need. As I mentioned earlier, the organizational structure of Company X is organic, most of the decision-making activities are delegated to development teams. Nevertheless, only with the empowerment from the management team, development teams can feel trusts and make decisions autonomously. The organic organizational structure and servant leadership of Company X demonstrates that organizational structure and leadership styles are interdependent. As the organizational context of Company X is defined, I will proceed to answer our main research question, that is, how does organizational context of Company X influence effectiveness of game development teams positively?

5.2 A Flat Structured Environment

Based on the Team Effectiveness Model, team effectiveness relies upon organizational environment, team design, and team processes. Organizational environment and team design are regarded as inputs of the team outcomes, while the team processes are the factors that directly affect the output. Therefore, I will first start with the inputs, discussing how

organizational context affects team design, and in turn influence team process and effectiveness. Team design was divided into three dimensions: team composition, team stability and team autonomy in the study.

As I discussed in the data analysis chapter, for Company X, having members who have been working together is considered as the most important factor while composing a game development team. Nonetheless, there are still situations, for instance, a team grows, or some members leave, that Company X needs to add new people into the team. In this case, while game development teams' job is to focus on developing well-performing games, management's job is to recruit and find the people with right mentalities that are aligned with the company and fits the team so that the game development team can fully concentrate on their work. In order for the management team to find the right people that fit the team, the management team first has to have a deep understanding of the game development team. At this point, the head of studio and team lead play very important roles. Both of them need to know every member of the team very well and understand how the team works for finding a right person and composing an effective team. As noted by Sanots & Passos (2013), forming a team with members who have similar thoughts and behaviour can reduce the level of conflict and improve effectiveness. Thus, it is important that the management team knows how each team works so that they can find the right person that fits the team.

For Company X, the organization is fairly flat, which helps the management team to get to know the development teams and members. A flat organization has an organizational structure with few layers of middle management between the management team and development teams. From interviewees' point of views, due to this flat organization nature, developers always feel free to reach out and share their thoughts with the management. Because of low hierarchy, the lateral communication happens more often, and the extent of internal relations is stronger. Even though the size of the company X is big, the top management team still try to speak with and get to know everyone so that they can know what's going on in different teams. It is noteworthy that, flat organization is mainly about the number of levels of management within the organization. And organic organizational structure is built upon that foundation with low centralization and low formalization added. In my opinion, having a flat organization is the foundation of the organizational environment

of company X. Flat organization helps the management team to have deeper understanding of every developer, which helps with recruiting right person into each team. Working with right person would help the team to increase coordination and reduce conflicts which in turn increase team effectiveness. The figure (Figure 15) below illustrates how the organizational environment of the Company X affects team composition.

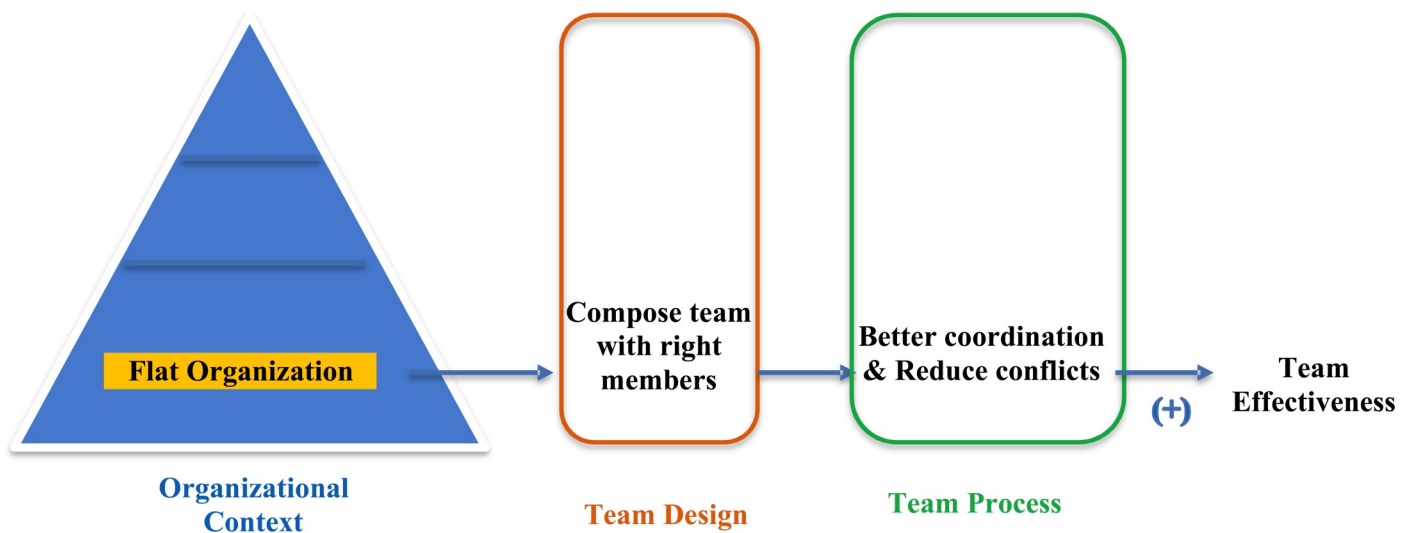


Figure 13: The effect organizational context on team composition
Source: Own Illustration

5.3 A Stable Environment

Before having an autonomous team, company needs to first compose a team. Team process and effectiveness are highly dependent on team composition. It is known that a great game comes out from a great team and a great team consists of right people. But the question is who are the right people? In literature reviews, I discussed the impact of homogenous and heterogenous members (Bell et al., 2011), as well as the team size (Slotegraaf and Atuahene-Gima, 2011; Daspit, Tillman, Boyd & Mckee, 2013) on team effectiveness. Surprisingly, during the interviews, these points were not mentioned or emphasized by the interviewees. From their point of views, team size can be big and small depending on how the team works. Therefore, team size is not really a determinant for team effectiveness. Instead, team stability,

having people who have worked together previously, is considered as one of the most important factors for Company X while composing a team.

As noted by Tuckman (1965), before becoming a real team, the team has to go through four developmental stages, including forming, storming, norming and performing. From the point of view of the Company X, a team must work for at least two years together to truly become a cohesive team where the basic trust is built so that they can work together effectively.

Team stability was mentioned by the interviewees many times. Developers who have worked for a long time together would understand each other better and know how others are working. They have gone through challenges together so that the trust among them is stronger. In addition, literature mentioned that in a small team, every member's opinion is influential so that members feel the sense of responsibility and their significance to achieve the team's goals and, accordingly, increases their willingness to contribute to the team (Alnuaimi, Robert & Maruping, 2010). However, the stability of team can also give members a sense of commitment as they are all together as a team for the same goal, which increases the team collaboration and effectiveness. All in all, through the case study I could state that team stability is the first priority for Company X in respect of team composition.

Team stability enhances the team decision-making process, and in turn, the ultimate project outcomes of development teams (Slotegraaf & Athuahene-Gima, 2011). Game development is a lengthy process, it includes many stages, from concept development, design, production, launch and live. A game development teams has to go through a cycle together, experiencing different stages so that they can know what will happen when a game goes live so that the team can make better decisions in each stage. For company X, development teams are formed very naturally that when a project ends, the same group of people will move together to the next project and start working on that. In other word the same team usually continues to work together still for the next project. Based on the interviewee's experience, even if it is not the whole team but a few core members that have been working together will already make the development process a lot easier since the team doesn't need to spend time on getting to know each other, which also removes a lot of need to manage the team.

As stable team creates a cohesive team which positively affect the effectiveness of a team Therefore, the management’s role is to ensure the team stability, providing a stable organizational environment for game development teams so that they can perform most effectively. The figure (Figure 14) below illustrates how the organizational environment of the Company X affects team stability.

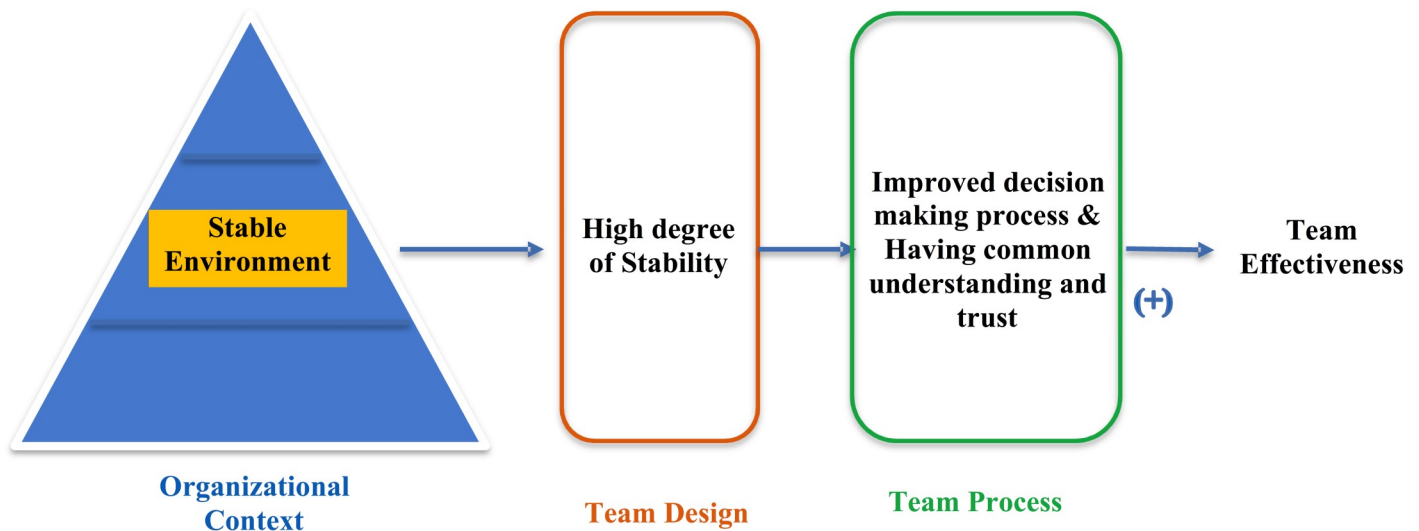


Figure 14: The effect organizational context on team stability
 Source: Own Illustration

5.4 An Autonomous Environment

In literature review, I pointed out that for mobile gaming industry, autonomous teams are more applicable for companies to act and adapt accordingly to cope with the fast-changing market. The organizational environment of Company X gives substance to game development teams to be autonomous. In Company X, the decision-making is decentralized, communication is frequent, and the process is flexible, with empowerment from the management, development teams have freedom to make their own decisions, and express opinions. Autonomy helps teams to change and adapt faster in the dynamic market. Nevertheless, an excess of team autonomy can give rise to an adverse effect on team performance (Chen et al. 2015; Haas, 2010). Finding a balance point between autonomy and

control was also a concern for Company X. Company X believes that the management team has to be detached, giving development teams their free space. However, being too detached, the management team might not have sufficient knowledge about what are the teams' needs and how to support them. Therefore, to prevent team isolation, Company X still keeps certain degree of centralization and formalization.

Firstly, the management team of Company X holds strategy meetings four times a year. These meetings are formalized and centralized. The management team decides and develops a framework that defines what types of games and directions each studio should focus on. And game development team would develop games based on these sandboxes. These sandboxes are restricted so that it could help game development teams to stay aligned with company's goal; nonetheless, within these sandboxes, the development teams are fully autonomous. Secondly, there are still some formalized meetings like gate review meetings in Company X. Instead of making decisions, the purpose of these meetings is to help the management team to get to know the progress of every game development and be able to provide support in real time. Lastly, lateral communication is an important way for the management team to keep close relations with game development teams. Through the above discussion, we now know that the organic organizational structure and empowering leadership style of Company X provides an environment for game development teams to be autonomous but not isolated.

Later, taking a look at team process, team autonomy benefits the planning stage which is the idea creation phase, and production stage which is implementation stage. Autonomy helps to increase team innovativeness and creative problem solving, which in turn increase team effectiveness. It is noteworthy that during these phases, product lead plays an important role. While the team works autonomously, product lead is the key to make sure that the team has a clear goal and it is aligned with company's goal. The figure (Figure 13) below illustrates how the organizational environment of the Company X affects team autonomy.

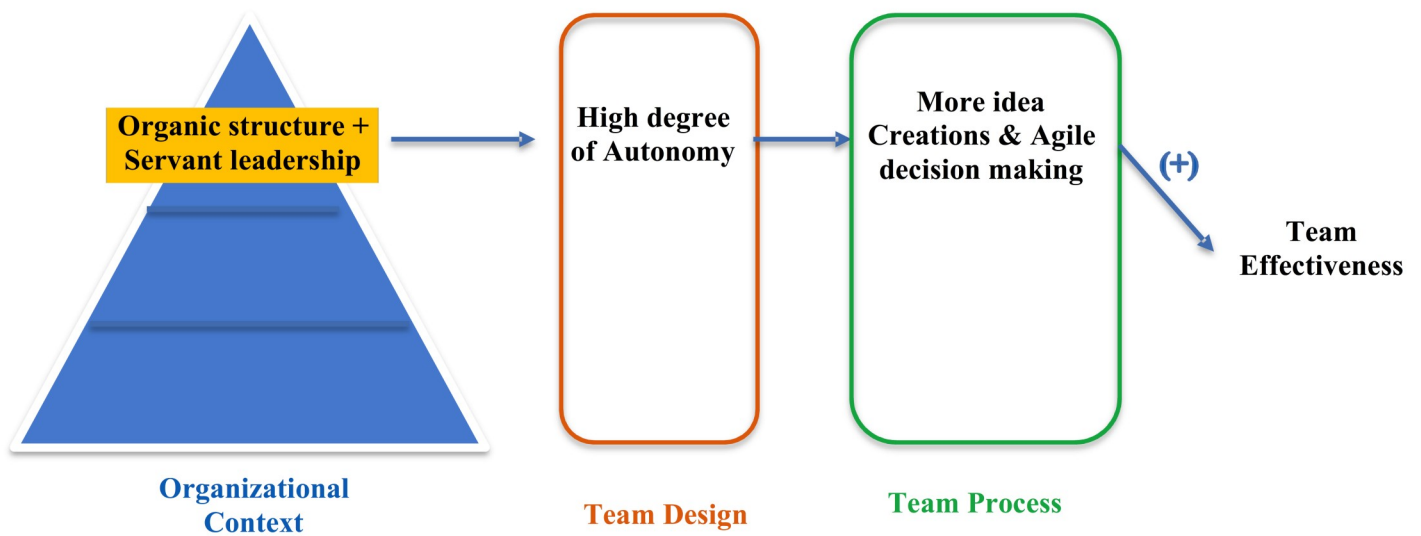


Figure 15: The effect organizational context on team autonomy
Source: Own Illustration

5.5 Empirically-based framework

In this discussion chapter, I first defined the organizational structure and leadership style of Company X. Later, I talked about how this type of organizational context affects team design, team process and in turn team effectiveness. In the end of this chapter, I will answer the research question by summarizing the discussion above.

Q: How does organizational contexts influence effectiveness of game development teams?

The way to make a great game is to have a great team; and great team consists of right people. Therefore, the first element to have an effective team is to compose the right members. Flat organization with few management layers helps to increase the internal relationship within the organization. The management team would have a better understanding of development teams and developers so that the management can recruit the right person that not only aligns with the company's goal but also fits the particular development team. Having right members within the team helps to increase the team coordination and reduce conflicts which in turn increase team effectiveness.

After recruiting and grouping right members into a team, the management's job of Company X is to provide teams a stable organizational environment. That is, the management needs to ensure development teams to have stable members. Stability helps members to build trusts with each other. Also, members who have been working together for a long time are more likely to have a common understanding and thought about an issue which helps to improve the decision-making processes and in turn improve team effectiveness.

At this stage, a development team is already a functional team. However, as I mentioned, developers are the expertise within their fields. Therefore, to make them fully effective, the organizational structure needs to be organic and decisions making rights are delegated so that the development team can make their own decisions agilely in order to respond to the dynamic market. Meanwhile, in prevent of the team isolation, it is important that the management team have deep understanding of every development progress and always be there to support the development teams when the help is needed.

The following figure (Figure 16) below shows my team effectiveness model which summarizes how the organizational environment of the Company X affects team design and team processes, and in turn team effectiveness. Through the case study, I discovered that the organizational environment of Company X affects team design gradually. It resembles a pyramid that the company needs to first be a flat organization in nature. A flat organization would help the company with team composition, recruiting the right people into a team. Later, in Company X, team members who have been working together on a project would naturally move and start working on the next project together which helps to keep the team stability. Lastly, built upon flat and stable organizational environment, the organic organizational structure and servant leadership helps the development teams of Company X to be autonomous. Right members in teams, high extent of team stability and team autonomy altogether have positive effects on team processes and in turn increase team effectiveness.

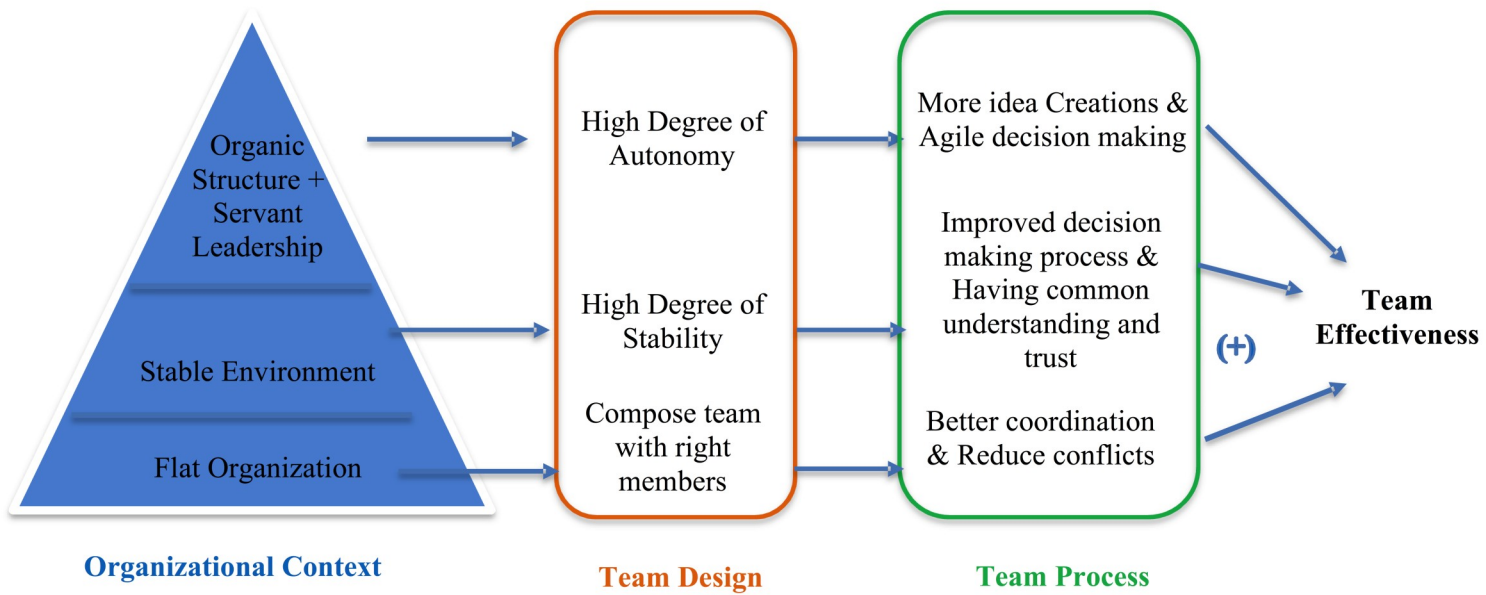


Figure 16: The effect organizational context on team effectiveness
 Source: Own Illustration

6 CONCLUSIONS

6.1 Summary

This research set out to discover the factors that facilitate mobile game development teams to be successful by looking into the organizational environment and how it affects the effectiveness of game development teams. As there seems to be very limited existing literature on mobile game development teams, and none on the management practices and organizational aspects, this study hopes to contribute to the gap and bring new insights to the fields of mobile gaming research. Due to the growing mobile gaming market and the increasing competitiveness within the industry as well as the distinct nature of the mobile gaming industry, the understanding of how organizational contexts influence the game development team effectiveness is worthy of researching. This study allowed me to also examine whether contemporary team effectiveness theories apply as such to the mobile gaming industry. The research questions were:

- Q: How does organizational contexts influence effectiveness of game development teams?
- a. How does organizational context influence team design, and in turn team effectiveness?
 - b. How does organizational context influence the process of game development, and in turn team effectiveness?

The research approach was single case study and I chose Company X because it's a prestigious mobile gaming company that has multiple games in top grossing lists. The empirical data was collected via interviews of the people who are involved with the management practices. The interviewees were SVP, EVP, and the HOS of Company X.

This study has several contributions. First, I built my own team effectiveness framework based on the reviewed literatures that are related to effectiveness of game development team. Although the framework of this study is built based on McShane and Von Glinow's team effectiveness model, my model included the autonomy of team into discussion which I considered very important for the effectiveness of game development teams.

Second, in this study, I uncovered the organizational structure of Company X and re-examined it with literature. As I mentioned, there is limited literature on mobile game development teams, and particularly on the management practices and organizational structures that support their functioning. The findings show that the organizational environment of case company is low degree of centralization and low degree of formalization. Most of the decision-making activities in Company X have been delegated downward to the team level and the company aims to have as few rules and formalities as possible. This finding matched the literature that to cope with the dynamic market, an organic organizational structure would be the most favorable environment for the teams to develop new products.

Third, this study divided the intermediate variables that influence the game development team into team design and team process in light of Cohen and Bailey (1997) team effectiveness framework. The empirical part of the study showed that the game development teams of the Company X are autonomous. And while composing a team, stability of the team is the prioritized concern for the company since it has a direct impact on further team process. Moreover, the role of the product lead was added to the preliminary framework. Product lead plays an important role in the process; a bridge between game development teams and the management. Team lead has to make sure that the team is coordinating well, and the team has a clear goal which is aligned with the company's views. Meanwhile, product lead needs to communicate team's vision about game development to the management team to ensure that the development team gets equivalent support from the organization.

Last, this study brought a new idea to describe organizational environment as a pyramid where the concept of the organizational environment affects team design and process of game development gradually. In literature review, I went through various team effectiveness models (e.g, McGrath, Cohen & Bailey, Hughes, Ginnett and Curphy) and none of them suggest that team effectiveness consist of layers which gradually built up when the foundation is strong. In the case of Company X, foundation is the flat organization.

Contribution of the study is to present the organizational environment of a successful mobile gaming company and how it impacts the game development team's effectiveness. Investigating only on a single case is the biggest inadequacy of the study. It would be interesting for the future study to discover if the organizational environment characteristics of Company X are the same as other top-grossing gaming companies and if Company X's organizational environment could be successfully applied to other mobile gaming companies.

6.2 Practical Implications

For managers, the main discovery of this study is that the organizational structure and leadership are interdependent. In order to recruit right people into development teams, it is not enough to only have a flat organization if the management don't put effort to get to know the developers and to keep strong internal relations with development teams. Similarly, to keep high extent of team stability, it requires management's effort to understand the situations and mentalities of members in different development team for ensuring that they are working well together. Organic organizational structure requires the help with servant leadership so that development teams can feel truly empowered and free to share their thoughts with the management. In addition, finding a balance point between autonomy and control is a difficult question for the management in many companies. Through the case study, we've learned that giving autonomy to development teams is essential; however, a company can still keep an eye on game development progress through formalized meetings and lateral communication. Meanwhile, managers need to keep in mind that the purpose of formalized meetings is not to control game development teams' decisions. Instead, the main goal is to keep up with the progress of each studio and to be able to provide help and in real time.

6.3 Limitations

Due to the research design and data collection method, this study has certain limitations which have to be pointed out to provide meaningful directions for future research. First, the study was conducted in one organization. Unlike multiple case study, this study cannot

provide insights through comparing the similarities and differences between multiple companies. The findings of the empirical study on a single case company cannot be considered generalizable to all mobile gaming companies. Therefore, future research could examine multiple mobile gaming companies to further investigate the similarities and differences between various cases.

Second, although there is no rule to define how many interviews are needed in a qualitative research, Guest et al. (2006) proposed that 12 interviews might be the desired number of data collection to reach saturation. As a result of insufficient time, this research only had three interviews with the management team. Thus, subsequent research could increase the sample size in order to gain richer results. In addition, Limiting the data to upper management neglected the perception from game development teams. As the objective of the study is to discover how organizational contexts influence the game development team effectiveness, adding the developers' point of views would bring more insights to the research.

Lastly, the limitation of cultural context should be taken into consideration while reviewing the findings. Company X is situated in Helsinki. It can be stated that Finnish operation is mostly built based on trust, while empowerment and autonomy happen only when there is trust in a relationship. Therefore, for game development teams working in other cultural contexts, it is possible that the effect of organizational environment is different. Besides, the case company has more than 300 employees which is considered a large company. The impact of organizational environment on game development teams could change due to the size of the company.

6.4 Suggestions for future research

The limitations presented above bring possibilities and directions for future exploration of the theoretical and practical implications of this study. As mentioned above, the study is a single case study that only has a case organization as representative. Multiple case study focusing on successful mobile gaming companies would offer more comprehensive results and add the generalizability of the findings.

In addition, a research with mobile gaming companies from different countries would provide a more comprehensive insight for the topic as well. As brought up previously, due to the working culture difference, the impact of organizational environment on development teams in other countries could be distinct from this study. Also, Chinese mobile gaming companies are growing and expanding rapidly in the past few years. Taking a look at the list of the top 10 mobile gaming companies worldwide by game revenues, two out of ten are Chinese companies; that are, Tencent and Netease (PocketGamer, 2018). Therefore, investigating the organizational environment of these top Chinese mobile gaming companies would be a worthy topic for research.

Additionally, this study suggests the effect of organizational environment on game development teams through the management's point of views. Future research might want to explore this topic through development team's perspectives. Re-examining the framework of this study by means of studying and understanding the viewpoints from the other side, the developers. In their opinions, what kind of organizational environment would help them to be the most effective. Game developers' point of views could not only bring interesting insights but also yield different results. Lastly, the stability of the game development team has been emphasized as an important factor for team effectiveness several times in this study. Future research could be conducted on how mobile gaming companies maintain and ensure team stability and what are their perceptions of team stability specifically.

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APPENDICES

Appendix 1: Top 50 grossing games in both iOS and Google Play app stores in the US

iOS & Google Play Top 50 Grossing Game Charts; Country: United States; Date: Jun 18, 2017 (Source: App Annie)

# in iOS (iphone)	Game	# in Google Play	Publisher	HQ location	Founded (year)	Game Genre	Game Release Date
1	Clash Royale	8	Supercell	Finland	2010	Strategy	Jan 04, 2016
2	Candy Crush Saga	4	King	Sweden	2003	Casual	Jun 14, 2012
3	Clash of Clans	3	Supercell	Finland	2010	Strategy	Nov 14, 2012
4	Pokémon GO	6	Niantic	United States	2010	Adventure	Jul 10, 2015
5	Mobile Strike	1	Epic War(subsidiary of MZ)	United States	2008	Strategy	Jul 05, 2016
6	Game of War - Fire Age	2	MZ	United States	2008	Strategy	Jul 25, 2013
7	Candy Crush Soda Saga	5	King	Sweden	2003	Casual	Nov 11, 2014
8	Toy Blast	18	Peak Games	Turkey	2010	Puzzle	Jan 06, 2015
9	Slotomania Slots Casino: Vegas Slot Machines Games	7	Playtika	Israel	2010	Casino	Nov 07, 2011
10	Big Fish Casino – Best Vegas Slot Machines & Games	25	Big Fish Games	United States	2002	Casino	Aug 16, 2012
11	Gardenscapes - New Acres	9	Playrix	Russia	2004	Casual	Jun 04, 2016
12	Slot Machines - House of Fun Vegas Casino Games	12	Pacific-Interactive	United Kingdom	2011	Casino	Mar 14, 2013
13	Lords Mobile	19	IGG	Singapore	2006	Strategy	Mar 01, 2012
14	Star Wars™: Galaxy of Heroes	10	Electronic Arts	United States	1982	Role Playing; Action & Adventure	Sep 18, 2015
15	MARVEL Contest of Champions	15	Kabam	Canada	2006	Action	May 26, 2011
16	ROBLOX	43	Roblox	United States	2005	Adventure; Action & Adventure	Dec 10, 2014
17	Choices: Stories You Play	33	Pixelberry	United States	2012	Simulation	Jun 22, 2016
18	DoubleDown Casino & Slots – Vegas Slot Machines!	31	Double Down Interactive	United States	2010	Casino	Dec 18, 2013
19	Episode - Choose Your Story + Pretty Little Liars	72	Episode Interactive(owned by Pocket Gems)	United States	2009	Simulation	Nov 20, 2013
20	Jackpot Party Casino Slots- 777 Slot Machine Games	21	Scientific Games Corporation	United States	1973	Casino	Mar 31, 2016
21	King of Avalon: Dragon Warfare	11	FunPlus	China	2010	Strategy	Dec 12, 2012
22	World Series of Poker – WSOP Texas Holdem	39	Playtika	Israel	2010	Casino	Jun 21, 2016
23	Summoners War	14	Com2uS	South Korean	1998	Role Playing	Jun 12, 2014
24	8 Ball Pool™	41	Miniclip	Switzerland	2001	Sports	Oct 24, 2013
25	Legacy of Discord - Furious Wings	40	Youzu	China	2009	Action	Feb 27, 2013

# in iOS (iphone)	Game	# in Google Play	Publisher	HQ location	Founded (year)	Game Genre	Game Release Date
26	Heart of Vegas Slots – Casino Slot Machine Games	27	Product Madness	United States	2007	Casino	Sep 10, 2016
27	Golf Clash	26	Playdemic	United Kingdom	2010	Sports	Sep 06, 2016
28	Township	24	Playrix	Russia	2004	Casual	Jul 26, 2014
29	MLB Tap Sports Baseball 2017	71	Glu	United States	2001	Sports	Aug 12, 2013
30	Fishdom	34	Playrix	Russia	2004	Puzzle	Jan 26, 2017
31	Panda Pop	63	Jam City	United States	2007	Puzzle	Dec 11, 2013
32	Boom Beach	57	Supercell	Finland	2010	Strategy	Sep 14, 2016
33	Design Home	30	Crowdstar	United States	2008	Simulation	Mar 26, 2014
34	Slots - Huuuge Casino: Slot Machines	17	Huuuge Games	Poland	2014	Casino	Nov 05, 2015
35	CSR Racing 2	70	NaturalMotion	United Kingdom	2001	Racing	Sep 16, 2015
36	Candy Crush Jelly Saga	38	King	Sweden	2003	Puzzle	Apr 16, 2015
37	War Dragons	76	Pocket Gems	United States	2009	Strategy	May 02, 2016
38	FINAL FANTASY BRAVE EXVIUS	36	SQUARE ENIX	Japan	2003	Role Playing	Dec 30, 2014
39	DRAGON BALL Z DOKKAN BATTLE	16	BANDAI NAMCO Entertainment	Japan	1955	Action	Nov 17, 2011
40	Yu-Gi-Oh! Duel Links	29	KONAMI	Japan	1969	Card	Mar 05, 2015
41	Clash of Kings - CoK	13	EleX Technology	China	2008	Strategy	Sep 11, 2015
42	NBA LIVE Mobile Basketball	79	Electronic Arts	United States	1982	Sports; Action & Adventure	Feb 17, 2016
43	Minecraft: Pocket Edition	75	Mojang	Sweden	2009	Arcade; Action & Adventure	Jul 16, 2015
44	Zynga Poker - Texas Holdem	67	Zynga	United States	2007	Casino	Oct 27, 2016
45	POPI Slots – Las Vegas Casino Slot Machine Games	47	PlayStudios	United States	2011	Casino	Nov 12, 2014
46	Angry Birds 2	50	Rovio	Finland	2003	Casual	Dec 16, 2015
47	Wizard of Oz - Vegas Casino Slot Machine Games	45	Zynga	United States	2007	Casino	Sep 23, 2013
48	انتقام السلاطين	/	Onemt	Saudi Arabia	2015	Strategy	Mar 07, 2016
49	DoubleU Casino - Hot Slots, Video Poker and More	35	DoubleU	South Korea	2012	Casino	Aug 26, 2014
50	myVEGAS Slots – Vegas Casino Slot Machine Games	59	PlayStudios	United States	2011	Casino	Jul 19, 2016

Appendix 2: Interview Guide

Interview guide:

Process:

The interview guides the participant to reflect upon the company, its structure and processes through a recently released game or a few games, if so agreed. The interview is planned to take about 1 -1,5 hours. According to the participant preference, the interview will be held in either Finnish or English. The interview is preferred to be held in person, but also Skype interview can be arranged. In order to facilitate a deep understanding and analysis of the gathered data, and to ensure the validity and reliability of the research, the interview will be recorded. The recordings will be transcribed and analyzed by the research group, including analysis of potential drawings by the interviewee. Unless the participant indicates otherwise, direct quotes or drawings from the interviews may be used in future publications. The participant data will be kept anonymous, if the participant so prefers, and the company or game names not revealed in the research or any future publications.

Questions:

1. Organizational model

- When and how was your company established?
- How has your company's headcount evolved since its inception?
- How is your company structured? Please aid with drawings.
- What is your philosophy behind creating games?
- Do you focus on certain genres? If yes, which genres and why?
- Do you have any common aesthetic elements in your games?
- Who makes internal decisions about the game development and go/kill decisions?
- Who reacts to changes in technology, user preferences or similar?

2. Teams & Game development

- How do you form your teams?
- What is the size of your teams?
- What is the degree of independency of your teams?
- Could you visualize your game dev process (for a recent game launch)? Is the process always the same for all projects and why yes/no?
- How is the game development process managed and who is responsible for decision to continue/kill the game? Refer to previous drawing of game development process.
- Are the same people responsible for continue/kill decisions throughout the new game development process or are different people/teams responsible during different phases?
- What kind of skills and capabilities are required in each phase? Refer to previous drawing of game development process.
- Is the team mostly composed of individuals from art, programming, design, production, or business background or a combination?
- Are the team leads heavy in one discipline (business, art, engineering, design), or is there a mix, shared leadership or rotated leadership?

- Which departments have an active role in the concept creation process? How do they transfer the knowledge to other departments and what is their role in continue/kill decision-making?
- Which departments have an active role in the game development process?
- Which departments have an active role in testing and evaluating prototypes? How do they transfer the knowledge to other departments and what is their role in continue/kill decision-making?
- What decisions during the development process (including concept creation, design and/or go/kill decisions) are made by people in leadership roles?
- What decisions during the development process (including concept creation, design and/or go/kill decisions) are made by people with art, programming or design background?
- If the team is in conflict regarding a decision during the development process, how is it solved/who resolves it or makes the final call?
- How was idea behind this game/these games born? Who was behind the idea?
- Did the team spend a significant amount of time creating concept presentations or demos of the idea for upper management or marketing before the decision to proceed with development was made?
- How is the vision of the future potential demands being formed? What is your approach to creative innovations?
- Where do you draw inspiration for your games?
- Which of the following is prioritized in the game development process and why? Market research, user research, technological development, team ability
- Do you outsource any of your new game development process phases? If yes, what and how? How is the collaboration managed?
- Which external stakeholders do you (or other actors in your organisation) actively communicate with to gain insight from the market and industry? How is the information gathered, shared, processed and exploited?
- How do the external stakeholders affect the new game development process and strategy?

3. Launch and Marketing

- To what extent do you think about potential users when you are launching a new project? Do you place more emphasis on users or the game?
- How do you decide a game is ready to be launched?
- Who decides when a feature or game is complete and ready to be launched?
- What different stages do you have in the launch phase. Draw.
- What are your strategies to attract new customers?
- What are your strategies to retain customers/players?
- How do you gather user data and feedback?
- Based on what information do you evaluate your already launched games to improve them/kill them?
- Who is responsible for post launch feedback gathering, evaluating and knowledge sharing?
- Who is responsible for post launch decisions regarding feature improvements and continue/kill decisions?