

IS1_G5 MMORPG

Company project

report

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1 Introduction

Our start-up company named IS1_G5 is essentially developing an MMORPG game referred to as "Until You Survive". Our game is designed to be accessed through online mode to interact with players (consumers) around the globe. One of our goals is that players around different places will contribute to the game with ideas, which will serve as both marketing and a precursor to product development. In our game, there is a wide range of equipment available, ranging from protective gear like armor(vests), helmets and outfits, backpacks, utilities and equipment that can be utilized to help players during the game. We also offer special gear that may be purchased to make a player stand out from the other players. This is part of our monetization strategy where players can take part in the design and customization of equipment, which can be resold to other players. Furthermore, Consumers can collaborate with Authorized third party suppliers of in game equipment to produce completely unique equipment,

CDs will be used to distribute the game physically and every game will have an Unique ID, so that no single game can be copied by other players. Each player has an account, to which the unique ID must be attached. The game will be sold at different retail stores and can be ordered directly from online stores too. The game can also be purchased digitally, that is without physical distribution of the game CDs. Instead it will be either downloaded or streamed on Google Stadia (or another game streaming platform).

The price of the game will be reasonable for everyone to buy. Approaching some sponsors and advertising their products which are related to games like gaming accessories or gaming platforms and making some collaborations might even make some revenue from our game.

Introducing Game Forums to make interaction with player's and other ones who might share their ideas in designing the game better which can be done technically or designing the equipment and the skins. And all these ideas will be used by our company and they are rewarded with some prize money for their work.

The game is a Battle Royale game, when players initially arrive on the island, they must gather weapons and supplies in their surroundings or plunder them from dead players. Better weaponry and equipment are often located in more hazardous areas of the game.

Several e-sport leagues and events are supported by the game. Each major area has a main tournament, in which players compete till later competitions. Only 32 of the numerous teams who registered can qualify. This is the group stage of the main tournament, in which the 32 teams are divided into four groups of eight. Following the conclusion of the group rounds, the top 16 teams compete in the finals. From there, the teams strive to advance to the next round of competition. All these results are posted into the forums in our website under the section of eSports.

1.1 Revenue streams

The company's possible revenue streams

- Sales of game copies, sometimes discounted/free (ISP/GSS, see below)
- Sales of game subscriptions
- Sales of (standardized) In game Equipment
- Fee on 3rd party In game Equipment

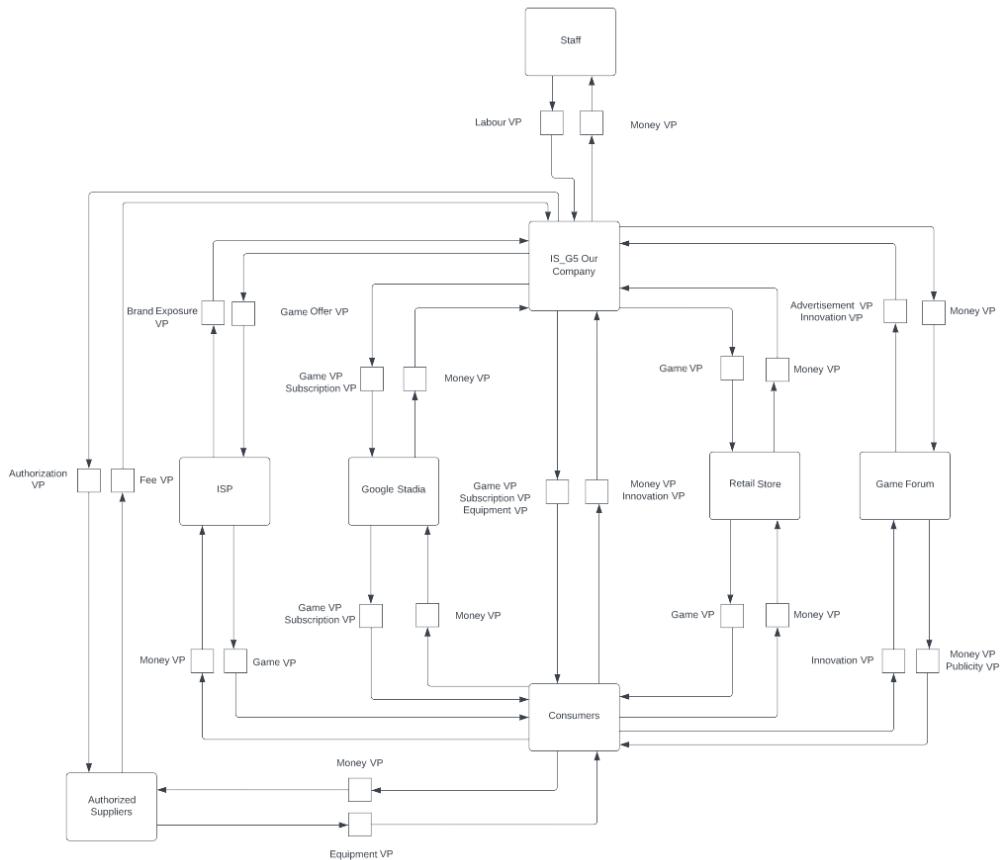
3rd party suppliers (of In game Equipment)

- Sell equipment to users
- **Pay a fee to our company**

2 Value Network Analysis

To illustrate, overview and analyze the value network in which IS_G5 company is operating in, a Value Delivery Modeling Language (VDML) is used to create a VDML diagram. The VDML diagram displays the different actors, or agents, which the company exchanges products or services with. Each exchange is notated with the value proposition (VP) proposed to the respective agent in a given exchange. For a more detailed description of what each VP is and what value it offers see the table in section 2.2. The VDML model only extends to agents directly connected to the IS_G5 company. Additionally all the exchanges and VPs are described from the perspective of the IS_G5 company.

2.1 VDML Diagram



2.2 VDML Diagram Explained

The primary products produced and thereafter exchanged by the IS_G5 company are the game itself, subscription to play the game, and equipment for in-game items. Each of these are associated with a value proposition (VP) in the VDML diagram, and are also further described in the table at the end of this section. These are the Game VP, Subscription VP, and the Equipment VP. The Game VP and the Subscription VP are offered to the agents Google Stadia, Retail store, and Consumers in return for Money VP. Google stadia and Retail stores, are on the other end of this, exchanges the Game VP to Consumers as well. Additionally Subscription VP for further distribution to Consumers are offered to Google Stadia, but not to Retail stores. These aforementioned VP exchanges can be called sales exchanges since they are the Game VP itself or is a VP that is tightly coupled to the Game VP, which in turn are directly related to the goal of generating revenue for the company.

In addition to this set of sales exchanges there also exist what may be called a number of investment or procurement exchanges. These are of course also important for generating revenue, but are involved more indirectly with this goal. Instead they are more closely related with activities regarding refinement, improvement, or the expansion of the product or service used in the sales exchanges. For example they are used in exchanges necessary to facilitate the expansion of the customer base, creating features for the game, or creating contents for the game. One identifying characteristic of the investment and procurement exchanges are that they are associated with outflow of Money VP, or the potential loss of money indirectly through other VPs. In contrast the sales exchanges that are characterized by inflow of Money VP or similar VPs.

One example of this type of exchange exists between IS_G5 and Game Forum. The Advertisement VP offers exposure to Consumers through the Game Forum marketing channels in return for Money VP. The end goal of the Advertisement VP is of course not to just increase the brand awareness of the game with Consumers, but to convert any exposed Consumers to instead become directly involved with the primary exchanges, like the Game VP exchange with IS_G5. In addition to the Advertisement VP Game Forum also exchanges Innovation VP, which are ideas for features to be implemented in the game. These ideas have been collected and aggregated from Consumers active on the Game Forum website. The Innovation VP therefore flows from Consumers through Game Forum to IS_G5. The Consumer are incentivised by Game Forum to come up with ideas by offering Money VP and Publicity VP.

Another one of these types of exchanges is between the IS_G5 Company and ISPs. In it, IS_G5 offers the ISP a license, or a right, with the Game Offer VP to distribute the game for free to its (ISPs) customer base. In return the ISP offers Brand Exposure VP. Both VPs offer both us (IS_G5) and the ISP the opportunity to expand their customer base, but with different products or services. The end goal is to expand the custom base of the IS_G5 Company. This would be achieved by either converting existing ISPs non-players to game subscribers or converting other ISPs customers to become customers to the ISP with which the exchange occurred. The

other end of this exchange is of course that the ISP uses the game as a means to also expand its own customer base.

Note that there is a distinct difference between Advertisement VP and Brand Exposure VP in the sense that Advertisement VP only constitutes traditional exposure through marketing channels, while the Brand Exposure VP is a special agreement with some form of immediate access to another agent's customer base. However, neither guarantees a successful outcome, in these VPs the expansion of the customer base and could therefore result in a net loss of revenue instead. In the case of the IS_G5 to ISP exchange this would be due to giving the game away for free, with the hope of converting the Customer at a later stage, instead of attempting to sell it to the ISP in exchange for Money VP.

The third investment/procurement exchange exists between the Staff agent and IS_G5. In it Money VP is offered in exchange for Labor VP. The Labor VP is directly related to the production of the game and game features, and therefore are highly contributing and essential to offerings in the Game VP and Equipment VP. More details regarding the production of these can be found in section 4.

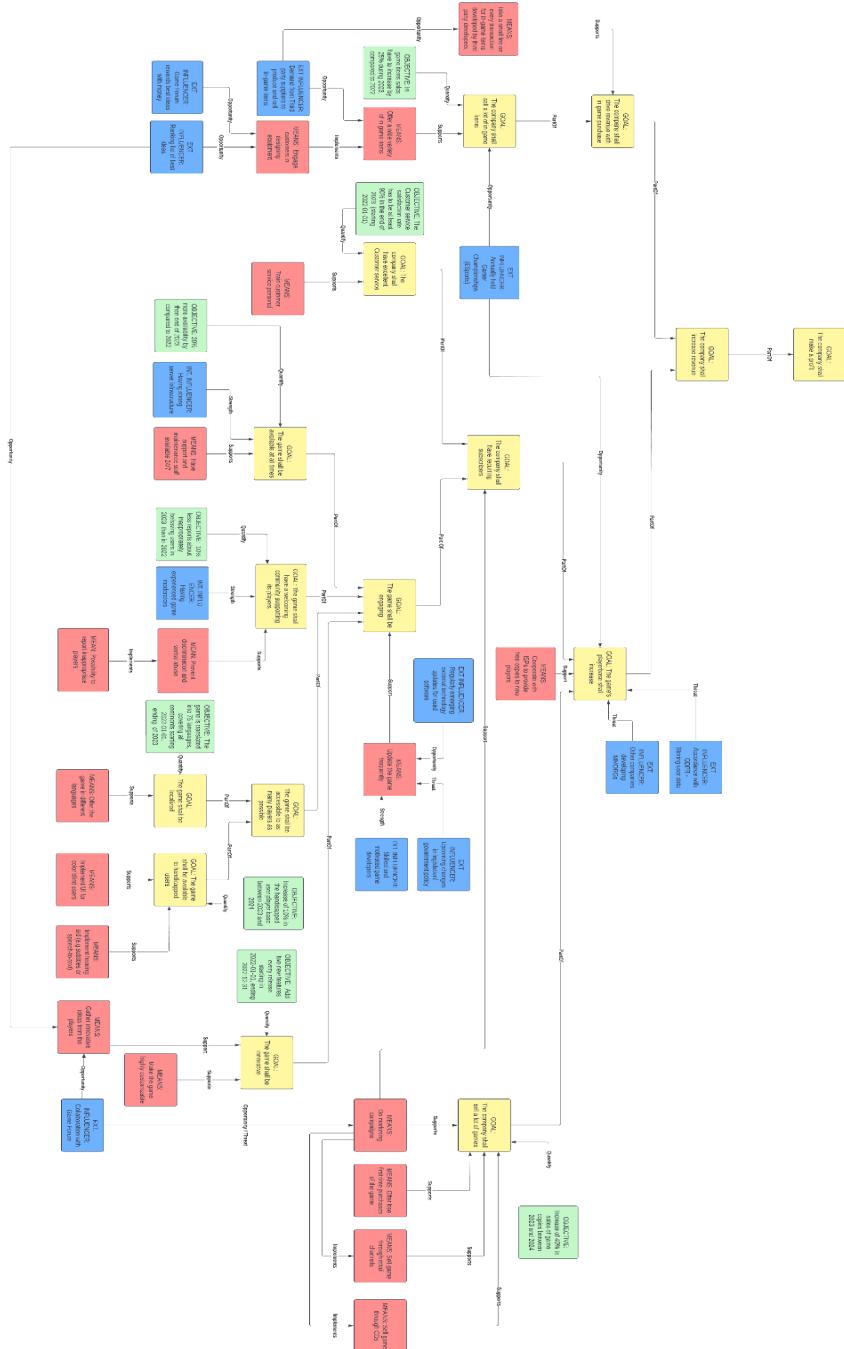
The final exchange chain exists between IS_G5, Authorized suppliers, and at the end Consumers. In the exchange between the IS_G5 and the Authorized Suppliers, IS_G5 offers the Authorization VP, which allows the supplier to create and sell in-game Equipment to Consumers of the game. In exchange IS_G5 receives a Fee VP for every item sold by the Authorized Supplier. The Authorized supplier in the exchange with the Consumer offers Equipment VP in exchange for Money VP. Hence, this exchange chain could perhaps be called a hybrid exchange, from the perspective of the IS_G5 company, since it both immediately contributes to revenue gain, as if it was a sales exchange, as well as the enchantment and creation of the VPs involved in it, as if it was a investment/procurement exchange.

However, it could also be argued that it is purely an investment/procurement exchange since the in-game equipment produced by authorized suppliers could be more demanded than equipment produced directly by IS_G5. Thereby causing IS_G5 to get out-competed in equipment sales within its own game and negatively affecting the net revenue, since IS_G5 would receive more Fee VP than direct Money VP. However in this individual case it was decided that authorized suppliers should be seen as another sales channel. Similar to how google stadia and retail stores operate as additional sales channels for the Game VP or the Subscription VP, and that the net revenue generated due to the total increase of sales of equipment would outweigh the net revenue lost due to equipment sales revenue flowing through authorized suppliers instead of directly to IS_G5.

Value proposition (VP)	Description
Game VP	<ul style="list-style-type: none"> • A physical or digital copy of the game. • Offering access (rights) to the game, which in turn offers entertainment.
Subscription VP	<ul style="list-style-type: none"> • A recurring time based access to the game. • Offer continuous access to the game, which offers entertainment.
Equipment VP	<ul style="list-style-type: none"> • In-game armor, weapons, buildings or land areas. • Offer personalization and customization of virtual characters.
Money VP	<ul style="list-style-type: none"> • An economic asset in the form of coins, bills or a digital equivalent. • Offers economic resource increase, to be spent or invested on other products or services, or accumulated for later use.
Innovation VP	<ul style="list-style-type: none"> • Ideas and solutions for the game. • Offers potential improvements to the game IP and services.
Brand Exposure VP	<ul style="list-style-type: none"> • Targeted advertising campaign using non-traditional advertising channels providing direct access to the customer base of the company. • Offers the potential to gain more customers for the Company
Game offer VP	<ul style="list-style-type: none"> • Giving away the right to distribute the game free of charge for its new customers. • Offers the potential to gain more customers for the ISP
Authorization VP	<ul style="list-style-type: none"> • Permission to produce and sell in-game equipment. • Offer access to a revenue channel.
Fee VP	<ul style="list-style-type: none"> • Permission to take a percentage cut of in-game equipment sold. • Offer some revenue of the in-game equipment sold.
Advertisement VP	<ul style="list-style-type: none"> • Exposure of the game through marketing channels. • Offer outreach and exposure of the game to potential new customer bases.
Publicity VP	<ul style="list-style-type: none"> • Fame and appreciation • Offer influence and recognition
Labor VP	<ul style="list-style-type: none"> • Labor • Offer Employment.

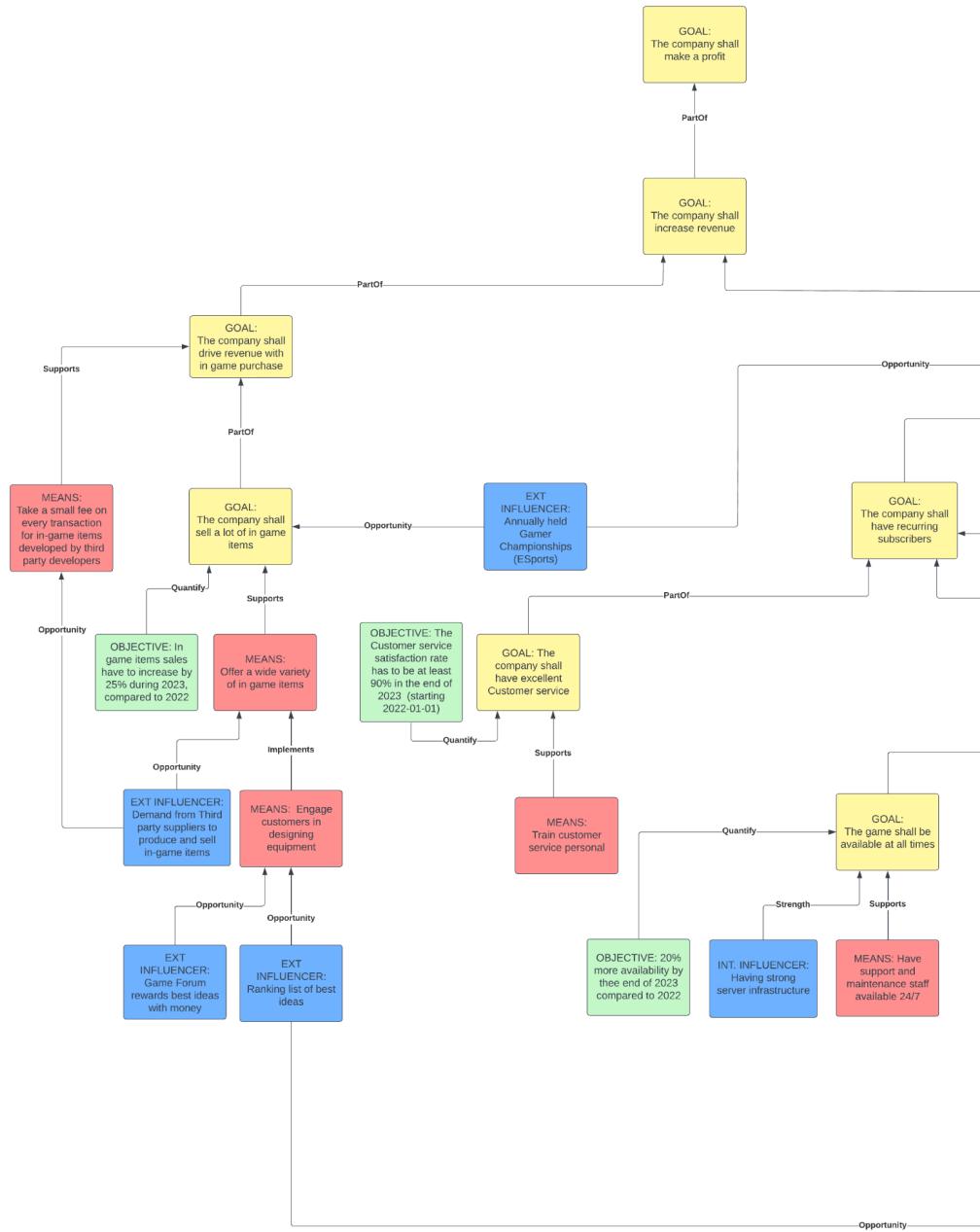
3 Goal Design

3.1 Goal Model

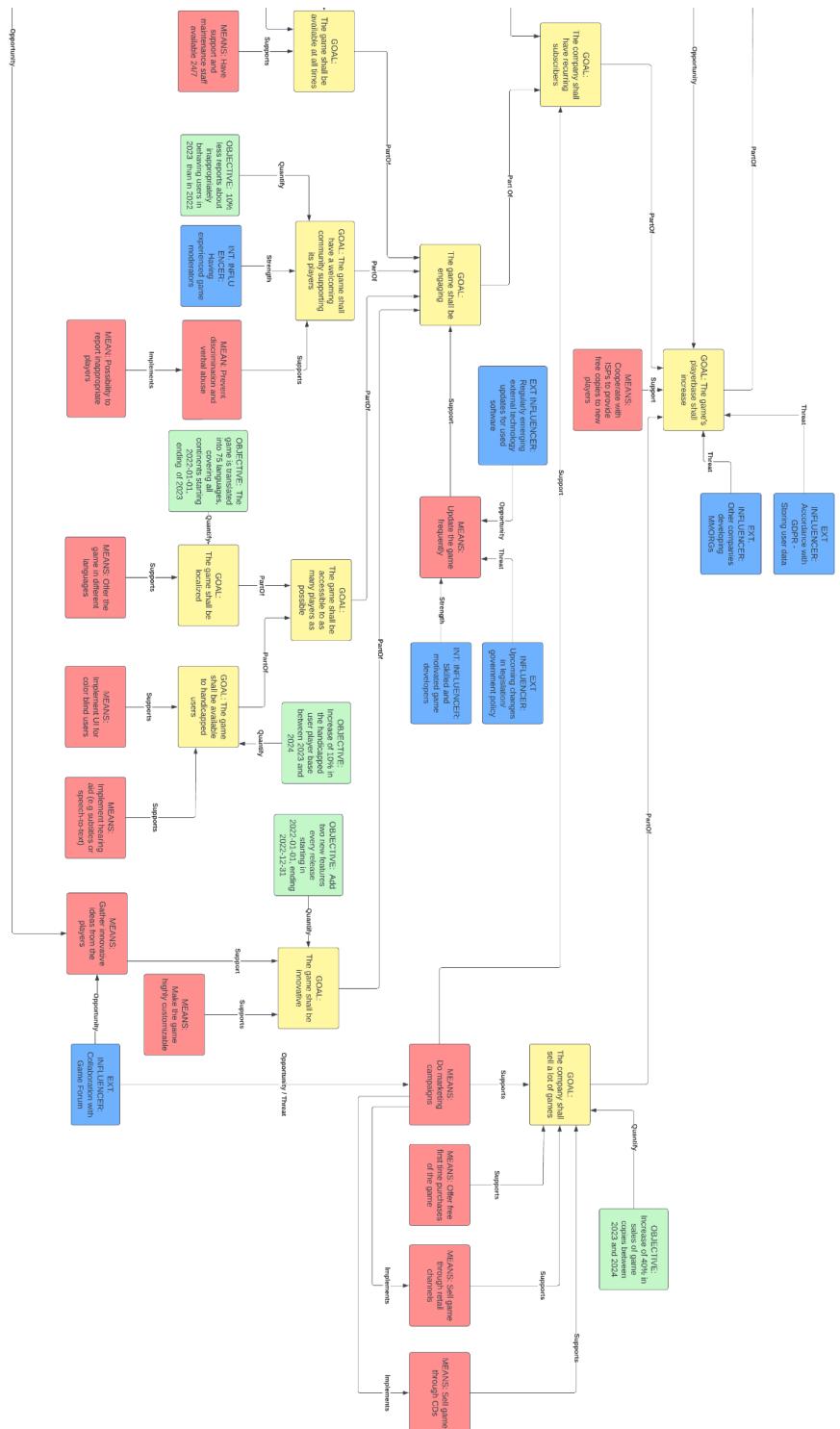


Goals			
1	The company shall make a profit	9	The game shall have a welcoming community supporting its players
2	The company shall increase revenue	10	The game shall be available at all times
3	The company shall drive revenue with in game purchase	11	The game shall be accessible to as many players as possible
4	The game's player base shall increase	12	The game shall be localized
5	The company shall sell a lot of in game items	13	The game shall be available to handicapped users
6	The company shall have excellent Customer service	14	The game shall be innovative
7	The company shall have recurring subscribers	15	The company shall sell a lot of games
8	The game shall be engaging		

Part A:



Part B:



3.2 Goal Model Explained

Like any other company in the industry, the main goal of our company is to make a profit and part of this main goal is to increase our revenue. To achieve this goal, two major sub-goals have emerged, which are driving revenues with in-game purchases and increasing the game's player base. To achieve these in turn, they are supported by further sub-goals and means, of which the leaf goals are in themselves made measurable by objectives. Some goals and means have additional influencers that affect them.

To generate revenue with in-game items, we receive money through a small fee that is charged for each transaction for in-game items developed by third-party developers. In addition, we offer a wide range of in-game items so that we can sell as many as possible. Therefore, it is also important for us to have good third-party suppliers who produce and sell as many well-thought items as possible. Players can also design their wishes together with us or post their ideas in the game forum, which will be ranked according to innovation and the best ideas will be rewarded with money. By having our game entered into the annual E-Sports Championships, we sell more in-game items and most importantly gain more reach, which influences growth in our user base. Hereby, it is important for us to always be in line with the current GDPRs.

But the increase of the game's player base is also negatively influenced by other companies developing MMORPG. Therefore, we cooperate with ISPs to provide free copies to new players, which will attract more players to our game. And in addition to this, as many games as possible are to be sold. For this purpose, advertising campaigns will be made, the game will be purchasable through CDs and retail channels and free first-time purchases of the game will be offered.

Furthermore, we want to retain our subscribers by having excellent customer support, well-trained service staff and an engaging game. We achieve this by regularly updating our game, which allows us to cover regular changes in the software we use and emerging legislative changes. To be able to implement this, we have employed skilled and motivated game developers.

What makes our game stand out from the rest is that we have set a goal for our game to be accessible at all times, helped by our existing strong server infrastructure, as well as the creation of a support and maintenance department that is available 24/7. We also want to make our game accessible to as many players as possible. That means the game should be localized by offering it in many different languages, but also that we want to make it accessible for handicapped users. This is possible by implementing UI for colourblind and hearing aids like subtitles or speech-to-text for deaf players. It is also a goal of ours to have a welcoming community by preventing discrimination and verbal abuse and giving players the possibility to report inappropriate players. For this, we use our experienced game moderators. Our game should be as innovative as possible, through a high level of customization and the ideas of players, collected through the game forum.

3.2.1 Five Forces Components Relevant to the Goal Model

In order to analyze the market competition we have used Porter's five forces in our goal model. Porter's five forces mainly focus on competitive rivalry, new entrants, power of buyers and suppliers, and the threat of substitutes. Michael Porter's "Porter's five forces" analysis has become the most important and famous strategy tools. Determining the profit potential is the purpose of the Porter's five forces. It focuses on industry's competitive pressure. Almost all business sectors are influenced by this theory. It helps a business to make good decisions and develop competitive strategies.

In our goal modeling we have given a goal that "The game's player base shall increase" which is influenced by external influencer "Other companies developing MMORPG". Here we have focused on competitive rivalry inspired from Porter's five forces. The type of competition can vary depending on the balance of the competitive relationship. The **competitive rivalry is high** when there are numerous competitors because then consumers can easily switch to competitors offering similar products or services. Similar size companies are likely to be more fierce than when there are large and small companies. It is also worth keeping an eye on the market growth as a growing market allows both companies to grow in sales and a stagnant market means that a market steal is required.

Another goal we established which states that "The company shall sell a lot of in game items " to support it we have a mean "offer a wide variety of game items" which is influenced by "demand from third party suppliers to produce and sell in-game items" that creates an opportunity that our company shall drive revenue with in game purchase. Thus here we have used Power of Supplier force from Porter's five forces by which he meant that suppliers have to drive up the cost of inputs.

We have also focused on "Threat of Substitutes " which means that most products can be substituted for other offerings, not necessarily the same category. Like we have a mean that our game will sell games through CDs, retail channels.

We have used the Entry barrier's force which is an external influencer "Upcoming changes in government policy " a threat when we update the game frequently (mean).

As for "Power of buyers" which focus on a high number of customers we have implemented a goal "The game shall be localized " and we offer game in different languages.

3.2.2 Strategy Map

We have created a strategy map that shows our goals and strategy to meet our vision.

We have four perspectives and our goals are connected with each other.

Strategy map is divided into four parts

1. Financial : Our main goal which is “ The company shall make a profit “ as well as some other goals are also included.
2. Customer Our company shall have recurring customers and it should increase.
3. Internal Business : Measures which will be taken by company are included such as “ The game shall be engaging”
4. Learning and Growth : In order to focus on the growth of the company we set goals such as “ The game shall be localized “ and “The game shall be available to handicapped users”:



Fig: Strategy map

4 Process Design

4.1 Exchange and Conversion Processes in REA

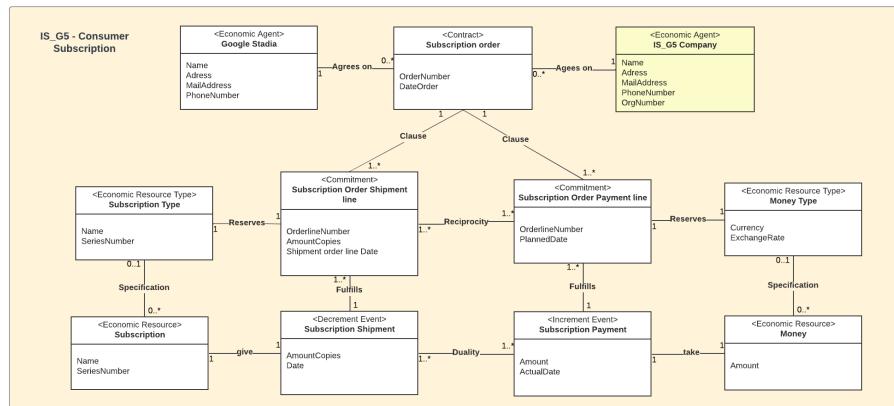
The following Exchange processes are derived from the VDML diagram.

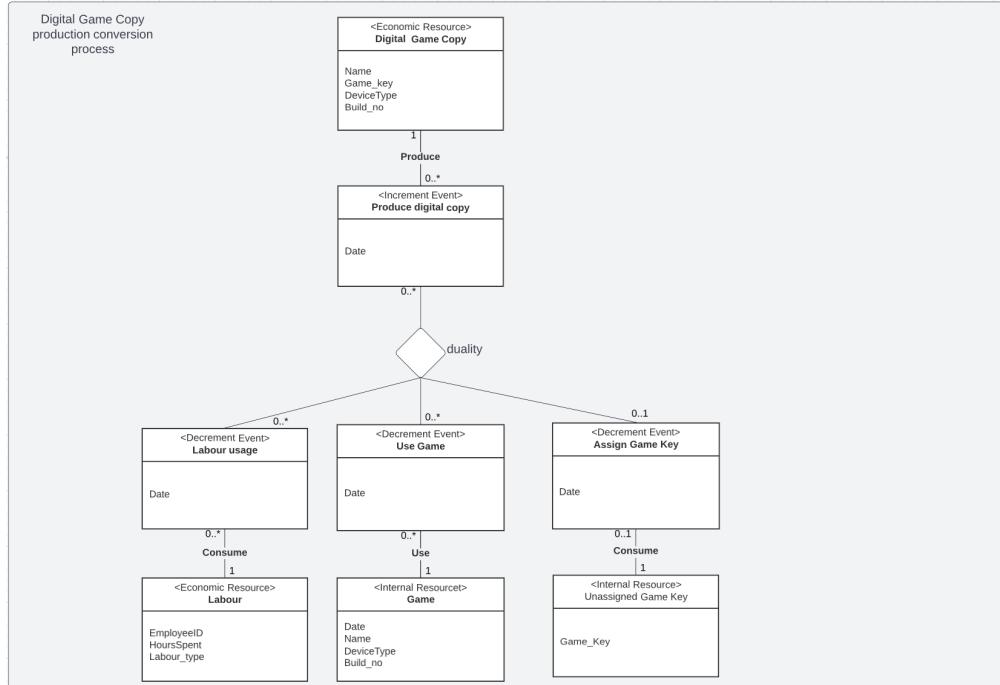
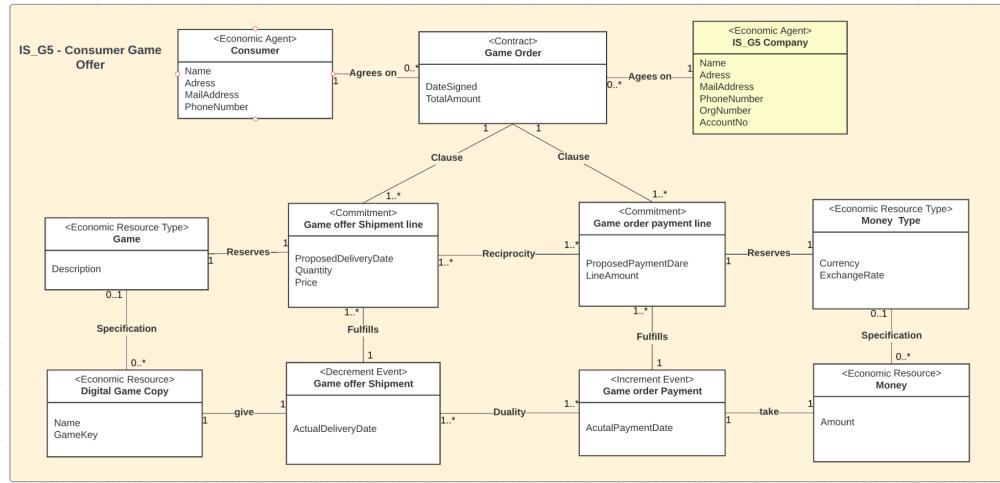
Focal Agent	Agent	VP (from Focal Agent)	VP (to Focal Agent)
IS_G5	Consumer	Game VP	Money VP
IS_G5	Consumer	Subscription VP	Money VP
IS_G5	Consumer	Equipment VP	Money VP
IS_G5	Consumer	Equipment VP	Innovation VP
IS_G5	Retail Store	Game VP	Money VP
IS_G5	Google Stadia	Game VP	Money VP
IS_G5	Google Stadia	Subscription VP	Money VP
IS_G5	Game Forum	Money VP	Innovation VP
IS_G5	Game Forum	Money VP	Advertisement VP
IS_G5	ISP	Game Offer VP	Brand Exposure VP
IS_G5	Authorized Suppliers	Authorization VP	Fee VP
IS_G5	Staff	Money VP	Labor VP

All exchange and conversion processes have been defined from the perspective of our company. This is highlighted by having the focal economic agent IS_G5 company marked with yellow color in the diagrams below. Relationships between the different classes should therefore be read as “IS_G5 company gives ...” and similarly for “takes” relationship. Most of the exchange and conversion have been separated into individual diagrams in order to improve readability and understanding for the reader. In two of the diagrams the exchange and related conversion process has been connected to illustrate how the given economic resource conversion is modeled, thereby hopefully supporting better understanding of the IS_G5 company and its processes and structure.

4.1.1 IS_G5 - Consumer processes

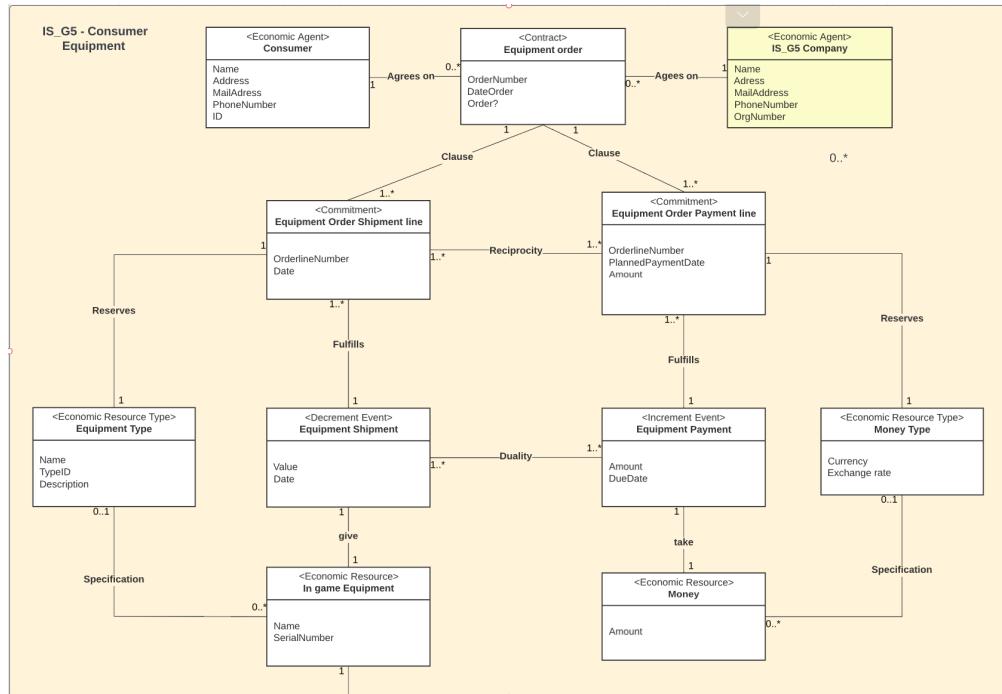
The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and Consumers as specified by the VDML diagram in section 2. These include one exchange process for the game, and another for the subscription. It also includes a combined exchange and conversion process, where the exchange process depicts equipment exchange for money and the conversion process models equipment production performed within the company.

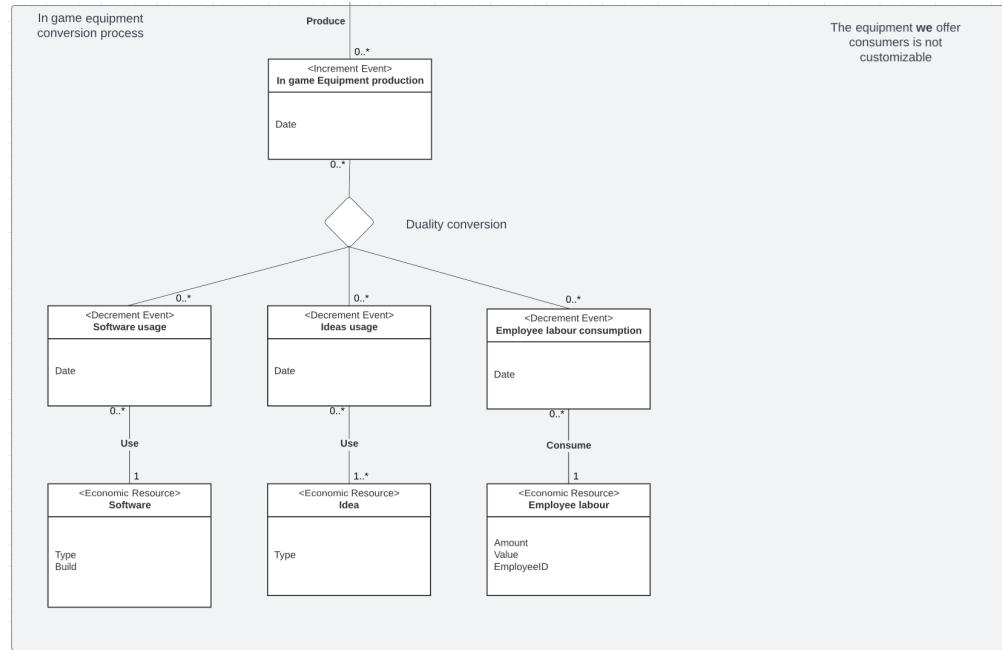




IS_G5 - Consumer Equipment

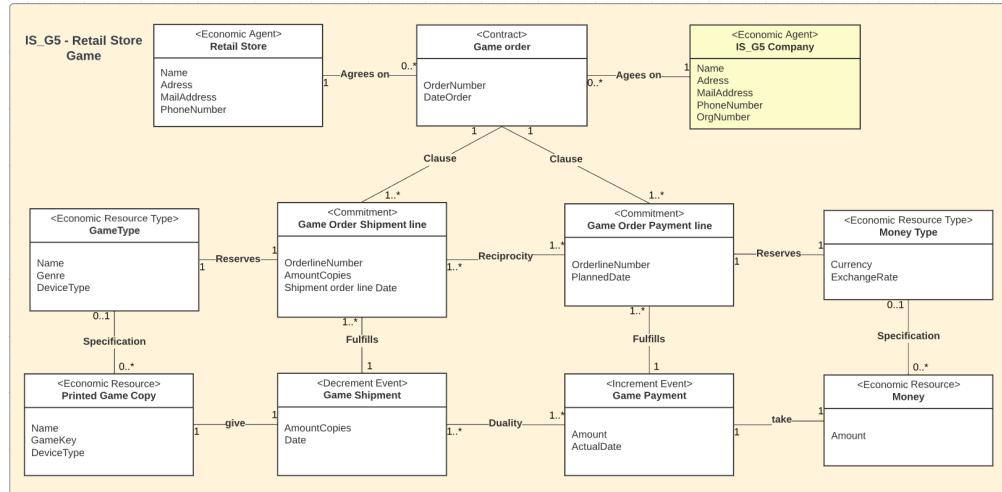
This is depicted with both an exchange and a conversion process, bridged by the Equipment economic resource. The exchange process, with a yellow background is a straightforward exchange process between the Authorized Equipment Supplier and the Consumer. The resources exchanged are Money and Equipment. The conversion process uses Software and Ideas, consumes Employee labor and Consumer labor to produce In-game Equipment





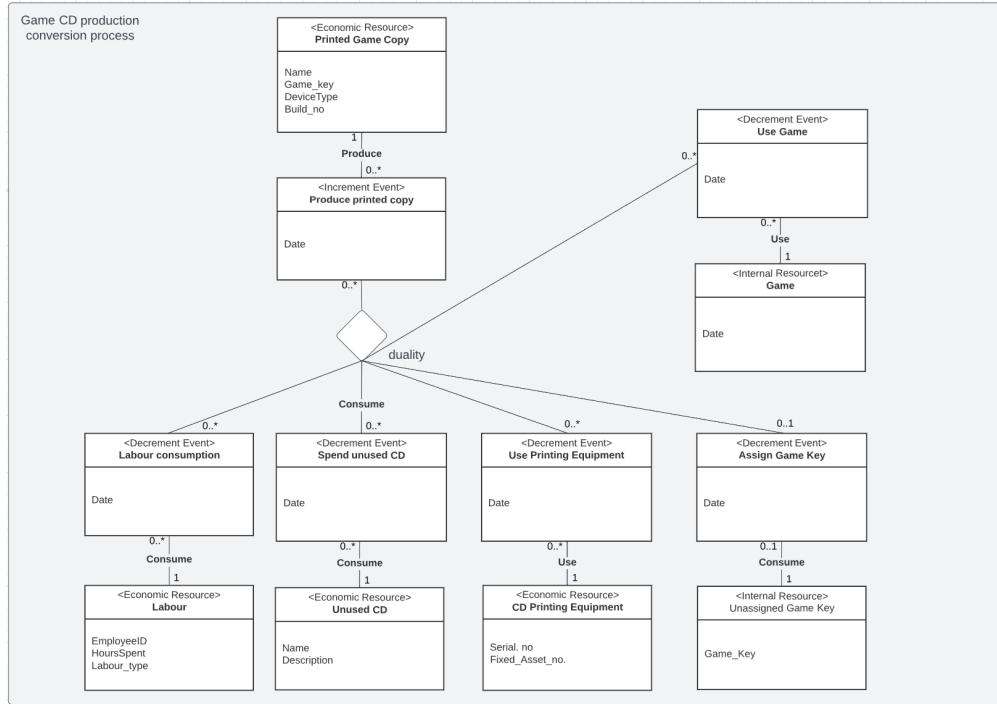
4.1.2 IS_G5 - Retail store

The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and Retail stores as specified by the VDML diagram in section 2. These include one exchange process for the game.



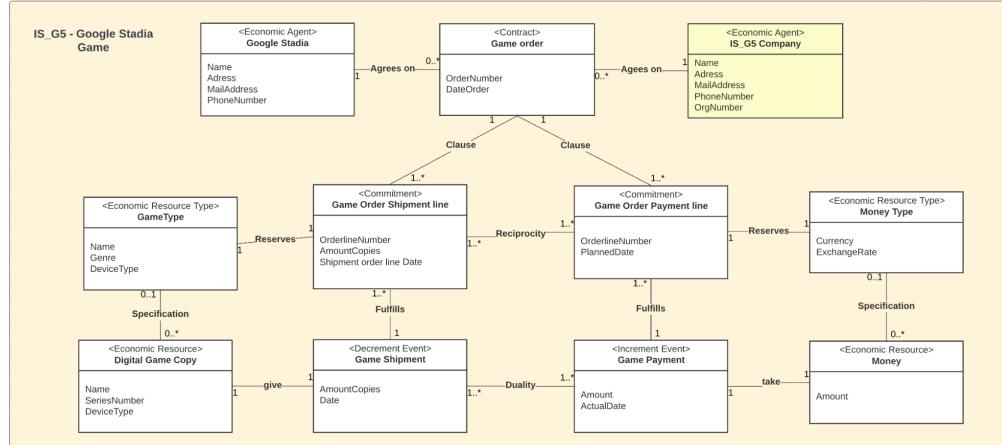
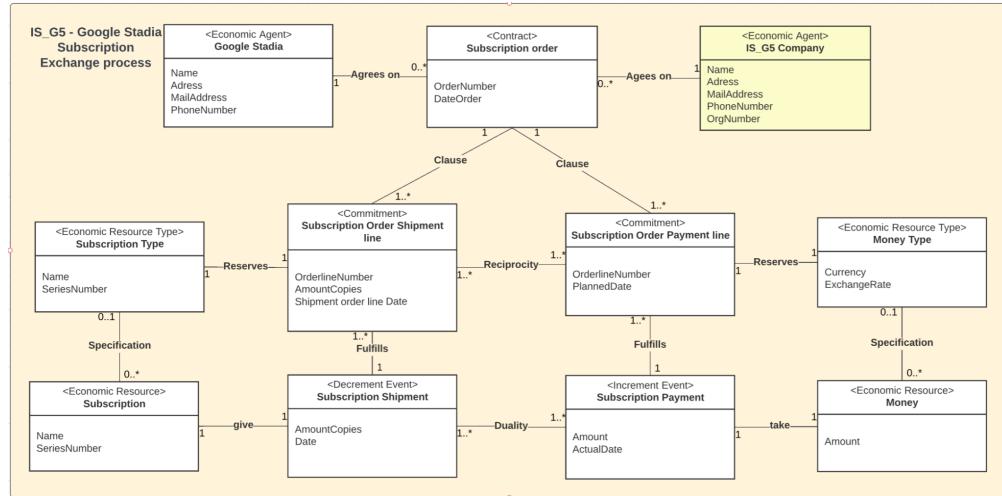
IS_G5 - Printed Game copy conversion process

Consumes unassigned Game Key, employed labor, unwritten CD and uses the game CD burner as resources to produce a printed copy



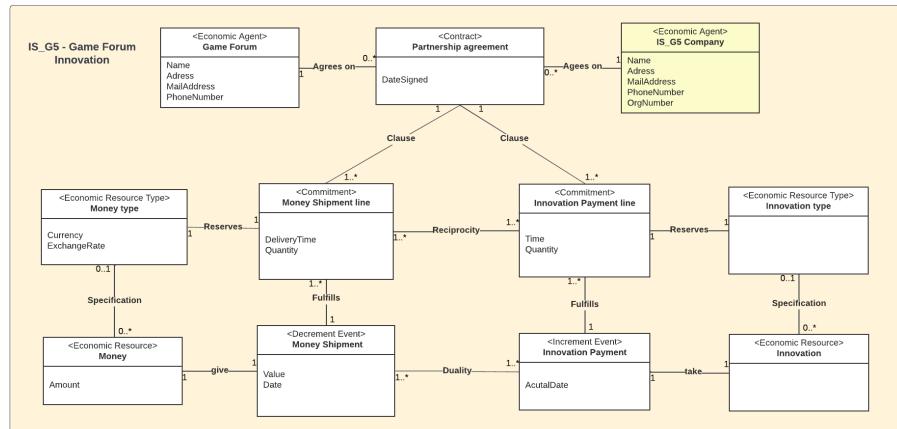
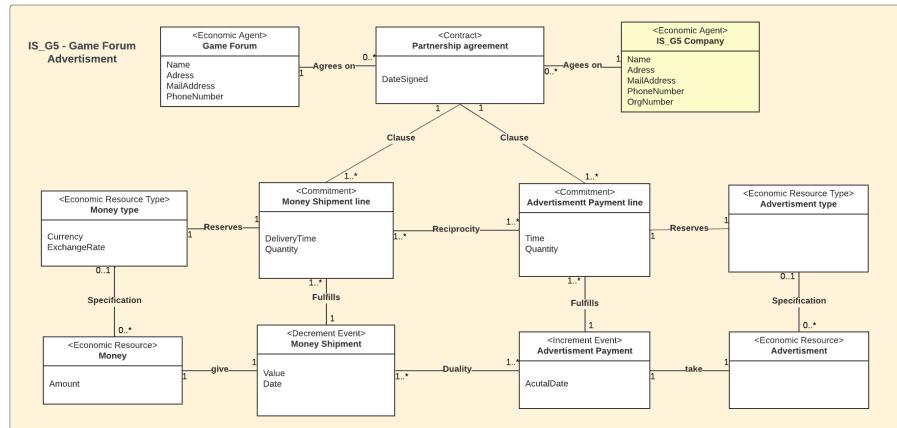
4.1.3 IS_G5 - Google Stadia

The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and Google Stadia as specified by the VDML diagram in section 2. These include two exchange processes for game and subscription as well as the previously described conversion process from the internal resource Game to the economic resource Digital Game Copy



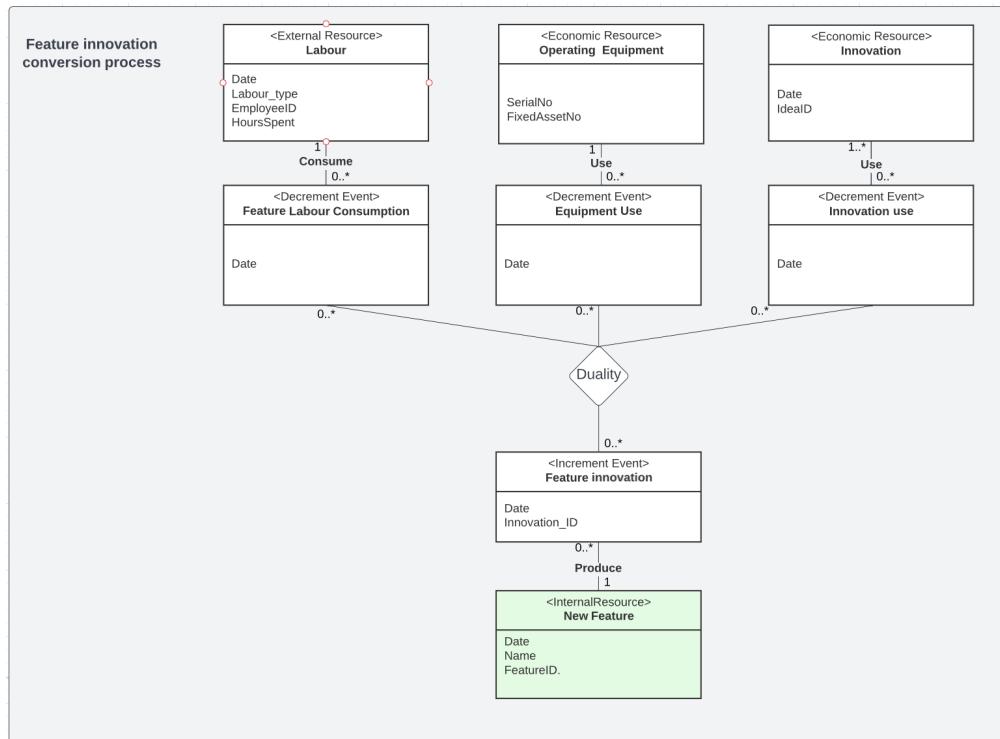
4.1.4 IS_G5 - Game Forum process

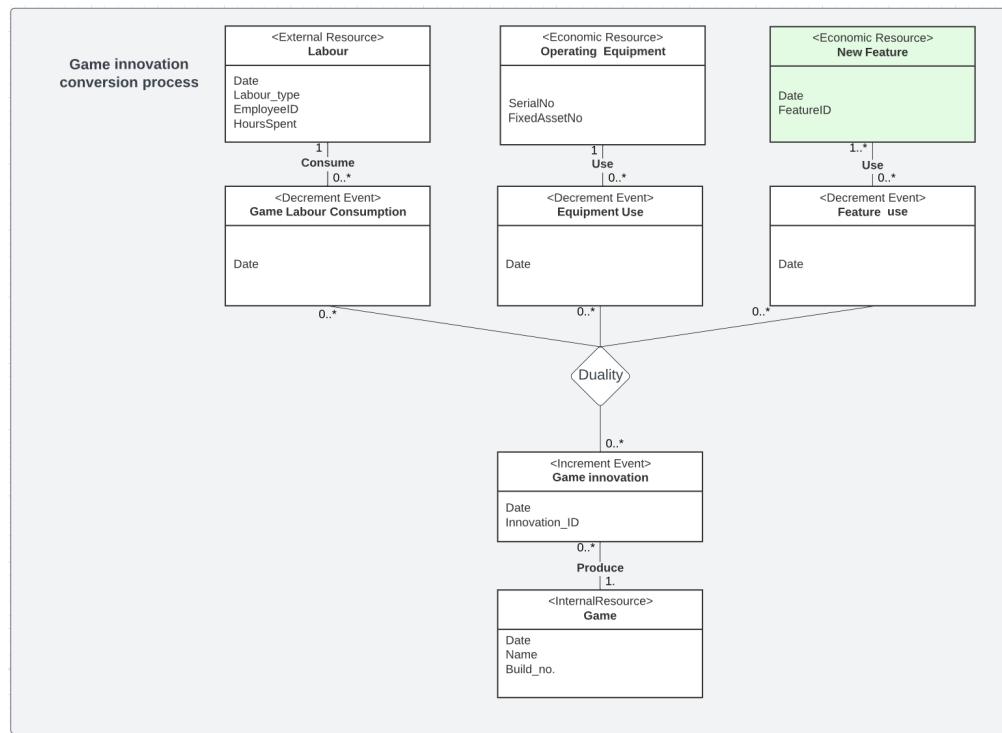
The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and Game forum as specified by the VDML diagram in section 2. These include exchange processes for advertisement and innovation.



IS_G5 - Game innovation conversion processes

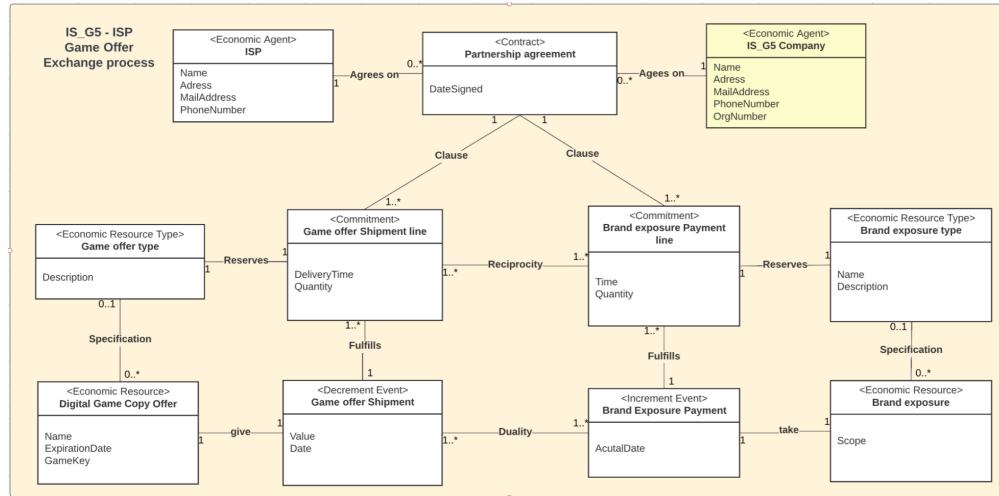
The following conversion process takes Innovation from the Game Forum and converts it into an internal resource, called New Feature. This in turn is converted into the economic resource Game, which is subsequently offered to other external agents in our exchange processes





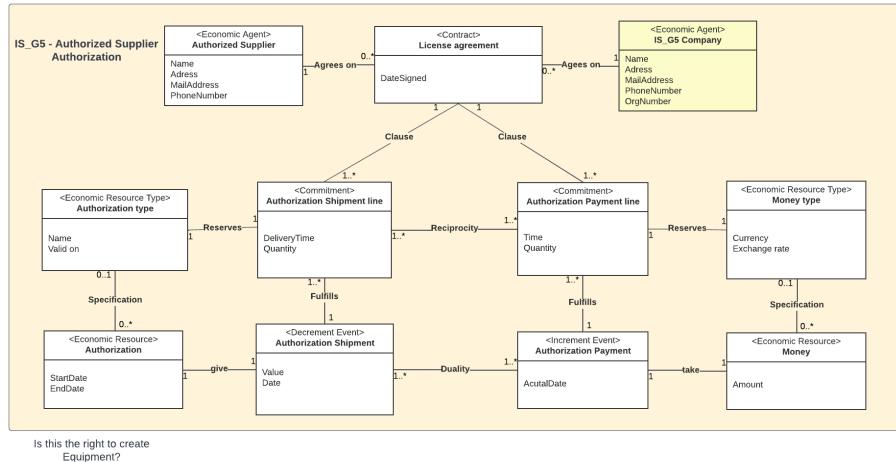
4.1.5 IS_G5 - ISP processes

The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and ISPs as specified by the VDML diagram in section 2. These include one exchange process with digital game offering for brand exposure.



4.1.6 IS_G5 - Authorized Suppliers process

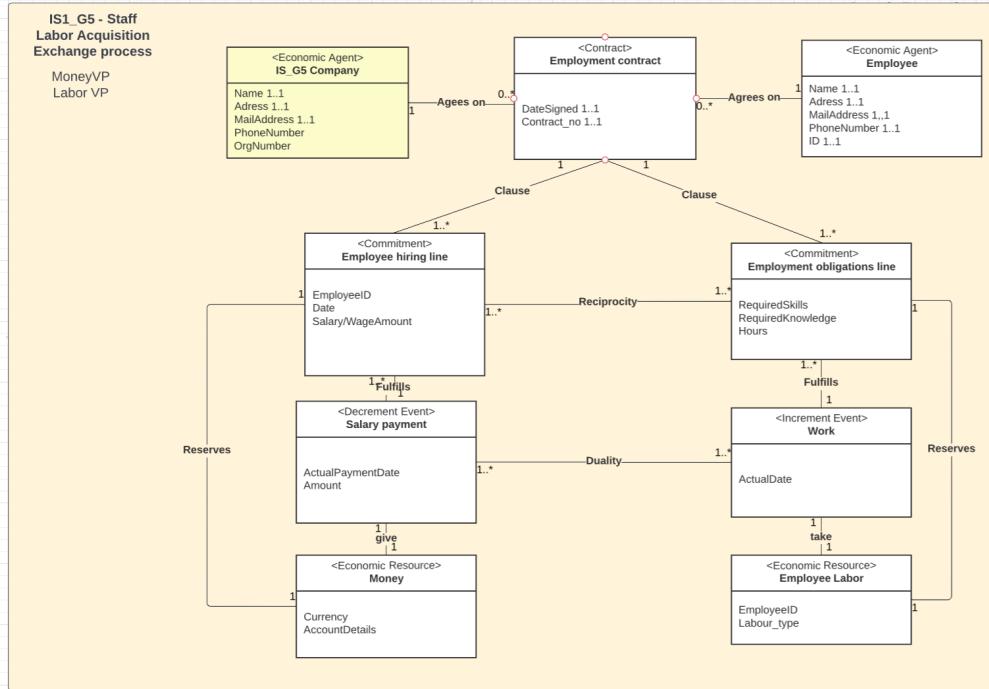
The following diagrams are for exchanges and conversions that are related to the relationships found between IS_G5 company and Authorized suppliers as specified by the VDML diagram in section 2. These include one exchange process for authorization.



Is this the right to create
Equipment?

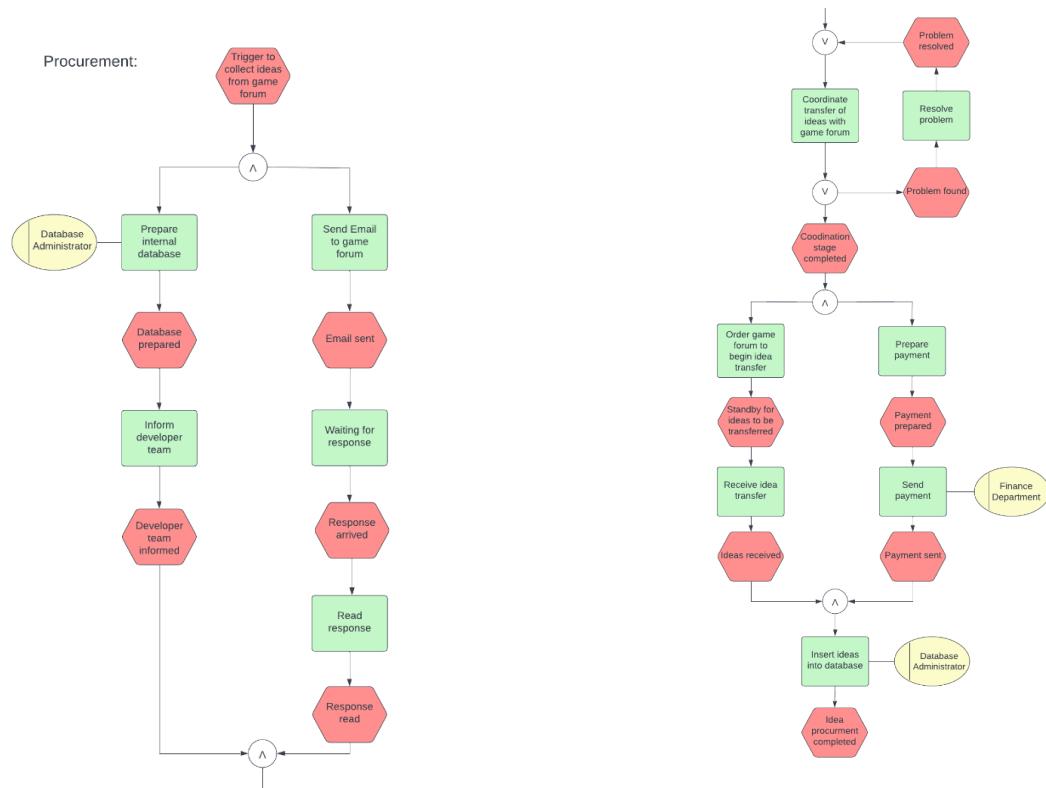
4.1.7 IS_G5 - Staff Labor Acquisition process

Our company also needs to hire employees/acquire labor

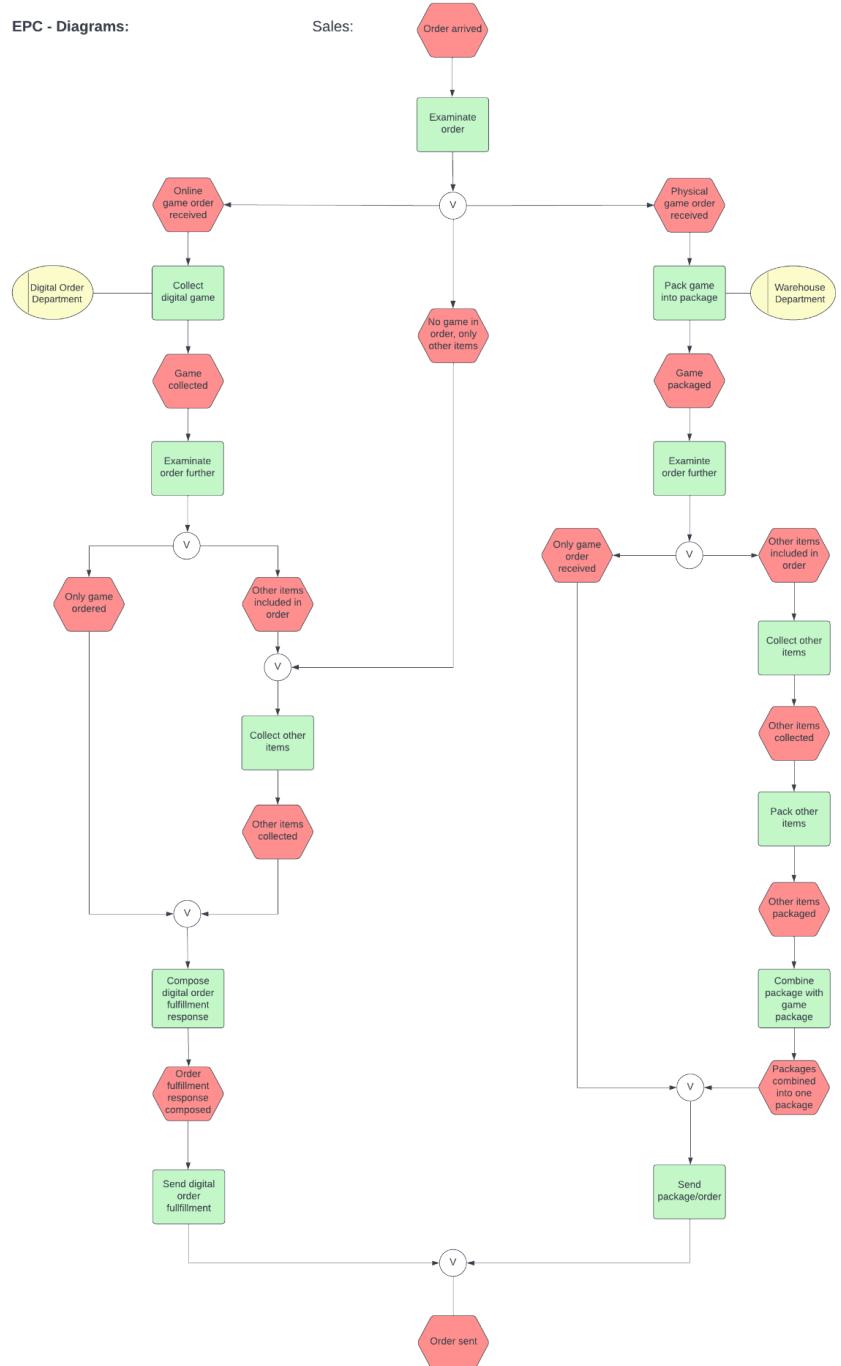


4.2 Detailed Processes in EPC

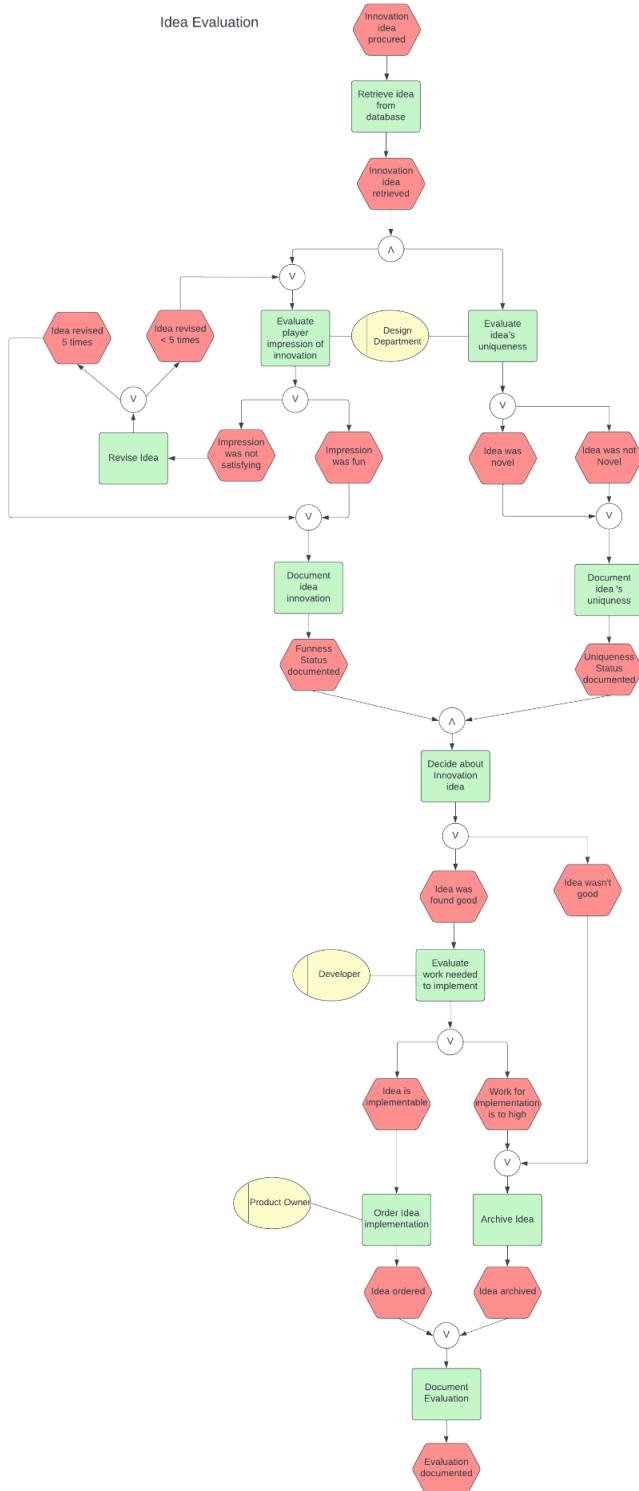
4.2.1 Procurement EPC diagrams



4.2.2 Sales EPC diagram



4.2.3 Idea evaluation EPC diagram



This EPC follows the Procurement EPC. Once an idea has been completed, it is stored in an idea database. It is then retrieved by the design team for evaluation. The idea is evaluated for uniqueness (to make sure that its mechanics have not been implemented similarly before) and whether it contributes any fun to the game. If the idea is not perceived as contributing any fun, it is revised for 5 times.

The result of each evaluation branch is documented before joining them and the flow reaches a decision event.

If the idea was found to be not good, it is archived. If the idea is found to be good it is sent to the development team for an evaluation of whether it is possible to implement the idea (given certain constraints, e.g cost, time, technology needed). If this evaluation step reaches the conclusion it is implementable, the product owner will proceed to order its implementation. If not, it will be archived. Finally the process and its outcome is documented in the idea database.

This is perhaps an unorthodox take on an EPC diagram, mostly because it goes into deeper detail than a normal EPC diagram, and could perhaps be broken down into more than one EPC. We decided to keep it in its aggregate form to provide an overview from start to finish of the evaluation process. Modeled this way, we also hoped to minimize the risk of deadlocks since we document and evaluate the results for each branch rather than making decisions directly. This could be tested as a Petri net and tokens.

4.3 Relationships between Models

The sales EPC diagram functions as a standardized procedure of how orders shall be managed before being delivered. The EPC can be applied to different actors which creates structure and consistency within the organization, which will support the goal “The company shall sell a lot of games”. The design of the process also aims to be as efficient as possible within the organization, resulting in higher productivity.

The procurement EPC diagram will promote the fulfillment of the goal “The game shall be innovative”. The process of gathering ideas will result in an innovative and engaging game. The EPC diagrams can be used in order to identify activities causing bottlenecks within the procedure. By improving the diagrams with an enhanced workflow the company may be given the opportunity to fulfill goals faster.

EPC	Conversion	Relationship
Idea evaluation	Game innovation conversion process	Takes ideas from game forum, via the dev/idea database and evaluates their implementability as New Features, an internal resource that is used to produce the game copies and subscription, which are economic resources.
Idea evaluation	Equipment conversion process	The EPC diagram shows the evaluation of an idea. In the conversion process, the idea is considered to be an economic resource which produces new in-game equipment during equipment production.

EPC	VDMIL	Exchange	Relationship
Sales	Game VP (from IS_G5) Subscription VP(fromIS_G5) Equipment VP(from IS_G5) Money VP(to IS_G5)	Consumer game Consumer subscription Consumer equipment	Sales EPC diagram shows the value exchange of game, subscription, equipment and money between IS_G5 and the consumer.
Sales	Game VP(from IS_G5)	Google Stadia Game	Sales EPC diagram shows the value exchange of game, subscription and

	<p>Subscription VP(from IS_G5)</p> <p>Money VP(to IS_G5)</p>	Google Stadia Subscription	<p>money between IS_G5 and Google stadia.</p> <p>Google stadia is then performing the same exchange with the customer.</p>
Sales**3	<p>Game VP(from IS_G5)</p> <p>Money VP (to IS_G5)</p>	Retail Store Game	<p>Sales EPC diagram shows the value exchange of game and money between IS_G5 and a retail store.</p> <p>The retail store is then performing the same exchange with the customer.</p>
Procurement	<p>Money VP(from IS_G5)</p> <p>Innovation VP(to IS_G5)</p>	Game forum innovation	Procurement EPC diagram shows the value exchange of money and innovation ideas between IS_G5 and Game forum.

5 IT Architecture Design

This section shows the IT architecture of the company. The involved actors are *Management, Distribution, Game Development, Sales, Customer Service* and the *Players* of our Game. Since many different actors are involved in the company, but all core processes of the company should be bundled in one system, we work with an ERP system. The ERP System also includes a CRM System for managing our relations with the user. All internal actors such as *Sales, Distribution, Management, Game Development* and *Customer Service* access this system to be able to handle the daily business processes efficiently.

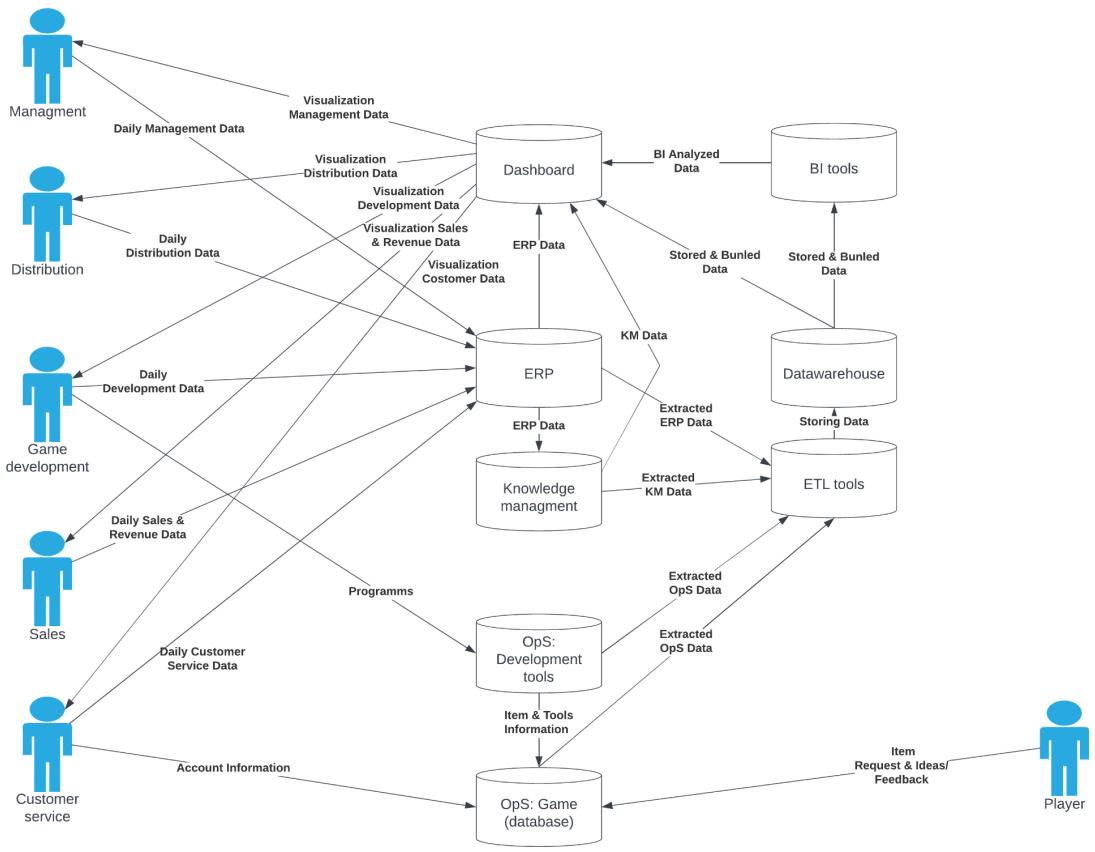
In addition, the IT support consists of a knowledge management system and ETL tools that extract the data from the operational systems, the ERP system and the knowledge management system, transform it and load it into the data warehouse so that it can then be processed using BI tools to support decision-making. The BI tools are thus used to analyze the performance based on the collected data. With the help of the dashboard, the analyzed data as well as the information bundled by the ERP system can be visualized for the internal actors enabling them to work with the data. Hereby most of the company goals can be reviewed and verified. The ERP system integrates functions that otherwise would have been included in a separate CRM system. Additionally the existence of an integrated ERP system makes the necessity for an EAI component obsolete.

As an *Distribution* and *Sales* actor for example an increasing player base and recurring subscribers can be kept in an overview. Furthermore, the *Game Developers* can check if the game reaches the goal of availability at all times and accessibility to as many players as possible and can thus think about new ideas and features at an early stage to achieve these goals.

To achieve the overall goals of the company, such as making a profit, increasing revenue or generating revenue within in-game sales, it is crucial for the *Management, Sales* and *Distribution* departments to know these figures early on and to have this data collected and accessible at one point. Therefore, these players need the ERP system, DSS and for the visualization a dashboard.

The foundation of all the above systems is the two operational systems *OpS: Development tools*, as well as the *OpS: Game's database*. The tools developed by the game developers are managed in the *OpS: Development tools* and are then fed from there into the database of tools available in the game.

The *players* also give additional input to the *OpS: Game* through their ideas and requests for new items. For *Customer Service*, it is important to keep the goal of having excellent customer service viewable, so they are reliable to the evaluation they get from the Decision Support Systems as well as the feedback they get through the game through the players.



6 Business Performance Management

6.1 Leading and Lagging KPIs

The following are the defined KPIs in the G5_IS company. Note that not all KPIs have a defined business process due to such a business process not yet being created. In such cases the KPIs business process value is named “Undefined”. Additionally, some goals have been abbreviated for readability.

6.1.1 Revenue - Lagging KPI

Name: Revenue

Definition: Annual increase in the company's revenues.

Goal(s): The company shall increase its revenue.

Target Values: 10% higher than the previous fiscal year

Business Process: Financial Statement

IT System: ERP database, G/L entries/financial statements.

IT Solution: ERP system

Owner: CEO

6.1.2 Daily logins - Leading KPI

Name: User base activity/Daily logins

Definition: Login activity per active subscription.

Number of logins to the game from accounts with active subscriptions compared the same time previous year.

Goal(s): Engagement, Revenue

Target Values: 85% of active subscribers should login daily during

Business Process: Undefined

Source data IT System: GameDB

IT Solution: GameDB OpS

Owner: Live Game Team

6.1.3 Features ordered - Leading KPI

Name: Features ordered

Definition: No. of approved and New Features ordered

Goal(s): Engagement, customer retention, new customers

Target Values: 2 (per game release)

Business Process: Game Idea Innovation EPC

IT System: DevelopmentDB, IdeaDB

IT Solution: DevelopmentDB OpS

Owner: Product owner

6.1.4 Daily new users - Leading KPI

Name: Daily new users

Definition: No. of daily new users

Goal(s): The game's playerbase shall increase, The game shall be accessible to as many players as possible

Target Values: 1500 new daily users

Business Process: Undefined

IT Data source System: GameDB OpS

IT Solution: GameDB OpS

Owner: Sales team

6.1.5 Crashes - Leading KPI

Name: Crashes

Definition: Track crash frequency

Goal(s): The game shall be available at all times

Target Values: No reported game crashes

Business Process: Undefined

IT Data source System: GameDB OpS

IT Solution: GameDB OpS

Owner: Live crew

6.1.6 Availability of game - Lagging KPI

Name: Availability of game

Definition: Measures the availability of the game during the last week in percentages. 100% availability equals 100% uptime of game servers and availability.

Goal(s): The game shall be available at all times.

Target values: 100% availability.

Business Process: Undefined

IT Data source System: Game system (database)

IT Solution: GameDB OpS

Owner: Live crew

6.1.7 Planned training of customer service staff - Leading KPI

Name: Planned training of customer service staff

Definition: Measures the planned/scheduled training occurrences of customer service staff members each month.

Goal(s): Excellent customer service

Target values: 4 monthly training occurrences

Business Process: Undefined

IT Data source System: ERP system.

IT Solution: ERP system

Owner: HR department

Assumption: The ERP system has a module for planning and scheduling training and to keep track of the outcome.. Maybe as part of HR module.

6.1.8 Performed training of customer service staff - Lagging KPI

Name: Performed training of customer service staff.

Definition: Measures the performed training occurrences of customer service staff each month.

Goal(s): Excellent customer service.

Target values: 4 monthly training occurrences completed

Business Process: Undefined

IT System: ERP system.

IT Solution: ERP system

Owner: HR department

Assumption: The ERP system has a module for planning and scheduling training and to keep track of the outcome.. Maybe as part of the HR module.

6.2 Evaluation of KPIs

The KPIs total eight in number and are therefore regarded as highly focused. Additionally it is argued that all of these should be considered “high value tasks”, essential for measuring and achieving the business and process goals of the company, and therefore also relatable to the top level goal. For example the KPI daily new users is tightly connected to expansion of the playabase of the company, and as such can also be connected to the goal model and integrated seamlessly to the objective of the overarching goal of the company.

Furthermore, the KPIs balance and complement, instead of interfering or undermining, each other. For example the number of crashes complement the availability KPI by supplying and measuring one of the underlying reasons for reduced availability. Likewise planned and performed training of customer staff complement each other by observing the measurable both in prospective and retrospective. This also supports actionable insights of the KPI since it allows the owner to take preemptive measures to ensure fulfillment of the KPI before it is too late.

However, not all KPIs were deemed directly actionable in an obvious way. For example, although the revenue KPI is simple to understand, it is measuring high strategic goals of the company and is merely the aggregated result of underlying metrics and KPIs, which in themselves may be actionable. Therefore to influence the outcome of revenue the underlying KPIs are the actual drivers and that requires actionable decisions to be made in order to influence the outcome of the revenue. Hence the revenue KPI, due to its lagging nature, may become actionable only by proxy to the other KPIs or as a long term, strategic, indicator. Which may or may not be desired. Expanding on this notion, daily new users and daily logins are two KPIs which can be considered more concretely actionable and as drivers for the revenue KPI.

Additionally some KPIs have a too small of a timeframe in order to be able to take actionable decisions to affect its outcome. One example is the daily new users KPI. Although it effectively measures the increase (or decrease) in numbers of players, the timeframe could be argued to be limited to effects its ultimate outcome within a given day. Of course different trends in daily new users could be considered for scaling our infrastructure, perhaps long term patterns can be seen when exploring daily new users (and logins) compared to different context parameters and time intervals, e.g holiday seasons, other game releases, new content delivered, or new/old marketing campaigns for decisions and actions taken to drive the outcome of the next following days in order to fulfill its measurable. However, only observing

the KPI as encapsulated within a given day most likely enforces constraints that limit any actions' final influence on the outcome. One alternative is to complement this KPI with a weekly or monthly increase as well so that both the daily and a more expansive timeframe is represented and analyzed.

All of the KPIs are deemed understandable and able to be clearly aggregated and analyzed so that the observer can understand the result and the target for each are concretely and explicitly defined. However, it could be argued that some of the threshold and KPIs will need to be updated and modified as the company grows and expands its customer base, in order to remain both challenging and relevant. For example the KPI daily new users has a target of 1500 player increase per day.

Although this is a challenging goal for a small company, as the company grows 1500 players may become a minuscule percent of the total playbase. Hence updating the target growth with the expansion of the player base would be advantages so that the KPI does not become irrelevant due to its simplicity to be fulfilled. Alternatively changing the target to a percentage, instead of an absolute number, of the total number of customers to make it more scalable.

All KPIs have clear ownership and the owners should have (reasonable) mandates to initiate actions when target values have not been met. If not, there should be an escalation process in place for extraordinary circumstances.

KPIs evaluated by Eckerson's characteristics, summarized in table:

KPI	Aligned	Owned	Predictive	Actionable	Timely*	Easy to understand	Balanced & Linked)	Gauge-proof*	Standardized	Incentivized	Relevant
Revenue	Yes	Yes	No	No	No	Yes	N/A	N/A	Yes	Yes	Yes
Daily logins	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A
Features ordered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Daily New users	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A
Crashes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Availability	Yes	Yes	No	No	Yes	Yes	N/A	Yes	Yes	Yes	N/A
Planned Training	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Performed Training	Yes	Yes	No	No?	Yes	Yes	No	Yes	Yes	Yes	Yes

7 Enterprise Architecture Evaluation

Concept	Description
Capability	To procure and implement ideas into a game that is engaging and entertaining.
Goal	<ul style="list-style-type: none">• The game shall have a lot of recurring customers• The game shall be engaging• The company shall be innovative
KPI	<ul style="list-style-type: none">• Daily logins• Daily new users• Features Ordered
Context	<ul style="list-style-type: none">• Idea evaluation set:<ul style="list-style-type: none">◦ Quality of ideas◦ Novelty of ideas• Context set:<ul style="list-style-type: none">◦ Technological feasibility◦ Resource feasibility
Process	<ul style="list-style-type: none">• Idea evaluation process• Idea procurement process
Process Variants	<ul style="list-style-type: none">• Idea evaluation process variants<ul style="list-style-type: none">◦ Revise idea five times◦ Good idea, no revision◦ Non feasible archive• Idea procurement process<ul style="list-style-type: none">◦ Idea transferred canceled, look in archived ideas◦ Standard procedure◦ Developers unavailable, standby

