



### **ASSIGNMENT 1 FRONT SHEET**

Qualification	BTEC Level 5 HND Diploma in Computing						
Unit number and title	Unit 14: Business Intelligence						
Submission date	December 3 <sup>rd</sup> , 2023						
Re-submission Date		Date Received 2nd submission					
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Class	GCC1001	Assessor name	DOAN DINH HO				

#### **Student declaration**

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student's signature	QUY
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#### **Grading grid**

P1	P2	M1	M2	D1	D2





☐ Summative Feedback:	□ Re	☐ Resubmission Feedback:		
Grade:	Assessor Signature:	Date:		
IV Signature:				





#### **Assessment Brief**

Student Name/ID Number	
Unit Number and Title	14: Business Intelligence
Academic Year	2019-2020
Unit Tutor	
Assignment Number & Title	Assignment 1: Discover business process and BI technologies
Issue Date	
Submission Date	
IV Name & Date	

#### **Submission Format**

The submission is in the form of a Microsoft® PowerPoint® style presentation to be presented to your colleagues. The presentation can include links to performance data with additional speaker notes and a bibliography using the Harvard referencing system. The presentation slides for the findings should be submitted with speaker notes as one copy. You are required to make effective use of headings, bullet points and subsections, as appropriate. Your research should be referenced using the Harvard referencing system. The recommended word limit is 500 words, including speaker notes, although you will not be penalised for exceeding the total word limit.

#### **Unit Learning Outcomes**

LO1 Discuss business processes and the mechanisms used to support business decision-making.

LO2 Compare the tools and technologies associated with business intelligence functionality

#### **Assignment Brief**

Your company is currently working in [Assumed Domain] for 2 years. For a new, young company, the





competition in the market is very high. Therefore, the Board of Director has decided to apply Business Intelligence to improve the company business process by making better decisions.

The Board of Directors assigns a small group including you in Research & Development Department to study business intelligence to apply for the company in the coming years.

You need to research about business processes and decision support processes in the company and identify the types of data (unstructured, semi-structured or structured) generated by these processes with examples. You also need to research about current software used in the business process or decision support process and evaluate these usages (benefits and drawbacks).

Next you need to understand the types of support for decision-making at different levels (operational, tactical and strategic) within the company and study which business intelligence features can help on that types of support. Study the information systems or technologies (of BI) can be used in this case, compare and contrast them to conclude which should be used.

Your group needs to present the research results to the board in a presentation of 30 minutes.

Learning Outcomes and Assessment Criteria						
Pass	Distinction					
LO1 Discuss business processes and the decision-making						
P1 Examine, using examples, the terms 'Business Process' and 'Supporting Processes'.	M1 Differentiate between unstructured and semi-structured data within an organisation.	<b>D1</b> Evaluate the benefits and drawbacks of using application software as a mechanism for business processing.				
LO2 Compare the tools and technologies a functionality	D2 Compare and contrast a range of information systems and technologies that can be used to					
P2 Compare the types of support available for business decision-making at varying levels within an organisation.	M2 Justify, with specific examples, the key features of business intelligence functionality.	support organisations at operational, tactical and strategic levels.				







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### I. Introduction

Steem is a world-renowned platform that supports a thriving community of game developers. We meticulously review and test submitted games, ensuring only high-quality titles reach our users. Upon release, these games are strategically categorized and promoted for optimal reach. We prioritize user experience with dedicated customer care services.

This report delves into the realm of business processes, specifically those involved in effective decision-making. I dissect the concepts of "Business Process" and "Supporting Process" through compelling examples.

Furthermore, I clarify the distinction between "unstructured" and "semi-structured" data within organizations, equipping you with clear definitions for each.

Finally, I compare the diverse tools and technologies associated with business intelligence, showcasing how different levels within an organization can leverage them for robust decision-making.

# II. Discuss business processes and the mechanisms used to support business decision-making

1. Examine, using examples, the terms 'Business Process' and 'Supporting Processes'.

#### a. Business Process:

#### **The definition of Business Process:**

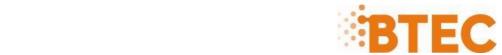
Business processes are procedures developed from a sequence of steps to achieve goals. Each step represents a specific assigned task. Business process workflows may involve people, materials, equipment and other elements needed for a department or individual to meet established goals. (Birt, 2022)

#### **Examples of Business Process:**

**Hiring process**: Hiring new employees for an organization is an example of a business process. A hiring team or human resources department may take the following steps in this process:

- Post the job description through various channels.
- Evaluate candidates to identify the top choices based on their qualifications.
- Contact selected candidates to arrange interviews.
- Interview candidates and select one for the position.
- Send a job offer for the candidate to accept.





**Delivery management:** Delivery management is a business process that involves shipping or transferring products to customers or other companies. This process may involve the following steps:

- Receive and accept the customer's order.
- Retrieve product and package it properly.
- Ship the product and send an invoice to the customer.
- Track the order through delivery.
- Ensure the customer receives the order.
- Measure customer satisfaction by sending a survey. (Indeed, 2023)
- **The importance of Business Process:** 
  - Creating a unified perspective: Business processes can help team members focus on shared objectives as they complete their regular tasks. For example, your team may want to increase customer satisfaction, so they define the tools, tasks and people in a process to do this.
  - o *Supporting consistency*: Documented business processes can help ensure that people complete tasks the same way no matter who is performing them. This helps prevent errors and minimize risks.
  - Answering questions: Business processes can be a quick reference tool for team members and company leaders who need to know how they or others might handle a particular task or decision.
  - Ensuring compliance: Business processes can make it easier and more methodical to create audit trails and comply with industry regulations and standards.
  - o *Fostering accountability*: Documented business processes can help support accountability because each team member understands their expectations.
  - o *Encouraging innovation*: Many business processes include stages for reflection, brainstorming and creative collaboration to help teams innovate to solve shared problems. (Birt, 2022)
- Classified business process: Can be classified in several aspect:
  - Scope of the process in the organization:
    - Individual process: An individual process is a step-by-step procedure that is carried out by a single person. It is often used to complete a task or achieve a goal. Individual processes are usually simple and straightforward, and they can be easily modified to fit the specific needs of the individual.
    - Vertical process: A vertical process is a step-by-step procedure that is carried out by a group of people. It is often used to complete a complex task or achieve a large goal. Vertical processes are usually more complex than individual processes, and they may require the coordination of multiple people and departments.
    - Horizontal process: A horizontal process is a step-by-step procedure that is carried out by multiple people, but they work on different aspects of the process simultaneously. Horizontal processes are often used to complete a task that requires input or feedback from multiple people. Horizontal processes can be more efficient and effective than vertical processes, as they can help to reduce the amount of time it takes to complete a task.
  - Purpose of the process:





- Operational processes: These processes affect the company's core business, or the steps needed to produce a product or service. These are often in areas like manufacturing a product, taking customer orders or opening an account. Operational processes might be department specific, like how people complete marketing or sales activities, or specific to an individual role and tasks.
- Management processes: These processes involve higher-level managerial functions such as compliance, human resources or governance. This means that leadership has certain steps to follow to improve overall business performance, employee morale, company culture or other organizational factors. This often involves tasks like budgeting and deciding on team structures.
- Supporting processes: These processes support operation functions such as accounting, customer call center, technical support or safety training. Rather than influencing the process it takes to deliver products and services, these enable teams to do their jobs. Rather than customer value, internal employees often see the value in these. (Indeed, 2022)

#### **b.** Supporting Processes:

#### **4** The definition of Supporting Processes:

These are processes that coordinate the development and life cycle of the activities contained in the main processes, ie organizational and business processes. These processes can be undoubtedly cross processes, so that they contribute to the achievement of objectives between different areas of the project and / or company.

The activities are in support processes, aimed at achieving objectives that support other processes that perform a specialized function. (Incubator, 2015)

#### **Examples of Supporting Process:**

- Bookkeeping, accounting
- Payroll processing
- Recruitment of new employees
- Maintenance of machinery and equipment
- Building maintenance
- Issuance of work aids to the employees
- Supplier selection procedure (Aptien, 2023)

#### **The importance of Supporting Process:**

Support processes are essential for the successful operation of a business. They provide the foundation on which the core business processes can operate effectively. Without support processes, the core business processes would be unable to function properly.

For example, if the IT systems are not functioning properly, the core business processes will be unable to access the information they need to operate. If the HR processes are not effective, the organization will be unable to attract and retain the best talent. And if the financial processes are not sound, the organization will be unable to manage its finances effectively. (Henson, 2023)





#### c. Talk about the scenario:

#### **♣** Scenario

#### Steem Games Corp.: Your Gateway to the World of Gaming

Steem Games Corp. is a leading gaming company dedicated to providing high-quality gaming content across various genres. We develop, distribute, and market cutting-edge digital and physical games, catering to a diverse audience of gamers. Our state-of-the-art online game sales platform offers a seamless and user-friendly interface for gamers to explore and acquire the latest releases.

#### A Commitment to Quality and Innovation

At Steem Games Corp., we are passionate about creating immersive and engaging gaming experiences. Our team of experienced developers and designers utilizes the latest technologies and methodologies to craft games that are not only fun to play but also visually stunning and intellectually stimulating. From action-packed adventures to thought-provoking puzzles, we have something for every gamer.

#### **Your One-Stop Gaming Destination**

Our online game sales platform is your one-stop shop for all your gaming needs. Browse our extensive library of games, discover new favorites, and purchase them with ease. Our platform is designed to be user-friendly and secure, ensuring a smooth and enjoyable gaming experience.

#### Stay Ahead of the Curve

At Steem Games Corp., we are committed to staying at the forefront of the ever-evolving gaming landscape. We continuously invest in technological innovation and explore new frontiers in gaming to bring you the most cutting-edge gaming experiences.

#### **Our Mission**

Our mission is to enhance the entertainment experience for a diverse audience of gamers. We strive to create high-quality, engaging games that are accessible to everyone. Whether you are a seasoned gamer or a casual player, we have something for you.

#### Join the Steem Games Corp. Community

Join our vibrant community of gamers and share your gaming passion. Engage with fellow gamers, discover new games, and participate in exciting events.

#### **Steem Games Corp.: Where Gaming Comes Alive**

Experience the thrill of gaming with Steem Games Corp. Discover new worlds, explore uncharted territories, and unleash your gaming potential.







#### Data set

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# **4** Explain data set

Field	Description	
AppID	ID of the game	
Name	Name of the game	
Release Date	The date that the game was released	
<b>Estimated Owners</b>	Number of people who own the game	
Peak CCU	Maximum number of players online simultaneously	
Required Age	Minimum age required to play the game	
Price	Price of the game after release	
DLC Count	Number of downloadable content for the game	
About the Game	Short description provided by the developers	
<b>Supported Languages</b>	Number of languages supported in the game	
Support Email	Customer support email by the developer	
Windows	Support for Windows OS	
Mac	Support for Mac OS	
Linux	Support for Linux OS	





Metacritic Score	Metacritic score of the game	
User Score	User score of the game (on Metacritic)	
Positive	Positive reviews of the game	
Negative	Negative reviews of the game	

# **↓** List of bussiness process in the scenario. Distribution Strategy Process:

This process encompasses the planning and execution of product delivery to the end consumer. It involves selecting appropriate distribution channels, managing logistics, and ensuring product availability in line with customer demand and preferences.

#### **Marketing Campaigns Process:**

This process entails the creation, implementation, and management of marketing strategies to promote products or services. It involves conducting market research, identifying target audiences, developing promotional materials, and evaluating campaign effectiveness.

#### **Quality Assurance and Testing Process:**

This process ensures that products adhere to established quality standards. It involves systematic measurement against established criteria, continuous process monitoring, and an integrated feedback loop that drives error prevention.

#### Market Research and Trend Analysis Process:

This process involves gathering, analyzing, and interpreting market-related information to identify trends that inform business decisions. It helps companies stay abreast of market dynamics and adapt their strategies accordingly.

#### **Partnership and Collaboration Process:**

This process involves forging strategic alliances with other organizations for mutual benefit. It entails identifying potential partners, negotiating agreements, and managing collaborative efforts to achieve shared goals.

#### **Sales and Revenue Analysis Process:**

This process involves examining sales data to understand the performance of a company's products or services in the market. It provides insights for informed decision-making regarding pricing, marketing, and product development.

#### **Steem Platform Debug Process:**





This process specifically relates to the Steem platform and involves troubleshooting and resolving issues to ensure seamless operation and a positive user experience.

#### **Platform Development Process:**

This process refers to the creation and enhancement of digital platforms, such as Steem. It may involve software development, user interface design, and the integration of various services and features.

#### **Streamers Collaboration Process:**

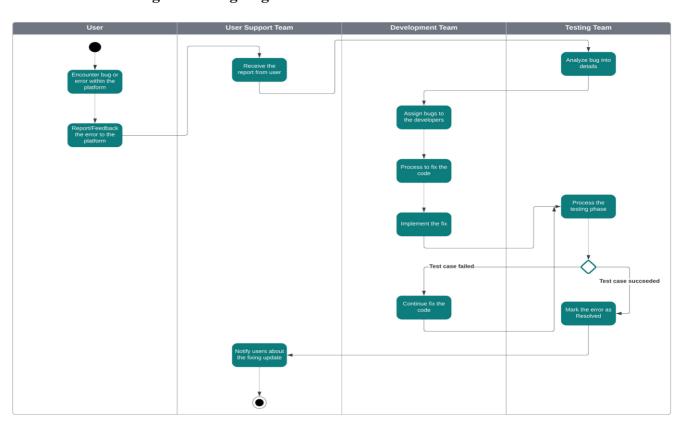
This process involves partnering with live streamers and content creators to promote products or services. It entails identifying influential streamers, negotiating terms, and managing collaborative content creation.

#### **Game Censorship and Release Process:**

This process involves reviewing game content to ensure compliance with regulatory standards and community guidelines prior to release. It may include editing or removing content deemed inappropriate or offensive.

#### **Activity diagram for the business process in the scenario**

#### **❖** Detecting and Fixing Bugs from Steem Client



In the illustrated process, if a user encounters an issue with the Steem Client and reports it, the User Support team receives this feedback and forwards it to the Tester team.





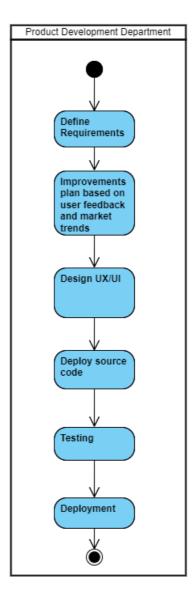
Subsequently, the Tester team examines the error, allocates relevant tasks to the Development team for resolution, and the developers rectify the issue by incorporating corrected code into the system. The updated system undergoes testing by the Tester team, and if the test is successful, the error is labeled as "Resolved." Lastly, the User Support team informs the user that the reported error has been effectively addressed through an update.

Structured	Semi-structured		
All the data is stored in a database, which stores the following data:	The semi-structured data is stored in JSON, and contains the following data:		
<ul> <li>User's error report details: User ID, Date, Error description, Steem Client version.</li> </ul>	• Development progress log: Timestamp, Developer ID, Code changes made.		
• Task assignment details: Task ID, Developer ID, Description, Priority, Deadline.	• Tester feedback log: Timestamp, Tester ID, Comments on the testing process.		
• <b>Test results:</b> Test ID, Status (Pass/Fail), Tester comments.			





#### **Steem Platform Development Process**



This process describes constructing a platform used to establish a foundational framework for the company. During this process, activities such as collecting information and determining requirements will take place. Following this, the software will be designed and built to align with the previously outlined User Interface (UI) and User Experience (UX). Deployment includes the potential installation of the software on servers and configuring settings. Product testing is carried out to ensure correct operation and compliance with specified requirements. This testing phase may involve both manual and automated testing. If any errors are identified during testing, the program is corrected and then retested. Once there are no errors, the program is deployed to users.

Structured	Semi-structured	Unstructured
------------	-----------------	--------------







Data can be organized in a database with specific fields. This includes:

- Project Information: Project ID, Start Date, End Date, Project Manager, Budget.
- Requirements Details: Functional requirements, Non-functional requirements.
- Testing objectives, Test cases, and Acceptance criteria.

The semi-structured data is stored in JSON, and contains the following data:

- Development Progress Log: Timestamp, Developer ID, Code changes made.
- **Testing Results**: Test ID, Status (Pass/Fail), Tester comments.
- Deployment Log: Timestamp, Server ID, Deployment status.

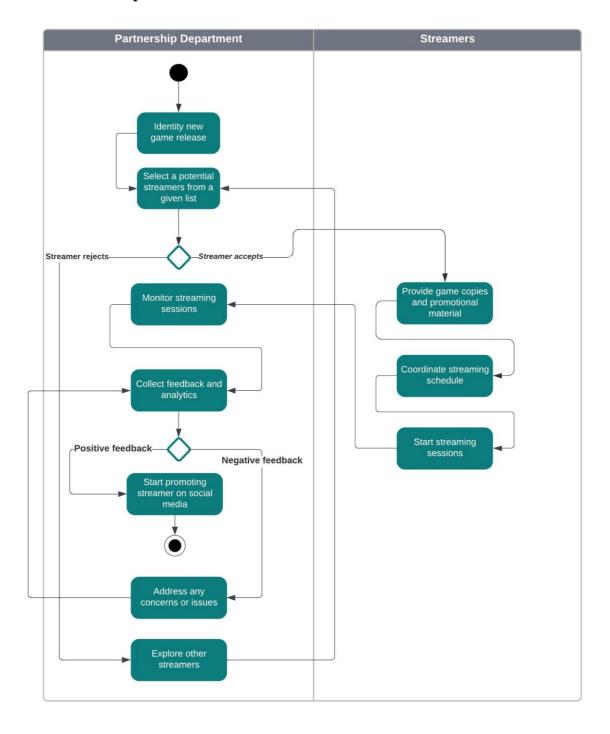
All the unstructured data is document file (pdf, docx):

- **Project Description:**Overview of the project and its goals, written as document file
- Testing Observations: Tester's detailed observations during testing.
- Error Correction Comments: Developer's comments on code changes.





#### **Co-op streamer:**



The provided picture outlines the process by which the Partnership department collaborates with streamers to promote a game. Initially, the department identifies games requiring promotion, especially newly released ones. They then seek out streamers who are active in similar game genres. If a streamer declines the partnership, efforts persist in finding alternative potential collaborators. On the other hand, if a streamer accepts, a collaborative relationship is established. The Partnership department provides the streamer with game copies, schedules streams, and monitors their progress. Importantly, they gather viewer feedback during these streams. Negative feedback initiates an analysis and resolution process





with the streamer, while positive feedback prompts the Partnership department to explore promotional strategies, highlighting the streamer as the game's focal figure.

Structured	Semi-structured	Unstructured	
	• Streaming Records:	The primary form of	
<ul> <li>Collaborative</li> </ul>	Some examples of semi-	unstructured data	
Streamer Information:	structured data output	output typically	
Regarding data related to	include:	consists of remarks	
partnered streamers, there		from viewers observing	
will be organized information	<ul> <li>Viewer Feedback</li> </ul>	the stream:	
including streamer names, the	Comments: These		
titles of the games they	encompass	<ul> <li>Unrestricted</li> </ul>	
engage with, pre-established	unstructured	comments and	
streaming schedules, and	comments and	responses from	
categorized viewer feedback	reactions from	viewers throughout	
data. Accumulation is also	viewers throughout	the streams	
part of this data collection	the streams.	<ul> <li>Diverse content,</li> </ul>	
process.	- Notes for Analyzing	encompassing	
	Negative Feedback:	viewpoints on the	
	These are remarks	game,	
	made in response to	recommendations,	
	negative feedback	and overall reactions	
	received during the	<ul> <li>May incorporate</li> </ul>	
	streams.	emojis, memes, or	
	- Strategies for	any expressive	
	Promotion Triggered	content exchanged by	
	by Positive	viewers during the	
	Feedback: This	streams	
	entails creating		
	concepts for		
	promotional initiatives in		
	response to positive feedback received		
	during streams.		

# III. Compare the tools and technologies associated with business intelligence functionality

- 1. Compare the types of support available for business decision-making at varying levels within an organization
- Definition of decision-making process:

A decision-making process is a series of steps taken by an individual to determine the best option or course of action to meet their needs. In a business context, it is a set of steps





taken by managers in an enterprise to determine the planned path for business initiatives and to set specific actions in motion. Ideally, business decisions are based on an analysis of objective facts, aided by the use of business intelligence (BI) and analytics tools. (Ed Burns, Kate Brush, 2023)

#### • Steps of decision-making process:

- ➤ Identifying the Problem: The decision-making process begins by recognizing a problem that requires resolution. This problem may arise due to a gap between the present state and the desired state of affairs or as a result of environmental changes presenting threats or opportunities. Managers need to continuously monitor the situation to swiftly identify and define the real problem. Properly defining the problem is crucial for a clear decision-making environment, and it requires imagination, experience, and judgment to detect managerial decision needs effectively.
- ➤ Diagnosing the Problem: Diagnosing the real problem involves analyzing its elements, magnitude, urgency, course, and its relation with other problems. Managers must gather all relevant facts and analyze them carefully to diagnose the problem accurately. The critical aspect of problem diagnosis is determining the actual causes or sources of the problem, ensuring that symptoms are not mistaken for the real issue. For instance, addressing manufacturing costs may not solve the problem if the real issue lies in poor engineering design. The problem can be analyzed based on its nature (routine or strategic), impact, futurity, periodicity, and relevant limiting or strategic factors.
- **Discovery Alternatives**: The next step in the decision-making process is to explore various possible alternatives. Rushing to adopt the first feasible solution is not advisable for executives. Identifying available courses of action may not always be apparent, and decision-makers must employ their ingenuity and creativity to recognize and relate them. Having a reasonably wide range of alternatives grants managers more freedom in their choices. However, it is prudent for management to focus on discovering critical or strategic alternatives relevant to the problem at hand, following the principle of the limiting factor. Strategic factors are those that hold the most significance in determining the appropriate action for a given problem. For instance, when deciding on expanding operations, capital availability or government regulations may act as limiting factors. Selecting the most favorable alternative involves recognizing and resolving these critical factors to achieve desired goals accurately. The goal is to keep the number of alternatives manageable while considering time and cost constraints. Developing alternatives is a creative process that necessitates research and imagination. Management must ensure thorough consideration of the best alternatives before finalizing a course of action, gathering and analyzing relevant information for this purpose.
- Evaluate Alternatives: After discovering the alternatives, the next step is to evaluate them. This process involves measuring the positive and negative consequences of each option, considering costs and benefits. Judgement and knowledge are vital in assessing the net benefit of each alternative. Both quantitative and qualitative factors should be taken into account, including risk, available resources, and timing. Management should establish evaluation criteria to weigh the options effectively, considering factors like risk, economy of effort, timing, and limitation of resources within the organisation.





- ➤ Select the Best Alternative: After evaluating the alternatives, the optimal choice is selected. The optimum alternative maximizes results under the given conditions. This step is crucial in decision-making and sets successful managers apart from unsuccessful ones. Past experience, experimentation, research, and analysis contribute to selecting the best alternative.
- ➤ Implementation and Follow-up: After making a decision, the implementation process begins with communication and obtaining feedback. Procedures, time frames, and necessary resources are established for implementation. Continuous monitoring ensures progress and desired outcomes. Responsibility for specific tasks is assigned to individuals if needed. Periodic progress reports help in assessing the decision's effectiveness. Herbert Simon's decision-making process includes three phases: intelligence activity (identifying and diagnosing the problem, defining objectives, and collecting information), decision activity (generating and evaluating alternatives), and choice activity (selecting the best course of action, followed by implementation). (raiyaanakhtar786, 2023)

#### • Challenges of decision-making process:

- ➤ Information Overload or Lack of complete information: Decision-making can be difficult when there is an excessive amount of information to consider, as it can be hard to determine what is relevant and important. This can cause analysis paralysis, where the sheer volume of information makes it difficult to make a decision. On the other hand, sometimes it is simply not possible to have all the information required to make a decision, leading to uncertainty and risk.
- ➤ Limited Time / Resources and Conflicting priorities: Decision-making can be difficult when time and resources are limited. Sometimes the options available for a decision may be constrained by external factors, such as budget or regulations. This becomes even more challenging if there are multiple conflicting priorities competing for the same leading to rushed or incomplete decisions, or decisions that are not fully aligned with the needs and goals of the team or organization.
- Fear of Making Wrong Decisions and Unforeseen Consequences: Making a mistake can be stressful and costly, and it is natural to worry about the consequences of your decisions. However, it is important to recognize that mistakes are a natural part of the learning process. Despite your best efforts, there is always the risk that a decision will have unintended or unanticipated consequences.
- ➤ Personal Bias, Values, and Beliefs: Decision-making can be impacted by personal values, beliefs, and biases, all of which can cloud objectivity and fairness. Our individual experiences can influence how we perceive and interpret information. These can affect the decisions we make particularly if they conflict with the goals or priorities of the team or organization.
- ➤ Group Dynamics and Resistance to Change: Group dynamics can also be a challenge in decision-making, particularly in group or team settings. Groupthink, where group members conform to the dominant perspective or opinion, can lead to poor decision-making and a lack of creativity and innovation. Conflict or disagreement can also hinder the decision-making process, or lead to decisions that are not fully supported by all team members. Similarly, change can be difficult, and you may encounter resistance when implementing your decisions.
- ➤ **Pressure & Stress**: Decision-making can be stressful, especially when there are time constraints or high stakes. To manage this challenge, it's important to prioritize your own well-being and practice stress-management techniques.







- Complexity: Complexity can refer to the number of variables or factors that need to be considered in a decision, or to the interdependence of those variables. For example, a decision may be complex if it involves multiple stakeholders with different interests, or if it has long-term or far-reaching implications. Such complexities require a high level of analysis and critical thinking to understand the various trade-offs and interrelationships between different options.
- ➤ Political considerations: Political considerations pertain to the influence of competing agendas or power dynamics on a decision. These can be internal to the organization, such as different departments or teams with conflicting priorities, or external, such as regulatory bodies or external stakeholders with competing interests. Such considerations can complicate the entire process as they can create conflicts of interest or pressure to prioritize certain interests over others. (Sculptors, 2023)

#### • Type of decision:

- ➤ Unstructured Decisions: At the other end of the continuum are unstructured decisions. While these have the same components as structured ones—data, process, and evaluation—there is little agreement on their nature. With unstructured decisions, for example, each decision maker may use different data and processes to reach a conclusion. In addition, because of the nature of the decision, there may only a limited number of people within the organization qualified to evaluate the decision.
- ➤ Semi-Structured Decisions: Decisions in the middle between structured and unstructured decisions, requiring some human judgment and at the same time with some agreement on the solution method. Area of focus for most DSSs. In the middle of the continuum are semi-structured decisions where most of what are considered to be true decision support systems are focused. Decisions of this type are characterized as having some agreement on the data, process, and/or evaluation to be used, but are also typified by efforts to retain some level of human judgment in the decision-making process. An initial step in analyzing which support system is required is to understand where the limitations of the decision maker may be manifested (i.e., the data acquisition portion, the process component, or the evaluation of outcomes).
- ➤ Structured Decisions: Structured or Programmed decisions are the ones where the organization has already faced such decisions. And the employees are used to solving such problems. For instance the hiring of new IT specialists in a firm. Many analysts categorize decisions according to the degree of structure involved in the decision-making activity. Business analysts describe a structured decision as one in which all three components of a decision the data, process, and evaluation are determined. Since structured decisions are made on a regular basis in business environments, it makes sense to place a comparatively rigid framework around the decision and the people making it. (Study, 2023)

#### • Level of business decision-making:

#### **Operational decisions:**

- **Definition**: Operational decisions are short-term choices that are typically made on a weekly, daily, or hourly basis. They are primarily concerned with operational details, daily resource allocation, inventory control, and delivery routing to maximize product flow along biomass-based production chains. (Quixy, 2023)
- Characteristics:

Accuracy





Good operational decisions behave like informed employees with the appropriate reports and analysis, using data quickly and effectively to take the right action. Instead of just being aware of the past, they use this data to get insight into the future and use that understanding to behave more appropriately. Through microsegmentation and intense customization, they target their customers using information about them.

#### *Flexibility*

Operational choices must be made quickly to reflect new possibilities, organizations, and threats; otherwise, their value will quickly deteriorate. No modern business system can endure protracted periods of static. Given the current competitive, economic, and regulatory context, it is impossible. When businesses automate their transactions and procedures, they frequently discover that how rapidly they can alter their information systems greatly affects how quickly they react to change. Operational decisions must be simple to alter quickly and effectively to reduce missed opportunity costs and increase overall business agility.

#### Consistency

Your operational decisions must be consistent throughout time and space across many channels you use to conduct business, including the web, mobile devices, interactive voice response systems, and kiosks. They enable you to act differently when you desire to, such as offering a reduced price online to promote the usage of a lower-cost channel, but they make sure that you don't act differently unintentionally. These systems support the people who directly work for you and the third parties and agents who represent you. They ensure you stay out of trouble by upholding your company's laws, rules, and social preferences everywhere it conducts business. They continually provide your employees with a top-notch experience.

#### *Timely*

You need to act as quickly as possible. Your competition is only three clicks away, as they say online. Your coworkers are developing short attention spans and a lack of patience. The systems that manage your supply and demand chains must act swiftly and shrewdly as they become more real-time. You must reduce wait times for these associates as fewer staff handle more clients, partners, and suppliers. You must make a choice swiftly and take action.

#### Cost-effective

Operational choices must, above all, be economical. Cost cutting is still crucial despite significant efficiency improvements and reductions in previous years. Effective operational choices reduce costly reports and needless tasks. They lessen fraud and avoid penalties. They enable your employees to work more effectively and allocate their time wisely. They ensure that you get as many things correctly the first





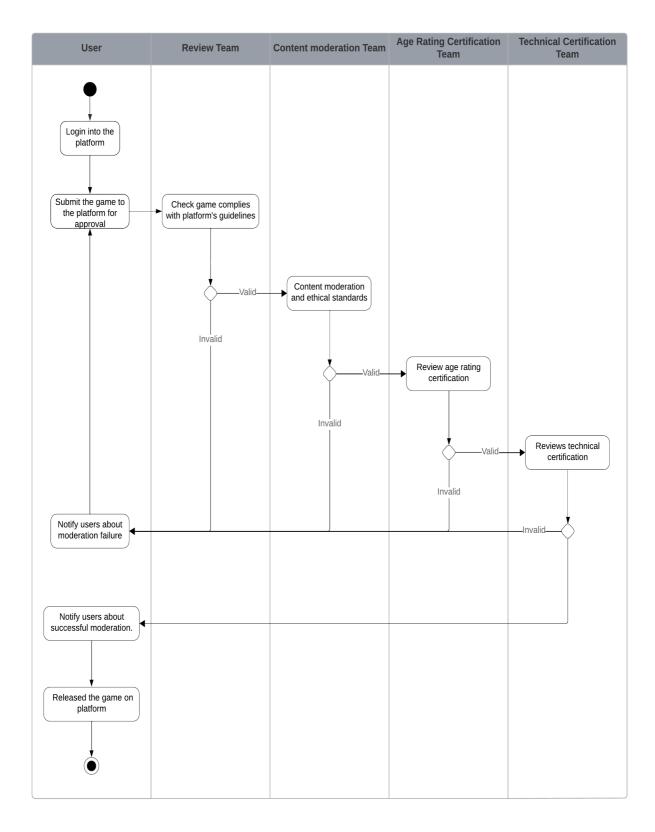
time and steer clear of costly "do-overs." They lessen friction, which slows down operations and raises expenses. (Quixy, 2023)

#### Example:

- Scheduling employees
- Allocating resources
- Maintaining inventory levels
- Responding to customer inquiries
- Resolving production problems







The diagram depicted above illustrates the operational processes related to decision-making, focusing on a specific decision regarding whether a game requiring censorship meets the Technical Certification for Reviews. Censors employ tools like Benchmark to meticulously evaluate the game's performance, stability, and compatibility on specific device types.





Simultaneously, the department verifies the accuracy of the measured data against the information provided by the publisher before reaching a final decision.

Upon a successful decision, confirming that the game has met all censorship requirements, users are notified that the game is eligible for listing and sale. Conversely, if the decision is to reject, users receive confirmation of the refusal along with the reasons. Users can then edit and reinitiate the moderation process in the future.

#### o Tactical decisions:

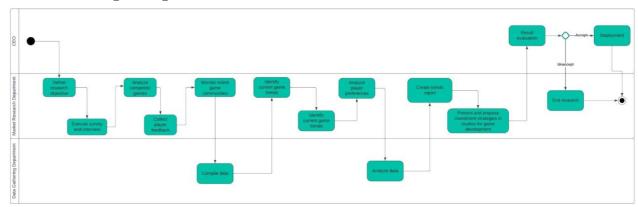
Definition: Tactical decisions are those that are made in the short term to support the organization's strategic goals. These decisions are typically made by middle managers and focus on allocating resources and making decisions that will have an impact on the organization's competitive position.

#### Characteristics:

- Time Frame: Short-term focus on day-to-day operations.
- Specificity: Concrete and related to immediate plans.
- Operational: Concerned with routine, operational aspects.
- Frequency: Often routine and repeated regularly.
- Decision-Making Level: Made by middle-level managers for immediate problem-solving.
- Flexibility: Allows for adaptability to changing circumstances.

#### Example:

- Developing marketing campaigns
- Launching new products or services
- Expanding into new markets
- Managing supplier relationships
- Negotiating contracts



The initial phase involves the Market Research Department defining research objectives. Subsequently, they will conduct interviews and surveys with participants aligned with the research goals, analyzing matches in competitive gaming titles and collecting user opinions. After accumulating sufficient data, the Data Analysis Department will scrutinize the information and draw conclusions regarding current gaming trends and gamer preferences.





Ultimately, the Market Research Department will create a comprehensive report on prevalent gaming trends for studios and developers. In the final evaluation steps, the executive board will appraise the potential of these trends and decide whether to implement them or not.

#### o Strategic decisions:

■ **Definition**: Strategic decisions are those that are made in the long term to set the direction of the organization. These decisions are typically made by senior managers and focus on the organization's mission, vision, and values.

#### Characteristics:

- Time Frame: Long-term focus on overall organizational direction.
- Scope: Broad and general, influencing the entire organization.
- Impact: Profoundly affects structure, culture, and core strategies.
- Uniqueness: Non-routine, involving fundamental choices.
- Decision-Making Level: Made by top-level executives, including CEOs.
- Resource Commitment: Involves significant commitment of resources, requiring careful planning.

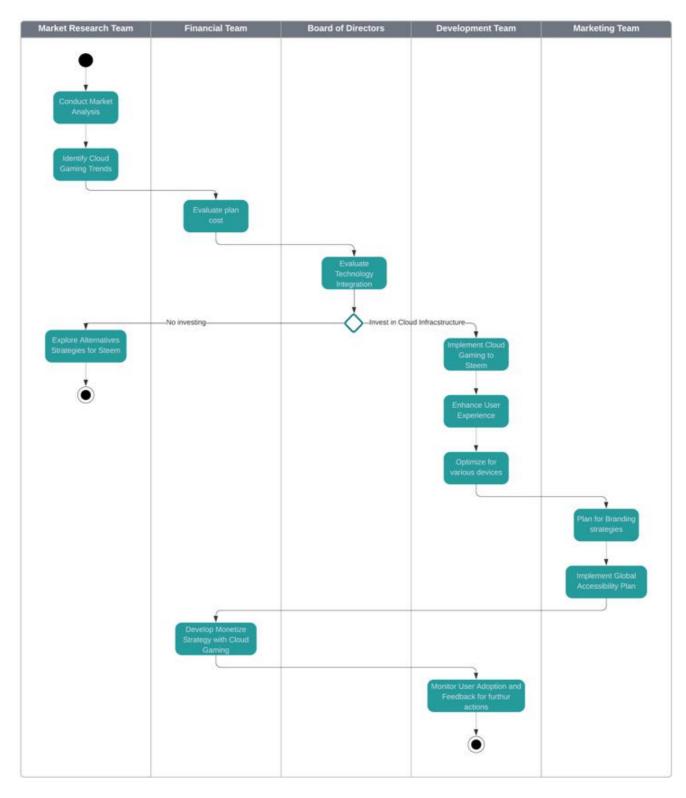
#### Example:

- Entering new markets
- Acquiring or merging with another company
- Developing new technologies
- Changing the company's culture
- Repositioning the company in the market









The activity diagram initiates with Steem conducting market analysis, identifying Cloud Gaming as a rising trend in the gaming industry. Subsequently, the financial team will assess the overall implementation cost of Cloud Gaming and present it to the Board of Directors. The board will then thoroughly evaluate Cloud Gaming's potential profitability, and if deemed viable, the technical team will proceed with its implementation on Steem. They will





focus on improving the user experience by optimizing the UI for various generations of PC devices.

Simultaneously, the Marketing Team will strategize to promote the Cloud brand globally. Additionally, the Financial Team will play a crucial role in pricing the Cloud Gaming plans. Lastly, during the Cloud Gaming launch, the Technology Team will actively monitor and gather user feedback for future improvements and actions.

• Comparison

No.	Factor	Unstructured data	Semi-structured data	Structured data
1	Structure	No predefined organizational form	Some degree of organization	High degree of organization
2	Technology	Character and binary data	XML/JSON	Relational database table
3	Transaction Management	No transaction management and no concurrency	Transaction is adapted from DBMS, not matured	Matured transaction and various concurrency techniques
4	Flexible	More flexible and absence of schema	More flexible than structured data but less flexible than unstructured data	Schema dependent and less flexible
5	Query Performance	Only textual queries are possible	Queries over anonymous nodes are possible	Structured query allow complex joining
6	Scability	Scaling Database schema is difficult	Schema scaling is simple	Very scalable
7	Data format	A collection of many varied data types that are stored in their native formats	Does not follow the tabular data structure models associated with relational databases or other data table forms.	Stored in a predefined format and is highly specific

## **IV.** Conclusion

This report delved into the fundamentals of business processes, decision-making support mechanisms, and business intelligence functionalities. By analyzing 'Business Process' and 'Supporting Processes,' I gained practical insights into their importance, exemplified by a relevant scenario. The comparison of business intelligence tools and technologies, alongside an overview of decision-making processes at different organizational levels, highlights the dynamic nature of modern business operations. As organizations navigate an evolving landscape, the report underscores the critical role of well-defined processes and technology in decision-making. It serves as a valuable resource for enhancing operational efficiency and strategic decision-making capabilities.





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