

**Higher Nationals in Computing**

**Business Intelligence**

**ASSIGNMENT**

**No.1**

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Assignment due: 10/07/2023

Assignment submitted: 10/07/2023

## Assessment Brief

Student Name/ID Number	
<b>Unit Number and Title</b>	<b>14: Business Intelligence</b>
Academic Year	2019-2020
Unit Tutor	Le Tran Ngoc Tran
<b>Assignment Number &amp; Title</b>	<b>Assignment 1: Discover business process and BI technologies</b>
<b>Issue Date</b>	
Submission Date	10/07/2023
IV Name & Date	

<b>Submission Format</b>
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.

<b>Unit Learning Outcomes</b>
<b>LO1</b> Discuss business processes and the mechanisms used to support business decision-making. <b>LO2</b> Compare the tools and technologies associated with business intelligence functionality
<b>Assignment Brief</b>

<p>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.</p> <p>The Board of Directors assigns a small group including you in Research &amp; Development Department to study business intelligence to apply for the company in the coming years.</p> <p>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).</p> <p>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.</p> <p>Your group needs to present the research results to the board in a presentation of 30 minutes.</p>
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Learning Outcomes and Assessment Criteria		
Pass	Merit	Distinction
<b>LO1</b> Discuss business processes and the mechanisms used to support business decision-making		<b>D1</b> Evaluate the benefits and drawbacks of using application software as a mechanism for business processing.
<b>P1</b> Examine, using examples, the terms 'Business Process' and 'Supporting Processes'.	<b>M1</b> Differentiate between unstructured and semi-structured data within an organisation.	
<b>LO2</b> Compare the tools and technologies associated with business intelligence functionality		<b>D2</b> Compare and contrast a range of information systems and technologies that can be used to support organisations at operational, tactical and strategic levels.
<b>P2</b> Compare the types of support available for business decision-making at varying levels within an organisation.	<b>M2</b> Justify, with specific examples, the key features of business intelligence functionality.	

# Business intelligence in laptop selling

GROUP 3

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# 01

# Business process

# Dataset

complete laptop data0.csv	complete laptop data0.csv	complete laptop data0.csv	complete laptop data0.csv	complete laptop data0.csv	complete laptop data0.csv	complete laptop data0.csv
Name	User Rating	Price	Sales Package	Model Number	Part Number	Model Name
ASUS VivoBook 15 (2021) Co...	5.00000	?47,990	Laptop, Power Adaptor, User ...	X515JA-BQ521WS	90NB0SR2-M00C20	X515JA-BQ521WS
ASUS ROG Strix SCAR 17 Cor...	5.00000	?2,34,990	Laptop, Power Adaptor, User ...	G733ZW-LL139WS	90NR08G2-M007S0	G733ZW-LL139WS
ASUS TUF Gaming F15 Core i...	4.70000	?64,990	Laptop , Adaptor, & Manual	FX506LH-HN310W	FX506LH - HN310WS	TUF Gaming F15
ASUS Ryzen 3 Quad Core 3rd...	4.70000	?36,949	Laptop, Manual, Adaptor	M515DA-BR322WS	M515DA-BR322WS	Vivobook 15
ASUS TUF Gaming F15 Core i...	4.70000	?64,990	Laptop , Adaptor, & Manual	FX506LH-HN310W	FX506LH - HN310WS	TUF Gaming F15
ASUS Ryzen 3 Quad Core 3rd...	4.70000	?36,949	Laptop, Manual, Adaptor	M515DA-BR322WS	M515DA-BR322WS	Vivobook 15
DELL Ryzen 5 Hexa Core 560...	4.70000	?73,990	Laptop, battery, adapter, cabl...	G15-5515	D560805WIN9W	G15-5515
ASUS VivoBook 14 (2021) Ry...	4.70000	?44,990	Laptop, battery, adapter, cabl...	M415DA-EB712WS	90NB0T31-M003U0	M415DA-EB712WS
ASUS Vivobook S14 OLED (2...	4.60000	?74,990	Laptop, Battery, Power Adapt...	S3402ZA-KM501WS	90NB0WE1-M007U0	S3402ZA-KM501WS
ASUS Vivobook S14 OLED (2...	4.60000	?74,990	Laptop, Battery, Power Adapt...	S3402ZA-KM502WS	90NB0WE2-M007V0	S3402ZA-KM502WS
DELL Ryzen 5 Hexa Core 560...	4.50000	?69,490	Laptop, battery, adapter, cabl...	G15-5515	D560804WIN9W	G15-5515
DELL Ryzen 5 Hexa Core 560...	4.50000	?69,490	Laptop, battery, adapter, cabl...	G15-5515	D560804WIN9W	G15-5515
Avita SATUS Celeron Dual Co...	4.40000	?21,990	Laptop, Power Adaptor, User ...	NU14A1INC43PN-MB	NU14A1INC43PN-MB	SATUS ULTIMUS S1...
Avita SATUS Celeron Dual Co...	4.40000	?21,990	Laptop, Power Adaptor, User ...	NU14A1INC43PN-MB	NU14A1INC43PN-MB	SATUS ULTIMUS S1...
realme Book Prime Core i5 11...	4.30000	?64,990	Laptop, Power Adaptor, Batte...	CloudPro002	130290120208	Book Prime
realme Book Prime Core i5 11...	4.30000	?64,990	Laptop, Power Adaptor, Batte...	CloudPro002	130290120210	Book Prime
realme Book Prime Core i5 11...	4.30000	?64,990	Laptop, Power Adaptor, Batte...	CloudPro002	130290120209	Book Prime
acer Aspire 5 Core i5 11th Ge...	4.30000	?49,990	Laptop, Power Adaptor, User ...	A515-56	UN.A1ESI.018	A515-56
realme Book Prime Core i5 11...	4.30000	?64,990	Laptop, Power Adaptor, Batte...	CloudPro002	130290120208	Book Prime

# Column to be used in dataset

Number: laptop price, laptop rating

Above data can be used later to find the relation between laptop price and rating from user

Text: Laptop name, Warranty type, RAM, Gpu\_processor, SSD, Storage, Weight

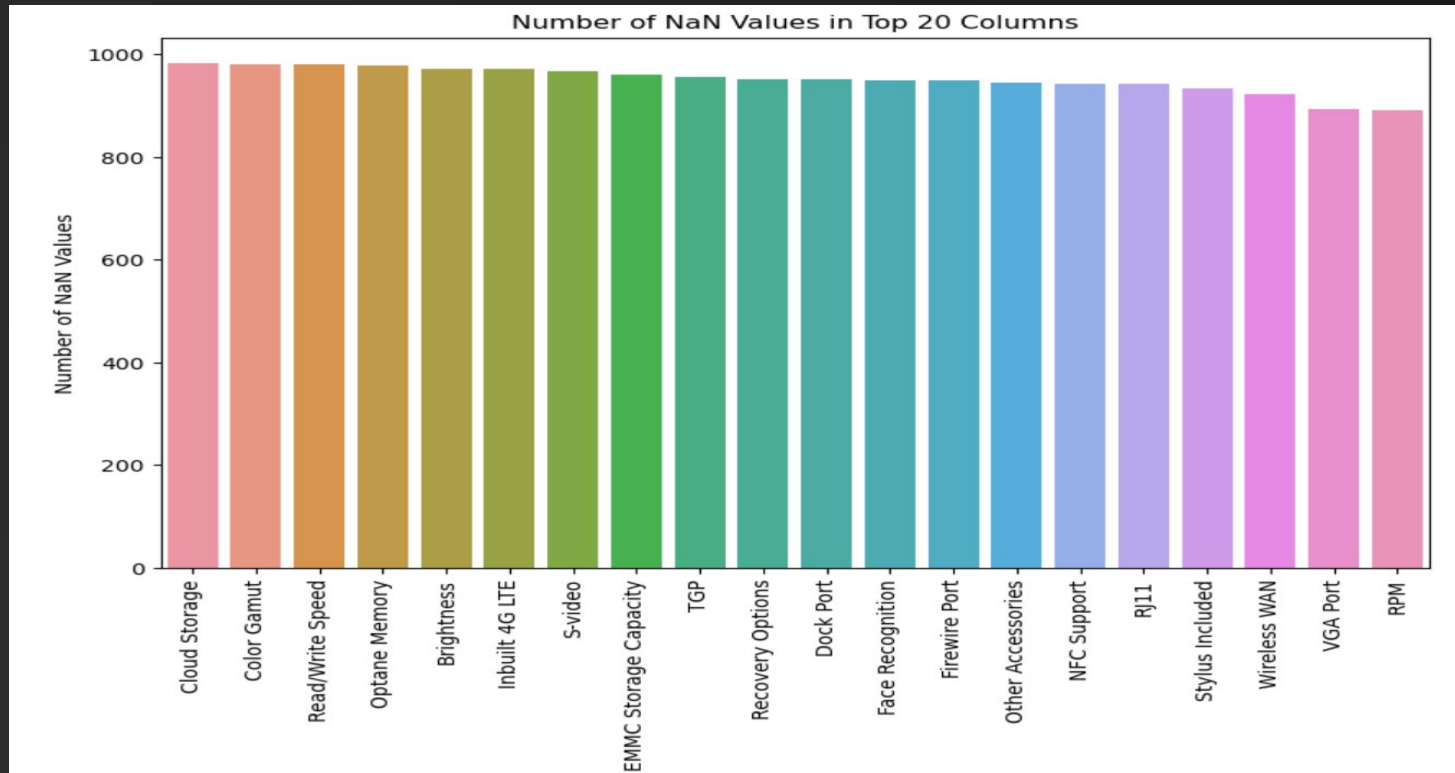
Text data mostly are laptop configuration

name	user rating	Price	Sales Package	Model Number	Part Number	Model Name	Series	Color	Type	Suitable For	MS Office Provided	Processor Brand	Processor Name	Processor Generatic
ASUS ROG Strix SCAR 17 Core i9 12th Gen - (32 ...	5.000000	234990	Laptop, Power Adaptor, User Guide, Warranty Do...	G733ZW-LL139WS	90NR08G2-M007S0	G733ZW-LL139WS	ROG Strix SCAR 17	Off Black	Gaming Laptop	Gaming	Yes	Intel	Core i9	12th Ge
ASUS ROG Strix SCAR 15 Core i9 12th Gen - (32 ...	4.220642	229990	Laptop, Power Adaptor, User Guide, Warranty Do...	G533ZW-LN136WS	90NR0872-M007L0	G533ZW-LN136WS	ROG Strix SCAR 15	Off Black	Gaming Laptop	Gaming	Yes	Intel	Core i9	12th Ge
HP Victus Ryzen 7 Octa Core 5800H - (16 GB/512...	4.220642	104091	Laptop, battery, adapter, cables and user manuals	16-e0351AX	552X1PA#ACJ	16-e0351AX	Victus	Mica Silver	Gaming Laptop	Gaming	Yes	AMD	Ryzen 7 Octa Core	Na



# Unclean data

Dataset includes some unclean data (NaN values) which need to be pre-processed  
Top 20 columns which have the most NaN values have over 900 NaN values each



# Business process

Definition: A set of actions to achieve organizational goals

Importance of well-defined processes:

- Clear objectives and consistent outcomes
- Enables effective goal achievement

Business Process Management (BPM):

- Systematic approach to enhance processes
- Helps organizations achieve objectives effectively

# Business process in selling laptop

- Sales Process: attract potential customers, provide information about laptop models, convert leads into sales.
- Inventory Management: help maintain optimal stock levels of different laptop models.
- Marketing and Promotions: attract customers, create awareness about the available laptop models, and promote competitive pricing and offers.

# Support process

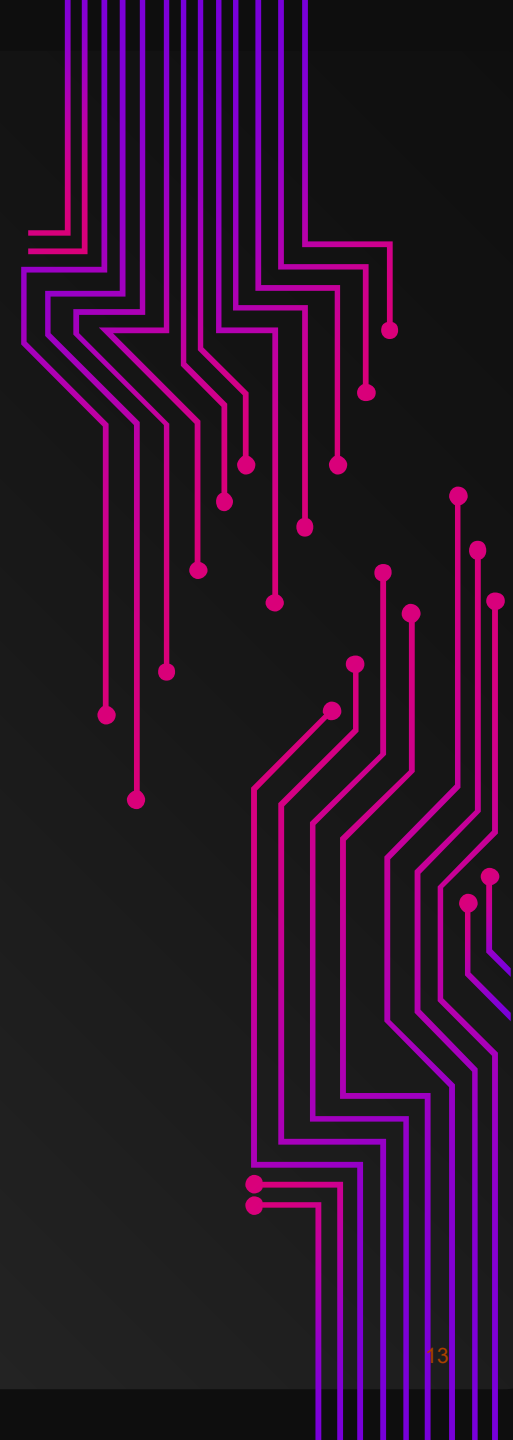
- Coordinate development and life cycle of tasks in primary processes
- Cross-processes that support goals across project and company domains
- Goals aid in supporting specific task execution
- Recording information produced by the process life cycle activities

# Support process in selling laptop

- Technical Support: to assist with software installation, configuration, and troubleshooting to address any software-related concerns.
- Warranty and Repair Management: To facilitate the warranty claims process, ensuring customers receive necessary repairs or replacements for defective laptops.
- Pre-sales Support: provide personalized recommendations based on customer requirements, ensuring they select the most suitable laptop model.

# 02

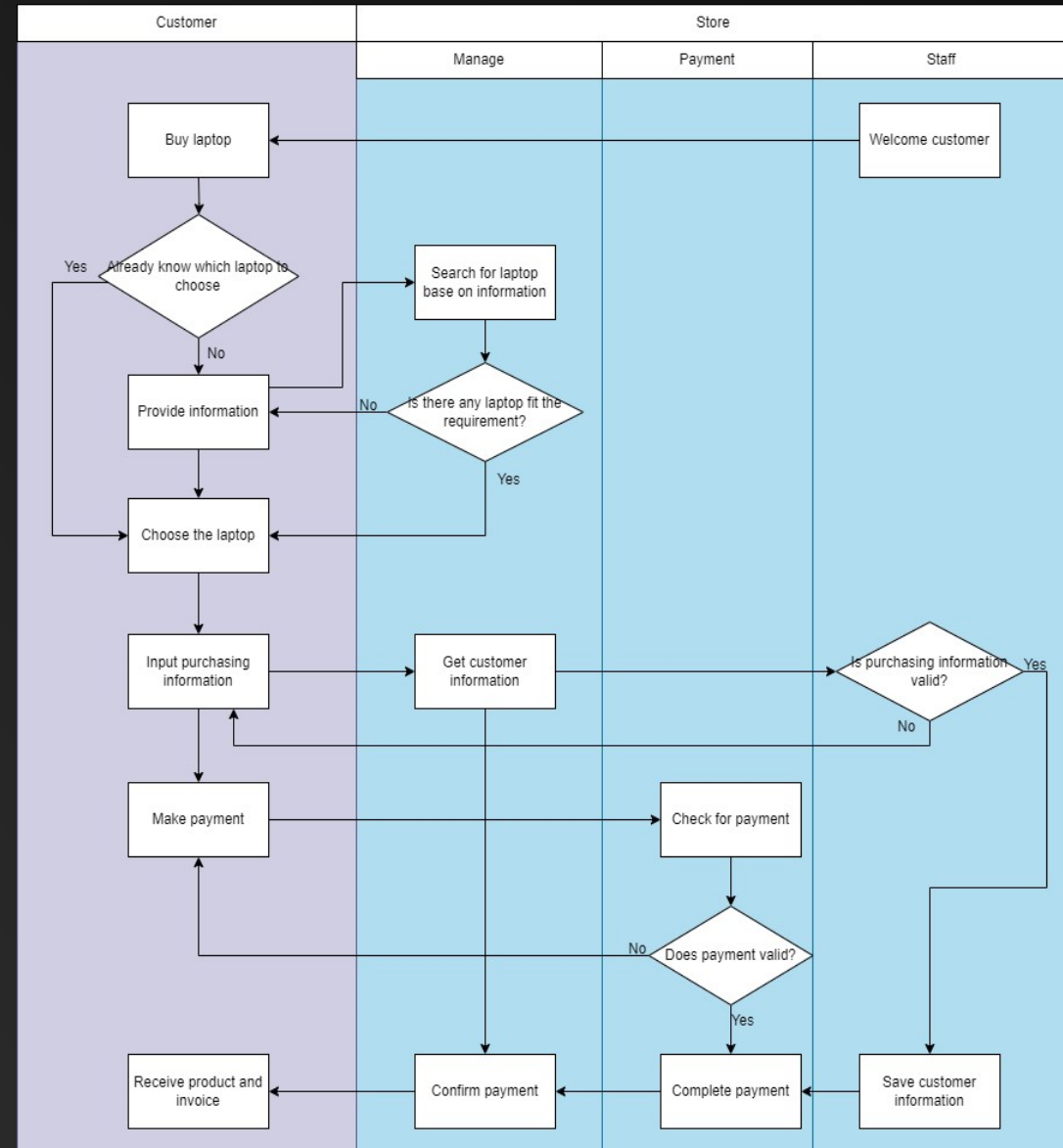
## Examples of process



# Business process example

The store has three employee roles:

- Management: Provides product advice, receives customer information, and confirms orders.
- Payment: Handles tasks related to payment processing and order fulfillment.
- Staff: Welcomes customers, verifies their information, and proceeds to payment.



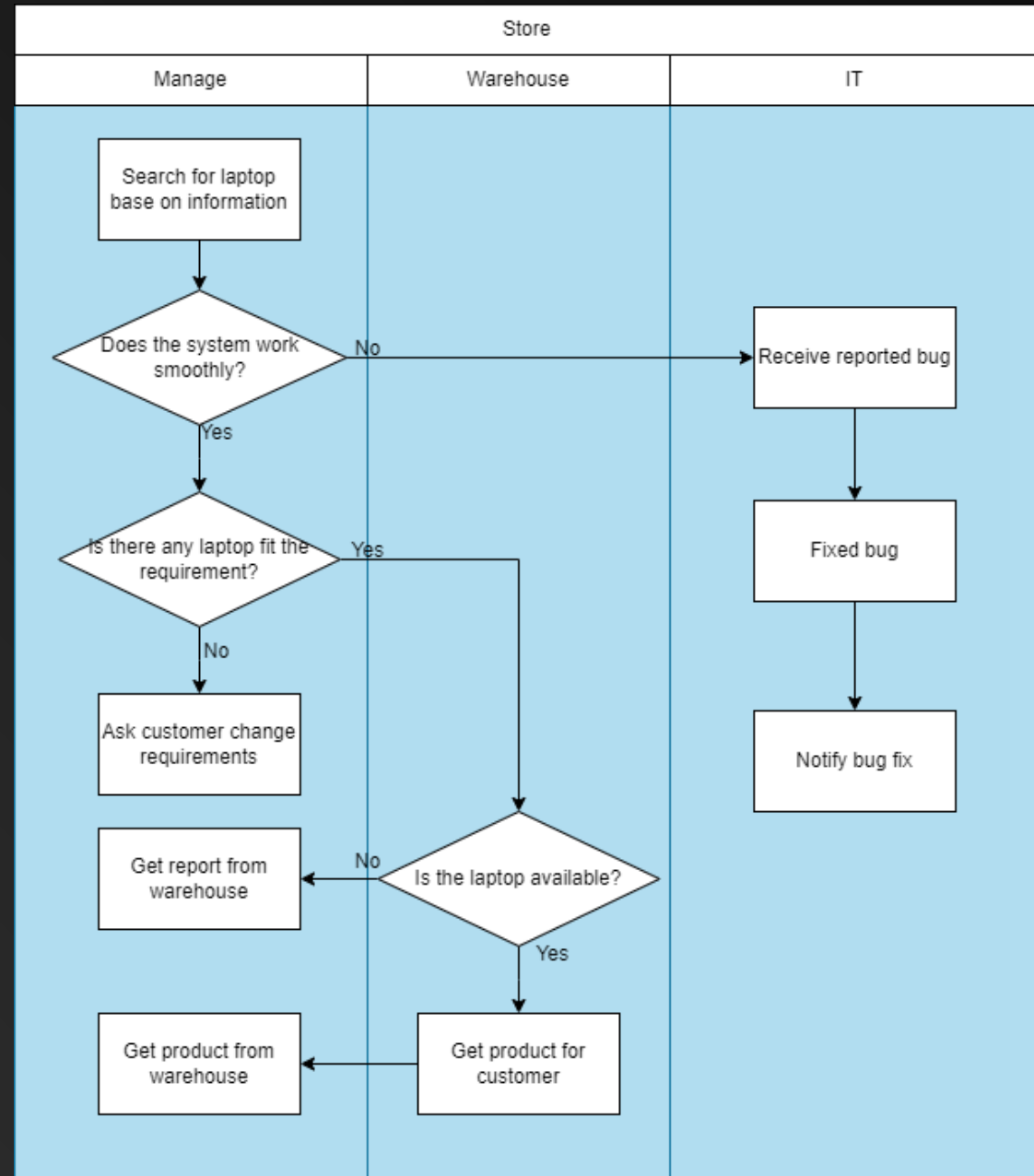
# Support process example

## Warehouse:

- Main role: Check product availability chosen by the management process
- If the laptop is out of stock, customer selects another product
- After payment, warehouse delivers the desired product to the customer

## IT:

- Role: Ensure smooth functioning of the product management process
- Receive bug information and promptly fix any system issues
- Notify other departments when the system is available for use





# 03

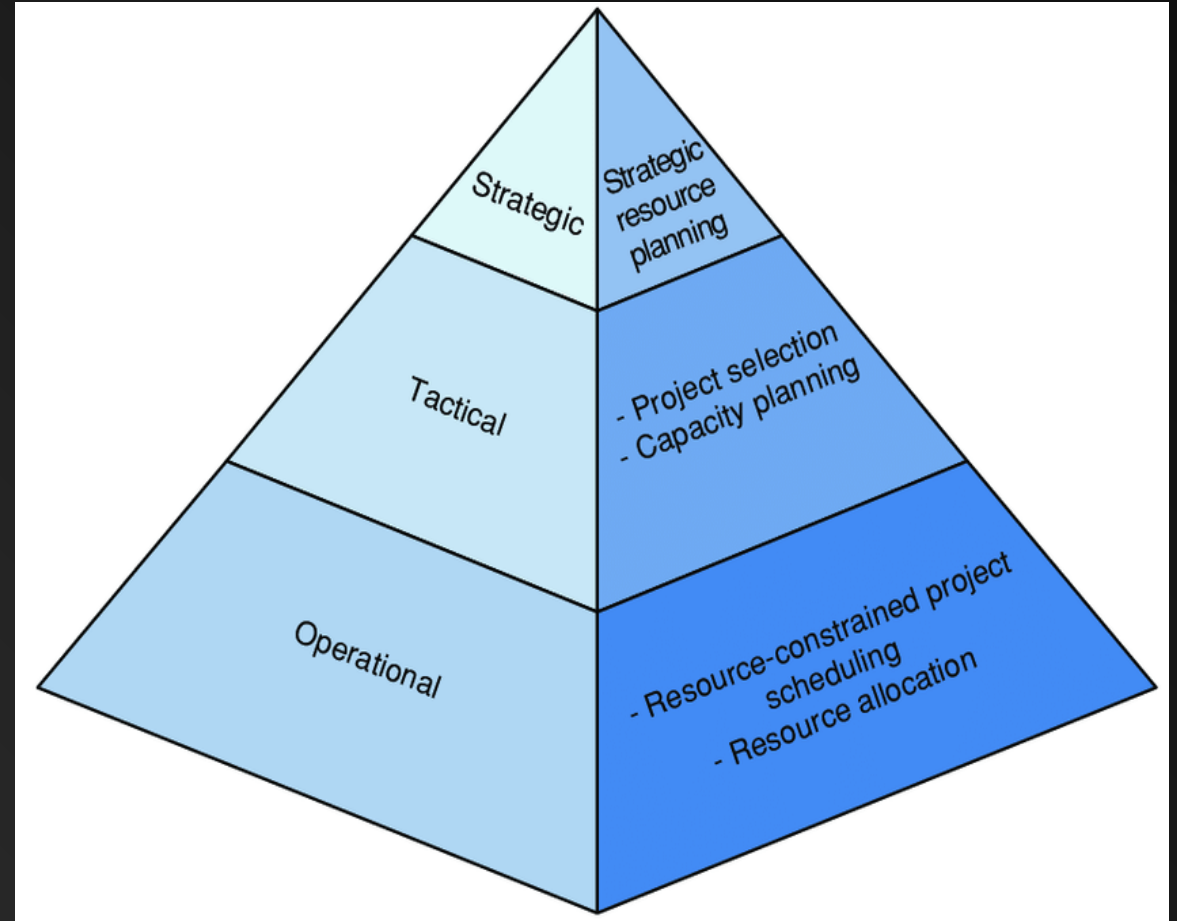
## BI in decision-making

# Three levels of decision-making

Operational: Daily routine and immediate impact.

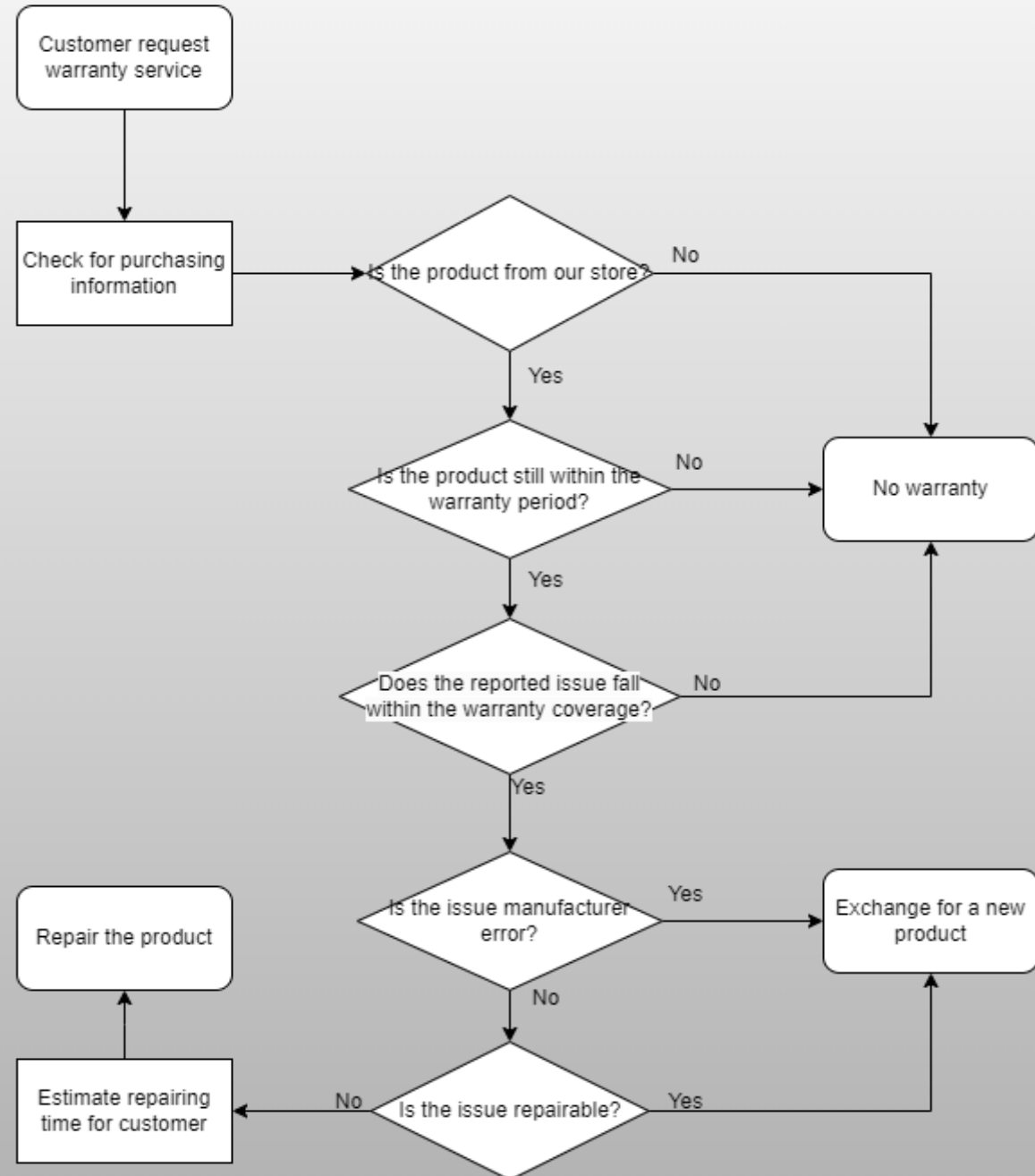
Tactical: Departmental goals and medium-term effects.

Strategic: Long-term vision and organization-wide impact.



# Operational level - Product warranty process

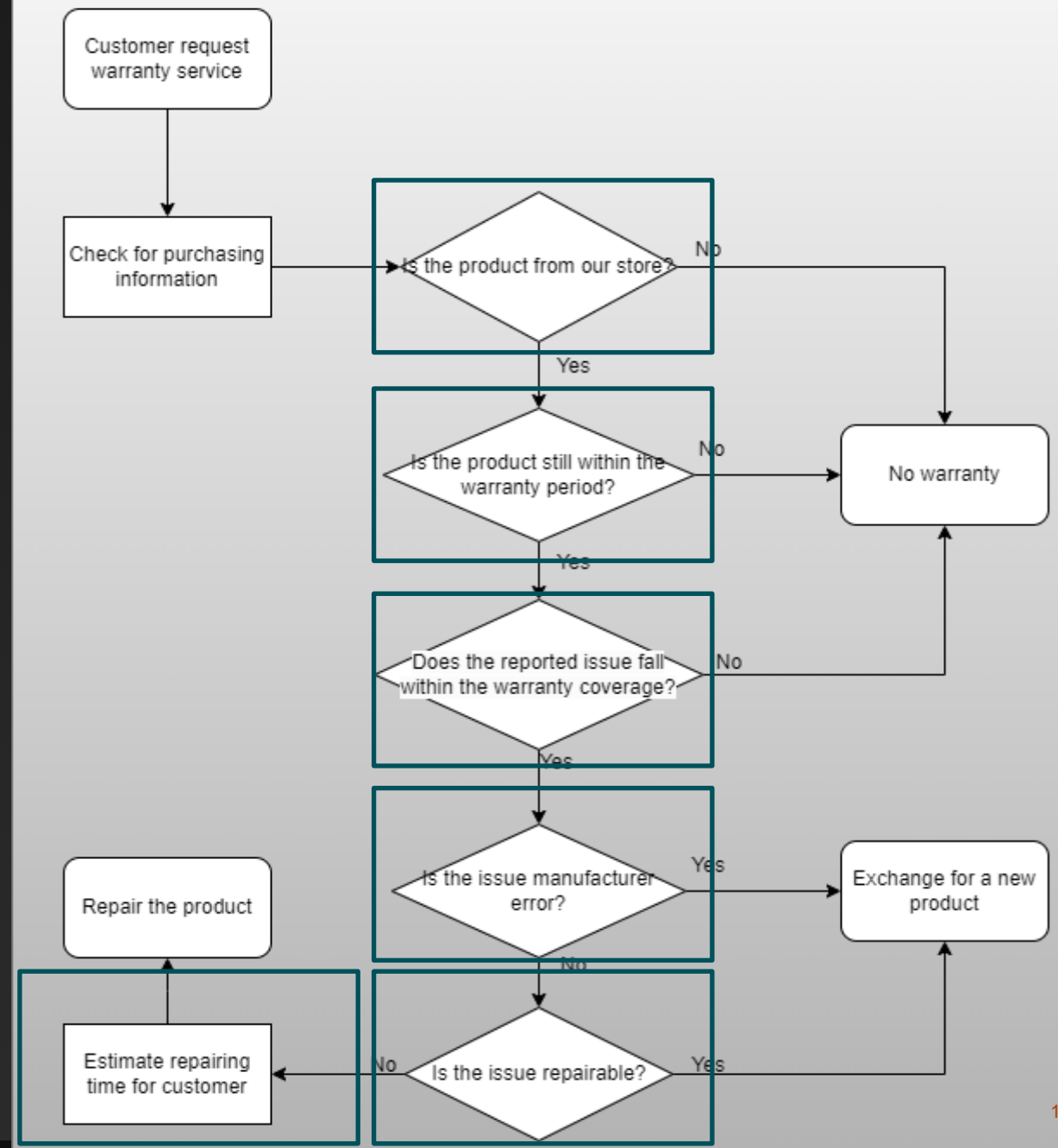
The process is to give the decision if the customer's product meet the warranty requirements or not?



# How can BI be applied in this case

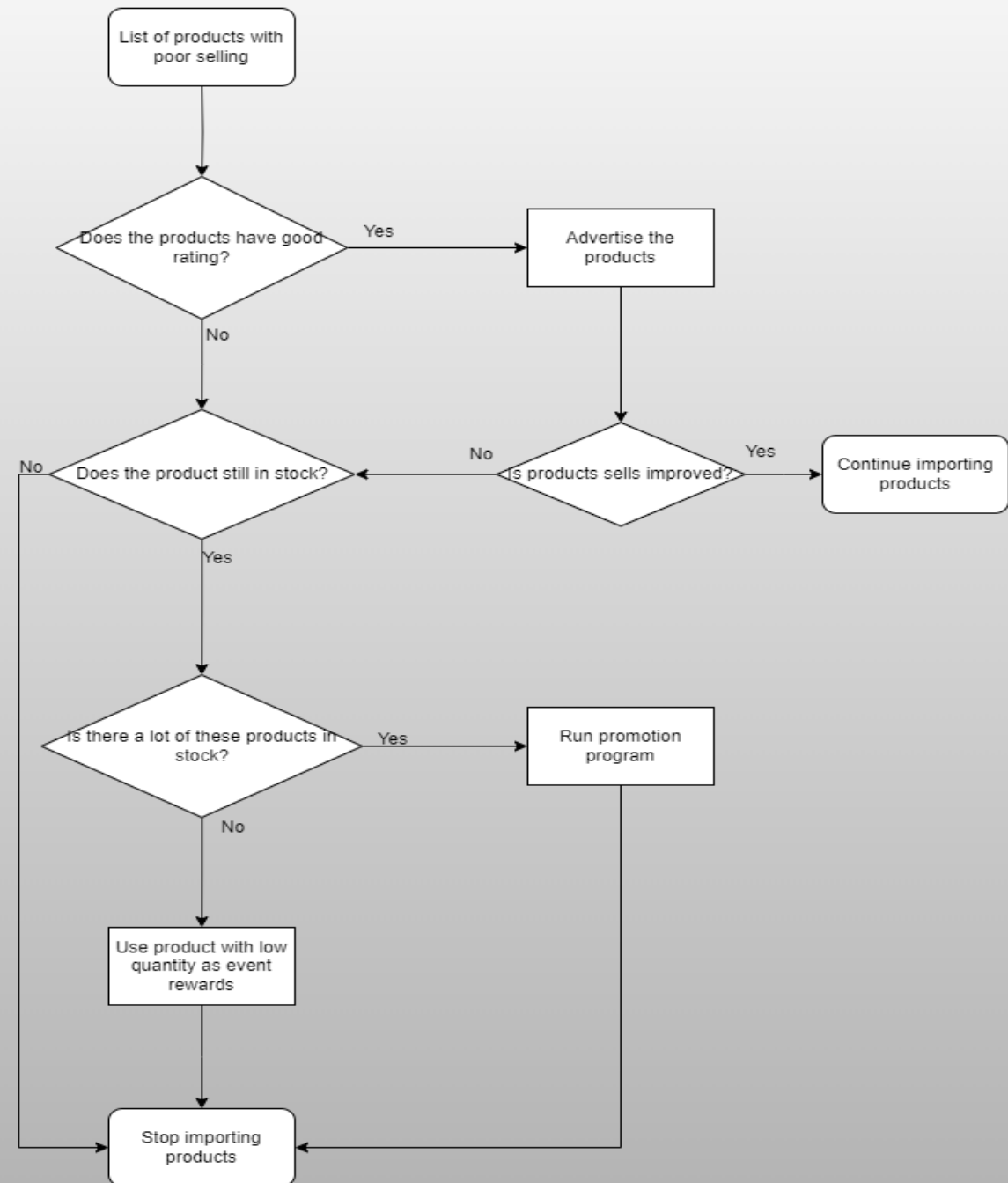
BI can be applied in this case by:

- Check for warranty information that customer provided
- Check for warranty history to give decision if the product can be warranty or not



# Tactical - Handling poor selling products process

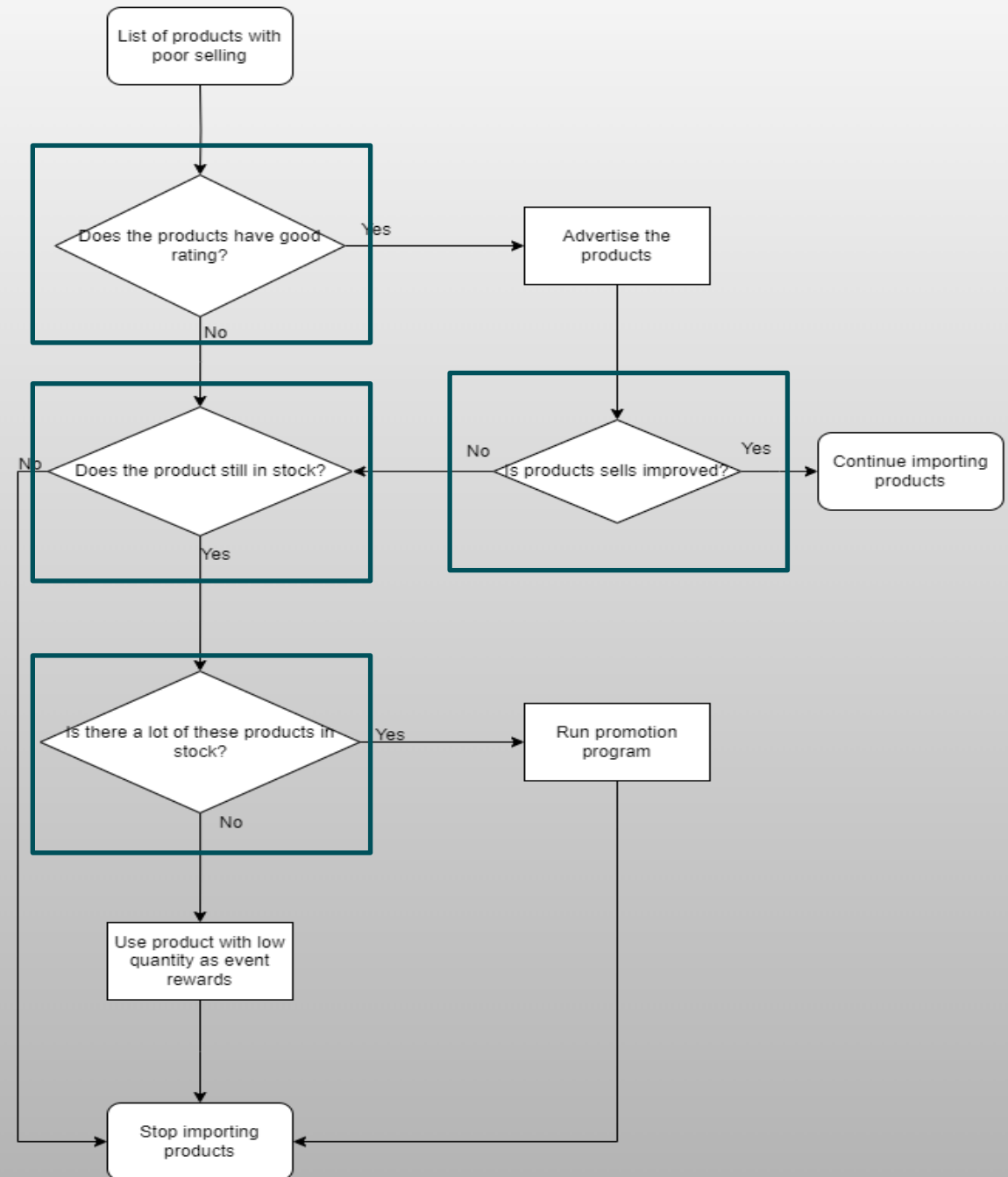
The process is to give the decision if the product is worth continuing to do business with or not



# How can BI be applied in this case

BI can be applied in this case by:

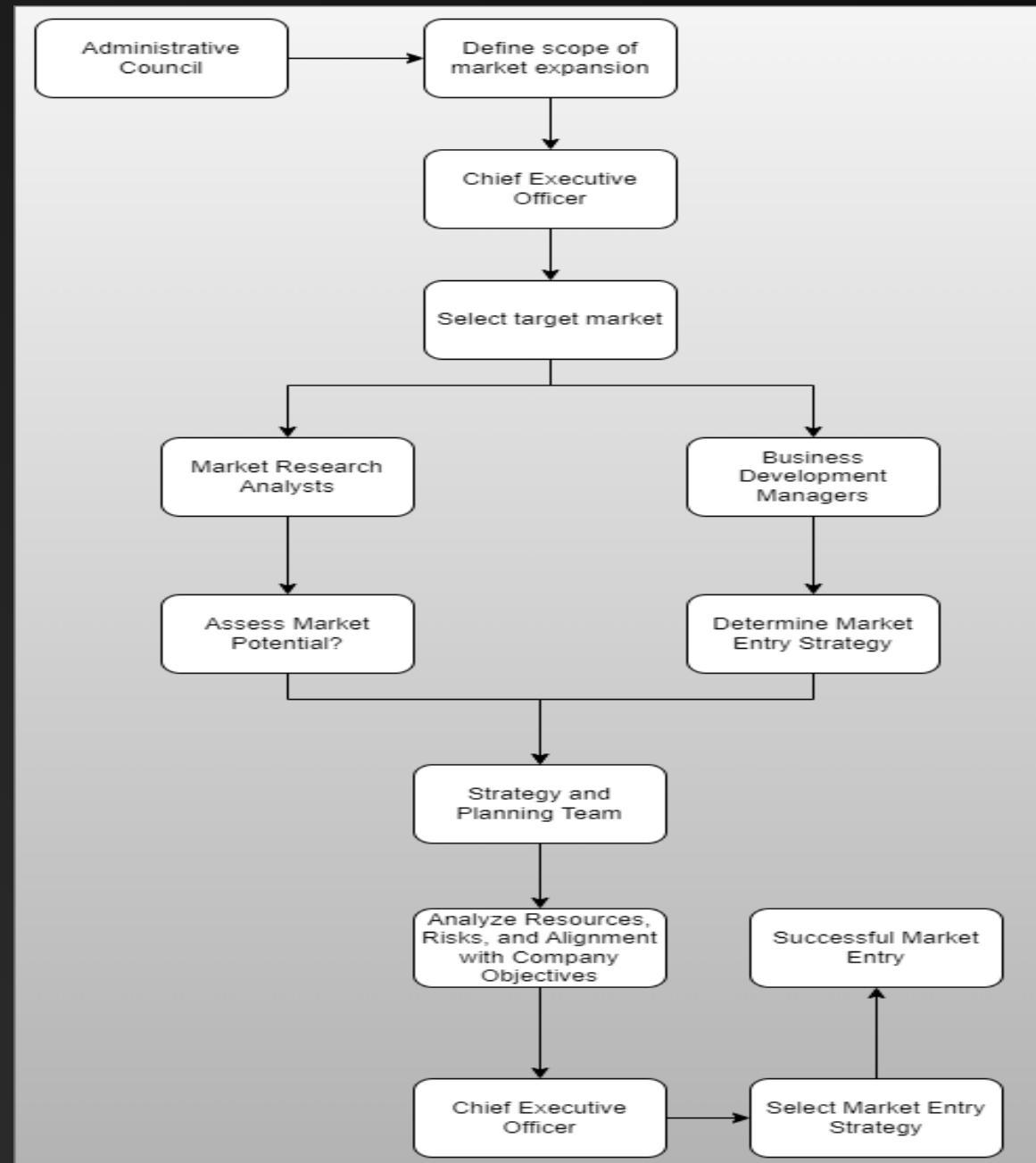
- Analyze rating of poor selling products
- Check for number of products in stock to give decision



# Strategic - Market expansion decision making process

The process is used to:

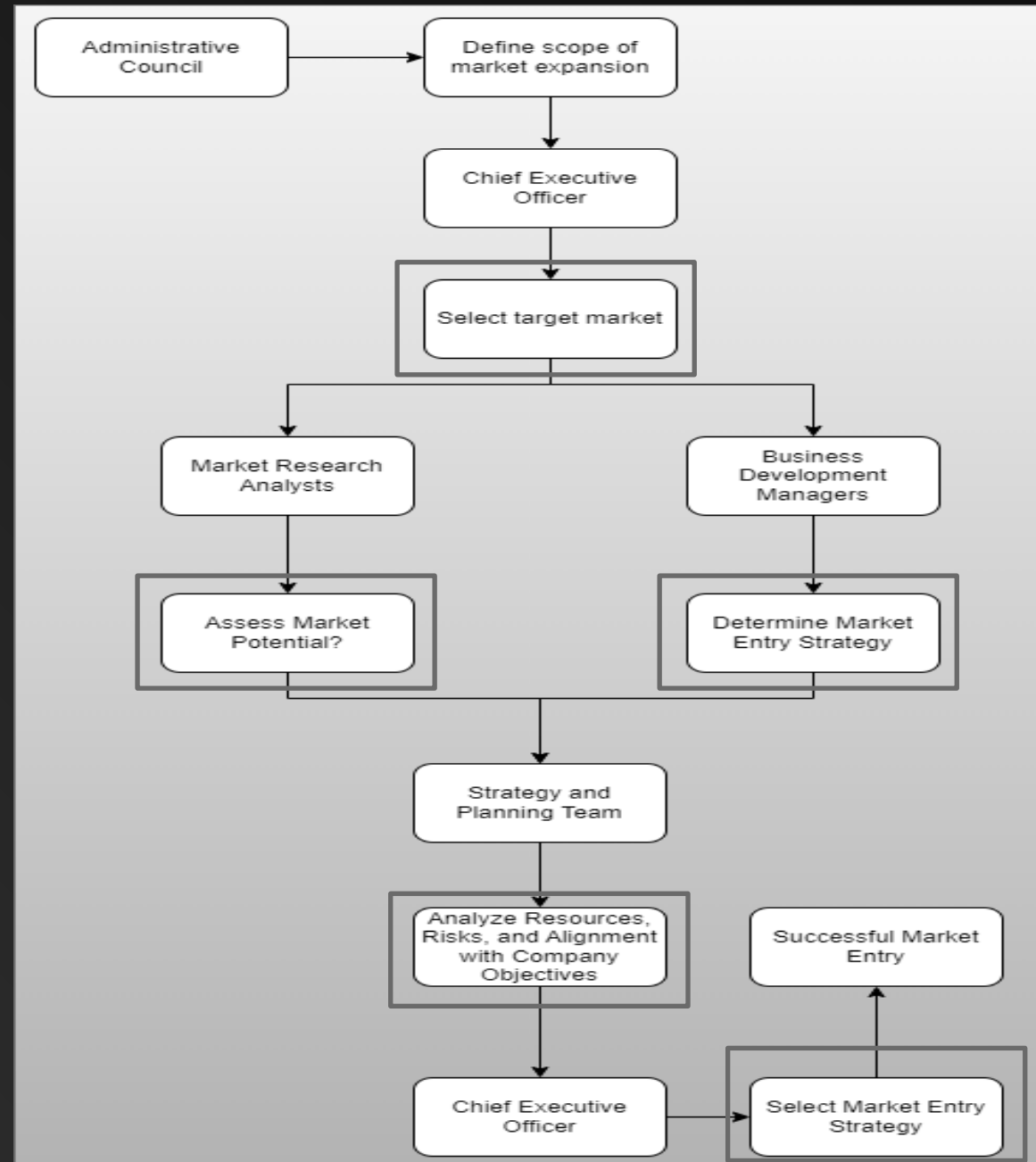
- Assess current market position and growth potential.
- Identify target markets aligned with business objectives.
- Determine the most suitable market entry strategy.
- Evaluate feasibility, risks, and resources.



# How can BI be applied in this case

BI can be used to helps in:

- Analyze some markets to help company in making decision
- List potential of chosen market
- List strategy for market entry
- Provides execute and risk plan for company





# 04

## BI tools

# Some famous BI tools/technologies



## Tableau

A visual analytics platform used to transform and present data in a visual way.



## Microsoft Power BI

Apply Microsoft products, databases, and online services for data analysis.



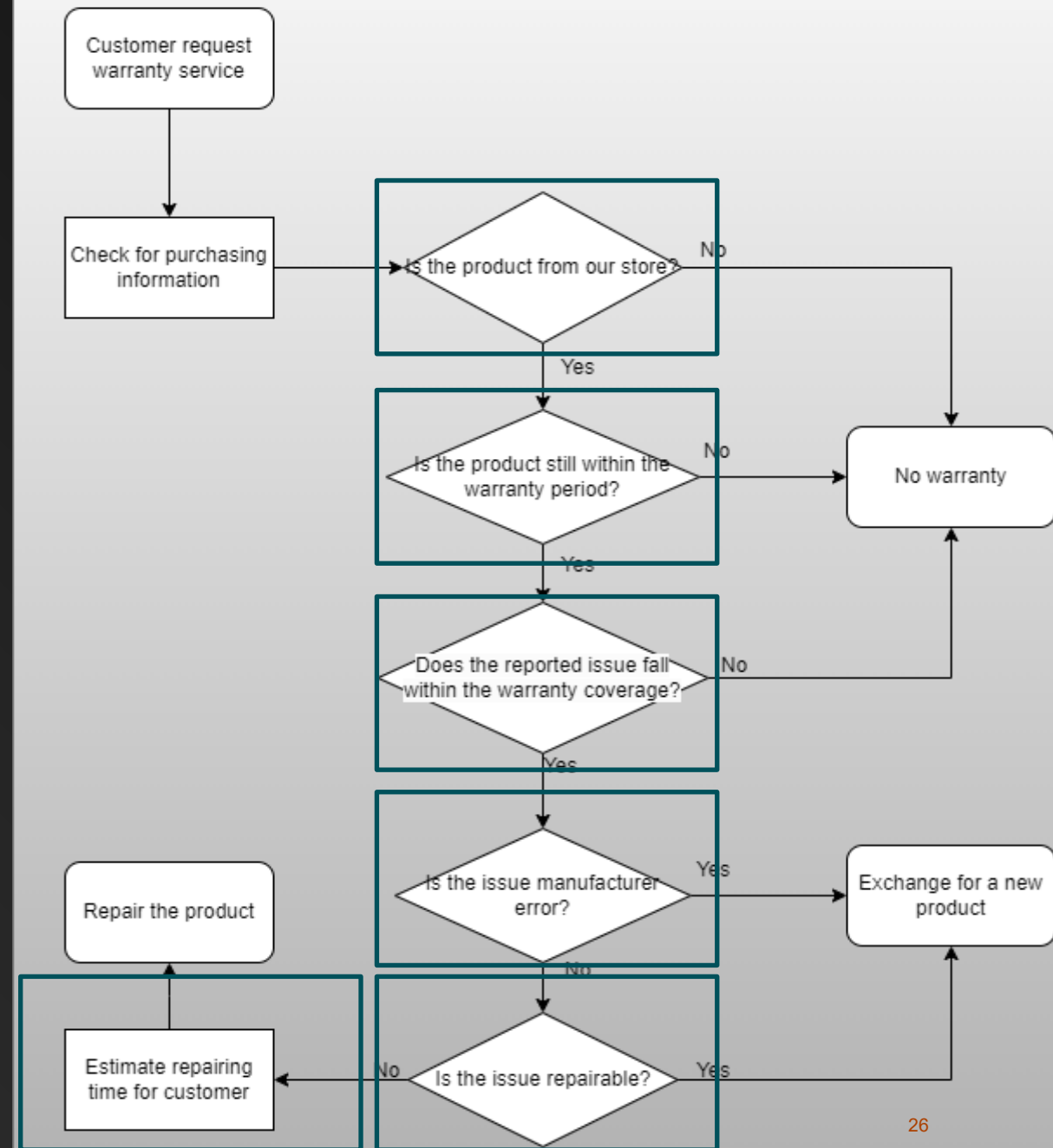
## Oracle Analytics Cloud

A BI platform that empowers users to analyze data across any device. Have intelligent analysis options and is easy to use.

# Apply Microsoft power BI

Microsoft Power BI can provide valuable insights and support in the product warranty decision-making process by:

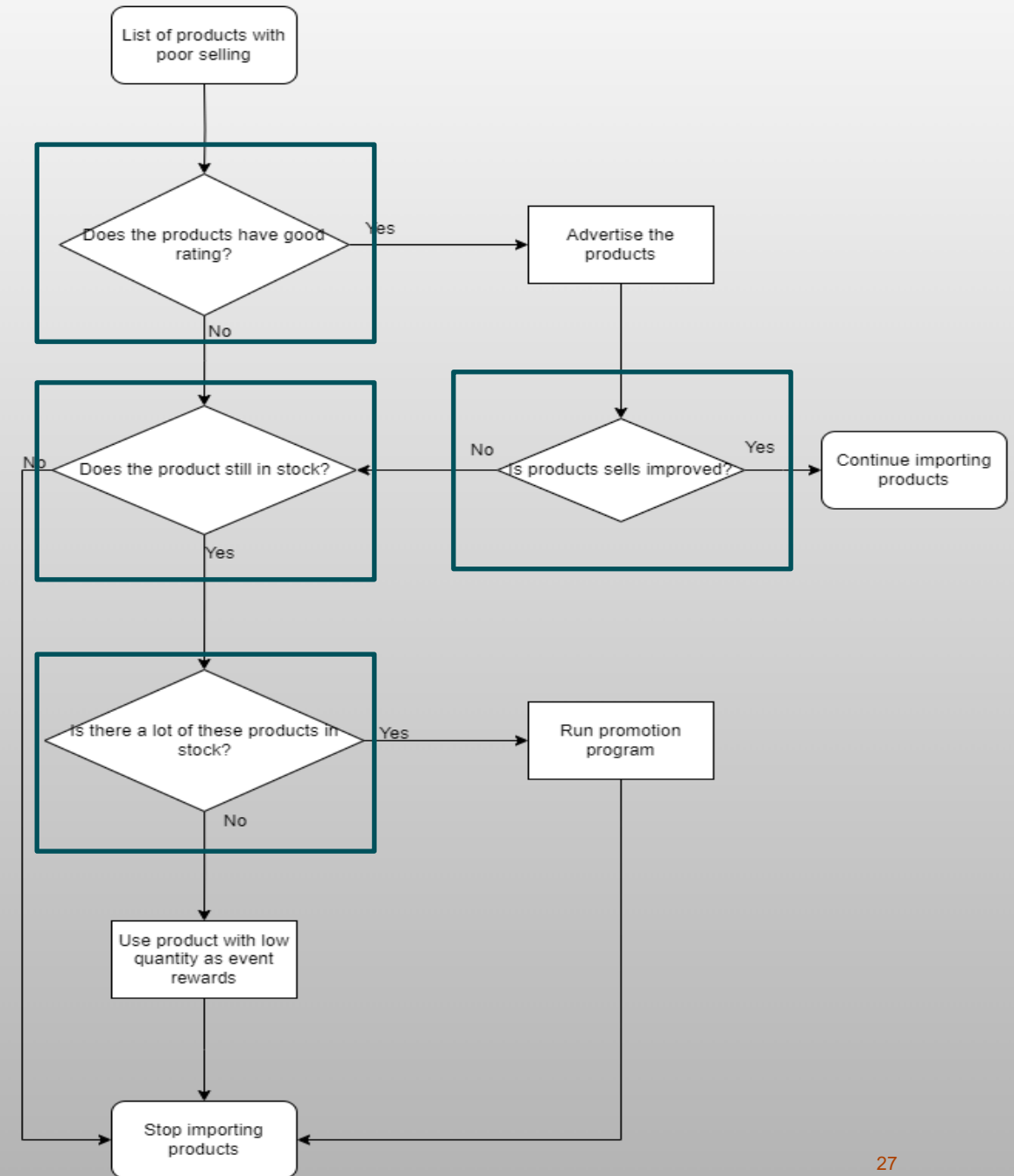
- Warranty Performance Analysis: Power BI enables you to analyze warranty data to identify patterns, trends, and anomalies.
- Predictive Analytics: Power BI can leverage advanced analytics and machine learning capabilities to predict warranty-related outcomes.
- Reporting and Collaboration: Power BI facilitates easy report generation and sharing.



# Apply Oracle Analytics Cloud

Oracle Analytics Cloud (OAC) can provide valuable assistance in handling poor selling products by:

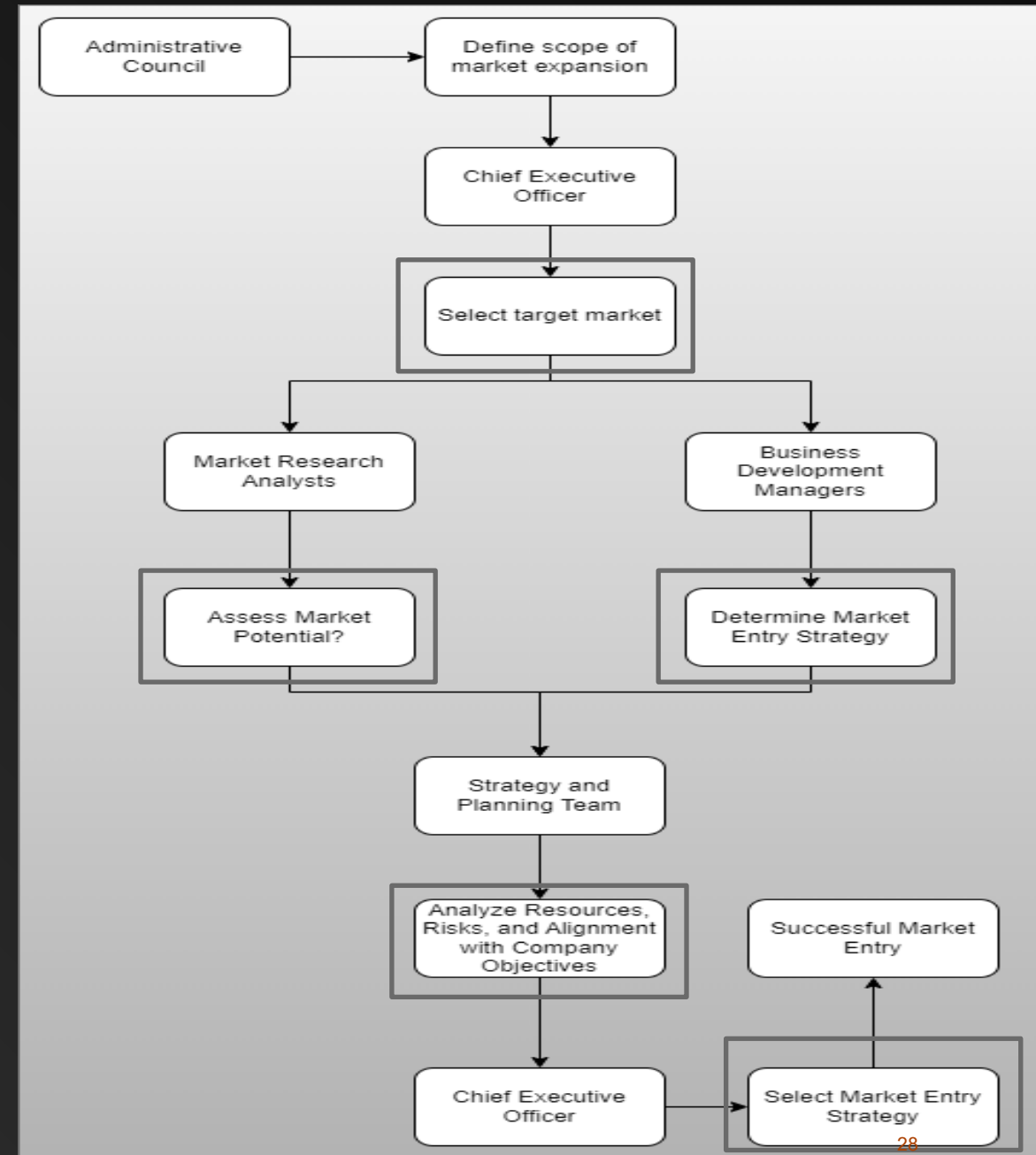
- Data Integration: consolidate data from various sources, such as sales records, inventory data, customer.
- Inventory Management: optimizing inventory management for poor-selling products.
- Predictive Analytics: forecast future sales trends and predict the potential success of different products.
- Customer Segmentation: segment customers based on various attributes, such as demographics, buying behavior, or preferences.



# Apply tableau

Tableau's capabilities can aid in the market expansion process by:

- Data Visualization: Tableau provides powerful data visualization capabilities
- Market Analysis: perform in-depth analysis of market data by leveraging its robust analytics features
- Dashboards and Reporting: provide a comprehensive view of market expansion efforts.
- Geographic Analysis: visualize data geographically, identify target regions with growth potential.





**THANK YOU  
FOR YOUR ATTENTION**

# Speaker notes

## I. Business process

### 1. Dataset

The dataset provided is a collection of laptop listings from Flipkart, an ecommerce website in India. It is an unprocessed dataset comprising 984 unique entries. The dataset includes 96 features such as laptop name, purchase link, price in Indian rupees, processor, GPU, and more

The dataset contain data in various form like number and text, some column could be used are:

- Number: laptop price, laptop rating
- Text: Laptop name, Warranty type, RAM, Gpu\_processor, SSD, Storage, Weight

Above data can be used later to find the relation between laptop price and rating from user, while text data mostly are laptop configuration and can be count to find laptop market trend.

The dataset also includes some unclean data, which are in form of NaN values. By applying seaborn in python, we can find that top 20 columns which most unclean data have over 900 in each. These data need to be pre-processed to be used.

### 2. Business process

#### 2.1. Definition

A business process refers to a set of actions carried out to achieve specific organizational goals. It is important for these processes to be well-defined, with clear objectives and consistent outcomes. Business process management (BPM) is a systematic approach that helps organizations enhance their processes and achieve their objectives effectively.

#### 2.2. Business process in selling laptop

**Sales Process:** The sales process is designed to attract potential customers, engage with them, provide information about laptop models, and ultimately convert leads into sales. It involves activities such as lead generation, inquiry management, product demonstration, pricing, order processing, and sales closure.

**Inventory Management:** Inventory management processes help maintain optimal stock levels of different laptop models. It involves tracking inventory, forecasting demand, procuring laptops from suppliers, receiving and inspecting incoming stock

**Marketing and Promotions:** Marketing and promotional processes are designed to attract customers, create awareness about the available laptop models, and promote competitive pricing and offers.

### 3. Support process

#### 3.1. Definition

The development and life cycle of the tasks included in the primary processes, i.e., organizational and business processes, are coordinated by these processes. These processes may undoubtedly be cross-processes, which means that they support the accomplishment of goals across several project and/or company domains.

The actions in support processes are geared toward reaching goals that aid in the support of other processes that carry out specific tasks. These goals can be used to define necessary to record all the information produced by the process life cycle activities.

### 3.2. Support process in selling laptop

Technical Support: diagnose and resolve technical issues, ensuring customers' laptops operate optimally. Assist with software installation, configuration, and troubleshooting to address any software-related concerns.

Warranty and Repair Management: To facilitate the warranty claims process, ensuring customers receive necessary repairs or replacements for defective laptops. **Keep customers informed about the status of their laptop repairs, providing updates and estimated repair times.**

Pre-sales Support: provide personalized recommendations based on customer requirements, ensuring they select the most suitable laptop model. Guide customers in assessing compatibility with other devices and peripherals to ensure a seamless experience.

## II. Examples of business process

### 1. Selling laptop process

#### 1.1. Roles in the process

The store has three employee roles:

- Management: Provides product advice, receives customer information, and confirms orders.
- Payment: Handles tasks related to payment processing and order fulfillment.
- Staff: Welcomes customers, verifies their information, and proceeds to payment.

The process starts when customer buying a laptop. Welcome them will be the first action from staff. If they already have a specific laptop to get, then they will go right into purchase process. If not, they will have to provide information about the laptop they want, management then search for the laptops that fitted their requirements in the database. If there is no suitable laptop, customer then have to provides different requirements. Purchase process will require customer to provide their information, payment role then will validate their payment and bring products to customer.

### 2. Support process

This process has two main employee roles:

Warehouse:

- Main role: Check product availability chosen by the management process
- If the laptop is out of stock, customer selects another product
- After payment, warehouse delivers the desired product to the customer

IT:

- Role: Ensure smooth functioning of the product management process
- Receive bug information and promptly fix any system issues
- Notify other departments when the system is available for use



After management process search for a laptop by using customer provided requirements, if bugs happened with the system, they report the bug that will be received by IT employees. The IT department then try to fix the bug, and after the bug is fixed, they notify it back to management. Warehouse role is to check if the product chosen by customer is available or not and notify back to management, if the laptop is available, they then will give it to management for further processes.

### III. BI in decision-making

#### 1. Three levels of decision-making

Decision-making contains three levels, which are:

- Operational: Daily routine and immediate impact.
- Tactical: Departmental goals and medium-term effects.
- Strategic: Long-term vision and organization-wide impact.

The first level is operational decision making. At this level, frontline employees and supervisors make decisions that directly impact daily operations. They handle routine tasks, such as scheduling shifts, managing inventory levels, and addressing customer complaints. These decisions have immediate effects on the day-to-day functioning of the organization.

Moving on to the second level, we have tactical decision making. Middle managers and department heads are responsible for making these decisions. They focus on achieving departmental goals and objectives. Examples of tactical decisions include resource allocation, goal setting, and process optimization. These decisions have a medium-term impact on the efficiency and performance of their respective departments.

Lastly, we have strategic decision making at the highest level of the organization. Top executives and the leadership team make these decisions. Their focus is on shaping the overall direction and vision of the organization. Strategic decisions are significant and have long-term effects. Examples include business expansion, market entry strategies, and mergers or acquisitions.

#### 2. Examples of decision-making processes

##### 2.1. Operational level – product warranty process

###### 2.1.1. Explain the process

The process is to give the decision if the customer's product meet the warranty requirements or not? The process starts when customer bring their broken product to the store, store then get information to answer three question which are: “is the product from the store?”, “is the product within warranty period?” and “does the reported issue fall within the warranty period?”. If any of them fail, then the decision for the case is no warranty, if they are all passed, they will then have to check if it is a manufacturer issue or not. If it is, they will then exchange for a new product, if not, they will estimate repairing time to customer.

###### 2.1.2. How BI can be applied in this process

BI can be applied in this case by:

- Check for warranty information that customer provided by searching in the database for purchasing information, check for warranty type of the product, and check for warranty period. Also compare customer product’s error with warranty coverage

- Check for warranty history of the store from older customer warranty products to give decision if the product can be warranty or not. This also can be used to estimate the time that need to warranty product in current position.

## 2.2. Tactical level – Handling poor selling products

### 2.2.1. Explain the process

The process is to give the decision if the product is worth continuing to do business with or not. It starts by listing all the product with poor selling of the store. The store then checking the products rating, if it's good, they will try to advertise the product and then check if the selling improved or not, if it is, the product then will be continuously sold normally. In case the sell is not improved, and in case the products have poor rating, the store then checks for the number of products in stock, if there is none in stock, they will stop importing it. If it is still in stock but with little quantity, they then will use these products as event rewards.

### 2.2.2. How BI can be applied in this process

BI can be applied in this case by:

- Analyze rating of poor selling products by creating overall review of product selling status and then analyze the rating of products with poor selling.
- Check for number of products in stock, then if the number suit with any of the case provided above, it will give decision for each case.

## 2.3. Strategic level – Market expansion strategy setting process

### 2.3.1. Explain the process

The process is used when company want to make decision about expanse their current market. It starts at administrative council giving the scope of the expansion. Chief executive officer then selects for a target market. Market research analysts and business development managers at the same time assess market potential and determine market entry strategy. With all the above information strategy and planning team will analyze the resources, risks and alignment with company objectives. In final step, chief executive Officer select for an entry strategy.

### 2.3.2. How BI can be applied in this process

BI can be used to helps in:

- Analyze some markets to help company in making decision by filter the data that are relate to the market.
- List potential of chosen market by applying company current status into the market data, also by forecasting the trend of the market.
- List strategy for market entry by doing competitor analysis, risk assessment and demand forecasting.
- Provides execute and risk plan for company by providing visualizations, such as risk heat maps or risk assessment matrices, to help stakeholders understand and prioritize risks.

## IV. BI tools

### 1. BI tools introduction

#### 1.1. Tableau

Tableau is a visual analytics platform or Tool, which use to transforming the data to solve problems and presentation of data in visual way, to get the insight of data to empowering people and organizations to make the most of their data.

## 1.2. Microsoft power BI

Power BI is a unified, scalable platform for self-service and enterprise business intelligence (BI). Connect to and visualize any data, and seamlessly infuse the visuals into the apps you use every day.

## 1.3. Oracle analytics cloud

Oracle Analytics Cloud (OAC) is a fully managed cloud-based BI and analytics platform from Oracle. It is designed as a single and complete platform that empowers business users and analysts to ask questions about their data — across any environment and from any device.

## 2. Apply BI tools in provided cases

### 2.1. Microsoft power BI - Product warranty process

Microsoft Power BI can provide valuable insights and support in the product warranty decision-making process. Here's how it can help:

- **Warranty Performance Analysis:** Power BI enables you to analyze warranty data to identify patterns, trends, and anomalies. You can assess warranty performance metrics like claim frequency, claim costs, and repair durations to understand the effectiveness of your warranty program.
- **Predictive Analytics:** Power BI can leverage advanced analytics and machine learning capabilities to predict warranty-related outcomes. By analyzing historical warranty data, you can build predictive models that forecast warranty claim rates, estimate future warranty costs, or identify potential warranty fraud.
- **Reporting and Collaboration:** Power BI facilitates easy report generation and sharing, enabling you to communicate warranty-related insights with stakeholders effectively. You can create customized reports or interactive dashboards that provide an overview of warranty performance, highlight key metrics, and track progress against warranty-related goals.

### 2.2. Oracle Analytics Cloud - Handling poor selling products process

Oracle Analytics Cloud (OAC) can provide valuable assistance in handling poor selling products and making informed decisions. Here's how OAC can help in the decision-making process:

- **Data Integration:** OAC allows you to consolidate data from various sources, such as sales records, inventory data, customer feedback, and marketing campaigns. By integrating these disparate datasets, you gain a comprehensive view of the factors impacting poor product sales.
- **Inventory Management:** OAC can assist in optimizing inventory management for poor-selling products. By analyzing inventory levels, sales velocity, and market demand, you can make informed decisions regarding stock replenishment, discounts, or discontinuation of underperforming products.
- **Predictive Analytics:** OAC's advanced analytics capabilities can help forecast future sales trends and predict the potential success of different products. By leveraging historical data and applying predictive models, you can estimate the sales potential of poor-performing products, identify market demand trends, and make data-driven decisions regarding inventory management.

- Customer Segmentation: OAC enables you to segment customers based on various attributes, such as demographics, buying behavior, or preferences. By analyzing customer segments, you can identify which segments are not responding well to specific products.

### 2.3. Tableau - Market expansion decision making process

Tableau's capabilities can aid in the market expansion process in the following ways:

- Data Visualization: Tableau provides powerful data visualization capabilities, allowing you to explore and present market data in an intuitive and visually appealing manner. You can create interactive charts, graphs, and maps to identify market trends, customer segments, and potential opportunities for expansion.
- Market Analysis: With Tableau, you can perform in-depth analysis of market data by leveraging its robust analytics features. You can filter, slice, and drill down into the data to gain insights into customer preferences, competitor activities, and market dynamics. This analysis can help you make informed decisions regarding target markets and strategies.
- Dashboards and Reporting: Tableau enables you to create interactive dashboards and reports that provide a comprehensive view of market expansion efforts. You can customize dashboards to display relevant metrics, track progress against targets, and share insights with stakeholders, fostering collaboration and informed decision-making.
- Geographic Analysis: Tableau's mapping capabilities can be particularly useful in market expansion. You can visualize data geographically, identify target regions with growth potential, analyze demographic information, and understand the competitive landscape in different geographic areas. This helps in determining suitable locations for expansion and optimizing market entry strategies.

Task Table

Task	Work	Status	Name	Self-Evaluate	Evaluate (Leader)
1. Business process	Finding dataset	Work in group		10	10
	Analyze dataset	Personal	Huynh Minh Loc	8	10
	Give introduction for business process and support process	Personal	Huynh Minh Loc	9	10
	Choose 2 business processes and create diagrams	Personal	Ng Phuoc Cuong	10	10
2. Decision making levels	Describe 3 levels of decision-making	Personal	Huynh Minh Loc	9	10
	Give examples for 3 levels of decision-making and draw diagrams	Personal	Ng Phuoc Cuong	9	9
	Find BI tools	Personal	Hoang Quang Quyen	9	10
	Apply BI tools in given cases	Personal	Hoang Quang Quyen	9	10
3. Prepare slides and speaker notes	Create slides from found information and write speaker notes for slides	Work in group		10	10

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