

MARCH 08, 2022

BUSINESS INTELLIGENT GROUP 1

PRESENTED BY



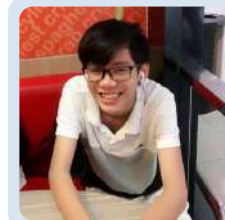
CONG TUAN



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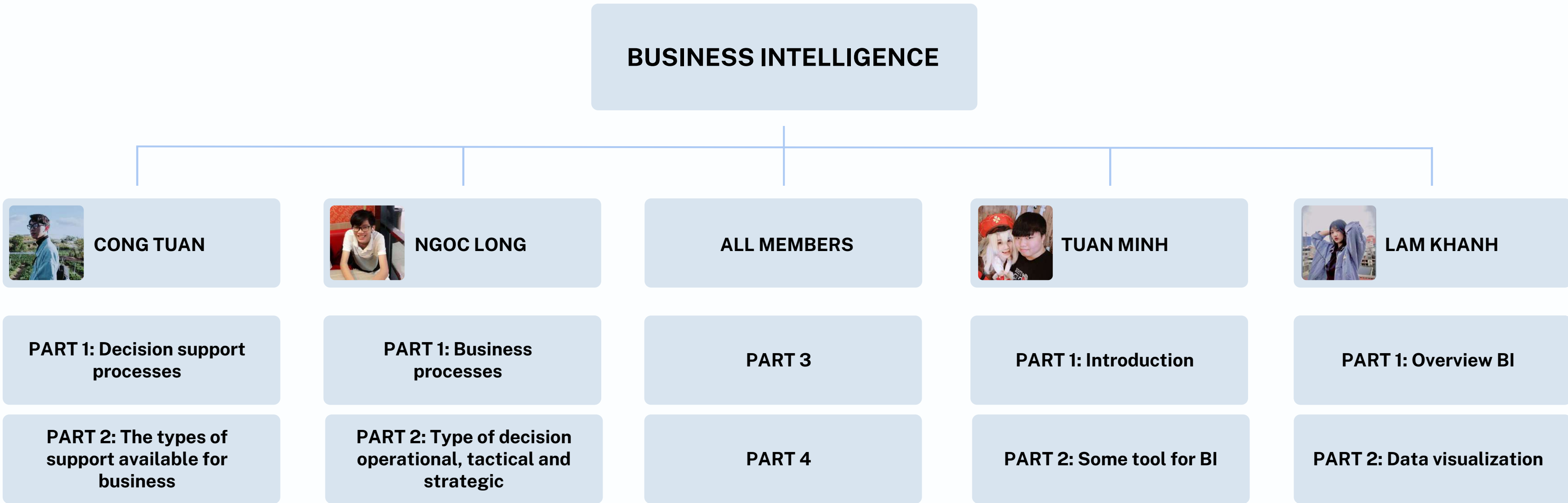
LAM KHANH



NGOC LONG



WORK BREAKDOWN STRUCTURE



WELCOME

- GROUP 1 -

TABLE OF CONTENT

- Part 1: Overview business intelligence
- Part 2: Business intelligence in the project
- Part 3: Structured and unstructured data
- Part 4: The key features of business intelligence functionality.



INTRODUCTION

Our company Travaloka is a company in the tourism industry. Due to the complicated development of the epidemic, the industry's statistics are not accurate. As a result, our company has been allowed to apply business intelligence technology to our work to facilitate monitoring and forecasting to help us make business decisions.

During that time, technology developers used tools to predict recovery times. The application of information technology in the tourism industry will help us to have specific analyses and monitor changes.

In this research, we have come up with a real scenario based on the statistics of the Ministry of Culture, Sports and Tourism. The study is based on statistical results from 2021. Due to the impact of the epidemic, the number of domestic and international tourists has changed day by day.

PART 1: OVERVIEW BI

ABOUT BI

1. What is BI?

Business intelligence (BI) leverages software and services to transform data into actionable insights that inform an organization's strategic and tactical business decisions. BI tools access and analyze data sets and present analytical findings in reports, summaries, dashboards, graphs, charts and maps to provide users with detailed intelligence about the state of the business.





Report



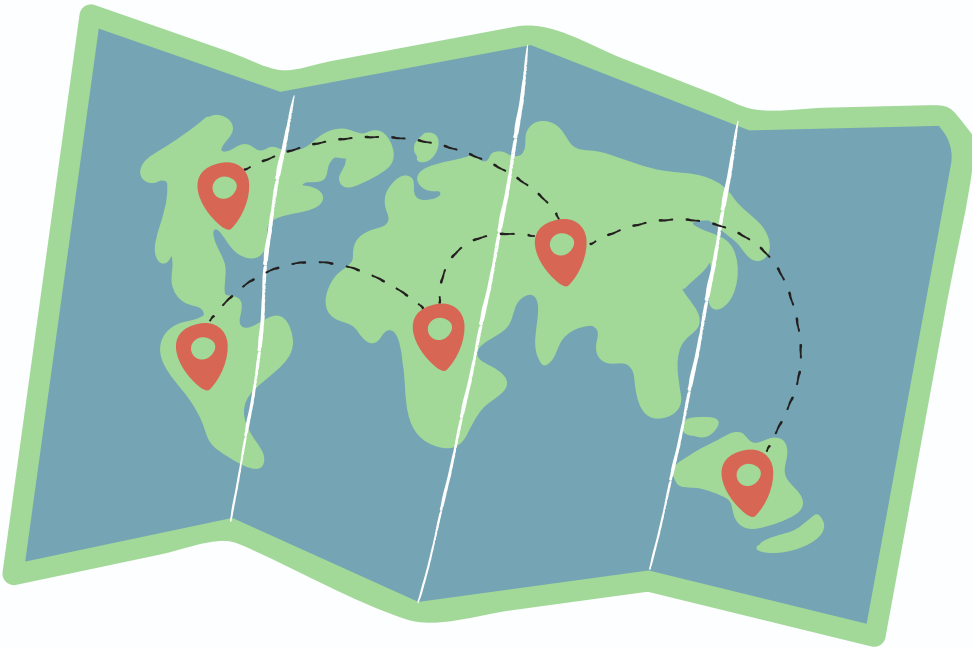
Summary



Dashboard

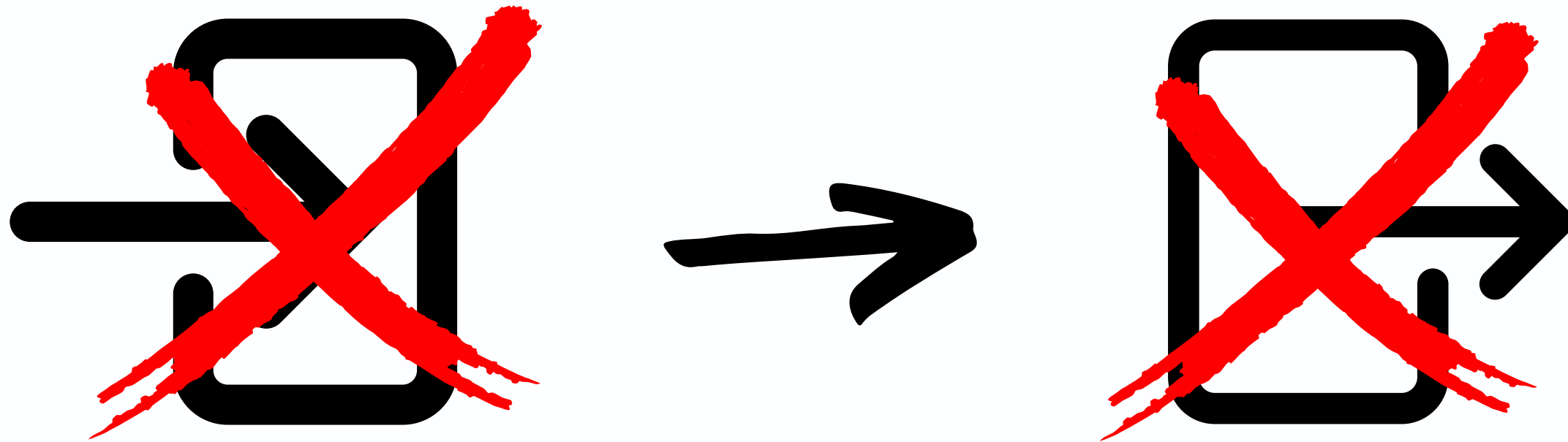


Graph/ Chart

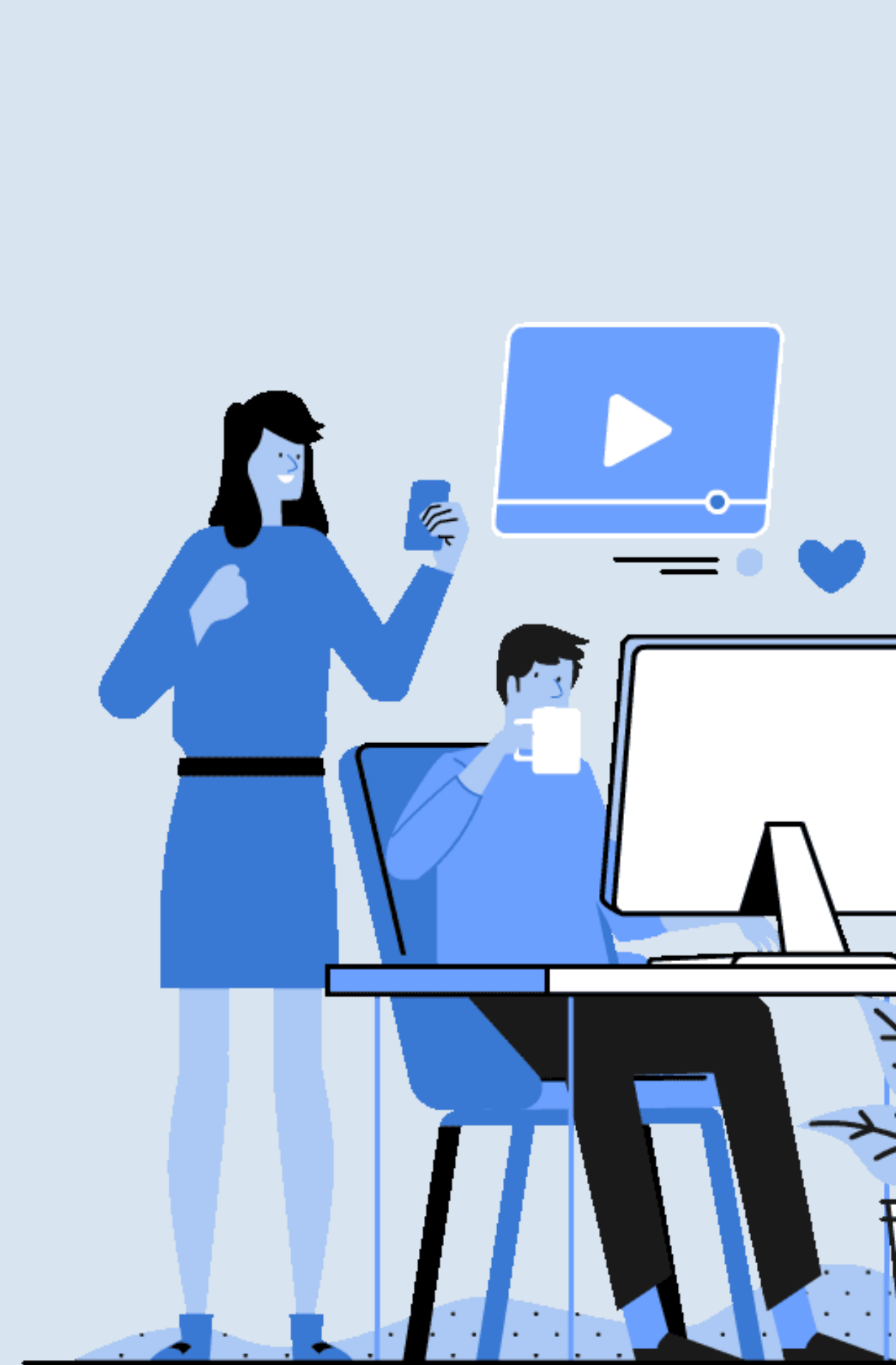


Map

1. What is BI?



=> BI attempts to solve this problem by analyzing current data that is ideally presented on a dashboard of quick metrics designed to support better decisions. ✓



2. Why is business intelligence important?

Business intelligence can help companies make better decisions by showing present and historical data within their business context. Analysts can leverage BI to provide performance and competitor benchmarks to make the organization run smoother and more efficiently.



Identify ways to increase profit



Analyze customer behavior

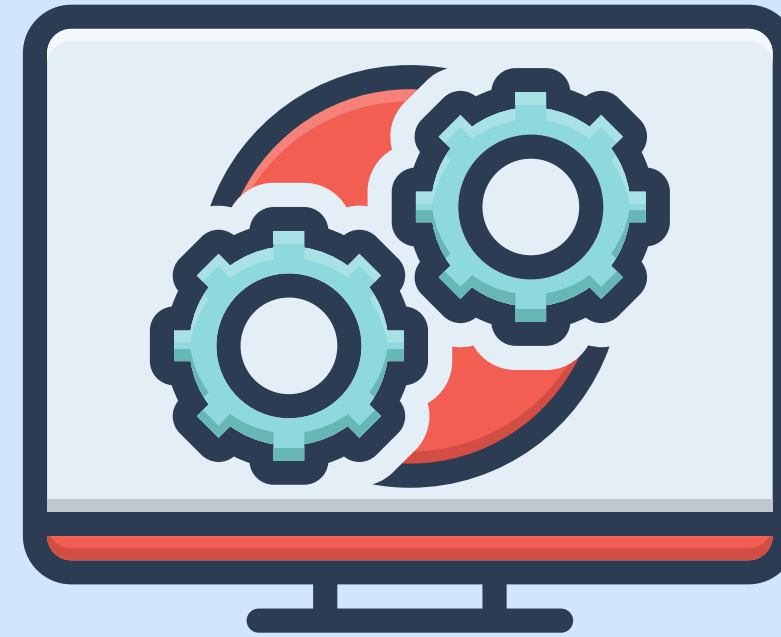


Compare data with competitors

2. Why is business intelligence important?



Track performance



Optimize operations



Predict success



Spot market trends

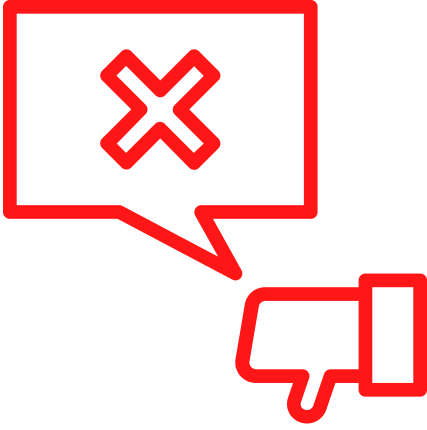


Discover issues or problems

3. How business intelligence works?

- Gather the necessary data, analyze it, and determine which actions to take to reach their goals.
 - Data is processed and then stored in data warehouses.
- Once it's stored, users can then access the data, starting the analysis process to answer business questions.





4. Advantages and disadvantages of BI

- Jump in and start analyzing data
- Provides real time metrics and reports
- Takes less time
- Make key performance indicators
- Information can be easily isolated
- Help to increase productivity
- Can increase profit

- User resistance is one big barrier
- Analyze voluminous amounts of irrelevant and poor quality data.
- Cleanup of irrelevant data
- Most companies don't understand their business processes well enough



5. Examples of BI

- Netflix:

The online entertainment company's 148 million subscribers give it a massive BI advantage. Netflix uses data in multiple ways. One example is how the company formulates and validates original programming ideas based on previously viewed programs. Netflix also uses business intelligence to get people to engage with its content.

The Netflix logo, consisting of the word "NETFLIX" in a bold, red, sans-serif typeface. The letters are slightly irregular and have a 3D effect, with the 'N' and 'X' being particularly prominent.

5. Examples of BI

- Starbucks:

Through its popular loyalty card program and mobile application, Starbucks owns individual purchase data from millions of customers. Using this information and BI tools, the company predicts purchases and sends individual offers of what customers will likely prefer via their app and email.



5. Examples of BI

- Tesla:

The innovative automotive company uses BI to connect their cars wirelessly to their corporate offices to collect data for analysis. This approach links the carmaker to the customer and anticipates and corrects problems such as component damage, traffic or road hazard data.



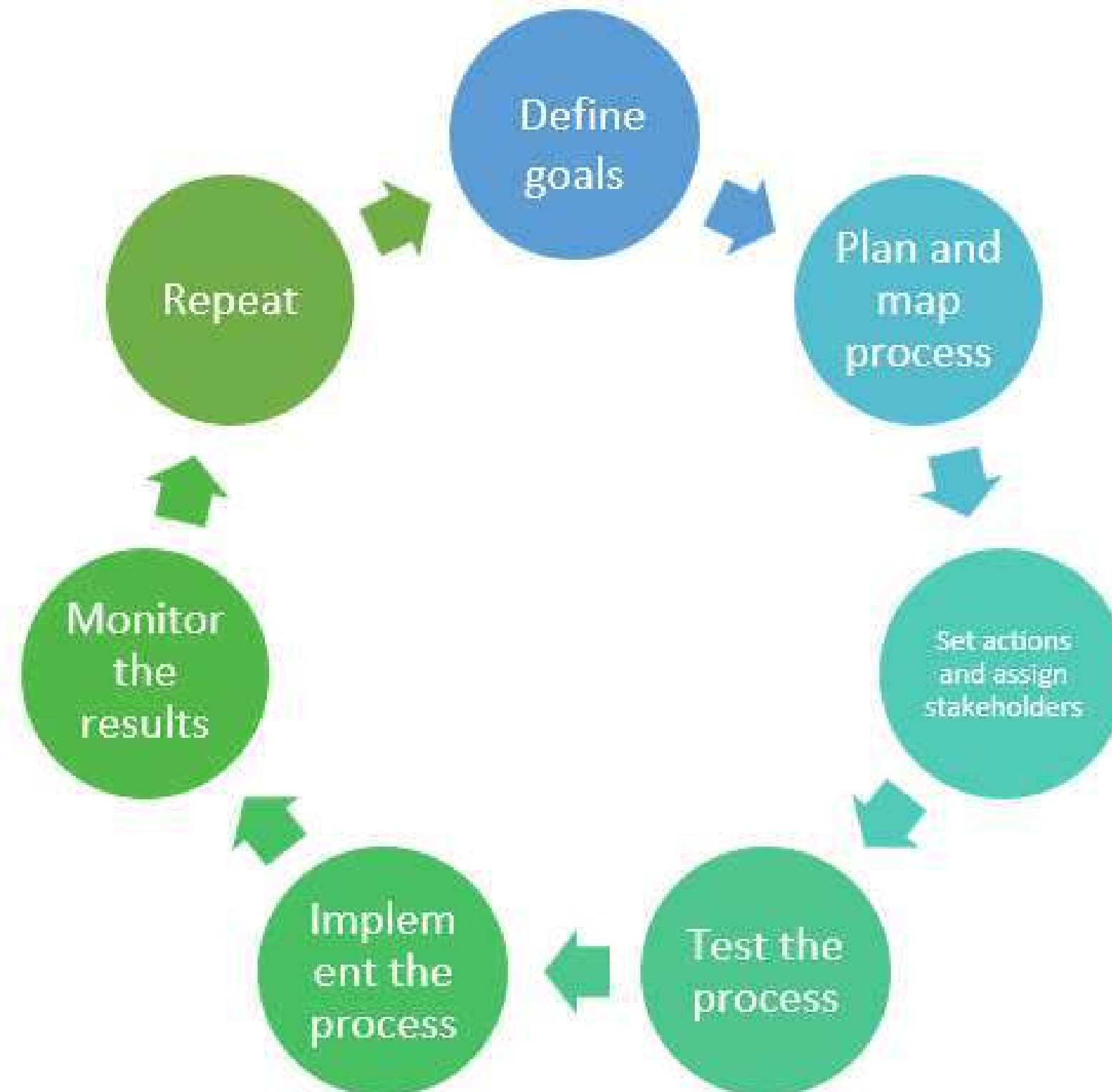
ABOUT BUSINESS PROCESS

WHAT IS BUSINESS PROCESS?

business process is a series of steps performed by a group of stakeholders to achieve a concrete goal. Each step in a business process denotes a task that is assigned to a participant. It is the fundamental building block for several related ideas

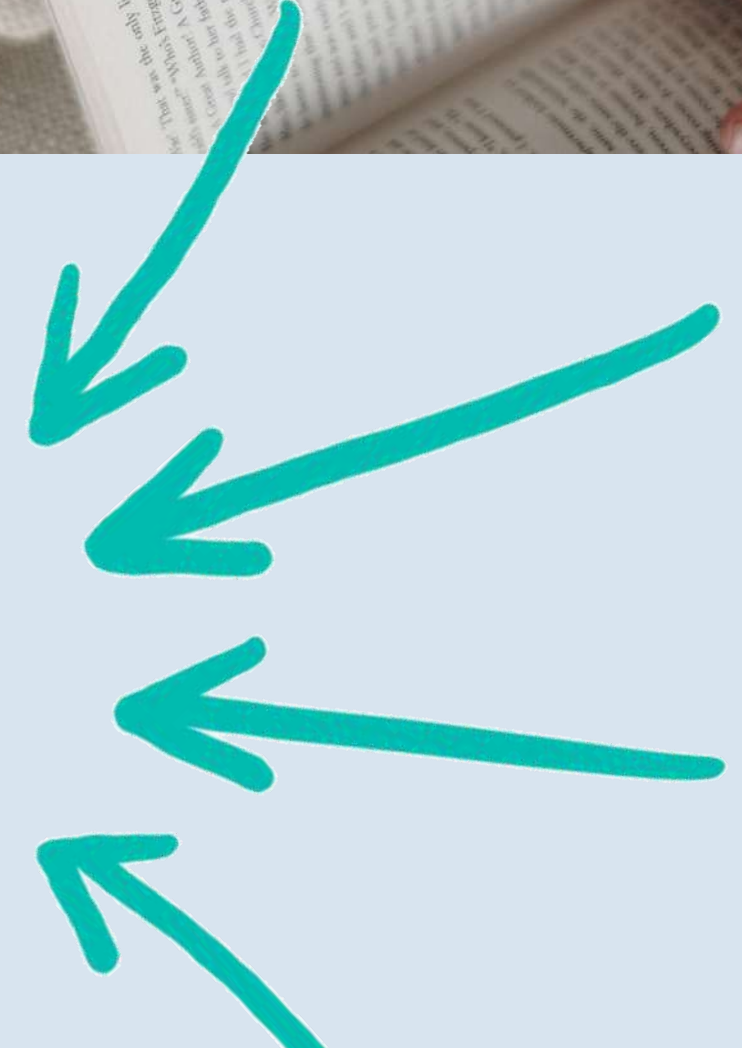


STEPS IN BUISENESS PROCESS



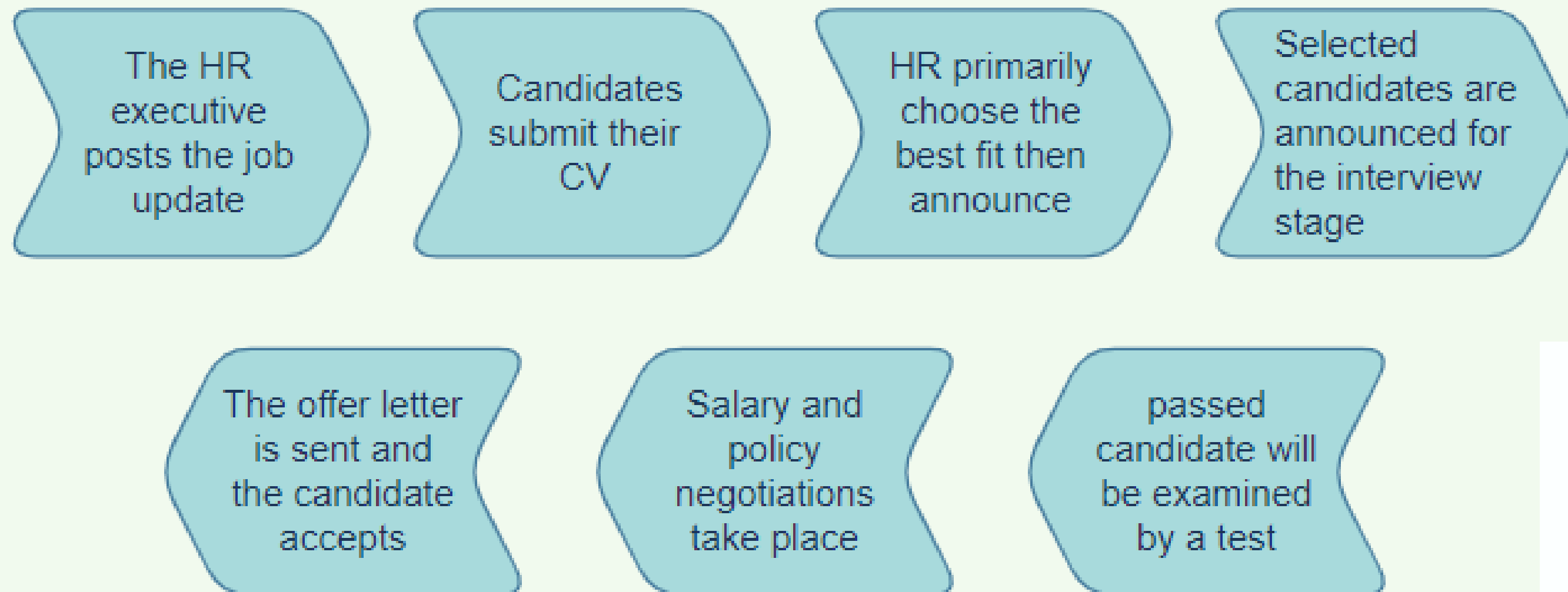
IMPORTANCE OF BUISENESS PROCESS

- ➔ Reduce risk
- ➔ Elimination of redundancies
- ➔ Minimized costs
- ➔ Improved collaboration
- ➔ Agility
- ➔ Improved productivity
- ➔ Higher efficiency



EXAMPLE FOR BUISENESS PROCESS

For example this time, I will use the recruitment steps to illustrate the buiseness process



DECISION SUPPORT PROCESSES

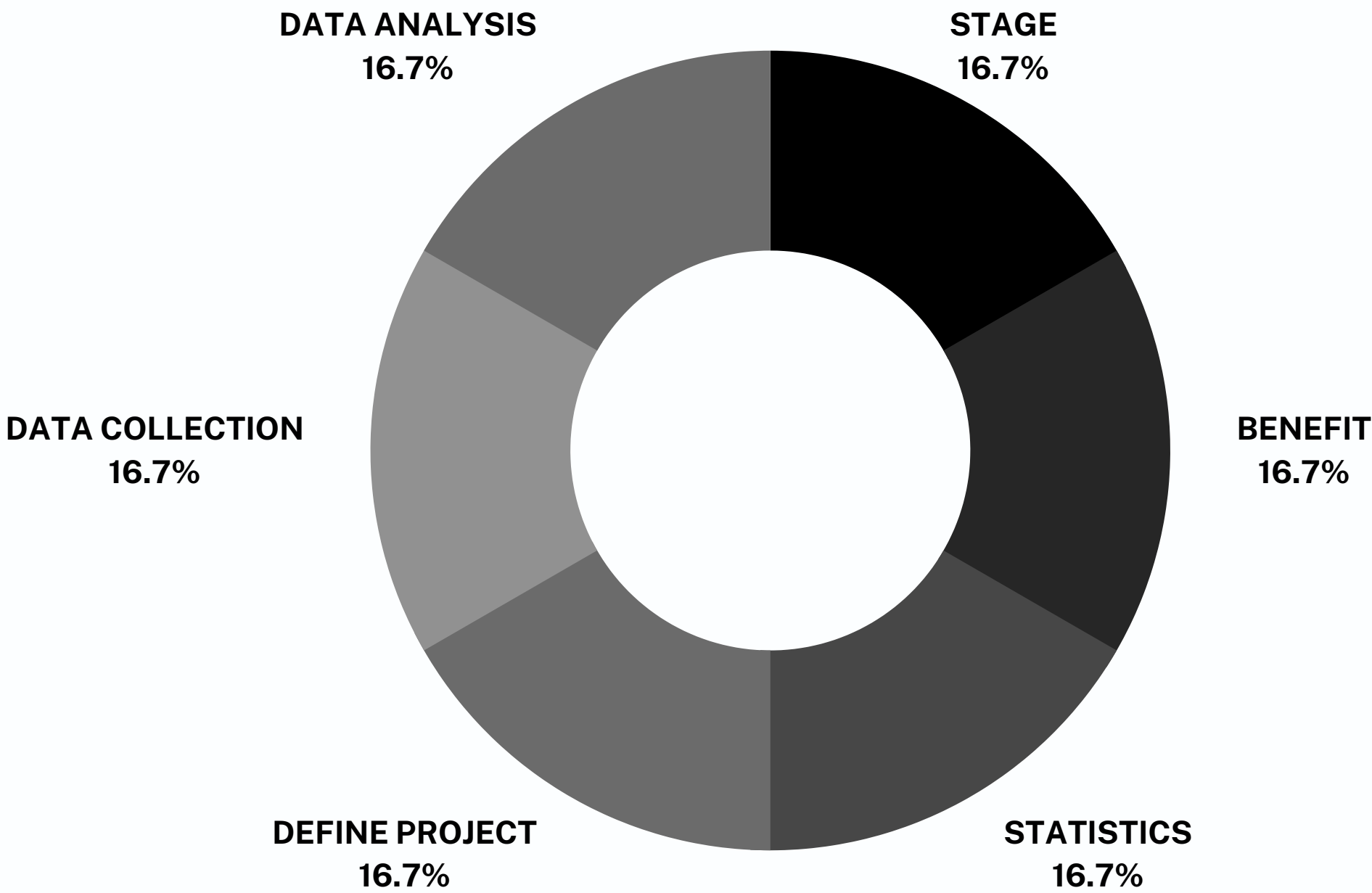
The decision-making process is a term used to describe how a company gets to a point where it can make the best decision for its company. This process is a way of thinking, a way of seeing the world, and a method of arriving at what you believe are the best possible decisions.

The decision-making process can be broken down into three steps:

1. Analysis of the current situation.
2. Presentation of the data to the manager, who can take the data and make a decision.
3. Applying the final decision.



DECISION MAKING PROCESS USING BUSINESS INTELLIGENCE (BI) SYSTEM





PART 2: BI IN MY PROJECT

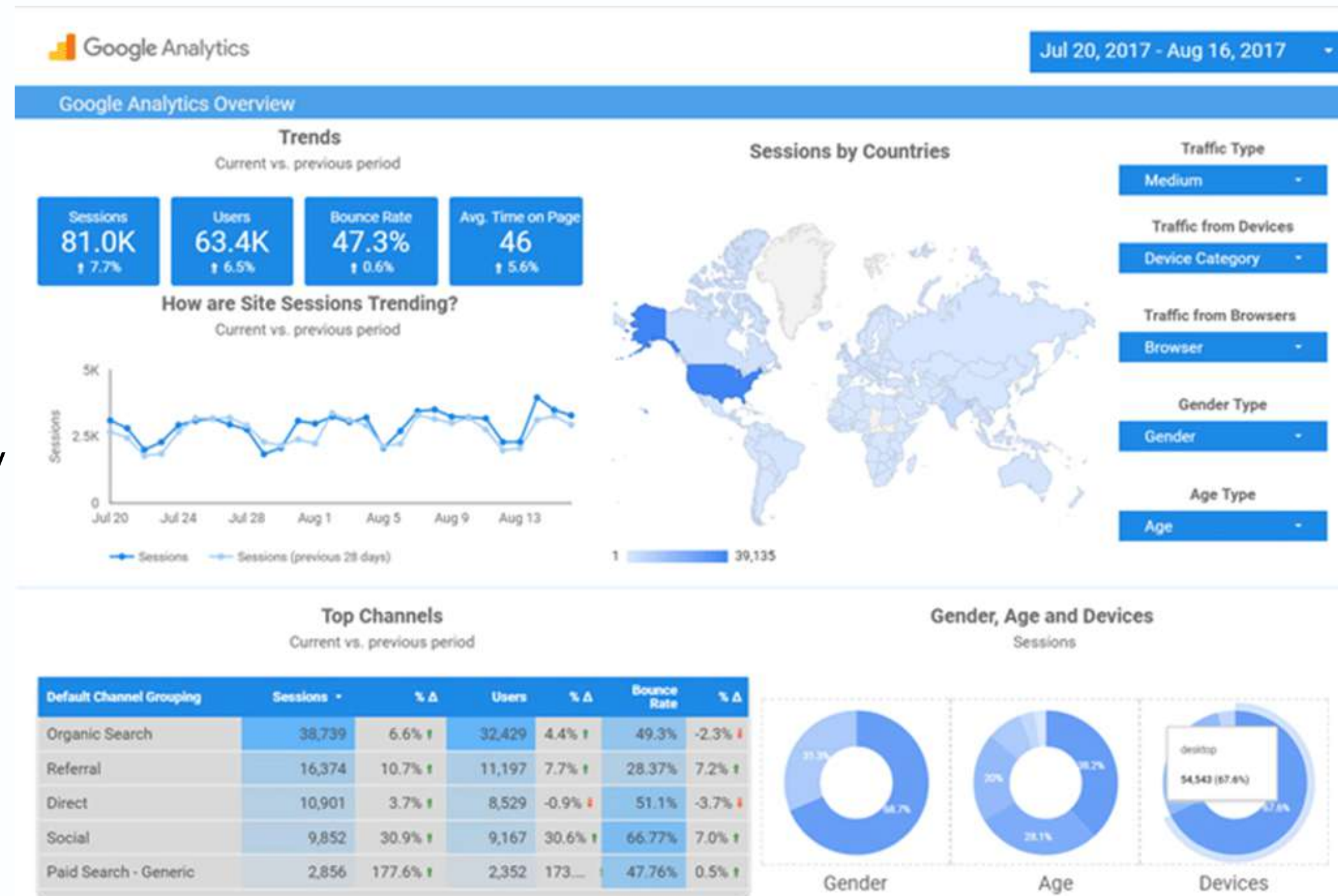
DATA VISUALIZATION

1. Definition

Data Visualization is a way of representing data under visual images, charts, and tables. From there, convey information to viewers in a more vivid and understandable way.

The concept of Data Visualization can be understood simply by using charts, tables, and graphs instead of numbers.

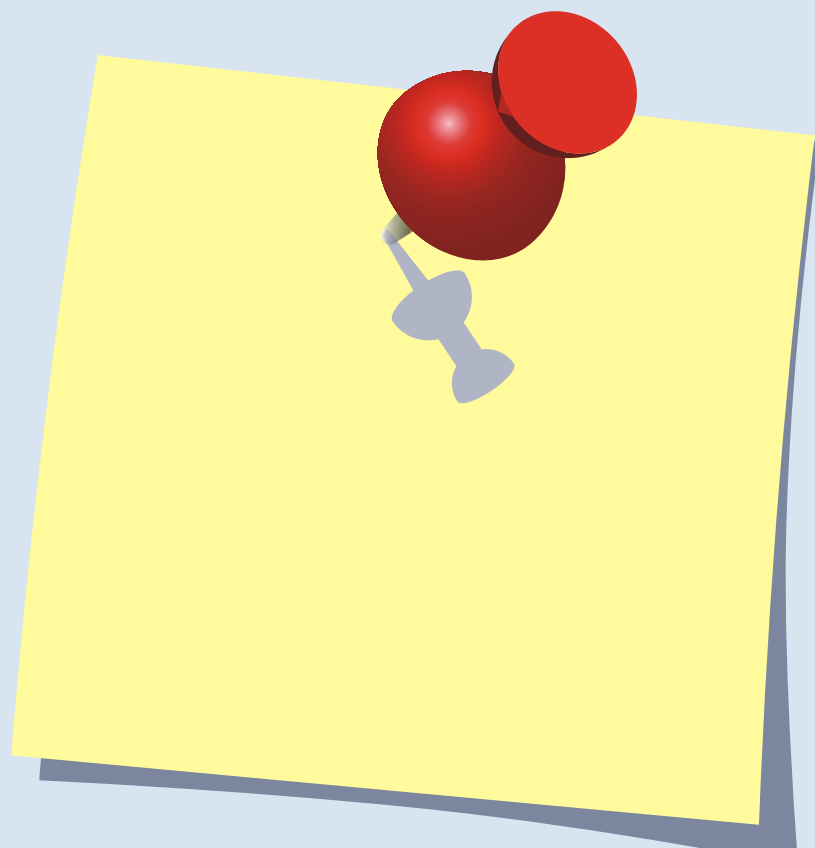
Helping viewers and readers understand the conveyed content, capture information, and optimize data exploitation.



2. Why is Data Visualization Important?

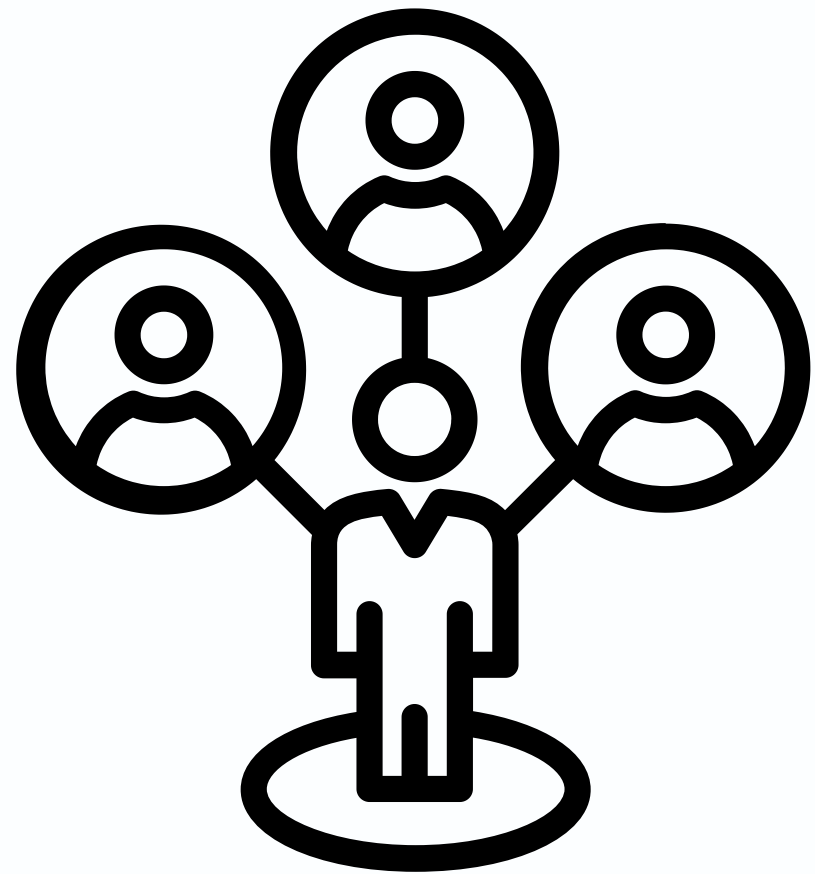
As one of the essential steps in the business intelligence process, data visualization takes the raw data, models it, and delivers the data so that conclusions can be reached.

=> Help companies identify which areas need to be improved, which factors affect customer satisfaction and dissatisfaction, and what to do with specific products (where should they go and who should they be sold to).



3. Benefits of Data Visualization

Data visualization positively affects an organization's decision-making process with interactive visual representations of data. Businesses can now recognize patterns more quickly because they can interpret data in graphical or pictorial forms.



Correlations in Relationships



Trends Over Time



Frequency

3. Benefits of Data Visualization



Examining the Market



Risk and Reward



Reacting to the Market

TOOLS FOR BI

- Power BI
- FineReport
- QlikView
- Sisense
- Tableau

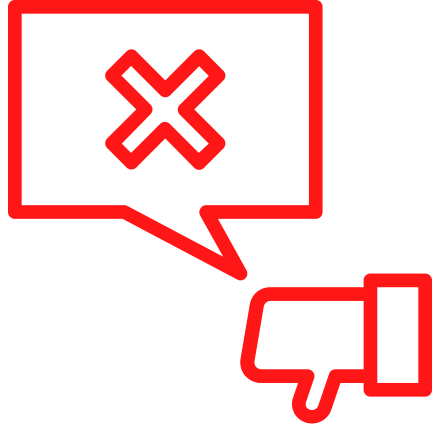


TOOLS FOR BI

POWER BI

From Microsoft, take the data visualization tools of Excel Pivot Table and Excel to the next level. Provided detailed videos and learning materials to help users quickly get acquainted.





ADVANTAGE AND DISADVANTAGE

- Excel integration: Power BI can connect to any Microsoft Office software. You can put the raw data into Excel - where you can see behind the scenes already visualized images.
- R Script Visualization: The only tool in the TOP 5 that supports R, using R's rich visualization and analytics capabilities for advanced data presentation and analysis such as forecasting.

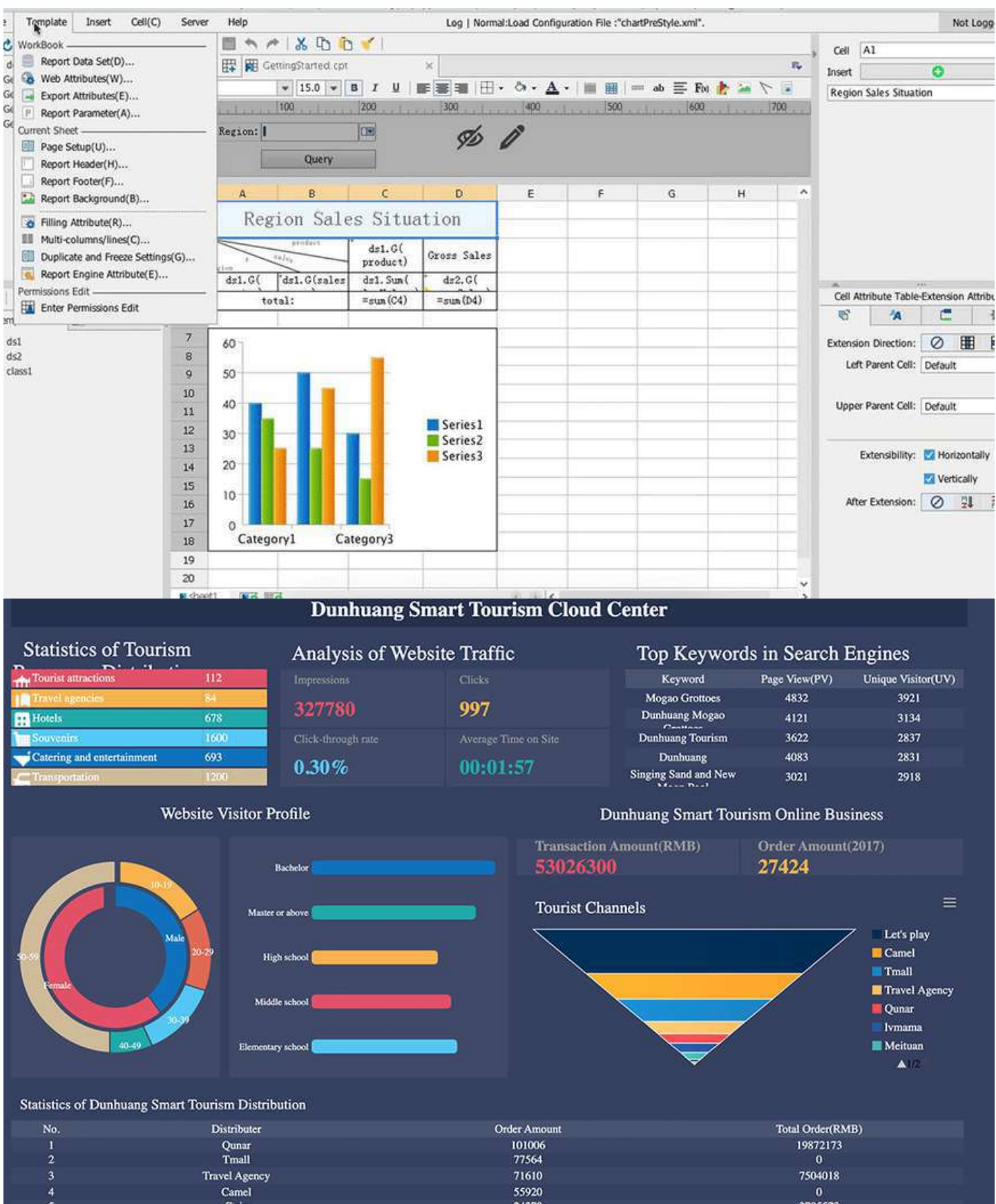
- Management issues: Power BI doesn't support multi-level permissions, can't control the level of granularity of columns viewed by users, and doesn't have complete control over group permissions.
- The data handling capacity is not good for the free version: The free version has a limit on the amount of data that can be processed. Once you reach 2GB, you must upgrade to the paid version to reduce processing time.

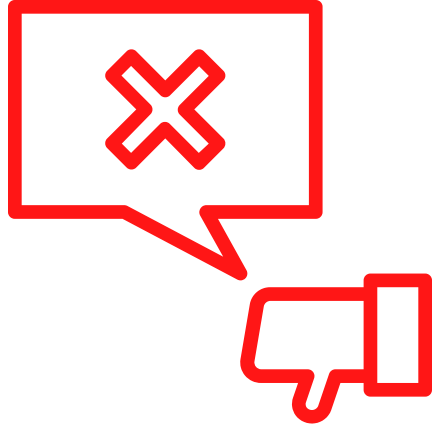


TOOLS FOR BI

FINEREPORT

With an interface similar to Excel and the ability to drag and drop objects, FineReport is a great tool for beginners. Anyone who has ever used Excel can quickly use this software. The official website provides detailed learning materials and videos for users, including 24/7 technical support.





ADVANTAGE AND DISADVANTAGE

- | | | |
|--|---|---|
| <ul style="list-style-type: none">• Smart data entry: FineReport's feature sets it apart, providing rich controls that make it easy to import big data through forms directly into the database, with functions like validation data and temporary storage. In addition, it also supports online and batches import of Excel data. | ! | <ul style="list-style-type: none">• The inconvenience of multidimensional analysis: You need to create a report for each dimension to be able to set up many details for a data cell. |
| <ul style="list-style-type: none">• Easily create complex reports: Impressive handling of complex reports. Concatenate aggregate blocks, eliminating the problem of merging and splitting cells in Excel. Each aggregate block is independent and can be dragged and dropped to be put together to generate ad-hoc reports. | ! | <ul style="list-style-type: none">• No chart suggestions: You must choose the chart type that suits your needs yourself, as FineReport will not make recommendations. |

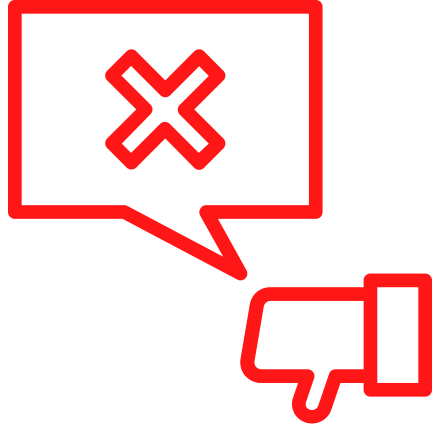


TOOLS FOR BI

QLIKVIEW

QlikView is a self-service tool that works with its own association technology and internal memory technology. Intuitive interface, easy to use, comes with smart search feature, no need to build blocks, suitable for academic analysis rather than daily analysis.





ADVANTAGE AND DISADVANTAGE

- In-memory technology: QlikView computes data while it moves from the backend to the frontend. Since no aggregated or pre-computed data is stored, system memory can be saved and data transfer speeds are fast.
- Search for direct and indirect data: You can find both direct and indirect data. Directly, you can input data and get information, indirectly, input the desired data related content and get all related data.

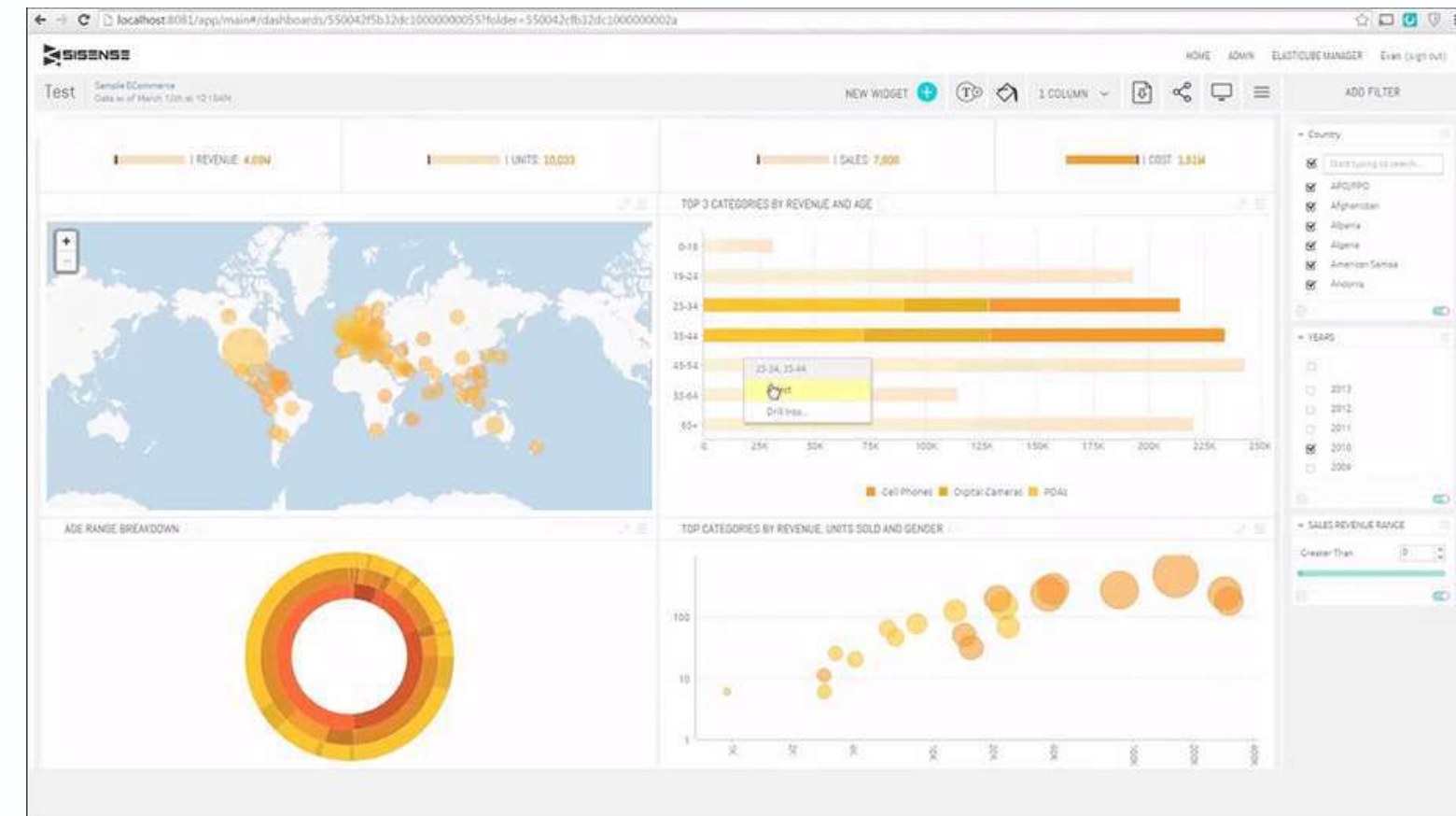
- Unfriendly for non-technical users: This limitation can be difficult for end-users to get used to.
- No support for map charts: While map charts are growing, this feature is not available in QlikView. Generating geo-map charts is quite complicated, unless an add-on is purchased from a third party.

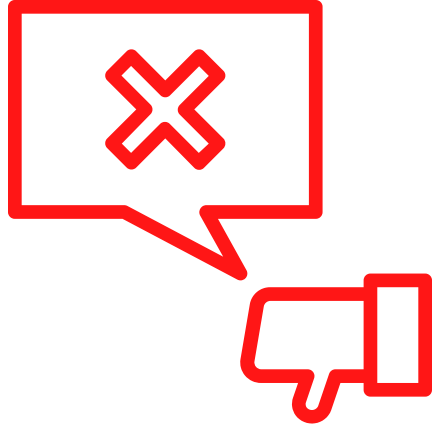


TOOLS FOR BI

SISENSE

Sisense has an intuitive interface, operating according to the drag and drop mechanism. The online community is large, although not as crowded as Tableau, but the resources here are enough for newcomers to get acquainted and use.





ADVANTAGE AND DISADVANTAGE

- Fast Speed: Ask any question and get instant answers without going back to the drawing board for new queries thanks to the engine software in Chip.
- Flexible Integration: Easily integrates with third-party applications such as Google Adwords, Excel, Zendesk, and Salesforce.

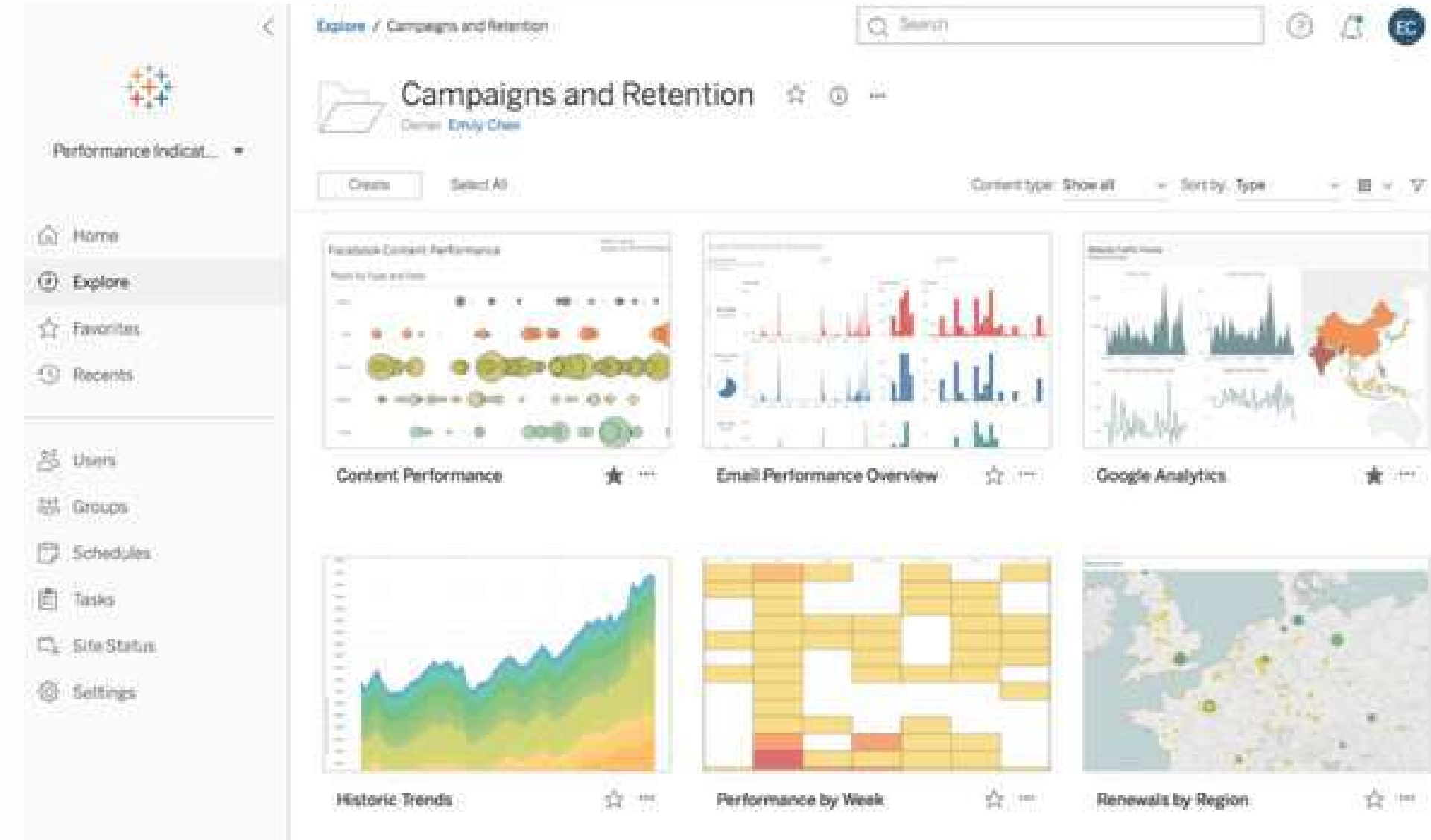
- Limited number of charts: The reporting and visualization features are somewhat basic compared to other tools.
- Inconvenience for teamwork: Administrators cannot currently edit dashboards, only the owners of folders and dashboards can publish changes.

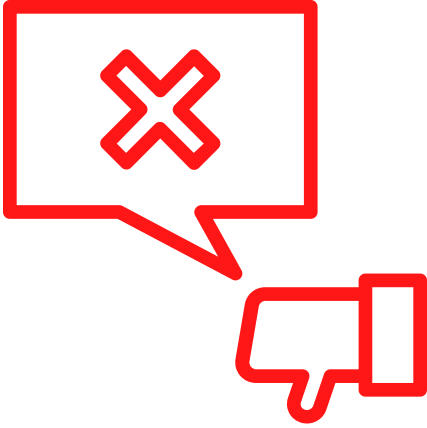


TOOLS FOR BI

TABLEAU

Tableau is a Business Intelligence tool specialized in data discovery and data visualization. With the software, you can easily analyze, visualize and share data, without IT having to intervene.





ADVANTAGE AND DISADVANTAGE

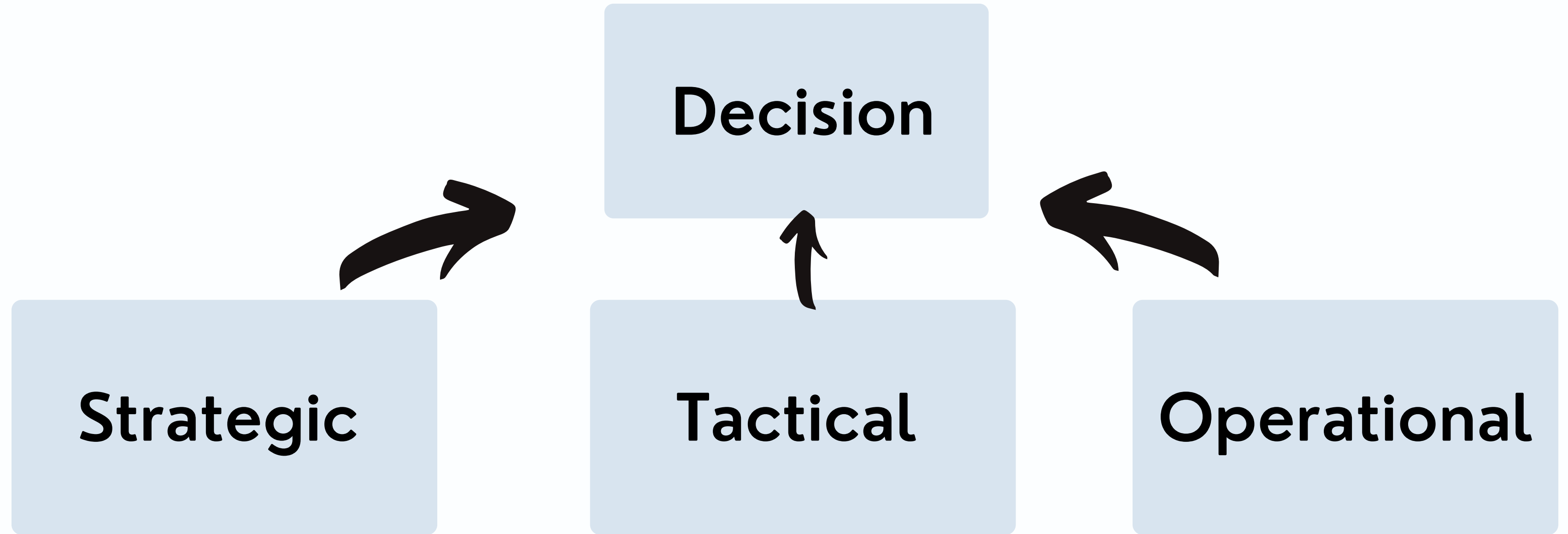
- Supports multiple data sources: Relational database, NoSQL database, Multi-dimensional database, Big Data Platform, File data sources (Excel, CSV, txt, JSON, pdf, MDB, Tableau)
- Powerful data visualization capabilities.
- Using unique visualization technology, Tableau can quickly analyze data by displaying analysis results in color, shape, and size. Tableau's development team is still working on the types of charts that users love.

Therefore, Tableau can best display the graph of the data. However, gauges, 3D graphs and heat maps cannot be used.

- Limited BI features: Tableau still lacks a few features for a perfect business analytics tool. Examples include large-scale reporting, building data tables, and static layouts. In addition, export and print formats are also limited, which is quite inconvenient when sharing.
- Customization issues: Tableau is difficult to customize or embed incorporate architectural drawings.



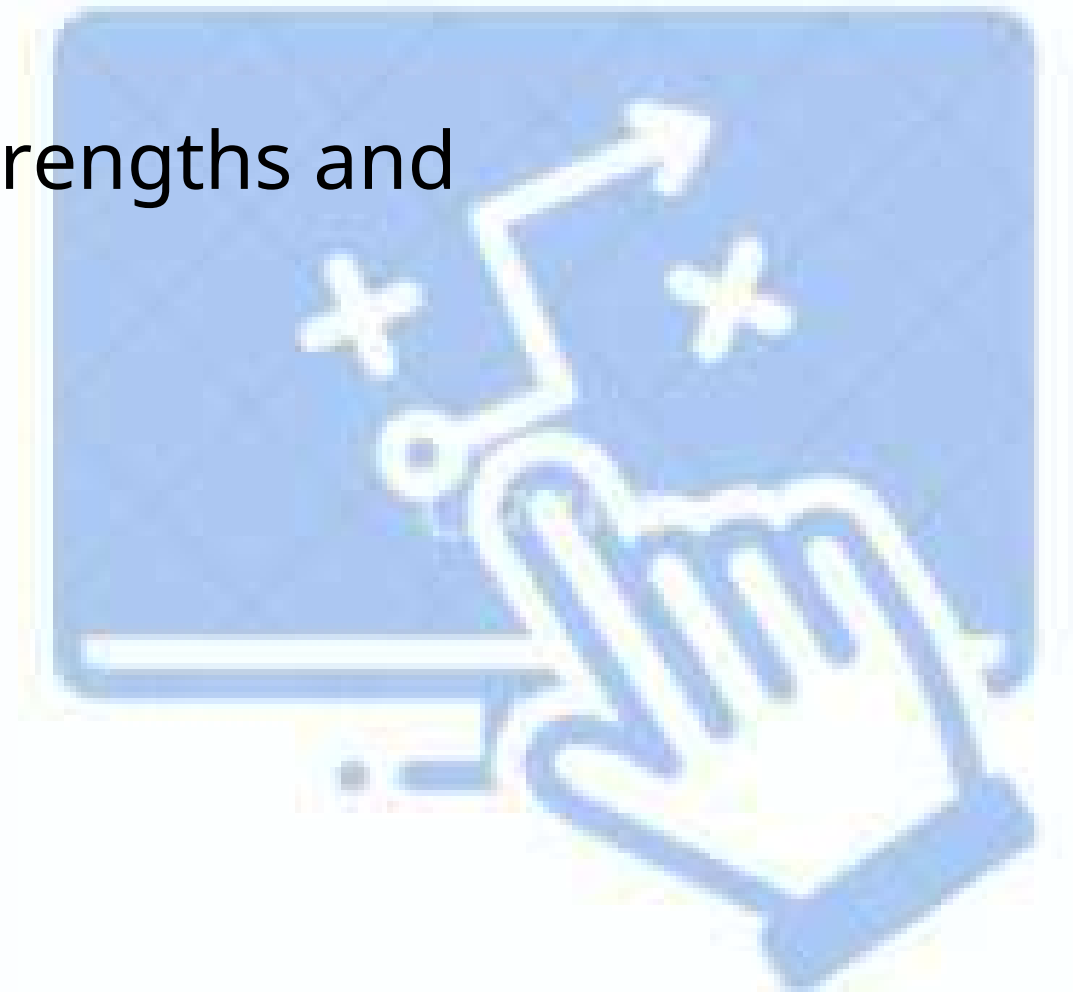
TYPE OF DECISION



STRATEGICAL DECISION

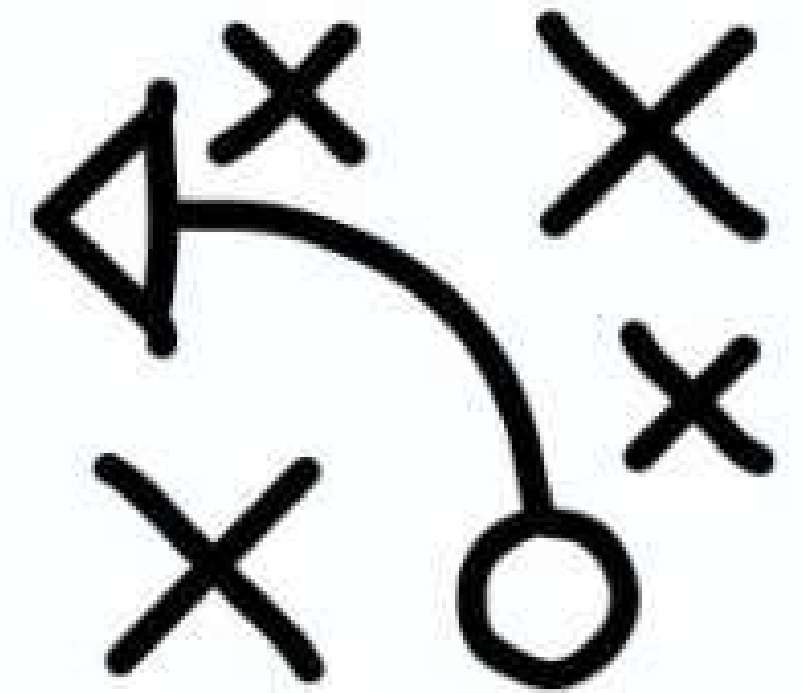
Strategic decisions are decisions made by top management to determine the fundamental long-term goals of an enterprise and form an overall plan to achieve them.

Strategic decisions often involve identifying an enterprise's strengths and weaknesses in relation to the opportunities and threats



TATICAL DECISION

These decisions relate to the implementation of strategic decisions. They are directed towards developing divisional plans, structuring workflows, establishing distribution channels, acquisition of resources such as men, materials and money. These decisions are taken at the middle level of management.



OPERATIONAL DECISION

These decisions relate to day-to-day operations of the enterprise. They have a short-term horizon as they are taken repetitively. These decisions are based on facts regarding the events and do not require much of business judgement.



THE TYPES OF SUPPORT AVAILABLE FOR BUSINESS

In the context of the complicated COVID-19 epidemic, the tourism industry is suffering heavy consequences due to the impact of the pandemic. Around the world, tourism-related businesses have to close and are affected, causing shops, hotels, and airlines to close for a long time.

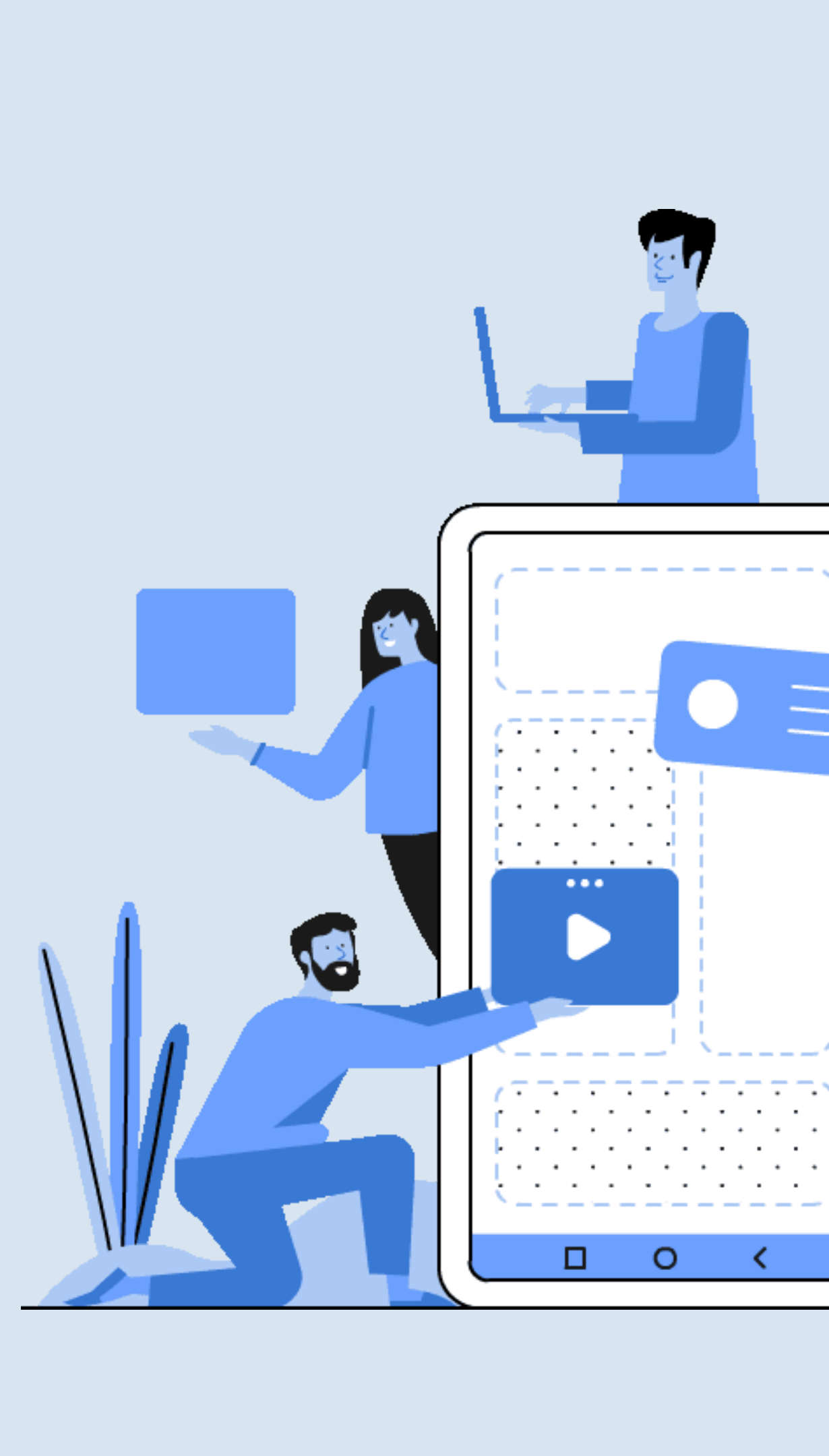
During that time, technology developers used tools to predict recovery times. The application of information technology in the tourism industry will help us to have specific analysis and monitor changes.

STRATEGIC

Vision: Reaching 1 billion USD in revenue in the period of 2022 - 2027. Putting Vietnam on the list of countries with the most developed tourism industry by 2027.

People and processes: On the strategic board, senior leaders are the decision makers.

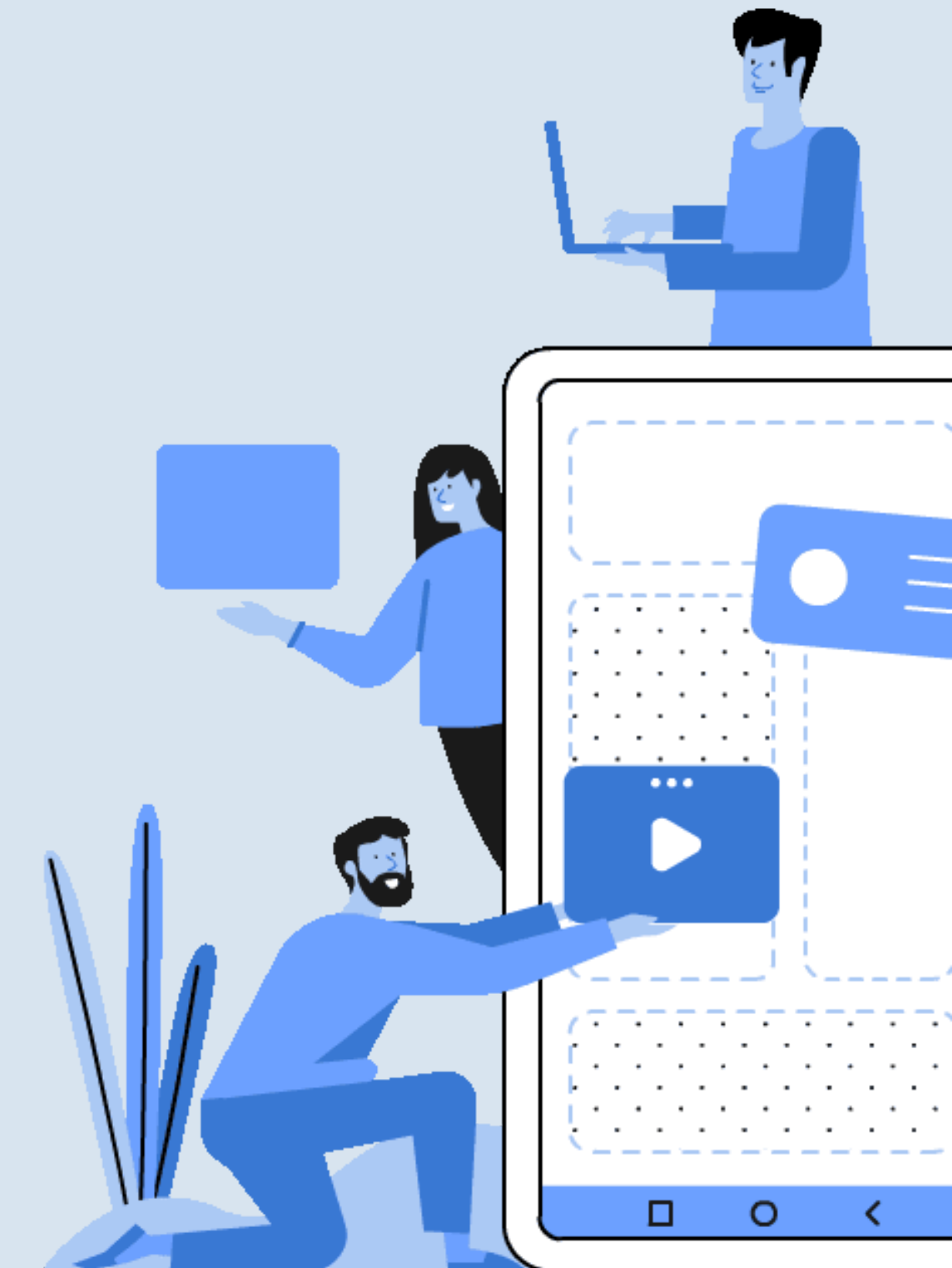
Tools and architecture: Tableau



THE TYPES OF SUPPORT AVAILABLE FOR BUSINESS

STRATEGIC

- Bring Vietnam's tourism industry back to normal and rebalance the number of international and domestic tourists. Restore industry-wide revenue and overcome the consequences of COVID-19.
- Time: 05 years
- Reaching 1 billion USD in revenue in the period of 2022 - 2027. Putting Vietnam on the list of countries with the most developed tourism industry by 2027.



THE TYPES OF SUPPORT AVAILABLE FOR BUSINESS

TACTICAL

- Stimulate domestic tourism demand, offer many preferential policies for the tourism industry.
- The loosening policy helps foreigners return to Vietnam soon.
- Accept and connect with countries that recognize vaccine passports.
- Advertising and communication of tourist attractions.



THE TYPES OF SUPPORT AVAILABLE FOR BUSINESS

OPERATIONAL

- Businesses work together to offer combos between airline tickets and hotels.
- Discount activities for amusement parks at complexes such as VinWonder, Sunworld, ...
- Introduce policies to ensure disease safety and support people to move between provinces.
- Tax exemptions.



PART 3: STRUCTURED AND UNSTRUCTURED DATA

UNSTRUCTURED AND SEMI-STRUCTURED DATA

UNSTRUCTURED DATA

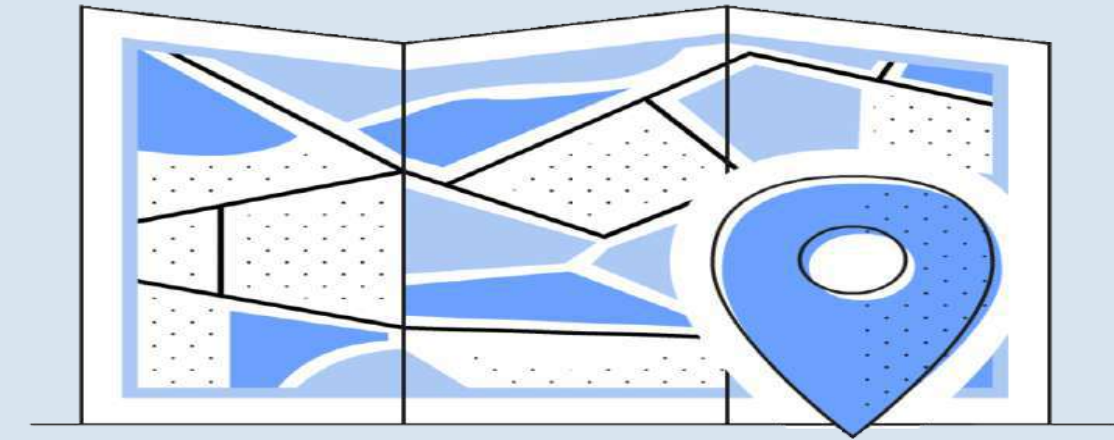
- Data with no predefined organizational form and no specific format
- Essentially anything that is not structured or semi-structured data (which is a lot)
- Data that can take any form and thus be stored as any kind of file (formless)
- Has gained importance with the emergence of the World Wide Web

SEMI-STRUCTURED DATA

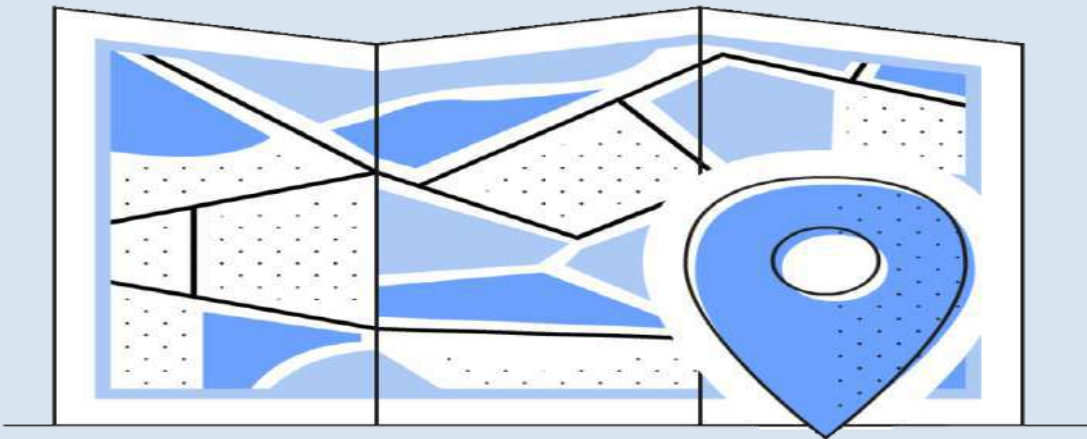
- Data with some degree of organization
- Think of a TXT file with text that has some structure (headers, paragraphs, etc.)
- Data is stored in files that have some degree of organization and structure
- Most of the data that is created today is unstructured

TOURISM INDUSTRY WITH BUSINESS INTELLIGENCE

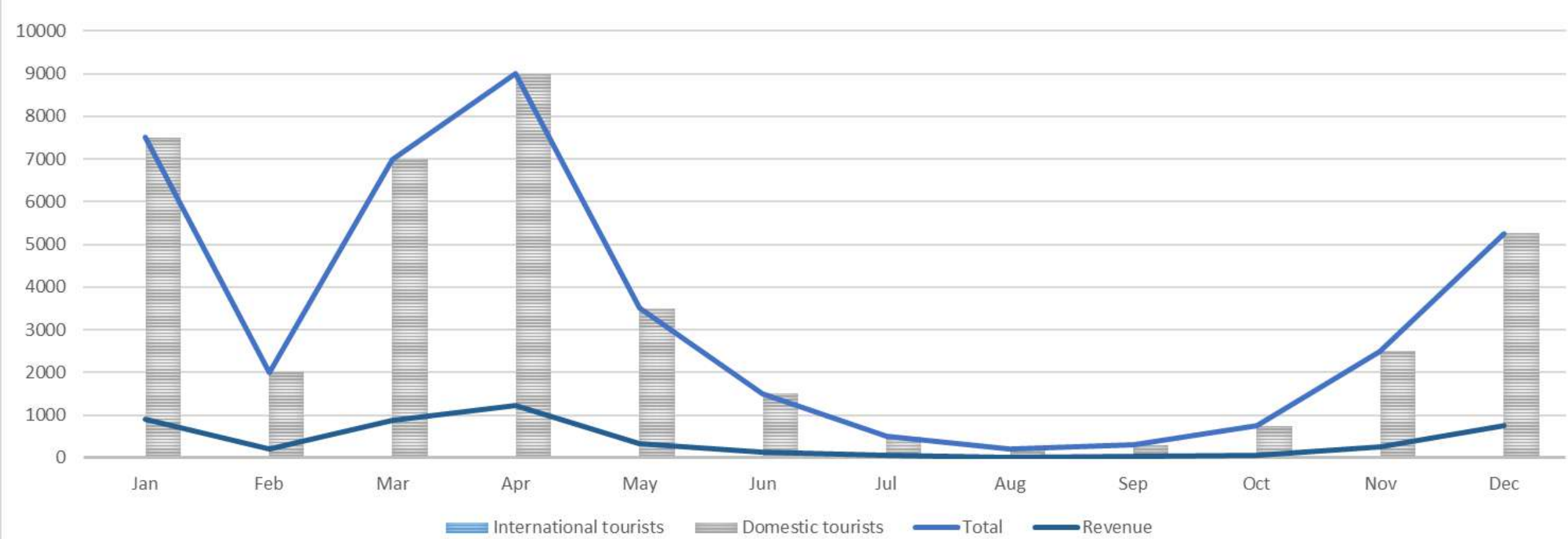
In this research, we have come up with a real scenario based on the statistics of the Ministry of Culture, Sports and Tourism. The study is based on statistical results from 2021. Due to the impact of the epidemic, the number of domestic and international tourists has changed day by day.



TOURISM INDUSTRY WITH BUSINESS INTELLIGENCE

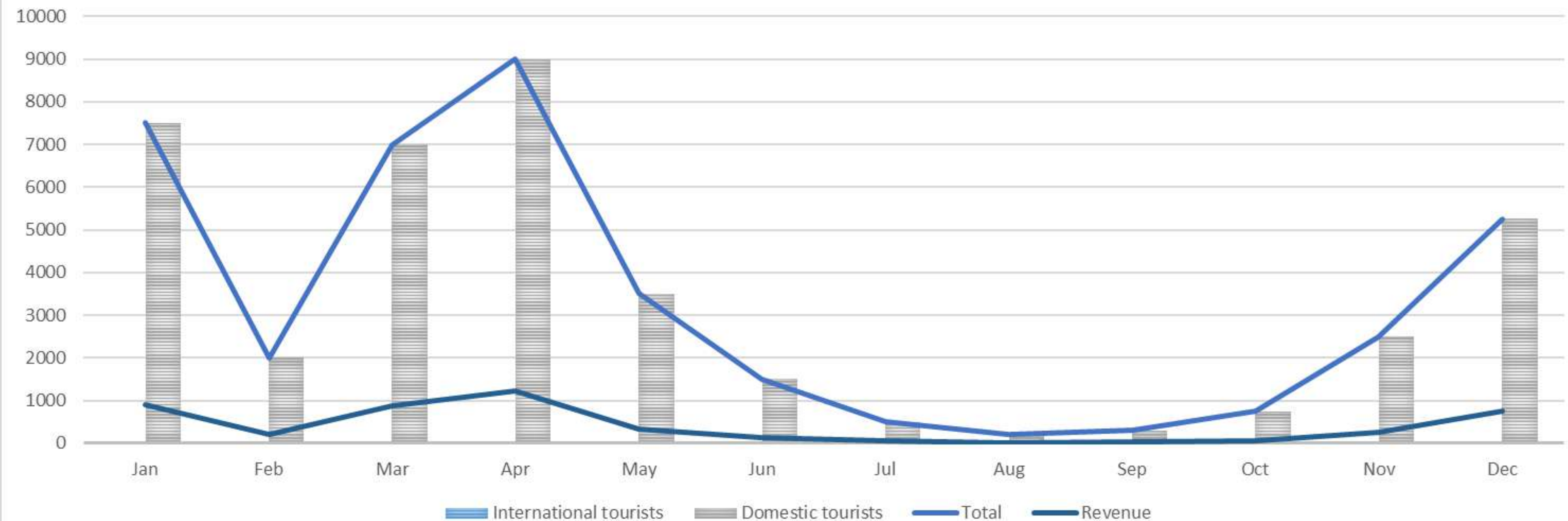


STATISTICS ON THE NUMBER OF TOURISTS IN 2021 IN VIETNAM



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
International tourists	0	0	0	0	0	0	0	0	0	0	0.4	3.1
Domestic tourists	7500	2000	7000	9000	3500	1500	500	200	300	750	2500	5250
Total	7500	2000	7000	9000	3500	1500	500	200	300	750	2500.4	5253.1
Revenue	897	203	865	1231	329	123	55	18.5	21.4	63	253	753

STATISTICS ON THE NUMBER OF TOURISTS IN 2021 IN VIETNAM



PART 4:
THE KEY FEATURES OF
BUSINESS INTELLIGENCE
FUNCTIONALITY.

KEY BUSINESS INTELLIGENCE FEATURES

RANKING REPORTS

Ranking reports let you easily view the best- and worst-performing facets of your business, from products to marketing campaigns to salespeople. You can view rankings across multiple dimensions and specify various criteria to focus your results.

INTERACTIVE REPORTS

Interactive reports allow users to condense the massive amounts of collected data into a wide variety of possible views

AD-HOC REPORTS

Instead of burdening your IT department with requests for detailed reports, ad-hoc reports are one of several important features of BI that let your nontechnical end-users generate their own reports on the fly.

GEOSPATIAL MAPPING

Applications using location intelligence can take your information and transform it into graphical and cartographic representations, simplifying your geographical data.

EXECUTIVE DASHBOARDS

Executive dashboards give your organization's leaders a real-time overview of your business in the form of graphs, charts, summaries and other information reports. They allow our company's executives to make smarter, faster and better decisions.

OPERATIONAL REPORTS

At the end of each day, business intelligence features like these can provide your organization's executives with a detailed summary of the daily events, giving them the information they need to make critical decisions.

RANKING REPORT

HANOI  TIMES



News Hanoinews Opinion Investment Travel My HaNoi Social Affairs Economy Arts & Entertainment Health & Education



ATTRACTIONS FEB 26, 2022 / 21:34

Google statistics show increase in international search volume for Vietnam tourism

Jenna Duong



Vietnam ranks first in the top destination countries that is most searched by international tourists.

HANOI  TIMES The recent analytical data from Google Destination Insights dedicates that the number of international searches about Vietnam tourism is on an upward trend. The country is the fastest-growing destination globally among the list of “Top Growth by Destination Country” with a growth rate of over 75%.



TRENDING

Gender equality as part of Vietnam's cultural-historical tradition: PM



Vietnam to have over 1,500 ultra-wealthy people by 2026



Vietnam seeks Poland refuge for Vietnamese Ukrainians



Russian-Ukrainian armed conflict: A story of broken trust



Vietnam should exchange anti-pandemic experience: COVAX



Bolstering Japan-Vietnam cooperation in regional supply chain: experts



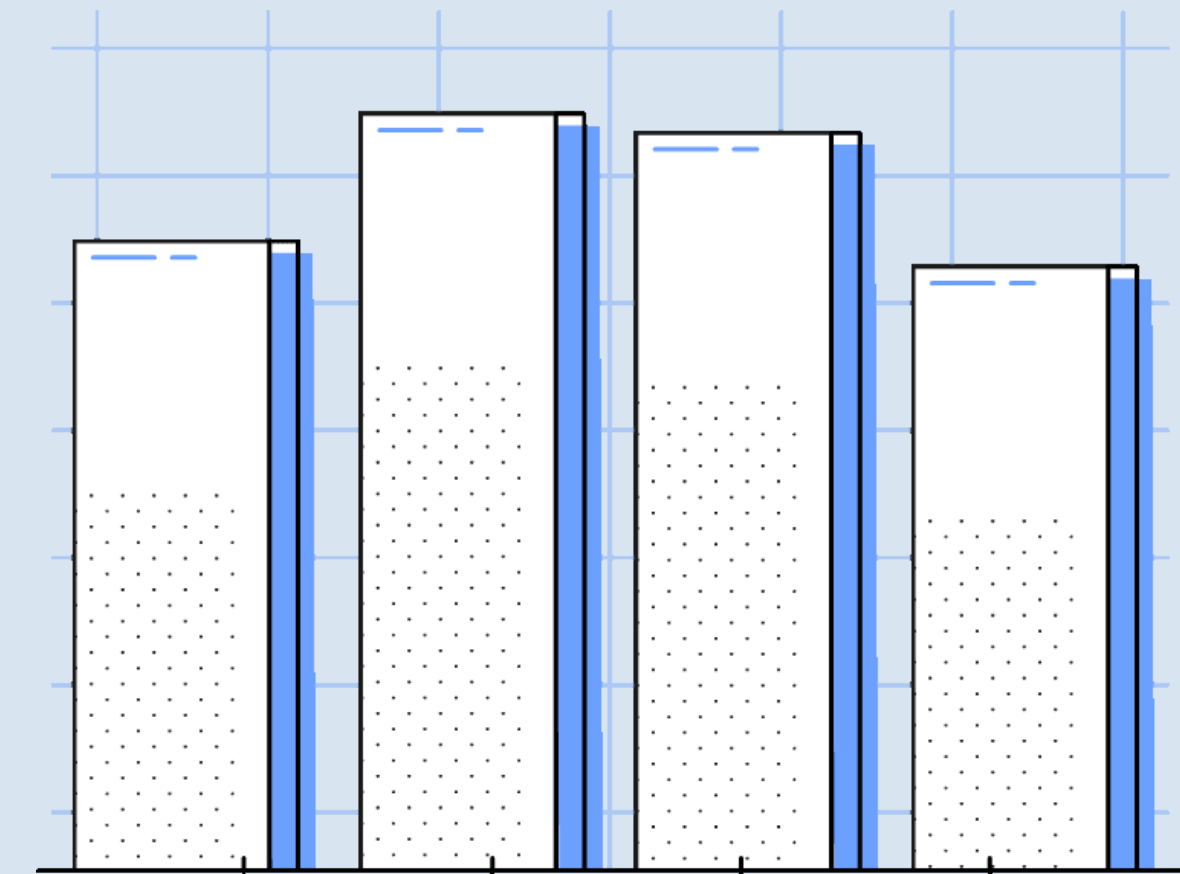
Pfizer vaccine doses for children aged 5-11 to arrive in Vietnam this month



Adidas affirms Vietnam its important market



Vietnam NA chairman demands supervision of

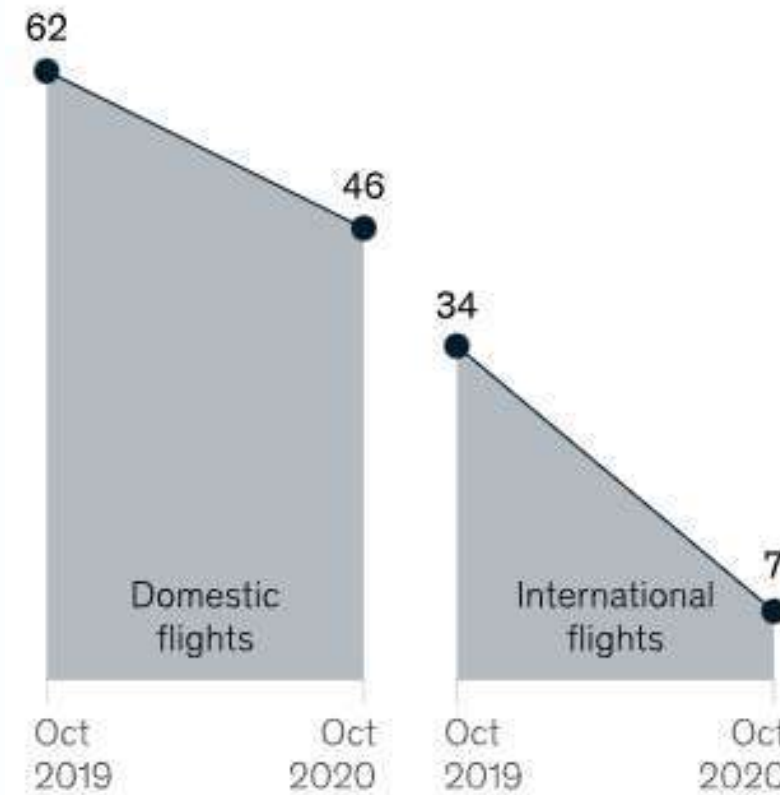


THE STATE OF TRAVEL IN VIETNAM TODAY: STAYING AFLOAT

Vietnam's tourism sector relies heavily on international travel, which plunged last year. International flights dropped 80 percent in October 2020 from the same time period a year earlier. Hotels, in turn, filled only 30 percent of their rooms.

COVID-19 had an outsize impact on Vietnam's tourism sector.

Number of passengers,¹ millions



Hotel-occupancy rate, %



LOOKING AHEAD: VIETNAM'S TOURISM INDUSTRY CAN RECOVER BY 2024

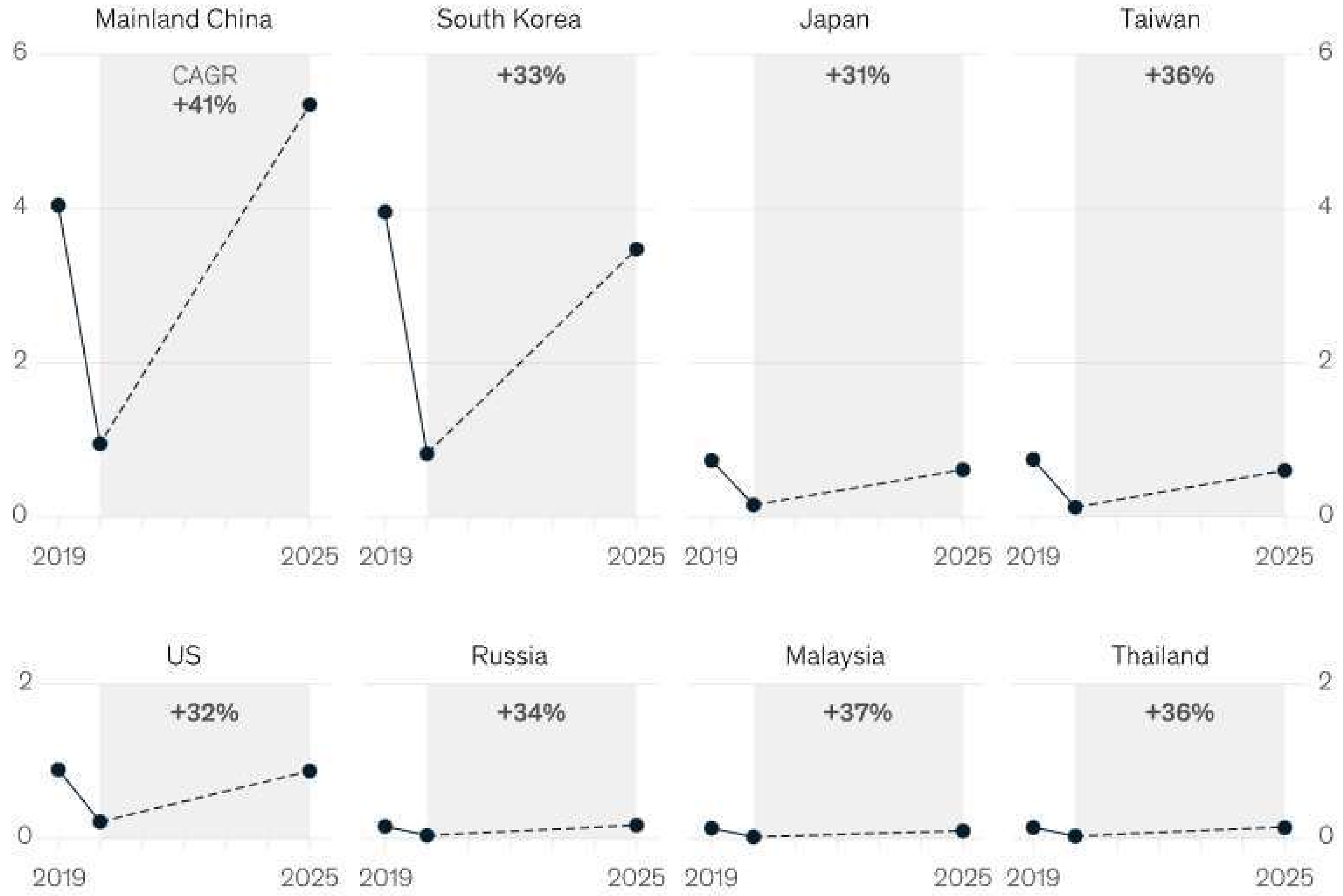
Even with favorable tailwinds driven by domestic tourism, Vietnam will be dependent on international markets, which represent around \$12 billion in spending. The majority of Vietnam's international tourists come from Asian countries, with those from China, Japan, South Korea, and Taiwan accounting for around 80 percent of Vietnam's foreign tourism spending. Vietnam's strong economic ties with these countries could lead to a relatively fast tourism-industry recovery compared with other key tourist destinations in Europe and North America

Vietnam can expect to see international tourism rebound first with travelers from other Asian economies.

Number of inbound arrivals to Vietnam by top source markets, 2019, millions

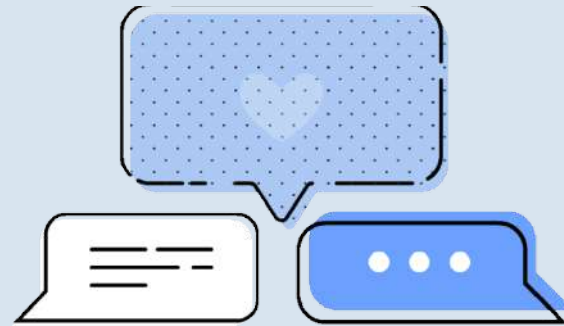


Inbound tourism expenditures, A1 recovery scenario, \$ billion





DISCUSSION



THANK YOU