



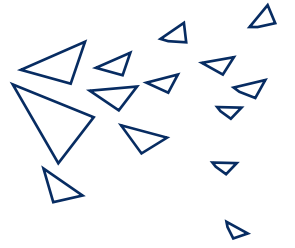
Hermes Co.

Report of business performance

By Linh Thuy Phung



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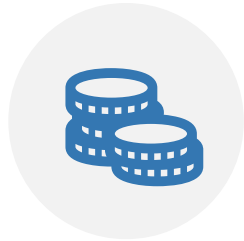
Overview of database

Hermes Co. is a consumer finance company, offering multiple lending products to Individuals. The company database has 6 tables: branch, bureau, customer, employee, loan, supplier



Branch

Data about the branch where the loan was disbursed



Bureau

Data about bureau score of customer, the number & current status of primary accounts/secondary accounts, current balance, disbursed amount, installment as well as data in the latest 6 months, etc



Customer

Data about customers of the company



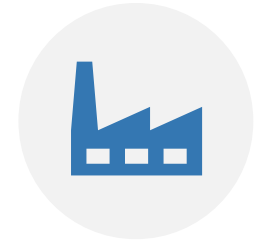
Employee

Data about employees of the company



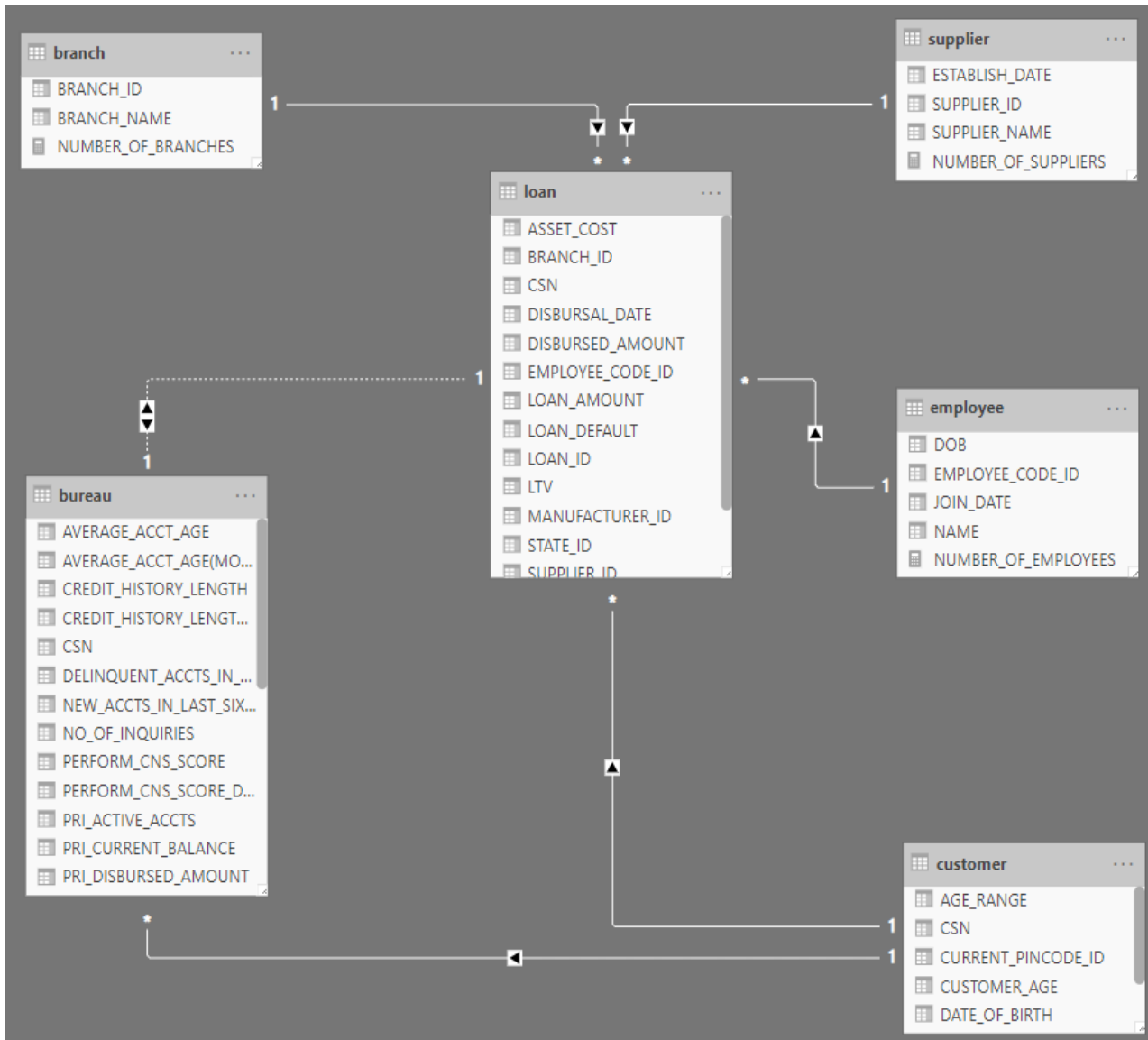
Loan

Data about loans of customers, disbursed amount and asset per loan, status of loan default and relevant stakeholders



Supplier

Data about suppliers of the company

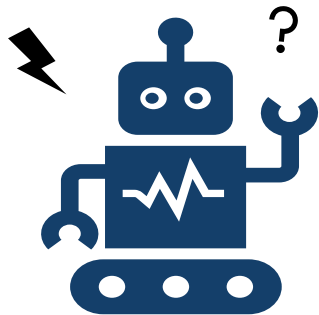


Relationships

Loan is the centre table which is linked to all other tables. Branch, supplier, customer, employee are referencing tables to loan, thus, forming one-many relationships. At the same time, bureau is connected to loan via customer table (both sharing a column called “CSN” from table customer)

Data problems

The database runs into some problems which should be resolved:



1

Missing values

Blanks values have been identified in some columns: Employment_type (Customer), Loan_default (Loan), etc. Number of missing values are large.

2

Incorrect data types

Some data are defined in inappropriate data type: Date_of_birth (Customer) and Join_date (Employee) should be in date format instead of text; Average_acct_age and Credit_history_length should be interger.

3

Confusing name

Some ID columns across tables share the same name (ID) although they convey different data. This could confuse people and thus, should be changed

4

Inappropriate values

In Bureau table, many customers don't have enough information to assess risk and shouldn't have a bureau score. However, some of these customers still have bureau score larger than 0 but smaller than 20 (scores are way too small compared to normal score)

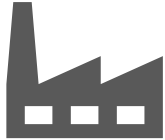
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Current state of business

Overall Metrics

Hermes Co. is a consumer finance company, offering multiple lending products to Individuals. Below are some overall metrics about the company

Number of Suppliers
3089 suppliers



Number of Customers
345,000 customers



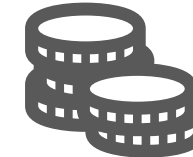
Total Loan Amount
19.55 billion



Number of Employees
3398 employees



Number of Branches
82 branches

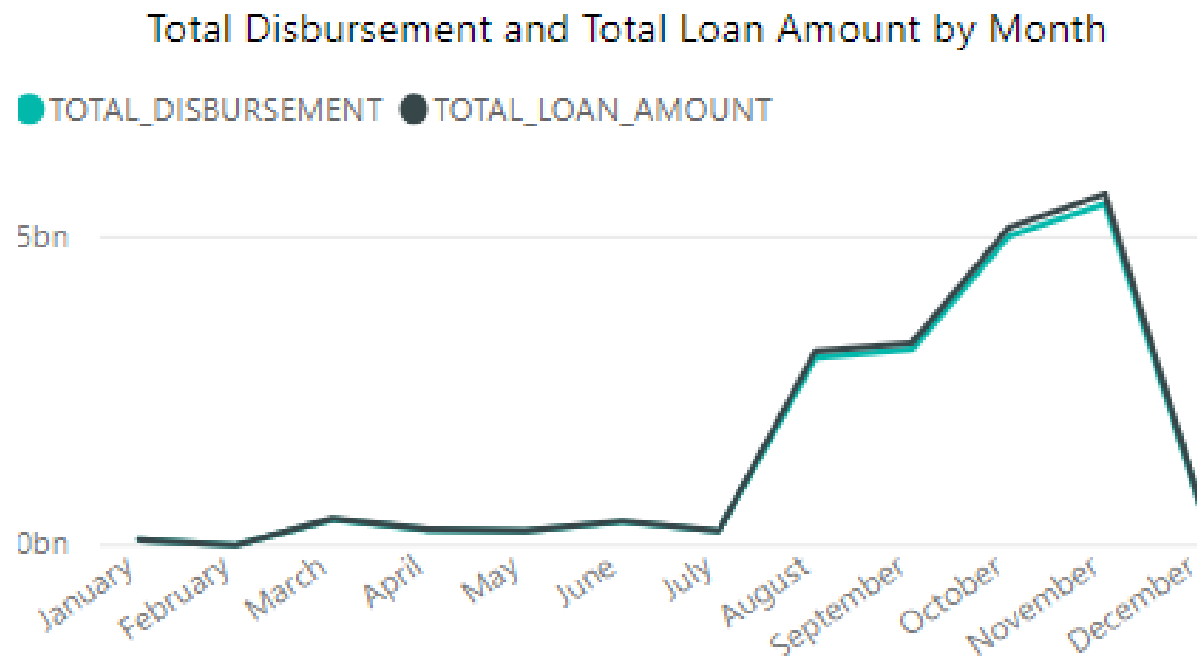


Total Disbursement Amount
19 billion

Key Findings

In 2018, from January to July, total loans and disbursement are stable around 100-400 million. Then, in the last four months (August-November), total loans & disbursement increased dramatically and reached the year's peak at nearly 6 billion (November). After that, the figures dropped to 600 millions in December. Overall, the company's busy season is the end of the year.

Trend of loan and disbursement amount in 2018 are shown in the line chart below



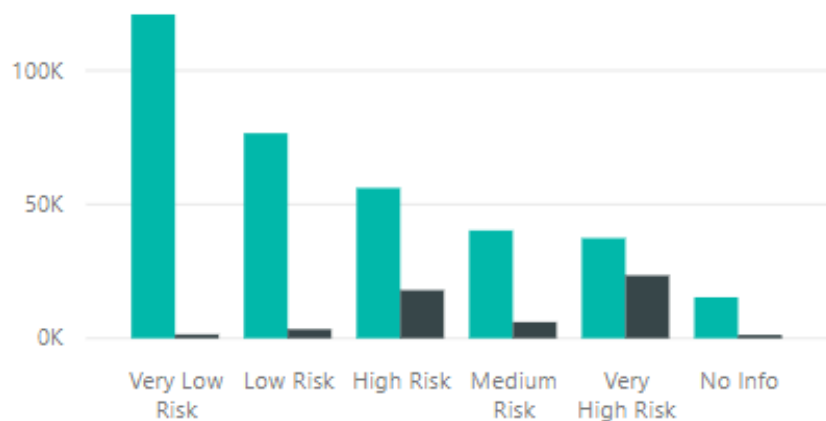
Current state of business

Business Analysis



Number of Primary Active Accounts and Primary Overdue Accounts by Risk Classification

● PRI_ACTIVE_ACCTS ● PRI_OVERDUE_ACCTS



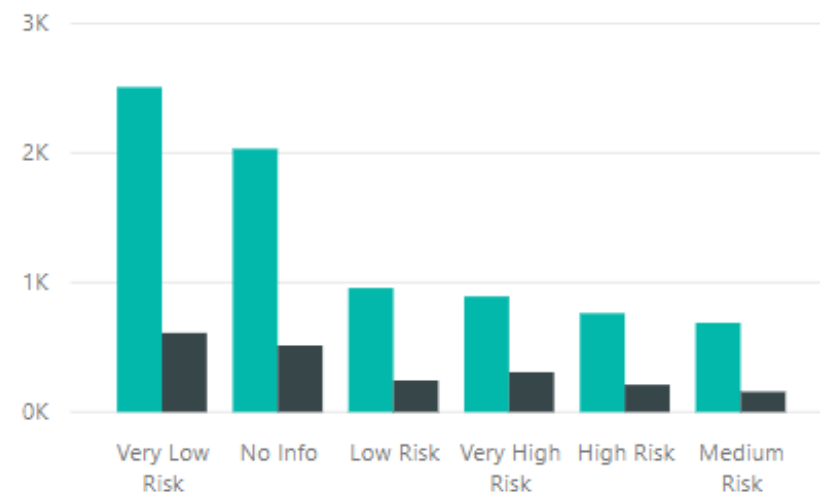
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2

Number of primary accounts: **819,149 (98%)**:
Many active accounts belong to Very low/ Low risk customers, while more overdue accounts belongs to High/ Very high risk customers

Number of Secondary Active Accounts and Secondary Overdue Accounts by Risk Classification

● SEC_ACTIVE_ACCTS ● SEC_OVERDUE_ACCTS



Number of secondary accounts: **16,419 (2%)**:
Many secondary accounts have fallen into customer group lacking of info to assess risk. In addition, percentage of secondary overdue accounts is larger in very low risk customers

Current state of business

Customer Analysis

- ▶ Number of Customer by Employment Type: 54,24% are self-employed, and 42,55% are salaryman. The remaining customers have no records of employment type and these missing values should be filled in for better analysis
- ▶ Most of customers are in the age of 20-30 or 31-40. These are adults and main working force of the economy who could take risks and have more desires of buying things
- ▶ Average of loan tenure is around 9 months => Most loans of customers are short-term loans
- ▶ Average of credit history is around 16 months => Target customers have around 1,5 years of credit history

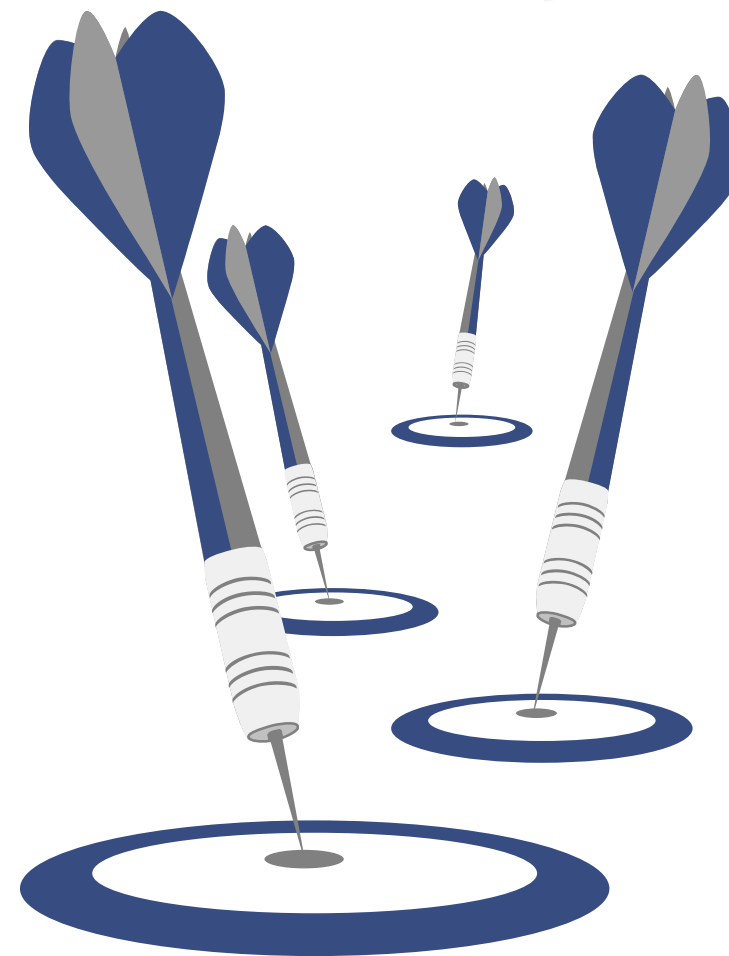
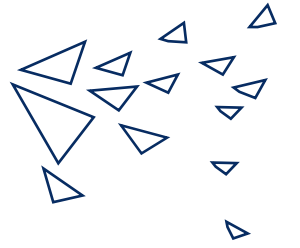




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Suggestion for data collection

Below are recommendations based on findings from the above analysis to improve business performance:

01

The company offers consumer loan to buy cars, so the busy season should go along with peak season of Car dealer companies: the end of the year. Hence, the company should prepare adequate resources (human resources, capital, etc) for this time to ensure a smooth processing

03

Focus on these target customers (business owner, age range from 20-40, prefer short-term loans) to provide tailored loan package

02

Reduce the number of secondary accounts which could potentially become overdue and accounts with no info to assess risk

04

Due to short-term loans, customer are typically required to pay a larger monthly amount and thus, increasing the risk of default. Therefore, the company should seek for better security methods (require secured, easily liquidated assets) or prefer customers with good, long & trusted credit history (more than 2 years)

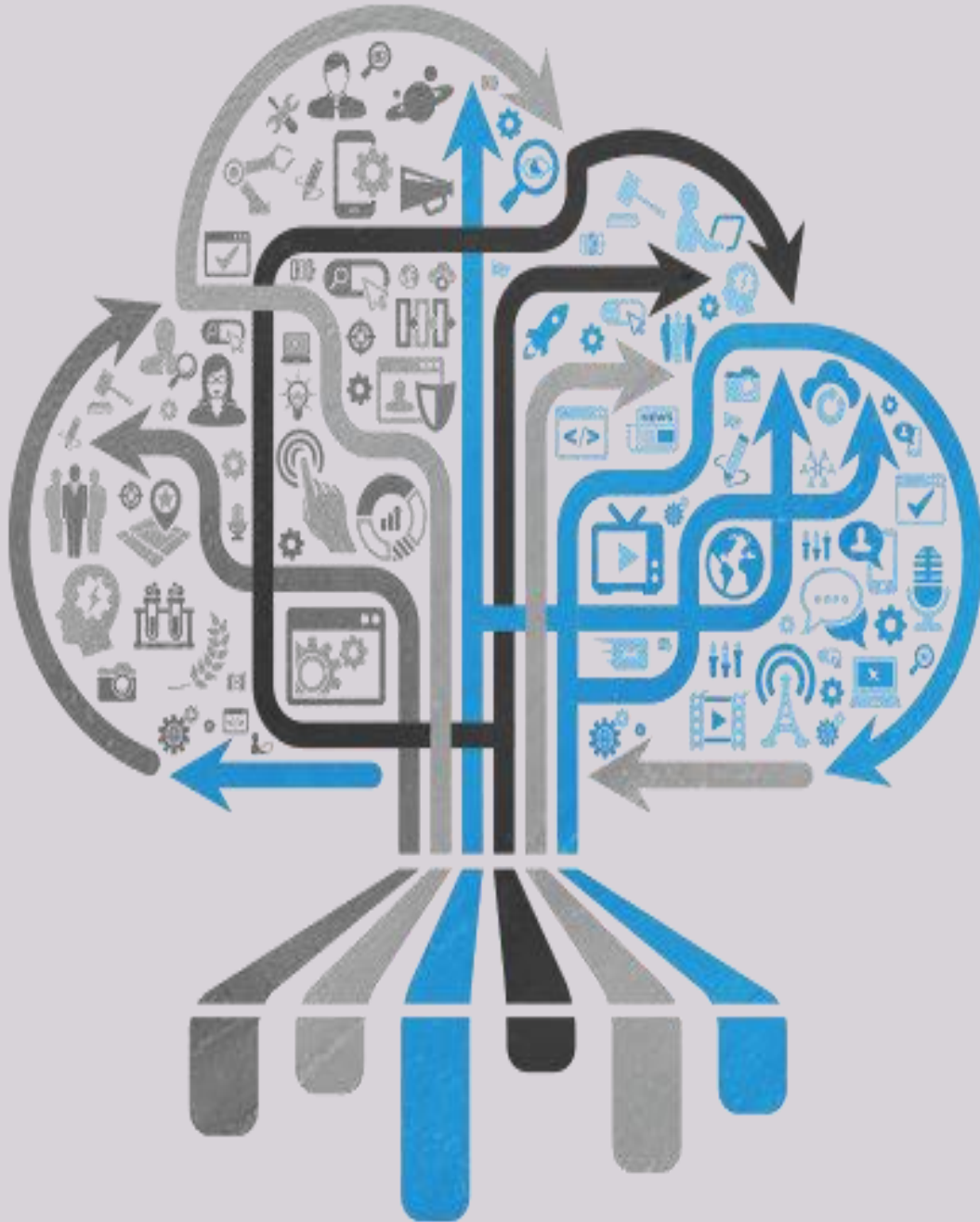
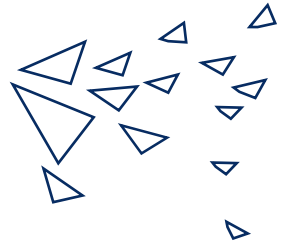


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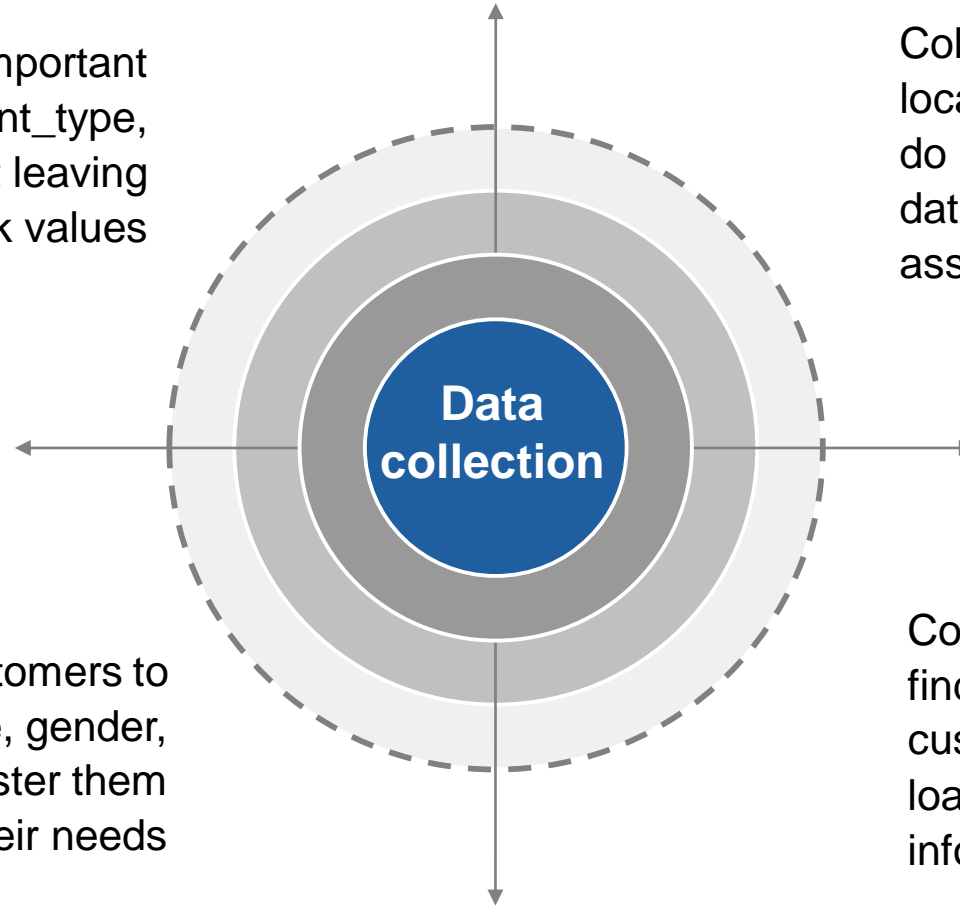
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Suggestion for data collection

Suggestion for data collection

Fill in missing values for important columns (such as Employment_type, Loan_default) to ensure not leaving too many blank values

Collect data about location, such as location of branch, customer address to do geographical analysis. Also, collect data about target business metrics to assess the business performance



Collect more data about customers to better understand them (name, gender, salary, etc) and be able to cluster them into groups suitable for their needs

Collect data about the manufacturer to find out the favorite brands of customers. There is manufacturer ID in loan table, but no reference of this information to be found

A photograph of a server room with rows of server racks on both sides of a central aisle. The racks are filled with equipment and have blue indicator lights glowing from them. The floor is made of metal grates, and the ceiling has recessed lighting. A semi-transparent black banner is overlaid across the middle of the image, containing the text "Thank You" and "Hermes Co." in white.

Thank You | Hermes
Co.