Car Insurance

Specification of business processes

1. Business goals of the organization

No Limit is an agent selling car insurance. It operates in its premises in different cities in the whole country. The company generates revenue by selling insurances for vehicles of various classes. The main source of its costs are compensations demanded for car damages of the insured.

The main aim of the agent is to achieve the highest possible profit. It is intended to be done by virtue of **the decrease in incurred cost of claims by about 5% in a year**. Reaching the goal will be monitored via **average indemnity paid per month** and **monthly average number of claims**. The company expects the two metrics to **decrease at the rate of at least 0.5% a month**.

The insurer would like to understand the reasons for monthly changes in the amounts of claims.

The business operations of *No Limit* comprise selling car insurance and dealing with clients' claims. Insuring occurs on the every-day basis. Contracts last one year, but different clients conclude them throughout the whole year. This process involves regular clients extending their period of insurance and new ones. Clients demand compensation after car damages, which happen irregularly.

Various personal details of a client are gathered (name, age, address, etc.), as well as information about the vehicles (class, age, size), licensing (duration) and claims (damages, amounts of compensation).

No Limit is also interested in analysing the influence of drivers' experience and characteristics on the amount of indemnity. Surplus to this, the insurer would like to know whether client's place of residence has impact on the value of compensation paid. Additionally, the properties of the vehicle should be examined in terms of claims' amounts.

2. Business processes

Insurance sale

A general description of the business process and a description of the performance metrics generated by this process, possible current analytical problems.

The process of insurance sale is as follows. The client enters the company's office. The client approaches one of the agents. The client provides the agent with the information about their car (VIN, registration plate, etc.). The agent puts the information into the system (the agent is logged in). In the system the VIN is connected to previous insurance policies (if available). The agent asks the client additional questions (e.g., expected number of kilometres driven in the next year, where the car is parked [garage or street]). When applicable, the system compares the information provided by

the client to the previous policies and informs the agent in case of inconsistencies. The agent determines the price for insuring the vehicle. The client signs the contract and pays the given price. The client receives appropriate documents and their vehicle's one-year insurance period starts.

The insurance policy provides an indemnity for damages of an insured vehicle.

Typical questions
- Compare the number of insurances sold last year in small and big cities.
- What is the average price of insurance?
- Is the number of insurances growing yearly?
- What is the total yearly revenue in the past decade?
- Who are our loyal clients (insured for more than 5 years)?
- Which car class was most commonly insured last month?
- Give details (name, city, experience) about the client with the longest experience.
- What is the average experience of the clients?

Data
Detailed information (entered by a logged-in agent) about the clients, their cars and insurances sold is available in the database system *SureSale*.

Dealing with claims

A general description of the business process and a description of the performance metrics generated by this process, possible current analytical problems.

The process of dealing with claims is as follows. Our client has their insured vehicle damaged. The client reports the damage to *No Limit* via online claim form. Up to 7 days after reporting, *No Limit*'s claims adjuster visits the location where the damaged vehicle is parked and assesses its state. The assessor describes and photographs the damaged parts. During the next 14 days the employee evaluates the cost of fixing the damages by either repairing or replacing the broken parts. The appropriate cost is determined for every part separately, according to their market value for the specific groups of vehicles. After the evaluation, the claimant is informed about the total amount of indemnity granted by the insurer and asked about the bank account number. During the next 7 days, the employee performs a bank transfer to the client's account. There is no possibility to reevaluate the damages or change the compensation value.

Typical questions
- What was the average number of claims per month in the last year?
- What is the average amount of indemnity paid?
- What is the total cost of compensations?
- Is the average number of compensations paid per month rising or falling?
- What is the average amount of compensation paid to the insured with little experience (shorter than one year)?
- What is the number of claims per car size/class?
- What is the average amount of indemnity paid by driver's experience?

- What are the maximum and minimum values of compensations?

Data

Information provided in the online claim form is stored in the *SureSale* system. It comprises claimant's insurance data and damaged car identification details. Data necessary for setting the indemnity value is available in *PartsCatalogueCSV* as a catalogue of parts. Results of damage evaluation are described in *SureSale*. This system is operated by the claims adjuster during car assessment. The total indemnity value is calculated by the claims adjuster and saved in *SureSale*. The compensation is a sum of repair or replacement costs for all damaged parts. The cost of replacement for a given kind of vehicle is directly indicated in *SureSale*, while the cost of repair equals 50% of the value of the part.