Specification of business processes

1. Business goals of the organization

"Book's Bookshops" is a bookshop network that sells books. Books are sold only in bookshops (the company does not sell books online). The main goal of the bookstore is to achieve the highest possible profit from the sale of books. To achieve this goal John Book - the CEO of the company - assumes **annual sales increase about 5%**. John Book monitors two main metrics: **monthly profit of individual bookstores and the number of sold copies within a month**. It assumes that the company is successful if there is a **rising trend for both of these metrics at a level not lower than 0.5% per month**. Currently the biggest problem of the CEO is to answer the question why in the analyzed month the book sale has increased or decreased.

The most important business issues in the bookstore include ordering and selling books. Each sold book is of a certain genre, for example: a crime story, album or fantasy. In addition, all books are written by their authors. Books are sold by various sellers working on various (depending on the day) positions. In addition, books are ordered from various publishers. Each bookstore is managed by one person.

John Book would like to analyze the influence of holidays and weekends on the sales amount. Moreover John Book want to know who are the best authors and what genres are sold best. In addition, the CEO wonders if the sales amount depends of employees providing information about books and selling them.

2. Business processes

Book sale

a. 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 book selling is as follows: the customer enters the bookstore and chooses a book or books that she/he would like to buy. The buyer goes to the one of cash desks and gives the book (or books) she/he has chosen. The barcode of the given book is read by the system, to which the seller is logged in. In this system the barcode is connected to the book ISBN, its title and price. The sales system generates a bill on which the price for each book is specified. The customer can buy several copies of the books, what is also denoted on the bill. Then the client pays the bill. In Book's bookstores it can be paid by cash, by card or by check.

b. Typical questions

Compare the number of copies of sold books in terms of their genres.
What are the most popular authors in this month?
Give the best-selling titles in this month.
Compare the profit of the current month with the profit of the previous month.

Compare individual sellers in terms of the number of books they sell.
How many of the most widely read titles sold individual sellers?
Give the average monthly profit for the last year.
Give a total profit for the last year.
Compare the profit from the last month with the average annual profit.
Give profit from the sale of books during the holiday periods.
Specify in how many cases the seller's opinion affected the purchase of the book.
What genres of books are purchased when the seller advises?
What are the profits for individual bookstores?

c. Data

All sales data are extracted from the sales system – "BillMaster". Sales system stores information about the seller making the transaction (thanks to logging in), the transaction number, the books purchased within this transaction and the price for which the book was purchased. In addition, it is known that the markup of the store for each copy is 7%. Moreover the payment method (card, cash or check) is settled.
In addition, data about employees and bookstores are stored in the EXCEL sheet.

Book ordering

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

The book ordering process is as follows. Every month there is one seller selected to handle the orders. The orders are made not more often than once a week. As a part of such order, a list of sub-orders for different publishers cooperating with Book's Bookstores are prepared. Besides the general order number a unique identifier is assigned to every order. Such sub-orders are then sent to the publishing houses and the than the delivery is expected. At delivery, its content is validated against titles ordered, volume and price and such information is stored. The information about missing titles is also stored.

b. Typical questions

Depending on the publisher, give the number of books that have been ordered, but have not been delivered within the first order.
Which titles were ordered the most in current month?
Are there books that have been ordered this month but have not been delivered?
Give the average order price for each publisher.

c. Data

All data about orders are fetched from the book ordering system.