



The information system of a company that sells building machines registers the travel expenses made by their sellers to potential customers. The company's sellers are characterized by: number/identifier; name; address; postal code; mobile phone number; hire data; and, sold value during the last year. Each postal code corresponds to a city.

Each seller belongs to a sales section (*e.g.*, earthmoving machines; cranes). A section is characterized by: code; description; creation date; extinction date (if already closed); and, number of sellers.

Every time that a travel (national or international) of a seller to a potential customer happens, the following data are stored: travel identifier (automatically generated); potential customer identifier (automatically generated); name; address; postal code; country; travel date; number of days; initial budget value; and seller or sellers participating in the travel.

The expenses are classified according to their type (*e.g.*, meal; flight travel; taxi). An expense type is characterized by a code and by a description.

For each individual expense happened during a travel, is stored: the expense value (in the original currency), the seller, the currency, the day and time when it has occurred; and the kind of expense. During a travel to a potential foreign customer, expenses in different currencies may be involved.

Following *Kimball* methodology, develop the dimensional analysis process to define and create the conceptual schema for a data mart that supports different data analysis, presenting all the facts, dimensions, granularity and all the relevant issues for the data mart project. When designing the data mart, the following requirement must be considered:

- Dimensional data analysis should be performed in any currency selected by the user, regardless of the currency in which the expense has occurred.