

28 HiCar



Case description

This case provides a more complete description of the application of a number of modelling techniques to the case of a European hire car company – HiCar.

Business Model

A number of statements categorised in terms of the elements of a Business Motivation Model are presented below (OMG, 2007):

- ▶ Vision: to be the car rental brand of choice for business users in the countries within which we operate.
- ▶ Goal: to provide industry-leading customer service.
- ▶ Goal: to provide well-maintained cars.
- ▶ Goal: to have vehicles available for rental when and where customers want them.
- ▶ Objective: by end of current year to be rated in the top 6 car rental companies in each operating country in the European Union.
- ▶ Objective: by end of current year to score 85% on the company's quarterly customer satisfaction survey.
- ▶ Objective: during the 4th quarter of the current year, no more than 1% of rentals need the car to be replaced because of mechanical breakdown (excluding accidents).
- ▶ Mission: to provide a car rental service across Europe and North America for business and personal customers.
- ▶ Strategy: to operate nation-wide at major airports in each country within the European Union and compete effectively with other premium car rental companies.
- ▶ Strategy: to manage car purchase and disposal at local level following practices conformant with national guidelines.
- ▶ Strategy: join an established rewards scheme run by a third party supplier.
- ▶ Tactic: encourage rental extensions.
- ▶ Tactic: to issue each member of the sales force with a digital assistant able to access central pricing and booking systems.
- ▶ Tactic: create standard specifications for car models to be used across the group for purchasing.
- ▶ External influencer: competitor: the presence of 'premium-brand' car rental companies such as Hertz and Avis.
- ▶ External influencer: supplier: car models, prices and contract terms and conditions offered by car manufacturers

- ▶ External influencer: technology: introduce vehicle identification and tracking systems.
- ▶ Internal influencer: habit: managers are generally promoted from within the company.
- ▶ Internal influencer: infrastructure: the rentals information system used by the company was developed for individual rentals and hence it cannot currently support corporate rentals.

Information model

HiCar is a car hire company which operates in most states of the European Union. HiCar maintains two types of organisational unit: depots and hire-points. Depots are places where hire cars are held, serviced and maintained. Hire-points are places where customers hire cars.

Any one hire-point has access to many depots. Each depot may supply cars for many different hire-points.

Customers pick-up cars from depots and return cars to depots. A given customer must pick-up a hire car from a specific depot but may return cars to a depot of their choice.

Employees of HiCar are categorised as either hire-point or depot employees. Depot employees remain at a particular depot. Hire-point employees frequently move between a fixed number of hire-points.

An information model documenting these requirements is presented in figure 1.

The requirement is to build an ICT system that keeps tracks of where cars are being held, where and who has hired them and the movement of employees.

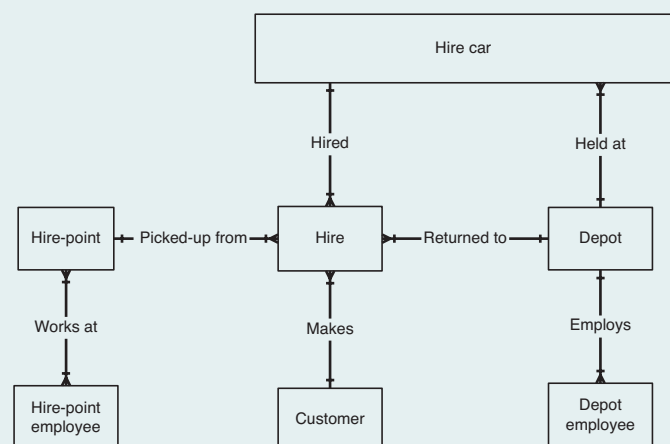


Figure 1: Information Model for HiCar

Business rules

A number of business rules relevant to the discounting of car hire are presented below:

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Day Rental
 AND Customer ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 10%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Day Rental
 AND Customer ISA Club Customer
 AND Booking <> 3 Days in Advance
 THEN Customer Discount = 5%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Day Rental
 AND Customer NOT ISA Club Customer
 AND Booking > 3 Days in Advance
 OR Booking <> 3 Days in Advance
 THEN Customer Discount = 0%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Week Rental
 AND Customer ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 15%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Week Rental
 AND Customer ISA Club Customer
 AND Booking <> 3 Days in Advance
 THEN Customer Discount = 10%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Week Rental
 AND Customer NOT ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 5%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Week Rental
 AND Customer NOT ISA Club Customer
 AND Booking <> 3 Days in Advance
 THEN Customer Discount = 0%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Month Rental
 AND Customer ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 20%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Month Rental
 AND Customer ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 20%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Month Rental
 AND Customer ISA Club Customer
 AND Booking <> 3 Days in Advance
 THEN Customer Discount = 15%

RULE*****


IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Month Rental
 AND Customer NOT ISA Club Customer
 AND Booking > 3 Days in Advance
 THEN Customer Discount = 10%

RULE*****

IF Customer rents Car
 AND Car Rental Group ISA Compact
 AND Rental Period ISA Month Rental
 AND Customer NOT ISA Club Customer
 AND Booking <> 3 Days in Advance
 THEN Customer Discount = 5%

 **Commentary**

This case study provides a number of snapshots of the application of modelling to various aspects of the business systems relevant to HiCar. This can be used as the basis for extension. For instance, activity and process models as well as information system models can be developed for a typical hire car company.

 **Keywords**

Organisation	Private Sector Organisation
Business model	Business motivation model
Information	Information model
Knowledge	Business rules

 **Source**

OMG (2007). Business Motivation Model (BMM) Specification. Object Management Group.

CASE-STUDY