

## **Study scenario**

*The following text describes the main steps of a bicycle manufacturing process at a small company. Read it to get a general impression of the process.*

Whenever the sales department receives an order, a new process instance is created. A member of the sales department can then reject or accept the order for a customized bike. In the former case, the process instance is finished. In the latter case, the warehouse and the engineering department are informed. The warehouse immediately processes the part list of the order and checks the required quantity of each part. If the part is available in-house, it is reserved. If it is not available, it is back-ordered. This procedure is repeated for each item on the part list. In the meantime, the engineering department prepares everything for the assembly of the ordered bicycle. If the warehouse has successfully reserved or back-ordered every item of the part list and the preparation activity has finished, the engineering department assembles the bicycle. Afterwards, the sales department ships the bicycle to the customer.

### **Process constraints:**

*This part presents four sentences that can be used to add additional constraints to the model.*

- *Use the information provided by the Speech2RuM tool together with the help document to verify that the generated constraints are correct.*
- *Note that, if a constraint is not generated properly, it may be helpful to explicitly say the word “comma” when a comma is present.*
  1. “The process starts when an order is received”
  2. “After receiving an order, it may be accepted”
  3. “Available parts must be reserved”

*The following constraints are described in a semi-formal manner. Determine how these constraints can be expressed in a **natural language sentence**.*

- *Use the help document for inspiration on how to express constraints in natural language.*
- *You are welcome to use synonyms and/or different grammatical constructs than shown in the help document.*
  4. Before activity “*notify the warehouse*”, mandatory to have activity “*accept order*”
  5. After activity “*check quantity*”, mandatorily execute activity “*order wheels*”
  6. Immediately after activity “*notify the warehouse*”, mandatorily execute activity “*check part list*”.
  7. Activity “*accept order*” and activity “*reject order*” cannot occur for the same instance.