Business Concept Models

EBR User Guide # 3

This user guide provides a definition of business concept models within the context of analysing and documenting business rules, how we use them at ACC for analysing business terms and rules, and provides an overview of how to construct them.

What is a business concept model?

Business concept models organise our business vocabulary so we can communicate in a consistent and accurate way. Concept models start with a collection of business terms and definitions, showing the relationships between them.
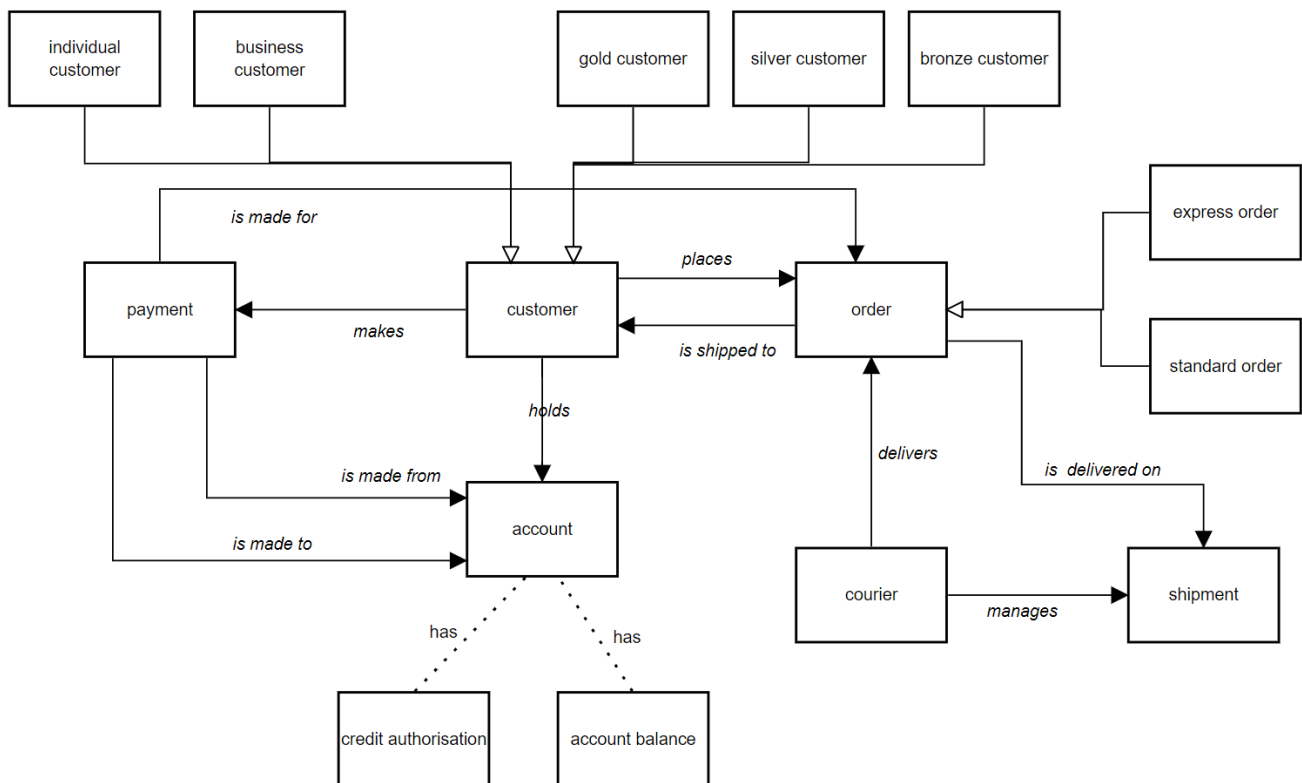

Figure 1 A generic sales or service business concept model

Why are we using business concept models at ACC?

With business concept models we can:

- Ensure the use of more consistent business terminology across ACC.

- Display the relationships between business terms in the context of a business domain.
- Communicate precise meanings and subtle distinctions with our business stakeholders.
- Identify if there is any ambiguity or duplication of items in a concept.
- Simplify the business rules being documented and assist in the quality assurance of the rules.
- Uncover implicit facts, including business rules, that might have been obscured in the relationships between concepts.
- Provide a visual structure and clarity for analysis, communication, and building a shared understanding across broad stakeholder groups.

Creating business concept models

Step 1: identifying noun concepts

The noun concepts in a business concept model represent the actors (people or agencies) and concrete objects in a business domain. Many of the noun concepts are likely to be business terms in themselves or will be synonyms or specific instantiations or aspects of business terms. In the ACC domain "ACC", "claim", "client", "injury", "provider", or "ACC45" would be examples of noun concepts. In the Figure 1 example above the noun concepts are "customer", "account", "payment", "order", courier", and so on.

Step 2: identify the verb concepts linking noun concepts

At its core, a business concept model is about fundamental connections between noun concepts (or business terms), stripped of qualification. The relationship between business terms is referred to as a "verb concept".

A concept model represents barebones knowledge; it only shows the relationship between business terms as opposed to any definitions and constraints – as these are recorded in the business rules. A concept model never assumes any business rules.

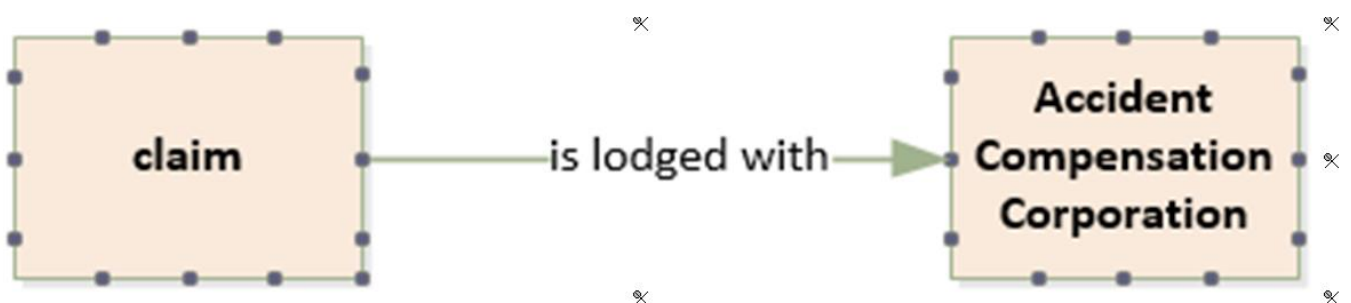Graphically, a verb concept could be represented as follows:

Figure 2 The verb concept "is lodged with" connecting two noun concepts in the ACC context

As our understanding of a busines context deepens, additional verb concepts can be added to show different relationships between the same business terms or noun concepts. In Figure 2 above, a "claim" can be "lodged with" "ACC. But conversely, as shown in Figure 3 below "ACC" can (or possibly must, given certain criteria) "register" a claim.
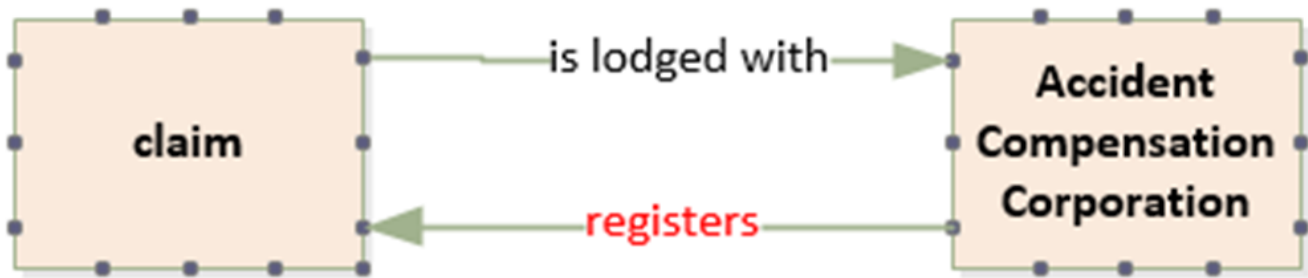
Figure 3 The verb concept "registers" shows an additional connection between noun concepts in the ACC context

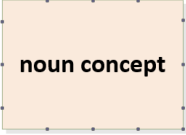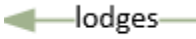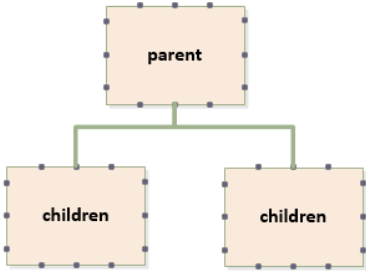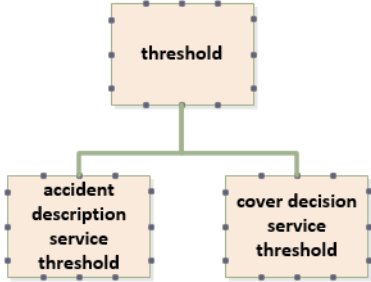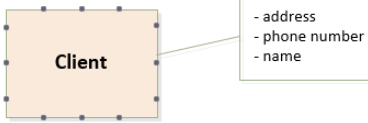## Step 3: organise the noun concepts and verb concepts in a graphical concept model

As you identify your business terms and get familiar with verb concepts (the relationships between those business terms), you can start to represent them graphically. There is no right or wrong platform for developing your initial concept model, some suggested tools include:
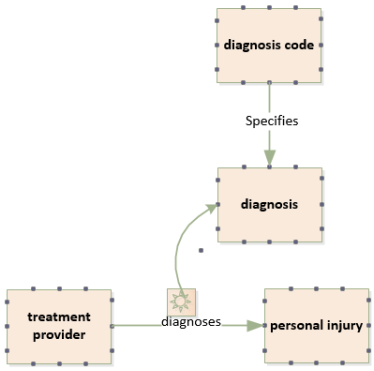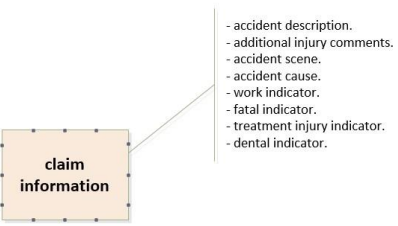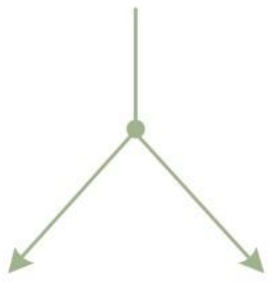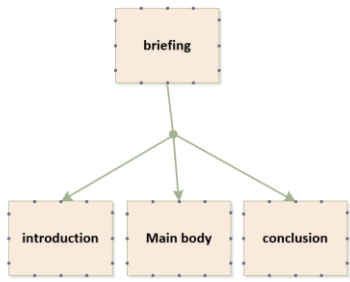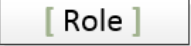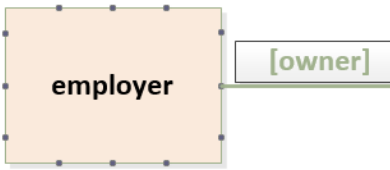
- Whiteboard or chart-paper and post-it notes
    - Noun concepts on post-it notes
    - Verb concepts can be drawn linking noun concepts
    - Fast for setting up and constructing a model in a face-to-face workshop, and easy for participants in a workshop to collaborate on
    - Moving and grouping concepts can become messy, especially as the model becomes more complex
    - The model output will need to be preserved (usually photographed) and documented electronically at a later time
- Microsoft Visio
    - A stencil is available from the EBR resources sharepoint which contains the standard shapes and connectors recommended (see Templates and Tools on the Documenting Business Rules page for instructions on importing this stencil)
    - Moving and repositioning the elements is supported
    - Models can be shared as exported PDFs or via M365 Visio Viewer for stakeholders who do not have Visio
- Trisotech Knowledge Entity Manager
    - Does not currently have the full set of recommended shapes and connectors, but can be powerful for connecting concepts between multiple models, including published business terms, rules, and process models at ACC
    - Builds a useful library of facts about the connected concepts
    - Models can be shared across ACC using Trisotech Kommunicator
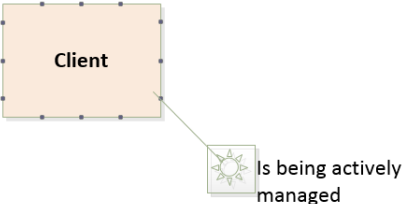
Step 4: use the correct notation for your business concept model.

The standard elements listed below are all available in the concept model shapes stencil linked from the EBR resources sharepoint linked above. For a whiteboard or KEM model you can adapt the standards to suit.

Simple Notation			
Shape	Shape Name	Definition	Example
noun concept	Noun concept	A business term that has a particular meaning for ACC and is used and recognised in business communications.	treatment provider
(arrow)	Verb concept	A word that represents the verbal relationship between two noun concepts.	←—lodges—
parent / children / children	Category	A class of noun concepts. Use categories to save space in your concept model; i.e. the parent category can be used to summarise the children categories as long as the category structure is shown in a foot note.	threshold / accident description service threshold / cover decision service threshold
property	Property	A quality or trait belonging to a noun concept.	Client — - address - phone number - name

	Objectification	A noun concept formed from a verb concept. Use objectification when a verb is used as a business term in a business rule and you need to represent that in your concept model to link to other concepts.	
	Instance	A real-world representation of a noun concept.	
	Whole part structure	A collection of one or more verb concepts that together describe how a thing of one class of things (the whole) is composed of things of two or more other classes of things (the parts)	
[Role]	Role	A part played by a business actor; a function performed by someone or something in a particular situation, process, or operation	

	Unary fact	Provides a simple "yes" or "no" answer to some basic operational business question	

Hints

The following hints will help you create great business concept models:

- Create and update the concept model collaboratively with SMEs from the business simultaneously with analysing and assessing the business rules.

- Test the noun and verb concepts with the stakeholders to make sure they make sense, and to ensure you use the business terms consistently in your business rules.

- Avoid creating the concept model last as representing the relationships graphically in a concept model helps to identify inconsistencies and resolve ambiguities. It's easier to spot and correct these as you go instead of leaving it until after decisions have been taken or rule statements codified, when it could take much longer to rework or fix.

- If the concept model gets too big and complex, consider splitting into a high-level concept model with multiple supporting detailed concept models.

- Remember – a verb concept is the active relationship between the business terms; it's the "doing word".