Eliciting Data Requirements - Model Answers

Goal:

The questions below are just examples and, definitely, far from complete and exhaustive. The goal here is for you to start thinking about how data requirements are elicited from stakeholders.

Again, the answers (and even more so than the questions) are just examples. The goal here is for you to get some indication of how when a data analyst talks to stakeholder all manner of hidden things may emerge and also, very importantly, that concepts that clear in a process model may be transformed into another, or split, or merge, in a data model.

The requirements are also far from exhaustive and complete. The goal here is for you to get a sense that in generating a DRS we're moving away from **how** data is processed (which is what a DFD diagram conveys) to **what** data is needed for processing (which is what a EER diagram conveys).

Finally, the requirements below are not definitive. You should be helped into realizing that these requirements will need to go back to the stakeholders for them to refine them until they are considered to be validated, i.e., exhaustive, complete, correct.

Task 1:

Q1 How do you describe a *customer*?

Q2 What do you need to know about them?

Q3 What identifies them?

Q4 Is it personal or rather something like the *table* they're sitting in?

Q5 Do we need to store information about the customer (e.g., *name*, or all of it is in fact transient, i.e., it goes away after the customer leaves)?

Q6 With regards to *kitchen*, is there a need to store information about *chefs* and their auxiliary staff?

Q7 If so, what information is stored?

Q8 What information is contained in an *order*?

Q9 How do you relate `order` and *good* and *stockItem*?

Q10 Is perhaps *good* the same as *ingredient* and it's *ingredient* that is seen as a *stockItem*?

Q11 Or it *good* a *meal*? Perhaps *good* also encompasses products other than meals (e.g., in an Italian restaurant, they may sell olive oil, herbs and spices in tins, etc.)?

Task 2:

A1 A customer, for us, is just the source of an order for a meal and of the payment for the meal.

A2 We don't need to know anything about customers as such, but what meal they order and what payment information they provide.

A3 For us, it is centred on the order, the order comes from a table, the table may have ordered as many meals as its capacity (say, four, if all seats are filled, though we sometimes join tables for large parties, so we don't enforce an upper limit per table).

A4 As my previous answer makes clear, no, we don't take note of any identifying or descriptive information about customers as people. We do take their credit card but we don't store it anywhere. So, by customer, we really mean the table. It's how we see it.

A5 All of it is in fact transient, i.e., it goes away after the customer leaves.

A6 Yes, what we think of as "kitchen" here is actually the people who prepare the meals in an order, so yes, we do relate an order with the personnel (chefs and/or auxiliaries who were assigned the preparation of each meal in an order).

A7 All we need to know is some identifying information about the member of staff, say, their internal unique initials.

A8 An order has a unique number (which we generate internally). It comes from a table (also, has a unique number we give it) and contains many meals (these are also uniquely coded).

A9 Hmm... It's complicated! Each meal is made of ingredients in certain weights or numbers. These ingredients are the stock items we store. What is meant by goods in the DFD is actually meals and sometimes products we sell (e.g., our branded ingredients).

A10 No, good is not always the same as ingredient, because it could be meals, and indeed this is the normal case. But, yes, we sell own-brand ingredients and when we do they are goods, in this conceptual context.

A11 Yes, a meal is also a good in the conceptual context of this DFD. Yes, good also encompasses products other than meals

Task 3:

R1 There is no need to store data about a *customer*.

R2 We do store the `id` and `type` of a *paymentMethod*.

R3 There are two kinds of *paymentMethod*s: *cash* and *card*. If the payment is by *card*, we store `holderName` and `expiryDate` as well.

R4 We store data about *order* (its unique `number`).

R5 An *order* comes from *table* (which also has a unique `number`) and is for many *meal*s.

R6 We store data about *personnel*, of which there are two types, viz., *chef* and *auxiliary*. In all cases, we store their unique `initials`

R7 We need to know which *personnel* prepares which meal.

R8 A *meal* is madeOf *ingredient*s in certain `quantity`, which can be number, weight, etc.

R9 An *ingredient* is a stock item in the inventory, so it has a unique `code`, `price`, and `description`.

R10 Some *ingredient*s are sold as *good*s.