

A Tale of Requirements Engineering

(Author unknown.)

- A: (*Answering the phone.*) Hi honey, what's up?
- B: Can you pick up some milk on your way home from work?
- A: Aren't you jumping ahead to the solution space? Let's back up here and talk about your requirements.
- B: Requirements? I just want some milk.
- A: But what happens if I get the wrong kind of milk, and then you complain about it later? Let's just make sure we know what we're trying to do.
- B: (*Sighs*). All right, I'll play along. I'd like half a gallon of low-fat homogenized milk. The cheapest brand.
- A: You're jumping to solution space again! The *first* step is to define the requirements. *Then* we can talk about solutions.
- B: I don't even know what you mean! We just need some milk!
- A: Think about it! What do you need it *for*? Are you sure milk is the right solution? And maybe cheapest isn't best, you know! Do you really want to sacrifice quality? In the long run, it might be better to pay more and get a better product!
- B: Oh good grief. All right, here is why we need it. Milk is tasty and nutritious. It goes well with breakfast cereal. Our toddler likes it. And I've bought it a thousand times before, and I know it meets our needs.
- A: That's the part that bothers me the most. You're really stuck on this one solution! Have you *really* considered all the alternatives? If we make a complete list of requirements, and evaluate all the possible solutions, then we'll have the data to *prove* that milk is the best solution. But until then, isn't it a big risk to keep using milk, just because that's the way you've always done it? Speaking of which, there are lots of *other* risks involved that you haven't mentioned. What about milk allergies? What about interactions of milk with prescription medications? What about mad cow disease? Not to speak of all the different methods used for pasteurization! We need a complete risk mitigation plan!
- B: (*Giving up.*) All right, you start the spreadsheet and the slides, and let me know what you need from me. (*Hangs up the phone.*)

(Six weeks later...)

- A: Hi honey, guess what? My coworkers took a lot of interest in this special project of ours, and have offered their help!
- B: Hi honey. What in the world are you talking about?
- A: You know, the "Milk Initiative". We've formed a regular brown-bag just to talk about it! All my coworkers have the same Problem Statement, so we thought we'd work on it together during our lunches. It could save us all so much money and effort!
- B: Ohh... I see.

A: The most interesting part is the "Make versus Buy" question. None of us had ever considered it much before. But when we started thinking about it, it just made lots of sense!

B: Um, what does that all mean?

A: Well, the requirements turned out to be pretty straightforward. But when we looked at the risks, we realized we had no real control. After all, who can really trust the FDA?

B: The FDA? (*laughing nervously*)

A: Actually, that's part of the mitigation strategy. Cow milk has more allergens, and cows are more prone to disease. We did all the research! There's lots of information online!

B: Research?

A: Yes! And we decided to go with goats!

B: ***What?***

A: Goats! One of the guys has two acres down in Queen Creek, so we decided to set up a coop! We'll all take turns milking.

B: But... but...

A: Don't worry, we've got all the data! It will work out great!

(Six months later... and still no milk)

B: So, how's that Milk Initiative coming?

A: We're still trying to get Budget. The guy in Queen Creek moved to Folsom, and the rest of us have been trying to raise cash to buy our own coop. But none of us can keep it above the ZBB line. And our stakeholders want to see *results*. So we're considering another alternative.

B: (*Getting nervous again...*) Alternative?

A: Yes, have you ever heard of Heifer International? For \$21 you can give someone a goat in a 3rd-world nation! It can change people's lives!

B: Um, OK, that's great, but what about the milk?

A: Yes, that's the whole point! The milk and cheese provides a steady stream of income. And when the goat has kids, and those kids start producing milk, it can change whole villages! Maybe even nations!

B: And everyone likes the idea?

A: Yes, we've all decided to contribute. It's far less risky than trying to start our own coop. We hadn't accounted for the risk of the guy in Queen Creek moving away - DOH! And moving the milk production offshore provides better economies of scale. But we still control the means of production, at least in a sense.

B: I see...

A: Yes, we're thinking of doing a presentation at next month's conference! Maybe we'll win an award!

B: (*Good thing I've been buying the milk myself, and keeping it in the little fridge in the closet!*)