Atlas of the mind
How brain mapping may change the way we think about decision-making

It's the potential Holy Grail of the business world — knowing decisively what your customer wants and whether your new product or service will be a hit in the marketplace. But sure things are only the whimsey of fantasy worlds. Or are they?

Nascent technologies in the field of brain mapping may just turn science fiction into reality and help researchers understand more about the brain, including how people make decisions.

"In a sentence, [the goal] is to map the structure and function of the human brain in health and disease," says John Mazziotta, director, division of brain mapping and chair of the neurology department at the David Geffen School of Medicine at UCLA.

The possibilities for brain mapping, he says, are still in the infancy stage. Smart Business spoke with Mazziotta about the emerging technology and its implications for businesses.

What practical uses for brain mapping are there for the business world?

From a research point of view, understanding how the brain functions has a lot of social and societal implications. There have been quite a few studies in decision-making and how people respond to marketing campaigns — whether they like Coke or Pepsi.

Understanding the way that the brain makes choices, obviously, is relevant to business. A number of companies, [such as those in the entertainment industry, are considering using these strategies to optimize their products.]

Rather than focus groups, why not see how the person is actually reacting to the material, the product or the concept directly?

How do you do that?

We've done experiments where we had Democrats and Republicans look at campaign ads from their favorite or least favorite candidates.

You can predict by looking at the scan what the response is going to be. It is the same with Coke or Pepsi or the design of automobiles.

They would set up a system where a group of subjects of the age and demographics of their target market come in and see possible products or campaigns or logos or whatever it is going to be and determine how positive or negative the reactions of those people are.

You compare it to something that they really liked. In a given person, you could say, 'What kind of a car do you really like?'

'Well, I really like BMW 7 series.'

So we show a picture of that and see how the brain responds. 'And what car do you really not like?' 'Well, I don't like a Hummer.' So you show them a picture of a Hummer and see that pattern.

'Now here are three new potential cars that we are thinking about making,' and you see how much that reaction matches the positive or negative pattern.

Could you apply this same concept to the recruitment process of senior executives to determine who would be a good leader?

We haven't looked at that yet, but I think that it is conceivable. That falls under the general heading of social cognition, which is a big part of trying to understand group dynamics and how individual brain reactions provide personality characteristics that are more or less like a description that you would have for a given position.

JOHN C. MAZZIOTTA is director of the division of brain mapping and chair of the neurology department at the David Geffen School of Medicine at UCLA. Reach him at (310) 825-2699 or mazz@toni.ucla.edu.

Insights Executive Health is brought to you by UCLA Medical Center