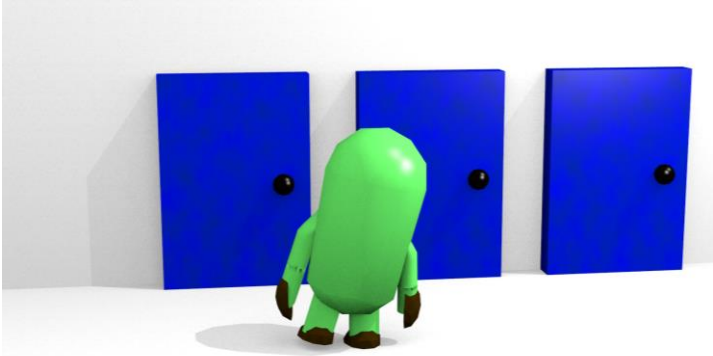


Pick a project, any project...

Oil companies thrive on uncertainty, if there were some clever technique that unerringly identified exactly where subsurface hydrocarbons were to be found we would be working in a very different industry. The ambiguity of evidence, the wide range of interpretations, and the debate about the optimal exploitation approach all drive strategy through good times and bad.



Most people's perception of risk is faulty. Perhaps one of the best known illustrations of that is the "Monty Hall" problem. In this TV game show the contestant was shown three doors, behind one of the three was a car the other two were empty. The victim picks a door, but before they can open it the host, who knows where the car is, opens one of the other two doors to

demonstrate that it is not the winner. The contestant was then asked if they want to swap their choice to the remaining door, should they? Even the great mathematician Paul Erdős at first refused to believe that by swapping the contestant doubles their chance of winning. Intuitively one would think that since the host will always open a non-winning door the reveal has no impact on the probability of the initially selected door being the right choice.

You might think that an oil company with three potential prospects and only enough capital to invest in one of them would be in a similar situation. But naturally it is not quite as simple as that. In the "Monty Hall" case the fact that one choice can be shown to **not** be a winner makes it more likely that one of the others **is**. In contrast, the fact that one choice will end up being a dry hole usually has little impact on the potential success of the other options, so most oil company opportunities have independent probabilities for success. Of course, the very fact that they are being pursued within a single organisation might alter that. To take an extreme example I remember a few years ago there was a classic case where an oil company announced that the annual bonus was going to be distributed into one of their four asset teams, whichever one had the best results. There was to be no bonus money at all for the other three teams. The inevitable result was that almost everyone started actively working to make the "rival" teams fail. It's much easier to delete or corrupt an important file than to construct something of value and impeding your opponent's progress puts you out in front. The results for the year they instituted this scheme were so bad that they never tried it again.

A pessimist might alternately suspect that picking the right project is like trying to find the Queen in the con-trick known as "Three Card Monte", in that variation **none** of the options will ever turn out to be a winner, the dealer uses various tricks and techniques to make sure of that. Certainly in some parts of the world there are projects that feel like they are set up to enrich only those outside the oil company.

In most of these choices the only thing that can contribute constructively is the data. Intuition about a project's potential is only as good as the data is trustable. If the underlying data has no provenance then the future of the company is being bet on personal opinion, not evidence.