



Shell International

Summary:

Read how Shell used the Bitsing Model to streamline its approach to new energy source exploration, improving strike rates and investment efficiency. “We created a predictive model for future projects”. Sven Kramer Shell International.

Interview with Sven Kramer, Senior Strategy, Planning & Performance Management Lead

What has most impressed you about the Bitsing Method in practice?

Sven: “It’s the factual aspect that I find so special - the method’s ability to detect answers to complex problems using fact-based models. It’s what occupies Shell each day; making things ... factual. We don’t just take action. Everything is tested, made fact-based, as it were. Because what we are doing represents investments of billions.

In my role as international Strategic Advisor, I received a question requiring the full attention of my colleagues and myself – as unprecedentedly large investments are involved, with equally large risks if it all goes wrong. The question concerned a new energy source – one that is hidden deep in the earth.

This new energy source had seen a lot of growth in some parts of the world, and the question was where else we could grow this new energy source? So they engaged my department to find out. At the outset you think of the big financial potential; the resource is everywhere. But this quickly narrows to: ‘But where, precisely?’ So yes, we search, worldwide, at the locations where we think we’ll find it. And we went for it. We invested. We searched. But it gradually became apparent that it wasn’t going all that well. A kind of awareness dawned: We think we’ll find it somewhere ... but how factually correct is that thought, in itself?

Then you arrived, with the Master class on your Bitsing method. Your approach to making choices, in the form of the *Pencil Philosophy*, was particularly relevant to this problem, and we applied the model to our situation with the new energy source. The issue is that we work in many different countries, all over the world. And the size of the investments involved and, indeed, of the world as an exploration area, are a cause of concern. The investing starts with the first geological analysis, which of course costs money. Then there are the next steps, each of which cost even more money. I’ll keep it simple for the reader, but think of drilling a well, or a number of them; the amount of money you invest without knowing what it’s going to yield, grows with each step. And if there are, ultimately, cautious, positive signals, you’re not there yet. You must then build a whole lot of facilities and pipelines, and invest an even larger amount.

In short, all the stages you pass through and all the investments must at least be repaid. However, you don’t know in advance whether those cost will be recovered.”

Sven remains quiet for a moment. “Do you know that only a minority of the pilot projects are ultimately successful? Yet the investments in the majority of the unsuccessful attempts, or where we

should have stopped projects earlier, must also be recovered?”.

This corresponds to the experience of product innovation in general. Only about one innovation in ten is successful – and that one success must cover the investment in the other nine innovation attempts.

“That means”, continues Sven, “That this, single, successful project, that will undergo full development, must pay for all the projects, worldwide, that are not successful. And that is a lot of expense.

If you do the sums you quickly conclude that you need to raise your strike rate. Partly on the basis of your Pencils model and the philosophy behind it.

We started costing out all aspects of the new energy source; using numbers which, as your model says, must be based on hard financial facts. This showed that our focus model actually wasn't so great”, said Sven, his tone reflecting the negative impact of this discovery.

“The focus on this new energy source was out of proportion – far too big in relation to its expected turnover, to its capacity to produce a positive yield. That yield appeared more marginal than what we can make on traditional oil and gas – in other words from our ‘sharp pencils’, to use your terminology”, said Sven.

“So the new energy source was a ‘blunt pencil’, but one that got an amount of attention comparable to that given to our sharpest pencils, namely oil and gas. And we had to use its much smaller margin to cover a very large investment, with a much lower chance of success.

So, yes, as often happens with the Bitsing model, we had to conclude that our initial approach didn't look too good from a commercial point of view. The degree of focus, of course, had to change.

How did you make the Bitsing Model work for you?

Sven: “We first looked at making a more intensive version equivalent to your model; at how we could refine the model and adapt it to our complex processes. By applying a more factual focus, based on financial facts, we aimed to increase the success rate of our selections.

We started identifying criteria, which raise the chance of financial success. We called them the Big Rules. If a project didn't sufficiently match the criteria, we immediately stopped it. We stopped earlier than before, in this way keeping the costs as low as possible.

We applied this. And it then appeared that the new energy source had more chance of succeeding if you prospect in areas in which you already produce, areas that represent ‘sharp pencils’ – where we have a firm handle on the models.

In contrast, if you explore in a totally new area, you have to set up everything without knowing whether the project is going to be profitable. To keep within the pencil metaphor, you have to sharpen that pencil from the start, but without knowing if you'll ever manage to get a sharp point on it.

In the selected areas, on the other hand, the pencil is already sharp. And so, working together, we arrived at the Big Rules: What do we have to take into account to increase our chances of success? In so doing, we had actually created a predictive model for future projects, with all the positive implications of such a tool, such as significant savings in terms of efficiency and an increase in effectiveness and success rate”, says Sven.

He follows this fascinating account with how they are now applying the approach in practice.

“We are therefore making increasingly critical evaluations of whether a project matches the Big Rules. If the answer is ‘yes’, we have a big chance of continuing the process. If not, then we must be disciplined enough to stop applying it, before it goes wrong.

I do operate at mega high level. One shows a number of slides and makes a proposal and then the people in the country take that and get to work. And once I see that happening, I step out of

it. But in the case of the strategy for the new energy source I hung around, because I found what happened there very special”, says Sven.

“It’s so great when you see a result. They were using the sharpened approach, which was something in itself, and there was a positive result for our business, for our employees and for the surrounding area.

What I could recommend to everyone is focus on your current source of business. Look at the facts: Do not just go out and start the adventure anywhere and then go for it, full on. Things could go very wrong. The chance of things going wrong is much larger if you’re in areas that are new to you, than in those where you already know all the ins and outs.

The risk of something going wrong in unfamiliar territory is many, many times bigger – and that is the risk we have now reduced, with this new approach.”

Before our interview, you remarked ‘Bitsing remains impressive in its simplicity and accuracy’. It’s great to hear this from someone who works for a company the size of Shell, in a complex area, and which has so much influence in the world.

Sven: “What we’re after isn’t something that’s available off the shelf. Gigantic sums of money are involved and a lot of uncertainty. And one has a lot of responsibility then, to the world. Because no one knows exactly what is under the ground. There are huge uncertainties, with many different aspects, in which a lot of money is involved. And a lot of responsibility – for instance to your employees and to the environment, to take just two aspects.

I would like to pass on the following advice: Keep making forecasts – and use that information to populate a financial model and a planning model.

Try to keep this as fact-based as possible. For us at Shell, this is not an easy process. We don’t know what is under the ground, or in a reservoir. And, to re-visit my example of the new energy source: whereas we originally invested in areas just because we thought we could be successful there (with investments that quickly rise to tens of billions), our forecasts are now significantly more fact-based, also using a Bitsing-like method.

So what I am basically saying is, don’t just start up a project. At least make sure that you estimate the risks you’re going to take, based on the facts to hand and taking all possible risk factors into account.”