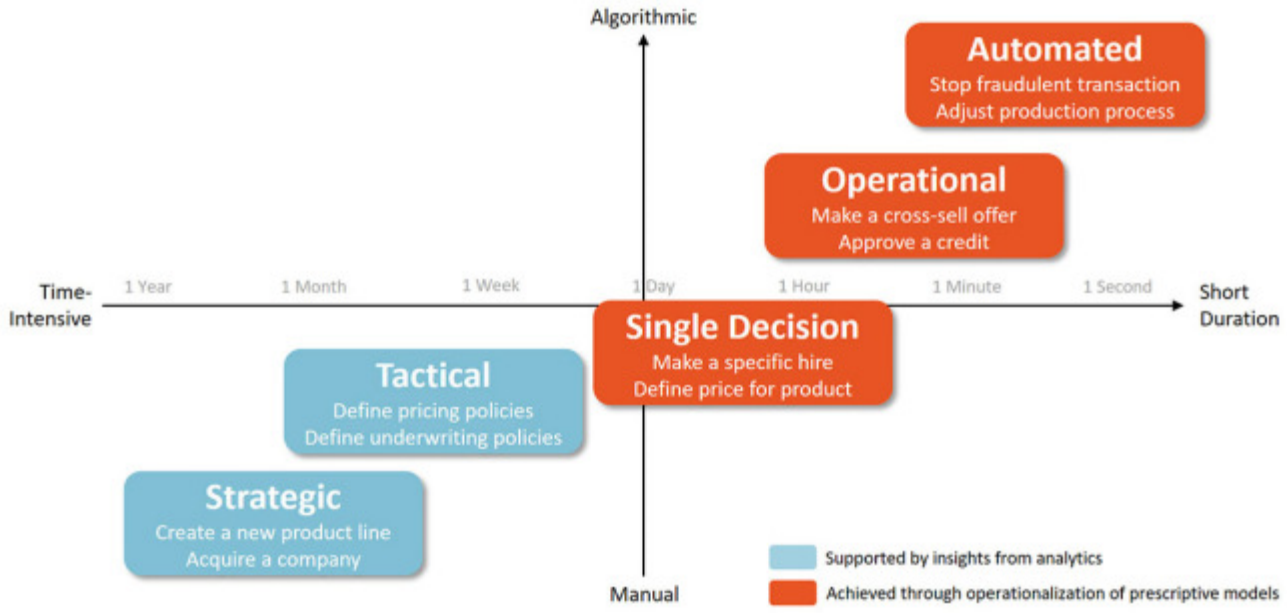


I have written on Artificial Intelligence (AI) before. Back then I focused on the technology side of it: what is part of an AI system and what isn't. But there is another question which might be even more important. What are we DOING with AI?

Part of my job is to help investors with their due diligence. I discuss companies with them in which they might want to invest. Here is a quick observation: By now, every company pitch is full with stuff about how they are using AI to solve a given business problem.

Part of me loves this since some of those companies are on something and should get the chance. But I also have a built-in "bullshit-meter". So, another part of me wants to cringe every time I listen to a founder making stuff up about how AI will help him. I listened to many founders who do not know a lot about AI, but they sense that they can get millions of dollars of funding. Just by adding those fluffy keywords to their pitch. The bad news is that it sooner or later actually works. Who am I to blame them?

I have seen situations where AI or at least machine learning (ML) has an incredible impact. But I also have seen situations where this is not the case. What was the difference?

In most of the cases where organizations fail with AI or ML, they used those techniques in the wrong context. ML models are not very helpful if you have only one big decision you need to make. Analytics still can help you in such cases by giving you easier access to the data you need to make this decision. Or by presenting this data in a consumable fashion. But at the end of the day, those single big decisions are often very strategic. Building a machine learning model or an AI to help you making this decision is not worth doing it. And often they also do not yield better results than just making the decision on your own.

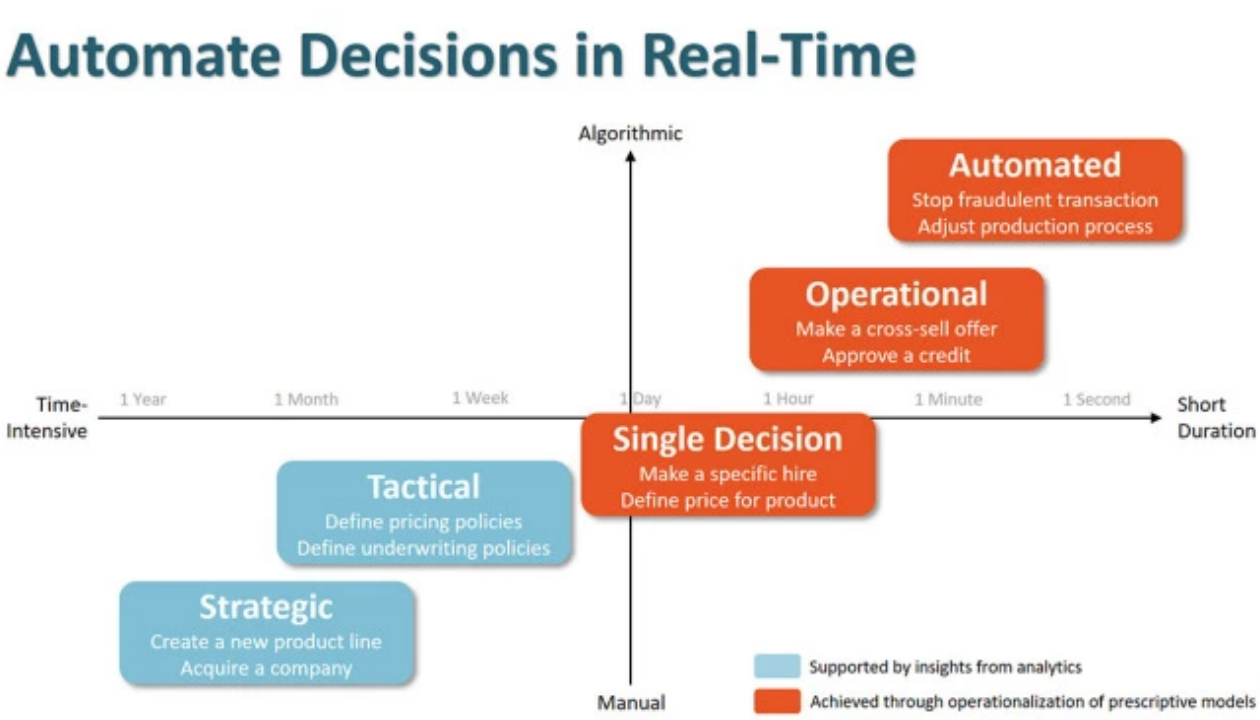
Here is where ML and AI can help. **Machine Learning and Artificial Intelligence deliver most value whenever you need to make lots of similar decisions quickly.** Good examples for this are:

- Defining the price of a product in markets with rapidly changing demands,
- Making offers for cross-selling in an E-Commerce platform,
- Approving a credit or not,
- Detecting customers with a high risk for churn,
- Stopping fraudulent transactions,
- ...among others.

You can see that a human being who would have access to all relevant data could make those decisions in a matter of seconds or minutes. Only that they can't without AI or ML, since they would need to make this type of decision millions of times, every day. Like sifting through your customer base of 50 million clients every day to identify those with a high churn risk. Impossible for any human being. But no problem at all for an ML model.

So, the biggest value of artificial intelligence and machine learning is not to support us with those big strategic decisions. **Machine learning delivers most value when we operationalize models and automate millions of decisions.**

The image below shows this spectrum of decisions and the times humans need to make those. The blue boxes are situations where analytics can help, but it is not providing its full value. The orange boxes are situations where AI and ML show real value. And the interesting observation is: the more decisions you can automate, the higher this value will be (upper right end of this spectrum).



One of the shortest descriptions of this phenomenon comes from Andrew Ng, who is a well-known researcher in the field of AI. Andrew described what AI can do as follows:

> “If a typical person can do a mental task with less than one second of thought, we can probably automate it using AI either now or in the near future.”

I agree with him on this characterization. And I like that he puts the emphasis on automation and operationalization of those models – because this is where the biggest value is. The only thing I disagree with is the time unit he chose. It is safe to go already with a minute instead of a second.