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Artificial intelligence in strategy

AI tools can help executives avoid biases in decisions, pull insights out of oceans of data, and make strategic choices more quickly. And that's just the beginning.

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Can machines automate strategy development? The short answer is no. However, there are numerous aspects of strategists' work where AI and advanced analytics tools can already bring enormous value. Yuval Atsmon is a senior partner who leads the new McKinsey Center for Strategy Innovation, which studies ways new technologies can augment the timeless principles of strategy. In this episode of the *Inside the Strategy Room* podcast, he explains how artificial intelligence is already transforming strategy and what's on the horizon. This is an edited transcript of their discussion. For more conversations on the strategy issues that matter, follow the series on your preferred podcast platform.

Joanna Pachner: What does artificial intelligence mean in the context of strategy?

Yuval Atsmon: When people talk about artificial intelligence, they include everything to do with analytics, automation, and data analysis. Marvin Minsky, the pioneer of artificial intelligence research in the 1960s, talked about AI as a "suitcase word"—a term into which you can stuff whatever you want—and that still seems to be the case. We are comfortable with that because we think companies should use all the capabilities of more traditional analysis while increasing automation in strategy that can free up management or analyst time and, gradually, introducing tools that can augment human thinking.

Joanna Pachner: AI has been embraced by many business functions, but strategy seems to be largely immune to its charms. Why do you think that is?

Yuval Atsmon: You're right about the limited adoption. Only 7 percent of respondents to our survey about the use of AI say they use it in strategy or even financial planning, whereas in areas like marketing, supply chain, and service operations, it's 25 or 30 percent. One reason adoption is lagging is that strategy is one of the most integrative conceptual practices. When executives think about strategy automation, many are looking too far ahead—at AI capabilities that would decide, in place of the business leader, what the right strategy is. They are missing opportunities to use AI in the building blocks of strategy that could significantly improve outcomes.

I like to use the analogy to virtual assistants. Many of us use Alexa or Siri but very few people use these tools to do more than dictate a text message or shut off the lights. We don't feel comfortable with the technology's ability to understand the context in more sophisticated applications. AI in strategy is similar: it's hard for AI to know everything an executive knows, but it can help executives with certain tasks.

Joanna Pachner: What kind of tasks can AI help strategists execute today?

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Yuval Atsmon: We talk about six stages of AI development. The earliest is simple analytics, which we refer to as descriptive intelligence. Companies use dashboards for competitive analysis or to study performance in different parts of the business that are automatically updated. Some have interactive capabilities for refinement and testing.

The second level is diagnostic intelligence, which is the ability to look backward at the business and understand root causes and drivers of performance. The level after that is predictive intelligence: being able to anticipate certain scenarios or options and the value of things in the future based on momentum from the past as well as signals picked in the market. Both diagnostics and prediction are areas that AI can greatly improve today. The tools can augment executives' analysis and become areas where you develop capabilities. For example, on diagnostic intelligence, you can organize your portfolio into segments to understand granularly where performance is coming from and do it in a much more continuous way than analysts could. You can try 20 different ways in an hour versus deploying one hundred analysts to tackle the problem.

Predictive AI is both more difficult and more risky. Executives shouldn't fully rely on predictive AI, but it provides another systematic viewpoint in the room. Because strategic decisions have significant consequences, a key consideration is to use AI transparently in the sense of understanding why it is making a certain prediction and what extrapolations it is making from which information. You can then assess if you trust the prediction or not. You can even use AI to track the evolution of the assumptions for that prediction.

Those are the levels available today. The next three levels will take time to develop. There are some early examples of AI advising actions for executives' consideration that would be value-creating based on the analysis. From there, you go to delegating certain decision authority to AI, with constraints and supervision. Eventually, there is the point where fully autonomous AI analyzes and decides with no human interaction.

Joanna Pachner: What kind of businesses or industries could gain the greatest benefits from embracing AI at its current level of sophistication?

Yuval Atsmon: Every business probably has some opportunity to use AI more than it does today. The first thing to look at is the availability of data. Do you have performance data that can be organized in a systematic way? Companies that have deep data on their portfolios down to business line, SKU, inventory, and raw ingredients have the biggest opportunities to use machines to gain granular insights that humans could not.

Companies whose strategies rely on a few big decisions with limited data would get less from AI. Likewise, those facing a lot of volatility and vulnerability to external events would benefit less than companies with controlled and systematic portfolios, although they could deploy AI to better predict those external events and identify what they can and cannot control.

Third, the velocity of decisions matters. Most companies develop strategies every three to five years, which then become annual budgets. If you think about strategy in that way, the role of AI is relatively limited other than potentially accelerating analyses that are inputs into the strategy. However, some companies regularly revisit big decisions they made based on assumptions about the world that may have since changed, affecting the projected ROI of initiatives. Such shifts would affect how you deploy talent and executive time, how you spend money and focus sales efforts, and AI can be valuable in guiding that. The value of AI is even bigger when you can make decisions close to the time of deploying resources, because AI can signal that your previous assumptions have changed from when you made your plan.

Joanna Pachner: Can you provide any examples of companies employing AI to address specific strategic challenges?

Yuval Atsmon: Some of the most innovative users of AI, not coincidentally, are AI- and digital-native companies. Some of these companies have seen

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massive benefits from AI and have increased its usage in other areas of the business. One mobility player adjusts its financial planning based on pricing patterns it observes in the market. Its business has relatively high flexibility to demand but less so to supply, so the company uses AI to continuously signal back when pricing dynamics are trending in a way that would affect profitability or where demand is rising. This allows the company to quickly react to create more capacity because its profitability is highly sensitive to keeping demand and supply in equilibrium.

Joanna Pachner: Given how quickly things change today, doesn't AI seem to be more a tactical than a strategic tool, providing time-sensitive input on isolated elements of strategy?

Yuval Atsmon: It's interesting that you make the distinction between strategic and tactical. Of course, every decision can be broken down into smaller ones, and where AI can be affordably used in strategy today is for building blocks of the strategy. It might feel tactical, but it can make a massive difference. One of the world's leading investment firms, for example, has started to use AI to scan for certain patterns rather than scanning individual companies directly. AI looks for consumer mobile usage that suggests a company's technology is catching on quickly,

giving the firm an opportunity to invest in that company before others do. That created a significant strategic edge for them, even though the tool itself may be relatively tactical.

Joanna Pachner: McKinsey has written a lot about cognitive biases and social dynamics that can skew decision making. Can AI help with these challenges?

Yuval Atsmon: When we talk to executives about using AI in strategy development, the first reaction we get is, "Those are really big decisions; what if AI gets them wrong?" The first answer is that humans also get them wrong—a lot. [Amos] Tversky, [Daniel] Kahneman, and others have proven that some of those errors are systemic, observable, and predictable. The first thing AI can do is spot situations likely to give rise to biases. For example, imagine that AI is listening in on a strategy session where the CEO proposes something and everyone says "Aye" without debate and discussion. AI could inform the room, "We might have a sunflower bias here," which could trigger more conversation and remind the CEO that it's in their own interest to encourage some devil's advocacy.

We also often see confirmation bias, where people focus their analysis on proving the wisdom of what they already want to do, as opposed to looking for a fact-based reality. Just having AI perform a default analysis that doesn't aim to satisfy the boss is useful,

and the team can then try to understand why that is different than the management hypothesis, triggering a much richer debate.

In terms of social dynamics, agency problems can create conflicts of interest. Every business unit [BU] leader thinks that their BU should get the most resources and will deliver the most value, or at least they feel they should advocate for their business. AI provides a neutral way based on systematic data to manage those debates. It's also useful for executives with decision authority, since we all know that short-term pressures and the need to make the quarterly and annual numbers lead people to make different decisions on the 31st of December than they do on January 1st or October 1st. Like the story of Ulysses and the sirens, you can use AI to remind you that you wanted something different three months earlier. The CEO still decides; AI can just provide that extra nudge.

Joanna Pachner: It's like you have Spock next to you, who is dispassionate and purely analytical.

Yuval Atsmon: That is not a bad analogy—for *Star Trek* fans anyway.

Joanna Pachner: Do you have a favorite application of AI in strategy?

Yuval Atsmon: I have worked a lot on resource allocation, and one of the challenges, which we call the hockey stick phenomenon, is that executives are always overly optimistic about what will happen.

They know that resource allocation will inevitably be defined by what you believe about the future, not necessarily by past performance. AI can provide an objective prediction of performance starting from a default momentum case: based on everything that happened in the past and some indicators about the future, what is the forecast of performance if we do nothing? This is before we say, "But I will hire these people and develop this new product and improve my marketing"— things that every executive thinks will help them overdeliver relative to the past. The neutral momentum case, which AI can calculate in a cold, Spock-like manner, can change the dynamics of the resource allocation discussion. It's a form of predictive intelligence accessible today and while it's not meant to be definitive, it provides a basis for better decisions.

Joanna Pachner: Do you see access to technology talent as one of the obstacles to the adoption of AI in strategy, especially at large companies?

Yuval Atsmon: I would make a distinction. If you mean machine-learning and data science talent or software engineers who build the digital tools, they are definitely not easy to get. However, companies can increasingly use platforms that provide access to AI tools and require less from individual companies. Also, this domain of strategy is exciting—it's cutting-edge, so it's probably easier to get technology talent for that than it might be for manufacturing work.

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The bigger challenge, ironically, is finding strategists or people with business expertise to contribute to the effort. You will not solve strategy problems with AI without the involvement of people who understand the customer experience and what you are trying to achieve. Those who know best, like senior executives, don't have time to be product managers for the AI team. An even bigger constraint is that, in some cases, you are asking people to get involved in an initiative that may make their jobs less important. There could be plenty of opportunities for incorporating AI into existing jobs, but it's something companies need to reflect on. The best approach may be to create a digital factory where a different team tests and builds AI applications, with oversight from senior stakeholders.

Joanna Pachner: Do you think this worry about job security and the potential that AI will automate strategy is realistic?

Yuval Atsmon: The question of whether AI will replace human judgment and put humanity out of its job is a big one that I would leave for other experts.

The pertinent question is shorter-term automation. Because of its complexity, strategy would be one of the later domains to be affected by automation, but we are seeing it in many other domains. However, the trend for more than two hundred years has been that automation creates new jobs, although ones requiring different skills. That doesn't take away the fear some people have of a machine exposing their mistakes or doing their job better than they do it.

Joanna Pachner: We recently published an article about strategic courage in an age of volatility that talked about three types of edge business leaders need to develop. One of them is an edge in insights. Do you think AI has role to play in furnishing a proprietary insight edge?

Yuval Atsmon: One of the challenges most strategists face is the overwhelming complexity of the world we operate in—the number of unknowns, the information overload. At one level, it may seem that AI will provide another layer of complexity. In reality, it can be a sharp knife that cuts through some of the clutter. The question to ask is, Can AI simplify my life by giving me sharper, more timely insights more easily?

Joanna Pachner: You have been working in strategy for a long time. What sparked your interest in exploring this intersection of strategy and new technology?

Yuval Atsmon: I have always been intrigued by things at the boundaries of what seems possible. Science fiction writer Arthur C. Clarke's second law is that to discover the limits of the possible, you have to venture a little past them into the impossible, and I find that particularly alluring in this arena.

AI in strategy is in very nascent stages but could be very consequential for companies and for the profession. For a top executive, strategic decisions are the biggest way to influence the business, other than maybe building the top team, and it is amazing how little technology is leveraged in that process today. It's conceivable that competitive advantage will increasingly rest in having executives who know how to apply AI well. In some domains, like investment, that is already happening, and the difference in returns can be staggering. I find helping companies be part of that evolution very exciting.

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