

Know Your Data and Analytics

Data: What Happened?

At this level, organizations want to use descriptive and exploratory statistics to answer fundamental business questions about what has happened in the past. This requires you to have collected the right kinds of data. In practice, we have found that while many enterprises have collected plenty of data, it is often dispersed across departments and owners, in the wrong format for analysis, or simply insufficient for answering basic business questions. If this applies to the use cases for which you're exploring AI and automation, you need to more clearly define your needs with requisite stakeholders in order to arrange for the correct data to be collected. Since knowing what has really happened in your business is critical for developing the best strategy for your future, this step is worth the investment of time, manpower, and budget.

Information and Knowledge: Why Did It Happen?

Once you and your executives are clear on what has happened in your business in the past, the next step is to understand why. During this phase, you move beyond statistical analysis of data into understanding and encoding expert logic for why certain results occurred. For example, your data may show that you had an unusually poor sales quarter last year. When analyzing your sales results along with data from human resources, you may discover that the poor showing is due to your top sales representatives leaving the company around that time. While some knowledge can be encoded, others will require you to augment your quantitative analysis with qualitative interviews and external research.

Intelligence: What Will Happen?

All businesses want to make key predictions, such as whether a prospect will become a paying customer or if an existing customer is in danger of churning. Machine learning and AI approaches can be used to deliver accurate and effective results only when your company has demonstrated mastery of the previous two levels. If you lack the requisite data, then you're missing information about your business that is critical to your highlevel strategy. If you have data but not the domain expertise to interpret that data, you are at risk of feeding the wrong assumptions into your intelligent systems, which will invariably produce the wrong results.

Insights: What's the Best That Could Happen?

Machine learning can also be used to discover opportunities you weren't aware of, such as new customer segments you can target, more effective messaging and processes for your sales and marketing functions, or a superior product design that improves retention. While predictive AI systems are usually built on past data, you can also employ AI solutions to generate new ideas and conduct large-scale experiments to test and evaluate new ideas rapidly.

Change and Impact: How Can We Automate Continuous Transformation?

The ultimate outcome for an analytics practice is to tighten and automate the feedback loop between data, insights, action, and results. For example, the goal of just-in-time manufacturing is to dynamically adjust factory output based on real-time consumer demand data from retail and digital touchpoints. For companies producing digital mobile and web experiences, the user experience and user interface (UX/UI) can be automatically optimized based on a specific user profile and browsing behavior.

Achieving this idealistic goal across industries and functions requires more than just technological sophistication and tools that can automatically recommend, execute, and monitor actionable insights. You will also need a fast-moving and tech-savvy workforce that has mastered analytical decision-making, change management, AI systems development, and leadership skills for managing autonomous organizations.