Analytics

There are 4 types of analytics:

- **Descriptive analytics**
    - Descriptive analytics answers the question of *what happened.* For instance, a healthcare provider will learn how many patients were hospitalized last month; a retailer – the average weekly sales volume;
    - Descriptive analytics juggles raw data from multiple data sources to give valuable insights into the past. However, these findings simply signal that something is wrong or right, without explaining why. For this reason, highly data-driven companies do not content themselves with descriptive analytics only, and prefer combining it with other types of data analytics.
- **Diagnostic analytics**
    - Thanks to diagnostic analytics, there is a possibility to drill down, to find out dependencies and to identify patterns. Companies go for diagnostic analytics, as it gives a deep insight into a particular problem. At the same time, a company should have detailed information at their disposal, otherwise data collection may turn out to be individual for every issue and time-consuming.
- **Predictive analytics**
    - Predictive analytics tells *what is likely to happen.* It uses the findings of descriptive and diagnostic analytics to detect tendencies, clusters and exceptions, and to predict future trends, which makes it a valuable tool for forecasting. Despite numerous advantages that predictive analytics brings, it is essential to understand that forecasting is just an estimate, the accuracy of which highly depends on data quality and stability of the situation, so it requires a careful treatment and continuous optimization.
    - Thanks to predictive analytics and the proactive approach it enables, a telecom company, for instance, can identify the subscribers who are most likely to reduce their spend, and trigger targeted marketing activities to remediate
- **Prescriptive analytics**
    - The purpose of prescriptive analytics is to literally prescribe what action to take to eliminate a future problem or take full advantage of a promising trend.

Companies are free to choose how deep they need to dive into the analytics to best serve the needs of their business. Sometimes a reactive approach is more appealing, in which case you pick either a descriptive or a diagnostic approach. But sometimes, a proactive approach is better in which you pick a predictive or prescriptive approach. It really depends on the business at hand.