

Decision Intelligence:

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Decision-Making

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What is decision intelligence?

“According to Gartner’s Top 12 Strategic Technology trends of 2022, decision intelligence is one of the top trends that is predicted to be practiced by over a third of large organizations within two years. Gartner emphasizes the need for faster decision-making to enhance customer experience and drive competitive advantage.”

Many factors can influence decisions, but in a rapidly changing world, organizations must equip themselves to make data-backed decisions. Decision intelligence helps organisations improve decision-making by enabling stakeholders with continuous, self-service access to data and the ability to plan for future scenarios with AI-based models. Decision intelligence platforms are created by integrating data, analytics, and AI to support, augment, and automate decisions, and eliminate dependencies on multiple teams.

Gartner®

Gartner believes that decision intelligence is a key trend to watch out for in 2022, with more than a third of large organizations having analysts practicing decision intelligence, including decision modeling, by 2023.

Humans & decision-making

Human beings make decisions all the time, however, it is a stressful process for many, making us shy away from it, especially when our decisions impact major organizational metrics. Choices are inevitable, and we often rely on our intuitions to assess the benefits and risks associated with our decisions.

Let's take the example of Netflix. Most users tend to select a series or movie from the recommendation made by the platform. Here, heuristic takes over to make it easier for them to watch something without choosing from the multiple options.

"75 percent of users select movies based on the company's recommendations, and Netflix wants to make that number even higher."

Google Maps is another good example of how human beings make decisions out of bias. Often, users choose a route they are used to taking rather than the faster route. This shows that humans are more likely to make an easy choice as it is a ready escape from the difficulties and saves them from explicit decision making; however, it may result in suboptimal choices.

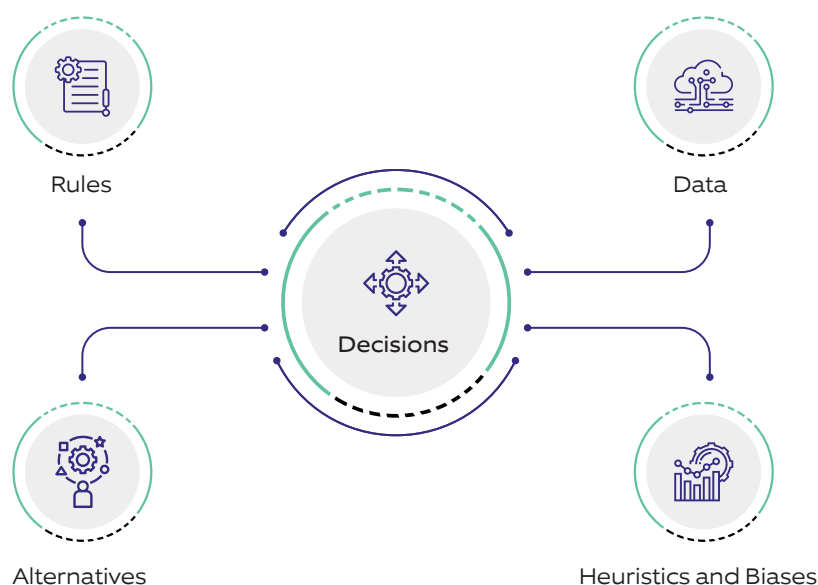


Fig 1: Illustration of a decision and its context

Today's business leaders are led by the belief that they're being data-driven when they look at a number, form an opinion, and execute their decision. Such decisions will be "data-inspired" at best, illustrated by situations where many numbers and metrics are considered inputs. However, the decision is still an outcome of an unconscious bias. Leaders must move away from emotions in organizational judgements and should combine hindsight and foresight for effective decisions. This is the driving principle behind the advent of decision intelligence.

Decision intelligence brings AI and data into the decision workflow. Data-driven decision-making can be a powerful tool to mitigate leaders' problems. Organizations must build the infrastructure to make fact-based decisions that gives them a competitive edge. AI and data play an essential and critical role in automating and aiding decision-making.

One key component of decision intelligence is intelligent business analytics through custom reports or BI dashboards that leaders can create independently to gain more insights. Such insights enable leaders with additional context around business decisions, helps them scale their ability to utilize massive amounts of data, and review the impact that decisions will have across the organization.

With decision intelligence, leaders can make decisions based on more than just past performance. AI technologies can enable forecasting and predicting to help them make informed choices.

The need for decision support

An organization's competitive edge depends on the timeliness, accuracy, and quality of its decisions. With the growing complexity of the business environment, organisations have to rely on data-based tools to make choices in an agile fashion. Decision-making can be improved by analyzing and modeling how decisions are currently made, and how they could be re-engineered by incorporating AI decision-making capabilities.

The following are the primary benefits that explain the need for decision support in an organization:



Influencing outcomes with data-driven decisions

While 91% of companies believe that data-driven decision-making can boost their business growth, only 57% rely on their data. Give your business a competitive edge by accessing the historical data, predicting future outcomes, and choosing the best option for your organization.

The use of AI in decision intelligence helps detect any potential abnormalities and eliminating the possible vulnerabilities that could negatively impact your business.



Faster and contextual decision-making

McKinsey's research indicates that managers at a typical Fortune 500 company may waste more than 500,000 days of working time and \$250 million of labor costs per year due to ineffective decision-making.

Implementing decision intelligence leads to accelerated decision-making as it leverages AI to process huge amounts of data almost immediately as well as make recommendations depending on previous numbers and outlook. It results in faster and more efficient decision-making and saves the cost incurred on labor per year.



Minimizing errors and bias to improve decision-making

Human decisions are prone to bias and intuition-based judgement can lead to errors. Decision intelligence helps eradicate these biases by presenting all necessary data and facts to make informed choices.

Large amounts of data and advanced modeling capabilities ensure that the decision is closer to complex realities.



Building transparency and resilience

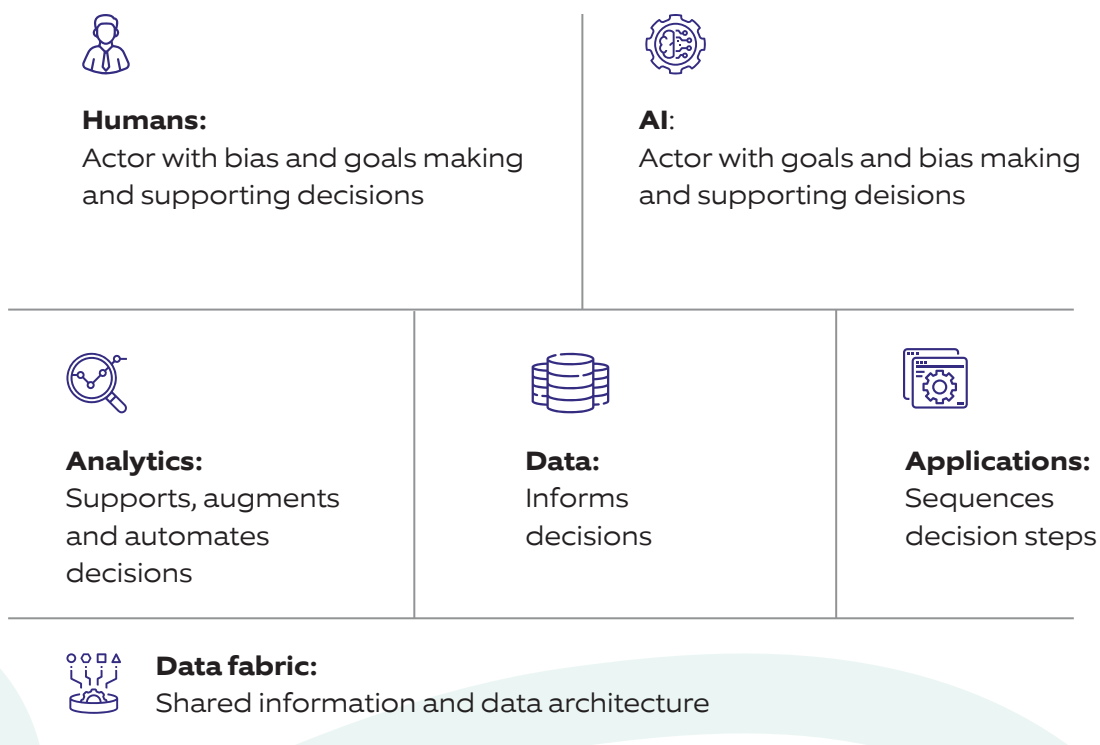
With the use of AI, decision intelligence can help businesses make transparent decisions that are resilient and can withstand the test of time. Foresight is useful to help leaders plan better for different scenarios. Where unpredictable events can majorly affect the business, resilient decision-making allows for more security in today's society.

Transparency in decisioning boosts confidence within the organization and can explain the trade-off between human and AI-driven decision-making. Decision intelligence also helps in making decisions auditable and explainable to others.

Decision intelligence components

Decision intelligence is a complicated process. It leverages the benefits of multiple advanced and traditional disciplines to identify improved data sources and create predictive models. A decision support platform is powered by a whole set of technologies and algorithms.

Gartner's decision intelligence components



Let us take a look at the key technologies that decision intelligence is built upon:

Data visualization: Data visualization leads to more informed decision-making through intuitive and interactive dashboards. Decision-makers no longer have to wait for input from the team and can immediately gain access to personalized insights to gather actionable recommendations.

Machine learning and deep learning:

Decision-making requires uncovering of insights that lie hidden under patterns on Big Data. Machine Learning and Deep Learning make recommendations by mining the big data and mapping them to patterns. For example, an anti-fraud system used by banks decides by itself if additional user authentication is required in case user activity is detected from a suspicious IP.

Optimization: Optimization allows decision-makers to choose the most optimal choice among a set of alternatives. By using advanced heuristics, organizations can simplify the process.



How can leaders build a decision intelligence culture?

According to Gartner, by 2023 more than 33% of large organizations will have analysts practicing decision intelligence. Here's how your business can enhance decision-making competency by joining the revolution.

01

The first step to building a decision intelligence culture in your organization is to identify areas where business-critical decision-making needs improvement. Analyze the business areas that require more data-driven support, or AI-powered augmentation which can help scale and accelerate decisions. Alternatively, you can also start with areas where employees are currently dissatisfied with the existing decision-making process.

02

Next step is to understand and analyze how decisions are currently being made and what steps could be taken to re-engineer the current process. Then incorporating AI decision-making capabilities, combined with human judgement, to optimize decision-making and apply a feedback loop for tracking results.

03

Build a data-driven organization by increasing data-literacy skills amongst the employees. Promote community-shared learning and collaboration through support groups and communities.

04

Educate key decision-makers on making optimized decisions by applying best practices, studying reports, analyzing dashboards, and getting acquainted with data models.

05

Hire experts or upskill existing employees to fulfill the role of a decision engineer. They will contribute to improving decisions by identifying critical decisions and engineering decision intelligence and business decision-makers.

Decision intelligence in action

Several companies have successfully converted their data into insights resulting in improved business performance and achievement of mission-critical priorities.

The following use cases illustrate how decision intelligence has incorporated both human and machine intelligence to produce optimal decisions.



Banking and finance

Through intelligent decision-making models and in-house financial consultants, Morgan Stanley helps its clients invest more innovatively. The wealth management program of Morgan Stanley leverages decision intelligence to achieve customer goals. AI system suggests winning strategies based on available data, which the human consultants further before being presented in front of the customers. DI systems are also helpful in alerting customers if their bank account is accessed from an unknown IP address.



Retail

Integrating decision intelligence with their existing system, retailers can predict how much inventory is required to maintain optimal stock levels. The use of AI helps in forecasting demand during major events such as festivals, elections, promotions, etc. based on historical data and past trends. DI also helps in demand forecast, inventory management optimization, cost reduction, and service level improvement.



Talent management

HR departments use decision intelligence to track the hiring process of potential employees. Furthermore, the use of DI helps HR professionals monitor employee satisfaction to create retention strategies and predict future hiring needs.



Energy

Decision intelligence helps energy companies in better procurement and management of their resources. Avista, an American energy company, chose Nagarro as its technology partner to help them make better power generation, transmission, and market transaction decisions. Nagarro and Avista co-created, Advanced Decision Support System (ADSS), a powerful, proprietary enterprise-grade application that helped in the economic optimization of Avista's energy resource portfolio.



Logistics optimization

Route optimization problems can be resolved through decision intelligence models. Finding the minimum distance between two locations is quite simple but the solution is rather complex when we need to visit multiple locations at their preferred times. Additional complexities could include vehicle capacity, type of vehicle available, customer preferences, associated carbon emissions, etc. Decision intelligence provides quick and efficient solutions to all these problems.



Market mix allocation

In today's times, businesses often face the need to make decisions about allocating their fixed marketing budget among various marketing channels. Decision intelligence can help clients make data-driven decisions on the ideal combination of marketing channels to maximize ROI. To achieve this goal, Nagarro has built an advanced decision intelligence solution that can support client to make informed decisions about the ideal combination of marketing channels and optimize expenditure.



Resource planning and utilization

In the non-profit sector, decision intelligence helps find optimal solutions for the organizations dealing with starved resources. For example, a non-profit could face issues while allocating ambulances to the patients due to high demand and low ambulance availability. A decision intelligence solution can predict future ambulance demands by analysing past data. This can lead to optimization of response time to reach, patient care based on criticality, ambulance location, and time taken to reach hospitals in different scenarios.



Team collaboration and communication

Decision intelligence is beneficial when new data is shared with the team. It saves the bearer from explaining what the data means, why the shared data is valid, and listening to counterpoints from the other team members. Decision intelligence serves as a single point of truth, eliminating the need for proving the data authenticity. With decision intelligence, everyone in the team has access to a common dashboard that everyone in the team can refer to and trust. The dashboard analytics and insights are unbiased, accurate, and reliable. This results in faster actions and lesser internal team conflicts.

Conclusion

Modern decision-making has become significantly more complex, making it crucial for organizations to rely on AI-powered intelligent business solutions. Decision intelligence allows business owners to make decisions faster and better. It helps companies unlock the benefits of being data-driven and takes into account the largest possible array of information while choosing the next steps.

By optimizing the decision-making process, companies can derive more value from their data and gain a competitive edge. As enterprises gather more and more data, the decision accuracy will further increase. In a few years, this technology will become indispensable for decision-makers.

Nagarro's decision intelligence solutions can provide the AI-driven decision-making system your organization has been looking for.

About Nagarro

Nagarro, a global digital engineering leader, helps clients become innovative, digital-first companies and thus, win in their markets. The company is distinguished by its entrepreneurial, agile, and global character, its CARING mindset, and its approach of "Thinking Breakthroughs". Nagarro employs over 15,000 people in 28 countries.

For more information, visit nagarro.com