What Generative AI Can Achieve in the Supply Chain?

Technology is advancing by leaps and bounds in all sectors and the logistics sector is no exception. In recent years we have seen how cloud applications have allowed us to migrate to software as services (SaaS), which reduces acquisition and maintenance costs, as well as providing us with greater security, updates and, above all, new functionalities that make the system more robust.



The changes bring great benefits within the logistics sector, one of them that seems very promising is the Generative Artificial Intelligence (GenIA). Its applications are projected to improve efficiency, visibility and decision making in various aspects of supply chain management.

According to Gartner, by 2026 more than 80% of companies will have used GenAl APIs and models and/or deployed Gen Al-enabled applications in production environments.



Promising applications of Generative AI in logistics

GenAl is still in development, but some of the main applications that we will see within the logistics sector are the following:

- **Help in decision making.** GenAl can generate solutions for eventualities in the supply chain. For example: production delays, changes in demand or quality problems. This allows quick and effective decisions to be made to minimize the negative impact.
- **Demand forecast.** To get closer to generating accurate forecasts, GenAl uses historical data from companies, such as sales indicators, purchasing patterns, seasonal factors, etc. This compilation refines the recommendations, which optimizes each corporate decision and helps prevent inventory problems.
- **Shipping route optimization.** GenAl can help find the most efficient shipping routes, considering variables such as traffic, weather conditions, and delivery restrictions. This can reduce transportation costs and improve delivery timeliness.
- **Distribution network design.** GenAl can help design efficient distribution networks, determining the optimal location of warehouses and distribution centers based on demand, transportation costs and other factors. Having support at this level becomes a powerful and accurate ally for companies, which will constantly be offering advice and alternatives that optimize all resources.
- End-to-end supply chain management. It's not just a dream, today AI allows us to have a comprehensive vision of the supply chain. According to Accenture, 43% of tasks in the supply chain have a high potential to be transformed through the use of GenAI. For example:
 - Identify inefficiencies and bottlenecks.
 - Identified improvements in all aspects, from the acquisition of raw materials to delivery to the customer.
 - Supplier selection.
 - Guide asset management processes.
 - Provide real-time supply chain alerts.
 - Contract management.
 - Identify risks and opportunities.
- Improved visibility and traceability. GenAl can also generate reports and advanced visualizations, which allows a clearer scenario where decision making becomes more accurate.



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These are just some of the main applications of GenAl that we will begin to see within the supply chain and that are perfecting its scope every day.

Generative AI has great potential to transform the supply chain by optimizing processes, improving efficiency and enabling more accurate decision-making. It is essential that companies are part of this transformation, know it, adapt it and allow its constant improvement. Getting to know her is only the first and most important step!

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