5 ways to ensure data protection when using AI solutions in supply chain

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Consumer demands, supply chain disruptions and significant advances in technology have made artificial intelligence (AI) solutions more readily available and necessary to optimize supply chains. Data drives AI, but what are the risks in generating and storing all that data? This article provides an overview of how retailers and supply chain leaders can continue to automate and optimize, while mitigating risks, securing data and ensuring ownership of intellectual property in generated content and business methods. Key takeaways:

- Identify in each AI vendor agreement exactly how the vendor collects, protects and uses data generated through AI.
- Protect proprietary information, including algorithms, through patent and trade secret laws and confidentiality covenants.
- Ensure that the AI vendor's security standards are as good as or better than yours.
- Ask if the data AI generated may cause bias or discrimination issues. Are personal identifiers anonymized before being retained and used in the future?
- Understand consumer data protections and regulatory compliance.

Implement AI or get left behind: Supply chain leading the way

The adoption of AI in supply chain has been a necessary tool to resolve supply and logistics issues exacerbated by the COVID-19 pandemic. The good news is the data shows it's working. Retailers and other businesses are quicky realizing the benefits of integrating AI into their operations.

A recent study by McKinsey showcased the improvements made by AI-enabled supply-chain management . Adopters of this experienced a 15 per cent reduction in logistics costs, a 35 per cent reduction in inventory levels and a 65 per cent increase in service levels. AI has also proven to be particularly helpful to create resiliency in the supply chain and is crucial to an organization's ability to execute mitigation strategies when disruptions occur.

By bridging the gap between data points, AI helps supply chains remain stable, lowers costs and allows for goods or services to be delivered with limited delay or interruption.

In many ways, supply chain is leading the way in adoption of AI solutions. Businesses are already utilizing AI in day-to-day processes, which include:

- Use of collaborative robots (cobots) to complete more repetitive tasks alongside humans.
- Use of machine automation driven by data to simplify complex processes and complete tasks around the clock.
- Use of proprietary algorithms establishing customer insights and trend predictions.
- Learning consumer behaviour to automate inventory updates and marketing strategies.
- Use of automated quality checks that limit human error through machines or other software checks.
- Providing real-time data that prevents bullwhip effects, reducing stock-outs and backlogs that can lead to larger inventory management issues.
- Providing real-time visibility of supply chain touchpoints to reduce data inaccuracies.
- Enabling automated inventory management and supplier relationship management.
- Enabling expedited decision making through algorithms developed from your data, and from the industry.

According to Gartner, businesses reliant on supply chains expect the level of machine automation in their supply chain processes to double in the next five years. At the same time, global spending on Internet of Things Platforms is predicted to grow from $1.67B in 2018 to $12.44B in 2024 (or a 40 per cent compound annual growth rate (CAGR) in seven years).

While AI in supply chain can create efficiencies, one must take precautions and use discretion when establishing data sets and algorithms and managing proprietary information.

Protecting proprietary information in a data driven world

Fully enabling AI in supply chain optimization is complex, expensive and difficult to manage. There are very few companies that can manage all supply chain AI technology in-house. Accordingly, outsourcing AI solutions -through vendors and platforms that provide AI applications for industrial processes-, is becoming increasingly prevalent and in demand. For these technologies to be optimized into successful processes, however, large amounts of data, including proprietary information, are required. Not surprisingly, real-time data and data analytics are being collected and established increasingly by AI vendors for supply chains.

According to Gartner, more than 75 per cent of commercial supply chain management application vendors will offer embedded advanced analytics (AA), AI, and/or data

science by 2026. Such systems bring AI decisions directly into complicated workflows. Protecting important data should be a priority.

The following are 5 considerations to protect important data when utilizing AI solutions in supply chains:

1. **Identify exactly what the AI vendor agreement outlines about data collection and protection.** It is important to understand the details of your contract with the AI vendor before signing any agreement. Remember that AI requires collection of large amounts of data, but you may not want proprietary or sensitive information to be used. Research vendors and platforms in your industry. If you already have an AI vendor, understand how your data are being collected, implemented, and stored. Be sure to review your contract or agreements detailing where proprietary information is kept and how data are being used in the process.
   Also, be sure to understand what happens to the data after the agreement is over.
2. **Protect proprietary information, including algorithms**. For AI to optimize supply chains, you may need to develop new algorithms or intellectual property. The data should be protected with the right protections, such as through patents, trade secrets and confidentiality obligations.
3. **Ensure AI vendor security standards are sufficient.** Does your vendor's security policy align with your organization's standards? Take a close look at the risk to the supply-chain ecosystem, whether your vendor's security policies are well established and up-to-date and if they have a strong risk management framework. Does the vendor have professional certifications and meet industry standards like ISO standards among others? If there is a data breach, what steps would need be taken to mitigate risks and ensure alignment with your own internal standards?
4. **Ask if the data AI generates causes bias or discrimination issues. Are personal identifiers anonymized?** It is important to understand how your AI vendor collects and implements your data in the supply chain and whether doing so creates privacy or security risks for your people or clients. These processes could increase the risk that decisions about how and where products or services are distributed may be based on specific criteria or personal identifiers, that could lead to biased or discriminatory results.
5. **Understand consumer data protections and regulatory compliance.** Ensure any data generated is in compliance with consumer protection regulations. If using robots, how is sensitive customer information protected? What happens if something goes wrong? Are consumer lists and proprietary information shared? Who has access to this information? If adverse decisions are made using AI, you may need to inform the consumer about it. Regulatory requirements may vary based on regions and may also be updated as technology advances. Ensure you always remain compliant.

Next steps

AI provides significant advantages for retailers, supply chain companies and their customers. Ensuring data privacy and protection is key when implementing AI solutions.

As AI solutions for supply chain optimization evolve, so will regulations, technology and governance. BLG can help you understand what information should be protected, establish important parameters when deciding on an AI vendor selection and help you understand agreements with vendors to ensure protections are in place.

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