

The Importance of S&OP and How AI is Shaping the Future of S&OP for Pharmaceutical Companies

Artificial intelligence is both the present and future of the pharmaceutical industry. It helps in many different areas and situations – and that includes S&OP. As sales and operations planning becomes more complex due to factors like the coronavirus pandemic and surging inflation, the power of AI with S&OP is helping pharmaceutical companies mitigate loss and make effective real-time changes.

Current S&OP Struggles for Pharmaceutical Companies

Pharmaceutical companies, even those with billion-dollar annual revenues, continue to struggle with gaining full visibility into their end-to-end supply chains. In this era of digital transformation, it may sound unbelievable, but it's true. Many of these organisations haven't moved forward. Spreadsheets remain a prevalent solution. External "outside-in" sources like ERP, LIMS, and MES are also used for siloing data.

All of this results in significant issues for their S&OP. Due to the assortment of manual processes still involved, costly human errors occur. Incomplete data means guesswork is involved with important business decisions. Relatively high levels of data latency also result in the supply chain being negatively impacted.

Ultimately, decisions and processes can only be completed with the data and tools available. If a pharmaceutical company isn't adopting digital transformation fully, it will only continue to fall further behind with its S&OP.

The Pharma Industry and its AI Transformation

One vital component in the pharma industry's shift to digital transformation is artificial intelligence. This AI transformation is advantageous across numerous different areas. Taking an organisation's complex supply chain and providing a clear, full picture of every detail, big or small, opens the door to smarter decision-making, improved efficiency, bigger cost savings, and more.

If you think of AI as simply a buzzword or flavour of the month, it's time to change that viewpoint quickly.

The reason is simple: AI is already transforming S&OP for the pharmaceutical industry. It possesses the capability not just to collect and process large amounts of data – both historical and real-time – but use to make intelligent decisions and recommendations. AI can push operations into a truly data-driven world, and companies are already leveraging its potential to enhance their efforts across the board.

Although traditional software has been, and continues to be, a powerful tool in any organisation's strategy, AI goes beyond the confines this type of software is trapped within. It utilises real-time learning where it is able to build and refine continually. By crawling both internal and external data sets – which can include everything from inventory data to weather conditions – AI is able to take this gained knowledge to make optimal decisions or recommendations.

An example of AI in action

To go into a little more detail about the transformative nature of AI, let's use available-to-promise (ATP) functionality as an example.

ATP takes a customer order inquiry and responds to this according to resource availability. With traditional software, this function is, in essence, a rules-based calculation. This calculation takes allocation rules and theoretical lead times – and these are volatile and liable to fluctuations. As a result, ATP calculations with these data points can cause incorrect ATP dates. That's the opposite of ideal.

Now, let's take a look at how AI handles ATP. With this technology, a "supply chain map" can be generated automatically, and this provides order details with metrics such as the expected delivery date and allocated quantity. Then, due to a combination of data science and machine learning, the AI makes highly precise predictions and recommendations. This accuracy supplies a significant advantage to ATP functionality.



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How AI Optimises S&OP

To learn more about how AI tools can play a key role in improving your S&OP efforts, here are five notable areas where this advanced technology helps:

- **Sales forecasting:** By using current company data, AI is able to predict your company's future sales accurately. As it is continually fed more data and it never stops refining its algorithm, this accuracy only improves over time. As a result, you are able to better organise the ordering and inventory aspects of your S&OP.
- **Data management:** The collection and analysis of real-time data is necessary to maximise AI's effectiveness. When your data management is AI-enabled, you are able to automate data normalisation, integration, and aggregation for your S&OP

strategy. This is important because your AI-driven solutions perform to a higher standard when they're fed better data.

- **Pooled ordering:** With an overall S&OP strategy, one way to support this is with order pools. AI capabilities allow you to automatically generate these order pools, streamlining the process while making it notably easier and more intuitive overall. Furthermore, sharing supply chain assets supports your company's carbon footprint efforts and reduces manufacturing costs.
- **Intelligent ordering:** Inventory is always an essential component for a pharmaceutical company. Inventory levels can be manually adjusted as needed within your S&OP solution. However, AI plays a crucial role in ensuring these levels are maintained successfully. It monitors stock levels and other data, coming up with order suggestions when required to meet your inventory objectives. Orders will then be checked and placed by a dispatcher or analyst.
- **Sustainability:** Going green is vital for any modern business. With AI as part of your S&OP, you are able to optimise transportation routes for deliveries, monitor and report emissions, predict when equipment maintenance is necessary, and even reduce waste across your entire supply chain. These are just some examples of how AI can support your company's sustainability goals.

Digitalize Your S&OP with PLAIO Today

You understand the power of AI for S&OP. Now it's time to act – and that is where we step in. Forget about spreadsheets. Move on from an unreliable workflow. Instead, you are able to effectively – and seamlessly – digitalise your pharmaceutical company. Start harnessing AI today for your S&OP, and benefit from optimised efficiency and performance.

Want to see how our advanced AI software can integrate into your current operations? Get in touch to learn more and request a free demo of our digital planning solution.