AstraZeneca and SAS

Extending our partnership to optimize and automate your supply chain.

Discover how advanced automated decisioning powered by SAS can help AstraZeneca to:

- Advance towards strategic targets including Factory of the Future, Ops 2020 and AZ2025.

- Reduce costs and mitigate risks in your global supply chain.

- Build an adaptive and resilient supply chain that's fit for the future.

A new destination on our shared journey

At SAS, we've helped and supported AstraZeneca for over 20 years. Until now, we've largely worked with you in critical areas like analytics support for clinical trials, and regulatory submissions within R&D. At the same time, we've partnered with other leading pharma and life sciences enterprises in non-clinical areas, and helped them achieve game-changing outcomes. We believe we can now leverage these wider experiences for AstraZeneca's advantage.

> "Our experience and expertise in technology are ready to support you throughout your digital transformation journey."
>
> **Jim Goodnight, CEO and co-founder, SAS.**

Why supply chain transformation now?

Life sciences manufacturing is at an inflection point:

- R&D innovation has pioneered new drugs and ingredients that are time and environmentally sensitive, and that often form part of specialized and personalized treatments. Timely delivery is paramount if these drugs are to achieve optimal patient outcomes.

- At the same time, AstraZeneca is under more pressure than ever to improve its manufacturing and distribution process – including supply chain efficiency.

- Recent unprecedented events mean businesses must adopt a 'new normal' way of working that can accommodate severe disruption across the global supply chain.

Now explore how SAS can help you accelerate demand-driven supply chain optimization that will play an important role in your responsive, joined-up and efficient manufacturing and distribution model of the future.

Driving end-to-end innovation

AstraZeneca's stand-out innovations in R&D must now be delivered to market by an equally innovative manufacturing process – one that's defined by consistent operational excellence. You recognize that achieving this goal means transforming the relationships between your supply chain, production and distribution functions.

At SAS, we're seeing more and more pharmaceutical sector leaders like AstraZeneca successfully addressing this challenge by changing the way they work with data.

We're already embedding analytics into core processes at some of the world's biggest and best-known CPG and manufacturing brands, and helping them to automate decisioning based on insights derived from analytics.

SAS SYNERGY

Today, we believe we can take best practice AI-driven analytics approaches from other industries and successfully apply them to your unique challenge of working in a highly regulated and highly validated industry – specifically in two important areas:

Supply Chain Optimization

Your Digital Operations 2020 and Factory of the Future transformation programs call out the importance of using real-time data to proactively optimize operations – including in your supply chain – and to further reduce its levels of risk, waste, and inventory holding.

By combining market and operations data, AstraZeneca can realize powerful supply chain efficiencies, for example:

Using real-time data insight to effectively predict the quantities of stock required in specific geographies at specific times.

Providing precise forecasting, demand sensing and demand shaping capabilities, in order to align supply plans with demand forecasts in near real-time.

OPTIMIZING NESTLÉ'S SUPPLY CHAIN

Nestlé, a $90B business, joined forces with SAS to use IoT data from manufacturing, fleet and sales to optimize inventory levels. Using SAS demand forecasting globally has enabled Nestlé to:

Reduce inventory days of supply by a significant **1.2 days**, while simultaneously improving product availability and customer service.

Improving forecasting reliability so Nestlé has more time to focus on demand planning for highly volatile products.

Supply Chain Automation

We know you face challenges as you work to reduce direct and indirect costs attributed to product losses, caused in turn by supply chain breakdown. By applying new streaming analytics methods to create real-time insight, and automating decisioning from connected time, temperature and location data, SAS can help you transform end-to-end global supply chain efficiency, reducing wastage to improve profitability.
For example:

Quickly identifying stock that has frozen in transit from Canada to the UK when it passes through low temperature zones. If undetected, this can easily cause a ripple effect of damage and loss that flows down the supply chain.

Monitoring areas of high uncertainty that are prone to stock hoarding, which in turn leads to financial waste tied up in idle stock.

With constant real-time surveillance across multiple data sets, plus streaming analytics and automated decisioning, AstraZeneca can establish sophisticated workflows that quickly improve supply chain performance.

AUTOMATION IN ACTION AT UPS

At the world's largest parcel business, which delivers 16m packages every day, SAS helps to analyze driver data via telematics sensors to improve delivery efficiency in real time. The results?

85 million miles of unnecessary travel eliminated from daily routes per year.

8m gallons fuel saved per year.

85,000 metric tons of CO_2 emissions saved per year.

Amway China deployed their SAS Inventory optimization system to **reduce replenishment time by 20 percent**, and **boost customer satisfaction to 97 percent.**

Inspiring new possibilities

AZ2025 sets out AstraZeneca's commitment to rejecting the status quo in pursuit of continued growth and innovation. At SAS, we envision a bright and exciting future for AstraZeneca, where advanced analytics and intelligent decisioning are embedded in the heart of a transformed supply chain, and in your wider manufacturing operations.

DEVELOP AND SUPPORT A QUALITY-DRIVEN STRATEGY

Quickly identify and address supply chain issues, and link customer feedback and expectations with design, engineering, manufacturing and packaging.

IMPROVE INVENTORY LEVELS

Take advantage of optimization capabilities that help you establish a single unified demand stream for your entire supply chain.

TRANSFORM YOUR SUPPLY CHAIN TO BE BEST IN CLASS

Deploy AI and machine learning to solve complex supply chain challenges, improve supply chain visibility, and create competitive advantages.

ACHIEVE NEW LEVELS OF DEMAND PRECISION

Deliver real-world demand plans that constantly improve time-sensitive supply chain KPIs using embedded AI and machine learning algorithms.

ENHANCE YOUR AFTERMARKET SERVICE

Help improve first contact resolution rates, minimizing costs and reducing the stockouts and overages that erode the customer experience.

LEVERAGE IOT EDGE INTELLIGENCE

Integrate streaming data with analytics and visualization to enable swift supply chain decisions while reducing data movement and storage costs.

Let's take our next step together

We believe SAS can add the greatest value to AstraZeneca by operationalizing analytics to guide better decisioning and governance on a global industrial scale. Let us help maximize the value of your existing data, analytics and technology investments in the intensively regulated environment of the life sciences industry.

You know and trust SAS. Now let's go forward together, and explore how we can help you deliver consistent innovation and excellence across your global supply chain.

A CLOSING STATEMENT FROM MARK HANSON, SAS GLOBAL ACCOUNT DIRECTOR FOR ASTRAZENECA,

"At SAS, we've supported AstraZeneca for over 20 years on your journey to follow the science, put patients first, and be entrepreneurial. I look forward to supporting you as you take your next steps to delivering the value and impact that AI, advanced analytics and data science can bring to your supply chain, and your wider business."

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