

Global life science supply chains in a post-pandemic world



Covid-19 brought unprecedented demands to life science supply chains worldwide, meaning a rethink of operations was needed for needs to be met during and post-pandemic.

A new normal emerged in the life sciences space that brought resources previously reserved for hospitals, such as ventilators, vaccines and personal protective equipment (PPE) to the top of agendas, in order to protect populations from the virus.

“Manufacturers, distributors and healthcare organizations have all needed to find new ways of working to suit a largely remote workforce, meaning finding new ways to communicate and collaborate,” said [Tim Groulx](#), senior director and AI and IoT lead for North America at [Avanade](#).

“With companies having to shut down due to outbreaks of Covid-19, it became critical to monitor aspects such as temperature and proximity between employees.”

Avanade has been helping life science companies to achieve this mission by offering its connected Intelligent Manufacturing Lifecycle. AI and IoT technologies are leveraged by users to gain a holistic view that consists of:

- R&D, using maintenance feedback and product analytics as input to bring markets to market based on demand and usage;
- inbound and outbound logistics, which allow for tracking of distribution and delivery using IoT;
- customer service, including product usage information and new technology driven ways to interact with customers;
- demand forecasting for procurement and suppliers, which allows distributors to understand where products are required in the market;
- market, customer and channel segmentation enable targeted marketing and distribution of products;
- quality assurance, powered by operational telemetry data and computer vision capabilities;
- predictive and proactive asset maintenance powered by machine learning.

The remote connectivity that comes with Avanade’s Intelligent Manufacturing Connected Ecosystem has allowed all employees involved in the supply chain to view operations from anywhere, a drastic change that circumstances brought by the pandemic has ushered in. All pre-built solutions are connected in order to create visibility and efficiencies across the lifecycle.

“Prior to the pandemic, there was a lack of digital technologies throughout the world that could enable this granular monitoring,” said Groulx.

Article originally published in Information Age, Healthcare Sector, May 2021



Tim Groulx, senior director and AI and IoT lead for North America at Avanade, spoke to Information Age about how global life science supply chains will leverage digital technologies post-pandemic



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Ensuring serialization compliance

As well as meeting changing demands, employees working across life science supply chains also need to ensure compliance with global serialization requirements.

Avanade helps organizations to develop a system of APIs and data collection capabilities, which can all collaborate through repeatable patterns. This system can be made accessible to all involved parties, making it fully transparent in the process.

“Users can see in real-time how much of that material they have, where it is and when the next shipment is set to arrive. “Once you start sharing that information and making that available through APIs and other modern technologies, we can now gain insights and efficiencies across the supply chain.” said Groulx.

Improving agility and data usage

Weathering such substantial changes in the landscape has called for an increase in agility across life science supply chains. But this isn't likely to happen overnight, and in the case of Avanade's Intelligent Manufacturing Lifecycle, it's been a matter of step-by-step integration.

“Organizations need to adopt digital technologies that enable integration, efficiencies, and insights across the supply chain,” explained Groulx.

“This doesn't need to happen all at once. We start by addressing the highest priority pain points, and then continue to expand capabilities in an iterative manner.”

Leveraging data, AI, and IoT, along with core business applications, allows organizations to gain the near-real-time insights required to react to changing demands and possible supply chain issues. According to Groulx, these technologies, ubiquitous storage and compute power have been able to strengthen previously fragile supply chains, as exposed by the Covid-19 pandemic.

He said: “Many organizations weren't where they thought they were in terms of leveraging big data, business applications, AI and IoT all together. We deliver these connected ecosystem solutions keeping security and data privacy as core tenants of all solutions.

“A lot of companies get overwhelmed by the complexity of the problem at hand and thinking about connecting all systems in the supply chain. “We break all that down into different areas, and then we have modular solutions for each of those areas, which are all built on the same core cloud platform.

“Users can realize value fast while building iteratively and continuing to adopt new capabilities over time.”

Avanade has also helped its life science clients to get the best out of cloud services from Microsoft Azure, which enable that all important integration across locations, data sources, and business processes, and in turn provides end-to-end connectivity. This, along with big data, allows users to facilitate supply chain operations at scale securely.

Additionally, Avanade offers a library of machine learning models that can be used for demand forecasting, predictive asset maintenance and quality assurance. This further decreases strain on workers by automating these important tasks once trained.

“The key thing is to understand what the broader view is and understand how everything connects together so that you don't ultimately build yourself into a box,” said Groulx.

“Don't reinvent the wheel and start a project from scratch. Work with a cloud partner that has done this before, and you can leverage all these available digital technologies and gain value much faster.”

Learn more at:
Avanade.com/health